ASTOR

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.

SERVICE DATA

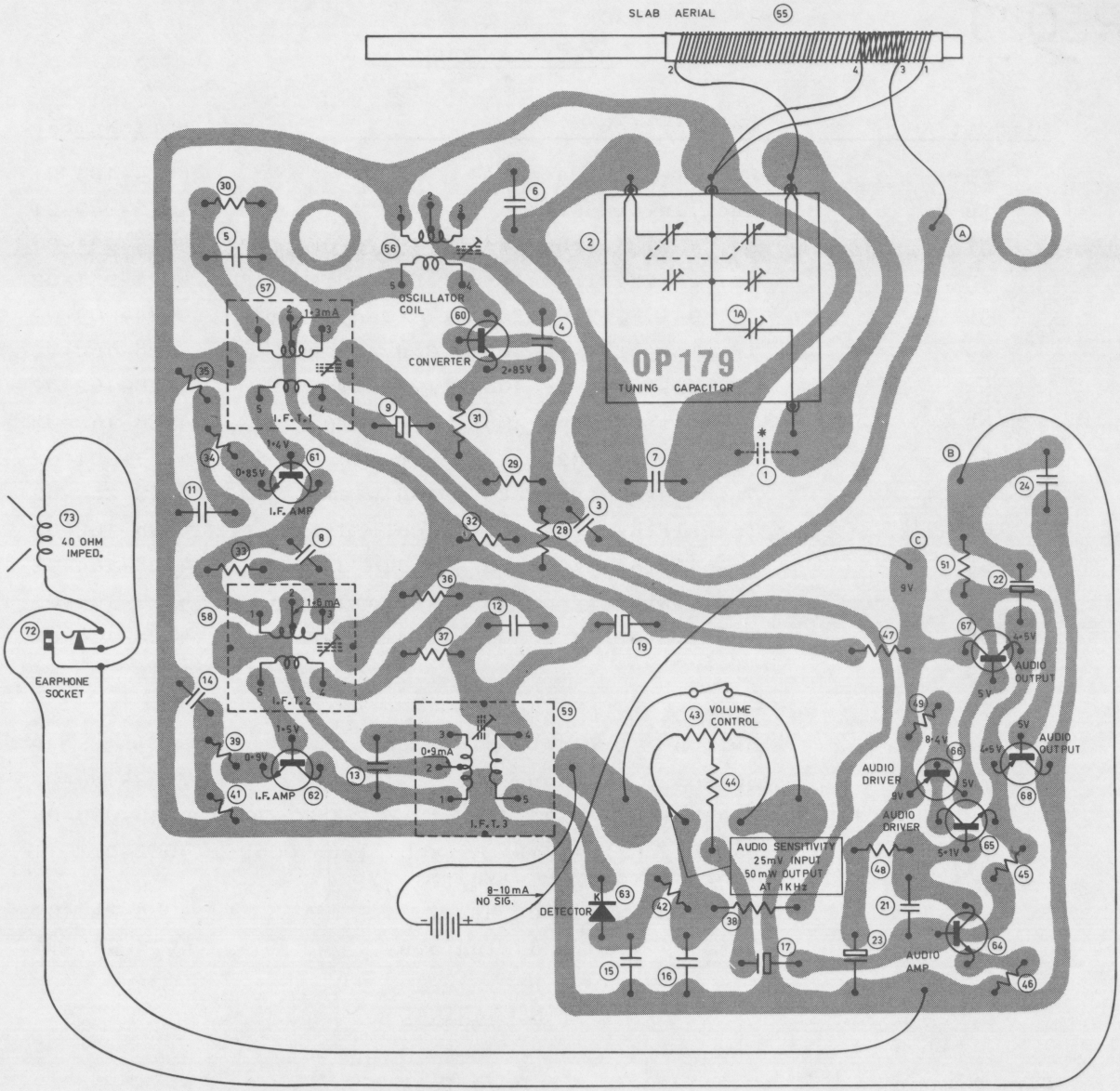
ASTOR MODEL PE029

TRANSISTOR PORTABLE RECEIVER

Tuning Range	- 520 - 1650 KHz
Intermediate Frequency	- 455 KHz
Power Output	- 100 milliWatts
Current Consumption	- 8 - 10 milliAmps (No Signal)
Supply Source	- 9 Volts D.C.

ACCESS TO INTERIOR OF CABINET

Remove screw and prise rear section off body of cabinet.

