



# Polar Max Recessed Series

Recessed In-ceiling Ambient Light  
Rejecting Projector Screen



## Installation Guide

### Important Safety & Warning Precautions

**Make sure to read this user's guide and follow the procedures below.**

**Caution:** The screen's Black Top Drop is already set to its maximum drop distance. There is NO extra Black Top Drop in the roller. Unapproved changes or modifications (except for cutting the power cord for hardwire installations) to this unit are prohibited and will void your warranty. For more information, please contact our Technical Support Department at (877) 511-1211 Ext. 604.

- Please retain this user's guide for future reference.
- To avoid damaging the unit, do not use with any unauthorized accessories not recommended by the manufacturer.
- Handle the unit carefully during transportation to avoid any damages.
- To ensure safe and reliable operation, direct connection to a properly grounded power source is advised.
- The power outlet supplying power to the unit should be close to the unit and easily accessible.
- Do not install the unit on uneven, inclined surfaces;
- Do not install in damp places to avoid an electric shock or short circuit.
- Do not place any heavy objects over the power cord.
- Position the power cord properly to avoid creating a trip obstacle.
- To avoid an electrical shock or fire, due to a loose contact or short circuit, do not overload the power cord.
- The internal & external parts of this unit are not end user serviceable. Do not attempt to disassemble this unit by yourself. No one except authorized technicians can open and make repairs to this unit.
- Make sure the power source that this unit is connected to has a continuous power flow.
- If there is need to use an extension cord, make sure the cord has an equal rating as the appliance to avoid over heat.
- Do not handle the power plug when your hands are wet or your feet are in contact with water.
- Properly dispose of this equipment according to the environmental regulations in your area when product is no longer of service.

### Do not use this unit under the following circumstances.

- Disconnect the power cord under the conditions of heavy rain, wind thunder or lightning.
- Avoid direct sun light, rain shower and moisture.
- Keep away from fire sources and high temperature to prevent this device from overheating.
- Cut off the power supply first before transportation or maintenance.
- To avoid possible injury and/or an electric shock, do not attempt to use this screen if there is obvious damage or if there are any evident broken parts.

### Installation Warning

The instructions provided in this user's guide are for reference only. Please consult a professional installation company for further installation and safety advice. The installer must insure that proper mounting hardware is used to provide adequate strength suitable for the installation. EPV Screens is not liable for any faulty installations. For limit adjustment instructions, please contact our Technical Support Department at (877) 511-1211 Ext. 604

### NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that the interference will not occur on a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

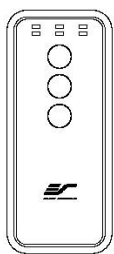
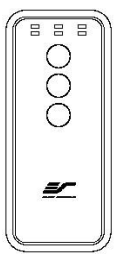

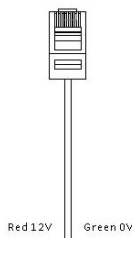
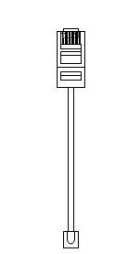
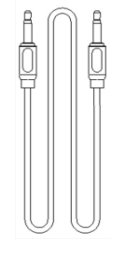

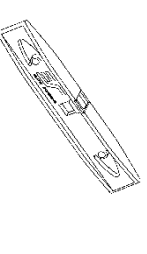
- ✓ **Reorient or relocate the receiving antenna of the device which may be causing the interference.**
- ✓ **Increase the separation between the screen and the device's receiver.**
- ✓ **Connect the equipment into a different power outlet other than the device.**

### Pre-Installation

1. Carefully unpack the screen.
2. Always handle the screen in a leveled position on a clean surface.
3. In order to protect the screen from exposure to stains, keep the screen out of contact with foreign particles such as dust, sawdust, and/or liquids.

### NOTE

Regardless of the mounting method, the screen should be securely supported so that the vibration or pulling on the viewing surface will not cause the casing to become loose or fall. The installer must insure the fasteners that are used are of adequate strength and suitable for the installation location.

Polar Max Aerie Series   Controls and Accessories							
A. IR Remote	B. RF Remote	C. Wall switch control box	D. 5-12 volt trigger cable	E. IR extended "eye" receiver	F. Wireless 5-12v (3.5 mm) mono trigger cable	G. AAA batteries	H. Bubble leveler
							

## Screen operation

**Electric Current:** The screen operates on AC110V at 60Hz/ 1.18A

1. After ensuring the power outlet & screen are compatible (voltage), plug the power cord into the power outlet.
2. Once the screen has power, you'll be able to control it using any of the 6 methods described below.

