LESSON 24
Verifying current flow again

To do our final current verification, build the circuit, shown on the right, on a solderless circuit board.

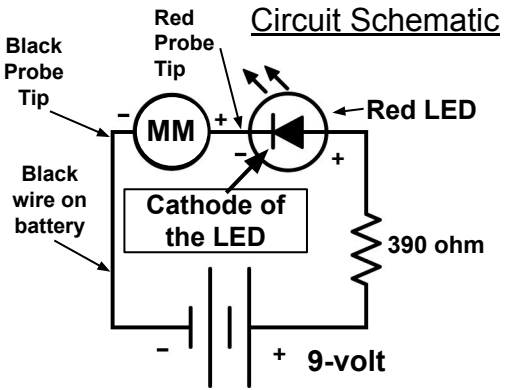
Now following the steps that we have taught you, set up the meter to measure current on the 20 mA position and insert the MM into the circuit by using the Black probe tip to touch the negative (black wire) of the battery and the Red probe tip to touch the negative lead, or Cathode, of the red LED.

The LED should light up and the meter should display the amount of current flowing in this part of the circuit.

Practice Quiz 24

Measure current flowing between battery and the LED.

Circuit Schematic

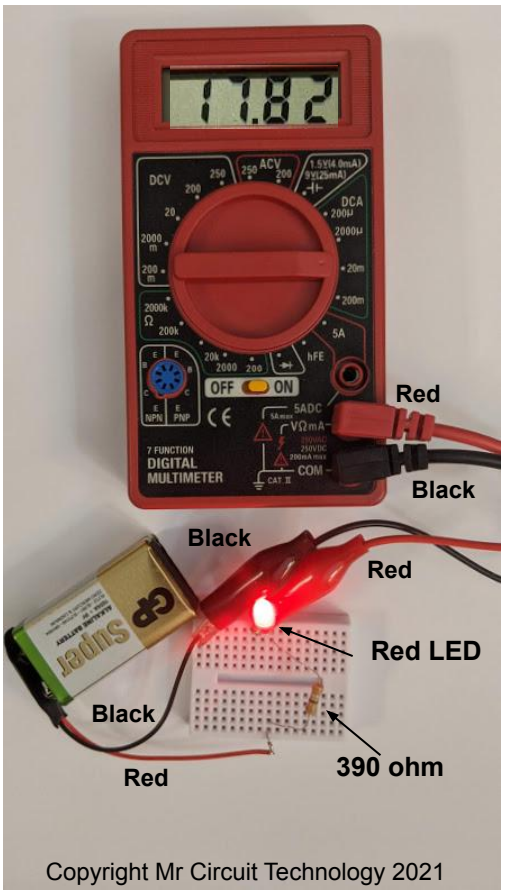


Your meter display should show approximately. 18 mA. or 0.018 Amps)

Our meter shows 17.82 mA or 0.01782 Amps.

If you find that the current flowing in this part of the circuit is the same as in Lessons 22 and 23, then you have verified that no matter where in a series circuit that you measure the current, it will always be the same amount.

Insert the MM into the circuit as shown and read the display.



Answer these questions	Activity Page	Comparing the current in a different place in the circuit	24b

(1) Is the same amount of current flowing in this part of the circuit as in Lessons 22 and 23.

_____

(2) How many components were in this simple series circuit?

_____

(3) Doing Lessons 22, 23, and 24, did you measure the amount of current flowing between each of the components?

_____

(4) Were all the amounts of current flowing in the circuit between each component the same?

_____

(5) Based on what you now know, is the current the same everywhere in a series circuit?

_____

(6) Be aware that 1 mA = 0.001 A = 1000 uA. (m = milli, A= Amps, uA = microamps)

So, if you tried to measure the amount of current flowing in this circuit (about 18 mAmps) with the meter dial in the 2000u position (2000uA = 2mA), what do you think might happen to the meter?

_____

(7) What is the maximum amount of current you can safely measure with this digital multimeter?

_____

(8) How many amps is 1500 uA?

_____

(9) If you were going to measure about 3 amps, what position would you put the meter dial at?

_____

(10) Into what jack would you plug the Red meter lead to measure a current of about 3 amps?

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