THE

Wireless Weekly

CALL SIGN BOOK and TECHNICAL REVIEW.

1/-

1938 EDITION

Technical Articles—

A 4-VALVE MANTEL SET.
THE "DOUBLE-PENTODE" BATTERY 4.
THE 2JU SPECIAL FIVE S.W. SET.
A SWITCHED-COIL 2-VALVE SET.
A 3-STAGE 50 WATT TRANSMITTER.

Call Signs—

AUSTRALIAN & N.Z. B'CAST AND AMATEURS — S.W. BROADCASTERS —D.X. STATIONS—All you want to know.

CALL SIGN BOOK

AND

TECHNICAL REVIEW

COMPILED BY JOHN MOYLE
(TECHNICAL EDITOR "WIRELESS WEEKLY")

★

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A "WIRELESS WEEKLY" PUBLICATION

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Call Signs

Technical Articles

National and Commercial Broadcasting Stations in Australia as at June 1, 1938

NATIONAL STATIONS

Call Sign.	STATION.	Freq. Kilocycles.	Wave Length Metres.	Aerial Power. Watts.
MEDIUM WAVE SERVICES				
NEW SOUTH WALES				
2BL	Sydney—National No. 1	740	405	3000
2CO	Riverina Regional (Corowa)	670	448	7500
2CR	Central Regional (Cumnock)	550	545	10,000
2FC	Sydney—National No. 2	610	492	3500
2NC	Hunter River Regional (Newcastle)	1230	244	2000
2NR	Northern Rivers Regional (Lawrence, near Grafton)	700	429	7000
VICTORIA				
3AR	Melbourne—National No. 2	620	484	4500
3GI	Gippsland Regional (Longford, near Sale)	830	361	7000
3LO	Melbourne—National No. 1	770	390	3500
3WV	Western Regional (Dooen, near Horsham)	580	517	10,000
QUEENSLAND				
4QG	Brisbane—National	800	375	2500
4QN	North Regional (Clevedon, near Townsville)	630	476	7000
4RK	Rockhampton Regional (Rockhampton)	910	330	2000
4QR	Brisbane	940	319	500
SOUTH AUSTRALIA				
5CK	North Regional (Crystal Brook)	640	469	7500
5CL	Adelaide—National	730	411	4000
5AN	Adelaide—National No. 2	890	337	500
5AU	Port Augusta Broadcasting Co., Ltd., Port Augusta, S.A. Location: Port Augusta, S.A.	1400	214	100
WESTERN AUSTRALIA				
6GF	Goldfields Regional (Kalgoorlie)	720	417	2000
6WA	South-West Regional (Minding, near Wagin)	560	536	10,000
6WF	Perth—National	690	435	3500
TASMANIA				
7NT	North Regional (Kelso, near Launceston)	710	423	7000
7ZL	Hobart—National	600	500	1000
EXPERIMENTAL SHORT-WAVE SERVICE				
VLR	Lyndhurst, Victoria	9580	31.32	1000

COMMERCIAL STATIONS

Call Sign.	Licensee and Location of STATION.	Freq. Kilocycles.	Wave Length Metres.	Aerial Power. Watts.
FEDERAL CAPITAL TERRITORY				
2CA	Canberra Broadcasters, Ltd., Ltd. Location: Canberra	1050	286	2000
NEW SOUTH WALES				
METROPOLITAN				
2CH	N.S.W. Council of Churches' Service, 77 York St., Syd. Location: Dundas, Sydney	1100	252	1000
2GB	Theosophical Broadcasting Stn. Ltd., 29 Bligh St., Sydney. Location: Homebush, Syd.	870	345	1000
2KY	The Labor Council of N.S.W., 424 George St., Sydney. Location: Brookvale, Sydney	1020	294	1000
2SM	Catholic Broadcasting Co., Aust. House, Wynyard Sq., Syd. Location: Pen. H., Syd.	1270	236	1000
2UE	Radio 2UE, Sydney, Ltd. 29 Bligh St., Sydney. Location: Lilli Pilli, Sydney	950	316	1000
2UW	Commonwealth Broadcasting Corp., Ltd., 49 Market St., Syd. Location: Sydney City	1110	270	750
COUNTRY				
2AD	New England Broadcasters, 113 Faulkiner St., Armidale. Location: Armidale	1130	265	100
2AY	Amalgamated Wireless (A/asia), Ltd., 47 York St., Sydney. Location: Albury	1480	203	200
2BE	Bega & Far Sth. Coast Broadcasters, Ltd., Carp St., Bega, N.S.W. Location: Bega	1490	201	100
2BH	Radio Silver City, Ltd., Cnr. Blende and Sulphide Sts., Broken Hill. Location: B. Hill	860	349	100
2BS	Bathurst Broadcasters Ltd., 51 Keppell St., Bathurst. Location: Bathurst	1500	200	100
2CK	Cessnock—not yet in operation	1460	205	200
2DU	Western Broadcasters Pty., Ltd., Dubbo. Location: Dubbo	660	455	200
2GF	Grafton Broadcasting Co. Pty., Ltd., 47 York St., Sydney. Location: Grafton	1210	248	200
2GN	Goulburn Broadcasting Co. Pty., Ltd., Auburn St., Goulburn. Location: Goulburn	1390	216	200
2GZ	Country Broadcasting Services, Ltd., 12 Spring St., Sydney. Location: Near Orange	990	303	2000
2HD	Airsales Broadcasting Co., Maitland Rd. Sandgate. Location: Sandgate, nr. Newcastle	1140	263	500
2HR	Hunter R. Broadcasters Pty., Ltd., 1 William St., Singleton. Location: Kaluda, nr. Singleton	680	441	300
2KA	Radio Katoomba Ltd., Barrack House, 16 Barrack St., Sydney. Location: Katoomba	780	385	500
2KO	Newcastle Broadcasting Co., Ltd., 72 Hunter St., Newcastle. Location: Sandgate, nr. N'castle	1410	213	500
2KM	Radio Kempsey, Ltd., 16 Barrack St., Sydney, N.S.W. Location: Kempsey	980	306	100
2LF	Young Broadcasters, Ltd., Watson House, 9 Bligh St., Syd., N.S.W. Location: Young	1340	224	300
2LM	Richmond River Broadcasters, Ltd., Molesworth St., Lismore. Location: Near Lismore	900	333	500
2MG	Mudgee—not yet in operation.	1470	207	100
2MO	2MO Gunnedah, Ltd., Marquis St., Gunnedah. Location: Gunnedah	1370	219	100
2MW	Tweed Radio & Broadcasting Co., Ltd., Austral Bldg., Commercial Rd., Murwillumbah, N.S.W. Location: Murwil'bah	1470	204	100
2NZ	Northern Broadcasters, Ltd., Otho St., Inverell. Location: Little Plain	1170	256	2000

COMMERCIAL STATIONS

CALL SIGN	Licensee and Location of STATION.	Freq. Kilo-cycles.	Wave Length Metres.	Aerial Power. Watts.
2PK	Parkes Broadcasting Co. Pty., Ltd., 283 Clarinda St., Parkes. Location: Parkes	1400	214	200
2QN	Deniliquin Broadcasting Co., Ltd., End St., Deniliquin. Location: Deniliquin	1440	208	100
2RG	Irrigation Area Newspapers, Ltd., P.O. Box 388, Griffith. Location: Griffith	1070	280	100
2TM	Tamworth Radio Development Co., Peel St., Tamworth. Location: Duri, nr. Tamworth	1300	231	2000
2WG	Riverina Radio Broadcasting Co., Ltd., 16 Fitzmaurice St., Wagga. Location: Nr. Wagga	1150	261	2000
2WL	Wollongong Broadcasting Co., Cnr. Church and Edward Sts., Wollongong. Location: W'gong	1430	210	500
2XL	Cooma Broadcasters Pty., Ltd., Cromwell St., Cooma, N.S.W. Location: Cooma	880	341	100

VICTORIA

METROPOLITAN

3AK	Melbourne Broadcasters Pty., Ltd., 480 Bourke St., Melb., C.1. Location: Balwyn, Melb.	1500	200	200
3AW	3AW Broadcasting Co. Pty., Ltd., 382 Latrobe St., Melb., C.1. Location: Melb. City	1280	234	600
3DB	3DB Broadcasting Co. Pty., Ltd., 36 Flinders St., Melb., C.1. Location: Melb. City	1030	291	600
3KZ	Industrial Printing and Publicity Co., 24-30 Victoria St., Carlton, N.3. Location: Melbourne City	1180	254	600
3UZ	Nilsen's Broadcasting Service Pty., Ltd., 45 Bourke St., Melb. C.1. Location: Melb. City	930	323	600
3XY	Station 3XY Pty., Ltd., 4 Bank Place, Melbourne, C.1. Location: Melbourne City	1420	211	600

COUNTRY

3BA	Ballarat Broadcasters Pty., Ltd., 56 Lydiard St., Ballarat. Location: Nr. Ballarat	1320	227	500
3BO	Amalgamated Wireless (A/asia) Ltd., 47 York St., Sydney. Location: Near Bendigo	970	309	500
3GL	Geelong Broadcasters Pty., Nat. Mutual Bldgs., Moorabool St., Geelong. Location: Geelong	1350	222	100
3HA	Western Province Radio Pty., Ltd., 27 Gray St., Hamilton. Location: Near Hamilton	1010	297	750
3LK	3DB Broadcasting Co. Pty., Ltd., 36 Flinders St., Melb., C.1. Location: Lubeck	1090	275	2000
3MA	Sunraysia Broadcasters Pty., Ltd., 22 Deakin Av., Mildura. Location: Mildura	1360	221	100
3CV	Mallee Broadcasters Pty., Ltd., Charlton. Location: Charlton	1470	204	200
3SH	Swan Hill Broadcasting Co., Campbell St., Swan Hill. Location: Swan Hill	1330	226	100
3SR	The Argus Broadcasting Services Pty., Ltd., 365 Elizabeth St., Melb., C.1. Location: Nr. Shepparton	1260	238	2000
3TR	Broadcast Entertainments Pty., Ltd., Raymond St., Sale. Location: Near Sale	1240	242	1000
3UL	The Argus Broadcasting Services Pty., Ltd., 365 Elizabeth St., Melb., C.1. Location: Warragul	900	333	200
3YB	The Argus Broadcasting Services Pty., Ltd., 365 Elizabeth St. Melb., C.1. Location: Warrnambool	1210	248	200

COMMERCIAL STATIONS

CALL SIGN	Licensee and Location of STATION.	Freq. Kilo-cycles.	Wave Length Metres.	Aerial Power. Watts.

QUEENSLAND AND PAPUA

METROPOLITAN

4BC	Commonwealth Broadcasting Corp. (Q'land) Ltd., Adelaide St., Brisbane. Location: Oxley, Brisbane	1120	268	1000
4BH	Broadcasters (Aust.) Pty., Ltd., 43 Adelaide St., Brisbane. Location: Bald Hill, Brisbane	1380	217	1000
4BK	Brisbane Broadcasting Pty., Ltd., 288 Queen St., Brisbane. Location: Brisbane City	1290	233	500

COUNTRY

4AK	Brisbane Broadcasting Pty., Ltd., 288 Queen St., Brisbane. Location: Oakey	1220	246	2000
4AY	Ayr Broadcasters Pty., Ltd., Airdmillan Rd., Ayr. Location: Ayr	860	349	500
4BU	Bundaberg Broadcasters Pty., Ltd., 117 Bourbong St., Bundaberg. Location: Bundaberg	1330	226	500
4CA	Amalg. Wireless (A/asia) Ltd., 47 York St., Sydney. Location.: Cairns	1000	300	200
4GR	Gold Radio Service Pty., Ltd., 43 Adelaide St., Brisbane. Location: Toowoomba	1000	300	500
4IP	Ipswich Broadcasting Co. Pty., Ltd., Brisbane St., Ipswich. Location: Ipswich	1440	208	100
4LG	Central Western Broadcasting Co. Pty., Ltd., Longreach. Location: Longreach	1100	273	500
4MB	Maryborough Broadcasting Co., Ltd., 43 Adelaide St., Bris. Location: Maryborough	1400	214	100
4MK	Mackay Broadcasting Service, 64 Nelson St., Mackay. Location: Mackay	1390	216	100
4PM	Amalg. Wireless (A/asia) Ltd., 47 York St., Sydney. Location: Port Moresby, Papua	1360	221	100
4RO	Rockhampton Broadcasting Co. Pty., Ltd., 43 Adelaide St., Bris. Location: Rockhampton	1080	278	500
4SB	South Burnett Broadcasting Co., Ltd., 43 Adelaide St., Bris., Qld. Location: Nr. Kingaroy	1060	283	2000
4TO	Amalg. Wireless (A/asia) Ltd., 47 York St., Sydney. Location: Townsville	780	385	200
4VL	Charleville Broadcasting Service Pty., Ltd., Burke St., Charleville. Location: C'ville	570	526	100
4WK	Warwick Broadcasting Co. Pty., Ltd., cnr. King & Albion Sts., Warwick. Location: Warwick	880	341	100
4ZR	Maranoa Broadcasting Co., Pty., Ltd., Hawthorne Rd., Roma, Qld. Location: Roma	1490	201	100

SOUTH AUSTRALIA

METROPOLITAN

5AD	Advertiser Newspapers, Ltd., Waymouth St., Adelaide. Location: Adelaide City	1310	229	500
5DN	Hume Broadcasters, Ltd., 29 Rundle St., Adelaide. Location: Adelaide City	960	313	500
5KA	Sport Radio Broadcasting Co., Ltd., Richards Bldgs., Currie St., Adelaide. Location: Adelaide City	1200	205	500

COUNTRY

5MU	Murray Bridge Broadcasting Co., Ltd., Waymouth St., Adelaide. Location: Murray Bridge	1450	207	100
5PI	Midlands Broadcasting Services, Ltd., Waymouth St., Adelaide. Location: Crystal Bk.	1040	288	2000
5RM	River Murray Broadcasters, Ltd., 29 Rundle St., Adelaide. Location: Renmark	850	353	1000
5SE	South-Eastern Broadcasting Co., Ltd., Waymouth St., Adelaide, S.A. Location: Mt. Gambier	1370	219	100

WESTERN AUSTRALIA

METROPOLITAN				
6IX	West Australian Newspapers, Ltd., St. George's Terrace, Perth. Location: Perth City	1240	242	500
6ML	W.A. Broadcasters, Ltd., Lyric House, Murray St., Perth. Location: Perth City	1130	265	500
6PR	Nicholson's, Ltd., 86-90 Barrack St., Perth. Location: Applecross, nr. Fremantle	880	341	500
COUNTRY				
6AM	6AM Broadcasters, Ltd., St. George's House, St. George's Terrace, Perth. Location: Northam	980	306	2000
6GE	Gt. North. Broadcasters, Ltd., St. George's Terrace, Perth, W.A. Location: Geraldton	1370	219	500
6KG	Goldfields Broadcasters (1933), Ltd., 209 Hannan St., Kalgoorlie. Location: Kalgoorlie	1210	248	500
6PM	6PM Broadcasters, Ltd., St. George's House, St. George's Terrace, Perth. Location: Fremantle	1390	216	100
6WB	W.A. Broadcasters, Ltd., Lyric House, Murray St., Perth. Location: Katanning	1070	280	2000

TASMANIA

METROPOLITAN				
7HO	Commercial Broadcasters Pty., Ltd., 82 Elizabeth St., Hobart. Location: Hobart	860	349	500
7HT	Metropolitan Broadcasters, Pty., Ltd., 44 Elizabeth St., Hobart. Location: Hobart	1080	278	500
COUNTRY				
7BU	Findlays Pty., Ltd., Wilson St., Burnie. Location: Burnie	600	455	200
7DY	North-East Tasmanian Radio B'casters Pty., Ltd., Paterson St., Launceston, Tas. Location: Derby	1400	214	200
7EX	7EX Pty., Ltd., 74 Charles St., Launceston, Tas. Location: Launceston	1000	300	500
7LA	Findlay & Wills Broadcasters Pty., Ltd., 67 Brisbane St., Launceston. Location: Launceston	1100	273	500
7QT	West Coast Broadcasters Pty., Ltd., 21 Paterson St., Launceston. Location: Queenstown	680	441	100
7UV	Nth. Tasmania Broadcasters Pty., Ltd., 480 Bourke St., Melb. Location: Ulverstone	1460	205	300

NEW ZEALAND BROADCASTING STATIONS TO MAY 31, 1938

New Zealand broadcasting is on a different basis from that in Australia. "A" class stations are the normal National Stations as we have them in Australia. "B" class stations are privately owned stations, subsidised by the Government, but cannot gather revenue from outside advertising. "C" class stations are owned by the Government, and are permitted to accept advertising from revenue.

2YA	Wellington ..	570kc.	60kw.	National
1YA	Auckland	650kc.	10kw.	National
4YZ	Invercargill ..	680kc.	100w.	B Class
3YA	Christchurch ..	720kc.	10kw.	National
2YB	New Plymouth	760kc.	100w.	B Class
4YA	Dunedin	790kc.	10kw.	National
2ZH	Napier	820kc.	65w.	B Class
2YC	Wellington ..	840kc.	5kw.	Alternative
1YX	Auckland	880kc.	150w	Alternative
2ZP	Wairoa	900kc.	105w.	B Class
2YN	Nelson	920kc.	30w.	B Class
3ZR	Greymouth .. .	940kc.	150w.	B Class
2ZJ	Gisborne	980kc.	200w.	B Class

2YD	Wellington ..	990kc.	250w.	B Class
4ZD	Dunedin	1010kc.	20w.	B Class
4ZM	Dunedin	1010kc.	30w.	B Class
1ZB	Auckland	1090kc.	1kw.	C Class
2ZB	Christchurch ..	1130kc.	1kw.	C Class
2ZM	Gisborne	1150kc.	15w.	B Class
3YL	Christchurch ..	1200kc.	250w.	Alternative
4ZB	Dunedin	1220kc.	1kw.	C Class
1ZM	Auckland .. .	1250kc.	1kw.	National
4ZC	Cromwell .. .	1280kc.	20w.	B Class
1ZJ	Auckland	1310kc.	65w.	B Class
3ZB	Christchurch ..	1430kc.	1kw.	C Class
4YO	Dunedin	1140kc.	J. R. Bonwell	Alternative

Special note should be taken that New Zealand time is 2 hours ahead of Sydney time. Thus their programmes commence and conclude 2 hours before our own. This adjustment must be made when checking programme times.

New Zealand broadcast stations are frequently well received in Australia, particularly those which have comparatively free channels. In the city, several of the stronger transmitters, particularly 1YA, will come in at very good strength in favorable conditions soon after dusk. In some very favorable locations quite a number of them will be heard from time to time. It must be remembered that the New Zealand stations close down 2 hours before most of the Australian stations, so it is no use trying to tune them in after our stations have closed down. They may also be heard in the early mornings, before the Australian stations have commenced the day's broadcasting.

ADD TWO HOURS TO SYDNEY TIME

AUSTRALIAN BROADCAST STATIONS

Call Sign.	Location.	K'cycles.	Metres.
2CR	Central Regional, N.S.W.	550	545
6WA	S.W. Regional, W.A.	560	536
4VL	Charleville, Q'land	570	526
3WV	Western Regional, Vic.	580	517
7ZL	Hobart, Tas.	600	500
2FC	Sydney, N.S.W.	610	492
3AR	Melbourne, Vic.	620	484
4QN	North Regional, Q'land	630	476
5CK	North Regional, S.Aust.	640	469
2DU	Dubbo, N.S.W.	660	455
7BU	Burnie, Tas.	660	455
2CO	Riverina, N.S.W.	670	448
7QT	Queenstown, Tas.	680	441
2HR	Hunter River, N.S.W.	680	441
6WF	Perth, W. Aust.	690	435
2NR	Northern Rivers, N.S.W.	700	429
7NT	North Regional, Tas.	710	423
6GF	Kalgoorlie, W. Aust.	720	417
5CL	Adelaide, S. Aust.	730	411
2BL	Sydney, N.S.W.	740	405
3LO	Melbourne, Vic.	770	390
4TO	Townsville, Q'land	780	385
2KA	Katoomba, N.S.W.	780	385
4QG	Brisbane, Q'land.	800	375
3GI	Gippsland, Vic.	830	361
5RM	Renmark, S. Aust.	850	353
7HO	Hobart, Tas.	860	349
2BH	Broken Hill, N.S.W.	860	349
4AY	Ayr, Q'land	860	349
2GB	Sydney, N.S.W.	870	345
6PR	Applecross, W. Aust.	880	341
4WK	Warwick, Q'land	880	341
2XL	Cooma, N.S.W.	880	341
5AN	Adelaide, S. Aust.	890	337
3UL	Warragul, Vic.	900	333
2LM	Lismore, N.S.W.	900	333
4RK	Rockhampton, Q'land	910	330
3UZ	Melbourne, Vic.	930	323
4QR	Brisbane, Q'land	940	319
2UE	Sydney, N.S.W.	950	316
5DN	Adelaide, S. Aust.	960	313
3BO	Bendigo, Vic.	970	309
6AM	Northam, W. Aust.	980	306
2KM	Kempsey, N.S.W.	980	306
2GZ	Orange, N.S.W.	990	303
4CA	Cairns, Q'land	1000	300
4GR	Toowoomba, Q'land	1000	300
7EX	Launceston, Tas.	1000	300
3HA	Nr. Hamilton, Vic.	1010	297
2KY	Sydney, N.SW.	1020	294
3DB	Melbourne, Vic.	1030	291
5PI	Crystal Brook, S. Aust.	1040	288
2CA	Canberra, F.C.T.	1050	286
6WB	Katanning, W. Aust.	1070	280
2RG	Griffith, N.S.W.	1070	280
7HT	Hobart, Tas.	1080	278
4RO	Rockhampton, Q'land	1080	278
3LK	Lubeck, Vic.	1090	275
7LA	Launceston, Tas.	1100	273
4LG	Longreach, Q'land	1100	273
2UW	Sydney, N.S.W.	1110	270
4BC	Brisbane, Q'land	1120	268
6ML	Perth, W. Aust.	1130	265
2AD	Armidale, N.S.W.	1130	265
2HD	Sandgate, N.S.W.	1140	263
2WG	Wagga, N.S.W.	1150	261
2NZ	Little Plain, N.S.W.	1170	256
3KZ	Melbourne, Vic.	1180	254
2CH	Sydney, N.S.W.	1190	252
5KA	Adelaide, S. Aust.	1200	250
4AK	Oakey, Q'land	1220	246
6KG	Kalgoorlie, W. Aust.	1210	248
3YB	Warrnambool, Vic.	1210	248
2GF	Grafton, N.S.W.	1210	248
2NC	Hunter River, N.S.W.	1230	244
6IX	Perth, W. Aust.	1240	242
3TR	Near Sale, Vic.	1240	242
3SR	Shepparton, Vic.	1260	233
2SM	Sydney, N.S.W.	1270	236
3AW	Melbourne, Vic.	1280	234
4BK	Brisbane, Q'land.	1290	233
2TM	Tamworth, N.S.W.	1300	231
5AD	Adelaide, S. Aust.	1310	229
3BA	Ballarat, Vic.	1320	227
4BU	Bundaberg, Q'land	1330	226
3SH	Swan Hill, Vic.	1330	226
2LF	Young, N.S.W.	1340	224
3GL	Geelong, Vic.	1350	222
4PM	Port Moresby, Papua	1360	221
3MA	Mildura, Vic.	1360	221
5SE	Mt. Gambier, S. Aust.	1370	219
6GE	Geraldton, W. Aust.	1370	219
2MO	Gunnedah, N.S.W.	1370	219
4BH	Brisbane, Q'land	1380	217
6PM	Fremantle, W. Aust.	1390	216
4MK	Mackay, Q'land	1390	216
2GN	Goulburn, N.S.W.	1390	216
4MB	Maryborough, Q'land	1400	214
2PK	Parkes, N.S.W.	1400	214
7DY	Derby, Tas.	1400	214
5AU	Port Augusta, S. Aust.	1400	214
2KO	Sandgate, N.S.W.	1410	213
3XY	Melbourne, Vic.	1420	211
2WL	Wollongong, N.S.W.	1430	210
4IP	Ipswich, Q'land	1440	208
2QN	Deniliquin, N.S.W.	1440	208
5MU	Murray Bridge, S. Aust.	1450	207
2MG	Mudgee, N.S.W.	1450	207
2CK	Cessnock, N.S.W.	1460	205
7UV	Ulverstone, Tas.	1460	205
3CV	Charlton, Vic.	1470	204
2MW	Murwillumbah, N.S.W.	1470	204
2AY	Albury, N.S.W.	1480	203
2BE	Bega, N.S.W.	1490	201
4ZR	Roma, Q'land	1490	201
2BS	Bathurst, N.S.W.	1500	200
3AK	Balwyn, Vic.	1500	200

BROADCAST DX!

HOW TO RECEIVE LONG DISTANCE ON THE BROADCAST BAND

By ALAN McGREGOR

THERE is an undeniable charm and a thrill in long-distance radio reception, and to-day, despite the advent of powerful short-wave receivers and equally powerful transmitters which make overseas reception both positive and easy, the broadcast receiver is, at times, able to give quite interesting reception from transmitters located in many far countries. We do not assert, nor do we even suggest to the uninitiated, that reception on the broadcast band, that is, between 200 and 550 metres, approaches in any way reception from overseas on the short-wave bands. However, just as we find people smashing records in other ways, so we find the broadcast DX fiend, who tries to get a log of normal broadcast stations located in all the scattered corners of the earth. The enthusiast knows full well when he has logged some station located perhaps in Siberia, but he must have proof of his accomplishment. Thus, when the new transmitter is heard he invariably notes the programme with care writes to the station, asks them to check it with the programme broadcast at the particular time of its reception in Australia, and should it coincide to confirm his claim of a new logging. Then, and only then, is he satisfied, and enabled to show fellow-enthusiasts positive proof of his reception.

REMEMBER!

To those who would like to join the ranks of these DX fiends, and the word fiend is used intentionally, we would endeavor to point out a few important facts which must always be borne in mind. Firstly, the receiver must be moderately sensitive. By this we do not mean that it should employ a large number of valves, but we do mean that it should give efficient reception during daylight hours of stations located upwards of 300 miles away. It must be absolutely quiet in operation, free from hum, crackling and distortion. In brief, it must be a good performer. The aerial must be no haphazard affair. It must be well and carefully insulated, of reasonable height and length, free from careless joins. The earth, too, must be efficient. Then the most important of all considerations is that of patience. Conditions must be watched, for it is useless searching for overseas stations through heavy static. Even when static is absent, one may try for a couple of evenings without much success, and then find, on the third evening, splendid reception. A time chart is essential, for it is quite useless searching for DX signals from overseas unless the signals are travelling through darkness. This does not always apply to early evening or early morning reception, however, for it may be quite light at the receiving or transmitting end. For example, signals from Europe are frequently heard in Eastern Australia until just before sunrise. This time would correspond with early evening in Europe, and thus the signals would actually be coming through darkness over the greater distance.

Several conditions affect DX reception to a marked degree, and whilst a set of rules cannot be drawn up, it will be found that stations from Asia are heard almost during the entire year. Reception from Europe can be divided into two periods. One of these is the "spring season," the other the "fall." The former season may be fairly accurately described as being from early August to the end of September, and the latter during March and April. African stations, too, will be heard during these seasons. Were it not for the use of almost all the available broadcast channels during the early winter evenings, it would be quite possible to hear American broadcasters at this time, but because of the "jamming" so prevalent during the early evenings, the best opportunity of logging America is just after midnight during midsummer. New Zealanders will be heard to advantage almost every evening, and may be heard during the early mornings from 5.30 a.m. when beginning their breakfast session. It will be found, of course, that the breakfast session is heard to best advantage during winter.

DX— MEANS DISTANCE!

It is the abbreviation which is generally used to indicate long distance reception. Mr. McGregor's experience as a Broadcast DX-er will be found of great value to all who search the ether for those elusive foreigners.

HOW TO REPORT

From time to time we receive queries which ask the correct method of reporting an overseas station, and requesting confirmation of reception. "How," many ask, "are you to request confirmation of reception when you do not even know the language being spoken?" This really presents no difficulty. The first essential in reporting a station is to be sure of the transmitter's identity. With a reliable list of frequencies, a few commonsense deductions regarding time will soon reveal the location of the stranger. The programme should be carefully noted for approximately 30 minutes. The type of receiver used, atmospheric conditions and signal strength should be mentioned in the report. Signal strength should never be exaggerated, for the engineers in stations thousands of miles away do not readily believe the statement that signals were "quite as loud as our own local stations." We have at times seen reports forwarded to Australian stations from overseas which grossly exaggerate the signal strength. The time of reception of each item in the programme heard should be converted to that country's standard time from which the programme originated. It is here that a time chart will prove invaluable.

The DX enthusiast should never let his enthusiasm wane merely because many will probably ridicule his assertion that overseas stations can most definitely be heard on the broadcast band. We know of stations in Argentina, in Mexico, in Russia, in Siam, in Switzerland, in almost every country where radio is used, that have verified reception of their programmes by Australian listeners. The newcomer to broadcast DX must be prepared to await the time when he can flourish his first QSL before the eyes of the doubting.

We have prepared a list of broadcast stations, all of which may be heard in Australia under favorable conditions. This list is by no means intended to be accepted as complete, and the Chinese section is very incomplete. Since the outbreak of hostilities in China, we have had no information regarding frequencies of the many stations there operating. It is quite possible, in fact certain, that other stations will be heard, and to those seeking their identification we are al-

BROADCAST DX RECEPTION

ways pleased to lend our aid. The stations which are listed, however, are those which provide the best possibilities of reception. To list all the broadcasters which could possibly be heard in Australia would take many pages of space, and then many would search for stations which would have only a remote chance of being heard, and failing, would give up in disgust.

If the suggestions we have offered in this article are followed, we feel sure that it will not be long before quite a creditable log is accomplished, and the possibilities of broadcast DX become more generally recognised. A pile of letters, cards and brochures received from some one hundred and fifty broadcasters located in thirty different countries which at present lie before us, may well come the way of those who are interested in this ever-absorbing hobby of broadcast DX.

It should be noted that any times given in the station lists are all Australian Eastern Standard Time. The hours of closing and opening given in the case of American stations are those times at which the stations invariably begin and cease their transmissions. It will be noted that the closing times of many are not given, and this is because of the fact that so many Australian stations are then on the air, making reception at that time a very remote possibility.

AMERICAN BROADCAST STATIONS

AMERICAN broadcasters are audible during two definite seasons of the year. During our autumn and winter we hear them during the early evening, closing their transmission. During our summer months they are best received towards midnight, and after, when they begin their transmissions for the day.

CALL.	LOCATION.	Frequency	Power (in k/w.)	Opens.	Closes
KSD	St. Louis, Mo.	550	1	12.00 p.m.	
KLZ	Denver, Colo.	560	1	11.30 p.m.	5.00 p.m.
KRSO	San Francisco	560	1	12.00 p.m.	7.00 p.m.
KMTR	Hollywood	570	1	12.45 a.m.	5.00 p.m.
KMJ	Fresno	580	0.5	1.00 a.m.	6.00 p.m.
KFSD	San Diego	600	1	1.00 a.m.	6.00 p.m.
KFRC	San Francisco	610	1	12.00 p.m.	6.00 p.m.
KGW	Portland	620	1	1.00 a.m.	6.00 p.m.
KFI	Los Angeles	640	50	12.15 a.m.	6.00 p.m.
KPO	San Francisco	680	50	—	6.00 p.m.
WLW	Cincinnati	700	500	9.30 p.m.	
KGO	San Francisco	790	7.5	1.30 a.m.	6.00 p.m.
KOA	Denver	830	50	12.00 p.m.	
XERA	Villa Acuna, Mex.	840	150	1.00 a.m.	
XEMO	Tiajuana, Mex.	860	5	11.15 p.m.	
WSUI	Iowa City	880	0.5	1.00 a.m.	
KFPY	Washington	890	12	12.50 a.m.	
KHJ	Los Angeles	900	50	1.00 a.m.	6.00 p.m.
KOMO	Seattle	920	1	1.00 a.m.	
KROW	Berkeley	930	1	1.00 a.m.	
KFWB	Hollywood	950	1	1.00 a.m.	
KJR	Seattle	970	2	2.00 a.m.	
KFVD	Los Angeles	1000	0.25	12.00 p.m.	
XEB	Mexico City	1030	10	1.00 a.m.	
KWJJ	Portland	1040	0.5	1.00 a.m.	
KNX	Hollywood	1050	50	12.30 a.m.	6.15 p.m.
WPG	Atlantic City	1100	5	12.00 p.m.	
KRKD	Los Angeles	1120	0.5	12.00 p.m.	
KSL	Salt Lake City	1130	50	11.30 p.m.	
KEX	Portland	1180	5	12.30 a.m.	
KYA	San Francisco	1230	1	2.00 a.m.	
WNEW	New York	1250	1	24 hours daily.	
KOL	Seattle	1270	1	12.15 a.m.	
KFBB	Great Falls	1280	1	1.00 a.m.	
KGB	San Diego	1330	1	1.00 a.m.	
KOMA	Oklahoma City	1480	5	11.00 p.m.	

ASIATIC BROADCAST STATIONS

ASIAN stations are heard to best advantage late at night after our local stations close. They are audible throughout almost the entire year under favorable conditions. The list given here is not a complete one, but includes all those the average dx-er is likely to hear.

CALL.	LOCATION.	Frequency.	Power. (in k/w.)	Usual Closure.
RW52	Tchita, U.S.S.R.	556	20	
MTCY	Hsinking, Manchukuo	560	10	12.30 a.m.
RW72	Tcheliabinsk, U.S.S.R.	570		
JFCK	Taichu, Formosa	582	1	12.00 p.m.
JOAK	Tokio, Japan	590	150	11.00 p.m.
JONG	Miyazaki, Japan	600	0.5	11.00 p.m.
XMHA	Shanghai, China	600	1	2.30 a.m.
JOJK	Kanazawa, Japan	610	3	11.00 p.m.
KZRM	Manila, Phil. Is.	618.5	50	1.00 a.m.
JOKK	Okayama, Japan	630	0.5	11.00 p.m.
JOUK	Akita, Japan	650	0.3	11.00 p.m.
XGOA	Nanking, China	660	75	12.30 a.m.
MTFY	Harbin, Manchukuo	675	3	12.30 a.m.
JOBK	Osaka, Japan	690	10	11.00 p.m.
VPB	Colombo, Ceylon	705	2	2.30 a.m.
JODK	Seoul, Korea	710	10	11.00 p.m.
JORK	Kochi, Japan	720	1	11.00 p.m.
JOCK	Nagoya, Japan	730	10	11.00 p.m.
HS7PJ	Saladaeng, Bangkok	750	10	3.30 p.m.
JOHK	Sendai, Japan	770	10	11.00 p.m.
VUM	Madras, India	770	0.2	11.30 p.m.
JOPK	Shizuoka, Japan	780	0.5	11.00 p.m.
JOGK	Kumamoto, Japan	790	10	11.00 p.m.
JOIK	Sapporo, Japan	810	10	11.00 p.m.
VUC	Calcutta, India	810	10	2.00 a.m.
JBBK	Heijo, Japan	820	0.5	11.00 p.m.
JOFK	Hiroshima, Japan	830	10	11.00 p.m.
ZBW	Hongkong, China	845	2.5	12.30 a.m.
VUB	Bombay, India	855	3	2.30 a.m.
HSPJ	Bangkok, Siam	855	2.5	1.00 a.m.
JOAK	Tokio, Japan	870	150	11.00 p.m.
VUD	Delhi, India	882	20	3.30 a.m.
JOLG	Tottori, Japan	890	1	11.00 p.m.
JOLK	Fukuoka, Japan	910	0.5	11.00 p.m.
JODK	Seoul, Korea	970	10	11.00 p.m.
JOCK	Nagoya, Japan	990	10	11.00 p.m.
VUL	Lahore, India	1200	0.1	1.30 a.m.
FFZ	Shanghai, China	1400	0.25	12.00 p.m.
VUP	Peshawar, India	1500	0.3	2.30 a.m.

AFRICAN and EUROPEAN STATIONS

THESE stations are generally heard best in the early mornings, particularly just before sunrise.

Location.	Frequency (in k/cs.)	Power (in k/cs.)
Budapest	546	120
Beromunster (Switzerland)	556	120
Grahamstown (S. Africa)	560	10
Stuttgart	574	100
Vienna	592	120
Capetown	600	10
Cairo	620	20
Prague	638	120
Johannesburg	645	10
Sottens (Switzerland)	677	100
Paris	695	120
Stockholm	704	55
Rome	713	100
Munich	740	100
Leipzig	785	120
Lwow (Poland)	795	50
Milan	814	50
Bucharest	823	12
Berlin	841	100
Strasbourg	859	100
Poznan	868	16
Graz	886	15
Hamburg	904	100
Toulouse	913	10
Breslau	950	100
Paris	959	60
Odessa (U.S.S.R.)	968	100
Hilversum	995	60
Bratislavia	1004	13
Konigsberg	1031	100
Bari	1059	30
Trieste	1140	10
Copenhagen	1176	10
Kosice (Czechoslovakia)	1158	10
Monteceneri	1167	15
Saarbrucken	1249	17
German Common Wave	1330	—
Lyons	1393	25
Miskole	1438	1
Paris	1456	5

SHORT WAVES

GETTING THE MOST FROM THEM

By R. N. SHAW.

Mr. R. N. Shaw has been the short-wave correspondent of Wireless Weekly for more than 10 years, and the list of stations given here has been compiled by him as the result of his own listening, and the reports of his many correspondents. All these stations should be audible from time to time.

IN these days of advanced radio there are quite a number of broadcast listeners who decide to break into the short wave field, but who, unfortunately, hold the mistaken view that all they have to do to ensure success is to purchase a modern all-wave receiver. There can be no denying the fact that a good receiver is first of all essential, but there are other essentials also. Amongst the latter will be found the necessity for patience, careful tuning, a knowledge of times in other countries, a smattering of foreign languages, and recognition of the fact that winter and summer, as well as daylight and darkness, have a very material effect on the reception of short wave signals from other parts of the world. There can be no denying the statement that patience is essential. Listeners on the broadcast bands have accustomed themselves to searching hurriedly across the dials of their receiver for their favorite local or more distant Australian station. When a receiver embodying short wave equipment comes into their hands it very often receives similar treatment. And what is the result? Generally speaking, a dissatisfied or disgusted listener who is prone to think that all the stories he has heard about overseas stations is pure moonshine developed in the over-active brain of an ardent short wave "crank." We know just what we happen to be writing about in this matter, for in different towns in this State we have been shown receivers which their owners declared would receive but few of the stations mentioned in our weekly notes. The astonishment depicted on the faces of some of these good folk was really a pleasure to behold, as it was our good fortune to tune in station after station! And those results can be achieved by almost anyone who will exercise a little care and patience. To be successful the tuner must rotate the dial controls very slowly, very slowly, indeed. It should be borne in mind that the lower the wavelength the finer is the tuning. For instance, a station on 80 metres amateur band can be tuned in rather broadly, but on coming down to 16 or 13 metres the listener will find quite a different story.

STUDY SEASON AND TIME

A listener, having acquired the "touch" of his receiver, should give particular attention to the effect of winter and summer and daylight and darkness upon station signals, for the effect of these conditions can cause a good deal of disappointment to the inexperienced listener. By the time these words are read by our listening friends we shall be in the midst of winter. Since last winter thousands of listeners in Australia have been added to the number who could listen to overseas programmes. Many of these, for instance, will have become accustomed to tuning in their favorite European station in the evening, but now find that this station has disappeared or is at the best tantalising and elusive in its behaviour these evenings. To appreciate this position the listener needs to realise that the short wave signal is forced away from the transmitter high above our ordinary atmosphere into what is termed the Heaviside layer. And it is up there that summer or winter seasons play havoc with the transmitted signal. Hence it comes about that during our summer months it is generally found impossible to hear signals on most wavelengths during daylight, whilst at night the signals romp in from all parts of the world. The position is reversed in winter, and as May approaches it will be found that stations weaken or disappear at night, whilst dozens of them on all bands up to 50 metres begin to appear throughout the day. These remarks apply in particular to all parts of Europe. It will be found that stations in the southern parts of America, particularly on 49 and 31 metres, may be heard quite well during the later evenings. As static is practically absent for most of the winter it is also possible to hear stations operating up to about 100 metres during the evenings after about 9 o'clock, whilst three or four stations in the U.S.A. operating on 13 and 16 metres may be heard for comparatively brief periods between 10 and 11.30 before they fade out. Speaking broadly, newcomers to the art of tuning short wave stations will find that until about the end of September the bands will contain more stations in the mornings until 9 o'clock and in the afternoons from about 2 o'clock until darkness sets in. At night during that period it will be found that there are but few stations on wavelengths of 13, 16, or 19 metres, with odd ones on 25, 27, 28, and 29 metres. Generally speaking, most entertainment will be found on 31 metres, with a few good stations on 49, 44, 58, 70, and 98 metres. It does seem quite a pity that the number of listeners who can enjoy the magnificent variety of programmes which can be heard during winter days is of necessity limited.

Mr. Shaw's Short Wave Notes appear in "Wireless Weekly" as a regular feature. You can keep your listening up-to-date by reading them each week as a guide to what stations are being heard at any particular season of the year.

QUESTION OF WAVELENGTH

One of the difficulties which beset the newcomer is that of wavelengths and frequencies, and we are frequently appealed to for explanations of some of the definitions used. Nowadays station announcers frequently use different terms in stating the wavelengths of the station. Some announce in terms of metres, others kilocycles, whilst others adopt megacycles, a term which has come into much greater use during the past 12 months. Listeners will note that the Daventry announcements are now in megacycles, with a cursory reference to metres. The method of ascertaining what is meant by either term is simple. For instance, 1000 kilocycles equal one megacycle. We will suppose that a listener has heard a station announced as

GETTING THE MOST FROM SHORT WAVES

six megacycles. If this is multiplied by 1000 six megacycles will be found to represent 6000 kilocycles. Now, if this 6000 is divided into 300,000 the result will be metres—50. Thus where kilocycles are mentioned the number should be divided into 300,000 to ascertain the number of metres.

WORLD TIMES

One of the wonders of short wave radio is bound up in the fact that a listener in Australia sitting by his or her receiver listens to voice or music emanating from a part of the world where the time is altogether different, and may be anything up to 18 hours behind, say, Sydney. In England, America, New Zealand, and some European countries what is termed daylight saving time operates, and clocks are advanced an hour between October and the end of April. Whilst this does materially affect reception from America it will be noticed that Daventry throughout quotes G.M.T., although "Big Ben" will be heard chiming summer time, or one hour ahead of G.M.T. A good knowledge of the time of day in other parts of the world will often assist the listener in identifying a doubtful or difficult station. Taking Sydney, Melbourne, or Brisbane as standard time, it might be noted that the following are behind those cities by the following number of hours:—London 10, Berlin, Praha, Rome, Lisbon, Madrid, 9; Paris, 10; Moscow, 7; Tokio and Manila, 2; China, 1; New York and Eastern America, 15; Chicago and Central America, 16; West or Pacific Coast of America, 18; India, 4½; and South Africa, 8.

SHORT WAVE AERIALS

AS a rule, no particular precautions need be taken when listening to short waves on a modern receiver, as far as aerials are concerned. Most of the stations worth listening to come in so well that the ordinary broadcast aerial will serve. We suggest that at all times an outside aerial be used, preferably about 60ft. long, and as high and clear of obstructions as possible.

In some cases, interference is met with on short waves due to faulty house wiring. In such cases, a doublet aerial of some kind is a distinct advantage, as it will prevent the lead-in from picking up noises which often are fed into it from the wiring. There are a number of very good aerials of this type available from our radio dealer, and they will work very well if installed as per the makers' instructions.

There are several other aerial systems designed to give extra gain on the main short wave bands—these generally have a number of "doublets" connected to one complete system, with some kind of matching transformer at their junction, or at the set itself, or at both places. As a rule, these should be erected so that the signals arrive at the aerial in a broadside direction. They should be strung up as high as possible, and should there be any power lines near by, at right angles to such lines. This latter rule should be observed, even if it means that the aerial cannot be hung this way, and at the same time present a broadside position to the most favored signals, which, as a rule, come from Europe.

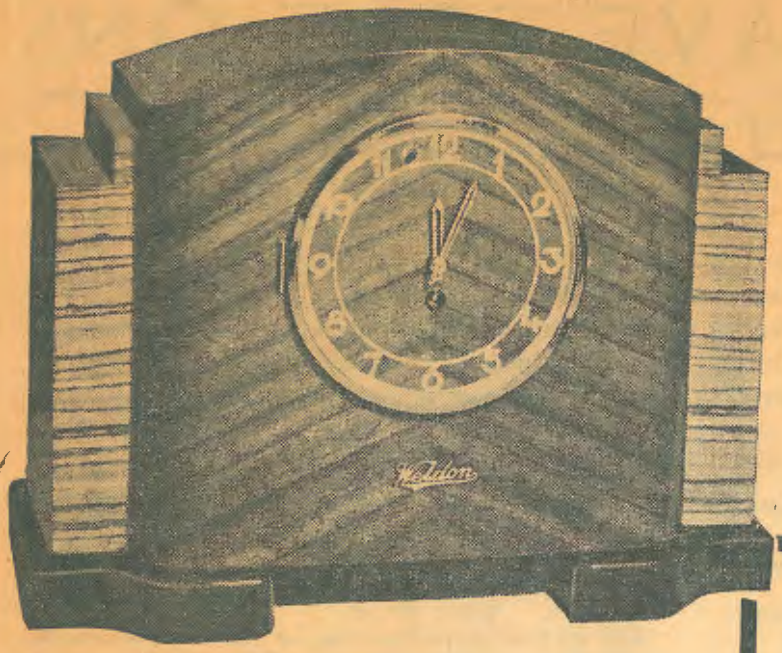
SHORT WAVE STATIONS OF THE WORLD

In addition to stations which can be heard without difficulty in Australasia, this list contains many stations which may be heard but rarely and with difficulty in this country. They are included to assist those whose speciality is searching the ether for new and difficult stations. Listeners should likewise bear in mind that stations heard in daylight during winter are inaudible in summer, while many stations heard during evenings in summer disappear as winter comes.

W/L.	CALL.	LOCATION.
13.92	W8XK	Pittsburgh, U.S.A. About 10 p.m. winter. B.
13.93	GSJ	Daventry. 8.45 p.m. to 2.30 a.m. B.
13.94	W2XE	New York. From 9.30 p.m. winter. News 9.45. B.
13.95	W2XAD	Schenectady. 10 p.m. to 1.30 a.m. winter. B.
13.97	GSH	Daventry. 8.45 p.m. to 2.30 p.m. B.
13.99	DJS	Berlin. 4 p.m. to 1.30 a.m. B.
15.77	HS8PJ	Bangkok, Siam. Monday, 11 p.m. to 12.30 a.m. B.
16.80	KGU	Honolulu. Hawaiian relays around 1-3 p.m. B.
16.87	W3XAL	New York. 10 p.m. winter, early mornings in summer. B.
16.88	PHI	Holland. Around 11 p.m. summer. B.
16.89	DJE	Berlin. 3.10 p.m. to midnight. Best in summer.
16.94	IAC	Piza, Italy. 8 p.m. to midnight. T.
18.34	RTW	Moscow. 3 p.m. to midnight. T.
18.47	KTO	Manila. 6 a.m. to noon. T.
18.59	GBA	Rugby, England. 6 p.m. to 1 a.m. T.
18.71	KKP	Hawaii. 4 a.m. to 10 a.m. T.
18.89	FTK	St. Assise, France. Phones Saigon 11.30 p.m. T.
18.90	XQJ	Shanghai. Around 8 a.m. to 3 p.m. T.
18.91	JVD	Nazaki, Japan. Afternoon and night. T.
18.91	CEC	Santiago, Chile. Early mornings. T.
19.20	JVF	Nazaki, Japan. Experimental; also phone evenings.
19.43	XEBM	Mazatlan. 1 a.m. to late afternoon. B.
19.51	CXA16	Montevideo, Uruguay. Operating later in year. B.
19.52	HAS3	Budapest. Sunday, midnight. B.
19.56	DJR	Berlin. 7.50 a.m. to 1.50 p.m. and 11 p.m. to about 1.30 a.m.
19.56	W2XAD	Schenectady. 1.30 a.m. to about 8 a.m. B.
19.60	GSP	Daventry. Winter, 3.30 a.m. to 11.30 a.m. B.
19.61	CXA18	Montevideo, Uruguay. Operating later in year. B.
19.62	LRU	Buenos Aires. 10 p.m. to 8.30 a.m. B.
19.63	DJQ	Berlin. 7.50 a.m. to 1.50 p.m. and 3.10 p.m. to late evening. B.
19.64	HI3X	Trujillo. 10.30 p.m. to 1.30 a.m., Sunday. B.
19.64	W2XE	New York. 4 a.m. to 8.30 a.m. Changes to 25 metres in winter. B.
19.68	W1XAL	Boston. Monday, 1 to 2.30 a.m. B.
19.68	TPA2	Paris. Winter from 8 p.m., summer 9 p.m. B.
19.68	RIM	Tashkent, Russia. Around 10 p.m. T.
19.70	OLR5A	Praha. Summer from 9 p.m., but may be heard mornings in winter.
19.71	PCJ	Holland. Tuesday, 5 to 6.30 p.m.; Wednesday, 11 p.m. to 1.30 a.m. Also audible some mornings 5 to 6 and 10 a.m. to 1.15 p.m. on 31.28 metres. B.
19.72	W8XK	Pittsburgh. Midnight to about 9.30 a.m. B.
19.73	DJB	Berlin. 7.50 a.m. to 1.50 p.m. and 3.10 p.m. to late evenings or early mornings in summer. B.
19.75	TAQ	Angora, Turkey. On air later in year.
19.76	GSO	Daventry. 7.15 to 11.30 a.m. and 3 p.m. to 5 p.m. in winter. Later hours in summer. B.
19.78	TGWA	Guatemala. Occasionally about 3 to 8 a.m. B.
19.79	JZK	Tokio. Winter, 3.30 to 4.30 p.m. and 10 p.m. B.
19.79	CXA14	Montevideo, Uruguay. Operating later in year.
19.79	XEWW	Mexico. Mornings to about 8 a.m. and occasionally afternoon to 4. B.
19.80	YDC	Bandoeng. About 8.30 a.m. to noon and 8 p.m. to 1.30 a.m. B.
19.82	GSF	Daventry. 7.15 a.m. to 9 a.m., 3 to 5 p.m., and 8.45 p.m. to 2.30 a.m. B.
19.84	HVJ	Vatican City. Around 1.30 a.m. B.
19.84		Yugoslavia. Heard between 10.15 and 11.15 a.m.
19.84	DJL	Berlin. 3 to 7.20 a.m., 3.10 to 5 p.m., and 11 p.m. to midnight.
19.95	RKI	Moscow. Afternoon and night. T.
20.03	KAY	Manila. From 8 p.m. and 10 a.m. T.
20.11	LZA	Sofia. 4 to about 5.30 p.m. and 3 to 7.30 a.m. B.
20.12	EA9AH	Spain. Heard mornings till about 7 a.m. B.
20.64	HBJ	Geneva. Heard Monday or Tuesday around to 6 p.m. in special broadcasts, and occasionally morning.
20.37	IQA	Rome. Around 11 p.m. T.
20.75	DZH	Berlin. Thursday, around 6 a.m.
20.43	EA9AH	Tetuan. Irregular, usually from 6 a.m. B.
22.0	SPW	Warsaw. Around 9 to 10.30 a.m. B.
22.44	JVU	Nazaki, Japan. 9 p.m. to 1 a.m. T.
22.62	VVN	Madras. 1 p.m. to 10 p.m. T.
22.70	IRJ	Rome. Irregular phone station.
23.29	VVS	Burma. 1 a.m. to 10 a.m. T.
23.33	IAC	Rome. 11 p.m. to 4 a.m. T.
24.52	TFJ	Reykjavik. Around 5 a.m. B.
24.73	DZE	Berlin. Experimental. Heard around 6 a.m. Thursday.
25.0	RNE	Moscow. Winter, Monday, Tuesday, Saturday, 7-8 a.m., and Sunday and Wednesday, 9-10 p.m. Also daily, 1 to 2 p.m. All English sessions. B.
25.08	H12X	Trujillo. Wednesday and Saturday, 11 a.m. to 1.30 p.m. B.
25.12	FTA	St. Assise, Paris. Early evening and morning. T.
25.20	CB1190	Santiago, Chile. Afternoon to about 1.30. B.
25.21	XEWI	Mexico. Morning, from 6. Probably afternoon occasionally also. B.
25.24	TPA3	Paris. 1 to 3 p.m., 4 to 8 p.m., 4 to 8 a.m. B.
25.27	W8XK	Pittsburgh. 10 a.m. to 1.30 p.m. May be earlier in winter. B.
25.34	OLR4A	Praha. Mornings to about 8 a.m. May vary to either 31.41, 19, or 49 metres without notice.

"T" stands for "telephone" stations, while "B" indicates that the station radiates broadcast programmes.

AUSTRALIA'S MOST POPULAR RADIO SET



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Australasian & Overseas Reception

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LISTEN CAREFULLY—TUNE SLOWLY!

W/L.	CALL.	LOCATION.
25.36	W9XAA	Chicago. Around 9 p.m. in summer or mornings in winter. B.
25.36	W2XE	New York. Around 7 a.m. till 1 p.m. B.
25.40	2RO4	Rome. 9.47 p.m. to 1.30 a.m., and probably to 9 a.m. If absent on 25.40, look for 31.13 metres.
25.42	COGF	Matanzas. Heard around 4 p.m. B.
25.42	JZJ	Nazaki, Japan. Morning to 8 a.m., 10-11.30 p.m. and occasionally afternoon.
25.45	W1XAL	Boston. About 7.30 to 8.30 a.m. B.
25.47	OER3	Vienna. Midnight to 8 a.m. B.
25.51	OLR4B	Praha. Usually mornings to about 8 a.m.
25.51	TGWA	Guatemala. Till about 1.30 p.m. B.
25.53	GSD	Daventry. 3.15-7.0 a.m., 9.20-11.30 a.m., 1.20-2.20 p.m., 3.0-5.0 p.m. B.
25.58		Saigon. About 10 p.m. to midnight. B.
25.60	CJRX	Winnipeg. 9 a.m. to 2 p.m. B.
25.60	CR7BH	Lourenco Marques. 10.30 to 2 a.m. B.
25.60	TPA4	Paris. 9 a.m. to 11 a.m. and 1.0-3.0 p.m. B.
25.60	CR7BH	Lourenco Marques. To about 6.30 a.m. B.
25.63	SBP	Stockholm. Irregular, early morning. B.
25.64	HP5A	Panama City. 2.0-3.30 p.m. and from 8 a.m. B.
25.65	CB1170	Santiago, Chile. Afternoon to about 2.30. B.
26.31	HBO	Geneva. Special broadcasts, evening or morning.
26.11	COCX	Havana. Till about 4 p.m., and may change to 25.56 metres. B.
27.17	CSW	Lisbon. Mornings till about 8 a.m. May change to 31.13 or 30.7 metres. B.
27.27	PLP	Bandoeng. 8 p.m. to 1.30 a.m.
27.3	ZLT	Wellington, N.Z. Radiophone with Sydney, London, and s.s. Awatea. Usually afternoon and evening.
27.50	KTR	Manila. 10 p.m. to 2 a.m. T.
28.47	JIB	Formosa. Opens at midnight, with English news.
28.93	EAJ43	Santa Cruz. Broadcasts Spanish news 7.15 a.m.
29.04	ORK	Brussels. Late afternoon and morning. B.
29.25	PMN	Bandoeng. From 8.30 p.m. to 1.40 a.m. Also may be heard winter from 8.30 a.m. B.
29.97	COBC	Havana. Afternoon to about 4 p.m. May be heard on 30.1 after 10 p.m.
30.15	CMA5	Havana, Cuba. Schedule unknown.
30.18	CSW	Lisbon. Heard in summer until about 8 a.m. B.
30.23	JDY	Dairen. 10 p.m., with English news at 10.30. B.
30.30	LSN	Buenos Aires. 9 a.m. to 9 p.m. T.
30.40	JYS	Japan. Occasionally relays JOAK evenings.
30.43	EAQ	Madrid. 3 a.m. to about 10 a.m. and 5 to 6 p.m. English news at 6.45 a.m. and 5.45 p.m.
30.43	COCM	Havana. 11 p.m. to 2.30 a.m. next day. B.
30.52	IRF	Rome. 9 a.m. to 11.30 a.m. B.
30.77	COCQ	Havana. 10 p.m. to 3 p.m. next day. B.
30.93	TI4NRH	Heredia, Costa Rica. Early afternoon, Wednesday, Friday, Sunday. B.
30.95	LLR	Buenos Aires. 6.45 to about 7.30 a.m. B.
31.00	DZA	Berlin. Irregular; transmits special broadcasts.
31.01	TGWA	Guatemala. Irregular. Occasionally Sunday afternoon.
31.12	CXA8	Radio Belgrano, Buenos Aires. Till 5 p.m.
31.06	LRX	Buenos Aires. 9 to 4.30 p.m. and from 8 a.m. B.
31.09	CT1AA	Lisbon. Wednesday, Friday, Sunday, 7.30 to 10 a.m. B.
31.10	CS2WA	Lisbon. Wednesday, Friday, Sunday, 7 to 9.30 a.m. B.
31.13	2RO	Rome. 5.55 to 9 a.m. B.
31.15	JFAK	Tokio. About 8 p.m. to midnight. B.
31.20	HJ1ABP	Cartagena. 10 to 11.30 p.m. Also afternoon. B.
31.22	HP5J	Panama City. Early afternoon and late morning.
31.23	ZRK	Capetown. 6.30-9.30 p.m., midnight to 1.30 a.m. B.
31.[illegible]	XEYU	Mexico City. 3.30-4.30 a.m., 11 a.m. to 3 p.m. B.
31.25	RAN	Moscow. 10 to 11.30 a.m. B.
31.28	VUD	Delhi, India. 5-6.30 p.m. and early morning.
31.28	6ME	Perth. Daily, except Sunday, 9 to 11 p.m. B.
31.28	W3XAU	Philadelphia. 3 to 10.30 a.m. B.
31.28	2ME	Sydney. Sunday, 3-5 p.m. and 8 p.m. to midnight. B.
31.28	PCJ	Hilversum, Holland. 5-6 a.m. and 10 a.m.-1.15 p.m. B.
31.32	GSC	Daventry. 12.20 to 2.20 p.m. in winter. B.
31.34	VLR	Melbourne. 12.25-5 p.m., 6.30-1.30 p.m. B.
31.34	GCB	Rugby. Phones with Canada early morning. T.
31.35	KZRM	Manila. 7 p.m. to midnight. B.
31.35	W1XK	Boston, U.S.A. 9 p.m. to 3 p.m. next day. B.
31.36		Moscow. New station, heard around 6 to 8 a.m. B.
31.38	DJA	Berlin. 7.50 a.m. to 1.50 p.m. and 3.10 p.m. to 1.30 a.m. next day. B.
31.41	CXA6	Montevideo, Uruguay. Operating later in year. B.
31.41	YDB	Bandoeng. 8.30 p.m. to 1.30 a.m. B.
31.41	TPA	Paris. Afternoon from about 4 to 7 p.m. B.
31.41	OLR3A	Praha, Czechoslovakia. 4 to 7.30 a.m. Likely to alter hours without notice.
31.42	VPD2	Suva. 8.30-10 p.m., except Sunday.
31.45	DJN	Berlin. 7.50 a.m. to 1.20 p.m., 3.10 p.m. to 1.30 a.m. next day. B.
31.48	JZI	Tokio. 5.30 to about 7.30 a.m. B.
31.48	W2XAF	Schenectady, U.S.A. 7 a.m. to about 5 p.m. B. Will be heard early evening late in 1938.
31.48	LKC	Jeloy, Norway. Early evening and morning. B.
31.49	XBW	Hongkong. 7 p.m. to midnight. B.
31.50	ZRH	Africa. 8 to 9.30 p.m. and early morning. B.
31.51	OZF	Skamlebaek, Denmark. 5 a.m. to about 7.15' a.m. B.
31.51	HJ6ABH	Colombia. 11 p.m. to 1.30 a.m. Also about 9 a.m. B.
31.55	GSB	Daventry. Hours vary, but winter, 3-9 a.m., 9.20 to 11.20 a.m., 12.20-2.20 p.m., 3-5 p.m. B.
31.56	PRF5	Rio de Janeiro. 7.45 to 8.45 a.m. B.
31.57		Finland. Between 6 and 8 a.m. B.
31.58	XEWW	Mexico City. About 2 to 4 p.m. and occasionally late evening or early morning. B.
31.58	HS8PJ	Bangkok, Siam. 10.30 p.m. to 12.30 a.m. Thursday only.
31.58	3ME	Melbourne. 7 to 10 p.m., except Sunday. B.
31.65	EAR	Madrid. Irregular.
31.71	OAX5C	Peru. 10 a.m. to about 3 p.m. B.
31.78	CXA9	Montevideo, Uruguay. Operating later in year. B.
31.82	COCH	Havana. 10 p.m. to about 3 p.m. next day. B.
32.15	OAX4J	Lima. 3-5.30 a.m., 10 a.m. to 3 p.m. B.
32.29	HIG	Trujillo. 3-4.30 p.m. and 7 to 11 a.m. B.
32.60	COBX	Havana. 8 a.m. to about 2 p.m. Irregular. B.
32.70	HC1GQ	Quito. Tuesday, Thursday, Sunday, noon to 1.30 p.m. B.
32.88	HAT4	Budapest. Monday, Thursday, Sunday, 10 to 10.30 a.m. B.
32.97	COCA	Havana. 11 p.m. to about 2.30 p.m. next day. B.
33.33	COBZ	Havana. 9.45 p.m. to 2 p.m. next day. B.

You cannot, of course, hear all these stations whenever you switch your set to the short waves. They are, however, compiled from actual reports, indicating that all the stations are heard on the air from time to time. The times given indicate the periods during which the stations are on the air, although some are audible only at certain times of the year.

Short Wave Stations, contd.

