



# User Manual



## Support

For instructional videos, software downloads, or further training and support, visit the [eGlass Academy](https://www.eglass.io/academy) by scanning the QR Code with your phone or by visiting <https://www.eglass.io/support>



## The Setup Process

When setting up eGlass, it's best to follow the steps below **in order**.

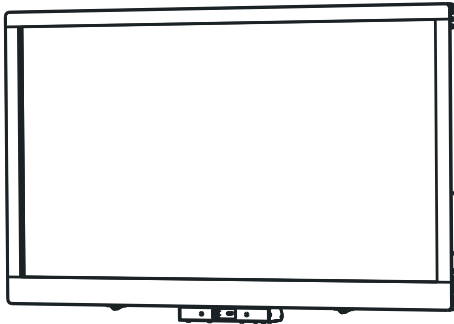
For example, you'll need to see the camera image before "Calibrating Lighting", which is why "Installing Software" is a few steps ahead of "Calibrating Lighting".

- Step 1** Unboxing - Page 2
- Step 2** Assembly - Page 3-5
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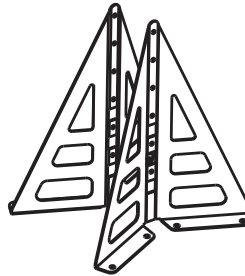
## What's in the Box?

- 1 Main eGlass Frame
- 2 2x Support Legs
- 3 Camera Arm
- 4 USB Cable
- 5 Power Adapter
- 6 Power Cable
- 7 Polarizing Filter + Adapter
- 8 4x Neon Dry Erase Markers (Unactivated)
- 9 Cleaning Rag
- 10 - 15 14x Support Leg (M5) Thumb Screws
- 16 - 17 2x Camera Arm (M5) Thumb Screws
- 18 Anti-Reflection Hood
- 19 2x Anti-Reflection Hood Brackets
- 20 4x Anti-Reflection Hood Rods
- 21 Adhesive Mounting Plates
- 22 Laptop Stand

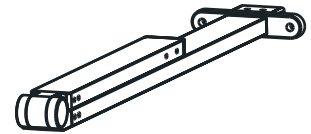
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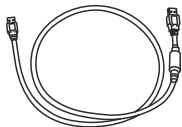
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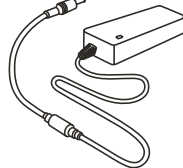
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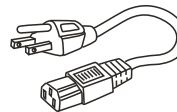
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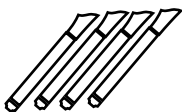
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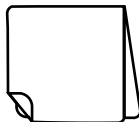
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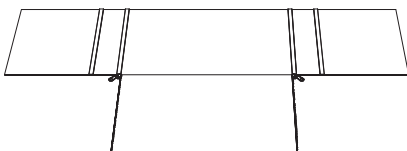
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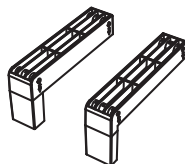
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18



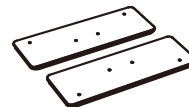
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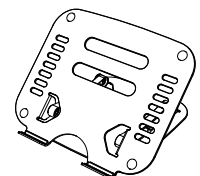
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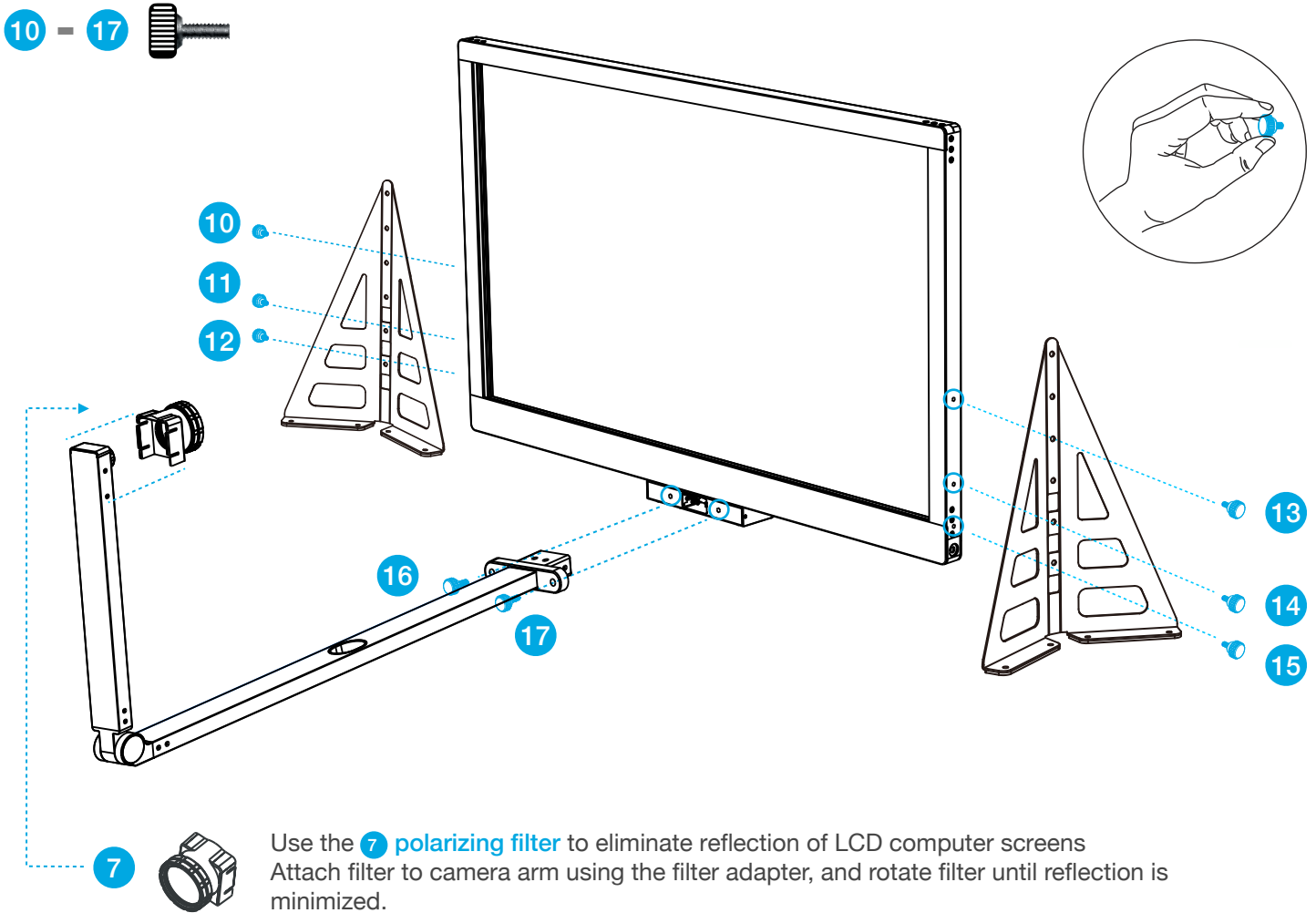