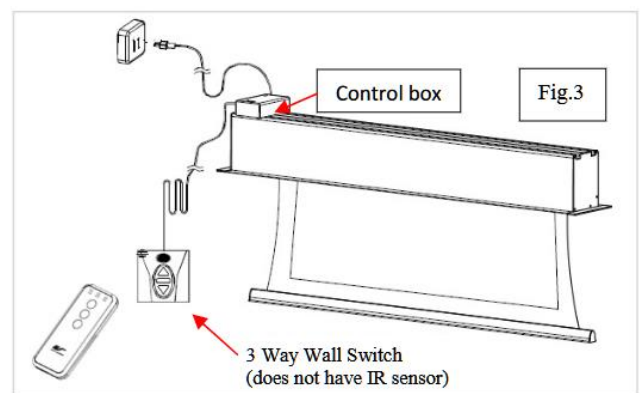
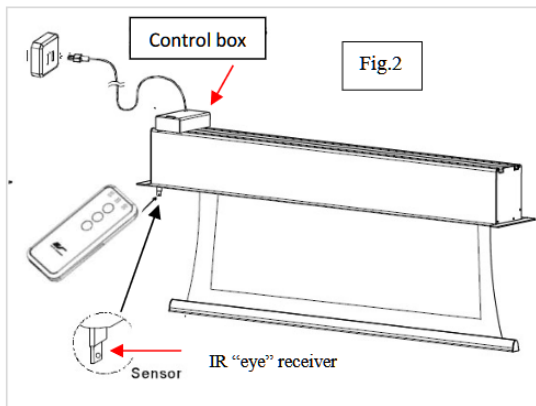
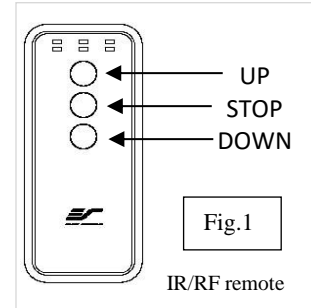
### 6 ways to control the Polar Max Aerie

**1. IR remote control (Item A, Fig 1):** The Infrared functions by direct line of sight contact with a beam range of 30 feet. Aim the IR remote at the “eye” receiver once it has been connected to the control box’s RJ45 port.

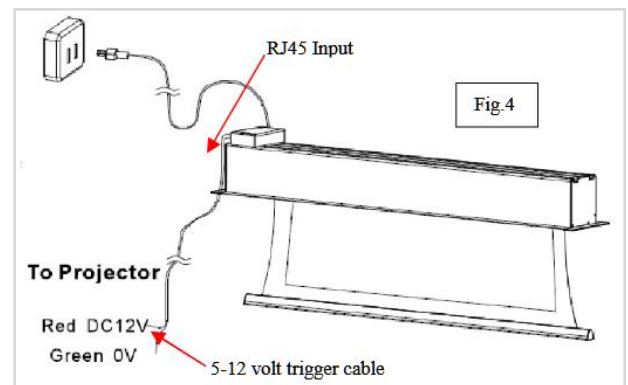
**2. IR “Eye” Receiver (Item E, Fig 2):** The IR “Eye” Receiver plugs directly into the control box’s RJ45 port to present a low profile line-of-sight control option for your IR remote control even in a recessed ceiling installation.

**3. RF Remote Control (Item B):** The radio waves eliminate the need for a direct line of sight with a range of 100 feet.

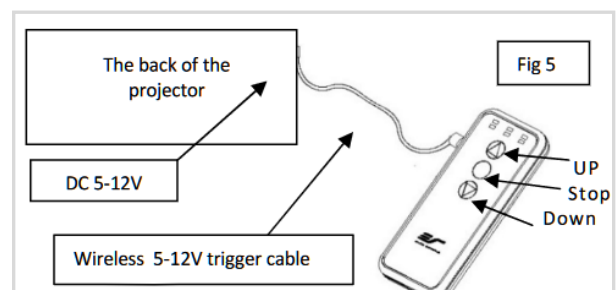
**4. 3-Way Wall Switch (Item C, Fig 3):** The 3-way wall switch is a wall mount switch with an up/stop/down button and plugs directly into the control box’s RJ45 port.



