



ASTOR ELECTRONICS PTY. LTD.

DIVISION OF ELECTRONIC INDUSTRIES LTD., BOX 183, P.O. SOUTH MELBOURNE

Reg. Office: Astor House, 161-173 Sturt St., South Melbourne. Telegrams: "Schuh" Telephone: 69 0300

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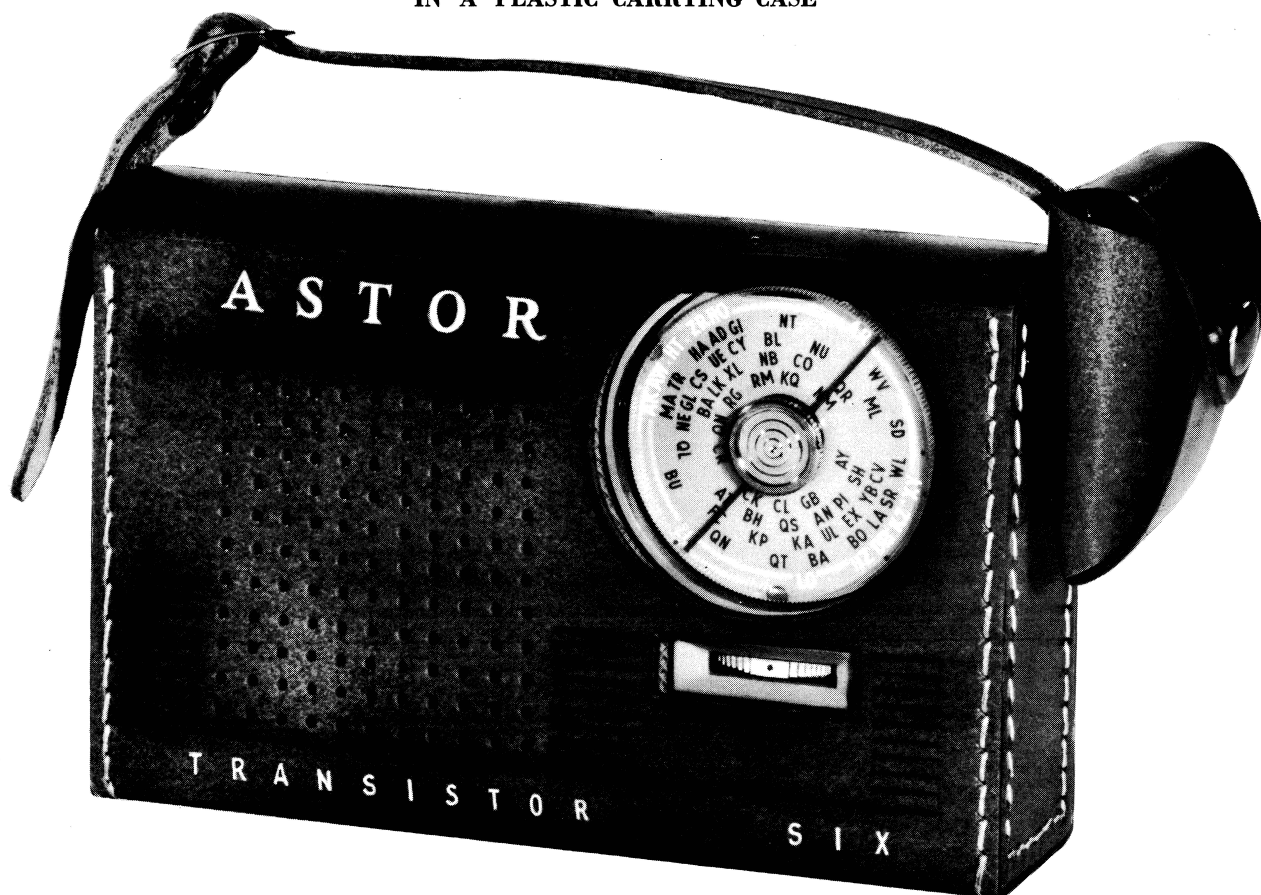
File : Receivers
Portable

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SERVICE DATA ASTOR MODEL "P8F"

6 TRANSISTOR MIDGET PORTABLE RECEIVER
IN A PLASTIC CARRYING CASE



Tuning Range - "ALPS" Tuning Capacitor, 528 - 1610 Kc/s
"M. S. P." Tuning Capacitor, 525 - 1630 Kc/s

Intermediate Frequency	- 455 Kc/s
Power Output	- 100 Milliwatts
Current Consumption	- 12 mA. (no signal)
Supply Source	- 6V. DC. - four 1.5V cells in series

ACCESS TO INTERIOR OF CABINET

Remove two screws and prise rear section off body of cabinet.

