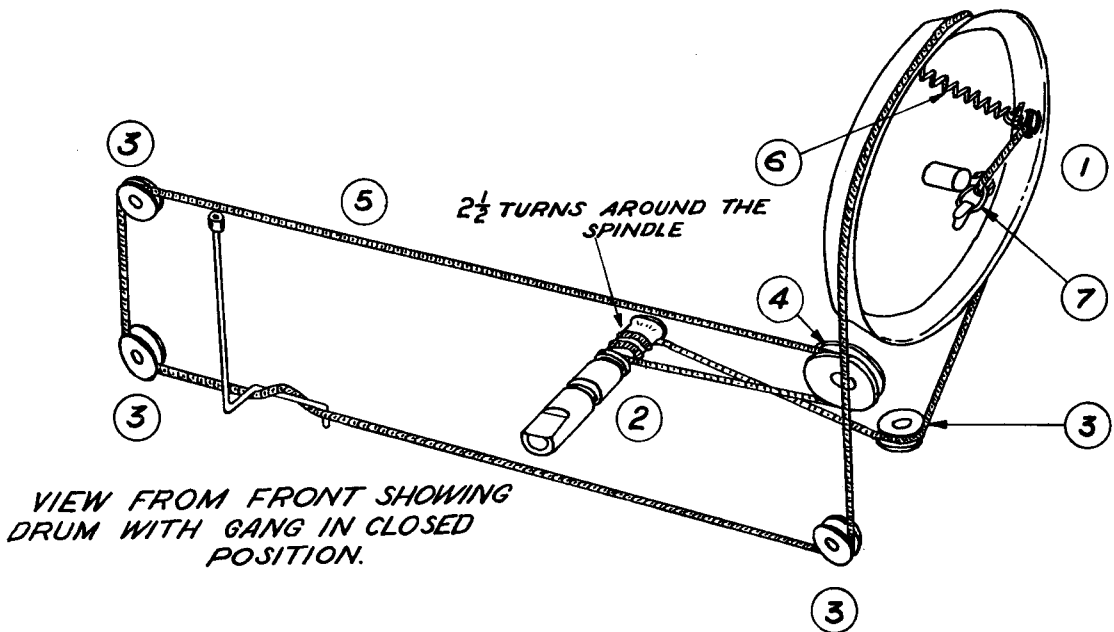


MISCELLANEOUS COMPONENTS

No. on Dial Cord Layout Drawing	Description	Code No.	No. on Dial Cord Layout Drawing	Description	Code No.
—	Assembly, cabinet grille and overlay	CR.520.833	5	Cord, dial drive	50" of cord required
—	Assembly, cursor	CR.480.657	1	Drum, dial	CS.360.005
—	Assembly, lampholder	C/F 733.8.1	—	Gear, driving W/C and T/C gearwheels, 2x	CS.354.202
—	Assembly, W/C clicker	CR.450.045	—	Gearwheel, W/C and T/C spindles, 2x	CS.354.201
—	Assembly, W/C switch	CZ.200.238	—	Knob, inner, 2x	CS.432.658
—	Badge, Fleetwood	CR.531.420	—	Knob, outer, 2x	CR.523.711
—	Bank, W/C switch	CZ.200.213	3	Pulley, dial drive, 4x	CS.359.612
—	Cabinet and grille, burgundy	CR.573.407	4	Pulley, dial drive, 1x	CS.359.602
—	Cabinet and grille, ivory	CR.573.405	—	Scale, dial	CS.412.392
—	Cabinet and grille, walnut	CR.573.406	2	Spindle, tuning	CS.351.243
—	Clip, gear wheels and knobs, 4x	CS.281.832	6	Spring, dial cord	CS.210.020
—	Clip, spring (I.F.T. mtg.), 2x	A3.652.58			



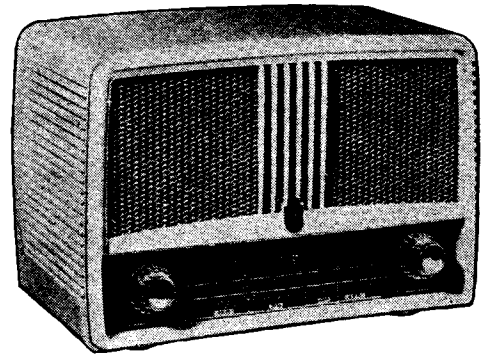
FLEETWOOD RADIO

MODEL 1116

SPECIFICATIONS

(Subject to alteration without notice)

Power Supply	200-250V, 40-50 c/s.
Tuning Ranges	B/C band, 530-1620 kc/s. S/W band, 5.85-12.2 Mc/s.
Intermediate Frequency	455 kc/s.
Cabinet	Plastic table.



