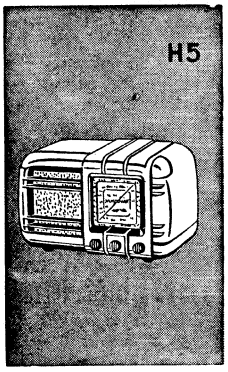


Hotpoint BAND-MASTER

MODEL H55TUX

SERVICE DATA & TECHNICAL INFORMATION

A.C. OR D.C. OPERATED SUPERHETERODYNE

AUSTRALIAN GENERAL ELECTRIC PROPRIETARY LIMITED

FIVE VALVE, THREE BAND

ELECTRICAL SPECIFICATIONS.

FREQUENCY RANGES:

Medium Wave	540-1600 Kc/s (555-187.5 M)
Short Waves	2.3-7 Mc/s (130-43 M)
	7-22 Mc/s (43-13.6 M)

INTERMEDIATE FREQUENCY: 455 Kc/s

Power Supply Rating: 210-250 volts A.C. or D.C. (See "Connection to Power Supply" for 105-125 volts operation)

Power Consumption	210-250 V. 60 Watts
	105-125 V. 30 Watts

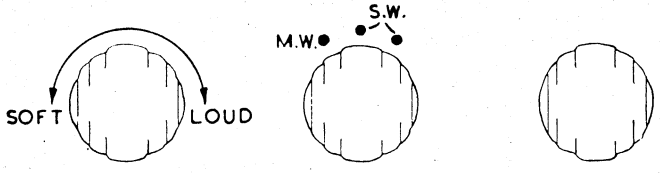
Valve Complement.

(1) X76M Converter
(2) W76 I.F. Amplifier
(3) DH76 Detector, A.F. Amplifier, A.V.C
(4) KT71 Output
(5) U76 Rectifier
161 Barretter

Loudspeaker (Permanent Magnet)

5 inch—code number AC46
Transformer—XA21
V.C. Impedance—3 ohms at 400 C.P.S.

CONTROLS H55TUX



MECHANICAL SPECIFICATIONS.

	Height	Width	Depth
Cabinet Dimensions (inches)	8¼	12¾	6¾
Chassis Base Dimensions (ins.)	2½	11	5½

Weight (nett lbs.) 16

Cabinet Colours: Walnut, Ivory, Burgundy

General Description.

The Model H55TUX is an A.C./D.C. operated mantel model, housed in a moulded plastic cabinet.

Features of its design include:—

Tropic-proof construction, automatic volume control, magnetite cores in I.F. transformers and broadcast oscillator coil, air-dielectric trimming capacitors.

MODEL H55TUX—CIRCUIT CODE.

Code No.	Description	Part No.
L1	I.F. Filter (including C1)	9382
L2, L3	Aerial Coil 540-1600 Kc/s	15454
L4, L5	Aerial Coil 2.3-7 Mc/s	17562
L6, L7	Aerial Coil 7-22 Mc/s	17562
L8, L9	Oscillator Coil 540-1600 Kc/s	9206A
L10, L11	Oscillator Coil 2.3-7 Mc/s	25115
L12, L13	Oscillator Coil 7-22 Mc/s	9205A
L14	R.F. Choke	25263
L15, L16	1st I.F. Transformer	25116
L17, L18	2nd I.F. Transformer	22703

RESISTORS

R1	0.1 Megohm ½ watt	
R2	0.5 megohm ½ watt	
R3	30,000 ohms ½ watt	
R4	320 ohms ½ watt	
R5	800 ohms ½ watt	
R6	5,000 ohms ½ watt	
R7	25,000 ohms 2 watt	
R8	20,000 ohms 1 watt	
R9	20,000 ohms 1 watt	
R10	50,000 ohms ½ watt	
R11	2 megohms ½ watt	
R12	0.5 megohm Volume Control	5707
R13	10 megohms ½ watt	
R15	50,000 ohms 1 watt	
R15	0.25 megohm 1 watt	
R16	0.5 megohm ½ watt	
R17	200 ohms 3 watt (wire wound)	
R18	50,000 ohms ½ watt	
R19	1,000 ohms 1 watt	
R20	0.2 megohm ½ watt	
R21	200 ohms 20 watt (wire wound)	

