



MURPHY RADIO LIMITED.  
PORTABLE B4 – 1930 VERSION.  
INSTRUCTIONS FOR REMOVING CHASSIS.

1. Lay the set on its face on a smooth piece of baize.
2. Remove the base which will be found to be screwed on.
3. Remove the battery rack, the screws of which are in the side flanges.
4. Remove the control knobs and indicating dials. You will notice that in removing the control knobs that there is a still H piece let into them to take the drive of the spindle.
5. The chassis is secured by two screws on the two flanges inside the cabinet and two screws driven in from the back of the cabinet and sealed with wax. Remove these screws and the whole chassis will then slide out through the base of the cabinet and you will find the loudspeaker unit readily accessible.

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Unsolder the 5 leads connecting the Frame Aerial to the Chassis on the screened grid side of the Receiver, also the 2 connecting leads on the LS jack side.

Unscrew and remove the 2 round-headed screws from each side of the chassis.

Unscrew and remove the 3 countersunk screws on the bottom edge of the control panel.  
The frame can be now separated from the chassis.

The front screen is held by a cheese-headed screw and nut in the bottom left and right hand corners.  
When these are taken out the front screen can be lifted off, exposing the assembly and wiring of the chassis.

It is important that the leads connecting the frame and the LS to the chassis be put back on the same terminal points and a note of these should be made before disconnecting.

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MURPHY RADIO LTD.  
Service Instructions for B4 Portable – 1932 version.

The first essential when servicing receivers is to see that the work bench is clear of all obstructions however minute, and is covered with some soft cloth. A piece of ordinary carpet underfelt covered with a soft yellow duster has been found by us to be the best "Pad" for these purposes and NEVER let the screws stray all over the "pad" because of possible damage to the cabinet.

TO REMOVE CHASSIS FROM CABINET.

Disconnect and remove all BATTERIES. Remove the black dome nuts from the centre of the control knobs using a 1 BA spanner, and the control knobs should then be lifted straight off. THEY MUST NOT BE TWISTED. This exposes the indicating discs that must be removed by taking out the two small screws found in each one.

The set must now be laid face downwards on the table with the turntable furthest away from you and the battery leads tucked into the valve compartment.

Take out the four round-headed screws holding the black board at the back of the battery compartment and remove the board, using the knob provided.

Unsolder the two black leads from the small anchoring plate that is found on the right hand side of the frame aerial. Great care must be exercised in this operation, so as not to damage the loudspeaker cone by falling blobs of hot solder.

ONLY DISCONNECT THE TWO BLACK WIRES AT THIS STAGE.

Remove the four (2 each side) round headed screws holding the chassis to the sides of the cabinet.

Two waxed filled holes will be noticed at the top of the cabinet at the back, break these wax seals, using a screwdriver, and remove the two screws that have been exposed.

The whole chassis and frame aerial will now slide down the cabinet sufficiently to allow the chassis to be lifted clear of the wooden strip at the top of the cabinet. By using the bottom of the frame aerial as a hinge no damage to the cone will ensue.

INSTRUCTIONS FOR DISMANTLING THE CHASSIS.

Unsolder the 5 leads connecting the Frame Aerial to the Chassis on the screened grid side of the Receiver, also the 2 connecting leads on the LS jack side.

Unscrew and remove the 2 round-headed screws from each side of the chassis.

Unscrew and remove the 3 countersunk screws on the bottom edge of the control panel. The frame can be now separated from the chassis.

The front screen is held by a cheese-headed screw and nut in the bottom left and right hand corners. When these are taken out the front screen can be lifted off, exposing the assembly and wiring of the chassis.

It is important that the leads connecting the frame and the LS to the chassis be put back on the same terminal points and a note of these should be made before disconnecting.

TO REMOVE THE L.S. FROM THE CABINET.

Remove the eight round-headed screws spaced around the cone and it will then be found that the cone and fret can be lifted out.

## B4 RECEIVER FAULTS.

<u>SYMPTOMS.</u>	<u>CAUSE.</u>
No emission Power Valve.	Loudspeaker winding open circuit. Filament open circuit. Valve bad fit in holder.
No emission LF valve.	Primary of 2nd transformer open circuit. Valve filament open circuit. Valve bad fit in holder
No emission Detector Valve.	Primary of 1st transformer open circuit. Reaction coil open circuit. Valve filament open circuit. Valve bad fit in holder. 0.05 Megohm feed resistor open circuit.
No emission anode screen grid valve.	Choke o/c. Valve filament open circuit. Anode connection bad contact. Valve bad fit in holder.
No emission screen, screen grid valve.	0.05 Megohm feed resistor open circuit. Valve bad fit in holder.
No signals and 2 m/a reading with all valves out.	Metal tags of reaction leads shorting to Screen. 0.002 $\mu$ f detector anode condenser short circuit. Primary of 1st transformer shorting to earth.
No signals and approx. 15 m/a reading with all valves out.	Short between windings of 1st transformer.
No signals and approx. 20 m/a reading with all valves out.	Short between windings of 2nd transformer
No signals and howl over min. half of long wave.	Frame Aerial o/c.
Station tuning very low and signals weak, anode tuning O.K.	Portions of frame aerial shorting, aerial condenser slip.