Base & Tag + Camera Controller for Camcorders

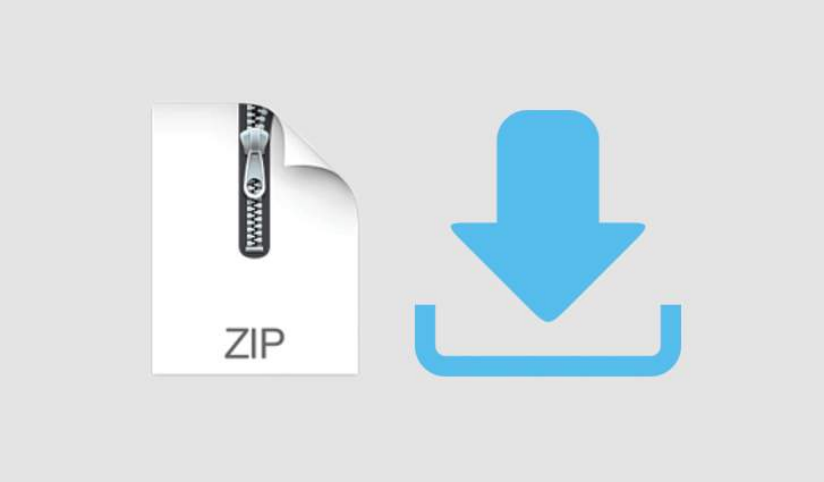
- instructions for use -

ASSEMBLY

Base 	Tag 	Camera Controller 	2.5mm Cable 	Multi Cable 
Tripod Tool 	Armband & Clip 	Base & Tag Charger Cable 	AV/R Cable 	Power Cable 

Step 1.0 | Safety First

Please read the SAFETY INSTRUCTIONS and warnings carefully before using the product.



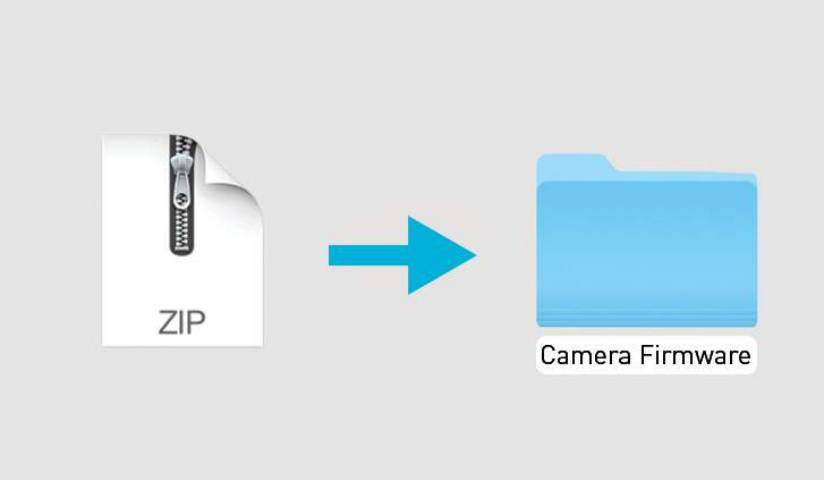
Step 1.1 | Download Zip File

Download the zip file containing firmware for your camcorder using the **Camera Firmware Selection Tool**, located just below the navigation menu.

Step 1.2 | Jumpdrive 2.0

You need a USB 2.0 jumpdrive to update firmware. Make sure USB:

- Has NO files on it.
- Example of recommended USB: PNY 8GB USB 2.0 jumpdrive available from Amazon or B&H Photo.

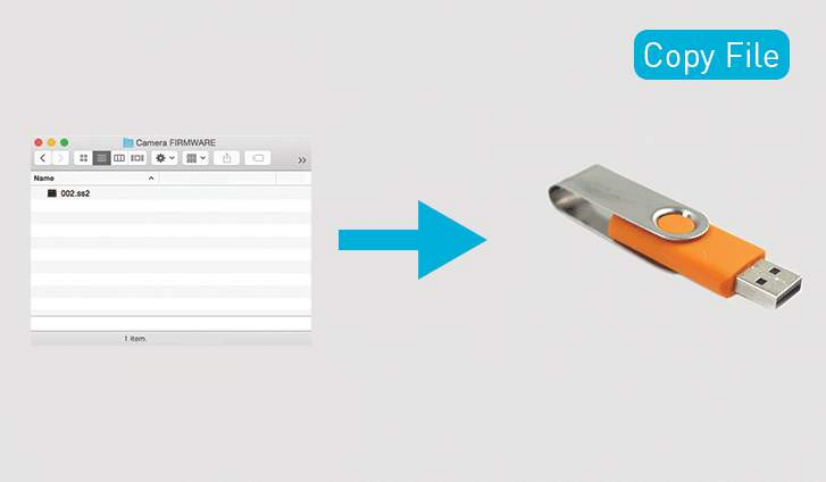


Step 1.3 | Unzip

Locate downloaded file and unzip to reveal firmware folder.

Step 1.4 | Copy File

Open folder and copy the 002.ss2 file from the firmware folder to the USB 2.0 Jumpdrive.



Step 1.5 | Power On Base

Power on Base by pressing power button.

Note:

- Power off: Press and hold power button for 6 seconds.
- LED 3 will illuminate when Camera Controller docked in following step.

Step 1.6 | Dock Controller

While holding down the update button on top of Camera Controller, dock into Accessory Port on Base at 45-degree angle.

Push the controller flush to the Base until it clicks into place.

Step 1.7 | Insert Jumpdrive

Insert the USB 2.0 jumpdrive into the USB Port on the side of your Base. The Base and Tag will automatically update, beginning first with Base and followed automatically by Tag.

Note: SOLOSHOT products will only accept a USB 2.0 Jumpdrive and not a 3.0.

Step 1.8 | Controller Will Update

Camera Controller LED will flash RED/GREEN during update.

LED 6 on Base will flash RED/GREEN as Controller updates.

Step 1.9 | Controller Updated

Camera Controller LED will turn RED when update complete.

On the Base:

- LED 1 will be blinking.
- LED 2 and 3 will be solid.

Step 1.10 | Release Controller

Slide the dock button down to release Camera Controller.

Remove Jumpdrive from side of Base.

Step 1.11 | Power Off

Power off Base.

Congratulations! You've successfully loaded the firmware specific to your camera to the Camera Controller.

Step 1.12 | Update Base & Tag

Important - You must update your firmware. Please do so now before proceeding with instructions.

Click HERE for Base & Tag firmware update instructions.

