

www.radio-workshop.co.uk

MURPHY SERVICE MANUAL

SPECIFICATION

MAINS SUPPLY:	200-250V a. c., 50 c/s
CONSUMPTION:	30 watts average
VALVE:	PCL83
RECTIFIER:	EC9 (metal)
PILOT LAMP:	6.5V, 0.3A, m. e. s.
FUSE:	Heat fuse on mains transformer
LOUDSPEAKER:	7 in. by 4 in. elliptical, 3 ohms impedance, permanent magnet
OVERALL DIMENSIONS:	9 in. high, 18¼ in. deep, 16¼ in. wide
WEIGHT:	26½ lb.
RELEASED:	March, 1958
PRICE:	£16 12s. 4d. plus P.T.

Issued by

MURPHY RADIO LTD
WELWYN GARDEN CITY · HERTS

Telephone: WELWYN GARDEN 3434

35811

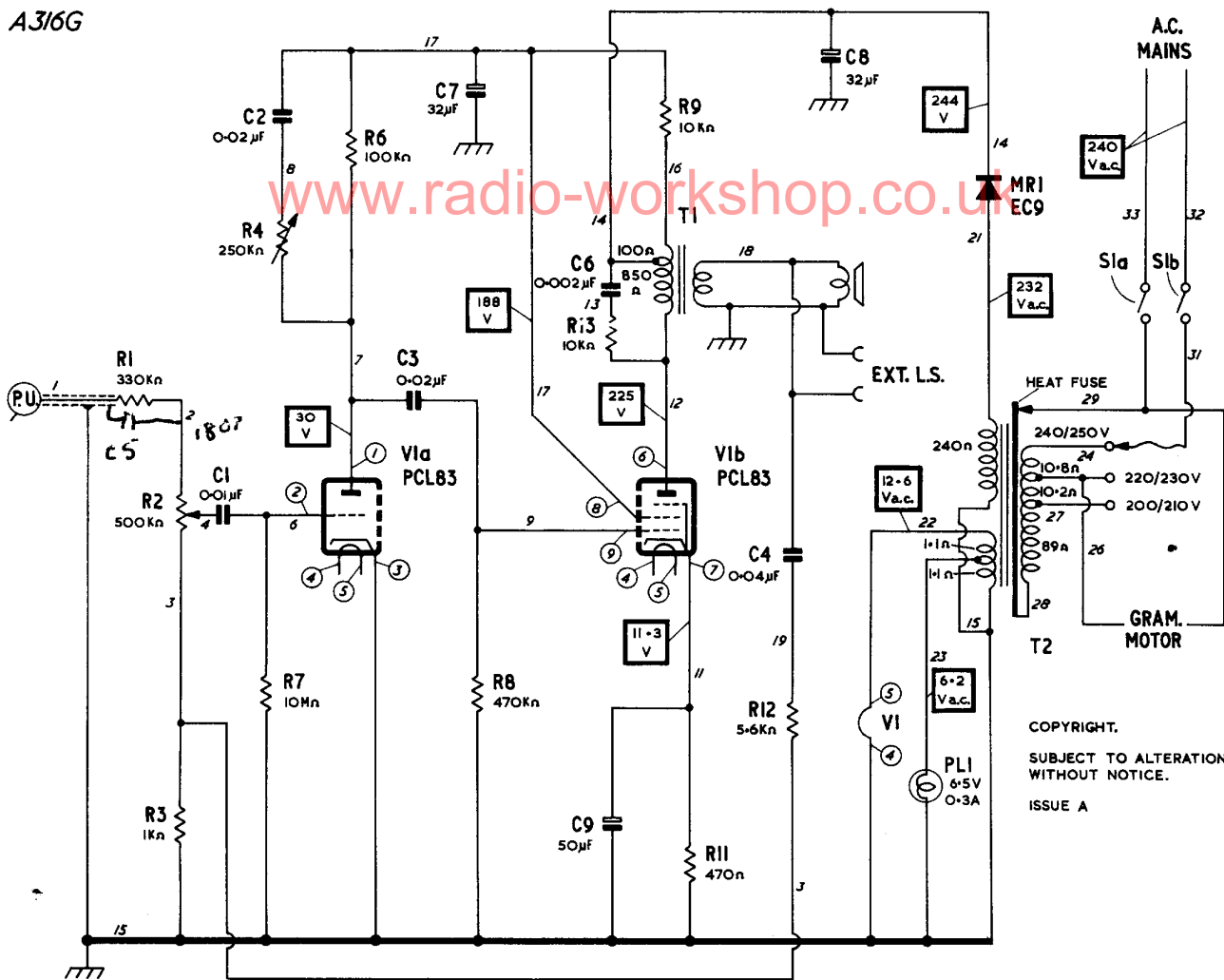


Fig. 2. The circuit diagram.

Component terminals and connecting leads are identified by test point (t.p.) numbers, which correspond with those appearing on the chassis diagram. The valve pin numbers are shown in the small circles.

Where the resistance of a winding is less than one ohm, the value is omitted.

Circuit voltages are shown within rectangles and were measured under no-signal conditions using a 20KΩ/V meter.

GRAMOPHONE UNIT

The gramophone unit is the Collaro "Conquest" four-speed automatic record changer. The pick-up arm incorporates a Collaro type "Studio 0" crystal pick-up cartridge with two sapphire styli.

The gramophone motor. This is an induction type a.c. motor, suitable for 200-250 volts 50 c/s mains operation.

Large record-spindle. A special spindle attachment for playing 45 r.p.m. large centre hole records automatically is available from Collaro Ltd.

Changing a pick-up stylus. Lift up the end of the pick-up arm, remove the screw holding the defective stylus to the pick-up cartridge, and carefully lift the stylus away from the cartridge. When fitting the replacement stylus, make sure that the lugs near the sapphire locate at each side of the small

