

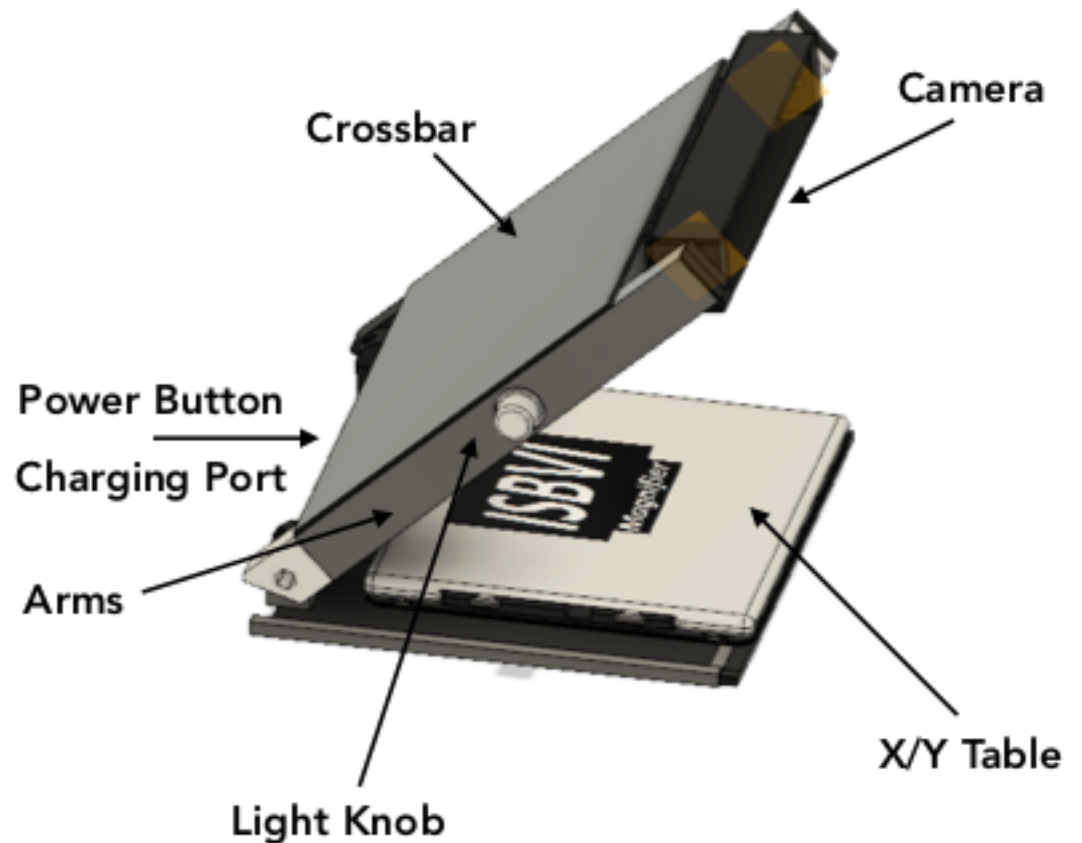
Purdue EPICS Magnifier User-Manual

The Purdue EPICS Magnifier is a device that provides magnification for individuals with visual impairments while using the iOS application developed by the ISBVI EPICS team at Purdue University. This magnification is available through the USB-camera attached to the support system. The device is designed to connect from one's iPad to a wireless router imbedded in the device. Once the iPad has been connected, individuals are able to livestream documents onto their iPad for magnification.



Mechanical Setup

This user friendly device is compiled of the simple parts shown in the image on the right; labeled **Figure 1**.



*Figure 1

Mechanical Parts Described

The following parts described can be viewed in **Figure 1**.

Arms: The arms hold up the camera bar and turn on the lights as well. One can open the device by simply lifting up the arms.

Camera: The camera is located above the crossbar. The bar itself can be positioned to face the classroom as well as the X/Y table.

Charging Port: The charging port can be found below the crossbar. One can charge the device by plugging the charging chord into this port.

Crossbar: The crossbar is located between the arms of the device. This encases the wires and other components of the Magnifier. One can also find the QR code to connect to the device on the back of the crossbar.

Light Knob: The lights can be found surrounding the camera on the device. One can brighten or dim these lights by twisting the knob located on the side of the arm.

