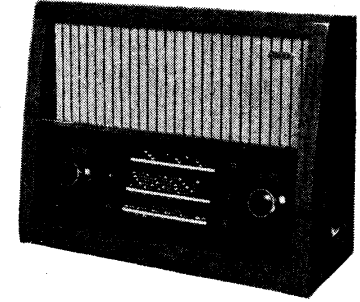
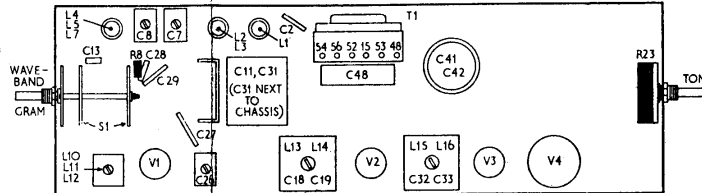
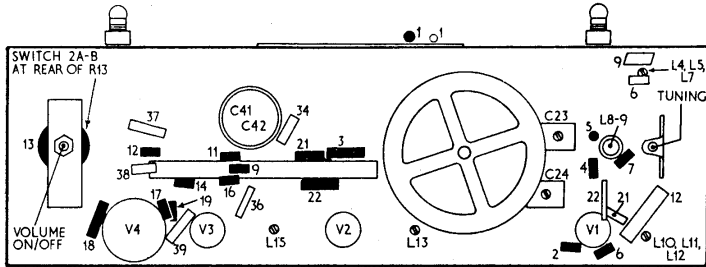


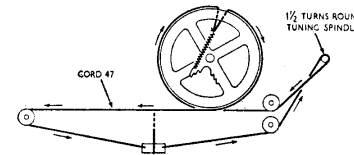
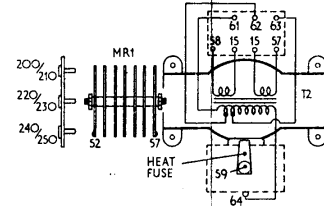
1034 1934

