

GLIDECAM[®]

TRU-HORIZON[™]



MANUAL

Set-up and Operations Guide

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Customer Service Line 1-781-585-7900

Manufactured in the U.S.A.

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TABLE OF CONTENTS

SECTION #		PAGE #
1.	Introduction	3
2.	Specifications	4
3.	Glidecam TRU-HORIZON Stabilizer Camera Plate Mounting	6
4.	Glidecam TRU-HORIZON Camera Mounting	7
5.	Glidecam TRU-HORIZON Batteries	9
6.	Glidecam TRU-HORIZON Power	11
7.	Glidecam TRU-HORIZON Software	12
7.	Other Camera Attachment Methods	13
8.	Professional Usage	13
9.	Warnings	14
10.	Warranty	15
11.	Online Information	16

#1 INTRODUCTION

Congratulations on your purchase of a Glidecam TRU-HORIZON.

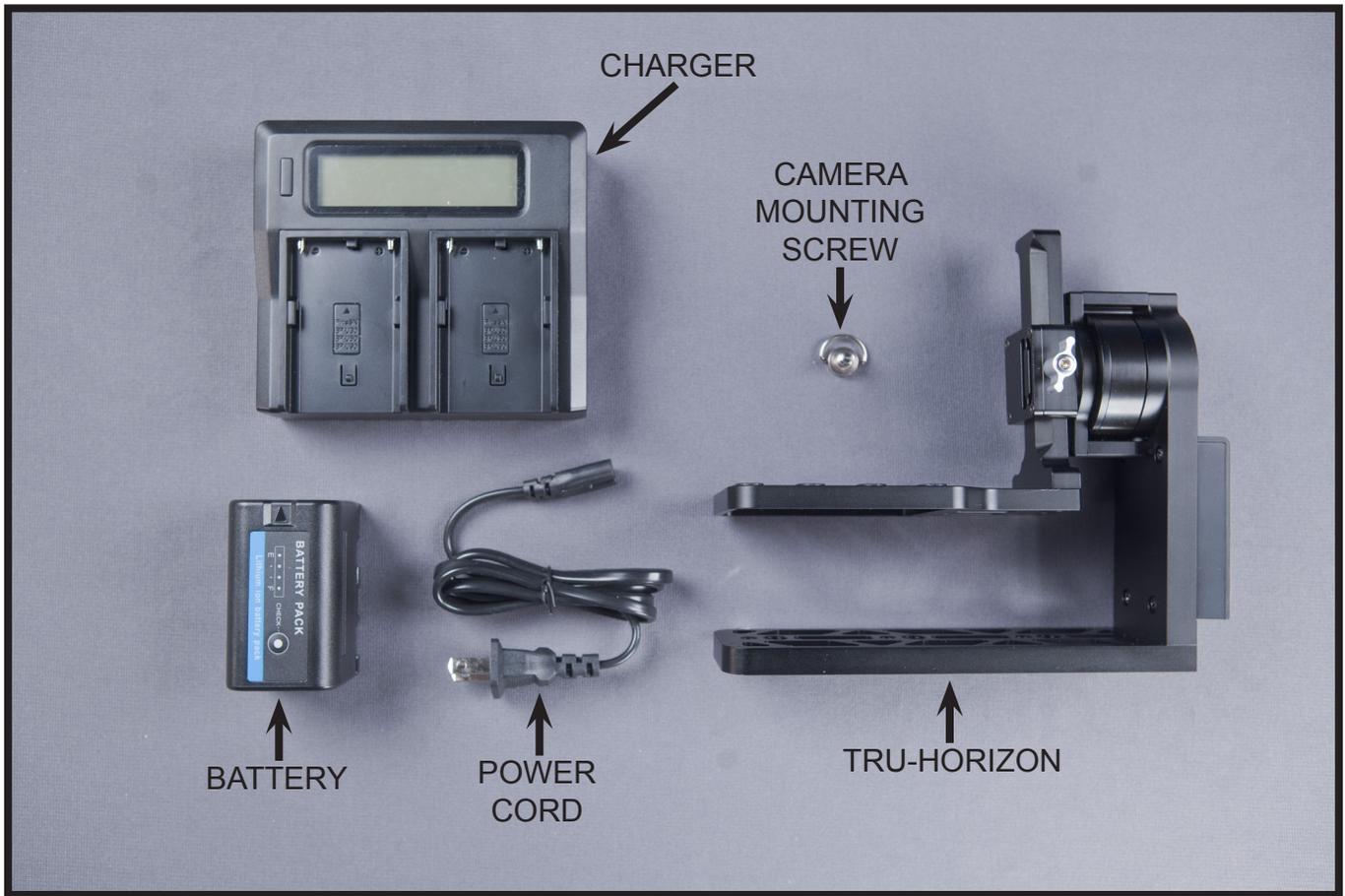
The Future is now. Take your moving shots to the next level with the Glidecam Tru-Horizon. Now you can move from low mode to high mode, and back again, in one single fluid shot while your camera automatically remains level and horizontal at all times. The Glidecam Tru-Horizon can be attached to the Glidecam Devin Graham Signature Series, Glidecam HD-4000 and Glidecam XR-PRO and it will control your camera's roll axis giving you a True-Horizon.

