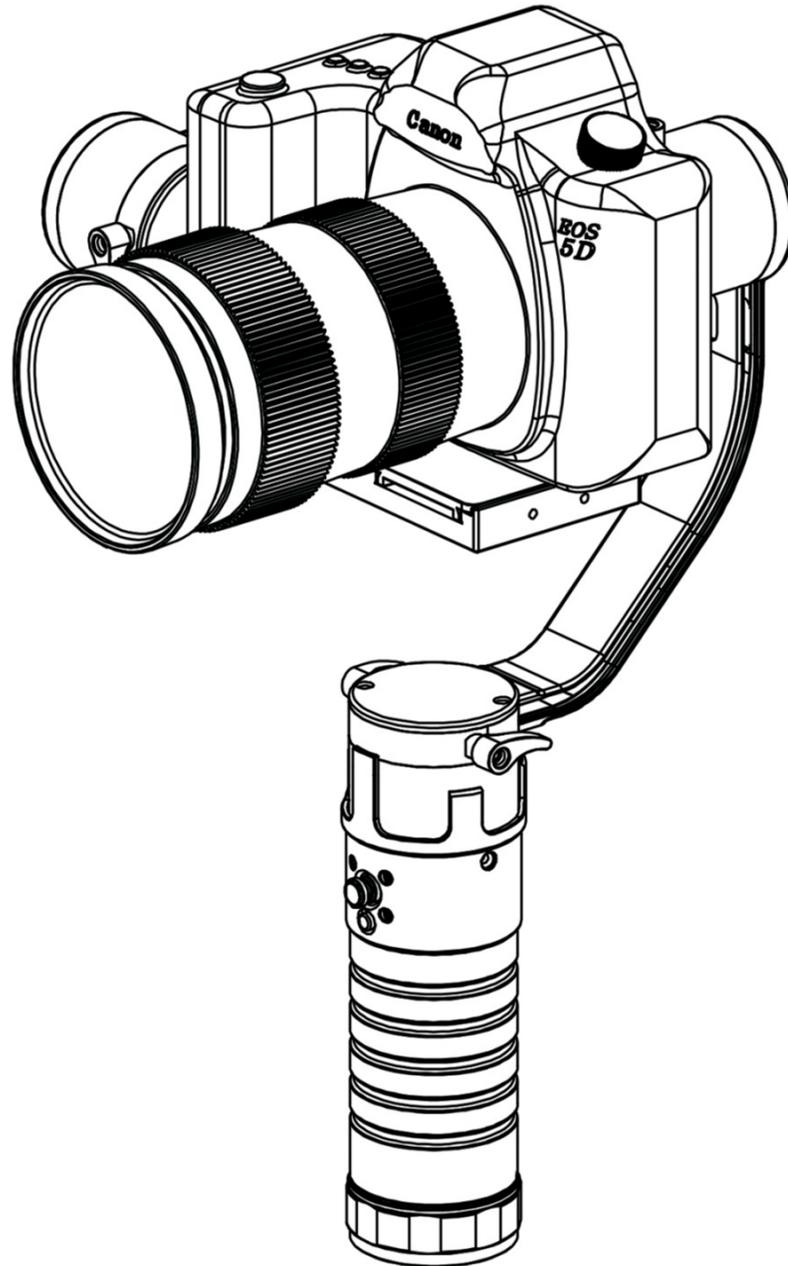


TRD Beholder DS1 Camera Stabilizer

V1.2 2016.5



Beholder

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Brief Introduction

Quick to setup, easy to use, and extremely affordable are the key features of the Beholder DS1 Camera Stabilizer. Whether you are a celebrity chaser, interviewer, short filmmaker, wedding photographer or just an amateur, you will be amazed at the professional results captured with Beholder DS1.

With TRD's years of experience in developing gimbals for handheld and aerial stabilizers a near perfect model is realized in the DS1's design. The DS1 has an improved payload of 3.8 pounds (1700 grams), ample room for a camera's flip-out LCD, and micro USB port for wired remote control. The stabilizer has a 32-bit controller with dual IMU sensors. The 32-bit processor enables multi-mode control which is more effective and efficient for stabilization.