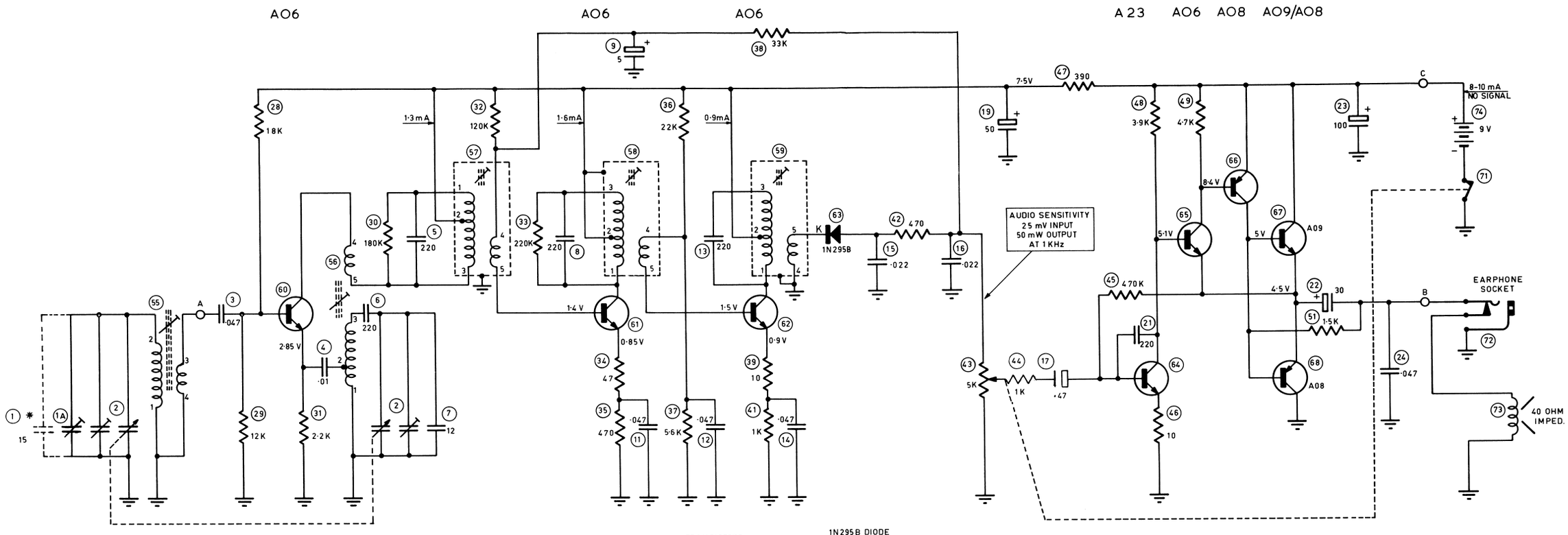


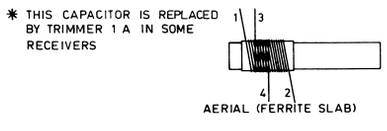
* THIS CAPACITOR IS REPLACED BY TRIMMER 1A IN SOME RECEIVERS.

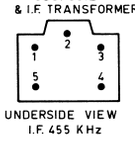
PB1673

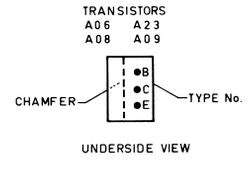
DRAWN	DATE	CH KD	APPD
A.O.	18-5-70	G.S.	S.I.Z.

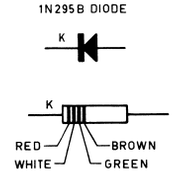
CIRCUIT BOARD
PRINTED WIRING SIDE
MODEL PE029











ALL VOLTAGES MEASURED BETWEEN POINTS INDICATED AND COMMON NEGATIVE WITH A D.C. VACUUM TUBE VOLTMETER (NO INPUT SIGNAL)
NUMBERS ASSIGNED TO TERMINALS OF COILS AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT BE FOUND ON THE UNIT

DRAWN	DATE	CH'K'D	APP'D
A.O	16-6-70	PB.	SIZ.

