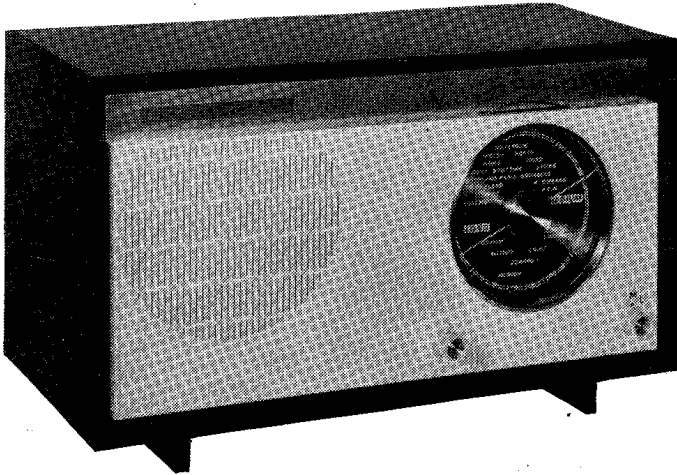


SERVICE INFORMATION FOR THE

STELLA

www.radio-workshop.co.uk

RADIO RECEIVER TYPE ST113U



DESCRIPTION

The ST113U is a mains-operated table model covering medium/long wavebands and housed in a grey moulded cabinet. The design features a printed circuit and a high impedance loudspeaker.

SPECIFICATION

Valve Functions

V1 UCH81	Frequency changer.
V2 UBF89	I.F. Amplifier/Detector.
V3 UCL82	A.F. Amplifier and Output.
V4 UY85	Mains Rectifier.

Waveband Ranges

M.W. 187-500 metres.
L.W. 1175-2000 metres.

Mains Supply Voltages

200-220 and 220-250 volts.

Consumption

60 watts.

Loudspeaker

4 in. dia, high Z (800Ω).

Output

1 watt.

Cabinet Dimensions

12½ in. width. 7¼ in. height. 6¾ in. depth.

CAUTION

- (i) Live chassis—check polarity.
- (ii) The L.S. may be replaced only with a high impedance type (800Ω).
- (iii) The speech coil is at H.T. potential.

CHASSIS

Removal

Pull off the volume and w/change knobs, place the receiver face down on a protected surface and remove the backplate. Remove the two rear chassis screws, and the three screws securing the chassis to the front of the cabinet. Unsolder the loudspeaker leads and withdraw the chassis.

Assembly

Turn gang to maximum and set tuning drive coupling to a 9 o'clock position viewed from the rear of the cabinet. Carefully engage the pin on the gang with the slot in the tuner drive, before replacing the chassis fixing screws.

TRIMMING INSTRUCTIONS

General notes

- (i) Output is observed on an A.C. Voltmeter (10v range) connected to the speech coil via a 47kpf capacitor. V/C in maximum position.
- (ii) When trimming R.F. circuits, couple the generator to the receiver via a few turns of insulated wire wound on the ferrite rod aerial.

Section	W/Band & Pointer	Frequency	Injection point	Adjust for max. output
I.F.	M.W. Gang at min.	470kc/s	G1V1 via. 47kpf	L8-7-6-5
Osc. and R.F.	M.W. Gang at max.	510kc/s	G1V1 via. 47kpf	L4
	M.W. 580kc/s	580kc/s	Loose coupling Trimming Note (ii)	L1
	M.W. 1570kc/s	1570kc/s	As above	C7
	L.W. 190kc/s	190kc/s	As above	L2

Note.—Switch to M.W. and recheck trimming.

OFFICIAL SERVICE AGENT :—

AMALGAMATED ELECTRIC SERVICES LTD.

