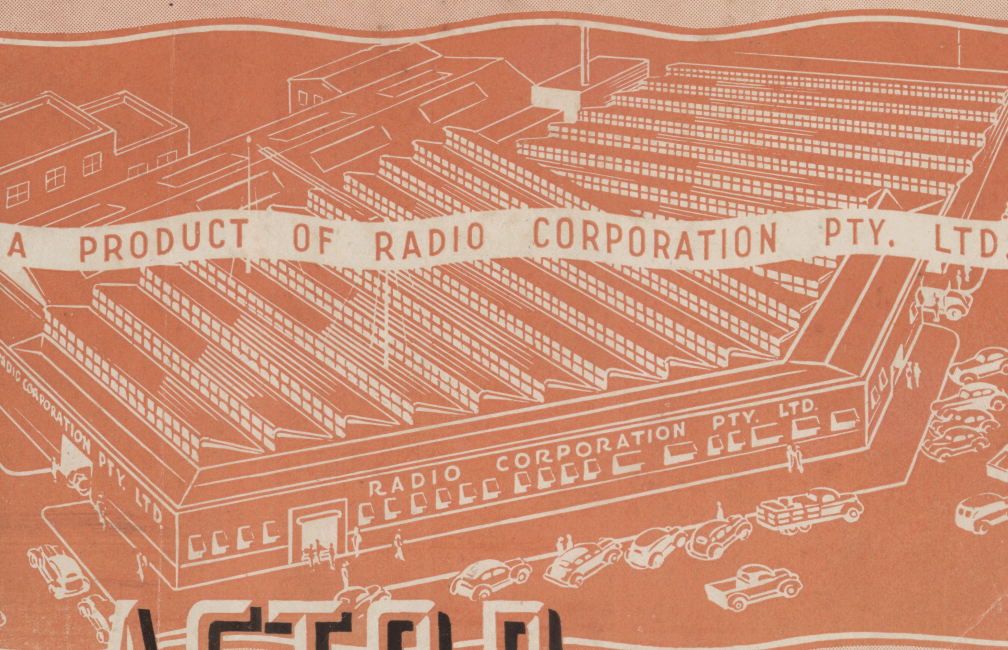
OPERATING INSTRUCTIONS

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 purchaser (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

Model B.N.

5 VALVE SUPERHETERODYNE BATTERY CONSOLE RECEIVER.

For Operation from Dry Batteries.

★

GENERAL INFORMATION.

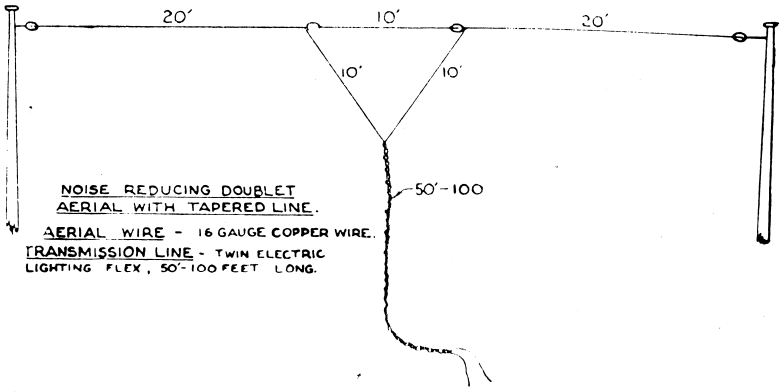
AERIAL:

An aerial from 75-100 feet long has been found suitable for the best results, and dimensions of an aerial which has proved satisfactory is shown below:—

Height	**20 feet**
Length	**70 feet**
Lead-in	**20 feet**

A HAZELTINE PATENT AERIAL TRANSFORMER is incorporated in this set, and makes the actual size of the aerial non-critical. It has been found that a very small aerial picks up little energy from the broadcasting station, and tends to make static noises relatively louder. Where the receiver is situated very close to a powerful local station a smaller aerial may give more satisfactory results.