piece of flexible plastic material protruding from the cartridge. The styli are Collaro sapphire types 5304N (for coarse groove records) and 5304L (for fine groove records). To release the crystal cartridge, remove the screw on the top of the pick-up arm moulding, and disconnect the two leads.

Removing the gramophone unit. Disconnect the pick-up and motor leads from the amplifier chassis, and remove the screws holding the wooden base-board to the cabinet. Lift out the gramophone unit complete with the base-board, set the Speed Selector to the "16" position, and remove the three spring clips from the screws retaining the gramophone unit. The unit can now be removed from the base-board.

Replacing the gramophone unit. With the Speed Selector in the "16" position, place the gramophone unit on the base-board, and fit

COPYRIGHT.
SUBJECT TO ALTERATION
WITHOUT NOTICE.
ISSUE A

the three spring clips, leaving a 1/8 in. gap between the top of the clip and the underside of the base-board (to avoid causing acoustic feedback). Replace the base-board in the cabinet, and reconnect the leads.

Transit screws. When these are removed for test and demonstration purposes in the shop, they should be kept with the instrument so that they can be handed to the purchaser for future use.

PARTS LIST (Electrical Components)

The following abbreviations are used in the table below:

tub. -- paper tubular
 i.s. tub. -- insulated sealed paper tubular (metal cased)
 m. tub. -- metallized paper tubular

elec. -- electrolytic
 V d.c. -- d.c. voltage rating
 W -- wattage rating
 log. -- logarithmic law