WADDON FACTORY ESTATE

CROYDON

SURREY

Telephone

CROYDON

7722

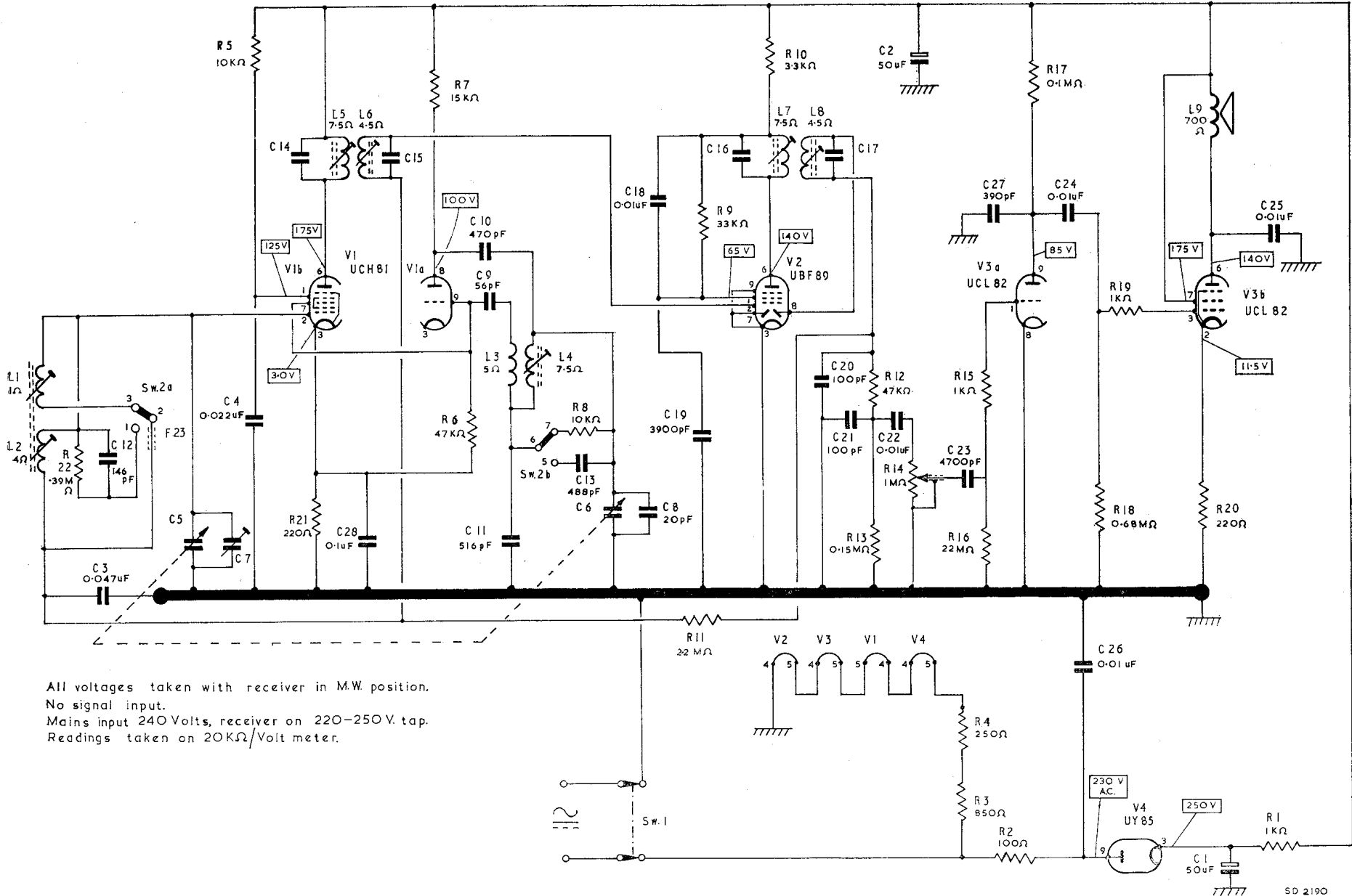
L	1.2.	5.	6.	3.	4.	7.	8.	9.	L							
C	3. 12.	5.	7. 4.	14.	28. 15.	10. 9. 11.	13. 6.	8. 18. 19.	16.	20. 17. 21.	22. 2.	23. 27.	24. 26.	1.	25.	C
R	22.	5.	21.	7.	6.	8.	11. 9.	10.	13. 12.	14.	4. 3. 15. 16. 2. 17.	18.	19.	20.	1.	R