W/L.	CALL.	LOCATION.
33.34	ZMBJ	s.s. Awatea. Phone with ZLT or 2ME.
33.48	COKG	Havana. 11.30 p.m. to 1.30 p.m. next day. B.
33.64	COJK	Camaguey. 10 p.m. to 1.30 p.m. next day. B.
39.7	FO8AA	Tahiti. Schedule unknown.
39.79	RKI	Moscow. 10 a.m. to 11.30 a.m. B.
39.95	JVP	Tokio. 5.30 to 6.30 a.m. Irregular. B.
40.65	XECR	Mexico City. 9 a.m. to 10.30 a.m. B.
41.80	CR6AA	Lobita, W. Africa. 5.45 to 7.45 a.m. B.
42.25	FO8AA	Papeete. Wednesday, Saturday, 2 to 3 p.m. B.
43.99	XGOX	Nanking. Not heard for some time.
44.60	PMH	Bandoeng. 8.30 p.m. to 12.30 a.m. B.
44.94	HBQ	Geneva. Monday, 1.45 to 2.30 a.m. B.
45.25	HIT	Trujillo. 3.15 to 4.15 p.m., 8.45-11 a.m. B.
45.80	XEBC	Vera Cruz. 11 p.m. to midnight. B.
45.81	HI4D	Trujillo. 3-4.15 p.m., 8 to 10 a.m. B.
46.01	YV4RB	Valencia. 2.30-4.30 p.m., 7.30 a.m. to noon. B.
46.22	HI1L	Santiago. 8.30 to 11 a.m. Irregular. B.
46.80	TEPG	San Jose. 10 to 11.30 p.m. and 3-4.30 p.m. B.
47.47	COCW	Havana. 10 p.m. to about 2.30 p.m. next day. B.
47.50	HIZ	Trujillo. 8 a.m. to 12.30 p.m. B.
47.54	TG2	Guatemala City. 8 a.m. to noon. Irregular. B.
47.65	OAX4G	Lima, Peru. 10 a.m. to 12.30 p.m. B.
47.65	HIG	Trujillo. 10.30 p.m. to 11.30 p.m. B.
47.77	COHB	Sancti Spiritus. 7 to 8.30 a.m. B.
48.08	HIN	Trujillo. 10.30 to 11.30 p.m. and 7 to 11 a.m. B.
48.62	XEXA	Mexico City. 9-11.30 p.m. and 8 a.m. to noon. B.
48.85	CJRO	Winnipeg, Canada. 9 a.m. to 2.30 p.m. B.
48.82	HJ4ABE	Medellin. 8 a.m. to 2.30 p.m. B.
48.82	W8XK	Pittsburgh. 4 to 4.30 p.m. B.
48.90	CR7AA	Lourenco Marques. 12.30 to 2 a.m. B.
48.94	LKL	Jeloy, Norway. 2 to 8 a.m. B.
48.92	COCD	Havana. 1 a.m. to 2.30 p.m. next day. B.
49.00	HP5H	Panama City. 10 a.m. to noon. Irregular. B.
49.02	XEUZ	Mexico City. 3 p.m. to about 4.30 p.m. B.
49.02	VPD	Colombo. 9.30 p.m. to 1.30 a.m. B.
49.02	W2XE	New York. 11.30 a.m. to 12.30 p.m. B.
49.18	W9XF	Chicago. 4 to 5 p.m. and 8 to 10 a.m. B.
49.18	W3XAL	Bound Brook, New Jersey. Around 4 p.m. B.
49.18	YUA	Belgrade. 3 a.m. to 7.30 a.m. B.
49.20	ZRJ	Johannesburg. Late evening and early morning. B.
49.20	ZRK	Capetown. 3 to 6.30 a.m. B.
49.30	7LO	Nairobi, East Africa. 2 to about 5.30 a.m. B.
49.30	OAX4Z	Lima, Peru. 10.30 a.m. to 1.30 p.m. B.
49.34	HP5F	Colon. 1.45-3.15 p.m. B.
49.34	ZHJ	Penang. 9.45 to 10.45 p.m. B.
49.50	SBO	Metala, Sweden. 4.30 to 7.30 a.m. B.
49.50	W8XAL	Cincinnati. 9 p.m. to 10.30 a.m. next day, and around 4 p.m. B.
49.50	W3XAU	Philadelphia. 10 a.m. to 1.30 p.m. B.
49.65	XETW	Mexico. 10.45 a.m. to 5 p.m. B.
49.65	HJ1ABG	Barranquilla. 2 p.m. to midnight. B.
49.75	HP5B	Panama City. 10.30 a.m. to 3.30 p.m. and 8 a.m. to 9 a.m. B.
49.83	XEUW	Vera Cruz. 9 a.m. to 2.30 p.m. B.
49.83	DJC	Berlin. 3 to 7.20 a.m. B.
49.83	HI3U	Santiago, Dominican Republic. 8 a.m. to noon and 10.30 p.m. to midnight. B.
49.83	HJ3ABX	Bogota. 8.30 a.m. to 1.30 p.m. and 1.30 a.m. B.
49.96	COCO	Havana. About 10 p.m. till early morning. B.
49.96	9MI	s.s. Kanimbla. Usually around 10 p.m. B.
49.96	HP5K	Panama City. 10 p.m. until early morning. B.
49.96	ZRH	Pretoria, South Africa. Morning till about 7 a.m. B.
50.00	XEBT	Mexico City. 1 a.m. to 2 p.m. next day. B.
50.00	RW59	Moscow. Around 7 to 8 a.m. in summer. B.
50.26	HVJ	Vatican City. 5.15 to 5.30 a.m. B.
51.70	ZEC	Salisbury, Rhodesia. 5 to 6 a.m. B.
58.30	PMY	Bandoeng. 8.30 p.m. to 1.30 a.m. B.
62.37	YDE	Bandoeng. About 9 p.m. to 1.30 a.m. B.
70.65	RW15	Khabarovsk. 8 p.m. to 12.30 a.m. B.
98.6	YDA	Bandoeng. 8.30 p.m. to 1.30 a.m. B.

AUSTRALIAN AMATEUR STATIONS

Scattered throughout the world, from the heart of almost every city, to the outposts of Greenland, and the heart of Burma, are some 60,000 amateur stations. These operate on set wave-bands and may often be tuned in by the short-wave listener. Australia has about 1700 amateurs, each with his own call sign. All commence with VK, meaning Australia, then a number, meaning the State, and up to three letters to identify the station. These are the nine "districts" into which Australia is divided.

AMATEUR WAVE-LENGTHS

VK1—Not allotted.
VK2—New South Wales.
VK3—Victoria.
VK4—Queensland.
VK5—South Australia.
VK6—West Australia.
VK7—Tasmania.
VK8—Central Australia.
VK9—New Guinea.

Amateurs all over the world operate only on the wave-lengths or frequencies allotted to them by International agreement. The average dual-wave receiver will cover only two of these bands, at 20 and 40 metres. On these bands phone stations can often be heard. Here is a list of the wave-lengths which are given exclusively to amateurs.

WHERE TO LISTEN

175-150 metres or	42.9-41.1 metres or	10.71-10 metres or
1715-2000 kilocycles.	7000-7300 kilocycles.	28,000-30,000 kilocycles.
85.7-75 metres or	21.43-20.83 metres or	5-5.3 metres or
3500-4000 kilocycles.	14,000-14,400 kilocycles.	56,000-60,000 kilocycles.

As we have said, 20 and 40 metres are of most interest to the listener because he can take in these bands on his set. The 20-metre band is a wonderful band for phone working between different countries. During the course of an evening or afternoon, one might hear amateurs in U.S.A., India, S. America, Canada, England, S. Africa and in fact almost anywhere, talking amongst themselves or to Australia. Much, of course, depends upon conditions prevailing. The 40-metre band is often used for interstate phone work, particularly in the daytime, and abounds with Morse signals. Another popular phone band is 80 metres, mainly used for interstate, and linking with New Zealand amateurs.

VK2—AMATEUR STATIONS IN N.S.W.

CARDS FOR VK2 AMATEURS MAY BE SENT TO BOX 1734JJ., G.P.O., SYDNEY

Call Sign.	Licensee.	Address
	FEDERAL CAPITAL TERRITORY.	
VK 2ET	Tormey, E. A.,	Leslie Crescent, Canberra.
VK 2GU	Cox, E. H.,	Barkly Crescent, Forest, Canberra.
VK 2GY	Higgs, A. J.,	Mt. Sromlo, Canberra.
VK 2ID	Brinkman, S. J. F.,	Bougainville Street, Griffith.
VK 2RR	Radio Research Board (Council for Scientific and Industrial Research.	Mt. Stromlo, Canberra.
VK 2YN	Ryan, A. J.,	Kingston, Canberra.
VK 2ADM	Radclyffe, L. E.,	Alt Crescent, Ainslie, Canberra.
	NEW SOUTH WALES.	
VK 2AB	Badger, A. V.,	19 Cecily Street, Leichhardt.
VK 2AE	Adams, D. J. M.,	8 Kuring-Gai Avenue, Turramurra.
VK 2AF	Williams, A. F.,	"Moseley," Argyle Avenue, Ryde.
VK 2AG	Gray. A. H.,	35 Middle Street, McMahon's Point.
VK 2AH	Llewellyn, A. H.,	6 French Street, Artarmon.
VK 2AI	Carter, H. R.,	Yarraman North Station, Quirindi (Portable).
VK 2AJ	Brown, E. C.,	1 Toyer Street, Tempe.
VK 2AK	Claffey, K. J.,	"Yarrandale," Deniliquin.
VK 2AL	Littlejohn, A. S.,	3 Emmerick Street, Leichhardt.
VK 2AN	Gardner, W. E.,	Piper Street, Central Mine, Broken Hill South.
VK 2AO	Friar, A. O.,	7 Fitzroy Street, Grafton.
VK 2AP	Reynolds, A. P.,	512 Macauley Street, Albury.
VK 2AR	Hudson, W. H.,	1 Terrace Road, Dulwich Hill.
VK 2AS	Freeman, A. C.,	51 Park Road, Burwood.
VK 2AT	Altman, L.,	18 Myee Street, Lakemba.
VK 2AU	Cureton, J. P.,	30 Church Street, Burwood.
VK 2AV	Thurstan, A. W.,	33 Stoney Creek Road, Penshurst.
VK 2AW	Dye, A. W.,	44 Martin Road, Centennial Park.
VK 2AX	Kerr, H.,	86 Darling Point Road, Darling Point.
VK 2AZ	Day, H. L.,	2 Robinson Street, Kogarah.
VK 2BA	Chapman, B. A.,	1 Edgar Street, Chatswood.
VK 2BB	Eastwood Radio Club,	138 Rowe Street, Eastwood.
VK 2BC	Taylor, N. S.,	"Moama," Upper Bay View Street, McMahon's Point.
VK 2BD	Behrmann, A. E.,	97 Rangers Avenue, Cremorne.
VK 2BF	Forsythe, L. E.,	"Sydney" Training Depot, Snapper Island.
VK 2BG	Glassop, B. L.,	10 Carlingford Road, Epping.
VK 2BI	Stick, R. J.,	27 Wyrallah Road, Lismore.
VK 2BJ	Burnett, J. K.,	3 Macartney Avenue, Chatswood.
VK 2BK	Edwards, J. F.,	18 Smith Street, Parramatta.
VK 2BM	Martin, B.,	37A Wycombe Road, Neutral Bay.
VK 2BN	Flood, R. F. J.,	1 Togo Street, Penshurst.
VK 2BQ	Easton, F. W. S.,	33 Latimer Road, Bellevue Hill.
VK 2BR	Brooke, Rev. W. H. L.,	The Rectory, Dora Creek.
VK 2BT	Gibbens, A. J.,	87 Carrington Road, Randwick.
VK 2BU	Butterworth, C.,	83 Nelson Street, Wallsend.
VK 2BV	Waverley Radio Club,	13 Macpherson Street, Waverley.
VK 2BX	Brunsden, H. T.,	64 Hill Street, Leichhardt.
VK 2BY	Olds, E. C. M.,	225 Jamieson Street, South Broken Hill.
VK 2BZ	Davies, H. E.,	44 Bryant Street, Tighes Hill, Newcastle.
VK 2CB	Rutter, G. A.,	28 Muttama Road, Artarmon.
VK 2CC	University of Sydney,	Sydney.
VK 2CD	Drew, C. W.,	7 Roscrae Avenue, Randwick
VK 2CE	Barnes, A. J.,	87 Murriverie Road, North Bondi.
VK 2CF	Collard, C. J. F.,	King Street, Lorn, West Maitland.
VK 2CG	Chinner, H. E.,	117 Darley Road, Randwick.
VK 2CI	Kempton, G.,	10 Clapton Place, King's Cross.
VK 2CJ	Johnston, W. C.,	Moonee Street, Coff's Harbor.
VK 2CL	Taylor, L. H.,	45 Hardy Street, Ashfield.
VK 2CM	Maclurcan, C. D.,	"Namanula," Agnes Street, Strathfield.
VK 2CP	Cooper, O. E.,	2 Corona Flats, Glebe Street, Randwick.
VK 2CS	Swain, L. T.,	6 Frederick Street, Waratah.
VK 2CT	Kerkin, E. J.,	221 Victoria Road, Drummoyne.
VK 2CU	Campbell, D. D.,	Ulmarra, Clarence River.
VK 2CV	Ferrie, R. J.,	28 Goodhope Street, Paddington.
VK 2CW	Pearce, W.,	30 High Street, Cessnock.
VK 2CX	Evans, J. T.,	"Aberteifi," Adelaide Street, Paxton.
VK 2DA	Caldecott, H. W. S.,	77 Seaview Street, Manly.
VK 2DB	Davies, H. A.,	139 Lyons Road, Drummoyne.
VK 2DC	Sellenger, D. C.,	9 Cecil Street, Hurstville.
VK 2DD	Dawson, D.,	307 Marius Street, Tamworth.
VK 2DE	Renshaw, W. P.,	"Waimea," Lord Street, Roseville.
VK 2DF	Cocks, L. S. W. J.,	20 Stewart Street, Eastwood.
VK 2DG	Rudkin, K.,	Lismore Street, Abermain.
VK 2DH	Hammer, W. C.,	99 Francis Street, Bondi.
VK 2DI	Cole, G. F.,	20 Ewos Parade, Cronulla.
VK 2DK	Clunne, E.,	35 Brunswick Street, Merrylands.
VK 2DL	Phelps, W. J.,	14 Watkin Street, Canterbury.
VK 2DN	Parris, J. E.,	George Street, Deniliquin.
VK 2DO	Rayner, R. H.,	Adele Street, Yass.
VK 2DP	Webb, M.,	7 Floss Street, Hurlstone Park.
VK 2DQ	Nourse, J. C. D.,	218 Pell Street, Railway Town, Broken Hill.
VK 2DR	Reed, D. W.,	69 Pacific Highway, Waitara.
VK 2DS	Davis, R. R.,	"Palomar," Drumalbyn Road, Bellevue Hill.
VK 2DT	Harrison, A. R.,	49 Harrow Road, Stanmore.
VK 2DV	Hodder, F. A.,	411 Old South Head Road, North Bondi.
VK 2DW	Wilson, D. J.,	60 Henry Street, Five Dock.
VK 2DX	Blair, K. A. W.,	c/o Commercial Bank of Australia, Ltd., Bega.
VK 2DY	Lindsay, D. G.,	44 Sydney Street, Concord.
VK 2DZ	Clark, J.,	C/o Martin De Launays Ltd., 287 Clarence Street, Sydney.

VK 2EA Fitzgerald, E. F., 25 Wallace Street, Waverley.
VK 2EB Bryden-Brown, G. H., 14 Wrights Road, Drummoyne.
VK 2EC Crouch, E. C., 7 Spencer Road, Mosman.
VK 2ED Bell, W. J., 5 Second Avenue, Campsie.
VK 2EE Llewellyn, J. L., 9 Allison Avenue, Lane Cove.
VK 2EF Fisk, E. T., 16 Beaconsfield Parade, Lindfield.
VK 2EG Dunn, D. C., 9 Centennial Avenue, Randwick.
VK 2EH Hodgkins, E. P., 24 Hillcrest Street, Punchbowl.
VK 2EI West, L. J., 19 Dalton Street, Parkes.
VK 2EK Kenny, E. F., 13 Good Street, Granville.
VK 2EM Sutton, A. F., 26 Elva Avenue, Killara.
VK 2EN Hulme, E. C., 42 Kennedy Street, South Kensington. Now 42 Kennedy Street, Kingsford.
VK 2EO Duff, D. H. B., 29 Gertrude Street, Arncliffe, N.S.W.
VK 2EP Watson, Pastor E., 80 Stanley Street, Burwood
VK 2EQ McNamara, J. S., 79 Burdett Street, Hornsby.
VK 2ER Adams, F. A., 26 Neil Street, Carlingford.
VK 2ES Simpson, E. M., 128 Bellevue Road, Bellevue Hill.
VK 2EU Phibbs, A. R. A., 410 Townsend Street, Albury.
VK 2EV McCredie, E. S., 219 Burwood Road, Burwood.
VK 2EW Webster, W., 126 Pittwater Road, Gladesville.
VK 2EX Outtrim, A. H., Windsor Street, Richmond.
VK 2EY Junk, G. P., 103 Napoleon Street, Sans Souci.
VK 2EZ Moyle, J. R., Glenview Street, Gordon.
VK 2FB Warner, G. A., Willyama, Wyong, N.S.W.
VK 2FD Davidson, W. F., 29 Scott Street, Croydon.
VK 2FF Bracken, L. C., 8 Parraween Street, Cremorne.
VK 2FG Medhurst, E. C., 393 Illawarra Road, Marrickville.
VK 2FH Henriques, F. L., "Alwood," Mount Street, Hunter's Hill (Motor Launch, "Amohine").
VK 2FI Wells, A. J., No. 7, La Paloma Flats, 45 Birriga Road, Bellevue Hill.
VK 2FJ Ferguson, J., 111 Hewlett Street, Waverley.
VK 2FK Welzel, K. P. C., 123 Clovelly Road, Clovelly.
VK 2FN Young, G. C., 65 Clinton Street, Orange.
VK 2FO Griffiths, H. T. W., 20 Garfield Street, Five Dock.
VK 2FM Murray, F. A., 38 Rangers Avenue, Cremorne.
VK 2FP Baker, E. J., 13 Skelton Street, Hamilton, Newcastle.
VK 2FQ Collinge, C. H., 123 Murray Street, Wagga Wagga.
VK 2FR Bassett, F. R., 71 George Street, Singleton.
VK 2FS Smith, A. C., 177 Burwood Road, Burwood.
VK 2FT Tregurtha, F. C., 58 Upper Pitt Street, Kirribilli.
VK 2FU Catt, E. A., 37 Robey Street, Maroubra Junction.
VK 2FV Fairweather, J. C., 14 Gordon Street, Mosman.
VK 2FW Martin, G. H., 224 Cowper Street, Waverley.
VK 2FX—Cross, F. J., 41 Vernon Avenue, Mascot.
VK 2FY Vaughan, D. E., 3 Hampden Street, Lakemba.
VK 2FZ Reid, G. W., de Boos Street, Temora.
VK 2GA McKenzie, Mrs. F. V., 26 George Street, Greenwich Point.
VK 2GC Charles, G. B., Dalrye House, Richard Avenue, Bishop's Court, Coogee.
VK 2GD Edgecombe, G. H., 64 Clanville Road, Roseville.
VK 2GE Edwards, G. J., 13 Nicholson Street, West Maitland.
VK 2GH Gibson, R. L., Alstonville, Richmond River.
VK 2GI Blanch, C. K., Woodford Leigh, Clarence River.
VK 2GJ Jones, G. E., 5 Oakley Road, North Bondi.
VK 2GK LeCornu, O. C., 64 Spring Street, Lismore.
VK 2GM McDowell, G., 97 Rookwood Road, Bankstown.
VK 2GO Mackay, C. S., High Street, Coff's Harbor.
VK 2GQ Barlow, E., Flat No. 2, 51 Spit Road, Mosman.
VK 2GR Robinson, A., 166 Francis Street, Richmond.
VK 2GS Simmonds, A. G., James Street, Murwillumbah.
VK 2GT Bruce, G. T., Capper Street, Tumut.
VK 2GV Fenton, A. S. G., 26 Muttama Road, Artarmon.
VK 2GW Woolnough, W. L., 31 Ordnance Avenue, Lithgow.
VK 2GX Woollahra Amateur Radio Club, 47 Queen Street, Woollahra.
VK 2HA White, E. B., 221 Greenwich Road, Greenwich Point.
VK 2HB Choules, G. H., 38 Wentworth Road, Homebush.
VK 2HC Carter, H. R., Yarraman North Station, Quirindi.
VK 2HE Miller, H. E., 7 Kent Street, Belmore.
VK 2HF Furze, J. A., "Alkoomie," Edgecliffe Esplanade, Seaforth.
VK 2HG Mackel, J. F., "Alster," Devonshire Street, Chatswood.
VK 2HH Sandel, O., 248C Oxford Street, Woollahra.
VK 2HK Powell, E. G., 3 Wilfield Avenue, Vaucluse.
VK 2HL Lapthorne, H. C., 1 Bowen Street, Chatswood.
VK 2HM Marshall, H. A., 94 Francis Street, Bondi.
VK 2HN Nottingham, H. A. J., "House of David," Lane Cove Road, North Ryde.
VK 2HO Hart, H., 70 Lord Street, Roseville.
VK 2HP Peterson, H. F., "St. Mena," Hamilton Street, Coogee.
VK 2HQ Pottie, N. C., 6 Veret Street, Hunter's Hill.
VK 2HS Fanker, E. M., 35 Shaw Avenue, Kingsford.
VK 2HV Hutton, H. V. J., Henderson Street, Inverell.
VK 2HW Holt, R. A., Cor. Market and Fraser Streets, Tahmoor.
VK 2HX Jinks, E. W., 144 Gaffney Lane, Railway Town, Broken Hill.
VK 2HY Stacey, R., 46 Waratah Street, Oatley.
VK 2HZ Moore, W. M., 137 Middle Harbor Road, Lindfield.
VK 2IA Handel, K. F., 16 Culwulla Street, Hurstville.
VK 2IC Clarke, A. I. K., 76 Fricourt Avenue, Earlwood.
VK 2ID Mitchell, R. S., 50 Brookong Avenue, Wagga.
VK 2IE Cox, P., Lidsdale, via Wallerawang.
VK 2IF R9 Radio Club, 231 Victoria Street, Drummoyne.
VK 2IG Ross, R. W., 673 David Street, Albury
VK 2IJ Gray, A. H., 19 Buckingham Road, Killara.
VK 2IK Brown, A. J., 12 Gretchen Avenue, Earlwood.
VK 2IM Maclean, J. D., 21 Cheviot Street, Ashbury, N.S.W.
VK 2IN Ayres, J. A., "Handsworth," Sackville Street, Hurstville.
VK 2IO Barlow, A. E., 21 Ewert Street, Marrickville.
VK 2IP Thornton, G. W., 8 Fredben Avenue, North Sydney.
VK 2IQ Treharne, R. F., 5 Waimea Street, Burwood.
VK 2IR Hannam, H. W., 109 Sale Street, Orange, N.S.W.
VK 2IT Free, G. B., 20 Ronald Avenue, Canterbury.
VK 2IW Wallace, R. I. G., Hill Farm, Robertson.
VK 2IX Green, B. H., 162 Bay Road, Waverton.
VK 2IY Myers, J. G., 128 Wycombe Road, Neutral Bay.
VK 2IZ Wood, G. A., 11 Waimea Street, Woollahra.
VK 2JA Mitchell, J. A. J., 14 Redmyre Road, Strathfield.
VK 2JB Bradley, F. R., 17 Ryrie Street, Mosman.
VK 2JC Wall, J. H., Maitland Street, Narrabri.
VK 2JE Martin, N. R., 1 King Street, Enfield.
VK 2JF Newport, T. I., 49 Northbrook Street, Bexley.
VK 2JG Maynard, F. S., 80 Brighton Street, Croydon.
VK 2JH Hutchison, J. V., 7 Cobham Avenue, West Ryde.
VK 2JJ Jennison, J. W., "Wallaroo," Mathoura.
VK 2JK Brown, J. H. S., "Shadwell," Chelmsford Avenue, Botany.
VK 2JL Young, J. L., Cowabbie, Coolamon.
VK 2JN Keane, J. P. J., 42 Stoney Creek Road, Bexley.
VK 2JO Caldwell, R. C., 10 Simpson Street, Bondi.
VK 2JP Pike, J. H. A., 14 Sarner Road, Greenwich.
VK 2JQ Nell, Rev. G. A. M., The Rectory, Binda.
VK 2JR Reed, J. G., 24 Kenilworth Street, Croydon.
VK 2JT Luckman, C. F. A., 66 Chandos Street, Ashfield.
VK 2JU Moyle, J. M., 882 Pacific Highway, Chatswood.
VK 2JV Roberts, C. D., 49 Greenwich Road, Greenwich.
VK 2JW Williams, R. J., 51 Ocean Avenue, Edgecliff.
VK 2JX Adams, P. H., 39 King Street, Waverton.
VK 2JY Young, J. W., 7 Larkin Street, Roseville.
VK 2JZ Mather, A. S., 14 William Street, Singleton.
VK 2KB Fairhall, A., "Segenhoe," Wolfe Street, Newcastle.
VK 2KC Fry, R. H., 45 Kembla Street, Wollongong.
VK 2KD Pearson, A. W., 111 Baker Street, Temora.
VK 2KE Watson, W., Stanford Main No. 1 Colliery, Stanford Merthyr.
VK 2KF Field, C. J., 58 Francis Street, Leichhardt.
VK 2KG Greenhalgh, K. N., 20a Gregson Avenue, Mayfield West.
VK 2KH Nelson, W. P., 5 Magill Street, Randwick.
VK 2KJ Cramond, W. H., 59 Bridge Street, Lane Cove.
VK 2KK Dodds, J. W. M., 1 Maitland Street, Kurri Kurri.
VK 2KL Maguire, E. N., 146 The Boulevarde, Dulwich Hill.
VK 2KN Driscoll, A. E., Jnr., Abbott Street, Quirindi.
VK 2KP Fox, A., 28 The Avenue, Rose Bay.
VK 2KQ Early, J. H., 11 View Street, Temora.
VK 2KR Hardman, C. A., "Euralla," Woy Woy.
VK 2KS Meyers, L. S., 25 Centennial Ave., Marrickville, N.S.W.
VK 2KT Seccombe, L. M., 4 Haybourn Avenue, Rockdale.
VK 2KU Archibald, I. W., 49 Fraser Street, Dulwich Hill.
VK 2KV Bodkin, H. B., 290 Unwin's Bridge Road, St. Peters.
VK 2KW Grant, A., Taylor's Arm Roadside, Macksville.
VK 2KX Gray, T. A., 35 Hill Street, Manly.
VK 2KZ Austin, E. M., Stanford Street, Kurri Kurri.
VK 2LA Adams, L. K., 37 McClelland Street, Willoughby.
VK 2LC Glasscock, N., 9 McMahon Street, Willoughby.
VK 2LD Dodds, L. H., 3 Anthony Street, Chatswood.
VK 2LG Wallace, J. W., 87 Faithfull Street, Goulburn.
VK 2LH Soraghan, D. St. J. P., 2 Spencer Street, Rose Bay.
VK 2LJ Rayner, J., 8 Edison Street, Belmore.
VK 2LK Harkness, K. L., 36 Carlotta Road, Double Bay.
VK 2LL Lane, L. S., Weethalle.
VK 2LN Le Nevez, A., 289 Annandale Street, Annandale.
VK 2LO Higgins, C. S., 44 Ettalong Road, Pendle Hill.
VK 2LP Bean, L. P. R., "Rochester," Orana Avenue, Pymble.
VK 2LQ Millen, D. R., 22 Hume Street, Wollstonecraft.
VK 2LR Lakemba Radio Club, 334 Old Canterbury Road, Canterbury.
VK 2LS Todd, L. V. G., 117 Denison Street, West Tamworth.
VK 2LU Prentice, E. T., Sydney Radio Centre, Carlingford.
VK 2LW Waugh, L. W., 12 Belgrave Street, Burwood.
VK 2LX Crisp, H. C., 91 Curranulla Street, Cronulla.
VK 2LZ Bischoff, W. E. C., "Glensara," Hume Ave., Wentworth Falls, N.S.W.
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VK 2MJ Crisp, A. J. T., 46 Rawson Avenue, Bexley.
VK 2MK Elphinstone, L., Cor. Wrexham and Main Roads, Thirroul.
VK 2ML McLaughlin, W. R., 3 Fotheringham Street, Taree.
VK 2MM Long, R. H., 1 Jeffrey Street, Canterbury.
VK 2MN Burke, H. E., 174 Bland Street, Haberfield.
VK 2MP Winkler, M. H., 158 Morgan Street, South Wagga.
VK 2MQ McGowan, W. E. C., 24 Cross Street, Waverley.
VK 2MR Manly District Radio Club, East Esplanade, Manly (postal address, P.O., Box 644FF, Sydney).
VK 2MS Spitzkowsky, M., 65 Everton Street, Hamilton.
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VK 2MU Nangle, J., Observatory, Sydney.
VK 2MV R.C.S. Radio, 21 Ivy Street, Darlington (Portable).
VK 2MX Holmes, D. E., 33 Tamworth Street, Dubbo.
VK 2MY McGregor, J. F., 61 Holdsworth Street, Woollahra.
VK 2MZ Hurstville Radio Club, 316B Forest Road, Hurstville.
VK 2NE Nunn, M. S., 55 Mitchell Street, Crow's Nest, N.S.W.
VK 2NG Gough, N., "Remuera," Martin Street, North Manly.
VK 2NK Ball, C. W., 520 Railway Parade, Hurstville.
VK 2NJ Johnson, A. K., 11A Duncan Street, Punchbowl.
VK 2NL Squire, L. L., Thornton.
VK 2NM Milton, H. W., 100 Church Street, Mudgee.
VK 2NO Knock, D. B., 14 Yanko Avenue, Bronte
VK 2NP Fryar, C. F. L., 113 Tennyson Street, Gladesville.
VK 2NQ Pieremont, N. S., Daphne Street, Dolans Bay, Port Hacking.
VK 2NS Evans, T. F., 192 Rockett Street, Bathurst
VK 2NT Tomkins, N. S., "Fredalma," Hammers Road, Northmead.
VK 2NU Knock, D. B., 14 Yanko Avenue, Waverley (Portable).
VK 2NV Truman, R. P., 8 Lorne Avenue, Killara.
VK 2NW Austwick, E. D., 5 California Flats, 20 Birriga Road, Bellevue Hill.
VK 2NX Brooks, D. D., 14 Fitzwilliam Road, Vaucluse.
VK 2NY Berry, R. J., 54 Bacon Street, Grafton.
VK 2OA Amalgamated Wireless (A/asia), Ltd., Kissing Point Rd., Turramurra.
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VK 2OC Chapman, O. G., Rankin Street, Wyong.
VK 2OD O'Donnell, T. M., Commonwealth Bank, Hurlstone Park.
VK 2OE Allworth, W. M., Cooma Street, Yass.
VK 2OF Francis, J. W., 337 Beryl Lane, Broken Hill.
VK 2OG Menon, G. J., 75 William Edward St., Longueville, N.S.W.
VK 2OI Bower, G. G., 346 Homer Street, Earlwood.
VK 2OJ Arnold, E. N., Forrest Hill Avenue, Albury.
VK 2OH O'Brien, N. B., 29 Eurimbla Avenue, Randwick.
VK 2OL Watson, H. L., Tallagala Street, Unanderra.
VK 2OM Springett, A. J., 15 Chiltern Road, Willoughby.
VK 2ON Douglas, R. L., "Aloha," Murray Street, Tamworth.
VK 2OO Lovering, G. F., 11 Allibone Street, Ashfield.
VK 2OP Roy, A. B., 8 Bronte Street, Waverley.
VK 2OQ Capsey, H., 33 Gordon Street, Brighton-le-Sands.
VK 2OR Brown, M. A., 15 Rawson Street, Epping.
VK 2OS Young, I. N. C., Rockleigh Street, Thornton.
VK 2OT Sobels, M. D., 3 Hogarth Avenue, Dee Why.
VK 2OU Wardle, S. W. L., 43 Bellevue Road, Bellevue Hill.
VK 2OW Dimmock, B. L., 9 Canterton Street, Hurlstone Park.
VK 2OZ Olle, J. D., 17 Eccles Avenue, Ashfield
VK 2PC Proving Radio Club, 29 Blairgowrie Street, Dulwich Hill.

VK 2PE Perocz, J. P., Hope Street, Bourke.
VK 2PF Carruthers, F. A., 4 Fripp Street, Arncliffe.
VK 2PG Gosnell, R., 17 Middleton Avenue, North Bondi.
VK 2PH Petith, J. R. F., 1 Loftus Crescent, Homebush.
VK 2PK Hainsworth, P. T., "Roselea," Castlereagh Street, Penrith (Now VK 2AGK).
VK 2PM McLeod, N. J., 107 Artarmon Road, Artarmon.
VK 2PN Weeden, R., "Clifford," Capper Street, Tumut.
VK 2PP Phillips, J. P. C., 22 East Crescent, McMahon's Point.
VK 2PS Stephen, P. G., 152 Croydon Road, Croydon.
VK 2PT Richardson, C. A., 78 King's Road, Five Dock.
VK 2PV Vesper, J. P., Jnr., 779 Military Road, Mosman.
VK 2PW Wise, W. G., 44 Nowranie Street, Summer Hill.
VK 2PX Ackling, H. D., 76 Market Street, Bankstown.
VK 2PY Nancarrow, R. S., 46 St. Mark's Road, Randwick.
VK 2PZ Cowan, C., 106 Aberdare Road, Aberdare.
VK 2QA Russell, G. J., Nyngan.
VK 2QB R.C.S. Radio, 21 Ivy Street, Darlington.
VK 2QC Best, G. B., 64 Western Road, Parramatta.
VK 2QD Dixon, R. H., 171 Beardy Street, Armidale.
VK 2QE Fietz, A. A., 587 David Street, Albury.
VK 2QF Shelley, G. H., "Hamilton," Foam Crest Ave., Newport Beach.
VK 2QG Lillie, R. C. B., 17 Beresford House Flats, Belgrave Street, Manly.
VK 2QH Moore, E. A., 92 Princes Highway, Arncliffe.
VK 2QI Davies, L. E., 10 Russell Street, Vaucluse.
VK 2QJ Peppercorn, A. E., 33 Regent Street, Bexley.
VK 2QK Preston-Smith, C., "Winchombe," Morrice Street, Lane Cove.
VK 2QL Hine, F. T., 85 Lennox Street, Richmond.
VK 2QM Light, C. E., 79 Beach Street, Coogee.
VK 2QO Dale, T. C., 7 Botanic Road, Balmoral.
VK 2QP Hughes, L. W., 52 Shadforth Street, Punchbowl.
VK 2QR Burstall, J. E. R., 7 Wandeen Avenue, Beecroft.
VK 2QS Small, E. G., 35 Church Street, Mayfield, Newcastle.
VK 2QT Mutton, A. H., 31 Stafford Street, Stanmore.
VK 2QU Waldock, G. A., 51 Methven Street, Lithgow.
VK 2QV Pickles, E. J., Edward Street, Fennell's Bay.
VK 2QW Shipley, A., 82 Brighton Boulevarde, North Bondi.
VK 2QX Warren, J. C., c/o W. Goodall, 148 Wileys Avenue, Lakemba.
VK 2QY Moss, A. M. L., 18 Mundarrah Street, Clovelly.
VK 2QZ Black, R. H., 16 Alice Street, Harris Park.
VK 2RA Priddle, R. A., 18 Park Road, Marrickville.
VK 2RB Brown, R., 174 Park Road, Auburn.
VK 2RC Chilton, R., Chilton Avenue, Wahroonga.
VK 2RD Longworth, R., 9A Marshall Avenue, North Wollstonecraft.
VK 2RE Australian School of Radio Engineering, Wembley House, Railway Square, Sydney.
VK 2RF Felton, W. R., 29 Collins Street, Belmore.
VK 2RH Reynolds, R. P., 118 Kincaid Street, Wagga.
VK 2RJ Fagan, R. J., Sunnyridge, Mandurama.
VK 2RK Carpenter, N. D., Austral Building, Commercial Road, Murwillumbah.
VK 2RL Litchfield, A. R., "Springwell," Cooma.
VK 2RM MacFarlane, R. A., Wakaden Street, Griffith.
VK 2RN Hentze, P. R., 14 Stanhope Road, Killara.
VK 2RO Turnbull, R. W., 2 Ethel Street, Burwood.
VK 2RP Purdie, R. R., Mileham Street, Windsor.
VK 2RQ Foley, J. P., Port Hacking Road, Port Hacking.
VK 2RS Jones, W. H., 1 Hastings Street, Marrickville.
VK 2RU Collett, M. E., 42 Bent Street, Gosford.
VK 2RV Huband, R. W., 164 Dewhurst Street, Werris Creek.
VK 2RW Cusiter, R. W., 38 Victoria Street, Lewisham.
VK 2RX St. John, H. C., 82 Gibbes Street, Rockdale.
VK 2RY Brown, I. L., 7 Day Street, Drummoyne.
VK 2RZ Atkinson, J. M., 27 Pine Street, Chippendale.
VK 2SA Salmon, W. E., "La Paloma," Frederick Street, North Bondi.
VK 2SB Banks, S. W., 19 Arcadia Street, Coogee.
VK 2SC Sydney County Council, Oxley Street, Crow's Nest.
VK 2SE Wright, A. E., c/o Godfrey Bros., Bourke, N.S.W.
VK 2SF Jones, D. A., Mountain Road, Austinmer.
VK 2SG Tonkin, S. G., C/o Station 2LM, Ballina Road, Goonellabah, via Lismore.
VK 2SI Scholtz, R. J., 21 Kellett Street, Darlinghurst.
VK 2SJ Jacobs, S., 20 Horton Street, Marrickville.
VK 2SK Kaufman, S. D., 23 Isabel Street, Belmore.
VK 2SL Hoare, P. M., 17 Cathcart Street, Lismore.
VK 2SM Southwell, C. L., 47 Tunks Street, Northbridge.
VK 2SN Nelson, S. S., 3 Modern Avenue, Canterbury.
VK 2SO Cowell, G., 117 Mitchell Street, Merewether.
VK 2SP Pemberton, S. T., 58 Bowden Street, Ryde.
VK 2SQ Inglis, S. D., 15 Percival Road, Stanmore.
VK 2SR Emmelhainz, A. E., 66 Margaret Street, Petersham.
VK 2SS Fussell, R. M., 39 Tulloh Street, Willoughby.
VK 2ST Tatham, S. E., 160 Castlereagh Street, Sydney.
VK 2SU Middleton, A., 96 Spencer Road, Cremorne.
VK 2SV Peters, C. W., 7 Highgate Road, Lindfield.
VK 2SX Slade, C. W., "Rockleigh," Lang Street, Croydon.
VK 2SZ King, N.S., 3 Oaks Avenue, Neutral Bay.
VK 2TA Thackeray, A. M., Wootoona, via Young.
VK 2TB Knight, J., 14 Mary Street, Lakemba.
VK 2TC Taylor, H. J., Bonnie Doon, Monteagle.
VK 2TE Boyd, A., 98 Lambton Road, New Lambton.
VK 2TF Cohen, R. F., 112 Awaba St. West, Mosman, N.S.W.
VK 2TG Goldie, A. T., 18 Kintore Street, Dulwich Hill.
VK 2TH Heimann, T. R., 58 Duntroon Street, Hurlstone Park.
VK 2TI Ryan, W. G., 21 Tunstall Avenue, Kingsford.
VK 2TJ Torrington, R. N. 21 Dellview Street, Bondi.
VK 2TK Croke, T. L., 73 Bridge Street, Lithgow.
VK 2TN Bailue, I., 23 Allens Parade, Waverley.
VK 2TO Ansell, L. C., c/o Police Wireless Station, Georgetown Road, Waratah.
VK 2TP Wickham, A. N., "Cranbrook," Gladstone Parade, Lindfield.
VK 2TQ Sherlock, K. H., 47 Lancaster Avenue, Ermington.
VK 2TR Conrad, R. E., 24 Gloucester Street, Rockdale.
VK 2TS Scotney, H. R., 253 Old Canterbury Road, Dulwich Hill.
VK 2TT Todd, T. A., "Loloma," Vimiera Road, Eastwood.
VK 2TU Bosher, A. T., 324 West Street, North Sydney.
VK 2TV Lenon, R. J., Liverpool Street, Cowra.
VK 2TW Bushby, T. R. W., 25 "Wembley," 155 Victoria Rd., Bellevue Hill.
VK 2TX Levenspiel, P., "Braeside," Rankin Street, Wyong.
VK 2TY Best, R. W., 57 Hunter Street, Newcastle.
VK 2TZ Tamworth Amateur Radio Club, "Northern Daily Leader" Buildings, Cnr. Brisbane and Marcus Streets, Tamworth.
VK 2UA Heathers, C. J., 40 Raymond Street, Bankstown.
VK 2UB Bastow, G. C., 105 Sutherland Street, Paddington.
VK 2UC Maloney, K. A., 21 Esmore Street, Lismore.
VK 2UD Archer, R. W., 7 Fulbourne Avenue, Pennant Hills.
VK 2UF Tarrant, F., 7 Tooke Street, Cook's Hill, via Newcastle.
VK 2UG George, Dr. C. W., 2 Edward's Bay Road, Mosman.
VK 2UH Scott, F. L., 16 Bangalong Street, Naremburn.
VK 2UI Wallbridge, A. L., 17 Henson Avenue, Mayfield East.
VK 2UJ Unger, H. W., "Rocky View," Alectown, via Parkes.
VK 2UK Freeman, L. J., 122 Francis Street, Lidcombe.
VK 2UM Colton, G. C., 97 Clarendon Road, Stanmore (Portable).
VK 2UO Wagga Amateur Radio Club, Fire Brigade Station, The Esplanade, Wagga Wagga.
VK 2UP London, J. W., "Palomar," West Street, Manly.
VK 2UQ Manley, P. J., 15 Princess Avenue, Vaucluse.
VK 2UR Henry, C. J., Bridge Street, Uralla.
VK 2UV McElrea, W. J., 7 Jacka Street, Daceyville.
VK 2UX Goyen, F. M., 2 Lillipilli Street, Epping.
VK 2UY Clay, H. V., 255 Blaxland Road, Ryde.
VK 2UZ Browne, B. B., 62 Clifford Street, Goulburn.
VK 2VA Bennett, A. V., 14 Park Avenue, Concord.
VK 2VB Wood, R. E., 483 Anzac Parade, South Kensington. Now 483 Anzac Parade, Kingsford.
VK 2VC Cahill, W. B. V., 4 Woodford Road, Rockdale.
VK 2VE Smith, N. J., 26 Reserve Road, Artarmon.
VK 2VG Corthorn, R., 39 Ronald Avenue, Greenwich.
VK 2VH Colville, S. V., 8 Small Street, Broadway.
VK 2VI Gay, V. J., 30 Archer Street, Chatswood.
VK 2VJ Jarvis, V. J. E., c/o 2RG, Ulong Street, Griffith.
VK 2VK Fuller, H. J., 573 Englehardt Street, Albury.
VK 2VL Nutman, J. T., 24 Cleland Road, Artarmon.
VK 2VN Meyers, M. H., 96 Cabramatta Road, Mosman.
VK 2VO McPherson, C. J., 3 Sparke Street, West Maitland.
VK 2VP Morris, G. W., 37 Slade Street, Naremburn.
VK 2VQ Paton, J. W. A., 260 Pacific Highway, Artarmon
VK 2VR Wheeler, A. R., 11 Alton Avenue, North Strathfield.
VK 2VS Stanley, V. E., Radio Station, Carlingford.
VK 2VT Calvert, J. G., 27 Neirbo Avenue, Hurstville.
VK 2VU Partridge, G. D., 16 Hunter Street, Singleton.
VK 2VV Lofberg, C., 30 Albyn Street, Bexley.
VK 2VW Worswick, V., 67 Consett Street, West Concord.
VK 2VY Hartley, A., 7 Edge Street, Lakemba.
VK 2WA Dwyer, J. T., "Beulah," Young.
VK 2WB McKenna, A. M., "Youanmi," Henley Marine Drive, Five Dock.
VK 2WD Dukes, G. W., 43 Arundel Street, Forest Lodge.
VK 2WE Standard Telephones and Cables (Aust.), Ltd., 258 Botany Road, Alexandria.
VK 2WF Faulks, R. W., 7 Modern Avenue, Canterbury.
VK 2WH Stitt, W. H. R., "Cumbijowa," Forbes.
VK 2WI Wireless Institute of Aust. (N.S.W. Division), P.O. Box 1734JJ, Sydney.
VK 2WJ Peell, W. J., 228 Boyce Road, Maroubra.
VK 2WK Kennedy, Rev. W. D., 62 Lennox Street, Rockdale.
VK 2WM Piggott, W. L., "Beverley," 18 Kellett Street, King's Cross.
VK 2WN Lusby, M. MacI., 10 Leeton Avenue, Coogee.
VK 2WP Potter, W. F., 6 Fletcher Street, Helensburgh.
VK 2WQ Wilkins, R. T., 108 Henry Street, Werris Creek.
VK 2WR Shipley, A., 5 Wirringulla Flats, St. Neot Avenue, Pott's Point.
VK 2WS Small, T. A., Austral Building, Murwillumbah.
VK 2WT Watt, C. R., Warrenfels, Tenterfield.
VK 2WU Macdonald, L., 20 Sunderland Street, Mayfield, Newcastle.
VK 2WV Pacey, W. H., 28 Canberra Street, Lane Cove.
VK 2WX Wray, R. M. P., "Esma," Jellicoe Street, Hurstville.
VK 2WY Butters, W. L., Karoola Street, Brooklyn, Hawkesbury River.
VK 2WZ Maddison, E. V., 2 Laurel Street, Willoughby.
VK 2XA James, H. K., Flat 4, "Branxton," Arden Street, Coogee.
VK 2XB Brownlee, T. D., 39 Grafton Street, Woollahra.
VK 2XC Cuffe, I. D., 21 Redan Street, Mosman.
VK 2XD Williams, K. J. W., Commercial Bank of Australia, Tamworth.
VK 2XG Gray, G., 41 Kissing Point Road, Turramurra.
VK 2XH Manley, W. M., 28 Manning Road, Gladesville.
VK 2XI Craig, W. A., 22 Irrara Street, Croydon.
VK 2XJ Broome, F. M., Bay Road, The Entrance, Tuggerah Lakes.
VK 2XK Heavey, J. A., 221 Boyce Road, Maroubra.
VK 2XO Retallick, J. N., Mary Street, Bellingen.
VK 2XP Thompson, J., 274 Woodville Road, Guildford.
VK 2XQ Traill, R. J., 47 Regent Street, West Maitland.
VK 2XR Halloran, A. T., "The Kraal," Whitton and Sutherland Roads, Chatswood.
VK 2XS Gillanders, B. C., 62 Bellevue Road, Bellevue Hill.
VK 2XT Hall, W. C., Brunker Street, Kurri Kurri.
VK 2XU Pollock, G., Colliery Office, Abermain No. 2, Kearsley, N.S.W.
VK 2XV Cameron, R. M., "Chyandra," Richmount Street, Cronulla.
VK 2XW Voysey, A. J., 85 Alt Street, Ashfield.
VK 2XX Dale, B., 8 Gladstone Street, Kogarah.
VK 2XY Maguire, S. W., 164 Hastings Parade, North Bondi.
VK 2XZ Delmar, E. C., 175 Victoria Street, Ashfield.
VK 2YA Black, R. C., Derribong Street, Trangie.
VK 2YC Corbin, J. B., 39 Mitchell Street, McMahon's Point.
VK 2YD Pettitt, W. S. B., 26 Cropley Street, Rhodes.
VK 2YE Davey, J. A., 23 Avenue Road, Glebe Point.
VK 2YF Caldwell, F. D., 51 Watson Street, Bondi.
VK 2YG Litchfield, Miss L.N., 4 Yeo Avenue, Ashfield.
VK 2YH Hannam, W. H., 201 Mowbray Road, Willoughby.
VK 2YI Blue, H. W., c/o A.A.M.S., Box 50B, Broken Hill.
VK 2YK Abbott, R. E., Telegraph Point.
VK 2YL Hawkins, H., 27 Comfort Avenue, Cessnock.
VK 2YM Brown, H. M., C/o 2BH, Broken Hill.
VK 2YO Younger, G. H., Wallsend Street, Pelaw Main.
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VK 2YP Hutchison, C. D., 12 Selwood Street, Brighton-le-Sands.
VK 2YR Ringrose, W. S., 9 Victoria Street, Epping.
VK 2YS Flood, J. S., 131 Good Street, Granville.
VK 2YT Woodward, G. R., "Neath," Oxford Street, Sutherland.
VK 2YU Chessell, J., 2 Esplan Court, The Esplanade, Ashfield.
VK 2YV Littlefair, G. T., 20 Church Street, Randwick.
VK 2YW Pitman, D. H., 49 Macleay Street, Wagga Wagga.
VK 2YX Riley, W. J., 9 Turner Street, Balmain.
VK 2YY Watson, W., 32 Pritchard Street, Annandale.
VK 2YZ Johnston, W. D., 1 Searle Street, Ryde.
VK 2ZA Slight, A. A. B., Kable Street, Windsor.
VK 2ZB Zero Beat Radio Club, 38 Sydney Arcade, Sydney.
VK 2ZC Cowan, J. G., 90 Bridge Street, Waratah.
VK 2ZE Woodman, J. H., Bombala Street, Delegate.
VK 2ZF Southwell, N. L., 103 Allen Street, Leichhardt.
VK 2ZG Cooper, J. H., 13 Selwyn Street, Wollstonecraft.
VK 2ZH Macnaughton, N., 47 Shirley Road, Roseville.
VK 2ZI Glasscock, A. L. K., 44 Little Street, Lane Cove.
VK 2ZJ Temby, H. M., 321 William Street, Broken Hill.
VK 2ZK Henry, A. G., Clareville Avenue, Sandringham.
VK 2ZL Ottv, W., Bolton Point, Toronto.
VK 2ZM Wood, J. H. C., 110 Bacon Street, Grafton.
VK 2ZN Cottrell, J. W. M., "Barrington," Kissing Point Road, Dundas.

VK 2ZO Bridgewater, F. H., 17 Alexander Street, Moore Park.
VK 2ZP Yates, A. G., 70 Evans Street, Inverell.
VK 2ZQ Phillips, F. J. M., 2 Moray Court, Blair Street, Bondi.
VK 2ZR Pinnell, J. C., 47 Sloane Street, Summer Hill.
VK 2ZS Stubbs, H., 2 Grandview Parade, Epping.
VK 2ZU Gilmour, N. S., 75 William Street, Sydney.
VK 2ZV Hands, D., 28 Reddall Street, Manly.
VK 2ZW Grimmett, S. U., 352 South Terrace, Bankstown.
VK 2ZX Lumbewe, E. W., 9A Otho Street, Inverell.
VK 2ZY Cotterill, H. S., 43 Epping Avenue, Eastwood.
VK 2ZZ Clarke, W. R., Olive Street, Asquith.
VK 2ABA Le Nevez, A., 61 Marrickville Road, Marrickville.
VK 2ABB Varnes, H. H., "Hillcrest," Murray Ave., Newcastle, N.S.W.
VK 2ABC Stirk, F. J., 221 Gale Road, Maroubra.
VK 2ABD Galbraith, C. C., 43 Bulkara Road, Bellevue Hill.
VK 2ABF Howe, H. W., 59 Balfour Road, Kensington.
VK 2ABG Moore, E. A., 92 Princes Highway, Arncliffe (Portable).
VK 2ABH Mulligan, H. P. A., 60 Willis street, Kingsford.
VK 2ABI Barnes, T. W., 25 Bayview Avenue, Undercliffe.
VK 2ABK White, F. R., 1 Nola Road, Roseville, N.S.W.
VK 2ABL Tanner, L. S. C., Delamere Street, Canley Vale.
VK 2ABN North, W., Robinson Crescent, Marrickville.
VK 2ABO Bell, J., Green's Avenue, Dundas.
VK 2ABP Broken Hill Amateur Radio Club, 499 Radium Street, North Broken Hill.
VK 2ABQ Lumsdaine, J. C., 54 Chiltern Road, Willoughby.
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VK 2ABT Buchanan, D. A., Hume Highway, Yerrinbool.
VK 2ABU Dan, A. M., 11 Kingsclere Flats, Macleay Street, Pott's Point.
VK 2ABV Scotland, L. H., 28 Figtree Avenue, Randwick.
VK 2ABY Gardiner, I. D. R., 228 Queen Street, Ashfield.
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VK 2ACA Hart, W. J., 56 Premier Street, Marrickville.
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VK 2ACD Hipwell, R. A., 357 Iodide Street, Broken Hill.
VK 2ACE Brennan, L., 10 Sarsfield Street, Blacktown.
VK 2ACG Morris-Rees, A., "Gwys," Black's Road, Paxton, via Cessnock.
VK 2ACH Oxenford, L. G., 83 Victoria Street, Lewisham.
VK 2ACI A.M.F. 53rd Battalion, 2nd Military District Drill Hall, Addison Road, Marrickville.
VK 2ACK Roberts, J. M. D., 37 Kingston Street, Haberfield.
VK 2ACL Burghard, H. A. B., Warbreccan, Deniliquin.
VK 2ACN Moore, B., 225 Rankin Street, Bathurst.
VK 2ACO Hunter, A. D., 44 Denham Street, Bondi.
VK 2ACP Zech, W. J., c/o Mrs. Morris, Carina Bay, Como.
VK 2ACQ Chesterfield., J. H., 45 High Street, Strathfield.
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VK 2ADE Miller, C. A., 162 North Street, Casino.
VK 2ADG Finlayson, F., 61 Gosford Road, Broadmeadow, Newcastle.
VK 2ADH Deaman, F. C., 76 Anzac Avenue, West Ryde.
VK 2ADI Williams, J. B., 152 Hastings Parade, Bondi Nth., N.S.W.
VK 2ADK Pugh, E. G., 83 Belgrave Street, Kempsey.
VK 2ADL Kinscher, E. W. D., Bushman's Hill, Parkes.
VK 2ADN Gerard, J. W., Lister Street, Coff's Harbor.
VK 2ADO Arthur, R. W., 96 Hudson Street, Hurstville.
VK 2ADP Richter, R. W., 15 Macquarie Road, Auburn.
VK 2ADQ Dark, E. J., 5 Grace Street, Lane Cove.
VK 2ADR Roy, A. R. J., 26 Macquarie Street, Mascot.
VK 2ADS Davies, T. J., 58 King Street, Rockdale.
VK 2ADT Hill, J. H., 17 Allen Street, Lismore.
VK 2ADU Cooper, F. C., 83 Orion Street, Lismore.
VK 2ADV Hicks, C. McC., 28 Murdoch Street, Cremorne, N.S.W.
VK 2ADW Hay, P. W., 63 Church Street, Lidcombe.
VK 2ADX Cottrell, J. W. M., "Barrington," Kissing Point Road, Dundas (Portable).
VK 2ADZ Wilson, V. H., 63 Prospect Street, Harris Park, Granville.
VK 2AEB Tibbett, E. S., 41 Balmoral Street, Waitara.
VK 2AEC Anthony, T. R., 1A Clifton Avenue, Burwood.
VK 2AED Crowley, C., Chapple Street, Broken Hill.
VK 2AEE Walter, E. T., 47 Albert Crescent, Burwood.
VK 2AEF Oswald, A. G., 46 Farr Street, Rockdale.
VK 2AEG East, W. L., 10 Jubilee Lane, Newcastle.
VK 2AEH Atherden, F. A., 119 Garnet Street, Broken Hill.
VK 2AEI Collins, W., Exchange Hotel, Baylis Street, Wagga Wagga.
VK 2AEJ Smith, J. W., "Karoa," Baradine.
VK 2AEK Chaffer, E. M., 2 Kinniel Court, Elizabeth Bay Road, Pott's Point.
VVK 2AEM Wiltshire, A. J., 10 Norris Street, Lismore.
VK 2AEN Joyce, V. S., 50 Clements Street, Five Dock.
VK 2AEO Polmear, O. S. R., 92 Thorne Street, Wagga Wagga.
VK 2AEQ Lever Amateur Radio Club, C/o Lever Bros., Ltd., Reynolds Street, Balmain.
VK 2AES Wilson, D. D., Blair Street, Teralba.
VK 2AET Havyatt, A., "Orion," Cnr. Kiaora Road and Court Street, Double Bay.
VK 2AEU Aked, E. L. J., 142 Zadoc Street, Lismore.
VK 2AEV McMurray, A., 26 North Street, Auburn.
VK 2AEW Moss, N., 19 Fremont Street, Concord West.
VK 2AEX Reddacliff, L. A., 78 Ryde Street, Gladesville.
VK 2AEY Eagling, R. W., 149 High Street, Taree.
VK 2AEZ Marstella, E. A., 49 Mackie Avenue, New Lambton, Newcastle.
VK 2AFA Gray, H. R., Awaba Street, Teralba.
VK 2AFB Dickson, F. P., c/o K. Blair, Carp Street, Bega.
VK 2AFC McDonald, A. H., 6 Little Villiers Street, Grafton.
VK 2AFD Kerr, A. A., Thurgoona.
VK 2AFE Magennis, A. E. A., 38 Pine Road, Auburn.
VK 2AFF Roberts, P., 56 Thorn Street, Wagga.
VK 2AFG Patterson, J. H., 54 Birrell Street, Waverley.
VK 2AFI Ewing, J. D., 5 Cairo Street, North Sydney.
VK 2AFJ Fraser, J. H., 8 Deakin Avenue, Haberfield.
VK 2AFK Kenny, F. H., 13 Fullers Avenue, Canterbury.
VK 2AFL Swanson, W. W., 24 Bongalong Street, North Sydney.
VK 2AFM Dickson, E. J., 31 Station Street, Guildford.
VK 2AFN Slawson, G. T., 69 Lawrence Street, Harbord.
VK 2AFO Toakley, T. T. "Kieta," Merriwa Street, Katoomba.
VK 2AFP Gream, R. L. C., Diary Street, Casino South.
VK 2AFQ Treharne, E. D. L., 5 Waimea Street, Burwood.
VK 2AFR Reynolds, R. J., 190 Trongate Street, Granville.
VK 2AFS Wilson, R. V., Morton Street, East Moree.
VK 2AFT Hilder, R. H., Fort Bourke Station, Bourke.
VK 2AFU Broadley, D. H., 99 Homer Street, Undercliffe.
VK 2AFV Templeman, G. J., "Roseleigh," Bellarwi.
VK 2AFW Canning, F. G., 155 Victoria Road, Bellevue Hill.
VK 2AFX McMurtrie, S. A., 71 MacKenzie Street, Lismore.
VK 2AFY Davis, J., 20 Northland Road, Bellevue Hill.
VK 2AFZ Johnson, J. E., 338 Birrell Street, Bondi.
VK 2AGA Quodling, H. N., 40 Copeland Street, Beecroft.
VK 2AGB Hooper, C. J., 34 Burwood Road, Concord.
VK 2AGC Henry, R. C., 128 Piper Street, Tamworth, N.S.W.
VK 2AGD Lee, G. L., 34 Carrington Street, Mayfield.
VK 2AGE O'Donnell, A. L., 126 Alt Street, Ashfield.
VK 2AGF Kelso, A. J. B., 25 Walker Avenue, Haberfield.
VK 2AGG Jones, H., Albert Street, Speers Point, Boolaroo.
VK 2AGH Hall, G. G., 17 Albyn Road, Strathfield.
VK 2AGI Bailey, G. E., 148 Grand Parade, Kogarah.
VK 2AGJ Mitchell, R. J., 34 Moore Street, Roseville.
VK 2AGK Hainsworth, P. T., "Roselea," Castlereagh Street, Penrith.
VK 2AGL Braddock, G. S., c/o R. V. Wilson, Morton St., East Moree.
VK 2AGM Berry, W. C., Bay Street, Byron Bay.
VK 2AGN Manahan, F. G., Myrtle Street, Murwillumbah.
VK 2AGO Wilson, H. G., 38 King William Street, Greenwich.
VK 2AGP Leyden, F. M., 1 Albert Parade, Ashfield.
VK 2AGQ Ridgway, E. K., Henty.
VK 2AGR Hughes, A., 50 Norton Street, Ashfield.
VK 2AGU Hatton, H. C., 18 Irene Street, Abbotsford.
VK 2AGV Thompson, A. C., 149 Beaconsfield Street, Auburn.
VK 2AGW Arnold, E. C., 5 Woods Street, Manly.
VK 2AGX Enmore Activity School, Metropolitan Road, Enmore.
VK 2AGY Meyer, F. C., 19 Johnston Street, Annandale.
VK 2AGZ Yates, R. C., 82 Smith Street, Wollongong.
VK 2AHA Whyte, Harold, 7 William Street, Jesmond.
VK 2AHB Pearce, A. C., 14 Pearce Street, Double Bay.
VK 2AHC Curlewis, N. U., 5 Kardella Avenue, Killara.
VK 2AHD Grennan, G. P., 32 Norfolk Street, Paddington.
VK 2AHE Pratt, A. J., 70 Cary Street, Marrickville.
VK 2AHF Jones, R. H., 319 Princes Highway, Kogarah.
VK 2AHG Bushell, Harold, 17 Kingston Street, Haberfield.
VK 2AHH Carter, A. R., 2 Flat, "Kentworth," Alexander St., Coogee.
VK 2AHI Martin, R. W., 158 West Street, Casino.
VK 2AHJ Paterson, G. C., 22 Pine Street, Randwick.
VK 2AHK Smith, C. S., 81 Charles Street, Ryde.
VK 2AHL Brown, George, 308 Old Canterbury Road, Hurlstone Park.
VK 2AHM Whyte, R. J., Willow Point Station, Wentworth.
VK 2AHN Rogers, J. E., 172 Midson Road, Epping.
VK 2AHO Parker, G. J., 70 Bryant Street, Rockdale.
VK 2AHP Ramage, J. E., 92 Edenholme Road, Abbotsford.
VK 2AHQ Quilty, H. E., 11 Middleton Avenue, Bondi North.
VK 2AHR Ellis, R. C., 180 Morrison Road, Ryde.
VK 2AHS Morse, N. P., 44 Redan Street, Mosman.
VK 2AHT Sydney Amateur Radio Club, 54 Station Street, Newtown.
VK 2AHU Dent, H. F., 37 Llewellyn Street, Rhodes.
VK 2AHV Caletti, G., 51 Hodge Street, Hurstville.
VK 2AHW Cook, F. L., Fisher Road, Dee Why.
VK 2AHX Orvad, F. M., 17 Myra Road, Dulwich Hill.
VK 2AHY Martin, E. W., Weir 5, Balranald.
VK 2AHZ Jackson, H. P., 17 Baroona Avenue, Church Point.
VK 2AIA Eagles, J. A., 35 Cotswold Road, Strathfield.
VK 2AIB Wells, A. A., 69 Trail Street, Wagga Wagga.
VK 2AIC Benson, J., 38 Addison Avenue, Concord.
VK 2AIE Hocking, E. J., 27 Albert Street, Hornsby.
VK 2AIG Parsons, R. A. B., 19 Frenchmans Road, Randwick.
VK 2AIH Parris, H. C., Dowling Street, Bungog.
VK 2AII Cleburne, E. W., 34 McIntosh Street, Gordon.
VK 2AIK Horne, C. T., 59 Australia Avenue, Matraville.
VK 2AIL Ellis, J. A., 106 Zadoc Street, Lismore.
VK 2AIN Purssell, J. R., 46 Alice Street, Lakemba.
VK 2AIO Brand, A. O., Fairview Avenue, The Entrance, Tuggerah Lakes.
VK 2AIP Thorburn, R. G., 21 Fernbank Street, Marrickville.
VK 2AIQ Cant, Alan, 14 Harriett Street, Marrickville.
VK 2AIR Griffin, T. N., 18 Baroona Road, Northbridge.
VK 2AIS Graydon, J. F., 346 Pacific Highway, Lindfield.
VK 2AIT Tierney, V. E., 5 Transvaal Avenue, Double Bay.
VK 2AIU Smith, R. J., 18 Washington Street, Bexley.
VK 2AIV Jackson, C. J., Carool, Tweed River.
VK 2AIW Hall, W., Dubbo Street, Coonamble.
VK 2AIX Radclyffe, L. E., Alt Crescent, Ainslie, Canberra (portable).
VK 2AIY Cullerton, H., 84 Alice Street, Ramsgate.
VK 2AIZ Nolan, G. R., 138 Blues Point Road, North Sydney.
VK 2AJB Curle, G. C., 41 Cardigan Road, Chullora.
VK 2AJC Johnson, C., 146 St. James Road, New Lambton.
VK 2AJD Broadfoot, J., 1 Chelmsford Avenue, Lindfield.
VK 2AJE Blair, R. L., Australasian Missionary College, Cooranbong.
VK 2AJF Lloyd, W. E. G., 18 Eames Avenue, Stockton.
VK 2AJG Sanders, L. D., 7 Ellen Street, Randwick.
VK 2AJH Weston, S. H., 133 Norfolk Road, Epping.
VK 2AJI Egan, V., 13 Carthage Street, Tamworth.
VK 2AJJ Ackland, R. G., 9a Rovalist Road, Cremorne.
VK 2AJK Manwaring, A. L., 79 Berthong Street, Cootamundra.
VK 2AJL Hayes, W. L., 30 Cormiston Avenue, Central Concord.
VK 2AJM Bull, F. H., 307 Sailor Bay Road, Northbridge.
VK 2AJN Mills L. B., "Ronville," Lilli Pilli Point Road, Port Hacking.
VK 2AJO Joscelyne, R. A., 61 Spruson Street, Neutral Bay.
VK 2AJP O'Leary, C. G. B., 64 Station Road, Auburn.
VK 2AJQ Smith, R. S., 30 Seaview Street, Dulwich Hill.
VK 2AJR Acland, B., 40 Cormiston Avenue, Concord.
VK 2AJS Morgan, R. G., 1 Lee Street, Randwick.
VK 2AJT Nicholle, H.H. W., 35 Cairo Street, North Sydney.
VK 2AJU Horan, K. J., Commercial Hotel, Argent Street, Broken Hill.
VK 2AJV Craig, K. W., 11 King Street, Stockton.
VK 2AJW Patterson, R. W., 35 Bromborough Road, Roseville.
VK 2AJX Scott, J. B., 56 Cheltenham Crescent, Cheltenham.
VK 2AJY Mutter, J., 40 Avenue Road, Mosman, N.S.W.
VK 2AJZ Cumpston, L. W., 1 Victoria Square, Ashfield, N.S.W.
VK 2AKA Holschier, J., "Oakvale," Moira, N.S.W.
VK 2AKB Brown, K. B., 7 Seville Street, Lane Cove, N.S.W.
VK 2LMW Wilson, L. M., Malboona Station, via Mudgee.