If you have need of any technical assistance, you can call our **Technical Support Line at 1-781-585-7900**, Monday through Friday between the hours of 9:00 am and 5:00 pm, Eastern Standard Time. We have also provided TRU-HORIZON tutorial videos on Glidecam.com.

We're sure that once you have your Glidecam TRU-HORIZON up and running, you will find years of enjoyment with it.

#2 SPECIFICATIONS

- **Load Weight: 1-5 lbs. (.45 to 2.26 kg.)**
- **Angular Vibration Range: $\pm 0.02^\circ$**
- **Roll Axis Control: 360°/s**
- **Motor Type: 1 x Brushless with factory pre-programmed AS5600 (I2C) Encoder**
- **Processing: 32-bit processor**
- **System Requirements: Windows: 32- or 64-bit**
- **Supported Camera Dimensions:**
 - **Max Dimensions: 8" width, 12" length and 6" height.**
 - **No more than 4" of clearance from the back of the camera to the mounting hole.**
- **Power Requirements: 1x BP-U30 Battery (Included)**
- **Operating Temperature: 15 to 105°F (sensor performs best when not below freezing, 32 degrees F.)**
- **Built in slip-ring allowing 360 degree rotations of the motor without twisting wires.**



	Tru-Horizon Status	LED Status
1	Battery voltage OK	Always lit
2	Battery voltage low	Slow flashing
3	Battery voltage extremely low	Fast flashing
4	Power switching off	Double Flashing

****NOTE**** Low voltage protection. When the battery voltage is extremely low, the Tru-Horizon will turn off the motor to protect the battery.

#2 GLIDECAM TRU-HORIZON STABILIZER CAMERA PLATE MOUNTING



Figure 1

In this example we will be using the Devin Graham Signature Series.

To mount your camera to the TRU-HORIZON you will need the 1/4" camera mounting screw.

****NOTE**** The Glidecam TRU-HORIZON works with the Glidecam Devin Graham Signature Series, Glidecam HD-4000 and Glidecam XR-PRO.



Figure 2

Take the Glidecam TRU-HORIZON and flip it upside down on your lap. Place the camera plate where you would like to mount the Glidecam TRU-HORIZON and tighten using your existing hardware.



Figure 3

You have now mounted the TRU-HORIZON to your stabilizers camera plate.

