# PHILIPS RADIOPLAYER MODEL 117



#### SPECIFICATIONS

(Subject to alteration without notice.)

| Tuning Ranges          | 535-1,620 Kc/s<br>5.85-18.4 Mc/s   |
|------------------------|--|
| Intermediate Frequency | 455 Kc/s   |
| Cabinet                | De-luxe bakelite table   |
| Battery Equipment      | 2 x 45V, heavy duty, plug-in type, dry<br>batteries; 1 x 1.5V plug-in type, dry<br>battery |
| Battery Consumption    | "A", 0.3A<br>"B", 14 MAS   |

### VALVE EQUIPMENT AND VOLTAGE ANALYSIS

| Valve Function                    | Valve<br>No. | Valve<br>Type | Plate<br>Volts | Screen<br>Volts | Bias<br>Volts |
|-----------------------------------|--------------|---------------|----------------|-----------------|---------------|
| Frequency Converter               | VI           | IR5           | 41             | 41              | 0             |
| 1st I.F. Amplifier                | V2           | IT4           | 47             | 47              | 0             |
| 2nd I.F. Amplifier                | V3           | IT4           | 84             | 47              | 0             |
| Demodulator, A.V.C. and Ist Audio | V4           | 155           | 17             | 5               | 0             |
| Power Amplifier                   | V5           | 354           | 83             | 57              | -6            |

NOTE: These voltages are measured with a "1,000 ohms per volt" meter and may vary  $\frac{1}{2}$  10% from the figures quoted. They are measured from the socket points quoted to chassis; V5 bias is measured across back bias resistor R17. The receiver should be in a "no signal" condition.

#### REMOVAL OF CHASSIS FROM CABINET.

The incorporation of a removable chassis bottom cover or "service window" permits much service work being carried out on this Radioplayer without the need to remove the chassis from the cabinet. If it is necessary that the chassis be removed, proceed as follows:—

Remove the plugs from the batteries, or if the Radioplayer is vibrator unit operated, remove the battery clips from the battery terminals. Remove the cabinet back, the bottom cover, the control knobs, the speaker plug from its socket and release the dial cursor and slider from the dial cord. Removal of the four chassis mounting bolts permits the chassis to be withdrawn from the cabinet.

The chassis may be replaced by a reversal of the above procedure.

#### ALIGNMENT.

Removal of the chassis bottom cover permits access to all alignment trimming adjustments.

The receiver oscillator on the short wave band operates at a frequency below that of the incoming signal.

#### VIBRATOR UNIT OPERATION.

Model 117 may be operated from a 6 volt accumulator by means of vibrator unit Model 118.

Provision is made on the receiver chassis for fitting the vibrator unit. The receiver battery leads should be plugged into the vibrator unit sockets, the surplus cable being neatly stowed in the cabinet. It is also necessary to fit the two-pin plug from the vibrator unit to the socket provided on the receiver chassis.

A separate service sheet covers the Model 118 unit.

#### PARTS LISTS

| CAPACITORS                    |                         |                    | RESISTORS     |                      |          |  |
|-------------------------------|-------------------------|--------------------|---------------|----------------------|----------|--|
| No.                           | Description             | Code No.           | No.           | Description          | Code No. |  |
| CI                            | 200 pF mica             |                    | R1-10         | 50,000 ohms 1/2W     | carbon   |  |
| C2                            | 30 pF glass trimme      | r CZ.117.600       |               |                      |          |  |
| C3-17-20-<br>27-30-<br>33-36- | -                       |                    | R2            | 30,000 ohms 1/2W     | carbon   |  |
| 38                            | 0.1 mF 200V pape        | er.                | R3-6-7-<br>14 | 1 megohm 1/2W carb   | on       |  |
| C4                            | 0.0045 mF mica          |                    |               |                      | •••      |  |
| C5~9                          | 30 pF alr trimmer       | CZ.113.700         | R4            | 15,000 ohms 1/2W ca  | irbon    |  |
| C6-7                          | 2 gang tuning           | 2H                 | R5-8-12       | 2 megohms 1/2W ca    |          |  |
| C8                            | 47 pF ceramic           | CZ.096.604         | K3-6-12       | z megonms +/2vv ca   | rbon     |  |
| C101318<br>2223               | -<br>125 pF ceramic tri | nmer<br>CZ.118.200 | R9            | 10,000 ohms 1/2W ca  | rbon     |  |
| CH                            | 15 pF glass trimmer     |                    | RII           | 0.5 megohm potention | neter    |  |
| C12                           | 565 pF mica             |                    | RIB           | 0.5 megohm IW carbo  | an .     |  |
| C14-19                        | 150 pF mica             |                    |               | •                    |          |  |
| C15                           | 0.002 mF mica           |                    | R15           | 0.5 megohm 1/2W ca   | rbon     |  |
| C16-21-25-<br>26-31           | 100 pF ceramic          | CZ.096.602         | R16           | 50 ohms 1/2W carbon  | ı        |  |
| C24                           | 0.01 mF 600V pape       | :                  | R17           | 500 ohms 1W carbon   |          |  |
| C28                           | 24 mF 350V electro      | lytic              |               |                      |          |  |
| C29                           | 0.002 mF 600V pap       | er                 | R18           | 20,000 ohms 1W carb  | on       |  |
| C32                           | 290 pF mica             |                    | R19           | 25 ohms 1/2W carbon  |          |  |
| C34                           | 0.006 mF 200V pape      | er .               |               |                      |          |  |
| C35                           | 0.5 mF 200V paper       |                    | R20           | 5 megohms 1W carbon  |          |  |
| C37                           | 33 pF ceramic           | CZ.096.605         | R21           | 5,000 ohms IW carbo  | n        |  |