VK3—VICTORIAN AMATEUR STATIONS

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VK 3AC Chandler, H. G., 52 Gray Street, Hamilton.
VK 3AD Dixon, A. G., 216 Rathmines Road, Hawthorn East, E.3.
VK 3AF Bent, A. F. W., 33 Girton Crescent, West Geelong.
VK 3AG Glover, A. J. G., c/o 3YB, Spring Gardens, Warrnambool.
VK 3AH Miller, A. H., 32 Brinsley Road, E.6.
VK 3AI Kruger, F. A., Armstrong Street, Charlton.
VK 3AL Kerr, A. D., 1214 Sturt Street, Ballarat.
VK 3AM Forecast, A. M., 22 Neerim Road, Caulfield, S.E.8.
VK 3AN Newberry, A., Indi Avenue, Red Cliffs.
VK 3AO Allison, C. M., 33 Arnold Street, North Carlton, N.4.
VK 3AP Bowley, A. H., 5 Caroline Street, Hawthorn East, E.3.
VK 3AQ Marist Brothers' College (Brother Gonzales), Kilmore.
VK 3AS Stow, A. F., 187 St. George's Road, North Fitzroy, N.7.
VK 3AT Taylor, A. F., 4 The Ridgeway, Ivanhoe, N.21.
VK 3AU Milligan, S. H., 44 West Melbourne Road, Geelong West.
VK 3AV Ternes, H. M., 92 Willesden Road, Oakleigh, S.E.12.
VK 3AX Boast, H. D., 105 Cochrane Street, Elsternwick, S.4.
VK 3AY Jenvey, W. W., 24 Draper Street, Ormond, S.E.14.
VK 3AZ Avard, A. E., 1 Hawthorn Road, Northcote, N.16.
VK 3BC Cooper, B. D., 10 Mary Street, Coburg, N.13. Vic.
VK 3BF Carnahan, J. M., 27a Logie Street, Oakleigh, S.E.12.
VK 3BG Jones, R. B., 11 Mitchell Street, Bendigo.
VK 3BH Whitelaw, C. R., Gordon Street, Mornington.
VK 3BJ Hanham, F. S., 161 Napier Street, Essendon, W.5.
VK 3BK Baker, S. C., 235 Clarendon Street, South Melbourne, S.C.5.
VK 3BL Fitchett, J. C., 13 Holmwood Avenue, Brighton, S.5.
VK 3BM Mann, B. R., Quambatook.
VK 3BN Reddrop, J. W., 57 Saturn Street, Caulfield, S.E.8.
VK 3BP Hood, J. H., 9 Tintern Avenue, Toorak, S.E.2.
VK 3BQ Howden, W. F. M., 13 Balwyn Road, Canterbury, E.7.
VK 3BR Billan, L. J., Dargo Road, Briagolong.
VK 3BT Barthold, G. L., 72 Union Street, Malvern, S.E.3.
VK 3BU Brownbill, W. A., 71 Gheringhap Street, Geelong.
VK 3BV Burston, L. R., 93 Rowan Street, Wangaratta.
VK 3BW Woolrough, A., Fenwick Street, Portarlington.
VK 3BX Halley, T. W. A., 558 Centre Road, Bentleigh, S.E.14.
VK 3BY Holst, H., 27 Bambra Road, Caulfield, S.E.7.
VK 3BZ Morris, G. I., Boundary Road, Mordialloc, S.12.
VK 3CA Hughes, C. A., 1 Vera Street, Williamstown, W.16.
VK 3CB Sievers, W. F., 26 Lesney Street, East Richmond, E.1.
VK 3CC Radio Research Board, University of Melbourne, Carlton, N.3.
VK 3CD Rich-Phillips, J., "Peri," Murraydale.
VK 3CE McNally, R. C., Berriwillock.
VK 3CF Falconer, C. I., 13 Norris Street, Surrey Hills, E.10.
VK 3CG Brogan, J. P. H., Game Street, Merbein.
VK 3CH Harris, A. C., Cumming Avenue, Birchip.
VK 3CJ Manning, C. J., Eltham, Vic.
VK 3CK Shenfield, C. K., Sunny Banks, Cobden.
VK 3CL Long, C. R. W., "Edgecliffe," Cliff Road, Frankston.
VK 3CM Jenkin, F. C., Oxford Road, Croydon.
VK 3CN Harrisson, C., c/o 2 Marungi Street, Shepparton.
VK 3CO Conry, W. H., Centre Road, Brighton, S.6.
VK 3CP Pritchard, A. C. J., 3 Loch Street, Kew, E.4.
VK 3CQ Cobb, V. L., 241 Peel Street, North Melbourne, N.1.
VK 3CR Doyle, H. L., Leith Lodge, Fiocchi Avenue, Frankston.
VK 3CS Matheson, C. R., 2 Richardson Street, Essendon, W.5.
VK 3CT Graf, R. G., 19 Bloomfield Road, Ascot Vale, W.2.
VK 3CU Wilson, J. T., 79 Park Road, South Camberwell, S.E.6.
VK 3CV McKeone, J. C., 13 Forbes Street, Essendon, W.5.
VK 3CW Walters, C. A., 16 Cape Street, Heidelberg, N.22.
VK 3CX Brown, A. G., 17 Langham Place, Upper Hawthorn, E.3.
VK 3CY Carroll, C. M., 3 Draper St., Ormond, S.E.14, Vic.
VK 3CZ Berry, A. I., 15 Kembla Street, Hawthorn, E.2.
VK 3DC Embling, S. A., 296 Williams Road, Toorak, S.E.2.
VK 3DD Rooks, J., Milne Street, Crib Point, Vic.
VK 3DE Hale, D. E., Buninyong.
VK 3DF Irvine, C. J., 922 Burke Road, Balwyn, E.8.
VK 3DG Giddings, A. W. J., Tyers Street, Stratford.
VK 3DH Morgan, I., 7 Melrose Avenue, East Malvern, S.E.5.
VK 3DI Chilver, J. D., McCartin Street, Leongatha.
VK 3DJ Gleeson, J. L., 675 Rathdown Street, North Carlton, N.4.
VK 3DK Baker, T. D., Railway Station, Boonoonar.
VK 3DL Leber, D., 402 Bridge Road, Richmond, E.1.
VK 3DM McDonald, D. C., 16 Railway Avenue, Malvern, S.E.4.
VK 3DN Amalgamated Wireless (A/asia) Ltd., 147 York Street, Sydney. (Station at 167 Queen Street, Melbourne.)
VK 3DO Dobbyn, J. M., 6 Wills Street, Glen Iris, S.E.6.
VK 3DP Were, R. W., 196 Melville Road, West Brunswick, N.12.
VK 3DQ Morris, J. D., 31 Davey Avenue, Oakleigh, S.E.12.
VK 3DR Bennett, W. J. J., Alexandra Street, Mooroopna.
VK 3DT Petruchenia, V. V., 25 The Parade, Ascot Vale, W.2.
VK 3DU Bowie, L. D., 65 Noone Street, Clifton Hill, N.8. (Portable.)
VK 3DV Bremner, T., 20 Esplanade, Clifton Hill, N.8.
VK 3DW Tacey, D. W., Wyndham Street North, Shepparton.
VK 3DX Kermond, L. J., 4 Lava Street, Warrnambool.
VK 3DY Dyer, C. A. R., 162 Roseneath Street, Clifton Hill, N.8.
VK 3DZ Ryan, C. J., 3 Hartington Street, Northcote, N.16.
VK 3EA Anderson, E., Port Welshpool.
VK 3EB Endacott, J. M., 24 Cumming Street, West Brunswick, N.12.
VK 3EC Cook, E., Kimberley Avenue, Swan Hill.
VK 3ED Jones, D. O., 24 Francis Street, Ascot Vale, W.2.
VK 3EE Faulkner, E. A., 5 Wattle Grove, East Malvern, S.E.5.
VK 3EF Faull, A. E., 56 Anderson Street, Warracknabeal.
VK 3EG Miller, I. V., Towong Street, Tallangatta.
VK 3EH Foot E. H. S., 19 Knutsford Street, Balwyn, E.8.
VK 3EI Watson, L. G., 23 Redan Street, Caulfield, S.E.7.
VK 3EK Bell, R. J., 10 Banks Avenue, Hampton, S.7.
VK 3EL Boyd, N. J., 105 Ormond Road, Elwood, S.3.
VK 3EM Manifold, E. C., 267 Jasper Road, McKinnon, S.E.14.
VK 3EN Pearce, H. R. J., 43 Cromwell Street, Caulfield, S.E.7.
VK 3EP Perkin, E., Queen Street, Rochester.
VK 3EQ Colyer, E. L., 17 Denman Avenue, East St. Kilda, S.2.
VK 3ER Read, E. H. W., 5 Fordham Avenue, East Camberwell, E.6.
VK 3ES Callander, A. R., 34 Halstead Street, Caulfield, S.E.7.
VK 3ET Asmus, H. J., 153 Buckley Street, Footscray, W.11.
VK 3EW Wheller, E. C., 96 Toorak Road, Camberwell, S.E.6.
VK 3EX Webb, E. K., 297 Mitcham Road, Mitcham.
VK 3EY M.C.C.E.S. Social Club, Heffernan Lane (Sub-station), 608 Little Bourke Street, Melbourne, C.1.
VK 3FA Falkenberg, B., "Bonnie Hills," Byaduk.
VK 3FB Oldfield, F. B., 14 Gordon Street, Hampton, S.7.
VK 3FC Clark, F. T., 14 Nelson Street, St. Kilda, S.2.
VK 3FD Longmore, H., c/o Station 3LK, Lubeck.
VK 3FE Constable, H. S., 20 Louise Avenue, Mont Albert, E.10.
VK 3FF Speer, J. F., "Viewfield," Corop.
VK 3FG Ince, F. G., 10 Eskdale Road, Caulfield, S.E.7.
VK 3FH Huon, H. F., 41 Westbury Street, St. Kilda, S.2.
VK 3FI Fitzsimmons, R. H., 849 Burke Road, Camberwell, E.6.
VK 3FJ Edgerton, A. F. J., 9 Athol Street, Moonee Ponds, W.4.
VK 3FK Kerr, F. J., 27 Monomeath Avenue, Canterbury, E.7.
VK 3FL Johnson, A. L., 34 Stanley Grove, Canterbury, E.7.
VK 3FM Wildman, C. G., 59 Blair Street, Moreland, N.13.
VK 3FN Ferguson, B. M., 10 Mary Street, Coburg, N.13.
VK 3FO Olsen, F., 10 New Street, Hampton, S.7.
VK 3FQ Fontaine, L. A., "Wyuna," Derby St., Armadale, S.E.3, Vic.
VK 3FR Smith, G. L. F., 62 Beavers Road, Northcote, N.16.
VK 3FS O'Brien, A. J., 215 McKean Street, North Fitzroy, N.7.
VK 3FT Randell, B. F. H., c/o R.A.A.F., Laverton.
VK 3FU Briggs, D. E., 21 Service Street, Coburg, N.13.
VK 3FV Chick, K. F., 576 Main Street, Mordialloc.
VK 3FW Fulton, W. A., 24 Logan Street, Canterbury, E.7.
VK 3FX McCarthy, J. K., 31 Bloomfield Road, Ascot Vale, W.2.
VK 3FZ Maher, F. A., 102 McKean Street, North Fitzroy, N.7.
VK 3GA Douglas, W. G., State School, Curdievale.
VK 3GB Baker, H. G., 12 Clive Road, Hawthorn, E.2.
VK 3GC Carter, G. R., Campbell Street, Camperdown.
VK 3GD Downing, W. G., Stanhope.
VK 3GE Every, G. E., King Street, Queenscliff.
VK 3GF Auld, J. R., 76 Parker Street, Williamstown, W.16.
VK 3GG Guest, E. L. G., 9 Mulgoa Street, Brighton, S.5.
VK 3GH Williamson, H. G., Edward Street, Rainbow.
VK 3GJ Hoy, A. J., 22 Pickles Street, Albert Park, S.C.6.
VK 3GK McLean, S. C., 692 Sydney Road, Brunswick.
VK 3GM McCulloch, G. R., 511 Havelock Street, Ballarat.
VK 3GN Turner, G. A., 26 Cambridge Street, Maryborough.
VK 3GO McGowan, R. C. G., Thompson Street, Sale.
VK 3GP Shields, A. J. E., 22 Ash Grove, East Malvern, S.E.5.
VK 3GQ Emeny, T. F., Bowen Street, Camperdown.
VK 3GR Rowland, R. G., 29 Inkerman Street, Ballarat.
VK 3GS Semmens, G. S. C., 18 Shaftesbury Street, Essendon, W.5.
VK 3GT Thompson, G., 9 Rennie Street, Thornbury, N.17.
VK 3GU Chapman, H., 1 Noel Street, Ivanhoe, N.21.
VK 3GV Goeby, A. T., Hilton Street, Glenroy, W.9.
VK 3GW Williamson, H. G., Rainbow.
VK 3GX Gibson, P. R., 13 Federation Street, Ascot Vale, W.2.
VK 3GY Day, C. J., 88 Pentland Parade, Yarraville, W.13.
VK 3GZ Oliver, K. W., 22 Verner Street, South Geelong.
VK 3HB Bain, H. M., Dixon Avenue, Werribee.
VK 3HC Cliff, H., 3 Riverview Road, Essendon, W.5.
VK 3HD Ward, H. D., 6 Epsom Avenue, Mordialloc, S.12.
VK 3HE Hodge, H. G., 13 Albert Street, Surrey Hills, E.10.
VK 3HF Fuller, H., 15 Woolley Street, Essendon, W.5.
VK 3HG Templeton, N. M., Willima, Coleraine.
VK 3HH Maughan, F. H., 15 Staniland Avenue, Malvern, S.E.4.
VK 3HJ George, V. H., 199 Rosanna Road, Heidelberg, N.22.
VK 3HK Heitsch, K., 305 Mitcham Road, Mitcham.
VK 3HL Hutchings, A. T., "Bryn Avon," Callawadda.
VK 3HM Hutchings, Mrs. E. L., "Bryn Avon," Callawadda.
VK 3HN McCandlish, J., Hannan Street, Sea Lake.
VK 3HO Hodges, R. A., Disraeli Grove, Pascoe Vale South, W.7.
VK 3HQ Hutchings, Miss M. L., "Bryn Avon," Callawadda.
VK 3HR Roberts, H. C., Box 79, Sea Lake.
VK 3HU Blackman, H. H., Closter Avenue, Ashburton, E.13.
VK 3HW Hattam, F., 18 Greenhill Street, Castlemaine.
VK 3HX Hogan, T. D., Learmonth Street, Charlton.
VK 3HY Andrews, H. L., River Road, Murchison.
VK 3HZ Clyne, E. M., c/o Station 3UL, South Road, Warragul.
VK 3ID Davies, I. J., Talbot Avenue, Bentleigh, S.E.14.
VK 3IG Ireland, G. W., 5 Gillies Street, Mitcham.
VK 3IH Burton, R. F., Clifton Street, Charlton.
VK 3IL Jordan, R. F., Gabo Island Lighthouse.
VK 3IM Seventh Battalion Radio Club, Riverside Avenue, Mildura.
VK 3IN Simpson, C. W. A. 39 Tope Street, Sth. Melbourne, S.C.5.
VK 3IR White, H. B., 36 Osborne Avenue, Glen Iris., S.E.6.
VK 3IS Worsley, H. A., 12 Glencoe Street, Caulfield, S.E.7.
VK 3IT Argoon, A. J., 3 Jervis Street, Burwood, E.13.
VK 3IW Fayle, B. J., 20 Adam Street, Burnley, E.1.
VK 3IX Reed, C. J., 142 Hall Street, Spotswood, W.14.
VK 3JA Anderson, J. F., Nullawarre.
VK 3JB Kling, J. R., 41 Myrtle Road, Hampton, S.7.
VK 3JC Cassidy, J. J., 362 Riversdale Road, Camberwell, E.6.
VK 3JD Davies, J. C., 15 Summerhill Road, Brighton, S.5.
VK 3JE Alder, W., c/o W. Collins, Commercial Road, Yarram.
VK 3JF Wilson, A. L., 108 Wheatley Rd., McKinnon, S.E.14, Vic.
VK 3JH Hurley, A. L. J., 9 Bellevue Street, Coburg, N.13.
VK 3JI Jepson, R. R., 25 Marlborough Street, East St. Kilda, S.2.
VK 3JJ McMath, J. J., 136 Kerferd Road, Albert Park, S.C.6.
VK 3JK Herd, J. K., 1 Murdoch Road, Wangaratta.
VK 3JL Osborne, C. G., 5 Kalang Road, Hartwell, E.6.
VK 3JM Martin, J. F., 19 Dudley Street, North Fitzroy, N.7.
VK 3JN Young, L. G., 15 Clyde Street, East Malvern, S.E.6.
VK 3JO Stevens, H. N., 33 Auburn Grove, Hawthorn East, E.3.
VK 3JP Michell, H. E. H., Land Office, Hamilton.
VK 3JQ Brebner, W. J. A., 2 Cambridge Street, Belmont.
VK 3JR Rainbow, C. J., 18 Arthur Street, Preston, N.18.
VK 3JS Schultze, J., 18 Invermay Grove, Hawthorn East, E.3.
VK 3JT Symons, J. L. G., 47 Elizabeth Street, Malvern, S.E.4.
VK 3JU Phillips, H. E. J., 475 Chapel Street, South Yarra, S.E.1.
VK 3JV James, A. G., Macorna.
VK 3JW Bruce, R. W., 51 Tooronga Road, East Malvern, S.E.5.
VK 3JX Sydow, J. F., 184 Nelson Road, South Melbourne, S.C.5.
VK 3JZ Lafferty, J. A., Union Street, Yarram.
VK 3KA Sharp, J. J. C., 3 Seach Street, Caulfield, S.E.8.
VK 3KB Kissick, A. L. H., 85 Moreland Road, East Coburg, N.13.
VK 3KC Wilcox, S. J., 49 Narrawong Rd., Caulfield, S.E.8, Vic.
VK 3KD Carlyle, A. K. H., 24 McIlwraith Street, North Carlton, N.4.
VK 3KE Keating, T. J., 6 Moorabbin Road, Mentone, S.11, Vic.
VK 3KF Carroll, J. M., 2 Lewis Street, Mordialloc, S.12.
VK 3KG Green, K. L., 32 Cunningham Street, South Yarra, S.E.1.
VK 3KH Anderson, E. W. A., 9 Clark Street, Glen Iris, S.E.6.
VK 3KI Mabbitt, J. M., "Long Lake," Lake Boga.
VK 3KJ Stalker, D. C., 16 McDonald Street, Colac.
VK 3KL Philpot, C. H., Horsham.
VK 3KM McGuire, L. P., Corryong.
VK 3KN Kinnear, H., 16 Moule Avenue, Brighton, S.5.
VK 3KO Scarff, W. J., 7 Glenview Avenue, Malvern, S.E.4.
VK 3KP Ayre, D. R., Rothesay Court, Sidwell Avenue, East St. Kilda, S.2.
VK 3KQ Benwell, G. T., 27 Bendigo Avenue, Elwood, S.3.
VK 3KR Rankin, K. R.
VK 3KT Williams, A. E., 18 Park Street, Elsternwick, S.4.
VK 3KU Love, H. K., 7 Valency Road, East Malvern, S.E.6.

VK 3KV Solomon, C. C. H., 113 Clarendon Street, South Melbourne, S.C.5.
VK 3KW Keillor, W., 4 Pakington Street Extension, Geelong West.
VK 3KX Tandy, R., 76 Rae Street, Colac.
VK 3KY Mann, S. G., 44 Ludstone Street, Hampton, S.7.
VK 3LA Bollas, G., 18 Chambers Street, Footscray, W.11.
VK 3LB Amor, H. R., 24 Clifton Grove, Preston, N.18.
VK 3LC Knyvett, E. L., 12a Douglas Street, East Malvern, S.E.5.
VK 3LD Richardson, L. R. N., 122 Kooyong Road, Armadale, S.E.3.
VK 3LE Lockhart, L., 17 Normandy Road, Elwood, S.3.
VK 3LF Bunn, M. K., 66 Alexander Street, East St. Kilda, S.2.
VK 3LG Glew, L. G., 22 Elphin Street, Newport, W.15.
VK 3LH James, R. H. Main Street, Drouin.
VK 3LI Rogers, L. C., 4 Coward Street, Footscray, W.11.
VK 3LJ Simmons, L. J., State School No. 1059, Rheola.
VK 3LL Kelly, K. M., Queen's College, Carlton, N.3.
VK 3LM Lee-Archer, E. L., 15 Findon Street, Malvern East, S.E.5.
VK 3LN Moncur, L. P., 235 Union Road, Ascot Vale, W.2.
VK 3LP Paul, L. A., 35 Austral Avenue, Preston, N.18.
VK 3LQ Sheppard, W. H., 25 Florizel Street, Burwood, E.13.
VK 3LS Busch, R. T., 20 Wordsworth Street, Moonee Ponds, W.4.
VK 3LT Thompson, L. N., 590 Point Nepean Road, Carrum.
VK 3LU McPherson, C. T., 34 Pickett Street, Footscray, W.11.
VK 3LV Malone, L. E. P., Mologa.
VK 3LW Hiam, C., 27 Ontario Street, Caulfield North, S.E.7.
VK 3LX Harding, L. G. H., 31 Charles Street, Footscray, W.11.
VK 3LY Schmidt, R. F., York Street, Sale.
VK 3LZ Ellis, C. A., 552 Glenhuntly Road, Caulfield, S.E.8.
VK 3MC Amalgamated Wireless (A/asia) Ltd., Rockbank.
VK 3MD Amalgamated Wireless (A/asia) Ltd., Portable Station.
VK 3ME Amalgamated Wireless (A/asia) Ltd., Braybrook.
VK 3ME Amalgamated Wireless (A/asia) Ltd., 167 Queen Street, Melbourne.
VK 3MI Alsop, J. R., 11 Weir Street, Kew, E.4.
VK 3MJ Medley, D. J., University, Carlton, N.3, Vic.
VK 3MK Vale, L. H., 27 Lime Avenue, Mildura.
VK 3ML Cunningham, R. H., 94 Robinsons Road, Hawthorn, E.2.
VK 3MM Hooper, E. M., 223 Auburn Road, Auburn, E.2.
VK 3MN Amalgamated Wireless (A/asia) Ltd., Ballan.
VK 3MP Hosken, S. V., 69 Mason Street, Hawthorn, E.2.
VK 3MR Campbell, M. R., 194 O'Heas Road, Coburg West, N.13.
VK 3MS Waters, M. H., 22 Winifred St., Essendon, W.5, Vic.
VK 3MT Melbourne Technical College, Latrobe Street, Melbourne, C.1.
VK 3MU Mackay, R. R., 54 Patterson Street, North Carlton, N.4.
VK 3MV Coulter, J. N., 45 Alma Road, Caulfield, S.E.7.
VK 3MW White, S. G., Flat 12, "Kia Ora," 453 St. Kilda Road, Melbourne, S.C.2, Vic.
VK 3MX Sebire, P. J., Howell Street, Moorabbin, S.20.
VK 3MY Money, L. D., 8 Maling Road, Canterbury, E.7.
VK 3NA Gardner, Dr. J. K., Royal Melbourne Hospital, Lonsdale Street, Melbourne, C.1.
VK 3NB Nickson, A. F. B., 56 Wattletree Road, Malvern, S.E.3.
VK 3NC Bennett, P. C., 196 Auburn Road, Auburn, E.3.
VK 3NF Herman, L. G., 38 Aintree Road, Glen Iris, S.E.6.
VK 3NG Gunter, N. E., 7 Harrison Crescent, Hawthorn, E.2.
VK 3NH Gibbings, W. E., 35 Lincoln Road, Essendon, W.5.
VK 3NI Nicholls, A. H., 59 Alma Road, East St. Kilda, S.2.
VK 3NJ Colvin, N., Everard Road, Ringwood East.
VK 3NK Ballinger, J. W., "Monterey," Curdie Street, Camperdown.
VK 3NL Lewis, C. E., 181 Boundary Road, North Melbourne, N.1.
VK 3NM McLeod, N., 61 Narrawong Road, Caulfield, S.E.8.
VK 3NN Brown, H. R., Yanac.
VK 3NO Nolte, G. E., 39 Mitford Street, Elwood, S.3.
VK 3NP Marshall, M. J., 8 Hilda Street, East Malvern, S.E.5.
VK 3NQ Watson, J. D., "Wattleville," Darlington.
VK 3NR Mathieson, I. H., Diggers Road, Werribee.
VK 3NS Levings, S. B., 32 Rona Street, Regent, N.19.
VK 3NU Coffin, R. G., 9 Dickens Street, Glen Iris, S.E.6.
VK 3NV Ryan, M. J., 8 Bain Avenue, Merlynston, N.14.
VK 3NW McTaggart, F. K., 11 Ulupna Road, Ormond, S.E.9.
VK 3NX Daniel, G. W. H., 76 Anderson Street, Warracknabeal.
VK 3NY Marsland, J. G., 20 Renwick Street, Glen Iris, S.E.6.
VK 3NZ Murfett, N. C., Grey Street, Terang.
VK 3OA Winch, R. M., "Park Lodge," 621 Punt Rd., South Yarra, S.E.1.
VK 3OB Burrows, L. T., 30 Flower Street, Essendon, W.5.
VK 3OC Ohrbom, R., 22 Gordon Street, Coburg, N.13.
VK 3OD O'Connor, J., 121 Melrose Street, North Melbourne, N.1.
VK 3OF O'Dwyer, F. P., 6 Duffy Avenue, Gardenvale, S.4.
VK 3OG Sawers, T. V., 43 Cooper Street, Essendon, W.5.
VK 3OH O'Hara, J. B., 20 Napier Street, Maryborough.
VK 3OI Collins, R. J., 4 Emmaline Street, Croxton, N.16.
VK 3OJ Stevens, R. E., 17 Jervis Street, Burwood, E.13.
VK 3OL Bibby, F. C., 9 Pleasant Road, Hawthorn East, E.3.
VK 3OM Parr, J. G., 16 Wentworth Avenue, Canterbury, E.7.
VK 3ON Niven, J. C., 191 Kooyong Road, Caulfield, S.E.7.
VK 3OO Stuart, J. A., 41 Regent Street, Brighton, S.5.
VK 3OQ Williams, J. H., 6 Russell St., Northcote, N.16. Vic.
VK 3OR Orr, M. D., Lake Meran, Kerang.
VK 3OS Scott, R. O., "Mt. Buninyong," Scotsburn.
VK 3OT Barnes, V., 166 South Road, Brighton East, S.6.
VK 3OU Williams, J. O., 12 Mildura Avenue, Sandringham, S.8.
VK 3OV Perry, R. E., 25 High Road, Camberwell, E.6.
VK 3OW Templeton, G. L., Carinya, Coleraine.
VK 3OX Cook, R. H., 34 Judd Street, Camberwell, E.6.
VK 3OY Quin, A. K., 12 Grace Street, Camberwell, E.6.
VK 3OZ Evans, P. E., 5 Howitt Street, Glen Iris, S.E.6.
VK 3PA Anderson, P. J., 5 Collins Street, West Preston, N.18.
VK 3PB Boyd, J. P. A., 40 Grant Street, East Malvern, S.E.5.
VK 3PC Purvis, C. W., 77 Sutherland Road, Armadale, S.E.3.
VK 3PE Thornley, P. E., Gnotuk, Camperdown.
VK 3PH Williams, N. G., 49 Bay Street, Brighton, S.5.
VK 3PI Pearson, L. F., 43 Youngman Street, Preston, N.18.
VK 3PK Smith, C. H., 98 Harp Road, East Kew, E.5, Vic.
VK 3PL Colthrup, J. F., 139 Spensley Street, Clifton Hill, N.8.
VK 3PM Frew, G. S. V., 2 Gould Street, Brighton, S.5.
VK 3PN Tozer, P. J., 346 Barkly Street, Elwood, S.3.
VK 3PP Payne, Capt. A. E., 554 Toorak Road, Toorak, S.E.2.
VK 3PQ Wilkinson, J. E. M. A., 161 Perry Street, Fairfield, N.20.
VK 3PR Jardine, W. R., "Dunloddon," Old Korumburra Road, Leongatha.
VK 3PS Powers, L. A. T., 16 Holrood Street, Camberwell, E.6.
VK 3PT Peterson, R. C., 88 Eglinton Street, Moonee Ponds, W.4.
VK 3PU Jackson, R. G., 19 Charles Street, Williamstown North, W.16.
VK 3PV Veall, R. P., 38 Elidon Road, St. Kilda, S.2.
VK 3PW Webber, H. P., 37 Lucerne Crescent, Alphington, N.20.
VK 3PX Finnigan, H. M., 193 Ninth Street, Mildura.
VK 3PY Watson, P. R., Molyneaux Street, Warracknabeal.
VK 3QA Mackie, A. E., 55 Tooronga Road, East Malvern, S.E.5.
VK 3QB Mills, W. J., c/o The Commercial Banking Co. of Sydney, Ltd., Moe.
VK 3QC Plowman, B. McI., "Arilcurra," Rowcliffe Street, Bendigo.
VK 3QD Harrison, V. W., 6 Leopold Crescent, Mont Albert, E.10.
VK 3QH Feldman, J. F., Forest Street, South Geelong.
VK 3QJ Roseblade, R. K., 23 Macartney Avenue, Kew, E.4.
VK 3QK Jenkins, E. H., 415 St. Kilda Street, Elwood, S.3.
VK 3QL Thompson, J. K., 9 Tuppen St., Yarraville, W.13, Vic.
VK 3QM Haines, C. L. H., 97 Roslyn Road, Belmont.
VK 3QN Moore, E. B., "Boughton Grange," Panton Hill.
VK 3QO Roberts, K. McL., 30 Redesdale Road, Ivanhoe, N.21.
VK 3QP Peterson, W., c/o 554 Toorak Road, Toorak, S.E.2.
VK 3QR White, R. L., 27 Wattletree Road, Malvern, S.E.4.
VK 3QS Wall, J. W., 161 Gladstone Avenue, Northcote, N.16.
VK 3QT Norgate, A. W., 104 Melbourne Road, North Williamstown, W.16.
VK 3QW Brown, A., 231 Wood Street, Preston, N.18.
VK 3QX O'Brien, C. R. H., 16 Turner Avenue, Glenhuntly, S.E.9.
VK 3QZ Cooper, H. N., 6 Grey Street, Deepdene, E.8.
VK 3RB Buring, R., 32 Camp Street, Ballarat.
VK 3RC Streeter, R. W., 8 Hotham Street, Preston, N.18.
VK 3RD Day, R. F., 19 Hotham Street, Oakleigh, S.E.12.
VK 3RE Hehir, W. J., 14 Raven Street, Kew, E.4.
VK 3RF Field, R. W., 42 Orrong Street, Caulfield, S.E.7.
VK 3RG Blake, R. L. G., 29 Doveton Street, Castlemaine.
VK 3RH Hodder, I. R., "Eromanga," Glenorchy.
VK 3RI Victorian Railways Institute Wireless Club, Victorian Railways Institute Building, Flinders Street, Melbourne, C.1.
VK 3RJ Jones, R. E., 23 Landale Street, Box Hill, E.11.
VK 3RK Evans, T. E., Heliopolis Street, Pascoe Vale, W.7.
VK 3RM Easterbrook, R. W., 23 Osborne Street, South Yarra, S.E.1.
VK 3RO Brennan, W. E., 31 Lindsay Avenue, Murrumbeena, S.E.9.
VK 3RP Payne, R. L., 39 Retreat Road, Newtown, Geelong.
VK 3RQ Quick, M. R., 16 Regent Street, Ascot Vale, W.2.
VK 3RR Hall, C., 212 Harold Street, Thornbury, N.17.
VK 3RS Shortell, R. C., Congupna Road, via Shepparton.
VK 3RT Tozer, R. H., 92 Yarra Street, Alphington, N.20.
VK 3RU Foreman, R. M., 5 Yarrbat Avenue, Balwyn, E.8.
VK 3RV McConnell, J. H., 3 Brighton Avenue, Preston, N.18.
VK 3RX Serle, C., 3 Ormsby Grove, Toorak, S.E.2.
VK 3RY Smith, R. S., 38 Barrington Avenue, Kew, E.4.
VK 3RZ Fitzsimons, H. B., 109 Toorak Rd., Hawthorn Sth., E.3, Vic.
VK 3SA Breen, J. H., 2a Oak Grove, Ripponlea, S.2.
VK 3SB Brehaut, A. L., 29a Clyde Street, Oakleigh, S.E.12.
VK 3SC Sargeant, W. B., Wall Street, Camperdown.
VK 3SE Widgery, S. E., 515 Lydiard Street North, Ballarat.
VK 3SF Jones, S. W., 405 Lyons Street, South Ballarat.
VK 3SG Hourigan, J. B., 23 Jordan Street, Malvern, S.E.4.
VK 3SI Marriott, R. J., 187 Kooyong Road, Toorak, S.E.2.
VK 3SJ Riches, S. J. W., 62 James Street, Northcote, N.16.
VK 3SL Southwell, L. W., Oak Street, Seymour.
VK 3SM Simpson, B., 2 Prince Patrick Street, Richmond, E.1.
VK 3SN Bell, J. B., 139 Skene Street, Shepparton.
VK 3SO McCubbin, B. L., 41 Chestnut Street, Richmond, E.1.
VK 3SP Coath, S. P., 6 Symon Street, West Preston, N.18.
VK 3SQ Bond, F. W., 134 Hastings Street, Northcote, N.16.
VK 3SS Scott, K. V., Stratford Road, Maffra.
VK 3ST Coghlan, J. L., 39 Jackson Street, St. Kilda, S.2.
VK 3SU Edwards, S. G., 46 Rothsay Avenue, Elwood, S.3, Vic.
VK 3SW Gadsden, S. W., 20 Fellows Street, Kew, E.4.
VK 3SX Wellington, S. H., 2 Arthur Avenue, Brighton, S.5.
VK 3SY Mathews, J. C., 71 Fairview Avenue, Newtown, Geelong.
VK 3SZ Zeunert, S. I., 37 Foster Street, Hamilton, Vic.
VK 3TA Hardinge, B. E., Natimuk Road, Horsham.
VK 3TB Barnes, T. W., 8 Capulet Street, Moonee Ponds, W.4.
VK 3TC Bowie, L. D., 65 Noone Street, Clifton Hill, N.8.
VK 3TD Buzacott, R. N., c/o Herald Relay Station, Lubeck.
VK 3TF Dennis, G. W., 14 Milton Street, Footscray, W.12.
VK 3TG Rose, B. I., 29 Bowen Street, East Malvern, S.E.9.
VK 3TH Thompson, G. F., 104 Bambra Road, Caulfield, S.E.8.
VK 3TI Godden, C. A., 54 Seventh Street, Mildura.
VK 3TJ Gray, J. T., 16 Canberra Street, Coburg, N.13.
VK 3TK Kinsella, T. W., Cromie Street, Rupanyup.
VK 3TL Trebilcock, R. E., Victoria Street, Kerang.
VK 3TM Buck, A. H., McKinnon Street, Terang.
VK 3TN Riley, M. R., Gray Street, Hamilton.
VK 3TO Holden, S. T., 9 Denmark Street, Kew, E.4, Vic.
VK 3TS Speer, T. P., Corop.
VK 3TT Tallent, W. D., Dean.
VK 3TU Irvine, J. F., 922 Burke Road, Balwyn, E.8.
VK 3TV Brumhead, A. T., 800 Burke Road, Camberwell, E.6.
VK 3TW Wells, G. L. D., 264 Gray Street, Hamilton.
VK 3TX Tregear, W. S., 22 Cole Street, Upper Hawthorn, E.3.
VK 3TY Murden, W. H., 1 Gillingham Street, West Preston, N.18.
VK 3TZ Manks, T. E., 66 Victoria Street, Sandringham, S.8.
VK 3UB Byrne, H. L., 21 Wolseley Grove, Brighton, S.5.
VK 3UD Denholm, I. H., 36 Royal Parade, Coburg, N.13. Now 40 Royal Parade, West Coburg, W.7.
VK 3UE Huey, R. M., 3 Langham Flats, Langham Place, Hawthorn East, E.3.
VK 3UF Thompson, R. R., Water Commission, Tatura.
VK 3UG Sallmann, N. H., 1 Arlington Street, Camberwell, E.6.
VK 3UH Allen, K. G., 517 Lower Malvern Road, Glen Iris, S.E.6.
VK 3UJ Roudie, A., 6 Arthur Street, Fairfield, N.20.
VK 3UK Marshall, V. E., 75 Argyle Road, Kew, E.4.
VK 3UM Mitchell, W. T. S., 329 Wattletree Road, East Malvern, S.E.5.
VK 3UO Harvey, C. G., 43 Dandenong Road, Malvern, S.E.3.
VK 3US Robertson, A. E., 176 Auburn Road, E.2.
VK 3UU Launder-Cridge, W. E., 105 Bulla Road, Essendon, W.5.
VK 3UW Burrage, J. A., c/o 3SR, Congupna Road, Near Shepparton.
VK 3UX Smith, A., 191 Hoddle Street, Abbotsford, N.9.
VK 3UY Nilsen's Broadcasting Service Pty. Ltd., 45 Bourke Street Melbourne, C.1.
VK 3VB Hughes, E. W., 5 Marwal Avenue, North Balwyn, E.9.
VK 3VF McKenzie, B. A., 17 Yann Street, Preston, N.18.
VK 3VG Vinning, H. A., 33 Macalister Street, Sale, Vic.
VK 3VH Hoobin, L. W., 18 Bent Street, Bentleigh, S.E.14.
VK 3VJ Adams, A. W., "Dunham," Cook Street, Sandringham, S.8.
VK 3VK Bowen, M., 30 Gladstone Street, Windsor, S.1.
VK 3VL White, V. W., 7 Kinlock Avenue, Surrey Hills, E.10.
VK 3VM Marks, Dr. E. H., 70 Malvern Road, Malvern, S.E.4.
VK 3VN Evans, P. E., Smeaton.
VK 3VP Baker, C. W., cnr. Sternberg and Condon Streets, Bendigo.
VK 3VQ Evans, A. B. D., 12 Dudley Street, Brighton, S.5.
VK 3VR Dexter, J. H., 46 Edward Street, Sandringham, S.8.
VK 3VS Spicer, V. J., 92 Freeman Street, North Fitzroy, N.7.
VK 3VT Thompson, M. M. 5 Riversdale Road, E.2.
VK 3VU Chippindall, J., 5 Collins Street, Coburg West, N.13.
VK 3VW Stobie, G., Bell Street, Heidelberg, N.22.
VK 3VX Clyne, A. H., 231 Glen Eira Road, East St. Kilda, S.2.
VK 3VY Dudman, W. H. G., 36 Hopetoun Grove, Ivanhoe, N.21.
VK 3WA Wilson, W. A. G., 215 Raglan Street, Ballarat.
VK 3WB Black, W. H., 20 Wheatland Road, Malvern, S.E.4.
VK 3WD Mather, W. D., 230 Lyons Street, Ballarat.
VK 3WE Williams, A. R., P.O. Box 7, Omeo.
VK 3WF Fitzpatrick, W. P., 205 Coppin Street, Richmond, E.1.
VK 3WG Gronow, W. R., 2 Anthony Street, Glen Iris, S.E.6.
VK 3WH Chandler, A. W. H., 35 Aileen Avenue, Caulfield, S.E.8.

VK 3WI Wireless Institute of Australia (Victorian Division), 191 Queen Street, Melbourne, C.1.
VK 3WJ Sandford, S. M., "Roslin," Welsh Street, Kyneton.
VK 3WK Soumprou, E. W., 44 Kneen St., North Fitzroy, N.7, Vic.
VK 3WL Nye, W. L., 16 Berry Street, Coburg, N.13.
VK 3WM Wilson, W. M., 131 Wood Street, East Preston, N.18.
VK 3WN Lambart, J. M., Best Street, Sea Lake.
VK 3WO Humphreys, R. E., 53 Llaneast Street, Malvern, S.E.4.
VK 3WP Kenderdine, C. W., 35 Macartney Avenue, Kew, E.4.
VK 3WQ Quin, C.C., 25 Faussett Street, Albert Park, S.C.6.
VK 3WR Temby, F. K., 26 St. George's Road, Malvern, S.E.3.
VK 3WS Sweeney, W. M., 52 Brighton Road, St. Kilda, S.3.
VK 3WT Barratt, W. G., 8 Swanston Street, Geelong, Vic.
VK 3WU Smith, N., 230 Pelham Street, Carlton, N.3, Vic.
VK 3WW Matters, W. L., 7 Ellerslie Grove, Warrnambool.
VK 3WX Robb, W. L., 146 St. Leonards Rd., Ascot Vale, W.2, Vic.
VK 3WY Anderson, R. A. C., 18 St. Andrics Street, Camberwell, E.6.
VK 3WZ Whalley, R. P., P.O. Box 26, Myrtleford.
VK 3XA Groves, G. W., 64 Sutherland Road, Armadale, S.E.3.
VK 3XB Stafford, I., State School, Lallat North, via Rupanyup.
VK 3XC Holland, C., 32 Railway Crescent, Maryborough.
VK 3XD Dowling, R., 6 May Street, North Fitzroy, N.7.
VK 3XE Doherty, F., 17 Palermo Street, Mentone, S.11.
VK 3XG Page, B. F. D., Sladen Street, Birregurra.
VK 3XH Johnson, S. W., 73 York Street, Sale.
VK 3XI Duggan, H. G., 194 Liebig Street, Warrnambool.
VK 3XJ Manning, G. W., Newstead Street, Maribyrnong, W.3.
VK 3XK Coleston, S. R., 6 St. Vincent Street, Glenhuntly, S.E.9.
VK 3XL Sydserff, W. H. B., 10 Suffolk Road, Surrey Hills, E.10.
VK 3XM Jackson, W. L., 23 Malane Street, Ormond, S.E.9.
VK 3XN Cumming, M. C., 3 Howitt Road, Caulfield, S.E.7.
VK 3XO Adams, F. J., 9 Moule Avenue, Middle Brighton, S.5.
VK 3XP Sankey, R. E., 7 Pembroke Street, Surrey Hills, E.10.
VK 3XQ Baldock, A., 24 Northernhay Street, Preston, N.19.
VK 3XR Winton, J. H., 43 Clyde Street, Surrey Hills, E.10.
VK 3XS Prowse, R. R., 4 Larch Street, Caulfield, S.E.8.
VK 3XT Millerd, G., 18 Ward Street, South Melbourne, S.C.5.
VK 3XU Weynton, A. G., 29 Bull Street, Castlemaine.
VK 3XV Mikkelsen, G. C., 1 Kerford Street, Coburg, N.13.
VK 3XW Blyth, O. E., 12 Hartwell Hill Road, Camberwell, E.6.
VK 3XX Research Laboratories, P.M.G.'s Department, Little Collins Street, Melbourne, C.1.
VK 3XZ McGregor, R. R., c/o 3UL, Warragul.
VK 3YA Young, A. R., 17 Lethbridge Street, Moonee Ponds, W.4.
VK 3YF Johnson, L. W., 157 Whitehorse Road, Deepdene, E.6.
VK 3YG Smith, G. E., 37 Carpenter Street, Brighton, S.5.
VK 3YJ Wookey, G. W. L., 26 Pine Avenue, Elwood, S.3.
VK 3YK Douglas, G. C., Hakea Hill, Bayswater.
VK 3YL Marshall, Miss M. A., 650 Dandenong Road, Murrumbeena, S.E.9.
VK 3YM Thompson, S. A., 3 Tuppen Street, Yarraville, W.13.
VK 3YO Woodward, C., 15 Selbourne Street, Moreland, N.13.
VK 3YP Patterson, C. L., 82 Burke Road, East Malvern, S.E.5.
VK 3YQ Smith, R. C., 2 New Street, Surrey Hills, E.10, Vic.
VK 3YS Bail, F. G., 62 Channon Street, Box Hill North, E.12.
VK 3YT Costello, A. D., 16 Grant Street, Ballarat.
VK 3YW Waring, C. C., Cromie Street, Rupanyup.
VK 3YX Hardie, B. N. K., 3a Bowen Crescent, Melbourne, S.C.2.
VK 3YY Harkin, D. J., 77 Agg Street, Newport, W.15.
VK 3YZ McKeown, A. M., 7 Grandview Grove, Northcote South, N.16.
VK 3ZA Sims, E. L. A., c/o Post Office, Apollo Bay.
VK 3ZB Brown, H. M., 8a Darling Street, Oakleigh, S.E.12.
VK 3ZC Tutton, J. K., 31 Denham Street, Hawthorn, E.2.
VK 3ZD Williams, R. A., 45 Banool Road, Balwyn, E.8.
VK 3ZE Cumpston, L. W., 34 Longmore Street, St. Kilda, S.2.
VK 3ZF Martin, E. H., 61 Addison Street, Elwood, S.3.
VK 3ZG Lelliott, H. W., 30 Edgar Street, Glen Iris, S.E.6.
VK 3ZJ Salmon, J. E., 80 St. George's Road, Elsternwick, S.4.
VK 3ZK Stevens, J., Gray Street West Swan Hill.
VK 3ZL Thomas, D. E., 13a Rowe Street, Ballarat East.
VK 3ZN Israel, M. S., 13 Station Street, Burwood, E.13.
VK 3ZO Cunliffe, J. A., 12 Yann Street, Preston, N.18.
VK 3ZP Richardson, R. J., 97 Vere Street, Collingwood, N.5.
VK 3ZQ Hutchinson, H. K., 446 Racecourse Road, Flemington, W.1.
VK 3ZR Moody G. C., 88 Hudson Road, Spotswood, W.14.
VK 3ZU O'Donnell, F. A., 315 Wattletree Road, East Malvern, S.E.5.
VK 3ZW Lelliott, T., 8 Agnes Street, Mont Albert, E.10.
VK 3ZV Tinkler, A. E., 31 Bridge Street, Hampton, S.7.
VK 3ZX Oppenheim, O. G., 33 Saturn Street, Caulfield, S.E.8.
VK 3ZY Borgeest, W. F., 24 Charnwood Road, St. Kilda, S.2.
VK 3ZZ McLeod, G. S., "Brooklyn," Wallington.

VK4—QUEENSLAND AMATEUR STATIONS

CARDS FOR VK4 AMATEURS MAY BE SENT TO VK4VS

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VK 4AD Dixon, A. L., "Daron," Agnew Street, Norman Park.
VK 4AE Stratford, L. S., Marshall Street, Goondiwindi.
VK 4AF Marshall, A. F., Fisher Street, Clifton.
VK 4AG Greenham, A. J., c/o National Bank of A'asia, Ltd., Innisfail.
VK 4AH Hadley, A. L. T., Cnr. Lamington Terrace and Wahoumba Street, Dutton Park.
VK 4AL Munro, B. W., McConnell Street, Bulimba.
VK 4AM Minchin, W. A., 63 William Street, Rockhampton.
VK 4AN Allen, J., Wallace Street, Chermside.
VK 4AP Guildford, A., 36 Bramston Terrace, Helston.
VK 4AQ Duffy, J., Prince Street, Grange, Brisbane.
VK 4AR Tonge, A. E., Salisbury Street, Indooroopilly.
VK 4AS Soden, A. W., Ipswich Road, Annerley, S.3.
VK 4AU Milner, J., 44 Woodland Street, Ashgrove.
VK 4AW Walz, A. E., cr. Eton St. and Sandgate Rd., Nundah.
VK 4AX Denby, H. R., Goulburn Street, Kedron, N.3.
VK 4AZ Sharpe, F. V., Whytecliffe Parade, Scott's Point, Redcliffe.
VK 4BA Brookes, A. A., cr. Greenwood and Quandong Sts., Ashgrove, W.3.
VK 4BB Beatson, R. J., 210 Fort Street, Maryborough.
VK 4BG Glassop, R. J., c/o Mrs. D. B. Stewart, 565 New Sandgate Rd., Clayfield.
VK 4BM Morrow, A. C., 177 Kennedy Terrace, Paddington.
VK 4BN Newell, A. J., Racecourse Road, Mill Hill.
VK 4BS Grummitt, G. F., Hunt Street, Hamilton.
VK 4BW Couper, A., off Lloyd Street, Mareeba.
VK 4CB Caswell, A. H., Fryar Street, Murgon.
VK 4CD McDonald, C., 96 Archer Street, Rockhampton.
VK 4CF Fortescue, C., "Matlock," Arthur Street, Toowoomba.
VK 4CG Gold, C. H. Y., c/o Gold Radio Service, Ltd., Ruthven Street, Toowoomba.
VK 4CH Hawson, T. E. C., Macrae Street, Woodend, Ipswich.
VK 4CJ Marley, C. W., 20 Louisa Street, Highgate Hill, S.1.
VK 4CK Schnitzerling, L. F. J., 72 Canning Street, Warwick.
VK 4CL Waterworth, L. C., Smith Street, The Range, Rockhampton.
VK 4CM McDowall, Dr. V., Observatory Tower, Wickham Terrace, Brisbane.
VK 4CN Jackson, J. W., Cribb Island, Brisbane.
VK 4CO Langfield, H., 95 Elizabeth Street, Rosalie.
VK 4CP Parry, C. A., Gordonvale.
VK 4CR Hewitt, C. R., 121 Fernberg Road, Rosalie.
VK 4CU Walker, C., East Street, Clifton.
VK 4CW Welsh, C. W., Pratten Street, Warwick.
VK 4CX McDowell, J. C. D., 22 Duke Street, Ascot.
VK 4CY C.Y.M.S. (Gordonvale Branch), Catholic Presbytery, Gordonvale.
VK 4DB Brown, G. D., Bale Street, Ascot.
VK 4DO Hobler, H. L., 202 Campbell Street, Rockhampton.
VK 4DK Kerr, R., Elderslie Street, Winton.
VK 4DL Cresswell, H. L., 15 Lackey Avenue, Coorparoo.
VK 4DN Horn, Dr. D., Tara.
VK 4DU Dundas, R. L., Crawford, Kingaroy Line.
VK 4DR Laws, D. A., Mt. Cootha Road, Taringa.
VK 4DX Queensland DX Radio Club, 73 Payne Street, Torwood.
VK 4DY Wright, E. J., Ekibin Road, Annerley, S.3.
VK 4EA Ashlin, E. R., c/o Rosentengels, Ltd., Ruthven St., Toowoomba.
VK 4EB Butcher E. W., Richmond Street, Kedron.
VK 4EC Cagney, E. W., Bracker Street, Rockhampton.
VK 4EE Mathews, J., 143 George Street, Rockhampton.
VK 4EF Fell, E. F., 191 Waterworks Road, Ashgrove.
VK 4EG Gold, E. E., Lindsay Street, Toowoomba.
VK 4EI Belstead, R. L., 2 Park Lane, Hyde Park.
VK 4EL Lake, E. J., 47 William Street, Kangaroo Point.
VK 4EM Mars, E. B., "Lorraine," Burke Street, Charleville.
VK 4ER Reilly, E. H., c/o Laidley Motors, Laidley.
VK 4ES Sprenger, H. E., c/o Wyper Bros., Ltd., Bundaberg.
VK 4EW White, E. H., Vowles Street, Red Hill.
VK 4FB Beech, F. S., Bennetts Road, Coorparoo.
VK 4FE Burton, A. R., 33 Leichhardt Street, Brisbane.
VK 4FJ Baxter, S. R., Old Cleveland Road, Camp Hill.
VK 4FK Kenna, V. F., 41 Allen Street, Hamilton.
VK 4FL Silver, F. L., Brittania Avenue, Morningside, E.1.
VK 4FM Moody, F. P., 34 Lake Street, Cairns.
VK 4FN Nolan, F. M., 587 New Sandgate Road, Clayfield, N.2.
VK 4FO Hoe, F., Killarney Street, Yeronga.
VK 4FS Starr, F. J., Corundum Street, Stanthorpe.
VK 4FW Woolley, L. R., 22 George St., Newtown, Ipswich.
VK 4GA Shearer, G. A., State School, Quamby, via Cloncurry.
VK 4GC Campbell, G. A., 22 Brook Street, South Brisbane.
VK 4GE Ginn, E. G., 8 Lamington Road, West End, Townsville.
VK 4GF Foreman, E. G., Airdmillan Road, Ayr.
VK 4GG Heilbronn, G., "Euroa," Clayton Street, Chinchilla.
VK 4GH Harley, G. N., "Brooklyn," Didcot, Gayndah Line.
VK 4GJ Arthur, C. J. G., Dayboro.
VK 4GK Mackenzie, A. H., Fire Station, Wynnum.
VK 4GS Strofeldt G., cnr. Guthrie and Isaac Sts., Paddington.
VK 4GU Chadwick, R. H., "Te Whare," Clifton Street, Wilston, N.W.1.
VK 4GW Ham, G. W., 248 Cavendish Road, Coorparoo, S.E.2.
VK 4GX Barraclough, F., Gail Street, Kedron, N.3.
VK 4HA Angel, H. B., Sisley Street, St. Lucia.
VK 4HB Bremerman, H. F., 51 Wellington Street, Wooloowin.
VK 4HC Core, H. J., Ripon Street, Coorparoo, Brisbane.
VK 4HD Lindsay, H. M., Riley Road, Nambour.
VK 4HF Shortt, R., c/o Post Office, Camooweal.
VK 4HG Brown, H. G., cnr. Fifer Street and Menzies Lane, Ipswich.
VK 4HJ Mackenzie, A. A., Fire Station, Wynnum, E.2.
VK 4HK Kinzbrunner, H. C., Tully.
VK 4HL Lynch, H. J., 198 Wickham Street, Valley.
VK 4HM Murphy, H. J., Rectory Street, Pomona, Qld.
VK 4HR Scholz, H., Station Street, Coorparoo.
VK 4HS Scott, H. G., 108 Bridge Street, Albion, N.3.
VK 4HT Todd, A. H., Lind Street, Newmarket.
VK 4HU Hughes, G. H., Eildon Road, Windsor, N.3.
VK 4HX Amalgamated Wireless (A/asia), Ltd., 47 York Street, Sydney. (Station at Pinkenba.)
VK 4IV Dennett, P. R., Camooweal.
VK 4IR Irvine, William, Cross Street, Mitchelton.
VK 4JA Abbiss, J. E. F., Wilson Street, Morningside.
VK 4JB Alder, O. E., 16 Old Sandgate Road, Albion.
VK 4JC Bailey, J. H., 18 Thomas Street, Redhill.
VK 4JE Edgar, J. M., 57 George Street, Kangaroo Point.
VK 4JF Files, J. C., 43 Rialto Street, Coorparoo, S.E.2.
VK 4JG Grant, C. J., cnr. Victoria Parade and Old Sandgate Road, Wooloowin.
VK 4JH Humphry, Mrs. I. J. L., Poopoonbah, via Giru.
VK 4JJ Jordan, J., c/o Wyper Bros., Bundaberg.
VK 4JK Humphry, J. L., Poopoonbah, via Giru.
VK 4JL Love, J. P., "Glen Kedron," 1st Avenue, Kedron.
VK 4JM McDermott, J. W., Rosemount, via Nambour.
VK 4JN Augustesen, G. G., Sussex Street, Mitchelton.
VK 4JO Fittell, S. L., City Buildings, Mary Street, Gympie.
VK 4JP Gray, G. H. B., 18 Henry Street, Ascot, N.E.2.
VK 4JQ Graham, J. A., Connah Street, Ekibin, South Brisbane.
VK 4JU Nolan, F. W., 110 Wharf Street, Brisbane.
VK 4JW Larsen, H. P. C., 18 McLeod Street, Cairns.
VK 4JX Heine, J. F., Wendell Street, Mowbray Park.
VK 4JY Young, J. W., 114 Fernberg Road, Rosalie.
VK 4KF Price, K. F., Lockyer Street, Camp Hill.
VK 4KH Argaet, W. S., "Kingsley," Kingsley Terrace, Wynnum South.
VK 4KK Bradford, A. K., "Bonville," Bringalily, via Millmerran.
VK 4KL Johnson, I. U., 197 Esplanade, Cairns.
VK 4KO Hart, N. V., 67 Glebe Road, Newtown, Ipswich.
VK 4KX Cran, M. R., 228 Boundary Street, West End.
VK 4KY Martin, M., 21 Elizabeth Street, Ipswich.
VK 4KZ Coughman, C. C. McG., Kaimkillenbun, via Dalby.
VK 4LA Smith, S. D. P., Arthur Street, Corinda.
VK 4LB Bowen, J. L. 33 Nudgee Road, Hamilton, N.E.2.
VK 4LC Currie, J. L., c/o Power Station, Proserpine.
VK 4LD Gunn, K. C., "Inverness," Patrick Street, Laidley.
VK 4LE Greenhill, G. A., 39 Whynot Street, West End.
VK 4LF Lee, F. H. S., c/o Radio Station, Misima, via Samarai, Papua.
VK 4LH Hitchcock, L. F., 128 Kedron Park Road, Wooloowin.
VK 4LJ Feenaghty, L. J., cnr. Aloomba Road and Amarina Avenue, Ashgrove.
VK 4LK Kerr, V. L., P.O. Box 103, Cloncurry.
VK 4LL Lumb, L. J., Devonshire Street, Ashgrove.
VK 4LM McMahon, L. H., Old Sandgate Road, Toombul.
VK 4LN Grey, J. L., "Birkhill," Agnew Street, Norman Park.

