

murphy service information

May, 1962

BULLETIN NO 0009

PRODUCT INFORMATION

RECEIVER: SG610, SG611, SG615

PART NAME: Chassis Assembly

PART NO:

CHANGE EFFECTIVE: From April, 1962

CHANGE: Remove tinned copper wire from pin 5 of the EL84 valve socket immediately behind the volume control. This wire goes to an earthing lug, and should be removed from there also. Solder a length of wire from the centre spigot of the valve socket (EL84) behind the tone control and mains switch, over to the earthed filament lug on the mains transformers.

REASON FOR CHANGE: It has been found that these chassis have been giving excessive hum. It is not certain how far back it is, that this fault has appeared.

RECCOMENDATIONS: Where excessive hum is present in any of these models which use noval type valves, the change should be made should customer require it.

FISHER & PAYKEL LIMITED

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TO ALL MURPHY DEALERS:

MURPHY MODEL SG610 & SG611 SERVICE INFORMATION

(MODIFIED FOR NOVAL VALVES)

We recently issued a modified circuit diagram and service information for the Murphy Models SG610 and SG611 which we regret contained some incorrect information.

We are enclosing 'ISSUE 2' for the above models and request that your service personnel replace pages 1, 2, 3, 4, and the Circuit Alignment Table issued previously, with the 'ISSUE 2' Pages enclosed.

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MURPHY SERVICE INFORMATION

MURPHY MODEL SG610 & SG611 SERVICE INFORMATION (ISSUE 2)

(MODIFIED FOR NOVAL VALVES)

REFERENCE LIST FOR CIRCUIT DIAGRAM

Abbreviations:

cer.	-	ceramic	elect.	-	electrolytic
p.s.m.	-	protected silver mica	v.d.c.	-	d.c. voltage rating
tub.	-	paper tubular	w.	-	wattage rating
m. tub.	-	metallised paper tubular	-ve.	-	negative temperature coefficient
log.	-	logarithmic law	p.f.	-	plastic film tubular.
i.s. tub.	-	insulated sealed paper tubular (metal case)			

Part No.	Circuit No.	Value	Tolerance and Remarks.
M27461	R1	1M ohm	20% .4w
M25531	R2	33K ohm	10% 1.5w
M27205	R3	4.7K ohm	20% .4w
M24517	R4	82 ohm	10% .4w
M24229	R5	15 ohm	10% .4w
M25435	R6	18K ohm	10% 1.5w
M25613	R7	56K ohm	10% .5w
M27493	R8	1.5M ohm	20% .4w
M27205	R9	4.7K ohm	20% .4w
M24613	✓ R10	150 ohm	10% .4w
M24613	✓ R11	150 ohm	10% .4w
M27653	✓ R12	10M ohm	20% .4w
M27653	✓ R13	10M ohm	20% .4w
M25125	✓ R14	3.3K ohm	10% .4w
M27333	✓ R15	220K ohm	20% .4w
M27333	✓ R16	220K ohm	20% .4w
M25125	✓ R17	3.3K ohm	10% .4w
M27269	✓ R18	100K ohm	20% .4w
M27269	✓ R19	100K ohm	20% .4w
M27103	✓ R20	10K ohm	20% .5w
M27269	✓ R21	100K ohm	20% .4w
M24653	✓ R22	180 ohm	10% .5w
M24653	✓ R23	180 ohm	10% .5w
M27269	✓ R24	100K ohm	20% .4w
M25133	✓ R25	3.3K ohm	10% .5w
M25133	✓ R26	3.3K ohm	10% .5w
M66165	C1	47 pf	20% 750 v.d.c. cer.
M66153	C2	4.7 pf	20% 750 cer.
	C3	Trimmer	(Part of VC1)
M66177	C4	470 pf	20% 750 v.d.c. cer.
M66292	C5	220 pf	5% 350 v.d.c. p.f.

