Results, CQ's Second World-Wide DX Contest

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The report on the final results of the biggest DX Contest in amateur history is just too big for a single issue of CQ. Here's the first half of the results—the rest will appear next month.

CQ'S SECOND WORLD WIDE DX CONTEST exceeded the first successful event by a smashing 100% despite severe ionosphere storms during most of the radiophone weekend. In some parts of the world atmospheric disturbances were also raising havoc during the c.w. weekend of competition. Entries were received from over 1000 c.w. stations and from 450 radiophone stations competing. Spot checks of the logs of both c.w. and phone contestants indicate at least an equal number of participating stations that did not submit logs. Thus CQ's DX contest is well on its way to becoming the leading DX activity of the year.

PY2CK led the world with the highest phone score in the contest—224,349 points.

CQ's Second World Wide DX Contest departed radically from previous competitions of this type by permitting entries for single bands, as well as an "open," or "all-band" competition. Experimentally, 80 meters was dropped from the contest. Indications are that most contestants favored the use of the three principal DX bands, although there is continued agitation not to abandon 3.5 mc, since it is useful as a DX band when properly employed. What is done in the forthcoming 1950 event will depend upon the decision of CQ's DX Committee, to meet in session shortly.

A word about the method of listing the scores. Many DX men requested that we give a complete breakdown on all scores, i.e., total number of contacts, countries and zones. We were fully prepared to do this extensive bookkeeping task when we discovered a grievous error of omission on our part. On the special contest log sheets sent out, there were boxes provided for totaling scores. The boxes for total scores had provision for number of contact points, but not for the actual number of contacts (a factor which actually doesn't figure in the score). In instances where the score was submitted for one band only, operators did fill in the line asking for total number of contacts in the recapitulation paragraph. However, wherever a log covered more than one band, to list total QSOs for each band in the final tabulations we would have had to individually count the contacts-per-band in by far the greatest majority of logs submitted. Since we couldn't possibly handle that detail, only the winning *all-band* scores show the number of contacts, as well as all other pertinent data. Next year we'll straighten out the form and each log sheet will have the necessary space. The published summaries will contain zones, countries, and contacts.

Highest single-operator score reported in the world was that of the well-known Dutch DX man PAØUN using nothing more than 100 watts into a pair of 807's and standard communication gear all the way. For antennas PAØUN used 3-element rotaries on 20 and 10; two half-waves in phase on 40. This sterling performance represents operating techniques gathered through years of operating on all the DX bands.

Second highest score in the world, and leader in the United States is W4KFC. W4KFC is another station where the only fancy operating aid is the operator himself. 700 watts, BC-348, a Gonset Convertor for 10, 2 elements on 10 and 20, and 138′ end feed 40 meter wire comprise his entire setup. Says Vic, "Same XYL as last year, alarm clock—lots of coffee." He raises an interesting point. With 80 out of the test, the east coast boys jam up 40 and ruin the west coast shot at Europe. Higher east coast scores confirm this. and east coast DX men take full advantage of greater activity in Europe than any other continent.

Just less than two thousand points separates W8JIN another experienced DX man, whose final score was 308,180, and who further emphasizes the fact that there is no substitute for experience. An interesting point raised by W8JIN is the controversy about optimum beam height. Raising his 14-mc rotary to 66 feet made a noticeable difference over last year's performance. HRO, PP-250TH, 10-meter 4-element wide spaced rotary and a 7-mc half-wave vertical complete W8JIN's layout.

What would a contest be without ZL1MB whose 304,560 points placed him among the world leaders and far ahead of his nearest national competitor. ZL1MB uses a 277′ Vee beam and 8-section Sterba, plus other assorted wires to help his 100

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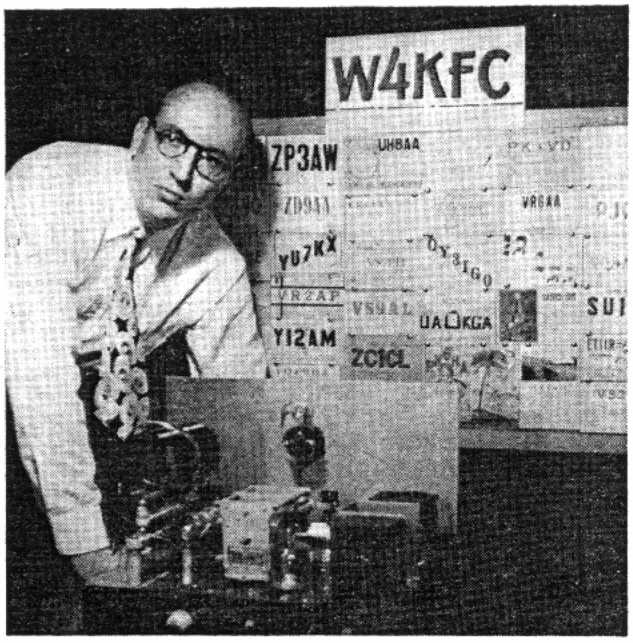


W4 KFC ran up the highest c.w. score in the U.S.A., and the 2nd highest c.w. score in the world—310,184.

watts. In cross-checking U.S. logs, ZL1MB's reports were conisstently outstanding on all bands. ON4QF is practically standing on the same spot with his 302,994 points. As ON4QF puts it, "Very beautiful and interesting contest." Mick ran 40 to 60-watts input plus a 360′ long wire, among other antennas. ON4QF reported erratic conditions throughout the contest, although his score doesn't reflect them. Among the other outstanding scores reported were those of:

KH6IJ	292,734	VK2EO	228,200
W3LOE	289,120	W9IU	224,425
KG6DI	281,780	CX3CS	211,420
CE3AG	249,480	OK1HI	202,764
GW3ZV	231,846		

As usual KH6IJ's score is in the top bracket and his 702 contacts represents one of the outstanding performances numerically. Oddly enough, KV4AA had 760 contacts but couldn't get the multiplier necessary for one of the high scores because of the large number of Americans desiring contact. This is true for a number of other outstanding operators including EK1AO with 510 contacts, and KL7PJ with 508.

KG6DI, in setting out for new records, comments on the handicap he faced (and presumably other DX stations) by insufficient savvy on the part of the Ws. He could work stations faster than they were returning, and often a station receiving an S9 report would slow down and repeat everything twice. Conditions, no matter how bad elsewhere, seem to hold up in the Pacific and KG6DI is raring for the next one. His hot band was 10!

W3LOE is more than an outstanding operator, he is an outstanding designer of equipment and his station is unusual in that he uses separate homemade superhets for 10, 20, and 40. They work too . . . as does his kw feeding rotaries and a 2-element colinear fixed beam on 40. CE3AG used a kw into a 304TH final, 75A receiver and 3-element beams plus a doublet.

GW3ZV, another perennial appearing on logs galore, recommends still greater publicity, despite the fact that this year over 100 countries were active. To follow up the suggestion, logs are going to be made available from a central source in each major country and notices will be circulated to all foreign societies and publications several times before the next contest. Behind GW3ZV's signal are PP 807's, homemade super with full break-in, 7-mc Vee beam, rotaries on 20 and 10, long wire on receiver. The electronic key is to avoid fatigue.

CX3CS, operated by the extremely well known DXer CX2AJ, had one of the outstanding S.A. signals, verified by his score. Like many DX entries, his log shows a tremendous preponderance of U.S. contacts, even when conditions favored other continents. W9IU's sterling all-band performance indicated more QSOs on 10 than any other band. VK2EO ran 100 watts into 3-element beams on 20 and 10; 136′ end feed were on 40.

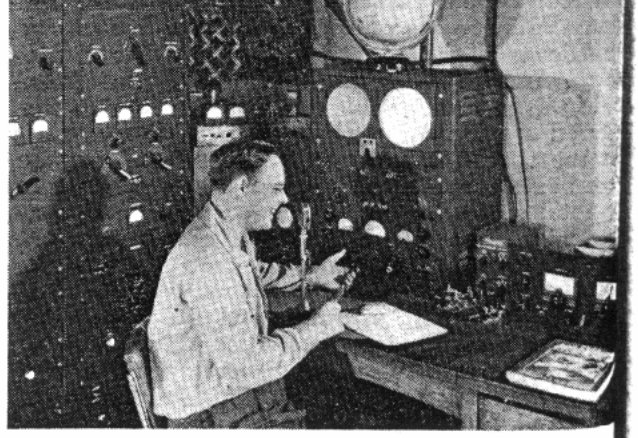
OK1HI's 202,764 points is one of the highest low-power scores, 60 watts input to a single wire did the trick.

The conspiracy against the phone men continues, with the band reflecting some of the year's worst conditions. Scores ran higher than the previous contest only because of greater activity and a DX gang that was evidently prepared for the worst and concentrated on the few paths relatively stable. As HK4AR put it, "A swell contest. Too bad the bands did not cooperate."

No close race developed for top honors among the phone men. PY2CK ran away with his 224,349 points. Aided by favorable propagation conditions and some adroit operating this remarkable score represents 396 contacts in 80 *different* countries. PY2CK operates with a full kw, NC 2-40D, rotaries on 20 and 10, and a preselector.

Europeans stand out with the next highest scores and they really sweated out most of their contacts. G2DPZ with 153,642 points; HB9DS 145,410; OH2NB 132,191; LA7Y 127,684; I1RB 124,026 points. G2DPZ, one of 1948's top men repeated his outstanding performance with 150 watts, HQ-129, R9er, rotaries on 10 and 20, and a half-wave on 40. Again the Europeans made good use of 40-meter phone working as high as 25 countries in four continents on that band.

HB9DS used a maximum input of 57 watts. Kurt's station is one of the most remarkable pieces of home construction ever seen and portions of his station will be described in articles scheduled to appear in *CQ*. His beam is a 4-element rotary continuously adjustable with collapsing elements for 10, 15, and 20. A gang-tuned rig and 14 tube dual conversion superhet have the detail of a fine Swiss



CQ's own Contributing Editor, W3LOE, with his 100% home-built station led phone and c.w. gangs in W

watch. And the precision carries into the operating habits. Details on OH2NB's station were not received, but his outstanding signal over the all-but closed Northern path attest to its potency. LA7Y, equally well known as a c.w. operator showed his versatility. His score was made with 50-watts input, AR-88 and a 2-element beam. I1RB ran 100 watts into a dipole on 10 and 20 and turned in a log with some of the nicest catches in the contest.

Highest American score was turned in by W1ATE whose 83,664 points represent 221 QSOs with 60 different countries and 28 zones. Chad used a Collins 32V-1 driving a pair of 250THs at a full kw, Collins 75A-1 receiver; switchless 4-element 20-meter rotary on 20, 8-elements on 10, both 80′ high. Chad, like many other contestants did not know the FCC ban on certain areas had been lifted with result he passed up a number of countries. It is an inequality that just can't be compensated for, unfortunately.

In the phone contest, because of the natural inclination to stick to bands best known, many of the single band scores were higher than the winning all-band entries. It is particularly interesting to note that in many instances all-band entry winners were beaten on single bands by "specialists."

Miscellaneous

It is the bitter truth, but average power of the U.S. winners was close to a kw. With DX, it is over 100 watts indicating a definite trend to higher power on the part of foreigners. Another noticeable trend among the outstanding DX men is the use of converters on standard communication receivers to get optimum performance on 10 and 20.

KZ5WZ, in a magnanimous gesture, lists W6QD as one of the outstanding signals there. Wally thinks the choice of dates might be improved to find better conditions. MP4BA was a new one for many DXers. GM3AXR, with over 50,000 points, had the highest GM score. Most remarkable is the fact that his 100-watt station is powered entirely by 12 volt d.c. from batteries and gas generator. Battery operated HRO, 420′ longwire EW and 690′ longwire NS did the trick. Those long wires practically put him into U.S. territorial waters.

W6PQT, in voicing his approval of single-band competition for land-bound city dwelling hams, also urges a committee to try and determine optimum weekends for the contest. As one suffering

HK4AR, winner for Columbia and Zone 9, with a score of 73,932. That Panadaptor must have been a big help in locating the holes in the bands.

F9QU/FM8, whose activity was limited, but who managed to give many of the gang another rare country.

DX man put it, "Make it the one when the XYL is away." W9CIA resolves solemnly, no more medical operations before a DX contest. Wire must be cheap in some towns . . . at Carnegie Tech's Radio Club, W3NKI operated by W2CDW, they have a 500′ long wire. G4CP emphasizes the clean operating by practically everyone, a comment echoed by many entrants. GM3AXR, and others, suggest two periods of 24 hours instead of one period of 48 hours. Like many DX men he finds it difficult to get free for two full days.

W6ALQ, entering his first DX contest in 19 years, says he learned a certain "new technique" of DX operating. On most logs a patient XYL rates as the number one operating aid! KL7UM, "Well planned contest. Certainly makes all other DX contests seem to be a waste of time." He is for the status quo on rules. W8SDR, not a full fledged competitor, worked a new country and gets a vote of thanks from the contest compilers—along with others like him—who sent in a log for checking. W6OMC, out for new countries only, threw his rig into high gear when a casual check indicated that he was ahead of his half-way mark of last year when he was bearing down. Proof positive that it is going to be a bigger and better contest every year.

