



Figure 19. Testing for earth continuity and polarity on a large installation using the circuit wiring. Test between points C and P. The resistance measurement should not exceed $\frac{1}{2}$ ohm

2. See that all fuses are inserted in the distribution boards.
3. Connect the red (switch) conductor on the installation side of the main fuse to the consumer's main earth, using an independent test connection as shown at "A" (Figure 19).

By using an independent connection, the resistance of the main earth connection is included in the measurements.

Earth-continuity and polarity tests

Close the switch under test, and when testing at a 3-pin socket-outlet or at a ceiling rose, close any switch controlling this point. Where 2-way corridor switches are installed, test separately the two switches in both "On" and "Off" positions, and take the lower reading.

Connect one terminal of the testing instrument to points marked "C" (see Figure 19) and the other terminal to points marked "P", or, in the case of 2-pin sockets or ceiling roses, to each conductor taking the lower of the two readings.

—If the resistance measured is $\frac{1}{2}$ ohm or less, the earth-continuity is satisfactory and the polarity correct.

If the resistance measured is above $\frac{1}{2}$ ohm this point should be noted for further investigation, as described on page 35.

The resistance measured above includes the resistance of one conductor from the main switch to the point under test. If, therefore, the resistance measured is only slightly above $\frac{1}{2}$ ohm the earth-continuity may generally be passed as satisfactory.

The approximate resistance of one conductor may, however, be obtained as follows:

Join together the red and black conductors on the consumer's side of the main fuses ("L" and "N" in Figure 8).

Measure the resistance at an adjacent ceiling rose or wall socket across the two contacts which will supply current to the lamp or other apparatus, as shown in Figure 9, and