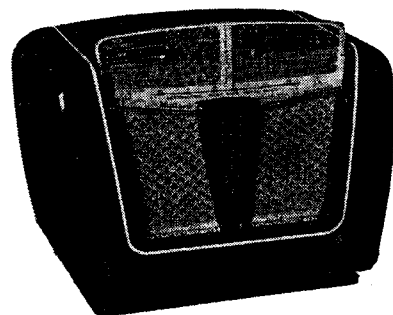




# MULLARD MASTER RADIO

## MODELS MAS 1060-A

NOTE: Models MAS 1060 and MAS 1060A differ from one another only in the types of I.F. transformers used. Refer to "Coils" Section of "Parts Lists" for details.



### SPECIFICATIONS

(Subject to alteration without notice)

|                              |                             |
|------------------------------|-----------------------------|
| Power Supply .....           | 220-260V, 40-60c/s.         |
| Tuning Ranges .....          | 530-1620kc/s. 5.9-18.4Mc/s. |
| Intermediate Frequency ..... | 455kc/s.                    |
| Cabinet .....                | Bakelite Mantel             |

### VALVE EQUIPMENT AND VOLTAGE ANALYSIS

| Valve Function                                    | Valve No. | Valve Type               | Plate Volts                 | Screen Volts | Osc. P. Volts |
|---|-----------|--------------------------|-----------------------------|--------------|---------------|
| Frequency Converter                               | V1        | 6AN7                     | 210                         | 50           | 100           |
| I.F. Amplifier, A.V.C., Demodulator and 1st Audio | V2        | 6N8                      | 150                         | 50           | —             |
| Power Amplifier                                   | V3        | 6M5                      | 218                         | 210          | —             |
| Rectifier   | V4        | EZ82                     | V4 Cathode — L18 C.T., 240V |              |               |
| Dial Lamp   | V11       | 6.3V 0.32A tubular screw |                             |              |               |

Voltage across R18, -1.2V; across R17 and 18, -6.4V.

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 mains outlet socket. Remove the control knobs (a firm pull is all that is necessary) and the lever control knobs (the tone control knob will slide right off the volume control spindle, but the wave change knob will remain captive and cannot be removed until the chassis is withdrawn). Slide the dial cursor from its carriage (a direct upward pull is required). Remove the combined cabinet back and bottom cover. The chassis is held to the cabinet by four screws — two through the baffle plate and two through the bottom of the chassis—removal of these screws permits the chassis to be withdrawn from the cabinet. On removal of the chassis, recover the wave change lever knob.

Refitting the chassis is a reversal of the removal operations. Before attempting to refit the chassis, place the wave change lever knob in the correct control hole from inside the cabinet.

#### MAINS VOLTAGE ADJUSTMENT.

The power transformer is provided with two primary winding tappings—220/240 volts and 250/260 volts—for adjustment of the receiver to the supply voltage at the point of installation. The receiver is adjusted at the factory to the 220/240 volts tapping.

#### ALIGNMENT.

It is not necessary to remove the chassis from the cabinet for carrying out alignment. Before commencing alignment operations, set the dial cursor, with the tuning gang fully closed, to the right hand edge of the 49M block of the dial scale.

In Model MAS 1060, the cores for the primaries of the I.F. transformers are in the bottom of the cans, those for the secondaries are in the top. In Model MAS 1060A, the adjustments for the slugs for both windings are accessible from the top of the cans.

Broadcast alignment frequencies are 600 kc/s and 1,420 kc/s. Shortwave alignment frequencies are 6 Mc/s (oscillator coil slug), 17.8 Mc/s (aerial trimmer-rock tuning gang) and 18.4 Mc/s (tuning gang fully open, oscillator trimmer). **Do not attempt to adjust the iron cores of either aerial coil.**

#### DIAL CALIBRATION ADJUSTMENT.

If station calibrations are incorrect by an equal amount over the length of the scale, the condition may be corrected by loosening the cursor carriage to dial cord clamping screw, making the necessary adjustment and firmly retightening the screw.