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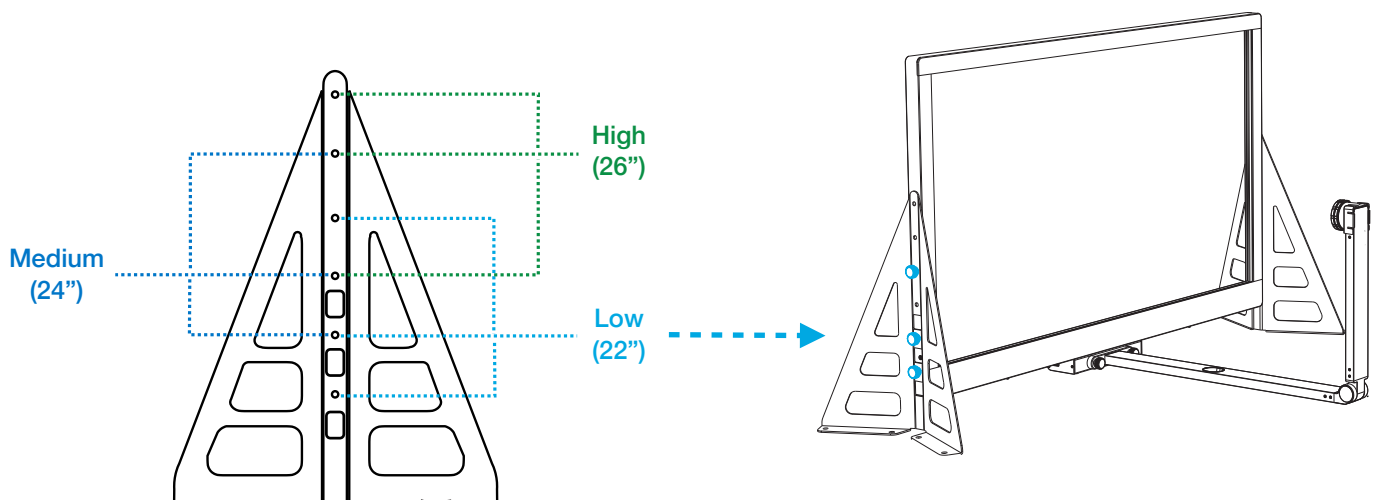
22





## Choose Height Setting

The support legs can be mounted in three height configurations. Install thumb screws **10 - 15** in the color-coded holes below depending on the desired height:



## Mounting eGlass Semi-Permanently (Optional)

For added stability and security, eGlass can be mounted semi-permanently or permanently to a flat workspace. If you decide you'd like to mount eGlass to a specific place, you have two mounting options:

**\*IMPORTANT:** Adhesive bonding strength is reduced after 1x use. If your adhesive strips are no longer sticky, please contact [eGlass support](https://www.eglass.io/support) at <https://www.eglass.io/support>.

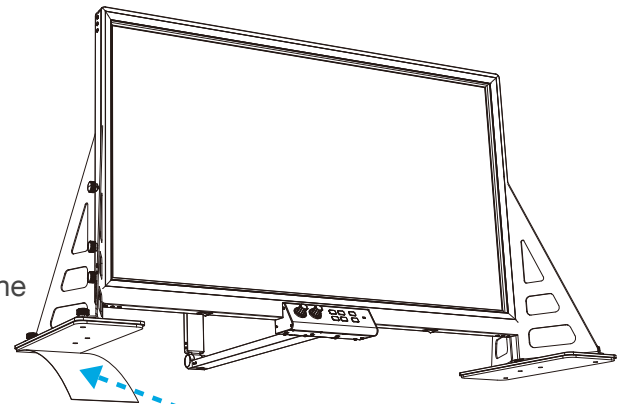
### OPTION 1

#### Using the optional included Adhesive Mounting Plates (semi-permanent)\*

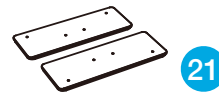
- Secures eGlass to flat, non-porous surfaces without the need for drilling holes into your work surface.
- Can be removed and reinstalled elsewhere.\*
- May leave behind adhesive residue occasionally.

• **Installation:**

1. Clean the desired surface, ensuring it is complexity dry and non-porous.
2. After eGlass is assembled and the **2 Support Legs** have been installed to the desired height, use **10 - 15 8x Support Leg Thumb Screws** to secure the **21 Adhesive Mounting Plates** to the bottom of the eGlass legs. Do not remove the protective film from the bottom of the mounting plate's adhesive strips.
3. Place eGlass in the desired location on your work surface and verify the selected location is comfortable.
4. Slightly tilt the eGlass, exposing the adhesive strips on the bottom of the **21 Adhesive Mounting Plates**.

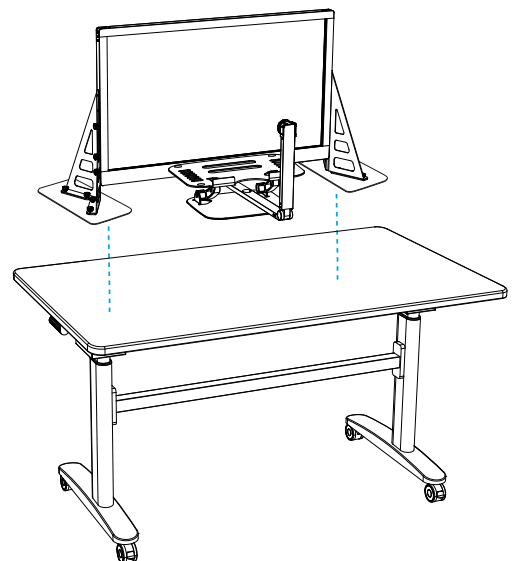


Durable adhesive strips on the bottom of the mounting plates



Remove the protective film from the adhesive strips and casually lower eGlass down to sit flat.

5. Apply downward pressure on all sides of the mounting plates for 30 seconds, ensuring the adhesive strips properly adhere to the work surface.
- To remove the **21 Adhesive Mounting Plates** and reinstall elsewhere, apply gradually increasing backwards pressure too the eGlass frame, as if you were pulling eGlass towards you. This gradually increasing pressure will slowly peel the adhesive strips off of the work surface, until the mounting plates release from the work surface. You may now repeat the installation steps with the same adhesive strips, but keep in mind the effective reusability and adhesion strength is reduced with each reapplication. If your adhesive strips are no longer sticky, try gently hand-cleaning them with water (do not use a rag or paper towels), allowing them to fully dry before reinstallation.