VK 4LO Nolan, Mrs. V. E., 110 Wharf Street, Brisbane.
VK 4LP Page, L. N., Lloyd Street, New Farm, N.1.
VK 4LQ Johnston, R. W., 23 Bell Street, Petrie Terrace.
VK 4LR Thomas, R. H., Vine Street, Bulimba, N.E.1.
VK 4LS Williams, L. S. B., Toogoolawah.
VK 4LW Morris, C. R., Exeter Street, Ashgrove.
VK 4LX Grey, E. E., 18 Circe Street, Ascot, N.E.2.
VK 4LZ Griffiths, L. A., 56 Neil Street, Toowoomba, Qld.
VK 4MA Bull, F. G., "Cozydell," River Park, Fairfield, S.3.
VK 4MC MacPherson, A. D., "Cluny," Old Sandgate Road, Nundah, N.E.3.
VK 4MF Winterford, D. C., Heron Street, Sarina.
VK 4MI Goford, T. W., Radio Hut, South End, Mt. Isa.
VK 4ML Merchin, L. G., Hillier Street, Richmond.
VK 4MM O'Brien, M. M., Villa Street, Annerley, S.3.
VK 4MR Stewart, J. E., "Braemar," Rode Road, Nundah.
VK 4MW Wratten, M. J., Clem Street, Brassall, Ipswich.
VK 4MX Martin, J. R., Watson Street, Cunnamulla.
VK 4ND Dahl, N. L., Airdmillan Road, Ayr.
VK 4NF Dangerfield, J. H., 36 Wills Street, Townsville.
VK 4NL Dangerfield, N. G., Pioneer Estate, Lower Burdekin.
VK 4NM Mills, N. G., Ipswich Road, Moorooka, S.4.
VK 4NO Thuge, N., Parsons Point, via Gladstone.
VK 4NP Phillips, N. W., 93 Nicholas Street, Ipswich.
VK 4NW Starkie, T. W., "Langthorne," Rode Road, Nundah.
VK 4OL O'Loughlin, F. P., 37 Kennedy Terrace, Red Hill.
VK 4OO Bright, W. H. H. 52 Hume Street, Toowoomba.
VK 4OR O'Rourke, J. S., Wendel Street, Brisbane, S.E.1.
VK 4PC Chapman, P. C. L., P.O. Box 130, Babinda.
VK 4PF Fitzgerald, P. M. A., 2 Victor Street, Rockhampton.
VK 4PH Hardgrave, P., 285 Montague Road, South Brisbane, S.1.
VK 4PJ Jessop, P. F., Hambledon, via Cairns.
VK 4PK McIntosh, S., "Kia Ora," O'Sullivan Street, Woodend.
VK 4PL Proposch, W. C. L., Heeny Street, Chinchilla.
VK 4PN Roberts, R. F., "Deeander," Ipswich Road, Annerley.
VK 4PW Wood, P., Nicholas Street, Ipswich.
VK 4PX Johnson, A., Croker Avenue, Hendra, N.E.2.
VK 4PY Clarke, P. F., Jarvisfield, Ayr.
VK 4QA Khan, Kullandar, 30 Grafton Street, Cairns.
VK 4RA Atkinson, R. A., King Street, Annerley.
VK 4RB Browne, R. J., 25 Church Street, Toowong.
VK 4RC Campbell, R., 30 Prospect Terrace, Kelvin Grove.
VK 4RD Moffatt, R. D. G., Northside, Mackay.
VK 4RF Lubach, F. J., 90 Prince Street, Thompson Estate, South Brisbane, S.3.
VK 4RG Ryan, G. E., 15 Russell Street, South Brisbane.
VK 4RH Howe, R., Perry Street, Bundaberg.
VK 4RJ Delbridge, Rev. R. J. R., Glebe Road, Booval.
VK 4RL Central Technical College, George Street, Brisbane.
VK 4RM Meadows, R. C., 60 George Street, Mackay.
VK 4RP Carne, R. L., c/o C.S.R. Co., Ltd., Goondi Mill, Innisfail.
VK 4RQ Rose, R. W., Eagle Street, Longreach.
VK 4RS Stacey, R. E., Main Street, Proserpine.
VK 4RT Thorley, R., Bower Street, Annerley, S.3.
VK 4RV Vickary, R. M., 98 Grafton Street, Warwick.
VK 4RW Rohde, W., "Maranoa," McCook Street, Red Hill.
VK 4RX Blades, R. A., Gresham Flats, Taylor Street, Toowoomba.
VK 4RY Harston, W. L., 72 Riverton Street, Clayfield, N.2.
VK 4SA Smith, A. S., "Winalar," Burns Street, Indooroopilly.
VK 4SD Sharland, A. H., Boondall, N.E.6.
VK 4SG Grantham, S., 712 Ruthven Street, Toowoomba.
VK 4SL Luckman, T. S., cnr. Shaw and Lodge Roads, Kalinga.
VK 4SM Smart, A., Paterson, North Central Railway.
VK 4SR Shoring, T., c/o Burnett Club, Quay Street, Bundaberg.
VK 4ST Tumbridge, S. H., Post Office, Stanthorpe.
VK 4SU Sherriff, E. G., 113 Hawthorne Road, Hawthorne, N.E.1.
VK 4TA Alexander, T. M., Murray Street, North Ward, Townsville.
VK 4TH Hewitt, Dr. T. G., 8 Mackenzie Street, Cairns.
VK 4TK Stack, R. P. C., Owen Street, Innisfail.
VK 4TW Tarling, A. W., Henry Street, West End, Townsville.
VK 4TY Tyas, N. R. W., Kingaroy.
VK 4UJ Dubois, P. L., 55 Baroona Road, Rosalie.
VK 4UL Hubsher, L. P., 98 Commercial Road, Brisbane, N.1.
VK 4UR Bates, J. L., 233 Arthur Street, Teneriffe.
VK 4UU Chitham, W. N., 32 Doggett Street, Valley.
VK 4UW Ferricks, M. B., 28 John Street, Valley.
VK 4UX Singleton, C. P., Theodore.
VK 4UZ Buzacott, A. H., 44 Campbell Street, Toowoomba.
VK 4VC Cummins, R. V., 278 Wilston Road, Newmarket, N.W.1.
VK 4VD Bell, V. S., Jones Street, Wandal, Rockhampton.
VK 4VH Wooster, H. M., 144 Mitchell Street, Townsville.
VK 4VJ Jeffs, V., 170 Bowen Terrace, Brisbane.
VK 4VR Rickaby, L. D., 32 Macaulay Street, Coorparoo, S.F.2.
VK 4VW Wilson, V. J., 58 Newstead Terrace, Newstead.
VK 4VX Rich, M. C. W., Samarai, E.D., Papua
VK 4VZ Garth, R., Mackay.
VK 4WA Goldsworthy, W. J., 27 Brunswick Street, Valley.
VK 4WB Berry, W. J., Wingarra Street, Yerongpilly.
VK 4WD Hepton, W. D., 115 Milton Road, Milton.
VK 4WE Armstrong, W. E., Mt. Sisa, Misima Island, Papua.
VK 4WG Clayton, W. G. G., Benwell Street, East Innisfail.
VK 4WH Hagarty, W. E., Crane Street, Longreach.
VK 4WI Wireless Institute of Australia (Queensland Celtic Chambers, George Street, Brisbane, Division).
VK 4WJ Farrell, J. H., "Braeside," Palmer Street, Windsor, N.3.
VK 4WL Irving, C. L., Bower Street, Annerley, S.3.
VK 4WM McNicol, R. W. E., 37 Florence Street, Teneriffe, N.1.
VK 4WN Nash, W. R. C., 129 Esplanade, Cairns.
VK 4WO Tilse, H., Avoca Street, Yeronga.
VK 4WP McDermott, W. S., Currie Street, Nambour.
VK 4WS Sebley, W. J., 3 Birdwood Street, Ipswich.
VK 4WT Wishart, W. T., cnr. Long and Dan Streets, Graceville.
VK 4WU Grant, W. P., Ward Street, Indooroopilly, S.W.2.
VK 4WW Radford, W. D., Elimatta Drive, Ashgrove, W.3.
VK 4WX Ham, T. E., River Terrace, Chelmer, S.W.3, Brisbane.
VK 4XF Mantle, J. P. T., Norman Street, Ascot.
VK 4XK Richards, G., Burnett Street, Ipswich.
VK 4XL Chapman, F. W., Christensen Street, Yeronga, S.3.
VK 4XM Worrall, L. A., c/o Bank of New South Wales, Cairns.
VK 4XN Nissen, E. L., Condamine Street, Dalby.
VK 4XO Weston, R. M. H., Sydney Hotel, Bundaberg.
VK 4XR Chippindall, E. K., 206 Latrobe Street, Paddington.
VK 4XW Harmer, G., Ashton Street, Coorparoo.
VK 4XY McGarry, L. I., c/o G. Arnold, Duke Street, Roma.
VK 4YA Kemp, A. A., Yangan.
VK 4YG Young, I. H., 212 Sandgate Road, Albion.
VK 4YJ Sainsbury, R. H., "Warrego," Franz Road, Clayfield.
VK 4YL MacKenzie, Miss F. M., Fire Station, Wynnum, E.2.
VK 4YM Cohen, D., City Hall, Brisbane.
VK 4ZL Pembleton, T. E., 167 Denham Street, Rockhampton.
VK 4ZO Hillhouse, J., Collinsville.
VK 4ZP Peters, H. Z., Yerra, via Maryborough.
VK 4ZT McDonald, W. N., No. 7, "Cora Lynn," 638 Brunswick Street, New Farm, N.1.
VK 4ZX Bullock, A. F. W., 26 Primmer Street, Coorparoo.
VK 4ZY Burns, C. E. J., Knight Street, Kingaroy.

VK5—AMATEUR STATIONS IN SOUTH AUSTRALIA

VK 5AC Cook, V. R. P., 86 Windsor Avenue, Kilkenny.
VK 5AF Ives, C. A., 12 Ramsgate Street, Glenelg.
VK 5AG Smith, W., 5 Burnleigh Mansions, Esplanade, Henley Beach.
VK 5AI Reilly, E. D., 53 Stanley Street, Woodville.
VK 5AK Lawrie, K. A., 3 Gertrude Street, Lockleys.
VK 5AL Lum, A. D., 132 First Avenue, Joslin.
VK 5AM Kennedy, P., 77 Edmund Avenue, New Parkside.
VK 5AR Richardson, A. K., 11 South Road, Everard Park.
VK 5AT Taylor, A. W., 128 Main Road, Solomontown.
VK 5AW Kelly, A. W., Lyndale Winery, Lyndoch.
VK 5AX Traeger, A. H., 11 Dudley Road, Marryatville.
VK 5AY Haynes, T. A. J., 408 Cross Road, Black Forest Estate, Adelaide.
VK 5AZ Amalgamated Wireless (A/asia), Ltd., 47 York Street, Sydney. (Station at Rosewater).
VK 5BC Lloyd, H. F., 5 Mary Street, Hindmarsh.
VK 5BD Briggs, D. R., Iona Street, Broadview, Walkerville.
VK 5BF Miller, F. G., Eleanor Terrace, Murray Bridge.
VK 5BG Grundy, R. H., Edward Street, Murray Bridge.
VK 5BH Blunden, L. W., 58 Shelly Street, Firle.
VK 5BJ Bruce, R. A., 1 Henry Street, Glenelg.
VK 5BK Grivell, J., c/o Station 5CK, Crystal Brook.
VK 5BM Willoughby, E. L., Knight Street, Penrhyn.
VK 5BN Barton, G. F., Gray Street, Mount Gambier.
VK 5BP Caldwell, R. B., 53 Hughes Street, North Unley.
VK 5BU Bourne, F. F., 8 Edmund Avenue, Unley.
VK 5BW Phillips, J. G., Madge Terrace, Somerton.
VK 5BY Whitburn, D. R., 77 Wattle Street, Fullarton.
VK 5CB Brimble, C. C., 27 Scarborough Street, Somerton.
VK 5CJ Ferguson, C. A., Mount Gambier.
VK 5CM Anthony, R. M., 14 Sherbourne Road, Medindie Gardens.
VK 5CP Laver, C. P., Cape Borda Lighthouse, Kangaroo Island.
VK 5CR Cheel, C. R., 40 Clifton Street, Maylands.
VK 5CS Bested, J. P., Spains Road, Salisbury.
VK 5CX Moule, C. E., 146 Young Street, Parkside.
VK 5CY Henry, R. C., Cook.
VK 5DA Buckerfield, S. R., 38 Queen Street, Knoxville.
VK 5DB Berry, L. D., 24 Moulden Street, Norwood.
VK 5DC Shepard, A. E., 33 Queen Street, Norwood.
VK 5DI 5AD-PI Radio Club, 313 Young Street, Wayville.
VK 5DK Robbins, T. F., 59 Sheffield Street, Malvern.
VK 5DP Brock, H. E. E., 2a Marlborough Street, Malvern.
VK 5DR Deer, P. W., 9 Arundel Road, Brighton.
VK 5DW Wreford, A. F., 34 Myall Avenue, Kensington Gardens.
VK 5DX Taylor, D. G., 1 Merlon Avenue, Black Forest.
VK 5DY Davey, R. W., 199 Torrens Road, North Croydon (portable).
VK 5EM Mann, J. E., 24 Newman Street, Semaphore.
VK 5FB Brandon, E. F., P.O. Box 80, Wilmington.
VK 5FC Collins, C. H. J., 12 Hackett Terrace, Marryatville.
VK 5FG Rodgers, B. S., c/o F. R. Radestock, Blackwood.
VK 5FL Harris, R. C., 9 Giles Avenue, Glenelg.
VK 5FM Bowman, H. N., Battams Road, Payneham.
VK 5FW Halliday, E. T., Wonga Avenue, Hectorville.
VK 5GA Anderson, G. R., Baulderstone Road, Myrtle Bank.
VK 5GB Bruce, G. W., 37 Buller Street, Prospect.
VK 5GC Burgess, G. T., 39 Airlie Avenue, Prospect.
VK 5GF Farmer, M. G., 134 Le Strange Street, Knoxville.
VK 5GK Carter, F. P., 55 Roebuck Street, Mile End.
VK 5GL Tilbrook, C. D. L., 16 Carlisle Street, Camden.
VK 5GM Anderson, A. R., 16 Hauteville Terrace, Eastwood.
VK 5GN Matthews, K. M., 77 Cambridge Terrace, Malvern.
VK 5GP Pitts, R. G., 65 Carlton Parade, Torrensville.
VK 5GR Ragless, G. B., South Road, St. Marys.
VK 5GU Gregory, R. W., Hutchinson Street, Mount Barker.
VK 5GW Huppatz, W. G., McCoy Street, Naracoorte.
VK 5GY Farmer, M. G., 134 Le Strange Street, Knoxville. (Portable).
VK 5HB Johnson, H. B., 429 Esplanade, Henley Beach.
VK 5HD Lloyd, W. E., 5 Mary Street, Hindmarsh.
VK 5HG Cooper, H. M., 51 Hastings Street, Glenelg.
VK 5HK Backler, E. L., Kingston.
VK 5HL Lunn, H. V., 10 Morphett Road, Morphettville.
VK 5HM Goldsmith, G. W., 15 Goldfinch Avenue, Cowandilla.
VK 5HR Heinrich, W. L., P.O. Box 9, Bute.
VK 5HS Scott, W. H., Main Road, Clare.
VK 5HW Wheeler, H. W., Wilpena Street, Eden Hills.
VK 5IT Thomas, I., 15 Eynesbury Avenue, Kingswood Park, Mitcham.
VK 5IV Dennett, P. R., Coneybeer Street, Berri.
VK 5JA Brewer, P. J., 21 Douglas Street, Parkside.
VK 5JB Bergin, J. T., 11 Sefton Street, Largs Bay.
VK 5JC Cawthorn, E. J., 59 Fisher Street, Fullarton.
VK 5JG Georgeson, J., 67 Moseley Street, Glenelg.
VK 5JH Chennell, V., 37 Hounslow Avenue, Cowandilla.
VK 5JN Henderson, S., 19 North East Road, Walkerville.
VK 5JO Reimann, A. A., 26 College Road, Kent Town.
VK 5JR Smith, J. A., 41 Queen Street, Alberton.
VK 5JS Strafford, J., 71 Ann Street, Stepney.
VK 5JT Kilgariff, J., 70 Stanley Street, Burnside.
VK 5JU Berry, H. A., 38 William Street, Norwood.
VK 5JW Wilkin, J. W., "Willow Bend Stud Poultry Farm," North
VK 5JX Golley, J. C., Fisk Avenue, Glengowrie, S.A.
VK 5KB Bowen, H. K., 44 Augusta Street, Maylands.
VK 5KD Davey, R. W., 199 Torrens Road, North Croyden.
VK 5KG Brooks, A. H., 13 Surrey Street, Grange.
VK 5KH Ring, K. M., 8 May Terrace, Kensington Park.
VK 5KJ Connon, G., Booleroo Centre.
VK 5KL Castle, C. H., 21 Harrington Street, Prospect.
VK 5KO De Cure, J. E., 25 Farrell Street, Glenelg.
VK 5KR Ireland, L. K., Chute Street, Mount Gambier.
VK 5KW Wadham, K., 83 Moseley Street, Glenelg.
VK 5KX Bulling, W. J., 617 Esplanade, Grange.
VK 5KY Stapleton, J. W., 9 King Street, Alberton.
VK 5KZ Keddie, P. R., 45 Stanley Street, Woodville Park.
VK 5LA Atkins, L. M., 16 Lockwood Road, Erindale.
VK 5LB Badenock, J. H. L., 46 Hereford Avenue, Trinity Gardens.

VK 5LC Catford, L. E., Gladstone.
VK 5LD Deane, L. A., 21 Davenport Terrace, Hazelwood Park.
VK 5LF Sawford, L. F., 107 Wills Street, Largs.
VK 5LG Cotton, L. S., Post Office, Iron Knob.
VK 5LJ Davies, R. R., 8 Gurr Street, Goodwood Park.
VK 5LL Lucas, G. F., 19 Wilpena Terrace, Kilkenny.
VK 5LN Drew, A. J., 19 Dimboola Street, Kensington.
VK 5LO Loeser, H. E., 2 Clifton Street, Goodwood.
VK 5LP Phillis, L. V., 5 Luhrs Road, South Payneham.
VK 5LR Lester, Jack, Coneybeer Street, Berri.
VK 5LW Kelly, R. D., 58 Fairford Street, Unley.
VK 5LY Hodder, C. W., 72 Porter Street, Parkside.
VK 5MD Barbier, E. A., Stockade Reserve.
VK 5MF Smythe, A. C., 15 Northcote Street, Torrensville.
VK 5MH Baty, R., Torrens Road, Challa Gardens.
VK 5MK Bentley, F. E., 20 Neil Street, Cowandilla.
VK 5ML Coombe, G. S., 6 Manton Street, Hindmarsh.
VK 5MO McGrath, E. P., 42 Robsart Street, Parkside.
VK 5MP Porter, L. G., Huddleston.
VK 5MS Stuart, M. H., Radio Station, Rosewater (see also alterations to call signs).
VK 5MV Barber, S. G., 16 Rodney Street, Woodville.
VK 5MW Atkins, K. J., 29 Park Avenue, Semaphore South.
VK 5MX White, C. R., 69 Curran Street, Kilkenny.
VK 5MY Roberts, H. M., 5 Raldon Grove, Myrtle Bank.
VK 5MZ Laurence, J. H., 17 Sheffield Street, Malvern.
VK 5NA Ancher, N. L., 27 Henley Beach Road, Mile End.
VK 5NO Knock, D. B., 14 Yanko Avenue, Bronte, N.S.W. (Portable, for use in Central Australia).
VK 5NW Bailey, R. H., Mitchell Street, Crystal Brook.
VK 5OJ Green, H. R., 5 Dudley Avenue, Prospect.
VK 5OP Brown, L. A., 16 Park Terrace, Eastwood.
VK 5PB Burford, W. P., Foster Street, Naracoorte.
VK 5PN Pearn, W. L., 20 Oxford Terrace, Sturt Park.
VK 5PR Kilsby, K. W., Birdwood.
VK 5PS Parsons, W. W., "Haigh Mansions," Esplanade, Henley Beach.
VK 5QP Theel, K. M., Caulfield Avenue, Clarence Park.
VK 5QR Galle, R. V., 56 Olive Street, Prospect.
VK 5RB Bedford, R., Cottage Hospital, Kyancutta.
VK 5RC Cameron, A. R., 330 Kensington Road, Leabrook.
VK 5RD Elliott, R. D., Flat 1, "Burnleigh," Esplanade, Kirkcaldy.
VK 5RE Hobcroft, H., Ral Ral Avenue, Renmark.
VK 5RG Gurner, R. C., 11 Strathspey Avenue, Linden Park Gardens.
VK 5RH Haskard, R. G., 9 Austral Terrace, Malvern.
VK 5RI South Australian Railways Institute, North Terrace Railway Station, Adelaide.
VK 5RJ Hancock, D. M., 86 Taylor Street, Kadina.
VK 5RK Deane, R. K., 121 Wattle Street, Fullarton.
VK 5RL Paech, R. L., 14 Fernleigh Street, Underdale.
VK 5RN Robertson, D. S., "Maroonika," Milan Terrace, Mount Lofty.
VK 5RO Easter, E. R., Ryan Street, Moonta.
VK 5RP Parasiers, R., 138 Anzac Highway, Glandore.
VK 5RT Manuel, R. T., 59 Gordon Road, Prospect.
VK 5RW Wreford, R. N., "Ellangowan," Woodleigh Road, Blackwood.
VK 5RX Luxon, G. W., 8 Elphyn Road, Mitcham.
VK 5RZ Nestrom, O. L., 24 Second Avenue, Joslin.
VK 5SL Fiedler, L. V., Blyth Terrace, Moonta.
VK 5SM S.A. School of Mines and Industries, North Terrace, Adelaide.
VK 5SP Finn, L. W., Simpson Street, Seaton Park.
VK 5SU Gray, F. M., 52 Ormond Grove, Toorak Gardens.
VK 5SW Smith, W. H., 9 Glengyle Street, Woodville.
VK 5TL Laidler, T., Poynton Street, Ceduna.
VK 5TR Turner, R. R., 5 Greenhill Road, Dulwich.
VK 5TT Thebarton Junior Technical School Club, Ashley Street, Thebarton.
VK 5TW Welling, T., 16 Helen Street, Mount Gambier.
VK 5TX Foster, J., 11 York Street, North Kensington.
VK 5UL Allan, A. J., 27 Devonport Terrace, Ovingham Park.
VK 5UK Coakley, T. J., 10 Thomas Street, Unley.
VK 5UX Wallbridge, L. W., 38 Railway Terrace, Peterborough.
VK 5WA Adamson, W. K., 46 Woodfield Avenue, Fullarton.
VK 5WD Wilkinson, D. A., 23 Main Avenue, Frewville.
VK 5WG Govan, W. N., 39 Esmond Road, Port Pirie.
VK 5WI Wireless Institute of Australia (South Australian Division), 176 Rundle Street, Adelaide.
VK 5WJ Wiseman, W. J. C., Port Lincoln.
VK 5WK Prince, A. E., 23 Warwick Street, Walkerville.
VK 5WP Pridham, L. C., 118 North Parade, Torrensville.
VK 5WR Richards, W. M., 32 Charlbury Road, Medindi Gardens.
VK 5WS West Suburban Radio Club, 44 King Street, Mile End.
VK 5WB Wilson, H. B., Mayfair Flats, Thornber Street, Unley Park.
VK 5WW Walker, W. S., 20 King Street, Alberton.
VK 5XA Stacey, H. K., 10 Howard Terrace, Knightsbridge.
VK 5XB Sutherland, A. J., Gower Street, Dunleath, Glenelg.
VK 5XJ Pryzibilla, C. A., 19 Leicester Street, Parkside.
VK 5XK Hewitt, A. J., 233 Henley Beach Road, Torrensville.
VK 5XR Patterson, C., Peake Street, Naracoorte.
VK 5YK Eastern District Radio Club, 56 Statenborough Street, Burnside.
VK 5YL Geisel, Miss B. A., Charles Street, Murray Bridge.
VK 5YM Growden, N., Crystal Brook Road, Gladstone.
VK 5YQ Charles, E. A., 193 Young Street, North Unley.
VK 5ZA Bate, A. J., 115 Gouger Street, Adelaide.
VK 5ZL Weddell, J. A., 26 Kandahar Crescent, Reade Park.
VK 5ZU Phillips, A. M., 68 Kintore Avenue, Prospect.
VK 5ZX Heath, A. H., 7 Clifford Street, Prospect Park.
VK 5ZY Mutton, A. K., 4 Burke Street, Tusmore.

VK6—AMATEUR STATIONS IN WESTERN AUSTRALIA

VK 6AA Grey, A. E., 40 Archdeacon Street, Nedlands.
VK 6AB Buckie, A. C., 14 Kinninmont Avenue, Nedlands.
VK 6AE Curedale, A., 74 Palmerston Street, Perth.
VK 6AF Foxcroft, A., 108 Carnarvon Street, Victoria Park.
VK 6AG Coxon, W. E., 38 Fifth Avenue, Mt. Lawley.
VK 6AH Hill, A. S., 33 Trenton Street, Wiluna.
VK 6AK University of West Australia, Perth.
VK 6AL Lathwell, A. G., 133 Stirling Street, Bunbury.
VK 6AR Russell, A. C., 75 Gairdner Street, Northam, W. A.
VK 6AW Watkins, A. P., 131 Davis Street, Boulder.
VK 6BA Arnold, W. H. R., Richardson Street, Katanning.
VK 6BB Park, J. C. W., 29 Suburban Road, Mill Point, South Perth.
VK 6BC Congdon, B., 75 Gloster Street, Subiaco.
VY 6BE Reid, J., c/o R.A.A.F., Pearce, W.A.
VK 6BL Amalgamated Wireless (A/asia), Ltd., 47 York Street, Sydney, N.S.W. (Station at Applecross).
VK 6BN Stevens, A. E., 27 Strickland Street, South Perth.
VK 6BW Wyle, A. J. H., 23 James Street, Shenton Park.
VK 6BX Baxter, A. H., 231 Lester Avenue, Geraldton.
VK 6CA Bold, C. A., 13 Solomon Street, Beaconsfield.
VK 6CB Brown, C. W., 11 May Avenue, Subiaco.
VK 6CN Canavan, J., 196 Bulwer Street, Perth.
VK 6CP Cooke, C. R., 35 Beechboro Road, Bayswater.
VK 6CR Reeves, C. H., 3 McMillan Street, Victoria Park.
VK 6CX Quin, C., 67 Holland Street, Wembley Park.
VK 6CY Young, C., 73 Marine Terrace, Fremantle.
VK 6DA Saw, F. W., 31 Haynes Street, North Perth.
VK 6DC D'Evelynes, C., Uduc Road, Harvey.
VK 6DF Du Feu, M. A. J., 110 Hoytesbury Road, Subiaco.
VK 6DH Hardisty, D. C., 2 Duncan Street, Victoria Park.
VK 6DN Edwards, F. P., Mitchell Street, Merredin, W.A.
VK 6DR Devitt, R. L., 38 Portland Street, Nedlands.
VK 6DS Spencer, D. D., 23rd Squadron, R.A.A.F., Pearce.
VK 6DX Barber, W. H., 101 Boulder Road, Kalgoorlie.
VK 6EC Cornelius, E. E., Emu Point, Albany.
VK 6EI Grogan, A. W., 29 Clifton Crescent, Mount Lawley.
VK 6FG Goldsmith, F. H., 27 Cooper Street, Nedlands Park.
VK 6FH Hull, F. A., Port Hedland.
VK 6FJ Kemble, F. J., Richardson Street, Katanning.
VK 6FL Lambert, F. C., 9 Gregory Street, Wembley.
VK 6FR Wright, F. H., 31 Willis Street, Mosman Park.
VK 6FT Tredrea, F., 88 Arlington Avenue, South Perth.
VK 6GA Ashley, G. W. R., 33 Mars Street, Carlisle.
VK 6GB Gabbertas, J., 254 Guildford Road, Maylands.
VK 6GM Moss, G. A., 68 Forrest Street, Mt. Lawley.
VK 6GR Rippen, A. H. G., 27 Clarke Street, Fremantle.
VK 6GS Horrocks, G. S. B., Uduc Road, Harvey.
VK 6GW Butterfield, G. W., 12 Swan Street, South Perth.
VK 6HD Davies, H. T., 19 Harley Street, Highgate Hill.
VK 6HF Fogg, H. L., 27 Dumbarton Crescent, Mt. Lawley.
VK 6HS Simpson, H. B., 36 Bruce Street, Leederville.
VK 6HT Tarbotton, H. A., Middleton Road, Albany.
VK 6HW Willis, H. O., 42 Jenkin Street, South Fremantle.
VK 6IG Ginbey, I. H., 24 Carnac Street, Fremantle.
VK 6JA Hunt, J. A., 16 Puntie Crescent, Maylands.
VK 6JB Wahl, A. F., 139 Loftus Street, Leederville.
VK 6JC Chinery, Miss J. C., John Street, Welshpool.
VK 6JE Elsbury, C. R., 24 Addis Street, Kalgoorlie.
VK 6JG Goddard, J. E., 31 Ruby Street, North Perth.
VK 6JH Horn, I. J., Observatory, Perth.
VK 6JJ Jewell, T. J., 52 Lichfield Street, Victoria Park.
VK 6JK Dewan, J. O., 57 Monmouth Street, North Perth.
VK 6JR Richards, V. J., 55 View Way, Nedlands.
VK 6JS Squires, J., Cannington Terrace, Cannington.
VK 6JT Treloar, J., Nannine Avenue, Beaconsfield.
VK 6KB Dook, V. L., 33 Egina Street, Mt. Hawthorn.
VK 6KD McHugh, W. C., 29 Johnson Street, Guildford.
VK 6KM Saar, A., 193 Sixth Avenue, Maylands.
VK 6KN Morrison, G. C., 275 Stirling Street, Perth.
VK 6KO Rann, G. W., Holland Street, Wembley.
VK 6KP Parker, K. H., Darlot Street, Meekatharra.
VK 6KR Bell, V. F., 5 Mercantile Chambers, Egan Street, Kalgoorlie.
VK 6KS Anderson, K. S., 241 Hay Street East, Perth.
VK 6KW Hugo, R. W. S., 8 View Street, Subiaco.
VK 6KX Simmons, H. T., 7 Bedford Street, Nedlands.
VK 6KZ Vernon, C. H., c/o R.A.A. Barracks, Fremantle.
VK 6LA Jamieson, J. E., 7e Addis Street, Kalgoorlie.
VK 6LH Harrison, P. L., 1 Mount Street, Claremont.
VK 6LJ Mead, J., 39 Canterbury Terrace, Victoria Park.
VK 6LK Read, A. W., c/o Northam Broadcasters, Ltd., Northam.
VK 6LL Bishop, C. E., Carew Street, Katanning.
VK 6LR Reading, L. W., c/o R.A.A.F., Pearce.
VK 6LW Peterson, W. M., 108 Hill Street, East Perth.
VK 6LX Richardson, J. B., 6 Merriwa Street, Hollywood.
VK 6LY Collis, R., 19 Murray Street, Bayswater.
VK 6MH Hill, Mrs. M. L., 33 Trenton Street, Wiluna.
VK 6MN Madden, S. J., 123 Harbourne Street, Wembley.
VK 6MO Magnetic Observatory, Watheroo.
VK 6MS Sander, J. H., Albany Road, Cannington.
VK 6MU Urquhart, M. S., 90 Railway Street, Cottesloe.
VK 6MW Weston, W., 5 Portland Street, Nedlands.
VK 6MY Murray, M. I., 36 Strickland Street, South Perth.
VK 6MZ Tonkin, A. M., Clive Street, Katanning.
VK 6ND Doig, N. L., Nivens Crescent, Carnamah, W.A.
VK 6NJ Johnston, N. B., 101 Rosalie Street, Subiaco.
VK 6NL Harris, V. H., 25 Harvey Road, Shenton Park West.
VK 6NO Turnbull, N. E., 21 Harvey Road, Shenton Park.
VK 6OR Hoar, J. C., 65 Dalgety Street, East Fremantle.
VK 6PD Australian Aerial Medical Services, Public Health Department, Perth. (Station at Port Hedland.)
VK 6PK Kernick, P. E., 12 Fremantle Road, South Perth.
VK 6PP Paterson, P. P., 6 Thompson Street, Wiluna.
VK 6RA Agnew, R. G., 37 Myers Street, Nedlands.
VK 6RG Harvey, E. R., Scarborough Road, Scarborough, W.A.
VK 6RH Hull, R. A., 67 The Boulevarde, Mt. Hawthorn.
VK 6RJ Tapper, J. R., 24 Davies Road, Claremont.
VK 6RS Trew, R. S., 29 London Street, Mt. Hawthorne.
VK 6RT Trunfull, R. L., Government School, Roebourne.
VK 6RW Muir, R. W., Johnston Street, Wagin.
VK 6SA Austin, S. C., 82 Forrest Street, South Perth.
VK 6SG Hogg, S., Sir James Avenue, Harvey.
VK 6SP Sperring, W. J., 43 Temple Street, Victoria Park.
VK 6SR Subiaco Radio Society, 75 Gloster Street, Subiaco.
VK 6ST Stewart, W. A., 89 Blencowe Street, West Leederville.
VK 6SW Worth, S. E., 47 Mountjoy Road, Nedlands.
VK 6TP Pearce, E. R., 3 Woodville Street, North Perth.
VK 6VK Vincent, J., 124 Varden Street, Kalgoorlie.
VK 6WG Green, W. W., 50 Forrest Street, Wiluna.
VK 6WH Doddy, E. A., 9 Queen Street, Claremont.
VK 6WI Wireless Institute of Australia (W.A. Division), Melba Chambers, Cnr. Hay and Milligan Streets, Perth.
VK 6WK Ruse, T. W., Scarborough Beach Road, Osborne Park.
VK 6WL McGeoch, W. L. S., Richardson Street, Brookton.
VK 6WM Morris, W. B., 37 Hill View Road, Mt. Lawley.
VK 6WO Pelling, J. C. F. L., Trimmer Road, Moojebing.
VK 6WP Phipps, W. R., 56 Coode Street, South Perth.
VK 6WR Rodda, W. D., 19 Bay Road, Claremont.
VK 6WS Schofield, W., 40 Irvine Street, Peppermint Grove.
VK 6WW Watson, S. W., 27 Clive Street, West Perth.
VK 6WZ Atkinson, R. H., 27 Rathay Street, Victoria Park.
VK 6XI Robson, C., 8 Robin Street, Mount Lawley.
VK 6XL Miles, H. R., 34 Learoyd Street, Mount Lawley.
VK 6YB Lewis, W. J., c/o R.A.A.F., Pearce.
VK 6YL Longley, Miss R. V., 7 Cathbert Street, Shenton Park.
VK 6YN Harkin, D. J., R.A.A.F., Pearce.
VK 6YZ Samphier, R. L., 53 Gloucester Street, Victoria Park.
VK 6ZO Potter, E. T., 17 Allen Street, East Fremantle.
VK 6ZZ Stephens, H., 339 Suburban Road, South Perth.

PAPUA AND NEW GUINEA

VK 4HN Nicholson, H. G., Paga Hill, Port Moresby, Papua.
VK 4KC Bock, W. A., Pandora Crescent, Port Moresby, Papua.
VK 9AW Twycross, J. K., Rabaul, New Guinea.
VK 9BB Brown, W. F., Guinea Airways, Wau, New Guinea.
VK 9DK Davis, C. E., Kavieng, New Guinea.
VK 9DM Mitchell, D. McR., Mining Lease D.S.L. 280, Watut River, Terr., New Guinea.
VK 9GM Hill, G. M., Rabaul, New Guinea.
VK 9LW White, N. L., Rabaul, New Guinea.
VK 9MC MacGregor, W. A., Wewak, New Guinea.
VK 9VG Gilchrist, V. H., Slate Creek, via Wau, New Guinea.
VK 9WF Forman, W. A. D., on patrol vessel Eros, stationed at Rabaul, New Guinea.
VK 9WL Williams, L. L., Kela, Salamaua, New Guinea.

AMATEURS IN TASMANIA

VK 7AB Fisher, D. H., 6 York Street, Launceston.
VK 7AG Milne, J. C., "Askrigg," Gretna.
VK 7AH Medhurst, F. W., "Cranleigh," Beach Rd., Lower Sandy Bay.
VK 7AL Allen, T. A., 36 Seymour Street, New Town.
VK 7AM Arnold, L. G., 42 Herbert Street, Launceston.
VK 7AR Johnson, C. F., 3 Ryder Street, West Hobart.
VK 7BC Forsyth, R. A., 7 Galvin Street, Launceston.
VK 7BJ Brown, J., 22 Cromwell Street, Battery Point.
VK 7BM Sheldrick, E. C., 15 Richards Avenue, Launceston.
VK 7BQ Crooks, J. A. L., 64 Frederick Street, Launceston.
VK 7CD Smyth, C. W., 9 George Street, Devonport.
VK 7CJ Finch, A. E., 35 Button Street, Mowbray Heights.
VK 7CK Clark, L. F., "Woodstock," Natone.
VK 7CL Conway, M. L. D., 33 Welman Street, Launceston.
VK 7CM Miller, C. H., "Carnac," Douglas Street, Bellerive.
VK 7CS Scott, A. C. J., 22 Lord Street, Sandy Bay.
VK 7CT Connor, T., Rokeby.
VK 7CW Walch, C. A., 10 Osborne Avenue, Sandy Bay.
VK 7DH Hildyard, A. D., 325A Davey Street, Hobart.
VK 7DJ Dodds, J. S., Mt. Nelson Road, Hobart.
VK 7DW Watson, D. M., 30 Main Road, New Town.
VK 7EK Kerby, E. T. J., Ringarooma.
VK 7GD Dineen, G. J., 2 Brougham Street, Launceston.
VK 7GH Hall, G. L., 54 Clare Street, New Town.
VK 7HB Banks, H. E. W., 11 Union Street, Hobart.
VK 7HQ 12th Battalion A.M.F., 6th Military Districts, Barracks, Launceston.
VK 7HY Yeates, H. M., 39 George Street, Launceston.
VK 7JA Waters, J. A., 13 Russell Crescent, Sandy Bay.
VK 7JB Batchler, J. C., 21 Quarry Street, North Hobart.
VK 7JH Hooker, W. T., 47 Bay Road, New Town.
VK 7JW Wallis, J. C., Longford.
VK 7KQ Miles, G. T., "Wight Cottage," York Street, Bellerive.
VK 7KR Robinson, C. J., 8 Howick Street, Launceston.
VK 7KV Valentine, L. K., Cnr. Derwent and Park Streets, Bellerive.
VK 7LC Chappell, L. A., Winnaleah.
VK 7LG Chick, L. G., 20 Campbell Street, Launceston.
VK 7LJ Jensen, L. R., 319 Park Street, New Town.
VK 7LP Hyland, L. P., 83C Argyle Street, Hobart.
VK 7LR Manning, A. J. R., 88 Wenvoe Street, Devonport.
VK 7LZ Wright, C. P., 21 York Street, Launceston.
VK 7MM Masters, W. E., "Riverside," Victoria Esplanade, Bellerive.
VK 7NC Campbell, N. D., 25 Joynton Avenue, Hobart.
VK 7NG Jonasson, R. P., Waddamana Power Station.
VK 7PA Allen, A. E., 8 Hopkins Street West, Moonah.
VK 7PC Hobart Technical College, 26 Bathurst Street, Hobart.
VK 7PR Launceston Technical College, Wellington Street, Launceston.
VK 7QZ Brown, B. K., 50B Frankland Street, Launceston.
VK 7RC Cannon, R. F. H., Goldie Street, Wynyard.
VK 7RK Kilby, R. H., 52 Cimitiere Street, Launceston, Tas.
VK 7RY Nicholls, F. E., 15 Alexander Street, Burnie.
VK 7RZ Kemp, J. E., 16 Oldaker Street, Devonport.
VK 7SR Army Signals Radio Club, Anglesea Barracks, Hobart.
VK 7UT University of Tasmania, Hobart.
VK 7WI Wireless Institute of Australia (Tasmanian Division), 95 Arthur Street, North Hobart.
VK 7WJ Lithgow, J. C., 174 George Street, Launceston.
VK 7WR Nicholas, W. R., 18 Elphinstone Road, North Hobart.
VK 7WT Milledge, R. A., 86 Montpellier Road, Hobart.
VK 7WX Nicholls, W. J., 34 George Street, Launceston.
VK 7XA Oldham, C. E., 49 Bay Road, New Town.
VK 7YL Crowder, Miss J. I., 86 Main Road, Lower Sandy Bay.

INTERNATIONAL PREFIXES

AC4 .. TIBET
AR .. SYRIA
CE .. CHILE
CM .. CUBA
CN .. MOROCCO
CO .. CUBA (fones)
CP .. BOLIVIA
CR4 .. CAPE VERDE
CR5 .. PORTUGUESE GUINEA
CR6 .. ANGOLA
CR7 .. MOZAMBIQUE
CR8 .. PORTUGUESE INDIA
CR9 .. MACAO
CR10 .. TIMOR
CT1 .. PORTUGAL
CT2 .. AZORES
CT3 .. MADEIRA
CX .. URUGUAY
D4 .. GERMANY
EA .. SPAIN
EA8 .. CANARY ISLANDS
EI .. IRISH FREE STATE
EL .. LIBERIA
EP, EQ .. IRAN (ex-Persia)
ES .. ESTONIA
F3 .. FRANCE
F8 .. FRANCE
FA .. ALGERIA
FB8 .. MADAGASCAR
FD8 .. TOGOLAND (French)
FE8 .. CAMEROONS (French)
FF8 .. FRENCH WEST AFRICA
FG8 .. GAUDELOUPE
FI8 .. FRENCH INDO-CHINA
FK8 .. NEW CALEDONIA
FL8 .. SOMALI COAST
FM8 .. MARTINIQUE
FN8 .. FRENCH INDIA
FO8 .. FRENCH OCEANIA, TAHITI
FP8 .. ST. PIERRE & MIQUELON
FQ8 .. FR. EQUATORIAL AFRICA
FR8 .. REUNION
FT4 .. TUNIS
FU8 .. NEW HEBRIDES
FY8 .. FRENCH GUIANA
G .. GREAT BRITAIN
GI (see G) .. NORTHERN IRELAND
HA .. HUNGARY
HB .. SWITZERLAND
HC .. ECUADOR
HH .. HAITI
HI .. DOMINICAN REPUBLIC
HJ, PK .. COLUMBIAN REPUBLIC
HP .. PANAMA
HR .. HONDURAS
HS .. SIAM
HZ .. HEDJAZ
I .. ITALY
J .. JAPAN
K4 .. PORTO RICO, VIRGIN ISLANDS
K5 .. CANAL ZONE
K6, GUAM, HAWAII, MIDWAY ISLAND, SAMOA (U.S.), WAKE ISLAND.
K7 .. ALASKA
KA .. PHILIPPINE ISLANDS
LA .. NORWAY
LU .. ARGENTINA
LX .. LUXEMBOURG
LY .. LITHUANIA
LZ .. BULGARIA
MX .. MANCHUKUO
N, .. U.S. NAVAL COMMUNICATION RESERVE STATIONS.
NY .. CANAL ZONE
OA .. PERU
OE .. AUSTRIA
OH .. FINLAND
OK .. CZECHOSLOVAKIA
OM .. GUAM
ON .. BELGIUM, BEL. CONGO
OX .. GREENLAND
OY .. FAROE ISLANDS
OZ .. DENMARK
PA .. NETHERLANDS
PI .. NETHERLANDS (Schools)
PJ .. CURACOA
PK .. NETH. INDIES
PX .. ANDORRA
PY .. BRAZIL
PZ .. SURINAM
SM .. SWEDEN
ST .. SUDAN
SU .. EGYPT
SV .. GREECE
TA .. TURKEY
TF .. ICELAND
TG .. GAUTEMALA
TI .. COSTA RICA
U, UE, UK, UX .. U.S.S.R.
VE .. CANADA
VK .. AUSTRALIA
VO .. NEWFOUNDLAND
VY1 .. BRITISH HONDURAS
VP2 .. DOMINICA, GRENADA, ANTIQUA, ST. KITTS-NEVIS.
VP3 .. BRITISH GUIANA
VP4 .. TRINIDAD & TOBAGO
VP5 .. CAYMAN ISLANDS, JAMAICA, TURKS & CAICOS ISLANDS.
VP6 .. BARBADOS
VP7 .. BAHAMAS
VP8 .. FALKLAND ISLANDS, SOUTH GEORGIA.
VP9 .. BERMUDA
VQ1 (*VR3) .. FANNING ISLAND
VQ2 .. NORTHERN RHODESIA
VQ3 .. TANGANYIKA
VQ4 .. KENYA
VQ5 .. UGANDA
VQ6 .. BRITISH SOMALILAND
VQ8 .. MAURITIUS
VQ9 .. SEYCHELLES
VR1 .. FIJI ISLANDS
VR3 .. FANNING ISLAND
VR4 .. BR. SOLOMON ISLANDS
VR5 .. TONGA ISLANDS
VR6 .. PITCAIRN ISLAND
VS1, VS2, VS3 .. MALAYA
VS4 .. BORNEO
VS5 .. SARAWAK
VS6 .. HONGKONG
VS7 .. CEYLON
VS8 .. BAHREIN ISLAND
VS9 .. MALDIVE ISLANDS
VU .. INDIA
W .. UNITED STATES
XE .. MEXICO
XT, XU .. CHINA
YA .. AFGHANISTAN
YI .. IRAQ
YJ (**FU8) .. NEW HEBRIDES
YL .. LATVIA
YM .. DANZIG
YN .. NICARAGUA
YR .. ROUMANIA
YS .. SALVADOR
YT, YU .. JUGOSLAVIA
YV .. VENEZUELA
ZA .. ALBANIA
ZB1 .. MALTA
ZB2 .. GIBRALTAR
ZC1 .. TRANSJORDANIA
ZC2 .. COCOS ISLANDS
ZC3 .. CHRISTMAS ISLAND
ZC4 .. CYPRUS
ZC5 .. PALESTINE
ZD1 .. SIERRA LEONE
ZD2 .. NIGERIA, CAMEROONS (British)
ZD3 .. GAMBIA
ZD4 .. GOLD COAST, TOGOLAND (British)
ZD6 .. NYASALAND
ZD7 .. SAINT HELENA
ZD8 .. ASCENSION
ZE1 .. SOUTHERN RHODESIA
ZK1 .. COOK ISLANDS
ZK2 .. NIUE
ZL .. NEW ZEALAND
ZM .. WESTERN SAMOA
ZP .. PARAGUAY
ZS, ZT, ZU .. SOUTH AFRICA
*ZU9 .. TRISTAN DA CUNHA

* Suggested by the British Empire Radio Union.
** Official, by French Govt.

NEW ZEALAND AMATEUR STATIONS

The 80-metre 'phone transmissions of the New Zealand stations are very well received in Australia, but N.Z. amateurs are not permitted to use 'phone on the 40-metre band. cards, etc., should be sent to the N.Z.A.R.T., Q.S.L., Bureau, Box 374, Dunedin, N.Z.

ZL1—STATIONS LOCATED IN AUCKLAND DISTRICT

ZL 1AA Edwards, C. N., 26 Meola Rd., Point Chevalier, Auckland.
ZL 1AB Waite, S. G., 54 Marlborough Street, Dominion Road, Auckland, S.W.1.
ZL 1AC Spackman, L. S., 29 Faulder Avenue, Westmere, Auckland, N.2.
ZL 1AD Kenny, J. P., 10 Prospect Terrace, Ponsonby, Auckland, S.2.
ZL 1AE Duffin, R. W., 40 Meadowbank Road, Remuera, Auckland, S.E.2.
ZL 1AF Penny, V. G., 207 Panmure Road, Auckland, S.E.6.
ZL 1AG Pope, C. R. W. L., 58 Ulster Street, Hamilton.
ZL 1AH Hartle and Gray, 7 Alten Road, Auckland.
ZL 1AI McLean, C., "Bird Grove," Waipu.
ZL 1AJ Brown, A. J. C., 12 Northall Rd., Auckland, S.W.4.
ZL 1AK Claxton, W. H., Hill Street, Thames.
ZL 1AL Bartrum, R. G., 17 Wellington Street, Hamilton.
ZL 1AM Isherwood, J. C., 17 Clyde Street, Whangarei.
ZL 1AN Arthur, H. B. M., 242 Dominion Road, Auckland.
ZL 1AO White, R. G., 1388 Dominion Road, Mount Roskill, S.3.
ZL 1AP Winch, N. J., Brady Street, Te Awamutu.
ZL 1AQ Somerville, A. A., 66 Wairiki Road, Mount Eden, Auckland, S.2.
ZL 1AR Mellars, L. M., 24 Rangitoto Avenue, Remuera, S.E.2.
ZL 1AS McCrae, I. H., Winstone's Buildings, Queen Street, Auckland, C.1.
ZL 1AT Swain, G. S., Mangapiko Street, Te Awamutu.
ZL 1AV Reardon, F. C., 20 Cooper Street, Auckland, W.2.
ZL 1AW Lyons, R. R., 4 Coronation Road, Epsom, Auckland.
ZL 1AX Orbell, R. J., 5 Mount Royal Ave., Mount Albert, S.W.2.
ZL 1AZ Sherson, J. R., Radnor Street, Hamilton.
ZL 1BA Taylor, R. J., 57 Dominion Road, Auckland.
ZL 1BC Mickleborough, W. E. F., 58 Moa Road, Point Chevalier, W.3.
ZL 1BD Wadham, W. H., 22 Sefton Avenue, Grey Lynn, Auckland, W.2.
ZL 1BE McKay, E. K., 17 Windsor Street, Parnell, Auckland, C.4.
ZL 1BG Thompson, B. G., 16 Litchfield Road, Parnell, C.4.
ZL 1BH Hudson, A. H., 49 Almorah Rd., Epsom, Auckland, S.E.1.
ZL 1BI McArthur, G., John Street, Pukekohe.
ZL 1BJ Jury, A. V., Onewhero.
ZL 1BK Long, R. J. E., "Tatsfield," Mount Wellington Highway, Otahuhu.
ZL 1BL Lynch, J. S., 31 Colombo Street, Frankton Junction.
ZL 1BO Paterson, T. M., Ngaruawahia.
ZL 1BP Surman, J. D., 38 King's View Road, Mount Eden, Auckland, S.1.
ZL 1BQ Coutts, M. W., Great South Road, Otahuhu.
ZL 1BR Sweetman, T. C., 16 Arcadia Road, Epsom, Auckland.
ZL 1BU Sword, A., Ramsay Street, Frankton Junction.
ZL 1BV Evans, A., Railway Street, Papakura.
ZL 1BW Jackson, R. M., Ngaiwi Street, Orakei, Auckland.
ZL 1BX Grut, H. J., c/o N. Hickey, Mutu Street, Te Awamutu.
ZL 1BY Yeats, C., Whitford.
ZL 1BZ Gault, J. H., 105 Paritai Drive, Orakei, E.1.
ZL 1CA Jakeman, H., Main Street, Huntly.
ZL 1CB Nobes, J., Teasdale Street, Te Awamutu.
ZL 1CD Baxendale, J., 532 Manukau Road, Epsom.
ZL 1CE Sargent, T. A., 34 Bellwood Avenue, Mount Eden.
ZL 1CF MacLean, H. M., Leith Street, Te Awamutu.
ZL 1CH Boyd, H. A., 13 Budock Road, Auckland.
ZL 1CI Wight, C. A., Puke Road, Paeroa.
ZL 1CJ Danrell, R. A., Hill Street, Te Kuiti.
ZL 1CK Salt, G. McB., 32 Pukeora Avenue, Remuera.
ZL 1CL Shearer, L. D., Hotel Northland, Queen Street, Auckland.
ZL 1CN Ireland, A. E., Mutu Street, Morrinsville.
ZL 1CO Lee, W. L. W., Awhitu.
ZL 1CP France, W. J., Katikati.
ZL 1CR Hunter, W. E., Archibald Road, Glen Eden.
ZL 1CS Williams, J. H., c/o E. Jeans, Whitehall, Cambridge.
ZL 1CT Pickmere, A. H., Kemp Road, Kerikeri.
ZL 1CU Gray, H., Main Street, Ohura.
ZL 1CV Wood, L. H., Kenrick Street, Te Aroha.
ZL 1CW Dick, M. L. C., Awaroa Road, Helensville.
ZL 1CY Johnson, W. A., Mellsop Avenue, Waiuku.
ZL 1CZ Pooley, J., Post Office, Raglan.
ZL 1DA Quigg, L. G., 4 Enfield Street, Mount Eden, Auckland.
ZL 1DB Dugmore, F. R., 2nd Avenue, Tauranga.
ZL 1DC Townsend, R. G., 79 Kiwi Rd., Point Chevalier, Auckland.
ZL 1DD Foster, E. B., 20 Rowan Road, Mount Roskill, Auckland.
ZL 1DE Adshead, G. O., 58 Airedale Street, Auckland, C.1.
ZL 1DF Gordon, P. P., 20 Haverstock Road, Mount Albert, S.W.1.
ZL 1DG Grant, R. J., 226 Hobson Street, Auckland.
ZL 1DH McDonald, T. C., Arapuni.
ZL 1DI Lindegreen, G. S., 3 Calgary Street, Auckland, S.2.
ZL 1DJ Fielder, A., 24 Fairlands Avenue, Avondale.
ZL 1DK Glucina, G., c/o B. Walter, Onewharo.
ZL 1DL Larking, M. J. W., George Street, Waiuku.
ZL 1DM Cottam, S. L., 102 Grange Road, Auckland.
ZL 1DN Appleyard, C. B., 11 Folke Street, New Lynn, Auckland.
ZL 1DP Volkner, N. J., 47 Wembley Road, Auckland.
ZL 1DQ Warden, C., 25 Maxwell Avenue, West Lynn.
ZL 1DS Day, H. F. W., 1449 Great North Road, Avondale.
ZL 1DU Parkinson, J. H., Tirohanga, Opotiki.
ZL 1DV Gibbs, S. B., Halsey Road, Manurewa.
ZL 1DW McNamara, F. R. S., 20 Cambrai Avenue, Auckland.
ZL 1DY Crickett, J. L., Park Street, Morrinsville.
ZL 1DZ Elliott, H. N., 36 Kingsland Avenue, Kingsland, Auckland.
ZL 1FB Hulme, F., 14 Fourth Avenue, Auckland, W.3.
ZL 1FC Pinder, A., Lighthouse, Cuvier Island.
ZL 1FD Davidson, J. F., Morgantown, Te Aroha.
ZL 1FE Wood, A. F., 32 Peach Grove Rd., Claudelands, Hamilton.
ZL 1FF Gifford, B., Sloane Street, Te Awamutu.
ZL 1FG Pawley, N. C., Willow Street, Tauranga.
ZL 1FH Cross, C. T., 10th Avenue, Tauranga.
ZL 1FI Goodwill, C. S., Jellicoe Street, Te Puke.
ZL 1FJ Sexton, W. J., 14 Ethel Street, Sandringham.
ZL 1FK Hamlin, S. M. Y., Mount Wellington Highway, Ellerslie.
ZL 1FL Wark, A. J., 123 Hinemoa Street, Rotorua.
ZL 1FM Warn, J. E. B., Katikati.
ZL 1FN Duthie, D. A., 27 Liverpool Street, Auckland, S.E.3.
ZL 1FO Cooper, E. R., 60 Meadowbank Road, Remuera.
ZL 1FP Anchor, G. S., 8 Queen's Avenue, Frankton Junction.
ZL 1FQ Smith, A. F., 5 Westminster Road, Mount Eden, S.2.
ZL 1FR Harris, L. W., 5 Fitzroy Street, Papatoetoe.
ZL 1FS Dickson, L. R., 3 Gorrie Avenue, Epsom, Auckland.
ZL 1FT Walding, N. N., 31 Edwin Street, Newton, C.2.
ZL 1FU White, G. D., Bridge Street, Opotiki.
ZL 1FV White, J. M., 13 Atherton Road, Epsom, S.E.3.
ZL 1FW Hubbard, W. F., Maeroa Street, Manaku.
ZL 1FY Curtis, N. C., 19 Bellwood Avenue, Auckland.
ZL 1FZ Coates, K. J., 9 Kenyon Avenue, Mount Eden, Auckland.
ZL 1GA Dervan, M. E., Kawaha Point, Rotorua.
ZL 1GC Illingworth, W., Te Atatu.
ZL 1GD Branigan, C. K., Lighthouse, Cape Maria Van Diemen.
ZL 1GE Benson, G. S., 13a Marsden Ave., Mount Eden, Auckland.
ZL 1GF Fish, J. F., 29 Hepburn Street, Auckland, C.2.
ZL 1GG Eaton, R. E., 140 Grafton Road, Auckland, C.3.
ZL 1GH Keefe, W. J. F., Post Office, Bucklands Beach.
ZL 1GI Smerdon, A. D., 7 Claude Street, Epsom, Auckland.
ZL 1GL Talbot, J. F., Perelka Street, Rotorua.
ZL 1GN Marsh, W., Commerce Street, Kaitaia.
ZL 1GP Merriman, E., Railways, Mercer.
ZL 1GR Robins, G. H., 4 Ascot Avenue, Devonport, Auckland.
ZL 1GS Scull, G. H., 8 Ethel Street, Sandringham, Auckland.
ZL 1GT Smith, H. C., 6 Amohia Street, Rotorua.
ZL 1GU Pratt, E., 26 Station Road, Claudelands, Hamilton.
ZL 1GV Spackman, B. C. W., Seabrook Avenue, New Lynn.
ZL 1GW Ross, P. R., Public Works Department, Arapuni.
ZL 1GX Hawthorn, F. L., 10 King Edward Street, Mount Eden.
ZL 1GY Hart, G. C., 33 Allan Road, Grey Lynn, Auckland, W.2.
ZL 1GZ Amos, A. M., 7 Halesown Avenue, Auckland.
ZL 1HA Miller, R. C., Arawa Street, New Lynn, Auckland.
ZL 1HB Dahl, T. N., View Road, Kauriland, Titirangi.
ZL 1HC Boulton, A. C., 257 Campbell Road, Ellerslie, Auckland.
ZL 1HD Harrison, H. B., Rayners Road, Huntly.
ZL 1HE Matthews, H. H., Otorohanga.
ZL 1HF Fitton, E. L., Bombay.
ZL 1HG Clair, A. R. St., 13 North Avenue, Devonport.
ZL 1HH Smith, A. E. The Esplanade, Blockhouse Bay, Auckland, S.W.3.
ZL 1HJ Snow, A. N. H., Wallace Street, Whangarei.
ZL 1HK Metcalf, J. H., 13 Haig Avenue, Mount Roskill.
ZL 1HL Garland, H. F., 10 Ethel Street, Sandringham, Auckland.
ZL 1HN Philip, R F., 21 Rata Street, New Lynn, Auckland.
ZL 1HO Jarman, A. W., Willoughby Street, Hamilton.
ZL 1HQ Batty, H. W., Onewa Road, Birkenhead, Auckland.
ZL 1HR Goodwin, L. W., 433 Coronation Road, Paeroa.
ZL 1HS Crowhurst, L. A., 10 Williamson Street, Epsom, Auckland.
ZL 1HT Bettany, A. W., Beale Street, Hamilton East.
ZL 1HV Auckram, T. W. B., 57 Princes Street, Otahuhu.
ZL 1HW Evans, G., Railway Hut AIII. on line, South Auckland.
ZL 1HX Marett, R. E., 8 Rhodes Avenue, Mount Albert, Auckland.
ZL 1HY Brown, D., Seddon Street, Waihi.
ZL 1HZ Dodds, J., jun., Raynor's Road, Huntly.
ZL 1IA Petty, G. A., 77 Portland Road, Auckland.
ZL 1IB Blair, R. L., 12 Weona Place, Westmere, Auckland, W.2.
ZL 1IC Fitzwilliam, W. B., 19 Springleigh Avenue, Auckland.
ZL 1ID Gooch, R. A., 32 Esplanade Road, Mount Eden, Auckland.
ZL 1IE Eyre, C. K., 11 Wicklow Road, Auckland.
ZL 1IG Grigg, F. L. H., 17 Gundry Street, Auckland.
ZL 1II Skinner, H. R., 75 Arthur Street, Onehunga, S.E.5.
ZL 1IL Bennett, A. E., St. Patrick's Presbytery, Wyndham Street, Auckland.
ZL 1IM Sutcliffe, D. B. G., 20 Albert Road, Point Chevalier.
ZL 1IN Pearce, R. M., 27 Epsom Avenue, Auckland.
ZL 1IP Merriman, E., c/o N.Z. Railways, Frankton Junction.
ZL 1IQ Stewart, T. K., Tara, Mangawai.
ZL 1IR Turtley, S. J., Te Kawana Road, Te Aroha.
ZL 1IS Olsen, C. M., Cranley Street, Dargaville
ZL 1IU Cameron, E., McGregor's Road, Morrinsville.
ZL 1IW Burley, T., 8 Goldie Street, Auckland.
ZL 1IX Day, B. C., Aumoe Street, Auckland.
ZL 1IY Barlow, J. L., 10 Edwin Street, Auckland.
ZL 1IZ J. P. McDonald, Arapuni.
ZL 1JA Sager, J. H., Goodfellow Street, Te Awamutu.
ZL 1JB Piesse, G. F., c/o Mrs. Frith, 29 Benson Road, Remuera, Auckland.
ZL 1JC Hayward, F. H., c/o Radio House, Waihi.
ZL 1JD Colmore-Williams, D. C., Victoria Road, Dargaville.
ZL 1JE Gaukrodger, H. W., Victoria Street, Dargaville.
ZL 1JF Hardcastle, G. L., 13 King Street, Frankton Junction.
ZL 1JG Wishart, D. L., 26 Brixton Road, Mount Eden, S.2.
ZL 1JH Hopkins, W. H., Riverview Private Hotel, Mercer.
ZL 1JI Smith, J. R., 34 Kingsland Avenue, Auckland.
ZL 1JK Schofield, J. R., 202 Heaphy Terrace, Hamilton.
ZL 1JL Lochie, A. A., cnr. Bowen and Clarence Streets, Thames.
ZL 1JM Acton, F., 23 Seddon Road, Frankton Junction.
ZL 1JN Walker, W., 25 King Street, Hamilton.
ZL 1JO Henry, H. P.W. Sub-station, Keripehi.
ZL 1JP Leprou, E. E., Mahoe Street, Melville, Hamilton.
ZL 1JQ Allen, A. E., 1720 Great North Road, Avondale, Auckland.
ZL 1JS Jones, M. W. S., 35 Speight St., Kohimarama, Auckland.
ZL 1JT Taylor, J. F., 11 Nottingham Street, Grey Lynn.

ZL 1JU Morrin, E. C., King Street, Pukekohe.
ZL 1JV McNeill, F. A., Post Office, Paparoa.
ZL 1JX Hayward, C. A., 1 Norfolk Street, Whangarei.
ZL 1JY Doyle, E. A. L., 25 Mangere Road, Otahuhu.
ZL 1JZ Robertson, C. S., 33 Wallace Street, Ponsonby, Auckland.
ZL 1KA Kay, R. M., 10 Tui Street, Mount Eden, C.3.
ZL 1KB Thomson, D. D., 36 Byron Avenue, Takapuna, N.2.
ZL 1KC McCallum, K. T., 25 Lloyd Avenue East, Mount Albert, Auckland, S.W.2.
ZL 1KD Dodd, C. E., Mont Clare, Massey Road, St. Heliers.
ZL 1KE Lockie, L. W., 31 Bond Street, Grey Lynn, Auckland.
ZL 1KG Needham, R. C., Patumahoe.
ZL 1KH Shepherd, N. C., Percy Street, Whangarei.
ZL 1KI Harper, J. F. H., Air Force Base, Hobsonville, Auckland.
ZL 1KJ Harvey, R. S., 9 Pah Avenue, Epsom, S.E.3.
ZL 1KK Carter, N. A. W., 11th Avenue, Tauranga.
ZL 1KL Luxford, H. M., 37a Te Aroha St., Claudelands, Hamilton.
ZL 1KM Gardner, D. R., Ranolf Street, Rotorua.
ZL 1KN McLeod, R. M., Motumaoho, Morrinsville.
ZL 1KO Barlow, R., Banks Road, Matamata.
ZL 1KP Sutherland, G., Okaula, Matamata.
ZL 1KR Crocker, G., 23 Edinburgh Street, Newton, Auckland, C.1.
ZL 1KS Murray, S. J., 22 Sheridan Street, Auckland, C.1.
ZL 1KT Sadler, G. A., 15 Ardmore Road, Ponsonby.
ZL 1KU Witham, T. N. Bollard Avenue, New Lynn, S.W.4.
ZL 1KV Palmer, J. E., 28 Stewart's Road, Mount Albert, S.W.2.
ZL 1KX Mobberley, E. N., 11 Challenor Terrace, Mount Albert.
ZL 1KZ Bell, E. W. D., Rata Street, New Lynn, S.W.4.
ZL 1LC Diedrichs, G. H., 12 Ascot Avenue, Remuera, S.E.2.
ZL 1LF Neilson, A. K., Railway Settlement, Helensville.
ZL 1LG Morgan, G. S., Glendon Avenue, Avondale.
ZL 1LI Bice, G. A., 696 Manukau Road, Epsom, Auckland.
ZL 1LK Kennedy, F. W., 34 Barnley Terrace, Auckland.
ZL 1LL Cook, S., 24 Millais Street, Auckland.
ZL 1LM Wellington, K., 1 Pencarrow Ave., Mount Eden, Auckland.
ZL 1LN Egan, R. A., 208 Ponsonby Road, Auckland.
ZL 1LO Edelsten, W. R., 14 High Street, Otahuhu, S.E.7.
ZL 1LP Davis, D. H., 8 Waitoa Street, Parnell, Auckland.
ZL 1LQ Ball, W. G., Mount Wellington Highway, Otahuhu.
ZL 1LT Thain, L. G., 29 Castle Street, Auckland.
ZL 1LU Williams, E., 43 Marau Crescent, Mission Bay, Auckland.
ZL 1LV McCurdy, G. E., School, Matapihi, Tauranga.
ZL 1LW Thomson, Miss G., Waharoa.
ZL 1LY Nutsford, E. J., 1 Rothesay Street, Remuera, Auckland.
ZL 1LZ Mingins, C. R., 32 Pencarrow Avenue, Auckland.
ZL 1MA North Shore Radio Club (D. D. Thomson), 103 Lake Road, Takapuna.
ZL 1MB Herbert, C. L., 49 Violet Crescent, Parnell, Auckland.
ZL 1MC Inder, J. H., 7 Waltham Avenue, Remuera, Auckland.
ZL 1ME Cowan, M., 2 Edinburgh Street, Newton, Auckland.
ZL 1MG Parkin, E., 4 Haronui Street, Whangarei.
ZL 1MH Shore, A. R. H., Dudley Avenue, New Lynn, Auckland.
ZL 1MI Dunsford, A. L., Victoria Street, Dargaville.
ZL 1MJ Ryan, R., 13 King Street, Grey Lynn, Auckland, N.2.
ZL 1MK Dawson, A. H., R.N.Z.A. Barracks, Devonport, Auckland.
ZL 1ML Gall, J. D., 35 Eldon Road, Mount Eden, Auckland.
ZL 1MM Taylor, J. T., 28 Westview Road, Grey Lynn, Auckland.
ZL 1MN Bettany, A. C., Nelson Street, Pukekohe.
ZL 1MO Goodwin, L. J., Western Street, Matamata.
ZL 1MP White, J. T., Loose Moors Lane, Morrow Street, Auckland.
ZL 1MQ Betson, C. W., 41 Cumberland Avenue, Auckland.
ZL 1MR Barnes, R. E. M., 6 Harbour Street, Auckland.
ZL 1MS Bitossi, F. D., Royal N.Z. Air Force Base, Auckland.
ZL 1MT Bolwell, F. W., Lighthouse, Cape Maria van Diemen.
ZL 1MU Langridge, J. H., 26 Pererika Street, Rotorua.
ZL 1MV Llewellyn, J. D., Rawene.
ZL 1MW Thames Amateur Radio Club (Lockie, A. A.), Mackey Street, Thames.
ZL 1MX Fisher, B. D. B., 22 Stanmore Street, Auckland.
ZL 1MY Carss, J. R., 21 Woodside Road, Mount Eden, Auckland.
ZL 1MZ Holmes, F. E., 23 Cameron Street, Devonport, Auckland.
ZL 1NB McDonnell, W. P., 6 Pratt Street, Ponsonby, Auckland, S.E.7.
ZL 1NC Moore, W. E., 82 Norwood Road, Bayswater, Auckland, N.3.
ZL 1ND Miller, E. D. N., Lighthouse, Cape Maria van Diemen.
ZL 1NE Bustard, A. J., 17a Hamilton Road, Herne Bay, Auckland.
ZL 1NF Tunnicliffe, W. M., Hill Street, Te Kuiti.
ZL 1NG Phillips, T. H., 38 Home Street, Grey Lynn, Auckland.
ZL 1NH Hart, F. M., Kohukohu.
ZL 1NI Sharp, H. L., The Vynes, Symonds Street, Auckland.
ZL 1NJ Hall-Jones, W. M., Hinemoa Street, Rotorua.
ZL 1NK Carlyle, A. L. G., 18 Avondale Road, Avondale.
ZL 1NL Smith, G. C. T., P.W.D., Kaitaia.
ZL 1NM Bonny, G. E., 11 Hamilton Road, Herne Bay, Auckland.
ZL 1NN Douglas, J. W., 422 Point Chevalier Road, Auckland.
ZL 1NO Leyden, G. G., Parnell Street, Rawene.
ZL 1XI Auckland University College, Auckland.