#3 GLIDECAM TRU-HORIZON CAMERA MOUNTING

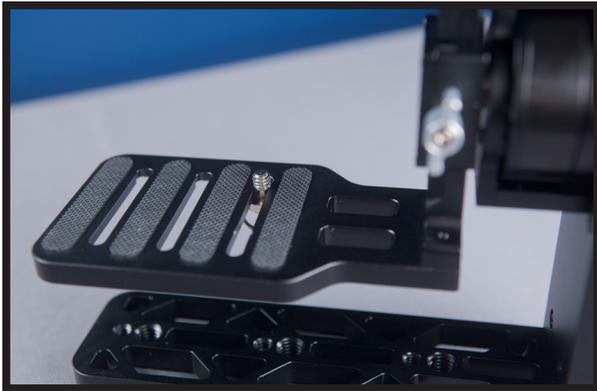


Figure 4

Take the Glidecam TRU-HORIZON and insert the 1/4" CAMERA MOUNTING SCREW provided with your Glidecam TRU-HORIZON into the CAMERA MOUNTING PLATE as seen in Figure 4.



Figure 5

Now place the Glidecam TRU-HORIZON on your lap or on a solid flat surface like a table. Take your camera and insert the CAMERA MOUNTING SCREW into the base of your camera.

****NOTE**** It is important not to over tighten the CAMERA MOUNTING SCREW as you could damage the threading on your camera.



Figure 6

It is important to center the camera on the CAMERA PLATE to evenly distribute the weight like seen in Figure 6. You should be able to move the CAMERA PLATE to the left or right and it fall back to an even central position.

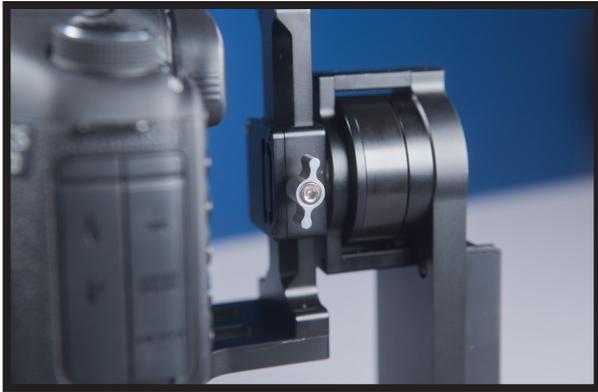


Figure 7

Now with your camera mounted, you will want to adjust the ROLL BAR so the weight is evenly distributed. You can do this by loosening the ROLL BAR SCREW slightly and moving the ROLL BAR up or down.



****NOTE**** The TRU-HORIZON also has guide scale markings on the ROLL BAR so you can make note of the position for quick and easy future balancing.



Figure 8

When the Glidecam TRU-HORIZON ROLL BAR is in the correct position you will be able to position the TRU-HORIZON at a 90 degree angle and it stay there like seen in Figure 8.



Figure 9

Your camera is now mounted to the Glidecam TRU-HORIZON.

You can now mount the TRU-HORIZON to your stabilizer.**

****NOTE**** With the TRU-HORIZON added you will now have to balance your stabilizer. Please refer to the manual provided with your stabilizer for assistance in balancing your stabilizer.

#4 GLIDECAM TRU-HORIZON BATTERIES

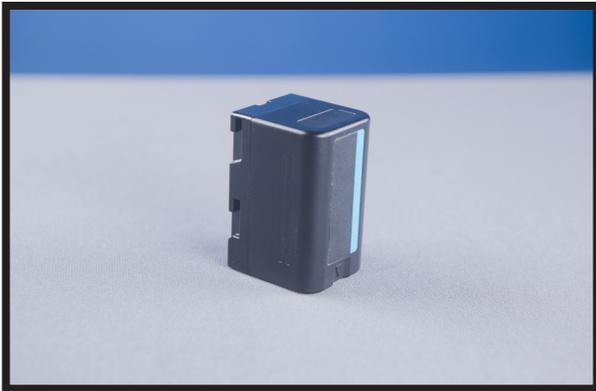


Figure 10

The Glidecam TRU-HORIZON comes with a LITHIUM ION BATTERY and a BATTERY CHARGER.