CHASSIS SERIAL NUMBER

Remove rear of cabinet and fully mesh tuning gang. Serial number is stamped into top section of tuning gang mount bracket.

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PRODUCTION CHANGES

A quantity of first production run receivers are fitted with "ALPS" type two gang tuning capacitors. Later production are fitted with an "M.S.P." type.

The external appearance of the receivers is the same except for the dial readings. To identify the type of capacitor fitted, observe the low frequency end of the tuning range, i. e. 3AR, 2FC, 4QG, 5CL, 6WF, etc.

These station letters appear at the 10 o'clock position on the dial when an "ALPS" capacitor is fitted and will appear at the 2 o'clock position when an "M.S.P." capacitor is fitted.

The Broadcast Alignment procedure is different for each gang type. The main alignment procedure is to be followed when servicing receivers fitted with "M. S. P." units and the following procedure is for receivers fitted with "ALPS" units.

BROADCAST ALIGNMENT

Receivers fitted with "ALPS" type tuning capacitor.

- A. To inject a signal into the receiver connect 2 ft. of aerial wire to the "hot" terminal of signal generator. Fashion wire into a vertical position.
- B. Place receiver so that ferrite aerial is uppermost and horizontal. Tuning end of receiver is to be toward but not less than one foot from generator aerial wire.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1.	Refer Para. A. & B. above	600Kc/s	Set tuning indicator to 600Kc/s spot on dial. Adjust oscillator coil iron core for max. output whilst rocking tuning gang thru signal.
2.	As oper. 1.	1615Kc/s	Tuning gang plates fully open. Adjust oscillator trimmer capacitor for max. output.
3.	As oper. 1.	1470Kc/s	Tune receiver accurately to 1470Kc/s signal. Adjust aerial and oscillator trimmer capacitors for max. output. Do not rock the gang.
4.	As oper. 1.	600 Kc/s	Readjust osc. coil iron core for max. output.
5.	Repeat operations 2 and 3		
	Tuning range 528 - 1610 kilocycles approx.		

CHANGES TO MAIN COMPONENT PARTS LIST

The main parts list shows components used in receivers fitted with the "M.S. P." capacitor. The following list details components which are used in receivers fitted with "ALPS" capacitor.

Circuit No.	Description	Part Number
1.	Two Gang Tuning Capacitor. Includes Trimmers.	4000-016-01
55.	Ferrite Slab Aerial	4074-051-01
56.	Oscillator Coil	4043-047-01

NOTE: The mount screws and spacers for the "ALPS" capacitor are supplied as part of the component.

7309-051-03 Locking screw - tuning indicator disc.

DIAL READINGS

7070-028-02	New South Wales	7070-028-04	Queensland
7070-028-03	Victoria/Tasmania	7070-028-05	Western and South Australia

ALIGNMENT EQUIPMENT

Signal Generator - modulated 400 cps
Output Meter - 15 ohm impedance
Generator Series Capacitor - .1 mF. Part No. 4006-005-03
Alignment Tools

- (a) Flat metal Blade End - Part No. 4121-001-01 for I. F. T. and Osc. coil iron core Adjustment
- (b) Chisel Point type - Part No. 4121-005-01 for trimmer capacitor adjustment.

ALIGNMENT CONDITIONS

Volume Control - maximum setting
Output Level - 6 milliwatts
Output Meter
Connection - to receiver earphone socket. Plug, Part No. 7171-015-01 is available for this purpose.
Supply Voltage - 6 V. DC. (four 1.5V cells in series)

INTERMEDIATE FREQUENCY TRANSFORMER ALIGNMENT

Remove two screws and prise rear section off cabinet. The receiver chassis does not have to be removed from cabinet for alignment purposes.

