



## iXP1-500 Power Circuit

A lot of people are asking how we did it! The patent for the iXP1-500 is filed so we can disclose some information regarding the power circuit.



The iXP1 power circuit uses multiple resistors. Resistors restrict and direct the flow of electric current. In our circuit, resistors are used to direct current flow to particular parts of the circuit. They are being used to determine the voltage gain of an amplifier. The resistors control the signal to permit the iPad to charge. Most electronic circuits require resistors to make them work properly. This control of the current flow is exactly what the resistors in our circuit design are doing with the iPad to make it work properly with standard USB ports on desktop and laptop computers.

The type of resistors and the values of each resistor is very critical to the iXP1-500 power circuit design. A standard USB cable pin descriptions are shown in the chart below. For the standard USB cable to sync as well as to charge an iPad from a PC is problematic because of the voltage the iPad requires. Effectively by changing the USB cables electric circuit configuration of the attaching pins permits charging. The way the pins are wired from the male USB connector to the female USB connector of the iXP1-500 with the resistors is also required for the charge capability of the iPad by PCs. In addition the iXP1-500's power circuit permits car adapter and hubs to be used for charging as well.

**USB Pin Chart**

Pins	Name	Cable Color	Description
1	VCC	Red	+5 VDC
	D-	White	Data -
3	D+	Green	Data +
4	GND	Black	Ground