PB1674

MODEL PE029

CAPACITORS

Circ. No.	Value	Description	Tol. ±	Rating V.DCW	Part Number
1	15pF	Ceramic Disc	10%	50	4008-050-08
2		Two gang - tuning			4000-056-05
3	.047uF	Ceramic Disc		25	4008-057-04
4	.01uF	Ceramic Disc		25	4008-039-10
5	220pF	Polystyrene	5%	125	4004-005-10
6	220pF	Polystyrene	5%	125	4004-005-10
7	12pF	Ceramic Disc	10%	50	4008-018-11
8	220pF	Polystyrene	5%	125	4004-005-10
9	5uF	Electrolytic		3	4005-018-18
10					
11	.047uF	Ceramic Disc		25	4008-057-04
12	.047uF	Ceramic Disc		25	4008-057-04
13	220pF	Polystyrene	5%	125	4004-005-10
14	.047uF	Ceramic Disc		25	4008-057-04
15	.022uF	Ceramic Disc		25	4008-010-06
16	.022uF	Ceramic Disc		25	4008-010-06
17	.47uF	Electrolytic		3	4005-056-01
18					
19	50uF	Electrolytic		10	4005-001-21
20					
21	220pF	Ceramic Disc	20%	50	4008-009-06
22	30uF	Electrolytic		6	4005-033-07
23	100uF	Electrolytic		10	4005-002-51
24	.047uF	Ceramic Disc		25	4008-057-04
25					
26					
27					

RESISTORS

Circ. No.	Value Ohms	Description	Tol ±	Rating V.DCW	Part Number
28	18K	Carbon	10%	.5	4022-018-01
29	12K	Carbon	10%	.5	4022-029-01
30	180K	Carbon	10%	.5	4022-014-03
31	2.2K	Carbon	10%	.5	4022-021-02
32	120K	Carbon	10%	.5	4022-031-01
33	220K	Carbon	10%	.5	4022-063-01
34	47	Carbon	10%	.5	4022-041-01
35	470	Carbon	10%	.5	4022-016-01
36	22K	Carbon	10%	.5	4022-026-02
37	5.6K	Carbon	10%	.5	4022-022-02
38	33K	Carbon	10%	.5	4022-059-03
39	10	Carbon	10%	.5	4022-035-01
40					
41	1K	Carbon	10%	.5	4022-008-01
42	470	Carbon	10%	.5	4022-016-01
43	5K	Volume Control - SP.ST. Switch attached			4029-003-06
44	1K	Carbon	10%	.5	4022-008-01
45	470K	Carbon	10%	.5	4022-045-02
46	10	Carbon	10%	.5	4022-035-01
47	390	Carbon	10%	.5	4022-058-04
48	3.9K	Carbon	10%	.5	4022-020-01
49	4.7K	Carbon	10%	.5	4022-005-01
50					
51	1.5K	Carbon	10%	.5	4022-007-01

CHASSIS REMOVAL

1. Hold tuning disc firmly, turn locking screw anticlockwise then remove screw, disc, rubber washer and extension bush from tuning shaft.

2. Remove cabinet back.

3. Remove 3 screws holding circuit board to cabinet and lift chassis clear of cabinet.

REFITTING THE CHASSIS

1. Reverse removal instructions.

2. Set tuning indicator as detailed in Alignment Procedure.

CLEANING AGENT FOR CARRY BAG AND MOULDED PLASTIC CASE

Do not polish the carry 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 carry bag or the moulded case.

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

ALIGNMENT EQUIPMENT

Signal Generator - Modulated 400Hz

Output Meter - 40 Ohm impedance

Alignment Tool - Flat metal blade end.

Part No. 4121-001-01 for I.F.T. and Osc. coil iron core adjustment and trimmer capacitor adjustment.

ALIGNMENT CONDITIONS

Volume Control - Maximum setting

Output Test Level - 50 milliWatts

Output Meter Connection - To receiver earphone socket

Supply Voltage - 9 Volt D.C.

INTERMEDIATE FREQUENCY TRANSFORMER ALIGNMENT

Remove screw and prise rear section off cabinet. The receiver chassis does not have to be removed for I.F. transformer 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. Connect generator direct to Pin A on circuit board.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1	To Pin A converter base	455KHz	Adjust iron core of 3rd I.F. trans. for maximum output.
2	As oper. 1	455KHz	Adjust iron core of 2nd I.F. trans. for maximum output.
3	As oper. 1	455KHz	Adjust iron core of 1st I.F. trans. for maximum output.
4	Repeat operations 1, 2 and 3 in same order.		

BROADCAST ALIGNMENT

A To inject a signal into the receiver, connect 2ft. 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 Paragraphs A & B	600KHz	Set tuning indicator to 600KHz spot on dial. Adjust iron core of oscillator coil for maximum output.
2	As oper. 1	1400KHz	Set tuning indicator to 1400KHz spot on dial. Adjust oscillator trimmer for maximum output.
3	Repeat operations 1 & 2 until no change occurs.		
4	As oper. 1	600KHz	Tune to 600KHz and move adjustable aerial former for maximum output.
5	As oper. 1	1400KHz	Tune to 1400KHz. Adjust aerial trimmer for maximum output.
6	Repeat operations 4 & 5 until no change occurs.		