ZL2—STATIONS LOCATED IN WELLINGTON DISTRICT

ZL 2AA Brown, A. S., 14 Grant Street, Dannevirke.
ZL 2AB Wilkinson, D., c/o School House, Rangiotu.
ZL 2AC O'Meara, I. H., Bushmore Road, Gisborne.
ZL 2AD Stevens, P. R., 258 Gladstone Road, Gisborne.
ZL 2AE Patty, R. J., 55 Salisbury Road, Gisborne.
ZL 2AF Sutton, J. B., 184 Cobden Street, Gisborne.
ZL 2AG Ludwig, M., 112 Ormond Road, Gisborne.
ZL 2AH Roberts, R. V., Rogers Street, Blenheim.
ZL 2AI Sandford, H. D., Ballance Street, Raetihi.
ZL 2AJ Parmenter, V. H., 2 Oak Grove, Wellington, C.1.
ZL 2AK Cooper, A. M., 83 Roxburgh Street, Wellington.
ZL 2AL Chew, J. B., Woodland Road, Johnsonville.
ZL 2AM Buist, W. F., Dr., cnr. Collins and High Streets, Hawera.
ZL 2AO Mathewson, T., 7 Cargill Street, Karori, Wellington.
ZL 2AR Whiteley, A. J., 7 Seymour Square, Ponsonby, Auckland.
ZL 2AS Sharman, L. G., 9 Taumata Rd., Sandringham, Auckland.
ZL 2AP Eade, A., 1 Camden Street, Feilding.
ZL 2AQ Collett, D. H., 72 Hopper Street, Wellington.
ZL 2AR Rennie, A. M. McBey, 35 Nelson Street, Wanganui.
ZL 2AS Whiteman, V. G., Cape Campbell Lighthouse.
ZL 2AT Beale, E. W., 405 Grays Road, Hastings.
ZL 2AU Fever, W. H., 66 Rotherham Terrace, Wellington.
ZL 2AV Chatfield, R. G., 42 Raroa Road, Kelburn, Wellington.
ZL 2AW Clarke, C. R., 111 Apu Crescent, Lyall Bay, Wellington.
ZL 2AX Kyle, J. V., 50 Waldegrave Street, Palmerston North.
ZL 2AY Corps of Signals, Central Depot, Garrison Hall, Wellington.
ZL 2AZ Duggan, F. E., 196 Sydney Street, Wellington.
ZL 2BA Ellesmore, C. E., 260 Ferguson Street, Palmerston North.
ZL 2BB Murray, N., Taupata Street, Castle Cliff, Wanganui.
ZL 2BC Perry, S. H., 89 Tiber Street, Island Bay, Wellington.
ZL 2BD Hollis, W. G., 39 Nairn Street, Wellington, S.W.1.
ZL 2BE Mills, J., 311 W. Queen Street, Hastings.
ZL 2BF Clark, J., Lemon Street, New Plymouth.
ZL 2BG Tinney, J. G., 74 Kainui Road, Hataitai, Wellington.
ZL 2BH Hall, W. M., 1 Hutt Road, Petone.
ZL 2BI Liddell, C. G., 16 Lerwick Terrace, Lyall Bay, E.3.
ZL 2BJ New Plymouth Aero Club, New Plymouth.
ZL 2BK Firth, E., 43 Roy Street, Wellington South.
ZL 2BL Saunders, I. A., 6 Beach Road, Kaiti, Gisborne.
ZL 2BM Griffiths, W. H., Raetihi.
ZL 2BO Dixon, H. C., 330 The Terrace, Wellington.
ZL 2BP Macklin, W. N., 75 Waipapa Road, Hataitai.
ZL 2BQ Dacre, J., Kawatiri Avenue, Wanganui.
ZL 2BR Lamber[illegible] K. A., 147 St. Hill Street, Wanganui.
ZL 2BS Hes[illegible] A., 5 Edinburgh Terrace, Wellington, S.1.
ZL 2BT Tanne[illegible] A., Karere Road, Longburn.
ZL 2BU Donald, J. F., 120 Inglis Street, Wellington, E.5.
ZL 2BV Ching, W. H., Spring Grove, Nelson.
ZL 2BX Black, R. G., 31 Karepa Street, Brooklyn, Wellington.
ZL 2BY Berry, C. T., 20 Rata Street, Wanganui.
ZL 2BZ Gillion, O. W., 71 Church Street, Palmerston North.
ZL 2CA Turnbull, W. J., 39A Tinakori Road, Wellington, N.1.
ZL 2CB Huggard, F. J., Smart Road, Fitzroy, New Plymouth.
ZL 2CC Beech, F. R., Kenepuru Head, Picton.
ZL 2CD McNeill, F. A., Observatory, Kelburn, Wellington.
ZL 2CF Speedy, S., Pipi Bank, Herbertville.
ZL 2CH McKelvie, M., 17 Mulgrave Street, Wellington.
ZL 2CI Wilson, W. A., Crows Nest, Island Bay, Wellington.
ZL 2CJ Upchurch, G. E., 113 Wallace Street, Wellington.
ZL 2CK Black, J. W., Duke of Edinburgh Hotel, Porangahau.
ZL 2CL Autridge, E., Fort Dorset, Seatoun, Wellington.
ZL 2CN Bradley, E. A., 5 Caius Avenue, Gonville, Wanganui.
ZL 2CO Hamilton, C. G., 76 Ellice Street, Wellington.
ZL 2CP Cormack, J. B. B., 64 Tilley Road, Paekakariki.
ZL 2CS Miller, R. E., 17 Tennyson Street, Petone.
ZL 2CT Schofield, S., Lighthouse, Cape Campbell.
ZL 2CV Blakeley, P. W., 26 Balgownie Avenue, Wanganui.
ZL 2CW Jensen, W. A. E., 18 Mills Road, Wellington, S.W.1.
ZL 2CX Patchett, G. P., 264 Rintoul Street, Wellington.
ZL 2CY Francois, L. G., William Street, Richmond.
ZL 2CZ Vincent, H. F., 11 Harbour View Road, Wellington.
ZL 2DA Newlands, G. B., Nelson Street, Petone.
ZL 2DB Morrison, C. W., 71 Dundas Street, Seatoun, Wellington.
ZL 2DC Chisholm, W. P., 9 Palm Grove, Wellington South.
ZL 2DD Redshaw, L. P. L., 6 North Esk Street, Nelson.
ZL 2DG Taylor, C. R. H., Kereru Bend, Tawa Flat.
ZL 2DH Bedingfield, D. L., 123 Jackson Street, Petone.
ZL 2DI McMahon, P. R., Kendall's Road, Linton, Palmerston North.
ZL 2DJ Peterson, E. A., 175 Queen's Drive, Wellington, E.3.
ZL 2DK Barclay, B., 43 McGrath Street, Napier.
ZL 2DL Carr, R. A. J., Totara Terrace, Miramar, Wellington.
ZL 2DM Smith, C. H., 558 Childers Road, Gisborne.
ZL 2DN Brewer, W. L., 22 Northland Road, Northland, Wellington.
ZL 2DO Wiffen, M. A., Charles Street, Blenheim.
ZL 2DP Stretch, J. H., 249 Ohiro Road, Wellington.
ZL 2DQ Hooker, J. K., 11 Standen Street, Karori, Wellington.
ZL 2DR Cooke, A. R., Railway Avenue, Upper Hutt.
ZL 2DS Kirkcaldie, K. R., Ohau.
ZL 2DT Johnson's Radio College, 44-48 Victoria Street, Wellington.
ZL 2DU Duffield, A. W., 49 Ferguson Street, Palmerston North.
ZL 2DV Shepherd, N. C. C., Harrison Street, Featherston.
ZL 2DW Hughes, W. J. T., 10 Sievwright Lane, Gisborne.
ZL 2DX Daniells, P., Main Street, Tahunanui, Nelson.
ZL 2DY Smithson, G. W., Seddon Street, Raetihi.
ZL 2DZ Griffiths, H. M., Tokomaru.
ZL 2FA Butler, G. B., 46 Winter Street, Gisborne.
ZL 2FB Bullivant, W. E., Ormond Road, Gisborne.
ZL 2FC Perry, E. A., 128 Queen Street, Wairoa.
ZL 2FD Shelton, H. E., Ormond Road, Gisborne.
ZL 2FF Hands, C. T. C., Gladstone Road, Gisborne.
ZL 2FG Brown, H. R. D., 104 Lyndhurst Street, Palmerston Nth.
ZL 2FH Fitzgerald, T. M. F., Nolan Street, Hawera.
ZL 2FI Knight, A. A., Montreal Road, Nelson.
ZL 2FJ Jackson, B. E., 83a Hill Street, Wellington, N.1.
ZL 2FK Tanner, R. A., Motor Launch Haumoana, Tangimoana.
ZL 2FL Parsons, J., 229b Main Street, Palmerston North.
ZL 2FM Hogan, J. G., 30 Hungerford Road, Wellington.
ZL 2FN Jackson, J. L., 188 Sydney Street, Wellington.
ZL 2FO Savell, I. S., 6 Burns Avenue, Palmerston North.
ZL 2FP Hoare, P. R., 166a Abel Smith Street, Wellington.
ZL 2FQ Crabtree, A. W., 177 Vigor Brown Street, Napier.
ZL 2FR Dyett, N. D., 8 Duthie Street, Karori, Wellington.
ZL 2FS Wastney, G. C., Brewer Street, Blenheim.
ZL 2FT Lane, F. J. K., 87 Ferguson Street, Palmerston North.
ZL FU Hewett, H. B., 41 Normanby Street, Wellington.
ZL 2FV McCann, J. E., Benize Avenue, Upper Hutt.
ZL 2FW Etheridge, H. G., 87 Wellesley Road, Napier.
ZL 2FX Fownes, H. G. G., 1 The Parade, Island Bay, Wellington, E.2.
ZL 2FY Roberts, H. R., Ikanui Road, Hastings.
ZL 2FZ Reid, D., 11 Murphy Street, Wellington.
ZL 2GA Johnson, J., St. James Avenue, Lower Hutt.
ZL 2GB Trenbath, J., c/o W. Cornish, Broadway, Picton.
ZL 2GC Howarth, A., 12 High Street, Dannevirke.
ZL 2GD Adair, B. R., 385 Clifford Street, Gisborne.
ZL 2GE Tyler, G. E., 155 Vigor Brown Street, Napier.
ZL 2GF Shaw, D. C., 19 Barker Street, Wellington.
ZL 2GH Cross, A. R., King Street, Nelson.
ZL 2GI McGregor, E. W. L., Waipawa.
ZL 2GJ Elliott, K. L., 92 West Street, Feilding.
ZL 2GK Perkin, S. R., 42 Puru Crescent, Lyall Bay, Wellington.
ZL 2GL Gabriel, M. T., The Mansions, Ghuznee Street, Wellington.
ZL 2GM King, G. T., 80 The Parade, Island Bay, Wellington.
ZL 2GN Humphrey, E. H., Queenswood Road, Levin.
ZL 2GO Fownes, H. G. G., 15 Rewa Road, Hataitai, Wellington.
ZL 2GP Ashbridge, W. G., 40 Sussex Street, Wellington.
ZL 2GQ Hunt, F. I. R., Clyde Road, Napier.
ZL 2GR Green, W. S., 114 Ohiro Road, Wellington.
ZL 2GS Green, H. E. H., Clifford Road, Johnsonville.
ZL 2GT Hancock, E. J., 19 Endeavour Street, Wellington.
ZL 2GU Hanley, R. H., 153 Grey Street, Palmerston North.
ZL 2GV Claridge, A. R. C., 13 Rawhiti Street, Dannevirke.
ZL 2GW Taylor, S. G., Beach Road, Levin.
ZL 2GX White, J. M., Ngatapa, Gisborne.
ZL 2GY Wass, L. H., 71 Roxburgh Street, Wellington, E.1.
ZL 2GZ McKenzie, A. J., Rainbow Station, Awatere, Marlborough.
ZL 2HA McCabe, H. C., 42 Adams Terrace, Wellington.
ZL 2HB Clinch, V. J., 176 Tinakori Road, Wellington.
ZL 2HC Cassey, H., Garden Road, Northland, Wellington.

ZL 2HD Buchanan, A. H., 36 Konini Road, Hataitai, Wellington.
ZL 2HE Elliston, L. J., Main Road, Karori.
ZL 2HF Jenkins, D. F., 8 Pembroke Road, Northland.
ZL 2HG Marston, G., Creswick Terrace, Northland, Wellington.
ZL 2HH Simpson, E. V. B., 3 Dalrymple Road, Gisborne.
ZL 2HI Birch, L. E., 626 Devon Street, New Plymouth.
ZL 2HJ Hampton, J. H., 95 Orangi Kaupapa Road, Wellington.
ZL 2HK Whiteman, W. F. C., 7 Moana Avenue, Lower Hutt.
ZL 2HL Hill, C. P., 115 Creswick Terrace, Northland, Wellington.
ZL 2HN Hayward, A. E., Chatham Islands.
ZL 2HO McLaughlan, J., Nelson.
ZL 2HP May, P. J., Charlotte Street, Takapau.
ZL 2HQ White, L., Ladies Mile, Eltham.
ZL 2HR Stevens, W. A. W., Manawapou Street, Hawera.
ZL 2HS Shennan, C. V., 35 Queen Street, Wellington.
ZL 2HT Bradfield, A. G. S., Te Awe Awe Street, Palmerston North.
ZL 2HU Anderson, A. J., 29 Volga Street, Wellington.
ZL 2HV Bennett, A. K., 93 Powderham Street, New Plymouth.
ZL 2HW Megann, T. H., 299 The Parade, Island Bay, Wellington.
ZL 2HY Thrower, C. J., Karehana Bay, Plimmerton.
ZL 2HZ Eckford, T. S., Park Terrace, Blenheim.
ZL 2IA Blumhardt, E., 95 High Street, Blenheim.
ZL 2IB Benson, P. W., 244 Featherston Street, Palmerston North.
ZL 2IC Austin, E. S., Mill Street, Nelson.
ZL 2IE Wainwright, W. J., 21 Waikato Street, Island Bay, Wellington.
ZL 2IF Rolle, E. G., 96 Hanson Street, Wellington.
ZL 2IG Jackson, W. L., 14 Seapoint Road, Napier.
ZL 2IH Dodds, I. N., R.M.D., Upper Moutere.
ZL 2II Bird, A. W., 86 Lytton Road, Gisborne.
ZL 2IJ Andrews, F. R. W., White House, Taihape.
ZL 2IK McMillan, L. D., 32 Queen Street, Petone.
ZL 2IL Gabites, J. F., 52 Glen Road, Kelburn, Wellington.
ZL 2IM Hobbs, J. H., Lighthouse, Stephens Island.
ZL 2IN Perkins, H., 6 Elmira Avenue, Palmerston North.
ZL 2IO Collins, E. S. B., Kawai Street, Nelson.
ZL 2IQ Cassey, R., 43 Majoribanks Street, Wellington.
ZL 2IR Thevenard, C. M. H., Sandon Road, Feilding.
ZL 2IS Martin, J. L., c/o Nicholl Bros., Taihape.
ZL 2IU Purdy, R. G., 11 Akatea Street, Wellington, S.1.
ZL 2IW Bownes, W. S., 141 South Road, Hawera.
ZL 2IX Parker, C. H., Hukanui.
ZL 2IY Gorman, W. D., 34 Garden Road, Wellington.
ZL 2IZ Trimmer, C. W., 26 Aurora Street, Petone.
ZL 2JA Chisholm, D. H., 16 King's Avenue, Wanganui.
ZL 2JB French, E. J. S., Lyndhurst Road, Hastings.
ZL 2JC Way, Clinton J., Manchester Street, Feilding.
ZL 2JE Ramsden, J. W., Fitzroy Road, Havelock North.
ZL 2JG Laskey, J. J., Tikitiki.
ZL 2JH Law, R. G., Orlando Street, Stratford.
ZL 2JI Rean, W. J., Station Road, Ohakune Junction.
ZL 2JK Grocott, G. H., 78 Hill Street, Wellington.
ZL 2JL Prime, D. R., Taoroa Road, Taihape.
ZL 2JM Wellington Technical College, Tasman St., Wellington.
ZL 2JO Parsons, J., Ormond Road, Gisborne.
ZL 2JP Bradley, R. A. H., Russell Street, Nelson.
ZL 2JQ Shirley, J. R., 183 Ferguson Street, Palmerston North.
ZL 2JR Fahey, J. D. S., 45 Harbour View Road, Northland, Wellington, W.2.
ZL 2JS Johnson, H. B., Kensington Private Hotel, Wellington, S.1.
ZL 2JT Hutana, H. T., Mangaoropa, Porongahau.
ZL 2JU Fanthorpe, J. K. L., 7 Mamari Street, Kilbirnie, Wellington.
ZL 2JV Cranford, C. A. H., Ohakune Junction.
ZL 2JW Davies, R. D., 22 Ferry Street, Seatoun, Wellington.
ZL 2JX Culpitt, R. W., Tui Street, Taihape.
ZL 2KA Cuthbert, G. A., 1 Coombe Street, Wellington.
ZL 2KB Wood, L. M., Rangiwahia.
ZL 2KC Moess, C. B., Rangiwahia.
ZL 2KD Simpson, C. J. C., 603 Ellison Road, Hastings.
ZL 2KE Smith, W. A. D., Smith's Garage, Urunui.
ZL 2KF Gould, A. G., Tasman Street, Nelson.
ZL 2KG Sharland, K. O., Cleveland Road, Nelson.
ZL 2KH Bennett, V. H., Awahuri.
ZL 2KI King, R. H., Riverbend Road, Napier.
ZL 2KJ Pettifer, M. F., 99 Shakespeare Road, Napier.
ZL 2KL Steele, N. A., Devon Street, Picton.
ZL 2KM Robertson, G. A., Pakowhai Road, Hastings.
ZL 2KN Millward, H. P., Tulloch Street, Wanganui.
ZL 2KO Davison, S. C., Humber Street, Island Bay, Wellington.
ZL 2KR Gregg, A. P., Lewer Street, Karori, Wellington.
ZL 2KS Furness, J. S., 9 Keiss Street, Blenheim.
ZL 2KT O'Neill, J. G., 702 York Street, Hastings.
ZL 2KU Ward, T., 53 Calabar Road, Miramar, Wellington.
ZL 2KV Ward, T. W., Rugby Road, Tariki, Inglewood.
ZL 2KW Palmer, C. G., Alton, Wanganui.
ZL 2KX Wicksteed, C. G., 44 Norway Street, Wellington, W.1.
ZL 2KY Simonsen, H. D., 134 Totara Road, Wellington, E.4.
ZL 2KZ Rolle, E. G., Hutcheson Road, Newtown, Wellington, S.1.
ZL 2LA Slack, E. J., 74 Victoria Street, Petone.
ZL 2LB Fouhy, W., 99 Washington Avenue, Brooklyn, Wellington.
ZL 2LC McBean, H., Lighthouse, Stephens Island.
ZL 2LD Westwood, E. N., 171 Onepu Road, Lyall Bay, Wellington.
ZL 2LE Pinhey, J., 72 Dundas Street, Seatoun, Wellington.
ZL 2LF Guthrie, W. A., Rugby Road, Tariki.
ZL 2LG Langridge, J. H., Clifford Street, Gisborne.
ZL 2LH Sharland, R. T., c/o Mrs. A. Lee, Parkers Road, Tahunanui, Nelson.
ZL 2LI Munro, G. S., 3 Tasman Street, Nelson.
ZL 2LJ Morgan, G. S., c/o Mrs. Berg, Juliet Street, Stratford.
ZL 2LK Dance, W. E., Warwick Street, Blenheim.
ZL 2LM Western Electric Co., Ltd., Wellington.
ZL 2LN Keyes, A. W., 26 Rongotai Terrace, Wellington.
ZL 2LO Leatham, W. G., 136 Dixon Street, Wellington.
ZL 2LP Pascoe, L. V., 251 Church Street, Palmerston North.
ZL 2LQ Ambury, C. R., Paynter's Avenue, New Plymouth.
ZL 2LR Edwards, K., 24 Rex Street, Miramar, Wellington.
ZL 2LS Steel, L. H., 27 Farm Road, Northland, Wellington.
ZL 2LU Wildash, R. F., Charles Street, Blenheim.
ZL 2LV Barltrop, C., 61 Rakau Road, Wellington.
ZL 2LW McLennan, H. C. S., Raroa Road, Johnsonville.
ZL 2LX McCaul, D. G., Cashmere Avenue, Wellington, N.5.
ZL 2LY Masters, W. C., 174 Jackson Street, Petone.
ZL 2LZ Irvine, E., 51a Halifax Street, Nelson.
ZL 2MA Hight, P. D., 2 Milton Street, Nelson.
ZL 2MB Glading, C. M., 71 Herald Street, Wellington.
ZL 2MC Lawson, S. C., 13 Binham Street, Wellington.
ZL 2MD Jackson, A. F., Takapau.
ZL 2MF O'Leary, B. J., Waikupa Road, Okoia, Wanganui.
ZL 2MG Harvey, P. R., 95 Rakau Road, Hataitai, Wellington.
ZL 2MH Walker, A. C., Konini, Pahiatua.
ZL 2MI Parsons, C. B., 5a John Street, Wellington, S.1.
ZL 2MJ Smith, L. G., "Hill View," Guppy's Road, Greenmeadows, Napier, Hawkes Bay.
ZL 2MK Adams, J. A., Stansell Avenue, Tahunanui, Nelson.
ZL 2MM Adcock, H. F., 39 Opaki Road, Masterton.
ZL 2MN Pole, L. E., High Street, Hawera.
ZL 2MO Johnston, R. W., 16 Duigan Street, Wanganui.
ZL 2MP Powell, W. H., Gloag Street, Waverley.
ZL 2MQ Crook, P. G., 102 Maclean Street, Hastings.
ZL 2MR Blair, D. I., Te Horo.
ZL 2MS Thomasen, L. H., Rewa, Feilding.
ZL 2MT Taylor, W., 37 Kennedy Road, Napier.
ZL 2MU Bell, S. M., Moroa, Greytown.
ZL 2MV Harte, T., Baring Head Lighthouse, via Eastbourne.
ZL 2MW Wiggins, F. V., 17 Konini Street, Wanganui.
ZL 2MX Smith, I. E. L., Ames Street, Paekakariki.
ZL 2MY Sellens, F. W., 7 Randwick Road, Northland, Wellington.
ZL 2MZ Wiggins, H., Public Hospital, Waipukurau.
ZL 2NB Sword, A., 2 Waione Street, Petone.
ZL 2NC Henderson, J., Central Police Station, Wellington.
ZL 2ND Cobbe, D. J., Ranfurly Avenue, Feilding.
ZY 2NF Bullivant, R. E., 109 Nelson Crescent, Napier.
ZL 2NG Wintringham, L. R., Muller Road, Blenheim.
ZL 2NI Peacock, J. W. E., 9 Andrew Young Street, Palmerston N.
ZL 2NJ Ross, H. D., 30 Miro Street, Palmerston North.
ZL 2NL Reeves, G. T., 30 Kirkcaldie Street, Petone.
ZL 2NM Stubbs, G., "Burnside," Takapau.
ZL 2NN Reilly, A. C., Seddon.
ZL 2NO McLaughlin, J., 123 Jackson Street, Petone.
ZL 2NP King, A., 5 Hula Street, Petone.
ZL 2NQ Fairbrother, E. H., King Street, Hastings.
ZL 2NR Taylor, W. N., 11 Harbour View Road, Northland, Wellington, W.2.
ZL 2NS Glassey, R. B., Main Street, Pahiatua.
ZL 2NT Sutton, C. H., Richmond, Nelson.
ZL 2NV Stallard, E. H., Murchison.
ZL 2NW Le Seuer, A. I., 35 Richmond Avenue, Karori, Wellington.
ZL 2NY Mace, W. G., Barnard Street, Wellington.
ZL 2OB Sword, J. A. D. S., 4 Waione Street, Petone.
ZL 2OC Hutchinson, W. C., 53 Stout Street, Wellington.
ZL 2OD Barnes, W. D., 8 Second Street, Masterton.
ZL 2OG Lough, E. B., Manuka Road, Stokes Valley, Wellington.
ZL 2OJ Inge, W. J., Louis Street, Hastings.
ZL 2OK Moir, E. V., 535 Ormond Road, Gisborne.
ZL 2OL Cuthbert, D. M., 9 Hereford Street, Palmerston North.
ZL 2ON O'Brien, J. S., Chatham Islands.
ZL 2OO Burrell, N. W., 151 Bridge Street, Nelson.
ZL 2OP Scambury, G. E., 23 Onepu Road, Lyall Bay, Wellington.
ZL 2OQ Cronin, P., Bengal Street, Khandallah, Wellington.
ZL 2OS McKernon, F. H., Portland Island.
ZL 2OR Rean, H. E., 166A Railway Row, Ohakune Junction.
ZL 2OT Girling, J. R., 95 Leach Street, New Plymouth.
ZL 2OU Parminter, J. D., McLean Street, Wairoa.
ZZL 2OV Petrie, L. G., 127 Coromandel Street, Wellington.
ZL 2OW Forbes, W. D., 10 Wexford Road, Miramar, Wellington.
ZL 2OX Keyes, A. W., 17 Queen's Drive, Lyall Bay, Wellington.
ZL 2PA Leete, J. B., 108 Bentley Street, Masterton.
ZL 2PB McLaren, H. B., 8 Brooklyn Terrace, Wellington.
ZL 2PC Mitchell, G. W., 6 Gladstone Road, Napier.
ZL 2PD Vinten, W., Waipawa.
ZL 2PE Roatz, H. E., 17 Te Whiti Street, Kilbirnie, Wellington.
ZL 2PF King, Thomas, 489 Aberdeen Road, Gisborne.
ZL 2PG Ferguson, J. D., 5 Hume Street, Lower Hutt.
ZL 2PI Treleaven, A. R., 9 Manawaroa Street, Palmerston North.
ZL 2PK Yorke, R., 28 Highbury Road, Wellington, W.1.
ZL 2PL Johnston, N. B., 78 Tinakori Road, Wellington.
ZL 2PM Norman, J. L. M., 13 Tinakori Road, Wellington.
ZL 2PN Briden-Jones, W. J., 71 Ghuznee Street, Wellington, C.2.
ZL 2PO Tout, R. E., Rocks Road, Nelson.
ZL 2PP Sinclair, J. D. J., 502 Grove Road, Hastings.
ZL 2PQ Angelini, L., Main Road, Pahiatua.
ZL 2PS Fisher, B. V. P., 21 Imlay Crescent, Ngaio, Wellington.
ZL 2PT Coker, L. W., Parker Street, Blenheim.
ZL 2PV Moloney, M., Ward.
ZL 2PX Taylor, M. F. W., Ballance Street, Shannon.
ZL 2PY Heslop, H. G., Waimea Road, Nelson.
ZL 2PZ Randerson, K. D., Mount Street, Nelson.
ZL 2QA Bailey, A. W., 48 Main Street, Palmerston North.
ZL 2QC Noble, W. A., Queens Road, Lower Hutt.
ZL 2QD McPhee, E. A., 130 Abel Smith Street, Wellington.
ZL 2QE Byrn, H. L. T., 17 Macara Street, Masterton.
ZL 2QF Hay, F. H., 26 Durie Hill, Wanganui.
ZL 2QG McGahan, L., Maxwell Avenue, Wanganui.
ZL 2QH Barnes, C. J., Fox Street, Featherston.
ZL 2QI Dawson, F. J., 102 High Street, Blenheim.
ZL 2QL Lawlor, L. A., Howard Road, Lowry Bay, Wellington.
ZL 2QM Stevens, O. J., 43 Coromandel Street, Wellington.
ZL 2QN Bornholdt, A. V., 14 Buick Street, Petone.
ZL 2QO Hanford, R., 96 Riddiford Street, Wellington.
ZL 2QP Smith, W. E., Opunake.
ZL 2QQ Cook, S. T., Ngatitoma Street, Nelson.
ZL 2QR Nolan, R., 257 Clifford Street, Gisborne.
ZL 2QS Padman, N. B., 222 The Parade, Island Bay, Wellington.
ZL 2QT Hilkie, A. J., 34 Wade Street, Wellington.
ZL 2QV Haynes, W. R., c/o W. Clark, Waipawa.
ZL 2QW Pratt, E. R., 44 Heretaunga Street, Petone.
ZL 2QX Ryder, N., 148 Jackson Street, Petone.
ZL 2QY McCarthy, J., 22 Oriental Street, Petone.
ZL 2QZ N.Z. Shortwave Radio Club (A. B. McDonagh), 4 Queen Street, Wellington.
ZL 2RA Petrie, B. J. N., 7 Fortunatus Street, Wellington, S.W.1.
ZL 2RB O'Donnell, J. B., 31 Marama Crescent, Wellington, C.2.
ZL 2RC Coakley, R. J., Te Mome Road, Lower Hutt.
ZL 2RD Andrews, N. A., Poole Street, Motueka.
ZL 2RF McSweeney, T. J. G., 118 Creswick Terrace, Northland, Wellington.
ZL 2RH Munro, C. R., 122 Shakespeare Street, Hastings.
ZL 2RI Savell, B. E., Coley Street, Foxton.
ZL 2RJ Inglis, W. I., 87 Hutt Road, Lower Hutt.
ZL 2RK McKenzie, K., 82 Mortimer Terrace, Wellington.
ZL 2RL Saxby, A. M., 13 Clyde Road, Napier.
ZL 2RM Kebblewhite, K. W., Military Camp, Trentham.
ZL 2RN Hart, J., 39 Cambria Street, Nelson.
ZL 2RO Ashford, J. W., Lighthouse, Farewell Spit.
ZL 2RP Goodyer, B. E., Graham, 45 Russell Street, Waipukurau.
ZL 2RQ Jones, I. L., 7 Vera Street, Karori, Wellington.
ZL 2RR Turner, W. G., 40 Ingestre Street, Wanganui.
ZL 2RT Murphy, J. F., Cafe-de-Paris Hotel, Palmerston North.
ZL 2RU Boyens, R. O., 26 Aurora Terrace, Wellington, C.1.
ZL 2RV Grant, C. J., Lincoln Road, Carterton.
ZL 2RW Gibbs, E. G., 2 Ruapehu Street, Castlecliff, Wanganui.
ZL 2RX Robins, R. B., Bulls.
ZL 2RY Hayward, E. B., 60 Heads Road, Wanganui.
ZL 2RZ Bowman, G. R. B., 8 Copeland Street, Lower Hutt.
ZL 2SA Hawera Radio Society, Hawera.
ZL 2SB McIntosh, J. A., Lighthouse, Cape Campbell.

ZL 2SD Oxley, J. S., 20 Tiber Street, Island Bay, Wellington.
ZL 2SE Daws, B. V., Main Street, Castle Cliff, Wanganui.
ZL 2SF Sandford, G. G., King's Private Hotel, Wakefield Street, Wellington.
ZL 2SG Ainsworth, C. R., 67 Herald Street, Wellington.
ZL 2SH Boardman, W., 6 Norma Crescent, Kelburn, Wellington.
ZL 2SI Barker, W. J., 10 Lochiel Road, Wellington.
ZL 2SJ Wilson, T. D., 70 Ava Street, Petone.
ZL 2SK Teehan, J. N., 6 London Street, Dannevirke.
ZL 2SL Earl, E. H., Karioi, Ohakune.
ZL 2SM Jenkins, D. A., 11 Birdwood Road, Lower Hutt.
ZL 2SN Forsyth, S. K., Ward Street, Lower Hutt.
ZL 2SO Alexander, B., 28 Konini Road, Wellington, E.2.
ZL 2SP Langdale, C. C., 35 Adams Terrace, Wellington.
ZL 2SQ Ford, H. W., 44 Jones Street, Wanganui.
ZL 2SS Weaver, P. C., Whitehead Road, Hastings.
ZL 2ST Carver, M. A., 196a Oriental Bay, Wellington.
ZL 2SU Gould, C. J., 23 Lorne Street, Wellington.
ZL 2SW Nicholls, L. W., 6 Colombo Street, Palmerston North.
ZL 2SX Bell, F. G., 111 Regent Street, Hawera.
ZL 2SY Ensoll, J. R., c/o Public Works Department, Wanganui.
ZL 2SZ Bolton, R., 51 Mantell Street, Wellington, E.5.
ZL 2TR Rush, D. O., Mills Road, Eltham.
ZL 2TC Page, B. R., Cook Street, Tolaga Bay.
ZL 2TD Sullivan, W. G., 55 Alma Road, Wanganui.
ZL 2TE Foster, E. M., Lighthouse, Farewell Spit.
ZL 2TF Moffatt, F. A., 17 Turnbull Street, Wellington.
ZL 2TG McGinity, F. G. J., 2 Highbury Crescent, Wellington.
ZL 2TH Weenink, H., c/o Mrs. March, Korokoro, Petone.
ZL 2TI Papworth, A. G., 55 Wi Pere Street, Gisborne.
ZL 2TJ Ambury, C. R., 133 Devon Street, New Plymouth.
ZL 2TK Coleman, H. A., 25 Trafalgar Square, Nelson.
ZL 2TL Jillings, M. A., c/o H. F. Cook, Te Aute Road, Havelock North.
ZL 2TM Borthwick E. S., 8 Glasgow Street, Wellington.
ZL 2TN Alexander, K. G., 23 Coolidge Street, Brooklyn, Wellington.
ZL 2TO Read, G. C., Schoolhouse, Manutahi, Patea.
ZL 2TP Borman, C. A., Waitotara.
ZL 2TR Laurie, G., 2 Empire Street, Dannevirke.
ZL 2TS Nixon, H. W. J. H., 58 Hobson Street, Wellington, N.1.
ZL 2TT Farlen, J. L. F., 34 Normanby Street, Wellington.
ZL 2TU McMillan, A. K., 17 Queen Street, Dannevirke.
ZL 2TV Boyer, J. P., Cobb Valley, Upper Takaka.
ZL 2TW Cunliffe, A. J., 6 Taft Street, Brooklyn, Wellington.
ZL 2TX Scanlon, V. A., Wingrove Factory, R.D., Stratford.
ZL 2TY Goffe, E. M., 402 Ormond Road, Gisborne.
ZL 2TZ—Alexander, C. J., 16 Hudson Street, Island Bay, Wellington.
ZL 2UA Vickers, E. R., 43 Rotherham Terrace, Miramar, Wellington.
ZL 2UB Bunn, H. R. W., Turuturu Road, Hawera.
ZL 2UC Willis, B. G., Moki Road, Uruti.
ZL 2UD Gamman, A. R., Pukahu, Hastings.
ZL 2UE Williams, E. N., Rangiuru Road, Otaki.
ZL 2UF Ludwig, M., 18 College Street, Masterton.
ZL 2UG Riddle, W. C. M., 66 Calabar Road, Wellington.
ZL 2UH Leslie, D. A., Weir House, Kelburn, Wellington.
ZL 2UI Cullen, Father J. J., Manuka Street, Nelson.
ZL 2UJ Hanlon, K. R., 19 Torridon Road, Wellington.
ZL 2UK Murray, C. G., 10 Maire Street, Lower Hutt.
ZL 2UL Bartlett, A. J. W., Matakitaki Road, Murchison.
ZL 2UM Hollard, C. S., Stratford-Opunake Road, Rowan.
ZL 2UN Hastings, W. A., 18 Georges Drive, Napier.
ZL 2UP Louisson, G. M., 15 Alan Street, Palmerston North.
ZL 2UQ Heyward, A. W. N., 92 Wexford Road, Wellington.
ZL 2UR Trustrum, H. N. J., 22 Northland Road, Wellington, W.2.
ZL 2US J. E. Gawn, 2 Lerwick Terrace, Kilbirnie, Wellington.
ZL 2UU Tolley, H. G. R., 35 Putnam Road, Wellington.
ZL 2UV Kibble, A. R., 73 Constable Street, Wellington.
ZL 2UW Fitzgerald, A. J., School Residence, Horopito.
ZL 2UX Hartley, A., 34 Devon Street, Wellington.
ZL 2UY Bradley, H. A., 62 Heads Road, Wanganui.
ZL 2UZ Shirley, J. R., Burnside, Bay View, Napier.
ZL 2VA Vaughan, D. L., 4 Russell Terrace, Wellington.
ZL 2VB Calander, H. J., 80A Parade, Lyall Bay, Wellington.
ZL 2VC Langrope, S. J., 22 Te Aweawe Street, Palmerston North.
ZL 2VD Shanks, J. M., 6 Taft Street, Brooklyn, Wellington.
ZL 2VE Batchelar, R. C., 89 Fitzherbert Avenue, Palmerston North.
ZL 2VF Brocklebank, W. G., Juliet Street, Stratford.
ZL 2VG Stewart, T. K., Manaia Road, Kaponga.
ZL 2VH Jacobson, E. J., Oringi Railway, Dannevirke.
ZL 2VI Searle, J. H., 129 Seatoun Heights, Wellington, E.5.
ZL 2VJ Angelini, L., c/o L. Hunt, Marima, Mangamaire.
ZL 2VK Wallace, I. R., 31 Gonville Avenue, Wanganui.
ZL 2VL Third, R., 514 Gladstone Road, Gisborne.
ZL 2VM Boyle, A. D., 49 Ludlam Street, Seatoun, Wellington, E.5.
ZL 2VN Cov, R. C., 127 Coromandel Street, Wellington, S.1.
ZL 2VO Suckling, E. E., 385 Main Road, Karori, Wellington, W.3.
ZL 2VP Cheshire, A. H., Ashhurst.
ZL 2VG Shaw, J., 103 Main Road, Karori, Wellington.
ZL 2VR Johnson, L. E. C., 75 Clarke Street, Wellington.
ZL 2VR Johnson, L. E., 74 Clark Street, Khandallah, Wellington.
ZL 2VS Gibbs, R. J., 9 Wilkie Street, Wanganui East.
ZL 2VT Bennett, W. R., 12 Moore Avenue, Wanganui.
ZL 2VU Beatson, R., 157 Guyton Street, Wanganui.
ZL 2VV Bennett, P., 13 Maketu Street, Wanganui.
ZL 2VW Gray, O. T., 29 Kiwi Street, Lower Hutt.
ZL 2VX Kirkcaldie, N. M. K., 9 Mowbray Street, Wellington, C.1.
ZL 2VY Delahunty, R. G., 238 The Parade, Island Bay, Wellington, S.1.
ZL 2XY Collier and Beale, Ltd., 66 Ghuznee Street, Wellington.

ZL3—STATIONS LOCATED IN CANTERBURY DISTRICT

ZL 3AA Anderson, D. W., Schoolhouse, Oaro.
ZL 3AB Evans, L. C., 77 Ayers Street, Rangiora.
ZL 3AC Laugeson, N. W., 73 Bealey Street, Christchurch, N.1.
ZL 3AD Banwell, C. J., 9 Chelsea Street, Linwood.
ZL 3AE Lawson, H. C., 119 Cannon Street, St. Albans, Christchurch.
ZL 3AF Sandford, G. C., Moncks Spur, Redcliffs.
ZL 3AG Byrne, L. J., 14 Bretts Road, Ashburton.
ZL 3AH Courtis, H. B., 69 Grey Road, Timaru.
ZL 3AI Strachan, J. E., East Belt, Rangiora.
ZL 3AJ Blake, R. G. F., South Belt, Rangiora.
ZL 3AK Lane, S. W., 19 Bridle Path Road, Lyttelton.
ZL 3AL Beattie, G. C., 66 Ashley Street, Rangiora.
ZL 3AM Kirk, R. E., 263 Kilmore Street, Christchurch.
ZL 3AO Souper, Mrs. T. M., 66 Mersey Street, Christchurch.
ZL 3AP Tomlinson, H. C., Motunau.
ZL 3AQ Lovett, V. P., 130 Alford Forest Road, Ashburton.
ZL 3AR Buchanan, D. W., 74 Wills Street, Ashburton.
ZL 3AS Copp, L. F., 2 North Avon, Christchurch, N.E.1.
ZL 3AT Marquet, L. J., 46 Shakespeare Road, Christchurch.
ZL 3AU Byrne, J. L., 9 Campbell Street, Timaru.
ZL 3AV Cronin, D. W., 64 Matheson's Road, Christchurch.
ZL 3AW Hills, H. O., Rialto Theatre, Kaiapoi.
ZL 3AX Earland, F. P., 1 Hamilton Street, Christchurch.
ZL 3AY Mason, G. E., Hawarden.
ZL 3AZ Stanton, R., 17 Martin Avenue, Beckenham.
ZL 3BB Innes, D. D., Main Road, Springfield.
ZL 3BC Harrison, J., Scargill.
ZL 3BE Boys' High School (Mr. H. E. Dyer, Master in Charge), Straven Road, Riccarton.
ZL 3BF Prince, E., 76 Cobham Street, Christchurch.
ZL 3BH Bowman, G. R. B., Hokitika.
ZL 3BJ Hunter, L. C., 62 Colombo Street, Christchurch.
ZL 3BK Danks, T. L., 27 Cashel Street, Christchurch.
ZL 3BL G. Askey, 15 Sarah Street, Timaru.
ZL 3BM Cook, D., 125 Opawa Road, Christchurch.
ZL 3BN Field, N. A., 16 Campbell Street, Timaru.
ZL 3BO Zanders, F. H., Norwich Quay, Lyttelton.
ZL 3BP Merrin, F. E., 148 Ensor's Road, Christchurch.
ZL 3BR Savage, V., 70 Wildberry Street, Christchurch.
ZL 3BS Rose, W. C., 39 Heywood Terrace, Christchurch, N.E.1.
ZL 3BT Smith, W. L., Ludstone Estate, Kaikoura.
ZL 3BU Docherty, W., Ward Street, Runanga.
ZL 3BV Schaef, L. M., Marsden Road, Greymouth.
ZL 3BW O'Connell, F. A., 77 Ferry Road, Christchurch.
ZL 3BY Whiteley, A. J., 15 Lonsdale Street, New Brighton, Christchurch.
ZL 3BZ Jackson, W. H., Raukapuka, Geraldine.
ZL 3CA Hughes, C. A., 149 Huxley Street, Christchurch.
ZL 3CC Elliott, J. B., 25 Franklin Street, Spreydon, Christchurch.
ZL 3CE Henderson, B. G., 100 Rugby Street, Christchurch.
ZL 3CF Simpson, A. E. H., 99 Abberley Road, Christchurch.
ZL 3CG Brown, H. P. V., 10 Merivale Lane, Christchurch.
ZL 3CH McKnight, S., 20 Derby Street, Christchurch.
ZL 3CI Mulholland, F. S. T., 189 Bligh's Road, Christchurch.
ZL 3CJ Hannan, A. E. S., Beverley Road, Timaru.
ZL 3CK Shipley, E. G., 2 Puriri Street, Riccarton.
ZL 3CL Gerity, A. J., 20 Fitzgerald Street, St. Albans, Christchurch.
ZL 3CP Parton, C. W., 69 Hackthorne Road, Cashmere, Christchurch.
ZL 3CR Tucker, S. A., Wigram Aerodrome, Christchurch.
ZL 3CT Tabley, J. R., 67 George Street, New Brighton.
ZL 3CV Gilligan, S. J., Ranfurly Street, Runanga.
ZL 3CW Spiers, M. E., 55 High Street, Greymouth.
ZL 3CX Stewart, J. D., 112 Alford Forest Road, Ashburton.
ZL 3CY Hughes, W., 196 Hastings Street, Christchurch.
ZL 3CZ Rose, F. L., 39 Heywood Terrace, Christchurch, N.E.1.
ZL 3DC Travis, E. H., 43 Papanui Road, Christchurch.
ZL 3DD Lemin, A., 104 High Street, Greymouth.
ZL 3DE Dale, K. W., c/o Jones Motors, Fairlie.
ZL 3DF Morgan, H. W., c/o H. Pilbrow, Midlands, Oxford.
ZL 3DG Clayton, B. T., 58 Stewart Street, Christchurch.
ZL 3DH McBryde, A. W. I., 18 Railway Street, Christchurch, N.W.2.
ZL 3DI Taylor, K. P., 179 Antigua Street, Christchurch.
ZL 3DJ Walter, F. W., 89 Briggs Road, Mairhau, Christchurch.
ZL 3DL Smith, P. O., 8 Victoria Street, Christchurch, C.1.
ZL 3DM Calbert, R., 99 Hinau Street, Christchurch, W.1.
ZL 3DN Reynolds, E., East Street, Ashburton.
ZL 3DO Hunter, R. P., 30 Randall Street, Christchurch.
ZL 3DP Sweeney, A. P. H., 192 Moorhouse Avenue, Christchurch.
ZL 3DQ Goldsborough, R. F., 371 Hereford Street, Christchurch.
ZL 3DR Hullett, E. W., 259 Fitzgerald Avenue, Christchurch.
ZL 3DS Farquhar, A. J., Mount Hutt R.M.D., Rakaia.
ZL 3DT Thompson, J. T., Good Street, Rangiora.
ZL 3DU Wilson, V. J., 33 Rosebery Street, Christchurch.
ZL 3DV Zohrab, C. E., 18 Aitken Street, Ashburton.
ZL 3DX Ripley, R. H., 52 Hopkins Street, Christchurch.
ZL 3DY Firman, H. V., Wilson Street, Geraldine.
ZL 3DZ Wilson, D., West Melton, Greendale, R.M.D., Christchurch.
ZL 3FA Gates, T., 48 Diamond Avenue, Christchurch.
ZL 3FB Freeman, J. F., Linwood Avenue, Christchurch.
ZL 3FC Guthrie, M. W., 32 Westminster Street, St. Albans, Christchurch.
ZL 3FD Wilmott, S. V., 146 Jubilee Avenue, North Brighton.
ZL 3FE Ellwood, M. H. G., 69 Westminster Street, Christchurch.
ZL 3FF Turner, C. H., 194 Edgeware Road, Christchurch.
ZL 3FG Wickham, L. M., Arney Street, Greymouth.
ZL 3FH Mail, L. C., Dr., Wilson Street, Geraldine.
ZL 3FI Roscoe, J. H., 4 Saltaire Street, North Brighton.
ZL 3FJ Robinson, V. E., 21 Queen's Avenue, Christchurch.
ZL 3FK Hepburn, L. D., 247 Fifield Terrace, Christchurch.
ZL 3FL George, A. B. W., 16 Stafford Street, Riccarton.
ZL 3FM Knowles, J. H., 171 River Road, Christchurch.
ZL 3FN Hartnett, D. P., Peel Street, Cobden, Greymouth.
ZL 3FO Blackmore, W. V., Northbrook Road, Rangiora.
ZL 3FP Reid, J. A. M., 3 Cain Street, Timaru.
ZL 3FQ Walker, E. M., 38 Belt Road, Ashburton.
ZL 3FR Lilly, C. P., 173 Bealey Avenue, Christchurch.
ZL 3FS Smith, D. A. F., 35 Peverell Street, Riccarton, Christchurch.
ZL 3FT Cunnold, C. D., 80 Church Street, Timaru.
ZL 3FU Wilson, S. A., Pigeon Bay.
ZL 3FV McCracken, W. D., 18 Whiteleigh Avenue, Addington, Christchurch.
ZL 3FX Brown, N. W., 20 Sydney Street, Spreydon, Christchurch.
ZL 3FZ Gledhill, A. F., 43 Severn Street, St. Albans, Christchurch.
ZL 3GA Gale, W. T., 113 Petrie Street, Christchurch.
ZL 3GC Perry, W. J., Wild Street, Hokitika.
ZL 3GD Kingan, S. G., Mayfield.
ZL 3GE Isaacs, N., 5 Wai-iti Road, Timaru.
ZL 3GF Timaru Boys' High School (A. G. Tait), Timaru.
ZL 3GG Roberts, C., Dobson, Brunnerton.
ZL 3GH Voss, C. H. J., Willowbridge, Waimate.
ZL 3GI Ballantyne, C. T., 26 Nelson Terrace, Timaru.
ZL 3GJ Hall, T. R., 25 Ilam Road, Riccarton, Christchurch.
ZL 3GK Jacobs, F. J., 25 Bordesley Street, Linwood, Christchurch.
ZL 3GL Keast, T. J., Lincoln.
ZL 3GM Andrews, R. A., 304 Gloucester Street, Christchurch.
ZL 3GN Dacombe, A. M., 68 Perry Street, Christchurch.
ZL 3GO Fooks, A. C., P.W.D., Oaro.
ZL 3GP Eddy, A. W., Lake Road, Irwell, Christchurch.
ZL 3GQ Gee, F., 46 Elizabeth Street, Timaru.
ZL 3GR Rowe, R. H., "The School," Springbank, St. Andrews.
ZL 3GS Nelson, M. H., 19 Pratt Street, New Brighton, Christchurch.
ZL 3GT Summer, A. H., Hokitika.
ZL 3GU Keys, J. R., 60 Huxley Street, Sydenham, Christchurch.
ZL 3GV Edwards, W. G., 89 Domain Terrace, Spreydon, Christchurch.
ZL 3GW Gourley, A. R., McDonald Street, Methven.
ZL 3GX Barbour, W. F., 305 Worcester Street, Christchurch.
ZL 3GZ Berry, A. E., 18 Marlborough Street, Linwood, Christchurch.
ZL 3HA Arnold, H. F., 165 Ollivier's Road, Christchurch.
ZL 3HB N.Z. DX Radio Association, Inc., Christchurch, N.1.
ZL 3HC McGlashan, D. C., Stafford Street, Timaru.

ZL 3HE Day, B. C., Wigram Aerodrome, Christchurch.
ZL 3HF Robb, C. M., 195 Bealey Avenue, Christchurch.
ZL 3HG Naylor, L. W., cnr. Peel and Rintoul Streets, Westport.
ZL 3HH Griffin, R. J., 40 Saunders Road, Ashburton.
ZL 3HI Hepburn, K. A., 104 Oxford Street, Ashburton.
ZL 3HJ Steel, J. Otira.
ZL 3HL Clutterbuck, W., 14 Leslies Road, Hornby, Christchurch.
ZL 3HM Evans, C. E., 3 Drain Road, Fernside, Rangiora.
ZL 3HO Philpott, E. C., 127 Westminster Street, Christchurch.
ZL 3HP Hildebrand, D. E., Seddon Terrace, Runanga.
ZL 3HQ Rodda, C. A., 71 Springfield Road, Christchurch.
ZL 3HU Lawa, C. R., Pareora East, Timaru.
ZL 3HV Johnson, J. F. L., 3 Poulson Street, Addington, Christchurch.
ZL 3HW Stringleman, Miss M., 28 Konini Street, Riccarton, Christchurch.
ZL 3HY Watkins, E. C. K., 174 Baker Street, New Brighton, Christchurch.
ZL 3HZ North Beach Rover Scouts' Radio Society, 69 Berry Street, Christchurch.
ZL 3IB Higgs, R. B., Charles Street, Kaiapoi.
ZL 3IC McCulloch, I. A. G., 38 Retreat Street, Christchurch.
ZL 3ID Pettigrew, W. L., 281 Fitzgerald Avenue, Christchurch, C.1.
ZL 3IE Hopkinson, L. G., Fraser Street, Temuka.
ZL 3IF Higgins, H. E., Gresson Street, Greymouth.
ZL 3IG Buchanan, D. W., Lands Wood, Peel Forest.
ZL 3IJ Addison, R. H., 430 Montreal Street, Christchurch, C.1.
ZL 3IL Burrows, J. W. L., 14 Sarah Street, Timaru.
ZL 3IM Summerfield, H. J. D., 63 Rockwood Avenue, North Brighton, Christchurch.
ZL 3IN Wills, S. P., 17 Alexander Terrace, Greymouth.
ZL 3IP Kingan, S. G., 597a Colombo Street, Christchurch.
ZL 3IR Benson, A. F., 12 Breens Road, Harewood, Christchurch, N.W.4.
ZL 3JA Rowe, H. J., Southbridge.
ZL 3JB Burtenshaw, J. W., Thornycroft Street, Fendalton, Christchurch.
ZL 3JC Millard, H. W., 29 Weka Street, Christchurch.
ZL 3JD Lyes, A. E., 155 King Street, Christchurch.
ZL 3JF Henderson, H. P., 201 Fitzgerald Street, Christchurch.
ZL 3JG Gibbs, J. R., Wigram Aerodrome, Sockburn.
ZL 3JH Kingston, E. W. A. H., 7 Draper Street, Richmond, Christchurch.
ZL 3JI Hart, J. D., 31 High Street, Greymouth.
ZL 3JJ Lowry, T. N., 95 Osborne Terrace, North Brighton Christchurch.
ZL 3JK Elliot, L. A., 145 Salisbury Street, Christchurch.
ZL 3JL Mason, G. F., 14 Hillview Street, Christchurch, E.1.
ZL 3JM White, D. V. B. P., 27 St Martin's Road, Christchurch.
ZL 3JN Ashby, D. H., Princess Street, Waimate.
ZL 3JP Langley, E. W., 136 Huxley Street, Christchurch.
ZL 3JQ Evans, A. S., Fernside-Horrelville, R.M.D., Rangiora.
ZL 3JR Stuart, J. A., 127 Innes Road, Christchurch.
ZL 3KB Burch, J. R., 405 Barbadoes Street, Christchurch.
ZL 3JS Pruden, H. C. L., 89 Retreat Road, Christchurch, N.E.1.
ZL 3JU Anderson, D. W., 105 Office Road, St. Albans, Christchurch.
ZL 3JV Hill, R. S., Dunsandel.
ZL 3JW Anderson, R. A., 262 Lincoln Road, Addington, Christchurch.
ZL 3JX Rowlands, T. E., R.M.D., Kaiapoi.
ZL 3JY Maguire, Rev. J., 136 Barbadoes Street, Christchurch.
ZL 3KB Burch, J. R., 405 Barbadoes Steret, Christchurch.
ZL 3KE McGrath, R. E., 183 Richmond Terrace, New Brighton, Christchurch.
ZL 3KF Pettitt, E. R., High School, Methven.
ZL 3KG Billson, G. E., jun., 75 Gardiner's Road, Harewood, Christchurch.
ZL 3KH Service, W. J., 25 Ilam Road, Riccarton, Christchurch.
ZL 3KJ Rogers, K. J., 16 Cross Street, Allenton, Ashburton.
ZL 3KK Lublow, H. H., 16 London Street, Lyttelton.
ZL 3KL Scarborough, W. A., Jackson's Bay.
ZL 3KM Woodfield, R. T., Turiwhata, Greymouth.
ZL 3KN Lee, W. C., 116 St. Albans Street, Christchurch, N.1.
ZL 3KO Lindsay, R. H., 26 Lindsay Street, Christchurch.
ZL 3KP Green, K. D., 24 Severn Street, Christchurch, N.1.
ZL 3KR Cox, R. C., 66 Neville Street, Christchurch.
ZL 3KT Grey, R. B., 27 Hagley Street, Christchurch.
ZL 3KU Condon, W. J., Adderley Head, Lyttelton.
ZL 3KV Duxbury, T. A., 11 Fulton Avenue, Merivale, Christchurch.
ZL 3KV Duxbury, T. A., Pigeon Bay.
ZL 3KW Phillips, A. S., Duvauchelle.
ZL 3KX Heslop, G. W., Crown Hotel, Temuka.
ZL 3KY Talbot, A. D., Pleasant Point.
ZL 3KZ Eadie, J. M., 28 High Street, Greymouth.
ZL 3XB Canterbury University College, Hereford Street, Christchurch.