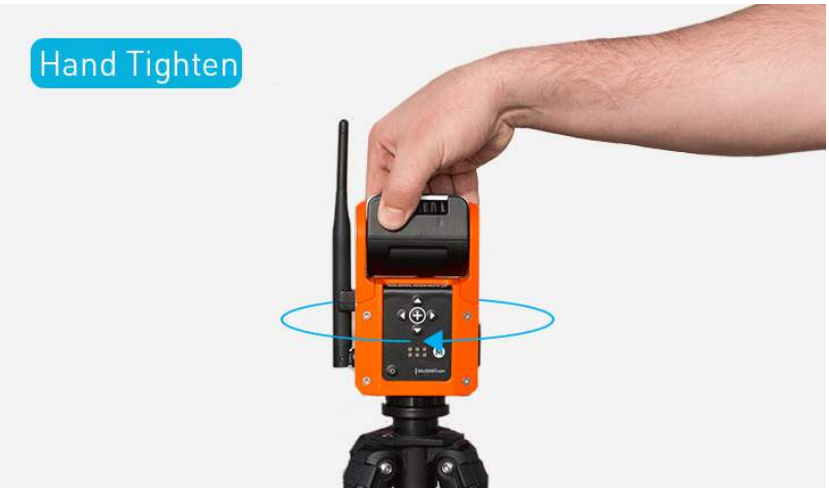
Step 1.13 | Connect Base

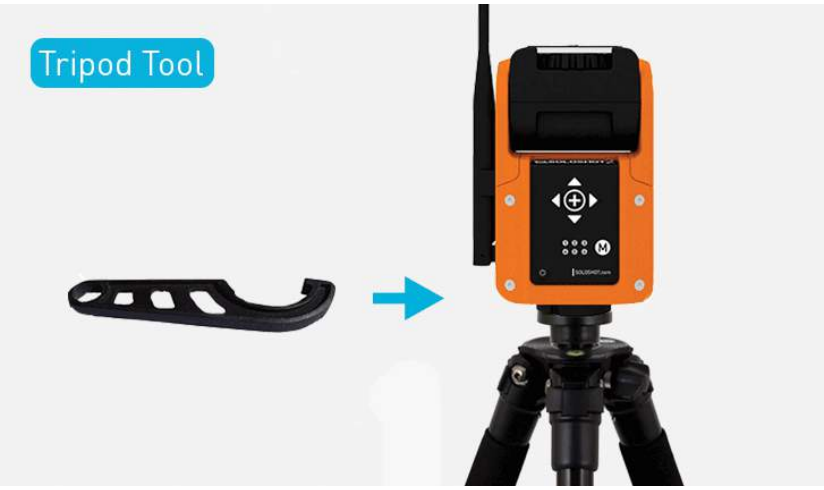
Connect Base to your Tripod (not included). The Base fits a 3/8" inch mounting screw.

Note: If you already have a pan/tilt head on your tripod, please remove it prior to connecting your Base.

Step 1.14 | Hand Tighten

Screw the Base onto your tripod until you feel light resistance from the motor.





Step 1.15 | Tool Tighten

Use Tripod Tool to finish tightening.

Step 1.16 | Attach Camera

Attach your camera to the Base using the mounting screw and spinning wheel.

Step 1.17 | Align Camera

Make sure your camera points in the same direction as the tracking LED.

Step 1.18 | Camera Settings

Turn on your CX-240 or CX-405 by opening the screen.

Adjust settings below (click for details):

- FOCUS = Auto.
- STEADYSHOT = Active.
- IMAGE QUALITY = Limited by your SD card quality and size. We recommend 60p.
- iAUTO = Turn off.

Step 1.19 | Camera Controller

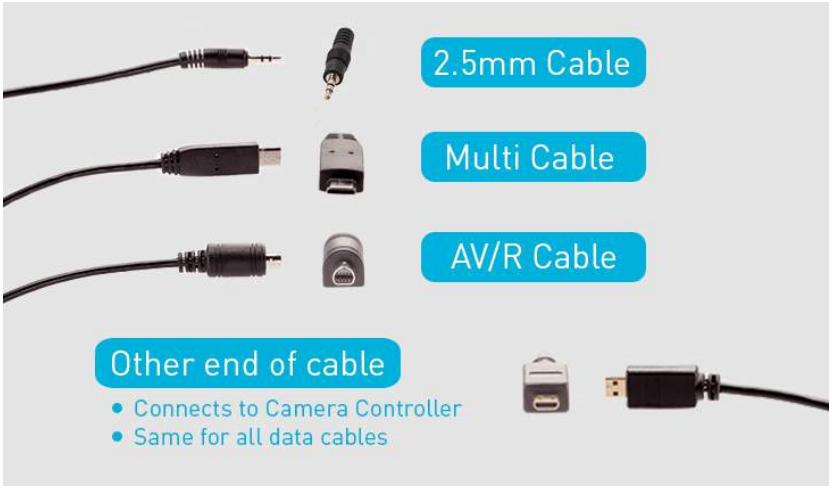
This is your Camera Controller.

Step 1.20 | Select Data Cable

Attach the data cable (and adaptor cable if needed) identified by the **Camera Firmware Selection Tool.**

- 2.5mm (Certain DSLR and cameras).
- Multi (certain SONY camcorders and mirrorless).
- AV/R (certain older Sony cameras and camcorders).

Note: The Camera Firmware Selection Tool is located just below the navigation menu.



Step 1.21 | Power Cable

Your Camera Controller comes with a USB Power Cable.

IMPORTANT: Only use Power Cable provided if the **Camera Firmware Selection Tool** indicates your camera is compatible.

Step 1.22 | Insert Cables

Open silicone cover on side of your Camera Controller.

Insert the appropriate ends of the appropriate Data Cable and *Power Cable into the Camera Controller.

*If your camera is compatible with the Power Cable.

Step 1.23 | Dock Controller

Dock your Camera Controller into the accessory port on your Base. (To release Controller, slide the dock button down)

Step 1.24 | Connect Data Cable

Connect the free end of the Data Cable to the Multi Port on your camera.

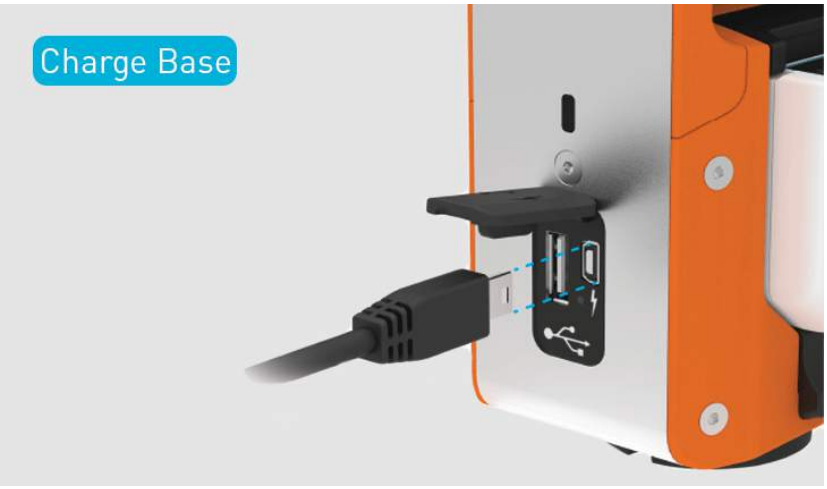
Step 1.25 | Connect Power

Connect the female end of your Power Cable to the camera's USB.

Note: SOLOSHOT can only power certain cameras. Check the **Camera Firmware Selection Tool** to see if your camera is compatible.

Travel Tip

IMPORTANT: Unplug all cables from Camera Controller and camera when transporting your SOLOSHOT.



Step 1.26 | Charge Base

- Open side flap on Base.
- Plug mini USB end of charging cable into side of Base.
- Plug USB end of cable into standard walll adaptor (included with SONY camcorder).
- Plug adaptor into wall socket.
- Charging indicator on Base will be RED while charging and GREEN when ready.

Step 1.27 | Charge Tag

- While holding the Tag at a 45-degree angle, dock the Tag into Accessory Port on Base.
- Tag will click into place.
- LED above Tag's power button will turn RED when charging and GREEN when fully charged.
- Slide the dock button down to release Tag.
- Note: Base must also be plugged in to charge Tag.

SETTINGS

Step 2.0 | Base On/Off

Base Power:

- On - Press power button.
- Off - Press and hold power button for 6 seconds.
- Note: LED 3 will only illumenate if Camera Controller is connected.

Step 2.1 | Tag On/Off

Tag Power:

- On - Press power button. LED 1 will turn RED.
- Off - Press and hold power button for 6 seconds.

Step 2.2 | LEDs 1-6

The 6 LEDs on your Base represent different settings.

Each LED/Setting can be toggled between different operating modes based on your needs.

