

**SAFETY!**



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- 1) Read and understand instructions and heed warnings before beginning installation.
- 2) **Mount rail securely. The lens is heavy, and requires a secure and stable surface. Fasteners in sheetrock alone are not safe. Reciprocal lens motion can and will work them loose. Use a board, plate, or projector mount fixed to ceiling joists or studs.**
- 3) **Ladder caution: Exercise extreme caution when working on a ladder. Do not work directly above another person, particularly a child. Plan all work carefully. Accidentally dropping a drill, hammer, or the lens assembly can cause serious bodily injury.**
- 4) **Unexpected lens movement: Anticipate all lens motion. A malfunction can cause the lens to move unexpectedly. While on a ladder, do not stand in direct path of lens in case of unexpected or accidental movement. Disconnect power when installing, working on, or repositioning the lens.**
- 5) **Indoor use only: Do not install lens in a wet or moist environment, or where the mechanism will be exposed to extreme or external weather conditions.**
- 6) **Object and liquid entry: Never pour any liquid or push any object into the enclosure.**
- 7) **Power Sources: The power adaptor is intended for 100- 220 volt, 50-60 cycle AC power only.**
- 8) **Power Cord: Do not subject power cord to conditions which will wear through or cut the insulation. Avoid excessive tension or chafing of the cord.**
- 9) **Service: Do not service the motor drive or electronics. There are no user serviceable parts. Contact your dealer. Send only to a factory approved facility. Opening the case will void the warranty.**



This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

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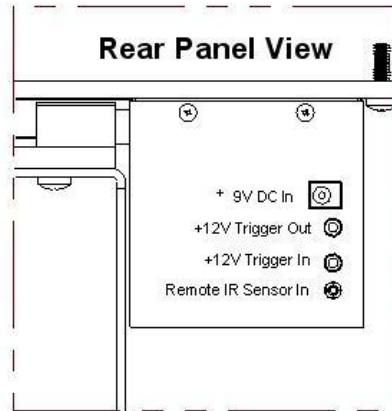
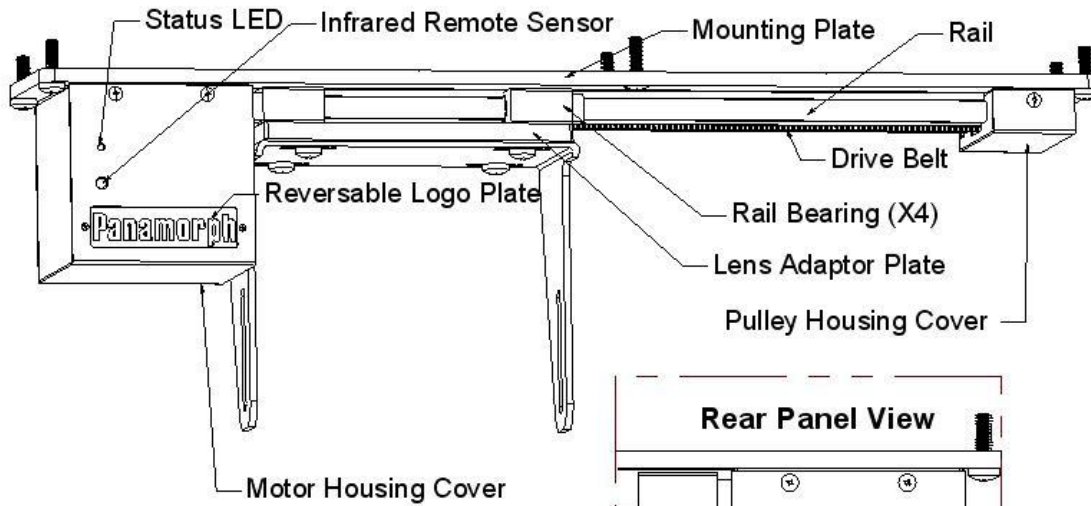
# 1 Introduction

Congratulations, and thank you for purchasing a quality Panamorph product. Your lens motor/sled is outfitted with a custom mechanism designed exclusively for use in the home theater environment. No oil or liquid based lubricants are used to assure the maximum cleanliness of optical components. Both lens and drive will provide years of maintenance free service. The Panamorph system is built and tested in the USA to the strictest quality standards and certifications.

