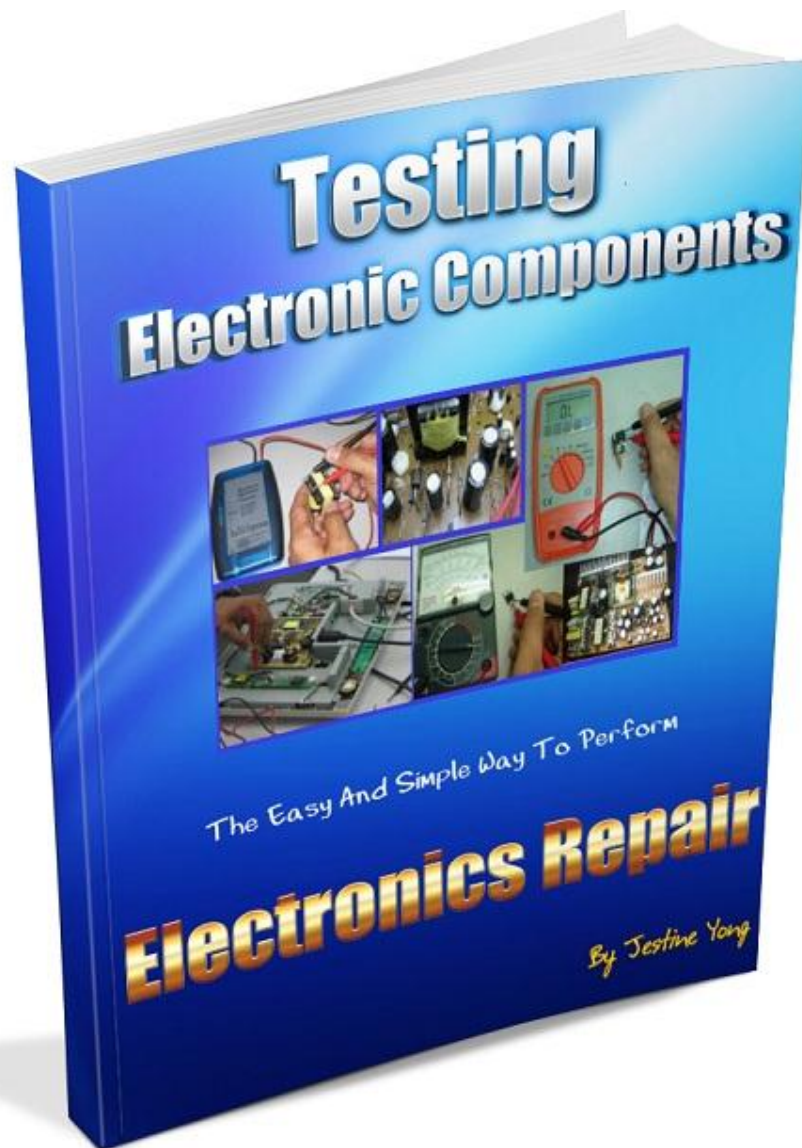


Preview Of The Ebook

Testing Electronic Components



Brought to you by Jestine Yong

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Table of Contents

| | | |
|-----|---|----|
| 1. | Safety First | 6 |
| 2. | Understanding Analogue and Digital Multimeters..... | 13 |
| 3. | How To Test AC/DC Voltage..... | 17 |
| 4. | How To Perform A Current Test..... | 24 |
| 5. | Continuity Testing..... | 28 |
| 6. | Resistance and Resistors..... | 30 |
| 7. | Resistor Colour Code Calculation..... | 32 |
| 8. | Testing Resistors..... | 37 |
| 9. | Testing Variable Resistors..... | 45 |
| 10. | Testing Fuses..... | 50 |
| 11. | Testing Coil/Inductor..... | 55 |
| 12. | Testing Switches..... | 60 |
| 13. | Testing Diodes..... | 63 |
| 14. | Testing Schottky Diode..... | 67 |
| 15. | Testing Bridge Rectifier..... | 71 |
| 16. | Testing Light Emitting Diode (LED)..... | 75 |
| 17. | Testing Zener Diode..... | 77 |
| 18. | Testing Linear Transformer..... | 80 |
| 19. | Testing Switch Mode Power Transformer..... | 87 |
| 20. | Understanding Capacitors..... | 93 |