G3DO comments that the outstanding signals at his shack during the contest were ZL4HP and ZS6JS. How about some of these phone morsels . . . VQ8AX, XZ2SY, FQ8SN, M1B, VU2BL, FF8PG, ZD2S . . . did you work 'em? CR5UP had the DX men in a tizzy . . . TI2HP, commenting on their very active representation in the contest says the average power in Costa Rica is 800 watts. W5LVD, and lots more, spent their last nickel buying a beer to cry into. He passed up XZ, VQ8 because of the original FCC ban. They didn't know it had been lifted. W4TO, way down Ga. way worked hard to add new ones and came up with nothing better than Zone 3. KZ5WZ used a 10-meter vertical on 40. From CZ, outstanding signals reported were W2ZY, W3LOE, W6GRL, W6TZD, W6OMC, and VE4RO. W2ZY should serve as a case for the despairing DX men. He uses nothing more than a Collins 32V-2 and an indoor dipole for 10 and 20, with the feeders tied

together for 40. F9QU/FM8, reporting on his contest activities, details his station which is keeping Martinique well represented, with a chance to receive QSLs. He is Assistant Port Captain for the French Line Steamship Company, uses 100 watts on 10 and 20, SX25, 20-meter doublet, 10-meter rotary.

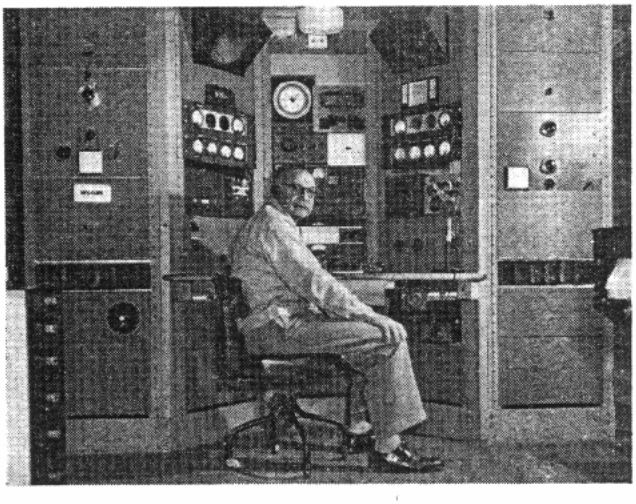
VQ4CUR, operating portable in Zanzibar especially for the contest, is one of this year's heroes. Only 220 v. d.c. was available, so Harry took a complete military installation, battery operated. The trip was made by air and 6 fully charged batteries were available during the test. Harry is a regular Army man, with 27 years in the service and has visited 87 different countries. He'll be back in England this winter and DX men should be sure to say hello and thanks to G2CUR.

How do they do it? For example, VK4RC with an 807 and a 33′ vertical for transmitting and a 14-mc folded dipole for receiving, still managed to tear through for 56,000 points.

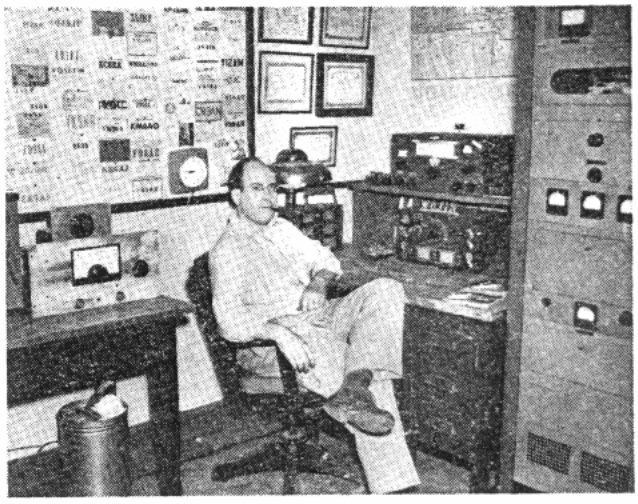
The Winners!

All Band, Single Operator, C. W.

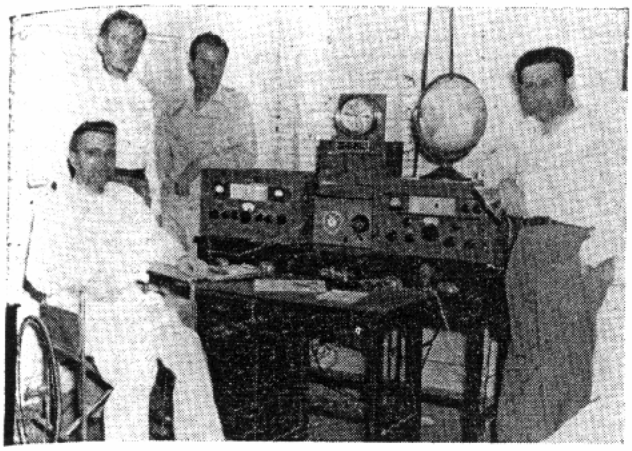
	Station	Total Countries	Total Zones	Total QSOs	Points
Zone 1	KL7PJ	58	41	508	75,735
Zone 3	W6GRL	192	69	354	190,080
	W7IRZ	32	29		11,041
Zone 4	W4KVX	128	68	317	172,466
	W5LVD	203	65	257	107,688
	W8JIN	172	80	417	308,180
	W9IU	129	62		224,425
	WØDAE	117	59		147,136
	VE3IJ	77	43	171	51,960
	VE5QZ	54	39	153	32,922
	VE6AO	37	30		15,544
Zone 5	W1RY	107	56	269	117,034
	W2QCF	105	54	270	128,790
	W3LOE	182	78	384	289,120
	W4KFC	158	74	490	310,184
	VE1EA	43	25		16,660
	VE2NI	63	31		43,052
	VE3AEJ	6	5		198
	W8AZD	80	48	205	75,856
Zone 7	KZ5DE	32	16	370	49,322
	KS4AC	21	18	288	12,207
	HP1BR	38	34	119	13,248
Zone 8	KV4AA	72	41	760	105,203
	KP4JE	26	18	134	15,200
Zone 10	HC2JR	75	49	606	221,960
Zone 11	PY2NX	53	36		72,090
Zone 12	CE3AG	104	61	520	249,480
Zone 13	CX3CS (CX2AJ op)	61	49		211,420
	LU7CD	47	31		55,770
	VP8AI	22	21		16,296
Zone 14	DL7AA	90	50		120,300
	G4CP	97	59	342	147,888
	PAØUN	133	65		343,728
	LA6U	73	33		71,171
	EA1AB	44	18		42,842
	OY3IGO	2	3	22	300
	OZ7EU	68	32	215	42,000
	ON4QF	125	61	612	302,994
	F9BO	81	46		62,992
	SM6ID	47	22		28,221
	GM3AXR	77	47	177	50,344
	GW3ZV	122	50		231,846
	HB9DZ	42	30	152	26,424
	LX1AS	23	14		8,695
	EA6AF	48	20		34,816
	EI9J	49	30	362	66,913
	GC2CNC	48	13		15,311
Zone 15	OE1CD	73	39		36,064
	OK1HI	124	59		202,764
	HA4SA	96	37	284	61,180
	OH5NF	67	29		35,616
	ZB1AJ	28	11		3,042
	I1PL	88	44		119,860
	IS1FIC	18	9		1,080
Zone 20	SVØWH	36	22	88	11,600
	YO3RI	82	37		77,945
	4X4RE	83	38		138,061
Zone 21	AP5B	37	26		15,183
	VU2JP	57	22	133	31,205
Zone 24	CR9AG	78	46	420	153,760
	VS6AE	38	26		16,960
Zone 25	JA2BQ	46	41	223	55,071
Zone 27	KG6DI	88	58	644	281,780
Zone 28	VS2BD	38	23	143	23 058
	PK3LC	80	63		55,913
Zone 29	VK6RU	82	46	231	88,704



Doc Stuart, at W6GRL, ran up the second-highest U.S. phone score.



W8JIN worked 38, count 'em, Zones on 14 mc, to end up with the 3rd highest c.w. score in the world.



The gang at multiple-op HC2JR. L. to r., HC2JR, HC1MK, HC2IH, and HC1AZ.

	Station	Total Countries	Total Zones	Total QSOs	Points
Zone 30	VK2EO	105	58		228,200
Zone 31	KH6IJ	83	56	702	292,734
Zone 32	ZL1MB	86	55		304,560
Zone 33	EK1AO	92	35	510	192,786
	CN8AG	24	11	116	12,110
	FA8DA	74	27		64,337
Zone 34	ST2TC	22	13	86	8,330
Zone 36	OQ5BQ			252	60,900
	VQ2GW	21	17	112	11,096
	FE8AB	78	43	512	173,756
Zone 37	VQ1CUR	30	17	184	23,876
	VQ4HJP	98	54		190,608
Zone 38	ZS5LI	66	41	303	94,160
Zone 39	VQ8AY	19	16		6,020
Zone 40	TF3EA	76	34	333	93,390

All Band, Single Operator, Phone

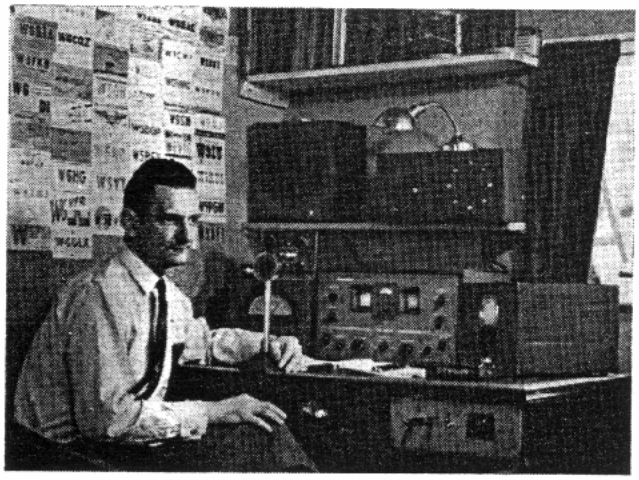
Zone 1	KL7UM	24	14	69	5,472
Zone 3	W6GRL	77	46	155	49,077
	W7HRH	15	15		1,440
	VE7HC	49	28	162	25,333
Zone 4	W4DQH	76	47		14,525
	W5HFQ	29	20	48	6,370
	W8NXF	78	39	108	31,824
	W9EWC	70	44		30,894
	W0GUV	34	25		6,018
	VE3QE	23	13		3,708
	VE4RO	49	41		19,620
Zone 5	W1ATE	94	50	221	83,664
	W2BXA	50	24		27,454
	W3LOE	91	45		47,056
	W4OM	51	26	150	31,878
	W8AVW	12	8		920
	VE1CR	53	30		24,402
Zone 7	TI2HP	71	41	184	40,880
	YS1JR	17	17		3,672
	HP1LA	28	25		17,649
Zone 8	CO7RQ	21	18		8,463
	VP2GG	12	10		1,034
Zone 9	HK4AR	62	39	260	73,932
	YV5AC	53	33		29,068
Zone 10	HC2KJ	47	30	140	28,875
	CP5FA	19	17		4,392
Zone 11	PY2CK	123	58	396	224,349
Zone 12	CE2DY	24	18	91	9,366
Zone 13	LU8CW	53	37	115	25,380
	CX3BH	41	32		12,400
Zone 14	G2DPZ	120	54	338	153,642
	ON4AZ	7	5		156
	GW2UH	24	12	61	3,780
	HB9DS	124	61	333	145,410
	EA4LA	39	22	166	28,121
	F9BO	70	23	115	24,786
	LA7Y	88	49	402	127,684
	SM4KP	64	20		25,192
	CT1FM	36	14		12,600
	DL3DO	87	48		80,730
Zone 15	I1RB	103	45		124,026
	OK2SO	50	25		18,750
	OH2NB	90	46		132,191
	I1RC (Trieste)	32	15		14,006
	ZB1AJ	25	8		2,112
Zone 20	AR8AB	17	10		2,241
	YO3RI	30	9		3,510
	4X4AA	74	37		60,939
Zone 22	VS7GR	21	13		3,638
	AP5B	37	26		15,183
Zone 24	VS6AE	15	11		1,144
Zone 28	VS2BD	20	19		2,196
	PK4DA	23	16	39	9,243
Zone 29	VK6KW	60	40	186	55,200
Zone 30	VK3VQ	26	24		4,750
Zone 31	KH6IJ	52	44	311	89,568
Zone 32	ZL4HP	64	38		96,288
Zone 33	FA8IH	68	37		37,065
	CN8BV	38	18		20,944
Zone 36	VQ2DII	63	37	218	60,300
	FQ8SN	22	17	48	5,304
	CR5UP	70	34	237	64,168
	OQ5BQ	51	22		24,642
Zone 37	VQ4SC	80	44		55,056
	MI3SC	58	33	426	25,791

CE3AG delivered the highest South American c.w. score, with 249,480 points.

	Station	Total Countries	Total Zones	Total QSOs	Points
Zone 38	ZS6TE	67	42	210	63,547
	ZS3G	25	17		20,412

Single Band, Single Operator, C. W.

