

# Electro-Resales

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**PLEASE READ**

Many thanks for purchasing this component tester from Electro-Resales. This simple, but powerful tool used in conjunction with a 2 channel 'scope set in XY mode, can greatly reduce the time needed to test unknown components, identify leads on transistors, separate rectifiers from zener diodes, and much more

We appreciate your business and want to ensure that your experience with our products is a pleasurable one. We understand that you want the product to work without fault and that is our wish also. By following these simple instructions you should have no problems

## **Some Notes about this tester**

The tester is based on the 'Octopus' design developed by test & service engineers from a bygone era, while a simple concept, it is a very powerful one that allows for any dual trace 'scope to be converted into a component tester by the addition of some external components.

This unit uses a current limited 12 VAC source to provide the component under test's current Vs. Voltage characteristics to be displayed on an oscilloscope.

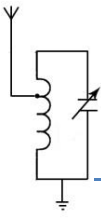
**Please note;** The tester is best used with an analog scope (one with a CRT), it will work with a digital scope, however, it has not been tested with any of the USB 'scopes or other scopes that require a computer to function.

## **First Steps – Setting Up**

In the box should be the following items:

- a. The checker – a small white box with terminals and BNC connectors
- b. BNC terminated RG58 coax cables (x2)
- c. A pair of test leads (Red or black)
- d. A small AC 12 Volt power supply (USA plug style)
- e. Instruction sheet

**If anything is missing please contact us by email for help, [resalese@gmail.com](mailto:resalese@gmail.com)**



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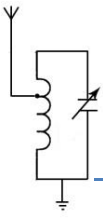
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1. The oscilloscope to be used in conjunction with the tester needs to be a 2 channel unit with settings that allow it to be configured in XY mode.
2. Most 2 channel scopes can be used, the higher the frequency response of the 'scope, the more versatile the testing, but a 5MHz unit is as good as a 100MHz unit.
3. Set the oscilloscope controls to XY mode and connect the tester BNC sockets to the 'scope X and Y inputs using the coax jumpers. Turn on the 'scope and then connect the small ac supply supplied to the unit using the coaxial jack on the side of the box.
4. At this point a horizontal line should appear on the scope trace. Plug in the test leads; if the test leads are shorted together the line will go vertical.