ZL4—STATIONS LOCATED IN OTAGO DISTRICT

ZL 4AA Bell, F. D., Waihemo (Shag Valley Station).
ZL 4AB Hunt, P. W., Joseph Street, Gore.
ZL 4AC Robinson, R. E., 3 Chetham Avenue, Dunedin.
ZL 4AD Jordan, A. E., 41 Venus Street, Invercargill.
ZL 4AE Brown, G. E., Ardwick Street, Gore.
ZL 4AF Strachan, J. M., 2 Lawrence Street, Gore.
ZL 4AH O'Grady, F. J., Dunedin.
ZL 4AI Shore, K. H., 22 Helena Street, Dunedin, S.W.1.
ZL 4AJ Austin, H. W., 443 Leith Street, Dunedin.
ZL 4AK Shiel, W. L., 243 Macandrew Road, Dunedin.
ZL 4AL Grubb, A. H. McL., Gore.
ZL 4AM Gibb, L., Luggate, Otago.
ZL 4AN Clayton, B. T., 85 Alice Street, Invercargill.
ZL 4AO Shrimpton, H. N., 17 Cliff's Road, St. Clair, Dunedin.
ZL 4AP Stroud, L. B., 118 Stafford Street, Dunedin, C.2.
ZL 4AQ Edgar, G. T., 24 Pine Hill Road, Dunedin.
ZL 4AR Natta, H. W., 41 Richardson Street, St. Kilda, Dunedin.
ZL 4AS Morris, C. C., 17 Hope Street, Dunedin.
ZL 4AT Stone, J., 34 Grove Street, St. Kilda, Dunedin.
ZL 4AU Gerkin, G. D., Knapdale.
ZL 4AV Milnes, J. L., 9 Warden Street, Opoho, Dunedin.
ZL 4AW Head, A. W., Radio Station, Awarua.
ZL 4AX Halcrow, L. A., c/o National Broadcasting Service, Highcliffe, Dunedin.
ZL 4AY Budd, L. W., 11 Agnes Street, Mornington, Dunedin.
ZL 4AZ Sidey, T. K. S., Tolcarne Avenue, Dunedin, N.W.1.
ZL 4BA Smith, J. G., 7 Crosby Street, Dunedin.
ZL 4BB Smith, W. T., 10a Alva Street, Dunedin.
ZL 4BC Ferris, J. L., Alexandra.
ZL 4BD Swann, A., 27 Oakland Street, Dunedin, E.1.
ZL 4BE Shepherd, N. H., 31 Warden Street, N.E. Valley, Dunedin.
ZL 4BF Smith, L., 24 Mitchell Street, Invercargill.
ZL 4BG Marshall, W., 24 Cutten Street, St. Kilda, Dunedin.
ZL 4BH Motion, R., 13 St. Heliers Street, Caversham, Dunedin.
ZL 4BI Hitchcock, S. R., 63 Hunt Street, Anderson's Bay, Dunedin.
ZL 4BJ Cameron, E. P., 44 Cargill Street, Dunedin.
ZL 4BK McDonald, N. M., 19 Bouverie Street, Dunedin.
ZL 4BL Lucas, A. W., c/o State Advances Department, Dunedin.
ZL 4BN Middlemiss, T. C., c/o Majestic Mansions, St. Clair, Dunedin.
ZL 4BO Richardson, A., Lighthouse, Cape Saunders.
ZL 4BP Collett, W. G., 40 Cargill Street, Dunedin, C.2.
ZL 4BQ Frame, F. E., 251 Melbourne Street, Dunedin.
ZL 4BR Thompson, H. G., 6 Albion Street, Mataura.
ZL 4BS Burnby, L. A., Waikaka Valley, Gore.
ZL 4BU Cook, R. W., 61 Shetland Street, Dunedin.
ZL 4BV McConnell, J. R., 157 Tweed Street, Invercargill.
ZL 4BW Kent, C. H., Flat No. 6, Globe Hotel Buildings, Oamaru.
ZL 4BY Winefield, J. W., 5 Dundas Street, Dunedin.
ZL 4BZ Masterton, D., 40 Brighton Street, Dunedin.
ZL 4CA Harris, A. R., 52 Peter Street, Dunedin.
ZL 4CB Callander, H. A., 54 Brougham Street, Gore.
ZL 4CC Newson, H., Lighthouse, Puysegur Point.
ZL 4CD Sims, F. A., 169 Anderson's Bay Road, Dunedin.
ZL 4CE Searle, J. H., 193 Ettrick Street, Invercargill.
ZL 4CF McLaren, A. D., 36 Driver Street, St. Kilda, Dunedin, E.1.
ZL 4CG Boyens, R. O., 92 Duke Street, Invercargill.
ZL 4CH Rosevear, R., The Hostel, Milford Sound.
ZL 4CI Stewart, R. D., 59 Easther Crescent, Kew, Dunedin.
ZL 4CJ Jupp, H., 36 Pitcairn Street, Dunedin.
ZL 4CK Self, W. F., 12 School Street, Roslyn.
ZL 4CL Cameron, M. E., 102 Princess Street, Dunedin.
ZL 4CM Mathie, M. A., 16 Rother Street, Oamaru.
ZL 4CN Peterson, A. McN., 148 Melbourne Street, Dunedin.
ZL 4CO Crocker, A. V., 34 Chalmer Street, Oamaru.
ZL 4CP Edginton, K. S., Henderson Street, Bluff.
ZL 4CR Johnstone, M. O., Balclutha.
ZL 4CS Wilkinson, A. R., 158 Main Street, Gore.
ZL 4CT Allen, J., 52 Prince Albert Road, Dunedin.
ZL 4CU McEwan, D. M. R., 20 Mitchell Street, Invercargill.
ZL 4CV Wareham, A., c/o 4YA, Dunedin.
ZL 4CW Leckie, J. C., 29 John Street, Dunedin.
ZL 4CX Warburton, N. O., c/o McFarlane, North Balclutha.
ZL 4CZ Martin, W. G., 185 Princes Street, Invercargill.
ZL 4DA Warren, B. C., 595 George Street, Dunedin.
ZL 4DB Barron, K. H., 48 Queen Street, Dunedin.
ZL 4DD Sergeant, G. W., Kurow.
ZL 4DG Gilchrist, N. C., Waiareka Junction, Oamaru.
ZL 4DH Hanlon, A. C., 16 Pitt Street, Dunedin.
ZL 4DI Shepherd, D. A. C., 4 Bellknowes Terrace, Dunedin.
ZL 4DJ Austin, A. J., Riversdale.
ZL 4DK Hunter, S. T., 75 Herbert Street, Invercargill.
ZL 4DL Leslie, A. J., 268 High Street, Dunedin, C.1.
ZL 4DM Wylie, W. H., Arthur Street, Oamaru.
ZL 4DN McBryde, A. W. I., 128 Tennyson Street, Dunedin.
ZL 4DP Grant, J., Otiaike.
ZL 4DQ Hamilton, W. R., 50 Islington Street, Dunedin.
ZL 4DR Mutch, J. W., Ann Street, Bluff.
ZL 4DS Renton, B., Inchclutha.
ZL 4DT Kirby, Miss K., 40 Cargill Street, Dunedin.
ZL 4DV Simpson, J. W. N., Central Fire Station, Invercargill.
ZL 4DW Wallace, A., Radio Station, Awarua.
ZL 4DX Taylor, W. R., 12 Nottingham Crescent, Dunedin.
ZL 4FA Miles, T. H., Murchiston Street, Dunedin.
ZL 4FB Gardner, H. F., 7 Bellevue Street, Roslyn, Dunedin.
ZL 4FD Denford, F., 27 Playfair Street, Dunedin, S.W.1.
ZL 4FE Kennedy, G. R., School, Waimahaka.
ZL 4FF Nisbet, A. J., 5 Greenock Street, Kaikorai, Dunedin.
ZL 4FG Ellis, C. A., 319 Herbert Street, Invercargill.
ZL 4FH Freeman, C. H., 29 Ravenswood Road, St. Clare, Dunedin.
ZL 4FI Gault, J. H., 77 Spottiswoode Street, Dunedin.
ZL 4FJ Roberts, C. C., 22 Grove Street, Dunedin.
ZL 4FK Dodds, R. B., 110 St. David Street, Dunedin, N.1.
ZL 4FL Jocelyn, J. N., Banockburn.
ZL 4FM Shave, P. G., 23 Coquet Street, Oamaru.
ZL 4FN Egan, Mrs. M. A., 23 Islington Street, Dunedin, N.E.1.
ZL 4FO Hudson, S. T., 30 Tweed Street, Roslyn, Dunedin.
ZL 4FP Pickerill, J. P., Sanatorium, Palmerston.
ZL 4FQ Nichol, L. A., Bank of New Zealand, Otautau.
ZL 4FR Howard, J. G., 24 Erin Street, Dunedin.
ZL 4FS Clark, P., Main Road, St. Leonards, Dunedin.
ZL 4FT Mitchell, G. L., 36 Roseberry Street, Bellknowes, Dunedin.
ZL 4FV Sparrow, J. A., 24 Oban Street, Dunedin.
ZL 4FW Phillips, R. D., 60 Royal Terrace, Dunedin.
ZL 4FY Brain, E. R., Waipounamu Road, Gore.
ZL 4FZ Findlay, C. S., Portobello.
ZL 4GA Frame, A. F., 251 Melbourne Street, Dunedin.
ZL 4GB Chapman, M., Rosebank, Balclutha.
ZL 4GC Hayward, A. S., Balclutha.
ZL 4GE Anderson, G. A., Thornbury.
ZL 4GF Borthwick, G., 6 Grove Street, Dunedin, S.2.
ZL 4GG Boddy, H. W., 64 Belgrave Crescent, Dunedin.
ZL 4GI Burnby, J. C., Gore-Ferndale Road, Gore.
ZL 4GK Kitto, R. G., 106 Bowmont Street, Invercargill.
ZL 4GM Jackson, D. D., 46 Islington Street, Invercargill.
ZL 4GN Baird, W. C., Hope Street, Mataura.
ZL 4GO Kimble, T. M., 50 Jackson Street, Invercargill.
ZL 4GR Ridgwell, G. S., Stirling.
ZL 4GS Graham, E. J. W., 317 Yarrow Street, Invercargill.
ZL 4GT Bowen, J. R. W., Gordon Road, Mosgiel.
ZL 4GU Frapwell, L. H., 103 Eglinton Road, Dunedin, W.1.
ZL 4GV Broom, F. E., Radio Station, Awarua.
ZL 4GX Sutton, H., 63 Dublin Street, Invercargill.
ZL 4GY Brown, E. E. A., 471 George Street, Dunedin.
ZL 4GZ Applegarth, G., 27 Parkhill Avenue, Dunedin.
ZL 4HA Greene, R. S., Christchurch Street, Kaitangata.
ZL 4HB Russell, V. T., 215 Herbert Street, Invercargill.
ZL 4HC Weir, J. A. C., Railway House 219, Clyde.
ZL 4HF Hazlett, F., 100 Melbourne Street, Invercargill.
ZL 4XO Otago University College, Dunedin.

COOK ISLANDS

ZL ZK1AB Wood, E. J., Titikaveka, Rarotonga.
ZL ZK2AA Lonsdale, J., Radio Station, Niue.

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HOME MADE COILS ARE OFTEN UNSATISFACTORY

USE

R.C.S. Precision Crystal Oscillator matched Coils and obtain maximum results

For the Push Pull Pentagrid Four use R.C.S. De Luxe Coil Kit

The Coils are wound on Marquis Formers and are Laboratory tested. The Intermediates are Iron Cored Precision Litz wound and Vacuum impregnated. This Kit will give you highest sensitivity and perfect selectivity. Type K81. RETAIL **£1/17/6**

For those who prefer the straight former type Coil Kit with Iron Core I.F.'s, we have provided Kit Type K82. RETAIL **£1/7/6**

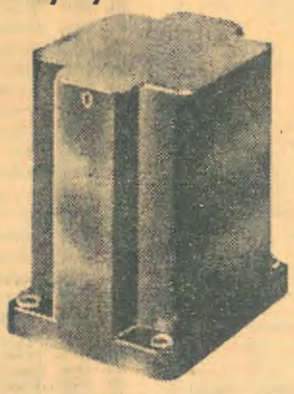
The 4/38 Mantel Receiver requires an R.C.S. Quality Coil Kit

We have specially designed Midget Litz coils and Intermediates in square shields requiring a minimum of space for this set. Although small in size these coils are extremely efficient as to sensitivity and selectivity—Simple to wire up—no colour code needed. Order 4/38 Mantel Coil Kit, Type K83. PRICE RETAIL **£1/8/-**

The Switched Coil 2

The three coils for mounting on the wave change switch were designed for ease of mounting and with sufficient overlap to completely cover the bands. This set of coils, the Heart of the Receiver, will provide astounding results. Ask for R.C.S. Coil Kit (3 coils). Type K84 PRICE RETAIL **6/-**

10 Metre, 2 Valve Coil, type H20
20 Metre, 2 Valve Coil, type H21
40 Metre, 2 Valve Coil, type H22
} **2/-** Each Retail



The 2 J.U. Special 5

For this set we have also provided the 6 coils for easy mounting on the switch. The Kit comprises the 6 coils, 2 Iron Cored Intermediates. This Kit makes a surprisingly powerful S.W. Receiver. Order R.C.S. Coil Kit, Type K85 RETAIL **£1/9/6**

10 Metre, Aerial Coil, type H14
20 Metre, Aerial Coil, type H15
40 Metre, Aerial Coil, type H16
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20 Metre, Osc. Coil, type H18
40 Metre, Osc. Coil, type H19
} Each Retail

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For P.P. Pentagrid 4—
Type TB5 P.P. "A" Class Trans. **Retail 15/-**

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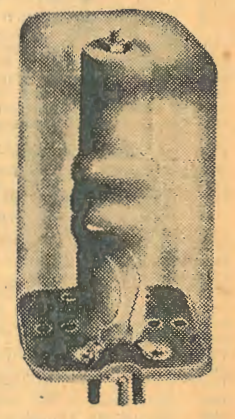
Type TA1 Audio Choke. **Retail 15/-.**

For Amateur Transmitter—
Type TM1, Modulation Trans. **Retail 30/-**
Other Popular Audio Transformers—
"A" Class Single Input, Type TB4. **Retail 15/-**
"B" Class Input, Type TB6. **Retail 15/-**



Amateurs Note:—We make Heavy Duty resisters, etc., to your order for transmitters.

IRON CORE INTERMEDIATES

These precision wound iron-cored I.F.'s for 460 K.C. provide extremely high gain and selectivity within the practical limits of usage. The Litz windings are Vacuum impregnated, ensuring long life. Isolantite Type Base.
Type IF11, Low Gain, Litz Iron Core, 460 K.C., Round Can. Price, 9/-.
Type IF12, High Gain, Litz, Iron Core. 460 K.C., Round Can. Price, 9/-.
Type IF56, Midget, Low Gain, Iron Core, 460 K.C., Sq. Can. Price, 9/-.
Type IF57, Midget, High Gain, Iron Core, 460 K.C., Sq. Can. Price, 9/-.
We can supply all type I.F.'s, some of which we list below:—
Type IF51, Midget, Low Gain, Litz, 460 K.C., Sq. Can. Price, 5/-.
Type IF52, Midget, High Gain, Litz, 460 K.C., Sq. Can. Price, 5/-.
Type IF6, Low Gain, Litz, 460 K.C., Round Can. Price, 4/6.
Type IF7, High Gain, Litz, 460 K.C., Round Can. Price, 4/6.

MIDGET LITZ WOUND BROADCAST COILS

These Midget Aerial, R.F. and Oscillator Coils are, due to their small size (1½in. x 1½in.), ideal for Mantel, Portable, or Car Radio. The coils are sensitive and selective and are the latest product from our Laboratory. You can't go wrong in wiring up—no color or number code needed—as our new design mounting panel is embossed showing identical letters at connecting points with those in "Wireless Weekly" diagrams. Ask for type H.C. 51 Coils. Price, each, retail **5/-**

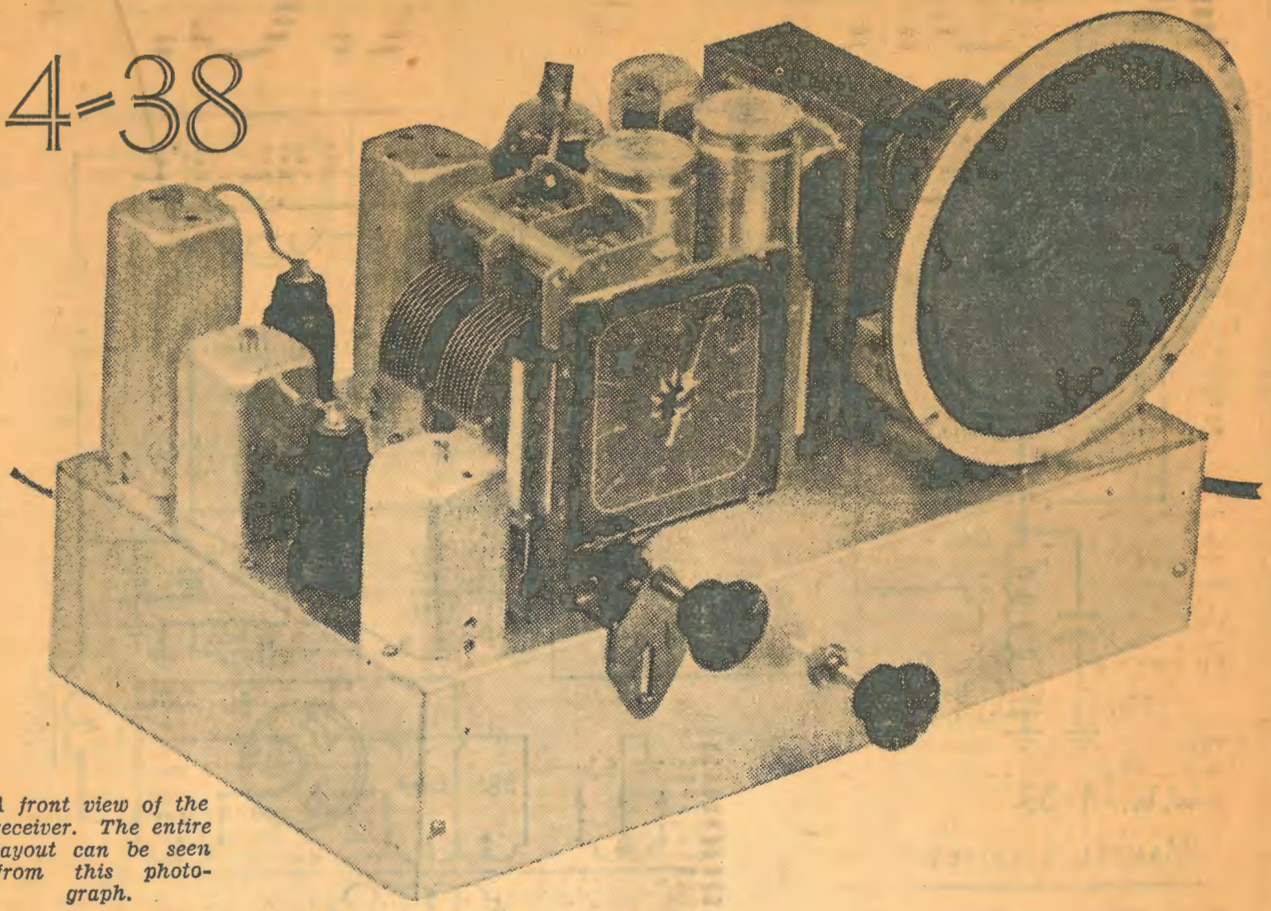
R.C.S. RADIO PTY. LTD.,

'Phone MA6041-2
21 Ivy Street, Darlington

Obtainable from your local dealer or from R.C.S. direct

THE MANTEL RECEIVER

4-38



A front view of the receiver. The entire layout can be seen from this photograph.

A simple receiver, using only four valves in all, which is particularly suitable for mounting in a mantel cabinet. It is probably the simplest type of A.C. broadcast receiver one could build and gives particularly fine results.

HERE is a receiver which will be of interest to all who build radio receivers. We thought a good while over this set, notwithstanding the fact that it is so simple. It has been built to do a job of work in just about the easiest and simplest manner one could devise.

It is called the "Wireless Weekly 4/38," because it has only four valves, and is our standard small receiver for 1938. Yes, you heard correctly—four valves, including rectifier—a set capable of full output, and sensitivity equal to the tuning-in of interstate stations, even the small ones, just like the bigger models.

For a long time, we have felt the need for a set which would represent good broadcast reception in the simplest possible form. To date, one has been in the habit of regarding the smallest set for broadcast reception as being one with four valves and a rectifier—5 valves in all. It is, of course, necessary to use a converter valve represented in our set by the 6A8 type, and a single intermediate amplifier represented by the 6K7. A second detector is necessary, usually a diode-triode or diode-pentode valve, and finally, an output pentode.

Such a set, of course, gives very good results—results too good, we might even state, to be used to the full. In other words, although the R.F. tuner is not by any means wasted—its sensitivity and selectivity being appreciated—there is really too much audio gain ever to be used in the normal way. In other words, we could build sets which have exceptionally high audio gain, but we can only use a certain amount of it—over and above this figure, we are really throwing it away by reducing the setting of the volume control.

This is particularly so in the case of small mantel sets, which are required to have good sensitivity, to be easy to handle, and to have enough output for comfortable reception, without in any way "blowing the roof off." Therefore, particularly in a mantel set, it is a fact that too much audio gain is by no means to be desired.

The introduction of the EBL1 is interesting because it combines an output valve in the same envelope as a pair of diodes. In other words, instead of using a diode-triode valve to drive our output pentode, we can use the diode plates for detection and A.V.C., and feed the output direct into the pentode output valve.

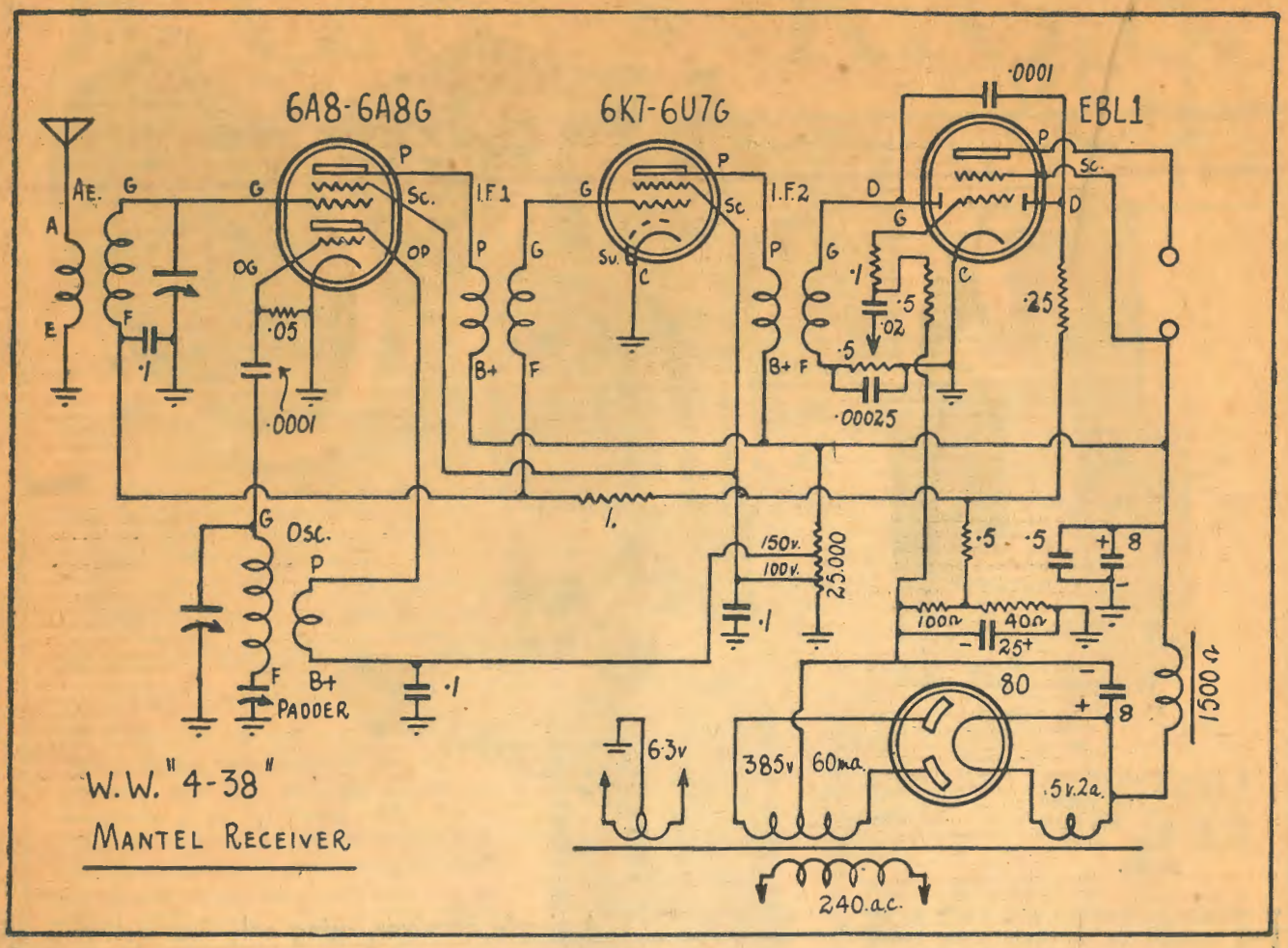
Any old kind of a pentode, of course, would not suffice. Something very special in the way of sensitivity is needed for us to get good output from a very small signal. The EBL1 has a very sensitive pentode section indeed—one needing only a few volts input to give 4.5 watts output. Verily it is a remarkable valve, and its use makes our four-valve set possible.

PERFORMANCE

In performance, we would class this as an ideal mantel receiver. As we have said, although it will easily overload the average 6-inch speaker on local stations, its audio gain is not so high that the cabinet tends to leap off the shelf when we accidentally give it the works. It will tune in any stations which are audible on the conventional five-valver, because the tuning end is just the same. But we have to turn the volume control further round to get the same volume as the five. That is all the difference. Even then, we can't possibly use all the available volume on local stations, so actually, as far as results are concerned, we can't lose. We still have volume up our sleeves to spare, should we want to use it—the maximum being 4.5 watts!

This "docility"—a good word to express it—is very attractive in its way. It gives the impression that the set is

THE CIRCUIT



PARTS LIST, 4/38 MANTEL RECEIVER

1 Base, 14 x 9 x 3 in.
1 2-gang tuning condenser, with trimmers.
1 Tuning dial.
1 465 k.c. superhet. coil kit (aerial coil, oscillator coil, 2 I.F. transformers and padder).
1 Power transformer, 385-0-385 v. at 60 mills, 6.3 v. at 3 amps, 5 v. at 2 amps, upright type.
2 8 mfds. electrolytics (or greater capacity), at least 500 v. working.
1 .5 mfd. tubular condenser.
3 .1 mfd. tubular condensers.
1 25 mfds. electrolytic.
1 .02 mfd. mica condenser.
1 .00025 mfd. mica condenser.
2 .0001 mfd. mica condensers.
1 1-meg. resistor.
2 .5-meg. resistors.
1 .25-meg. resistor.
1 .1-meg. resistor.
1 50,000 ohms resistor.
1 100 ohms w.w. resistor.
1 40 ohms w.w. resistor.
1 .5-meg. potentiometer.
1 25,000 ohms voltage divider.
Sockets—2 octal, 1 "P" type, 2 4-pin.
Valves—1 6A8, 1 6K7, 1 EBL1, 1 80.
Speaker—1500 ohms F.C. matched for pentode.

very quiet in operation. It won't make the terrific rushing and roaring noises of a bigger set, should you turn it "flat to the boards." It gives the impression that the stations are received with the utmost of ease, and with no sense of effort. And finally, because there is only one audio stage, it has a peculiar "purity" of tone one rarely gets with larger sets.

At the same time, don't get the idea that the set is lacking in lift. Nothing could be further from the facts than this. Fitted with a larger speaker, and housed in a conventional cabinet, it will give you all you want in the way of volume and tone. We are delighted with it in every way, and thoroughly recommend it wherever a simple and inexpensive receiver is wanted, whether for a mantel set or not.

LAYOUT

We have not attempted to bring this set into the midget class as far as size is concerned. We couldn't see much point in doing so. Sets can be made too small—easy to pull off the table when one catches in the power cord, and failing badly in tone and output owing to the baby speakers required. We have built the set on a chassis which will fit most mantel cabinets, and which is capable of reduction an inch or two all round if extreme compactness is required. There is very little critical in the layout, because we have fixed on the simplest of circuits, and no one should fail to do what we did—obtain first-class results straight away.

We have left room on the chassis for mounting the speaker—this may be bolted down with brackets, or screwed to the cabinet first of all. It plugs into the back of the chassis, so that the set may be removed complete, leaving the speaker behind, should this be desired. We have used a 6-inch speaker in our tests—one can use a larger or smaller type according to the cabinet decided upon. In the interests of all-round effciency, use the largest speaker you can.

As a general rule, the smaller speakers have fields which are not so effective as chokes as their bigger brothers. Consequently with them, the hum level

might be a bit higher than with the larger types. Usually in a mantel model, with its rather meagre baffling, this isn't a drawback. If it is, then another filter condenser paralleled with each of those existing will help, and maybe you can get the types which have rather a high capacity—up to 24mfds. if these are available from your dealer. However, the hum is no worse than with the ordinary commercial mantel set, and when there is music playing, cannot be regarded as at all important. We simply mention it as a point in passing.

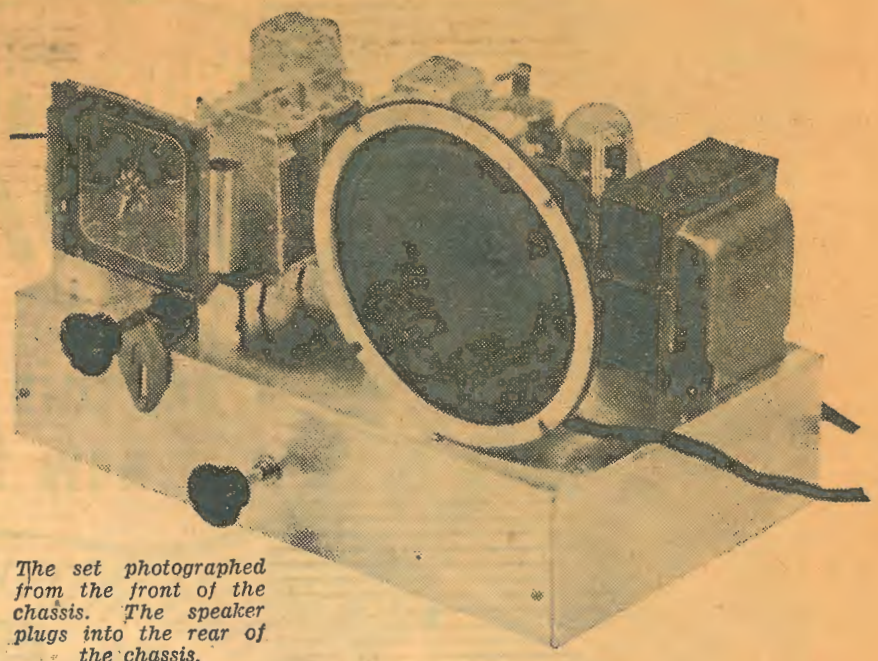
We have used midget type coils, because their small square cans fit better to a smallish chassis. They are obtainable nowadays in very efficient iron-cored types, and give first-class results. If the standard larger coils are used, the chassis will have to be bigger—our layout having been made to suit the smaller coils.

We have shown a small, non-committal type of dial which will probably suit most mantel sets. If the cabinet will take it, larger dials may, of course, be fitted. There is plenty of room.

The speaker may also be mounted above the set, or in the standard console position, if desired. We think most of these sets will be built into handy mantel cabinets, so have kept to the layout shown.

THE COMPONENTS

All the components are standard, just the same as those used in other receivers. The coils are ordinary 460 kc. type broadcast coils, obtainable everywhere. They are made to suit all the popular makes of gang condensers—the gang used here incidentally has two sections, each fitted with a trimmer. The padding condenser is generally supplied with the coils.



The set photographed from the front of the chassis. The speaker plugs into the rear of the chassis.

The speaker, as we have said, is a 6-inch type, and has a field coil resistance of 1500 ohms.

The power transformer may be of the 60 mills type. Ours was a vertical mounting type, as it takes less room than the average flat-mounting transformer. It has a filament winding for 6.3 volt valves.

We used an 80 rectifier because it is cheap and easily obtainable. Actually, the 5Z4 might be preferred, as the EBL1 is rather a slow heater, and maybe the electrolytics would appreciate a little breathing space before the voltage is applied. This is particularly so if the electrolytics are of the 500-volt type. We used the 600-volt type, because we like their all-round robustness, and generally include them in all sets. They are not likely to be troubled with initial overloads whether the valve used is an 80 or not.

The condensers and resistors again are standard, either 1 watt or ½ watt may be employed. The tubular condensers may be of the 400-volt type.

THE CIRCUIT

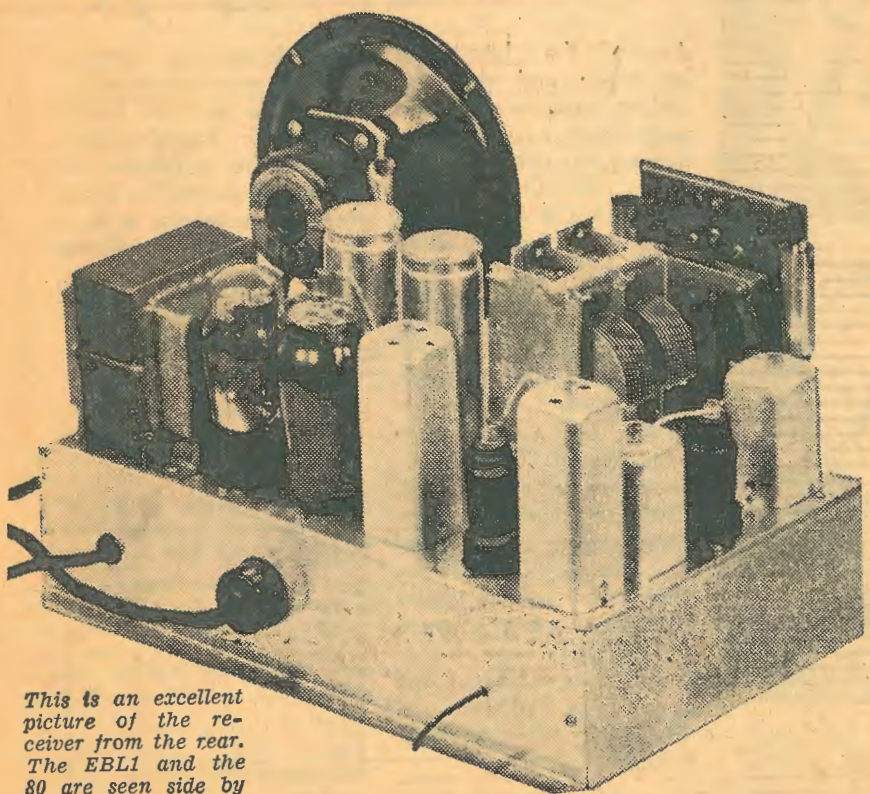
The circuit has no catches—no reflexes or anything like that—it is the essence of simplicity and straightforward design. The 6A8 converter circuit is standard—in fact the whole set is straight going right down to the EBL1

Note that all the cathodes are earthed—the bias is obtained from a back biasing system. This saves components, and it obviates the need for a separate resistor and condenser for each valve. The EBL1 is used with one diode as a detector, and the other for A.V.C. Our wiring diagram shows which diode is used for each of these offices. The A.V.C. circuit is straightforward, and its load resistor returns to about 2.5 volts bias which sets the minimum for best sensitivity. Actually of course, as long as there is any signal or noise in the set, it is generally more than this in practice. The A.V.C. is very effective, and levels out the stations particularly well. A plate meter in the 6A8 and 6K7 circuits will show a very sizeable dip in plate current as one tunes in a signal.

There may appear to be one or two extra resistances in this A.V.C. and detector circuit, but these are necessary, and you may strike instability if you leave them out. We haven't included a single component which isn't required. The set is quite stable, as evidenced by the fact that we are able to use such a simple A.V.C. circuit.

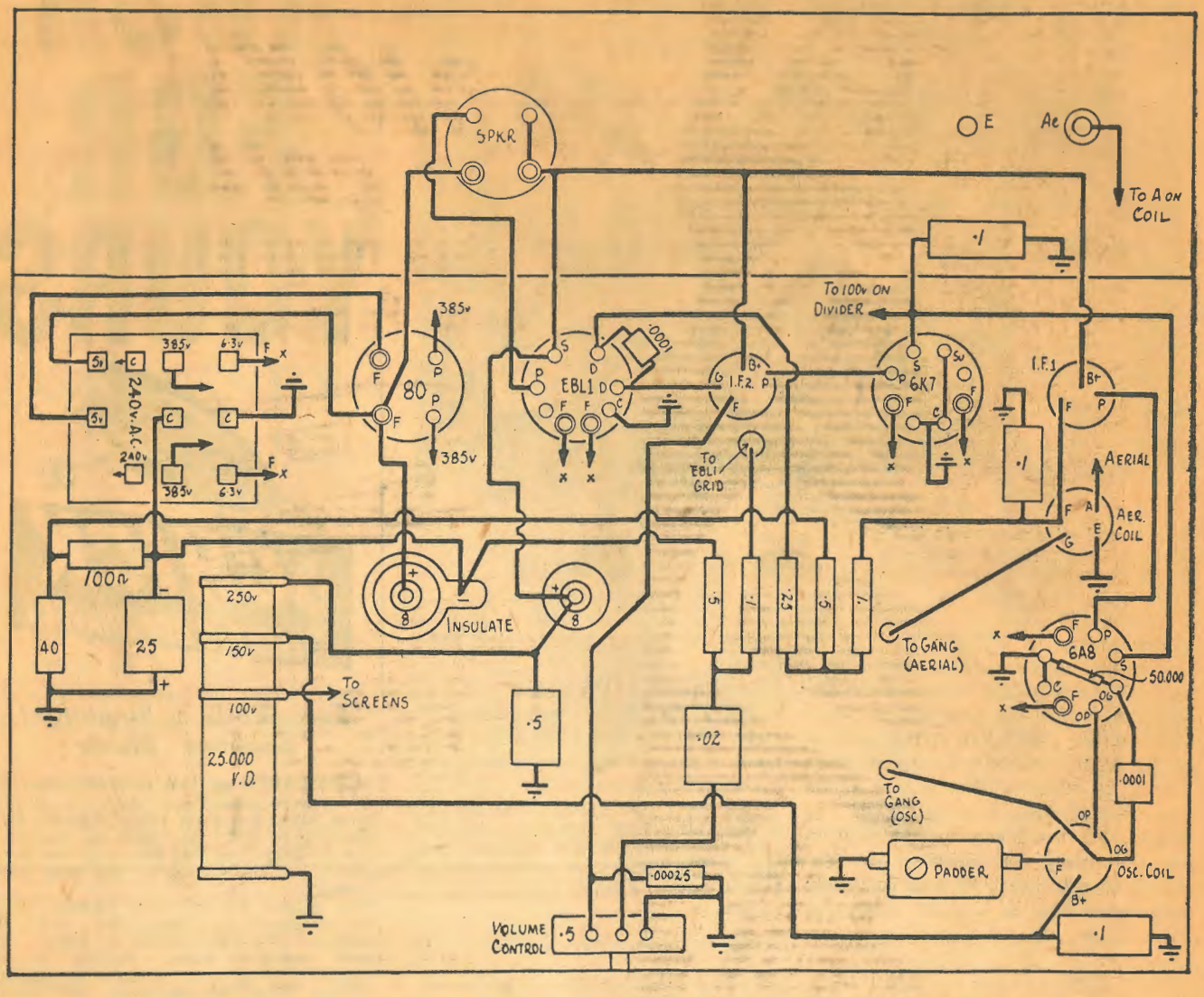
The single 25 mfds. electrolytic across the bias resistors is ample to check hum generation in this source.

We could have used series resistors for the screen and oscillator plate supplies, but the voltage divider is just as effective and is cheaper. It also provides a steady bleed which helps to keep the



This is an excellent picture of the receiver from the rear. The EBL1 and the 80 are seen side by side.

WIRING DIAGRAM



The wiring diagram shows the simplicity of the set's construction. The five resistors near the centre may be mounted on an insulated panel.

voltage in check during the initial warming-up period.

The .5 condenser across the high-tension is good standard practice with any A.C. receiver, as not all electrolytics are effective bypasses for R.F. It helps to avoid any possible instability when the set is tuning in weak stations.

CONSTRUCTION

The construction of the set is quite straightforward. Before going on, we might mention one or two points.

In our wiring diagram, you will notice five resistors laid out near the centre of the chassis. In the photograph, you will see these mounted on a small insulated panel. We have done this for convenience—it groups them nicely, and makes wiring neat and easy. The panel is mounted on the end of a long bolt used to support one corner of the gang condenser.

The set as you will see, uses back-bias. The two resistors for this should strictly speaking, be about 40 and 80 ohms. These values are hard to get—at least, the 80 ohms is. We used a C.T. filament type of resistor for the 40 ohms, and a 100 ohm type for the 80 ohm. This will give the EBL1 about 7 and a bit volts bias instead of 6 volts, but this won't matter. The junction of the two resistors will be about 2.5 volts, again about right.

The 6A8 and the 6K7 use octal bases—the EBL1 a "P" type base, and the rectifier, if an 80, a four-pin base. Rectifiers are also obtainable using octal bases.

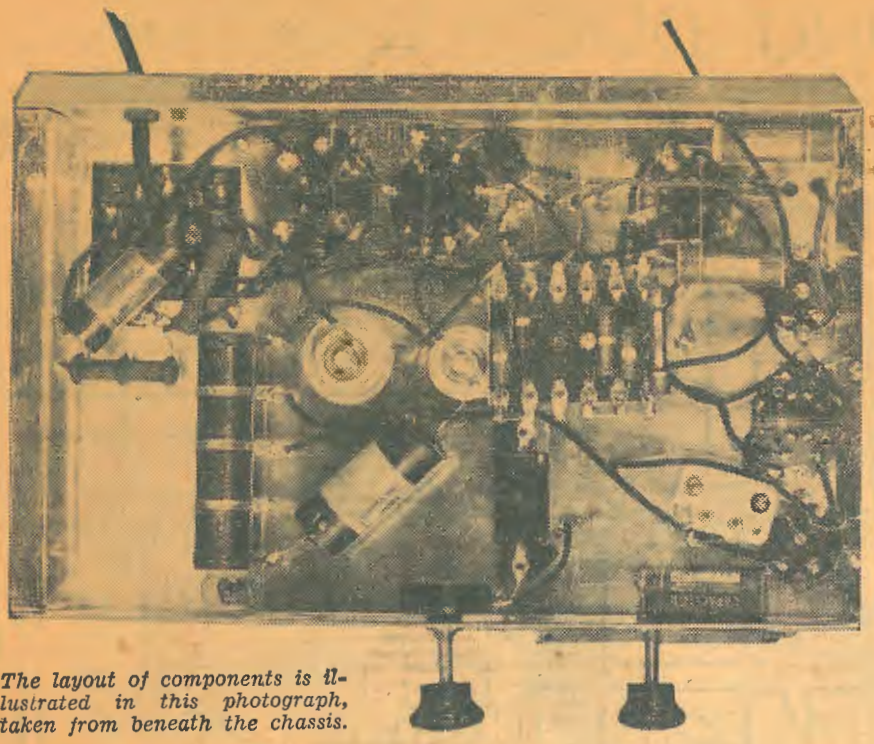
Incidentally, glass type valves may be used in place of the 6A8 and 6K7—if so, they must have shield cans. Converters may be 6A8, 6A8G, 6A7 or EK2. I.F. amplifiers may be 6K7, 6K7G, 6D6, or 6U7G. No alterations to circuit values should be required, except in the case of the EK2, which should not be run, according to the makers, at more than 70 volts screen voltage. There is no alternative for the EBL1.

Our diagram shows all the wiring. The only connections above the base are those to the EBL1 grid cap, which comes up through the chassis, and the leads from the coils to the 6A8 and the 6K7 respectively.

OPERATION

Having made all the connections, and gone over them to see that they are correct, switch on the power without the rectifier in position. After about 30 seconds, all the valve heathers should be seen glowing. Switch off, plug in the rectifier, and switch on. If there are no funny lights or untoward flashes in the valves, which will indicate wrong connections, you will probably hear a low hum in the speaker, and an "alive" sound when the volume control is advanced.

Slacken off the padder about three turns, and turn the dial till it points to 2SM, or some station low on the dial. Slacken off the trimmers on the gang, and adjust the oscillator, or front, trimmer, until the station comes in opposite its dial marking, if necessary, adjusting the aerial trimmer to keep the signal. Now carefully adjust this aerial trimmer until the best volume is obtained.

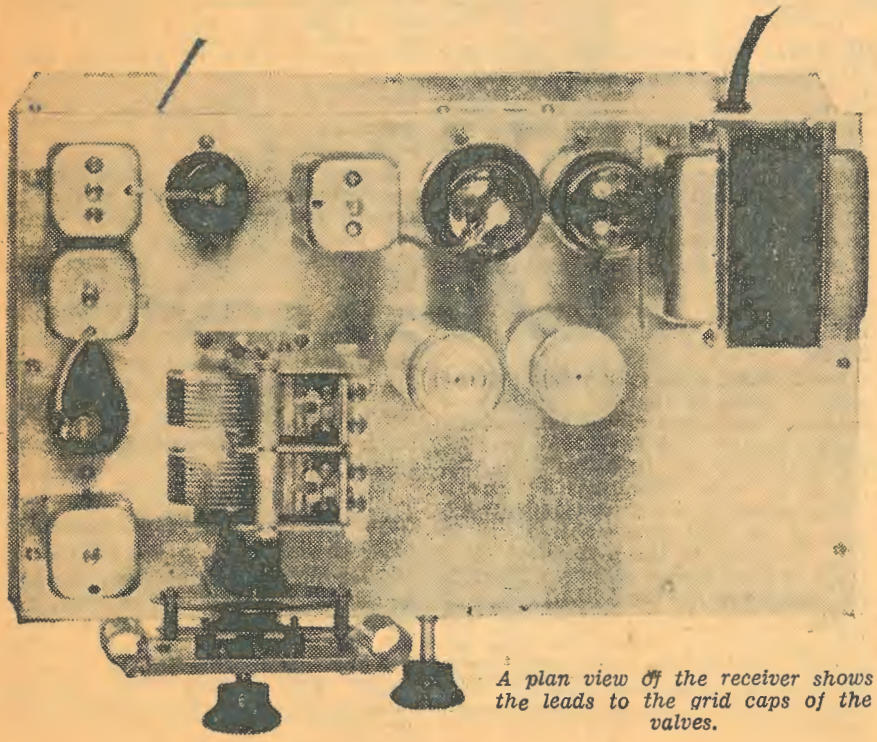


The layout of components is illustrated in this photograph, taken from beneath the chassis.

Now swing to 2FC, or some other convenient station marked on the dial, and without touching the trimmers, adjust the padder till the dial markings coincide with the station at this top end of the dial. When this happens, you should be receiving this station at its best strength for any setting of the padder. It is, of course, important to see that your dial marking are designed to suit the coils and condenser you have—this is usually simply a matter of telling your dealer beforehand.

Now go back to the bottom of the dial, and tune in a station well down on the scale. You can now make a fine adjustment of the aerial trimmer, after which the lining-up is complete.

You won't find a big aerial necessary or anything like that—you should be able to get excellent interstate reception on not more than 40ft of wire, and in most cases, a small indoor aerial will suffice.

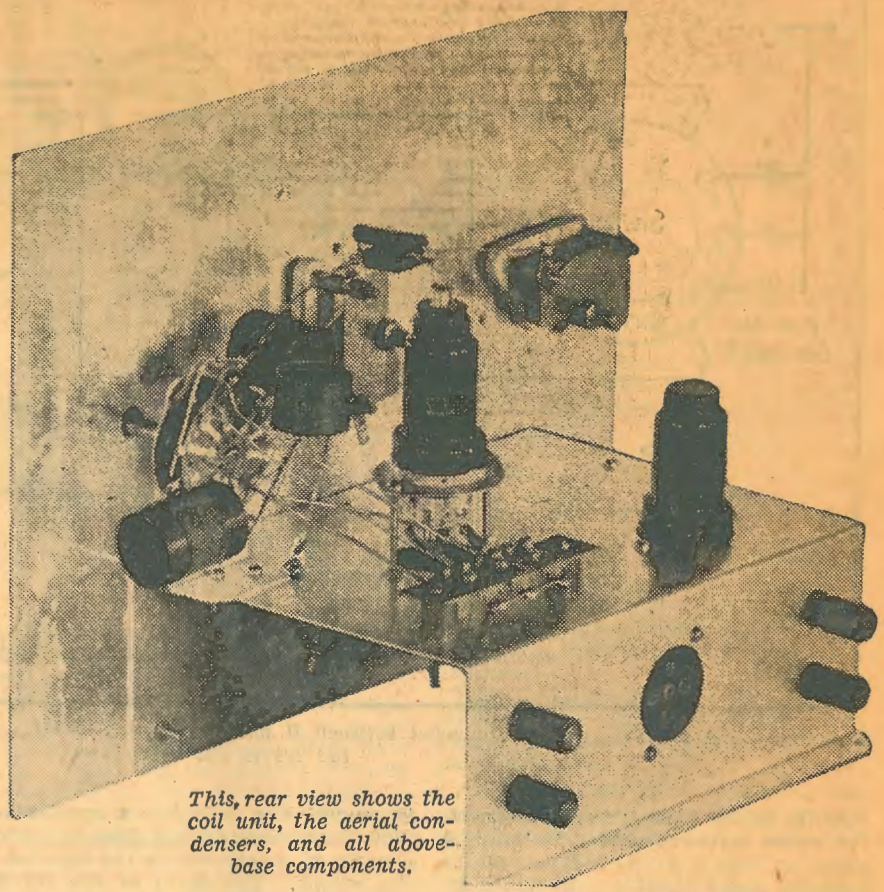


A plan view of the receiver shows the leads to the grid caps of the valves.

A SWITCHED-COIL 2 VALVER

A NEW AND EFFICIENT RECEIVER FOR BEGINNER—EXPERIMENTER—AMATEUR.

This simple little set is equally suitable for operation from A.C. or from batteries. It is the handiest and most effective receiver of its type you have ever constructed and the ideal set for the beginner.



This, rear view shows the coil unit, the aerial condensers, and all above-base components.

THERE is no mystery attached to the popularity of small receivers for the reception of short wave signals. All through the years of short wave receiver development—of new valve releases, and circuit design—the humble "detector and one audio" has found constant and satisfactory use. Its simplicity and efficiency, to say nothing of flexibility, have made it a first favorite with thousands, and even to-day many amateurs and listeners well able to afford more elaborate sets, still pin their faith to a simple receiver of this type.

Reasons for this are, first of all, the widespread use of headphones for hunting very weak stations, the fact that such a set will rarely miss any station which is actually capable of being heard at all, and the low cost and small size of such a set. It is, of course, very easy to handle, and just as easy to construct.

We have long sold out of "Wireless Weekly" issues containing a description of a set like this, and a Call-Sign Book of this type, interesting as it does so many who like to listen to short waves, is an excellent place to include the description of a simple set which has some new features as well.

Bearing in mind that many beginners will want to build it up, we are printing many photographs and diagrams, so that every possible point will be covered. Anyone with the slightest mechanical leaning should be able to make this set, and get good results from it.

COIL SWITCHING

The first thing you will notice when looking at the photographs is that there are no plug-in coils. In their place you will see three small pieces of coil former, and a switch.

These form a switched-coil unit which has abolished the need for plug-in coils. When considering the set in general, and asking ourselves what features we should include in it, the nuisance of changing coils immediately came to our mind as something we could well do without. And we could think of no reason why we should not do away with them. There isn't any justification for plug-in coils when it is so easy to avoid them.

With this receiver, when changing from one band to another, it is necessary merely to turn the switch to the required position, and the deed is done. Maybe a small adjustment is called for to the band-set condenser which gives us our rough tuning, and then we proceed to cover whichever band we require by means of the smaller condenser and vernier dial. It is possible to so arrange the turns on the coils, should the receiver be used for amateur use only, so that there is no need to reset the band-setter when changing from one band to another. This means that a change from 40 to 20 metres is accomplished in about one-tenth of a second.

There have been many objections raised to switches in short wave sets. Just why, we find it hard to understand. There are, of course, losses introduced in any switch, but so there are in plug-in formers and valve sockets. Switches are so good nowadays that we can disregard such things as relatively unimportant in the total of losses, etc., we are likely to encounter. The proof of the pudding is in the eating, and this little set has given ample proof of being the equal in performance of any other set of its size we have built. As far as the coil switching is concerned, we would be very reluctant ever again to go back to plug-in coils, except in special cases.

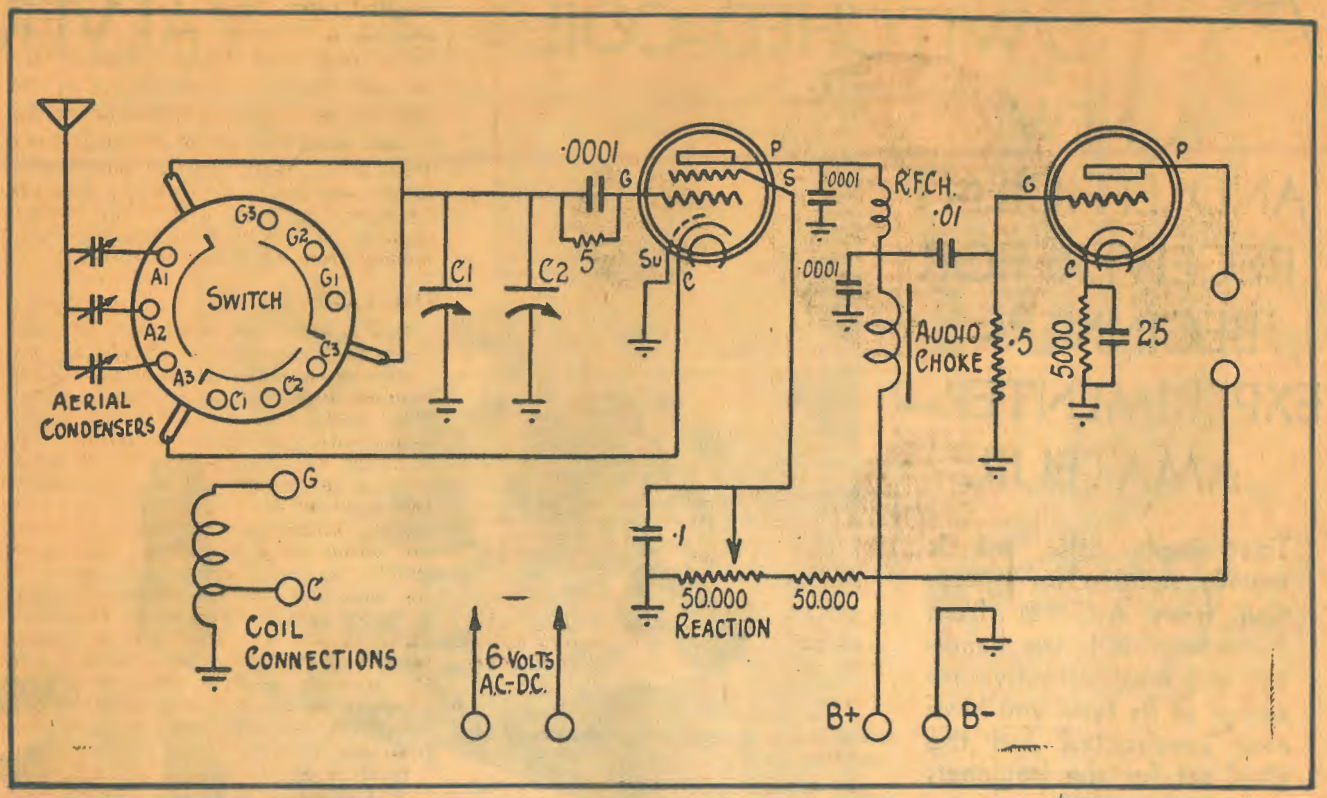
In construction there isn't the slightest difficulty in wiring—no more than one would find in wiring up to a multi-prong valve socket. Our diagrams have been drawn to show the connections, and we will discuss this aspect of the set later on.

THE CIRCUIT

We have used in this set two valves of the 6.3 volt type. The detector was a 6K7, and the audio amplifier a 6C5. There are several reasons for doing so.

In the first place, we can get better efficiency from these valves than from directly heated types, and the circuit is made simpler and much easier to get into operation. Secondly, it is possible to use either A.C. or D.C. on the filaments, so that the set is suitable for either all battery operation, or with a small power supply. Thus it is equally at home in the city or the country, without any circuit alterations.

THE CIRCUIT



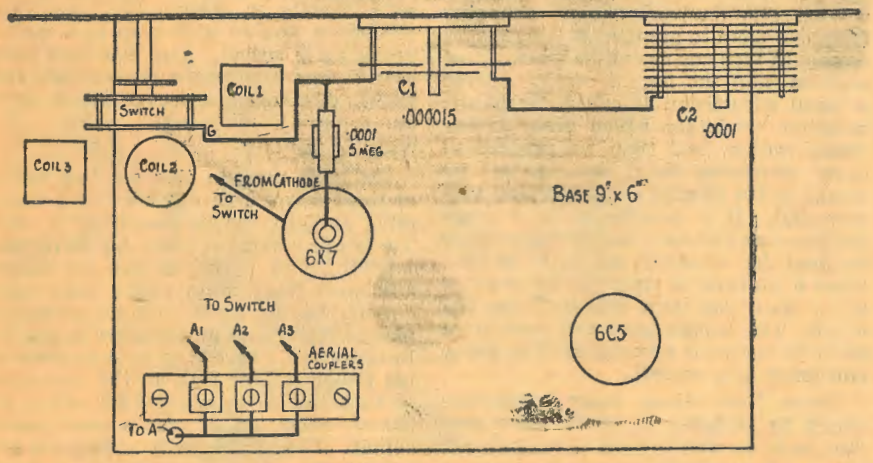
The circuit. A switch should be included between B minus and the chassis, or a lead to the B battery removed when the set is not being used.

As far as the filaments are concerned, the valves we have used draw only .6 amps, so that a 6-volt accumulator of moderate size will suffice. Should it be advantageous to keep this accumulator quite small, then by all means use the 6.3 volt .15 amps filament types represented by the 6S7G in place of the 6K7, and the 6L5G in place of the 6C5. The total filament consumption of the two valves is then .3 amps, and we suggest that these be used if the set is required for battery operation.

These valves may also be used with an A.C. supply, when they will operate just the same as the 6K7 and the 6C5.

When using A.C., probably the most economical idea is to buy a small filament transformer for the filaments, and a couple of B batteries for the high tension supply. The drain of the set is only a few milliamps, and for the comparatively short time the set is used, as compared with the running hours of a regular broadcasting set, even light duty B batteries are quite a proposition. Two light duty 45 volt batteries cost much less than a power transformer, filter condensers, and choke, and rectifier valve. Again, it isn't wise to use more than about 90 or 120 volts with headphones, unless some output filter circuit is used to make sure one doesn't come into contact with the high tension voltage. So that whether the filaments are lit from A.C. or not, the B battery supply, which is, of course, humless, is to be preferred in most cases. The batteries should last six or nine months at least before being due for replacement.

Small A.C. supplies can, of course, be used, should the necessary equipment be on hand. The total high tension we suggest be obtained from a voltage divider thrown across the output, the tapping being bypass with 8 mfds. Some years ago, commercially made power packs were sold giving a maximum of about 150 volts—one of these would no doubt be quite suitable for the set, and possibly the constructor may have one on hand.

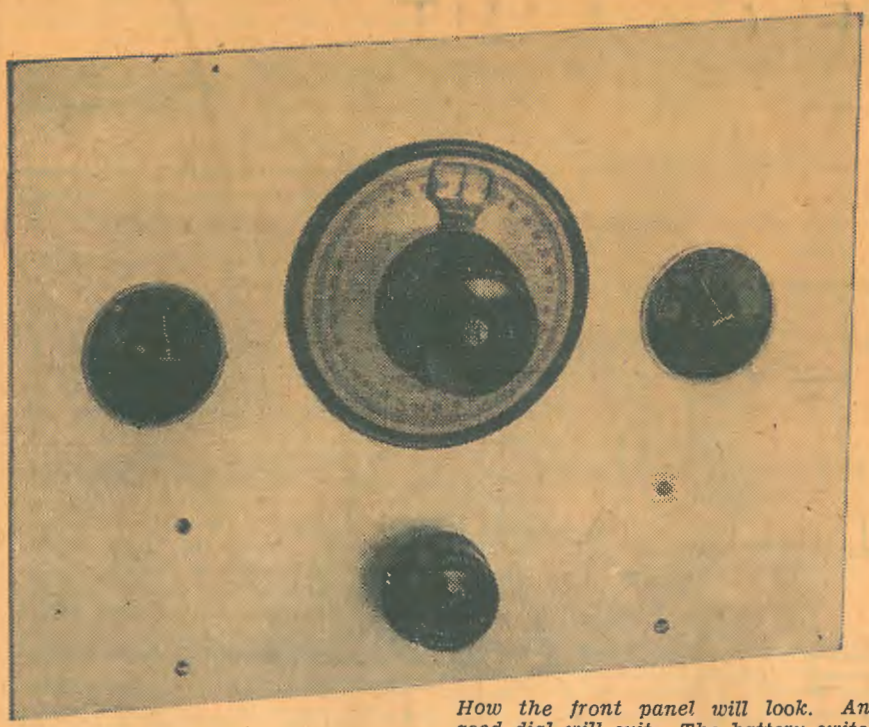


Here is a scale drawing of the components above the base. Connections are also shown in this diagram.

COIL DATA

W/BAND	COIL	TAP
10-20m.	3	1½
20-40m.	10	2
40-80m.	16	2
80m. up	32	6

Coils are wound on 1-inch former. The 10-20 coil is spaced over ¼in., the 20-40 coil over ⅛in. The others are close wound. All use 26 gauge d.s.c. wire. The coil unit may be bought ready made, and color-coded for connection.



How the front panel will look. Any good dial will suit. The battery switch may also be mounted on this panel.

THE DETECTOR

The detector uses an electron-coupled circuit with a tapped coil for reaction, the control being in the screen circuit of the valve. This is probably the most popular and satisfactory of reaction circuits—it is simple to get working, not at all critical, and the reaction control has the minimum of effect on tuning. The coupling to the output valve is through a high-impedance audio choke, which allows the maximum gain to be realised from this valve.

The output valve is a triode with an amplification factor of 20. This means that the output is more than enough for headphone operation, and there is no point in using a pentode valve which would call for more high tension current which is largely unnecessary. A two-valve set, generally speaking, is not required to work a speaker, although on the stronger stations a speaker can be used quite satisfactorily. Should most of the work be required for speaker, then a pentode could be used in its place, with a suitable power supply. Our experience has shown that the triode output valve will meet the requirements of by far the larger number of constructors, and the set is simplified on all points by using it.

AERIAL CONNECTION

The usual aerial connection for such a set is by means of a small variable condenser connected directly to the detector grid. This is a good idea, but it has disadvantages. The main one is that the best setting of the condenser, say, on 20 metres, is not necessarily the best setting for 80 metres. One can use much more capacity and get stronger signals, on 80, by employing a greater capacity. If the condenser is made variable, we would have to reset it each time we changed bands. Furthermore, when the resetting was carried out, unless the same capacity was used each time, we would be unable to maintain calibrations without carefully juggling both aerial condenser and bandsetter.

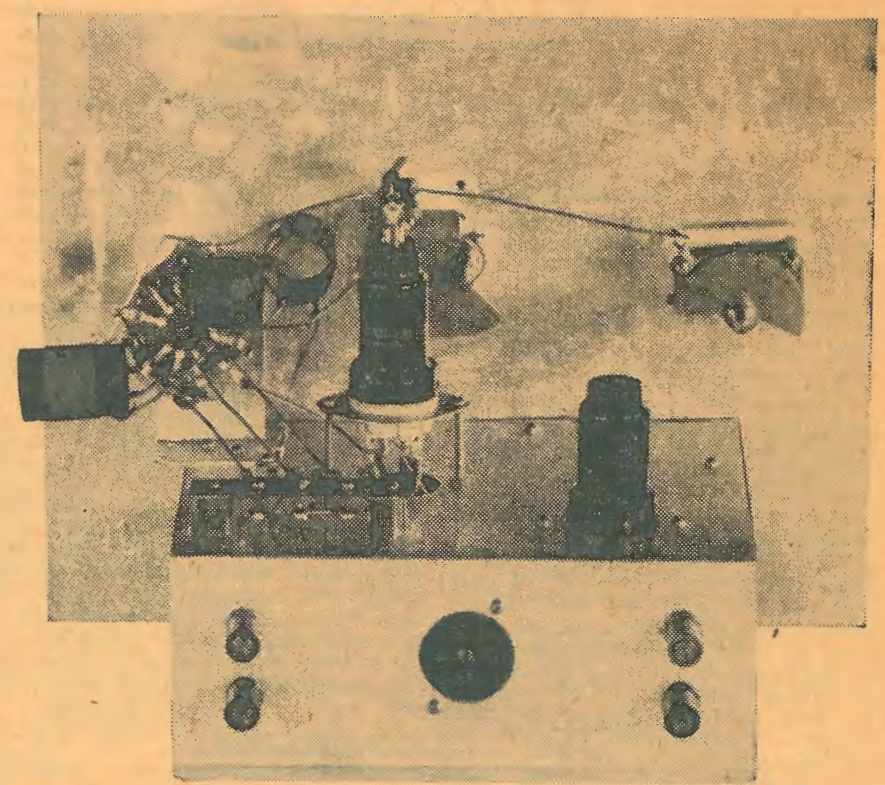
So we have used for aerial connection three little condensers such as are made for use in trimming short wave coils. In our case, we obtained them on a single strip, and mounted them at the rear of the chassis. The lead from the aerial terminal is connected to one side of each, and the vacant terminals connected one to each section of the switch. Thus, when we switch to any required band, we automatically switch over to a different one of the three little condensers. When adjusting the set, each little condenser is set to the position best suited to the requirements of that band, and left permanently fixed. This is a great help in maintaining calibration, particularly if the coils are "wangled" so that little or no adjustment to the bandsetter is required when moving from one band to another.

THE COIL UNIT

Now a few words about the coil unit. To keep the circuit as simple as possible, we have used a switch which handles three circuits in three positions. This means that we can use three bands with the circuit as shown. For instance, we could start off with a coil to tune 10 metres, and with the aid of the band-setter, run up with it to 20 metres, where the next coil would take up. From about 20 metres to 40 metres should be well within the range of the next coil, and the third coil would probably extend from 40 to 80 metres, right at the top. The idea in making each band start at 10, 20, and 40 is with the amateur bands in view—it is more efficient to place these bands with a low-tuning capacity than it is with a high one.

