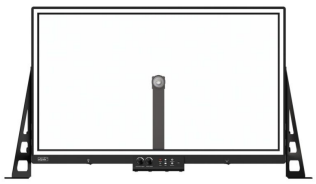


eGlass Transparent Lightboard with Built-in Camera User Guide

eGlass Transparent Lightboard with Built-in Camera User Guide

Contents

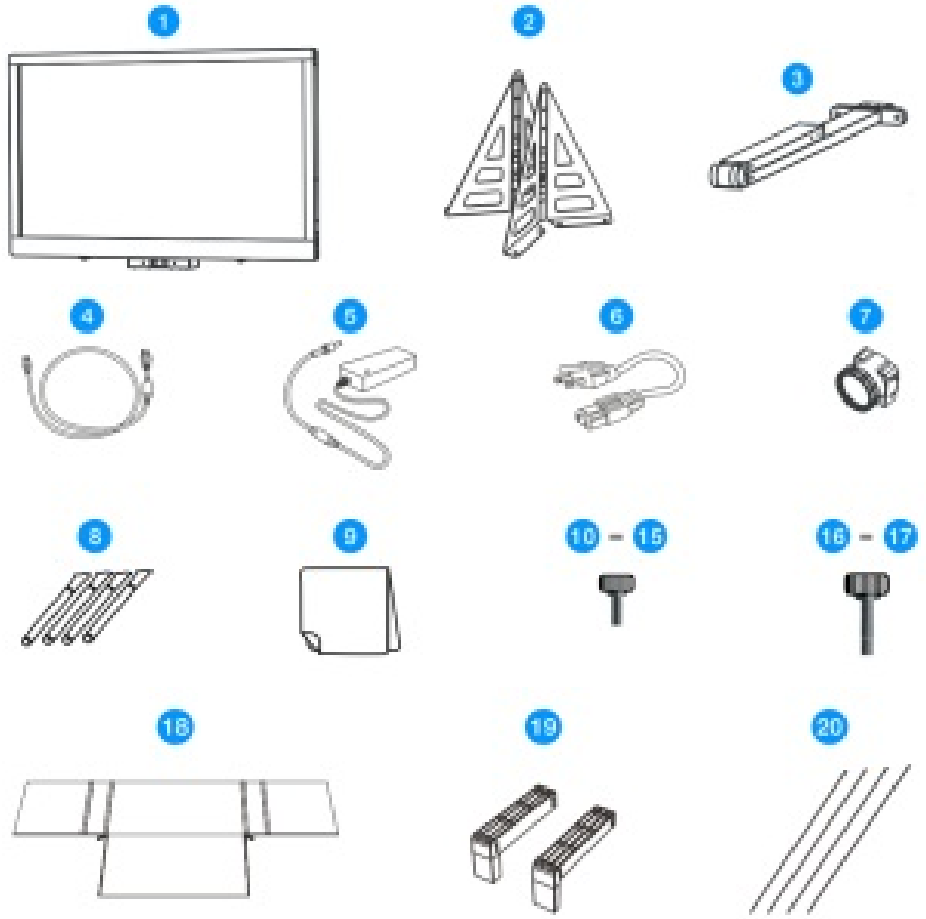
The Setup Process

When setting up eGlass, it's best to follow the below steps 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".