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Part No.	Circuit No.	Value	Tolerance and Remarks
M28172	C6	68 pf	5% 350 v.d.c. p.s.m.
M75233	C7	560 pf	2% 350 v.d.c. p.f.
M66292	C8	220 pf	5% 350 v.d.c. p.f.
M28368	C9	100 pf	10% 350 v.d.c. p.s.m.
	C10	Trimmer	(part of VC2)
M66162	C11	27 pf	20% 750 v.d.c. cer.
M44453	C12	.01 mf	25% 400 v.d.c. m. tub.
M49455	C13	.02 mf	25% 150 v.d.c. m. tub.
M66292	C15	220 pf	5% 350 v.d.c. p.f.
M66298	C16	390 pf	5% 350 v.d.c. p.f.
M54080	C17	270 pf	20% 750 v.d.c. cer.
M41412	C18	.05 mf	20% 500 v.d.c. tub.
M49447	C19 ✓	.01 mf	25% 150 v.d.c. m. tub.
M49447	C20 ✓	.01 mf	25% 150 v.d.c. m. tub.
M49441	C21 ✓	.1 mf	25% 150 v.d.c. m. tub.
M49441	C22 ✓	.1 mf	25% 150 v.d.c. m. tub.
M51551	C23 ✓	.005 mf	20% 500 v.d.c. tub.
M51551	C24 ✓	.005 mf	20% 500 v.d.c. tub.
M41411	C25 ✓	.02 mf	20% 500 v.d.c. tub.
M41411	C26 ✓	.02 mf	20% 500 v.d.c. tub.
M74816	C27 ✓	20 mf	(C27, 31, 32) elect.
M56168	C28 ✓	50 mf	+ 100%
			- 20% 12 v.d.c. elect.
M41419	C29 ✓	.01 mf	25% 1000 v.d.c. tub.
M41419	C30 ✓	.01 mf	25% 1000 v.d.c. tub.
M74816	C31 ✓	40 mf	(C27, 31, 32) elect.
M74816	C32 ✓	40 mf	(C27, 31, 32) elect.
M49453	C33	.01 mf	25% 400 v.d.c. m. tub.
M74796	(VC1	528 pf swing	2 ganged capacitor
	(VC2	528 pf swing	2 ganged capacitor
DP2026	{ VR1	1M ohm	ganged log. matched
	{ VR2	1M ohm	pot. VOLUME.
DP2027	{ VR3	250K ohm	ganged log. matched
	{ VR4	250K ohm	pot. W/S3 TONE
DP2028	{ VR5	250K ohm	ganged lin. pot
	{ VR6	250K ohm	(balance)
EP2643	S4	4 pole 2 position switch	
DW2570	T1	(5.6 ohm (Pri.)	1st I.F. Transformer
		(5.6 ohm (Sec.)	1st I.F. Transformer
DW2571	T2	(5.6 ohm (Pri.)	2nd I.F. Transformer
		(4.1 ohm (Sec.)	2nd I.F. Transformer

✓ 1670 v.t. 500v. condenser.

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Part No.	Circuit No.	Value	Tolerance and Remarks
DW3659	T3 & T4 ✓	(330 ohm (Pri.) (26.5 ohm (hum phasing)	Output Transformer Output Transformer
DW3882	T5 ✓	(18 ohm (Pri.) (115/110 ohm (H.T.Sec.) (less than 1 ohm (6.3v sec.)	Mains Transformer
EW1016	L1 L2	(53 ohm (Pri.) (2.3 ohm (Sec.)	Aerial Coil Aerial Coil
EW1017	L3 L4	(1 ohm (Pri.) (2.3 ohm (Sec.)	Oscillator Coil Oscillator Coil
M16882	LP1	6.5v .3 amp.	M.E.S. Panel Lamp
M16882	LP2	6.5v .3 amp	M.E.S. Panel Lamp
XP1146	V1	6C12 or ECH81	
XP1144	V2	6FD12 or EBF89 Valve	
XP1140	V3 ✓	6L13 or ECC83 Valve	
XP1143	V4 ✓	6P15 or EL84	
XP1143	V5 ✓	6P15 or EL84	
XP1150	V6 ✓	EZ80	