Fully mesh tuning gang plates and loosen tuning indicator locking screw. Set indicator to low frequency end of travel dial spot then tighten lock screw.

Set tuning control to high frequency end of travel.

Insert .1mF capacitor in series with generator "hot" lead.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1.	To pin on circuit board (term 3 of slab aerial)	455Kc/s	Adjust iron core of 3rd IF trans. for max. output.
2.	As oper. 1.	455Kc/s	Adjust iron core of 2nd IF. trans. for max. output.
3.	As oper. 1.	455Kc/s	Adjust iron core of 1st IF. trans. for max. output.
4.	Repeat operations 1, 2 and 3.		

BROADCAST ALIGNMENT (Refer Page 2)

- A. To inject a signal into the receiver connect 2 ft. of aerial wire to the "hot" terminal of signal generator. Fashion wire into a vertical position.
- B. Place receiver so that ferrite aerial is uppermost and horizontal. Tuning end of receiver is to be toward but not less than one foot from generator aerial wire.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1.	Refer PARA. A & B	600Kc/s	Set tuning indicator to 600Kc/s spot on dial. Screw in aerial trimmer to max. capacity then unscrew a half turn. Adjust iron core of oscillator coil for maximum output whilst rocking tuning gang thru signal.
2.	As oper. 1.	1400Kc/s	Set tuning indicator to 1400Kc/s spot on dial. Adjust oscillator and aerial trimmer capacitors for max. output. Do not rock gang.
3.	As oper. 1.	600Kc/s	Tune receiver to generator. Adjust iron core of osc. coil for max. output whilst rocking gang thru signal.
4.	Repeat operations 2 & 3.		
5.	Tuning range 525 to 1630 Kc/s approx.		

TUNING INDICATOR DISC SETTING

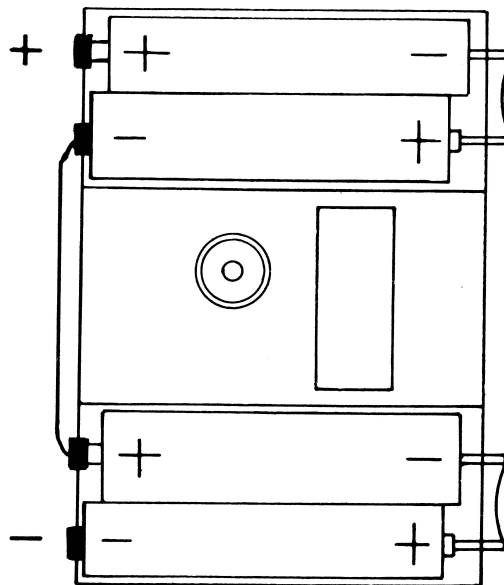
Loosen disc locking screw, anticlockwise. Rotate the disc for optimum logging of the local stations then securely tighten lock screw.

BATTERY REPLACEMENT

1. Remove screws and lift back off cabinet.

NOTE: It is most important that the cells be installed with the polarity as shown on diagram.

2. Before fitting new cells, lay the tapes provided into the cavities of battery holder.



CHASSIS REMOVAL

1. Hold tuning disc firmly, turn locking screw anticlockwise then remove screw, disc, rubber washers and extension bush from tuning shaft.
2. Remove screws and lift back off cabinet.
3. Remove batteries then remove a screw from each of the lower cavities in battery holder.
4. Remove hexagonal bush located between volume control and tuning gang.
5. Remove the chassis by lifting firstly the end near the tuning gang then the battery end.

REFITTING THE CHASSIS

1. Reverse removal instructions.
2. Set tuning indicator as detailed in Alignment Procedure.

DIAL READINGS

A set of four dial readings are stored in the metal holder located behind tuning disc.

1. Remove locking screw (anticlockwise) and tuning indicator disc.
2. Carefully prise lugs of holder upward off dial readings; remove cover and dial readings.
3. Select required dial reading then refit readings and cover into holder. Fold down metal lugs.
4. Refit tuning disc and locking screw. Set indicator as detailed in Alignment Procedure.