VALVE EQUIPMENT AND VOLTAGE ANALYSIS

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Osc. P. Volts
Frequency Converter	V1	6AN7	235	50	95
I.F. Amplifier	V2	6BH5	235	50	—
Audio Amplifier, A.V.C. and Demodulator	V3	6BD7	70	—	—
Power Amplifier	V4	6M5	240	235	—
Rectifier	V5	6V4	V5 Cathode — L17 C.T., 255V		
Dial Lamp	V11	6.3V, 0.32A, tubular screw			
Voltage across R13, -1.2V.			Voltage across R18, 5.5V.		

NOTE: These voltages are measured with an "1,000 ohms per volt" meter and may vary $\pm 10\%$ from the figures quoted. They are measured from the socket points indicated to chassis or across the resistors listed. The receiver should be in a "no signal" condition.

TO REMOVE CHASSIS FROM CABINET.

Remove the power plug from the wall outlet socket. Remove the cabinet back (6 screws) and unplug the aerial loop. Remove the two top speaker mounting screws. Remove the four chassis mounting screws from the counter bored holes in the base of the cabinet. The chassis may now be withdrawn from the cabinet.

Refitting of the chassis is a reversal of the above procedure.

If it is necessary to turn the cabinet face downwards during service work, some soft protective material should be used over the work area.

ALIGNMENT.

Alignment may be carried out without the necessity of removing the chassis from the cabinet.

Because of the noise pick-up of the aerial loop, it will be found advisable to either carry out alignment without the loop in position, or else to desensitise the receiver. If the loop is removed, its place should be taken by a 50,000 ohms carbon resistor connected between the red and yellow or blue leads. To desensitise the receiver, connect a 25,000 ohms 1 watt 10% carbon resistor and a 0.1 mF 200V, 20% paper capacitor in series across the secondary of the first I.F. transformer.

Before attempting alignment, set the dial cursor, with the tuning gang fully closed, to the right-hand edge of the 49M band block.

I.F. channel alignment is carried out in the following sequence:—

Connect 100 pF capacitor from plate of 6BH5 to chassis and peak secondary of 2nd I.F.T. (screw nearer 6BD7).

Transfer 100 pF capacitor to 6BD7 diode to chassis position and peak primary of 2nd I.F.T. (screw nearer 6BH5).

Remove the detuning capacitor and peak secondary of 1st I.F.T. (screw nearer 6BH5).

Peak primary of 1st I.F.T. (screw nearer 6AN7). Repeat operations on 1st I.F.T. ONLY.

For broadcast band alignment: when the loop is in position use a 50 pF capacitor as dummy; if the loop has been removed use the standard I.R.E. dummy. Because of the interdependence of oscillator coil coupling windings, it is essential that the broadcast adjustments be made before the short wave adjustments. On the short wave band, the oscillator operates on a frequency above signal frequency, so of the two signals tunable on the receiver the high frequency one is correct. Broadcast band alignment frequencies are: 1,420 kc/s (oscillator trimmer and loop trimmer), and 600 kc/s, 7ZL (oscillator padding). Short wave band alignment frequencies are: 6.1 Mc/s, small peaked mark above "9" in 49M block (oscillator padding), and 11.85 Mc/s, small peaked mark between "2" and "5" in 25M block (oscillator trimmer and aerial trimmer, the latter with rocking of the tuning gang).

The broadcast aerial loop trimmer should be adjusted only with the loop in its normal operating position.

If an oscillator coil has been replaced, it is advisable to make a preliminary peaking of the iron core at 600 kc/s or 6.1 Mc/s, as the case may be, before proceeding with normal alignment procedure.

No attempt should be made to adjust the iron core of the S/W aerial coil.

DIAL CALIBRATION ADJUSTMENT.

If dial calibrations are incorrect over the dial scale by an equal amount, the condition can be corrected by sliding the cursor on the dial cord. An access hole for this purpose is provided in the base of the cabinet.

MAINS VOLTAGE ADJUSTMENT.

The power transformer is provided with two primary winding tapings—200/230 volts and 240/250 volts—to allow of adjustment of the receiver to the supply voltage at the point of installation. The receiver is adjusted at the factory to the 240/250 volts tapping.