| | | |
|------------|---|------------|
| 21. | How to Discharge Capacitor..... | 98 |
| 22. | Testing Capacitors..... | 102 |
| 23. | Testing Capacitors That Breakdown When Under Full Operating Voltage..... | 107 |
| 24. | Testing Ceramic Capacitor..... | 110 |
| 25. | Testing Voltage Regulator IC..... | 113 |
| 26. | Testing Optoisolator IC..... | 117 |
| 27. | Testing Transistors..... | 121 |
| 28. | Testing Field Effect Transistor (Mosfet)..... | 134 |
| 29. | Testing Darlington Transistor..... | 138 |
| 30. | Testing Horizontal Output Transistor..... | 146 |
| 31. | Testing Silicon Controlled Rectifier (SCR)..... | 150 |
| 32. | Testing Triac..... | 154 |
| 33. | Testing Crystals..... | 156 |
| 34. | Testing Relays..... | 163 |
| 35. | Testing NTC Thermistor..... | 170 |
| 36. | Testing Varistor..... | 173 |
| 37. | Summary Of Test Electronic Components..... | 175 |
| 38. | Tools And Test Equipment That You Need To Buy..... | 177 |
| 39. | Technical Books for Reference..... | 178 |
| 40. | Conclusion..... | 179 |

Safety First



Whenever you're working on any electronic equipment, your own safety has to come first. Every electronic technician must always take safety precautions before he or she starts work. Electricity must be handled properly, or else it can injure or cause fatalities. Here are some basic steps that show you how to avoid accidents from occurring.

1. *Electrical Shock*

Once you open up a set cover, you're actually exposing yourself to the threat of electric shock. Always keep in mind that safety has to come first. A serious shock may stop your heart and if a large electric current flows through your body, you will receive serious burns. Here are some rules, which should help you to avoid electricity hazards:

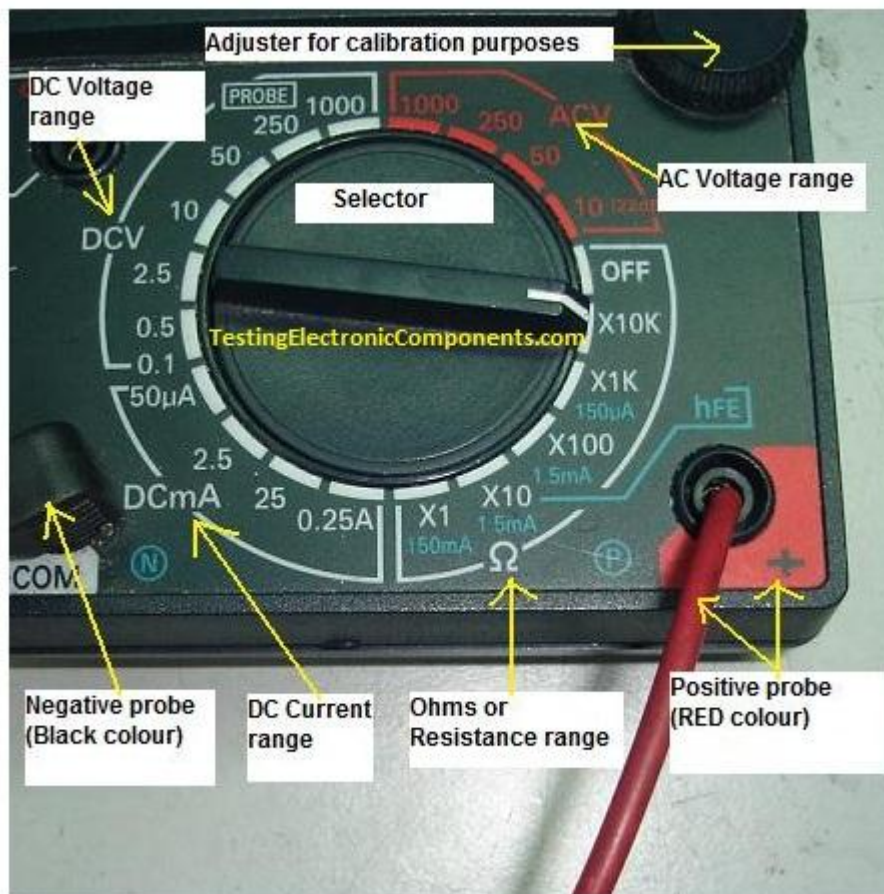
- a) Always turn off the equipment and unplug it before you begin to work.
- b) If you have to run tests while the equipment is operating, turn the equipment on, make your test carefully, and then turn the equipment off again.
- c) Wear rubber bottom shoes or sneakers.
- d) Try to do the work with one hand, while keeping the other in your pocket. That keeps the possible current paths away from the heart.
- e) Don't attempt repair work when you are tired or rushed.
- f) Always assume that all the parts in the power supply are "**HOT**".
- g) Use only plastic screwdriver for shock protection during service operation.