A doublet aerial is the most suitable for a dual wave receiver and construction details of a simple and effective doublet are given here. This doublet aerial is efficient for the whole of the short-wave range, and automatically changes to a single-wire type aerial for use on the broadcast range. The short-wave aerial transformer is designed to give the best results on any normal length of single-wire aerial, and also to closely match the doublet aerial.



The advantages of the doublet aerial are:—

1. Greater short wave sensitivity.
2. Less noise on short wave.
3. Performance equal to an ordinary aerial when used on broadcast range.

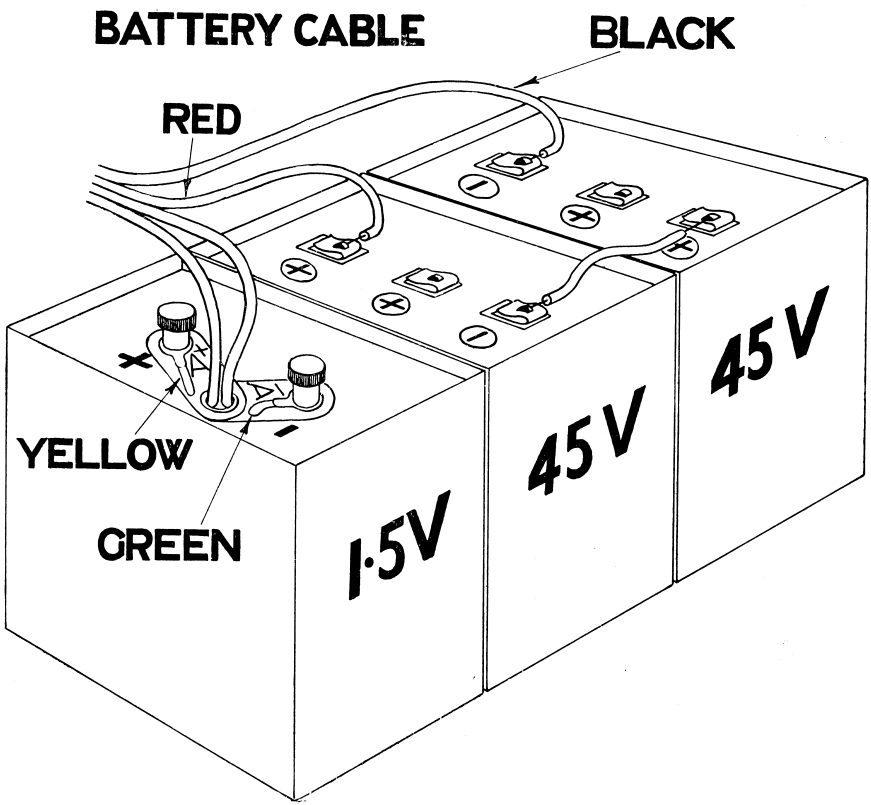
DOUBLET AERIAL INSTRUCTIONS:

When connecting the doublet aerial, connect one lead into the terminal marked "Aerial" and the other lead into the terminal marked "Earth" together with the earth wire. This gives best results on short-waves and good results on broadcast waves. Long distance signals can be better received on broadcast waves if the doublet lead connected to the earth terminal is removed.

EARTH:

A good earth connection soldered or firmly clamped to a water pipe, considerably improves results. If a water pipe is not available an earth lead can be soldered to a length of pipe driven about 4 ft. into the ground, or another method is to solder the earth wire to a piece of galvanized iron (as large as possible) which is buried in moist soil. All aerial and earth connections should be soldered as twisted joints are certain to cause noisy reception when they oxidise or become dirty. The earth lead should be as short as possible.

BATTERY CONNECTIONS:



FEATURES:

This receiver features:—Automatic volume control, 10 inch speaker, Low battery drain, Stabilized circuits, Permeability side tuned I.F. transformers, Humidity proofing, Straight line frequency calibration.