- LED 1 = Tilt Setting
- LED 2 = Trajectory Setting
- LED 3 = Zoom Setting
- LEDs 4 - 6: MULTI MODE Settings

Step 2.3 | Change Modes

Change Modes by changing the color of the blinking LED:

- Cycle through colors/modes by pressing the M button.

Step 2.4 | Change Settings

Jump to the next LED/Setting by a quick pressing of the power button.

- The active LED/Setting will blink.

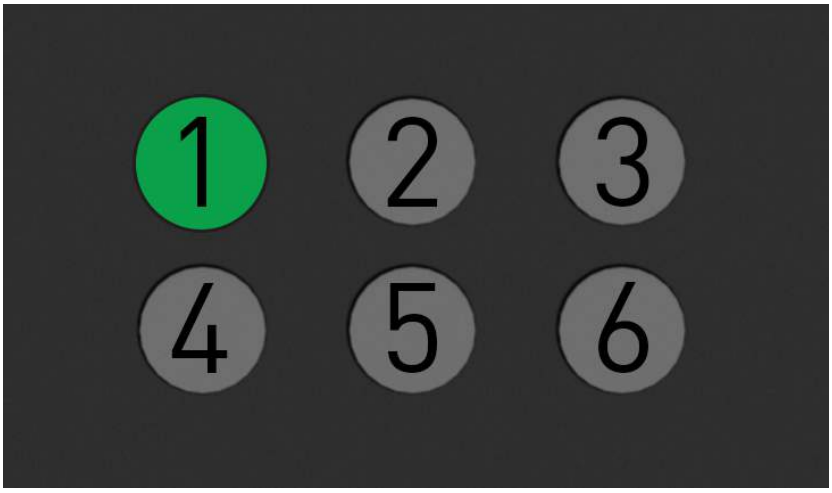
Step 2.5 | LED 1 | Tilt Setting

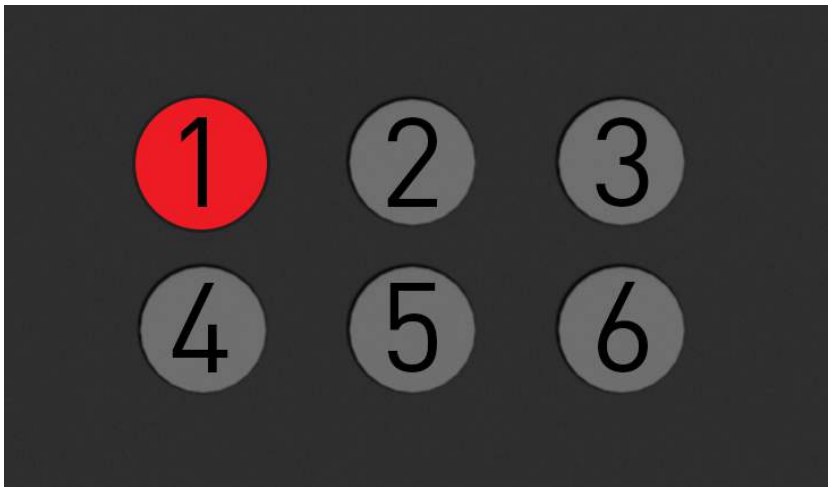
Select your tilt mode by changing LED 1 color based on your activity's requirements as described below.

LED 1 = GREEN

Surf & Turf Mode:

- Great for activities performed on a level surface like surfing, kiteboarding, soccer and wakeboarding.
- **JUMP detection** is now built into Surf & Turf!





LED 1 = RED

Big Altitude Mode:

- Great for activities with large altitude changes (Examples: snowboarding, RC planes and kiteboarding).
- Requires wider framing.

LED 1 = ORANGE

Pan Only Mode:

- Lock tilt at a specific angle regardless of Tag location.
- Allows filmmakers to limit motion to a single degree of freedom.
- Also captures tighter shots.

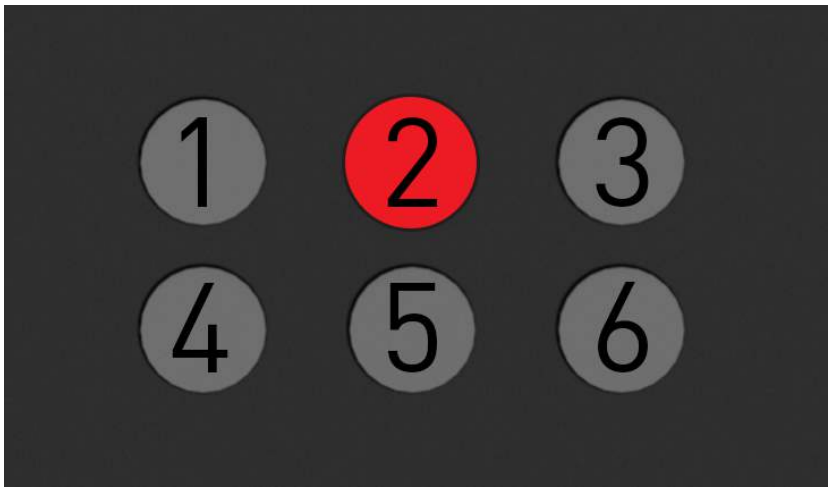
Step 2.6 | LED 2 | Trajectory Setting

Set how long your Base continues to track along it's trajectory when Tag signal is disrupted.

LED 2 = GREEN

One (1) Second Trajectory :

- Use if wipeouts are most important to you because your Base will stop tracking shortly after signal loss.
- Tradeoff: Tracking may be jumpy at times but you won't miss the carnage!



LED 2 = RED

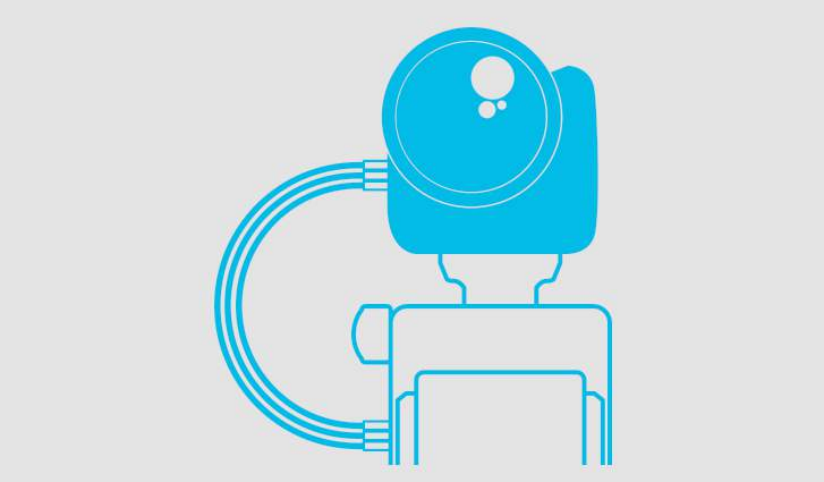
Three (3) Second Trajectory :

- Use in situations where obstructions or distance may disrupt the communication link.
- Great for filming RC planes from long distances.

LED 2 = ORANGE

Ten (10) Second Trajectory:

- Great for surfing deep barrels so you are still in frame when you get spit out.
- Tradeoff: SOLOSHOT will not stop at point of wipeout.



Step 2.7 | LED 3 | Zoom Options

Set how tight a frame you want to capture and SOLOSHOT will automatically zoom your camera in and out to maintain it.

LED 3 = GREEN

Wide Mode:

- Maintains a 80ft wide shot when operating in Surf & Turf or Pan Only Modes.
- Maintains 125ft wide shot when operating in in Big Altitude Mode.