PARTS LIST

CAPACITORS

No.	Description	Code No.
C2	50 pF compr. trimmer	
C3, 12	30 pF air trimmer	CZ.113.700
C4	95 pF mica 2½%	CZ.064.512
C5, 6	2 gang tuning	CZ.107.746
C7	10 pF mica	
C8, 9, 18, 24	100 pF mica	
C10	450 pF mica 2%	CZ.066.117
C11	60 pF air trimmer	49.005.58
C13	75 pF mica 2½%	CZ.064.514
C14, 15, 19, 20	Part of I.F. transformers	
C16	0.1 mF 200V paper	
C17, 26	0.02 mF 400V paper	
C21	30 pF mica	
C22, 25	0.01 mF 400V paper	
C23, 31	0.05 mF 200V paper	
C27, 28	0.005 mF 600V paper	
C29, 30	8+24 mF 350V dual electrolytic	CZ.099.913

Unless otherwise stated, all tolerances are 20%

RESISTORS

No.	Description	Code No.
R1	47,000 ohms 1W carbon	
R2, 22	68,000 ohms 1W carbon 10%	
R3	270 ohms ½W carbon 10%	
R4, 7	47,000 ohms ½W carbon	
R5	33,000 ohms 1W carbon	
R6, 11	1 megohm ½W carbon	
R8	0.5 megohm tapped carbon potentiometer	CZ.029.145
R9	15,000 ohms ½W carbon 10%	
R10	10 megohms ½W carbon	
R12	0.56 megohm ½W carbon 10%	
R13	27 ohms ½W W/W 10%	
R14, 24	0.22 megohm ½W carbon	
R15	2 megohms switch potentiometer	CZ.032.600
R16	0.47 megohm ½W carbon 10%	
R17	4,700 ohms ½W carbon	
R18	180 ohms ½W W/W 10%	
R19	1,000 ohms ½W carbon	
R20	15 ohms ½W W/W 10%	
R21	2,200 ohms 1W carbon 10%	
R23	0.47 megohm ½W carbon	

Unless otherwise stated, all tolerances are 20%

COILS

No.	Ohms	Description	Code No.
L1	<1	B/C loop	CR.572.106
L2	1.0-1.4		
L3	1.3-1.7	S/W aerial coil	CZ.323.022
L4	<1		
L5	0.9-1.1	B/C oscillator coil	CZ.330.612
L6	3.1-3.9		
L7	<1	S/W oscillator coil	CZ.330.611
L8	<1		
L9	11.5-15.5	1st I.F. transformer	A3.124.25
L10	11.5-15.5		
L11	11.5-15.5	2nd I.F. transformer	CZ.320.434
L12	11.5-15.5		
L13		Output transformer	Type HCG76
L14		Speaker	Type 5-7H, F86
L15			
L16	28-38	Power transformer	CZ.344.085
L17	305-415		
L18	<1		

IMPORTANT! In ordering spare parts, quote CODE NUMBER of part and MODEL NUMBER of Receiver. In claiming free replacement under GUARANTEE, return defective part PROMPTLY and quote MODEL and SERIAL NUMBER of Receiver and DATE OF PURCHASE.

L	21	1, 2	3, 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
C																				
R																				
V																				

