

S. Gram

murphy service informationMURPHY MODEL SG79 & SG712 SERVICE INFORMATIONREFERENCE LIST FOR CIRCUIT DIAGRAM.Abbreviations:

cer	-	ceramic	v.d.c.	-	d.c. voltage rating
p.s.m.	-	protected silver mica	w.	-	wattage rating
tub.	-	paper tubular	lin.	-	linear law
m.tub.	-	metallised paper tubular	log.	-	logarithmic law
p.f.	-	plastic film			
elect.	-	electrolytic			

Part No.	Circuit No.	Value	Tolerance & Remarks	
27461	R1	1M ohm	20%	.4w
27019	R2	15K ohm	20%	.4w
25613	R3	56K ohm	10%	.5w
27269	R4	100K ohm	20%	.4w
25531	R5	33K ohm	10%	.1w
27205	R6	47K ohm	20%	.1w
24517	R7	82 ohm	10%	.4w
24229	R8	15 ohm	10%	.4w
25435	R9	18K ohm	10%	1w
25613	R10	56K ohm	10%	.5w
27525	R11	2.2M ohm	20%	.4w
27493	R12	1.5M ohm	20%	.4w
27205	R13	47K ohm	20%	.4w
24613	R14	150 ohm	10%	.4w
24613	R15	150 ohm	10%	.4w
27653	R16	10M ohm	20%	.4w
27653	R17	10M ohm	20%	.4w
27333	R18	220K ohm	20%	.4w
27333	R19	220K ohm	20%	.4w
27269	R20	100K ohm	20%	.4w
27269	R21	100K ohm	20%	.4w
27269	R22	100K ohm	20%	.4w
27269	R23	100K ohm	20%	.4w
25125	R24	3.3K ohm	10%	.4w
25125	R25	3.3K ohm	10%	.4w
24653	R26	180 ohm	10%	.5w
24653	R27	180 ohm	10%	.5w
25197	R28	4.7K ohm	10%	.5w
25133	R29	3.3K ohm	10%	.5w
25133	R30	3.3K ohm	10%	.5w

murphy service information

- 2 -

Part No.	Circuit No.	Value	Tolerance and Remarks	
25133	R31	3.3K ohm	10%	.5w
24357	R32	33 ohm	10%	.4w
24357	R33	33 ohm	10%	.4w
66153	C1	4.7 pf	20%	750 v. cer.
	C2	trimmer	part of VC1	
66177	C3	470 pf	20%	750 v. cer.
49453	C4	.01 mf	25%	400 v. m. tub.
66169	C5	100 pf	20%	750 v. cer.
66177	C6	470 pf	20%	750 v. cer.
	C7	trimmer	part of VC2	
49453	C8	.01 mf	25%	400 v. m. tub.
66292	C9	220 pf	5%	350 v.d.c. p.f.
28172	C10	68 pf	5%	350 v.d.c. p.s.m.
28288	C11	520 pf	1%	350 v.d.c. p.s.m.
66292	C12	220 pf	5%	350 v.d.c. pf.
28368	C13	100 pf	10%	350 v.d.c. p.s.m.
49454	C14	.04 mf	25%	150 v.d.c. m. tub.
	C15	trimmer	part of VC3	
66162	C16	27 pf	20%	750 v. cer.
49455	C17	.02 mf	25%	150 v. d. c. m.tub.
49453	C18	.01 mf	25%	400 v.d.c. m.tub.
66292	C19	220 pfd	5%	350 v.d.c. p.f.
54080	C20	270 pfd	20%	750 v.d.c. cer.
66298	C21	390 pfd	5%	350 v.d.c. p.f.
41412	C22	.05 mfd	20%	500 v.d.c. tub.
49447	C23	.01 mfd	25%	150 v.d.c. m.tub.
49447	C24	.01 mfd	25%	150 v.d.c. m.tub.
74816	C25	20 mfd	(C27, C35, C36) elect.	
41411	C26	.02 mfd	20%	500 v.d.c. tub.
41411	C27	.02 mfd	20%	500 v.d.c. tub.
53062	C28	.005 mfd	25%	500 v.d.c. i.s. tub.
53062	C29	.005 mfd	25%	500 v.d.c. i.s. tub.
49441	C30	.1 mfd	25%	150 v.d.c. m.tub.
49441	C31	.1 mfd	25%	150 v.d.c. m.tub.
74915	C32	50 mfd	+100%	
			-20%	25 v.d.c. elect.
41419	C33	.01 mfd	25%	1000 v.d.c. tub.
41419	C34	.01 mfd	25%	1000 v.d.c. tub.
74816	C35	40 mfd	(C27, C35, C36) elect.	
74816	C36	40 mfd	(C27, C35, C36) elect.	

