

## From the Workbench

### Servicing an English Philips Portable Record-Player (with a “live” chassis) by Chris Ratcliff

This is an English unit hence it has a *live* chassis. Therefore, an isolation transformer is an absolute must, then we must make an earth connection to the common line.

*(SEE CIRCUIT DIAGRAM ON THE NEXT PAGE)*

From the circuit diagram, you will see that the isolation capacitors prevent the pick-up cartridge from becoming live at mains potential. The motor remains on by the unit's own power switch. The output valve is a PCL82 (50BM8). P is 100Ma series connected. C is Triode. L is power pentode. 8 is a 9-pin button base. 2 is the valve grade. It's a 6BM8 with a 50V heater. This heater is supplied by a tapping on the motor winding, via R1 a 180 ohm 5watt resistor, & a 12V globe.

**Fault:** The motor runs, but neither the globe nor the valve light up. R1 was found to be open circuit. I replaced R1 with a 200ohm 5W resistor, which was the closest I had.

The “On” switch worked fine, but after a while R2 began to smoke! There were no visible signs of burn marks on R2, but I replaced it anyway. A 390ohm 5W resistor did the trick.

I also replaced the Selenium Rectifier MR1 with 1N4007. A 1amp 1000V diode.

On checking, the rest of the resistors all were O.K. including most importantly Rk4. This resistor must be all ways what it reads. In this case 200ohm. But not R3. I replaced it with a 10K 1W resistor and now the Philips record-player works well.

