

Lab 1 Overview

EGR 220
Jan 29, 2020

Goals in Lab 1

- Begin investigations for one or more of our Questions Of Understanding
- Some of the practical skills to begin
 - Using the ammeter for measuring through
 - Measure across for voltage
 - Drawing circuit diagrams for each
 - & translating into the actual circuit setup
- Lab time – not for answering the questions in the lab handout – but for doing the hands-on work

2

Lab 1: Equipment and Ohm

- Learn and play with the lab equipment
- Test and verify Ohm's Law
- Deepen understanding for semester 'Questions'
- Measuring voltage and current
 - Measure voltage **across** an element
 - Measure current **through** a branch
 - Break the circuit and insert the ammeter into the flow of the current
- Notice that the lab equipment *is part of your circuit*

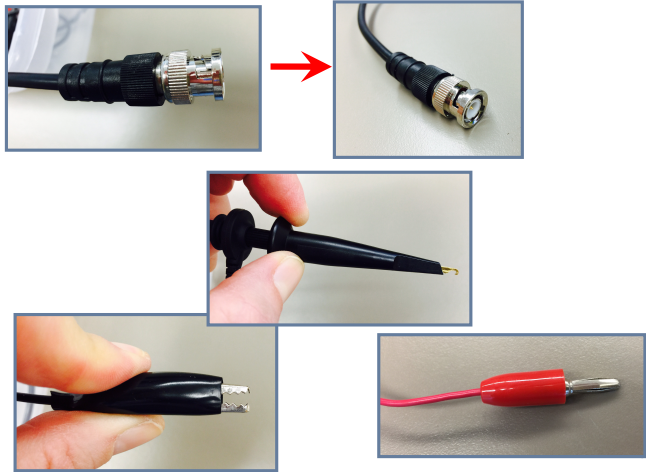
3

Lab Equipment

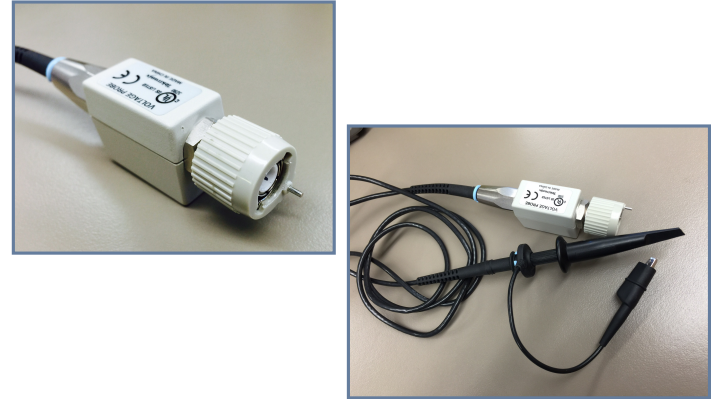


4

Lab Connectors



Scope Probes

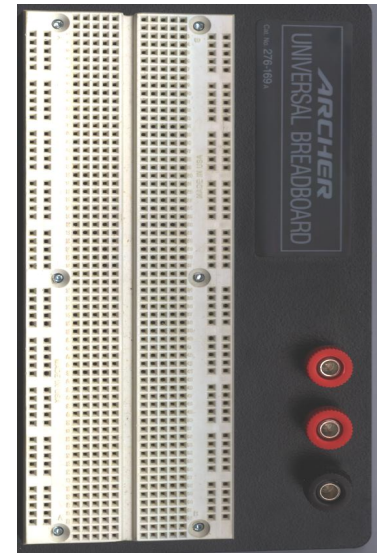


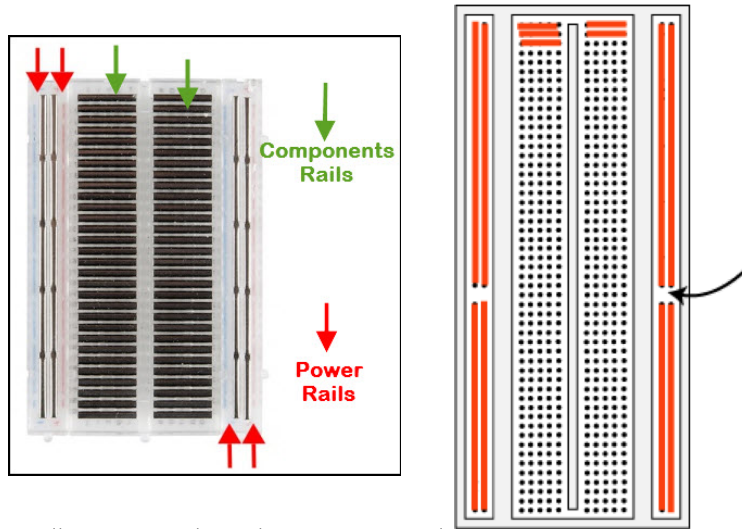
6

Breadboards – for building circuits

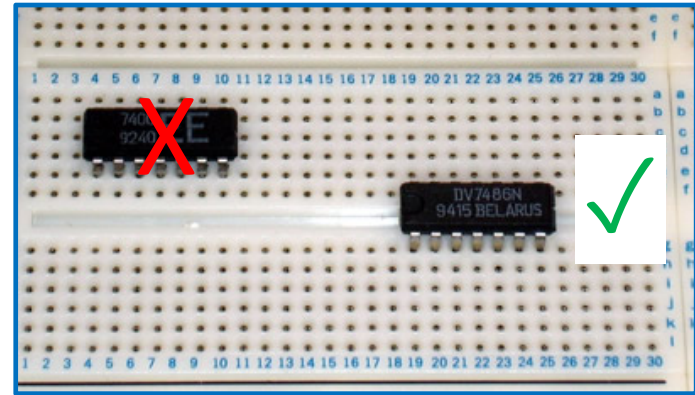


Electrical Connections in Breadboard

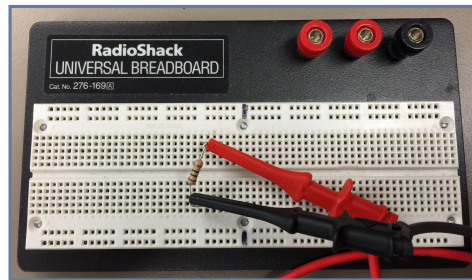




<https://learn.sparkfun.com/tutorials/how-to-use-a-breadboard/all>



Lab 1: Measure Across or Through?



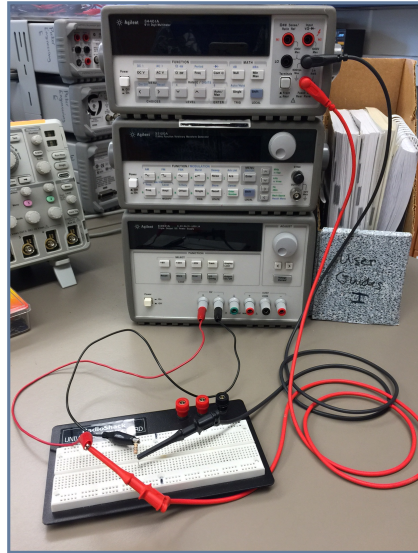
11

Lab 1: Measure Across or Through?

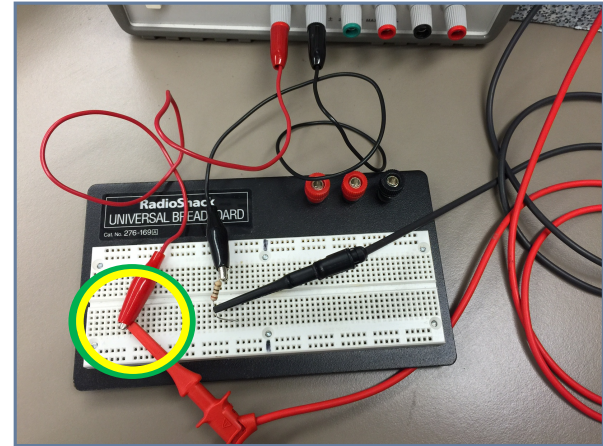


12

Lab 1:
Measure
Across or
Through?



Lab 1: Measure Across or Through?



14