**5. 5-12 volt trigger (Item D, Fig 4):** The built-in 5-12V trigger input allows your screen to synchronize its drop & rise with the projector’s power cycle. The screen deploys when the projector powers up and will retract when the projector powers down. The 5-12 volt RJ45 cable connects to your projector’s trigger output via a separate cable that may or may not be provided by the manufacturer of the projector. The trigger feature will not work without an output cable from the projector, but it can be tested by connecting the Red (+) and Green (-) cable to a 9-volt battery.



**6. Wireless 5-12 volt trigger (Item F, Fig 5):** The RF remote control serves as a dual purpose, independently as a handheld remote control, or in conjunction with the Wireless 5-12 volt trigger cable. The radio frequency technology can be programmed to send a wireless signal to synchronize its drop/rise with the projector’s power cycle.



## Here's how to set up your Wireless 5-12 volt trigger | Synchronization Instructions

**Step1:** Connect one end of the 3.5 mm wireless 5-12 volt trigger cable to the RF remote.

**Step 2:** Connect the other 3.5 mm end of the wireless 5-12 volt trigger cable to your projector

**Step 3:** Make sure to unplug your screen from the power outlet

**Step 4:** Hold the **UP** button on your RF remote

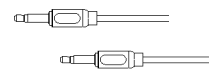
**Step 5:** While holding the **UP** button, plug the screen back to the power outlet

**Step 6:** Wait 5 seconds and then release the **UP** button

**Step 7:** Your 5-12V wireless trigger should now be activated with your screen and ready to be used and able to control your screen with your projector's power cycle

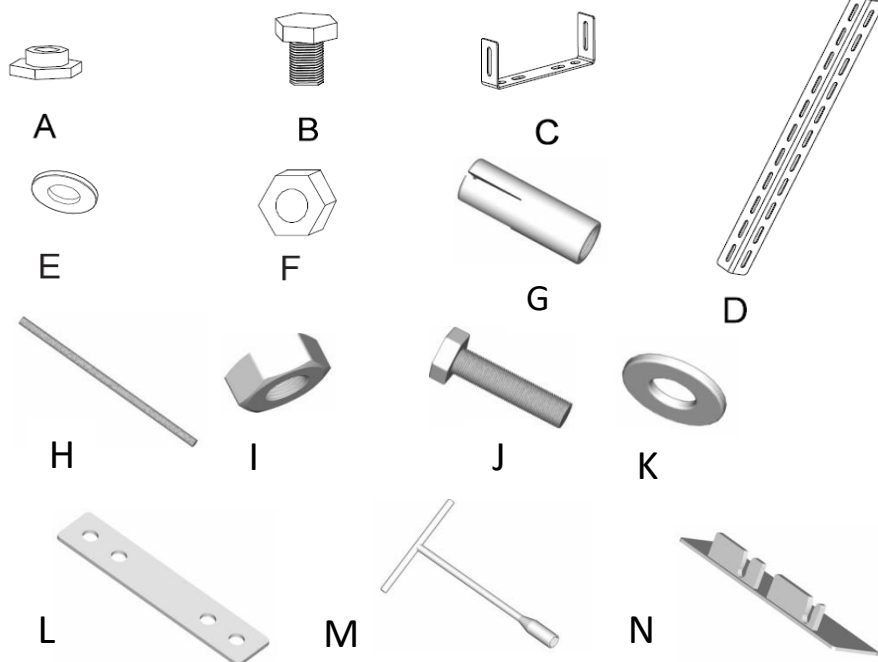
Repeat the steps again if not successful.

(Please be aware, the projector on/off cycle may take longer to fully activate. It usually takes around 20-30seconds for full off and on cycle each time)



## Hardware Parts List for Polar Max Aerie Series

*Please make sure all parts listed below are included before proceeding with the installation.*



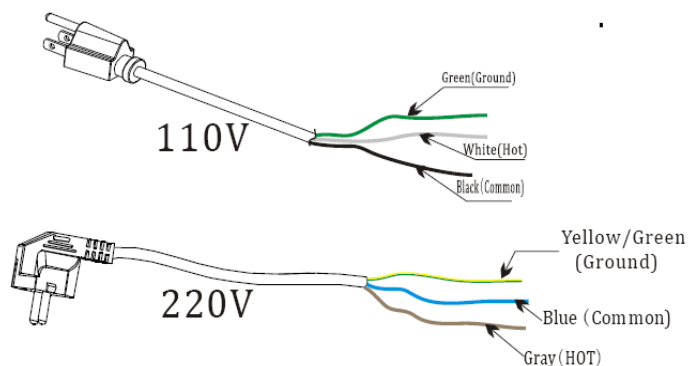
Hardware Parts List	QTY
A. Case Rail Nut	4-6
B. Hex Screw	4-6
C. Hanging Bracket	2-3
D. Suspension Bar	4
E. Washer	8-10
F. Hex Nut	4-6
G. M8 Top Expanding Bolt	4
H. M8 Threaded Rod	4
I. M8 Screw Nut	20
J. M8 Hexagonal Screw	4
K. M8 Screw Washer	28
L. Installation Bracket	2
M. Socket Wrench	1
N. White cover flange panel	2

## Installation Instructions

The Polar Max Aerie allows access for above or below ceiling installation. Please follow the instructions described in the following steps below for your type of installation.