INSTRUCTIONS FOR OPERATING:

Make sure that the aerial, earth and batteries are correctly connected up. Switch the set on by turning the extreme left hand knob to one notch in a clockwise direction. Adjust the wave change switch to the desired wave band, then tune to the desired station. Adjust volume and tone controls to suit. The set must be accurately tuned to the station being received, otherwise the tone will be impaired.

AUTOMATIC VOLUME CONTROL:

This receiving set is equipped with automatic volume control, incorporated to prevent blasting of local stations, and to eliminate fading when using the set for distant reception.

DIAL CALIBRATION:

The dial is calibrated in kilocycles for the broadcast band and all main stations are clearly marked. The tuning condenser is straight line frequency which has the effect of spreading the stations evenly over the band. The short wave calibration is in metres and megacycles with all important bands clearly marked. The broadcast range extends to 1600 Kc.

SHORT WAVES:

Reception of short wave stations is governed by movements of the Ionisphere layers. These layers vary with the time of day, the seasons, and sun spots, so that altogether short wave reception is never constant. Generally, programmes transmitted directly to Australia give best reception, and most wireless periodicals carry a page of short wave broadcasts, and the best times to listen to them.

CAUTION.

Use great care in connecting Batteries. Follow instructions shown on page 2 and on the back of the chassis.

Do not use a filament battery in excess of $1\frac{1}{2}$ volts, or a high tension battery in excess of 90 volts.

Make sure set is switched off when not in use.

TURN SWITCH AS FAR ANTI-CLOCKWISE AS IT WILL GO.

The

ASTOR

5 VALVE CONSOLE RECEIVER.

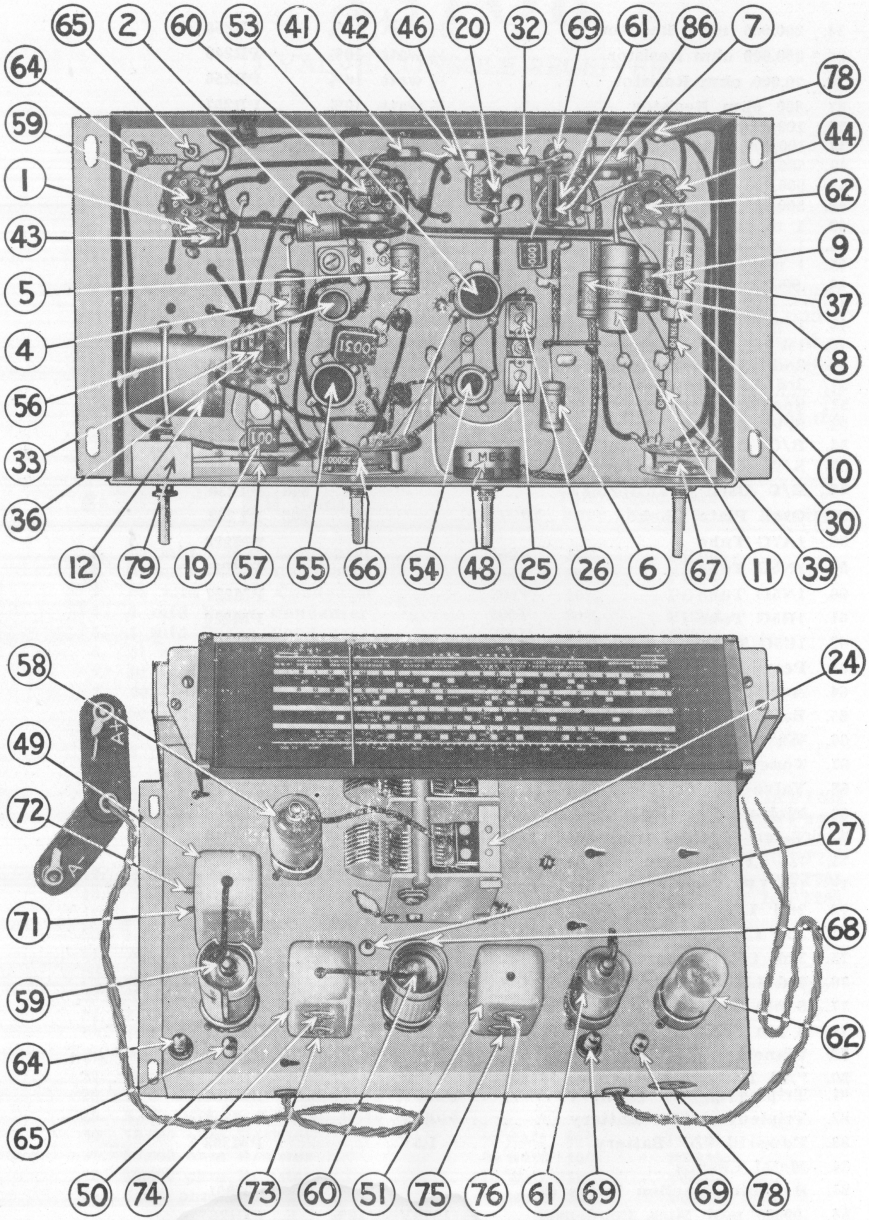
Battery Model.

