

MODEL B41

A.W.A. PORTABLE RADIOGRAM



GENERAL DESCRIPTION

Model B41 is a seven transistor, battery operated, portable radiogram designed for the reception of the Medium Wave Band and for the reproduction of 7", 10" or 12" records at all four speeds. Stereophonic records may be played without damaging the record, although both channels will be reproduced through one loudspeaker.

Features of design include:—Ferrite Rod aerial with provision for external aerial and earth connections; high gain miniature I.F. transformers; low drift oscillator; high compliance ceramic stereo cartridge.

ELECTRICAL AND MECHANICAL SPECIFICATIONS

Frequency Range 525-1625 Kc/s
Intermediate Frequency 455 Kc/s

Battery Complement:

Amplifier 9V Eveready Type 276P
Motor 9V Eveready Type 276P

Battery Consumption:

Amplifier 14 mA (Zero Signal)
Motor 50 mA
Power Output ½ watt
Loudspeaker 6" x 4" 50245
V.C. Impedance 15 ohms at 400 c.p.s.

Transistor and Diode Complement:

AWV 2N1639 Converter
AWV 2N1638 1st I.F. Amplifier
AWV 2N1638 2nd I.F. Amplifier
AWV 2N408 Pre-Amplifier
AWV 2N408 Driver
AWV AS128 (2) P-P Output
AWV 1N87A Detector and A.G.C. Diode
AWV 1N87A Overload Diode

Dimensions:

Width, 11½"; Depth, 10"; Height, 5"; Weight, 12 lbs.

Controls (Front):

Tone-On/Off, Gram/Radio, Tuning, Volume.

Controls (Top):

Speed Selector.

Chassis Removal:

Remove the batteries.

Remove the front knobs by pulling them straight out their spindles.

Remove the lid and make sure the pick-up arm is secured to its rest.

Place the radiogram face down and remove three screws exposed in the bottom of the case. The case may now be lifted from the motor board assembly.

To gain access to the wiring side of the printed board, remove three Phillips Head screws situated at the bottom front of the chassis and loosen the two screws clamping the chassis to the moulded lugs. The complete assembly may now be lifted and tilted forward to reveal the printed wiring.

SPRING LOADED FOOT REPLACEMENT

To accomplish this, the whole assembly comprising foot (part No. C494C) Spring and Retaining Clip (Mc. SCO/1868) must be replaced. It is essential that the correctly coloured springs, as shown in the accompanying diagram, are replaced in their corresponding positions. The diagram is viewed from the underside of the cabinet case.

To replace a foot, first remove the cabinet case. Mount the correct spring on the foot and push it through its mounting hole. From inside the cabinet case push the retaining clip onto the foot until its teeth engage in the groove in the foot.

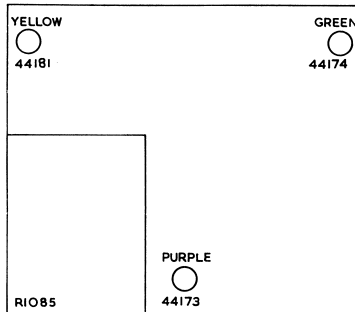


Fig. 1

ALIGNMENT PROCEDURE

Manufacturer's Setting of Adjustments:

The receiver is tested by the manufacturer with precision instruments and all adjusting screws are sealed. Re-alignment should be necessary only when components in tuned circuits are repaired or replaced or when it is found that the seals over the adjusting screws have been broken. It is especially important that the adjustments should not be altered unless in association with the correct testing instruments listed below.

Under no circumstances should the plates of the ganged tuning capacitor be bent, as the unit is accurately aligned during manufacture and can only be readjusted by skilled operators using special equipment.

For all alignment operations, keep the generator output as low as possible to avoid a.g.c. action and set the volume control in the maximum clockwise position.

Testing Instruments:

Signal Generator—modulated 400 c.p.s. or Modulated Oscillator.

If the modulated oscillator is used, connect a 0.22 megohm non-inductive resistor across the output terminals.

Output Meter.

If an indication only is required then Output Meter

Type TF893A, switched to 150 ohms and connected across the voice coil, should be adequate. If other types of meters are used with the correct loading, the speaker **must be disconnected**, otherwise the maximum dissipation of the transistors will be exceeded at medium output levels.

Errata

C3 Should read 8-210pf

C4 Should read 8-93pf

Add to B40 circuit

Add to B40 code

Add to B41 code

ALIGNMENT TABLE

ALIGNMENT ORDER:	Connect "High" side of Generator to:	Tune Generator to:	Tune Receiver to:	Adjust for Maximum Peak Output:
1	Aerial Section of Gang	455 Kc/s	Gang fully closed	Co-res in TR5, TR4 and TR3
Repeat adjustments until maximum output is obtained.				
2	Inductively coupled to Rod Aerial*	600 Kc/s	600 Kc/s	L.F. Osc. Core Adj. (TR2)§
3	Inductively coupled to Rod Aerial*	1500 Kc/s	1500 Kc/s	H.F. Osc. Adj. (C6)
4	Inductively coupled to Rod Aerial*	1500 Kc/s	1500 Kc/s	H.F. Aerial Adj. (C5)

* A coil comprising 3 turns of 16 gauge D.C.C. wire about 12 inches in diameter should be connected between the output terminals of the test instrument, placed concentric with the rod aerial and distant not less than 1 foot from it.

§ Rock the tuning control back and forth through the signal.