LED 3 = RED

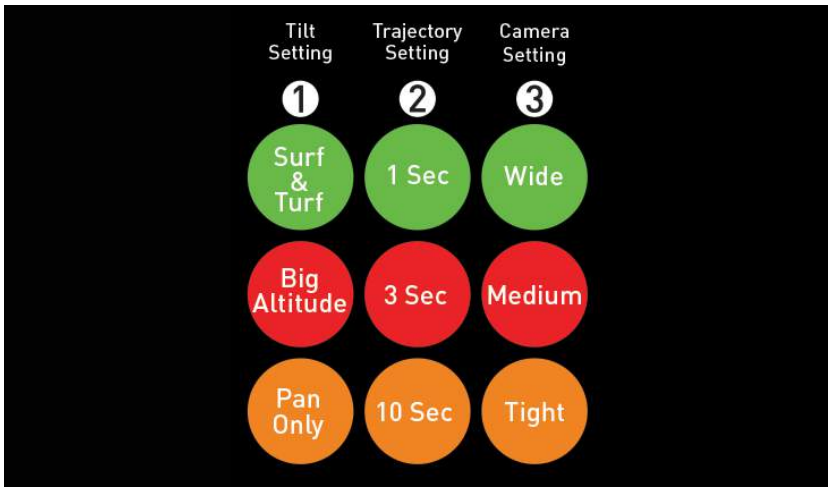
Medium Mode:

- Maintains a 50ft wide shot when operating in Surf & Turf or Pan Only Modes.
- Maintains a 75ft wide shot when operating in in Big Altitude Mode.

LED 3 = ORANGE

Tight Mode:

- Maintains a 30ft wide shot when operating in Surf & Turf or Pan Only Modes.
- Maintains a 45ft wide shot when operating in in Big Altitude Mode.



Step 2.8 | LED Summary

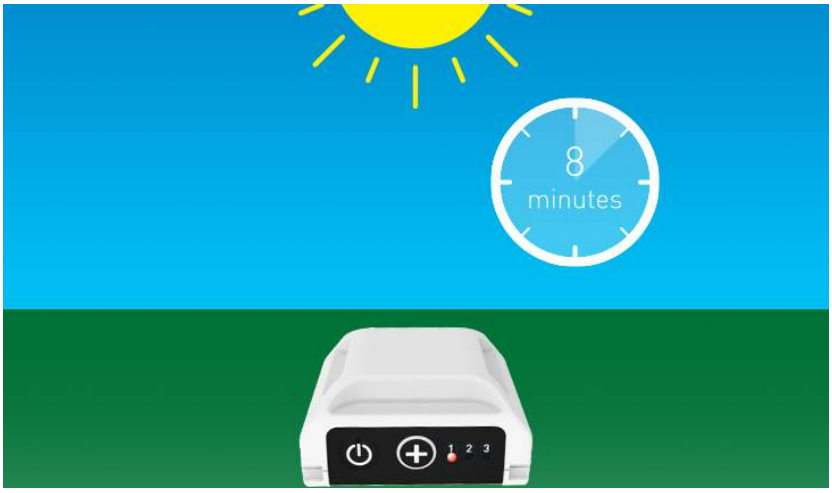
However, please use this image for quick reference - download HERE.

SETUP

Step 3.0 | Tag Warm Up

Power on Tag and:

- Place Tag outdoors white side up with clear view of sky for 8 minutes.
- LED 1 will blink RED when ready.
- While waiting, setup Tripod, Base and camera described below.



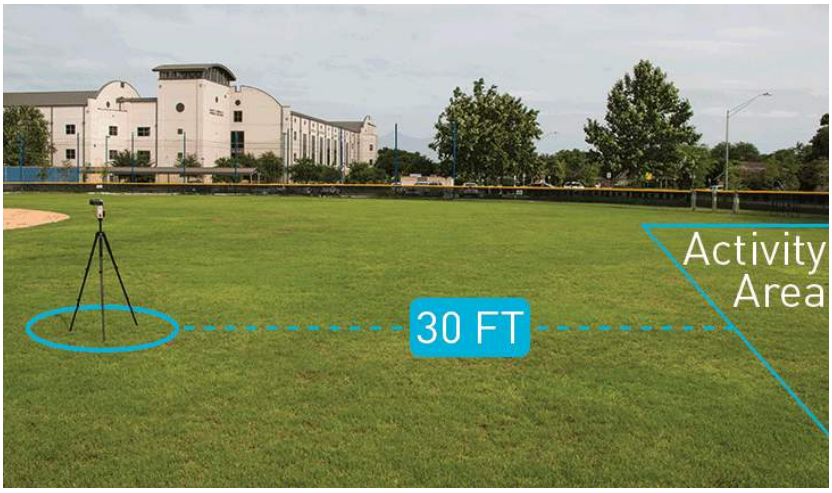
Step 3.1 | Verify Assembly

If you have not already assembled your Base, tripod, Camera Controller and tripod as described in Assembly, please do so now.

Step 3.2 | Choose Location

Choose Tripod and Base location:

- At least 30ft back from activity area.
- Make sure Tripod and camera are level for best results.



Step 3.3 | Power Up

Turn on Base and camera:

- Press power button on Base
- Open LCD screen to turn on camera.

Step 3.4 | Set Modes

Use the power and M buttons to set your Base to the desired modes as described in Settings.

Step 3.5 | Centering Object

Identify object to center within your camera's screen for calibration:

Surf & Turf -

- Object must be at least 50ft away and at the level of your activity surface.
- Examples: Surfboard fins at ocean's edge or intersecting lines on a soccer field.

Big Altitude -

- Object must be at least 150ft away but can be at any level.
- Example: Includes fence post on ski slope.

Pan Only -

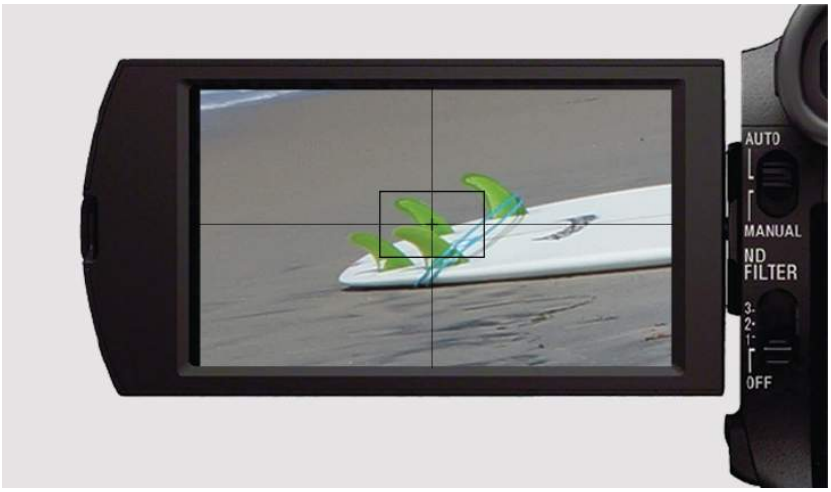
- Object must be at least 50ft away and at any level.
- Tip: Adjust tilt using the tilt arrows as needed during tracking

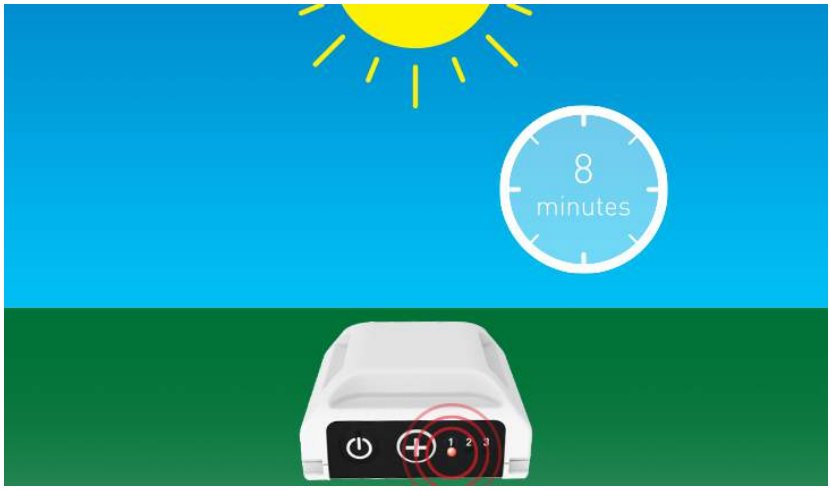
Note: You can switch to Big Altitude and Pan Only Modes at any time during tracking regardless of the calibration mode and method used. However, you can only switch back to Surf & Turf if you originally calibrated in that mode using a centering object level with the activity surface as described above.