	Station	Band	Total Countries	Total Zones	Points
Zone 1	KL7RZ	7 mc	6	6	708
	KL7UM	14 mc	52	25	47,047
	KL7PJ	28 mc			9,600
	VE8AS	14 mc	21	15	6,472
Zone 2	VO6X	14 mc	40	19	43,424
Zone 3	W6AM	7 mc	24	20	8,932
	W6PQT	14 mc	74	35	71,504
	W6WJX	28 mc	29	17	9,568
	W7LNG	7 mc	6	6	156
	W7ASG	14 mc	52	28	20,440
	W7IRZ	28 mc	22	20	5,717
	VE7VC	7 mc	15	16	2,852
	VE7KC	14 mc	39	26	16 705
	VE7MS	28 mc	52	27	20,066
Zone 4	W4PN	14 mc	56	27	29,382
	W4CYC	28 mc	42	23	27,105
	W5JC	7 mc	61	28	16,376
	W5KC	14 mc	44	25	14,007
	W5KC	28 mc	31	18	7,742
	W8WZ	7 mc	49	25	26,176
	W8JIN	14 mc	51	23	78,232
	W8BTI	28 mc	42	21	21,546
	W9DUY	7 mc	14	13	1,134
	W9DUY	14 mc	90	39	82,173
	W9LM	28 mc	43	22	23,725
	WØDAE	7 mc	11	11	1,100
	WØDAE	14 mc	66	27	37,293
	WØDAE	28 mc	40	21	23,485
	VE3ACS	7 mc	25	14	6,630
	VE3IJ	14 mc	52	24	24,624
	VE3BTG	28 mc	27	15	6,636
	VE4IJ	28 mc	22	20	2,604
	VE5QZ	7 mc	3	4	63
	VE5QZ	14 mc	36	23	15,930
	VE5QZ	28 mc	15	12	2,025
Zone 5	W1ZL	7 mc	28	14	8,568
	W1JYH	14 mc	66	31	34,823
	W1RY	28 mc	36	19	17,875
	W2AGO	7 mc	42	21	15,876
	W2UFT	14 mc	79	33	71,008
	W2KUW	28 mc	44	22	30,162
	W3LOE	7 mc	40	21	11,346
	W3LOE	14 mc	100	36	75 136
	W3JKO	28 mc	48	24	40,248



G2DPZ rolled up the score of 153,642, to capture 2nd place in the phone division.

11RB led the Zone 15 phone gang with a score of 124,026.

	Station	Band	Total Countries	Total Zones	Points
	W4BRB	7 mc	49	23	31,392
	W4KFC	14 mc	73	33	66,992
	W4KFC	28 mc	44	21	30,615
	VE1IM	7 mc	8	4	420
	VE1EA	14 mc	32	17	9,163
	VE1KN	28 mc	22	10	2,976
	VE2NI	7 mc	3	3	54
	VE2BW	14 mc	63	31	43,052
	VE2NI	28 mc	22	9	7,409
	W8AZD	14 mc	41	25	15,708
	W8AZD	28 mc	39	23	21,018
Zone 7	KS4AC	7 mc	3	3	132
	KS4AC	14 mc	7	6	1,573
	KS4AC	28 mc	11	9	3,400
	HP1BR	7 mc	4	5	171
	HP1BR	14 mc	23	18	4,100
	HP2RO	28 mc	34	20	32,724
	VP1AA	14 mc	5	6	902
Zone 8	CO2LN	7 mc	5	5	340
	KP4KD	14 mc	37	21	9,222
	KP4JE	28 mc	11	9	3,460
Zone 10	OA4J	14 mc	10	10	5,040
Zone 11	PY2NX	14 mc	21	14	4,305
	PY2NX	28 mc	32	22	37,098
Zone 12	CE3AG	7 mc	13	12	4,650
	CE3AG	14 mc	58	32	73,620
	CE3AG	28 mc	33	17	25,400
Zone 14	DL1YA	7 mc			1,380
	DL3DU	14 mc	60	26	39,130
	DL1FI	28 mc	26	26	24,128
	G4CP	7 mc	24	10	9,458
	G2LB	14 mc	69	34	92,906
	G3DCU	28 mc	44	26	52,570
	PAØCJH	14 mc			720
	LA6PB	7 mc			2,128
	LA6U	14 mc			35,032
	LA6PB	28 mc			3,720
	OZ1W	7 mc			1,554
	OZ7EU	14 mc			15,912
	OZ7EU	28 mc			2,620
	ON4QF	7 mc			8,440
	ON4QF	14 mc			81,969
	ON4QF	28 mc			29,332
	F9BO	7 mc	10	21	4,650
	F8IW	14 mo	35	11	11,316
	F9BO	28 mc			8,888
	SM5IZ	14 mc	55	25	35,760
	GM3AXR	7 mc	16	8	1,176
	GM3AXR	14 mc	48	28	24,244
	GM3CSM	28 mc	22	12	4,896
	GW5SL	7 mc	30	10	6,800

(*Continued on page 50*)

SECOND WORLD-WIDE DX CONTEST

(*from Page 22*)

	Station	Band	Total Countries	Total Zones	Points
	GW5SL	14 mc	43	24	17,956
	GW5SL	28 mc	32	19	12,240
	HB9BN	7 mc			1,596
	HB9EU	14 mc	63	26	40,773
	HB9DZ	28 mc	14	12	6,188
	EA6AF	7 mc			5,325
	EA6AF	14 mc			12,857
	EI9N	14 mc	36	14	29,750
	GC2CNC	7 mc	23	7	5,070
	GC2CNC	14 mc	25	6	2,542
Zone 15	OE6AA	28 mc	18	10	2,884
	OK1HI	7 mc	37	13	6,800
	OK1HI	14 mc	48	22	28,280
	OK1HI	28 mc	39	24	35,784
	HA4SA	7 mc	33	10	7,611
	HA5BF	14 mc			40,000
	HA4SA	28 mc	21	11	4,480
	OH5NF	7 mc	22	6	1,596
	OH6NR	14 mc	20	11	10,416
	OH5NF	28 mc	19	10	5,916
	I1PL	7 mc	26	9	13,475
	I1PL	14 mc	42	19	20,252
	I1KN	28 mc	19	15	8,534
	I1BCB /Trieste	14 mc	27	13	4,480
Zone 20	YO3RF	14 mc	31	12	4,687
	4X4RE	14 mc	42	18	38,820
	4X4RE	28 mc	41	20	30,134
Zone 21	MP4BAD	14 mc	57	27	52,584
Zone 24	CR9AG	14 mc	40	26	42,174
	CR9AG	28 mc	38	20	34,858
	VS6AX	14 mc	20	17	8,880
Zone 25	JA2BQ	7 mc	5	5	880
	JA2BQ	14 mc	25	22	14,570
	JA2BQ	28 mc	16	14	7,050
Zone 27	KG6DI	7 mc	8	10	4,266
	KG6DI	14 mc	49	26	45,000
	KG6DI	28 mc	31	22	57,839
Zone 28	VS2BD	14 mc	33	19	18,512
	VS2BD	28 mc	5	4	198
Zone 29	VK6RU	7 mc	4	7	759
	VK6RU	14 mc	46	20	29,928
	VK6RU	28 mc	32	19	11,016
Zone 30	VK4EL	7 mc	9	11	4,840
	VK3OP	14 mc	68	30	79,674
	VK3OP	28 mc	10	10	3,120
	VK7GW	28 mc	30	18	16,224
Zone 31	KH6IJ	7 mc	12	11	8,970
	KH6IJ	14 mc	51	26	62,370
	KH6IJ	28 mc	20	19	35,334
Zone 32	ZL4GA	7 mc	13	13	7,332
	ZL4GA	14 mc	44	27	54,883
	ZL4GA	28 mc	14	14	15,564
Zone 33	CT3AV	14 mc	28	14	36,120
	EK1AO	7 mc	19	5	4,896
	EK1AO	14 mc	47	20	39,597
	EK1AO	28 mc	26	10	26,028
Zone 36	FE8AB	7 mc	12	6	1,044
	FE8AB	14 mc	37	24	64,111
	FE8AB	28 mc	29	13	13,736

	Station	Band	Total Countries	Total Zones	Points
Zone 37	MI3AB	14 mc	62	30	66,240
	MD4GC	14 mc	30	21	19,074
	CR7AF	14 mc	19	14	14,091
	VQ4SGC	14 mc	39	21	17,160
Zone 38	ZS5LI	7 mc	6	6	384
	ZS6OW	14 mc	54	28	79,704
	ZS5U	28 mc	32	14	12,604
	ZS3R	14 mc	6	8	924
Zone 40	TF3EA	7 mc	18	5	805
	TF3EA	14 mc	38	19	32,091
	TF3EA	28 mc	20	10	7,530

Single Band, Multiple Operator, Phone Winners

Zone 3	W6SA	14 mc	52	26	22,698
	W6NIG	28 mc	32	22	10,980
Zone 4	W5CD	28 mc	3	2	45
	W5CD	14 mc	1	1	6
	W8YPV	28 mc	41	18	10,915
Zone 5	W1RTB (W1IPQ)	28 mc	29	16	7,245
Zone 7	HP2RO (HP2RB)	28 mc	33	19	24,232
Zone 9	HK4JO	14 mc	25	15	8,120
Zone 10	HC2JR	7 mc	7	5	144
	HC2JR	14 mc	43	23	35,970
	HC2JR	28 mc	38	21	51,920
Zone 14	HB9P	7 mc	18	6	1,056
	HB9P	14 mc	40	18	12,006
	HB9P	28 mc	35	19	7,222
	EI3W	14 mc	27	12	8,775
Zone 15	I1AUH	7 mc	32	18	225
	I1AUH	14 mc	28	13	4,510
	I1AUH	28 mc	11	4	18,650
Zone 28	VS1DZ	14 mc	24	14	5,282
	VS1DZ	28 mc	26	16	14,700
Zone 36	OQ5LL (OQ5BU) (OQ5KL) (OQ5PW) (OQ5VD) (OQ5NK)	28 mc	65	25	54,450

All Band, Multiple Operator, C. W. Winners

Zone 3	W6SZY W6SA	141	74	474	291,110
Zone 4	K8AIR	87	58		80,185
	VE4RO	127	76	320	179,858
Zone 5	W2BXA W2LPE	135	64	483	272,431
Zone 10	HC2JR	75	49	606	221,960
Zone 15	HA5B	33	15		21,504
Zone 20	4X4BX 4X4AO	63	27		62,820

All Band, Multiple Operator, Phone Winners

Zone 3	W6SA	84	48	182	60,060
Zone 4	W5CD W5PXF	4	3		84
	VE3JU VE3BHS	40	24		11,264

	Station	Band	Total Countries	Total Zones	Points
Zone 10	HC2JR	88	49	504	196,869
Zone 13	CX3CS	57	39		60,192
Zone 14	ON4PJ	41	21		15,128
	HB9P	93	43	223	53,584
	HB9FM				
	HB9KX				
	HB9KU				
	HB9DU				
	EA2CQ	62	30		29,248
Zone 15	I1AUH	71	35		52,788
Zone 28	VS1DZ	42	22		31,296

(To be concluded next month)

V.H.F.—U.H.F.

(from page 39)

receiver, provided the low-powered signal was stable enough to stay within the 10-kc band of the communications receiver. This means that a crystal controlled 1/2-watt transmitter would be as easy to copy as a 100-watt modulated oscillator splashing over a 2 mc band! It isn't at all hard to get a half watt of stable power on 420. Present-day receiving type tubes can deliver this much sock. And the receiver need not be complex—a simple three-tube converter in front of your regular communications receiver should suffice.

If this all seems hard to take, look at the results obtained by G5BY and G3EJL using low-powered transmitters and simple converters working into standard communications receivers. G5BY's log shows a total of 7 QSOs with G3EJL over that 119-mile path, to date!

The problem of receiver stability is a tough one, but it can be licked by fairly simple means. G5BY uses a 2-meter oscillator tripling to 420 (no extra multiplier tube was needed) as the local oscillator. G3EJL uses a crystal-controlled local oscillator and tunes the i.f. receiver—an HRO. These fellows habitually use c.w. on 420! They are confining operations to the section of the band between 432 and 438 mc, the third harmonic of their two-meter band. Their success has produced many new 420-mc converts, and from the talk heard on the two-meter band, most of the stations in England are going on "70 cms" as soon as possible—all with crystal-controlled transmitters and communications-bandwidth receivers!

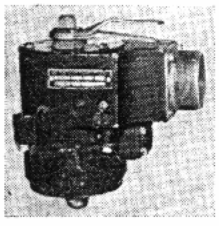
Ye Ed would like to find out how you fellows feel on this subject. It's easy to adopt a "hands off" policy and wait to see how things develop. But there are a great many hams now thinking seriously about getting on 420 who would like advice on the best way to get started on the band. If we suggest a simple converter into a communications receiver, there will be many disappointments when the experimenters find that they are not able to copy most of the signals now on the band. Nor is there much incentive to build a stabilized transmitter when the stations you aim to work are using radar receivers or super-regens. The only answer to that situation is higher power—and it isn't easy to get it crystal-controlled. So let's hear from you. . . .

And while we're at it, shall we settle the polarization problem, too? ! ! !