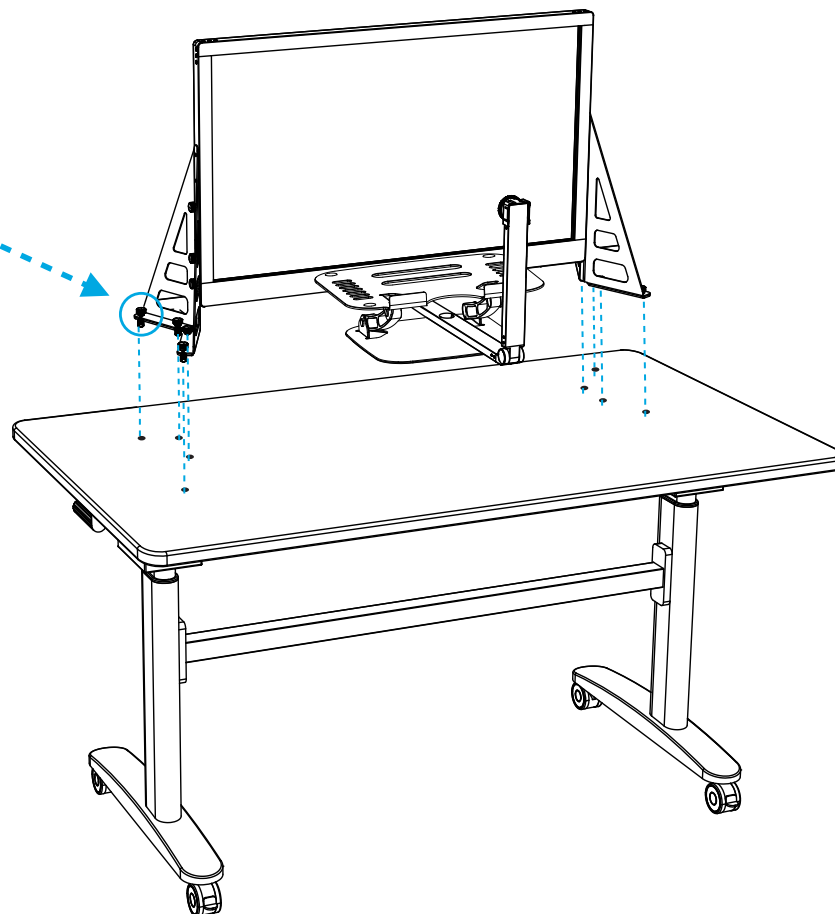
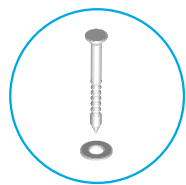
## Mounting eGlass Permanently (Optional)

### OPTION 2

#### Mounting eGlass directly to the work surface (permanent)

- The most stable option
- Requires drilling permanent holes in the chosen work surface.
- Requires additional hardware (not included)
- **Installation:**
  1. Select and verify the location you'd like to install eGlass.
  2. Place eGlass on the select location (do not use [21 Adhesive Mounting Plates](#))
  3. Select the appropriate sized and rated hardware (screws, washers) based on your work surface's material type (most desk surfaces are typically wood or laminate).
  4. Install hardware through the 8x exposed mounting holes on the bottom of the [2 Support Legs](#) into the work surface

