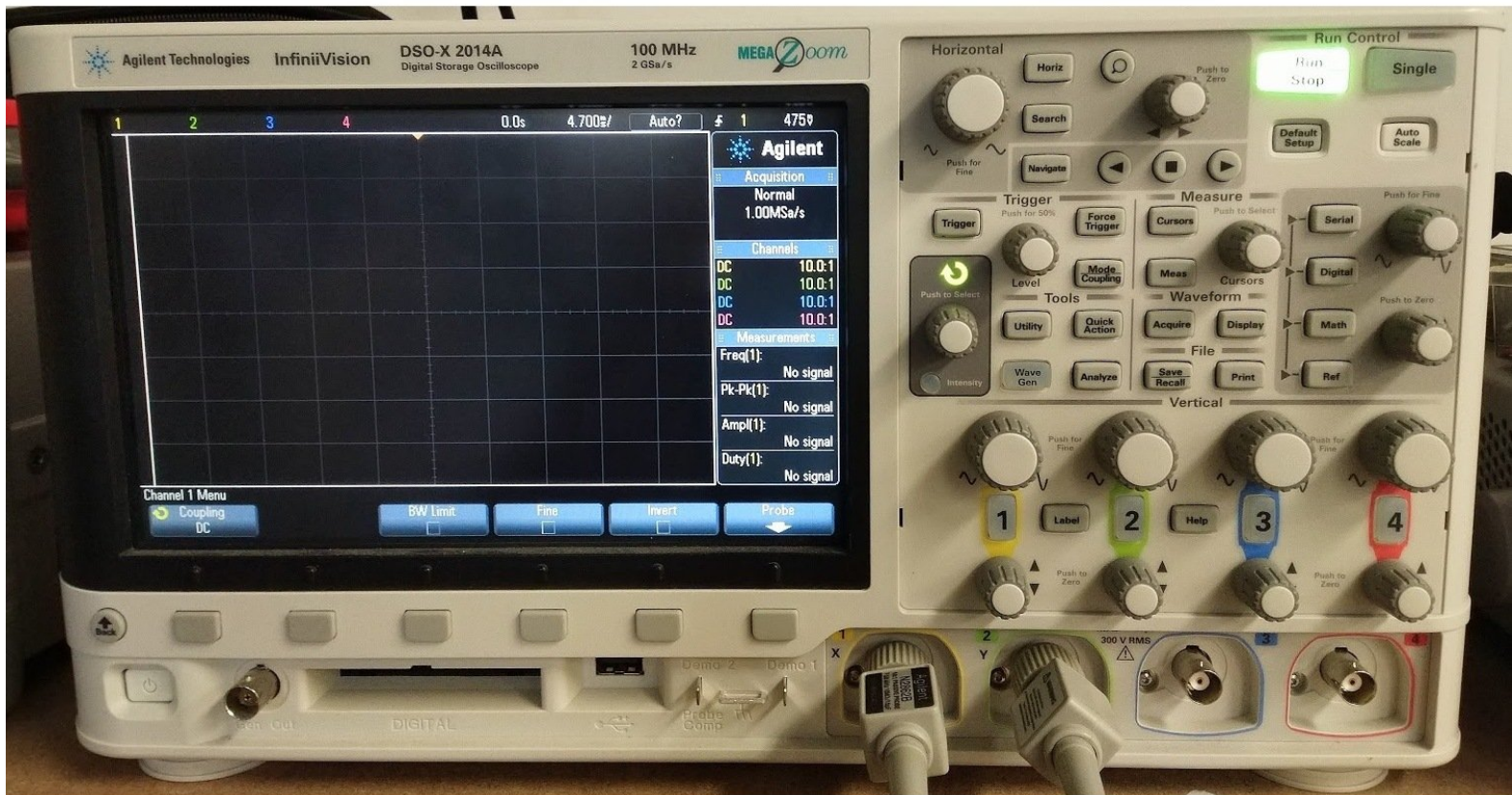




Oscilloscope Basic Usage

This guide will show how to use the Oscilloscope and cover basic measurement

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Introduction

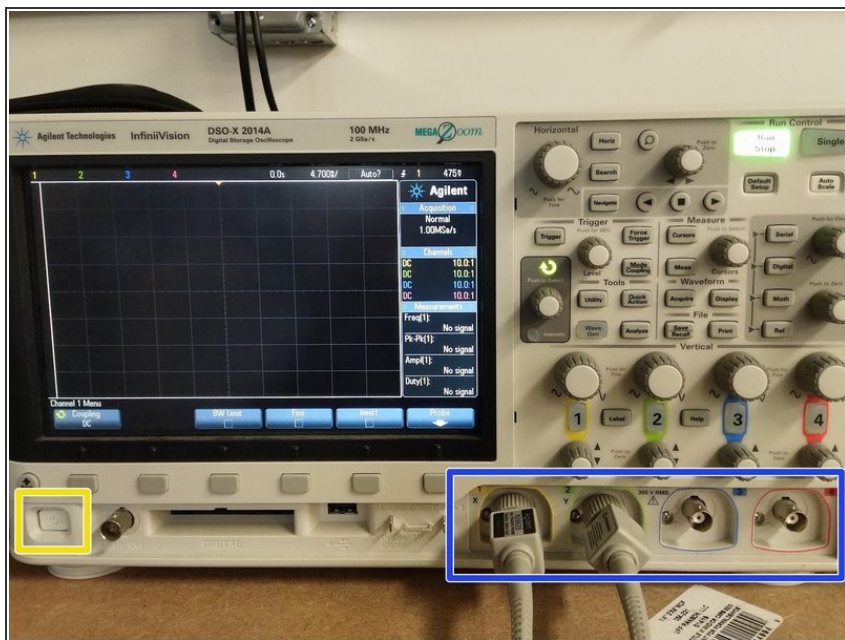
This guide will show how to use the Oscilloscope and cover basic measurement