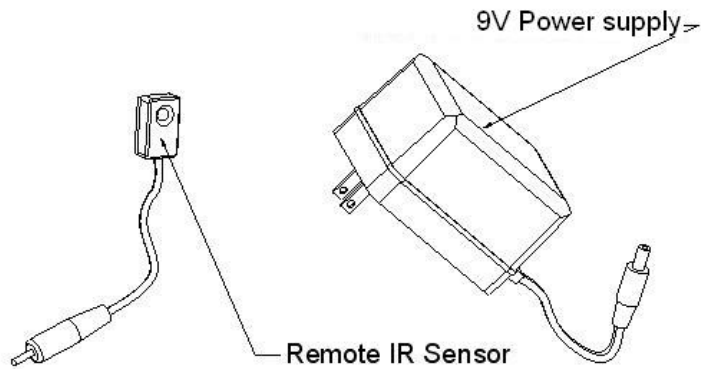
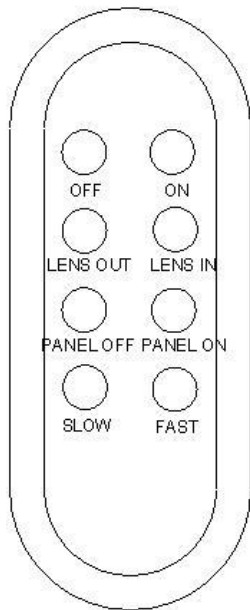
Features and benefits:

- Easy, straight forward installation and operation
- Machined, high grade, anodized aluminum components
- Repeatable precision positioning system
- Flexible mounting options allowing table or ceiling mount
- Speed selector for high or low speed operation
- Configurable “lens in” position
- Extra external IR sensor for remote mounting (if needed)
- Input 12V jack for automatic lens trigger
- Output 12V jack for screen masking trigger
- Non mechanical long life optical stop sensors
- Dry operating precision linear bearings
- Heavy duty high precision NEMA 23 stepper motor
- Custom built, low noise stepper drive circuitry and firmware
- Endurance tested to over 2,000,000 traversals
- 8 button long range remote control (up to 50 feet) with discrete functions
- Backlit logo with on/off lighting control
- Reversible logo plates
- Completely maintenance free
- USA built and tested
- FCC, CE, and UL certified

## 2 Getting to know your motor system



8 Button Remote Control



## 3 Plan your installation

The lens assembly may be mounted in one of two ways:

- 1) To the ceiling or projector mount above the projector
- 2) To a shelf or table below the projector



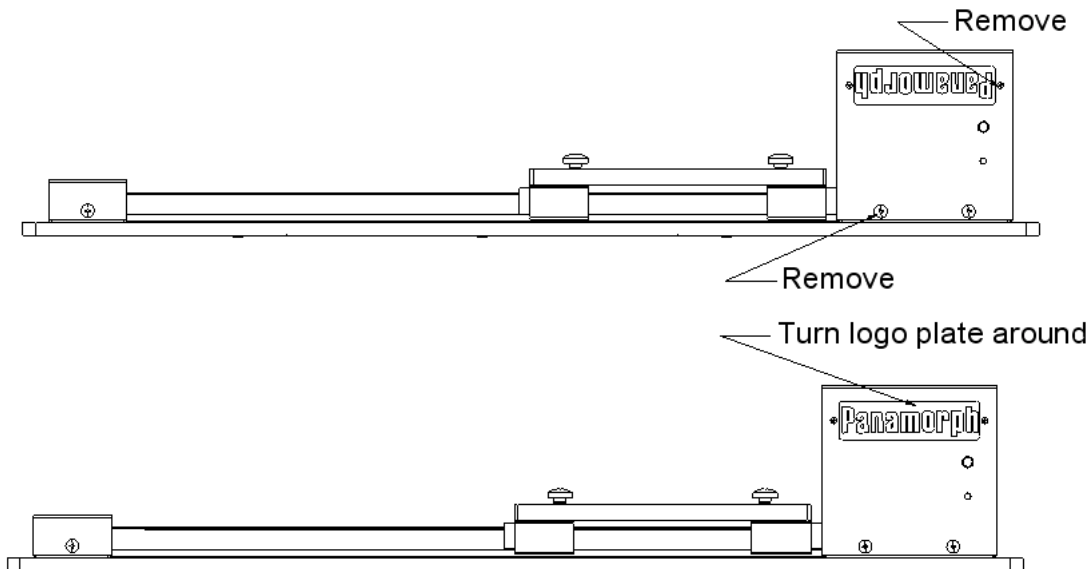
***When attaching motor assembly to the ceiling, use a board, plate, or lens enabled projector mounting attached to the ceiling joists or studs. Sheetrock embedded fasteners can and will work loose with repeated lens movement causing the mechanism to fall, resulting in possible severe injury.***

### **Changing Orientation of Logo Plate (optional)**

As shipped, the lens sled is configured for ceiling mounted operation. As such, the logo reads right side up with the mounting bar on top. If you are using the sled in a table or shelf mounted configuration, you may want to turn the logo around so that it is right side up with the mounting bar below the projector.

