

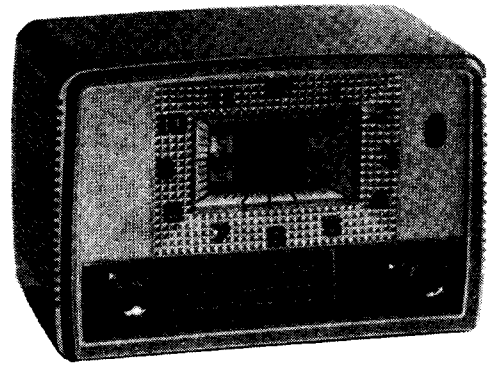
FLEETWOOD RADIO

MODEL 1118

SPECIFICATIONS

(Subject to alteration without notice)

| | | | |
|------------------------|-------|-------|------------------|
| Power Supply | ..... | ..... | 200-250V, 50 c/s |
| Tuning Range | ..... | ..... | 530-1620 Kc/s |
| Intermediate Frequency | ..... | ..... | 455 Kc/s |
| Cabinet | ..... | ..... | Plastic Table |
| Timer Unit | ..... | ..... | Telechron C98 |



VALVE EQUIPMENT AND VOLTAGE ANALYSIS

| Valve Function | Valve No. | Valve Type | Plate Volts | Screen Volts | Osc. Plate Volts | Cath. Volts | |
|---|-----------|--------------------------|---------------|--------------|------------------|-------------|--|
| Frequency Converter | V1 | 6AN7 | 225 | 43 | 43 | — | |
| I.F. Amplifier | V2 | 6BH5 | 225 | 43 | — | — | |
| Audio Amplifier, A.V.C. and Demodulator | V3 | 6BD7 | 72 | — | — | — | |
| Power Amplifier | V4 | 6M5 | 219 | 225 | — | 6.75 | |
| Rectifier | V5 | 6V4 | 227/227V A.C. | | | | |
| Dial Lamp | V11 | 6.3V 0.32A tubular screw | | | | | |
| Unfiltered B+ 237 volts. Filaments 6.4 volts. | | | | | | | |
| Filtered B+ 225 volts. Across R11 1.9 volts | | | | | | | |

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 cabinet back (4 screws) and unplug external aerial and earth leads. Release the timer unit plug from its socket on the radio chassis and unscrew four chassis mounting screws from the counter bored holes in the base of the cabinet. The chassis may now be withdrawn from the cabinet, but care should be exercised with the rod aerial. When fitting chassis, ensure the speaker slides between the cabinet edge and screw column. With the removal of the timer unit plug from its socket, it is not possible to get power to the chassis until pins 2 and 4 of the socket are bridged (refer to circuit diagram).

REMOVAL OF TIMER UNIT FROM CABINET

For this operation it is necessary to remove the chassis from the cabinet (see "To Remove Chassis from Cabinet").

Remove the two timer unit knobs—a firm pull is all that is necessary. Inside the cabinet, remove the four screws securing timer unit to clock mounting brackets. The timer may now be withdrawn from the cabinet.

REMOVAL OF CLOCK OVERLAY

It is necessary to first remove the cabinet frame which is secured by 4 screws situated inside cabinet, and a further three in the base. Unscrew the badge and remove the clock overlay.

