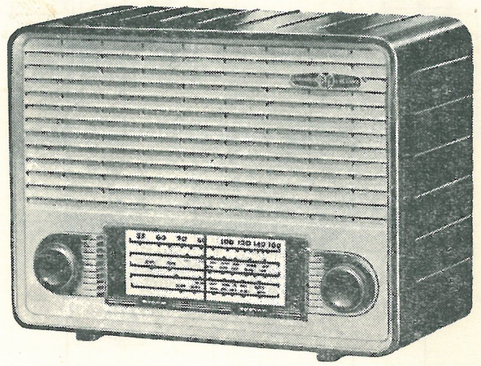
# SERVICE SHEET FOR

## model PZ45 + PZ85 Model "Y"

FOR OPERATION OFF
230 VOLT A.C. MAINS



### CIRCUIT ANALYSIS

Mains Consumption 37 watts. A.F. Output 2.2 watts.

| | Valve | Mullard | Ea | Ia | Es | Is | Osc. Ea | Osc. Ia | Ek | Ik |
|---|---|---|---|---|---|---|---|---|---|---|
| V1 | Frequency Changer | ECH.42 | 190 | 2.5 | 62 | 4.4 | 90 | 3.0 | 1.9 | 9.9 |
| V2 | I.F. Amplifier | EF.41 | 190 | 4.2 | 62 | 1·7 | — | — | — | 5.9 |
| V3 | Det. and A.F. Amplifier | EBC.41 | 62 | 0·6 | — | — | — | — | — | 0·6 |
| V4 | Output | EL.41 | 210 | 27.5 | 190 | 3.5 | — | — | 4.6 | 31 |
| V5 | Rectifier | EZ.40 | Anode to Anode 420 v. A.C. | | | | | | 215 | 47·4 |

**Note.**—All measurements taken with no signal input. Gang fully meshed. Mains input 230 volts Measurements taken with an Avometer Model 8 instrument which has a resistance of 20,000 ohms per volt.

### TRIMMING PROCEDURE

| Apply signal as below | Set Receiver Controls to | Adjust in order for Maximum Output |
|---|---|---|
| (1) 470 kc/s. between chassis and control grid of V1 via 0·1 μF condenser | Gang fully meshed | Iron dust cores of I.F. Transformers T2 and T1 |
| (2) 600 kc/s. between Aerial and Earth Sockets via standard Dummy Aerial | 600 kc/s. | Iron dust cores of L9 and L1 |
| (3) As (2) but 1500 kc/s. (200 m.) | 1500 kc/s. | Trimmers C16 and C2 |
| (4) Repeat (2) and (3) above until calibration and tracking are correct. | | |

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CALLAGHAN PRINT, WAIRI

PZ45-PZ85

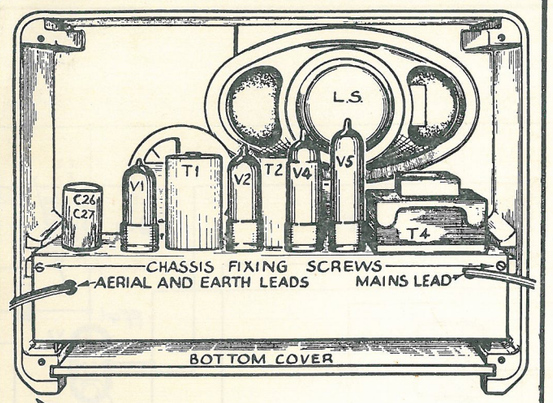



FIG. 1

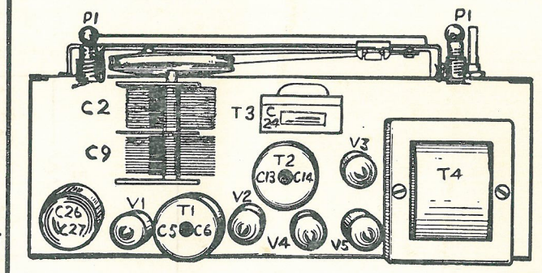



FIG. 2

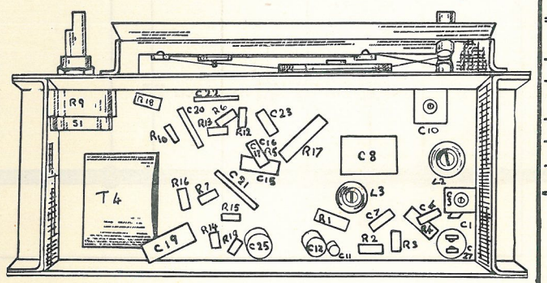
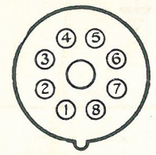