AERIAL & OSCILLATOR COIL LUG PANEL

I.F. TRANSFORMER BASE VIEW OF LUGS

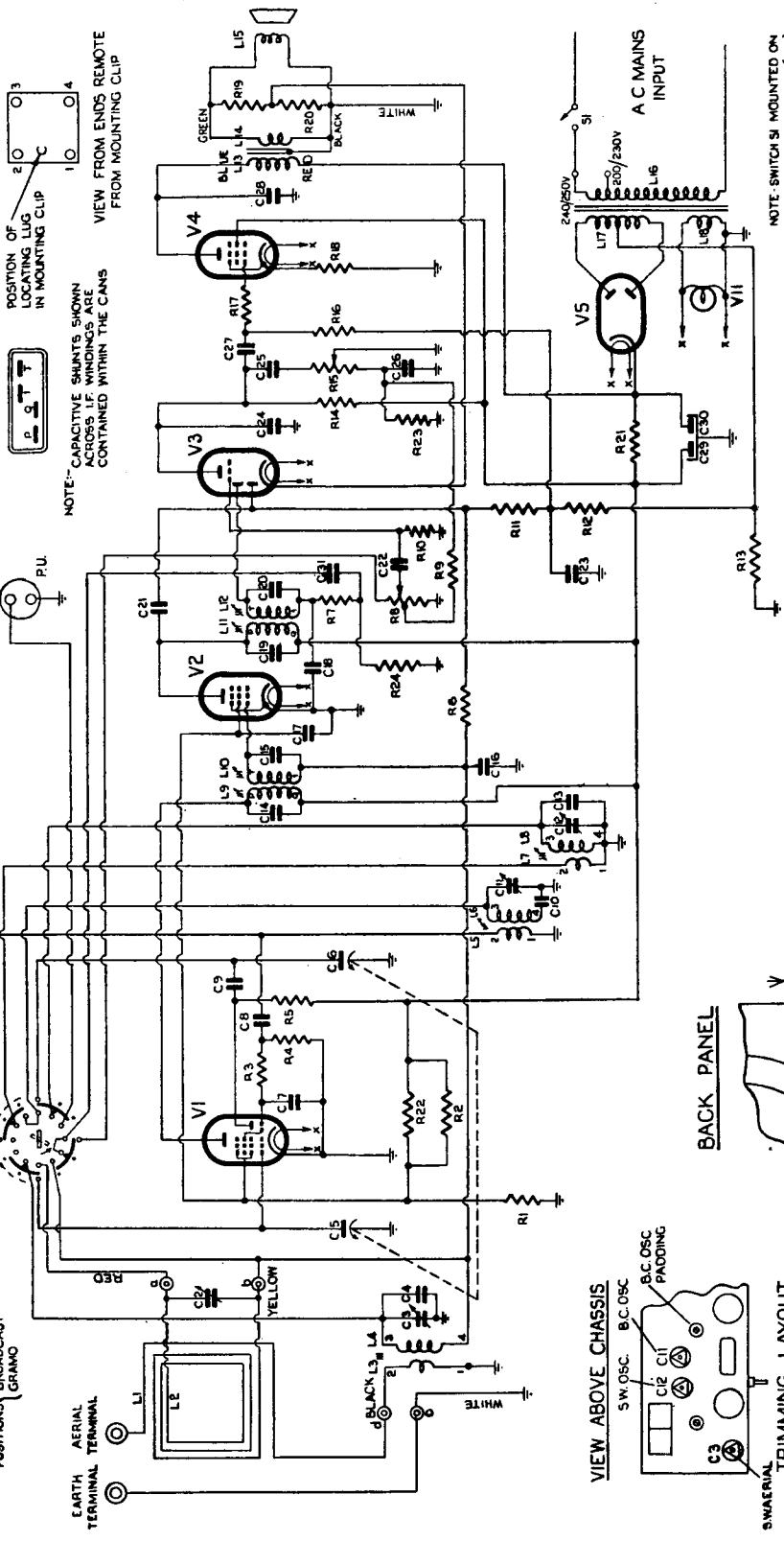
VIEW FROM ENDS REMOTE FROM MOUNTING CLIP

VIEW FROM ENDS REMOTE FROM MOUNTING CLIP

BACK PANEL VIEW FROM INSIDE

VIEW ABOVE CHASSIS TRIMMING LAYOUT

VIEW BENEATH CHASSIS

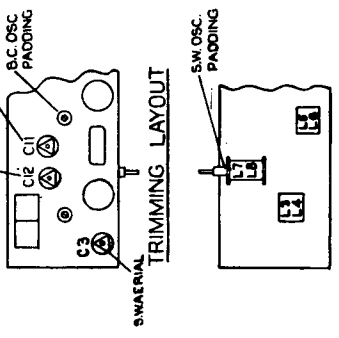
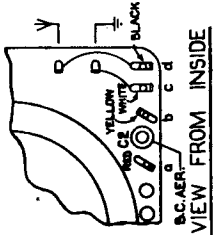


SWITCH A1 SHOWN IN S.W. POSITION (SHORT WAVE BROADCAST)



NOTE: CAPACITIVE SHUNTS SHOWN ACROSS I.F. WINDINGS ARE CONTAINED WITHIN THE CANS

NOTE: SWITCH S1 MOUNTED ON TONE CONTROL (R18)



MODIFICATION SHEET

FLEETWOOD RADIO

MODELS 1116A-B-C

NOTE: This sheet should be read in conjunction with the service data sheet for Model 1116.

MODEL 1116

Errata.

Due to errors in preparation, some entries in the "Capacitors" and "Resistors" lists were omitted. This can be corrected by making the following alterations and additions.

Delete "2" of the entry "R1, 2" to read "R1."