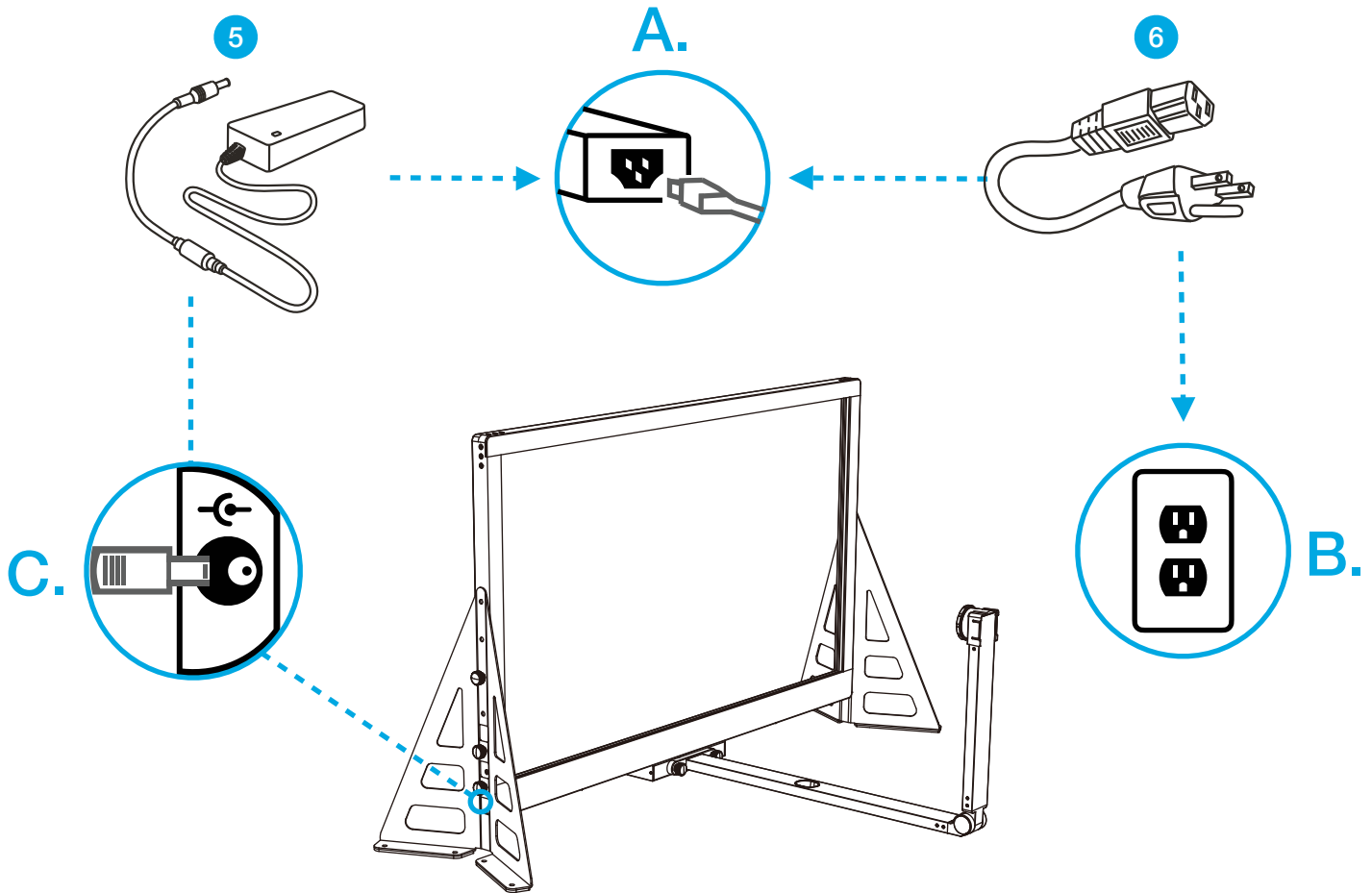
Mounting hardware  
not included



## Step 3 Connecting

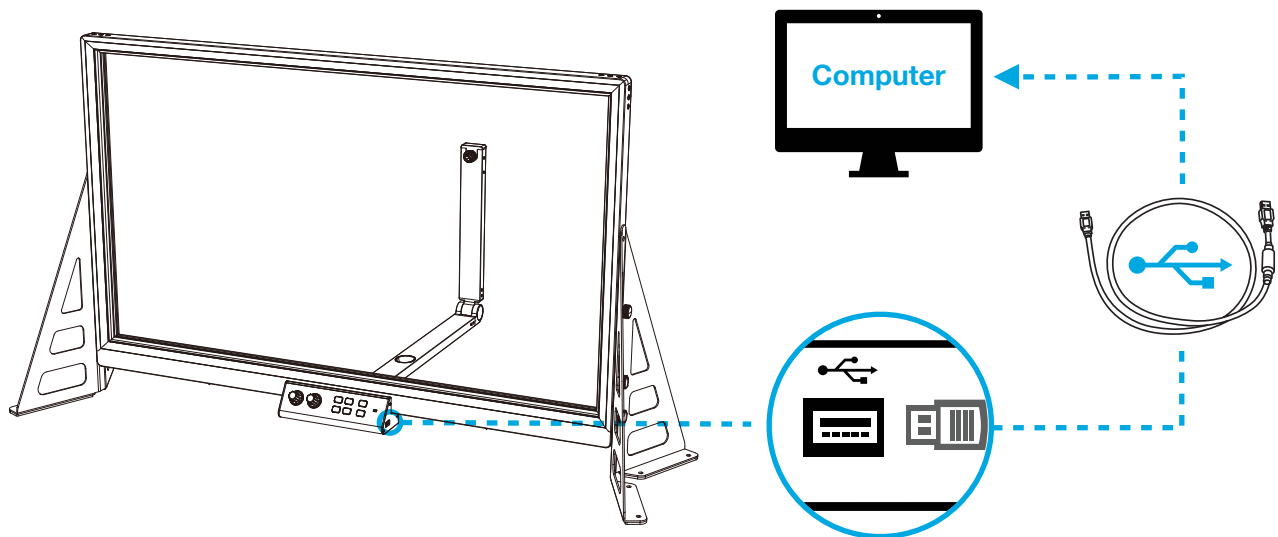
### Connect Power

- A. Connect the **5 Power Adapter** to the **6 Power Cable**.
- B. Then plug one end of the **6 Power Cable** into a protected AC power outlet,
- C. and the other end of the **5 Power Adapter** into the DC-in port on the bottom left sider of the eGlass frame.



### Connect Computer

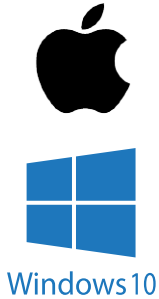
Use the included **4 USB Cable** to connect a PC, Mac, or Chromebook to the USB-In port on the bottom right side of the eGlass frame.



## Step 4 Installing Software

### eGlass Fusion Software

- Before completing set-up process, please install the [eGlassFusion Software](https://www.eglass.io/support) onto your computer.
- Download the Software from <https://www.eglass.io/support>
- Chromebook users must use the HoverCam for Chrome App.



Download from

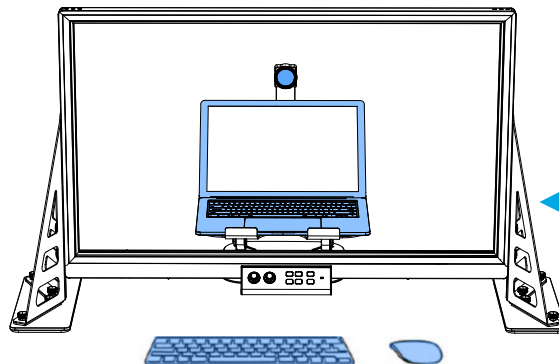
<https://www.eglass.io/support>

## Step 5 Computer Setup

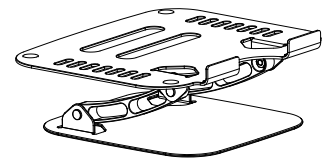
### Computer Placement

- For optimal results, place computer screen on the other side of glass **as close to eGlass camera as possible**. This will simulate eye contact when looking towards the computer screen.
- Because computer will on the other side of glass and out of reach, use a **mouse** and **keyboard** (not included) to operate.
- For best results, use the **22 laptop stand** as pictured below to position computer screen even closer to the eGlass camera.

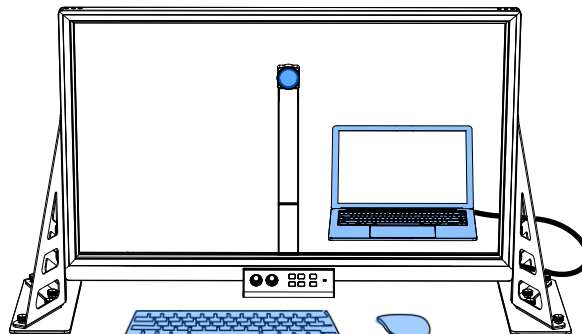
**Best:**



**22 Laptop Stand**

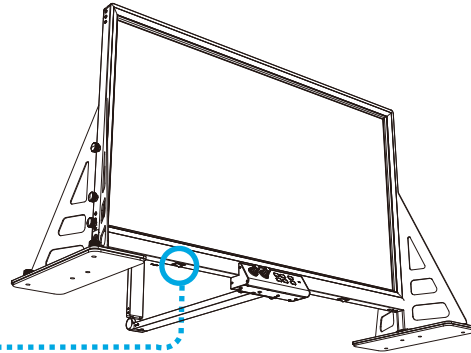


**Good:**



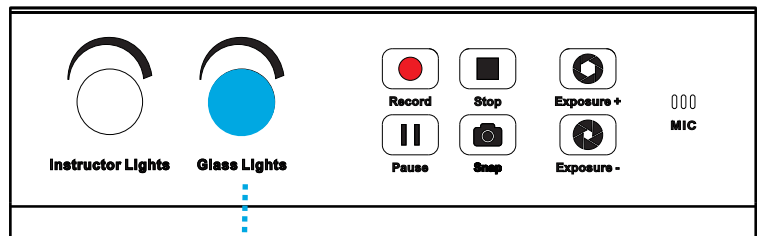
## Step 6 Turning On

Flip the **On/off Power Switch** to provide power to the glass lighting system.



## Step 7 Using Neon Dry Erase Markers

Before writing on the glass, turn the **Glass Lights** dial (found on the **Control Panel**) to its maximum setting by rotating it clockwise.



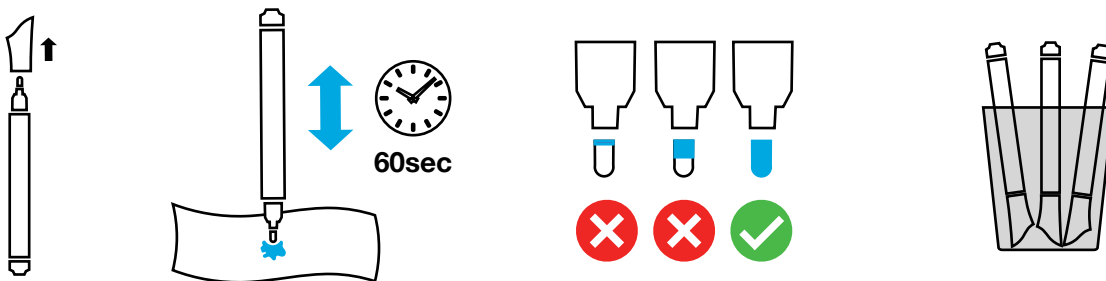
For a glowing effect, we recommend using neon dry erase markers, which can be purchased online.

Some recommended brands are:

- Quartet Glass Whiteboard Dry Erase Markers - Neon
- Arteza Glass Board Dry Erase Markers - Neon
- Expo Neon Window Dry Erase Markers

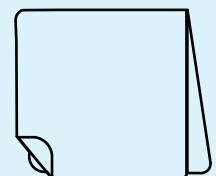
**Activate pen** by dabbing tip into cloth upside-down until ink flows to tip.

Store pens **upside-down** when not in use to keep tip saturated.



To erase pen ink, simply use the included cloth to wipe the glass clean. Foaming glass cleaning solutions can be used occasionally, but are not necessary for every day use.

The special properties of neon dry erase ink causes erased ink flakes to “clump” more than standard dry erase markers, sometimes dirtying one's workspace. However, this clumping is preferred as it causes ink particles to fall rather than remaining in the air like standard dry erase particles do. Use a rag or small handheld vacuum to occasionally clean your workspace of fallen ink flakes.





