Performing a high current $Z_E$ measurement
using the Seaward PowerTest 1557

When testing circuits which are not RCD protected and where the earth loop impedance is low, for example when measuring $Z_E$, performing a high current loop test can give improved accuracy and repeatability.

The line impedance ($L-N$) test can be used to perform a high current $Z_E$ measurement as shown below:

Method a) 3 wire measurement

1) Connect the red test probe to the line conductor.
2) Connect both the green and black test probes to the earth conductor.
3) Select the loop test $Z_s$ on the rotary switch.
4) Select a high current line impedance test by pressing the F1 key until $L-N$ is shown on the LCD display.
5) Press the TEST key to make a measurement.
Method b) 2 wire measurement

1) Connect the red test probe to the line conductor.

2) Connect the combined green/black test probe to the earth conductor.

3) Select the loop test Zs on the rotary switch.

4) Select a high current line impedance test by pressing the F1 key until L-N is shown on the LCD display.

5) Press the TEST key to make a measurement.