Add entries of—

"R2, 22 68,000 ohms 1W carbon 10%"

"R23 0.47 megohm $\frac{1}{2}$ W carbon"

Add "30" to entry of "C29" to read "C29, 30."

There is a typographical error in the "Miscellaneous Components" section. The code number for "Bank, w/c switch" should read CZ.200.231.

Modifications.

A modification applied to Model 1116 to overcome a tendency to instability on the 25 metres band consists of a change in value of C16 from 0.05 μ F to 0.1 μ F 200V. paper.

A modification to isolate diode current from the volume control potentiometer element consists of the interposition of a capacitor C31 of value 0.05 μ F 200V. paper, between R7 and the wave change switch, and the wiring of a resistor R24, 220,000 ohms, $\frac{1}{2}$ W carbon, between the junction of R7/C31 and the chassis. Included in this modification is the change of 2nd I.F. transformer to CZ.320.434.

MODEL 1116A

Model 1116A incorporates the above changes and also the replacement of the aerial loop with a Ferroxcube rod aerial. The circuit diagram of this version is published overleaf.

Parts changes associated with the "A" version are—

L1	<0.5 ohms	}	Rod aerial assy. CZ.323.033
L2	<0.5 ohms		
L20	<0.5 ohms		
L21	18-20 ohms		
R25	6,800 ohms		
L3	1-2 ohms	}	S/W aerial coil CZ.323.034
L4	<0.5 ohms		
C1, 32	100 pF mica		
C2	30 pF air trimmer		CZ.113.700

MODEL 1116B

Model 1116B is the same as Model 1116A except for the replacement of the I.F. transformers. Details are—

L9	4.7-5.2 ohms	}	1st I.F.T.	A3.126.84
L10	8.0-9.0 ohms			
L11	8.3-9.2 ohms	}	2nd I.F.T.	CZ.320.444
L12	4.7-5.2 ohms			

Alignment procedure of the I.F. channel is as under—

1. Screw out the slug of the primary of the 2nd I.F.T. as far as possible.
2. Peak slugs in the following order—
Secondary 2nd I.F.T. (nearer V3)
Secondary 1st I.F.T. (nearer V2)
Primary 1st I.F.T. (nearer V1)
Primary 2nd I.F.T. (nearer V2)
3. Do not re-adjust any slugs.

MODEL 1116C

Model 1116C is the same as Model 1116B except that separate gear coupled volume and tone control potentiometer "on/off" switch have been replaced by a dual concentric unit. This modification affects the following items on the "Miscellaneous Components" and "Resistors" parts list of Model 1116 Service Data.

