

# INSTRUCTION MANUAL

# PHANTOM

Ballast® COMMERCIAL DE



Phantom ballasts are designed and built for commercial growing environments.

**PHB3010**



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## THE PHANTOM BALLAST

**COMMERCIAL DE** is an ideal ballast choice for efficient growing. It was created with state-of-the-art microprocessor technology to utilize the industry's double-ended 1000W HPS lamps. It operates on a 120-240V, 50/60 Hz power supply.

### WARNINGS

- Use this ballast in greenhouses or indoor applications only. Position it in an area away from excessive heat or contact with liquids.
- This ballast does not rely on the luminaire enclosure for protection against accidental contact with live parts.

- For remote operations, use this ballast with a maximum lamp cord of 15 feet.
- Disconnect the ballast from the power supply before performing any maintenance, lamp changes, or other modifications.
- Contact the retailer or distributor for service if the ballast does not work after confirming the power connection, output connection, and bulb operation.
- Opening the ballast will void the warranty.
- Lamps with built-in ignitors will not work with this ballast. Not for use with external ignitors.



**ALWAYS DISCONNECT BALLAST'S POWER CORD BEFORE MOVING THE UNIT OR CHANGING LAMPS.**

## ELECTRICAL SPECIFICATIONS

Model	Main Voltage	Operating Voltage Range	Max Input Power	Output Power Settings	Power Factor	Ignitor Voltage	THD	CF	ta	tc
PHB3010	120-240V	108-264V	1243W	Super/100%/75%/60%	> 0.98	4.0 KV	< 8%	1.414-1.6	40°C/104°F	70°C/158°F

## INPUT AMPERAGE REFERENCE

Model	I <sub>max</sub> 120/240v	Super Boost 120/240v	100% 120/240v	75% 120/240v	60% 120/240v
PHB3010	10.5/5.2	10.3/5.1	8.9/4.5	6.7/3.4	5.4/2.7

## BALLAST LED STATUS INDICATORS

STATUS	DIMMING BUTTON	SELECTED POWER LED
Warm Up	On	Slow Flash
Normal Operation	On	On
Stand By	Slow Flash	Slow Flash
Ballast Fault	Off	Off
Lamp Fault	Off	Rapid Flash
End of Life Lamp Indicator	Rapid Flash	Off
Connection Error	Flash x 1	Off
High Impact Voltage	Flash x 2	On
Low Impact Voltage	Flash x 3	On
Over Temperature	Flash x 4	On

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## INSTALLATION AND CONNECTION

For proper lamp break-in, we recommend that you run the ballast and bulb at 100% power for at least 12 straight hours after initial startup. This will improve lamp life and performance.

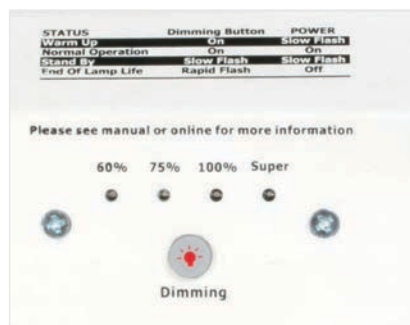
1. Find a suitable location for the ballast with sufficient cooling and away from any heat source.
2. Install the lamp firmly into the lamp socket of the reflector and connect the Lock & Seal lamp cord to the ballast.
3. Remove the power cord from the box. Plug the power cord into the power input panel on the side of the ballast.
4. Plug the power cord into the power source (electrical outlet).
5. Once lamp has fired, set your desired dimming ratio. Please note that the ballast dims or raises output gradually to protect the lamp, so you might not see an instant increase upon changing your output percentage.

## MOUNTING THE BALLAST ON THE WALL (FOR REMOTE OPERATION)

- Remove the mounting screws and wall mount template from the hardware bag.
- Using the template, mark the mounting screw positions on the wall. It is recommended that the screws be mounted in a wall stud. If that is not possible, please use drywall anchors rated for at least 15 pounds.
- Install the screws into the stud. Use the end of the template as a depth gauge to install to the proper depth.
- Slide the ballast onto the screws.
- We recommend that you mount the ballast vertically, with the output connector towards the bottom, for optimal cooling.

## DIMMABLE NOTES

- When starting a cool lamp, the ballast will apply 100% power for 15 minutes to properly heat the gasses in the lamp. The dimming feature will not operate during this initial start-up period, but you can preset the dimming ratio during this time without impacting the warm up. After the warm up is complete, the ballast will run at the set dimming ratio.
- Press the dimming button to cycle through the dimming levels (**image below**). The appropriate LED indicator will light up to indicate selected dimming level (60%, 75%, 100%, Super).



- This ballast has built-in hot-restrike programming to protect the lamp and ballast in the event of the ballast turning off unexpectedly. The ballast will not attempt to restart a hot lamp for at least 15 minutes. If your lamp fails to start immediately, **DO NOT cycle the power on and off**. This can damage the lamp and ballast. If after 30 minutes your lamp is still not lit, shut off power to the ballast, and reconnect. This will begin the startup sequence again.
- There are three ways to utilize this ballast. Simply sit it on the floor in a convenient location; use the holes in the end plate flanges to hard-mount the ballast into place with included lag bolts; or hang the ballast with attached reflector (instructions included with reflector).

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## DEFINITION OF TERMS

- **Main Voltage** – Rated input voltage range for the ballast.
- **Operating Voltage Range** – The acceptable operating range for input voltage to the ballast. Deviations from the rated numbers may result in decreased ballast performance and additional case generated heat.
- **Max Input Power** – Maximum possible wattage draw of the ballast.  
Amperage – Input current or draw.  
Power Factor – A measurement of how effectively the ballast converts electrical current to useful power output, in this case, output to the lamp. Power factor is measured between 0-1; the closer you get to 1, the more effective the circuit is said to be. The ballast's power factor is greater than .99.
- **Ignitor Voltage** – Ballast output during ignition sequence.
- **THD (Total Harmonic Distortion)** – A measurement of all harmonics present in

a circuit. The higher the number, the more stress is applied to internal parts, the lamp, and the power grid. Generally, a number below 10% is considered desirable in an electronic ballast application.

- **CF (Crest Factor)** – A measurement of how "clean" the ballast power output wave is. A perfectly clean output sine wave would have a CF of 1.414. Given that some harmonics must exist in an electrical system, the crest factor must always be higher than 1.414. Therefore, the closer the ballast is to a CF of 1.414, the easier it is on the lamp.
- **ta (Ambient Temperature)** – Maximum rated ambient temperature for the ballast area. Excessive ambient temperature can result in ballast failure, safety shutdown, or lamp failure.
- **tc (Case Temperature)** – Maximum temperature that the case of the ballast should reach. If the case temperature exceeds this number, the ballast may be malfunctioning or the ambient temperature may exceed the rating.

**This Product May Cause Interference To Radio Equipment And  
Should Not Be Installed Near Maritime Safety Communications  
Equipment Or Other Critical Navigation Or Communication  
Equipment Operating Between 0.45-30 Mhz.**



## WARRANTY

This product is warranted to be free from defects in materials and workmanship. The warranty term is 3 years beginning on the date of purchase. Misuse, abuse, or failure to follow instructions is not covered under this warranty. This warranty also does not cover any labor associated with installation or removal of the ballast. We will, at our discretion, repair or replace the ballast covered under this warranty if it is returned to the original place of purchase. To request warranty service, please return the ballast, with original sales receipt and packaging, to your place of purchase. The purchase date is based on your original sales receipt. For more detailed warranty information, visit our web site.