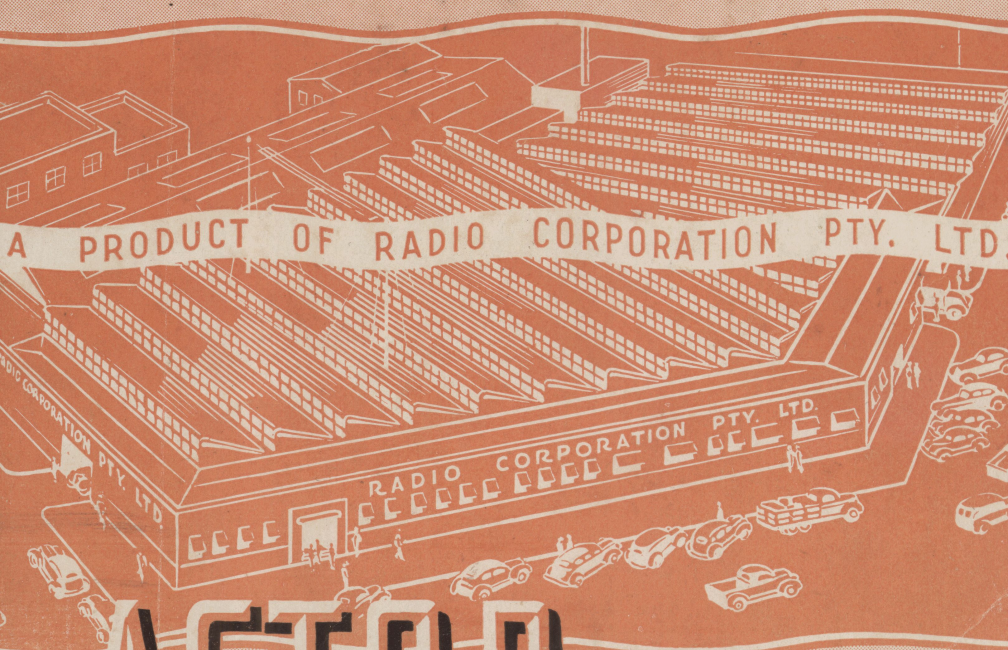
OPERATING INSTRUCTIONS

AND COMPLETE PARTS LIST



ASTOR Radio

Warranty

Each new Astor Receiver is warranted by the manufacturer to be free from defects in material and workmanship under normal use and service; the obligation under this warranty being limited to making good at the Astor factory any part or parts thereof which shall within 12 months after delivery of such receiver to the original purcnaser (but not more than 15 months from the abovementioned date of despatch from the Astor factory), be returned to the factory with transportation charges prepaid by the original purchaser both to and from the factory, and which examination shall disclose to the manufacturer's satisfaction to have been thus defective, this warranty being expressed in lieu of all other warranties expressed or implied and of all other obligations or liabilities on the manufacturer's part, and the manufacturer neither assumes nor authorises any representative or other person to assume for him any other obligation in connection with the sale of his receivers.

This Warranty does not apply to any receiver which shall have been repaired or altered outside of the Astor factory by any other than the authorised Dealer or Distributors in any way so as, in the manufacturer's judgment, to affect its stability or reliability nor which has been subject to misuse, negligence, or accident, nor which has had the serial number altered, defaced, or removed. Neither shall this Warranty apply to any receiver which has been connected otherwise than in accordance with the instructions furnished by the manufacturer.

No Warranty whatever is made in respect to cabinets, valves batteries, vibrators or other accessories not manufactured by the manufacturer inasmuch as they are usually warranted by their respective manufacturers.

..... of .....
Name of Purchaser Address

has this day purchased from the undersigned the following Radio Receiver:

Model No..... Serial No.....

....
Authorised Retailer Retailer's Address

Date.....

ASTOR CRAFTSMEN BUILT RADIO

The

ASTOR

Type C.M.

