Continuity of Ring Final Circuit Conductors

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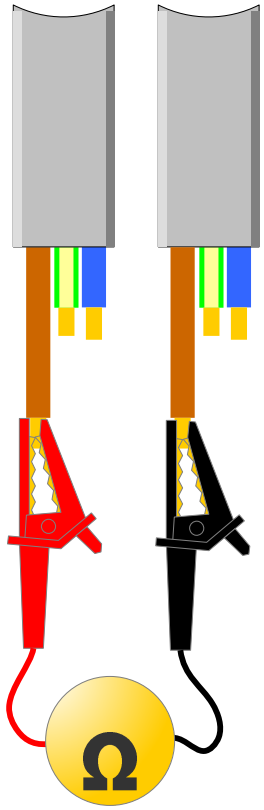
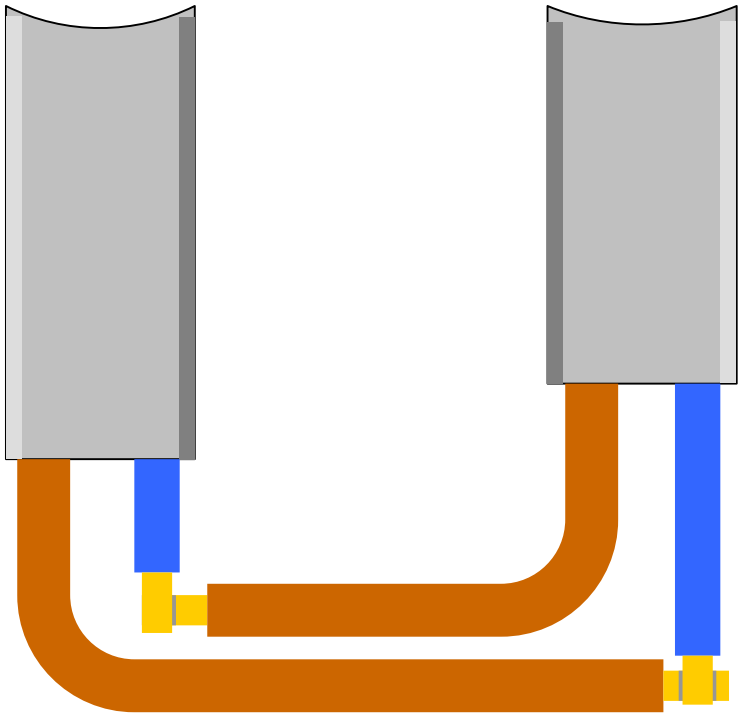
Step 1 - Initial Check for Continuity

- Check between each end in turn
  - L to L
  - N to N
  - CPC to CPC
- Note results as
  - r1 - Line
  - r2 - CPC
  - rn - Neutral



