

# 1 K4 FLIP

# DIGITAL BALLAST

Installation and Operating Instructions

August 1, 2012

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## START Here

The 1K4 Flip ballast can run four 1000 Watt lights at a time and has a built-in flip box to allow you to run two rooms on a single ballast. Hooking up the ballast is as simple and connecting power, plugging in your trigger cord and connecting the lights.

## Power, Ground and Reset

Incoming power to the 1K4 is connected to the three screw terminals at the bottom of the ballast as shown in the photo to the right. Use #10 AWG copper wire and connect to a 30 Ampere two-pole circuit breaker.

240 volts AC goes to the first two as shown, and safety ground goes to the terminal on the right that has the Ground symbol.

Ground is very important and is connected to the case of the ballast to prevent electric shock.

The RESET circuit breaker protects the ballast against overload conditions. Press it in to reset it, but try and find out why it popped.



## Best Practices

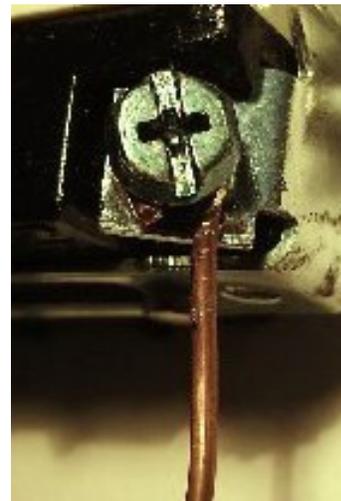
Make sure to:

1. Tie the lead down to the wall with a cable clamp
2. Close clear plastic safety cover – it's 240 volts!
3. Make a complete circle under the screws with the wire (see photos)

## BAD WIRING



## GOOD WIRING



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## Trigger and Flip

The 1K4 will start lighting bulbs as soon as you energize the TRIGGER input with 120 or 240 volts AC. This is the input that says “light ‘em up”.

Lights plugged into the outputs labeled **Normal** will come on in random sequence over a period of 90 seconds.

Unplugging TRIGGER turns all lights off immediately.

Energizing the FLIP input with 120 or 240 volts AC will ask the ballast to switch to the alternate set of outputs, labeled **Flip** in the photo. This change will begin 2 seconds after energizing FLIP unless the bulbs are hot. If you are flipping back to a set of hot bulbs, the 1K4 will wait 5 minutes to let the bulbs cool before initiating the flip.



## Dimming

The front panel of your 1K4 has individual dimming controls for 100%, 75% and 50% lamp power. You can use these settings to dim a 1000 Watt bulb as needed for your growing conditions.



PurGro does not recommend using any size bulb on this 1000 Watt ballast other than a 1000 Watt Metal Halide or HPS bulb.

# Troubleshooting

Before you call, read this section first. We're gonna ask you these questions anyway.

- **Totally dark. No lights, no fans, nothing.**

Check 240 volt incoming power with a voltmeter, and verify your TRIGGER cord is plugged in and that there is 120 volts there. Make sure your connections are solid. If it's been longer than 5 minutes, check the fuse under the cover of the TRIGGER input plug.



- **240 volt power is good, fans come on with TRIGGER, but LED is dark, lights are off.**

Ballast has probably acquired too many faults and has shut down. Check power, TRIGGER and make sure all lights are plugged in. Power the ballast off (both 240v power and trigger and flip), then power back up and try again.

A bad or arcing breaker will cause the ballast to not turn on either. CHECK the breaker feeding the ballast to make sure it is in solidly. An arcing breaker will cause no end of trouble. Try another breaker if 240v reads ok.

- **FLIP doesn't work.**

Be patient. If you are asking to flip to a set of bulbs that the 1K4 knows was hot, it will wait 5 minutes before switching to protect both the ballast and your bulbs. If it's been longer than 5 minutes, check the fuse under the cover of the FLIP input plug.



- **LED flashes once a second**

Over or under voltage. Check 240 volt input and make sure the breaker feeding the ballast is in solidly. An arcing breaker will cause no end of trouble. Try another breaker if 240v reads ok.

- **LED flashes every two seconds**

Open (no bulb) or shorted socket. Ballast will retry in 1 minute, and will attempt to restart 50 times. If it still can light the bulb, LED will go dark and ballast will not try again until power is cycled off then back on.

- **LED flashes every three seconds**

Over-temperature. Wait for ballast to cool. Make sure you have enough air circulation.