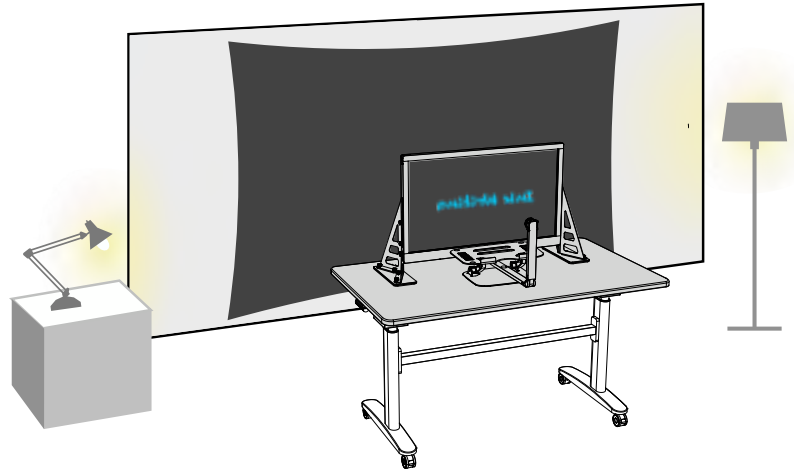
## Step 8 Setting Background

Choosing the right background is **essential**, because it will appear in the wide angle camera's field of view. Any light sources will make it harder to read the glowing ink. Furthermore, it is best to use eGlass against a background that is free from clutter to minimize distractions.

For a strikingly dramatic look, use a **dark backdrop** (such as a black sheet pinned to the wall with thumbtacks). This will make the ink glow vividly against the black background.

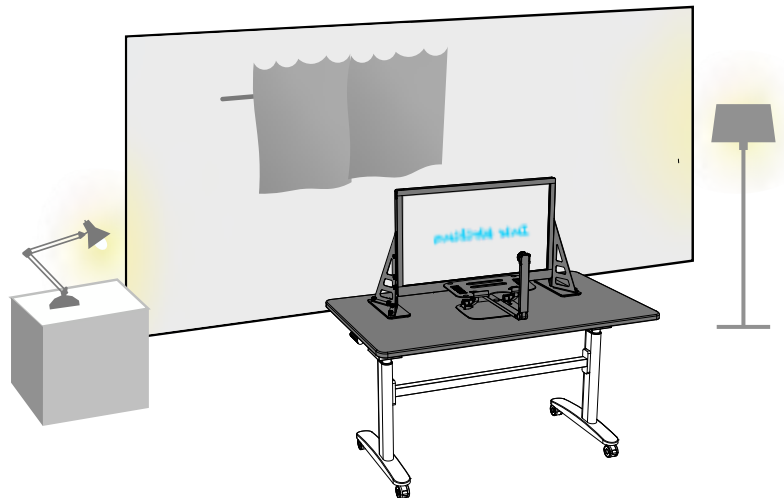
### BEST

- ✓ Black backdrop
- ✓ Cleanest background
- ✓ Ink Highly Visible



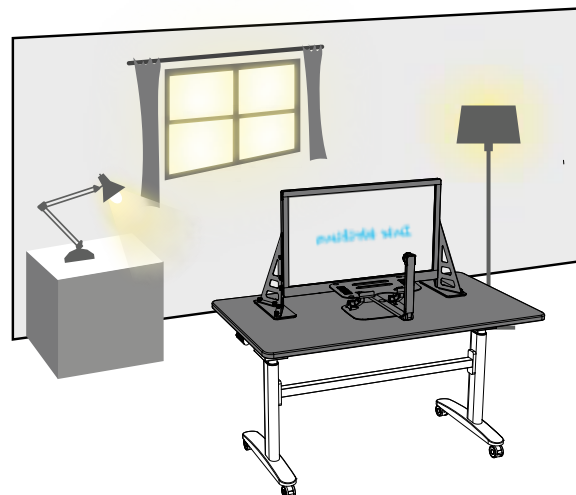
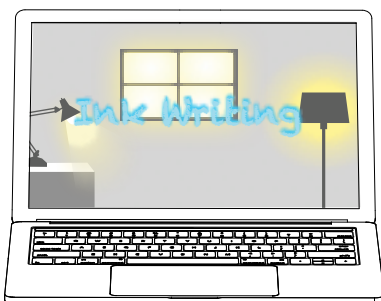
### GOOD

- Window Covered
- Lights Removed
- Ink Visible



### BAD

- ✗ Window in Background
- ✗ Lights in Background
- ✗ Ink Not Visible



## Step 9 Calibrating Lighting

**Note:** Before calibrating lighting, you need to have the software installed and running on your computer so that you can see the eGlass image. You also need to activate a neon pen and prepare to write on the glass.

**Calibrating the Lighting** is one of the most important steps when setting up eGlass. When properly calibrated, the lighting settings will make the ink glow vividly. eGlass features exposure controls that allow it to be used in bright rooms. Even a white wall can be made darker by lowering the exposure eGlass exposure.

The objectives when calibrating lighting:

- **Reduce background brightness** as much as possible.
- **Maximize ink brightness** so that it stands-out in contrast against the now-darkened background.
- **Ensure instructor is properly lit** so that viewers can see the instructor's face.



### **Before Calibrating Lighting**

- Background is **bright**
- Ink does **not** glow against background
- Instructor is **not** illuminated






### **After Calibrating Lighting**


- Background is **dark**
- Ink **glows** vividly against background
- Instructor **is** illuminated

# Step 9 Calibrating Lighting

The image settings are adjusted from the **Control Panel** at the base of eGlass frame:

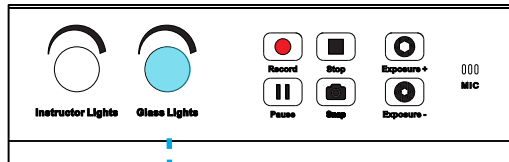
 **Exposure +** and  **Exposure -** adjust how much light is let into the camera, effectively raising or lowering the the entire image **brightness**. Even if your background is white wall, you can lower the exposure to make the background appear darker, resulting in the ink glowing more vividly against the darker image. If the image is too dark, you can raise the exposure to make the image appear brighter.

 The **Glass Lights** control how bright the ink glows. The glass lights should always be set to 100% when using neon markers.

 The **Instructor Lights** illuminate the instructor. These should be increased as the exposure is lowered.

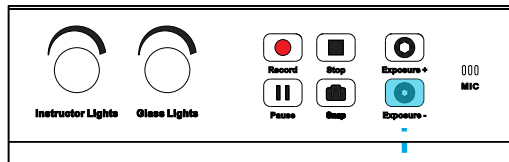
## Step 1

Turn the **Glass Lights** to 100% and draw on the glass with an activated **Neon Marker**.



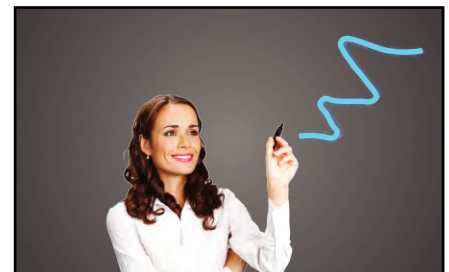
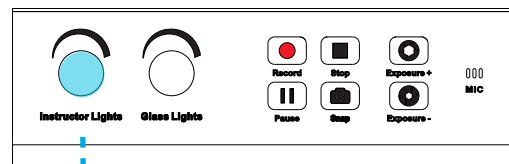
## Step 2

Next, **lower camera exposure** by pressing ( Exposure - ) until BOTH the **background** and **user** are dark, but the ink is still bright and visible.