CAPACITORS

C1	50 uuF Silvered Mica	
C2	4 uuF Mica	
C3	2-20 uuF Air Trimmer	19659
C4	2-20 uuF Air Trimmer	19659
C5	2-20 uuF Air Trimmer	19659
C6	4 uuF Mica	
C7	200 uuF Mica	
C8	12-430 uuF Tuning	18621
C9	500 X uuF Mica (2000V test)	
C10	500 X uuF Mica (2000V test)	
C11	0.05 uF Paper 400V working	
C12	4000 uuF Padder ± 2½%	
C13	2-20 uuF Air Trimmer	19659
C14	1700 uuF Padder ± 2½%	
C15	2-20 uuF Air Trimmer	19659
C16	2-20 uuF Air Trimmer	19659
C17	4 uuF Mica	
C18	0.01 uF Paper 600V working	
C19	0.02 uF Paper 600V working	
C20	0.05 uF Paper 400V working	
C21	0.05 uF Paper 400V working	
C22	0.01 uF Paper 600V working	
C23	70 uuF Silvered Mica	
C24	70 uuF Silvered Mica	
C25	0.05 uF Paper 200V working	
C26	0.05 uF Paper 400V working	
C27	0.035 uF Paper 600V working	
C28	70 uuF Mica	
C29	470 uuF Padder ± 2½%	
C30	12-430 uuF Tuning	18621
C31	0.05 uF Paper 400V working	
C32	0.05 uF Paper 400V working	
C33	0.01 uF Paper 600V working	
C34	100 uuF Mica	
C35	100 uuF Mica	
C36	70 uuF Silvered Mica	
C37	70 uuF Silvered Mica	
C38	200 uuF Mica	
C39	0.01 uF Paper 600V working	
C40	0.1 uF Paper 400V working	
C41	25 uF 40 P.V. Electrolytic	
C42	0.025 uF Paper 400V working	
C43	30 uF 350 P.V. Electrolytic	
C44	30 uF 350 P.V. Electrolytic	

