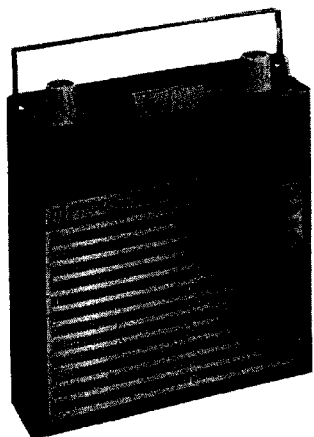


SERVICE INFORMATION FOR THE

PHILIPS

CAR PORTABLE RADIO

Types P3G38T/00 and P3G38T/05



The P3G38T is a two waveband car portable radio receiver incorporating six transistors and three crystal diodes. Medium wave and long wave range selection is by push button, rotary controls provide for tuning and volume/on-off switch. As a self-contained portable radio (P3G38T/00) it accommodates an internal aerial (ferroceptor) and loudspeaker and is powered by an internal 9V. dry battery. As a car radio (P3G38T/05) it slides into a mounting tray and engages a 5-pin plug to which the car's aerial, loudspeaker and battery supply (12V. only) are connected. Push button switching disconnects the internal aerial, loudspeaker and dry battery and connects the car's aerial, loudspeaker and battery in lieu. A safety lock automatically locks the receiver into the mounting tray and is released by a key provided.

The receiver Type P3G38T/00 and Car Mounting Kit Type NP1625 are available together as Car Portable Radio Type P3G38T/05 or separately under their type numbers.

A—SPECIFICATION

Transistor types	
T1	AF117
T2	AF117
T3	AF117
T4	OC82D
T5	OC82
T6	OC82
	Mixer/oscillator
	1st I.F. amplifier
	2nd I.F. amplifier
	Driver
	Output (matched pair)
Diode types	
X1	OA79
X2	OA70
X3	AA129
	A.G.C. damping
	Detector
	Stabilization
	12V. 0.75 watt L.E.S.
Scale lamp	
Power supply	
(i) Portable	9V. dry battery (Ever Ready type PP6 or equivalent)
	Consumption: 25 mA average
(ii) Car radio	12V. D.C. (either pole earthed)
	Consumption: 750 mA average
	1 amp. (car radio only)
Fuse rating	M.W. 187—353 metres
Waveband ranges	L.W. 1,200—2,000 metres
Output	
(i) Portable	400 mW
(ii) Car radio	1 watt
Loudspeakers	
(i) Internal	3" circular, 8Ω impedance
(ii) Car radio	6" x 4" elliptical, 5Ω impedance
Dimensions	Receiver: Width 6½". Depth 6½". Height 1¼".
	Mounting tray: Width 7". Depth 7". Height 2".
Portable weight	2 lbs. including battery

B—OPERATION NOTES

General

The receiver is switched on by turning the volume/on-off control clockwise and the required waveband selected by operation of the left-hand push button—"IN" for long wave, "OUT" for medium wave. The scale lamp lights up only when the receiver is in use as a car radio.

Portable operation

For portable operation, depress the right-hand push button to lock in the "IN" position, bringing into circuit the internal aerial, loudspeaker and 9V. dry battery. The internal ferrite-rod aerial is directional.

ISSUED BY:—

AMALGAMATED ELECTRIC SERVICES LTD.

WADDON FACTORY ESTATE

CROYDON

SURREY

Telephone: CROYdon 7722

Telex: 262308

JUNE, 1965

[Please quote AES 429 when ordering further copies]

AES 429]

71	Spring (2) for item 58	...	...	A3.645.86
72	Spring for item 59	...	...	MK.740.62
73	Strip—perforated	...	...	MK.680.86
74	Tray assy.	...	...	3113.108.50220
75	Washer for L31	...	...	988/3
76	Bracket—mounting	...	...	3113.101.20170
78	Kit of parts—receiver	...	...	3113.108.70220
79	Connector—L.T.	...	...	MK.990.79
80	Screw (3) 2BA x $\frac{1}{8}$	...	...	B.812.CD/2N x $\frac{1}{8}$
81	Screw (3) 8BA x $\frac{1}{2}$	...	...	B.070.WD/8N x $\frac{1}{2}$
82	Sleeve	...	...	MK.962.62
83	Suppressor capacitor 1uf	...	...	MK.207.22
84	Suppressor capacitor 0.5 uF	...	...	MK.207.23
85	Washer (3)	...	...	B.053.TF/2N
86	Washer (3)	...	...	B.050.TD/2N
87	Kit of parts—loudspeaker	...	...	3113.108.70230
88	Bracket—mounting (4)	...	...	MK.068.61
89	Nut (4)	...	...	B.801.AF/4N
90	Screw (4) 4BA x $\frac{1}{2}$	...	...	B.810.AA/4N x $\frac{1}{2}$
91	Screw (8) 5BA x $\frac{1}{2}$	...	...	B.070.AD/5N x $\frac{1}{2}$
92	Washer (4)	...	...	B.050.TD/4N
93	Washer—shakeproof (8)	...	...	B.053.TF/4N