The DS1 arrives pre-programmed and ready to use right out of the box. You can put your camera in any position such as upside down or create continuous shots via remote control. With an extendable rod the Beholder DS1 can create a jib shot, move like a slider, roll like a dolly, and time lapse. Just like the MS1, the DS1 is compact enough to share a backpack along with other gear such as a camera, lens, and other accessories. The stabilizer offers the combined camera movement of a shoulder rig, a slider, a jib, and a stabilizer in a convenient package.

The compact size of the stabilizer makes it possible to shoot in locations that are normally restricted to commercial/professional filming. Camera operators of all levels will find the Beholder DS1 Camera Stabilizer to be a rewarding and improved experience. Supported cameras are listed, including the Sony A7 series, GH4, BMPCC and Canon 5D/7D. The stabilizer has a 1/4 inch mount at the bottom of the handle, great for mounting DS1 to a monopod for a stunning jib shot. Another feature of the Beholder DS1 Stabilizer is the built in 5 way joystick offering complete control over pan/pitch and mode selection.

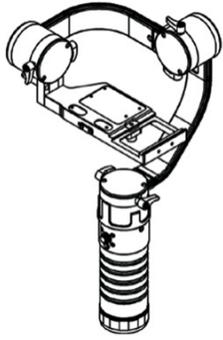
Features:

- Pre-calibrated
- Compact Design, fits in a backpack
- Travel friendly
- 5 way joystick
- Fun and easy to use
- Tool free operation

Specs:

- 3-Axis stabilization
- Battery 3.7 volts 18650,2600mAh
- Tripod mount
- USB charging port
- Micro USB for wired remote control
- 32 bit controller
- Dual IMU sensors

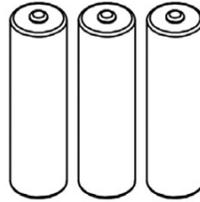
Kit Includes



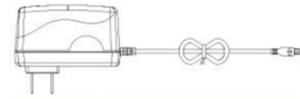
DS1 Main Body



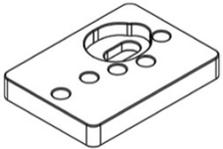
Battery Holder



18650 Batteries x 3



Adapter



Special adapter
for hard to balance
camera



Quick Release Plate



1/4" Screws x 2

Battery Setup and Charging

Battery Setup

- (Image 1) Connect the Micro USB cable to battery holder USB port. Connect the other end of the cable to a 5V USB power source with 1.5 to 2A. When a green light glows, this indicates power supply to battery holder is in good order.
- Be sure to install the battery into the holder with positive side facing upwards in the battery holder. (Image2)

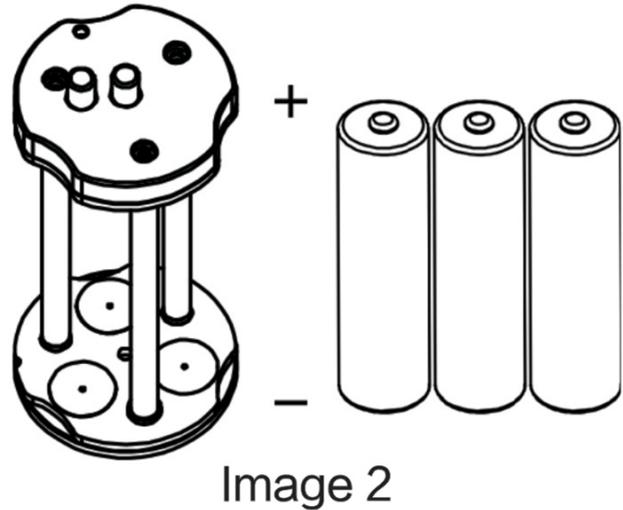
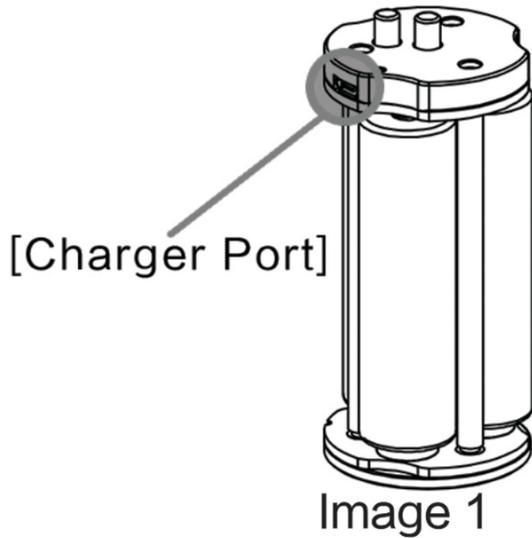
Red: Battery being charged.