Mantel Model 364A **Console Model 664A**

6-VALVE SUPERHETERODYNE DUAL WAVE RECEIVER.

For Operation from 200-250 A.C. Electric Supply Mains.

INSTRUCTIONS FOR INSTALLATION, OPERATION AND SERVICE.

INTRODUCTION.

The Astor Models 364A and 664A are 6 tube superheterodyne dual wave receivers designed for operation from 200V. to 250V. 40-60 cycle A-C Electric supply mains.

The broadcast tuning range is from 550Kc. (kilocycles) to 1600 Kc., this being the standard Broadcast band. The dial calibration is in kilocycles and all Australian stations are clearly marked.

The short wave tuning range extends from 7 mc. (megacycles) to 22 mc., covering all the important short wave bands. The dial is calibrated in megacycles and the short wave bands are also marked with the corresponding wave length in Metres (M.).

Accoustinator.

The Accoustinator control is incorporated in these models. This control gives three entirely different conditions of audio response and does not merely cut the high notes as with an ordinary tone control. The three positions are as follows:—

1. VOICE.
   (Left hand position—anti-clockwise).
   In this position the bass notes are reduced, while the highs are accentuated slightly to give maximum intelligibility while listening to Plays, Talks, etc.

2. MUSIC.

(Centre position).
In the "Music" position the high notes and low notes are accentuated progressively as the volume control is turned to lower volume. This makes the music clear and natural at very low volume levels.

3. OVERSEAS.

(Right hand position).
The effect in this position is twofold. Firstly the extreme high notes are reduced to prevent excessive noise and interference, and secondly the extreme low notes are reduced to give maximum intelligibility.

Should there be any doubt as to the Supply voltage furnished in your home, consult the local Electric Supply Department before attempting installation.

INSTALLATION.

Mains Voltage Adjustment: Every receiver is shipped from the factory ready for use on Electric supply voltages between 220V. and 250V. Should the voltage of the supply in your home be 220V. or less, the following instructions should be carefully adhered to.

Disconnect the receiver from the mains.

Remove the drive screw holding the cover plate on the back of the chassis (See No. 78, top view of chassis). Swing the cover plate upwards so that the terminals are accessible, remove the nut holding the adjustable lug, transfer the lug to the 200V.-220V. terminal and tighten down the nut. It is recommended that this work be done by a competent serviceman or Electrician.

Antenna:

The receiver is designed to give good results with an indoor aerial. However, for best results particularly on overseas stations an outside aerial approximately 50 to 100 feet long including lead-in is recommended. It should be as high as possible, and as far from surrounding objects as practical. For minimum interference it should be at right angles to Electric tram and train lines, incoming power lines, and other electrical apparatus which may be in the vicinity. Connect the aerial to the terminal marked "A" on chassis.

Earth:

Improved results can usually be obtained by using an efficient earth. Any one of the following suggested methods will be found satisfactory providing the lead is kept as short as possible.

A good connection soldered or firmly clamped to a water pipe, an earth lead soldered to a length of pipe driven deep into the ground or to a piece of galvanized iron sheet buried in moist soil. Connect earth lead to terminal marked "E" on chassis.

OPERATION

CONTROLS:

From left to right the controls are as follows:—

Volume Control:

Turning to the right (clockwise) increases volume.

Accoustinator:

Three positions. Extreme left position is "Voice", centre position is "Music", and extreme right position is "Overseas."

Tuning Control:

The "Silky" drive promotes greater accuracy in tuning local or overseas stations. It is light and smooth in operation.

Wave Change Switch:

This control is located on the right hand side of the cabinet and the simple switching operation converts the receiver for Broadcast Range or Shortwave Range as desired. The range is indicated by the color change of the illuminated dial.

Connect the mains cord to the power point, switch on and allow a few moments for the tubes to heat up.