To reverse the logo, remove the 4 screws securing the motor housing cover. Lightly spread the sheet metal cover and lift it off. Once removed, you can easily access the logo plate. Remove the two small screws securing the logo plate, turn the plate around, and re-install the screws. Install the motor cover housing back on the sled with the original screws.

In addition, the logo backlight may be turned off using the remote control. An alternative to reversing the logo plate is to simply turn off the back light to make the logo less conspicuous.



## 4 Mount M380 to shelf or ceiling

A Panamorph mounting plate system is recommended. Follow instructions included with the mounting plate. Otherwise, follow the directions below.



When installing the M380, first mark screw locations using only the sled, without the lens and/or the lens bracket in place. **Do not rely on fasteners embedded in sheetrock alone. Reciprocal lens movement can and will work them loose and cause the mechanism to fall. Mount the M380 on a plate, board, or lens enabled projector mount affixed to ceiling joists for safety.** Once the sled is secure, attach the bracket to the lens adaptor plate. Then, only after properly aligning and positioning the bracket, power up the sled and check alignment again. Then, attach and adjust the lens to its correct angle and vertical position.

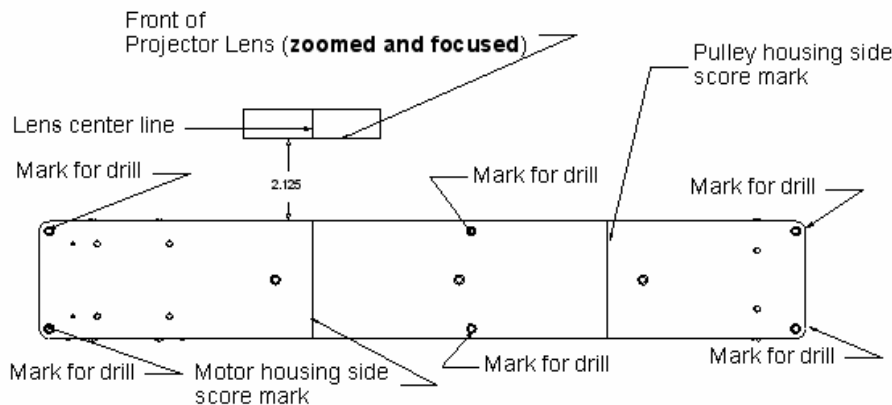
Follow this procedure:

### 1) Line up center line of lens



There are score marks on the back of the mounting bar that correspond to the center of the UH380 expansion lens as depicted below. **Before beginning, the projector must be correctly focused with the zoom and iris set in their viewing positions.** This will assure that the front of the lens is positioned correctly. Hold the motor/sled up to the projector and determine if the LENS IN position will be on the motor housing (logo side) or the pulley housing (smaller box) side. This will determine the score mark you will use (see below).

Measure 2 1/8 inches from the front of the projector lens, and lightly draw a line parallel to the front of the lens. Mark the center line of the projector lens along this parallel line. Now, line up the back of the mounting bar to the parallel line just marked. Align the center of the projector lens mark with the correct score line on the mounting bar, and mark the six drill hole locations using the mounting bar itself as a template. Drill out the holes for the fasteners.