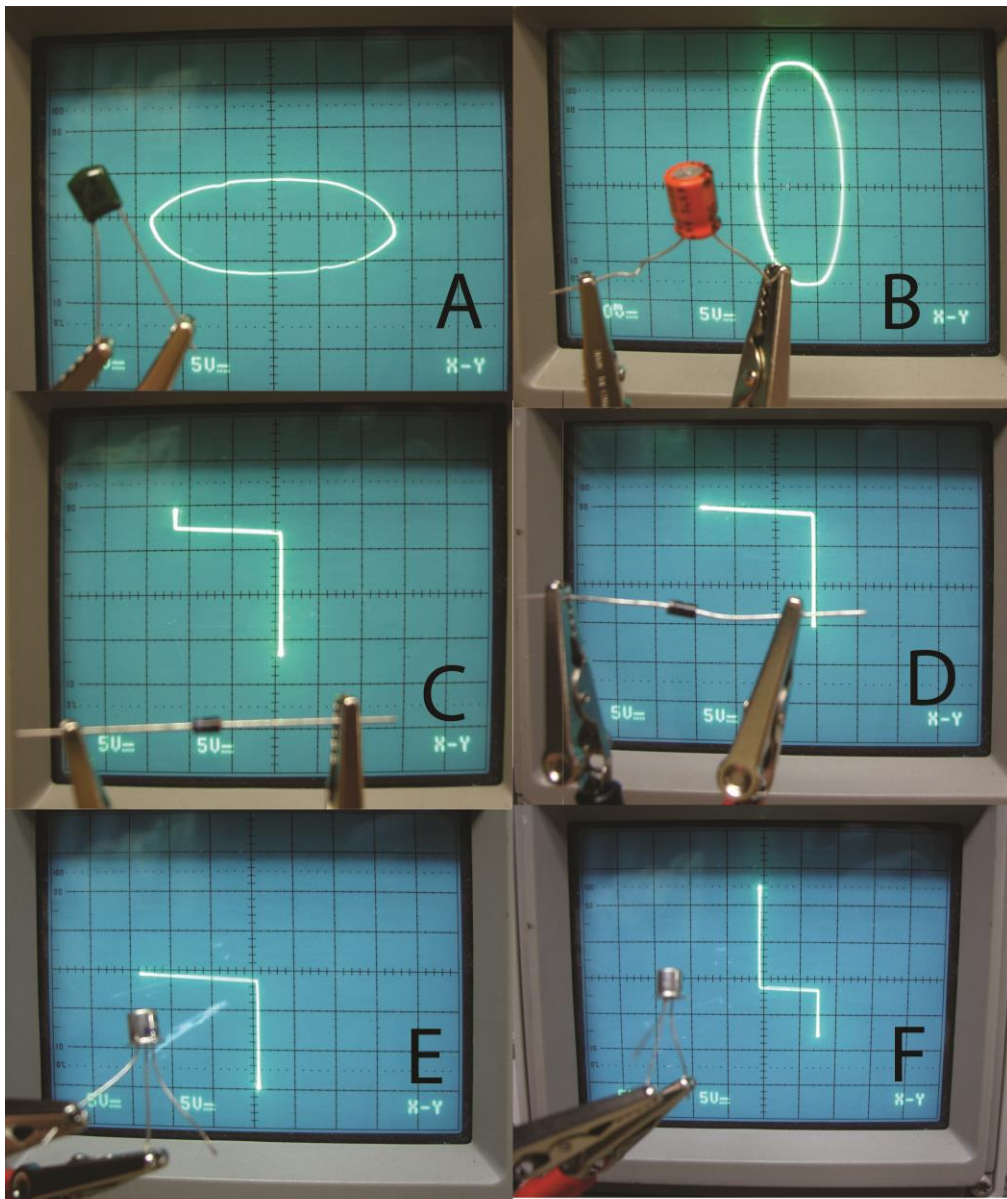
## Using the tester

1. Testing components is very easy, use the supplied clip leads to connect the component to the test unit, if the component is a diode for instance and not 'in circuit' it can be plugged directly in to the banana sockets on the tester
2. Using the pictures on the next page, compare your test results to identify components/leads.
3. When connecting components to the tester, you may notice the 'scope trace move around a little, this is normal and will stabilize once the component is firmly attached.
4. If the trace moves off screen, use the 'scope position controls to adjust the trace position on the screen so that the trace can be seen properly.
5. Adjust the 'scope controls to increase or decrease sensitivity, it will be a little trial and error to start with for each component to achieve the perfect settings.

The following pictures detail some of the basic tests that can be performed with the tester, remember you can test passive components like resistors and potentiometers as well as active components like semiconductors.



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## Curve Tracer Examples

A=20pF Capacitor

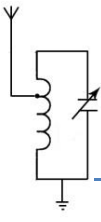
B= 47uF Electrolytic

C= 12 volt Zener

D= Silicon Rectifier

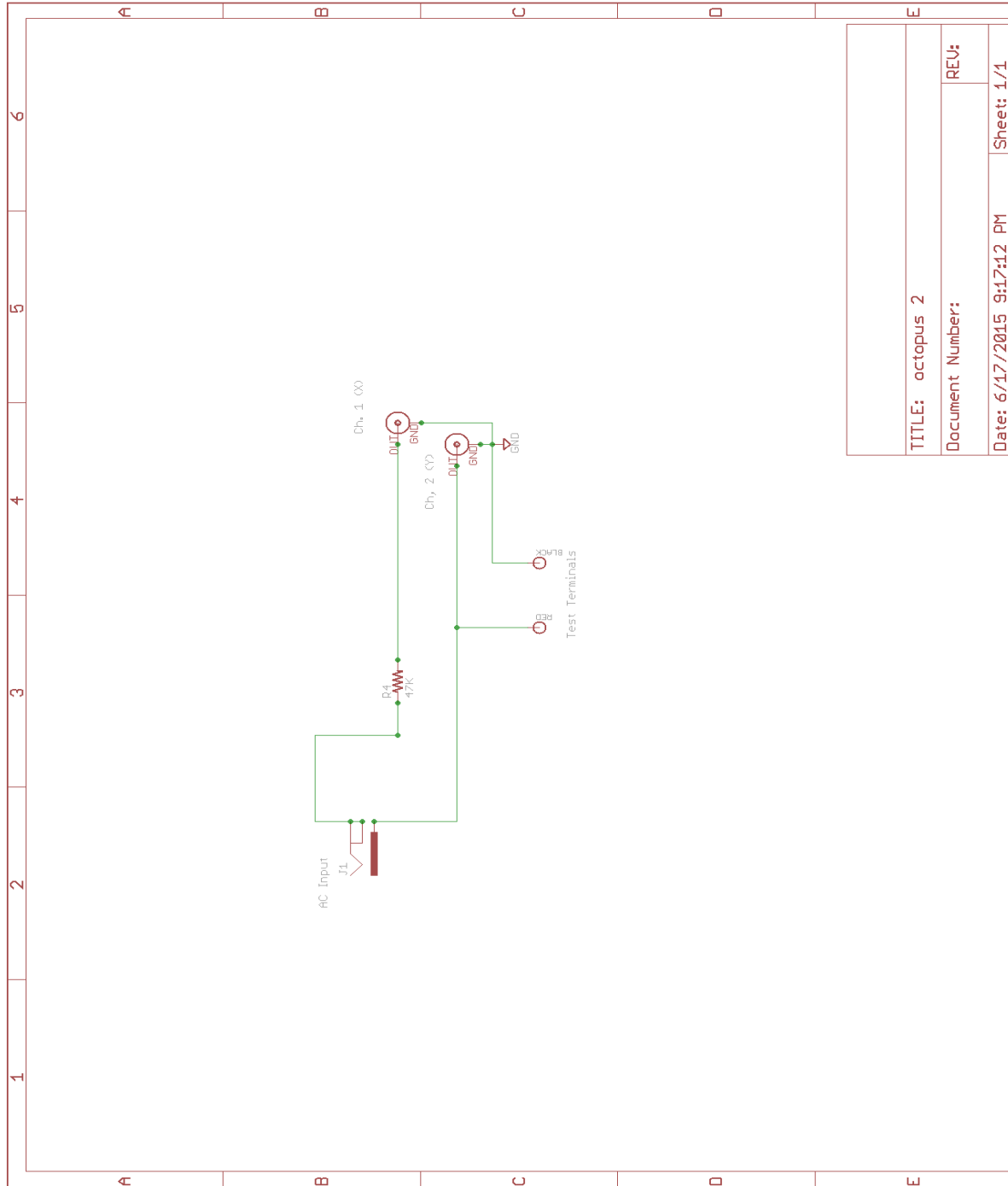
E=Base to collector, 2N2222A

F= Base to Emitter, 2N2222A



# Electro-Resales

## 'Octopus' Schematic



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