Set the wave change switch to the desired wave range, turn the volume control about halfway to the right, tune in the desired station and adjust volume control and accoustinator to suit. Make sure that the receiver is accurately tuned, otherwise the tone will be impaired. (See para. 2 on Page II

Phono Pick-up Connections: An inspection of the back of the chassis will reveal three plug sockets under the marking "Phono Pick-up". When the receiver is used on Radio, the middle and left hand sockets under "R" are connected by means of the Pick-up shorting bar. To connect the Phono Pick-up, remove the shorting bar and connect the pick-up leads to the middle and right hand sockets under "P."

If a single shielded lead is used from the pick-up, connect the lead to the centre socket and the shielding braid to the right hand socket. If it so happens that two leads are used on the pick-up, connect the active lead to the centre socket, the earth lead to the right hand socket and the shielding braid, if any, to the chassis earth.

The volume control and accoustinator both control the reproduction on Phono pick-up in exactly the same manner as on Radio.

ELECTRIC RADIOS :

The main adjustment tap shauld be adjusted as follows:— For any A.C. Mains Voltage between 200v. and 220v., on the 200-220 Tap, and for any A.C. voltage between 220v. and 250v., on the 220-250 Tap.

The

ASTOR

6-VALVE MANTEL AND CONSOLE

A.C. Model

PARTS LIST AND CIRCUIT DIAGRAMS.

An ASTOR Radio is never rendered useless by the discontinued production of that particular model, because the ASTOR policy ensures that a complete list of spare parts is stocked for every radio that leaves the factory. When ordering a replacement, from Radio Corporation Pty. Ltd., Grant Street, South Melbourne, give the model number or description of the set itself together with the part number and name of the part required.

No.	Part Name	Rating	Tol.	Spec. No.	Part No.
1.	.05 mfd Paper Condenser .	200V	20%		PC102
2.	.05 mfd Paper Condenser .	200V	20%		PC102
3.	.05 mfd Paper Condenser .	200V	20%		PC102
4.	.05 mfd Paper Condenser .	200V	20%		PC102
5.	.05 mfd Paper Condenser .	200V	20%		PC102
6.	.05 mfd Paper Condenser .	400V	20%		PC109
7.	.05 mfd Paper Condenser .	400V	20%		PC109
8.	.03 mfd Paper Condenser .	200V	20%		PC303
9.	.01 mfd Paper Condenser .	600V	20%		PC140
10.					
11.	.002 mfd Paper Condenser	600V	20%		PC112
12.	.25 mfd Paper Condenser .	400V	20%		PC128
13.	.5 mfd Paper Condenser . .	400V	20%		PC115
14.	.0001 mfd Mica Condenser	1000V	10%		PC110
15.	.0001 mfd Mica Condenser	1000V	10%		PC110
16.	.00005 mfd Mica Condenser	1000V	10%		PC141
17.	.00005 mfd Mica Condenser	1000V	10%		PC141
18.	.00005 mfd Mica Condenser	1000V	10%		PC141
19.	.0031 mfd Mica Condenser	1000V	5%	982	PC278
20.	.00005 mfd Silver Mica Condenser	1000V	2½%	1005	PC293
21.	.00005 mfd Silver Mica Condenser	1000V	2½%	1005	PC293
22.	.0001 mfd Silver Mica Condenser	1000V	2½%	1006	PC294