Model 1116C is the same as Model 1116B except for—

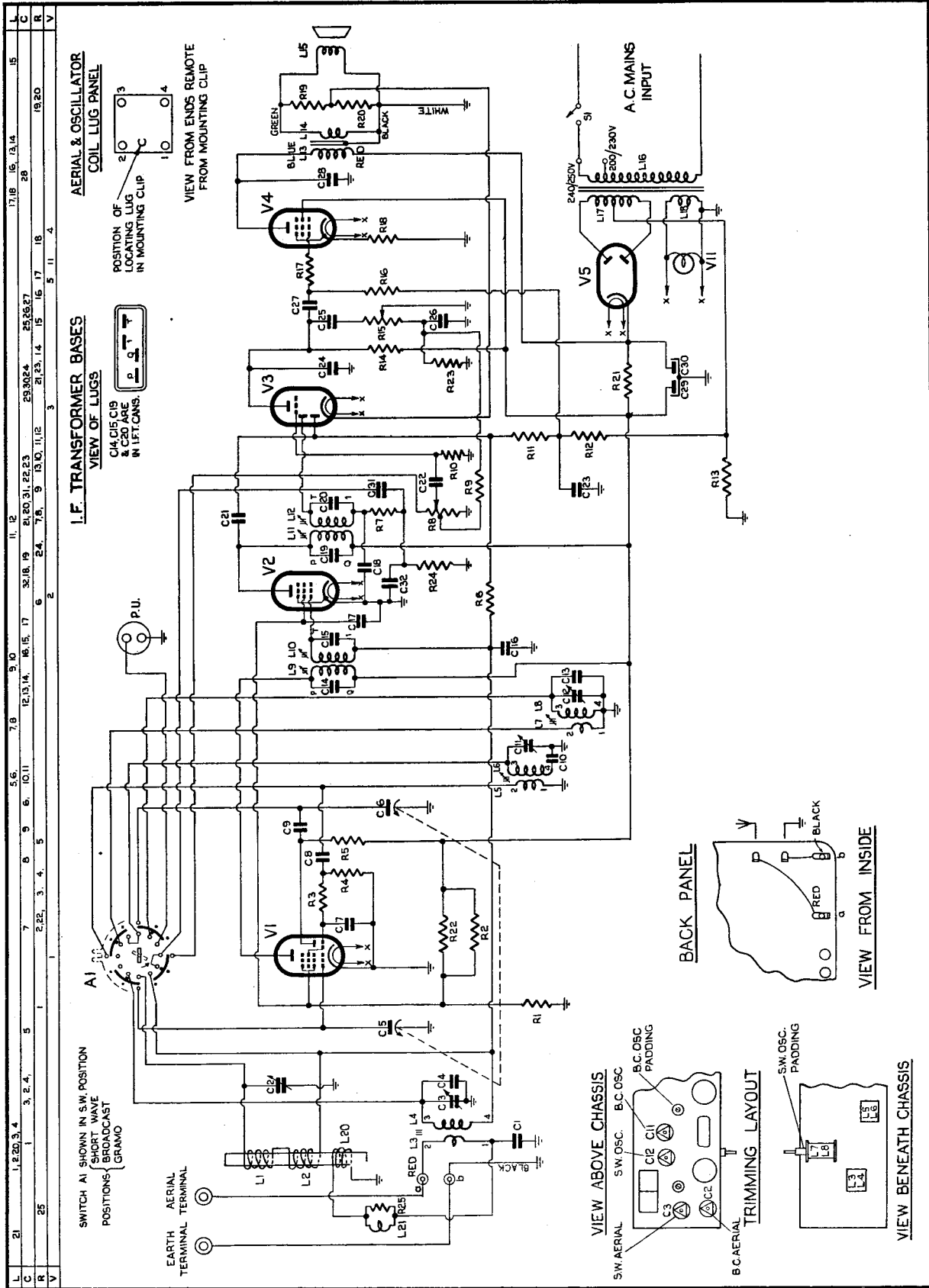
Miscellaneous Components.

Description	Code Number
Gear, driving W/C gear wheel	CS.354.202
Gear wheel, W/C spindle	CS.354.201
Spindle, tuning	CS.351.249
Sleeve, spindle, W/C and T/c, 2x	CS.381.670
Clip, gear wheel, 2x	CS.281.832
Knob, inner	CS.432.658.5
Knob, outer	CR.523.723

Resistors.

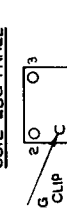
R8 } 0.5 megohm potentiometer tapped at 0.25	
R15 } megohm (volume) outer) with S.P.S.T.	
	switch, +2.0 megohm potentiometer (tone)
	(inner) CZ.032.602

The circuit diagram for Models 1116B-C is published overleaf.



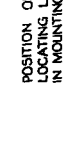
L	21	1, 2, 20, 3, 4	5	1	1	2, 22, 3, 4, 5	7	12, 13, 14, 16, 15, 17	5, 6, 7, 8	9, 10, 11	11, 12	13, 14, 15, 16, 17, 18	17, 18, 16, 13, 14	15
C		3, 2, 4, 1	6	9	8	9	29, 30, 24, 25, 26, 27	21, 23, 14, 15	28					
R														
V														

I.F. TRANSFORMER BASES



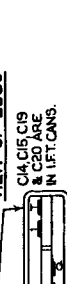
NOTE:-
I.F.T. PRIMARY AND SECONDARY WINDINGS ARE NOT SYMMETRICAL. CORRECT CONNECTION AS SHOWN IS ESSENTIAL.

AERIAL & OSCILLATOR COIL LUG PANEL



POSITION OF LOCATING LUG IN MOUNTING CLIP
VIEW FROM ENDS REMOTE FROM MOUNTING CLIP

VIEW ABOVE CHASSIS TRIMMING LAYOUT



SW. AERIAL
B.C. OSC.
B.C. OSC. PADDING
B.C. AERIAL

VIEW BENEATH CHASSIS TRIMMING LAYOUT



SW. OSC. PADDING
B.C. OSC. PADDING

BACK PANEL VIEW FROM INSIDE



BLACK
RED
BLACK

VIEW ABOVE CHASSIS TRIMMING LAYOUT



SW. AERIAL
B.C. OSC.
B.C. OSC. PADDING
B.C. AERIAL

VIEW BENEATH CHASSIS TRIMMING LAYOUT



SW. OSC. PADDING
B.C. OSC. PADDING