## Step 3

The previous step may have made the user's face too dark to be visible, so slowly raise **Instructor Lights** until the **user** is illuminated.



**Continue Adjusting:** Lighting should be constantly optimized by adjusting the Exposure +/- and Instructor Lights according to the following balancing rule:

If the image is too bright and you **Lower the Exposure** ↓ , you may need to **Raise the Instructor Lights** ↑

Inversely, if the image is too dark and you **Raise the Exposure** ↑ , you may need to **Lower the Instructor Lights** ↓



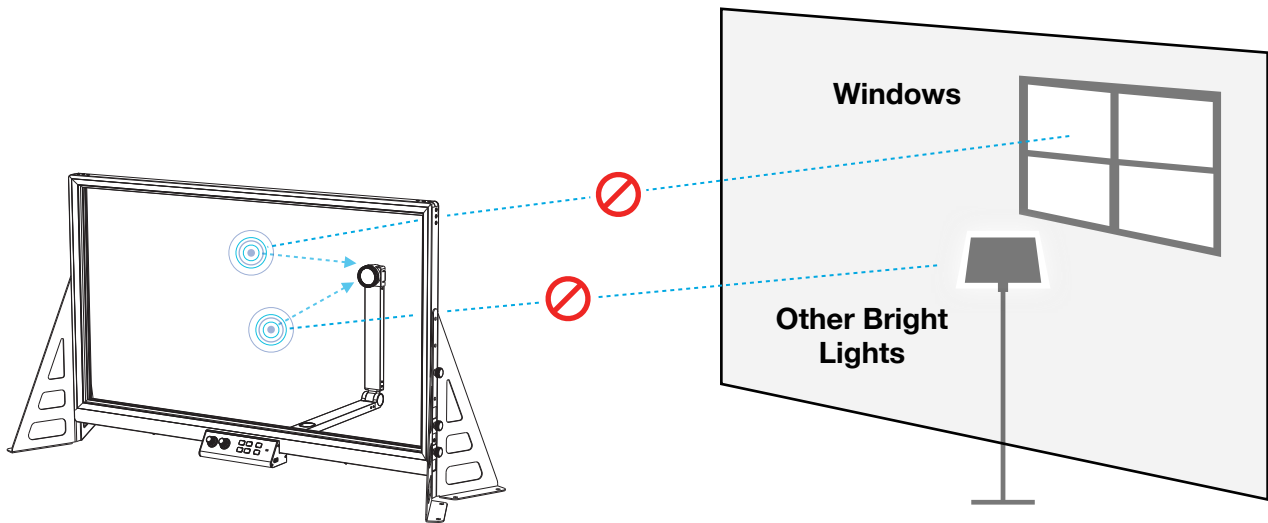
## For the Best Results, Use a Dark Backdrop (Optional)

A dark backdrop (not included), such as a black fabric photography backdrop, will provide the most dramatic look. These backdrops can be purchased online and hung with thumbtacks, curtain rods, or other mounting methods.

## Step 10 Eliminating Reflections

It is possible for light sources behind the camera to reflect off of the eGlass surface back into the camera. These bright spots can be distracting and even make the glowing ink hard to see. For best results:

- 1) **Positioning**: Do not position eGlass opposite of light sources that can reflect off of the glass (ceiling light fixtures, windows, etc.). Try repositioning eGlass by turning it away from potential light sources.
- 2) **Eliminate** light sources at the source by closing curtains, powering-off lights, etc.
- 3) **Lower Exposure** (-) to reduce the intensity of reflections
- 4) **Hood**: Use the Anti-Reflection Hood to fully eliminate reflections

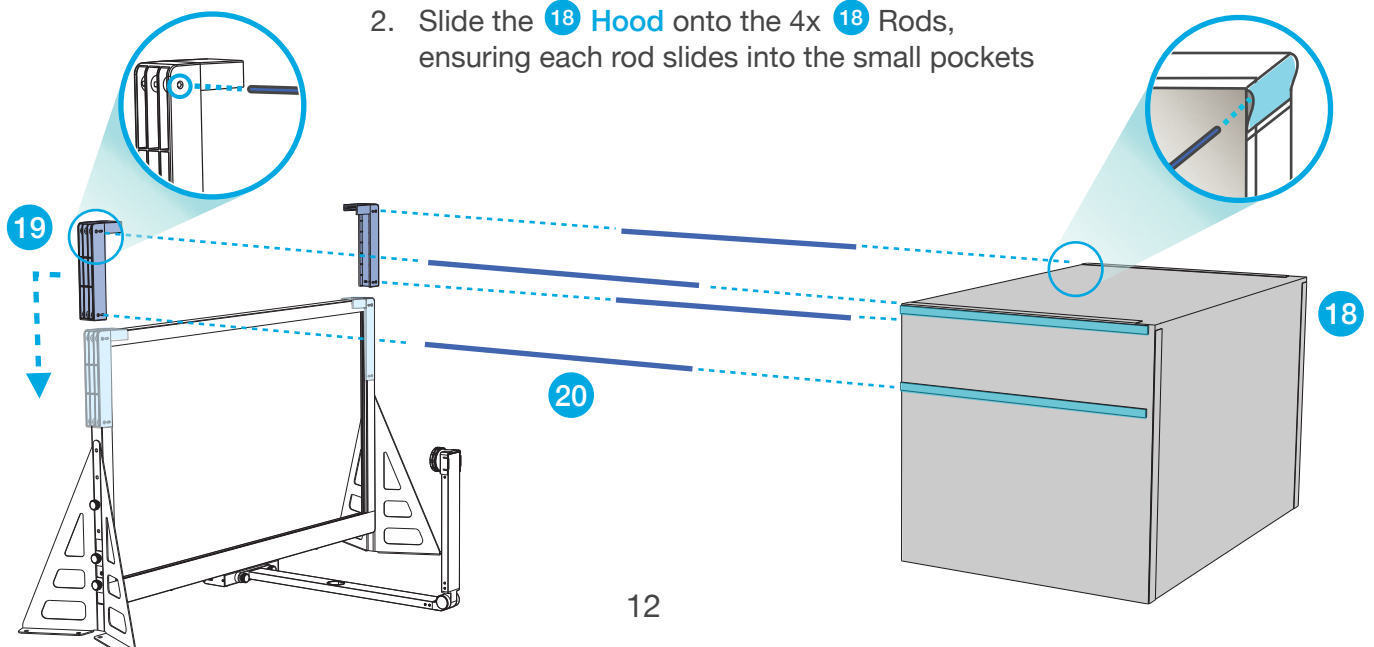


### Anti-reflection Hood (Optional)

The included **18 Anti-reflection Hood** can be assembled and attached to the eGlass frame to block out any reflections coming from the backside (camera side) of eGlass.

Please note: Because the **18 Anti-reflection Hood** decreases visibility through the glass during **face-to-face instruction**, try other reflection elimination methods before using this solution when teaching face-to-face.