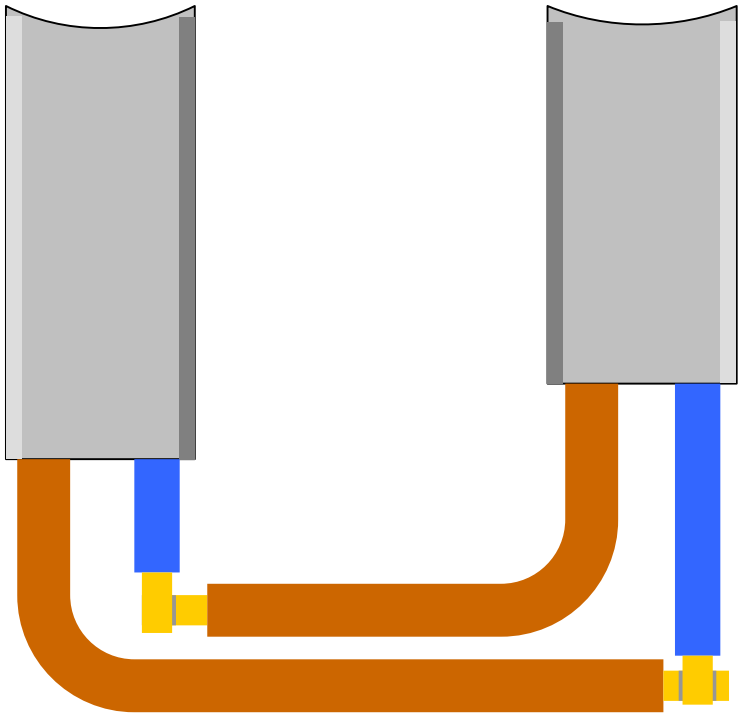
Step 2 - Cross Connect Line and Neutral

- In the consumer unit cross the out going L to the incoming N and vice versa
- Measure between L and N at each socket outlet



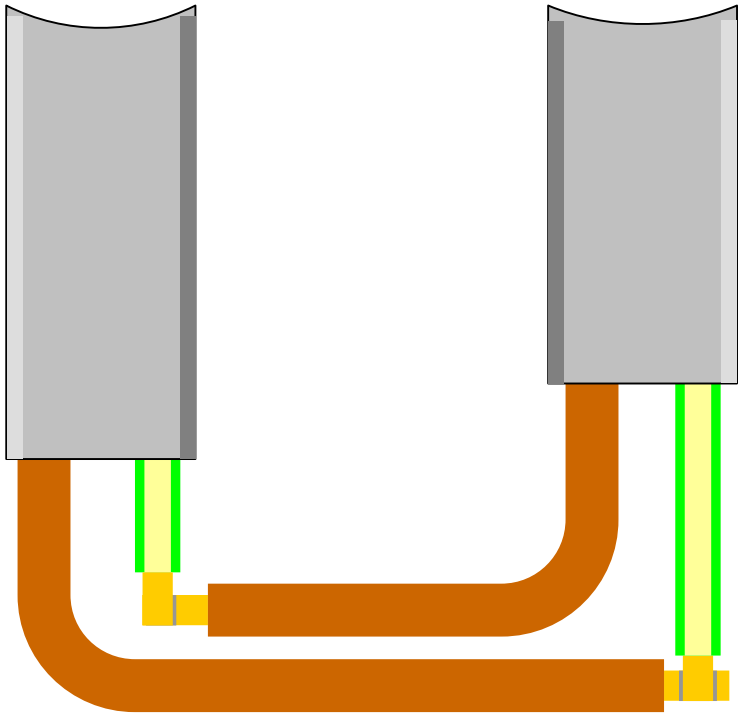
Step 3 - Cross Connect Line and Neutral

- Values should be the same at each socket
- Value should be (r1+rn)/4



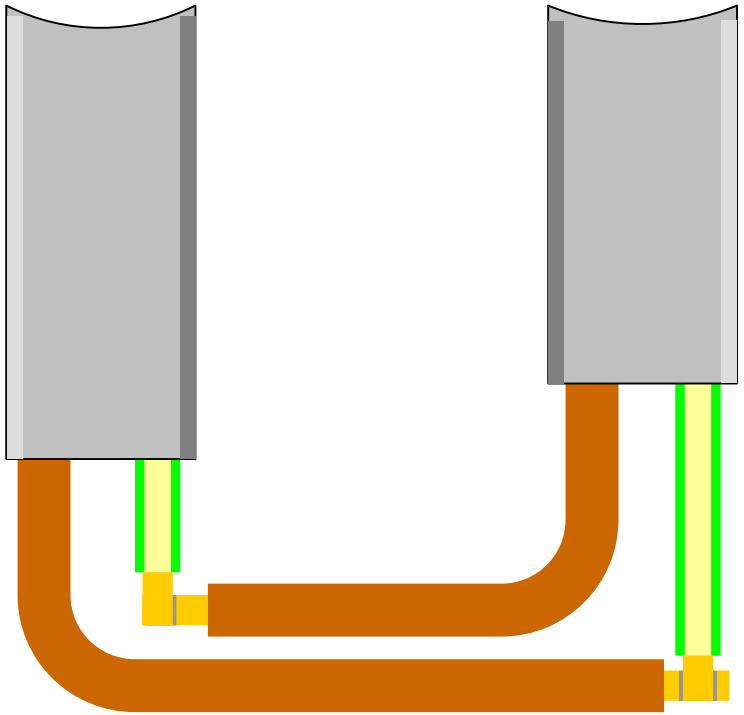
Cross Connect Line and CPC

- In the consumer unit cross the out going L to the incoming CPC and vice versa
- Measure between L and CPC at each socket outlet