MAINS VOLTAGE ADJUSTMENT

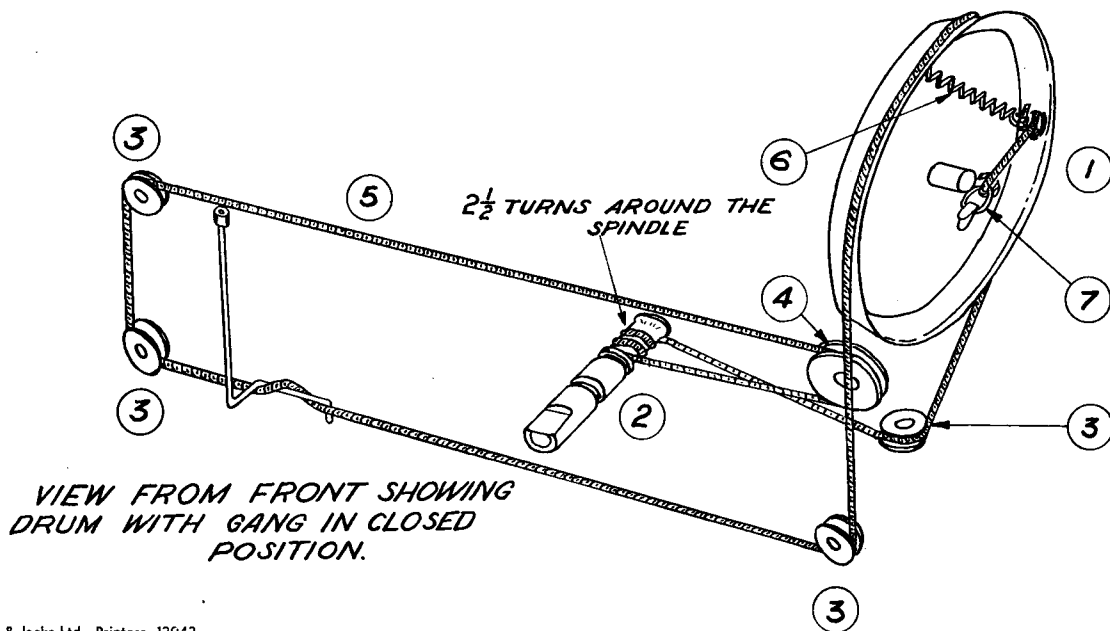
The power transformer is provided with two primary winding tapings—200/230 volts and 240/250 volts—for adjustment of the receiver to the supply voltage at the point of installation. The receiver is adjusted at the factory to the 240/250 volts tapping.

Published by Philips Electrical Industries Pty. Ltd.

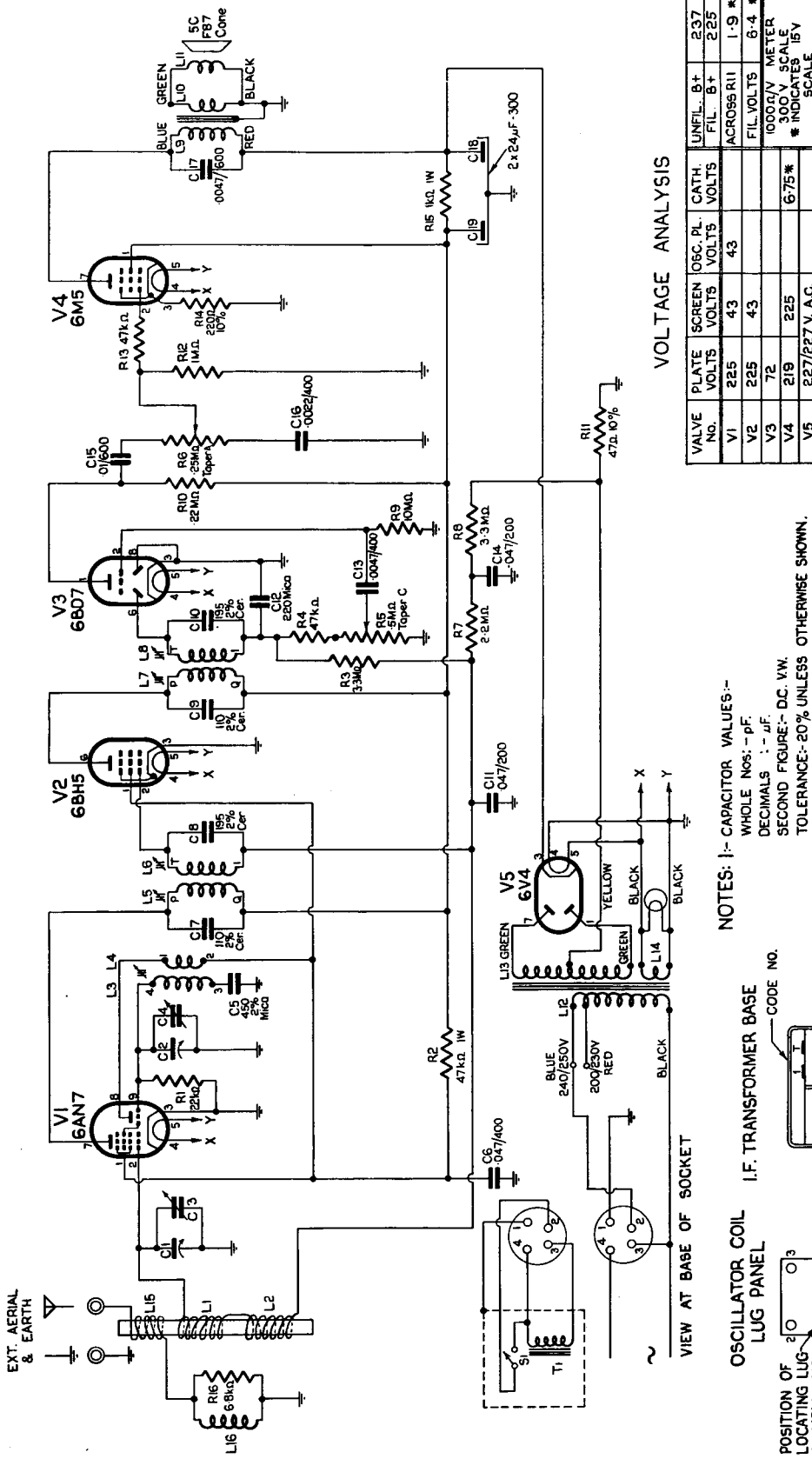
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MISCELLANEOUS COMPONENTS