TOOLS:

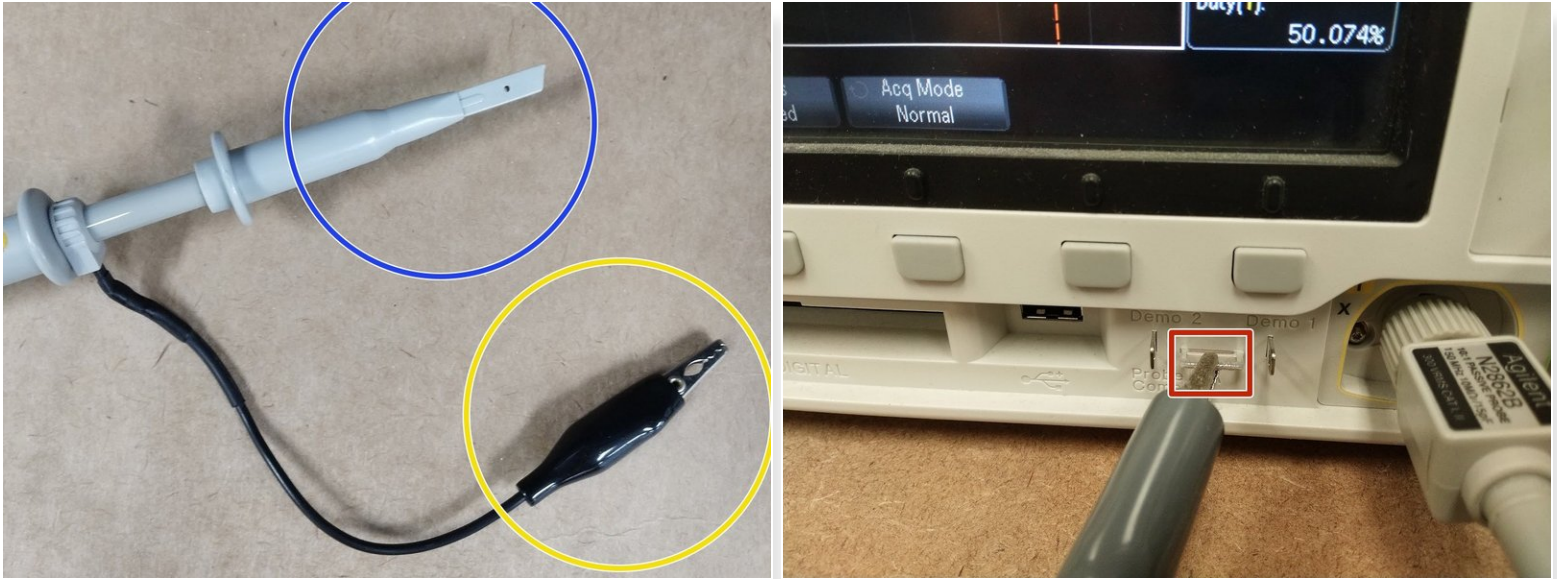
- [Keysight DSOX2024A Oscilloscope](#) (1)
-

Step 1 — Turning on the Oscilloscope



- Press power button in to turn the scope on.
- Connect probes by inserting into one of the four inputs and twisting clockwise until it clicks.