Part No.	Circuit No.	Description
XP1129	PL1	P.U. Plug 3 Pin (Cinch 2735)
XP1227	SK1	P.U.Socket 3 Pin (Cinch 75/443)
M74793	PL2/PL3	Spkr. Plug 4 Pin (Cinch 2745)
M74794	SK2/SK3	Spkr. Socket 4 pin (Cinch 75/444)
XP1230		Shell for PL1
M74791		Shell for PL2/PL3

OTHER COMPONENTS

Part No.	Description
DP3654 (SG610) CP3666 (SG611)	Back Cabinet
EP1011	Bearing, Spindle
AP3653	Cabinet, SG610 (Rosewood).

CIRCUIT ALIGNMENT SG610 - SG611

Receiver Output:

Make all adjustments for maximum output with the volume control at maximum, and the tone at maximum treble, and the channels balanced. Adjust the signal generator attenuator so that this output does not exceed 500 mW or approximately 1.2v. across the loudspeaker coil.

Trimming Tool:

A non-metallic tool must be used for adjusting the I.F.T. cores.

Tuning Pointer (Cursor)Setting:

This must be correct before aligning the R.F. circuits, and it must be adjusted only when the ganged capacitor is at maximum capacitance, (not necessarily with fully closed plates). When the chassis is outside the cabinet, the cursor must register with the extreme right-hand marker on the dial scale. (About 530 KC.)

Alignment:

This should be made according to the alignment table given on the following page.

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MURPHY MODEL SG615 SERVICE INFORMATION

Alignment procedure is the same as for Model SG610.

Dial Cord arrangement is the same for Model SG610.

The following list gives the components which are peculiar to Model SG615. All other components may be obtained from the Service Information for Model SG610.