| No. on Dial Cord Layout Drawing | Description | Code No. | No. on Dial Cord Layout Drawing | Description | Code No. |
|------------------------------------|--|----------------------|------------------------------------|---|------------|
| — | Assy. cursor | CR.480.657 | — | Grommet (lampholder) | CS.422.473 |
| — | Assy. dial back | CR.022.216 | — | Hand, minute | CS.410.015 |
| — | Assy. cabinet back, Brown | CR.572.108 | — | Hand, hour | CS.410.016 |
| — | Assy. cabinet back, Burgundy | CR.572.109 | — | Hand, second | CS.410.012 |
| — | Assy. cabinet back, Ivory | CR.572.100 | — | Hand, time set | CS.410.013 |
| — | Badge | CR.531.425 | — | Knob, large (tone) | CS.432.676 |
| — | Bush, tuning spindle | CS.381.655 | — | Knob, small (volume) | CR.523.723 |
| — | Bracket pulley | CS.228.626 | — | Knob, tuning | CR.523.740 |
| — | Bracket, cabinet back mtg. | CS.225.411 | — | Knob, clock, x2 | CS.432.659 |
| — | Bracket, speaker mtg. | CS.233.495 | — | Mask, Blue | CS.050.432 |
| — | Bracket, dial back plate mtg. | CS.232.206 | — | Mask, Green | CS.050.433 |
| — | Bracket, dial support | CS.228.628 | 3 | Pulley, special, x4 | CS.359.617 |
| — | Bracket, dial support | CS.228.629 | 4 | Pulley | CS.359.613 |
| — | Bracket, clock mtg. | CS.231.247 | — | Plate, clock face | CS.413.002 |
| — | Cabinet, Ivory (carcass only—packed) | CR.573.510 | — | Pad, speaker securing | CS.424.109 |
| — | Cabinet, Burgundy (carcass only—packed) | CR.573.511 | — | Ring "C" | CS.281.801 |
| — | Channel, rubber, x3 | CS.424.146 | — | Ring "C" (tuning spindle to chassis) | CS.281.802 |
| — | Cover, clock | CS.462.665 | 7 | Ring, cord | CS.281.807 |
| 5 | Cord, dial drive | 50" of cord required | 2 | Spindle, tuning | CS.351.249 |
| 1 | Drum, dial | CS.360.005 | — | Sleeve, spindle | CS.381.670 |
| — | Dial, clock overlay | CS.413.001 | 6 | Spring, dial drum | CS.210.020 |
| — | Frame, overlay | CS.030.016 | — | Spring, I.F.T. mtg. | A3.652.58 |
| — | Grommet, x2 (gang mtg.) | CS.422.483 | — | Socket, lampholder | CF733.8.1 |
| | | | — | Scale, dial | CS.412.379 |



| | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|----|
| L | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| C | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| R | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| V | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |



VOLTAGE ANALYSIS

| VALVE NO. | PLATE VOLTS | SCREEN VOLTS | OSC. PL. VOLTS | CATH. VOLTS | UNFIL. B+ FIL. B+ | 237 | 225 | |
|-----------|-----------------|--------------|----------------|-------------|-------------------|-------------|-----------------------|--|
| V1 | 225 | 43 | 43 | | | | | |
| V2 | 225 | 43 | | | | | | |
| V3 | 72 | | | | ACROSS R11 | 1.9 * | | |
| V4 | 219 | 225 | | | FIL. VOLTS | 6.4 * | | |
| V5 | 227/227 V. A.C. | | | | 600 V METER | 300 V SCALE | | |
| | | | | | | | * INDICATES 15V SCALE | |

NOTES: 1- CAPACITOR VALUES:--
 WHOLE NOS: -- pF.
 DECIMALS : -- μF.
 SECOND FIGURE:-- DC. V.W.
 TOLERANCE--20% UNLESS OTHERWISE SHOWN.

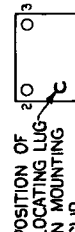
- 2-- RESISTORS ARE 1/2 W. 20 % UNLESS OTHERWISE SHOWN.
- 3-- MAINS SWITCH IS OPERATED MANUALLY BY TIMER. FUNCTION KNOB OR AUTOMATICALLY BY TIMER.
- 4-- R5,R6 IS A DUAL CONCENTRIC POTENTIOMETER.

I.F. TRANSFORMER BASE



VIEW OF LUGS

OSCILLATOR COIL LUG PANEL



VIEW FROM ENDS

REMOTE FROM MOUNTING CLIP

PRIMARY AND SECONDARY WINDINGS ARE NOT SYMMETRICAL CORRECT CONNECTION AS SHOWN IS ESSENTIAL

PARTS LIST

CAPACITORS

| No. | Description | Code No. |
|--------------|------------------------------|------------|
| C1, 2 | 2 gang tuning | CZ.107.755 |
| C3 | 30 pF air trimmer | CZ.113.700 |
| C4 | 60 pF air trimmer | 49.005.58 |
| C5 | 450 pF mica 2% | CZ.066.117 |
| C6 | 0.047 mF 400V paper | |
| C7, 8, 9, 10 | Part of I.F. transformers | |
| C11, 14 | 0.047 mF 200V paper | |
| C12 | 220 pF mica | |
| C13 | 0.0047 mF 400V paper | |
| C15 | 0.01 mF 600V paper | |
| C16 | 0.0022 mF 400V paper | |
| C17 | 0.0047 mF 600V paper | |
| C18, 19 | 24 mF 350V dual electrolytic | CZ.099.908 |

All tolerances are $\pm 20\%$ unless otherwise specified.

RESISTORS

| No. | Description | Code No. |
|--------|---|------------|
| R1 | 22,000 ohms $\frac{1}{2}$ W carbon | |
| R2 | 47,000 ohms 1W carbon | |
| R3, 8 | 3.3 megohm $\frac{1}{2}$ W carbon | |
| R4, 13 | 47,000 ohms $\frac{1}{2}$ W carbon | |
| R5 | 0.5 megohm potentiometer (vol.) (inner) | |
| R6 | 0.25 megohm potentiometer (tone) (outer) (dual concentric unit) | CZ.029.068 |
| R7 | 2.2 megohm $\frac{1}{2}$ W carbon | |
| R9 | 10 megohm $\frac{1}{2}$ W carbon | |
| R10 | 0.22 megohm $\frac{1}{2}$ W carbon | |
| R11 | 47 ohms $\frac{1}{2}$ W WW 10% | |
| R12 | 1 megohm $\frac{1}{2}$ W carbon | |
| R14 | 220 ohms $\frac{1}{2}$ W carbon 10% | |
| R15 | 1,000 ohms 1W carbon | |
| R16 | 6,800 ohms $\frac{1}{2}$ W carbon | |

All tolerances are $\pm 20\%$ unless otherwise specified.