CORES FOR COILS

L1-3, 4-6	...	...	...	K5.120.00
L7-10	...	...	...	56.681.22

CAPACITORS

	Value pF		
C1-2	Gang	...	49.002.97
C3	Ceramic	...	C.304.GH/P100E
C4	Trimmer	...	C.010.EA/20E
C6	Foil	10,000	C.280.AA/A10K
C7	Trimmer	...	C.010.EA/20E
C8	Ceramic	...	C.304.GC/D120K
C9	Foil	22,000	C.280.AA/A22K
C10	...	...	In L14-16
C11	Trimmer	...	C.010.EA/20E
C12	Trimmer	...	C.010.EA/20E
C13	Wire trimmer	250-400	907/250-400E
C15	Foil	0.1uF	C.280.AA/A100K
C16	Elco	...	C.426.AR/B32
C17	Foil	47,000	C.280.AA/A47K
C18	...	...	In L17-19
C19	Elco	...	C.426.AR/B32
C20	Foil	47,000	C.280.AA/A47K
C21	Foil	47,000	C.280.AA/A47K
C22	...	...	In L20-22
C23	Elco	125uF	C.426.AR/D125
C24	Foil	10,000	C.280.AA/A10K
C25	Elco	...	C.426.AR/G4
C26	Foil	10,000	C.280.AA/A10K
C28	Elco	200uF	C.426.CB/C200
C29	Foil	10,000	C.280.AA/A10K
C30	Ceramic	...	C.304.GH/A22E
C31	Elco	125uF	C.426.CB/E125
C32	Ceramic	10,000	MK.206.10
C33	Elco	1,000uF	MK.185.52
C34	Ceramic	390	C.304.GH/D390E
C35	Ceramic	8.2	C.304.GH/ABE2
C36	Foil	10,000	C.280.AA/A10K
C37	Polyester	82,000	906/L82K
C38	Foil	0.1uF	C.280.AA/P100K

TRANSISTORS & DIODES

T1	...	...	AF17
T2	...	...	AF17
T3	...	...	AF17
T4	...	...	OC82D
T5	...	...	OC82
T6	...	...	OC82
X1	...	...	OA79
X2	...	...	OA70
X3	...	...	AA129
LPI	Lamp	...	3113.104.90030
FS1	Fuse—1 amp.	...	974/1000

COILS & TRANSFORMERS

L1-3	Aerial coil M.W.	...	3113.108.20080
L4-6	Aerial coil L.W.	...	3113.108.20090
L7-8	Aerial coil M.W.	...	3113.108.20110
L9-10	Aerial coil L.W.	...	3113.108.20140
L7-10	Rod aerial assy. M.W. & L.W.	...	3113.108.20100
L11-13	Osc. coil	...	MK.570.11
L14-16	1st I.F. coil	...	MK.571.50
L17-19	2nd I.F. coil	...	MK.571.51
L20-22	3rd I.F. coil (detector)	...	MK.570.18
L23-25	Driver transformer	...	3113.108.30020
L26-28A	Output transformer	...	3113.108.30030
L29	Loudspeaker	...	AD.2309.SYD
L30	R.F. filter choke	...	A3.115.77
L31	Filter choke	...	3113.108.20470

RESISTORS

	Value Ω		
R1	6,800	...	902/6K8
R2	33,000	...	902/33K
R3	1,000	...	902/1K
R4	0.1M	...	902/100K
R5	470	...	902/470E
R6	0.1M	...	902/100K
R7	12,000	...	902/12K
R8	470	...	902/470E
R9	2,200	...	902/2K2
R10	22,000	...	902/22K
R11	4,700	...	902/4K7
R12	390	...	902/390E
R13	680	...	902/680E
R14	470	...	902/470E
R15	Pot. volume	4,700	902/470E
R16	820	...	902/820E
R17	47,000	...	902/47K
R18	10,000	...	902/10K
R19	560	...	901/560E
R20	1,000	...	902/1K
R21	1M	...	902/1M
R23	Preset pot.	200	E.097.AC/200E
R24	...	1,800	902/1K8
R25	...	680	901/680E
R26	...	6.8	MK.771.33
R27	...	6.8	MK.771.33
R28	...	0.15M	902/150K