Two Meter Notes

Samples of early-season DX collected at random:

May 1: A good opening across the mountains of central Pennsylvania, during which W3RUE in Pittsburgh caught W2NLY and W2PAU. Ted wants to know "when are the stations in Delaware going to



¾ RPM ANTENNA ROTATOR MOTOR — High torque, reversible motor—operates directly from 110 Volt 60 cycle by use of condenser. Light weight, quiet running, ruggedly built, positive stop, easily mounted. Normally operates from 110 V. 400 cycle. With instructions, complete—NEW . . . **$4.95**
10 MFD 400 Volt Cond. $1.00 SPST Momentary Switch 35¢ DPDT Momentary Switch 75¢ Resistor, 100 ohm 25 Watt 50¢ 4 Wire Cable .05¢ per Ft. COMPLETE KIT OF PARTS: Motor, Cond., SPST Switch, and Resistor **$5.95**

BC-645-A TRANSCEIVER—
110 VOLT TRANSFORMER & CHOKE

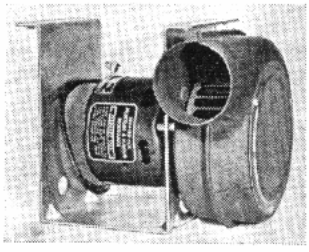
BC-645-A Transceiver, 15 tubes, ideal for conversion to 460 MC. Citizens Band. Frequency coverage 435 to 500 MC. With conversion instruction—NEW and Boxed **$14.95**
TRANSFORMER for BC-645-A — 110 Volt 60 cycle input; output 400 Volt 150 MA. after filter. 12, 9, and 6 V. AC. 4 amps and 5 V. 3 amps. No. CH-645 . . . **$6.95**
CHOKE—15 Hy. 150 MA. Order No. CH-646 . . . . . **$2.95**
PE-101 DYNAMOTOR—13/26 V. input **$2.95**

New Transformers and Chokes:

TRANSFORMERS (Cased) 115 VOLT 60 CYCLE PRIMARIES:
OUTPUT: 750-0-750 V.A.C. (600 V.D.C. after choke input filter at 250 MA.) Includes 6.3 V.A.C. winding at 5 amps and 5.0 V.A.C. winding at 4 amps. CH-106 . . . . . **$8.75**
OUTPUT: 600-0-600 V.A.C. at 250 MA. 12 V.A.C. at 3 amps: 12 V.A.C. at 3 amps: and 5 V.A.C. at amps. Designed for Army surplus transmitters. CH-108 . . . . . **$7.75**
OUTPUT: 250-0-250 V.A.C. at 60 MA. 24 V.A.C. at .6 amps: 6.3 V.A.C. at .6 amps. Designed for Army surplus Receivers. CH-109 . . . . . **$3.50**

TRANSFORMERS—110 VOLT 60 CYCLE PRIMARIES:
Sec. 12 V. 1 amp. . . **$1.50** Sec. 24 V. .5 amp. . . **$1.50**
Sec. 24 V. 1 amp. . . **1.95** Sec. 36 V. 2.5 amp. . . **2.95**
Sec. 24 V. 4½ amp. **3.95** Sec. 14-14 or 28 V. 7½ or 15 amp. . . **4.95**
Sec. 24 V. 2 amp. . . **2.25**

CHOKES (Cased)
CH-115—8 Henries at 500 MA. filter choke, 5,000 volt insulation **$10.95**
CH-116—5-20 Henries at 500 MA. swinging choke, 5,000 volts insulation **$10.95**
CH-121—13 Henries at 250 MA. filter choke, 1,500 volt insulation **$4.95**



BLOWERS:

115 Volt 60 cycle Blower (illustrated) Approx. 100 Cubic Ft. dis. 3¼" intake, 2" outlet. Motor size: 3½" x 3". 1525 RPM. Complete with mounting bracket. Gov't. surplus. Brand NEW. Order No. CQ-3604 **$7.95**

24 VOLT DC or 36 VOLT AC BLOWER—6" intake, 3" outlet. Approx. 200 Cu. Ft. Dis. Also has adapter for Dual outlet. Unused. Price **$5.95**
6 VOLT DC - AC BLOWER — Approx. 25 Cubic Ft. Dis. 1¾" intake, Dual outlet 1½". Complete with hose. Used for car defroster **$3.95**

DYNAMOTORS:

INPUT:	OUTPUT:	STOCK NO.:	PRICE:
9 V. DC. @ 6 V. DC.	450 V. 60 MA. 275 V. 50 MA.	DM-9450 w/Blower	$3.95
12 or 24 V. DC.	440 V. 200 MA. & 220 V. 100 MA.	D-104	9.95
12 V. DC.	600 V. 300 MA.	BD-86	7.95
PERMANENT MAGNET FIELD DYNAMOTORS			
12 or 24 V. DC.	275 V. 110 MA.	USA/0516	3.95
12 or 24 V. DC. @ 6 V. DC.	500 V. 50 MA. 240 V. 50 MA.	USA/0510	2.95

WHIP ANTENNA MAST BASES—INSULATED:

MP-132—(Illustrated) 1" heavy coil spring, 2" insulator. Overall length: 11½". Wt.: 2¾ lbs. Price **$3.95**
MP-22—Spring action direction of bracket. 4" x 6" mounting. Price **$2.95**

MAST SECTIONS FOR ABOVE BASES:
Tubular steel, copper coated, painted 3 foot sections, screw-in type. MS-53 can be used to make any length with MS-52-51-50-49 for taper. Price—any section **50¢ .Ea.**
MS-54 or 55. Larger sections than MS-53 **75¢ Ea.**
BAG BG-56 for carrying 5 mast sections . . **50¢ Ea.**

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When writing to our advertisers say you saw it in CQ

Results, CQ's Second World-Wide DX Contest

Here is part two of the results, continued from last month. Now you can see what we meant when we said it was too big to run in a single issue!

Single Band, Single Operator, Phone

	Station	Band	Total Countries	Total Zones	Points
Zone 1	KL7UM	14 mc	24	14	5,472
	KL7HI	28 mc	5	5	170
Zone 2	VO6EP	14 mc	2	1	3
Zone 3	W6DI	14 mc	50	22	24,624
	W6EPZ	28 mc	24	19	4,386
	W7CUD	14 mc	13	13	1,430
	W7LBN	28 mc	16	17	1,430
	VE7HC	14 mc	48	27	24,675
	VE7HC	28 mc	1	1	2
Zone 4	W4HA	14 mc	23	16	3,198
	W4NBV	28 mc	53	28	23,571
	W5JUF	14 mc	34	23	6 555
	W5KC	28 mc	21	14	2 030
	W8VLK	14 mc	36	19	8 745
	W8NXF	28 mc	51	33	15,022
	W9EWC	14 mc	30	22	7,436
	W9EWC	28 mc	40	22	7,936
	W0IINF	14 mc	17	10	1,431
	W0DBC	28 mc	31	20	4,743
	VE3HB	14 mc	23	13	3,708
	VE3BNQ	28 mc	38	16	12 204
	VE4NO	14 mc	31	20	9 180
	VE4RO	28 mc	23	20	6,450
Zone 5	W1CJK	14 mc	41	20	8,906
	W1BEQ	28 mc	57	26	30 710
	W2BXA	14 mc	49	23	26,712
	W2ZVS	28 mc	37	20	16,017
	W3LOE	14 mc	49	26	16,350
	W3LOE	28 mc	42	19	7,808
	W4OM	14 mc	41	25	10 362
	W4KKM	28 mc	36	18	11,232
	VE2IZ	28 mc	25	16	3,895
Zone 6	XE1AC	14 mc	50	26	17,480
Zone 7	TI2HP	14 mc	34	23	9,291
	YN4CB	14 mc	7	8	900
	TI2HP	28 mc	37	18	9,090
	KS4AC	28 mc	5	5	380
	KZ5DE	28 mc	2	2	16
	HP1TS	14 mc	36	20	18.894
	HP1LA	28 mc	19	15	8,194
Zone 8	CO2IC	14 mc	21	14	4.235
	VP6SD	28 mc	46	23	48,921
Zone 9	HK4AR	14 mc	22	15	7,326
	HK4CO	28 mc	54	24	47,034
	YV5BZ	14 mc	9	9	4,410
Zone 10	HC2KJ	7 mc	3	2	10
	HC2KJ	14 mc	18	14	5 312
	HC2KJ	28 mc	26	14	8,280
	CP5FB	28 mc	30	19	15,435

Single Band, Single Operator, Phone

	Station	Band	Total Countries	Total Zones	Points
Zone 11	PY2CK	14 mc	60	31	49 049
	PY2CK	28 mc	63	27	53 100
	ZP5BL	28 mc	55	25	67,680
Zone 12	CE2DY	7 mc	2	2	28
	CE2DY	14 mc	19	14	4,488
	CE4BP	28 mc	32	21	15,635
Zone 13	LU8CW	14 mc	15	12	2,565
	LU8CW	28 mc	38	25	11,781
	CX3BH	14 mc	18	15	5.181
	CX3BH	28 mc	23	17	12,400
Zone 14	G2DPZ	7 mc	16	6	638
	G2DPZ	14 mc	55	25	30 660
	G2PU	28 mc	40	23	44,511
	ON4AZ	14 mc	1	1	2
	ON4AZ	28 mc	6	4	120
	GW4CX	28 mc	33	23	8,904
	HB9DS	7 mc	15	6	693
	HB9DS	14 mc	59	29	25.008
	HB9DS	28 mc	50	26	35,568
	PA0RU	28 mc	29	17	9.154
	EA4LA	28 mc	39	22	28,121
	GM3DZB	28 mc	46	25	14,910
	F9BO	7 mc	4	2	24
	F9BO	14 mc	30	12	4,472
	F9BO	28 mc	36	17	7,155
	LA7Y	7 mc	22	9	3,813
	LA7Y	14 mc	37	23	34.620
	LA7Y	28 mc	20	17	11,132
	SM4KP	7 mc	3	2	12
	SM4KP	14 mc	38	17	7,755
	SM4KP	28 mc	37	25	7,770
	OZ3Y	28 mc	24	15	28,8 0
	CT1NT	14 mc	19	8	2,970
	CT1NT	28 mc	21	7	1,960
	DL1FK	14 mc	32	23	5,247
	DL3DO	28 mc	34	22	22,176
Zone 15	OK1HI	14 mc	31	12	8,643
	OK1FF	28 mc	43	23	31,492
	HIARU	14 mc	4	2	18
	OH2NB	14 mc	42	23	34.775
	OH2NB	28 mc	33	18	21,267
	HA5BF	14 mc	24	8	9,636
	MF2AA	28 mc	16	13	1,972
	OE6BB	14 mc	21	4	1,750
Zone 20	AR8AB	14 mc	4	4	84
	AR8AB	28 mc	14	8	1,584
Zone 22	VS7GR	7 mc	1	1	0
	VS7GR	14 mc	21	13	3,638
Zone 24	CR9AG	28 mc	32	22	17,928
	VS6AM	28 mc	10	7	561
Zone 26	XZ2SY	14 mc	49	25	30,046

Kurt Wydler at HB9DS, one of the biggest signals in Zone 14.

	Station	Band	Total Countries	Total Zones	Points
Zone 28	VS2BD	14 mc	16	13	1,537
	VS2BD	28 mc	4	3	56
	PK3MR	28 mc	15	11	2,340
	PK4KS	28 mc	37	21	19,024
Zone 29	VK5AS	28 mc	57	25	49,446
	VK6KW	14 mc	28	21	15,435
	VK6KW	28 mc	32	19	12,087
Zone 30	VK2WD	14 mc	19	15	2,856
	VK3LN	14 mc	32	30	16,214
	VK7LZ	28 mc	16	15	2,821
Zone 31	KH6IJ	14 mc	24	20	14,388
	KH6IJ	28 mc	28	22	30,300
Zone 32	ZL4HP	14 mc	36	20	20,888
	ZL1HP	28 mc	28	18	26,266
Zone 35	ZD4AH	28 mc	30	17	9,071
	FF8PG	28 mc			untabulated
Zone 36	VQ2GW	14 mc	18	13	1,022
	FQ8SN	14 mc	14	9	2,070
	FQ8SN	28 mc	8	8	736
	CR5UP	14 mc	35	19	20,088
	CR5UP	28 mc	35	15	12,250
Zone 37	VQ4SC	7 mc	3	1	8
	VQ4SC	14 mc	29	18	7,708
	VQ4IMS	28 mc	67	28	80,370
	MI3SC	14 mc	21	17	2,736
	MI3SC	28 mc	37	16	23,055
	VQ5ALT	28 mc	13	8	1,218
	CR7AF	14 mc	11	10	1,092
Zone 38	ZS3G	14 mc	14	9	3,151
	ZS3G	28 mc	23	16	13,611
	ZS5U	7 mc	5	5	110
	ZS6JS	14 mc	44	27	39,973
	ZS6OV	28 mc	48	30	56,550
Zone 40	TF3SF	28 mc	4	2	36

Single Band, Multiple Operator, Phone Winners

Zone 3	W6SZY	7 mc	31	21	12,012
	W6GAL (W6GHU)	14 mc	81	34	88,665
	W6OEG	28 mc	38	27	20,215
Zone 4	WØJPH (WØGOP)	28 mc	32	20	14,612
	VE4RO	7 mc	35	22	10,659
	VE4RO	14 mc	53	31	36,892
	VE4RO	28 mc	39	23	16,182
Zone 5	W2BXA	7 mc	37	17	12,690
	W2BXA	14 mc	60	28	65,648
	W2FBA	28 mc	45	24	34,431
	W3NKI	14 mc	58	27	33,150
	W4EZL	28 mc	44	23	28,408
Zone 8	KP4ID (KP4DJ)	28 mc	1	3	75
Zone 10	HC2JR	7 mc	10	9	4,693
	HC2JR	14 mc	33	22	42,625
	HC2JR	28 mc	32	18	38,400
Zone 14	EA3EP (EA3DY)	14 mc	31	18	29,000
Zone 15	HA5B	7 mc	22	12	5,168
	HA5B	14 mc	26	11	10,952
Zone 20	4X4BX (4X4AO)	14 mc	54	23	50,512
	4X4BX (4X4AO)	28 mc	9	4	546

List of Entrants

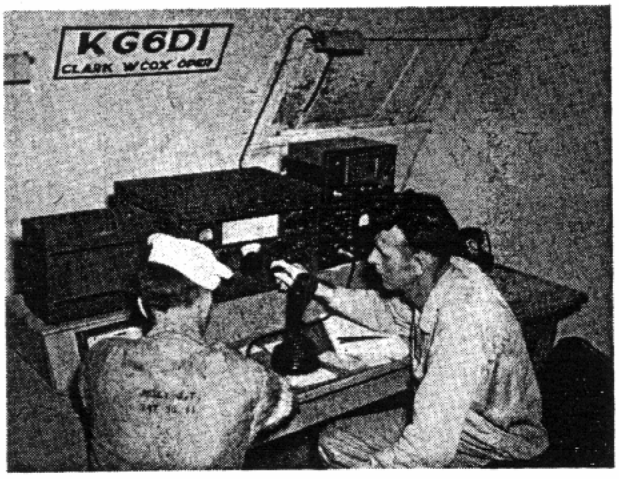
All Band, Single Operator, C. W. Entries

Zone 1 KL7PJ, 75,735; KL7CZ, 17,591; KL7KQ, 7,840.

