



Airborne Sensor, LLC.
9 Beach Rd.
Hingham, MA 02043
781-799-5148

Eagle360 QuickStart Guide

Rev 1.2

Congratulations on your purchase of an Eagle360 camera housing: this guide is to help you get it installed and shooting images quickly and successfully. It is an attempt to gather in one place many of the lessons we have learned developing and using the product. We are recommending a standard beginning setup on the GoPro camera: as you become more familiar with it you may want to set things up differently, but this will get you started as you begin the learning curve to your personal preferences. Please email us with any questions you might have, and let us know any way it can be improved!

1. GoPro Camera Setup

Some things are less than clear about unboxing and putting the GoPro camera to use, so we will walk you through the process.

Here's where to find digital versions of your user manual (the manuals are great for references):

<http://gopro.com/support/product-manuals-support>

a) **Memory Card:** The GoPro camera does not come with a memory card, so one of the first things to do is get a card for your GoPro. The Hero3 cameras use MicroSDHC cards (Hero2's use the physically larger SDHC cards), which are very tiny but can hold up to 64 gigabytes of data, or about 5-6 hours of HD video. Much smaller cards are available if you just need smaller runtimes. We recommend getting quality cards, and we recommend a speed rating of 10. KEEP THE ADAPTER TO SDHC which comes with most microSDHC memory cards: they let you insert the microSDHC cards, and the adapter, in turn, can be plugged into your Mac or PC if it has a "normal" SDHC slot (most laptops have such a slot), and so the adapter will let you easily look at your videos after they are shot. GoPro says: "the average recording storage times for a 32GB SD card when shooting at 1080p (30 fps) is 4h 21m", however your mileage may vary somewhat (they quote average values).

b) **Unpack the GoPro** (not as easy as you might think): Unwind the tape around the middle of the box, remove the plastic part of the case. Squeeze the clip at the base of the camera to remove the camera in the waterproof case it is shipped in. To open the case and reach the camera itself, look at the two white arrows on the clip securing the case: slide the white arrow

that moves sideways to the right, and while it is there lift up on the arm near the front of the camera with the other white arrow, and the latch should open, allowing you access to the camera. In the lower portion of the package you will find various clips and accessories, as well as the battery for the camera. Insert the battery, then charge it for a few hours with usual USB cable connecting the camera to a USB charger. If you also purchased Battery Bacpac (an extra battery that clips on the back of the camera for extended runtime) unpack and charge it as well.

c) **Update your GoPro:** *NOTE: follow the update directions carefully: most reported issues with GoPros stem from rushing the update process. Be a little patient, and it will go great and you will have a rock solid system with new features.*

Go to the GoPro site, click on Support, then click on

“HERO3 Camera Software Updates Available”

And follow their instructions to update your Hero 3. They are always fixing bugs and adding features, so do the upgrade **per their instructions** as soon as you unbox and insert a memory card into your camera (there has to be a memory card installed to do the update process!!).

As part of the upgrade you will be prompted to enter an 8 (or more) digit WiFi name: if you have no real preference may we suggest "H3B1eagle360" for your first camera, "H3B2eagle360" for your second, etc. That name may come in handy down the road for some Eagle360 updates we have planned.

Note: The GoPro Menu System

The camera’s menu system has a bit of a learning curve. There are two main buttons on the GoPro cameras: one on the front face, and one on the top. The one on the top works like most cameras: push it to take a picture or start a video, and push it again to end a video. The button on the front lets you power the camera on(push it momentarily) or off (hold it in until you hear beeps, then release), and steps you thru the menu system (push it momentarily while the camera is on).

The Menu System: Getting to Settings

To work with the menu system, see the GoPro manual, or push the front panel button once to turn the camera on (you will get 3 beeps). You come up in video mode, and so there is a little video camera icon on the screen. Push once to still mode, then again three times to see the wrench icon, which is the Settings Menu. The first press of the top button shows you the video mode you are in: press the top button once more to allow you to adjust it to 1080 and 30fps. I'd suggest you start off leaving it set to WIDE (you will get a bit of the aircraft body, and slight distortion in the corners, but maximum coverage). As far as other settings you may wish to change (these are optional) you might cut the beep to 70%, and leave Protune off, and likely

leave WiFi off for the time being, unless you want to start out with the free iPad/Android WiFi app right from the beginning.