CLEANING AGENT FOR PLASTIC BAG AND MOULDED PLASTIC CASE

Do not polish the plastic bag or the moulded plastic case with an abrasive material, motor car polish, boot polish or similar household cleaning fluids as permanent damage may result to the finish of the plastic bag or the moulded case.

To restore the lustre of the plastic bag and the moulded case wipe with a soft cloth dampened with water and lightly polish with a neutral wax.

Circuit No.	Value	Capacitors Description	Tol ±	Rating D.C.W.	Part Number
1		Two Gang Tuning (refer note page 2)			4000-032-02
2	·01mF	Disc Ceramic		25V	4008-039-06
3	·01mF	Disc Ceramic		25V	4008-039-06
4	220pF	Polystyrene	5%	125V	4004-005-03
5	·01mF	Disc Ceramic		25V	4008-039-06
6	·01mF	Disc Ceramic		25V	4008-039-06
7	10mF	Electrolytic		6V	4005-007-02
8	12pF	Disc Ceramic N. P. O.	5%	500V	4008-018-03
9	·01mF	Disc Ceramic		25V	4008-039-06
10					
11	220pF	Polystyrene	5%	125V	4004-005-03
12	·01mF	Disc Ceramic		25V	4008-039-06
13	27pF	Disc Ceramic N. P. O.	5%	500V	4008-031-04
14	·01mF	Disc Ceramic		25V	4008-039-06
15	220pF	Polystyrene	5%	125V	4004-005-03
16	·047mF	Disc Ceramic		25V	4008-057-03
17	·022mF	Disc Ceramic		25V	4008-010-03
18	2mF	Electrolytic		6V	4005-005-06
19	50mF	Electrolytic		3V	4005-001-02
20	·01mF	Disc Ceramic		25V	4008-039-06
21	·01mF	Disc Ceramic		25V	4008-039-06
22	100mF	Electrolytic		6V	4005-002-10
23		Trimmer (refer note page 2)			
24	5-30pF	Trimmer, Compression (refer note page 2)			4000-023-01

Circuit No.	Ohms	Resistors Description	Tol ±	Rating Watts	Part Number
25	56K	Carbon	10%	$\frac{1}{2}$	4022-003-03
26	12K	Carbon	10%	$\frac{1}{2}$	4022-029-01
27	2.2K	Carbon	10%	$\frac{1}{2}$	4022-021-02
28	1.5K	Carbon	10%	$\frac{1}{2}$	4022-007-01
29					
30					
31	330	Carbon	10%	$\frac{1}{2}$	4022-011-01
32	2.2K	Carbon	10%	$\frac{1}{2}$	4022-021-02
33	4.7K	Carbon	10%	$\frac{1}{2}$	4022-005-01
34	22K	Carbon	10%	$\frac{1}{2}$	4022-026-02
35	560	Carbon	10%	$\frac{1}{2}$	4022-010-01
36	560	Carbon	10%	$\frac{1}{2}$	4022-010-01
37	3.3K	Carbon	10%	$\frac{1}{2}$	4022-006-01
38	82K	Carbon	10%	$\frac{1}{2}$	4022-037-01
39	470	Carbon	10%	$\frac{1}{2}$	4022-016-01
40	5K	Volume Control - ON/OFF switch attached			4029-003-01
41					
42	·75	Wire Wound	10%	$\frac{1}{2}$	4024-002-02
43	3.9K	Carbon	10%	$\frac{1}{2}$	4022-020-01
44	1K	Carbon	10%	$\frac{1}{2}$	4022-008-01
45	22K	Carbon	10%	$\frac{1}{2}$	4022-026-02
46	1.5K	Carbon	10%	$\frac{1}{2}$	4022-007-01
47	10	Carbon	10%	$\frac{1}{2}$	4022-035-02
48	130	Disc. N. T. C.	10%	$1\frac{1}{4}$	4021-002-02
49	82	Carbon	10%	$\frac{1}{2}$	4022-070-01
50	100	Carbon	10%	$\frac{1}{2}$	4022-062-01
51					
52					