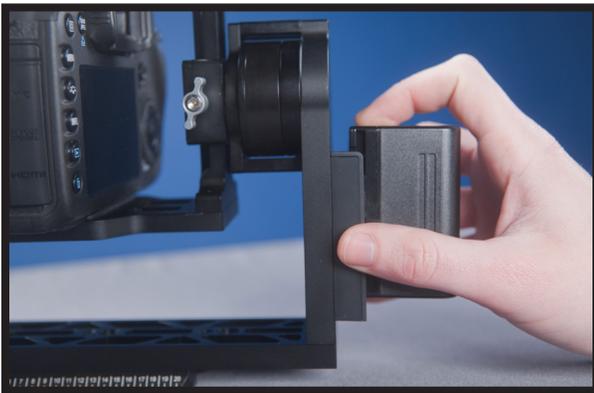


Figure 11

To insert the battery into the TRU-HORIZON insert the battery as shown in Figure 11.

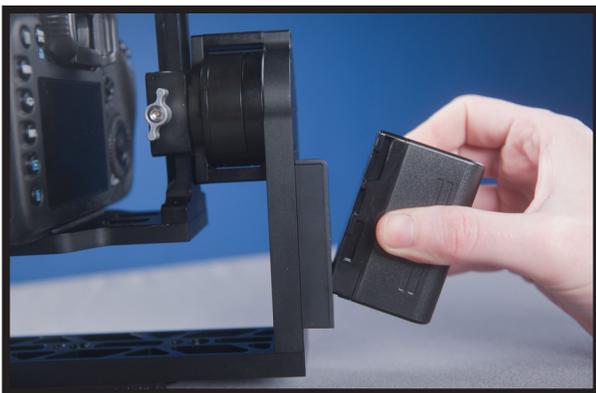


Figure 12

To remove simply push up on the battery and the battery will remove from it's lock.



Figure 13

To insert the battery into the TRU-HORIZON CHARGER insert the battery as shown in Figure 13.

Once your charger has indicated that your battery is fully charged you can remove the battery. To remove the TRU-HORIZON BATTERY from the TRU-HORIZON CHARGER simply push up on the battery and the battery will remove from it's lock.

#5 GLIDECAM TRU-HORIZON POWER

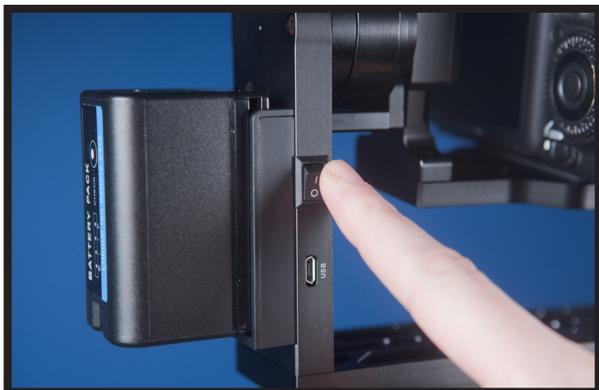


Figure 14

Now that your TRU-HORIZON battery is charged, camera is mounted to the TRU-HORIZON, and the TRU-HORIZON is mounted to your stabilizer you are ready to start shooting.

To power on the Glidecam TRU-HORIZON simply press the power button to the on position like seen in Figure 14. A green light behind the motor will turn on to let you know the system is on. When you are done shooting or when the TRU-HORIZON is not in use turn the TRU-HORIZON to the off position.

****NOTE**** When the TRU-HORIZON is powered on it is important not to manually move the TRU-HORIZON CAMERA PLATE. Doing so could cause permanent damage to the TRU-HORIZON motor.