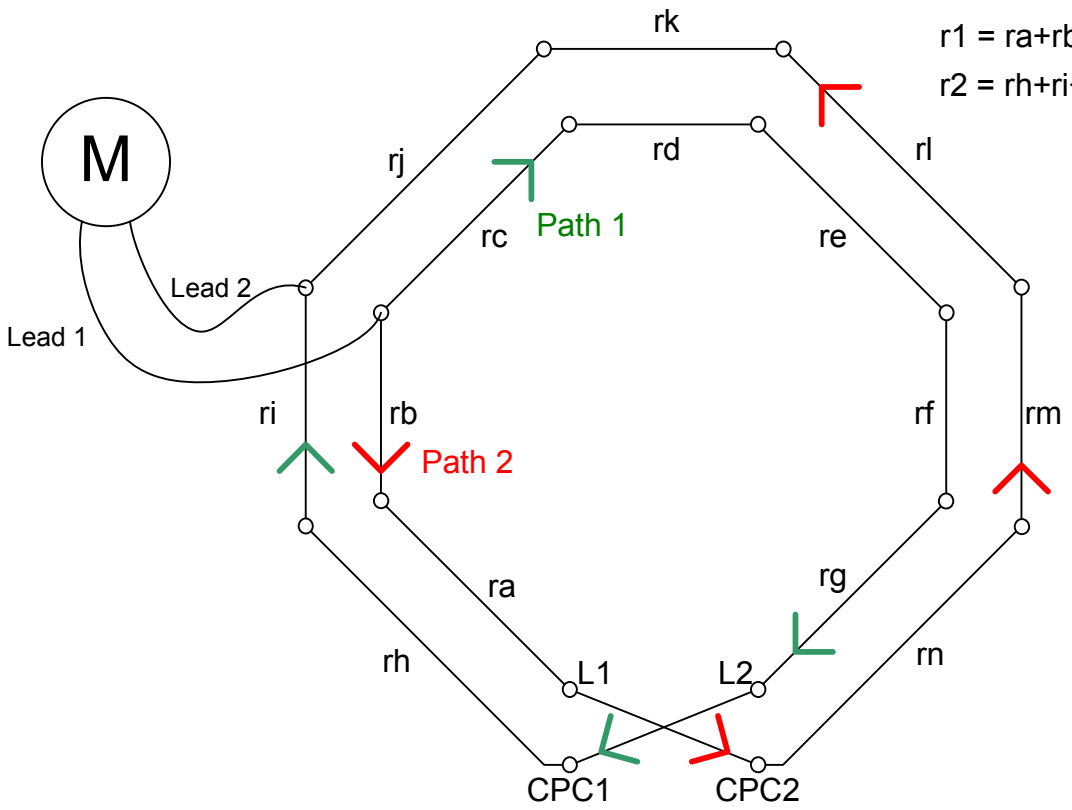
Cross Connect Line and CPC

- Values should be the same at each socket
- Value should be (r1+r2)/4
- Value is recorded as R1+R2 on the schedule of test results



Why is it (r1+r2)/4?