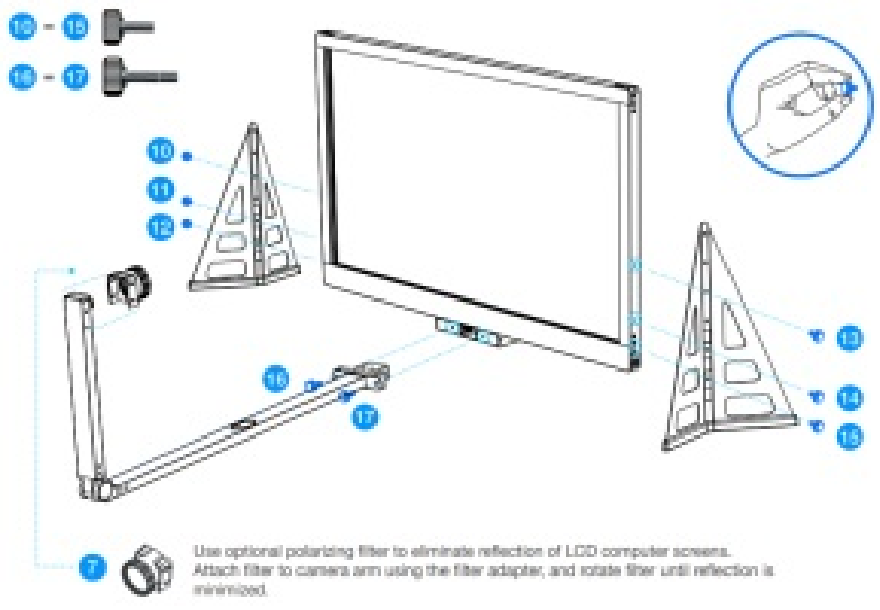
Unboxing

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 Glassboard Pens (Unactivated)
9. Cleaning Rag
10. (10-15) 6x Support Leg Thumb Screws
11. (16-17) 2x Camera Arm Thumb Screws
12. (18) Anti-Reflection Hood
13. (19) 2x Anti-Reflection Hood Brackets
14. (20) 4x Anti-Reflection Hood Rods

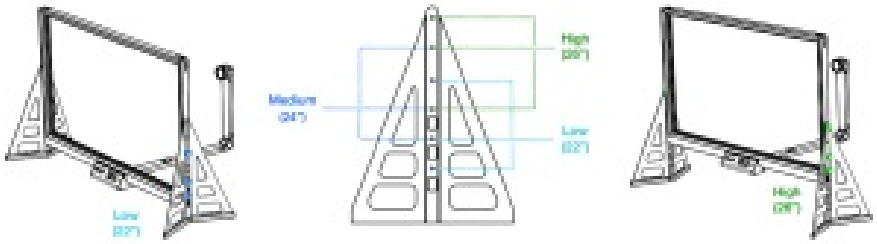


Assembly



Choosing Height Setting

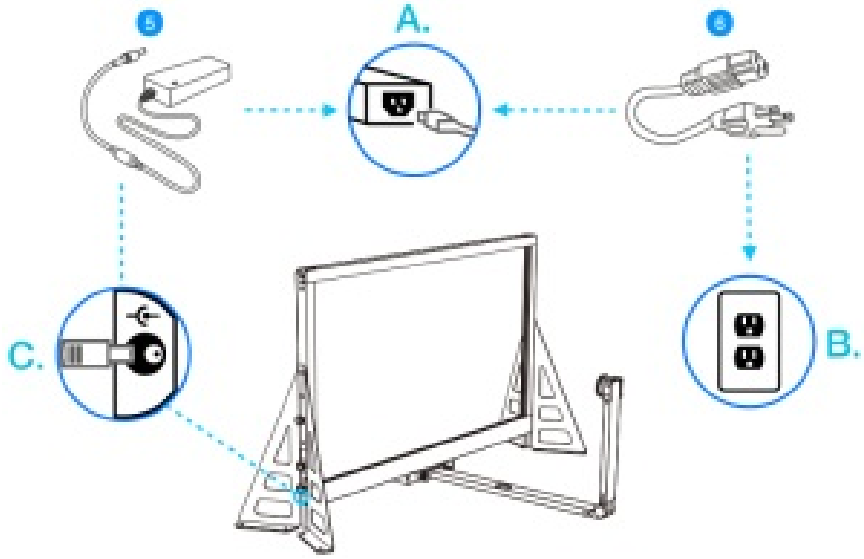
The support legs can be mounted in three height configurations, Install thumb screws 10 – 15 in the colour – coded holes below depending on the desired height:



Connecting

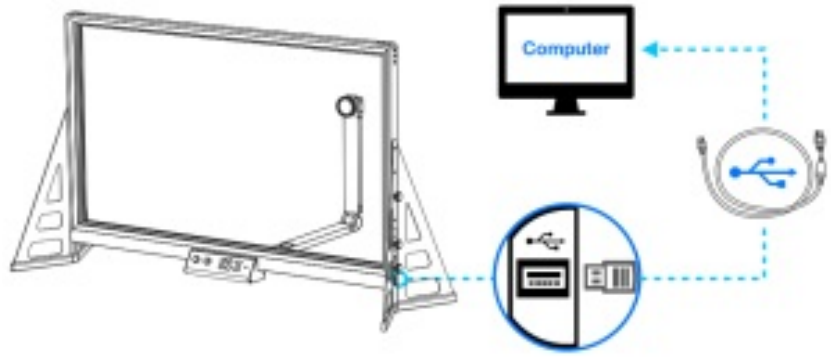
Connect Power

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 6 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.



Installing Software

Need to see camera image before setting up

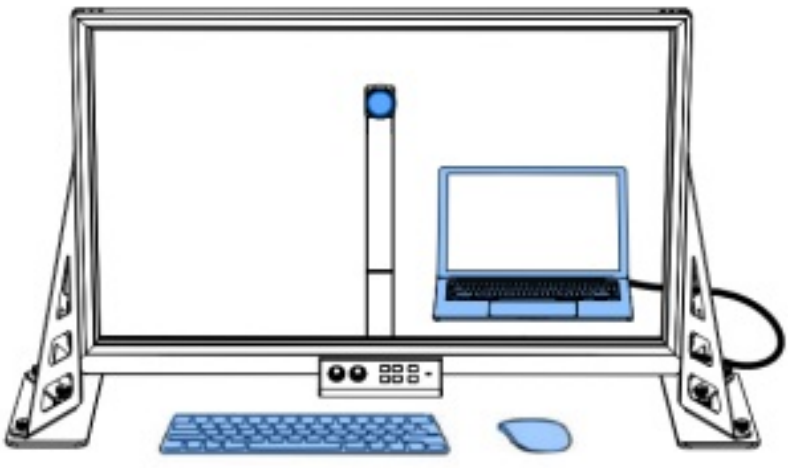
- Before completing set-up process, please install the eGlassFusion Software onto your computer.
- Download Software from **https://www.hovercam.com/eglass/help**
- Chromebook users must use the HoverCam for Chrome App.

Download from
https://www.hovercam.com/eglass/help

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 a laptop stand (not included) as pictured below to position computer screen even closer to the eGlass camera.

Good:



Best:

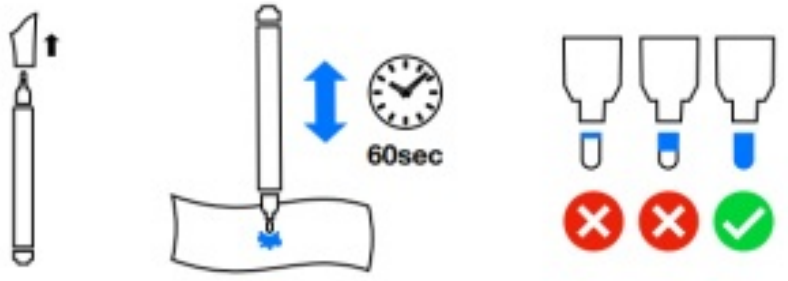
Turning-On

Using Neon Pens

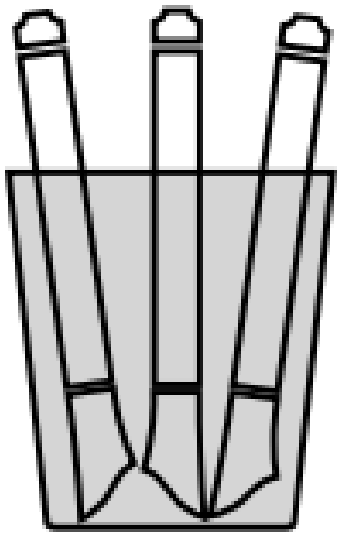
For a glowing effect, we recommend using neon dry erase markers, which can be purchased online. Some recommended brands are:

- 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.