'ERT' SERVICE CHART

MURPHY A212



R	13	12	17	14	19	16	9	21	22	3	1	5	7
C	37	38	39	36	34	1	23	9	6	24	22	21	12

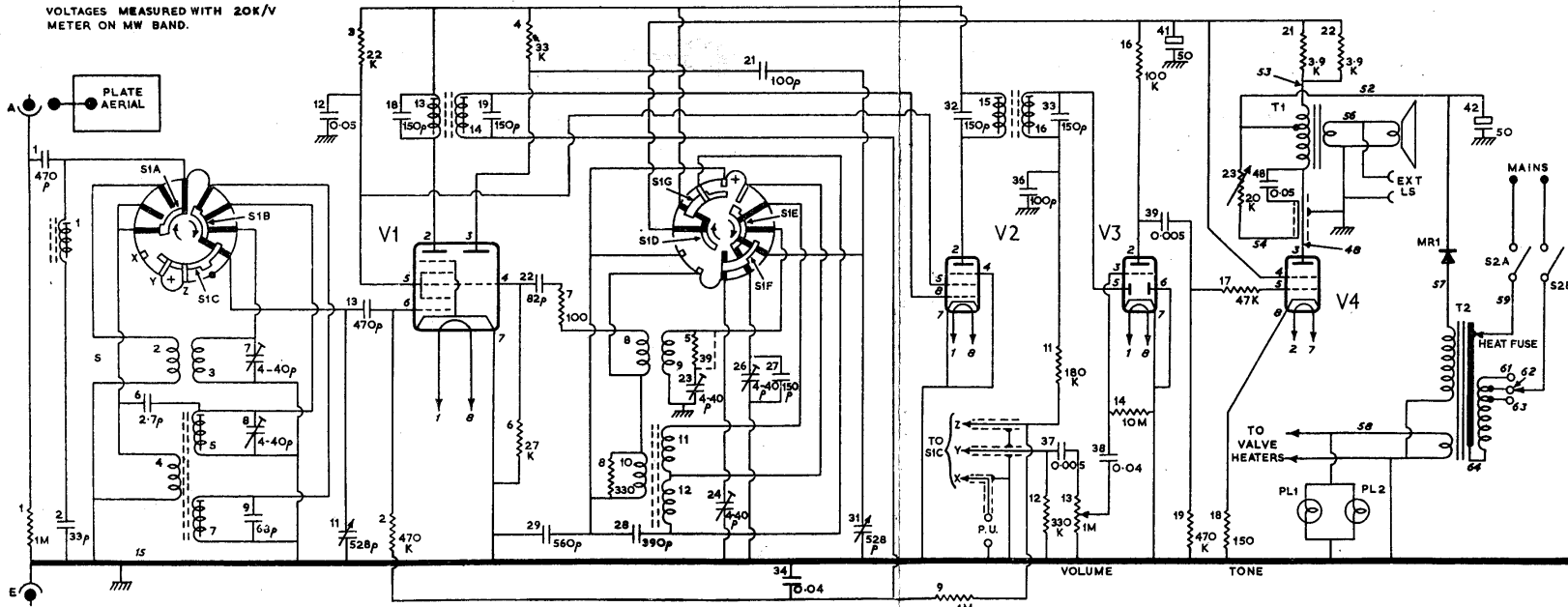


TRANSFORMERS

T1 primary (total)	...	487 ohms
T1 secondary	...	Very low
T2 primary (total)	...	39 ohms
HT secondary	...	108 ohms
Heater secondary	...	Very low

- COMPONENT RATINGS**
- Resistors**
 0.6W : R1 2 4-9 11 12 14 16 17 19
 0.75W : R3 18 21 22
- Capacitors**
 Silver mica 350V : C2 9 18 19 22 27 28 29 32 33
 Ceramic 500V : C1 6 13 21 36
 Paper tubular 350V : C12
 Paper tubular 500V : C37
 Paper tubular 750V : C48
 Sealed paper tubular (metal cased) 500V : C39
 Electrolytic 275V : C41 42

VOLTAGES MEASURED WITH 20K/V METER ON MW BAND.



INDUCTORS

L	Ohms
1	...
2	...
3	...
4	...
5	...
7	...
8-10	...
11	...
12	...
13-16	...

For description, service notes and alignment instructions see overleaf

MURPHY A212

THREE-WAVEBAND four-valve walnut table model for 200-250V 50-100c/s AC mains; consumption approximately 42W. Murphy Radio, Ltd., Welwyn Garden City, Herts, is the manufacturer and the receiver was released in May, 1954, at £25, inclusive of tax.

Frequency-changer V1 is 6C9; IF amplifier V2 is 6F15 or 6F16; 6LD20 provides signal rectification and AF amplification as V3; V4 is a 6P25 beam tetrode output valve. Half-wave metal rectifier MR1 is Westinghouse 14B986.

Waveband coverage is SW 16.8-50.4 metres, MW 187-540 metres, LW 1,000-2,000 metres. Intermediate frequency 470kc/s.

Speaker, 8in. circular type, impedance 3 ohms. Scale lamps, two 6.5V 0.3A MES fitting. A plate aerial is provided, also pickup sockets and sockets for extension speaker.

HT voltage readings were taken with an AVO No. 8 meter with the set switched to MW position. Where the voltage differs owing to signal conditions two readings are given one for no signal (NS), the other for strong signal (SS) conditions.

V1, pin 5 46V (NS) 130V (SS), pin 2 192V, pin 3 60V.

V2, pin 5 46V (NS) 138V (SS), pin 2 192V.

V3, pin 2 50V (NS) 100V (SS).

V4, pin 4 192V, pin 3 227V, pin 8 5.3V.

Voltage at reservoir capacitor C42 241V. At junction of C41 R16, 192V.

SERVICING NOTES

Heat fuse is on the side of mains transformer T2. Apply heat only, there being enough soft solder on the joint to effect a repair. Ordinary solder should never be used.

Waveband switch (S1a-S1g) is shown on the circuit diagram in the LW position and is drawn as seen from the rear; rotate clockwise for MW, SW and gramophone. Black contacts and inner rotors are on the hidden sides of the wafers and the lugs marked with cross are nearer chassis.