Curious about learning more at a high level about your GoPro? May we recommend these guides, written by one of the guys who shoots GoPro's in house videos:

<http://abekislevitz.com/understanding-your-new-gopro/>
<http://abekislevitz.com/understanding-your-gopro-part-2/>

2) Setting up your Eagle360

There really is only single step to setting up your Eagle360: decide if you want to start off using an extra battery pack or not. GoPro makes an external battery BacPac that clips onto the back of the camera and roughly doubles the available run time, and unless you are sure your flights, FROM THE TIME YOU START THE CAMERA is under 1.5 hours, we recommend getting the inexpensive Battery BacPac to make sure you don't run out of battery before your flight ends!

Your Eagle360 can accommodate using the Hero camera with or without a Bacpac. If you elect to use no Bacpac, just select the larger spacer block that came with your Eagle360, peel the backing paper off the back side (there is a knife cut across the wrapping, use your fingernail to peel it up) and attach it to the center of the back wall of one of the camera bays (see the spacer is marked "HERO" in blue:



If you have a Battery BacPac, select the smaller spacer block, and apply the same way. Once it is positioned and the double sided tape is adhering, drop the camera into the bay, push it forward to clip into the camera holder, and insert a triangular foam wedge behind it. The wedge should slightly protrude from the top of the pod: when the pod is mounted on the mounting plate and secured with the 4 camlocs the wedge compresses and exerts just the right amount of pressure to position the camera perfectly!

Each camera normally comes with a pair of thick and a pair of thin spacers. If you need more they are available in our store.

3) Positioning the Eagle360 on your aircraft

Turn a camera on (push front button momentarily, wait for the menu to come up showing a movie camera) , and push the top button to start the camera filming.

Put it in a pod bay.

Put a wedge between the camera and the spacer you mounted on the back wall.

Put the mounting plate on the pod such that the plates' towers fit into the pod's receptacles, and for each of the 4 red painted camlocs, push and turn 1/4 turn clockwise to attach.

Make 4 little notes (Post-its work well) marked "1" "2" "3" "4", or more of you'd like.

Hold the pod such that the mounting plate is flat against your aircraft in the first test position under your belly you wish to check out, and hold the #1 Post-it in front of the lens, then tape or otherwise secure that #1 tag to the place on the belly where the pod was located. This way you will have a few seconds of video from that location on your memory card, and you will be able to review it and decide which of the numbered positions is the best place to permanently mount your Eagle360.

Move to a second potential position, and do the same with the #2 Post-it, and move and repeat for #3 and #4, as desired.

Look at the resulting video, and decide where you would like your installer to mount your Eagle360. Keep factors like antenna position and landing gear position in mind as you make your decision. Note that since we set the camera to WIDE, you will be seeing the maximum amount of landing gear, etc, and that if you later decide you prefer to shoot using the MEDIUM width, the gear will be less (or not) visible.

4) Eagle360 Installation

Give the AS100 drawing, the mounting template drawing, the Installation Manual, the copy of the STC, and the Instructions for Continued Airworthiness to your installer, and tell him the

position you want your Eagle360 to be mounted in (1,2,3 or 4 whichever you preferred). Work with your installer, and be sure they see the engraved “FWD” arrow on the mounting plate must be pointed directly forward when the mounting plate is riveted in position. Our intent with the template is for them to tape it to the belly of your aircraft in the right position, and trace the location of existing rivets onto the template. They can then decide on where they will position the required rivets, and transfer those locations to the mounting plate for drilling.

5) When the Installation is Done

Charge your camera(s), format the memory card, turn on the camera (momentary push of front button), drop it in the camera bay, insert the foam wedge, start each camera filming (push top button once, confirm RED LED flashes) hold the pod to the Mounting Plate, and engage the four Camlocs. Go fly!

Landing: Reverse the 4 clicks to release the Camlocs. Stop the cameras by pushing the top button once, then power off the camera(s) by pushing and holding the front button until you hear 7 beeps. We currently use a Plano Protector model 1404 plastic case to transport the Eagle360 pod to and from the aircraft.

6) View your Video

Eject the tiny storage chip and immediately put it in the adapter card it came with. Put the larger SDHC adapter card into your laptop. If you are on a PC you can get Windows Movie Maker for free, on a Mac you get iMovie, and you should download GoPro Cineform for free. See this link for the download and good information about handling video files:
[http://gopro.com/support/cineform-studio-software-support;](http://gopro.com/support/cineform-studio-software-support)

I would suggest you open your files in Cineform, watch and be amazed. You can set In and Out points, and export the clips you like the most, and you can post them on Youtube, Vimeo, or just keep and enjoy them on your hard drive.

If the video is awesome, **SEND THE CLIP TO US TOO! We will post the best clips on the website!**