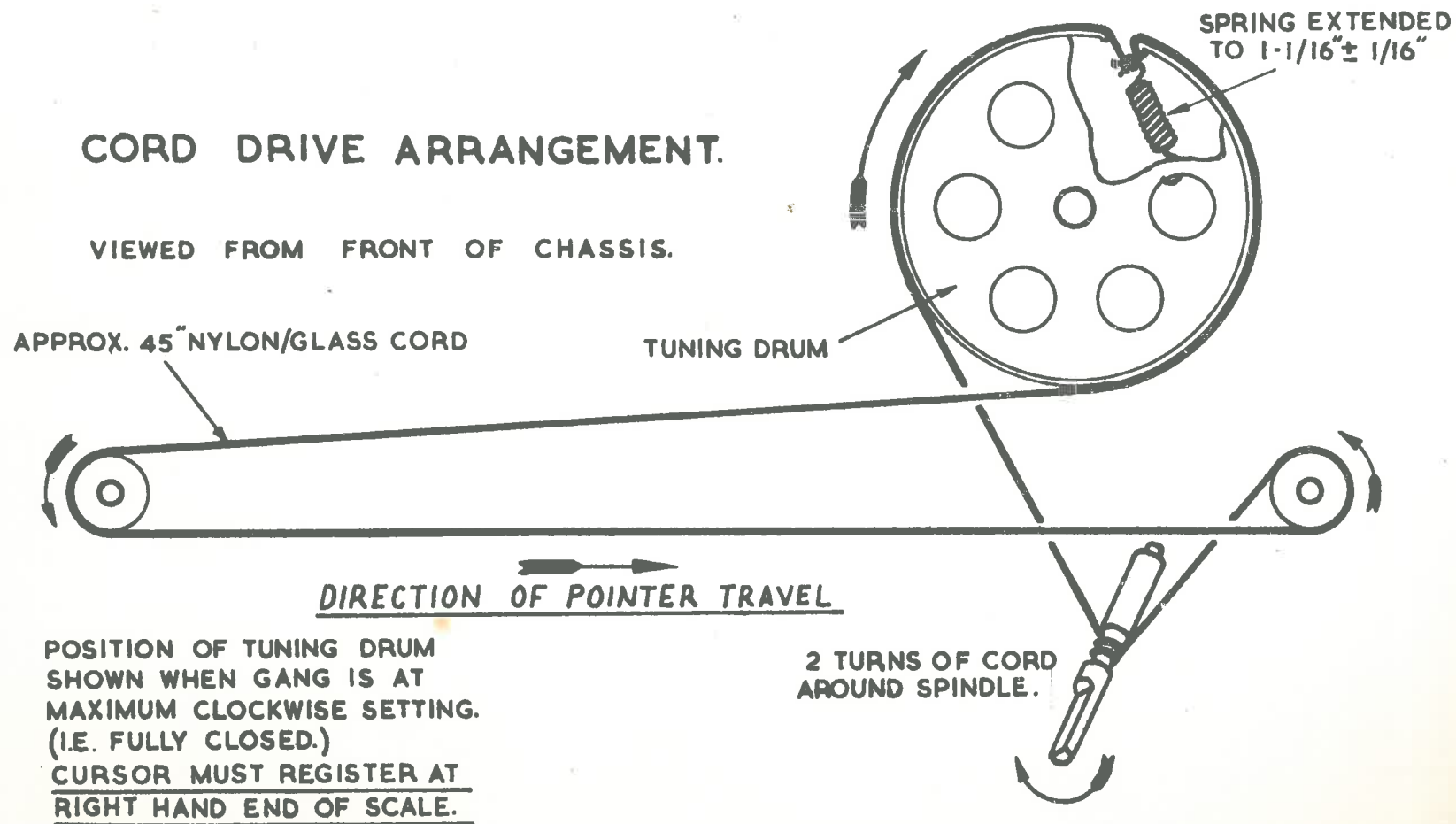
Part No.	Description
CP4171	Back, Cabinet
AP4170	Cabinet, SG615
XP2804	Fabric, Speaker 40" x 16"
XP2830	Trim, Baffle ($35\frac{1}{4}$ " off)
XP2830	" Dial, ($11\frac{3}{4}$ " off)
DP3799/2	Valve Location Chart.

MURPHY MODELS SG610 & SG611 CIRCUIT ALIGNMENT TABLE

CIRCUIT	NOTES	SIG. GEN. FREQUENCY	SIG. GEN. TERMINATION	CONNECT SIG. GEN. TO	RECEIVER SETTING:	ADJUSTMENTS
2 I.F.T.	Unscrew sec. core (Top of Can) before starting adjustments.	455 Kc/s.	Via .01 mfd. capacitor	V2 grid 1 (Pin 2)	Ganged capacitor fully meshed.	T2 (pri) below chassis T2 (sec.) top of can. Do not readjust pri. Core.
1st I.F.T.	As above	455 Kc/s.	As above	V1 grid 1 (Pin 2)	As above	T1 (pri.) below chassis T1 (sec.) top of can. Do not readjust Pri. Core.
Medium Wave		1364 Kc/s.	Dummy Aerial	Aerial and Earth Leads	Extreme left marker on dial scale	Osc. trimmer on VC2 (under and nearest end of chassis) Aerial trimmer on VC1 (below chassis).
		600 Kc/s.	As above	As above	600 Kc/s marker on dial scale	Iron core on L4 (above chassis) Iron core on L2 (below chassis) Repeat this and previous adjustments if necessary.