Step 2 — Probes



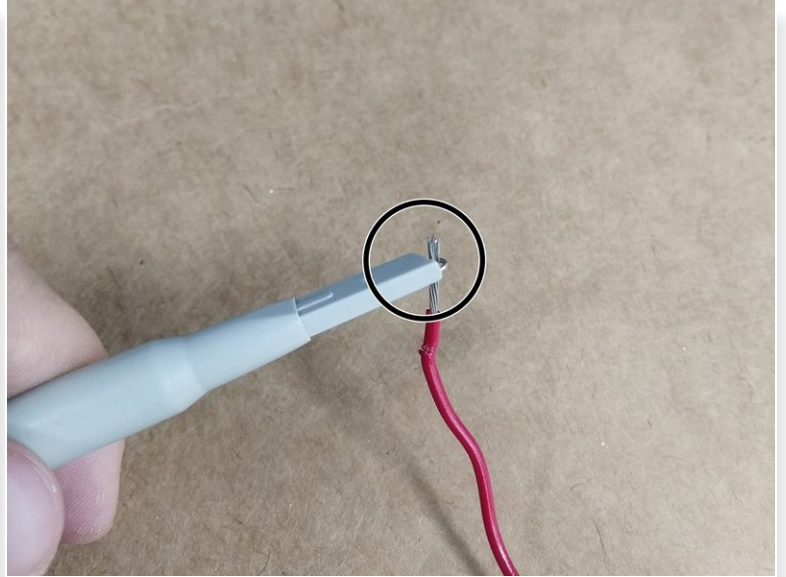
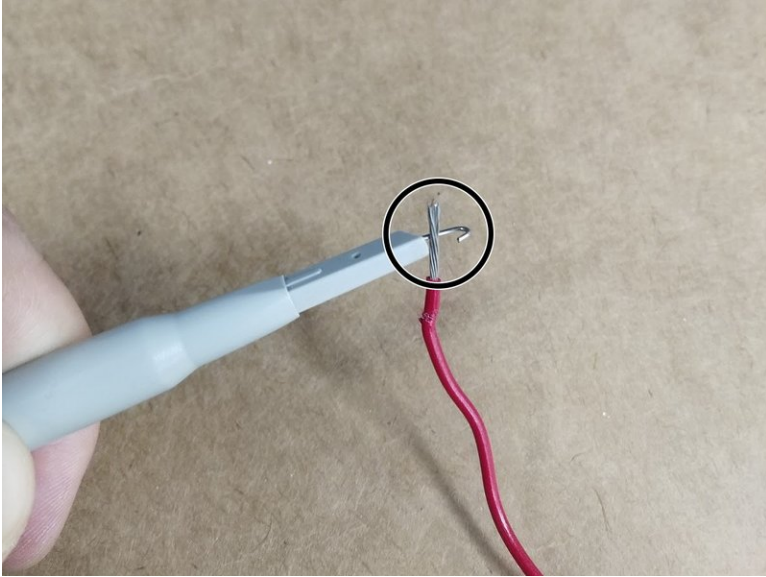
i An oscilloscope measure voltage across two points.

- Connect this part to the signal you want to measure.
- Connect this part to ground.

⚠ Each probe's ground is connected together so be careful not to create a short circuit when probing multiples parts of the circuit.