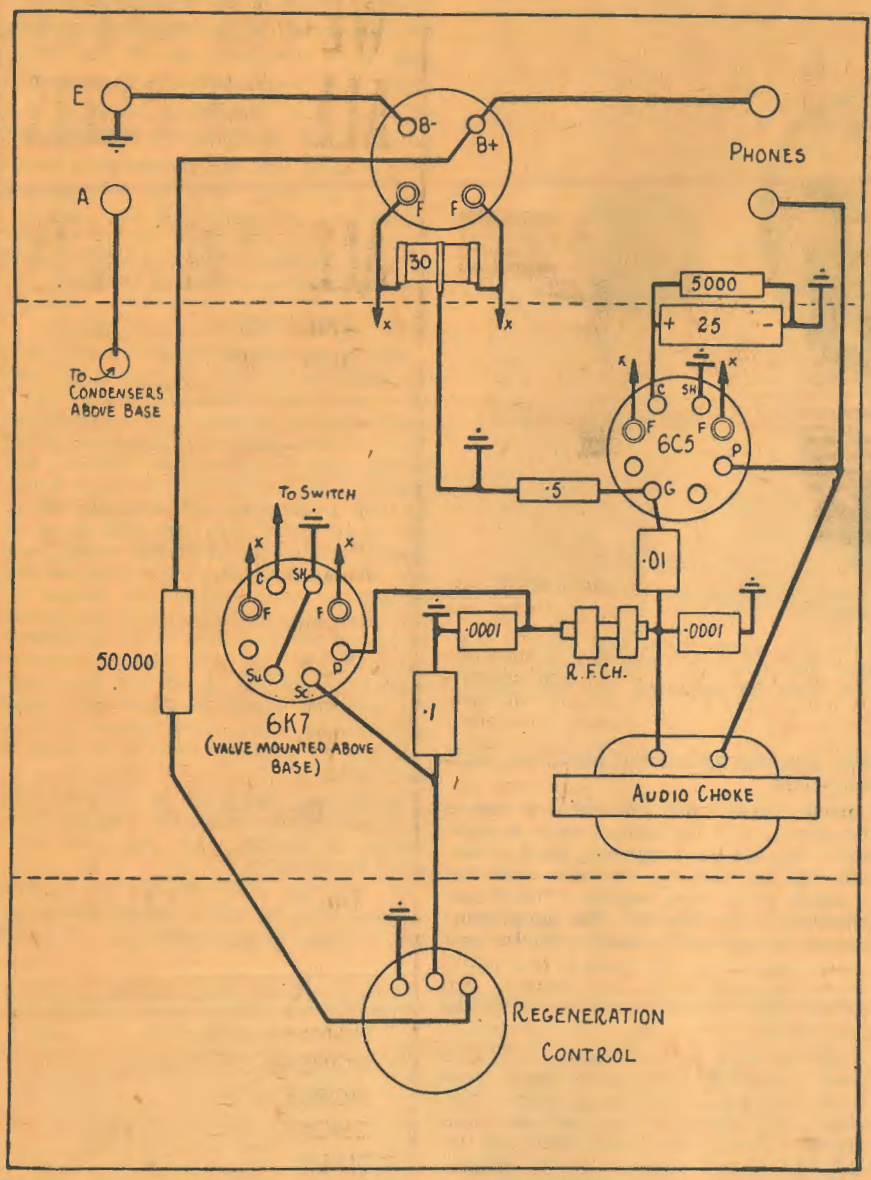
In all cases, the bands are located with the band-setter condenser, and the finer tuning is carried out with the two-plate bandspread.

As will be seen, one of the switch sections has its three points connected one to each aerial condenser. Another



The set from the rear. Aerial and earth terminals at left, headphone terminals at right. All but the earth terminal are insulated from the chassis. Battery socket in the centre.

☆ WIRING DIAGRAM ☆



The wiring diagram shows the connections under the base. The 30 ohm resistor is omitted in the battery version, connection to the chassis being made from one of the filament terminals of the 6K7.

connects to the grid ends of the three coils. The third connects to the cathode taps of the three.

The three main points are then connected into the circuit. As the aerial connection is made direct to the grid circuit, it is joined to the grid connection, and both run across the tuning condenser. The third runs across to the cathode tap.

There is nothing special to watch about wiring in the coils. If you wind them on pieces of one inch former, using about gauge 26 wire, and drill three small holes near the edge at one of the ends, you can then slip a piece of 18 gauge tinned copper wire through the holes, bend over the ends, and thus obtain a terminal point, to which the coil ends are soldered, and at the same time, provide the coils with long leads for connection to the switch. It will be unavoidable that some of these leads will be longer than others. Make the lower wave-length coils such as 10 and 20 metres with the shortest connections.

We suggest that you keep the coils at right angles to each other, and out of the way as much as possible. And don't forget when making switch connections to keep the wires in their right order. It's a good idea when wiring in each coil, to place the switch into the correct position for it, and then check up on the actual connections which are being made while the switch is so placed. You can't very well make a mistake if you do this. It's no good trying to receive if you have the grid end of the 20 metre coil connected to the switch point properly connected to the 40-metre coil!

CONSTRUCTION

The set is, of course, very simple to construct. The panel we used measured 12 inches by nine inches, and the base eight inches by six inches by three inches. In case you find this base a little bit short, we suggest making it nine inches wide instead of eight.

We have drawn out a small scale sketch of the components above the base, and you can take your approximate positions from it. They are not critical to a fraction of an inch!

Incidentally, if the aerial coupling condensers are not available easily in threes, separate units may be used soldered direct to the switch points.

We built the base from aluminium—if you do this you can cut out the holes for the valve sockets with an ordinary 1¼-inch wood bit lubricated with machine oil. Drill three holes before cutting—one for the centre and the other two for the socket mounting holes. It's easier to locate these holes before cutting.

Note that the detector valve socket is lifted above the base level on two long bolts. This is done to shorten the leads to it, particularly the cathode lead to the switch. It also brings the cap on a level with the tuning condenser.

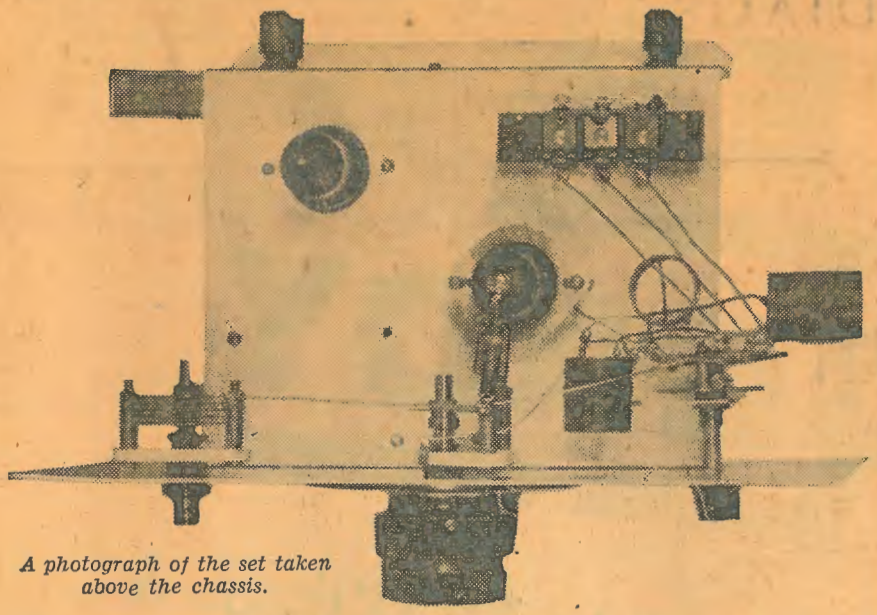
The aerial condenser strip is mounted where it is most easily adjusted, but its actual position isn't critical.

The under-base wiring diagram shows all the components and wiring. The 30 ohm resistor across the filaments need only be included when the filaments are lit from a transformer. There is a steady drain through it when the filament circuit is complete, and this is only waste. It is sufficient to earth one side of the filament circuit, and omit the resistor altogether, when the six-volt accumulator is employed. With the A.C., however, the resistor is very advisable as a means of keeping hum to a minimum. Its value is not critical, but should not be less than 30 ohms.

The regeneration control is a standard 50,000 ohms potentiometer, and forms part of a voltage divider system across the B battery. For this reason, a switch is required which will cut the circuit to the B battery when the set

PARTS LIST, SWITCHED-COIL 2 VALVER

1 Base and panel (see article).
1 .0001 mfds. variable condenser.
1 2 or 3 plate variable midget.
1 3 bank, 3 section switch.
1 .1 mfd. tubular condenser.
1 .01 mica condenser.
3 .0001 mica condensers.
1 R.F. choke.
1 High impedance audio choke.
1 5-meg. grid leak.
1 .5-meg. resistor.
1 50,000 ohms resistor.
1 50,000 ohms potentiometer.
1 25 mfds. electrolytic.
1 3 section trimming condenser bank.
1 Tuning dial.
Sockets—3 octal, or others to suit. Valves—4-pin for batteries.
Valves—1 6K7, 1 6C5, or equivalents.
Batteries—2 45-volt light duty, 6-volt accumulator, or 6-volt transformer.
1 Pair headphones, 4 terminals, 1 inch former and wire, 3 knobs or pointers, nuts, bolts, etc.
The coil assembly may be obtained factory-made.



A photograph of the set taken above the chassis.

is not required. Alternatively, the lead to the high tension terminal of the set may be removed when it is not in operation. If a filament switch is required as in the battery model, get one with two sections, one to break one of the A battery leads, and the other the B minus lead. Our sketch makes this point quite clear. This switch may be mounted on the front panel or in any other convenient spot.

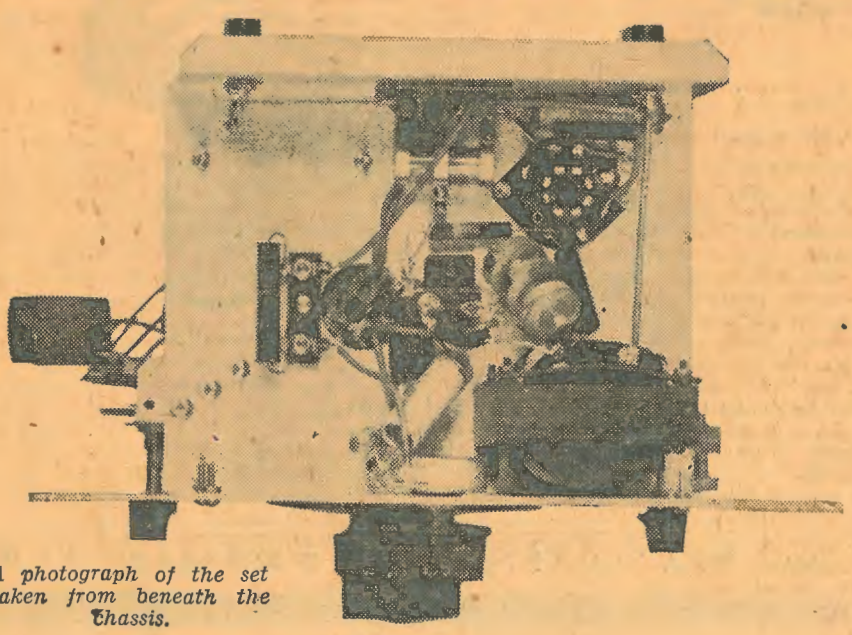
The audio choke isn't the same as a filter choke—it's a special high-impedance type used in audio circuits, and may be obtained at any radio dealer. It would be possible to use a resistance of 50,000 ohms in place of it, but the gain would be lowered by so doing.

OPERATION

To put the set into operation, make sure the connections are all in order, and connect up to the batteries, or the filament transformer. The filament should light up in about half a minute and the cathode be seen glowing dully. Now connect up the B batteries. A good band to start on is the 20-metre amateur band, as you are almost certain to find some signals there any time.

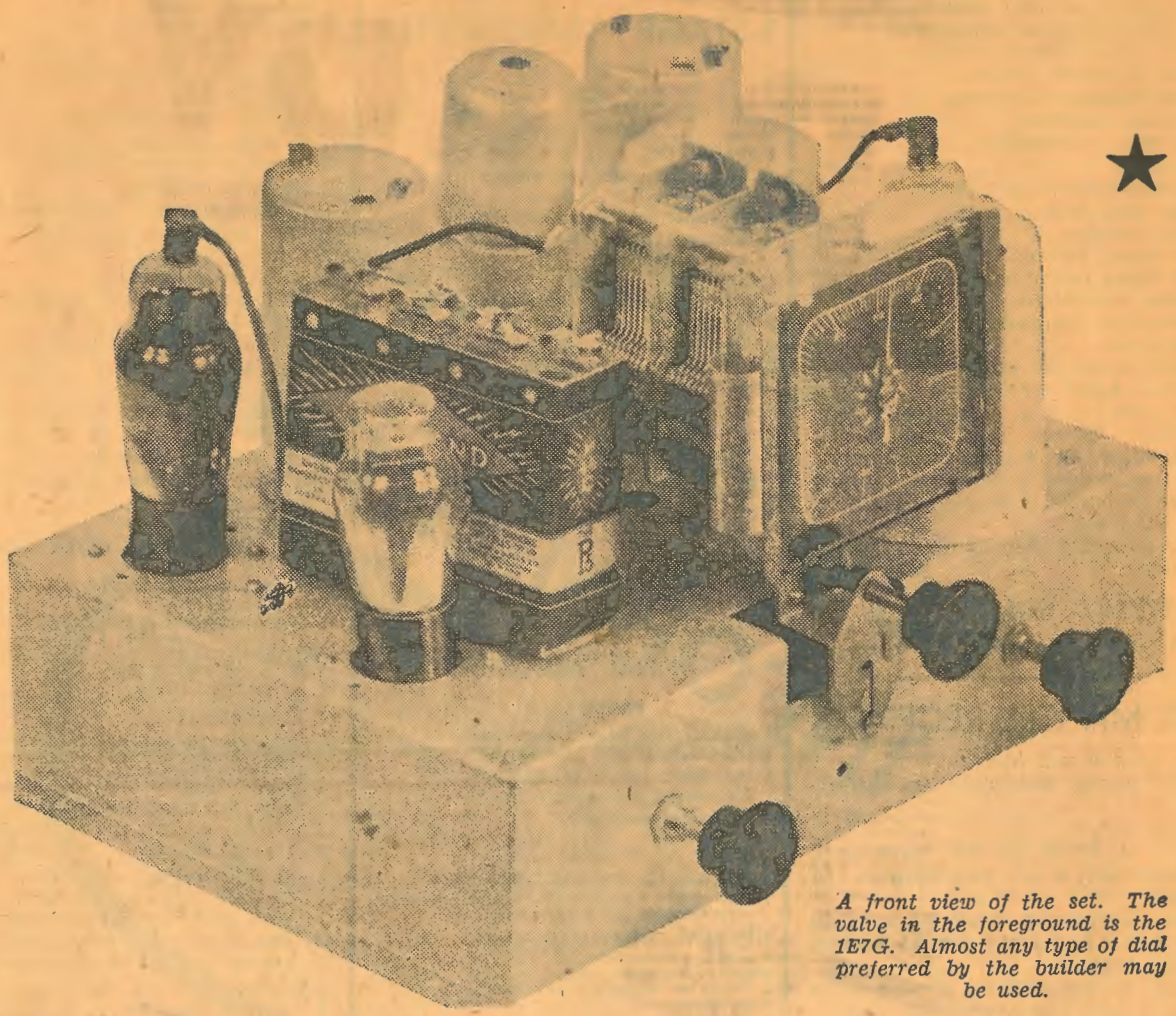
When the reaction control is operated, the set should go into oscillation smoothly and quietly. If it does not, you have probably got the aerial condenser screwed down too far for that particular band. On the 20 metre coil you may need to leave the condenser adjusted fairly well out—for 40 metres further in—for 80 metres, may be right in. The best adjustment is the one which is screwed in as far as is consistent with good reaction. The longer the aerial, the less will the aerial condenser be screwed down. There isn't much advantage in making the aerial more than about 60 feet overall. An earth connection is almost essential for best results.

Ninety volts of B battery will give good results on earphones, and there isn't much gain in using more than this. Remember that as you use more voltage, so is the current drain of the set increased. With a power supply, this, of course, doesn't matter so much.



A photograph of the set taken from beneath the chassis.

THE PUSH-PULL PENTAGRID 4



A front view of the set. The valve in the foreground is the 1E7G. Almost any type of dial preferred by the builder may be used.

This set represents an interesting version of the Pentagrid 4 series. It is the same in essentials as the simple Pentagrid circuit but includes for the first time, a new double pentode valve.

We have called this set the "Push-Pull Pentagrid Four" for several reasons. First of all, the name Pentagrid Four is so well known now among our readers, having appeared in almost every conceivable form, that they know pretty well now the general lay-out of the set when the name is used. Secondly, it is unique among our four-valve battery sets, because it uses, for the first time, a new output valve, which actually combines the virtues of a pentode with the advantages of a B class output stage.

It is a true Pentagrid set, because it has been designed, as have all these sets in the past, with the idea of combining extreme simplicity with efficiency. All the Pentagrid sets have been easy to make, and this set is just as easy to make as any of them. However, let's go through it, and see what it's all about.

THE RECEIVER

The receiver employs four valves, despite the push-pull output stage. It is a broadcast receiver, and therefore uses a standard broadcast type of coil kit. The intermediate frequency used is 460 kc., or, in some cases, 565 kc. Either of these frequencies will be suitable—some makers use one, and some the other. We generally refer to them as 460 kc. kits, whether they are, in fact, 460 kc., 465 kc., or, in some cases, even 485 kc. It doesn't matter at all which of these is used, as long as the kit is bought complete, and not made up of odd coils which may not be meant to work together.

Incidentally, this applies to the other sets in this book quoted as using 460 or 465 kc. coil kits. Any kit using a frequency round about this figure will be suitable.

The set uses 2-volt valves throughout. The first valve is a pentagrid converted, type 1C7G. There is one stage of intermediate amplification using a 1M5G type valve. This feeds into the second detector, a 1K7G, and this is transformer coupled to the output valve —the new 1E7G.

THE 1E7G

Now, a word about this new valve. As far as we know, it is the first time a set has been released or described using this valve. Actually, it is a double valve, and has two output pentode sections in the one envelope.

The sections operate as regular pentodes, except that they have characteristics which allow them to be used in a B class circuit.

Some years ago, valves of this type were very popular in England and the Continent, when they were known as "Quiescent Push-Pull" valves. This, however, is the latest type of American design, and is more in line with modern requirements.

PARTS LIST OF SETS DESCRIBED IN THIS HANDBOOK

SWITCHED-COIL TWO

1 Base and panel (see article).
1 .0001 mfds. variable condenser.
1 2 or 3 plate variable midget.
1 3 bank, 3 section switch.
1 .1 mfd. tubular condenser.
1 .01 mica condenser.
3 .0001 mica condensers.
1 R.F. choke.
1 High impedance audio choke.
1 5 meg. grid leak.
1 .5 meg resistor.
1 50,000 ohms resistor.
1 50,000 ohms potentiometer.
1 25 mfds. electrolytic.
1 3 section trimming condenser bank.
1 Tuning dial.
Sockets—3 octal, or others to suit. Valves—4-pin for batteries.
Valves—1 6K7, 1 6C5, or equivalents.
Batteries—2 45-volt light duty, 6-volt accumulator, or 6-volt transformer.
1 Pair headphones, 4 terminals, 1 inch former and wire, 3 knobs or pointers, nuts, bolts, etc.
The coil assembly may be obtained factory-made.

£7/16/- COMPLETE
"A" BATTERY 15/- EXTRA.

4/38 MANTEL RECEIVER

1 Base, 14 x 9 x 3 in.
1 2-gang tuning condenser, with trimmers.
1 Tuning dial.
1 465 k.c. superhet. coil kit (aerial coil, oscillator coil, 2 I.F. transformers and padder).
1 Power transformer, 385-0-385 v. at 60 mills, 6.3 v. at 3 amps, 5 v. at 2 amps, upright type.
2 8 mfds. electrolytics (or greater capacity), at least 500 v. working.
1 .5 mfd. tubular condenser.
3 .1 mfd. tubular condensers.
1 25 mfds. electrolytic.
1 .02 mfd. mica condenser.
1 .00025 mfd. mica condenser.
2 .0001 mfd. mica condensers.
1 1-meg. resistor.
2 .5-meg. resistors.
1 .25-meg. resistor.
1 .1-meg resistor.
1 50,000 ohms resistor.
1 100 ohms w.w. resistor.
1 40 ohms w.w. resistor.
1 .5-meg. potentiometer.
1 25,000 ohms voltage divider.
Sockets—2 octal, 1 "P" type, 2 4-pin.
Valves—1 6A8, 1 6K7, 1 EBL1, 1 80.
Speaker—1500 ohms F.C. matched for pentode.

£8/10/- COMPLETE

3-STAGE TRANSMITTER

EXCITER UNIT

PARTS LIST.

1 Chassis, 15½ x 11 x 3, and shield.
3 5-pin coil formers and sockets
1 Short-wave R.F. choke.
2 100 mmfd. midget condensers.
1 50 mmfd. midget condenser.
1 .1meg. resistor.
1 50,000 ohms resistor.
1 5000 ohms resistor, 60 mills.
1 [illegible] ohms voltage divider.
1 [illegible] ohms resistor, 100 mills.
1 400 ohms resistor, 100 mills.
1 50 ohms C.T. filament resistor.
5 .01 mica condensers.
1 .006 mica condenser.
1 .0001 mica condenser.
1 [illegible] mica condenser.
1 [illegible] switch and coupler.
2 Jacks.
Sockets—1 4-pin, 1 5-pin (for crystals).
2 Terminals.
Front panel, dial.
Valves—1 [illegible], 809.

FINAL AMPLIFIER

PARTS LIST

1 Chassis, 15½ x 11 x 3 inches.
1 5-pin coil former and socket.
1 100 mmfd. midget condenser.
1 R.F. choke, 100 mills.
3 .002 mica condensers.
1 Split-stator transmitting condenser, 50-50 mmfd. (1000 volt).
1 Neutralising condenser (1000 volt).
1 5000 ohms wire-wound resistor, 60 mills. (preferably with tapping).
1 50 ohms filament C.T. resistor.
1 Jack.
Sockets—2 4-pin.
2 Plug-type stand-off insulators.
2 Terminals.
Valve—1 809.

POWER SUPPLY

PARTS LIST

1 Chassis, 15½ x 11 x 3 inches.
1 Filament transformer, [illegible] v., at 4 amps, 6.3 v. at 5 amps, [illegible] v. at 2 amps, 5 v. at 3 amps.
1 Power transformer, 400-0-400, at 120 mills.
1 Power transformer, 600-0-6000, at 100 mills.
2 30h-[illegible] and 120 mills.
2 600 v[illegible]
2 4 mfds. [illegible] working paper condensers.
4 A.C. switch[illegible]
Sockets—2 [illegible]
Valves—1 80, [illegible]3.
1 50,000 ohms [illegible]eder resistor (2 25,000 ohms voltage dividers).

PUSH-PULL PENTAGRID 4

1 Base, 11½ x 9 x 3.
1 2-gang condenser.
1 465 k.c. b'cast coil kit (aerial coil, R.F. coil, 2 I.F. transformers and padder).
1 Battery switch.
1 .5 meg. potentiometer.
1 .5 mfds. tubular condenser.
2 .1 mfds. tubular condensers.
1 .01 mica condenser.
1 .00025 mfds. mica condenser.
1 .0001 mfds. mica condenser.
2 1 meg. resistors.
1 50,000 ohm resistor.
1 Push-pull "A" class transformer.
Sockets—4 octal, 2 5-pin.
Valves—1 1C76, 1 1M56, 1 1K76, 1 1E76.
Speaker—Permagnetic matched for push-pull pentodes.
Batteries—3 45-volt triple duty B batteries, 1 7.5-volt C battery, 1 2-volt 100 a.h. accumulator.
Valve cans, 3 knobs, battery cable, nuts, bolts, etc.

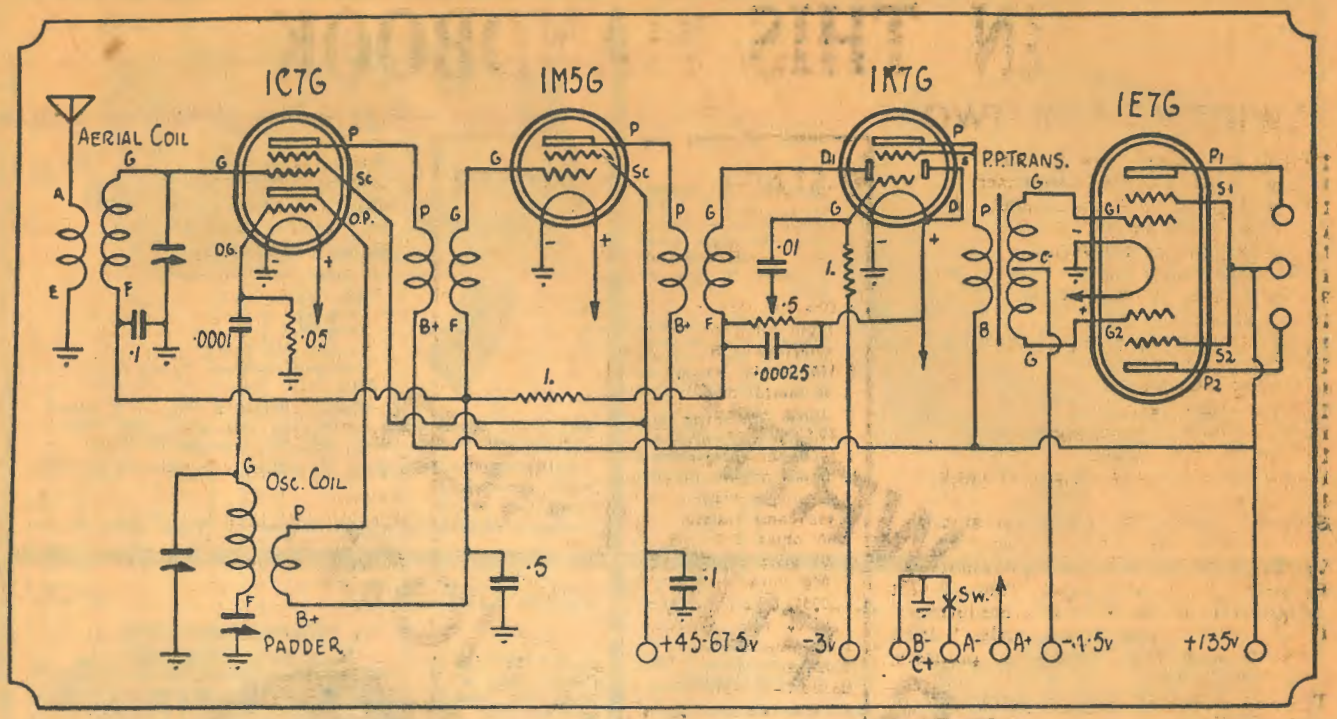
[illegible] COMPLETE

2JU[illegible]VE

1 Base, 16 x 10 x 3 in.
1 Panel, 18 x 10 in.
1 Tuning dial.
2 .0001 midget tuning condensers.
2 .00015 midget tuning condensers.
1 Power transformer, 3[illegible]0-385, at 80 mills, 6.3 v. at 3 amps, [illegible] v. at 2 amps.
2 8 mfds. electrolytic, [illegible] volts.
3 .5 mfd. tubular condensers.
3 .01 mfd. mica condensers.
1 .001 mfd. mica condensers.
1 .0005 mfd. mica condenser.
1 .0001 mfd. [illegible] condenser.
2 .1 mfd. tubular condensers.
1 5-meg. [illegible]istor.
1 .25 [illegible]. resistor.
4 [illegible]00 ohms resistors.
20,000 ohms resistors.
1 500 ohms w.w. resistor.
1 400 ohms w.w. resistor.
1 350 ohms w.w. resistor.
1 25,000 ohms voltage divider.
1 50,000 ohms potentiometer.
1 .5-meg. potentiometer.
1 Switch for beat oscillator.
2 465 k.c. I.F. transformers.
1 Beat oscillator coil (see text).
Sockets—5 octal, 2 4-pin.
1 2-bank switch, coil former and wire for coil unit. See text. This unit is also available commercially.
Valves—1 6L7, 2 6K7, 1 6N7, 1 6F6, 1 80.
Speaker—1500 ohms F.C., matched for pentode.
Knobs, hook-up wire, nuts, bolts, etc.

£11/10/- COMPLETE

THE CIRCUIT



The circuit is a particularly simple one. A standard push-pull transformer may be used, for "A" class work.

PARTS LIST, PUSH-PULL PENTAGRID 4.

1 Base, 11½ x 9 x 3.
1 2-gang condenser.
1 465 k.c. b'cast coil kit (aerial coil, R.F. coil, 2 I.F. transformers and padder).
1 Battery switch.
1 .5 meg. potentiometer.
1 .5 mfds. tubular condenser.
2 .1 mfds. tubular condensers.
1 .01 mica condenser.
1 .00025 mfds. mica condenser.
1 .0001 mfds. mica condenser.
2 1 meg. resistors.
1 50,000 ohm resistor.
1 Push-pull "A" class transformer.
Sockets—4 octal, 2 5-pin.
Valves—1 1C76, 1 1M56, 1 1K76, 1 1E76.
Speaker—Permagnetic matched for push-pull pentodes.
Batteries—3 45-volt triple duty B batteries, 1 7.5-volt C battery, 1 2-volt 100 a.h. accumulator.
Valve cans, 3 knobs, battery cable, nuts, bolts, etc.

A pentode valve, as everyone knows, has a very high amplification, and will deliver its full output with comparatively little drive. Thus, for quite a small signal into the grid, we get a pretty large signal out into the loudspeaker. That is the reason why so many sets these days use pentode output valves—it will be remembered that all the Pentagrid Fours in the past have used them.

A "B" class stage operates on a different principle. It needs a fairly large signal input, but, in return, will give very large outputs. This in itself would seem to be asking for heavy current consumption. But the B class valve is so made that, with no signal, it draws only a milliamp or two. As the signal fed to it is increased, so is the battery drain, which is proportional to the actual signal strength. If we use the set at low volume, then the variation in B battery drain is only very small. If we want big output, the drain increases with the loudness of the signal, dropping immediately the signal becomes soft again, or ceases when the selection or announcement is finished, whichever the case may be.

Thus, the pentode draws a steady current all the time, whether the signal is loud or soft. The B class current is varying all the time, following the loudness or otherwise of the signal.

The 1E7G combines the features of both these valves. It has the ability of the pentode to give big output with a small signal, although it needs rather more signal than a single pentode to give its best, which is only natural with the two sections connected in a push-pull circuit. It draws with no signal about the same plate current as a single pentode, such as the 1D4, but, as the volume increases, there is also an increase in plate current—not, however, as much as with a B class valve such as the 19. Also, it does not operate in such a manner as to allow grid current to flow, unless overloaded, so that there is no need to use a B class transformer. As a result, we can couple with a transformer having a good step-up ratio, thus making up for the increased drive on the grids needed over a single valve.

The filament drain of the 1E7G is .24 amps., which is the same as that of the generally used 1D4 single pentode. Its plate current on no signal is about 6.5 mills. with 7.5 volts bias. This also is about the same as the single pentode. The variation in plate current is only 3 or 4 milliamps at good volume, so that the valve's characteristics are really very attractive. We can get our push-pull output with very little extra battery drain, and the maximum output of the valve is .65 watts—quite a handy figure, and more than enough for almost any purpose.

We might mention that, in the photographs, we have shown a 4.5 volt bias battery—at the moment this was the one we were using in some experiments with lower plate voltage. Actually, we suggest using a bias battery of, say, 9 volts, and tapping off the required 7.5 volts from it. Should 90 volts be used, as sometimes is the case, the 4.5 volts would be the right amount to use.

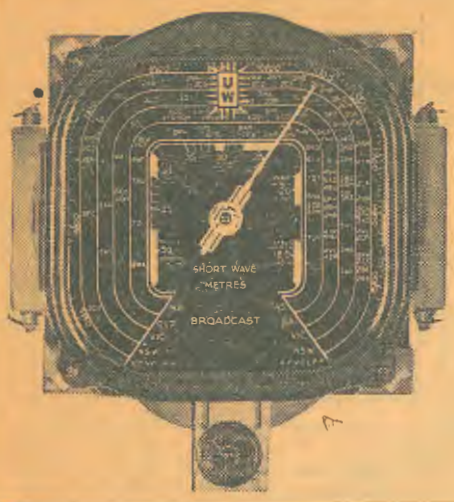
The transformer is a standard A class job, and we suggest using as high a ratio as possible. Not less than 3½-1 will be required to get the best results. Few audio transformers are sold with a lower ratio than this.

THE CIRCUIT

There are one or two points about the circuit we would mention. First of all, it will be noticed that the 1K7G is used as a triode, having the plate

"CROWN" PRECISION BUILT DIALS

FD8GM LIST PRICE 37/6

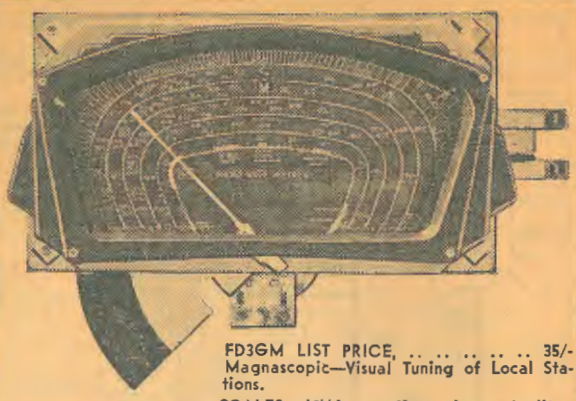


Magnascopic — Visual Tuning of Local Stations.

SCALES: 7in. square, glass edgelit, B/C Single Glass — Green, D/W, two glass, green and amber. Indicators available to suit all States.

MOVEMENT: Popular Friction Drive to gang with 290 deg. antiback lash gear train to needle spindle.

FD8G LIST PRICE, 32/6 Similar to FD8GM, but without Magnascopic Visual Tuning Feature.



FD3GM LIST PRICE, ... 35/- Magnascopic—Visual Tuning of Local Stations.

SCALES: 10½in. x 6in., glass edgelit—B/C Single Glass—Green. D/W, two glass green and amber.
MOVEMENT: Friction drive, with 180 deg. needle travel.

MOUNTING: Direct to gang, fits entirely above chassis, no cut-out being required.

FD3G LIST PRICE 27/6
Similar to FD3GM, but without Magnascopic—Visual Tuning Feature.

CDIM LIST PRICE 35/-

Magnascopic—Visual Tuning of Local Stations.

Also S/W indicator lights up automatically when switched to Short Wave band only, whilst B/C Local Stations light up when tuned to Broadcast side.

SCALE: 8in. dia. multi-coloured. D/W Celluloid.
MOVEMENT: 180 deg. Cord-drive, using especially made impregnated braid, producing powerful, velvet-smooth action.

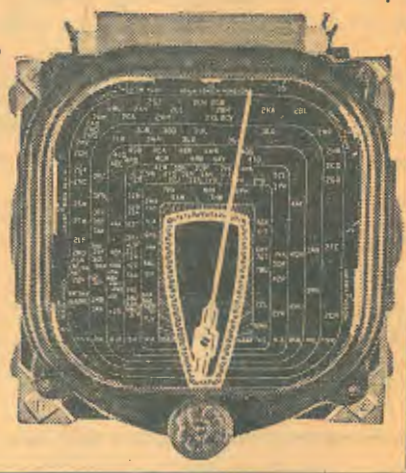
CDI LIST PRICE, .. 27/6 Similar to CDIM, but without Magnascopic — Visual Tuning Feature.

FD6G LIST PRICE 25/-

Similar in size to FD8GM, but available with beautiful multi-coloured acid-etched glass scale, lighting up in four colours with distinctive "Sunrise" effect.

MOVEMENT: 180 deg. as used in FD3GM, with same mounting.

ESCUTCHEON follows latest trend in providing fingerplate to prevent cabinet being scratched by finger-nails when tuning.



PERMATUNE

IRON CORED

IFs BROADCAST and SHORTWAVE COILS

Frequency drift, with its resultant "off-station" tuning and distortion, has now been eliminated by these newly developed CROWN Iron-cored components, incorporating PERMEABILITY TUNING.
Adjustment is obtained by INDUCTANCE variation, the iron core being moved up and down by means of a screw. Once adjusted the screw is locked in position with special LOCKING NUT, which ensures permanence of adjustment under the most adverse conditions.

"PERMATUNE" I.F. TRANSFORMERS.
TYPE ISP/465. PRICE, 12/6.

Adjustment is obtained by the "Permatune" method of inductance variation—a single screw each end being used for adjustment. The usual compression type mica trimmers are replaced by ceramic moulded fixed mica condensers, tested to within plus or minus 2½ per cent. of capacity used. The unit is fitted in a 4¾in. x 1 3-8in. square can.

"PERMATUNE" BROADCAST COILS.
TYPE CIV. PRICE, 7/6.

These coils are factory set to track with standard Crown dials, and S.C. Type "F" gangs. Matching being obtained by inductance variation with the "Permatune" iron core. Each coil may be re-adjusted to track with different dial calibrations. High impedance couplings ensure even sensitivity over the whole band—the unit fits into a 2 3-8in. x 1 3-8in. square can.
Type Nos: CIV/aer., R.F., and Osc./465.

"PERMATUNE" SHORT WAVE COILS. TYPE CIX. PRICE, 4/6.

First-class tracking—Always so difficult to obtain on Short Wave, especially when using an R.F. stage—is now definitely assured with these newly-developed Iron Core "Permatune" S.W. Coils, whilst the "Q" factor is greatly improved.

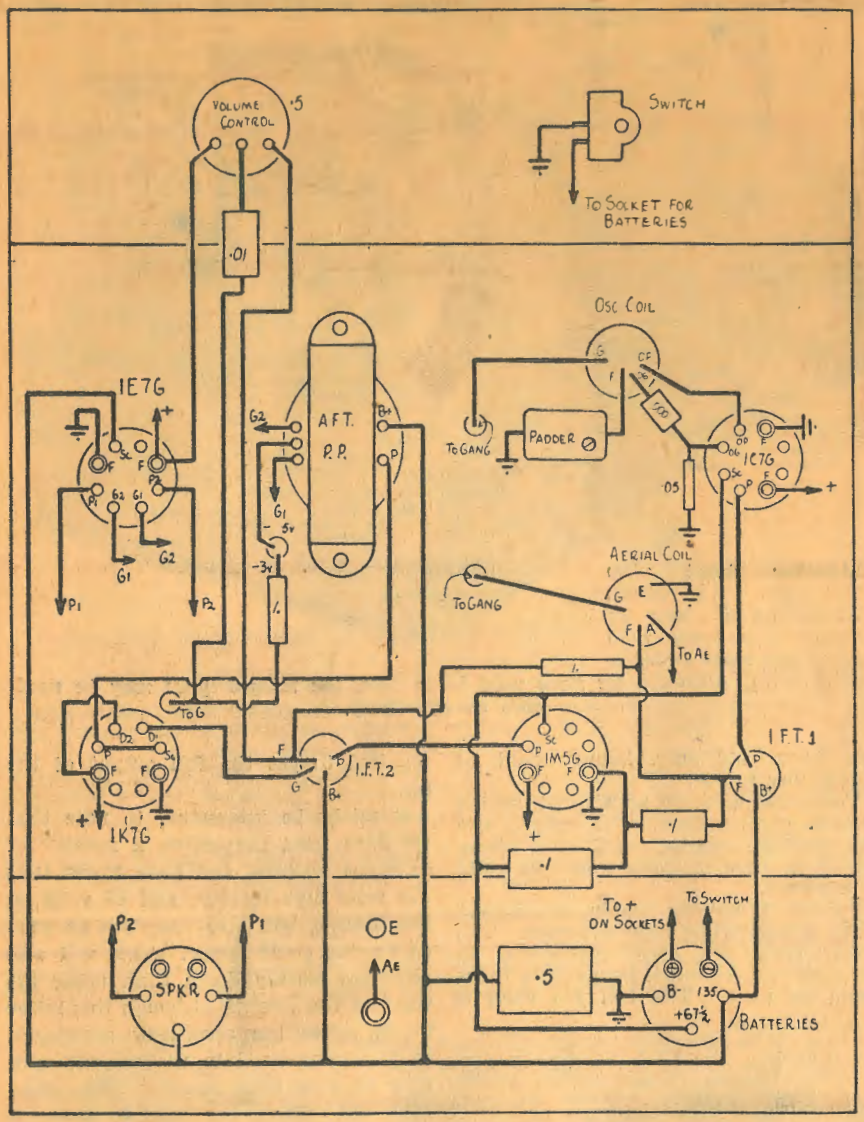
Measuring 2in. x ½in., the coils are ready for screwing direct to chassis or plate, and are available in two ranges.

Type Nos. 12 to 35 M.: CIX/12aer., R.F., and Osc. 16 to 50 M.: CIX/16aer., R.F., and Osc.

CROWN RADIO PRODUCTS Pty. Ltd.

'Phone, MW2628 (3 Lines).
51 MURRAY STREET, PYRMONT, SYDNEY
DISTRIBUTORS IN ALL STATES AND N.Z.
Telegrams: "Crownradio," Sydney.

★ WIRING DIAGRAM ★



The wiring diagram gives a complete picture of the connections. The bias battery stands above the chassis. The positive terminal connects to the chassis through a solder lug bolted to the frame of the gang condenser.

and screen tied together. This has been done because, although a screen grid connection will give greater gain, this gain is only obtainable with a high impedance in the plate circuit. The average transformer has far too low an impedance to make this practicable, and the triode connection, with its lower effective impedance, is required. Wired in this way, the valve has an excellent amplification for a triode, and will drive the output valve just about to its limit on a strong signal.

There appears to be no need for by-passing or filters in the plate circuit, as we never at any time found instability in the circuit. A .00025 condenser from the 1K7G plate to earth would be all that is required in the unlikely event of audio instability being experienced.

The A.V.C. circuit used is about the simplest possible, and it is quite effective. As we have often pointed out, the A.V.C. in a circuit such as this is mostly valuable as a means of levelling the volume of the stations to something like comparable strength rather than effecting fine points in control. Most A.V.C. circuits these days are regarded in this light by engineers—this being so, the simpler forms are favored, as they are just as effective, particularly in broadcast sets, as any other type.

Here again, we found not the slightest trouble from instability, and consequently were able to reduce the components in this circuit to an absolute minimum.

Apart from this, there isn't much to say about the circuit, except to again comment on its utter simplicity, and the ease with which it can be wired up and put into action.

Maybe, it would be a good idea to say something about the valves, as there may be some readers who would like to alter their present pentogrids, and build this set. For the converter socket, we have used a 1C7G. In effect, this is a 1C6 with an Octal socket—we used Octal sockets, because these are now being standardised by practically everyone, and it's a good plan to do so. However, the 1C6 can be used here with its 6-pin socket, and the 1A6 also with a 6-pin socket. If you are using an Octode, it can also be used, provided the correct socket and connections are used, whether a "P" base type is employed or not.

In the I.F. amplifier socket, the 1M5G is practically a 1C4 with an Octal socket. So you can use a 1C4 with a four-pin socket. A 1A4 or a 34 could also be used, although, strictly speaking, these valves should have a minimum bias of three volts. However, in this A.V.C. circuit, there is generally some bias all the time, and it may be possible to get away with it, particularly if the screen voltage is not made higher than 45 volts. Generally, this voltage is ample for almost any set of circumstances.

In place of the 1K7G, we could use a 1K6, as this is actually the six-pin socket version of the 1K7G, which has an Octal base. In this socket could also be used the 1B5 and 25S, if these are on hand, as they are somewhat similar in characteristics with the 1K7G as a triode.

However, if building the set right from the jump, we suggest that you keep to the valves as originally used in our set.

There is, of course, no equivalent to the 1E7G, which has an Octal base.

Some speakers may be fitted with a 4-pin base instead of a 5-pin. In this case, you will generally find a red lead, which is the H.T. lead—the other two being connections for the two plates of the 1E7G. In any case, it is generally easy to trace the leads through to the speaker, and find the high tension lead, which is the one running to the centre-tap on the transformer of the speaker.

BUILDING THE SET

The set is built up on a base 11½ x 9 x 3 inches. It is a standard Pentagrid-Four type of chassis, such as was used in the 1937 Pentagrid-Four described in our last Call-Sign Book. The coils may be either the standard type as we have shown, or the later midget type such as used in the 4/38 receiver described in this book. We suggest that you use as good a kit as you can obtain, as modern iron-cored coils are very efficient, and can be relied upon to give excellent results.

The general lay-out of the set is quite simple. The gang condenser should be bought at the same time as the coils and the dial, so that you are sure they work together. It is a good plan to get a dial matched for the coils, because this makes lining up much easier, apart from the natural convenience of having the stations marked out in their places. The dial we used is just a plain dial—tastes vary so much that we didn't worry about specifying any one in particular. If you want a small dial, there are some very nice small straight-line types readily available at any dealers.

Note that the transformer is mounted under the chassis. It is convenient to place it here, as it allows the bias battery room to be stood above the chassis. If you use a transformer that is too large to put underneath, you can mount it on top, and stand the bias

battery in the cabinet at the side of the set, as we have done with one or two sets in the past.

WIRING

The wiring is exceptionally simple, and there isn't much we can say to amplify the information contained in the wiring diagram and the photographs. Note the C battery leads running through a hole in the chassis to the C battery mounted above. The positive side of this battery is connected to a solder lug bolted to one end of the gang condenser, where a convenient hole will be found. There isn't any particular reason why it should be connected exactly to this point, except that of convenience. The only other lead running through the chassis is that to the grid of the 1K7G, which may be shielded as a precaution against feedback.

We didn't find it necessary to put a shield can round the 1C7G, although, in some cases, this might be a good idea if the set has a bit more gain than the average, and shows signs of oscillation on weak signals. It might be a good plan to include it in any case. There should be no need to shield the 1K7G.

The condenser we mounted up from the chassis on long bolts in order to locate the tuning dial at the most convenient spot. This is a matter which, of course, will depend largely on the type of dial you use. It doesn't matter much whether the condenser is raised up an inch or two, or mounted flat on the chassis. Incidentally, the gang should have trimming condensers, as there are none on the tuning coils.

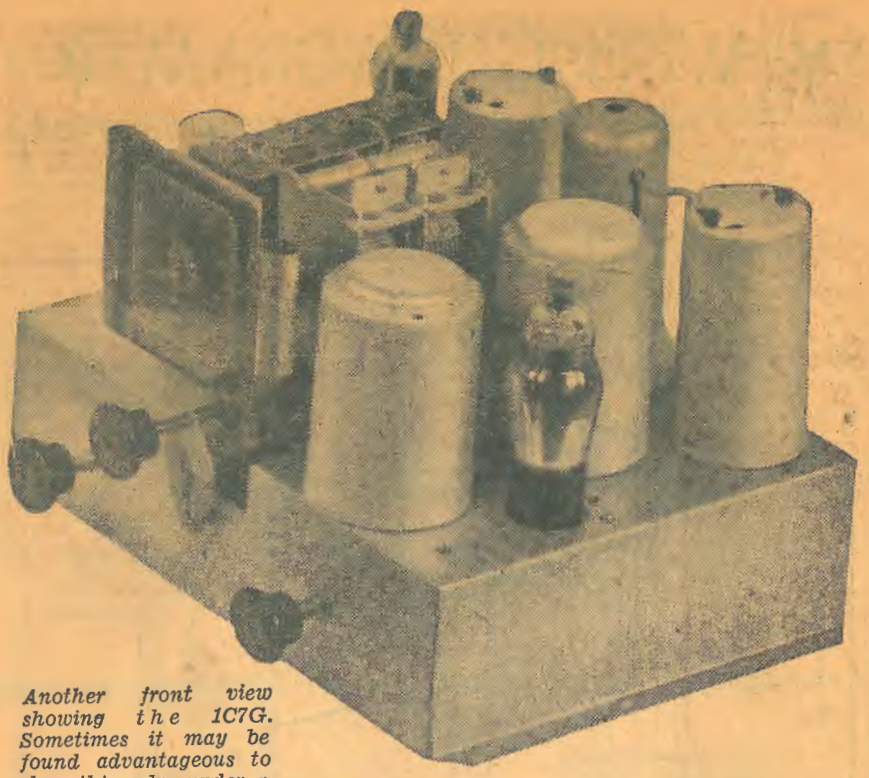
BATTERIES

The A battery supply may be from an accumulator of two volts. We suggest using one of ample capacity, as this will allow a good run between re-charging. About 100 amp. hours would be a good size to use.

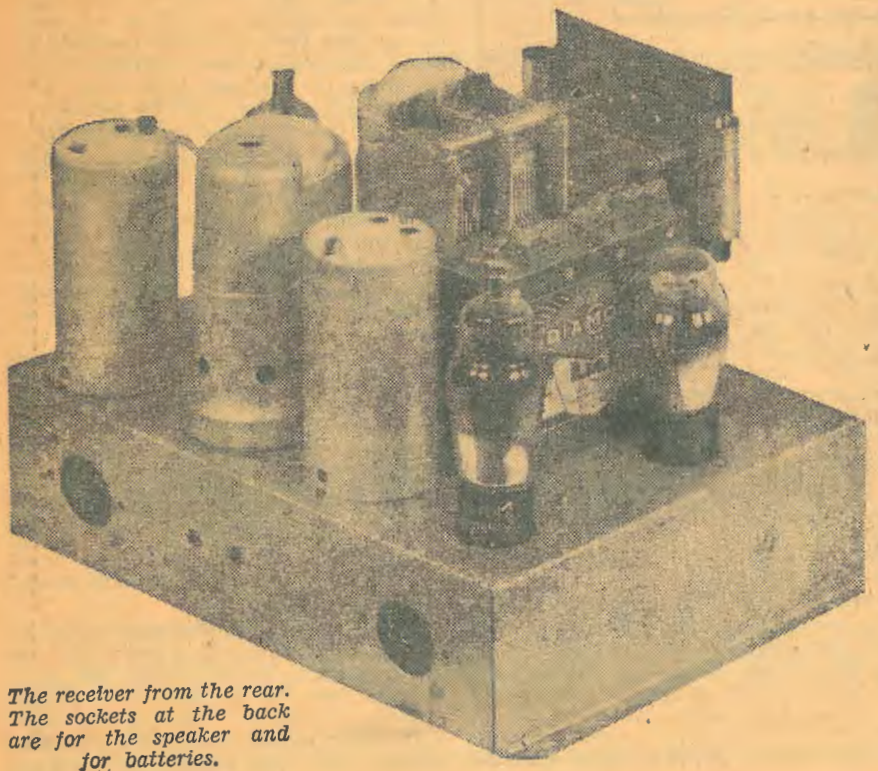
You could also use an air-cell, as the current consumption is .6 amps., and the dropping resistor required .5 ohms. Either of these methods would be quite satisfactory.

For the B battery supply, we suggest three 45-volt triple duty batteries. The larger types are more economical in the long run, although heavy-duty types could be used. The full 135 volts is required to get the full output of the set.

It might be interesting to note that we have tried the set on a number of different settings, and have found that 135 volts high tension, and 45 volts on the screens, will give reception as good as anyone could desire. This will also give less battery drain than using 67½ volts on the screens, although this latter figure raises the sensitivity somewhat. It is also possible to use the set with only 90 volts high tension. This, however, does limit the output, although sensitivity is still quite good, and battery drain under 10 mills. With the 90-volt high tension, we suggest using 4.5 volts of C battery instead of the 7.5 volts normally required for the 1E7G on 135 volts.



Another front view showing the 1C7G. Sometimes it may be found advantageous to place this valve under a shield can. Although we have used large coils, the midget types may be used just as effectively.



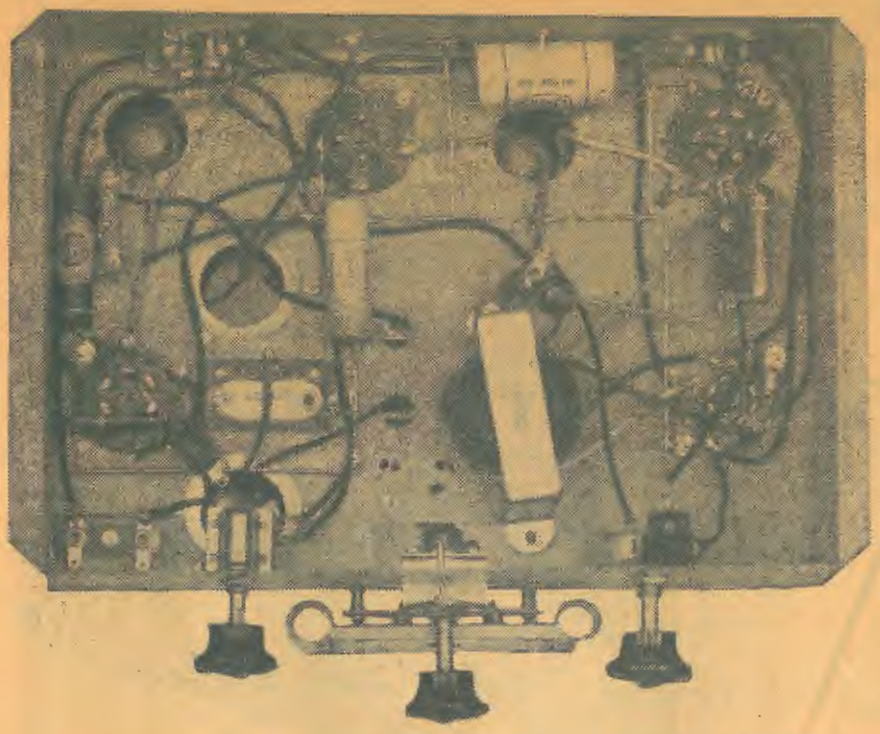
The receiver from the rear. The sockets at the back are for the speaker and for batteries.

SPEAKER

A good permagnetic speaker is required. The load resistance for the 1E7G maximum output is 24,000 ohms. If you use a speaker which has been made for push-pull pentodes, it will be approximately right for this valve. Use the best speaker you can afford, as the output and quality from the set are quite good enough to merit it.

LINING-UP

Having made sure the set is properly wired, connect the A battery leads and switch on. See that the valves are alight—they will glow a dull-red. Having connected the A battery—you can't very well blow the filaments with the B battery. An ordinary torch bulb connected in series with the B minus lead will, in any event, act as a fuse should it be required.



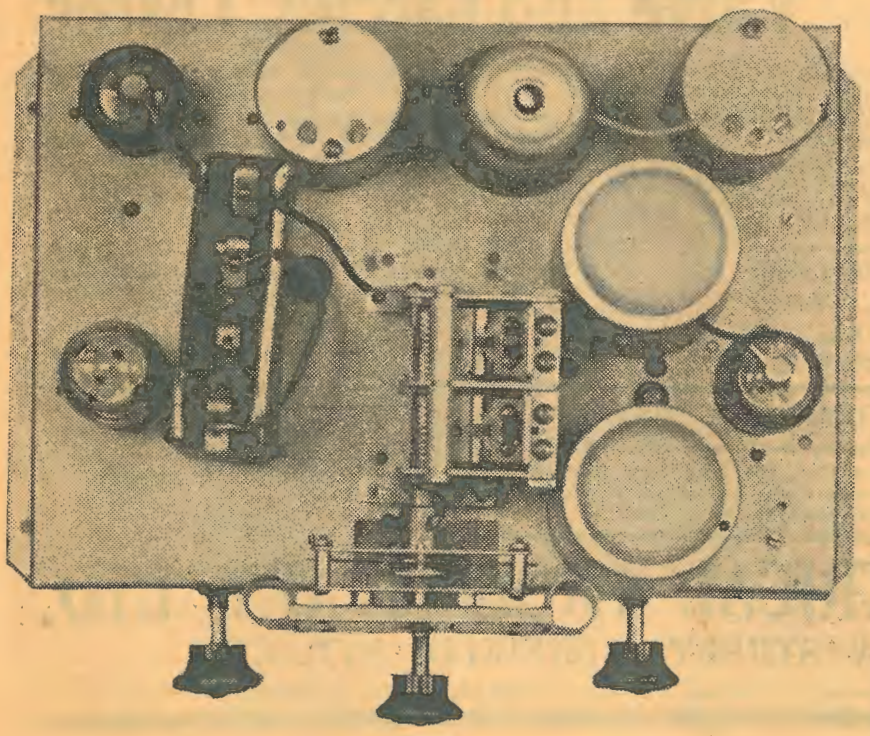
This picture shows the wiring beneath the chassis. Note the audio transformer.

Loosen the padder about three turns and unscrew the trimmers on the gang. Now tune in a strong station at the bottom of the dial, and adjust the front or oscillator trimmer until it is received at its right spot according to the dial markings. If necessary, keep tracking the aerial trimmer, which is now peaked at the adjustment which gives best results.

Now swing up to the top of the dial to another strong station, and note whether it comes in too high or too low from its right position. If too high, screw the padder down and re-tune, until you get it at the right spot. Don't touch the gang trimmers while you do this. If it is too near the centre of the dial, loosen the trimmer padder instead of tightening it.

Now run back to the bottom of the dial, and make the final fine trimmer adjustment on a weak station, so that you get the best possible volume. The set is now lined up and ready for work.

An ordinary aerial will do the set—experiment if you like with different lengths for best results.



Looking down on the receiver.

A MODERN 3-STAGE AMATEUR TRANSMITTER

COMPLETE WITH WIRING DIAGRAMS

Every licensed amateur will be interested in this transmitter, which has proved its worth during several months of service on three bands. It is the most flexible and efficient transmitter for the maximum power rating that one could desire. It uses the latest type of amateur transmitting valves.

ONLY a few months ago, amateur transmitters were granted the right by the P.M.G.'s Department, to use an input power to their transmitters of 50 watts. Previously, the power limit had been the very low one of 25 watts.

The increase in the power limit coincided with the release of several new transmitting valves, which made the design and construction of a 50-watt transmitter quite easy. One of the valves which have helped in the task is the type 809. After exhaustive tests, we have satisfied ourselves that it is a remarkable valve in many ways. As a result, we have designed this simple transmitter which will allow an input of 50 watts to an 809 in the final stage, on any band open to amateurs from 80 to 10 metres.

It is built on three chassis, each 15½ x 11 x 3 inches. The panels are standard width of 19 inches, so that the chassis will fit in a standard rack. The power supply occupies the bottom the exciter unit the centre, and the final amplifier the top. In between these could be housed a modulator on the same size chassis, a meter panel, and at the very top, an aerial tuner unit if desired. All the power connections plug into the power supply and also the transmitter chassis, so that it is but a second's work to disconnect any one unit.

The Design

Having decided to build a transmitter for the 809 as a final amplifier, the next thing was to sit down and work it out. This did not prove a very difficult task, as it was simply a matter of selecting the most suitable of the well-known circuit and valve combinations, and bringing them together in one unit.

As with most transmitters, we began at the final stage, and worked backwards. The 809 has a rating at 600 volts on the plate, which when drawing a current of 83 mills. must therefore have an input of 49.8 watts! Whether this is design or good judgment we are not prepared to say, but there it is, just nicely inside the 50 watt limit.

So we made a start with the 809 as an R.F. amplifier, with an input of roughly 50 watts. This of course calls for a power supply of 600 volts at 83 mills. To be on the safe side, we can make the power supply for this capable of 100 mills.

The next problem is the drive for the 809. A convenient little job such as this will surely find its way ultimately on phone, so let us work on the phone ratings.

These call for a driving power of 7.5 watts on the above ratings. As a most convenient method of obtaining bias is via a grid resistor, we will need to allow a further 5 watts or so for losses here. And as every good phone man knows, there should be up to twice as much drive as required available for a plate modulated stage, we shall need something like 20 watts or more, especially after we have allowed for coupling losses, etc.

At the same time, as we desire to use several bands, we will want a driver valve that will supply this power, and one which is at the same time, a good doubler. It will, of course, need to be driven by a crystal oscillator stage also capable of operating as a doubler or a straight oscillator.

So to cut a long story short, we chose an 807 as the driver for the 809, and excited it with a 6A6 in the well-known "Jones Exciter" circuit. We can therefore start off with a 40-metre crystal, double to 20 in the 6A6, double again to 10 in the 807, and still have enough drive to obtain good efficiency in the 809 on 10 metres. Or we can use only one section of the 6A6 as a crystal oscillator to drive the 807 as a doubler to 20, and the 809 amplifying on 20. Or we can use the 6A6 oscillator to drive the 807 as an amplifier, driving the 809 as an amplifier on 40. Using an 80 metre crystal, we can take in this band as well.

The Exciter Unit

Having outlined what can be done, we next proceed to describe the three sections of the transmitter in more detail. Leaving the power supply for the moment, we turn to the exciter.

The 6A6 is operated either as a straight oscillator, or as an oscillator doubler. In the first case, the circuit will show that only one section of the valve is in use, the other being cut out by a switch. A second section on the switch also cuts the high tension voltage to this doubler section when it is not in use. as the wiring diagram shows, an ordinary wave-change switch is used, controlled by a shaft running through the front panel. The coupling condenser to the 807, which is a very small one of .00005 mfds., is switched over to the respective plates of the 6A6, according to the use made of it.

EXCITER UNIT

PARTS LIST

1 Chassis, 15½ x 11 x 3, and shield.
3 5-pin coil formers and sockets.
1 Short-wave R.F. choke.
2 100 mmfd. midget condenser.
1 50 mmfd. midget condenser.
1 .1 meg. resistor.
1 50,000 ohms resistor.
1 5000 ohms resistor, 60 mills.
1 25,000 ohms voltage divider.
1 300 ohms resistor, 100 mills.
1 400 ohms resistor, 100 mills.
1 50 ohms C.T. filament resistor.
5 .01 mica condensers.
1 .006 mica condenser.
1 .0001 mica condenser.
1 .00005 mica condenser.
1 3-circuit switch and coupler.
2 Jacks.
Sockets—1 4-pin, 1 5-pin (for crystals).
2 Terminals.
Front panel, dials, etc.
Valves—1 6A6, 1 807.

FINAL AMPLIFIER

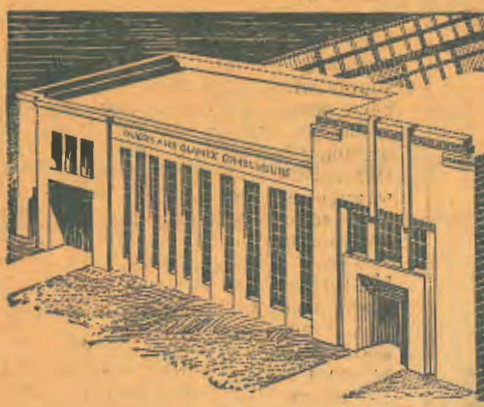
PARTS LIST

1 Chassis, 15½ x 11 x 3 inches.
1 5-pin coil former and socket.
1 100 mmfd. midget condenser.
1 R.F. choke, 100 mills.
3 .002 mica condensers.
1 Split-stator transmitting condenser, 50-50 mmfd. (1000 volt).
1 Neutralising condenser (1000 volt).
1 5000 ohms wire-wound resistor, 60 mills, (preferably with tapping).
1 50 ohms filament C.T. resistor.
1 Jack.
Sockets—2 4-pin.
2 Plug-type stand-off insulators.
2 Terminals.
Valve—1 809.