Circuit	Notes	Sig. Gen. Frequency	Sig. Gen. Termination	Connect Sig. Gen. to	Pointer Setting	Adjustments
2nd IFT ...	Unscrew sec. core (chassis rear)	470kc/s	Via 0.01mF capacitor	V2 signal grid (pin 6)	0.6cm	L15 (pri) at front L16 (sec) at rear
1st IFT ...	As above. Switch to MW band	470kc/s	As above	C11 (t.p. 11)	0.6cm.	L13 (pri) front L14 (sec) rear
IF rejector...	Switch to MW band. Adjust for minimum	470kc/s	Via dummy aerial	Ae socket	0.6cm	L1 at chassis rear
MW ...	Repeat these adjustments until there is no further improvement	600kc/s (500m)	As above	As above	2.25cm	L11 (osc) at rear L5 (ae) at rear.
		1,363kc/s (220m)	As above	As above	11.45cm	C24 (osc) at front C8 (ae) at rear
LW ...	As above ...	176.5kc/s (1,700m)	As above	As above	4.1cm	L12 (osc) at front L7 (ae) at front
		300kc/s (1,000m)	As above	As above	12.75cm	C26 (osc) at chassis rear
SW ...	Set C23 to lower capacitance peak. Rock tuning while adjusting C7	17.8mc/s (16.86m)	As above	As above	13.9cm	C23 (osc) at front C7 (ae) at rear
		6.7mc/s (44.8m)	As above	As above	2.35-2.65 cm	No adjustments

Squegging. Some frequency changers may produce squegging, in which case R5 should be brought into circuit by cutting the wire link.

Trimmers. Aerial, C7 SW, C8 MW. Oscillator, C23 SW, C24 MW, C26 LW.

Transformers. L13 L14 are primary and secondary windings of IFT1. IFT2 is made up of L15 and L16. Output transformer T1 has tapped primary, part of which helps to provide HT smoothing. T2 is the mains transformer.

ALIGNMENT

Receiver output. Excepting where otherwise stated, make all adjustments for maximum output with the volume control at maximum. Adjust the signal generator attenuator so that this output does not exceed 500mW, or 1V across the speaker speech coil.

Trimming tool. A non-metallic tool must be used to adjust the coil cores.

RF coil cores. More than one peak is possible with the RF coil cores. In case of difficulty, unscrew the core almost fully and then trim to the first major peak.

Pointer setting. Before aligning the RF circuits, make sure that the right-hand edge of the pointer carrier registers with 0.6cm on the guide rail when the ganged capacitor plates are fully meshed (not necessarily against the stop). After the chassis is fitted into the cabinet the pointer must be set so that it registers with the datum lines at the right-hand end of the tuning scale when the ganged capacitor plates are full meshed. The figures in the table refer to the setting of the right-hand edge of the pointer carrier.

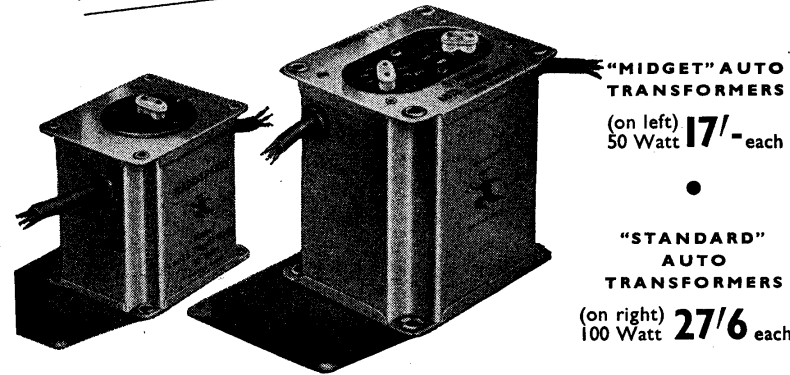
Receiver oscillator frequency. On all wavebands, this is higher than the signal frequency.

Scale light reflector must be in position during RF alignment.

Replacement SW coils. The inductance of replacement coils must be adjusted after fitting. Referring to the circuit alignment table, commence at the lower frequency end of the SW band and adjust the spacing of the end turns (osc first). Then adjust trimmers at the high frequency end.

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