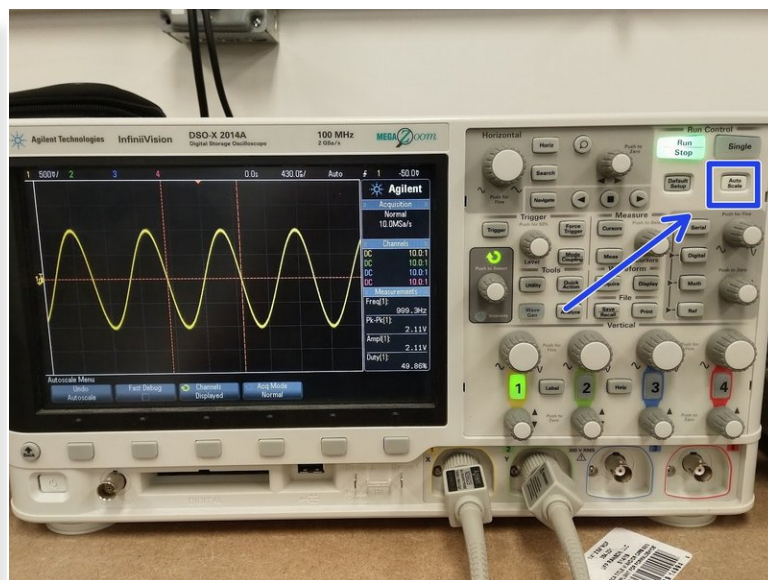
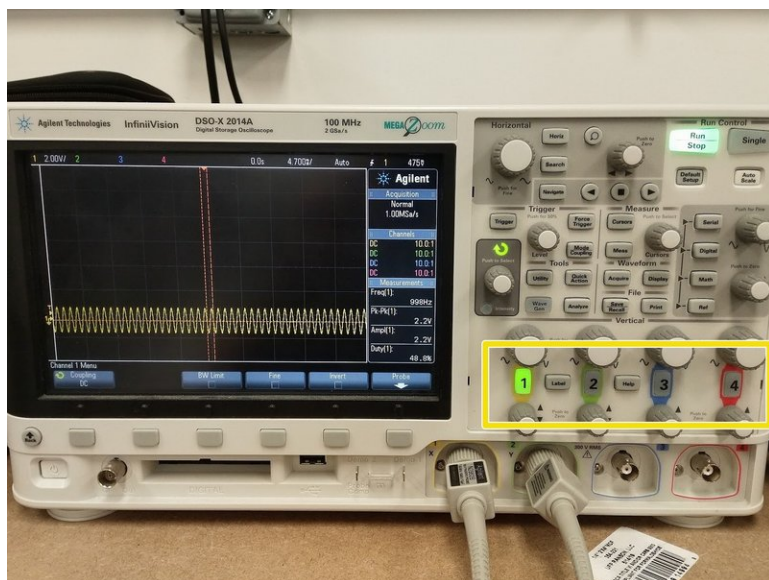
- If you need a ground to connect your circuit to, the oscilloscope has a built in ground located under the monitor.

Step 3 — Connect Probes to a wire



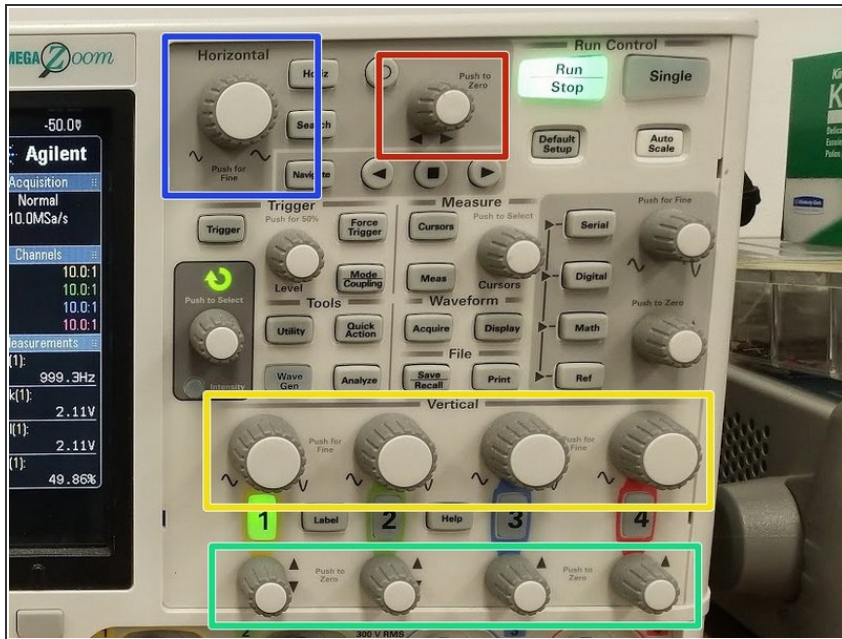
- Pull back the plastic cover of the probe to reveal a metal hook. Hook this around what you want to measure.
- ① You can also pull the plastic cover off to reveal a sharp point which can be inserted into the breadboard.
- Make sure you connect the black probe to ground.