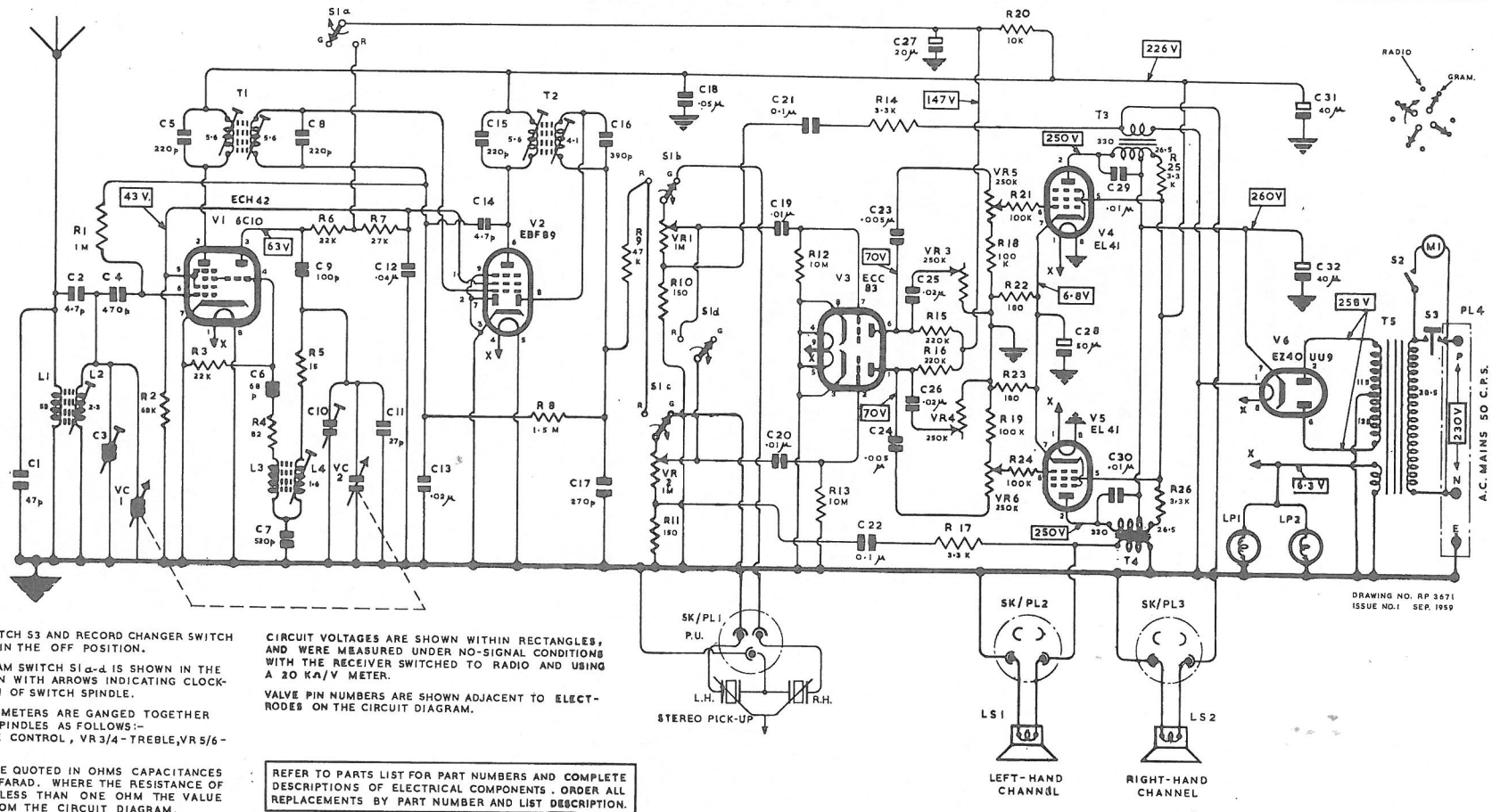
CORD DRIVE ARRANGEMENT.

VIEWED FROM FRONT OF CHASSIS.