TRANSFORMERS

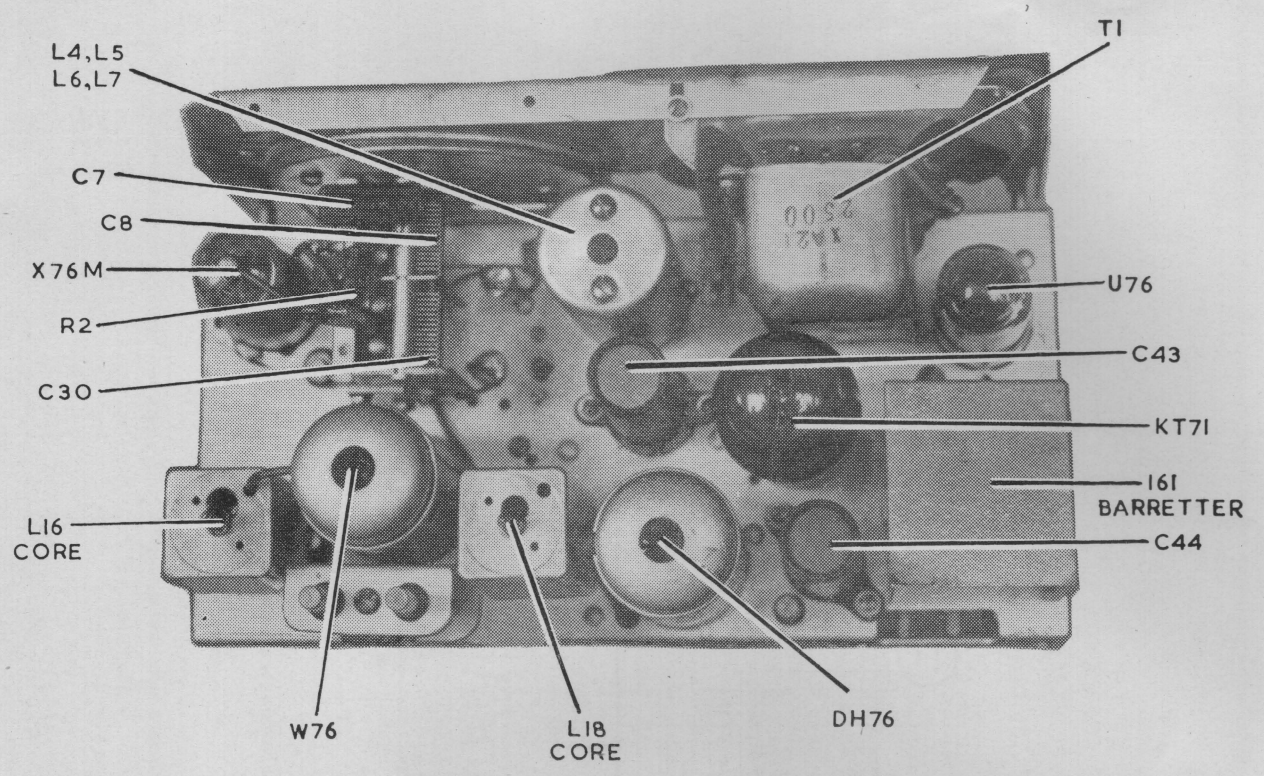
T1	Loudspeaker Transformer	XA21

LOUDSPEAKER

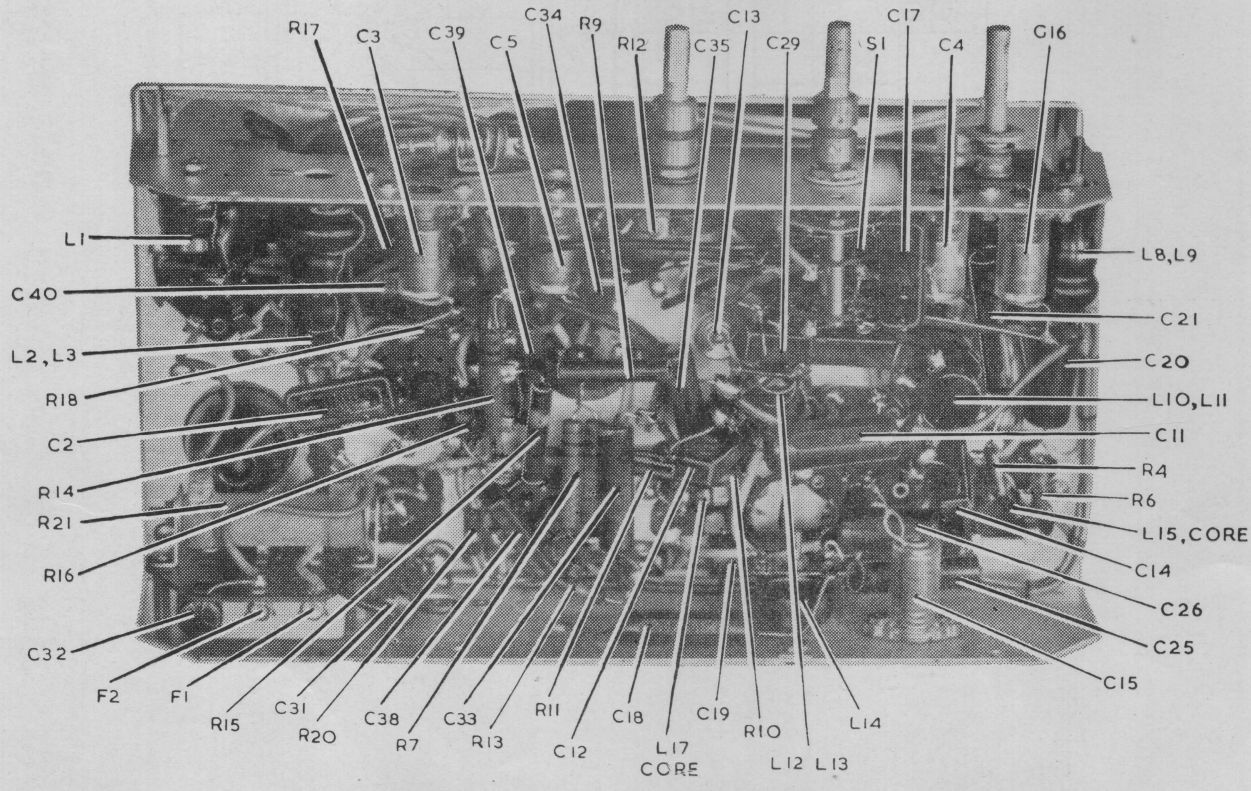
	5 inch Permanent Magnet	AC46

SWITCHES

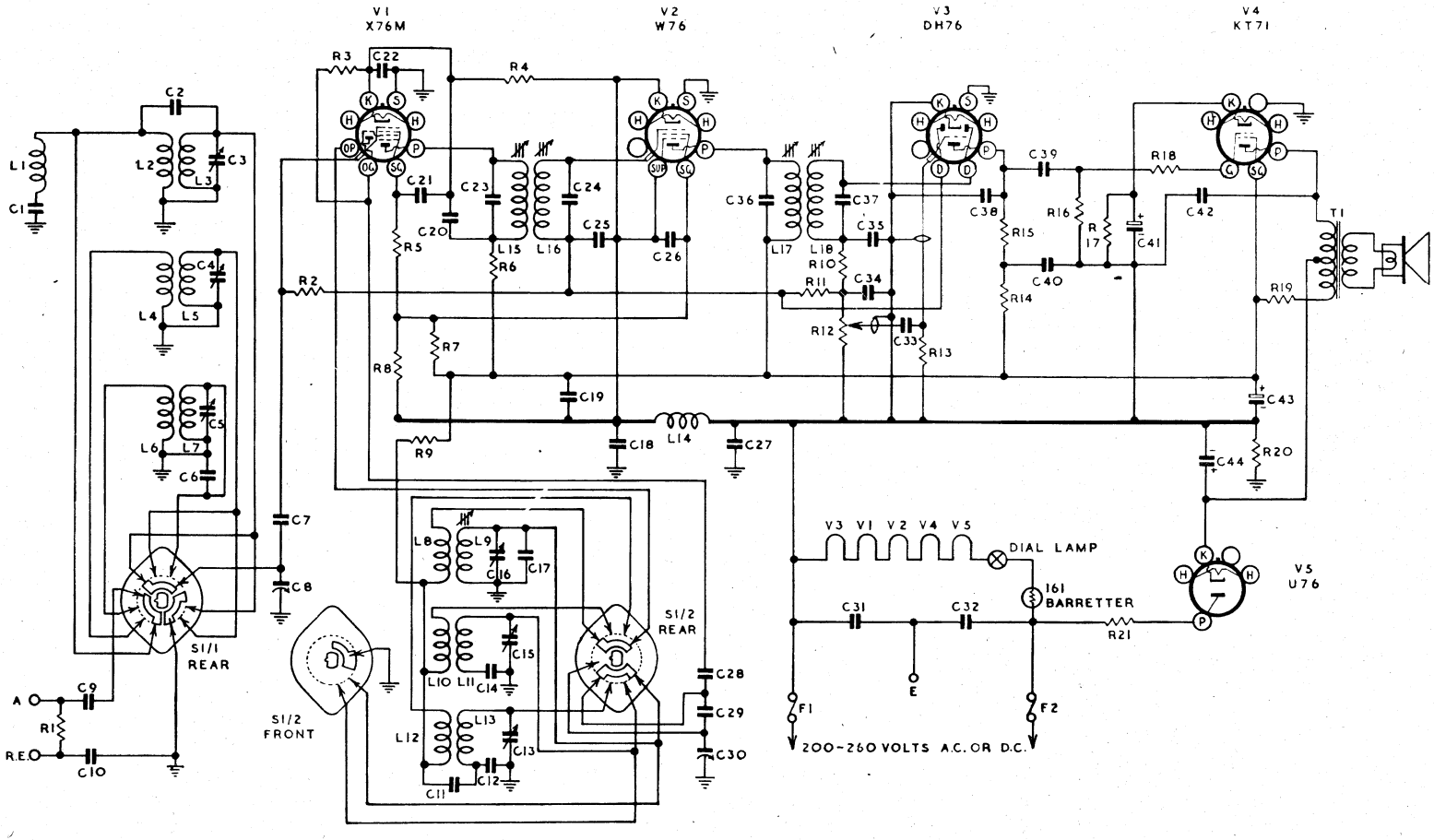
S1	Range Switch	25260



CHASSIS (Top View) H55TUX



CHASSIS (Underneath View) H55TUX


V1
X76M
V2
W76
V3
DH76
V4
KT71
V5
U76
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
C1
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L14
L15
L16
L17
L18
T1
S1/1
REAR
S1/2
FRONT
S1/2
REAR
DIAL LAMP
161
BARRETTER
V3 V1 V2 V4 V5
A
R.E.
E
F1
F2
200-260 VOLTS A.C. OR D.C.

ALIGNMENT PROCEDURE.

Manufacturer's Setting of Adjustments.

The receiver is tested by the manufacturer with precision instruments and all adjusting screws are sealed. Re-alignment should be necessary only when components in tuned circuits are repaired or replaced or when it is found that the seals over the adjusting screws have been broken.

