True tripping times & actual sensitivity for **DOMESTIC** (30mA) & **MEDICAL** (10mA) RCD's

RCD TESTER

The **Inventive Electronics** RCD (safety switch) tester is designed and manufactured in Australia, for Australian conditions, to meet Australian and New Zealand Standard AS/NZS 3760 – AS/NZS 3003.

- Ramps test current from zero to give true RCD performance.
- Measures precise minimum tripping current despite mains variations.
- Test current is randomly applied to mimic a real hazard unlike other testers, which phase locks the test current to the mains supply and gives repeatable results.
- Testing exceeds requirements of AS/NZS 3760 – AS/NZS 3003.
- Can be used as a diagnostic tool for nuisance tripping.
- Hand held for easy use with two meter IEC lead supplied.
- 12 month warranty with FREE end of warranty calibration.

Inventive Electronics
7 Windsor Avenue
Mt Waverley VIC 3149

Tel: (03) 9888 1211
Fax: (03) 9888 1711

kob@mem.com.au
www.invent.com.au

Call for availability and price.

QUESTION

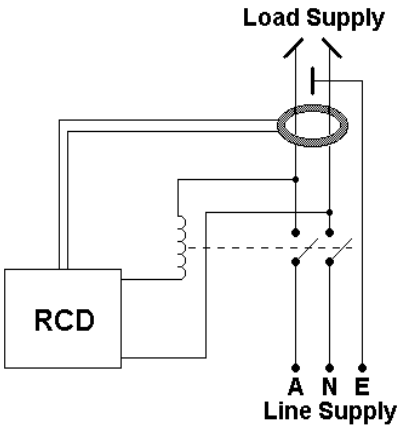
"When we do a 'TIME' test with the Inventive Electronics RCD tester, we get different results over the 6 tests we perform. Why is that ?"

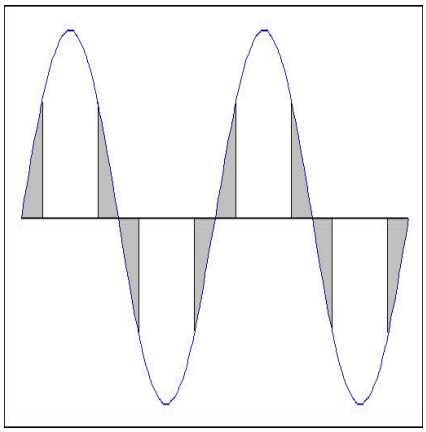
ANSWER

A typical RCD circuit diagram is shown below.

The time it takes for an RCD to trip depends on three things:

1. When leakage current is applied relative to the mains phase,
2. Testing the device at the exact rated current, and
3. The size of the mechanical mains switching device.





The mechanical switching mechanism of the RCD uses energy from the mains to trip. The shaded areas of the waveform above, indicate dead spots where a signal to trip the RCD will be ignored until there is sufficient energy in the next half cycle.

So when leakage current is randomly introduced at any part of the mains cycle, mimicking a real hazard, variations in trip time will result from the RCD processing the detected leakage current and initiating the trip coil.

The Inventive Electronics RCD tester introduces leakage current the moment the test is initiated. <u>Not</u> being phase locked, it will give true minimum and maximum trip times. It also measures the mains voltage at the time the trip test is initiated, providing the precise test current irrespective of variations in mains voltage.