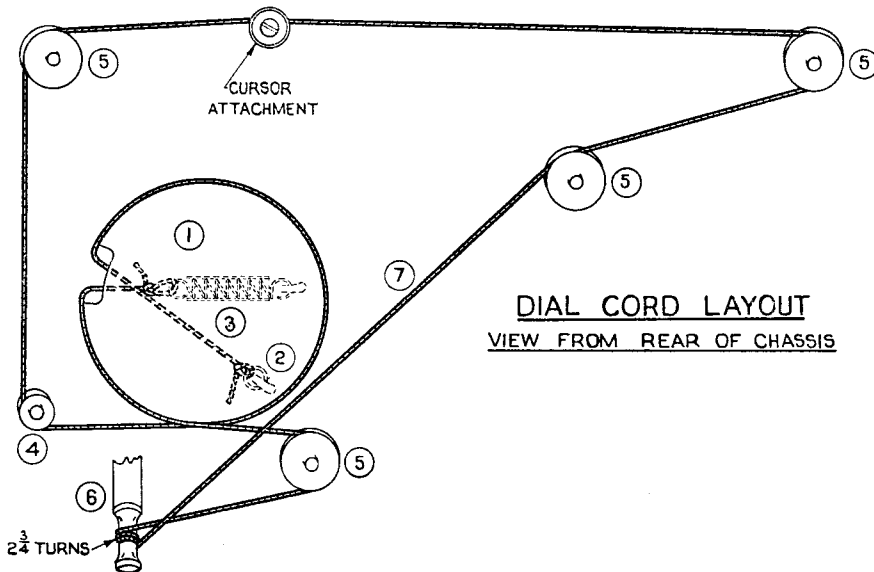
#### TO REMOVE DIAL SCALE.

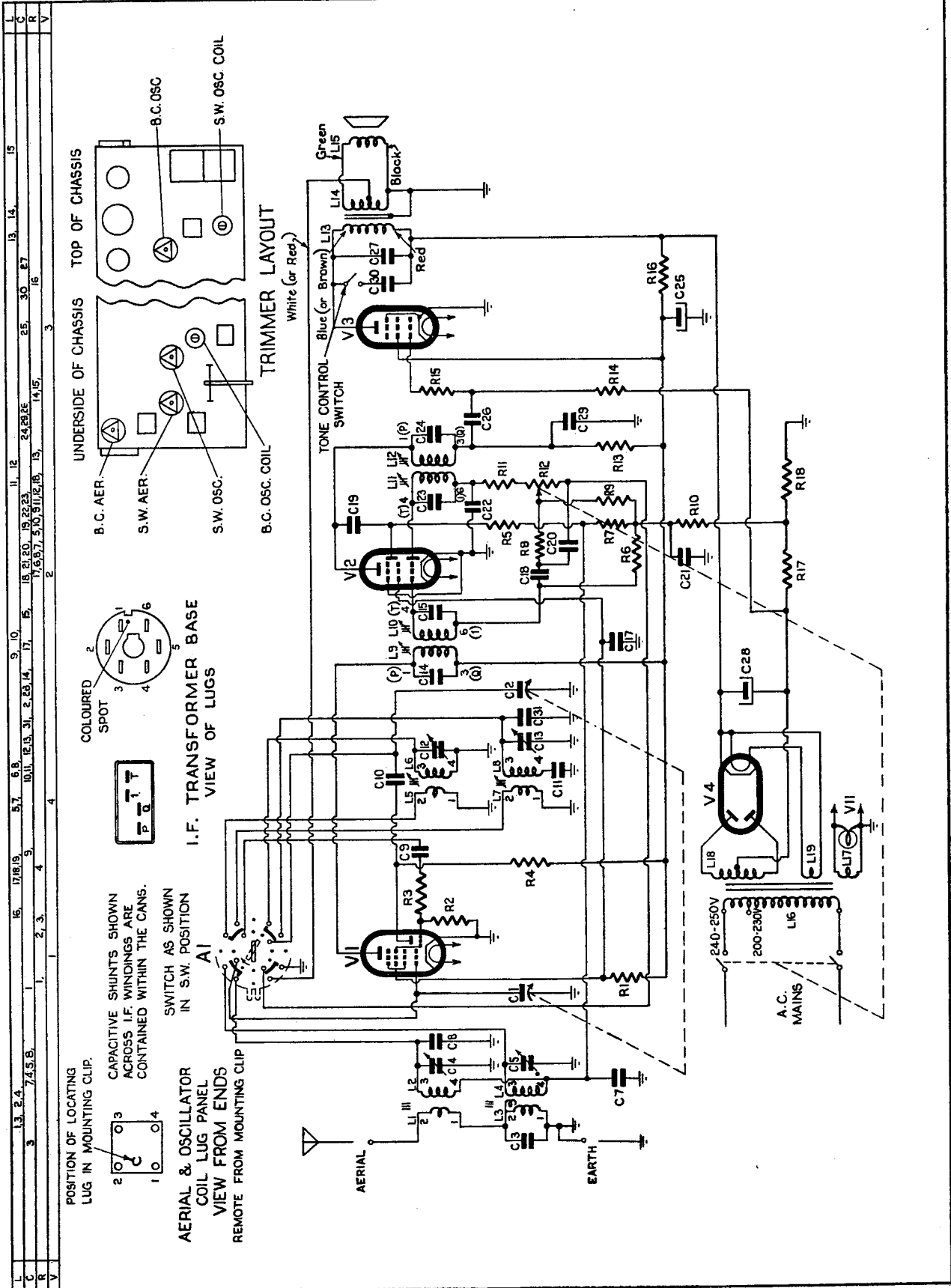
To remove the dial scale it is necessary to remove the chassis from the cabinet. The scale is fixed to the cabinet by two screws toward the top, and two screws and a bracket toward the bottom. The scale should be withdrawn from inside the cabinet.



