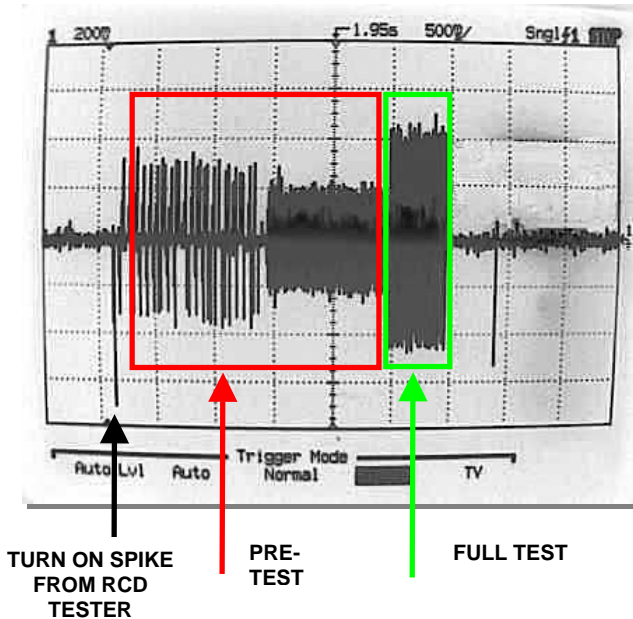


### Introduction

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 3200 recognises and ignores) – this is shown below.



This 'spike' will, however, cause the 3200 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

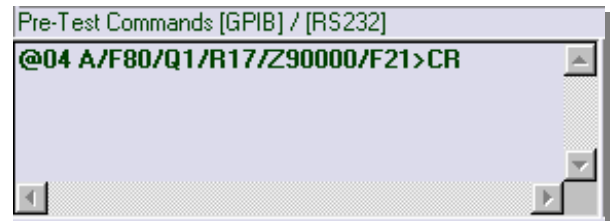
### Setting the Trigger level

The 3200 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 3200 sees a current of 62mA. This is to stop the 3200 triggering its timing cycle during an RCD pre-test when a tester draws ½ 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 3200.

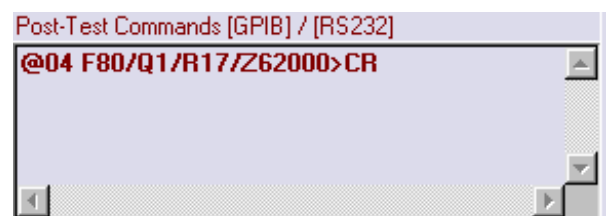
To overcome this problem, extra commands can be set in the Procal procedure. Open the test procedure with ProEdit, select the instruments tab and add the pre-test command shown below. This will set the trig level to 90%.



Where :

- @04** : The 3200 calibrator (traceable instrument 4)
- A** : Aborts the test which has already begun
- F80** : Set 3200 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 3200 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.