### Power

The Polar Max Aerie Series includes a 3-Prong Power Cord (2-Prong Power Cord for some countries) for use in a non-concealed power outlet. If your installation will be entirely concealed (including power outlet), EPV Screens strongly recommends a hardwire connection. Please refer to the image below for both 110v & 220v wiring information.



## Notice to Installer:

Please use the following installation instructions to obtain superior optical performance from the Polar Star® Angular Reflective ALR (Ambient Light Rejecting) Screen.

Make sure to follow these instructions in order for the Polar Star® to perform correctly.

- Angular-Reflective material is not compatible with ultra/short-throw projectors
- Minimum lens throw ratio 1.5x image width
- Ambient light must not come from the same direction as the projector

*Since angular-reflective means that the projected image will reflect at the mirror-opposite angle, it is important to position the projector so that the viewer will get the best possible image.*

**Step 1:** Establish the general “eye level” of the viewers

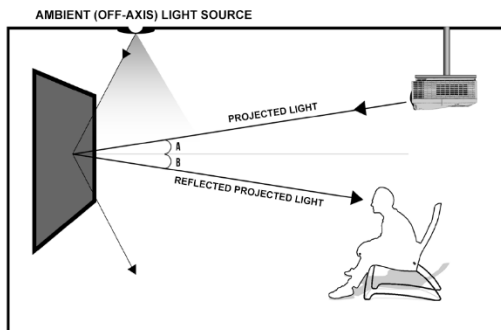
**Step 2:** Set the appropriate projection level

**Step 3:** Adjust the screen height level and projection angle

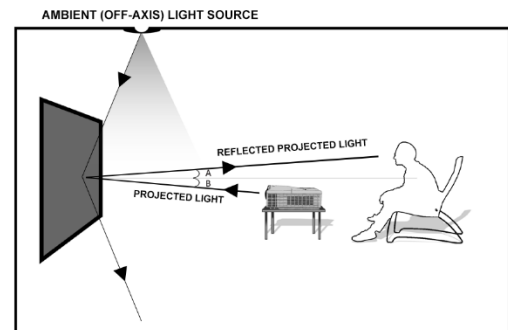
Input Angle (A) = Output Angle (B) aligns with the viewer’s angle

### Correct Installation Examples

**Projector Ceiling Installation:** Make sure the projector (*light in*) is angled (A) to reflect (B) at the mirror-opposite angle (*light out*) to align with the viewer’s eye level.

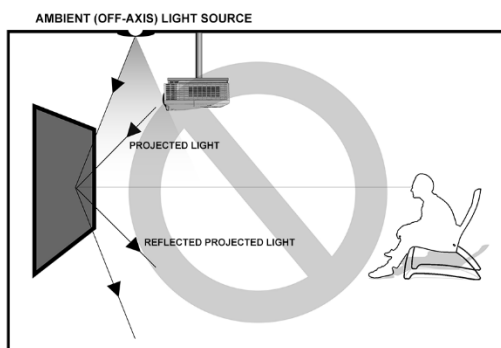


**Projector Table Top:** Make sure the projector (*light in*) is angled (A) to reflect (B) at the mirror-opposite angle (*light out*) to align with the viewer’s eye level.