### 2) Secure mounting plate

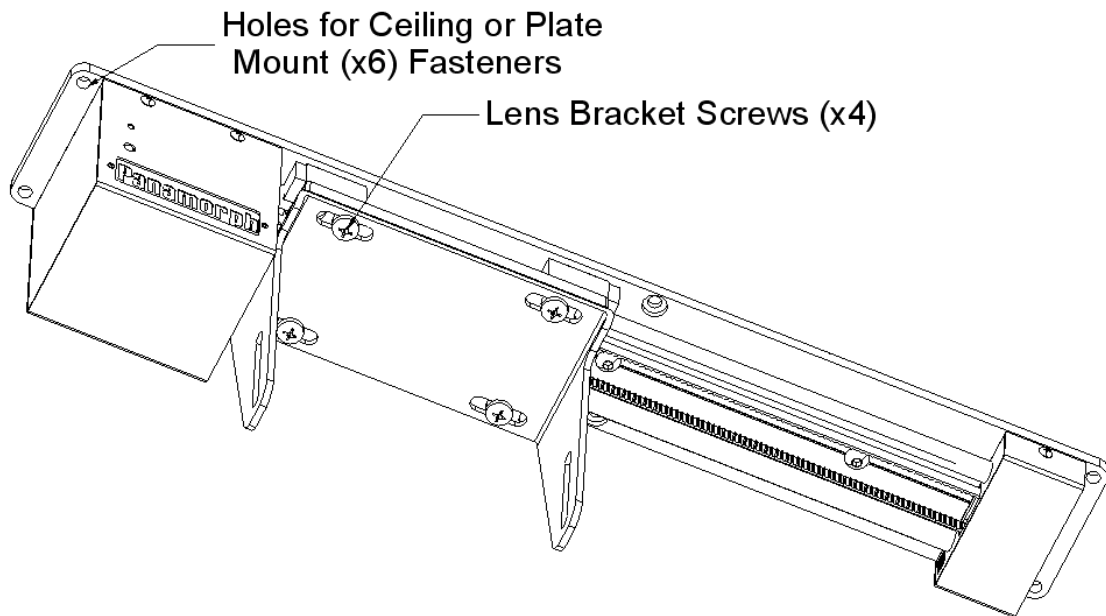


As the mechanism and lens are heavy, make sure the mounting fasteners, and surface are extremely secure. Remember that the sled motor will be starting and stopping a heavy weight thousands of times through normal use. Ceiling mounted lenses require a secure surface. **Sheetrock anchors alone are insufficient. Secure the mounting bar to a plate, painted board, or lens enabled projector mount securely affixed to the studs or ceiling joists.** Use of a commercial mounting system enabled for anamorphic lenses is highly recommended. Use all six screw holes, and tighten fasteners securely. Vibration from the motor and reciprocal lens movement will loosen any fasteners that are not absolutely tight and secure.

### 3) Attach lens bracket to adaptor plate



Remove the bracket mounting screws from the parts package and use them to attach the Panamorph lens bracket supplied with the UH380 . Observe the sticker on the plate showing the correct sequence for installing and tightening the screws. Snug up the bolts with the supplied hex key, but do not over tighten. Maintain even pressure on each bolt. **Do not attach the lens or power up the sled yet! Adjustment and alignment are much easier at this point without the lens.**