Red/Green: Battery charging finishing.

Green: Fully charged.

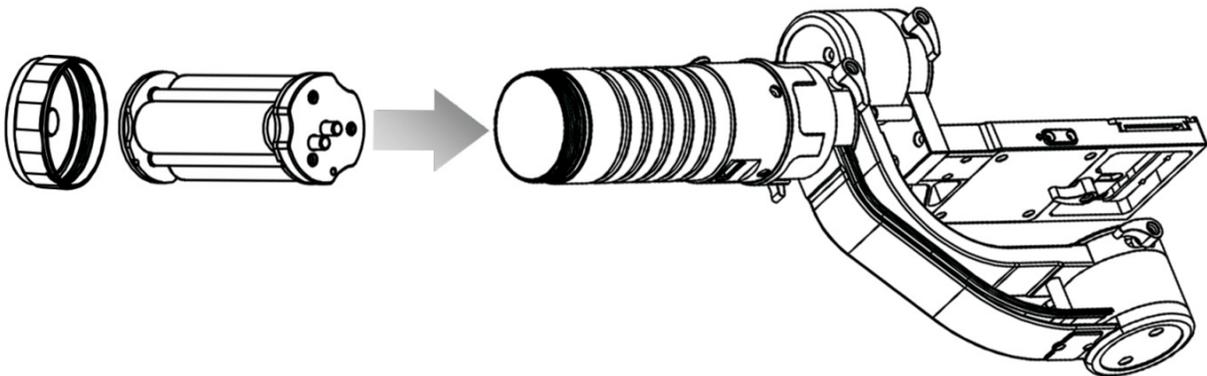
Note i) USB power source which is lower than 1.5A will result in charging failure and indicator light might fail as a result.

i i) It will take app. 4 -5 hours to fully charge the battery. For faster charging times a dedicated 18650 charger is recommend.



Battery Holder

- i) Check to make sure positive end of battery is facing upward in battery holder.
- ii) Check to make sure the spring contact in the battery holder is connected to the negative end of the battery.
- iii) Insert battery holder into the handle of the unit with positive end first.
- iv) Screw on battery cap and make sure the cap is securely locked.



 Do not turn power on until the unit has a camera properly balanced on it. Double check the battery compartment cap to ensure circuit contact is in good order.

Camera Setup and Balancing

a) Detach the quick release plate from the unit and reattach to the bottom of the camera (Image A). Tighten the screw lightly leaving room for adjustments.

b) Attach the camera which is on the quick release plate onto the stabilizer (image A), Fine tuning the camera and quick release plate by moving it back and forth and sideways carefully (Image B) so that the camera can be balance properly* on the unit. Detach the quick release plate with camera carefully and tighten the screw. Reattach onto the unit and tighten the screw knob lastly. Making sure it is tight but not "too tight" to avoid stripping when motors are turned on.

*A properly balanced camera on the stabilizer should neither tilt upwards nor sideway when power is NOT on. A camera with an extendable lens should have lens fully extended when balanced.