Power Button: In order to connect the Magnifier to the stream, simply press the bower button located at the bottom of the crossbar - near the charging port.

X/Y Table: The X/Y table is placed directly under the camera. The table can move to fit the sizes of different documents over the X and Y access.

How to Turn on Device

In order to turn on your Purdue EPICS Magnifier, simply press the power button located near the charging port at the bottom of the crossbar.

How to Connect

In order to connect the iPad to the device, go to the Wifi (in the settings app on your iPad) and connect to the router.

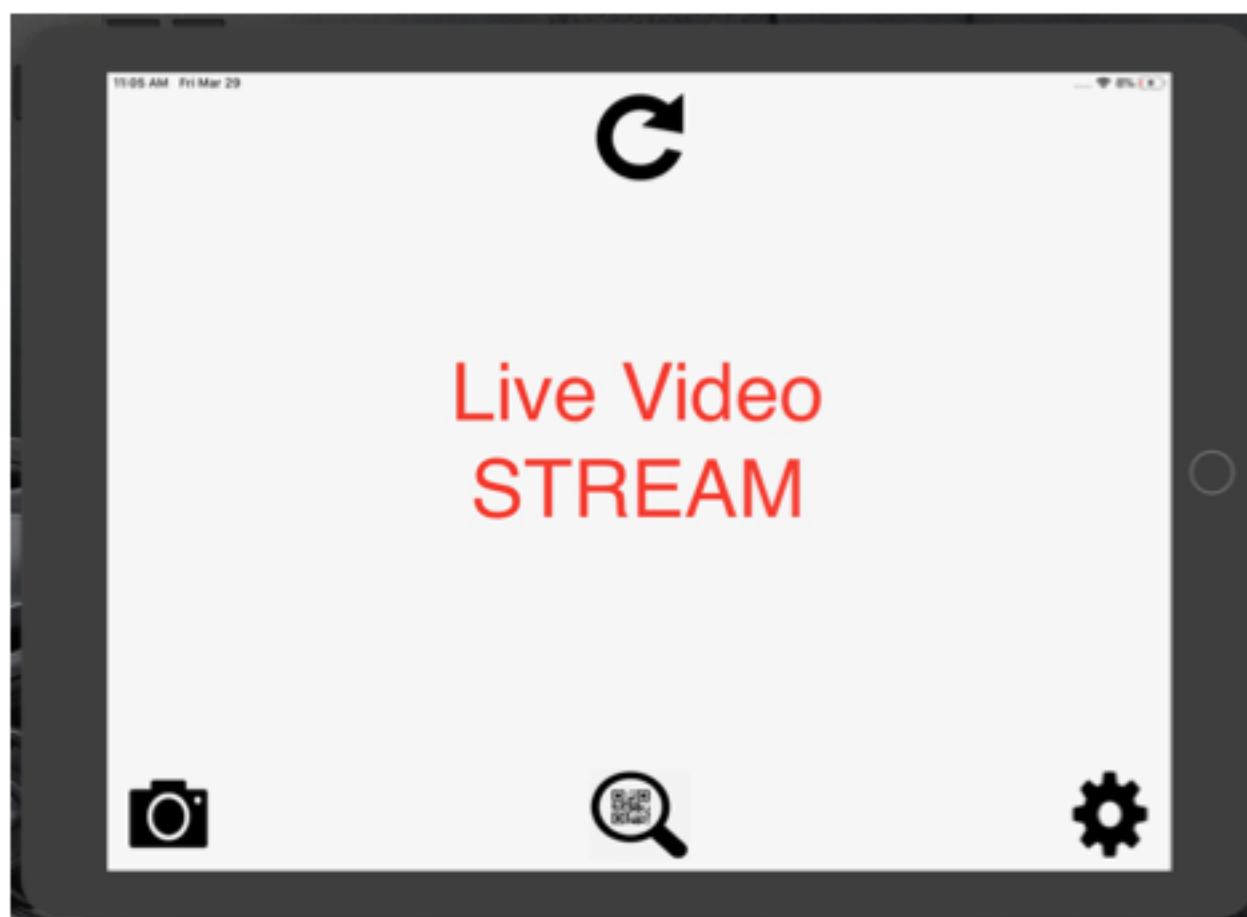
The router can be found under Magnifier 1.