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	Tolerance	Spec. No.	Part No.	Remarks
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.	.1 mfd Paper Condenser	200V	20%		PC218	
5.	.1 mfd Paper Condenser	200V	20%		PC218	
6.	.01 mfd Paper Condenser	600V	20%		PC140	
7.	.02 mfd Paper Condenser	400V	20%		PC111	
8.	.002 mfd Paper Condenser	600V	20%		PC112	
9.	.004 mfd Paper Condenser	600V	20%		PC221	
10.	10 mfd Electrolytic type ET717	40PV	20%		PC125	
11.	.5 mfd Paper Condenser	200V	20%		PC158	
12.	2 mfd Paper Condenser	400V	20%		PC159	
13.	.0001 mfd Silver Mica Condenser.	1000V	+ 5%		PC227	In PT208
14.	.0001 mfd Silver Mica Condenser.	1000V	+ 5%		PC227	In PT208
15.	.0001 mfd Silver Mica Condenser.	1000V	+ 5%		PC227	In PT249
16.	.0001 mfd Silver Mica Condenser.	1000V	+ 5%		PC227	In PT249
17.	.00005 mfd Silver Mica Condenser	1000V	5%		PC268	In PT208
18.	.00005 mfd Silver Mica Condenser	1000V	5%		PC268	In PT208
19.	.001 mfd Mica Condenser	1000V	10%		PC108	
20.	1.7 megohm Resistor	½ watt	10%		PR248	
21.	.0001 mfd Mica Condenser	1000V	10%		PC110	
22.	.0031 mfd Mica Condenser	1000V	5%	982	PC278	
23.	20 mmfd Wire Wound Condenser		5%	639	PC166	
24.	2 gang variable Condenser			996	PC292	
25.	B/C Aerial Coil Trimmer			858	PC250	
26.	S/W Aerial Coil Trimmer			847	PC224	
27.	B/C Variable Series Pad			710	PC164	
28.	B/C Oscl. Coil Trim. Wire Wound			995	PC286	
29.	S/W Oscl. Coil Trim. Wire Wound			995	PC286	
30.	10,000 ohm Resistor	½ watt	10%		PR164	
31.	25,000 ohm Resistor	½ watt	10%		PR155	
32.	50,000 ohm Resistor	½ watt	10%		PR160	
33.	5,000 ohm Resistor	½ watt	10%		PR250	