A. Attach the single sided anti slipping materials onto the adapter plate.

B. Make sure the camera can be balance properly in all positions.

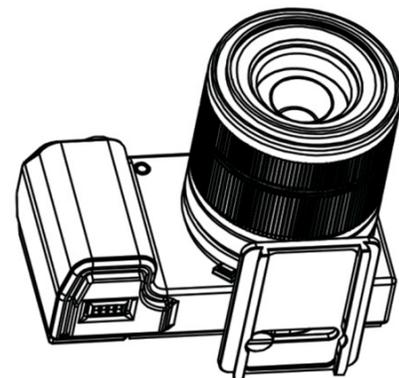


Image A

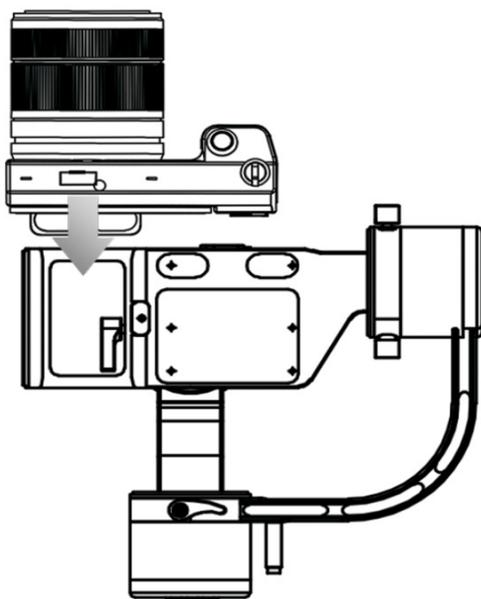
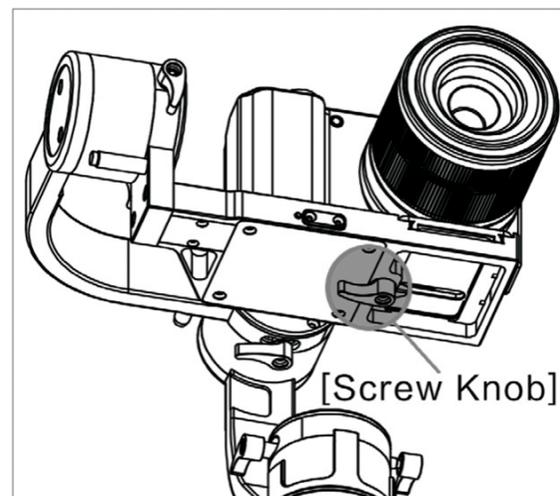
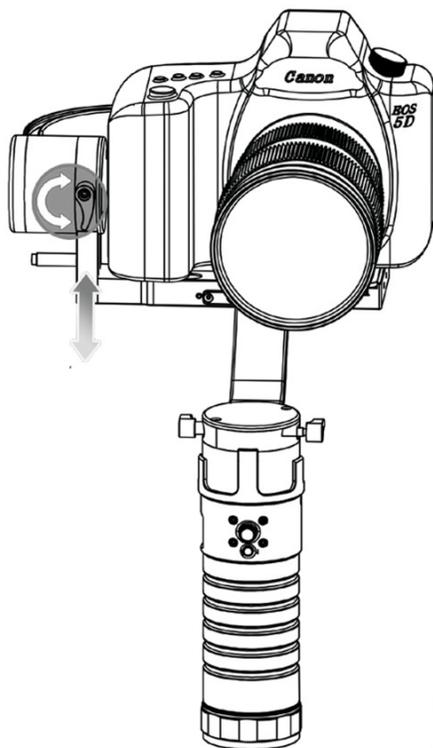
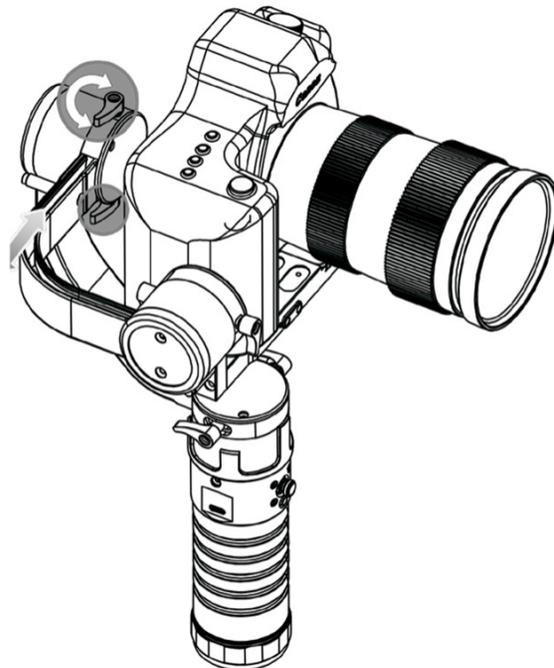