FIG. 3

### VALVE BASE CONNECTIONS

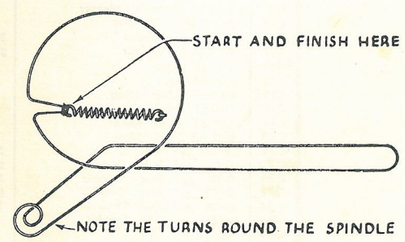
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| V1 | H | AH | AT | G3 GT | G2 G4 | G1 | K | H | — |
| V2 | H | A | K | K | G2 | G1 | K | H | — |
| V3 | H | A | G1 | | D1 | D2 | K | H | — |
| V4 | H | A1 | K | — | G2 | G1 | K | H | — |
| V5 | H | A1 | — | — | — | A2 | K | H | — |
| V6 | — | H | A1 | G | T | A2 | H | K | — |




VIEW LOOKING AT PINS

FIG. 4

THE DRIVE CORD SHOULD BE OF NYLON BRAIDED GLASS YARN. LENGTH 25⅛" BETWEEN CENTRES OF LOOPS

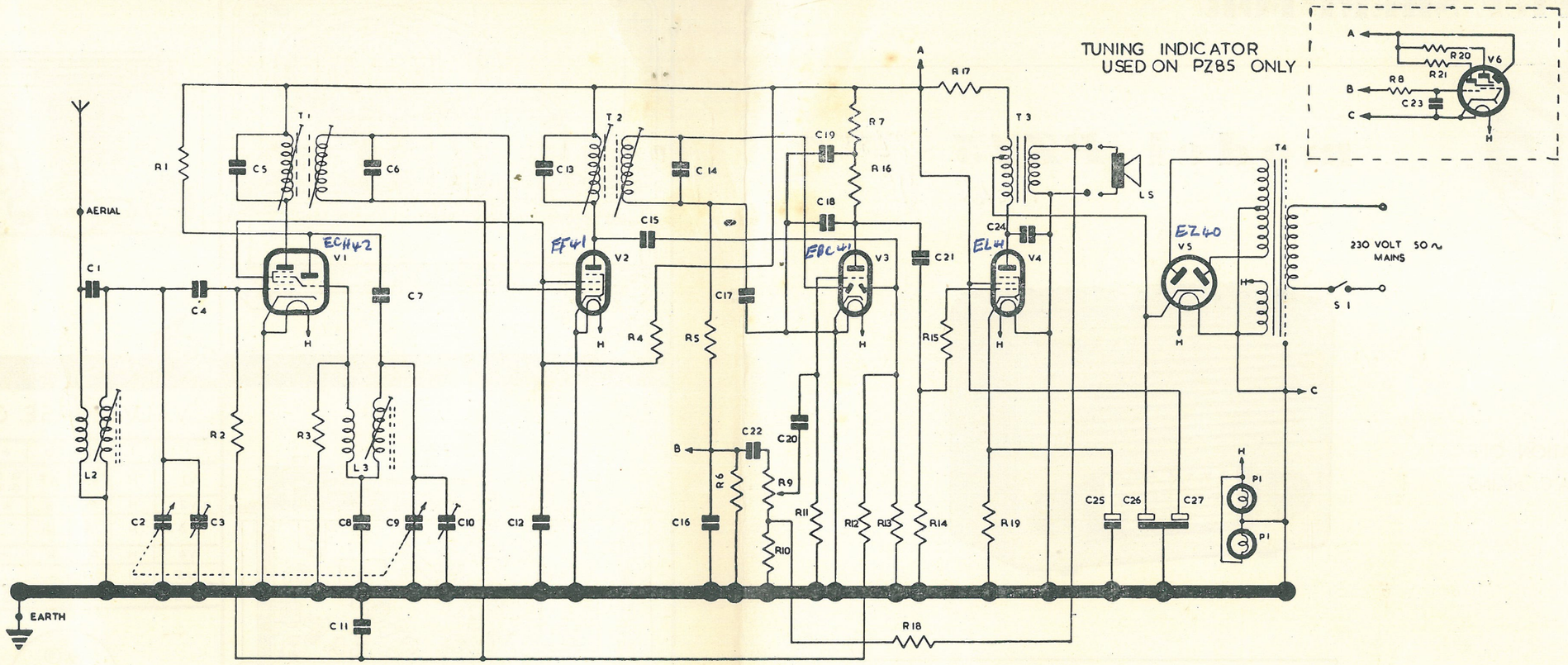



DRIVE CORD VIEWED FROM REAR OF CHASSIS WITH GANG FULLY CLOSED

FIG. 5

### Notes

1. Access to the bottom of the chassis is obtained by sliding out the bottom cover after removal of the card back, therefore in most cases eliminating the necessity for removing the chassis for servicing.
2. The Tuning Drive bearings should be lubricated occasionally with a drop of oil, taking care not to allow the oil to touch the Drive Cord.
3. TO REMOVE CHASSIS FROM CABINET:
   (a) Pull off knobs.
   (b) Remove the two Chassis Fixing Screws.
   (c) Withdraw Chassis.