PART NO.	CIRCUIT NO.	VALUE	TOLERANCE AND REMARKS	PART NO.	CIRCUIT NO.	VALUE	TOLERANCE AND REMARKS
49447	C1	0.01 μ F	25%, m. tub., 150V d.c.	27653	R7	10M Ω	20%, 0.6W
49455	C2	0.02 μ F	25%, m. tub., 150V d.c.	27397	R8	470K Ω	20%, 0.6W
53066	C3	0.02 μ F	20%, i.s. tub., 350V d.c.	27077	R9	10K Ω	20%, 0.6W
49454	C4	0.04 μ F	25%, m. tub., 150V d.c.	26821	R11	470 Ω	20%, 0.6W
41408	C6	0.002 μ F	25%, tub., 500V d.c.	25221	R12	5.6K Ω	10%, 0.6W
46532	C7	32 μ F	+50% -20%, elec., 350V d.c.	27077	R13	10K Ω	20%, 0.6W
74915	C8	32 μ F		PART NO.	CIRCUIT NO.	RESISTANCE (D.C.)	REMARKS
74915	C9	50 μ F					
27365	R1	330K Ω	20%, 0.6W	76845	T1	950 Ω	Pri. } o. t. Sec. }
68568	R2	500K Ω	Volume control, log.	76844	T2	110 Ω	
26885	R3	1K Ω	20%, 0.6W			240 Ω	
68569	R4	250K Ω	Tone control, log., with S1			2.2 Ω	
27269	R6	100K Ω	20%, 0.6W				

PARTS LIST (Mechanical Components)

PART NO.	TITLE	DESCRIPTION AND REMARKS	PART NO.	TITLE	DESCRIPTION AND REMARKS
74861	Badge, Murphy (2)	self adhesive, less surround	59675	Panel	mains adjustment, with tags
78023	Bracket (2)	for fastening handle	77883	Pick-up cartridge	Collaro "Studio O", with styli
79854	Cabinet	with fittings	73860	Rectifier, MR1	Westinghouse type EC9
76317	Clip for badge	holds surround (76312) to cabinet	103384	Screw, 2BA 1 1/4 in. (2)	transit, for gramophone unit
76945	Cover	back for amplifier compartment, less label	10419	Screw, grub, 2BA 3/16 in. (2)	for control knobs
1827/15	Fabric, 15 in. by 8 in.	Tygan for front of cabinet	77097	Socket (2)	for extension l.s.
76946	Filter, GREEN	for pilot lamp	79771	Stylus "N"	Collaro 5304N
79846	Foot (4)	for side of cabinet	79772	Stylus "L"	Collaro 5304L
77114	Foot (4)	Neoprene, for bottom of cabinet	76312	Surround for badge	on cabinet front
76176	Gramophone unit	Collaro "Conquest"	40134	Tag (3)	for mains adjustment panel
78013	Handle	for cabinet	40135	Terminal, spade	for mains adjustment panel
79855	Knob (2)	for front controls	59142	Valveholder, B9A	
76948	Label "Warning"	for cover (76945)	47923	Washer, Paxolin (2)	for screw (103384)
16882	Lamp	6.5V, 0.3A, m.e.s.	58627	Washer, felt (2)	for screw (103384)
56453	Lampholder		58647	Washer, felt (2)	between knobs and cabinet
68169	Loudspeaker	7 in. by 4 in., elliptical			

SERVICE MANUAL SUPPLEMENT

In later models, C5 (180pF, 20%, cer., N750, 750V d.c., Part No.66172) is connected in parallel with R1 to improve the treble response.

Please alter the Circuit Diagram, and Electrical Parts List in your copy of the Service Manual.

December, 1958.
125811

Murphy Radio Ltd.,
Welwyn Garden City.

V350: A316G**"REXINE" CLEANING AND MAINTENANCE**

THE following extract from recent I.C.I. publicity matter is relevant to the cleaning and maintenance of the cases of the V350 and the A316G:

"All 'Rexine' needs is an occasional wipe down with a damp soapy rag and a quick rub over with a dry duster, and it comes up clean and fresh. The surface will withstand scrubbing, preferably with a soft brush. DO NOT USE POLISHES OR PATENT CHEMICAL CLEANERS. They are unnecessary and may harm the coating of the material."

We might add that, from information obtained verbally, detergents should NOT be used.

A316G**PILOT LAMP**

To increase the length of life of the lamp, its rating has been changed from 6.5V 0.3A (Part No. 16882) to 6.8V, 0.3A (Part No. 16888).

Any replacements or supplies must be of the latter type.

Will dealers please write the appropriate alteration into the A316G Service Manual?