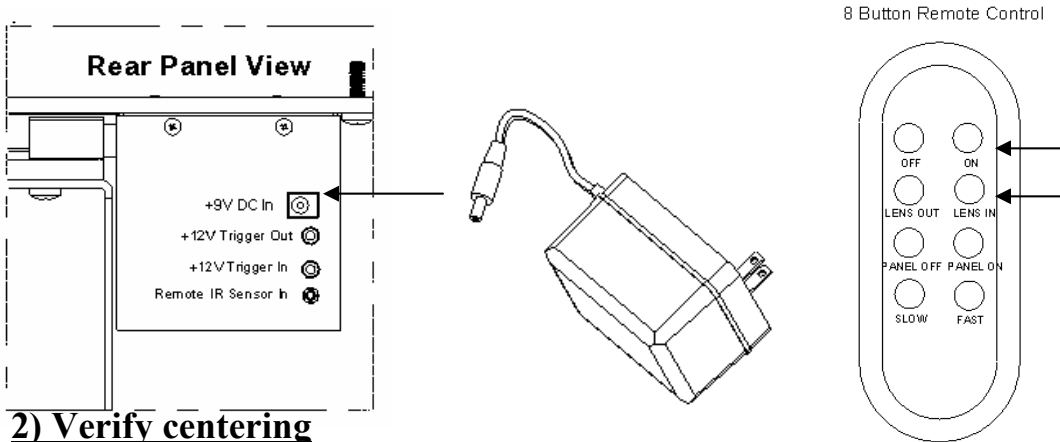
## 5 Setup

### 1) Power up the sled and set LENS IN position



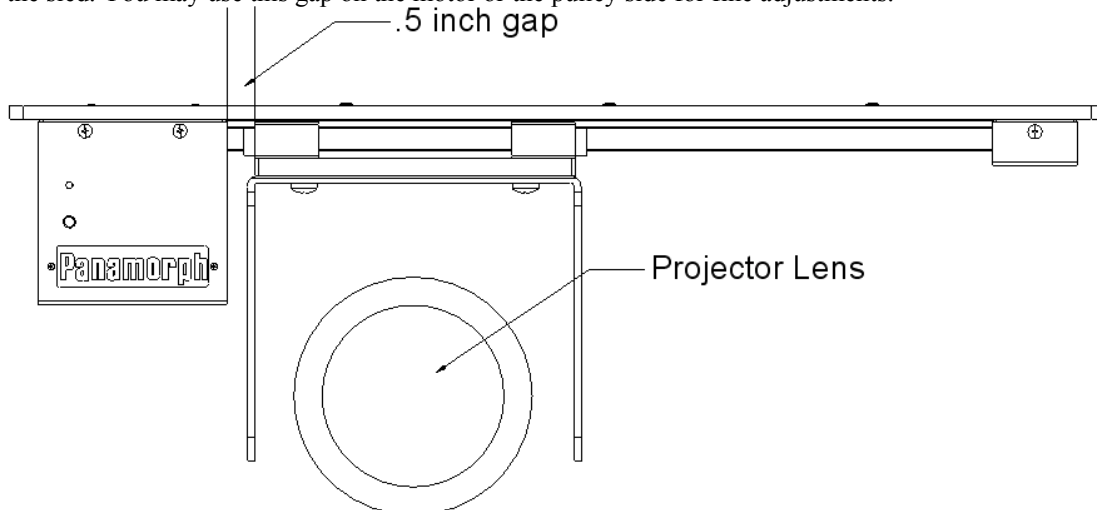
**Bright lights, particularly direct sunlight shining directly into the optical sensors at either end of the sled will prevent the sled from operating normally. Test the sled under normal or low lighting conditions. Now slide the lens into the middle of the sled before powering up.** Plug the power adaptor into an AC outlet, then into the back of the unit as illustrated. Put two AAA batteries in the battery compartment of the hand held remote control. **Back away from the lens or descend the ladder.** Hit ON, and then hit the LENS IN button on the remote. The lens sled will now slowly position itself into the factory default LENS IN position. The edge of the adaptor plate will land about ½ inch from the motor housing side of the sled. The lens will initially move to the default “lens in” side of the sled. **When you then hit LENS OUT, the lens will then move to the middle of the track and then slow down to calibrate itself. The lens will subsequently run at normal speeds after self calibration. If the bracket is in front of the projector lens after hitting LENS IN proceed to the next step (Verify centering).**

**If the bracket is not in front of the projector lens, you will need to change the setting.** Simply press the LENS OUT button on the remote, and wait for the bracket to move in front of the projector lens. Press and hold the LENS OUT button again for 10 seconds. The sled will confirm the new setting by moving the bracket away from the projector lens, to the new LENS OUT location. You have now re-programmed the sled. This setting will be preserved in the unit even if it is unplugged or undergoes a power failure. To change back, just repeat the above procedure



### 2) Verify centering

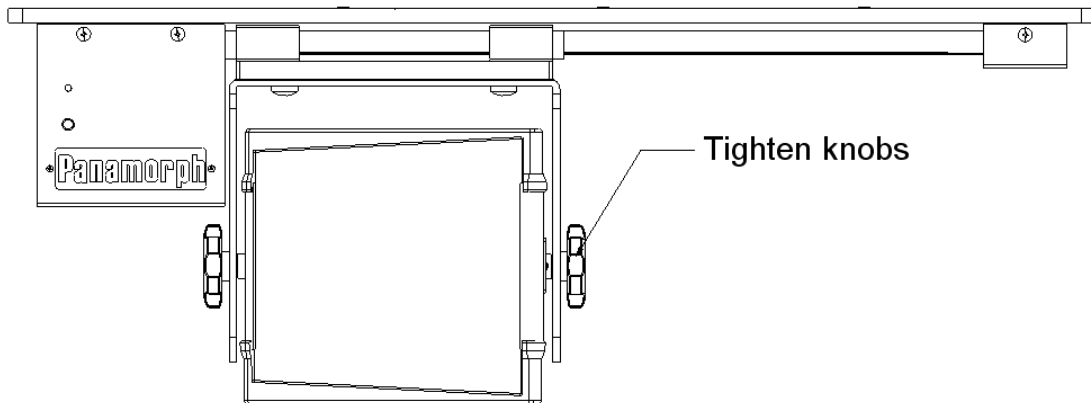
Press LENS IN and observe where the lens stops. If needed, you may make small adjustments (+ or - ¼ inch) to the lens bracket after disconnecting the power, by loosening the screws and sliding the bracket to the left or right as needed to achieve centering. Reconnect the power and check your work. The optical sensors will stop the edge of the lens adaptor plate approximately ½ inch from the housings on either side of the sled. You may use this gap on the motor or the pulley side for fine adjustments.