Then, use the camera (on your iPad) to scan a picture of the QR code. The QR code can be found on the back of the cross bar.

Software Setup

Once you have set up your device, you will be able to access and manipulate the livestream document through your iPad.

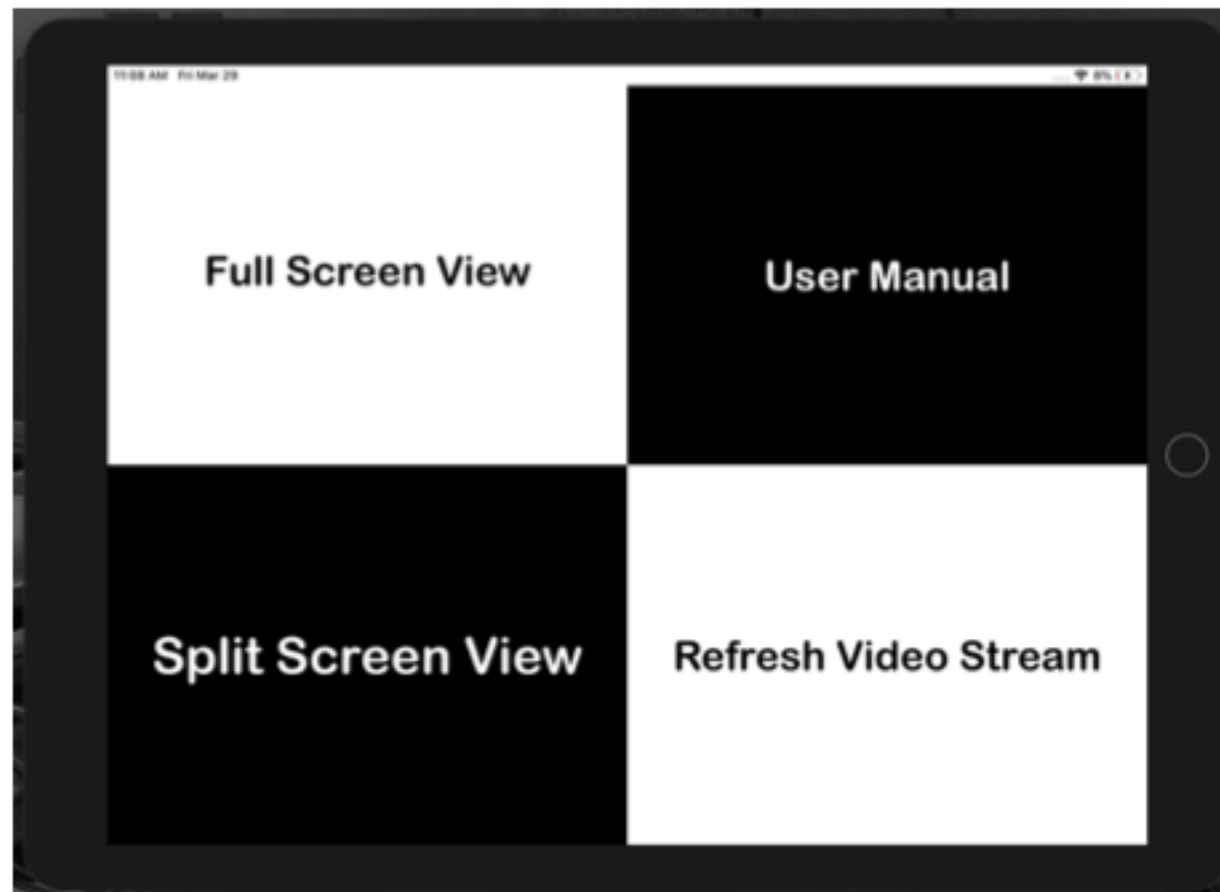
***Figure 2**



Immediately upon connecting the iPad to the Magnifier, the iPad will display a livestream of the document placed below the camera. The iPad screen will look much like the image above; labeled **Figure 2.**

The bottom right settings icon will lead you to the Menu Controller.

Figure 3



The Menu Controller is depicted to the above in **Figure 3**. As the image shows, there are four boxes that can be accessed through touch. Once you have clicked on one of the boxes, you will be directed to the specific feature.