OSCILLATOR & MIXER

I.F. AMPLIFIER DETECTOR

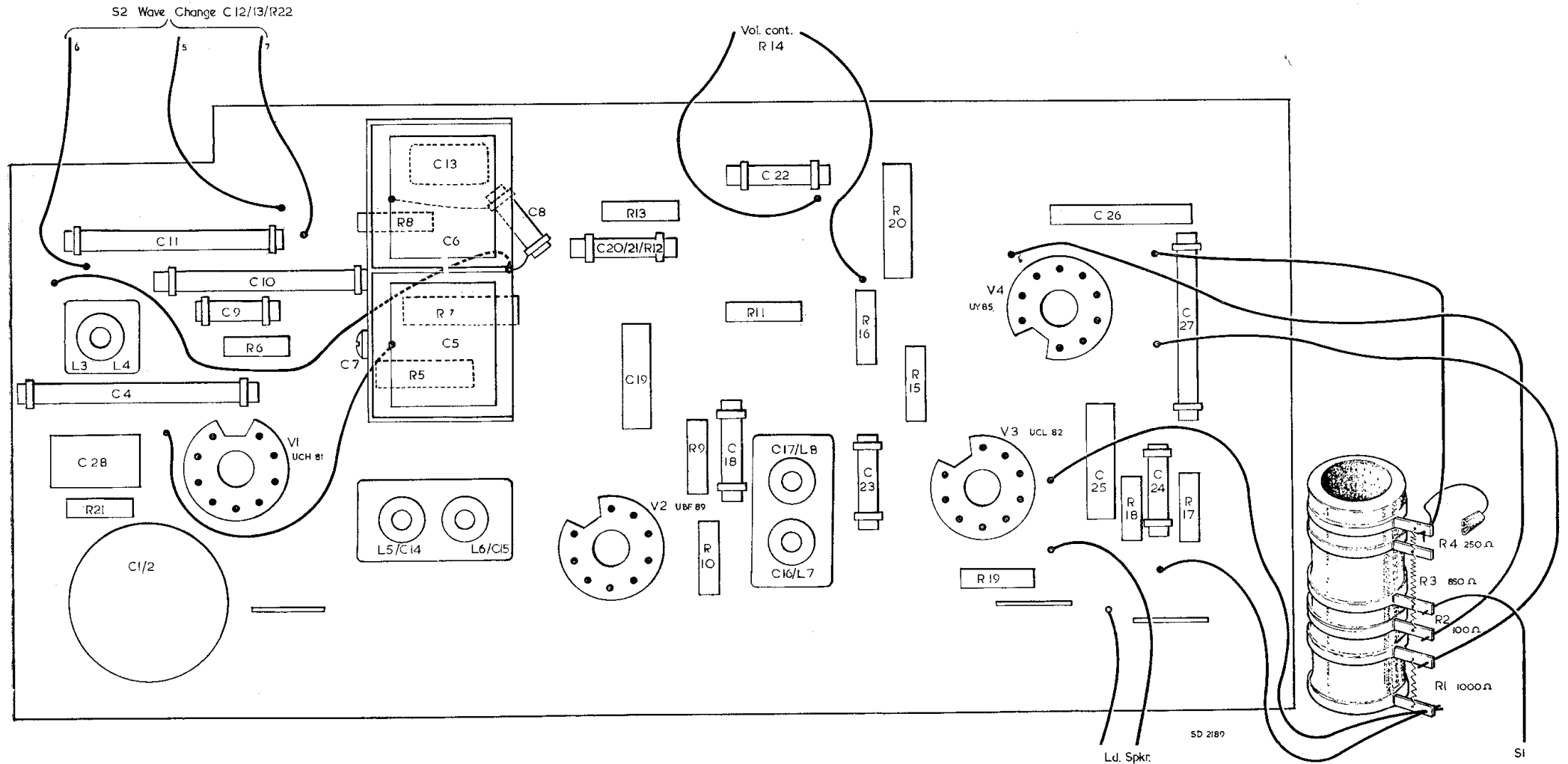
A.F. AMPLIFIER

OUTPUT RECTIFIER

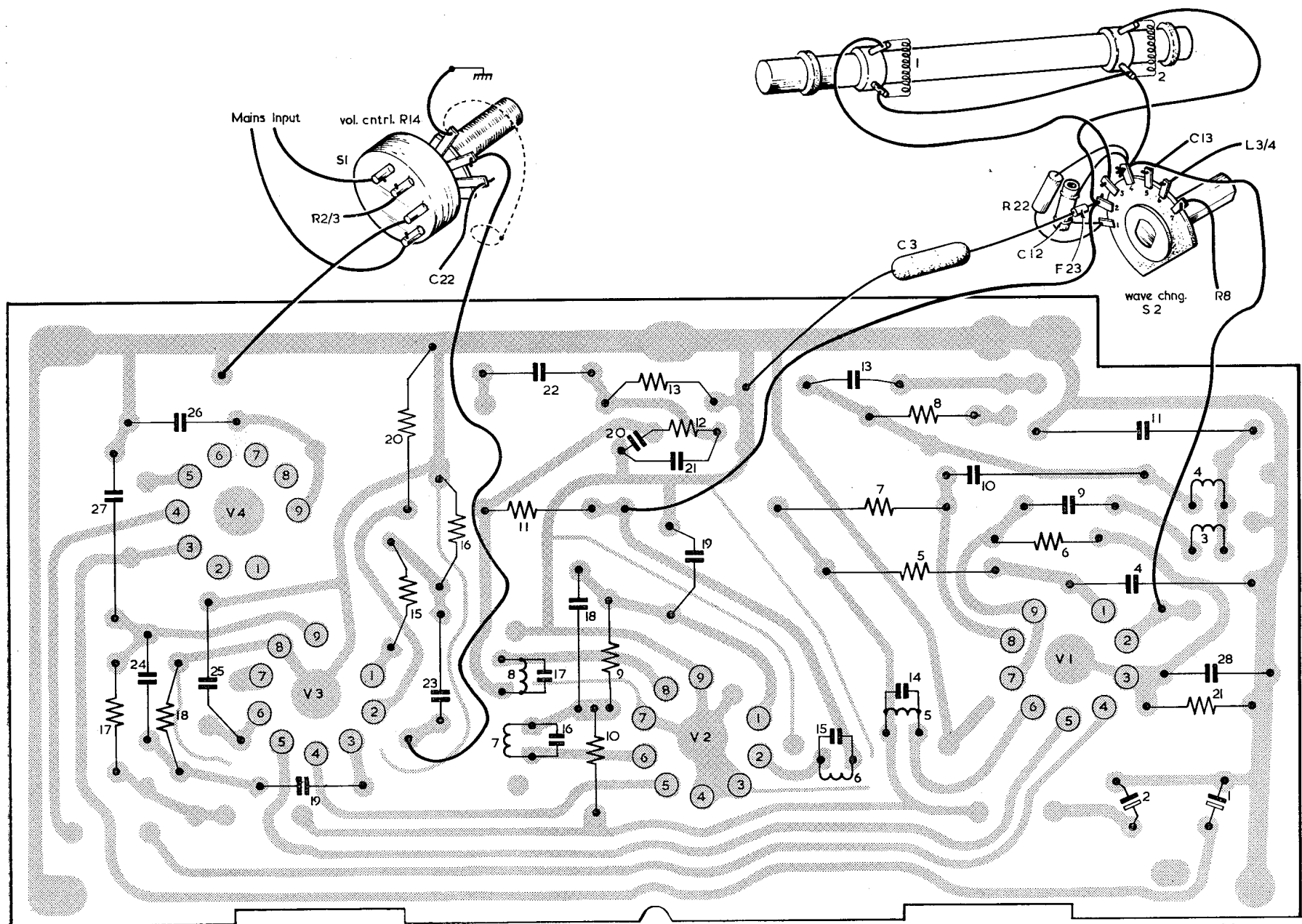


All voltages taken with receiver in M.W. position.
 No signal input.
 Mains input 240 Volts, receiver on 220-250 V. tap.
 Readings taken on 20K Ω /Volt meter.