### MISCELLANEOUS COMPONENTS

| No. on Dial<br>Cord Drawing | Description                                 | Code No.   | No. on Dial<br>Cord Drawing | Description                         | Code No.   |
|-----------------------------|---|------------|-----------------------------|-------------------------------------|------------|
| —                           | Assembly, baffle                            | CR.005.014 | —                           | Disc, retaining (W/C switch)        | CS.233.815 |
| —                           | Assembly, baffle grille                     | CR.520.820 | 1                           | Drum, dial                          | CS.359.806 |
| —                           | Assembly, cursor                            | CR.480.651 | —                           | Knob, control, blue                 | CS.432.641 |
| —                           | Assembly, cursor carriage                   | CR.432.217 | —                           | Knob, control, ivory                | CS.432.639 |
| —                           | Assembly, lampholder                        | CZ.367.920 | —                           | Knob, control, green                | CS.432.642 |
| —                           | Assembly, masking bracket                   | CR.262.430 | —                           | Knob, control, burgundy             | CS.432.638 |
| —                           | Assembly, pulley spindle bracket            | CR.265.211 | —                           | Knob, control, walnut               | CS.432.637 |
| —                           | Assembly, pulley spindle bracket            | CR.265.212 | —                           | Knob, T/C lever, blue               | CS.432.809 |
| —                           | Assembly, W/C clicker                       | CR.450.041 | —                           | Knob, T/C lever, ivory              | CS.432.808 |
| —                           | Assembly, 2 lug strip                       | A1.358.56  | —                           | Knob, T/C lever, green              | CS.432.810 |
| —                           | Assembly, 3 lug strip                       | A1.352.63  | —                           | Knob, T/C lever, burgundy           | CS.432.806 |
| —                           | Assembly, 5 lug strip                       | CZ.375.210 | —                           | Knob, T/C lever, walnut             | CS.432.805 |
| —                           | Back, cabinet                               | CS.462.146 | —                           | Knob, W/C lever, blue               | CS.432.815 |
| —                           | Badge, Mullard                              | CS.436.415 | —                           | Knob, W/C lever, ivory              | CS.432.814 |
| —                           | Ball, steel 3/16" (W/C switch)              | CH.760.015 | —                           | Knob, W/C lever, green              | CS.432.816 |
| —                           | Bank, W/C switch                            | CZ.200.048 | —                           | Knob, W/C lever, burgundy           | CS.432.812 |
| —                           | Bracket, baffle mounting                    | CS.222.495 | —                           | Knob, W/C lever, walnut             | CS.432.811 |
| —                           | Bracket, ball spring (W/C switch)           | CS.222.497 | —                           | Nipple, slide rod adj.              | CS.274.603 |
| —                           | Bracket, cabinet back mounting              | CS.244.603 | 4                           | Pulley, brass                       | CS.360.205 |
| —                           | Bracket, gang mounting<br>(2 grommet mount) | CS.230.618 | 5                           | Pulley, plastic                     | CS.359.602 |
| —                           | Bracket, gang mounting<br>(1 grommet mount) | CS.232.030 | 2                           | Ring, dial cord                     | CS.281.807 |
| —                           | Bracket, retaining (W/C switch)             | CS.229.615 | —                           | Rod, dial slide                     | CS.382.222 |
| —                           | Cabinet, blue                               | CR.570.453 | —                           | Scale, dial                         | CS.412.351 |
| —                           | Cabinet, ivory                              | CR.570.451 | —                           | Socket, noval wafer                 | CZ.369.702 |
| —                           | Cabinet, green                              | CR.570.452 | —                           | Spacer, speaker mounting, 3X        | CS.214.429 |
| —                           | Cabinet, burgundy                           | CR.570.454 | 6                           | Spindle, tuning                     | CS.351.330 |
| —                           | Cabinet, walnut                             | CR.570.448 | —                           | Spring, ball retaining (W/C switch) | CS.211.817 |
| —                           | Clip, coil can mounting                     | CS.235.833 | 3                           | Spring, dial drum                   | CS.210.029 |
| —                           | Clip, speed (control knob)                  | CH.777.370 | —                           | Switch, on/off                      | 28.650.25  |
| —                           | Cloth, baffle                               | CE.081.85  | —                           | Switch, tone control                | CZ.210.107 |
| 7                           | Cord, dial drive                            | CS.361.821 | —                           | Washer, felt (W/C switch)           | CS.424.072 |