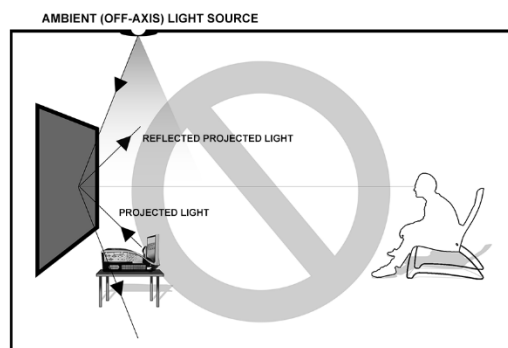


### Incorrect Installation Examples

**Ceiling Mounted Short-throw Projector**



**Tabletop Ultra-Short throw Projector**



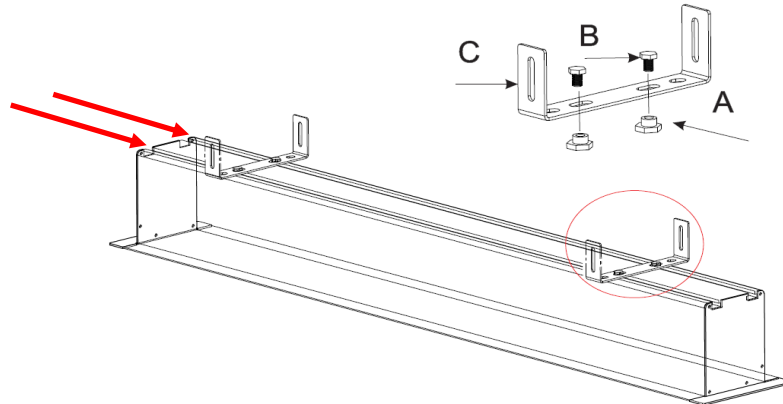
**Note:** Improper installation will result in light loss and produce a dark image. This is due to the projector’s light reflecting in the wrong direction.

*Images are not up to scale and are for illustration purposes only.*

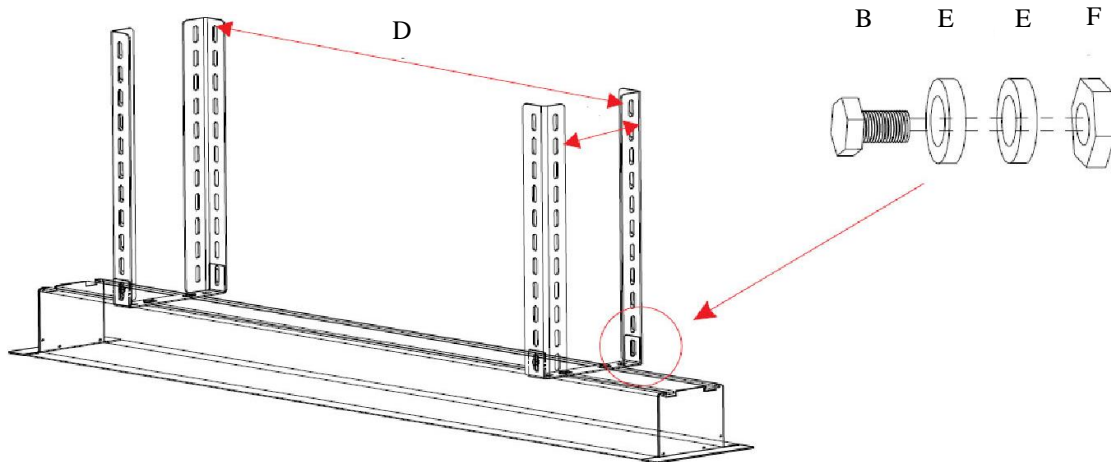
## A. Above ceiling installation instructions

### Assembly

1. Insert the Hex Screw (B) through the Hanging Bracket's (C) screw hole and secure with the Case Rail Nut (A). Slide the Hanging Bracket (C) through the railing on top of the case.



2. Place the Suspension Bar (D) on the Hanging Bracket (C) and align with the hole as shown below. Secure the Suspension Bar (D) with the Hex Screw (B), Washer (E) and the Hex Nut (F). Install the Suspension Bars (D) to your ceiling according to their distance.