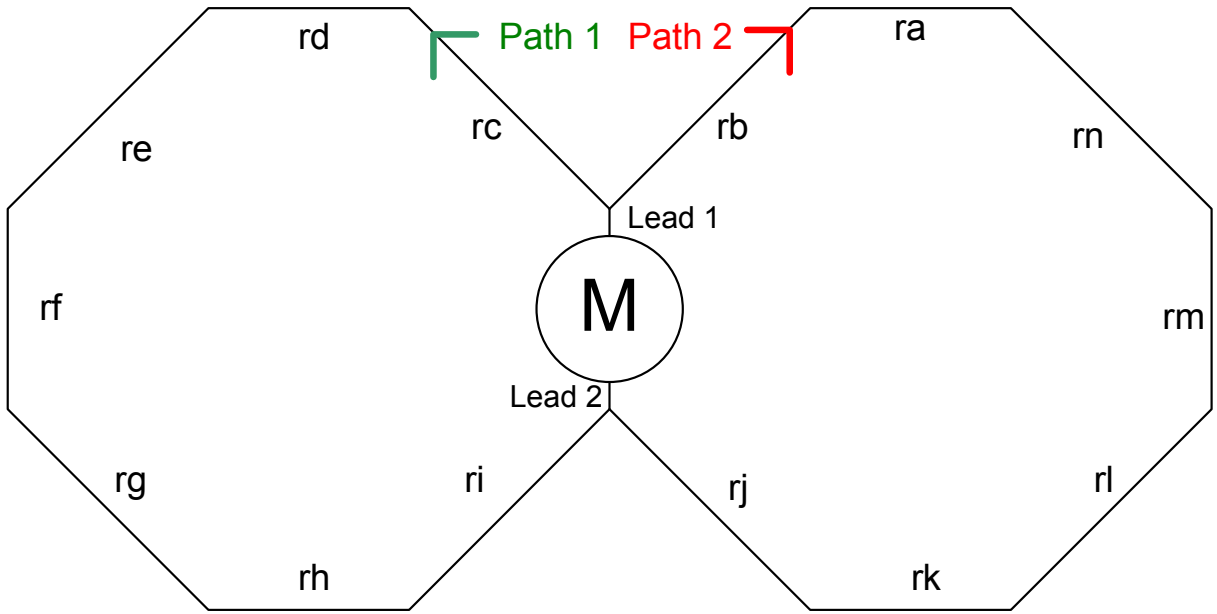
- Cross connecting the opposing Lines and CPCs creates a perfect resistive circle
- Follow the paths through yourself



Lead 1 to lead 2 path 1 route = rc+rd+re+rf+rg+rh+ri
Lead 1 to lead 2 path 2 route = rb+ra+rn+rm+rl+rk+rj

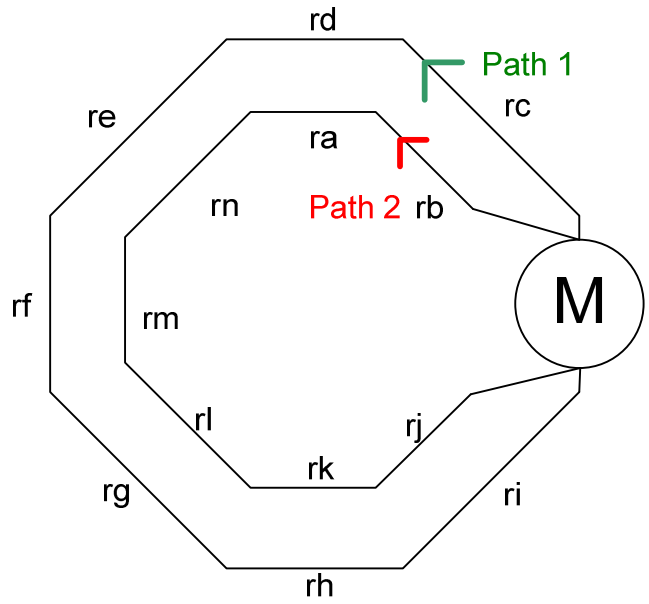
Why is it (r1+r2)/4?

- Flatten the previous diagram
- Placing the tester at any socket outlet (across L and CPC) in this circle forms a mid point of that circle



Why is it (r1+r2)/4?

- If we folded the previous drawing over we would get the drawing on the right



Why is it (r1+r2)/4?

- Which when drawn up as a circuit diagram shows that the 2 resistances are in parallel