COILS

| No. | Ohms | Description | Code No. |
|-----|---------|-------------------------------|-------------|
| L1 | <0.5 | | |
| L2 | <0.5 | | |
| L15 | <0.5 | Rod aerial assy. | CZ.323.038 |
| L16 | 18-20 | | |
| R16 | 6,800 | | |
| L3 | 0.9-1.1 | B/C oscillator coil | CZ.330.612 |
| L4 | 3.1-3.9 | | |
| L5 | 8.0-9.0 | 1st I.F.T. | A3.126.84 |
| L6 | 4.7-5.2 | | |
| L7 | 8.0-9.0 | 2nd I.F.T. | A3.126.84 |
| L8 | 4.7-5.2 | | |
| L9 | | Output transformer 7,000 ohms | |
| L10 | | type EBG96 | CZ.345.049 |
| L11 | | Speaker | Type 5C F87 |
| L12 | .55-75 | | |
| L13 | 630-850 | Power transformer | CZ.344.094 |
| L14 | <0.5 | | |

REPLACEMENT OF TIMER UNIT HANDS

Power should not be applied. Push on both timer knobs temporarily. Pull out the left-hand knob and turn it to the off position. The hand setting knob at the rear should be rotated until the switch just operates. This is indicated by the movement of the small bakelite piece into the body of the switch. This operation should be exact. If the knob is turned too quickly, the correct point will be passed over. To correct this, push the left-hand knob in and pull out again, turn the hand setting knob anti-clockwise about a turn, then turn it clockwise slowly until the switch just operates.

Replace the alarm hand (red), hour, minute and sweep second hand in that order, setting each one exactly at 12. Ensure that each hand is pressed down firmly and that all are clear of one another and the clock face.

Check these operations by setting the alarm hand to any other hour by using the right-hand knob. Push in the left-hand knob and pull it out again. Turn the hands by means of the hand setting knob, doing this very slowly as the set time is approached, and check that the switch operates within 5 minutes either side of this time.

ALIGNMENT

I.F. Alignment

Alignment procedure of the I.F. channel is as under:—
Set volume control at maximum, tone control at high and tuning condenser in closed position. Screw out iron core of primary of second I.F. transformer (nearer 6BH5) as far as possible. Adjust iron cores at 455 Kc/s for maximum output in the following order:

- Second I.F.T. secondary (screw nearer 6BD7)
- First I.F.T. secondary (screw nearer 6BH5)
- First I.F.T. primary (screw nearer 6AN7)
- Second I.F.T. primary (screw nearer 6BH5)

Do not re-adjust any iron cores.

R.F. Alignment

With the gang in closed position, set the cursor at the point where the bordering line is broken on the L.F. end of dial scale. Connect a shunt consisting of a 25,000 ohms 1 watt 10% carbon resistor and a 0.1 μ F 200V 20% paper capacitor in series across secondary of 1st I.F. transformer. This is necessary as it is desirable to desensitize the receiver because of the noise pick-up of the rod aerial. Connect generator through standard I.R.E. dummy to aerial and earth leads. Align-

ment frequencies are: oscillator trimmer (1,420 Kc/s 3XY) rear of tuning capacitor, rod aerial trimmer (1,420 Kc/s) near 6AN7, padding (600 Kc/s 7ZL) iron core in oscillator coil, rear of tuning capacitor.

In the event of replacement of the oscillator coil, it is advisable to make a preliminary peaking of the iron core at 600 Kc/s before commencing alignment.

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.

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.