Installation/Operating Instructions

Phantom Video Projector Lift for Tabletop Installation by Draper

These Installation/Operating Instructions are available in the official language of the country where you purchase the product. Please contact your distributor to request a copy.

You pouvez demander les instructions d’installation et d’opération traduites dans la langue officielle du pays ou vous achetez le produit. Veuillez demander à votre distributeur.


Important Safety Instructions

- Read instructions completely before proceeding.
- Follow instructions carefully. Installation contrary to instructions invalidates warranty.
- Do not obstruct operation of the lift with fingers or any other object. Serious injury or damage could result.
- Before putting this unit into regular use, the Obstruction Shutoff sensitivity must be adjusted using a GUI program available for download at www.draperinc.com/go/Phantom.htm. A Windows PC or laptop is required to operate the GUI program.
- Unit must be installed level (use a carpenter’s level).
- Unit operates on 24V DC.

Note: Unit has been thoroughly inspected and tested at factory and found to be operating properly prior to shipment.

Caution

- Do not use this apparatus near water or moisture—for example, in a wet basement, near a swimming pool, etc.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources, including radiators, heat registers, stoves, or other equipment (including amplifiers) that produces heat.
- Only use attachments/accessories specified by the manufacturer.
- Unplug the apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, including but not limited to: power supply cord or plug cut, frayed or otherwise damaged; liquid spilled/objects fallen into the unit; exposure to rain or moisture; unit not operating normally; or unit has been dropped.

WARNING/AVERTISSEMENT

This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock. Where in a manufacturer’s service documentation, for example in circuit diagrams or lists of components, a symbol “△” is used to indicate that a specific component shall be replaced only by the component specified in that documentation for safety reasons.

When apparatus operation and installation instructions contain instructions for use by service personnel, such instructions shall be separate in format from other instructions and preceded by the word “CAUTION” and the following or the equivalent. “These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.”

The unit shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the unit.

installing unit

The Phantom is provided with four (4) mounting points.

Planning

1. Based on screen location and projector specifications, determine proper position for projector installation.
2. Confirm that there is adequate space for installation and operation.
3. Arrange to provide service access to the unit.
4. Total lifting capacity of lift is 26 lbs (11.8 kg), including projector and closure panel.
5. The Tabletop Phantom comes with an Obstruction Shutoff feature. After installation the sensitivity of this feature must be adjusted using a GUI program (for Windows PC or laptop) and a Serial Programming/Control Kit (included).

As Soon As Phantom Projector Lift Arrives

1. Open carton and inspect for damage.
2. Locate the following parts:
   A. The unit itself
   B. Controls
   C. Serial Programming/Control kit
   D. Any optional equipment
3. Test unit before installing.
4. Top of unit must be unobstructed after installation.

www.draperinc.com/go/Phantom.htm. A Windows PC or laptop is required to operate the GUI program. For installation the sensitivity of this feature must be adjusted using a GUI program (for Windows PC or laptop) and a Serial Programming/Control Kit (included).
Electrical Connections

Unit operates on 24V DC.
The Phantom is shipped closed. **Please note:** Make sure electrical supply has been disconnected before attempting to connect Phantom to electricity.

Connections should be made in accordance with wiring diagram, and wiring should comply with national and local electrical codes. All operating switches should be "off" before power is connected.

110V or 220V AC for projector must be supplied by others. Phantom should be operated and checked prior to installing projector.

Operation

Unit is automatically supplied with a DC Motor Control and a three-button up-stop-down wall switch. When unit is first operated, be cautious! If unit fails to operate when the "up" button is pressed, press "off" and recheck electrical connections before proceeding. Cycle unit down and up several times to confirm satisfactory operation.

DC Motor Control (CE Approved)—In addition to standard wall switch and Obstruction Shutoff adjustment, allows optional remote control, RS232 or Ethernet connection. Included as standard.

Optional Infrared or Radio Frequency Remote Control (CE Approved)—A three-button transmitter is provided, with "up", "down", and "stop" buttons. Unit starts opens or closes when appropriate button is pressed, and may be stopped by pressing "off" button. When using RF or IR control, a three-button up-stop-down wall switch is also recommended and optionally available.

Optional RS232 (CE Approved)—Serial communication optionally available with wall switches, RF or IR remote.

Optional Ethernet (Not CE Approved)—Network communication optionally available with wall switches, RF or IR remote.