No.	Part Name	Rating	Toler-ance	Spec. No.	Part No.	Remarks
34.	200,000 ohm Resistor	½ watt	10%		PR255	
35.	250,000 ohm Resistor	½ watt	10%		PR249	
36.	70,000 ohm Resistor	½ watt	10%		PR256	
37	.800 ohm Resistor	½ watt	10%		PR257	
38.	100 ohm Resistor	½ watt	10%		PR262	
39.	100,000 ohm Resistor	½ watt	10%		PR103	
40.	500,000 ohm Resistor	½ watt	10%		PR245	
41.	500,000 ohm Resistor	½ watt	10%		PR245	
42.	500,000 ohm Resistor	½ watt	10%		PR245	
43.	1 megohm Resistor	½ watt	10%		PR246	
44.	1 megohm Resistor	½ watt	10%		PR246	
45.	1 megohm Resistor	½ watt	10%		PR246	
46.	.0002 mfd Mica Condenser	1000V	10%		PC124	
47.						
48.	1 megohm Volume Control			880	PR218	
49.	1st I.F. Transformer			928	PT208	
50.	2nd I.F. Transformer			928	PT208	
51.	3rd I.F. Transformer			973	PT249	
52.	Speaker Input Trans. 8000 ohms					
53.	S/W Antenna Transformer			963	PT234	
54.	B/C Antenna Transformer			947	PT228	
55.	S/W Oscl. Transformer			964	PT235	
56.	B/C Oscl. Transformer			946	PT230	
57.	Oscl. Plate Choke			965	PT242	
58.	1A7G Tube				PM228	
59.	1N5G Tube				PM227	
60.	1N5G Tube				PM227	
61.	1H5G Tube				PM226	
62.	1C5G Tube				PM229	
63.	Permag. Speaker Type 10/21			1007	PM401	
64.	Aerial Terminal				PM306	
65.	Earth Terminal				PM306	
66.	Wave Change Switch			854	PM263	
67.	Tone Contral and On/Off Switch			906	PM298	
68.	Valve Shields (2)				PM313	
69.	Pick-up Terminals				PM306	
70.	Valve Shield Earthing Clips (2)				PM314	
71.	1st I.F. Primary adj. Screw					
72.	1st I.F. Secondary Adj. Screw					
73.	2nd I.F. Primary Adj. Screw					
74.	2nd I.F. Secondary Adj. Screw					
75.	3rd I.F. Primary Adj. Screw					
76.	3rd I.F. Secondary Adj. Screw					
77.	8 pin Sockets (5)			696	PM277	
78.	4 pin Socket			696	PM143	
79.	Planetary Varnier Drive			857	PM259	
80.	"A" Battery Connecting Strip				PM421	
81.	Tripledyne "B" Battery	45V			PM397	
82.	Tripledyne "B" Battery	45V			PM397	
83.	Powerfil "A" Battery	1.5V			PM398	
84.	Metal Chassis					
85.	Bakelite Junction Strips (2)				PM391	
86.	.00025 mfd Mica Condenser	1000V	10%		PC126	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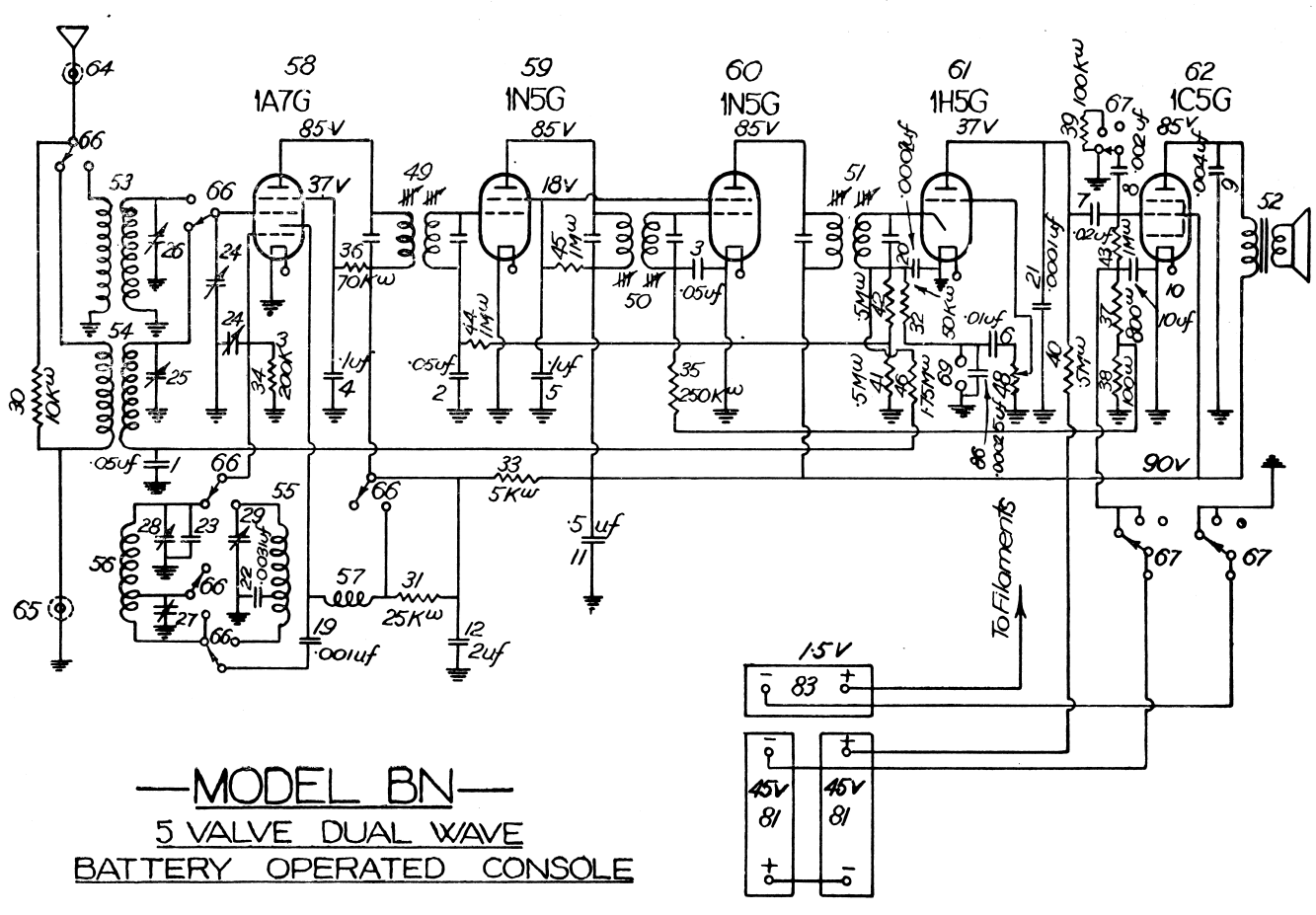