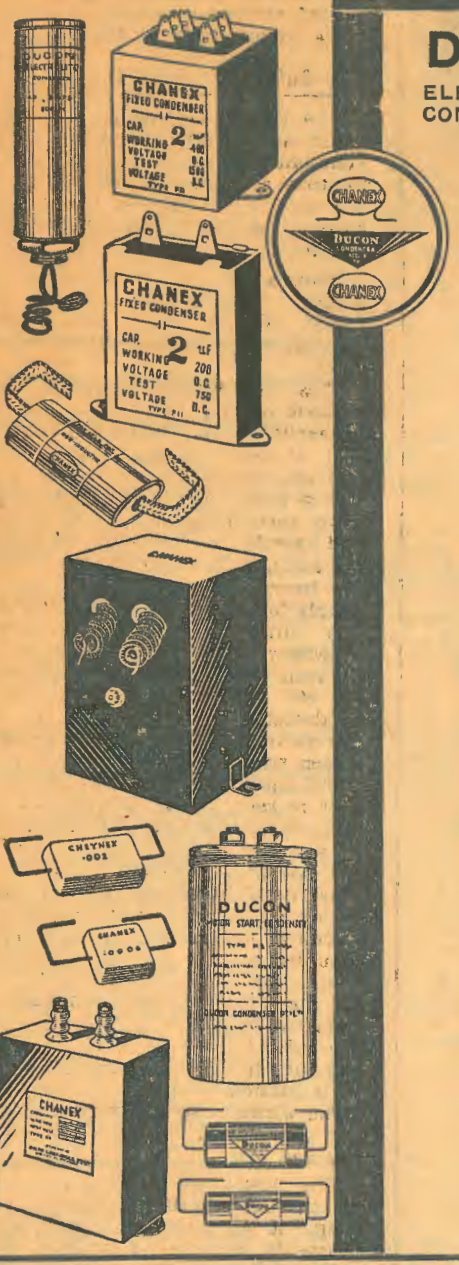
POWER SUPPLY

PARTS LIST

1 Chassis, 15½ x 11 x 3 inches.
1 Filament transformer, 6.3v. at 4 amps, 6.3 v. at 5 amps, 5 v. at 2 amps, 5 v. at 3 amps.
1 Power transformer, 400-0-400, at 120 mills.
1 Power transformer, 600-0-600, at 100 mills.
2 30h. filter chokes, 100 and 120 mills.
2 600 volt electrolytics.
2 4 mfds. 750 v. working paper condensers.
4 A.C. switches.
Sockets—2 4-pin.
Valves—1 80, 1 5Z3.
1 50,000 ohms bleeder resistor (2 25,000 ohms voltage dividers).



QUALITY SERVICE *and* SATISFACTION



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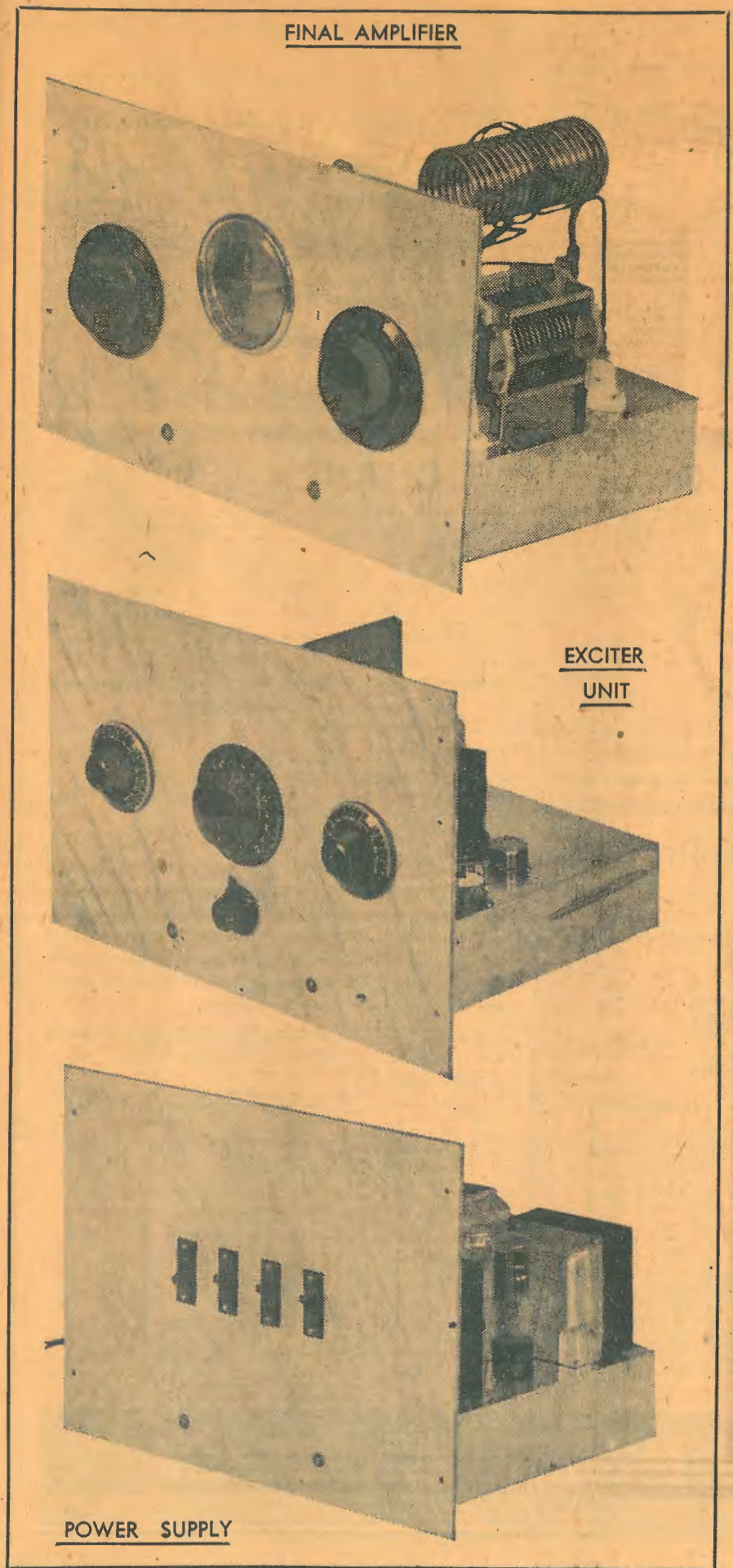


Cathode bias is used on this valve, as well as that obtained for each section by its respective grid leak. Thus if the valve stops oscillating, it cannot be ruined by too high plate current.

Note also that the plate current for both sections is obtained through a dropping resistor from the 400 volt supply which feeds this stage. This has been done in order to keep the output from the 6A6 on the low side. It is driving the 807, and one can overdrive this valve quite easily causing some very strange effects—lack of sharp tuning, and reduced output. One could reduce the voltage to the 6A6 still further, and still have more than the .25 watts needed to drive it to full output! This lower voltage also means better valve life, lower crystal current, and better stability owing to the lower operating temperature. A jack may be placed in series with the cathode resistor, so that it is bypassed by the cathode condenser, and used for a meter to read the plate current of the 6A6.

The Buffer Doubler Stage

The second section of the chassis is taken up by the 807 and its associated components. It is operating as a straight pentode amplifier or doubler and there are no frills or fancies about it. It is capacity coupled to the 6A6, and is link-coupled to the final amplifier.

Being a pentode, it must have a screen supply. This is taken from a voltage divider of 25,000 ohms wired across the 400 volt supply, and adjusted to 150-200 volts.

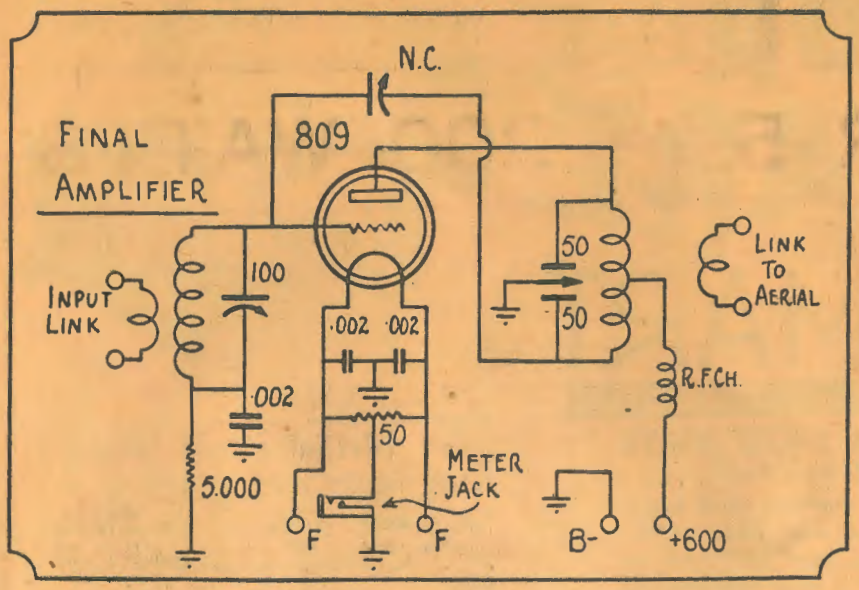
This valve is also supplied with a cathode resistor for bias, so that should its excitation fail, it will not follow the fate of most pentodes, and be ruined through lack of bias.

Now we know well that many amateurs have been disappointed with the 807, and have failed completely to get it working as an amplifier without neutralising. We have found this trouble to be due simply to lack of shielding between input and output circuits. It is absolutely necessary to run a heavy metal shield between the plate coil of the 6A6 and the 807. Failure to do this will result in almost certain feedback troubles, and the valve will not work as a buffer. A screen straight across the chassis, dividing it into two parts (top of the screen may be seen in the photograph) stopped altogether any tendency to oscillation. As a buffer, our 807 works perfectly. We did not find it necessary to shield the valve itself, or to neutralise in any way.

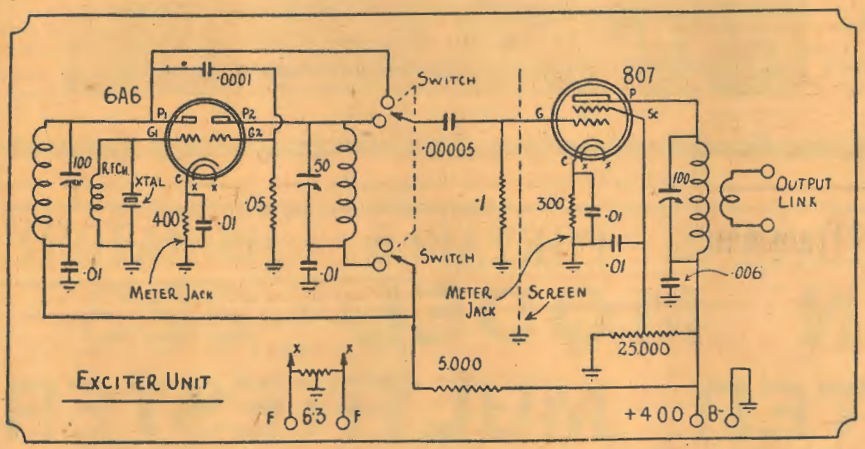
There is another jack in the cathode circuit of the 807. Both these jacks are mounted at the side of the chassis, so that a meter may be plugged from one to the other without unsightly leads hanging in front of the panels, which are quite free from such disfigurements. We have found this a very good idea, and it is standard in all our transmitters. The wiring diagram, incidentally, shows the connections made to the switch in the 6A6 circuit.

The power for this stage is brought in through a socket and a four-pin plug. A 6.3 voltage is needed for both filaments, and two terminals of the 400 volts supply.

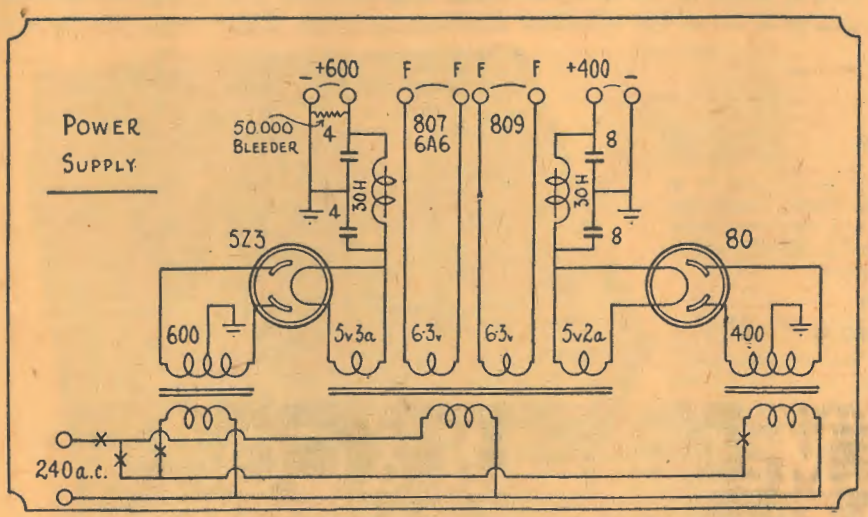
The valve sockets into which the coil formers plug-in are mounted a little above the chassis to facilitate and shorten the wiring to the tuning condensers. Incidentally, they are all 5-pin



Circuit of the final amplifier. It is being used with a twisted pair line clipped to the aerial coil. Good quality plate and neutralising condensers should be used.



Circuit of the exciter unit. Note the shield position and switch connections.



The circuit of the power supply.

formers used, and are interchangeable in connections. Thus one 20 metre coil may be plugged in anywhere in the transmitter which calls for such a coil.

The Final Stage

The final stage is pretty straightforward. At the left of the chassis there is the grid coil and condenser. In the centre is the 809 amplifier. At the right is the tuning condenser, split-stator type, and the tuning coil in our case plugs into two sockets mounted directly to the condenser itself. We made a pair of metal brackets to carry the sockets, and bolted them under two convenient terminals.

The aerial coil has two turns round the centre-tapped plate coil, and plugs into two stand-off terminals, which can be seen in the photographs. Heavy gauge self-supporting copper wire is used for the aerial coil, and the plate coil shown in the photograph is made of copper tubing for 20 metres.

The neutralising condenser is mounted in the lead back to the grid of the 809, so that this tuning circuit is made symmetrical round the centre-tap of the coil. This is a great help when neutralising, and the 809 needs only a comparatively small neutralising capacity.

The plate coil of the 807 and the grid coil of the 809 have wired to the filament pins of the 5-pin sockets coupling links—single turns of hook-up wire placed so that they can slide up and down the coil. These filament terminals connect to ordinary push-back terminals on the two chassis, and a lightly twisted length of hook-up wire connects these to form the low-impedance link. The advantage of thus including the link on the coils themselves is obvious—each coil may have its own link moved up and down for the best position, and when coils are changed, the link and all is changed, leaving the carefully found adjustment preserved for next time the coil is required, and plugged in.

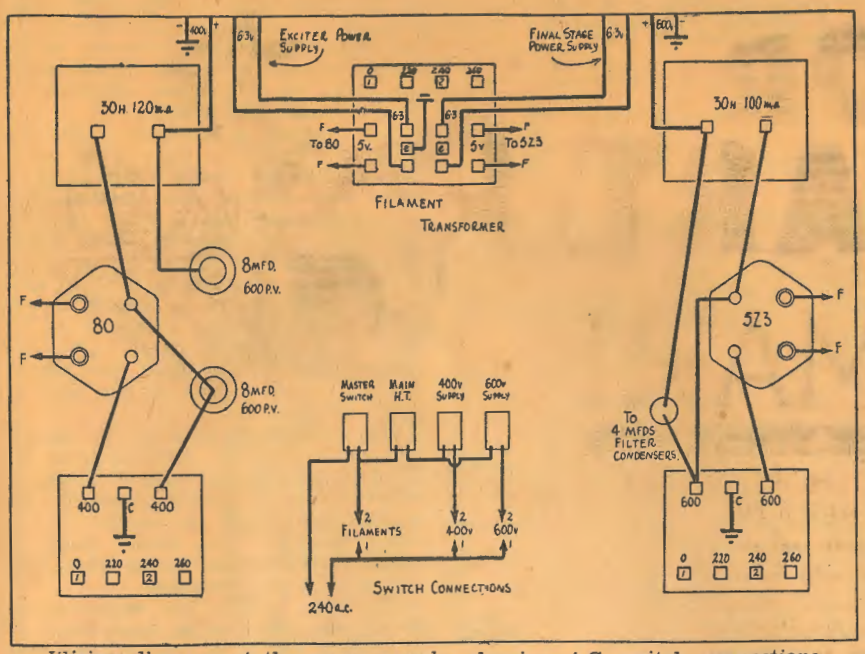
Link coupling was used because of its efficiency in jumping from one chassis to another, and the advantage it gives in being able to adjust the drive for the last stage.

There are two jacks in this final stage, one to read the grid current and one to read the total cathode current. Minimum plate current is thus total current less grid current.

The grid leak of 5000 ohms provides automatic grid bias for this stage. We found it not critical, between 2500 and 5000 ohms, according to the drive available. There is no need to use cathode bias as well, because the 809 is a very convenient tube—should its excitation fail, its high-mu will only allow it to pass about 18 mills standing current, at 600 volts, which can't possibly do any damage.

In fact, this is one of the transmitter's best points—you can't blow up anything, or do any damage, by failure of the excitation. Everything remains under control, and no plate meters do their best to multiply their readings by 1000!

It is essential particularly for phone work to give the 809 plenty of drive. Several cases we have known where 809's were giving poor results all revealed a hopeless lack of drive. It needs the 807 running well up to the mark to do the job properly, particularly on phone. Keep this insistence well in



Wiring diagram of the power supply, showing A.C. switch connections.

mind and the 809 will astonish you. In tests we have run 107 watts input (measured) continuously with this transmitter without any sign of color on the 809 plate. It is possible to fully modulate as per oscillograph with an input of 80 watts. But not without adequate drive. It is essential even at the rated 50 watts.

The Power Supply

The power supply is built on a single chassis. There are two units—one to give 400 volts at 120 mills and another to give 600 volts at 100 mills. The lower voltage supply uses an 80 rectifier, with a 30 henry choke and a pair of 600-volt type electrolytics. The 600-volt supply uses a 5Z3, and a pair of paper condensers rated at 750 volts working, and of 4 mfds. Experience with filter condensers has given us a leaning to paper condensers for high voltage supplies, although it is possible to use a pair of electrolytics in series for the job. We still prefer the paper condensers, even though a few shillings more is added to the cost.

There is nothing at all to the power supply—merely a matter of careful wiring up. We advise the arrangement of A.C. switches, as shown in the wiring diagram. First, there is the Master switch, which cuts off all A.C. for emergencies. When it is on, all the filaments in the transmitter light up, as there is a separate transformer for them. The second main high tension switch controls the A.C. line to both high tension transformers, so that it can cut off the transmitter on standbys without extinguishing the filaments. And, finally, there are separate switches for each of the high tension supplies, so that each may be turned on or off separately. This is invaluable for testing and adjusting.

Adjusting

Books may be written on adjusting transmitters. We must, therefore, assume that the constructor knows something of adjustments. With the crystal in place, let us assume a 40-metre crystal, the main switch is thrown on, and the filaments given time to heat. Now switch on the 400-volt supply, and with a pick-up coil or by watching the meters, tune the crystal oscillator circuit for maximum output. Switch over to the doubler position, and tune the doubler condenser for output on 20 metres.

After you have satisfied yourself the oscillator is working properly, switch on the 607 plate current, and quickly tune the plate condenser to resonance. Not that you won't get the large dip as in a triode valve, but you should get lashings of output, whether you have the tank coil on 20 or on 10. Having assured yourself the 807 is perking, note the grid current of the 809 circuit, and tune its grid condenser through resonance. You should get a goodly meter reading—tune for the highest both with the 807 plate condenser and the 809 grid condenser.

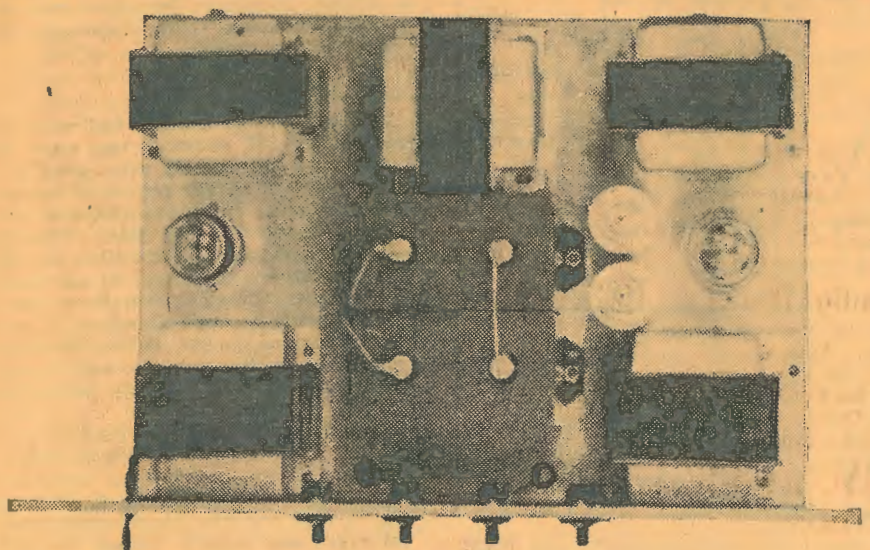
To neutralise, now rotate the 809 plate condenser until you strike a point where the grid meter will dip. Adjust the neutralising condenser, keeping the grid circuit in tune as you do so, until when tuning through resonance, you get no movement of the grid meter, or at any rate, a very small one. You can now take your hands off and switch on the 809 high tension, being very quick to retune the plate condenser to minimum current.

With full drive on 20 metres, you should be able to get a reading of 10 to 15 mills minimum current, and out of resonance 250 mills or more. This with a grid current should be run up to 40 mills at least, if desired. It should be kept well up to the maximum grid current of 32 mills allowable on the phone rating. Drive is adjusted by moving the coupling links on the coils. The above readings should apply whether the 807 is operating as a doubler or amplifier.

As we have said, pages could be written on adjusting transmitters—we can only here outline the transmitter and the procedure. Check with the various transmitting manuals if you are in doubt.

You will find this transmitter the last word in efficiency, and it is very flexible, and easy to build and operate. It is just as much at home modulated as unmodulated. A key plugged into the buffer cathode jack will serve when keying, complete with appropriate click filter.

A pair of 6L6 valves operating on their 30-watt audio rating in class AB would be an ideal modulator for this transmitter.



A plan photograph of the power supply. Note paper condensers.

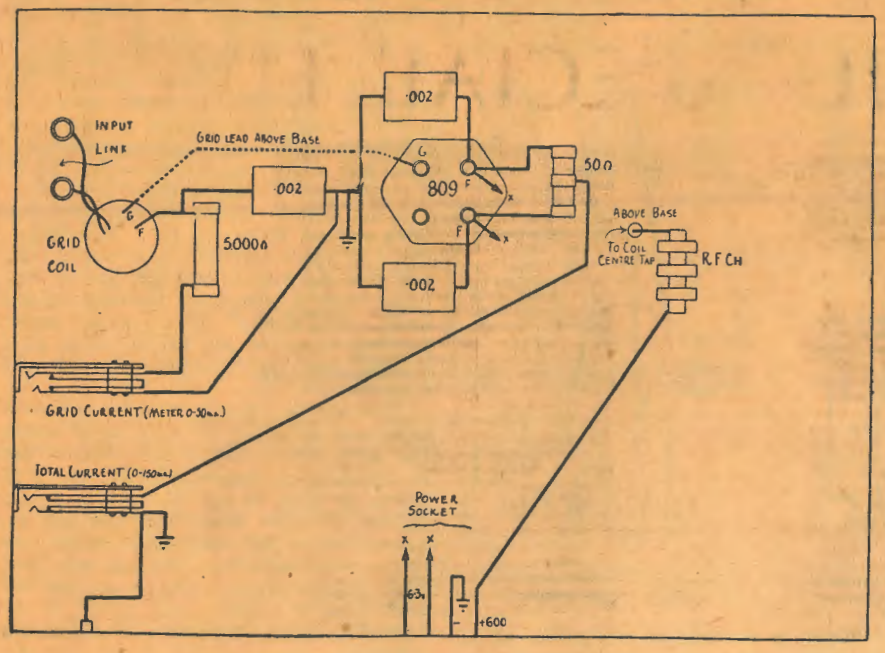
Coil Data

The coils for this transmitter are very simply made. All but the 809 tank coil are wound on 1¼-inch formers with gauge 16 or 18 enamelled wire, covering about 1½ inches of winding space. There are no tapped coils. Eighty-metre coils have 38 turns, 40-metre coils have 20 turns, 20-metre coils have 12 turns, and 10-metre coils have 5 turns. They are all interchangeable.

The final tank coils are wound with ¼in. copper tubing spaced never closer than ¼in. between turns. The coils are 2½in. outside diameter.

The final tank coil turns are subject to a certain amount of latitude according to the use of the transmitter. For C.W. operation, where low-C circuits are permissible, you can use about 9, 20, and 45 turns for 10, 20, and 40 metres, even increasing these figures to bring the

SCALE WIRING DIAGRAMS



Wiring diagram of the final amplifier.

total capacity still lower. In phone operation, use less turns—say, 7, 15, and 38. These are only a guide, however, as even the plug-in coils may be varied slightly according to individual set-ups. On 80 metres, a coil wound with 16 gauge wire, almost close wound would be suitable in most cases. All these coils are centre-tapped.

Aerials

The matter of aerials is one which is largely to be decided by individual taste. The original transmitter has been used practically all the time with matched impedance aerials, and not with the more universal tuned-feeder type. However, there is no reason why any type of aerial could not be employed.

The aerial favored by the writer is of the two half-waves in phase type, fed with a twisted pair line. There is the objection, of course, that such an aerial is, broadly speaking, suitable for only single band operation.

The arrangement of the radiator is to string two half-waves together, insulated in the centre. From the end of each half-wave, in the centre, runs a matching section in the shape of an odd number of quarter-waves spaced about 4in. apart. It may be one quarter wave in length, or three-quarter waves, or any odd number.

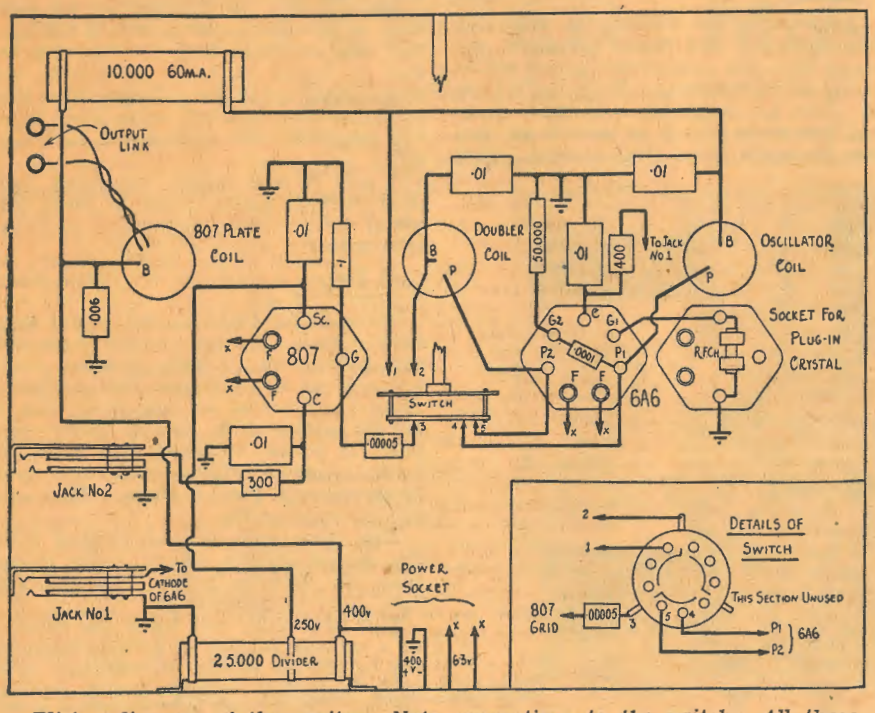
For instance, a 20-metre aerial will have two half-wave lengths of about 33ft., making an overall length of about 66ft. One quarter wave section from the centre would have a length of about 16ft. 6in. Three-quarter waves would be about 49ft. We suggest that where more than one frequency is to be used in the band, the exact lengths be cut for somewhere in the centre of it. We have never found the exact length very critical, and, in any case, the wire is bound to stretch after it has been up for a while.

The two bottom ends of the matching section are not short-circuited, but are connected one to each o fa pair of twisted lines. Strictly speaking, the twisted line should use special 70 ohm cable, but we have found gauge 16 V.I.R., lightly twisted, about three times per foot, is near enough.

The ends of this line, which should be at least one quarter wave long, are clipped to the aerial coil. If the complete coil is in circuit, a single turn of wire will probably be enough, but it is a good idea to experiment by clipping the aerial feeders across portion of the aerial coil to determine the right amount of loading to give the correct plate current under load, of 83 mills or so. A good deal will depend on the height and placement of the aerial, just how much coupling is needed in any one case.

If tuned feeders are used, as with the conventional zepp aerial, we suggest using a tuning coil and condenser arrangement, such as a "Collins" coupler, and link-coupling this circuit to the final tank in the conventional way. It is important that the coupling link should be located at the centre of the tank coil, otherwise you will tend to throw the circuit out of balance.

If the two half-waves in phase aerial is used, it should be strung so that it is broadside to the direction in which signals are intended to carry. While not highly directional, it will give a decided gain to all parts along a line at right angles to itself. If tuned feders are used, by tuning the half-waves so that they may be alternatively in or out of phase, the aerial may be made directional, either broadside or "end-fire," as desired.



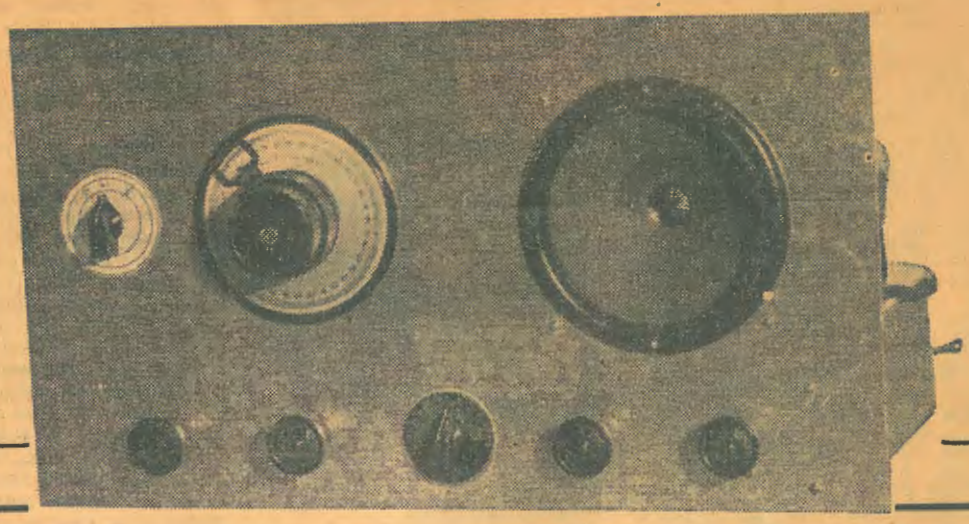
Wiring diagram of the exciter. Note connections to the switch. All these wiring diagrams are to scale.

Using The 6L6

It is possible to use the 6L6 valve in place of the 807, although this valve as a rule is not satisfactory when used as a straight amplifier. The reason, of course, is that it must be neutralised, and this is not always an easy job. That is why we have used and specified the 807 valve. If the 6L6 is used at all times as a doubler, there is naturally no need to neutralise it, and, therefore, it can directly replace the 807, making the plate connection to the valve socket instead of to the cap, which is only present in the 807.

Should neutralising be desired with the 6L6, the plate coil should be centre-tapped, and the neutralising condenser may be two short lengths of hook-up wire twisted together for a small space. We don't particularly advise the 6L6, unless it is operated always as a doubler.

THE 2JU SPECIAL FIVE



A front view of the set. The small pointer and scale in the centre is the oscillator band-setter. Any good panel-mounting dial may be used.

Here is an ideal short wave set for the amateur and short wave listener, which has several interesting features. The coil-switching is so effective that we'd hate to go back again to plug-in coils. It doesn't cost a fortune to build and will operate excellently even on 10 metres. At present it is used on 10, 20, and 40 metres, and makes a good receiver to accompany the transmitter also described.

THE design and construction of a short-wave receiver is a happy hunting-ground for any man with ideas and intelligence. It is possible to build small and cheap sets, which will give very good results, bearing in mind their limitations—it is equally possible to build sets in which there is practically no limit in elaborate circuit arrangement, and the number of valves used.

Then again, one may set out to design a receiver which will be a compromise between simplicity and complexity, which strives to get near to the performance of the big sets, but uses the minimum amount of material, and, therefore, costs much less. It is in this field that one has quite an amount of scope when setting about the job.

Recently we decided to build a set of this type. But, before starting out, we came to several conclusions, bearing in mind the usual manner in which such sets have been designed in the past.

COIL SWITCHING

Firstly, we could see no logical reason why we should keep to the old-fashioned idea of plug-in coils. There are occasions when plug-in coils are more efficient than would be a switching arrangement. Such a position would occur when such coils allowed appreciably shorter connections to the remainder of the circuit than the switching scheme. Also if the coil formers were of a better material than those we would use in the switching—that would help. If the connections between the coil pins and the socket were better than the contacts on the switch, here again would be another advantage.

A little thought made us realise that none of these possible disadvantages of switching need be present if the job is properly done. In the first place, it is not hard to so arrange the coil and the switch, and the valve associated with each section, that the actual leads are not longer than is permissible. One can achieve a perfectly practicable hook-up without cramping up components in an effort to gain efficiency.

It is also quite possible to buy tubing on which to wind the coils, which is of a quality better than the average short-wave former material. Overseas, special and very expensive formers may be bought which are probably rather better than the tubing usually employed in commercial receivers.

The difference, however, would not be in practice enough to make us seriously consider eliminating the switching scheme on this ground alone.

Then, once upon a time, switches which were available for such tuners were of very poor quality. Their contacts were undependable, their capacity high, and so on. Modern development has now made possible coil switches which are in every way satisfactory, and just as efficient from a contact point of view, as would be a coil former and socket.

At any rate, with these ideas in mind, we decided to use the coil switching in our set. To say that it was successful is simply stating the case—we will have more to say about it later on.

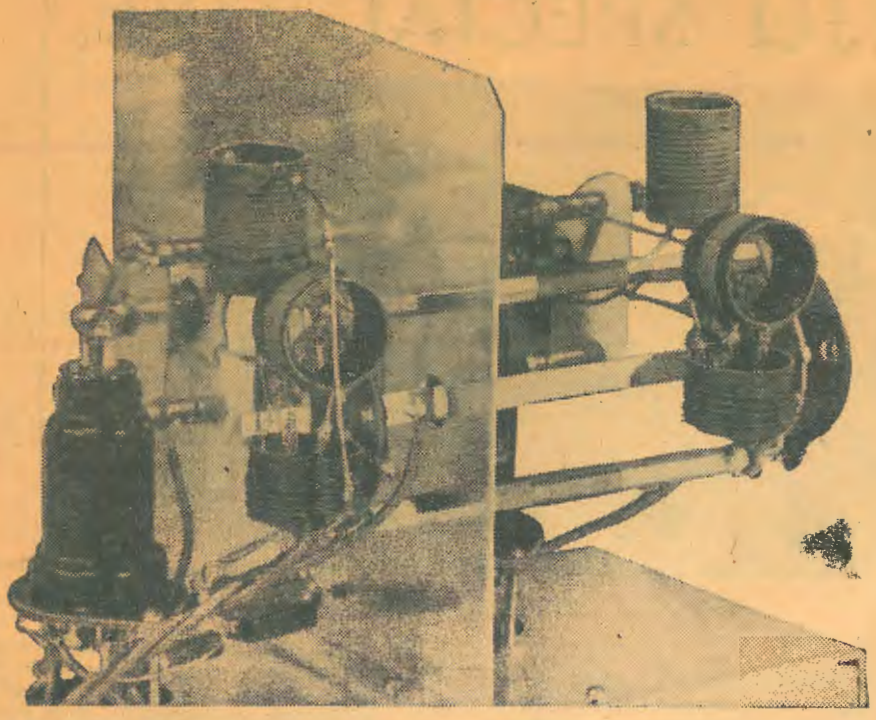
NUMBER OF VALVES

The valves we have used in all number six. They are the first detector or mixer valve—a 6L7, a 6K7 as a separate oscillator, another 6K7 as the intermediate amplifier, a 6N7 as second detector and beat oscillator, and a 6F6 as output valve. The sixth valve is the 80 rectifier.

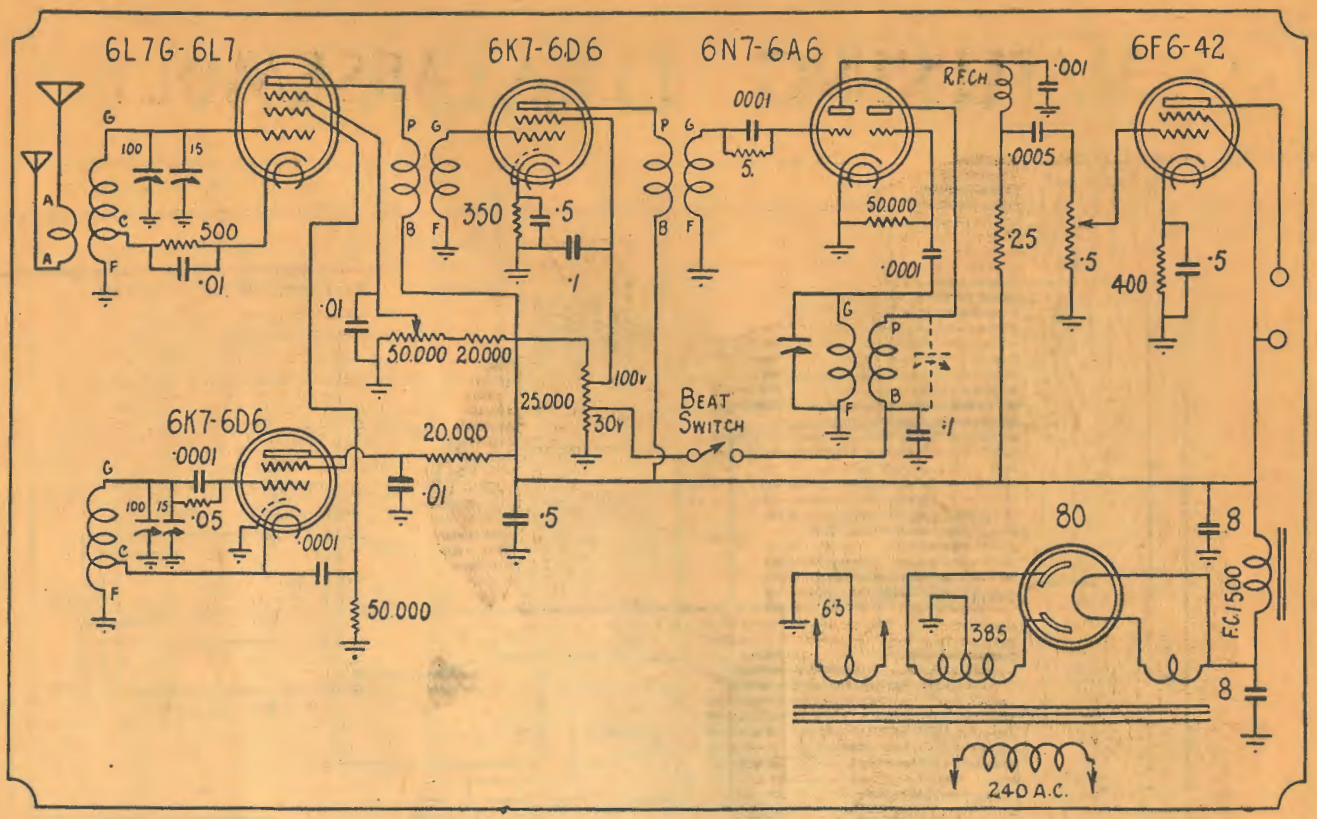
The 6L7-6K7 combination appears to be the best all-round first detector circuit—it operates very easily and effectively, and gives excellent results even down to 10 metres. It is a simple matter to use regeneration with this circuit, and regeneration is a great advantage where no R.F. stage is used. It makes up in many ways for the lack of the R.F. stage, with its extra valve and tuning circuit. Correctly used, it appreciably increases sensitivity, and, what is more important, selectivity. When the 6L7 is approaching oscillation, it tunes very sharply, and has a very much better capacity for rejecting image interference when there is no regeneration.

Modern high-gain intermediates of the 465 kc. type have a very good characteristic, and we can get all the gain required from a single stage, with a good degree of selectivity. As a matter of fact, even the ordinary plain intermediates will operate quite well in this circuit.

THE TUNING COIL ASSEMBLY



This photograph will give an excellent idea of how the coil assembly is built up. The front section contains the oscillator coils. The oscillator valve and socket are just visible at the edge of the screen. The two-plate variable condenser is also in the picture. The section to the left is the detector section. The .0001 mfds. condenser and 50,000 ohm resistor connecting the 6L7 injector grid with the 6K7 oscillator cathode can be seen at the bottom left hand corner—the lead actually runs through the shield between the two stages. The shield is also the back support for the switch assembly.



Here is the circuit. The .0005 coupling condenser may be changed to .01 for normal response.

PARTS LIST, 2JU SPECIAL FIVE

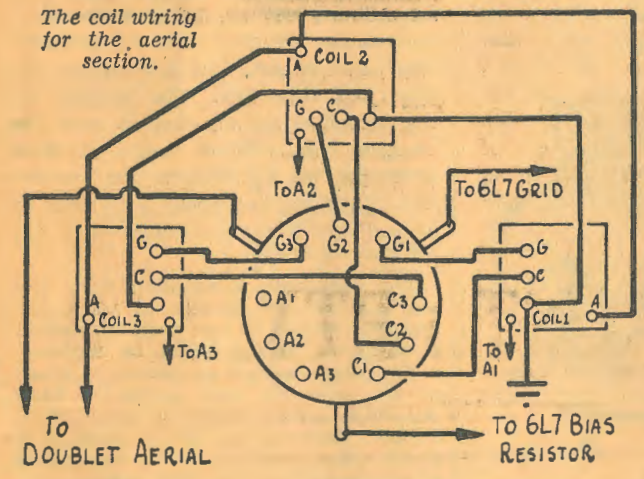
1 Base, 16 x 10 x 3 in.
1 Panel, 18 x 10 in.
1 Tuning dial.
2 .0001 midget tuning condensers.
2 .000015 midget tuning condensers.
1 Power transformer, 385-0-385, at 80 mills, 6.3 v. at 3 amps, 5 v. at 2 amps.
2 8 mfds. electrolytic, 500 volts.
3 .5 mfd. tubular condensers.
3 .01 mfd. mica condensers.
1 .001 mfd. mica condenser.
1 .0005 mfd. mica condenser.
4 .0001 mfd. mica condensers.
2 .1 mfd. tubular condensers.
1 5-meg. resistor.
1 .25-meg. resistor.
4 50,000 ohms resistors.
2 20,000 ohms resistors.
1 500 ohms w.w. resistor.
1 400 ohms w.w. resistor.
1 350 ohms w.w. resistor.
1 25,000 ohms voltage divider.
1 50,000 ohms potentiometer.
1 .5-meg. potentiometer.
1 Switch for beat oscillator.
2 465 k.c. I.F. transformers.
1 Beat oscillator coil (see text).
Sockets—5 octal, 2 4-pin.
1 2-bank switch, coil former and wire for coil unit. See text. This unit is also available commercially.
Valves—1 6L7, 2 6K7, 1 6N7, 1 6F6, 1 80.
Speaker—1500 ohms F.C., matched for pentode.
Knobs, hook-up wire, nuts, bolts, etc.

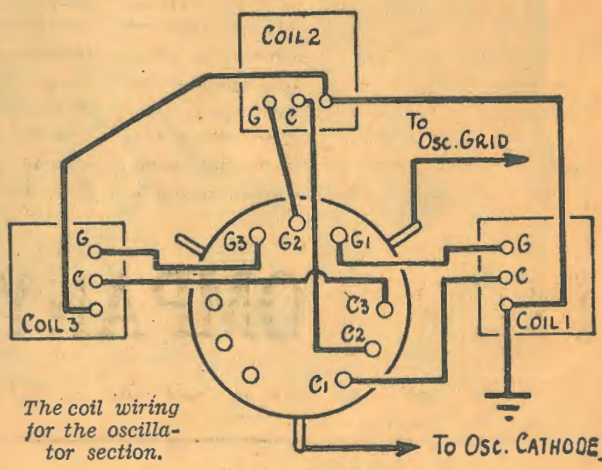
We have not used a gain control on the intermediate valve, because we didn't consider it necessary. It is an advantage to have the I.F. stage running at high sensitivity, as most of the searching will be done on weak stations. We therefore have used fixed bias with this valve, and do not find any tendency to instability through so doing.

The second detector presented quite a problem, when we had to decide what to do. All kinds of things were tried and thought of. What we wanted was a sensitive detector circuit, and also a good beat oscillator, without the need to use two valves for the job.

This meant the use of a double valve of some kind. After trying practically all the available schemes, and beat-oscillator coils, we decided on the 6N7 or 6A6 type of valve. In the first place, the high mu. of each section makes a very sensitive leaky-grid detector possible. In the second place, the second section of the valve allows a very simple plate feedback beat oscillator circuit to be used, the coupling inside the tube

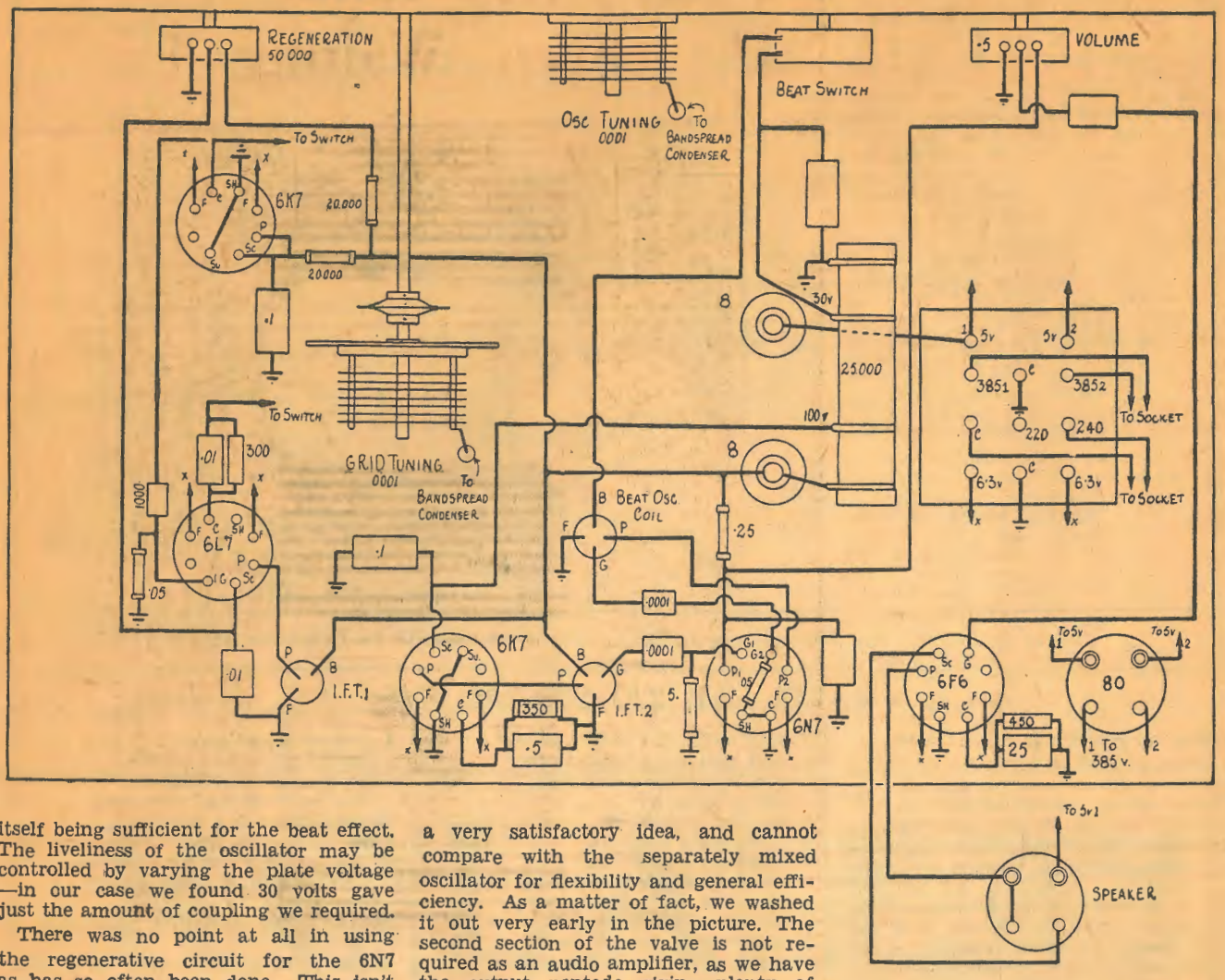
The coil wiring for the aerial section.





The coil wiring for the oscillator section.

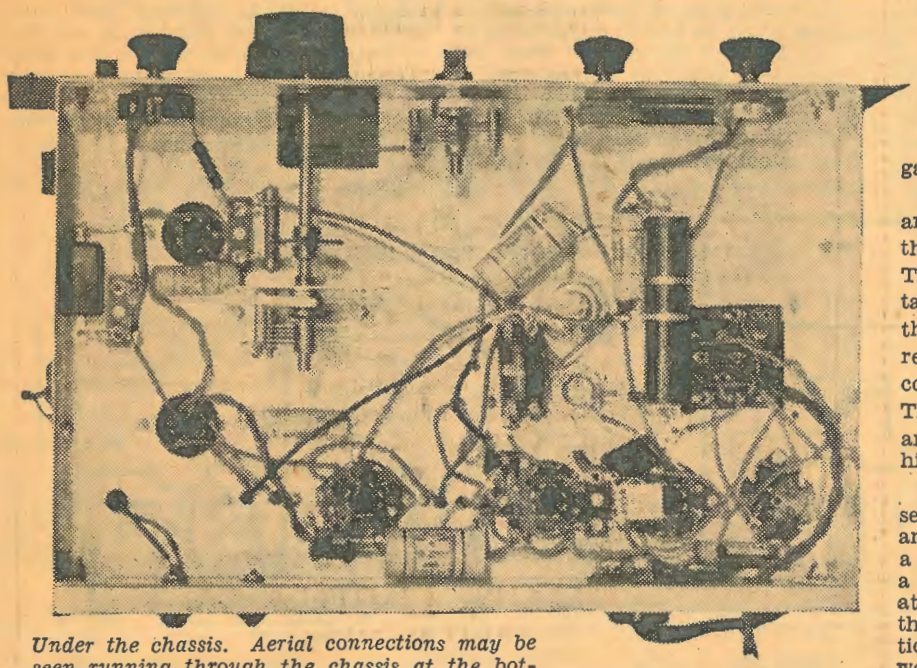
☆ WIRING DIAGRAM ☆



itself being sufficient for the beat effect. The liveliness of the oscillator may be controlled by varying the plate voltage —in our case we found 30 volts gave just the amount of coupling we required.

There was no point at all in using the regenerative circuit for the 6N7 as has so often been done. This isn't a very satisfactory idea, and cannot compare with the separately mixed oscillator for flexibility and general efficiency. As a matter of fact, we washed it out very early in the picture. The second section of the valve is not required as an audio amplifier, as we have the output pentode giving plenty of gain and volume for the loud speaker.

The wiring diagram shows all the connections under the base. Note the fixed bias used on the I.F. amplifier. Connections on the transformer marked "To socket" connect to the 80 rectifier.



Under the chassis. Aerial connections may be seen running through the chassis at the bottom left-hand corner.

The beat oscillator coil is made from an ordinary 465 kc. intermediate with the trimmer removed from the primary. The base is left, but the plates are taken out altogether. The trimmer on the secondary is adjusted to give the required beat, and, of course, it must cover the 465 kc. without any trouble. This saves messing about with coils in an endeavor to get something which will hit the right spot.

The beat note is adjusted when the set has had 15 minutes to warm up, and may be left in that position. Should a variation in the pitch be required, a three-plate midget condenser mounted at the beat coil, and controlled from the front panel, would be quite practicable However, we didn't think it a worth-while addition. The beat note is switched from the front panel.

This is quite the best second detector and beat oscillator circuit we have tried so far.

OUTPUT VALVE

Then follows the resistance coupled output valve, which uses a very small coupling condenser from the plate of the detector. This is in order to limit the low note response, ond thus reduce noise level and audio feedback. We have mounted the speaker on the front panel, not because we like the idea so much, but because so many others do, and because it is undoubtedly convenient, bearing in mind the small output generally required from such a set.

The speaker is mounted to the front panel on rubber washers. This helps to reduce acoustical feed-back. We can turn the set flat on most signals without noticing this annoying trouble, which is almost impossible to remove on such a receiver.

So much for the circuit. Now let us consider some constructional points about it.

THE COIL UNIT

The general construction of the coil unit is quite apparent from our photographs and diagrams. Each section of the switch is divided into three. This means that each section can switch three different points into three different positions.

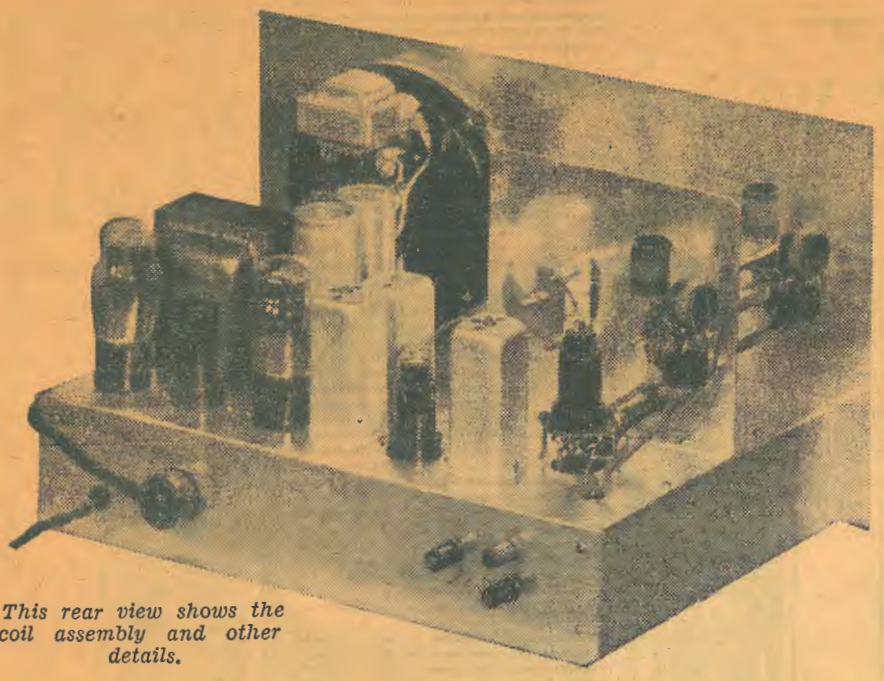
Now each tuning coil has a tapping for the cathode. As the bottom of all the windings is connected to earth, that means that only the grid and cathode connections have to be switched.

In consequence the earthed ends of the coils are connected together, and all connected over to the solder lug on the rotors of the respective 15 mfd. tuning condensers. This makes sure there is the shortest possible earth return circuit. The connection to the tap on each coil is connected to one of the three cathode section switch points, and the grids to the three grid points. The actual wiring is made perfectly clear in the diagrams.

In the case of the aerial grid coils (as distinct from the oscillator grid coils) there is an aerial connection to be considered. We found the best way was to use an aerial coil and utilise the third section of the switch to change it over. We always use a doublet aerial connection. This means that one end of each aerial coil is connected to a piece of busbar, from which a lead runs to one of the aerial terminals. The remaining ends of the aerial coils are connected to their respective switch points, and the second aerial lead is connected to the lug which connects to these three points. All these connections once again are shown in the diagram—it is only a matter of noting carefully the connections to the switch, so that each set of three on the two banks is identified.

The switch itself is built up of the two sections, a long shaft and spacing washers, the rear support being the screen which divides the two compartments. Our close-up pictures will give a good idea of this construction. All the material for making up the switch is readily obtainable.

The tuning is done with the two 15 mfd. condensers, which are ganged via the flexible coupler, and the rear one is supported on the shield screen panel.



This rear view shows the coil assembly and other details.

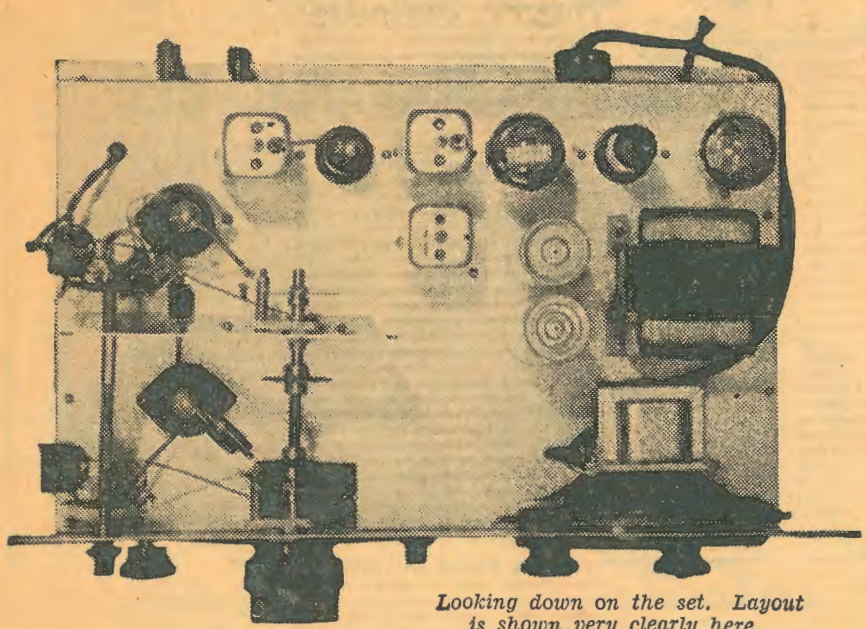
In addition to these condensers, which are small to act as band spreaders, there are two 100 mfds. condensers under the chassis, which act as band-setters. The oscillator condenser is mounted in the centre of the front end and carries a pointer and a scale. It is the sharply tuned oscillator condenser, with which the bands are set for amateur work. The aerial grid circuit has its 100 mfd. condenser mounted on a bracket immediately beneath the 15 mfd. type, so that the connection is short and convenient. It is not so sharp in tuning, except when regeneration is well advanced.

The 6L7 and the 6K7 oscillator, both have their sockets raised up from the base in order to keep the grid and cathode leads to the switch as short as possible. Therefore the wiring to these sockets, shown on the wiring diagram, actually passes through the chassis to the sockets themselves. The connection from the oscillator cathode to the 6L7 injector grid is made above the chassis, a hole being drilled in the screen so that it can pass through. The 50,000 ohms grid leak from the injector grid to earth is also for convenience mounted above the chassis. The oscillator 6K7 grid, of course, is connected from the valve to the switch through a grid condenser and leak.

WINDING THE COILS

We wound the coils on good quality former with a 1-inch diameter. A little way in from the bottom of each piece three holes are drilled. Small lengths of 18 gauge tinned copper wire are passed through these holes and bent back on themselves with a pair of pliers. A touch of solder, and we have a convenient anchorage for the ends of the windings and handy pigtails for soldering to the switch.

The coils we wound with 24 d.s.c. wire. This is a little on the fine side according to general practice, but we found it to be quite effective. The aerial coils are wound with finer wire—about 32 enamelled—and the ends threaded a couple of times through holes drilled at the top and bottom of the former.



Looking down on the set. Layout is shown very clearly here.

The placement of the coils on the switch is a matter for the individual in the main. Our set was made to cover 10, 20, and 40 metres. We placed the 40-metre coil in the centre, so that the 10 and 20 metres were well apart. The coils are at right angles to each other, to reduce coupling effects. Our best advice is to wire them so that the grid and cathode leads are as short as possible. In our photo. the 10-metre coil is at the bottom and the 20-metre coil at the top of each assembly.

The coil winding details we have given will provide for the oscillator bandsetter to show about 40 degrees on a 0-100 scale on 20 and 40 metres, and about 10 degrees on 10 metres. This amount of capacity in the oscillator section will give a good bandspread on each of these bands. A little care with the actual coils will allow the same band-setting position to be effective for 20, 40 and 80 if required, which means simply turning the switch to instantly jump from one band to another.

Only three bands can be covered with switches available at present, unless capacity aerial coupling is used. We could then have a switch which would switch two circuits into six positions if desired.

There is very little else to say about the construction of the set. The diagrams and photographs are very explanatory, and no one should have any trouble in getting it to work well.

The voltages for the set are approximately 250 for the plates, 100 volts for the screen, and 30 volts for the beat oscillator. This last may be varied, according to individual requirements. The values of all components are shown in the diagrams.

The 6L7 should be adjusted so that at least 50 volts is applied to the screen before the valve begins to oscillate. If the cathode tops are placed as we suggest, this can be controlled by varying the coupling of the aerial coil in each case. Closer coupling will allow a higher screen voltage before oscillation begins. Once set, the coil positions need never be altered.

The amateur will find it an absolutely ideal receiver for the modest purse. If required for short-wave use only, the bandspreaders of 15 mmfd. may be replaced with the main 100 mmfds. so that larger coverage may be obtained on the dial. By this means, 16 to 31 metres should be covered with the one coil.

The speaker incidentally is set off by a large bakelite dial escutcheon, which covers up the rough edges of the large hole drilled out of the panel, and gives extra appearance to the set itself.

COIL DATA

	AERIAL	OSCILLATOR.			
W/band	Aerial.	Grid.	Tap.	Grid.	Tap.
10-20m.	2	4	1	4	2
20-40	5	10	1	10	2
40-80	8	16	2	16	5
80 up	12	32	5	32	10

All coils wound on 1in. diameter former, with 26 d.s.c. Aerial coils wound with 32 enamelled wire. Ten metre coils cover ½in. winding space. 20 metre coils ¾in. space. Others close wound. Aerial coils spaced from grid coils to give best reaction and volume.

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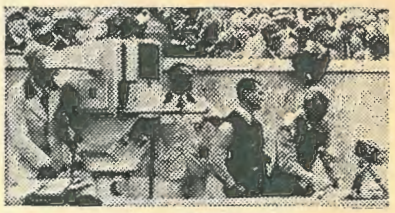

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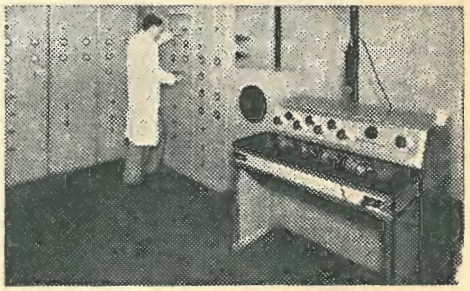

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