murphy service information

- 3 -

Part No.	Circuit No.	Value	Tolerance and Remarks
RW1016	L1	53 ohm Pri.)	Aerial Coil
	L2	2.3 ohm Sec.)	
RW1016	L3	53 ohm Pri.)	R.F. Coil
	L4	2.3 ohm Sec.)	
RW1017	L5	1 ohm Pri.)	Osc. Coil
	L6	2.3 ohm Sec.)	
RW2570	(T1	5.8 ohm Pri.)	1st. I.F.T.
	(	5.8 ohm Sec.)	
RW2571	(T2	5.8 ohm Pri.)	2nd I.F.T.
	(	4.0 ohm Sec.)	
RW3659	(T3	330 ohm Pri.)	
	(	26.5 ohm Hum phasing)	Output Trans.
		- Sec.)	
RW3659	(T4	330 ohm Pri.	
	(	26.5 ohm Hum phasing)	Output Trans.
		- Sec.)	
RW3882	(T5	17.7 ohm Pri.)	
	(	123 ohm H.T.Sec.)	
		125 ohm H.T.Sec.)	Mains Trans.
		- Sec.)	
75670	(VC1	528 pf swing)	
	(VC2	528 pf swing)	3 gang capacitor
	(VC3	528 pf swing)	
RP2643	S1	4 pole 2 position switch	
RP1227	SK1	3 pin socket (P.U.)	Cinch 75/443
74794	SK2	4 pin socket (L.H. Spkr.)	Cinch 75/444
74794	SK3	4 pin socket (R.H. Spkr.)	" 75/444
RP1129	PL1	3 pin plug (P.U.)	Cinch 2735
74793	PL2	4 pin plug (Spkr)	Cinch 2745
74793	PL3	4 pin plug (Spkr)	" 2745
	PL4	3 pin mains plug	
16882	LP1	6.5 v. .3 amp. panel lamp	
16882	LP2	6.5 v. .3 amp. " "	
RP1230		Shell (for 3 pin plug)	
74791		Shell (for 4 pin plug)	
RP2026	VR1)	1M +1M ohm log. ganged matched pot.	
	VR2)		
RP2027	VR3)	250K +250K ohm log. ganged matched pot W/S3	
	VR4)		
RP2028	VR5)	250K +250K ohm lin. ganged pot.	
	VR6)		

murphy service information

- 4 -

Part No.	Circuit No.	Value	Tolerance and Remarks
RP1147	V1	6F18/EF89	Valve
RP1146	V2	6C12/ECH81	"
RP1144	V3	6FD12/EBF89	"
RP1140	V4	6L13/ECC83	"
RP1143	V5	6P15/EL84	"
RP1143	V6	6P15/EL84	"
RP2321	V7	UU12/EZ81	"
RA3467	LS1	10" x 6" loud speaker S61 JQ/4714	
RA3467	LS2	10" x 6" loud speaker S61 JQ/4714	
RP2665	M1	Model RC210 Garrard Record Changer.	

OTHER COMPONENTS.

Part No.	Description
RC3320	Back, Cabinet (SG79)
60761	Bearing, spindle
RP3798	Block, rubber (for dial scale)
RC3303 (State Colour)	Cabinet (SG79)
RP2664	Cartridge (diamond stylus)
RP2663	Cartridge (sapphire stylus)
RM3793	Clamp, dial L.H.
RM3794	" " R.H.
2033/5	Cord, Nylon - 48"
71051	Core, Ferrite, (I.F. Transformer)
75731	Core, Iron Dust, (Aerial & Osc. Coils)
RD3788	Dial scale SG79
RM1013	Drum, tuning
RP2802	Fabric speaker (41" x 15")
RA3012	Knob assembly
RP1389	Lampholder
RM3795	Pointer
RM3792	Reflector, dial
103376	Screws, 2BA x $\frac{3}{4}$ " P.R.H.(chassis mounting)
RP2154	Spire Clip (Knob)
RM3789	Spindle tuning

murphy service information

- 5 -

Part No.	Description
RP1680	Spring, dial
RM1054	Trim, dial
59142	Valve socket B9A
RP1772	Washer, Felt (for knobs)
RP1775	" " (pointer tip)