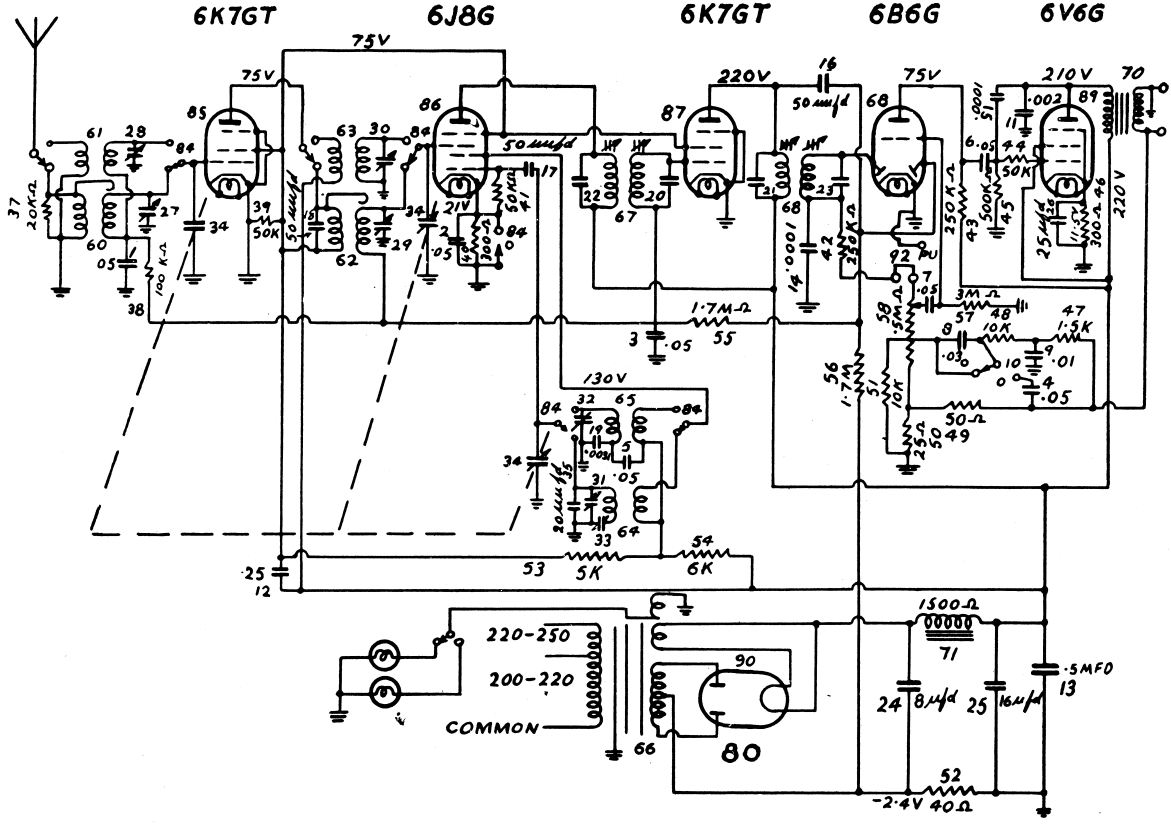
These models are designed for operation from 200V to 250V. 40-60 cycle A-C Electric supply mains..

ACCOUSTINATOR. The Accoustinator control is incorporated in these models. This control gives three entirely different conditions of audio response and does not merely cut the high notes as with an ordinary tone control. The three positions are as follows:-

1. VOICE. (Left hand position - anti-clockwise). In this position the bass notes are reduced, while the highs are accentuated slightly to give maximum intelligibility while listening to Plays, Talks, etc.

2. MUSIC. (Centre position). In the "music" position the high notes and low notes are accentuated progressively as the volume control is turned to lower volume. This makes the music clear and natural at very low volume levels.