O. 4022 101 50107

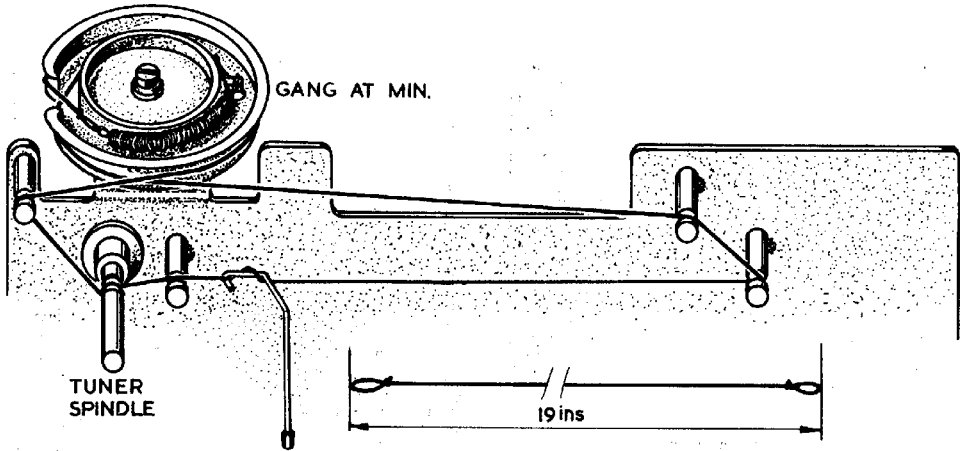


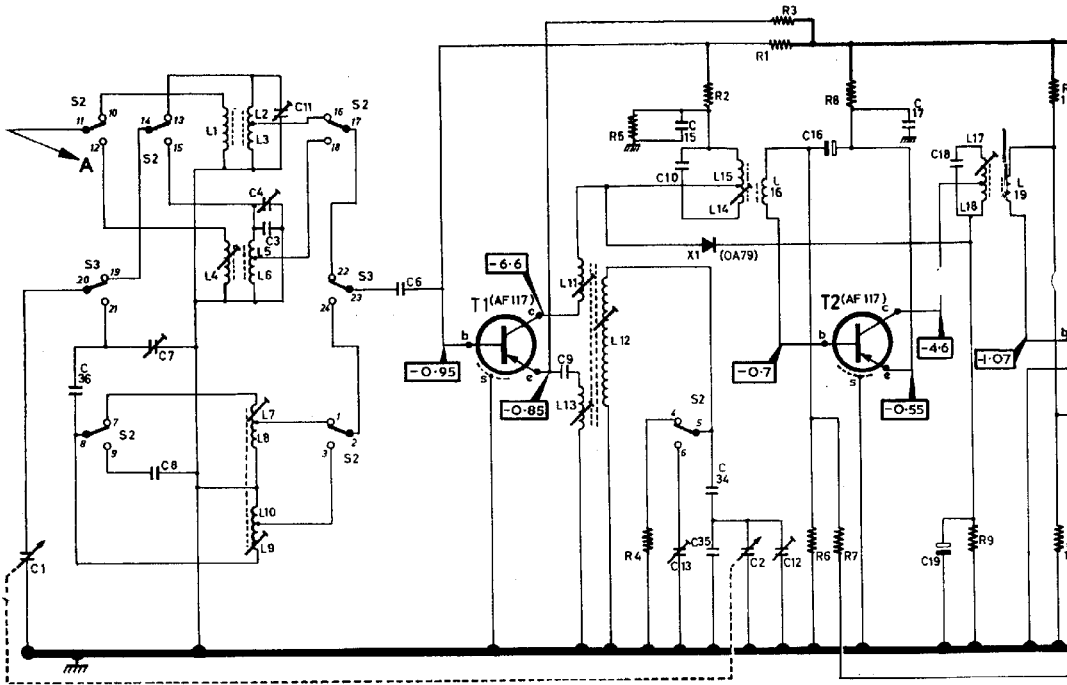
Fig. 4. DRIVE CORD

SD2895

SPARE PARTS LIST

CABINET ASSEMBLY			
1	Cabinet back assy.—grey	3113.108.01900	
2	Cabinet back assy.—red	3113.108.00180	
3	Cabinet front assy.—grey	HY.089.03	
4	Cabinet front assy.—red	HY.089.09	
5	Cover for battery compartment—grey	3113.104.00910	
6	Cover for battery compartment—red	3113.104.00130	
7	Grille for speaker	3113.101.60100	
8	Label—identity	MK.705.42	
9	Strip "Phillips all transistor car portable"	3113.105.00070	
CABINET SUPPLEMENTARY PARTS			
10	Clip—securing speaker	3113.101.00280	
11	Disc (2) sealing for item 18 grey	3113.104.01040	
12	Disc (2) sealing for item 18 red	3113.104.00560	
13	Handle	3113.108.03040	
13A	Insulator for batteries	MK.726.07	
14	Lampholder	MK.957.84	
15	Nut	MK.927.44	
16	Pad foam	3113.104.00190	
17	Scale—station	3113.105.00030	
18	Screw (2) 3mm. X35mm.	B.054.ED/3 X35	
18A	Washer for item 13	3113.104.02150	
CONTROL KNOBS			
19	On/off	3113.108.00200	
20	Push button (2)	3113.108.00210	
21	Rings—securing items 19, 23, 24	MK.752.03	
22	Spring for items 19, 23, 24	MK.730.50	
23	Tuning	3113.108.00200	
24	Volume	3113.108.00200	
MAIN CHASSIS ASSY.			
25	Bracket	3113.108.00160	
26	Clip (2) securing item 40	3113.101.00120	
27	Connector assy.—battery	3113.108.00300	
28	Cord for pointer	K.299.ZZ/938	
29	Drive drum	3113.104.00100	
30	Front plate assy.	3113.108.00140	
31	Pointer	3113.108.03600	
32	Ring (2) retaining item 30		B.108.AF/3.2
33	Screw (2) for gang mounting 2.6 X 3mm.		B.054.ED/2.6 X 3
34	Screw (4) for item 30 5BA X 1		B.070.AD/5N X 1
35	Screw for item 29 2.6mm. X 3mm.		B.054.ED/2.6 X 3
36	Screw (2) for item 37 5BA X 1		B.070.AD/5N X 1
