In this blog post, you will be exposed to the concept of a plotter driver. A plotter driver is simply a circuit that is present in most electronic devices such as laptops and routers. It's designed to provide a standard voltage on each pin, which enables electronic components on your circuit board to "see" what the voltage should look like at any given moment. Common applications of a plotter driver:

Some devices that use a plotter driver:

The following steps will help you understand the concept of a plotter driver.

NOTE: The above circuit consists of 12 parallel resistors. A parallel resistor is defined as two or more resistors connected together (in parallel) to form one single resistor. It is often used in parallel with another component such as a capacitor or transistor to form an RC network, also referred to as an RLC network (where L and C represent inductance and capacitance respectively). The purpose of using multiple resistors in parallel is to reduce the overall resistance of the network, and thus increasing the amount of current that can pass through it. A plotter driver is most often used in applications involving low voltages (V

NOTE: Since the two sets of resistors in this circuit are identical, we refer to them as 2x and 2y in order to clearly distinguish them from one another.

The following flow chart represents the basic concept of a plotter driver.

The following is a flow chart that demonstrates how a plotter driver works in addition to the voltage reference that powers it. Let's pretend that we have placed an Arduino into our circuit, with an attached USB cable connected to our laptop (USB is represented by dashed line). When we plug-in the USB cable and the computer turns on (this happens when we press "connect"), we will see two LEDs lit. This is because the Arduino's serial communication software (which controls the LEDs) is constantly monitoring voltage on each of its two pin ports. Since 16V is applied to the arduino, 4V is applied to each pin port. This causes both of our LEDs to light up. The Arduino board expects the amount of voltage on both of its pin ports to be 16V, so it will keep sending serial communication commands for both of its pins until the Arduino's software sees that all LED lights are lit. This process continues until we disconnect our laptop from the circuit by shutting it down or pressing "disconnect".

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