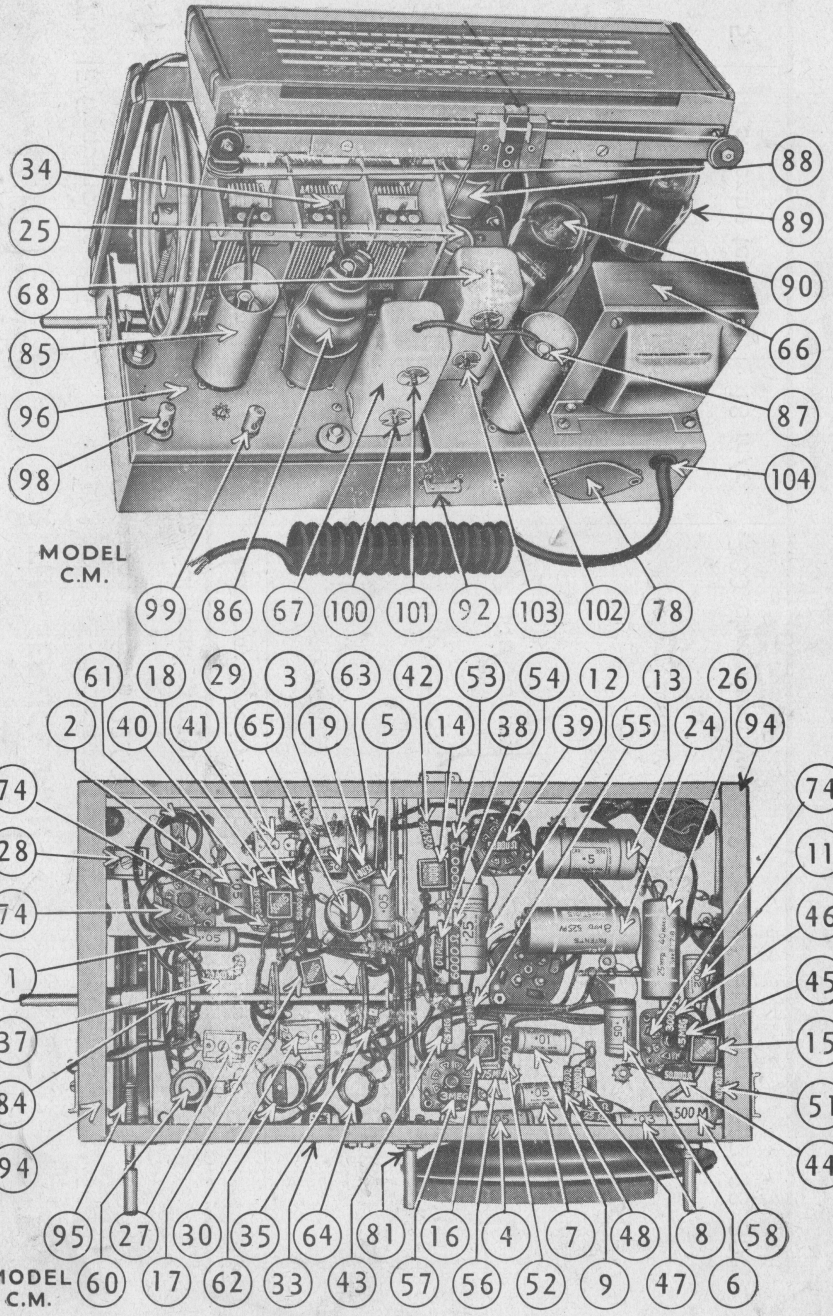
3. OVERSEAS. (Right hand position). The effect in this position is two - fold. Firstly the extreme high notes are reduced to prevent excessive noise and interference, and secondly the extreme low notes are reduced to give maximum intelligibility.



1. .05mfd paper Cond. 200V
2. .05mfd " " "
3. .05mfd " " "
4. .05mfd " " "
5. .05mfd " " "
6. .05mfd " " 400V
7. .05mfd pap. Cond. 400V
8. .03mfd pap. " 200V
9. .01mfd " " 600V
10.
11. .002mfd pap. Cond 600V
12. .25mfd paper con. 400V
13. .5mfd pap. con. 400V
14. .0001mfd mica Con. 1000V