### **3) Attach lens to bracket**

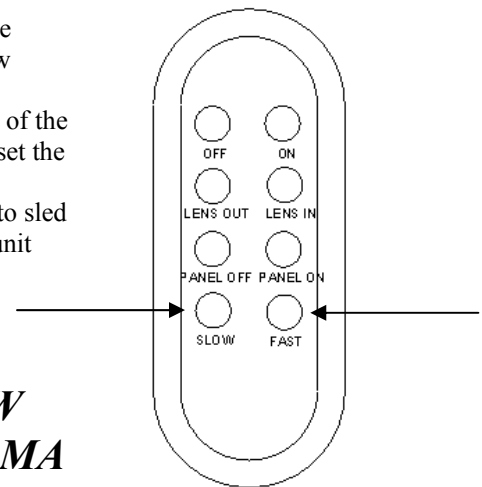
Attach the UH380 lens to the bracket using the plastic knobs supplied with the lens. Adjust the anamorphic lens vertically for correct alignment. See the instructions that came with the UH380 for fine tuning the lens position. When the image is correct, tighten the knobs against the bracket. Test run LENS IN and LENS OUT using the remote. Now tighten all connectors securely.



### **4) Configure lens speed**

The lens has two operating speed modes – FAST and SLOW. Fast is the default from the factory and is ideal under most circumstances. The slow mode reduces the forces exerted by the lens on the mounting system by accelerating and decelerating very slowly, and by limiting the top speed of the lens as it traverses the sled. If you notice any swaying in the mounting, set the speed to SLOW. Some users set the speed to SLOW when used in conjunction with screen masking systems to synchronize masking time to sled traversal time. This speed setting will be “remembered” by the control unit even if the power is interrupted.

8 Button Remote Control

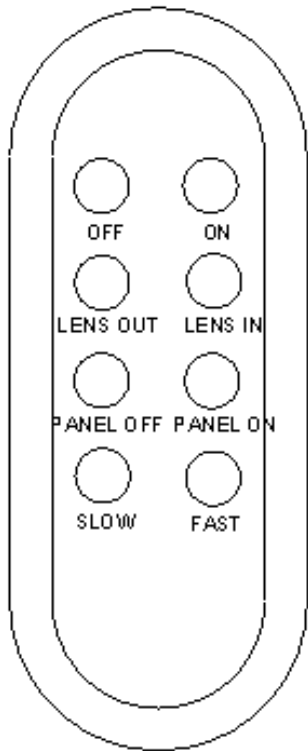


***CONGRATULATIONS!!!! YOU ARE NOW  
READY TO ENJOY WIDESCREEN CINEMA  
IN YOUR HOME THEATER.***

## 6 Remote control and motor operation

The LED indicator on the M380 will glow when the unit is ON, and flash when any button is pressed. It will also flash when the lens is in motion. When in standby the LED is off.

### 8 Button Remote Control



#### Buttons:

**OFF** – Puts the M380 in standby mode.

**ON** – Turns the M380 from standby to ON.

**LENS OUT** – A short press commands the lens to move into the LENS OUT position. *Subsequently holding the button for several seconds re-programs the current position as the new LENS IN position. The lens sled will acknowledge the request by flashing the LED and moving the lens to the new LENS OUT position (the opposite side).*

**LENS IN** – Commands the lens to move into the LENS IN position (as configured in Setup).

**PANEL OFF** – Turns the logo back light off.

**PANEL ON** – Turns the logo back light on.

**SLOW** – Sets the acceleration/deceleration and maximum speed for slow (low inertia) traversal.

**FAST** – Sets the acceleration/deceleration and maximum speed for rapid traversal.

Users of Pronto compatible devices may download a PCF from the following website at <http://www.remotecentral.com>. The Panamorph M380 will appear in the FILES section of the website.

## 7 Rear Panel –Triggers and Sensors

To use the automatic lens trigger, you must have a projector or scalar equipped with a lens trigger, and a standard double-ended 3.5 mm (1/8 inch) male mono or stereo jack cable. Simply plug the cable into the projector's lens trigger jack, and then into the M380 +12V Trigger In jack. Follow projector or scalar instructions to configure the lens trigger.