Zone 3 W6GRL, 190,080; W6RM, 186,154; W6IBD, 116,602; W6EPZ, 95,256; W6OMC, 93,790; W6CTL, 73,008; W6MVQ, 62,828; W6BAM, 55,338; W6ATO, 50,125; W6VE, 42,480; W6SRF, 37,189; W6RXV, 30,030; W6CQK, 28,105; W6BJU, 26,280; W6NKR, 22,327; W6KEK, 17,160; W6EFM, 15,570; W6AMO, 13,680; W6QDE, 13,668; W6YC, 11,842; W6LWC, 11,220; W6AM, 9,476; W6MUO, 9,204; W6CHV, 8,424; W6MI, 8,370; W6WWQ, 7,636; W6TDO, 5,626; W6UQQ, 5,502; W6ETJ, 4,025; W6WPI, 3,936; W6GPB, 3,895; W6EJA, 3,850; W6PCP, 3,280; W6VAT, 2,628; W7IRZ, 11,041; W7NLI, 10,830; W7LNG, 6,600; W7BGH, 4,860; W7ENA, 4,004; W7HJC, 1,431; VE7KC, 29,735; VE7EH, 8,352.

Zone 4 W4KVX, 172,466; W4DQH, 66,430; W4NNJ, 2,025; W4KMS, 1,326; W5LVD, 107,688; W5KC, 53,130; W5FNA, 43,960; W5MMD, 32,204; W5PKE, 28,200; W5LGS, 12,483; W5CD, 10,528; W5NTT, 1,271; W5CEW, 486; W8JIN, 306,189; W8BTI, 186,648; W8DAW, 100,825; W8LEA, 50,941; W8CCJ, 14,190; W8DAE, 11,484; W8DQC, 10,502; W8NSS, 10,065; W8PM, 7,378; W8SDR, 7,280; W8KC, 5,916; W8BWS, 3,741; W8BUM, 3,654; W8MMC, 1,155; W9IU, 224,925; W9DUY, 206,150; W9LM, 161,814; W9RQM, 88,830; W9ROM, 67,770; W9NH, 42,496; W9JNB, 29,610; W9NZZ, 24,080; W9HUZ, 19,460; W9KNK, 17,775; W9CIA, 16,461; W9ENY, 14,364; W9AEW, 5,586; W9INL, 2,501; W9WEN, 2,346; W9KMN, 1,925; W9QLW, 950; WØDAE, 147,136; WØCU, 43,248; WØVCR, 38,784; WØFGW, 10,125; WØRNL, 8,427; WØDEA, 3,818; VE5QZ, 32,922; VE6AO, 15,544.

Zone 5 W1RY, 117,034; W1CJH, 83,578; W1JYH, 46,680; W1CJK, 42,840; W1AXA, 39,832; W1PDF, 30,516; W1QOG, 17,457; W1EQ, 16,517; W1EOB, 13,778; W1DIT, 12,351; W1BOD, 12,283; W1ODW, 9,108; W1EWF, 7,685; W1AB, 6,579; W1AQE, 5,838; W1DDO, 3,900; W1QMJ, 3,696; W1ONP, 3,465; W1ORV, 2,112; W1RKB, 684; W1PLJ, 12; W2QCF, 128,790; W2MA, 47,352; W2GNQ, 40,920; W2CGJ, 34,686; W2WZ, 34,112; W2EMW, 26,754; W2EWT, 22,950; W2URX, 17,100; W2QCP, 12,166; W2AIS, 10,519; W2ICO, 10,175; W2TXB, 6,192; W2RHQ, 4,590; W2LTP, 2,760; W2UJJ, 1,800; W2BO, 1,781; W2SLU, 882; W2EYZ, 585; W2AQX, 135; W3LOE, 289,120; W3JTK, 66,780; W3JKO, 64,785; W3ARK, 42,648; W3GHD, 31,436; W3BEN, 27,160; W3NA, 19,272; W3NOH, 15,120; W3ADZ, 13,915; W3KQD, 7,008; W3OVQ, 4,320;



KG6DI could be found at the bottom of many a pile-up.

W3AFU, 4,218; W3CWD, 3,485; W3FDJ, 465; W4KFC, 310,184; W4TO, 92,232; W4FPK, 55,074; W4DXI, 23,895; W4EV, 21,294; W4AIT, 18,920; W4GG, 11,972; W4VE, 7,540; W4EPA, 2,956; W4JUY, 429; VE1EA, 16,660; VE1IM, 9,700; VE1EK, 8,424; VE2NI, 43,052; VE2BK, 5,450; VE3AEJ, 198; W8AZD, 73,858; W8AVW, 5,504.

Zone 7 KZ5DE, 49,322; KZ5WZ, 18,921; KS4AC, 12,207; HB1BR, 13,248.

Zone 8 KV4AA, 105,203; KP4JE, 15,200; KP4KD, 13,104.

Zone 11 PY2NX, 72,090; PY1GJ, 21,736.

Zone 12 CE3AG, 249,480; CE4AD, 46,177; CE2DY, 28,980.

Zone 13 CX3CS, 211,420; VP8AI, 16,296; LU7CD, 55,770; LU5BM, 47,731; LU6AX, 2,848.

Zone 14 G4CP, 147,888; G5YV, 143,385; G2VD, 142,232; G2DLJ, 63,854; G8KP, 62,684; G3AZ, 54,718; G3BPP, 25,320; G2AO, 19,383; G2AJB, 16,872; G2BVN, 10,710; G3ATU, 9,660; G6CL, 9,460; G3DES, 6,656; G8DA, 4,950; G6NK, 2,559; F9BO, 62,992; F8NB, 40,426; F8TM, 27,208; F9BB, 6,016; F8LD, 4,950; F8TQ, 4,023; F8ZY, 810; F9IL, 140; SM4KP, 30,094; SM6ID, 28,221; SM5UN, 22,650; SM5OL, 11,180; SM3ARE, 10,032; SM5CO, 11,037; SM7UT, 9,568; SM6DA, 8,221; SM6AIPB, 8,010; SM5LL, 7,959; SM5WJ, 6,768; SM5PV, 5,700; DL7AA, 120,300; DL1FI, 85,904; DL1KB, 44,176; DL1IB, 36,630; DK8AV, 34,144; DL7AF, 32,212; DL1AU, 30,744; DL7BK, 19,936; DL1BF, 19,870; DL1XS, 15,594; DL7DA, 15,128; DL7AH, 14,690; DL7AD, 10,716; DL7BX, 6,968; DL7AI, 6,390; DL1FV, 5,358; DL7AB, 2,484; DL7AU, 1,040; DL7CX, 594; LA6U, 71,171; LA6PB, 41,106; LA7WA, 27,456; LA4K, 938; LA7BA, 918; GI3BZR, 11,868; GW5SL, 107,124; GW3ZV, 231,846; GC2CNC, 15,311; GM3AXR, 50,344; GM6RV, 34,618; GM3CSM, 22,220; OZ2EU, 42,000; ON1W, 30,261; OZ2NU, 1,760; PAØUN, 343,728; PAØPN, 28,815; PA0LB, 1,980; ON4QF, 302,994; ON4AZ, 58,338; ON4UF, 6,000; ON4SQ, 3,465; ON4EQ, 2,624; HB9IP, 254,400; HB9DZ, 26,424; HB9EQ, 17,071; HB9BJ, 5,760; HB9CI, 1,550; EA1AB, 42,842; EA1BC, 26,730; EA5AF, 400; EA6AF, 34,816; LX1AS, 8,645; EI9J, 66,913; OY3IGO, 300.

Zone 15 OE1CD, 36,064; OE1AD, 30,096; OE5AR, 23,606; OE2CC, 1,000; OK1HH, 202,764; OK1LM, 51,525; OK1RW, 41,796; OK1NS, 37,515; OK3AL, 35,672; OK2SO, 31,773; OK1EA, 21,406; OK1AW, 20,236; OK1XQ, 14,768; OK2MA, 6,486; OK1CX, 5,564; OK1IA, 3,933; OK1KY, 3,485; OK1CT, 2,520; OK1SV, 2,520; OK1SK, 2,560; OK1UY, 1,768; OK1VB, 2,550; OK1WX, 10,146; OK1IJ, 1,700; OK1VW, 760; OK2BX, 700; OK1GM, 684; HA4SA, 61,180; HA5BF, 30,051; OH5NF, 35,616; OH2SD, 1,550; OH2TC, 1,127; OH6EV, 42; ZB1AJ, 3,042; I1PL, 119,860; I1AIV, 70,143; I1KN, 68,375; I1IZ, 31,160; I1ER, 429; IS1FIC, 1,080.

Zone 20 SVØWH, 11,600; YO3RI, 77,945; YO2BU, 22,540; YO3RF, 16,434; YO3AG, 9,550; YO7WL, 7,360; 4X4RE, 138,061; 4X4CZ, 56,170.

Zone 22 AP5B, 15,183; VU2JP, 31,205.

Zone 24 CR9AG, 153,760; VS6AE, 16,960; VS6BA, 10,491.

Zone 25 JA2BQ, 55,071.

Zone 27 KG6DI, 281,780.

Zone 28 VS2BD, 23,058; PK3LC, 55,913; PK3MR, 40,824.

Zone 29 VK6RU, 88,704.

Zone 30 VK2EO, 228,200; VK3OP, 114,342; VK4RC, 56,280; VK7LZ, 6,327.

Zone 31 KH6IJ, 292,734; KH6QH, 199,234; KH6CD, 135,072; KH6BA, 73,248.

Zone 32 ZL1MB, 304,560; ZL4GA, 201,375; ZL1MQ, 15,480; ZL3CP, 1,782.

Zone 33 EK1AO, 192,786; CN8AG, 12,110; FA8DA, 64,337; FA8IH, 55,352.

Zone 36 OQ5BQ, 60,900; FE8AB, 173,756.
Zone 37 VQ4HJP, 190,608; VQ4SC, 3,441.

Zone 38 ZS5LI, 94,160; ZS6OS, 61,200.

Zone 40 TF3EA, 93,390; TF3MB, 10,434; TF5TP, 7,661.

7 Mc, Single Operator, C. W. Entries

Zone 1 KL7RZ, 708; KL7PJ, 636.

Zone 3 W6AM, 8,932; W6ANN, 7,881; W6RXV, 4,147; W6CTL, 2,976; W6NKR, 1,470; W6YC, 1,380; W6SRF, 1,196; W6QDE, 1,180; W6NEX, 1,159; W6EPZ, 700; W6AMO, 624; W6BAM, 608; W6EJA, 588; W6MUO, 588; W6CQK, 520; W6KEK, 500; W6WWQ, 210; W6MI, 187; W6BJU, 36; W6ALQ, 12; W7LNG, 156; VE7VC, 2,852; VE7KC, 96.

Zone 4 W5JC, 16,376; W5BK, 8,640; W5CKY, 8,120; W5PKG, 2,560; W5FNA, 713; W5KC, 480; W5NTT, 169; W8WZ, 26,176; W8JIN, 6,477; W8BTI, 1,872; W8DAW, 1,113; W8DAE, 1,060; W8BWS, 48; W8CCJ, 2; W9DUY, 1,134; W9LM, 697; W9RQM, 230; W9QLW, 117; WØDAE, 1,100; WØCU, 608; WØFGW, 132; VE5QZ, 63; VE3ACS, 6,630; VE3IR, 3,072; VE3IJ, 735; VE3BTG, 195.

Zone 5 W1ZL, 8,568; W1DIT, 6,768; W1QMJ, 3,442; W1RY, 2,482; W1AXA, 1,300; W1RBQ, 1,248; W1BOD, 1,128; W1CJH, 966; W1JYH, 690; W1EOB, 558; W1ODW, 357; W1MRQ, 225; W1RKB, 104; W1RHU, 90; W2AGO, 15,876; W2WC, 10,199; W2AIS, 1,950; W2EWT, 1,628; W2EMW, 1,587; W2YDG, 987; W2QCF, 825; W2MA, 408; W2GNQ, 240; W2BO, 195; W2GVZ, 108; W2CGJ, 72; W3LOE, 11,316; W3MQY, 11,025; W3ORU, 8,428; W3ARK, 4,300; W3JKO, 1,757; W3PDX, 714; W3BEN, 627; W4BRB, 31,392; W4KFC, 14,274; W4FPK, 5,547; W4TO, 4,972; W4OBQ, 2,424; W4OM, 1,104; W4EV, 2; VE1IM, 420; VE1EA, 112; VE2NI, 54.

Zone 7 KS4AC, 132; HP1BR, 171.

Zone 12 CE3AG, 4,650; CE2DY, 408.