Step 4 — Capture a signal



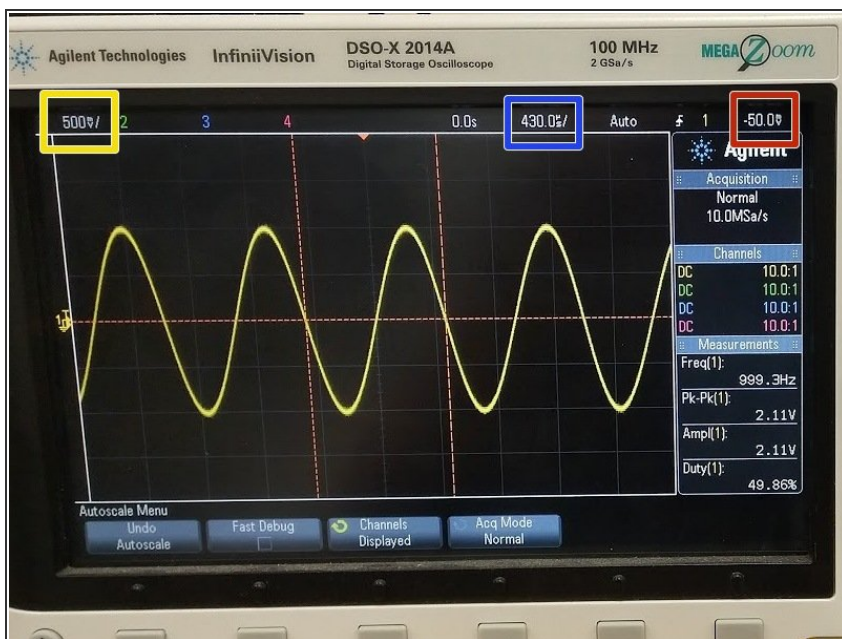
- Press the numbered buttons to show/hide the four inputs on the screen.
- Your signal may not be very clear initially. Most of the time pressing the auto-scale button will scale the signal so that it appears on the screen nicely.

Step 5 — Adjusting Scale



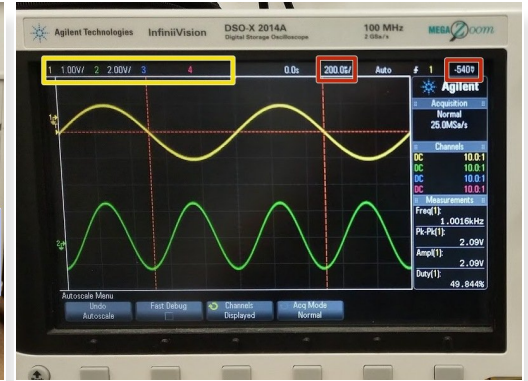
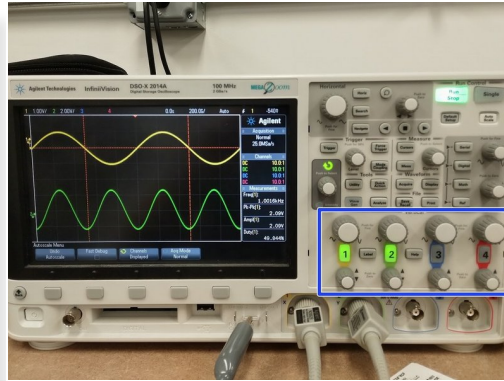
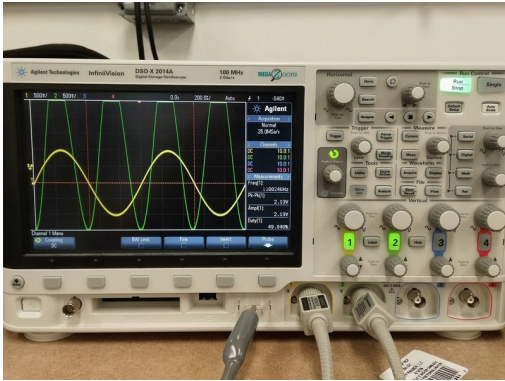
- i** You can also adjust the scale manually.
- Vertical Scale - Clicking the knob will toggle between fine and rough tuning.
- Horizontal Scale - Clicking the knob will toggle between fine and rough tuning.
- Vertical Offset - Clicking the knob will re-center the waveform.
- Horizontal Offset - Clicking the knob will re-center the waveform.

Step 6 — Scale



- i** Some scale information is located at the top of the screen, above the signal.
- Vertical Scale.
- Horizontal Scale.
- Horizontal Offset.

Step 7 — Adding more signals



i You can simultaneously measure up to four signals at a time.

- All signals have separate controls for vertical scaling and vertical offset, so that you can adjust them to be easier to read.
- Vertical scaling can be different for each signal.
- Horizontal Scaling and Horizontal Offset will be applied to all signals.