DRG. NO DP 3767

CAPACITORS	C 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	CAPACITORS.
RESISTORS	R 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	RESISTORS						
MISCELLANEOUS	LI-2	VC 1	VI	TI	L3-4	SI a	VC 2	V 2	T 2	SI b	VR 1	SI d	SK/PL 1	V 3	VR 3	VR 4	VR 5	SK 2	L 5 1	V 4	T 3	SK 3	PL 3	LS 2	LPI	V 6	LP 2	T 5	S 2	M 1	MISC.		
											SI c	VR 2	P.U.																			PL 4	



THE POWER SWITCH S3 AND RECORD CHANGER SWITCH S2 ARE SHOWN IN THE OFF POSITION.

THE RADIO/GRAM SWITCH S1 a-d IS SHOWN IN THE GRAM. POSITION WITH ARROWS INDICATING CLOCKWISE ROTATION OF SWITCH SPINDLE.

DUAL POTENTIOMETERS ARE GANGED TOGETHER ON COMMON SPINDLES AS FOLLOWS:-
VR 1/2 - VOLUME CONTROL, VR 3/4 - TREBLE, VR 5/6 - BALANCE.

RESISTANCES ARE QUOTED IN OHMS CAPACITANCES IN PARTS OF A FARAD. WHERE THE RESISTANCE OF A WINDING IS LESS THAN ONE OHM THE VALUE IS OMITTED FROM THE CIRCUIT DIAGRAM.

CIRCUIT VOLTAGES ARE SHOWN WITHIN RECTANGLES, AND WERE MEASURED UNDER NO-SIGNAL CONDITIONS WITH THE RECEIVER SWITCHED TO RADIO AND USING A 20 KA/V METER.

VALVE PIN NUMBERS ARE SHOWN ADJACENT TO ELECTRODES ON THE CIRCUIT DIAGRAM.

REFER TO PARTS LIST FOR PART NUMBERS AND COMPLETE DESCRIPTIONS OF ELECTRICAL COMPONENTS. ORDER ALL REPLACEMENTS BY PART NUMBER AND LIST DESCRIPTION.