L	3, 4.	5, 6.	7.	8.
C	28, 1/2, 4.	11, 12, 13, 9, 10.	14, 15.	16, 17.
R	21.	22, 6.	7, 8, 5.	9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19.



L						7. 8.				6.	5.		2. 4.		
C	27.	24.	26.	25.	19.	23.	22, 17.	20.	21. 19.	13.	3.	10.	12. 9.	4. 11.	28.
R	17.	18.			20. 15. 14. 16.	11.	16. 18.	10. 9.	13. 12.	7.	5. 8.	22. 6.			21.



SPARE PARTS LIST

CABINET ASSEMBLY

Cabinet assembly	...	...	...	...	...	HY.074.55
Grille assembly	...	...	...	...	...	MK.835.34
Backing plate	...	...	...	...	...	MK.367.03
Fixing clips (6)	} for above	...	...	...	...	MK.999.10
Ornamental ring on grille		...	...	...	...	MK.451.44
Stella trade name	...	...	...	...	...	MK.708.33
Fixing clips for speaker (4)	...	...	...	...	...	MK.926.63
Station scale	...	...	...	...	...	MK.708.34

CONTROL KNOBS

On/off and volume	...	...	...	...	...	MK.858.14
Wavechange	...	...	...	...	...	MK.958.11
Clips for above (2)	...	...	...	...	...	MK.451.57
Tuning	...	...	...	...	...	MK.858.10
Coupling piece	} for above	...	...	...	...	MK.986.48
Felt washer		...	...	...	...	MK.450.51
Fixing clip		...	...	...	...	MK.962.21
Backplate	...	...	...	...	...	MK.367.49
Fixing clips (5)	...	...	...	...	...	MK.751.72
Special screws (5)	...	...	...	...	...	MK.946.88
Printed panel with components	...	...	...	...	...	MK.985.09

MISCELLANEOUS

Fixing clip for rear of chassis (2)	...	...	...	...	...	MK.955.91
Screw for above (2)	...	...	...	...	...	MK.946.88
Fixing screw for front of chassis (3)	...	...	...	...	...	B.071.TF/8N x 5/8
Grommet (3)	} for above	...	...	...	...	08.008.75
Distance piece (3)		...	...	...	...	B.001.AE/5.1 x 7 x 5
Washer (3)	...	...	...	...	...	B.050.ED/4
Mounting grommet for gang (3)	...	...	...	...	...	08.008.73
Distance piece for above (3)	...	...	...	...	...	B.001.AC/4.1 x 6 x 4
Threaded rod for RI-4	...	...	...	...	...	MK.645.83
Large washer	} fixing materials	...	...	...	...	MK.450.26
Lockwasher		B.053.BD/3
Nut (3)		B.020.EE/3
Asbestos washer		MK.448.61
Spring washer (2)	} for above	...	...	...	...	B.051.AH/3
Washer (2)		MK.449.53

Tapping clip for RI-4	...	...	...	...	...	MK.751.46
Heat screen for RI-4	...	...	...	...	...	MK.081.12
Insulating plugs for chassis (4)	...	...	...	...	...	MK.726.07
Valve screen	...	...	...	...	...	MK.252.34
Nut for controls (2)	...	...	...	...	...	MK.927.05
Cable clamp (2)	...	...	...	...	...	A3.469.42
Sleeving	...	...	...	...	...	K.558.LB/size
Insulating spindle for controls (2)	...	...	...	...	...	MK.004.48
Screw (2)	...	...	...	...	...	B.054.ED/3 x 8
Lockwasher (2)	...	...	...	...	...	B.053.AD/3
Coupling piece for gang	...	...	...	...	...	MK.986.77
Grub screw for above	...	...	...	...	...	B.061.ED/3 x 6
Aerial support bracket	...	...	...	...	...	MK.033.83
Switch—waveband	...	...	...	...	...	MK.999.09
Tag strip—general	...	...	...	...	...	MK.964.52
Mains lead	...	...	...	...	...	R.909.KA/803
Valve position label	...	...	...	...	...	PG.012.00
Licence plate	...	...	...	...	...	MK.707.29
Type label	...	...	...	...	...	MK.706.56
Fixing screw for gang (3)	...	...	...	...	...	B.808.AD/4N x 5/8
Valveholders	...	...	...	...	...	MK.225.89
Contact for valve screen	...	...	...	...	...	MK.939.12
Ceramic tube for R20	...	...	...	...	...	MK.117.62
Rod for aerial	...	...	...	...	...	56.681.22/48