Full Screen View

This will take you back to the main screen of the app.

Here, you can view live stream of the document placed under the camera. One can zoom and manipulate the image simply by spreading your index finger and thumb across the screen.

User Manual

This will lead you to
this document, the
User Manual.



Split Screen View

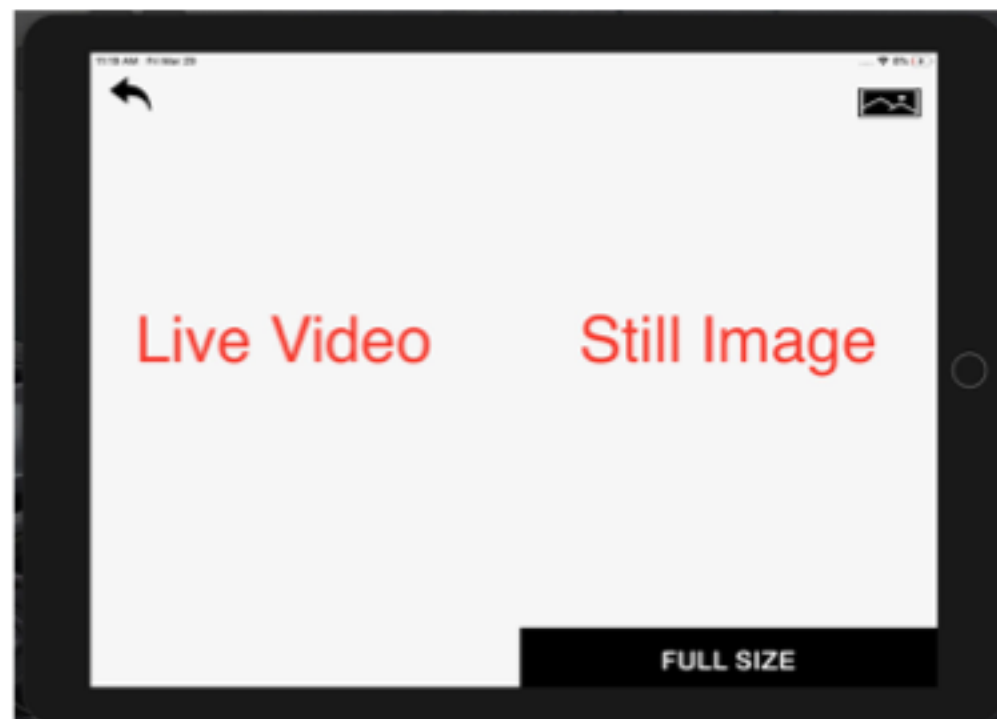
Through this feature, you can view the livestream document (on the left side of the screen) along with a still image (on the right side of the screen). This image can be a screenshot of the document being streamed or a photo from your iPad.

In order to take a screenshot, tap the camera icon in the bottom right hand corner in

Figure 2. This will snap a still image of the document being streamed and immediately switch to split screen. Your screen will look much like **Figure 4**.

In order to access old photos, tap the photo icon in the top right corner of **Figure 4**.

***Figure 4**



Refresh Video Stream

If video stream is lost (assuming you are connected to the device already), the refresh button will retrieve the stream again.

Frequently Asked Questions

- What if I want to invert the colors on my screen?
 - If you would like for the colors on your screen to be inverted, access the Settings app on your iPad. From there, tap General > Accessibility > Turn on the option for Invert Colors (it is under the Vision section on top).
- What happens if I scan the QR code and there is no video stream?
 - If the video stream fails to load, be sure to double check that you are connected to Wifi.
- How do I change the batteries?
 - The battery pack is located on the back of the crossbar. The magnifier uses AA batteries.
- Can I hook up more than one iPad to one single Magnifier?
 - Yes, you can hook up more than one iPad to a single Magnifier. Simply follow the steps when connecting listed above in Mechanical Setup for both iPads.

Any further questions can be directed to the following EPICS members.

- For physical device needs, contact Aditya Mishra - mishra59@purdue.edu
- For software needs, contact Nick Rosato - rosaton@purdue.edu
- For user needs issues, contact Sheila Schuh - schuhs@purdue.edu