### Optional Installation using parts below



Screw bolt X 4

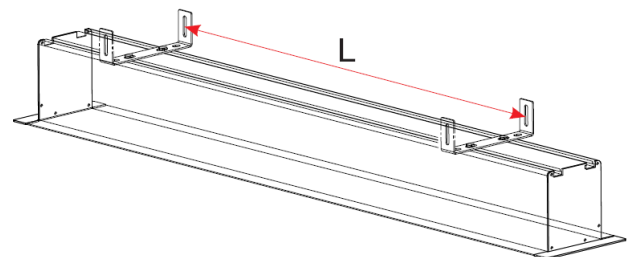


Washer X 8

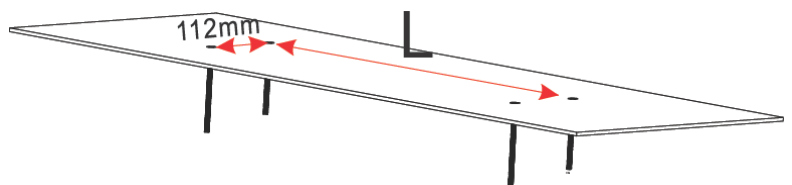


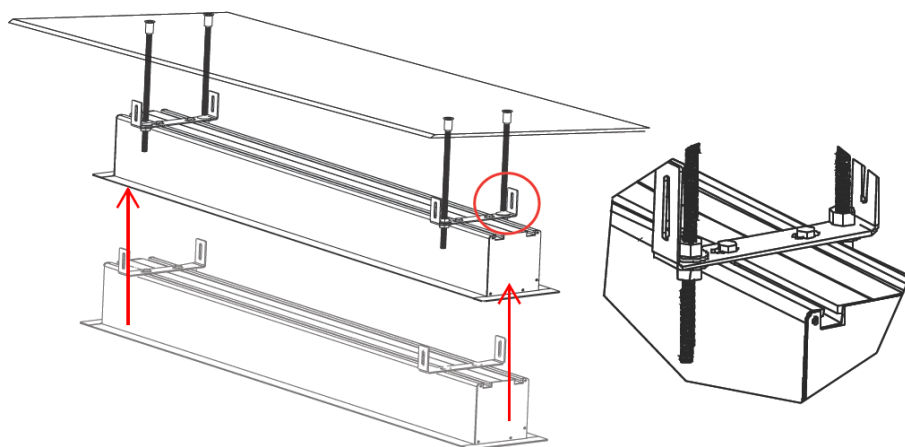
Nut X 8

1. Place the Hanging Bracket (C) in the desired location on the screen's housing and measure the distance as shown below. (L = Distance)



2. Mark the location of where the screen will be installed according to the distance (L) and then secure the bolt to the ceiling.
3. Install the screen to the screw bolt as shown in the figure below.