Step 3.6 | Zoom In

Manually zoom your camera all the way in on the centering object:

- Use pan tilt arrows to center object as you zoom in.
- Be sure to center the object in the center of the motor play for best results.





Step 3.7 | Tag Ready

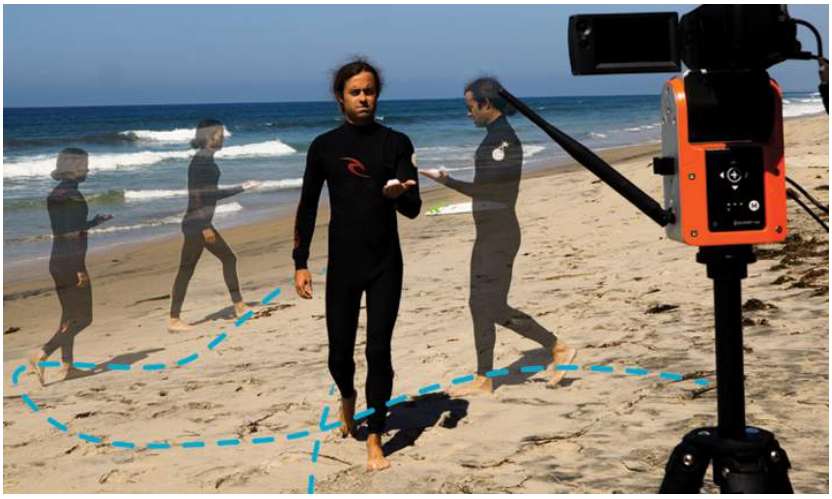
Your Tag should now be warm:

- Indicated by Tag LED 1 blinking RED.

Step 3.8 | Tag Walk

Place Tag in palm of hand, white side facing up and complete warm up by walking around:

- Surf & Turf or Pan Only: At least 50 steps.
- Big Altitude: At least 150 steps.



Step 3.9 | Button Press 1

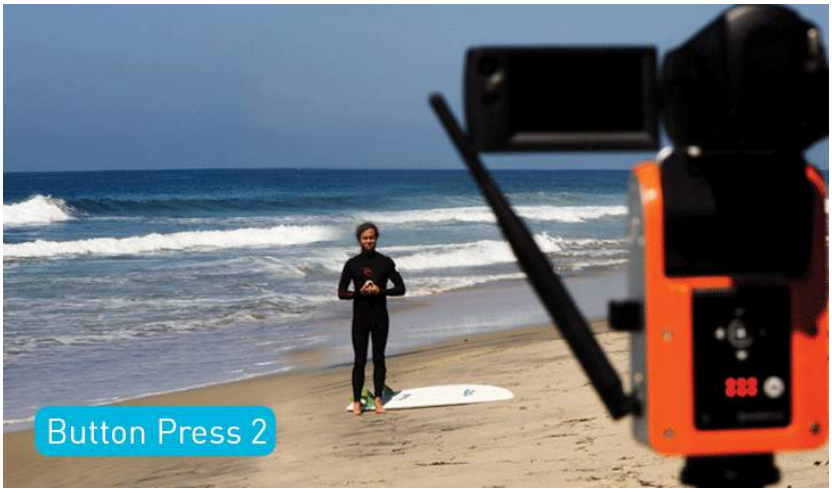
Time your walk to end at the Base then immediately:

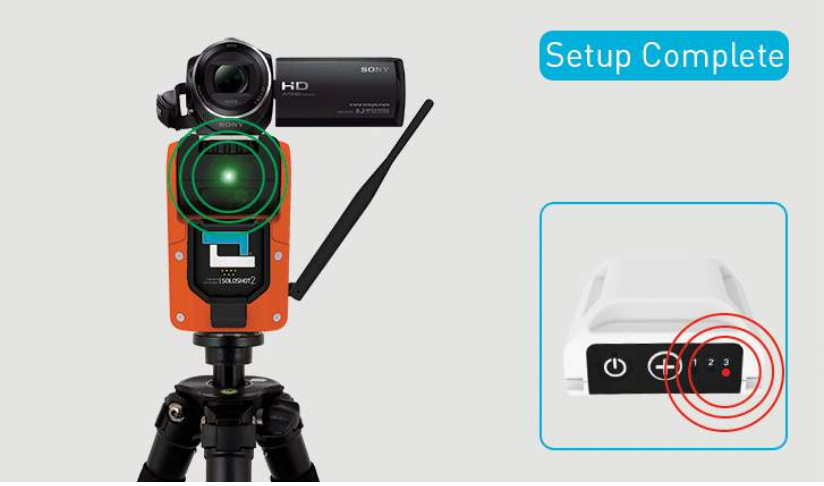
- Hold Tag white side up over your camera.
- Press the (+) buttons on both Base & Tag simultaneously.
- Release both (+) buttons.
- All 3 Tag LEDs and All 6 Base LEDs will start flashing RED.

Step 3.10 | Button Press 2

Quickly go to your centering object:

- Press Tag (+) button to complete calibration.





Step 3.11 | Setup Complete

The GREEN tracking LED on your Base will start continuously blinking once your Base and Tag are paired.

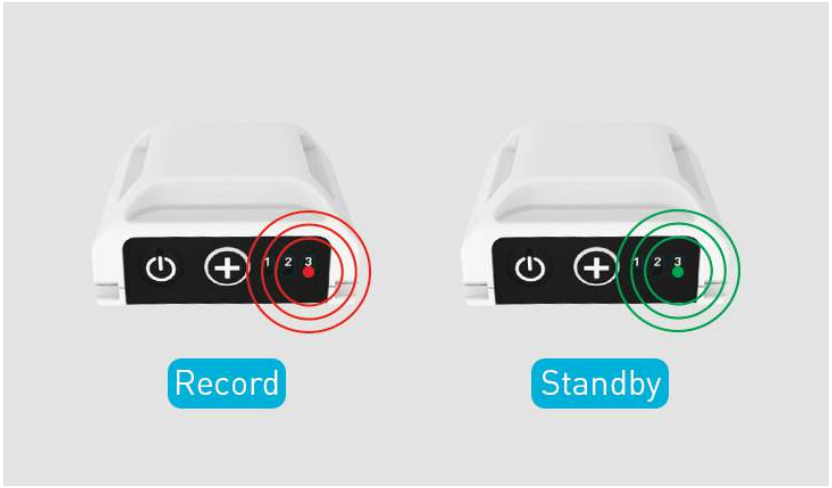
- Indicates the Base is actively tracking the Tag.
- LED is highly directional & changes brightness with distance.
- If you can see it, the Base is pointing at you and you are within range.
- Bright sunshine may make it harder to see LED at longer distances that are still within range.

LED 3 will blink RED on the Tag indicating that it's being tracked by the Base.

Step 3.12 | Record Commands

Press and hold your Tag's (+) button to toggle between Record and Standby.

- LED 3 blinking RED = Record.
- LED 3 blinking GREEN = Standby.