It is especially important that the adjustments should not be altered unless in association with the correct testing instruments listed below.

Under no circumstances should the plates of the ganged tuning capacitor be bent, as the unit is accurately aligned during manufacture and cannot be re-adjusted unless by skilled operators using specialised equipment.

For I.F. alignment, connect the "low" side of the signal generator to the receiver chassis, whilst for all other alignment operations to the terminal marked "R.E.," i.e., Radio Earth. Also, keep the generator output as low as possible to avoid A.V.C. action and the volume control in the maximum clockwise position.

Testing Instruments.

(1) A.W.A. Junior Signal Generator, type 2R3911, or
(2) A.W.A. Modulated Oscillator, type J6726.
If the modulated oscillator is used, connect an 0.25 megohm non-inductive resistor across the output terminals, and, for short wave alignment, an additional 400 ohms non-inductive resistor in series with the "high" output lead of the instrument.
(3) A.W.A. Output Meter, type 2M8832.

ALIGNMENT TABLE.

Order	Connect "high" side of generator to:	Tune Generator to:	Tune Receiver Dial to:	Adjust for maximum peak output
1	X76M*	455 Kc/s	540 Kc/s	L18 Core
2	X76M*	455 Kc/s	540 Kc/s	L17 Core
3	X76M*	455 Kc/s	540 Kc/s	L16 Core
4	X76M*	455 Kc/s	540 Kc/s	L15 Core
	Repeat the above adjustments until the maximum output is obtained.			
5	Aerial Terminal	600 Kc/s	600 Kc/s	L.F. Osc. Core Adj. (L9)†
6	Aerial Terminal	1500 Kc/s	1500 Kc/s	H.F. Osc. Adj. (C16)
7	Aerial Terminal	1500 Kc/s	1500 Kc/s	H.F. Aer. Adj. (C3)
	Repeat adjustments 5, 6, and 7.			
8	Aerial Terminal	6.5 Mc/s	6.5 Mc/s	H.F. Osc. Adj. (C15)§‖
9	Aerial Terminal	6.5 Mc/s	6.5 Mc/s	H.F. Aer. Adj. (C4)§‡
10	Aerial Terminal	20 Mc/s	20 Mc/s	H.F. Osc. Adj. (C13)§‖
11	Aerial Terminal	20 Mc/s	20 Mc/s	H.F. Aer. Adj. (C5)§‡

*With grid clip connected. An 0.001 uF capacitor should be connected in series with the "high" side of the test instrument.
†Rock the tuning control back and forth through the signal.
§6.5 and 20 Mc/s setting on the dial corresponds with the 1500 Kc/s mark.
‖Use minimum capacity peak if two can be obtained. Check to determine that the trimmer has been adjusted to correct peak by tuning the receiver to approximately 5.6 Mc/s or 19.1 Mc/s as the case may be, where a weaker signal should be received.
‡Use maximum capacity peak if two can be obtained.

Connection to Power Supply.

The design of the instrument is such that it may be connected to any supply, A.C. or D.C., for the following range:—

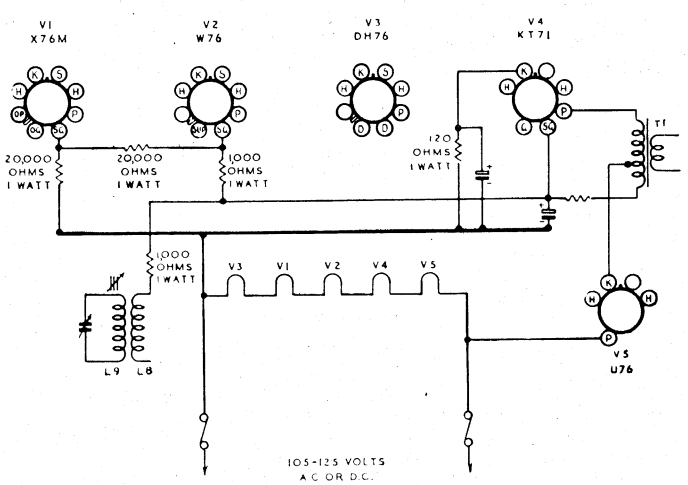
210-250 volts.

The receiver may, however, be operated from 115 volts mains after carrying out the circuit modifications shown in the accompanying diagram.