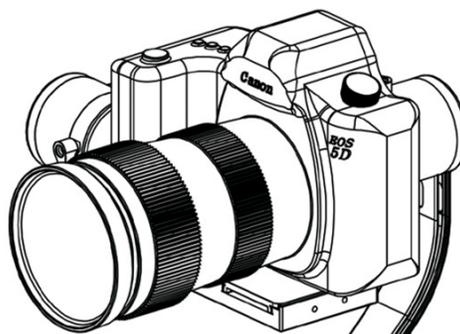
Image B



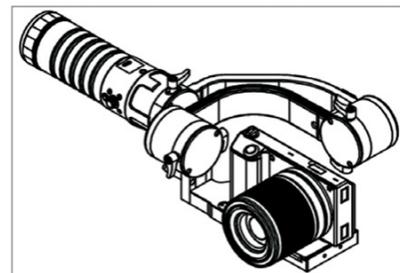
C. Moving camera left and right(sideways) until balanced



D. Adjusting quick release plate position on DS1 until balanced so it does not tilt up nor down.



E. Moving camera back and forth until balanced



Installation of special adapter for hard to balance camera

1. Attach the single sided anti slipping materials onto the adapter plate.
2. Attach the anti slip side onto the base of the camera (Image 1) and lightly tighten the 1/4" screw.
3. Attach the whole unit onto the quick release plate* (Image 2)

*try different screw anchoring holes for best result, you might have to try out many times to find the appropriate hole for the best balancing result.

4. Adjust the camera position on the adapter plate, fine tuning the screw position on the quick release plate to achieve a perfect balance, repeating steps A-B.
5. Tighten all screws and knobs. Loose space in between camera, adapter, quick release plate and the stabilizer will result in rattling noise and shaking movement while unit is in operation.

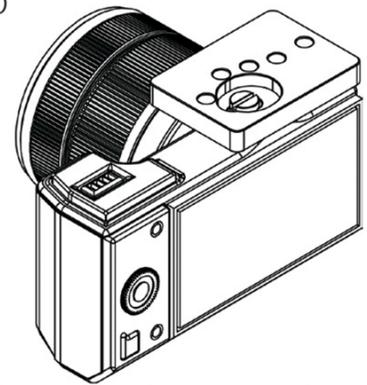


Image 1

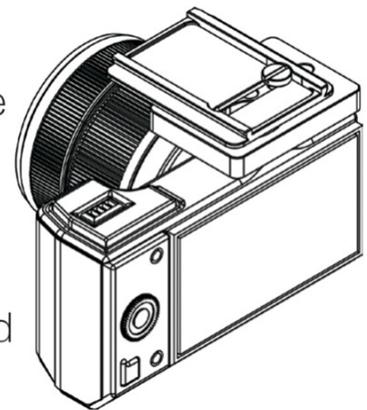


Image 2

Finally with camera on the adapter, attach it onto the quick release plate and insert the whole unit on the DS1.