2. *Discharging Switch Mode Power Supply (SMPS) Capacitors*

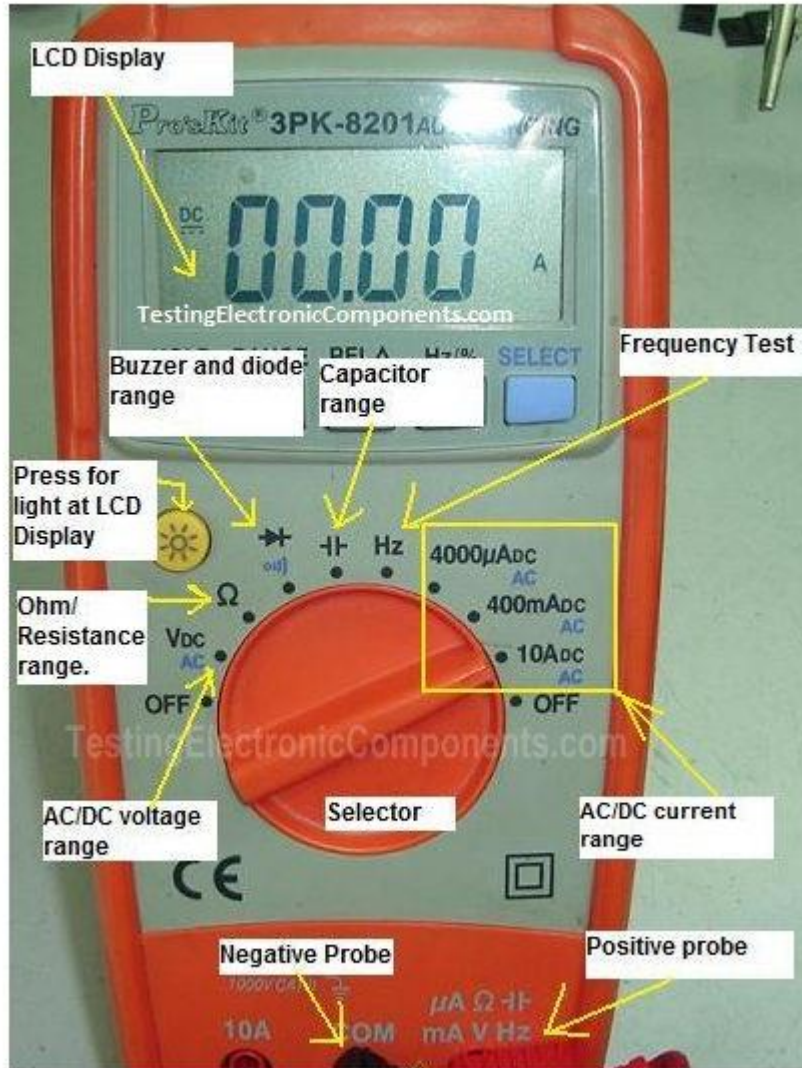
Most SMPS have a resistor to drain the charge in the main filter capacitor. But some resistors may fail and the capacitor can hold this charge even after you have turned off the equipment. This capacitor has a range of about 150uf to 330uf at 400 working voltage. Before you start to work on a power supply, always turn off the power and discharge the capacitor. You can do this by placing a

Excerpt from Page 14

Meter's Function and Range



Analogue and digital multimeters have either a rotary selector switch or push buttons to select the appropriate function and range. Some Digital Multimeters (DMMs) are auto ranging; they automatically select the correct range of voltage, resistance, or current when doing a test. However you still need to select the function. First, just before you make any measurement you must know



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Thanks



Jestine Yong