The following lists show the components to be deleted and those to be added.:—

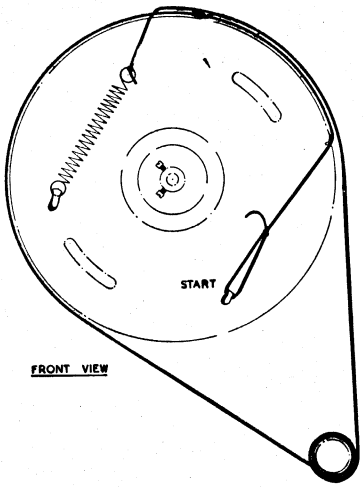
Delete: R5 — 800 ohms ½ watt
R7 — 25,000 ohms 2 watt
R8 — 20,000 ohms 1 watt
R9 — 20,000 ohms 1 watt
R17 — 200 ohms 3 watt
R21 — 200 ohms 20 watt
161 Barretter
Panel Lamp

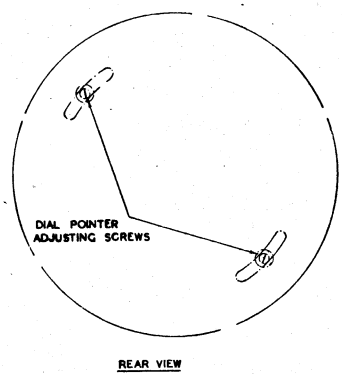
Add: 1 — 120 ohms 3 watt
2 — 1,000 ohms 1 watt
2 — 20,000 ohms 1 watt



Important.

When connected to D.C. mains, the receiver will operate only when the power cable is inserted in the power point with the correct polarity. Should the receiver fail to operate after the warm-up period of two minutes has elapsed, switch off the power point and reverse the plug in the socket.





Chassis Removal.

First, remove the cabinet back, control knobs and felt washers — each knob is held by a set-screw. Then, remove two screws from underneath the cabinet and withdraw the chassis.

Dial Pointer Adjustment.

To shift the position of the dial pointer, loosen two screws in the rear of the drive drum — see accompanying drawing — move the pointer disc to the required position and re-tighten the screws. The diagram also shows the route of the drive cord and the method of attachment.

MECHANICAL REPLACEMENT PARTS.

Item	Part No.
Aerial Terminal Assembly	15941
Cabinet	22501
Cable, Volume	25105
Dial Scale	23361
Dial Pointer Assembly	20132
Drum Assembly, Drive	25261
Front Panel Assembly	25259B
Knob	17603
Panel Fuse	25110
Reflector Assembly	25252
Shield Valve	25258
Socket Valve	4704
Socket, Valve Cushion	20142
Spindle Extension	22477
Strap, Mounting	22471
Strip, Tag, 1 way	7628
1 way	22945
7 way	25559

D.C. RESISTANCE OF WINDINGS.

Winding	D.C. Resistance in Ohms
Aerial Coil (M.W.)	
Primary (L2)	30
Secondary (L3)	4
Aerial Coil (S.W.)	
Primary (L4)	6
Secondary (L5)	*
Primary (L6)	6
Secondary (L7)	*
Oscillator Coil (M.W.)	
Primary (L8)	2
Secondary (L9)	6
Oscillator Coil (S.W.)	
Primary (L10)	*
Secondary (L11)	*
Primary (L12)	*
Secondary (L13)	*
I.F. Transformer Windings	10
I.F. Filter (L1)	17.5†
R.F. Choke (L14)	60
Loudspeaker Input Transformer (T1)	
Primary	125
Secondary	*

The above readings were taken on a standard chassis, but substitution of materials during manufacture may cause variations and it should not be assumed that a component is faulty if a slightly different reading is obtained.

*Less than 1 ohm.

†In some receivers this reading may be as high as 60 ohms.

SOCKET VOLTAGES. MODEL H55TUX.

Valve	Cathode to Negative Volts	Screen Grid to Negative Volts	Anode to Negative Volts	Anode Current mA	Heater Volts
X76M Converter	2.0	65	185	0.7	13.0
Oscillator	—	—	90	5.0	—
W76 I.F. Amp.	0	65	190	3.0	13.0
DH76 Det., A.F. Amp., A.V.C.	0	—	70*	0.4	13.0
KT71 Output	13.0	190	205	60.0	48.0
U76 Rectifier	215	—	—	—	30.0

Measured at 240 V. A.C. Supply. No signal input. Volume Control maximum clockwise.
*Cannot be measured with an ordinary voltmeter.