MULTI MODE

Step 4.0 | Intro to Multi Mode

LEDs 4, 5 and 6 on your Base control Multi Mode.

- Use Multi Mode to film multiple Tags from a single Base.
- See section 4.7 to learn how to film one Tag from multiple Bases.
- See section 4.8 to learn how to film multiple Tags from multiple Bases.

Step 4.1 | Multiple Tags

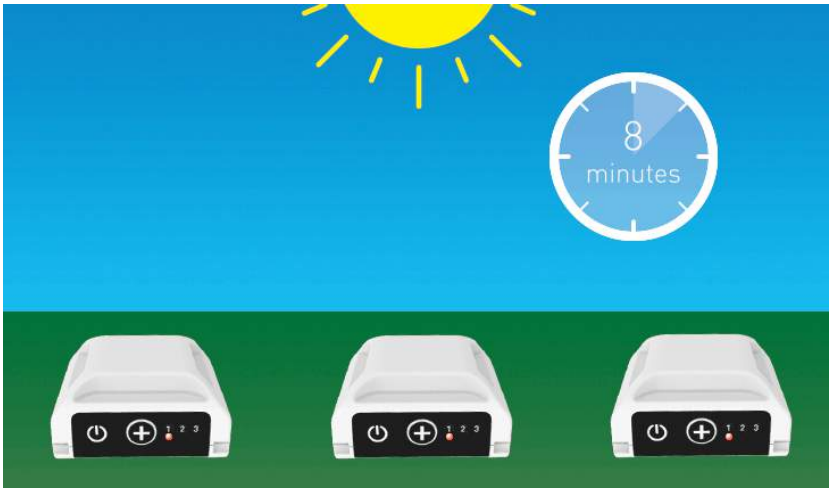
Multi Mode requires at least TWO Tags.

- Purchase Extra Tags individually HERE or use Tags from another SOLOSHOT2 package or bundle.

Step 4.2 | Warm Up Tags

Add more Tags to a calibrated and paired Base & Tag system at any time.

- Warm up additional Tags as described in in step 3.0.
- Note: You only need to do a walkabout (step 3.9) when using Tag to calibrate a Base.



Step 4.3 | Add New Tags

Add new Tag to a calibrated & paired system by:

- Press and hold the (+) button on the old Tag OR Base.
- Press the (+) button on the new Tag.
- IMPORTANT: Order matters. If you make a mistake, use the (+) button on the remaining Base or Tag component of the original system to bring the other two components back in.

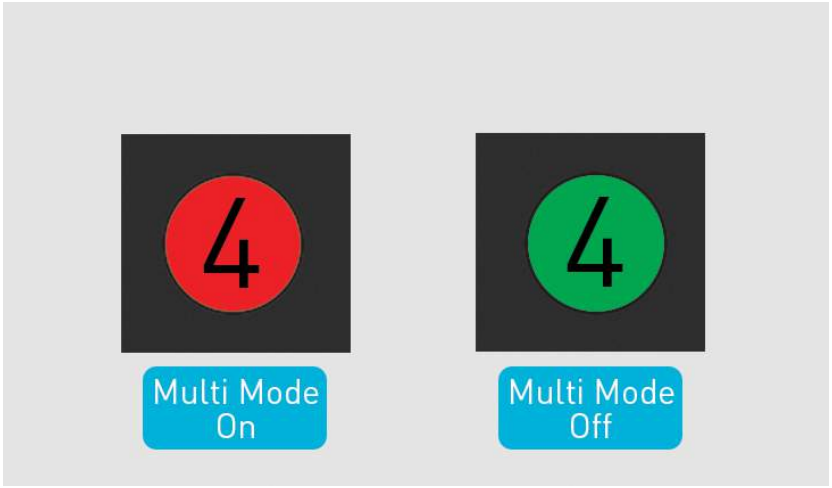
Step 4.4 | Base LED 4

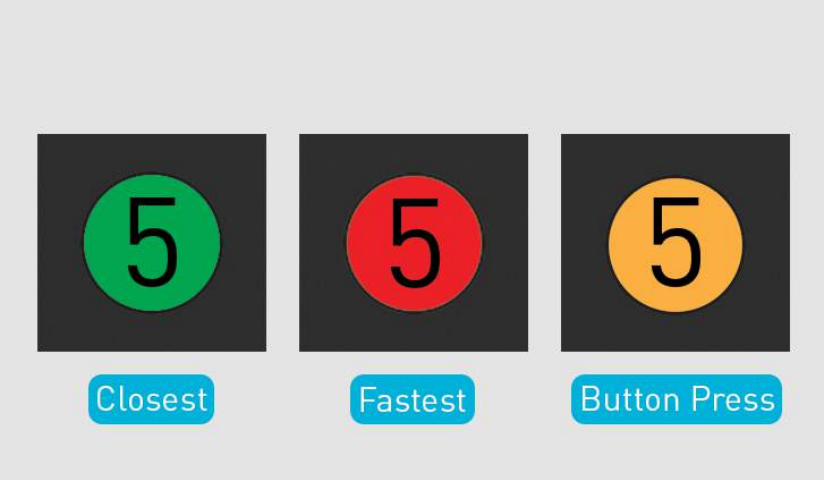
LED 4 on your Base indicates:

- RED = Multi Mode On (automatically turns RED once a second Tag is added).
- GREEN = Multi Mode Off (in case you want to focus on one Tag for extended period of time) .

Important: Turn Multi Mode off at any time but ensure the Base is tracking the Tag of interest when placing the Base back into Single Mode.

- For example: If you want to track Tag 3, then make sure the Base is tracking Tag 3 when turning off Multi Mode.





Step 4.5 | Base LED 5

Color of LED 5 indicates how your Base which decide which Tag to actively follow:

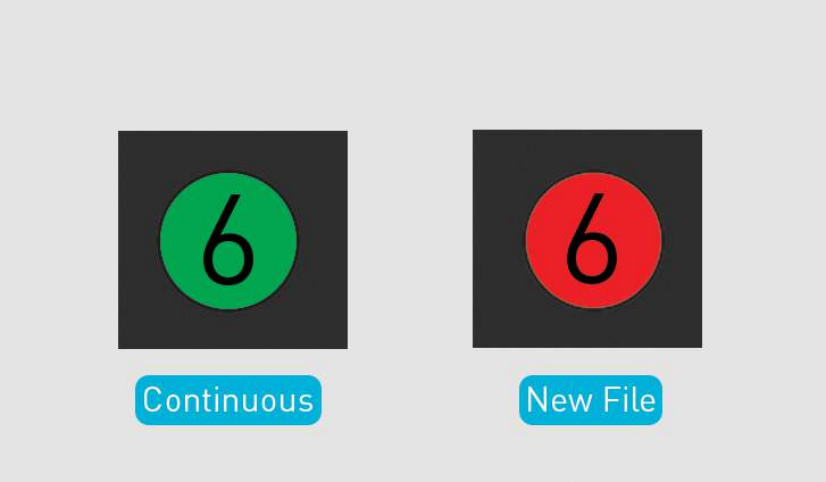
- Green = Closest to Base.
- Red = Fastest moving.
- Orange = Tag button press.

Step 4.6 | Base LED 6

Color of LED 6 indicates:

GREEN = Camera records continuously.

RED = Camera starts a new file each time Base switches to a new Tag.



Step 4.7 | Multiple Angles

Film yourself from multiple cameras:

- Simply set up each new Base using the same Tag.
- Purchase Extra Bases HERE or use any Base purchased with a SOLOSHOT System or Bundle.

Step 4.8 | Multiple Tags & Angles

Film multiple Tags from multiple cameras:

- Pair all your Tags together at the beginning of the session (or at any point you wish to add Tags).
- Use any paired Tag to calibrate each Bases and cameras.
- Set LED 5 and 6 on each Base to the desired tracking and recording modes.