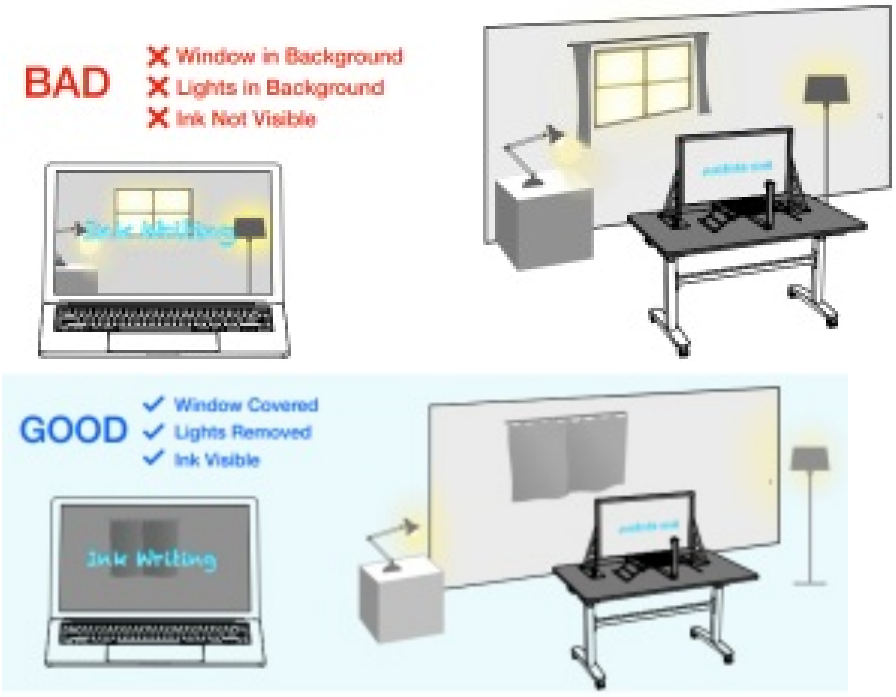
To erase pen ink, simply use the included cloth to wipe the glass clean. Foaming glass cleaning solutions can be used occasionally, but are not necessary for every day use.

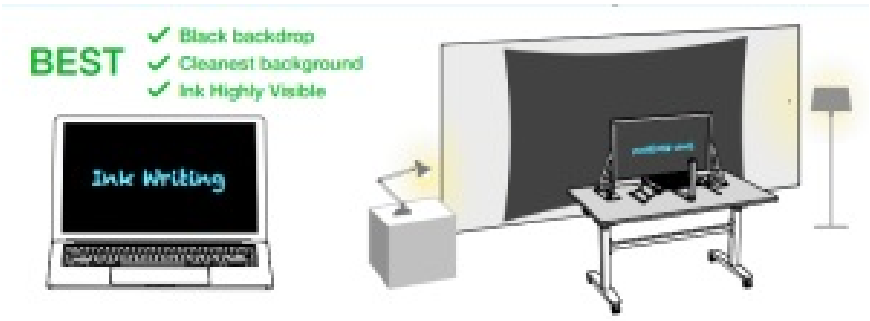
The special properties of neon dry erase ink causes erased ink flakes to “clump” more than standard dry erase markers, sometimes dirtying one’s workspace. However, this clumping is preferred as it causes ink particles to fall rather than remaining in the air like standard dry erase particles do. Use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

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.