Zone 14 G2VD, 6,992; G3AZ, 3,936; G2AJB, 1,080; G3BVN, 368; F8TM, 1,340; F9BO, 4,650; SM4AWS, 609; SM5OL, 121; SM6AFK, 56; SM7UT, 32; DL1FK, 2,846; DL1YA, 1,380; DL1XS, 945; DL1FI, 76; LA6PB, 2,128; LA6U, 10,025; GW5SL, 6,800; GI3BZR, 1,000; GM3CSM, 1,296; GM3AXR, 1,176; OZ1W, 1,554;

OZ2EU, 273; ON4QF, 8,440; ON4AZ, 2,816; HB9P, 11,583; HB9BN, 12,544; HB9EQ, 40; EA6AF, 5,325; EI9J, 3,996; GC2CNC, 5,070.

Zone 15 OK1HI, 6,800; OK2SO, 3,008; OK1AW, 2,460; OK1SK, 408; OK2UD, 198; OK1KY, 16; OK1XQ, 6; HA4SA, 7,611; OH5NF, 1,596; OH3PK, 640; OH6NR, 100; I1PL, 13,475; I1KN, 2,880.

Zone 25 JA2BQ, 880.

Zone 27 KG6DI, 4,366.

Zone 29 VK6RU, 750.

Zone 30 VK4EL, 4,840; VK5FM, 6.

Zone 31 KH6IJ, 8,970; KH6QH, 4,332; KH6CD, 715; KH6BA, 600.

Zone 32 ZL4GA, 7,332; ZL2MM, 3,969; ZL1MQ, 858.

Zone 33 EK1AO, 4,896.

Zone 36 FE8AB, 1,044.

Zone 38 ZS5LI, 384.

Zone 40 TF3EA, 805; TF3ZM, 560; TF5TP, 130.

14 Mc, Single Operator, C. W. Entries

Zone 1 VE8AS, 5,472; KL7UM, 47,047; KL7PJ, 22,344; KL7PB, 5,132; KL7KQ, 2,829.

Zone 2 VO6X, 43,424; VO6EP, 28,520.

Zone 3 W6PQT, 71,504; W6MVQ, 59,950; W6FSJ, 40,050; W6EPZ, 36,670; W6EHV, 26,255; W6CQK, 20,562; W6CTL, 20,546; W6BAM, 19,600; W6JZP, 18,924; W6SRF, 13,578; W6LDD, 13,176; W6MHB, 13,098; W6EYC, 10,545; W6NKR, 10,478; W6BJU, 8,586; W6JWL, 6,435; W6NXV, 5,586; W6QDE, 4,875; W6WWQ, 3,750; W6KEK, 3,600; W6MUO, 2,584; W6TI, 2,312; W6YC, 2,000; W6AMO, 1,541; W6PCP, 1,540; W6IPH, 1,323; W6RXV, 1,246; W6ALQ, 1,144; W6BIL, 973; W6EJA, 714; W6UQQ, 495; W6MI, 392; W6ETJ, 315; W6AM, 3; W7ASG, 20,440; W7AC, 9,728; W7LNG, 5,200; W7LEV, 4,730; W7NLI, 4,089; VE7KC, 16,705.

Zone 4 W4PN, 29,382; W4NNJ, 1,620; W4KMS, 594; W5KC, 14,007; W5MMD, 11,832; W5FNA, 12,717; W5PKE, 8,235; W5CD, 1,534; W5NTT, 524; W5CEW, 96; W8JIN, 78,232; W8BRA, 60,775; W8BTI, 57,630; W8HFE, 43,674; W8DAW, 19,296; W8LEA, 9,882; W8PXP, 8,162; W8QZV, 3,528; W8CLH, 874; W8HA, 630; W8DAE, 600; W8KC, 522; W8CCJ, 361; W8BWS, 1,404; W9DUY, 82,173; W9LM, 48,312; W9VW, 81,760; W9TQL, 28,512; W9FID, 26,714; W9FNR, 17,633; W9IUZ, 17,472; W9RQM, 17,408; W9NII, 12,998; W9IQF, 12,120; W9FAU, 3,624; W9JNB, 1,674; W9ABA, 459; W9QLW, 300; WØDAE, 37,293; WØCU, 18,910; WØDU, 13,464; WØERI, 10,692; WØCDP, 3,822; WØTKX, 3,276; WØCDV, 2,436; WØFGW, 1,320; WØEWF, 36; VE5QZ, 15,930; VE3IJ, 24,624; VE3HB, 6,532; VE3BTG, 5,410; VE3BYJ, 130.

Zone 5 W1JYH, 34,823; W1RY, 23,680; W1DQH, 22,185; W1MUN, 19,602; W1PDF, 16,120; W1CJK, 8,906; W1EOB, 6,032; W1AXA, 5,832; W1DHO, 5,328; W1AB, 4,860; W1AQE, 4,752; W1APA, 1,782; W1BOD, 1,600; W1ODW, 943; W1ONP, 240; W1RKB, 250; W1QMJ, 6; W2UFT, 71,008; W2IYO, 64,782; W2RQH, 45,212; W2QCF, 28,840; W2CSO, 26,356; W2ZZA, 24,846; W2ZA, 17,974; W2EMW, 15,300; W2PZM, 14,074; W2URX, 13,462; W2EWT, 12,348; W2AZS, 10,836; W2ICO, 10,175; W2MA, 8,262; W2GNQ, 8,094; W2TXB, 6,192; W2CGJ, 4,788; W2LXI, 3,960; W2DSU, 1,800; W2AIS, 1,178; W2CJM, 1,080; W2RHQ, 1,052; W2BO, 840; W2SLU, 612; W2PXR, 196; W2GVZ, 135; W2LTP, 135; W3LOE, 75,136; W3OCU, 48,048; W3ARK, 19,458; W3DKT, 16,870; W3ADZ, 13,356; W3BEN, 7,809; W3NOH, 6,844; W3CGS, 6,157; W3WU, 1,326; W3JKO, 2; W4KFC, 66,992; W4AIT, 18,920; W4TO, 17,854; W4OM, 14,336; W4GOG, 12,935; W4FPK, 9,845; W4EV, 2,640; W4LQN, 3,367; W4IZR, 1,540; W4EPA, 54; W8AZD, 15,708; VE1DB, 3,219; VE1IM, 2,912; VE1EA, 9,163; VE2BV, 16,835; VE2NI, 11,970.

Zone 7 KS4AC, 1,573; HP1BR, 4,100; VP1AA, 902.

Zone 8 KP4KD, 9,222; KP4JE, 6,451.

Zone 10 OA4J, 5,040.

Zone 11 PY2NX, 4,305.

Zone 12 CE3AG, 73,620; CE2DY, 13,414.

Zone 14 G2BOZ, 37,683; G2LB, 92,906; G2VD, 15,768; G3DOG, 11,220; G3AZ, 7,052; G8DA, 3,510; G2AJB, 2,624; G2NK, 2,378; G3ATU, 1,836; G3AIM, 1,008; G2BVN, 132; F9BO, 7,488; F8IW, 11,316; F8TM, 2,380; F9ND, 924; F9EP, 143; SM5IZ, 35,760; SM4KP, 13,727; SM5XH, 12,537; SM5OL, 7,400; SM5TQ, 5,876; SM7UT, 5,846; SM5WL, 4,972; SM5NU, 24; DL3DU, 39,130; DL1FI, 24,128; DL1DA, 13,490; DL1FK, 10,761; DL1XS, 8,802; DL3AB, 3,952; LA6U, 35,032; LA7VA, 14,592; LA8Q, 10,064; LA6PB, 7,105; LA9W, 820; LA3V, 27; GW5SL, 17,956; GI4NU, 39,780; GI3BZR, 8,260; GC2CNC, 2,542; GM3AXR, 24,244; GM5CL, 12,726; GM3CSM, 7,622; OZ2EU, 15,912; OZ1W, 8,976; PZØCJH, 720; PAØJX, 570; ON4QF, 81,969; ON4AZ, 12,810; ON4WF, 1,426; HB9P, 51,271; HB9EU, 40,773; HB9BT, 18,003; HB9EQ, 5,456; EA6AF, 12,857; EI9N, 29,750; EI9J, 10,887.

Zone 15 OK1HI, 28,280; OK1RW, 18,480; OK1XQ, 14,145; OK1AW, 3,895; OK1KY, 2,997; OK2SO, 2,852; OK1SK, 920; HA5BF, 40,000; HA5BD, 34,000; HA4SA, 8,294; OH6NR, 10,416; OH3PK, 6,844; OH5NF, 5,390; OH2TM, 5,200; OH6OV, 42; I1PL, 20,252; I1KM, 12,200; I1BCB/Trieste, 4,480.

Zone 20 YO3RF, 4,687; 4X4RE, 38,820.

Zone 21 MP4BAD, 52,584.

Zone 24 CR9AG, 42,174; VS6AX, 8,880.

Zone 25 JA2BQ, 14,570.

Zone 27 KG6DI, 45,000.

Zone 28 VS2BD, 18,512.

Zone 29 VK6RU, 26,928.

Zone 30 VK2PV, 1,334; VK3OP, 79,674; VK5BO, 63,918; VK5FM, 37,014; VK7LJ, 1,652.

Zone 31 KH6IJ, 62,370; KH6CD, 43,263; KH6QH, 41,956; KH6BA, 25,286; KH6PY, 6,440.

Zone 32 ZL2CP, 66,912; ZL4GA, 54,883; ZL3AB, 34,162; ZL3OA, 32,273; ZL1MQ, 1,764.

Zone 33 CT3AV, 36,120; CT3AA, 2,720; EK1AO, 39,597.

Zone 34 ST2TC, 8,330.

Zone 36 VQ2GW, 11,096; FE8AB, 64,111.

Zone 37 MI3AB, 66,240; MD4GC, 19,074; VQ1CUR, 23,876; CR7AF, 14,091; VQ4SGC, 17,160.

Zone 38 ZS3R, 924; ZS6OW, 79,704; ZS6HO, 75,348; ZS6OS, 43,285; ZS5LI, 28,126; ZS5FE, 15,428.

Zone 39 VQ8AY, 6,020.

Zone 40 TF3EA, 32,091; TF3AR, 25,785; TF3AB, 8,241; TF3MB, 5,720; TF5TP, 4,080.

V3ADZ, 13,356; . 6,157; W3WU, W4AIT, 18,920; 4GOG, 12,935; 3,367; W4IZR, VE1DB, 3,219; 16,835; VE2NI,

VP1AA, 902.

14.

; G2VD, 15,768; 3,510; G2AJB, G3AIM, 1 008; 3; F8TM, 2 380; SM4KP, 13 727; . 5 876; SM7UT, DL3DU, 39,130; DL1FK, 10,761; 35,032; LA7VA, ; LA9W, 820; 9,780; GI3BZR, 4; GM5CL, 12,- OZ1W, 8,976; 81,969; ON4AZ, HB9EU, 40,773; , 12,857; EI9N,

8,480; OK1XQ, OK2SO, 2 852; 34,000; HA4SA, OH5NF, 5,390; 252; I1KM, 12,-

0.

).

4; VK5BO, 63,-

,263; KH6QH,

3; ZL3AB, 34,-

); EK1AO, 39,-

11.

074; VQ1CUR,

ZS6HO, 75,318; 15,428.

5,785; TF3AB,

28 Mc, Single Operator, C. W. Entries

Zone 1 KL7BJ, 9,600; KL7KQ, 1,098.

Zone 3 W6WJX, 9,568; W6EPZ, 7,344; W6CTL, 5,160; W6BAM, 4,956; W6BJU, 4,294; W6RXV, 4 016; W6MI, 3,190; W6UQQ, 2 646; W6KEK, 2,240; W6AMO, 1,198; W6ETJ, 1,880; W6SRF, 1,647; W6YC, 1,386; W6MUO, 403; W6PCP, 350; W6QDE, 153; W6WWQ, 140; W6EJA, 114; W6MUQ, 24; W7IRZ, 5,717; W7NLI, 3,502; W7HNG, 2,070; W7LNG, 132; VE7MS, 20,066; VE7KC, 1,104.

Zone 4 W4CYC, 27,105; W4NNJ, 150; W4KMS, 144; W5KC, 7,742; W5PKE, 7,567; W5MMD, 4 992; W5FNA, 4,876; W5CD, 3,780; W5CEW, 96; W8BTI, 21,546; W8DAW, 20,212; W8JIN, 17,928; W8LEA, 15,540; W8GLK, 14,105; W8CCJ, 11,186; W8KC, 2,871; W8AL, 2,405; W8DAE, 2,366; W8BWS, 273; W9LM, 23,725; W9RQM, 22,113; W9DUY, 16 531; W9CKP, 16,740; W9JNB, 16,443; W9KXK, 13,050; W9NNI, 9,028; W9HUZ, 30; WØDAE, 23,485; WØFGW, 2,640; WØCU, 2,084; WØARH, 270; VE3BTG, 6,636; VE3AFY, 1,971; VE3IJ, 1,702; VE5QZ, 2,025; VE5UN, 640.

Zone 5 W1RY, 17,875; W1CJH, 17,316; W1CJK, 12,- 610; W1PDF, 2,268; W1ONP, 1,785; W1BOD, 1 364; W1AXA, 1,300; W1JIY, 738; W1OBW, 357; W1EOB, 247; W1AB, 126; W1AQE, 42; W2KUW, 30 162; W2CGJ, 11 350; W2MA, 10,764; W2GNQ, 8 670; W2QCF, 8 277; W2GVZ, 1,752; W2RHQ, 1,234; W2AIS, 595; W2NHH, 360; W2BT, 588; W2URX, 216; W2SLU, 24; W3JKL, 40,248; W3JTK, 27,813; W3LOE, 18,900; W3BEN, 2,310; W3NOH, 1,600; W3AOZ, 6; W4KFC, 30,615; W4EV, 12 256; W4TO, 11,550; W4OM, 7,344; W4FPK, 3,706; W4EPA, 2,184; W4EEO, 24; W8AZD, 21,018; VE1KN, 2,976; VE1IM, 564; VE1EA, 504; VE2NI, 7,409.