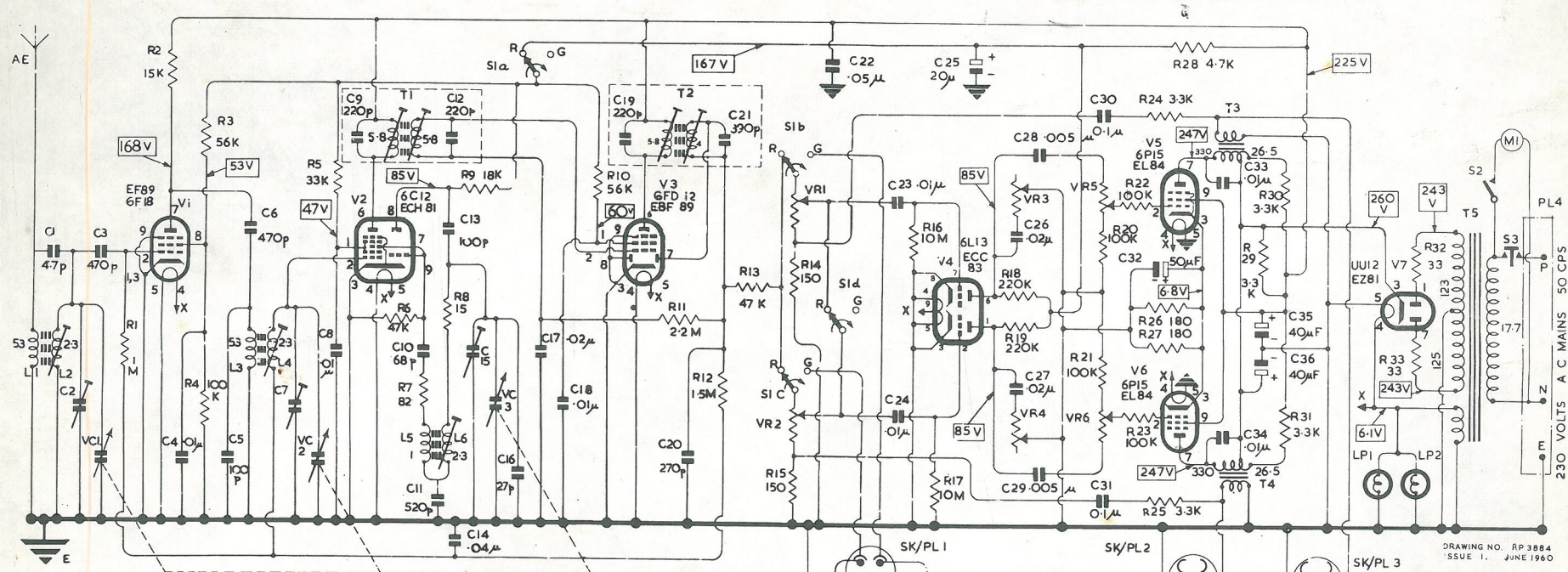
CIRCUIT ALIGNMENT, SG79, SG712 :

1. Receiver Output: Make all adjustments for greatest output with the volume and treble controls at the maximum positions. Adjust the signal generator attenuator so that this output does not exceed 500 m.w. or approximately 1.2v. across the loudspeaker voice coil.
2. Trimming Tool: A non-metallic slot tool must be used for adjusting the I.F.T. coils.
3. Tuning Pointer: This must be correct before aligning the R.F. circuits, and is adjusted only with the ganged capacitor at maximum capacitance. (Not necessarily with fully closed plates). In this position, the pointer should coincide with the round marker at the low frequency end of the dial scale. If necessary, shift pointer (or drum), to correct.
4. Alignment: This should be made according to the alignment table given.

MURPHY MODEL SG79 & SG712 CIRCUIT ALIGNMENT TABLE:

CIRCUIT	NOTES	SIG. GEN. FREQUENCY	SIG. GEN. TERMINATION	CONNECT SIG. GEN. TO	RECEIVER SETTING	ADJUSTMENTS
2nd. F.T.	Unscrew sec. core (top of can) before starting adjustments.	470 Kc/s	Via. .01 mfd capacitor	V3 grid 1 (pin 2)	Ganged capacitor fully meshed.	T2 (prim.) below chassis T2 (sec.) top of can. Do not readjust prim. core.
1st F.T.	As above	470 Kc/s	As above	V2 grid 1 (pin 2)	As above	T1 (prim.) below chassis T1 (sec.) top of can. Do not readjust prim. core.
Medium Wave		1364 Kc/s	Dummy Aerial	Aerial and earth leads.	1364 Kc/s	Osc. trimmer C15 (under and nearest end of chassis). R.F. and Aerial trimmers (C7 and C2) rear and front below chassis, respectively.
		600 Kc/s	As above	As above	600 Kc/s	Iron core on L6 (above chassis) Iron core on L4 (above chassis) Iron core on L2 (below chassis)
	Repeat adjustments at 1364 Kc/s and 600 Kc/s if alignment is far off.					

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	33	34	35	36	CAPACITORS													
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	27	28	29	30	31	32	33	34	35	36	RESISTORS	
AE	L1	L2	VC1		VI			L3	L4	VC2		V2	T1	L5	L6	VC3	51a			V3	T2		51b	VR1	51c	VR2	51d	SK/PL1	PU	V4	VR3	VR4	VR5	VR6	V5	V6	LS1	T3	T4	SK/PL2		LS2	LPI	LP2	52	M1	53	PL4	T5	MISC.



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

THE RADIO/GRAM SWITCH S1 SHOWN IN THE RADIO POSITION WITH ARROWS INDICATING CLOCK WISE ROTATION OF SWITCH SPINDLE.

DUAL POTENTIOMETERS ARE GANGED TOGETHER ON COMMON SPINDLES AS FOLLOWS:- VR1/2-VOLUME CONTROL, VR3/4-TREBLE, VR5/6-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 KΩ/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 NO LIST DESCRIPTION.

PLUGS AND SOCKETS ARE SHOWN AS VIEWED FROM OUTSIDE BACK OF CHASSIS

LEFT HAND CHANNEL

RIGHT HAND CHANNEL

CIRCUIT DIAGRAM FOR MURPHY STEREO RADIOGRAMS MODELS SG 79 & SG 712