—MODEL BN—

5 VALVE DUAL WAVE BATTERY OPERATED CONSOLE

For the Service Man . . .

The I.F. frequency is 455 Kc.

Broadcast coverage is from 1650 Kc. to 540 Kc.

Short Wave coverage is from 22.25 mc. to 6.85 mc.

Alignment Procedure.

With the gang plates fully meshed set the dial pointer at the end of the dial reading on 540 Kc.

Operation	Frequency	Generator Connection	Dummy Capacity	Instructions	Adjust Padder
1.	455 Kc	To grid of 1A7G	.01 mica cond. in series with generator.	Switch on B/C band. Leave grid cap on.	71, 72, 73, 74, 75, 76
2.	1400 Kc	To antenna terminal	200 uufd dummy	Set dial pointer on 1400 Kc.	25, 28
3.	600 Kc	To antenna terminal	200 uufd dummy	Rock gang to and fro while adjusting for maximum output.	27
		Turn switch to S/W Band.			
4.	22.25 mc	To antenna terminal	400 ohm dummy	Set pointer at 22.25 mc	29
5.	18 mc	To antenna terminal	400 ohm dummy	Set pointer at 18 mc. Rock gang to and fro for maximum output.	26

INSTALLATION HINTS.

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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 areas 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. Electrical interference.

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 plug 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.

4. 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 seriously 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.
886	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)