#5 GLIDECAM TRU-HORIZON SOFTWARE

Software and hardware requirements

1. Tru-Horizon setting software only support Windows system currently
2. Please install Microsoft .net framework 4.52 or higher version
3. Please install CP2102 windows driver
4. A standard Micro USB cable is required to connect Tru-Horizon and computer

Settings

1. Connect Tru-Horizon to computer by Micro USB cable.
2. Open the software, select right COM port, click "CONNECT" button to link device.
3. Setting items description
 1. Basic Provide basic PID settings, adjust these according to your camera.
 2. Motor
 - a) Power: Constrain the maximum power of the motor, adjust this according to your camera
 - b) Reverse: Reverse the direction of the motor, no need to change.
 - c) MOTOR OFF: Turn off the motor
 3. Advanced
 - a) PI: Provide position PI settings, normally no need to change.
 - b) Angle trim: You can adjust this if Tru-Hhorizon is not complete level.
 - c) Recovery speed: This item sets the maximum speed when camera recovery to level positon.
 - d) Manual angle control: You can manually spin and keep the camera on vertical position or level position for 2 seconds, Tru-Horizon will recognize this as a new stable position .
 4. Battery: Provide battery low alarm setting and motor off setting to protect battery.
 5. IMU calibration: Provide Acceleration meter and gyroscope calibration, please turn off the motor before calibration (by click MOTOR OFF button).

****NOTE**** After clicking Default Setting button, you need to click WRITE button again to restore settings.

****NOTE**** When IMU calibration is finished, you need to click WRITE button to save calibration values.

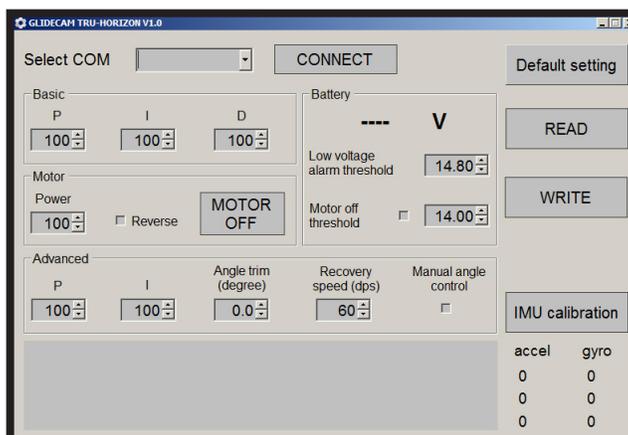


Figure 15

#6 OTHER CAMERA ATTACHMENT METHODS

Creating a gasket: If when attaching your camera to the CAMERA PLATE you find that the bottom of your camera isn't flat enough to allow for a good solid attachment, try making and adding a paper/cloth or rubber gasket to the CAMERA PLATE. (Try using a piece of a rubber dish washing glove.) Simply cut the material to the size of the top of the CAMERA PLATE and then create a hole in it to allow the CAMERA MOUNTING BOLT to fit through it, and into the base of your Camcorder.

#7 PROFESSIONAL USAGE

If you are using the Glidecam TRU-HORIZON to shoot professional looking shots, and you plan on incorporating them into a short movie or some sort of commercial project, we suggest that you plan the shot out in advance, perhaps rehearse the move a few times before shooting, and that you use an assistant to help you during complex shots. This will give you optimum results and will make your movies look more professional.

Good luck with your shooting.

#8 DISCLAIMERS AND WARNINGS

By using this product, you hereby agree to this disclaimer and signify that you have read it in full. You agree that you are responsible for your own conduct and any content created while using this product, and for any consequence thereof. By not following the manual properly or in the correct order, you understand the warranty will be voided.

By reading this disclaimer, you also agree that Glidecam reserves the right of final interpretation of this disclaimer, and that any part of this disclaimer is subject to change without prior notice.

Only use the supplied batteries, or backup batteries purchased directly from Glidecam. Internal functions may be damaged if an alternate power source is used. Do not modify or adjust the Gimbal. The gimbal has been calibrated and uploaded with appropriate settings. Modification or amending the gimbal is prohibited. Since Glidecam has no control over setup, final assembly, use, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. Glidecam assumes no liability for damage(s) or injuries incurred directly or indirectly from the use of this product.