MISCELLANEOUS

53.					
54.					
55.	Ferrite Aerial (refer note page 2)				4074-051-01
56.	Oscillator Coil (refer note page 2)				4043-047-01
57.	No. 1 I. F. Transformer 455Kc/s - (red/red ident.)				4044-009-01
58.	No. 2 I. F. Transformer 455 Kc/s - (red/grey ident.)				4044-009-07
59.	No. 3 I. F. Transformer 455 Kc/s - (red/yellow ident.)				4044-009-03
60.	Driver Transformer - 4500 : 1100 ohms impedance				4042-067-01
61.	Speaker Transformer - 320 : 15 ohms impedance				4042-066-01

62.	Earphone Jack Socket	7222-033-01
63.	Speaker - permag type 2C00/4/15	4056-009-01
64.	Battery (4) cells type 1015	4062-001-01
65.	Switch - ON/OFF part of circuit No. 40	
66.	Transistor - Converter type 2N412	4128-011-02
67.	Transistor - I. F. Amp 1, type 2N410-E (green spot)	4128-010-03
68.	Transistor - I. F. Amp 2, type 2N410-B (red spot)	4128-010-04
69.	Diode - Detector, type 1N295	4127-001-01
70.	Transistor - Audio Driver, type 2N406	4128-009-02
71.	Transistor - Audio Output type 2N408	4128-008-03
72.	Transistor - Audio Output type 2N408	4128-008-03

MECHANICAL

4085-125-01	Earphone Cord and Plug Assy.	
7113-016-01	Battery Holder Assy - includes lugs, springs and eyelets	
7055-374-02	Speaker Clip Ring	
7236-021-01	Slab Aerial Mount (2) moulded	
7196-926-03	Locking Screw - tuning indicator disc (refer note page 2)	
7031-068-01	Moulded Bush - tuning shaft extension	
7261-325-01	Washer (3) rubber moulded bush	
7070-029-11	Tuning indicator disc	
7185-006-01	Dial Reading Holder	
7070-028-12	Dial Reading - N. S. W.)	
7070-028-13	Dial Reading - Vic/Tas)	Refer note page 2
7070-028-14	Dial Reading - Qld.)	
7070-028-15	Dial Reading - S. A. /W. A.)	
7065-055-01	Dial Reading Cover - celluloid	
7293-003-01	Hexagonal Spacer - fasten chassis to cabinet	
7201-126-09	Screw (2) 3/8" x No. 4 csk. hd. self-tapping, fastens battery box to cabinet.	
7028-202-01	Bracket - tuning gang mount	
7198-301-12	Screw (2) fastens rear section to cabinet	
7198-002-04	Screw - 3/8" x 1/8" Whit. hex. hd., cabinet front.	
1127-032-01	Linen Tape - 9 $\frac{1}{2}$ ", battery removal	
1031-001-01	Organdie - black, speaker grille and cabinet rear	
7027-218-02	Bracket (2) volume control mount	
7293-007-01	Spacer (3) gang capacitor mount screws	
7196-275-13	Screw (3) 3/16" x 6BA Rd. Hd. gang capacitor mount	

STYLING

CABINET FRONT ASSY:- consists of escutcheon, cabinet body section, gasket and organdie.

	<u>ESCUTCHEON</u>	<u>CABINET BODY SECTION</u>
7099-011-06	PINE	/ TAN
7099-011-08	PINE	/ DARK GREEN
7099-011-09	PINE	/ LIME
7099-011-07	PINE	/ CHERRY RED
7099-011-04	PINE	/ CHARTREUSE
7099-011-01	CHARCOAL	/ CHARCOAL

CABINET BODY SECTION

7099-009-01	TAN
7099-009-09	DARK GREEN
7099-009-08	LIME
7099-009-03	CHERRY RED
7099-009-05	CHARTREUSE
7099-009-04	CHARCOAL

ESCUTCHEON

7084-078-04	PINE
7084-078-02	CHARCOAL

CABINET BACK SECTION

7006-084-03	SAND
7006-084-05	PINE

VOLUME CONTROL DISC

7071-023-07	WHITE
7071-023-04	CHARCOAL

CIRCUIT BOARD PRINTED WIRING SIDE MODEL P8F

NOTE: VOLUME CONTROL CONNECTIONS
A. TO CIRCUIT NO 18.
B. TO CIRCUIT NO 42.