The Trigger In (tip positive) operates as follows:

- +12V LENS IN command
- 0V LENSOUT command

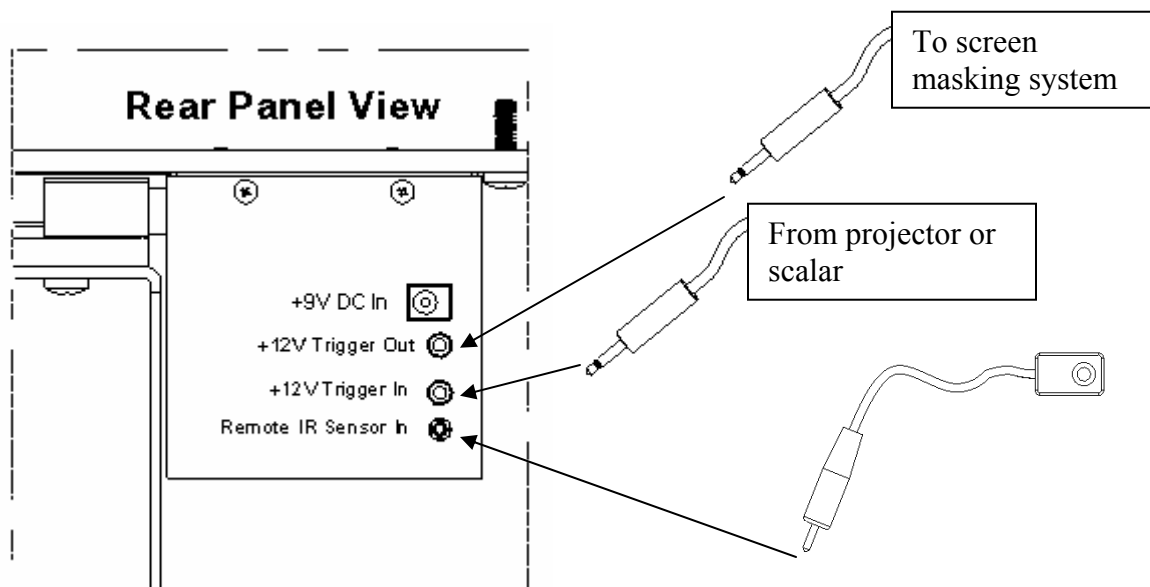
**NOTE:** *The input trigger jack may be temporarily overridden by the remote control. When the next transition of voltage occurs (up or down), the trigger will take control once again.*

Optionally, you may use the +12V Trigger Out jack on the rear of the device. The output jack is set to +12V whenever the sled is in the LENS OUT position. This is typically used for triggering screen masking systems to mask the side of the screen when an HDTV (16x9) image is being projected instead of a wide screen DVD movie format (2.35:1).

The Trigger Out jack (tip positive) operates as follows:

- + 0V Lens is in the LENS IN position
- +12V Lens is in the LENSOUT position

Each M380 is supplied with an optional remote IR sensor which may be used to improve reception if the sled is located at an inconvenient location for IR signals. It may also be used with an IR repeater system by simply taping the remote sensor to one of the IR emitters from the repeater system. To use, simply peel off the included self stick tape, affix to a convenient location, and plug the 2.5 mm cable into the appropriate jack in the back of the unit. Extension cables may be used to locate the sensor even further away.



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## 8 Cleaning & maintenance

The Panamorph system is completely maintenance free. It will deliver many years of trouble free service as delivered from the factory.

Clean the outside of the lens prisms occasionally with glass cleaner and an appropriate lens cloth. We recommend cleaning the lens while in the path of the projected beam to clearly observe the surface.

Clean the metal components with a damp cloth, taking care not to drip any water into the enclosure.

The M380 internal drive is permanently lubricated. Keep the rail linear bearing clean, dry, and contaminant free. In case of accidental soiling (i.e. spilled soda), clean all contaminants with water, and finally wipe down with denatured alcohol. The drive mechanism relies upon a clean rail to operate smoothly. The linear bearing, and all enclosed bearings are constructed of specialized material to self lubricate. Lubricants will gum up the mechanism, and possibly produce a film across the projector and anamorphic lenses.



