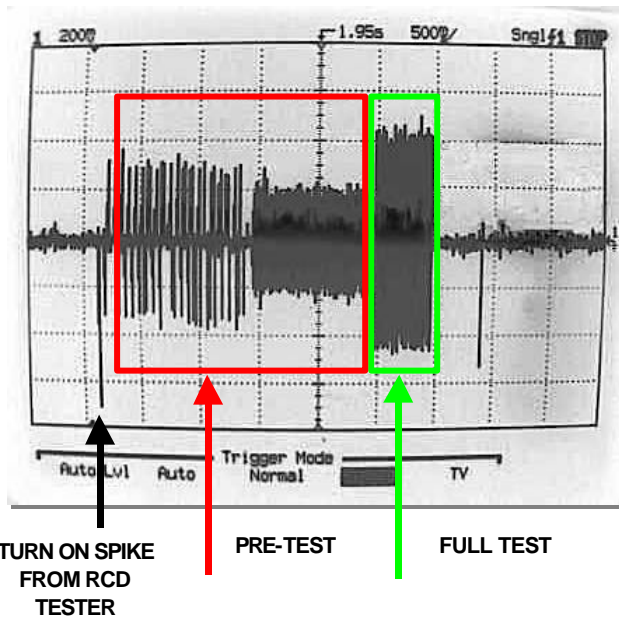


Introduction

Some testers produce a random switch on 'spike' which can be larger than the trip current being tested. This spike can be short in duration, and does not trip a mechanical RCD.

Most modern testers also perform a 'no-trip' pretest before the actual trip test begins (which the 2100 recognises and ignores) – this is shown below.



This 'spike' will, however, cause the 2100 to trigger and begin its reading cycle which will now be analysing the 'pre-test' section of the waveform. This will give incorrect measurements because of this.

Testers from the following manufacturers have been found to exhibit this 'spike' :

- Chauvin Arnoux
- Kewtech

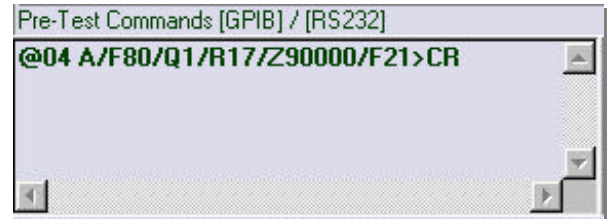
Setting the Trigger level

The 2100 starts making measurements from a pre-set percentage of the selected RCD current.

As default, this is set to 62%, so if the RCD tester is set to 100mA then current measurements will start when the 2100 sees a current of 62mA. This is to stop the 2100 triggering its timing cycle during an RCD pre-test when a tester draws 1/2 of the selected current.

The 62% level is suitable for most testers, but some use higher levels during their pre-test and some generate a switch on spike which although is too fast to trip an RCD it will trigger the timing on a 2100.

To overcome this problem, extra commands can be set in the Procal procedure. Open the test procedure with ProEdit, select the instruments tab and add the pre-test command shown below. This will set the trig level to 90%.



Limit changed to 90% trigger level (Z90000)

Where :

- @04 : The 2100 calibrator (traceable instrument 4)
- A : Aborts the test which has already begun
- F80 : Set 2100 back to its main menu
- Q1 : Sets enables access to internal settings
- R17 : Selects RCD trigger level constant
- Z90000 : Set trigger level to 90%
- F21 : Re-starts RCD trip test

The trigger level should be set back to the 62% default at the end of the test as shown below.



Limit changed back to default 62% trigger level (Z62000)



Please note the trigger level cannot be set from the 2100 front panel.

Notes on RCD Current testing

Almost all tester specifications for RCD current are in the format, for example, -0% +6%. This means that the current drawn will not be less than the RCD trip current, therefore the nominal value will be higher than the trip current. For example a 100mA trip with the spec. -0% +6% will have a nominal trip current of 103mA.