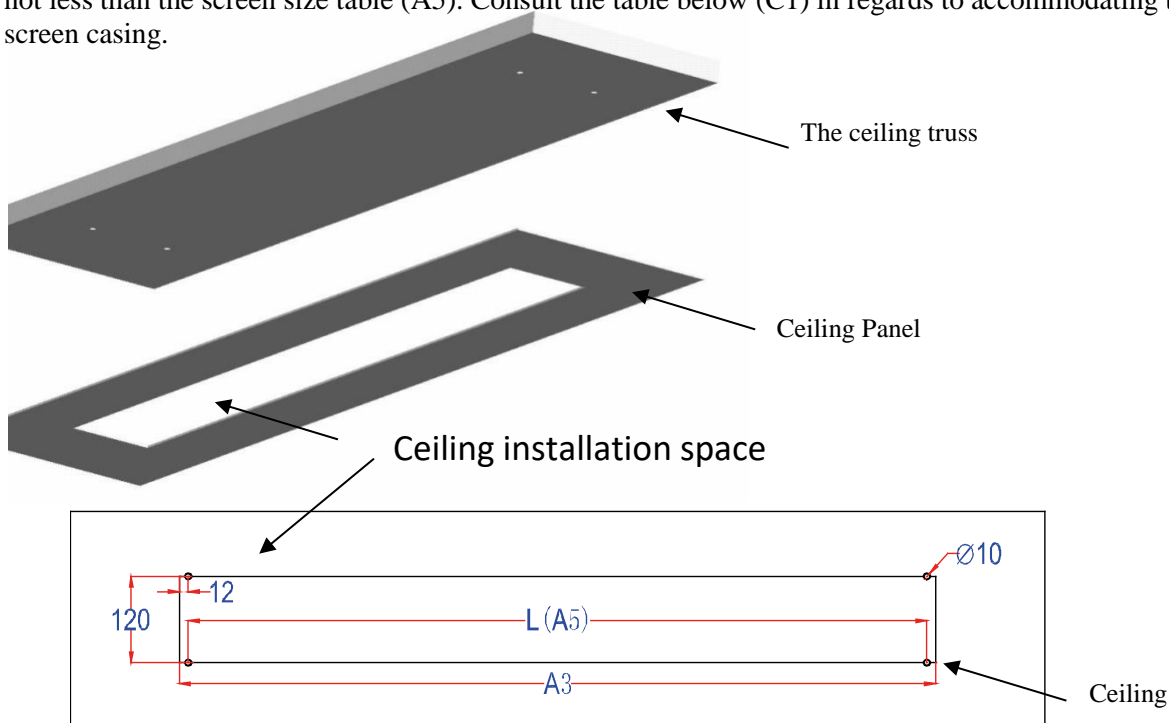




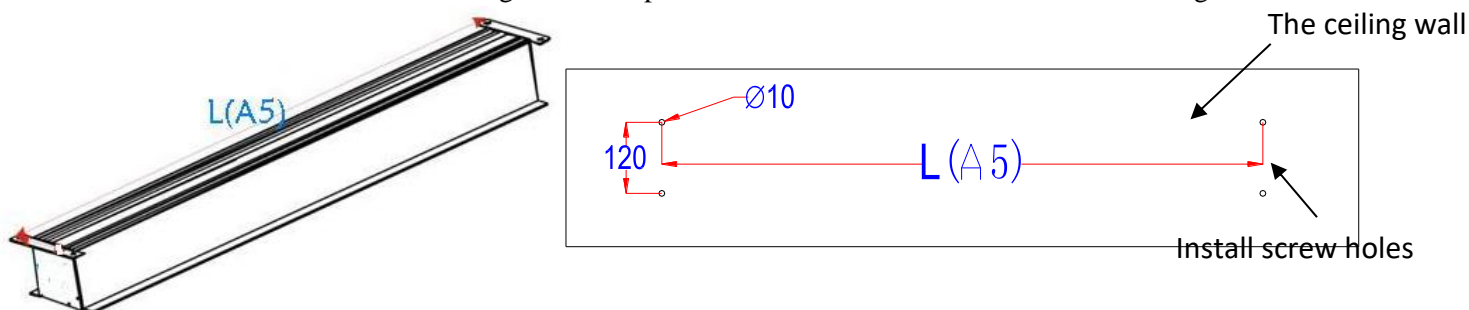
## B. Below ceiling installation instructions

1. Measure and cut the ceiling installation space. The width should not exceed 120mm. Measure the length of your screen to determine the length.

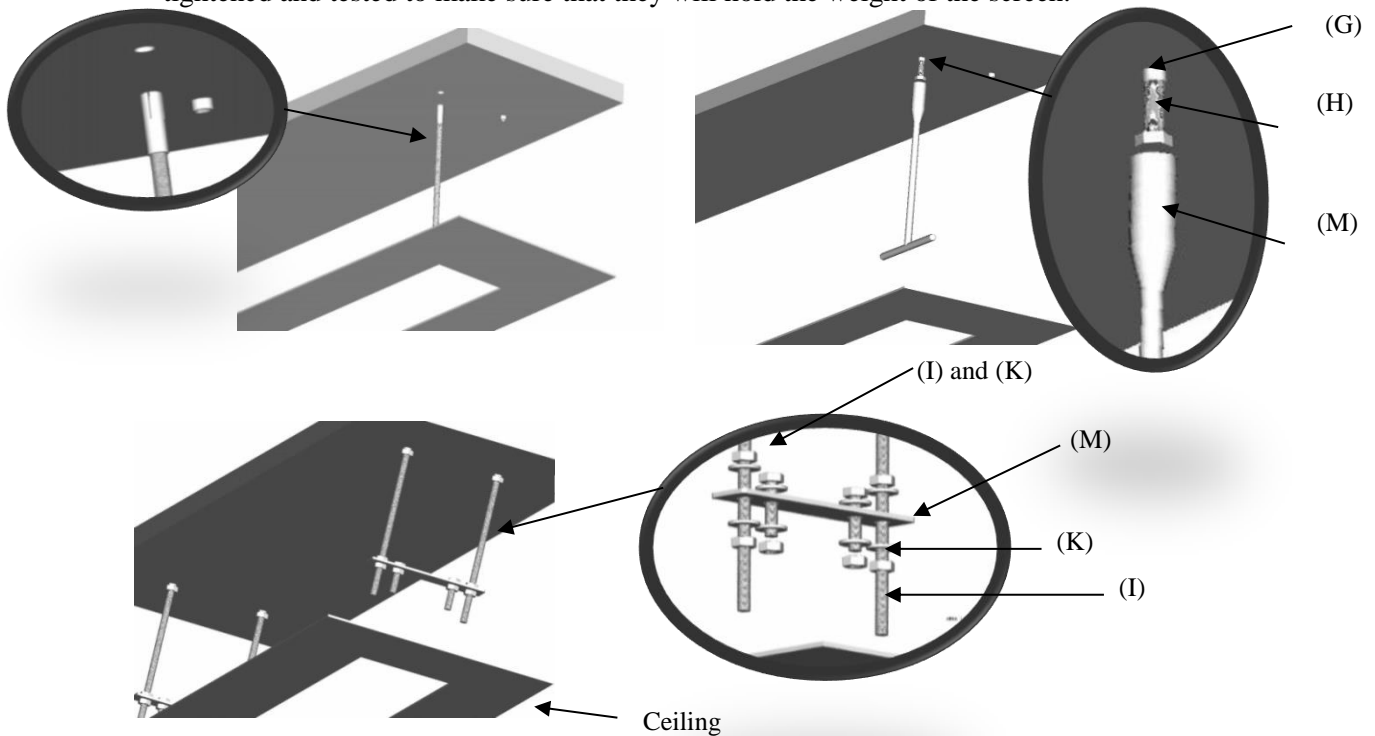
Note: The length of the installation space is not greater than the screen size table (A3), and the width is not less than the screen size table (A5). Consult the table below (C1) in regards to accommodating the screen casing.