| No.                  | Ohms                       | Description                         | Code No.   |
|----------------------|----------------------------|-------------------------------------|------------|
| L1<br>L2<br>L3<br>L4 | 21.5<br>1.2<br>3.5<br><0.5 | Aerial Coil                         | CZ.320.010 |
| L5<br>L6<br>L7<br>L8 | 4.2<br><0.5<br>1.8<br>0.8  | Oscillator Coil                     | CZ.321,007 |
| L9                   | 7.0                        | 1st 1.F. Choke                      | CZ.320.411 |
| L10                  | 7.0                        | 2nd I.F. Choke                      | CZ.320.411 |
| L11<br>L12           | 5.0                        | 3rd I.F. Transformer                | CZ.320.413 |
| L13<br>L14<br>L15    | (0.5<br>3.6∫               | Speaker and Transform<br>8,000 ohms | CZ.161.208 |

COILS

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

## COMPONENTS NOT SHOWN ON CIRCUIT DIAGRAM

| No. on I<br>Parts Dia | gram Description                 | Code No.   | No. on D<br>Parts Diag |   | Code No.                 |
|-----------------------|----------------------------------|------------|------------------------|---|--------------------------|
|                       | Arm, side (T/C-on/off switch)    | CS.218.010 | ****                   | Clip, dial glass mounting                 | CS.227,000               |
|                       | Arm, side (W/C switch)           | CS.218.006 | _                      | Cloth, speaker baffle                     | CE.081.14                |
| _                     | Assembly, baffle                 | CR.005.219 | *****                  | Contact, cab, back shield to              |                          |
| _                     | Assembly, cabinet back           | CR.572.019 |                        | chassis                                   | CS.106.204               |
| _                     | Assembly, chassis cover          | CR.572,017 | 5                      | Cord, dial                                | CS.361.817               |
| -                     | Assembly, cursor                 | CR.480.618 | 4                      | Cord, drum                                | CS.361.818               |
| 1                     | Assembly, dial drum              | CR.382.808 |                        | Glass, dial printed                       | CS.412.247               |
| _                     | Assembly, dial glass, mtg. brkt. | CR.265.200 |                        | Grommet, battery lead                     | CS.422.414               |
|                       | Assembly, T/C-on/off switch      | CZ.200.409 | _                      | Grammet, chassis mounting                 | CS.422.421               |
|                       | (complete)                       |            |                        | Key, T/C clicker                          | CS.365.804               |
| _                     | Assembly, W/C switch             | CZ.200.025 |                        | Key, W/C clicker                          | CS.365.803               |
|                       | (complete)                       |            | -                      | Knob, tuning                              | CR.523.647               |
|                       | Assembly terminal                | CZ.376.200 |                        | Knob, vol. control and switches           | CR.523.646               |
| _                     | Assembly T/C clicker             | CR.450.024 | _                      |   | CH.603.014               |
|                       | Assembly W/C clicker             | CR.450.020 | _                      | Plate, anchoring (bottom cover)           | CS.257.905               |
|                       | Badge, Philips                   | CR.531.406 |                        | Plug, 2-pin polarised                     | CR.102.200               |
| _                     | Bank, T/C-on/off switch          | CZ.200.405 | _                      | Plug, 3-pin                               | CZ.365.204               |
| _                     | Bank, W/C switch                 | CZ.200.024 |                        | Pulley, wooden (large)                    | CS.360.202               |
|                       | Brace, end (T/C-on/off and       |            |                        | Pulley, wooden (small)                    | CS.360.201               |
|                       | W/C switch)                      | CS.219.000 |                        | Ring "C" (tuning spindle)                 | CS.281.802               |
| _                     | Bracket, cab. back top mtg.      | CS.244.602 |                        | Rod, dial slide                           | C5.382.209               |
| _                     | Bracket, gantry (top)            | CR.295.000 |                        |   | CR.102.401               |
| _                     | Bracket, gantry (side)           | CS.250.002 |                        |   | CZ.369.301               |
|                       | Bracket, slide rod mtg.          | CS.244.601 |                        |   | CZ.369.507               |
|                       | Bracket, tuning spindle          | CS.224.607 |                        | Spindle, tuning                           | CS.351.222               |
| -                     | Bracket, V/C mounting            | CS.230,602 |                        | Spring, dial drum                         | CS.210.010               |
|                       | Buffer, cabinet mounting         | CS.423,000 |                        | Spring, stide rad                         | CS.255.001               |
| _                     | Cabinet                          | CS.460,479 |                        | Spring, tuning spindle                    | CS.212.001               |
| -                     | Clamp, baffle mounting           | GS.235.826 |                        | Spring, T/C on/off and<br>W/C clicker key | CC 311 000               |
| _                     | Clamp, speaker mounting          | CS.234.813 | -                      | Washer, felt (cabinet mtg.)               | CS.211.802<br>CS.424.018 |