TIME-LAPSE

Important

- Sony Handycam CX-240 and CX-405 are the only camcorders compatible with the motion time-lapse Camera Controller firmware.
- If using a Sony Handycam CX-405/CX-240 with Camera Controller click HERE for instructions.
- If using any other camcorder, proceed with the following instructions to add motion to your time-lapse and refer to your camera manufacturers suggested settings for shooting time-lapses.

Step 5.0 | Jumpdrive 2.0

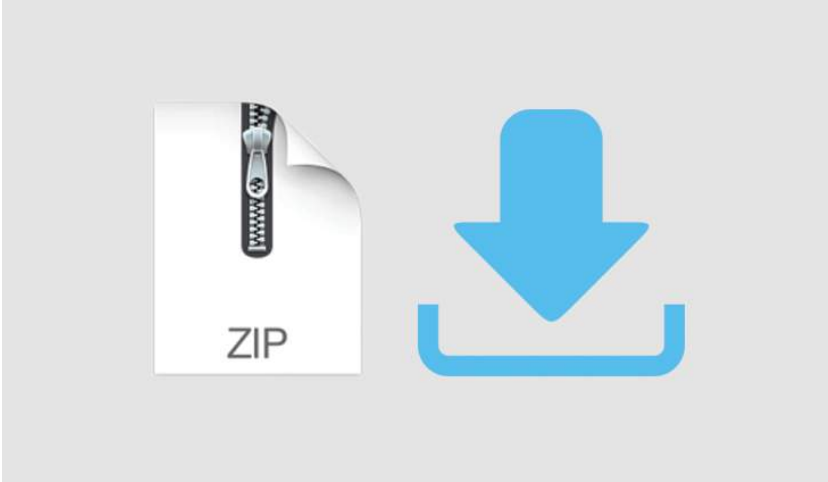
You need a USB 2.0 jumpdrive to load the motion time-lapse file. Make sure USB:

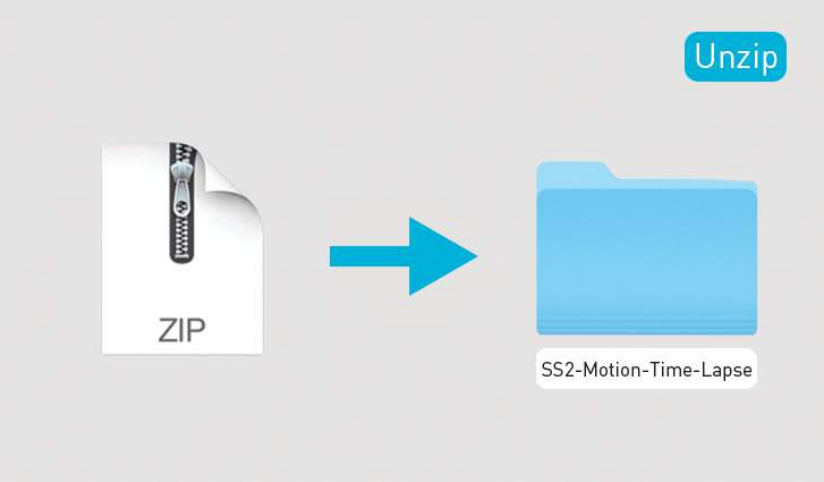
- Has NO files on it.
- Example of recommended USB: PNY 8GB USB jumpdrive available from Amazon or B&H Photo.

Step 5.1 | Zip File

Download the zip file containing time file for your motion time-lapse here:

- SS2-Motion-Time-Lapse





Step 5.2 | Unzip

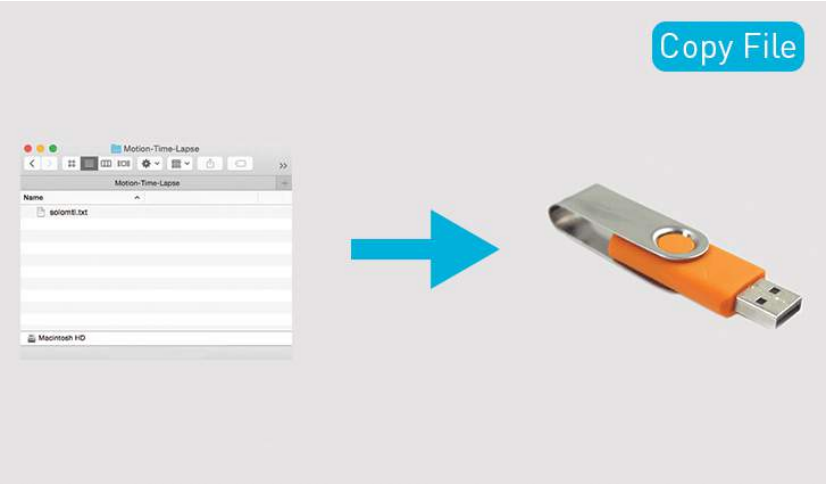
Locate downloaded file and unzip to reveal time file.

Step 5.3 | Copy File

Open folder and copy the time file from the folder DIRECTLY to the USB 2.0 jumpdrive.

- solomtl.txt

Important: Do not copy the folder onto your jumpdrive. Copy only the individual file listed above.



Step 5.4 | Sample Time File

Open the solomtl.txt time file to reveal the sample data:

- Pan speed: 100-degrees per minute to the right (total pan angle is 50-degrees).
- Duration: 1.25 hours.
- Photo interval: Every 5-seconds.
- Playback duration: 30-seconds.

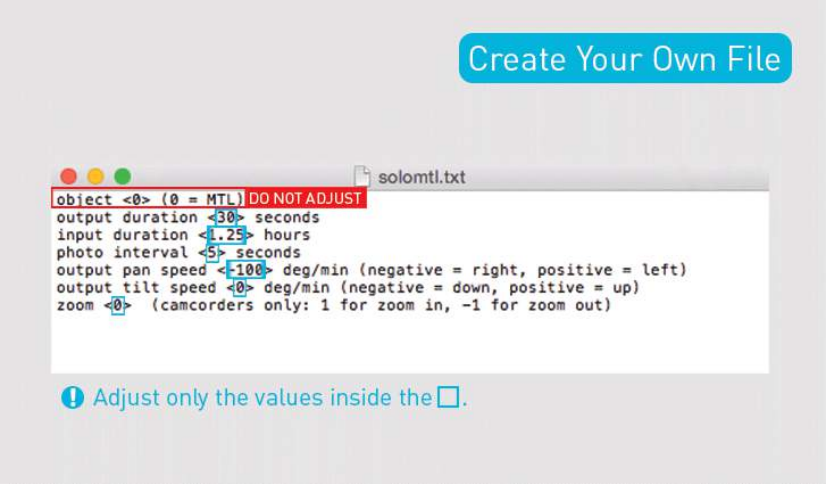
Note: The sample time file does not zoom or tilt.

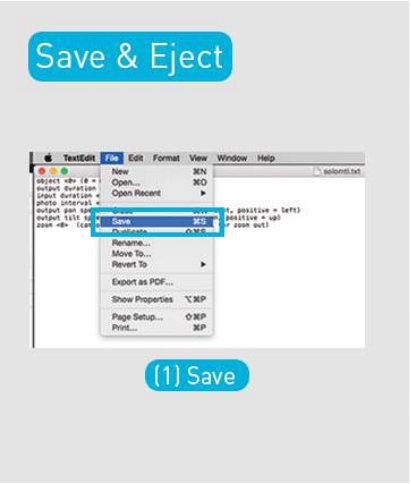
Step 5.5 | Create Your Own File

Change the numbers in the solomtl.txt file to create your own motion time-lapse file.