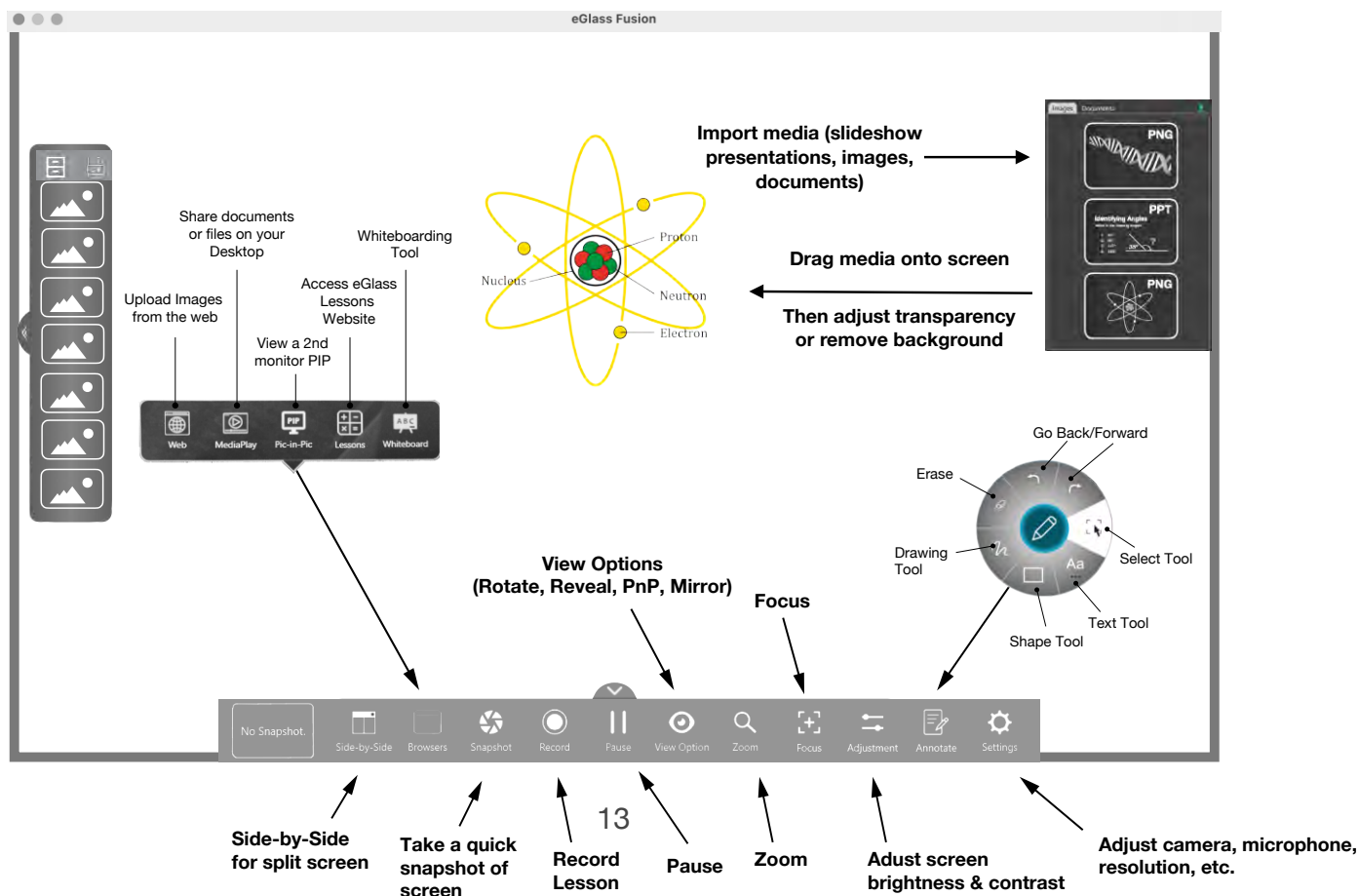
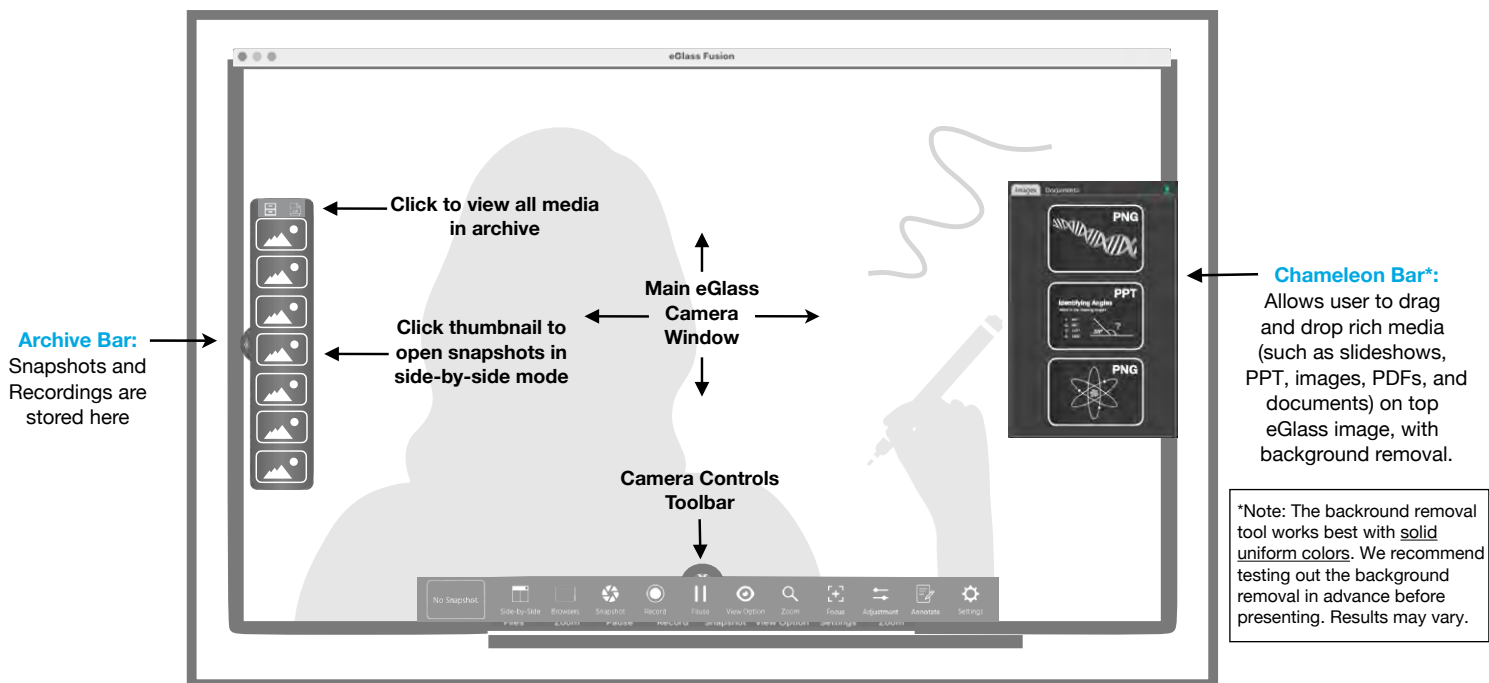
1. Insert the 4x **20 Rods** into the 2x **19 Brackets**
2. Slide the **18 Hood** onto the 4x **18 Rods**, ensuring each rod slides into the small pockets





## Support

For detailed software instructions, downloads and videos, visit the eGlass Academy by scanning the QR Code with your phone or by visiting:  
<https://www.eglass.io/support>



### General

**Do I need to write backwards?** No. The specially designed camera flips your image.

**Does eGlass have a built-in display, so I can see myself as I write?** No, you can't see your own image on screen. However, by positioning your computer near the camera on the audience side of the glass, you can see yourself perfectly through the glass.