**Never use lubricants of any nature on any part of the mechanism.**

## 9 Specifications

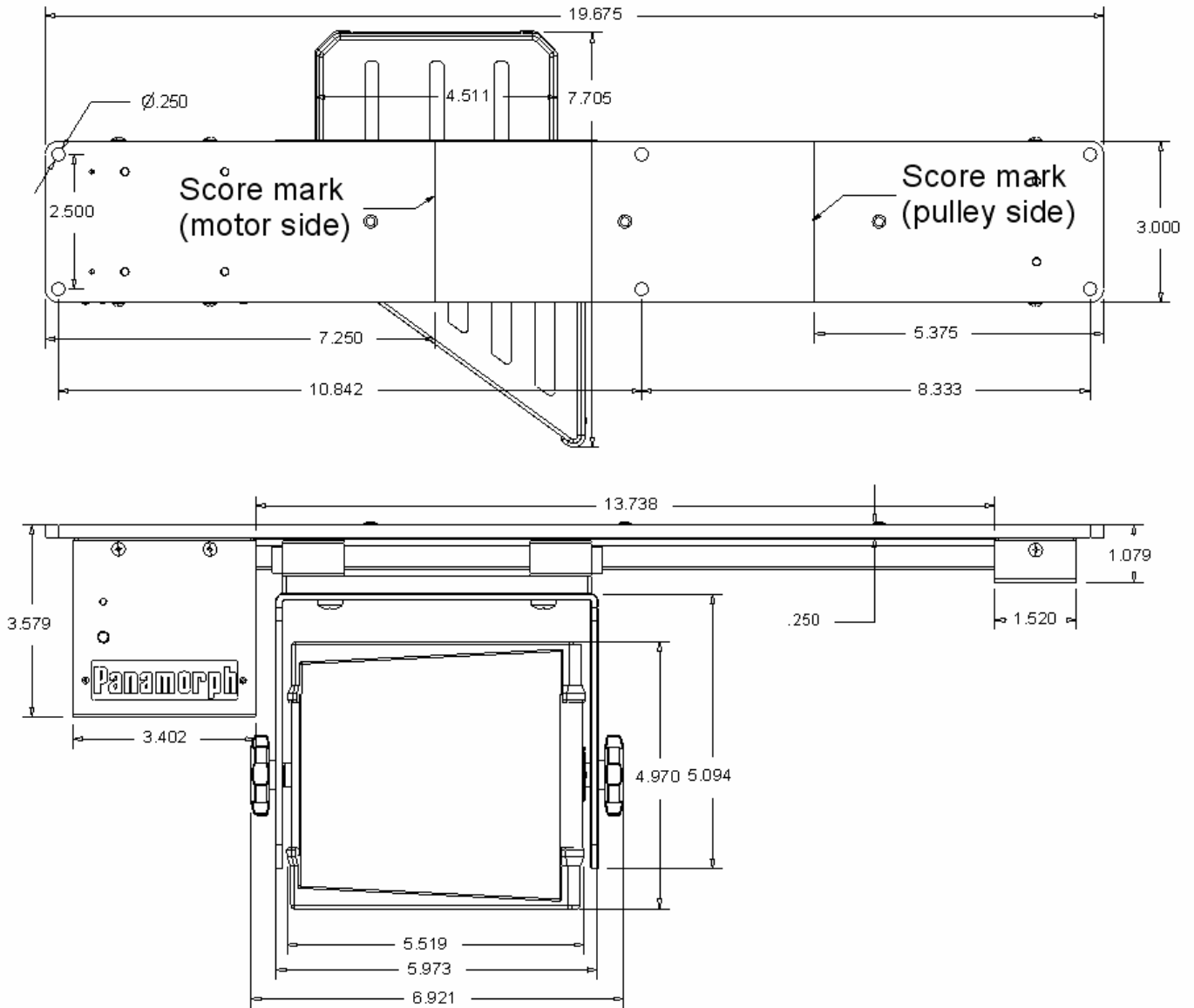
### Electrical Characteristics

Model	M380 motorized sled
Power supply	100-240VAC, 50-60 cycles
Power Supply Output	9V DC, .5A
Operating Voltage	9 -18V DC, .5-1.5A
Operating current draw	typical 350mA, max 650mA
Standby current draw	60mA
Trigger jacks	3.5 mm mono or stereo jack, 12V,tip positive, 20mA
Remote IR jack	2.5 mm stereo jack (supplied)
Remote	3oz, IR emitter
IR Receivers	2, one fixed, another remotely attached (optional)
IR Range	50ft from IR sensor
IR Carrier Frequency	38 kHz
Batteries	2 AAA
Certification	FCC, CE (M380 motor drive unit) UL Class II (power supply only)
Design Life	greater than 2,000,000 rail traversals

### Physical characteristics

Weight	6 lbs.
Dimensions	See accompanying drawings

## Dimensions



## *Warranty*

**Panamorph Inc, warrants this product to be free of defects in original workmanship and material for a period of twenty four months from the date of manufacture. During this period, a defective unit may be repaired or replaced, at the discretion of Panamorph, Inc., by returning it in its original packaging with a copy of your receipt. This warranty does not cover damage resulting from tampering, lack of prudent care, accident or misuse (including contravention of cautions stated in the instructions), or any cosmetic damage not reported within 15 days of purchase. All liability for damage is limited to the cost of the product and does not include incidental injury or peripheral damage to other equipment, persons, or property. Panamorph Inc. is not responsible for personal injury resulting from faulty installation. A service charge may be applied to any returned product requiring cosmetic attention, or to the repair of any damage not covered under this warranty**