# circuit diagram of the

# PYE MODEL "Y"

## type PZ45
## PZ85 (thin eye)

## CONDENSERS

| | Specification | Volts | | Ref | No. |
|---|---|---|---|---|---|
| C1 | 10 pF Silver Mica | | 5% | | 664700 |
| C2 | 540 pF Gang Condenser | | | | |
| C3 | 3-30 pF Trimmer | | | | |
| C4 | 100 pF Silver Mica | | 2% | | 664101 |
| *C5 | 100 pF Mica | | 2% | | 666776 |
| *C6 | 100 pF Mica | | 2% | | 666776 |
| C7 | 100 pF Silver Mica | | 2% | | 664101 |
| C8 | 500 pF Silver Mica | | 2% | | 664263 |
| C9 | 540 pF Gang Condenser | | | | |
| C10 | 3-30 pF Trimmer | | | | |
| C11 | 0·05 μF Tubular | 350 | | | 668599 |
| C12 | 0·05 μF Tubular | 500 | | | 668574 |
| *C13 | 100 pF Mica | | 2% | | 666776 |
| *C14 | 100 pF Mica | | 2% | | 666776 |
| C15 | 10 pF Silver Mica | | 5% | | 664700 |
| C16 | 100 pF Silver Mica | | | | 664101 |
| C17 | 100 pF Silver Mica | | 2% | | 664101 |
| C18 | 100 pF Silver Mica | | 2% | | 664101 |
| C19 | 0·05 μF Tubular | 500 | | | 668574 |
| C20 | 0·01 μF Disc Ceramic | 500 | | | 667171 |
| C21 | 0·01 μF Disc Ceramic | 500 | | | |
| C22 | 0·01 μF Disc Ceramic | 500 | | | |
| C23 | 0·01 μF Disc Ceramic | 500 | | | |
| C24 | 0·01 μF Disc Ceramic | 500 | | | |
| C25 | 50 μF } Electrolytic | 12 | | | |
| C26 | 40 μF } Electrolytic | 350 | | | |
| C27 | 40 μF } Electrolytic | 350 | | | |

NOTE :

* = Part of I.F. transformer.

## RESISTORS

| | Ohms | Watts | | Ref | No |
|---|---|---|---|---|---|
| R1 | 33,000 | 1 | 10% | | 671779 |
| R2 | 1·2 meg | ¼ | 10% | | 671771 |
| R3 | 47,000 | ¼ | 20% | | 671618 |
| R4 | 33,000 | 1 | 10% | | 671779 |
| R5 | 47,000 | ¼ | 20% | | 671622 |
| R6 | 220,000 | ¼ | 20% | | |
| R7 | 100,000 | ½ | 20% | | 671620 |
| R8 | 2·2 meg | ½ | 20% | | 671628 |
| R9 | 1·0 meg potentiometer | | | | |
| R10 | 47 | ¼ | 20% | | 671600 |
| R11 | 6·8 meg | ½ | 20% | | 671631 |
| R12 | 1·2 meg | ¼ | 10% | | 671771 |
| R13 | 1·2 meg | ¼ | 10% | | 671771 |
| R14 | 220,000 | ½ | 10% | | 671762 |
| R15 | 10,000 | ½ | 20% | | 671614 |
| R16 | 220,000 | ¼ | 10% | | 671762 |
| R17 | 1,500 | 1 | 20% | | 671609 |
| R18 | 470 | ½ | 20% | | 671606 |
| R19 | 150 | 1 | 20% | | 671565 |
| R20 | 1·2 meg | ¼ | 10% | | 671771 |
| R21 | 1·2 meg | ¼ | 10% | | 671771 |

## SWITCHES, LAMPS, ETC.

| | Specification | | Ref | No. |
|---|---|---|---|---|
| S1 | Mains on/off switch on Volume Control | | | |
| P1 | Dial Lamp 6-8V 0·3 amp | | 8045D | |

## INDUCTANCES

| | Specification | Ref. | No. |
|---|---|---|---|
| L1 | NOT USED | | |
| L2 | M.W. Aerial coil | MW7A | 780257 |
| L3 | M.W. Oscilator coil | MW9A | 780256 |
| LS | Loudspeaker | | 850019 |

## TRANSFORMERS

| | Specification | Ref. | No. |
|---|---|---|---|
| T1 | 1st. I.F. Trans { Prim res. 12Ω, Sec. res. 12Ω } | | 770369 |
| T2 | 2nd I.F. Trans. { Prim res. 12Ω, Sec res 12Ω } | | 770369 |
| T3 | Output Trans | | 770397 |
| T4 | Mains Trans. { Prim res 56Ω, Sec res 160+170Ω } | | 770807 |

## VALVES

| | Specification | | | |
|---|---|---|---|---|
| V1 | ECH42 | V6 | EM 34 | |
| V2 | EF41 | | | |
| V3 | EBC41 | | | |
| V4 | EL41 | | | |
| V5 | EZ40 | | | |