Calibrating Lighting

Note: Before calibrating lighting, you need to have the software installed and running on you computer so that you can see the eGlass image. You also need to active 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

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

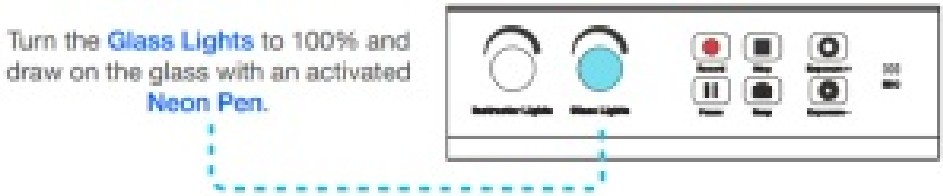
- 

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.
- 

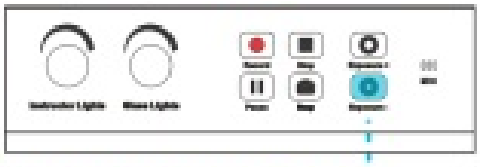
The Instructor Lights illuminate the instructor. These should be increased as the exposure is lowered.

Step 1



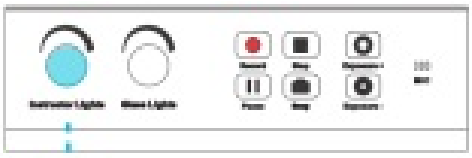
Step 2

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⇧

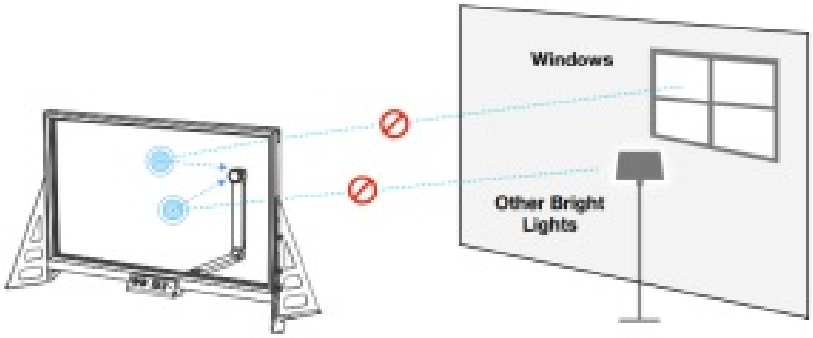
Inversely, if the image is too dark and you Raise the Exposure⇧, you may need to Lower the Instructor Lights⇩

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.

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

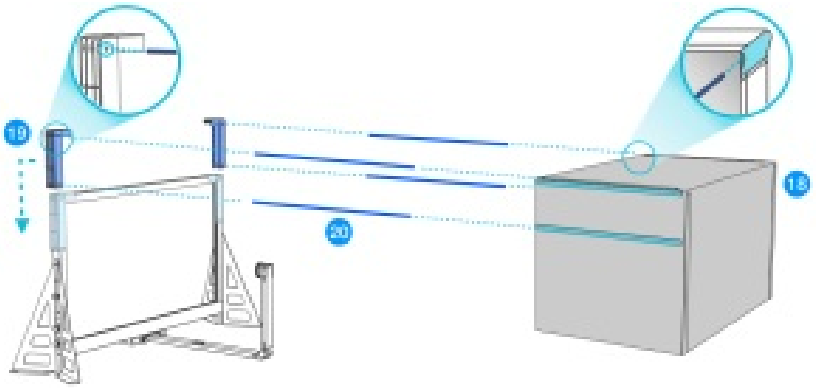


Antireflection Hood

The included Antireflection 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 Antireflection Hood decreases visibility through the glass during face-to-face instruction, try the 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