PE029

MISCELLANEOUS

Circuit No.	Description	Part Number
55	Ferrite slab aerial	4074-105-01
56	Oscillator coil	4043-049-01
57	No. 1 I.F. Transformer Green/Orange	4044-031-01
58	No. 2 I.F. Transformer Blue/Orange	4044-031-02
59	No. 3 I.F. Transformer Green/Green	4044-009-09
60	Transistor type A06 - Converter	4128-162-02
61	Transistor type A06 - I.F. amp	4128-162-02
62	Transistor type A06 - I.F. amp	4128-162-02
63	Diode type 1N295B - Detector	4127-001-02
64	Transistor type A23 - Audio amp	4128-244-02
65	Transistor type A06 - Audio driver	4128-162-02
66	Transistor type A08 - Audio driver	4128-164-02
67	Transistor type A09 - Audio Output	4128-165-02
68	Transistor type A08 - Audio Output	4128-164-02
69		
70		
71	Switch - part of volume control	
72	Socket - earphone	7222-164-01
73	Speaker 2 - 3/4" dia. type 2C00/4/40	4056-009-08
74	Battery (2) 9 Volt Hitachi type 006P or Eveready equivalent type 216	4062-002-11
-	Earphone and plug assy.	4085-248-01
-	Battery lead and plug assy.	4078-086-01

MECHANICAL

Part Number	Description
7309-150-01	Screw (2) special - gang mount
7236-156-01	Support (2) slab aerial
7086-088-08	Eyelet (2) aerial support
7167-058-01	Pin (2) Circuit board
7196-741-01	Screw (1) special - volume disc
7071-023-10	Disc (1) volume control
7209-513-02	Screw (3) 1/4" x 4/40 Phillips Hd. - circuit board
7152-273-01	Speednut (3) speaker mount
7261-163-04	Washer (1) earphone socket
7031-181-01	Bush (1) moulded - tuning spindle
7261-325-02	Washer (1) neoprene - bush
7070-029-01	Disc (1) tuning
7309-053-05	Screw (1) special - tuning disc
7070-152-01	Dial (1) printed
7152-020-01	Speednut (1) cab back fastening
7209-530-01	Screw (1) special - cab back
7099-079-21	Cabinet front assembly
7006-349-11	Cabinet back assembly
7010-006-01	Carrying bag

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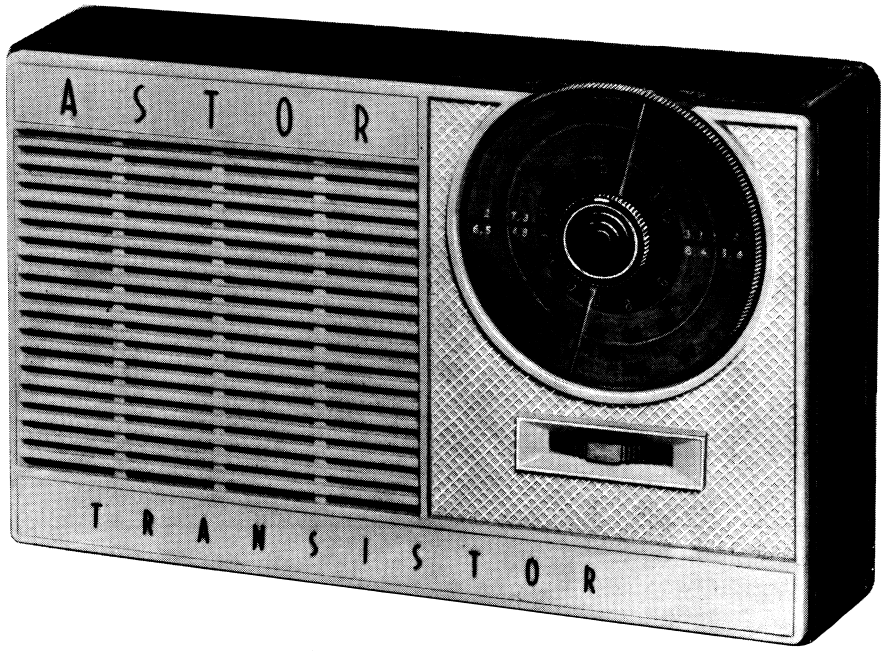

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Intermediate Frequency	- 455 KHz
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ACCESS TO INTERIOR OF CABINET

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