15. .0001mfd Mica Con. 1000V
16. .00005mfd mica Con. 1000V
17. .00005mfd mica Con. 1000V
18. .00005mfd mica Con. 1000V
19. .0031mfd mica Con. 1000V
20. .00005mfd Silver mica cond.1000V
21. .00005mfd Silver mica con. 1000V
22. .0001mfd Silver mica con. 1000V
23. .0001mfd Silver mica con. 1000V
24. 8mfd elec.Cond. type ET1015 525PV
25. 16mfd elec.con. type EEC973 525PV
26. 25mfd elec.con. type ET718 40PV
34.3 Gang Tun.Cond.
35. 20mmfd Bifilar Condenser
37. 20,000 ohm Res. ½W
38. 100,000 " " "
39. 50,000 " " "
40. 300 ohm " "
41. 50,000 ohm " "
42. 250,000 ohm " "
43. 250,000 ohm Res. ½W
44. 50,000 ohm " "
45. 500,000 ohm " "
46. 300 ohm Res. ½W
47. 1,500 ohm Res. ½W
48. 10,000 ohm Res. ½W
49. 50 ohm Res. ½W
50. 25 ohm Res. ½W
51. 10,000 ohm Res. ½W
52. 40 ohm Res. ½W
53. 5,000 ohm Res. 1W
54. 6,000 ohm " "
55. 1.7 meg. Res. ½W
56. 1.7 meg. " "
57. 3 meg. Res. ½W
58. 500,000 ohm Volume Control Tapped

INTERMEDIATE FREQUENCY - 455 Kc. Broadcast Coverage is from 1620 Kc. to 540 Kc.
Short Wave Coverage is from 22.00 mc. to .7 mc.
All voltages taken with 1000 ohms per volt meter. 250V & 10V scale. No signal.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MODEL C.M.
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FOR THE SERVICE MAN

The IF frequency is 455 Kc. Broadcast Coverage is from 1620 Kc. to 540 Kc.
Short Wave Coverage is from 22.00 mc. to .7 mc.

Alignment Procedure.

Set the dial pointer at the end of the dial reading near 550 Kc.

Oper.	Generator Connection.	Freq.	Dummy Capacity.	Instructions.	Adjust Padder
1.	To grid of 6J8G	455 Kc.	.01 mica cond. in series with generator.	Gang plate full out. Leave grid cap on.	100, 101 102, 103
2.	To antenna terminal	1400 Kc.	200 uuf dummy	Set dial pointer on 1400 Kc.	35, 27, 29
3.	To antenna terminal Turn Switch to S/W Band.	600 Kc.	200 uuf dummy	Rock gang to and fro while adjusting for max. output.	33
4.	To antenna terminal	22.00 m/c.	400 ohm dummy	Set pointer at 22.00 m/c.	32
5.	To antenna terminal	18 m/c.	400 ohm dummy	Set pointer at 18 m/c	32, 28, 30

INSTALLATION HINTS

Indifferent performance of a radio receiver is often due to indifferent installation and operation in the home. A little time spent on your receiver, when installing and operating is a safeguard against noisy or inferior reception. The following hints are included to aid you in getting the best from your receiver.

1. HIGH BACKGROUND NOISE OR HISS ON STATIONS.

This effect can be due to lack of, or inefficient aerial. An aerial, as described on page 1 is recommended for localities outside of the suburban area and a reasonable indoor aerial for suburban areas if an outdoor aerial is impracticable. The effect is to increase the signal pickup and lift the signal out of the background noise.

2. HIGH HISS LEVEL AND DISTORTION.

Poor reception of this type is often due to inaccurate tuning, especially when the receiver has a high degree of selectivity. One method is to tune by the background noise which will be at its minimum when the receiver is accurately tuned to the centre of the station.

3. HUM.

There are several possible causes of hum and the following suggested remedies should be tried in the order stated.

1. Reverse the mains plug.
2. Try an effective earth system as described on Page 2.

If the above remedies do not effect a cure, try the receiver in another room, and, if possible, another building, as hum sometimes originates in the house wiring.

4. ELECTRICAL INTERFERENCE.

The suggestions on hum can also apply where electrical interference is troublesome. An intermittent crackle can be caused by faulty electric light globes, loose contacts in mains plugs or sockets, or faulty electrical appliances such as vacuum cleaners, etc. Try removing all globes and plugs one at a time and inspect the contacts before replacing. If signs of arcing are noticed the faulty part should be renewed. Try the receiver in another building and if the trouble ceases, have the house wiring checked for intermittent connections.