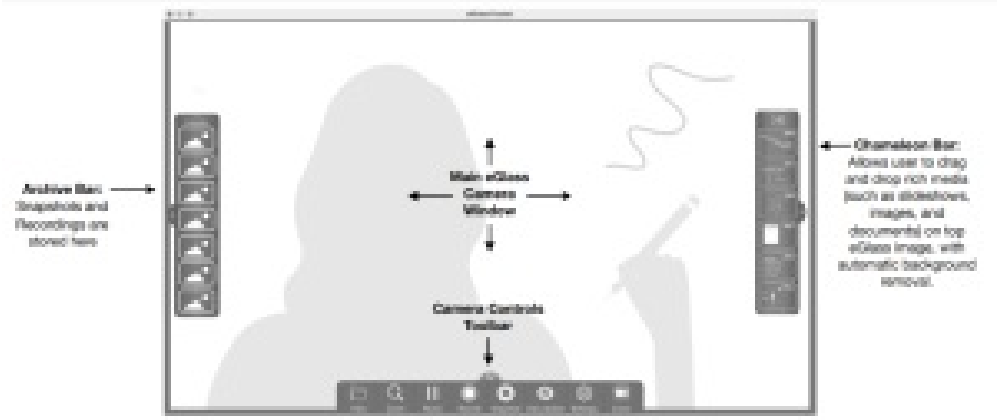


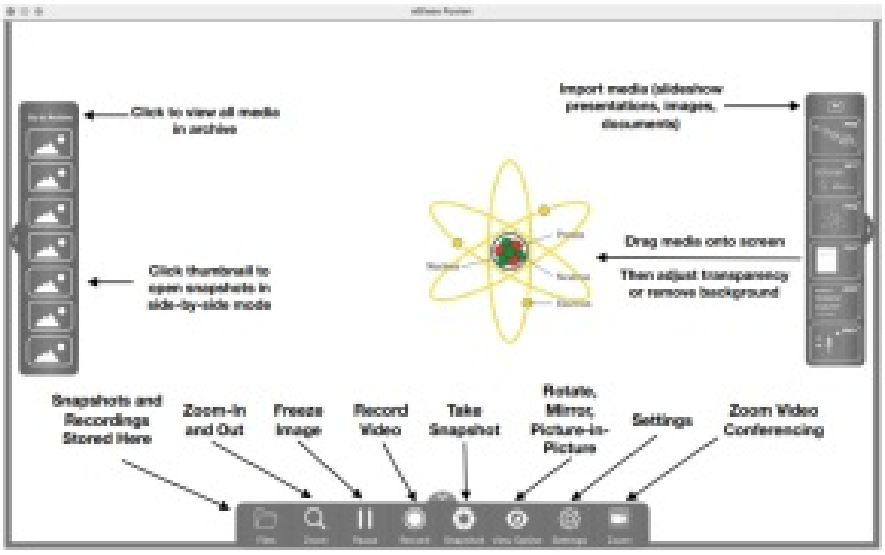
Using Software

Academy

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/academy**

Scan With Phone Camera





Troubleshooting and FAQ’s

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 onscreen. 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, Mac or Chromebook to flip and display the camera image so that writing appears correctly for the viewers

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 eGlassFusion software to your interactive whiteboard, interactive flat panel, projector or other display.

Can I use eGlass for virtual and/or 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 eGlassFusion software.

Can I plug eGlass directly into my HDMI display?

No, you must first plug eGlass into a PC or Mac with the appropriate eGlassFusion 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 a more sturdy (and semi-permanent) instillation, you may 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. See the "Focusing the Camera" section.

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 nd 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). Always store the pens upsidedown 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.

Software

Does eGlass work with PC, Mac and Chromebook?

Yes. PC and Mac versions of the eGlassFusion software are available for download from the eGlass Academy webpage. Chromebook users can use the “HoverCam for Chrome” software found on the Chrome Webstore.

Where do I find the software?

The software can be downloaded from the eGlass Academy webpage (**www.hovercam.com/eglass/help**)

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 eGlassFusion 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 eGlassFusion 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 eGlassFusion software and share the application window using the web conferencing platform’s screen sharing feature. (If you have eGlassFusion 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/ect. cannot detect it. What’s the deal?

Only one program can use the eGlass camera at a time. Check to make sure eGlassFusion is not open, then try reselecting eGlass as the camera device.

My eGlass is plugged in, but eGlassFusion 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 eGlassFusion

Why isn’t eGlass recording my audio?

You might not have eGlass’ integrated microphone selected as the audio input source. Check the microphone settings within the eGlassFusion software, and microphone settings within your computer’s system settings to ensure the eGlass microphone is selected.

Documents / Resources

	eGlass Transparent Lightboard with Built-in Camera [pdf] User Guide Transparent Lightboard with Built-in Camera