PARTS LISTS

**CAPACITORS**

| No.        | Description                  | Code No.   |
|------------|------------------------------|------------|
| C1-2       | 2 gang tuning                | CZ.107.746 |
| C3-9-10    | 100 pF mica                  |            |
| C4-5-12-13 | 30 pF air trimmer            | CZ.113.700 |
| C7-21      | 0.1 mF 200V paper            |            |
| C8-31      | 10 pF mica                   |            |
| C11        | 475 pF mica 2%               | CZ.066.119 |
| C14-15     | Part of 1st I.F. transformer |            |
| C17        | 0.1 mF 400V paper            |            |
| C18        | 0.002 mF 600V paper          |            |
| C19        | 20 pF mica                   |            |
| C20-22     | 300 pF mica                  |            |
| C23-24     | Part of 2nd I.F. transformer |            |
| C25-28     | 24 mF 350V electrolytic      |            |
| C26        | 0.01 mF 600V paper           |            |
| C27        | 0.02 mF 400V paper           |            |
| C29        | 0.001 mF 600V paper          |            |
| C30        | 0.06 mF 400V paper           |            |

**RESISTORS**

| No.    | Description                     | Code No.   |
|--------|---------------------------------|------------|
| R1     | 50,000 ohms 1W carbon           |            |
| R2     | 30,000 ohms ½W carbon           |            |
| R3     | 250 ohms ½W carbon              |            |
| R4     | 30,000 ohms 1W carbon           |            |
| R5-10  | 0.5 megohms ½W carbon           |            |
| R6-7-9 | 2 megohms ½W carbon             |            |
| R8-11  | 100,000 ohms ½W carbon          |            |
| R12    | 0.5 megohm carbon potentiometer | CZ.030.504 |
| R13    | 15,000 ohms 1W carbon           |            |
| R14    | 0.5 megohm ½W carbon 10%        |            |
| R15    | 50,000 ohms ½W carbon           |            |
| R16    | 2,000 ohms 1W carbon            |            |
| R17    | 130 ohms ½W carbon              |            |
| R18    | 30 ohms ½W carbon               |            |

**COILS**

| No. | Description                  | Code No.   |
|-----|------------------------------|------------|
| L1  | S/W Aerial Coil              | CZ.323.013 |
| L2  | (1 yellow and 1 black spots) |            |
| L3  | B/C Aerial Coil              | CZ.323.014 |
| L4  | (1 green and 1 black spots)  |            |
| L5  | S/W Oscillator Coil          | CZ.330.605 |
| L6  | (1 red and 1 black spots)    |            |
| L7  | B/C Oscillator Coil          | CZ.330.604 |
| L8  | (1 yellow and 1 white spots) |            |
| L9  | 1st I.F. Transformer—        |            |
| L10 | MAS 1060 CZ.320.421          |            |
|     | MAS 1060A A3.124.25          |            |
| L11 | 2nd I.F. Transformer—        |            |
| L12 | MAS 1060 CZ.320.420          |            |
|     | MAS 1060A A3.124.25          |            |
| L13 | Output Transformer           | CZ.345.008 |
| L14 |                              |            |
| L15 | Speaker                      | 49.239.58  |
| L16 |                              |            |
| L17 | Power Transformer            | CZ.344.046 |
| L18 |                              |            |
| L19 |                              |            |

**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.**