37	Socket		3113.100.20020
38	Spindle for drive		3113.101.20190
39	Spring—tension for item 28		3113.101.00070
40	Support (2) for aerial		3113.104.00120
41	Washer for item 29		B.050.FD/2.6
43	Screw for printed panel 5BA X 1		B.070.AD/5N X 1
44	Washer for printed panel		988/3
45	Nut for posts		81.125.43
MOUNTING TRAY ASSY.			
46	Baffle—loudspeaker		MK.404.06
47	Block—2-way for item 58		A3.822.29
48	Bush—fixing item 69, 66, 58		B.002.AF/3 X 0.2 X 3
49	Bush—fixing item 65		B.002.AF/3 X 3
50	Cap for item 50		P5.172.25/148HA
51	Clamp		B.205.AD/1 X 19 X 10
52	Clamp—speaker lead		MK.047.84
53	Cover assy.		3113.108.00800
54	Excutechon		3113.108.04550
55	Key		3113.101.20290
56	Lead assy.—Receiver end		3113.108.70130
57	Lead assy.—battery—car end		MK.957.96
58	Lead assy.—speaker		3113.108.70100
59	Lever for lock assy.		3113.101.20260
60	Lock cover assy.		3113.108.06780
61	Lockwasher for items 52, 53, L31		B.053.BD/3
62	Lockwasher (2) for item 54		B.053.AD/3
63	Loudspeaker and lead assy.		MK.957.86
64	Nut for items 52, 53, L31		B.020.ED/3
65	Panel—tag for item 54		MK.984.89
66	Plug strip assy		3113.108.00790
67	Screw for items 52, 53, 54, L31 3 X 6mm.		B.054.ED/3 X 6
68	Screw (4) for item 55 4BA X 1		B.070.AF/4N X 1
69	Socket—aerial—for item 54		3113.100.20000
70	Spring for item 50		A3.645.31

L	1-3 4-6 7-10			11-13			14-16			17-19			31
C	36	7	4, 3	11	6	9	10, 15	16	17	18	19	32	11
R	1	8					5	13, 35	2	1, 3	8		9, 28, 10



Voltages taken with respect to positive supply using a 100K Ω /V meter. All controls at minimum, no signal input and receiver switched to MW. Supply voltage 14.4V car battery or 9.3V internal battery.

Circuit drawn in MW, car radio position set for positive earth.