VALVES

V1	...	...	...	...	...	UCH81
V2	...	...	...	...	...	UBF89
V3	...	...	...	...	...	UCL82
V4	...	...	...	...	...	UY85

TRANSFORMERS AND COILS

L1/2	Rod aerial assembly...	...	...	...	...	MK.820.40
L1	M.W. aerial, coil only	...	...	...	...	MK.568.71
L2	L.W. aerial, coil only	...	...	...	...	MK.568.72
L3/4	Oscillator coil M.W.+L.W.	...	...	...	...	MK.569.25
L5/6	1st I.F. coil	...	...	...	...	MK.568.68
L7/8	2nd I.F. coil	...	...	...	...	MK.568.68
L11	Loudspeaker	...	...	...	...	ND.2350.AX

CAPACITORS

	Value	Permitted Tolerance %	
C1/2	Elco	50+50uF	AC.8307/50+50
C3	Polyester	47,000pF	C.296.AC/A47K
C4	Ceramic	22,000pF	C.301.GB/H22K
C5	} Gang	...	...
C6		...	...	MK.999.08
C7	} Ceramic	...	...
C8		...	...	C.304.GH/B20E
C9	Ceramic	56pF	C.304.AH/B56E
C10	Ceramic	470pF	C.304.AH/B470E
C11	Ceramic	516pF	C.304.GH/D516E
C12	Ceramic	146pF	C.304.AH/D146E
C13	Mica	488pF	MK.190.93
C14	...	...	In L5-6
C15	...	...	In L7-8
C16	...	...	...
C17	...	...	...
C18	Ceramic	10,000pF	C.301.GB/H10K
C19	Ceramic	3,900pF	MK.198.98
C20	} Diode filter	100pF	E.553.ZZ/03
C21		100pF	
C22	Ceramic	10,000pF	C.301.GB/H10K
C23	Ceramic	4,700pF	C.322.BA/H4K7
C24	Ceramic	10,000pF	C.301.GB/H10K
C25	Ceramic	10,000pF	MK.206.10
C26	Ceramic	10,000pF	MK.206.10
C27	Ceramic	390pF	C.304.AH/A390E
C28	Polyester	0.1uF	C.296.AC/A100K

RESISTORS

	Value	Watts	Permitted Tolerance %	
R1	1,000Ω	8.5	...	} MK.792.27
R2	100Ω	4.5	...	
R3	850Ω	11.0	...	
R4	250Ω	3.0	...	
R5	10,000Ω	1	10	
R6	47,000Ω	1	10	
R7	15,000Ω	1	10	
R8	10,000Ω	1	10	
R9	33,000Ω	1	10	
R10	3,300Ω	1	10	
R11	2.2MΩ	1	10	
R12	47,000Ω	1	10	
C20	} Diode filter	} E.553.ZZ/03
C21		
R13	0.15MΩ	...	10	} 48.426.10/150K
R14	1MΩ	Log law	10	
R15	1,000Ω	...	10	
R16	22.0MΩ	...	10	
R17	0.1MΩ	...	10	
R18	0.68MΩ	...	10	
R19	1,000Ω	...	10	
R20	220Ω	...	10	
R21	220Ω	...	10	
R22	0.39MΩ	...	10	
FR23	Ferroxcube bead	MK.116.74