**Can I use eGlass without a computer?** No, eGlass requires a PC or Mac computer to flip and display the camera image so that writing appears correctly for the viewers.

**Can I use eGlass with a Chromebook?** While eGlass is compatible with Chromebooks as a USB webcam, using the eGlass software with Chromebooks is not recommended due to restricted security permissions.

**Can I use eGlass for face-to-face instruction?** Yes, but you'll have to display the eGlass image on your classroom display so that the writing appears correctly. Simply use an HDMI cable to connect the computer being used to run the eGlass Fusion software to your interactive whiteboard, interactive flat panel, projector or other display.

**Can I use eGlass for virtual instruction?** Yes, eGlass can be used with your favorite video conferencing programs (like Zoom, for example) by selecting eGlass as the program's input camera, or by using the screen sharing feature to display the eGlass Fusion software.

**Can I plug eGlass directly into my HDMI display?** No, you must first plug eGlass into a PC or Mac with the appropriate eGlass Fusion software installed and running. You may then mirror your computer screen to your interactive whiteboard, interactive flat panel, projector or other display by connecting with an HDMI cable.

**Do you need any special tools?** No, eGlass is assembled using thumbscrews. You don't even need a screwdriver!

**Can I mount eGlass to my desk?** Yes, use the included mounting plates and adhesive film to secure eGlass to a desk surface for **semi-permanent** installation. For a more sturdy you can bolt the eGlass support legs to a wooden surface (hardware and tools not included).

### Lighting, Background, Reflections

**Does eGlass only work in dark rooms?** eGlass can be used against any background not containing direct light sources, but works best against dark backgrounds (so that the neon ink "glows" in contrast against the dark background). However, even when using eGlass against a white wall in a room with the lights on, eGlass lighting controls can be used to reduce the brightness of well-lit and otherwise busy backgrounds so that both the presenter and the ink can be highly visible. See the "Calibrating Lighting" section to learn how to drop the exposure.

**What if I want to use eGlass against a bright background?** eGlass can be used against a brightly-lit background, but the ink won't "glow" when the glass lights are on. In this scenario, the glass lights can be turned off, and darker-colored "standard" dry erase markers must be used to contrast against a bright background.

**How do I get rid of reflections?** The best way to eliminate reflections is to avoid them. Don't position eGlass opposite of any windows, ambient lights, or other light sources. If you cannot avoid certain reflections, try to eliminate them using curtains or other light-blockers, or turn off lights that are causing excessive reflections. If you cannot avoid or eliminate reflections, you can minimize them by turning-down the eGlass exposure using the control panel. When using eGlass remotely, use the included anti-reflection hood to completely block-out reflections.

**What is this black fabric tent-like system for?** The anti-reflection hood can be mounted onto the eGlass frame to completely block out reflection-causing light sources.

**Why is the image so dark?** First, check that the instructor lights are high enough to adequately illuminate the user. Also make sure the exposure isn't too low. You want the exposure low enough to make the background appear dark (so that the ink "pops" in contrast against the background), but not too low where the marker ink isn't visible.

**Why is the image so bright?** First, make sure the exposure isn't set too high by slowly lowering it. If only your face appears too bright, try lowering the instructor lights.

**How do I turn on/off the bottom bezel instructor light?** Use the switch on the bottom of the eGlass frame.

**Why is the image fuzzy?** The camera may be out of focus. Twist the lens on the camera until both the writing and your face are in focus. Be careful not to unscrew the lens completely from the device.

### Writing and Erasing

**Why isn't the pen ink glowing?** First ensure the glass lights are turned up to 100%. Next check that you are using compatible "neon" dry erase / glassboard markers. If the ink is still too dark, try raising the exposure. (Note: yellow neon markers tend to appear the brightest, followed by orange and blue. Other colors, like the included pink color, may not appear as brightly as the yellow, orange and blue colors).

**Do I need special markers?** We recommend neon dry erase markers, which can be purchased online. Some recommended brands are:

- Quartet Glass Whiteboard Dry Erase Markers - Neon
- Arteza Glass Board Dry Erase Markers - Neon
- Expo Neon Window Dry Erase Markers

**Why don't the included pens don't work?** First make sure you have activated the pens (see the "Writing" section, Step 7 on pg. 8). Always store the pens upside-down with their caps on between use. Always shake and "dab" the pen tips on a cloth two or three times before each use to saturate their tips.

**How do I keep the glass clean?** Simply wipe the writing off with a cloth or rag. Foaming glass cleaner and a glass cleaning squeegee can be used for more thorough cleaning (not included).

**How do I get rid of ink flakes that fall when I erase the board?** The special properties of neon dry erase ink causes erased ink flakes to "clump" more than standard dry erase markers, sometimes dirtying one's workspace. However, this clumping is preferred as it causes ink particles to fall rather than remaining in the air like standard dry erase particles do. Use a rag or small handheld vacuum to occasionally clean your workspace of fallen ink flakes.

### eGlass Fusion Software

**Does the eGlass software work with PC and Mac computers?** Yes. PC and Mac versions of the eGlass Fusion software are available for download from the eGlass Support webpage.

**Can I use eGlass software with a Chromebook?** While eGlass is compatible with Chromebooks as a USB webcam, using the eGlass software with Chromebooks is not recommended due to restricted security permissions.

**Where do I find the software?** The Windows and Mac eGlass Fusion software can be downloaded from the eGlass Academy web page at <https://www.eglass.io/support>.

**Do I have to use the eGlass software?** No, you can use eGlass as a USB camera when using other camera softwares (like Zoom, for example), but the eGlass Fusion software adds several features and functionalities that other software don't (For example, the Snapshot and Recording buttons found on the eGlass control panel are only functional when using eGlass Fusion software.)

**Does eGlass work with web conferencing programs?** Yes, simply select eGlass as the camera input in your preferred web conferencing program. For more functionality, open the eGlass Fusion software in the background, then select "eGlass AppCam" as the camera input in the web conferencing platform. This will allow you to utilize eGlass Fusion software features without "Screen Sharing", which often presents issues with video lag and delay. (If you have eGlass Fusion open, make sure eGlass isn't being used as the primary camera in the web conferencing platform).

**My eGlass is plugged in, but Zoom/Teams/Meet/etc. cannot detect it. What's the deal?** Only one program can use the eGlass camera at a time. Try disabling the video on your web conferencing platform, opening eGlass Fusion, and then selecting "eGlass AppCam" is the camera input device for the web conferencing platform.

**My eGlass is plugged in, but eGlass Fusion cannot detect it. What's the deal?** Only one program can use the eGlass camera at a time. Check to make sure another video program (like Zoom) is not using eGlass as its camera input, then try relaunching eGlass Fusion.

**Why isn't eGlass recording my audio?** You might not have the eGlass integrated microphone selected as the audio input source. Check the microphone settings within the eGlass Fusion software, and microphone settings within your computer's system settings to ensure the eGlass microphone is selected.



## Support

For detailed software instructions, downloads and videos, visit the [eGlass Academy](https://www.eglass.io/support) by scanning the QR Code with your phone or by visiting: <https://www.eglass.io/support>