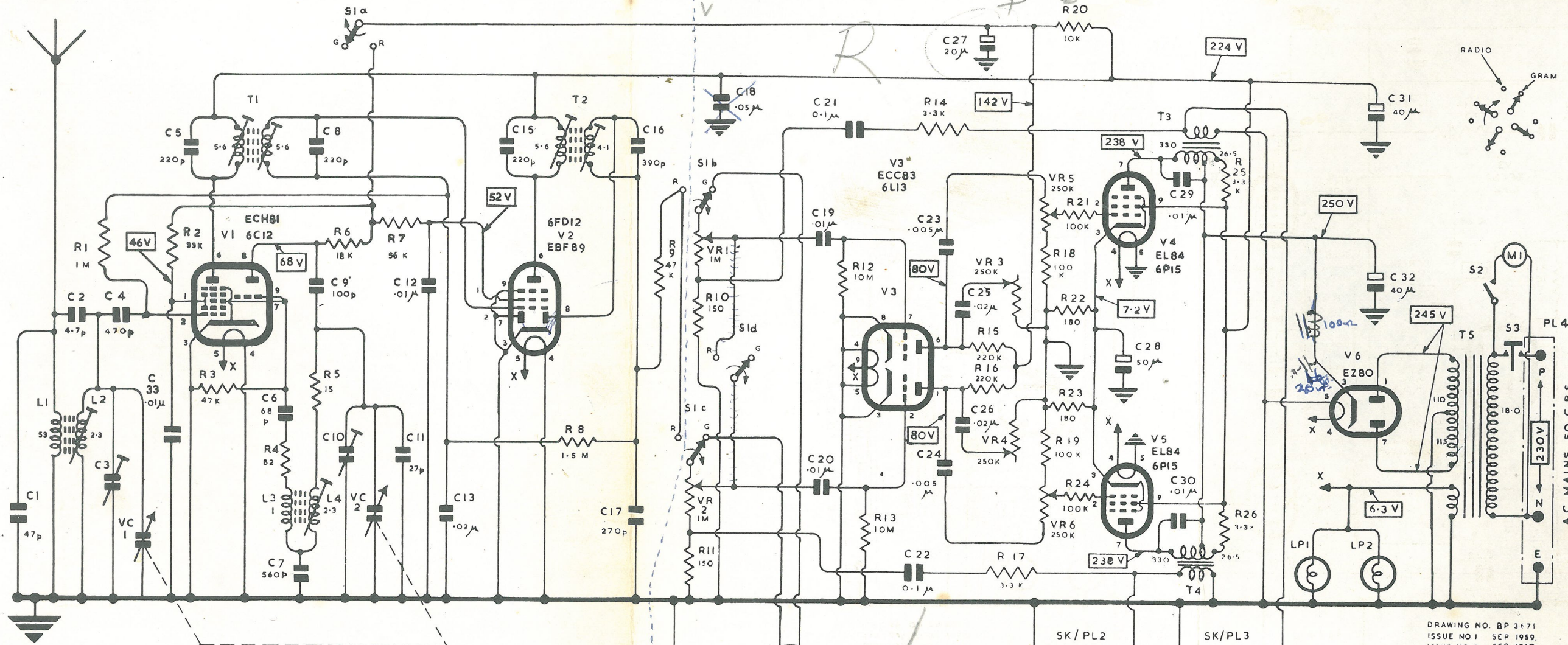
IMPORTANT

V6 MUST BE REPLACED WITH VALVE TYPE E240 ONLY IN SETS NUMBERED 908226 TO 908525 INCLUSIVE.

CIRCUIT DIAGRAM FOR MURPHY SG 610 CARINA AND SG 611 MIRANDA STEREO - RADIOGRAMS.

DRAWING NO. RP 3671
ISSUE NO.1 SEP. 1959

CAPACITORS	C 1	2	3	4	33	5	6	7	8	9	10	11	12	13	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	CAPACITORS.				
RESISTORS	R 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	RESISTORS										
MISCELLANEOUS	L1-2	VC1	V1	T1	L3-4	SIa	VC2	V2	T2	SIb	VR1	SIc	VR2	SI d	SK/PL1	P.U.	V3	VR3	VR4	VR5	SK2	LS1	V4	V5	T3	SK3	PL3	LS2	LP1	V6	LP2	T5	S2	M1	MISC.	S3	PL4



*Cond. off
plate EZ80.
← 16 v. 500.*

THE POWER SWITCH S3 AND RECORD CHANGER SWITCH S2 ARE SHOWN IN THE OFF POSITION.

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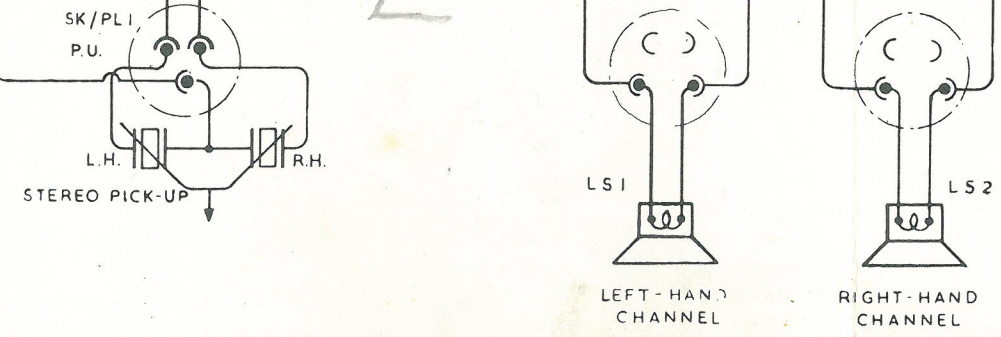
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CIRCUIT DIAGRAM FOR MURPHY SG 610 CARINA AND SG 611 MIRANDA STEREO - RADIOGRAMS. — NOVAL SERIES. ALSO OBERON MODEL SG615

DRAWING NO. BP 3471
ISSUE NO 1 SEP 1959.
ISSUE NO 2 SEP 1960.