Zone 7 KS4AC, 3,400; HP1BR, 1,430.

Zone 8 KP4JE, 3,460; KP4KD, 322.

Zone 11 PY2NX, 37,098.

Zone 12 CE3AG, 25,400; CE2DY, 1,440.

Zone 14 G3DCU, 52,570; G2VD, 25,032; G2PL, 17,541; G3AZ, 7,452; G3AIM, 7,068; G2BVN, 3,654; G3ATU, 2,937; G2AJB, 1,700; G8DA, 120; G2NK, 6; F9BO, 8,888; F8TM, 5,768; F9OL, 918; SM4KP, 4,536; SM7UT, 154; SM5OL, 16; DL1FI, 24,128; DL1LH, 23 655; DL1FK, 9,676; LA6PB, 3,720; LA6U, 1,904; LA9T, 217; GW4CX, 14,196; GW5SL, 12,240; GM3CSM, 4,196; GM3AXR, 912; OX2EU, 2,620; OZ1W, 1,081; ON4QF, 29 332; ON4AZ, 5,445; HB9P, 27,608; HB9EQ, 1,688; EI9J, 7,030.

Zone 15 OE6AA, 2,884; OK1HI, 35 784; OK2SO, 4,446; OK2AT, 946; OK1AW, 885; OK1ME, 96; OK1ZM, 20; HA4SA, 4,480; OH5NF, 5,916; I1KN, 8,534; I1PL, 6,970.

Zone 20 4X4RE, 30,134.

Zone 24 CR9AG, 34,858.

Zone 25 JA2BQ, 7,050.

Zone 27 KG6DI, 57,839.

Zone 28 VS2BD, 198.

Zone 29 VK6RU, 11,016.

Zone 30 VK3OP, 3,120; VK5FM, 967; VK7GW, 16,224.

COMMAND RECEIVERS & TRANSMITTERS:

(ALL WITH SCHEMATICS)	USED:	NEW:
BC-453 Receiver, 190-550 KC.	$11.95	$14.95
BC-454 Receiver, 3—6 MC.	4.95	6.95
BC-455 Receiver, 6—9.1 MC.	6 95	8.95
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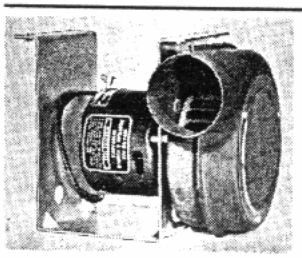
RACKS—Dual Transmitter or Receiver		$1.50
PLUG for pluging in rear of Rec. or Trans.		55¢



BRAND NEW BLOWERS

115 Volt 60 cycle Blower as pictured at left. Approx. 100 Cubic Ft. Displacement. 3¼" intake 2" outlet. Motor size: 3½" x 3". 1525 RPM. Complete with mounting bracket. Brand new, Gov't. surplus. Order No. CQ-3604 **$7.95**

DYNAMOTORS:

INPUT:	OUTPUT:	STOCK NO.:	PRICE:
9 V. DC.	450 V. 60 MA.	DM-9450	$3.95
@ 6 V. DC.	275 V. 50 MA.	w/Blower	
12 or 24 V. DC.	440 V. 200 MA. & 220 V. 100 MA.	D-104	9.95
12 V. DC.	600 V. 300 MA.	BD-86	7.95
12 V. DC.	330 V. 150 MA.	BD-87	5.95
12 V. DC.	375 V. 150 MA.	BD-83	6.95
12 V. DC.	1000 V. 300 MA.	BD-77	7.95
PERMANENT MAGNET FIELD DYNAMOTORS			
12 or 24 V. DC.	275 V. 110 MA.	USA/0516	3.95
12 or 24 V. DC.	500 V. 50 MA.	USA/0510	2.95
@ 6 V. DC.	240 V. 50 MA.		

BC-645-A TRANSCEIVER— 110 VOLT TRANSFORMER & CHOKE

BC-645-A Transceiver, 15 tubes, ideal for conversion to 460 MC. Citizens Band. Frequency coverage 435 to 500 MC. With conversion instruction—NEW and Boxed **$14.95**

TRANSFORMER for BC-645-A — 110 Volt 60 cycle input; output 400 Volt 150 MA. after filter. 12, 9, and 6 V. AC. 4 amps and 5 V. 3 amps. No. CH-645 ... **$6.95**

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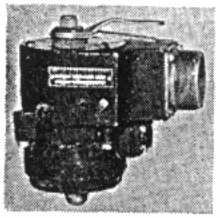

¾ RPM ANTENNA ROTATOR MOTOR — High torque, reversible motor—operates directly from 110 Volt 60 cycle by use of condenser. Light weight, quiet running, ruggedly built, positive stop, easily mounted. Normally operates from 110 V. 400 cycle. With instructions, complete—NEW ..**$4.95**

10 MFD 400 Volt Cond. $1.00 SPST Momentary Switch 35¢ DPDT Momentary Switch 75¢ Resistor, 100 ohm 25 Watt 50¢ 4 Wire Cable .05¢ per Ft. COMPLETE KIT OF PARTS: Motor, Cond., SPST Switch, and Resistor **$5.95**

New Transformers and Chokes:

TRANSFORMERS (Cased) 115 VOLT 60 CYCLE PRIMARIES:

OUTPUT: 750-0-750 V.A.C. (600 V.D.C. after choke input filter at 250 MA.) Includes 6.3 V.A.C. winding at 5 amps and 5 0 V.A.C. winding at 4 amps. CH-106 ..... **$8.75**

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TRANSFORMERS—110 VOLT 60 CYCLE PRIMARIES:

Sec. 12 V. 1 amp... **$1.50** Sec. 24 V. .5 amp... **$1.50**
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CH-115—8 Henries at 500 MA. filter choke, 5,000 volt insulation **$10.95**

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MP-132—(Illustrated) 1" heavy coil spring. 2" insulator. Overall length: 11½". Wt.: 2¾ lbs. Price **$3.95**

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Tubular steel, copper coated, painted 3 foot sections, screw-in type. MS-53 can be used to make any length with MS-52-51-50-49 for taper. Price—any section **50¢ Ea.**

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Zone 32 ZL4GA, 15,564; ZL1MQ, 2,576.

Zone 33 EK1AO, 26,028.

Zone 36 FE8AB, 13,736.

Zone 38 ZS5U, 5,604; ZS6OS, 7,456; ZS1FD, 4,050.

Zone 40 TF3EA, 7,530; TF3SF, 4,708; TF3MB, 682; TF5TP, 98.

All-Band, Single-Operator, Phone Entries

Zone 1 KL7UM, 5,472; KL7HI, 4,223.

Zone 3 W6GRL, 49,077; W6RM, 45,313; W6DI, 24,624; W6CHV, 15,356; W6FSJ, 12,540; W6AM, 20,335; W6EPZ, 16,401; W6BJU, 15,853; W6EHV, 5,580; W6MUO, 5,264; W6MI, 2,124; W6UQQ, 522; W7HRH, 1,440; W7CUD, 1,430; W7MOW, 962; VE7HC, 25,333.

Zone 4 W4DQH, 53,382; W4CYC, 14,525; W5HFQ, 6,370; W5MMD, 5,400; W5KC, 4,320; W8NXF, 31,824; W8ZMC, 21,973; W8GOB, 19,314; W8NSS, 14,713; W8CCJ, 2,664; W8PM, 540; W9EWC, 30,894; W9CZC, 15,247; W9ABA, 117; W9FAB, 2,108; WØQUV, 6,018; WØHNF, 1,770; WØFUH, 910; VE3QE, 3,708; VE4RO, 19,620; VE4XO, 12,096; VE4IJ, 2,040.

Zone 5 W1ATE, 83,661; W1PDF, 24,388; W1CJH, 19,656; W2BXA, 27,454; W2VQM, 19,656; W2IUV, 10,074; W2SFA, 4,560; W2MA, 5,520; W3LOE, 47,056; W3NA, 44,577; W3LTU, 22,270; W3BRT, 6,678; W4OM, 22,561; W4ZD, 18,009; W4TO, 8,060; W4FGL, 3,519; W4DXI, 1,248; W8AVW, 920; VE1CR, 24,402.

Zone 7 TI2HP, 40,880; YS1JR, 3,672; HP1LA, 17,649; HP1BR, 3,811.

Zone 8 CO7RQ, 8,463; VP2GG, 1,034.

Zone 9 HK4AR, 73,932; HK4DF, 50,976; HK1DZ, 8,658; YV5AC, 29,068.

Zone 10 HC2KJ, 28,875; HC1FG, 5,723; CP5FA, 4,392.

Zone 11 PY2CK, 224,349; PY4RJ, 34,920; PY7BN, 15,181.

Zone 12 CE2DY, 9,366.

Zone 13 LU8CW, 25,380; LU5CK, 19,620; CX3BH, 34,091.

Zone 14 G2DPZ, 153,642; G2PU, 120,496; G2ALN, 82,728; G2DYV, 20,025; G3DKR, 11,792; G2VJ, 6,615; G3AIM, 5,520; G2AO, 464; HB9DS, 145,410; HB9J, 4,576; HB9BJ, 2,583; ON4AZ, 156; EA4LA, 28,121; EA4CK, 6,413; F9BO, 24,786; LA7Y, 127,684; LA6J, 1,984; LA6PB, 570; SM4KP, 25,192; SM5WJ, 12,000; CT1FM, 12,600; CT1NT, 10,260; CT1ST, 696; DL3DO, 80,730; DL1FI, 12,276; DL1IB, 3,280; DL7AD, 968; DL7AA, 363.

Zone 15 OK2SO, 18,750; OK2SL, 2,627; OK1AW, 1,107; OK1RW, 3,636; I1RB, 124,026; I1LW, 27,384; I1AMU, 13,090; I1BNU, 1,081; OH2NB, 132,191; I1RC/Trieste, 14,006; ZB1AJ, 2,112.

Zone 20 AR8AB, 2,241; YO3RI, 3,510; 4X4AA, 60,939.

Zone 22 VS7GR, 3,745; AP5B, 15,183.

Zone 24 VS6AE, 1,144.

Zone 28 VS2BD, 2,196; PK4DA, 9,243.

Zone 29 VK6KW, 55,200.

Zone 30 VK3VQ, 4,750.

Zone 31 KH6IJ, 89,568; KH6CD, 966.

Zone 32 ZL4HP, 96,288; ZL1MQ, 23,732.

Zone 33 FA8IH, 37,065; CN8BV, 20,944; CN8BA, 18,340.

Zone 36 VQ2DH, 60,300; FQ8SN, 5,304; CR5UP, 64,168; OQ5BQ, 24,612.

Zone 37 VQ4SC, 55,056; MI3SC, 25,791.

Zone 38 ZS3G, 20,414; ZS3M, 476; ZS6TE, 63,547; ZS5U, 61,097.

7 Mc, Single Operator, Phone Entries

Zone 10 HC2KJ, 10.

Zone 12 CE2DY, 28.

Zone 14 G2DPZ, 638; HB9DS, 693; F9BO, 24; LA7Y, 3,813; SM4KP, 12.

Zone 22 VS7GR, 0.

Zone 37 VQ4SC, 8.

Zone 38 ZS5U, 110.

14 Mc, Single Operator, Phone Entries

Zone 1 KL7UM, 5,472; KL7HI, 2,666; KL7AAB.

Zone 2 VO6EP, 3.

Zone 3 W6DI, 24,624; W6PWR, 15,572; W6KQY, 10,431; W6AM, 7,200; W6FSJ, 6,125; W6BJU, 5,490; W6EPZ, 3,774; W6GVM, 3,367; W6MUO, 2,006; W6LDD, 495; W6MI, 195; W6PVV, 3; W7CUD, 1,430; VE7HC, 24,675; VE7VT, 2,583.

Zone 4 W4HA, 3,198; W5JUF, 6,555; W5HFQ, 6,370; W5JC, 1,290; W5MMD, 2,144; W5KC, 418; W8VLK, 8,745; W8ZMC, 5,014; W8NXF, 2,967; W8SXU, 252; W8CCJ, 72; W9EWC, 7,436; W9FAB, 2,108; W9ABA, 70; WØHNF, 1,431; WØGUV, 594; WØDU, 192; WØFUH, 40; VE3HB, 2,376; VE3IJ, 1,100; VE4XO, 9,180; VE4RO, 3,332.

Zone 5 W1CJK, 8,906; W1PDF, 7,905; W2BXA, 26,712; W2VQM, 4,950; W2IUW, 2,960; W2URX, 1,848; W2MA, 756; W2DSU, 54; W3LOE, 16,350; W3LTU, 5,632; W4OM, 10,362; W4TO, 1,890; W4ZD, 2,464.

Zone 6 XE1AC, 17,480.

Zone 7 TI1HP, 9,291; YN4CB, 900; HP1TS, 18,894; HP1LA, 1, 748; HP1LB, 1,020; HP1BR, 684.

Zone 8 CO2IC, 4,235.

Zone 9 HK4AR, 7,326; HK4DF, 516; YV582, 4,410.

Zone 10 HC2KJ, 5,312; HC1FG, 442.