Note:

- There is a special relationship between output duration, input duration, and photo interval such that only 2 out of 3 need to be specified.
- For Example: If you do not care about the photo interval and just want X hours squeezed into a Y second video clip, then leave photo interval at <0> and the Base will calculate it for you.



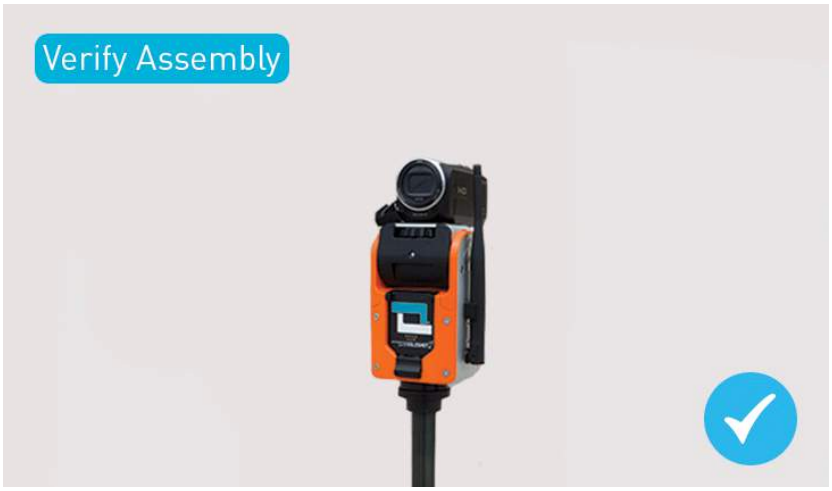


Step 5.6 | Save & Eject

- If you've altered the motion time-lapse file, then save the file before closing it. (Step 5.5 - Create Your Own File)
- If you haven't altered the code, simply close out of the file. (Step 5.4 - Sample Time File)
- Once you've saved/closed the file, make sure it's on the jumpdrive and then eject the USB properly from your computer.

Step 5.7 | Verify Assembly

If you have not already assembled your Base and Tripod as described in Assembly, please do so now.



Step 5.8 | Location & Power

Set up your tripod and Base in the location of your photo shoot.

Power on Base and camera:

- Press power button on Base.

Step 5.9 | Adjust Camera Settings

Refer to your camera manufacturers recommend time-lapse settings.

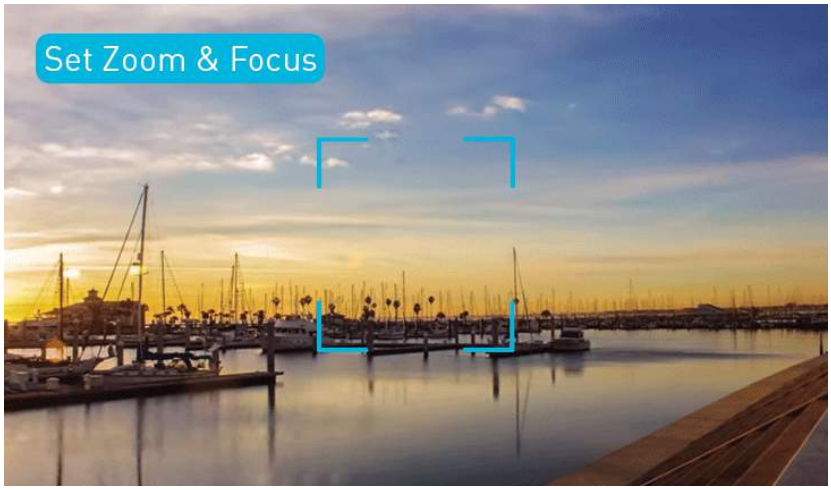
Step 5.10 | Load Time File

Insert the USB 2.0 jumpdrive.

- Once the solomtl.txt file is loaded into the Base, the LEDs will flash GREEN 3 times and you can remove the jumpdrive.
- Your Base is now loaded with the motion time-lapse file.

Step 5.11 | Level Tripod

Optional: Use the RED LEDs on the base to level the tripod. Tripod is level when all RED LEDs are off and GREEN LEDs are blinking dimly.



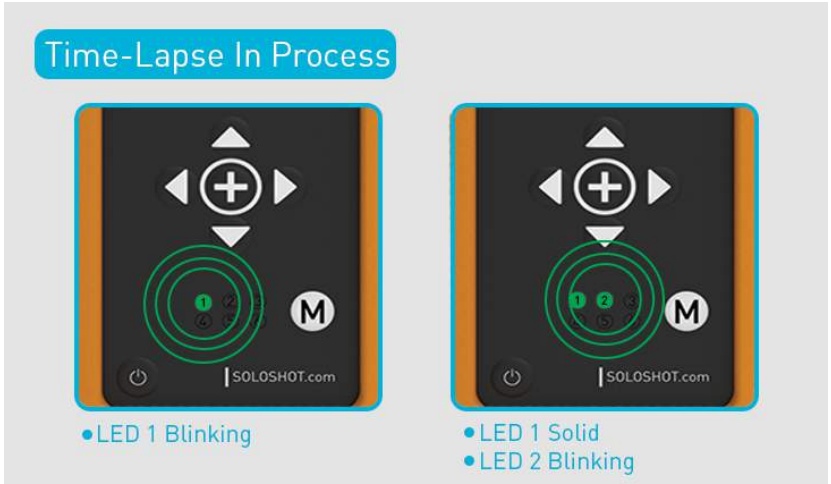
Step 5.12 | Set Zoom & Focus

Set desired zoom and focus.

Note: Setting the focus to manual is generally preferred in order to prevent flicker.

Step 5.13 | Start Motion-Time Lapse

- Use the arrow buttons on the back of the Base to aim the camera at the starting point of your motion path.
- Press (+) button on Base to begin motion time-lapse.



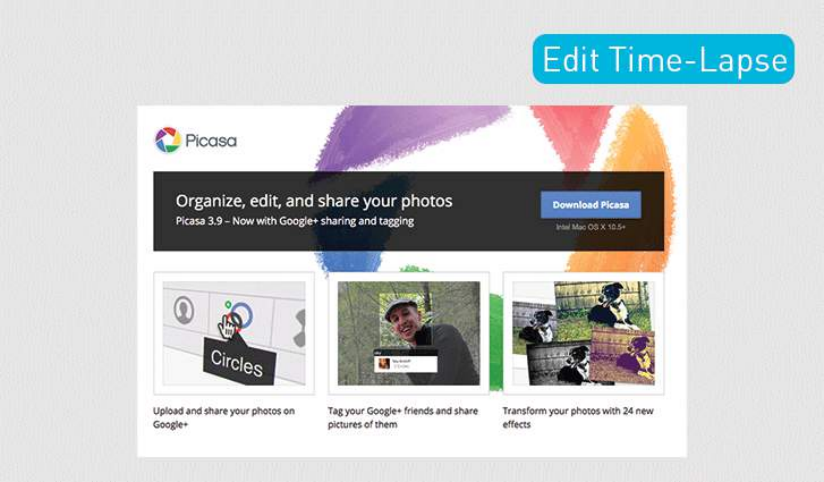
Step 5.14 | Time-Lapse In Process

LED 1 will flash GREEN for a few seconds. When LED 1 turns to solid GREEN and LED 2 starts flashing, the time-lapse is underway.

Each time LED 3 flashes RED, the camera should take a single picture (only if using Camera Controller with Sony Handycam CX-405 or CX-240).

Step 5.15 | Motion Time-Lapse Complete

When LED 6 turns solid RED the time lapse is complete.



Step 5.16 | Edit Time-Lapse

Here's a free Google resource to turn your motion time-lapse images into a video: https://picasa.google.com/