Phantom Tabletop—Dimensions

Please note: non-bracketed dimensions are for Model A; bracketed dimensions are for Model B.
**Projector Installation**

The Phantom video projector lift uses the Skyhook projector mount system. The parts kit contains:

- Two long skyhook arms
- Four short skyhook arms
- Four M3, four M4, four M5 & four M6 mounting bolts (30 mm)
- Four spacers (1/2" [12.7], 5/8" [15.875], 3/4" [19.05], 7/8" [22.225 mm])

1. Determine which size mounting bolts suit your projector, and set others aside. They are no longer required. If your projector has only three mounting holes, set aside one of the skyhook arms.
2. Assemble the universal mount (see diagram at right) using arms appropriate to projector. Spread out the arms so each end is over one of the mounting holes.
3. Connect universal mount to Projector. Fit the 1/2" (12.7 mm) spacer under the lowest arm, the 5/8" (15.875 mm) under the next arm and so on. If the projector base is uneven, you may use combinations of spacers and arms to ensure the triangular plate is horizontal.
4. Do not tighten any bolts yet.
5. Move the position of the triangular plate over the center of the projector, with the edge with the two holes towards the front (lens).
6. Tighten the mounting bolts. The projector and universal mount are ready to be inserted into the Phantom. Please note the projector will be in the upright, or desktop, mode.
7. First ensure that the Phantom is operating correctly, and that the projector cables are properly secured. Open the Phantom and insert the triangular projector plate into the slot in the rear of the Phantom. Attach it at the front using the supplied ¼" (6.35 mm)-20 bolts and springs.
8. These bolts will also give you Roll and Tilt adjustment to align your image on the screen, while the center 5/16" (8 mm) bolt provides Yaw adjustment. The springs will ensure that the projector is held still during motion. Do not install the projector plate without springs.

**Cable Management**

A cable exit hole is pre-drilled in the bottom panel. Make sure to leave enough slack in the cable to account for the motion of the Phantom during operation.

**Closure Panel Installation (by others)**

The Phantom comes with four 1" sections of hook & loop attachment strips for attachment in all four corners of a closure panel (provided by others). Please note the following when installing a closure panel:

1. Please use the hook & loop attachment system for attaching the closure panel to the Phantom. This provides a safety back-up in case fingers or other objects are caught between the closure and the tabletop when the closure closes. The hook & loop attachment strips will separate, leaving the closure panel loose and preventing pinching or injury.
2. Remember that the total weight of the projector, bracket and closure panel cannot exceed 26 lbs (11.8 kg).
3. Be sure to leave enough space between the edge of the closure and the surrounding tabletop to allow the closure edge to clear the table during opening and closing of the closure. There should be a minimum gap of 3/16".

Making your own closure panel to match surround cabinet or furniture:

Phantom A — ½" thick x 15½" x 15½"
Phantom B — ½" thick x 19½" x 19½"

Custom panel should be same size. The weight of the panel needs to be factored in for the total weight. See 1 above. Hook & loop attachment strips must also be used to attach custom closure to the Phantom (see 1 above).
Please Note: When you press a program button on the GUI, you must watch for the result. This button on the GUI may have to be pressed many times.

Adjusting Obstruction Shutoff Sensitivity

The Obstruction Shutoff feature stops the unit if its operation is obstructed. For this feature to work properly, its sensitivity must be adjusted.

This is the final stage of installation. Projector and closure panel must be installed before adjusting the sensitivity of this feature, and it must be reset if changes are made in the projector or closure panel in the future.

* Please Note: To adjust this feature, you must use the Serial Programming/Control Kit (provided). This feature is used to adjust the unit’s sensitivity to an obstruction before it stops the lift from closing.

1. Download Obstruction Shutoff Adjustment GUI Program from [www.draperinc.com/go/Phantom.htm](http://www.draperinc.com/go/Phantom.htm) and install on your PC/Laptop.
2. Connect your PC/Laptop to the Phantom, as shown in figure below.

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- **Launch the GUI program on your PC/Laptop so that you see the diagram to the right.**
- **Operate the Phantom “open” and “closed.”**
- **Adjust the sensitivity of the “Open” function. This will set how much weight it takes to keep the unit from opening. Starting with the “Low Threshold” button beneath the “Open Direction” heading in the GUI window, use the “Threshold” buttons until the unit does not open (use the remote to try and open after each adjustment—if it opens, close it and go to the next button). Then use “Nudge Stall Current Higher (Less Sensitive)” button until the unit opens normally to see result. This button on the GUI may have to be pressed many times.**

**Please Note:** When you press a program button on the GUI, you must watch for the “Program Light” on the DC Motor Control to light up to verify that it received the command.

- **Repeat step 4 for the “Close” function, using the buttons beneath the “Close Direction” heading. This will set how much pressure the unit will exert on an obstruction before it stops operating.**

**Caution:** Once the sensitivity is set as outlined above so that the unit operates, it can be adjusted according to the situation and preferences of the installer/end user. While adjusting the “Closing” sensitivity, **DO NOT** use your hands, fingers or other body parts to test the setting. If the Obstruction Shutoff is engaged, the motor can be reactivated by pressing the “Up” or “Down” button on the control switch.

**Please Note:** The unit may stall if the motor becomes overheated during this procedure, causing a false sensitivity setting. Once the sensitivity has been set, leave unit to cool for several minutes, then test. You may need to set the sensitivity more than once.

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Phantom Tabletop Wiring Diagram

DC CONVERTER

OUTPUT: 24 VDC

2.5 Amp

AUX PORT: For connecting multiple controls together. (up to six total-connect from AUX to Eye).

DASHED LINES INDICATE WIRES PROVIDED BY INSTALLER

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Please Note:

Cable used to connect to the Eye jack must be **electrically straight** 6-conductor modular cable (RJ25). This means colors do not cross over: blue leads to blue, green to green, etc. (see diagram below).