5. TONE.

Do not place the receiver flush against the wall but leave a space of 3 or 4 inches. Avoid placing near soft hangings or curtains as these can impair the tone.

BRANCHES AND FACTORY REPRESENTATIVES:

NEW YORK: 113 University Place.

LONDON: 7 Howard Road, Walthamstow.

NEW SOUTH WALES: 55-57 Dowling Street, East Sydney.

WESTERN AUSTRALIA: 905 Hay Street, Perth.

SOUTH AUSTRALIA: 55 Flinders Street, Adelaide.

TASMANIA: 86 Collins Street, Hobart.

TASMANIA: 126 Charles Street, Launceston.

QUEENSLAND: 802 Ann Street, Valley, Brisbane.

LIST OF CALL SIGNS AND WAVE LENGTHS OF AUSTRALIAN RADIO STATIONS

Frequency K.C.'s	Wave Length (M.)	STATION
550	545	2CR CENTRAL REGIONAL, N.S.W.
560	536	6WA SOUTH WEST REGIONAL, W.A.
570	526	2YA WELLINGTON, N.Z.
580	517	3WV WESTERN REGIONAL, VIC.
600	500	7ZL HOBART, TAS.
610	492	2FC SYDNEY, N.S.W.
620	484	3AR MELBOURNE, VIC.
630	476	4QN NORTH REGIONAL, QLD.
640	469	5CK NORTH REGIONAL, S.A.
650	463	1YA AUCKLAND, N.Z.
660	455	2DU DUBBO, N.S.W.
		7BU BURNIE, TAS.
670	448	2CO RIVERINA REGIONAL, N.S.W.
680	441	2HR SINGLETON, N.S.W.
		4AT ATHERTON, QLD.
		7QT QUEENSTOWN, TAS.
690	435	6WF PERTH, W.A. [N.S.W.
700	429	2NR NORTHERN RIVERS REGIONAL,
710	423	7NT NORTH REGIONAL, TAS.
720	417	6GF GOLDFIELDS REGIONAL, W.A.
730	411	5CL ADELAIDE, S.A.
740	405	2BL SYDNEY, N.S.W. [QLD.
760	395	4QS DARLING DOWNS REGIONAL,
770	390	3LO MELBOURNE, VIC.
780	385	2KA KATOOMBA, N.S.W.
		4TO TOWNSVILLE, QLD.
790	380	6WN PERTH, W.A.
		*2BH BROKEN HILL, N.S.W.
800	375	4QG BRISBANE, QLD.
810	370	5RM RENMARK, S.A.
830	361	3GI GIPPSLAND REGIONAL, VIC.
850	353	2CY CANBERRA, A.C.T.
860	349	4GR TOOWOOMBA, QLD.
		7HO HOBART, TAS.
870	345	2GB SYDNEY, N.S.W.
880	341	3UL WARRAGUL, VIC.
		4WK WARWICK, QLD.
		6PR PERTH, W.A.
890	337	5AN ADELAIDE, S.A.
900	333	2LM LISMORE, N.S.W.
		7AD DEVONPORT, TAS. [QLD.
910	330	4RK ROCKHAMPTON REGIONAL,
920	326	2XL COOMA, N.S.W.
		4VL CHARLEVILLE, QLD.
930	323	3UZ MELBOURNE, VIC.
940	319	4QR BRISBANE, QLD.
950	316	2UE SYDNEY, N.S.W.
960	313	5DN ADELAIDE, S.A.
970	309	3BO BENDIGO, VIC.
		4AY AYR, QLD.
980	306	2KM KEMPSEY, N.S.W.
		6AM NORTHAM, W.A.
990	303	2GZ ORANGE, N.S.W.
1000	300	4MB MARYBOROUGH, QLD.
		4CA CAIRNS, QLD.
		7EX LAUNCESTON, TAS.
1010	297	3HA HAMILTON, VIC.
1020	294	2KY SYDNEY, N.S.W.
1030	291	3DB MELBOURNE, VIC.
1040	288	5PI CRYSTAL BROOK, S.A.
1050	286	2CA CANBERRA, A.C.T.
1060	283	4SB KINGAROY, QLD.
1070	280	2RG GRIFFITH, N.S.W.
		6WB KATANNING, W.A.
1080	278	2LT LITHGOW, N.S.W.
		4RO ROCKHAMPTON, QLD.
		7HT HOBART, TAS.