Lithium Ion batteries can be extremely hazardous and require special attention:

- Do not charge batteries near flammable materials or on flammable surfaces such as carpet or wood.
- Never use or charge a swollen, leaky or damaged battery.
- Examine charger regularly for damage to the cord, plug, enclosure or other parts. Never use a damaged charger.
- Disconnect the charger when not in use.
- Do not heat, drop, freeze, or strike batteries.
- Clean battery terminals with a clean, dry cloth.
- Do not expose batteries to extreme temperatures, including excessive heat. Never leave batteries inside a vehicle on hot days.
- Do not store batteries in a moist environment, or allow batteries to come into contact with any kind of liquid.
- Do not attempt to repair batteries yourself.
- Do not place or use batteries on strong electrostatic or electromagnetic surfaces or surrounding areas.
- Do not place heavy objects on the batteries or charger. Avoid dropping batteries.
- Do not mix battery brands.
- Always use a Glidecam approved adapter/charger.
- Please dispose of batteries properly. Batteries cannot be discarded in the trash, fire, or compost. Use an appropriate battery disposal in your area.

****WARNING****

Do not change any of the software profiles or settings without first saving your current settings. Every gimbal is uniquely calibrated. This means if you alter the settings of your original settings we cannot send you the original profile. Save your profile before editing.

****WARNING****

In cold temperatures the sensor of the Glidecam Tru-Horizon may have to warm up before use. Leave the Glidecam Tru-Horizon on, and stationary for a few minutes to allow the sensor to warm up and work at full functionality.

#9 WARRANTY

For 1 year (90 days for batteries) from the date of shipment, we will repair or replace your Glidecam TRU-HORIZON, free of charge, in the event of a defect in materials or workmanship (the shipment date appears on your purchase receipt) which occurs during normal use in accordance with the Glidecam TRU-HORIZON's instruction manual. Shipping, packing, and insurance costs to and from the factory are your responsibility. This limited warranty extends only to the original purchaser, and you will need your purchase receipt. This warranty does not cover, by way of example, damage caused by products not supplied by us or damage resulting from mishandling in transit, accident, misuse, vandalism, neglect, modification, lack of reasonable care (or commercial use, including rentals to others) of the Glidecam TRU-HORIZON or service by anyone other than us. There are no express warranties except as listed above. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

WE ARE NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE UNIT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD.

To obtain service during (or after) the warranty period: Contact **Glidecam Industries' Customer Service** Department by calling **1-781-585-7900** or write to us at: **23 Joseph Street, Kingston, MA 02364** and explain the problem.

DO NOT SEND THE UNIT TO US WITHOUT FIRST OBTAINING A RETURN AUTHORIZATION NUMBER.

GLIDECAM INDUSTRIES, INC.

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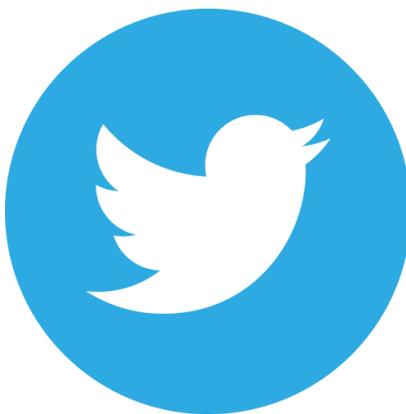
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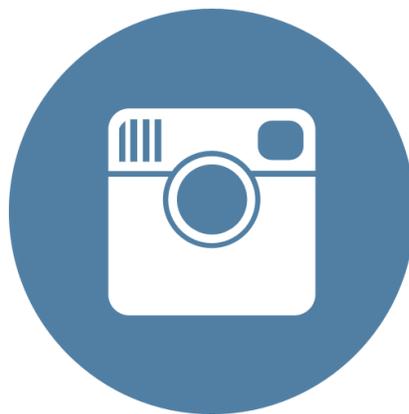
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