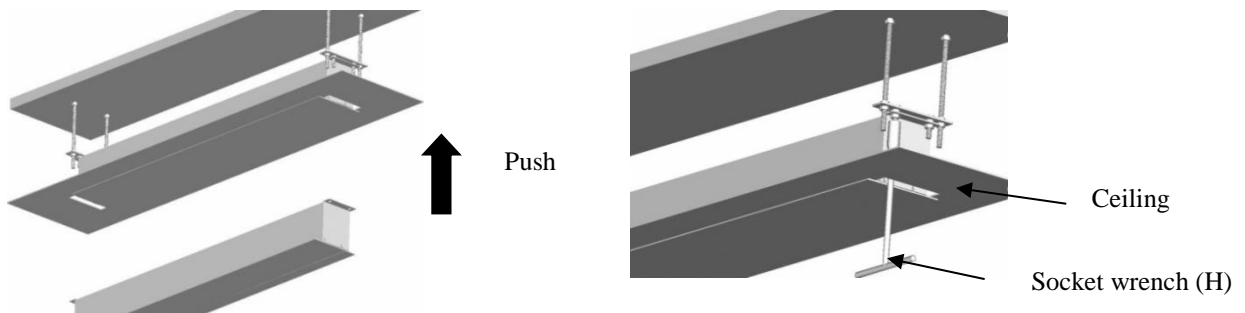
2. Drill 4 holes in the ceiling that correspond with the attachments on the various casing sizes.



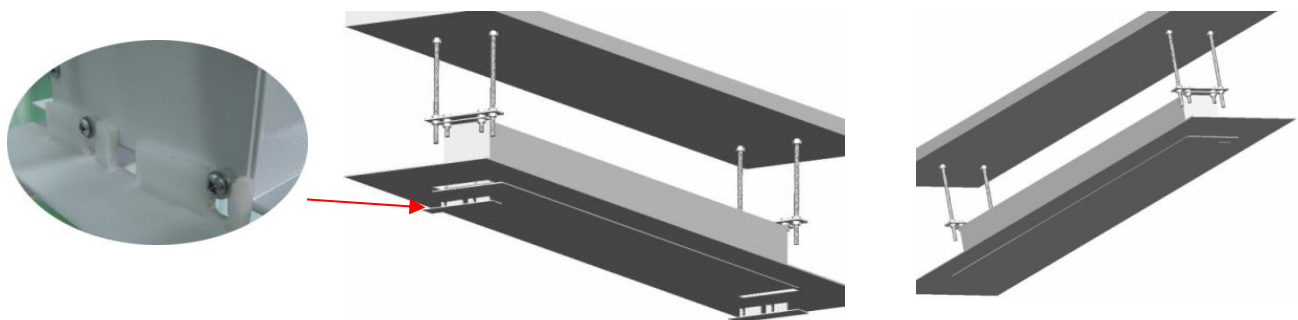
3. The expanding bolts (G) mount into thick wood beams, stone or concrete and will support the screen. Use the Socket wrench (M) to attach the hexagonal screws (J). The expanding bolts should be firmly tightened and tested to make sure that they will hold the weight of the screen.



4. Push the screen up into the space. Use the threaded rods (H) to attach the screen assembly to the ceiling. The hexagonal screws (J) will connect the screen to the rest of the assembly. Once firmly in place, use the nuts (I) to ensure a firm connection. Use the socket wrench (M) to make sure that the bolts are firmly tightened.



5. Install plastic cover panel (N) to complete the installation.



For local EPV Screens contact or Technical Support, please visit  
[www.epvscreens.com](http://www.epvscreens.com)