Frequency K.C.'s	Wave Length (M.)	STATION
1090	275	3LK LUBECK, VIC.
1100	273	4LG LONGREACH, QLD.
		7LA LAUNCESTON, TAS.
		‡ 6MD MERREDIN, W.A.
1110	270	2UW SYDNEY, N.S.W.
1120	268	4BC BRISBANE, QLD.
1130	265	2AD ARMIDALE, N.S.W.
		3CS COLAC, VIC.
		6ML PERTH, W.A.
1140	263	2HD NEWCASTLE, N.S.W.
1150	261	2WG WAGGA, N.S.W.
1160	259	7ZR HOBART, TAS.
1170	256	2NZ INVERELL, N.S.W.
1180	254	3KZ MELBOURNE, VIC.
1190	252	2CH SYDNEY, N.S.W.
1200	250	5KA ADELAIDE, S.A.
1210	248	2GF GRAFTON, N.S.W.
		3YB WARRNAMBOOL, VIC.
		6KG KALGOORLIE, W.A.
1220	246	4AK OAKEY, QLD. [N.S.W.
1230	244	2NC HUNTER RIVER REGIONAL,
1240	242	3TR SALE, VIC.
		6IX PERTH, W.A.
1260	238	3SR SHEPPARTON, VIC.
1270	236	2SM SYDNEY, N.S.W.
1280	234	3AW MELBOURNE, VIC.
1290	233	4BK BRISBANE, QLD.
1300	231	2TM TAMWORTH, N.S.W.
1310	229	5AD ADELAIDE, S.A.
1320	227	3BA BALLARAT, VIC.
		6PM FREMANTLE, W.A.
1330	226	3SH SWAN HILL, VIC.
		4BU BUNDABERG, QLD.
1340	224	2LF YOUNG, N.S.W.
		6TZ DARDANUP, W.A.
1350	222	3GL GEELONG, VIC.
		‡ 4GY GYMPIE, QLD.
1360	221	3MA MILDURA, VIC.
		4PM PORT MORESBY
1370	219	2MO GUNNEDAH, N.S.W.
		5SE MT. GAMBIER, S.A.
		6GE GERALDTON, W.A.
1380	217	4BH BRISBANE, QLD.
1390	216	2GN GOULBURN, N.S.W.
		4MK MACKAY, QLD.
1400	214	2PK PARKES, N.S.W.
		5AU PORT AUGUSTA, S.A.
1410	213	2KO NEWCASTLE, N.S.W.
1420	211	3XY MELBOURNE, VIC.
1430	210	2WL WOLLONGONG, N.S.W.
		‡ 6KY PERTH, W.A.
1440	208	2QN DENILIQUIN, N.S.W.
		4IP IPSWICH, QLD.
1450	207	2MG MUDGEE, N.S.W.
		7DY DERBY, TAS.
1460	205	2CK CESSNOCK, N.S.W.
		5MU MURRAY BRIDGE, S.A.
1470	204	2MW MURWILLUMBAH, N.S.W.
		3CV CHARLTON, VIC.
1480	203	2AY ALBURY, N.S.W.
1490	201	2BE BEGA, N.S.W.
		4ZR ROMA, QLD.
1500	200	2BS BATHURST, N.S.W.
		3AK MELBOURNE, VIC. (Night Service Station)

* Temporary allocation—reverts to 570 Kc/s later.

‡ (Projected Station)