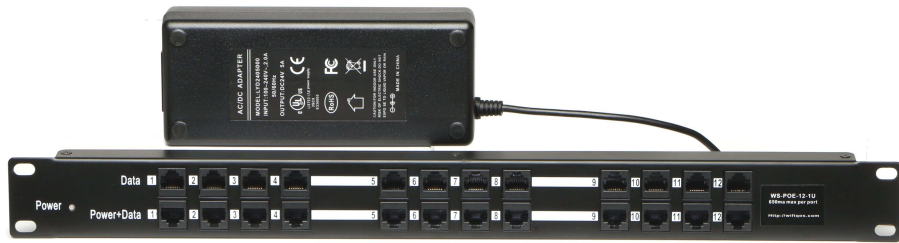


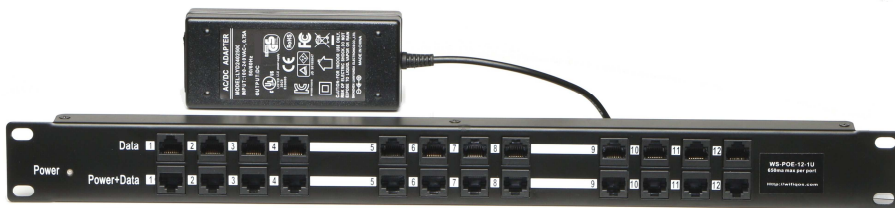


## Multi Port Passive POE injector

Using your WS-POE-12-24v power injector for 24 volt devices



120 watt kit



60 watt kit

Before plugging in your device – please check a few things – this device is mostly used for Mikrotik and Ubiquiti installations. If you are powering anything else – it might not work.

- Is this a VOIP phone installation? Almost nobody makes phones that operate from 24v via the Ethernet cable – most are 48v, we can exchange the power supply for you if needed.
- Which PoE ? Please see <http://wifi-texas.com> "Find a PoE" – you can enter your device and we will show you the PoE you need. Or contact us.
- This device supplies always on power to pins 4,5 (+) and 7,8 (-) from the DC jack on the back

We offer 56, 48, 24, 18, 15 and 12 volt power supplies – so if you need something else, please call.

WiFi AP's need from 3 to 15 watts each, with this injector, you can provide remote power up to 328 ft from the power source. If your device power supply says "24v .5 amp" that does not mean that the device needs 12 watts. Instead, that was the lower cost power supply available. For example, a Ubiquiti Nanostation needs about 6 watts – or .25 amps at 24 volts.

If the device shows "12v, PoE" on the data sheet – this usually means that the device uses 12v when powered from a transformer – and 48v when powered via CAT-5. So 24v on the Ethernet cable will not light up the device.

Connect each LAN port to your Ethernet switch. This device does 100mb max – so if there is no data sync on a gigabit Ethernet switch – try a 100mb switch or set the port to 100mb max.

If you need gigabit Ethernet or 802.3af or 802.3at – please see our WS-GPOE products

Connect each POE side to your device – it should power up and connect – and you are all set.

URL: <http://wifiqos.com/> Skype:wifiqos

## How PoE works

A device needs power to operate. Not volts or amps – power expressed as watts.

That power can be supplied at different voltages. The electronics inside the device needs usually about 3.3 or 5 volts. But at low voltages, the wires from power supply have a lot of loss beyond about 5 feet.

So for short distance power, most devices are shipped with a 5v or 12v power supply because low voltage supplies are cheap. But a device that can be powered via the Ethernet cable at 24 volts, can be 328ft distant without problems.

So a 12v 1 amp power supply for local power – when using PoE at 24v – translates to 24v .5 amps for the same power

## Here is why 24v is used on Ethernet cables

The device needs power – a camera needs about 5 watts. So at 12 volts – that is .4 amps. The power cord in the 12v supply is very short – say 6 feet. The loss in 6 ft of power cord is about 20 milliwatts – not a problem. Power loss is the current squared times the distance.

If we use 24 volts – the power is the same, but the current is lower – about 200 milliamps. But an ethernet wire can be up to 328 ft – so the loss is 50 times greater than at 6 ft, but since the current is 2 times lower – the power loss ( a square of the current) is 4 times lower – the loss in the cable is about 500 milliwatts. At 12 volts and 328ft – the cable loss for a 5 watt device would be 8 watts !

<http://wifigos.com/poe-calc.html> allows the values to be simulated

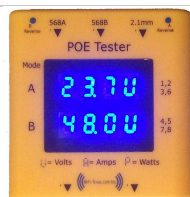
## Is 60 or 120 watts going to damage my device?

No. High **Voltage** can damage a device, because if the **voltage** is higher than allowed, the circuitry in the device “breaks down” **drawing** a lot of **power**, and that power will melt things. But at any allowed voltage – the device takes only the power it needs to operate - you cannot “push” power.

## Other Products from WiFi-Texas



12 and 16 port rack mount  
10/100mb or gigabit



PoE Tester



5v, USB and 12 volt active  
splitters

**WiFi-Texas.com inc** 815-A Brazos #326 Austin Texas, 78701 **tel: 512-479-0317**