Zone 11 PY2CK, 49,049.

Zone 12 CE2DY, 4,488.

Zone 13 LU8CW, 2,565; CX3BH, 5,181.

Zone 14 G2DPZ, 30, 660; G3DO, 20,732; G2VJ, 5,504; G3AIM, 132; G2AO, 84; HB8DS, 25,008; HB9J, 627; ON4AZ, 2; F9BO, 4, 472; EI3W, 8,775; LA7Y, 31,620; LA6PB, 252; SM4KP, 7,755; SM5LL, 608; CT1NT, 1,960; DL1FK, 5,247; DL1FI, 1,782; DL1UH, 330.

Zone 15 OK1HI, 8,643; I1ARU, 18; OH2NB, 34,775; OH6NR, 480; HA5BF, 9,696; HA5B, 3,816; OE6VB, 1,750.

Zone 20 AR8AB, 88.

Zone 22 VS7GE, 3,638.

Zone 26 XZ2SY, 30,046.

Zone 28 VS2BD, 1,537.

Zone 29 VK6KW, 15,435; VK2WD, 2,856; VK3LN, 16,244; VK3AWW, 920; VK3MX, 192.

Zone 31 KH6IJ, 14,388; KH6BA, 6,336.

Zone 32 ZL4HP, 20,888; ZL1MQ, 7,790; ZL4GA, 4,978.

Zone 36 VQ2GW, 1,922; FQ8SN, 2,070; CR5UP, 20,088.

Zone 37 VQ4SC, 7,708; MI3SC, 2,736; CR7AF, 1,092.

Zone 38 ZS6JS, 39,973; ZS5U, 3,861; ZS3G, 3,151; ZS3D, 1,751.

28 Mc, Single Operator, Phone Entries

Zone 1 KL7HI, 170.

Zone 3 W6EPZ, 4,386; W6AM, 3,230; W6BJU, 2,622; W6FSJ, 1,080; W6MI, 1,012; W6ILH, 756; W6MUO, 770; W6HG, 608; W7LBN, 1,419; W7MOW, 962; W7BGH, 247; VE7HC, 2.

Zone 4 W4NBV, 23,571; W4OYG, 8,316; W4MB, 816; W5KC, 2,030; W5MMD, 738; WBNXF, 15,022; W8NSS, 12,960; W8ZMC, 12,288; W8VOZ, 11,648; W8BPM, 3,600; W8CCJ, 2,108; W8SRS, 750; W9EWC, 7,936; W9NII, 3,741; W9HNI, 1,560; W9ENY, 651; W9BZB, 24; W9ABA, 6; WØDCB, 4,743; WØYCR, 3,132; WØGUB, 2,775; WØFUH, 540; WØRVS, 24; WØHNF, 18; VE3BNQ, 12,204; VE3ND, 16; VE3MZ, 6; VE4RO, 6,450; VE4XO, 117.

Zone 5 W1BEQ, 30,710; W1ONK, 18,830; W1MCW, 11,760; W1RZD, 7,448; W1RDR, 4,982; W1PDF, 4,520; W1MRP, 2,556; W2ZVS, 16,017; W2YOS, 15,680; W2QKJ, 15,120; W2JJI, 6,394; W2UTH, 4,920; W2VQM, 4,876; W2SFA, 4,560; W2MA, 2,184; W2IUV, 2,112; W2BT, 1,416; W2JQJ, 900; W2PFU, 510; W2BXA, 0; W3LOE, 7,808; W3LTU, 5,494; W3FQA, 1,520; W3JKO, 392; W3OCU, 882; W4KKM, 11,232; W4ZD, 10,850; W4OM, 5,848; W4LZM, 3,888; W4NYX, 3,441; W4TO, 2,196; W4EEO, 168; VE2IZ, 3,895.

Zone 7 TI2HP, 9,090; KS1AC, 380; KZ5DE, 16; HP1LA, 8,194; HP1BR, 1,206.

Zone 8 VP6SD, 48,921.

Zone 9 HK4CO, 47,034; HK4DF, 39,900; HK4AR, 34,176; HK4EB, 147.

Zone 10 HC2KJ, 8,280; HC1FG, 2,888; CP5FB, 15,435.

Zone 11 PY2CK, 53,100; PY3QO, 14,672; PY2NX, 14,112; PY3OJ, 3,712; PY1SA, 375; ZP5BL, 67,680.

Zone 12 CE4BP, 15,635; CE3AX, 10,290; CE2DY, 2,080.

Zone 13 LU8CW 11,781; LU8BF, 2,784; CX3BH, 12,400; CX3AA, 2,816; CX4AB, 1,248; CX2CN, 1,092.

Zone 14 G2PU, 44,541; G2DPZ, 29,952; G8KP, 20,096; G3ANH, 16,606; G3AIM, 4,158; G8SA, 1,968; G2AO, 150; HB9DS, 35,568; HB9CV, 13,650; HB9J, 1,775; ON4AZ, 120; GW4CX, 8,904; GW3KY, 5,632; GM3DZB, 14,910; F9BO, 7,155; F8XP, 6,280; F3PW, 3,103; LA7Y, 11,132; LA4FA, 1,148; LA6PB, 63; SM4KP, 7,750; SM5YD, 3,159; OZ3Y, 28,800; OZ7SM, 3,042; CT1NT, 1,960; DL3DO, 22,176; DL1FK, 8,580; DL1FI, 4,176; PAØRU, 9,154; EA4LA, 28,121.

Zone 15 OK1FF, 31,492; OK1MB, 14,012; OK1UY, 902; OH2NB, 21,267; MF2AA, 1,972.

Zone 20 AR8AB, 1,584.

Zone 24 CR9AG, 17,928; VS6AM, 561.

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* TWO of these with choke below make excellent power supply for ARC-5. 2 xfrmrs. and 1 choke ALL FER **$10.00**
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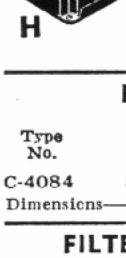
BC 746 TUNING UNITS: Easily converted to ½ W. xmtr. No. 3: 3995-4450 kc. No. 8: 3525-3980 kc. No. 10: 3735-4190 kc. (Others available.) Excel. cond. ..... ea. **75c**
3 FOR ONLY **$2.00**

COLUMBIA ELECTRONICS SALES Dept. LS 522 S. San Pedro St. Los Angeles 13, California

MERIT TRANSFORMERS

NEW!!! I K W PLATE!!! FULLY POTTED!!!



H

Get this "hot" new design for that "Gallon" XMTR with 115 or 230 volt line. Delivers 2500 or 2000 V. DC out of filter at a conservative 500 mils. EXCLUSIVE!!! Small plate transformer for low power XMTR or exciter stages. Delivers 400 V. DC at 150 M.A. at low cost.

FILTER SMOOTHING CHOKES

Type No.	Net Price	Inductance Henries	Current Rating M.A.	D.C. Res. Ohms	Volts Insul.	Mtg.
C-4084	$19.20	8	500	75	7500	H

Dimensions—H 6⅜", W 6 5/16", D 5 3/16"

FILTER INPUT OR SWINGING CHOKES

C-4091	$19.20	3-14	500	75	7500	H

Dimensions—H 6⅜", W 6 5/16", D 5 3/16"

UNIVERSAL MODULATION TRANSFORMER

Tapped Series-Parallel Coils Provide a Wide Range of Modulations

Type No.	Net Price	Pri. Impedance	Pri. M.A. Per Side	Sec. Impedance	Watts	Max. Sec. M.A.	Mtg.
A-4008	$54.00	2000-20000	325	2000-20000	500	325/650*	H

Dimensions—H 8¾", W 7½", D 7 *Series-Parallel

PLATE TRANSFORMERS

For Amateur or Intermittent Commercial Service
Pri. for 115* or 230 V. 60 Cy. DC Voltage Ratings are Approx. Values Obtained at Output of 2 Section Choke Input Filter.

Type No.	Net Price	Sec. Rms. Volts	Sec. DC Volts
P-4063	$66.00	3000-3000	2500
		2500-2500	2000

Sec. DC M.A.: 550, 150. Mtg.: H, D.
Dimensions—H 11¼", W 7½", D 7"

P-3175	$5.40	550-550	400

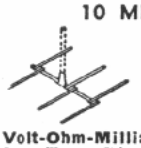
Dimensions—H 3 9/16", W 3", D 3⅞"
* 115 V. Pri. only.

D

See Merit Catalog No. 4911 for other items.
Ask your dealer or write

MERIT TRANSFORMER CORP.
4429 N. Clark St., Chicago 40, Ill.

SPECIAL
BC610 CHOKES
11 Henry .600 Amp. Herm. Sealed.
$7.95
Atronic Corp.
Dept. C-8
1253 Loyola Ave., Chicago 26, Ill.

10 METER BEAM ANTENNA

$15.95
3 ELEMENTS
SPECIAL
Volt-Ohm-Milliameter 0-1 MA. 4" Pan Type. Diagram Incl. Makes 1000 ohm per volt unit. Meter Only $2.95
METERS—3" PANEL TYPE
0-10MA $2.00

ARC/5 Xmtrs VFO Drivers
40 Watts Output

3-4 Mc	$6.95
Gibson Girl Xmitr	3.49
ARR2 Rec	4.95

Write For Many Others

MICROWAVE CAT. AVAIL.
Superhet Recvrs W/Dyn
Can be converted to 110v60cy

190 550 Kc	$6.95
3-6 Mc	4.95
6-9 Mc	4.95

Used Good Cond.

COMMUNICATIONS EQUIPMENT CO.
131 Liberty St., Dept. Q8. New York 7, N. Y.

Zone 28 VS2BD, 56; PK3MR, 2,340; PK4KS, 19,024.

Zone 29 VK5AS, 49,446; VK6KW, 12,087.

Zone 30 VK7LZ, 2,821.

Zone 31 KH6IJ, 30,300; KH6VP, 9,675; KH6CD, 966.

Zone 32 ZL4HP, 26,266; ZL1MQ, 4,293.

Zone 35 ZD4AH, 9,071.

Zone 36 FQ8SN, 736; CR5UP, 12,250.

Zone 37 VQ4IMS, 80,370; VQ4RF, 44,304; VQ4SC, 20,294; MI3SC, 23,055; VQ5ALT, 1,218; VQ5WCP, 341; ZS6OV, 56,550; ZS5U, 29,352; ZS3G, 13,611.

Zone 40 TF3SF, 36.

The following participants, who did not tabulate their scores, sent in logs for checking purposes only, and therefore do not appear in the above listings. Their calls are included here in recognition of their contribution to the success of the contest. Thanks a million, fellows!

C.W. W6ID, W6RIQ, W6ZBY, W6FZC, W7CNM, WØAZT, W1DYV, VO1O, VE1CU, KG4AK, CO2AP, VP3YG, PY1DH, CX6AD, G3APV, G6CJ, G2XY, G5WI, G3EEN, G3CXM, G2EC, G5HH, G5JF, G8PW, F8BQ, F9SN, SM5AUP, SM5OI, SM2ABH, SM5UH, SM5KX, SM5UJ, SM5AMJ, SM5DZ, SM5CV, DL5BK, DL1YB, DL1QO, LA8J, LA9T, ON4JD, HB9HI, EA4CQ, OZ5PA, HA5K, YO3GK, VK2NS, VK4CG, VK5KO, KH6LG, KH6VP, ZL1HY, FA9RW, ZS6VH, ZE2JN.

Fone KL7ZM, VE8AK, W4NDE, W5SU, W1DYV, W1IJT, W2TVQ, W2VQL, W4KCQ, VE2HM, VP9G, CO2MG, YV5AU, VP3YG, OA4Y, PY6CO, CE2AX, CE1BO, LU4MG, LU3HA, CX2BP, HB9CV, ON4UF, F8NV, F3IB, F9LK, DL1EZ, DL1HL, PAØGMU, PAØQJ, H1PM, YK1AC, KG6ET, KH6LG, ZL1CH, FF8PG, ZS1CG.

THE LYSCO TRANSMASTER

(from page 21)

and quick to change bands on the Transmaster as it is on the latest communications receiver.

The Output Circuit

The output of the Transmaster appears at a standard coax fitting which may be coupled to a transmission line of 52 ohms impedance, or to an antenna coupler designed to operate from a source of that impedance. If you don't have an antenna coupler on hand, Lysco will be pleased to sell you a neat band-switched coupler to go with the transmitter. It makes a nice combination, and the coupler can be mounted right inside the case of the Transmaster if you don't mind drilling a couple of holes.

Frankly we've had more fun playing with the Transmaster during the past few days than we've had in a long time. There is a great kick to be gotten out of working DX, traffic circuits, or just chewing the rag with a little rig as simple and straightforward as this one. We haven't been able to find any TVI on a receiver whose antenna is about two and one-half feet from our 3.5-mc doublet.

You've guessed it, we like it!

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Receivers
190-550
1.5-3 Mc.
3-6 Mc.
6-9 Mc.
3-Rec. Rac
3-Control H

BC-696, 3-
T-19, ARC
Mc. ...
BC-457, 4-
T-20, ARC
Mc. ...
BC-458, 5.
T-22, ARC
Mc. ...

BC-456 ...
MD-7, ARC
Push-pull
SCR-522 ..
ARC-4 Xmtt
APN-4 Rece
APN-4 Indi
APN-1 Xmtt
APS-13 Xmt
BC-645 Xmt
ARB Receive
BC-375 Trar
Tuning Units
BC-223 with
AS3 series R
PC-929A Ind
BC-929A Ind
APQ 2 HF T

1306 Bond