D.C. RESISTANCE OF COILS > 1 Ω

Coil No.	Ohms	Coil No.	Ohms	Coil No.	Ohms
L1	50	L9	4.8	L25	67
L2	5	L13	2.6	L26	3.2
L4	200	L15	1.8	L27	3.2
L5	57	L18	1.8	L29	7.0
L6	5.5	L23	340	L30	1.2
L7	1.4	L24	70	L31	1.3
				L32	3.6

Switch Coding
 S1 On/off
 S2 Wave change
 S3 Internal/car supply

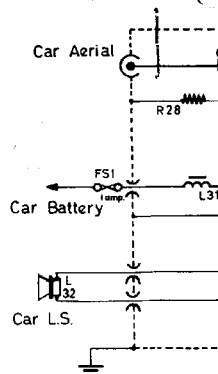
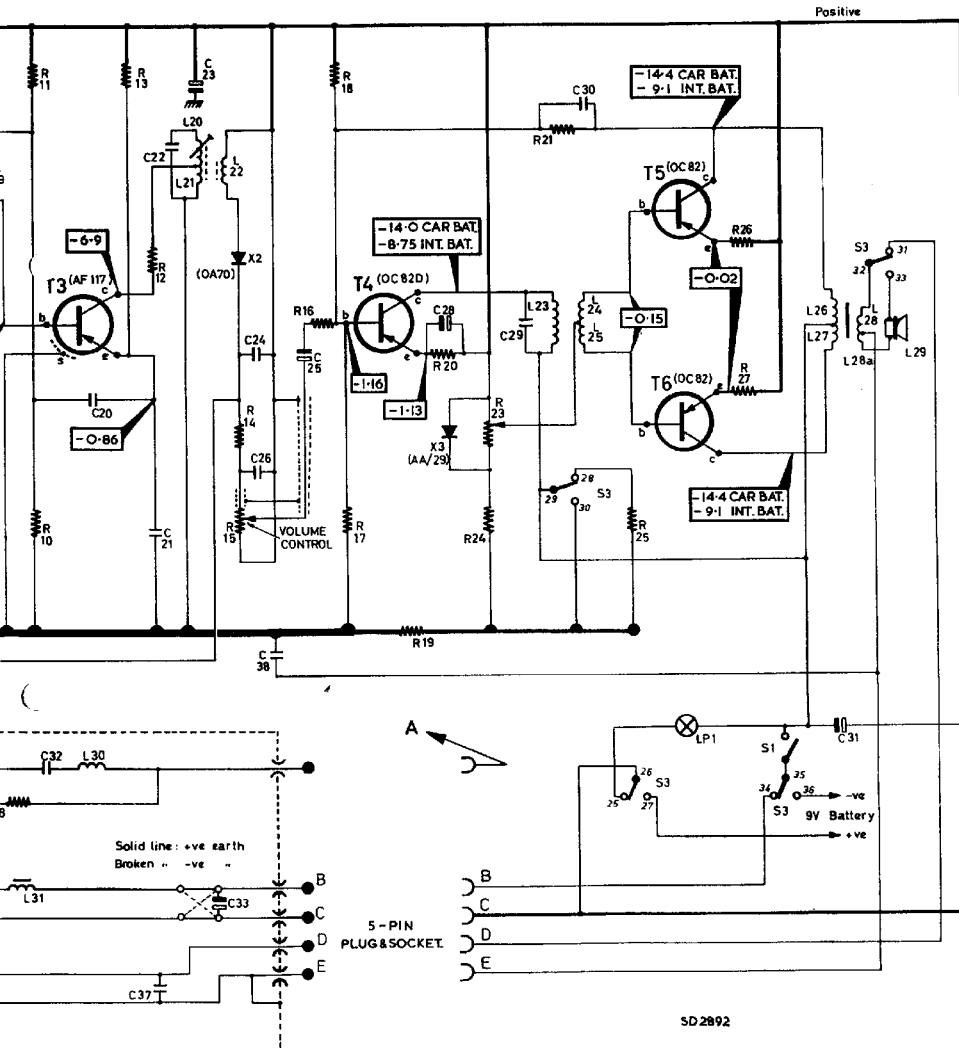


Fig. 2. CIRCUIT DIA

20-22.										23-25.										26-28a.										29.									
31.	30.		22.	23.	24.	25.	28		29	30												31.																	
32.	20.	37.	21.	33.	26.	38.			18	20.	23.	21.			26.																								
11.	13.		12.		15, 14.		16.	17.	19.	20.	23.	24.			25.	27.																							
10.																																							



TRAY UNIT
T DIAGRAM

SD2892