Start up and operation

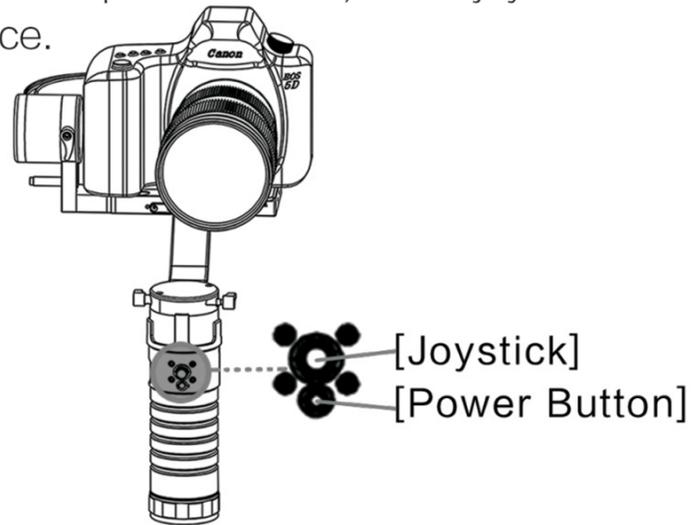
- A. 1) Only turn on the unit when there is a camera mounted properly on the stabilizer.

Beholder DS1 uses dual IMU sensors with 32-bit processing technology. The stabilizer can be started up and operated at any reasonable angle.

B. Semi transparent plastic button is the power button, metal joy stick is a five ways multi mode control device.

Press the power button once to activate the DS1 and the "Follow Mode" (a).

Stabilizer will follow your hand position and synchronizing with hand movement and heading. Tilting up and down or panning side to side. Other modes of operation:



Press the joystick in once (in follow mode) will change the stabilizer to a lock mode. (a)

Press the joystick in once again to change the stabilizer back to "Follow Mode", mode(b).

Pressing the joystick in for 3 seconds will change to Head-lock and Follow panning mode (b).

Explanation of mode and limitation:

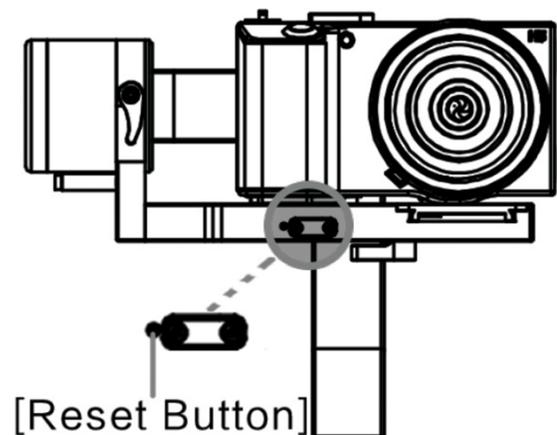
a. Follow mode (follows hand movements, joystick can control up and down, and panning movements)

b. Lock mode (lock camera onto subject, joystick can control up and down, and panning movements).

c. Head-lock and yaw follow (head lock subject and yaw follow hand, joystick can control pitch and panning movement.)

d. Gyro calibration mode:

Double-click the reset button (d) for gyro calibration. In this mode the stabilizer with camera should be placed on flat surface and free from any movement. This mode is only needed when the stabilizer has difficulty holding a level horizon when powered on.



e. Small DSLR Follow Mode: click the reset button 3 times continuously, get into small DSLR Follow Mode(400g-900g small DSLR camera)

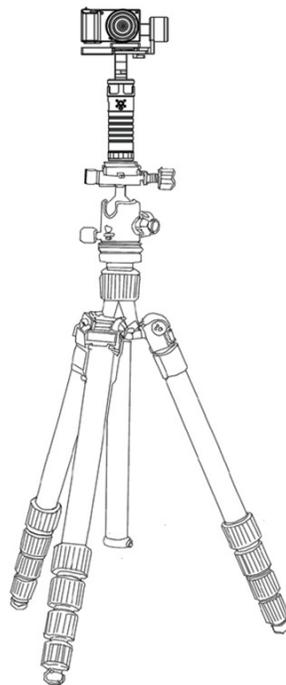
f. Small DSLR Lock Mode: click the reset button 4 times continuously, get into small DSLR Lock Mode.

Battery Status

Power LED Indicator	Status
 — Green light	Normal
 — Red light	Low battery
 - - - - Flashing Red	Flashing red light means batteries need to be changed and charged.

Versatility

- A. DS1 can be easily attached to an extension rod or tripod for more filming angles.
- B. Led lights can be attach to the USB for night shooting.
- C. DS1 can also work as a power source for charging phone when the power button is not activated.

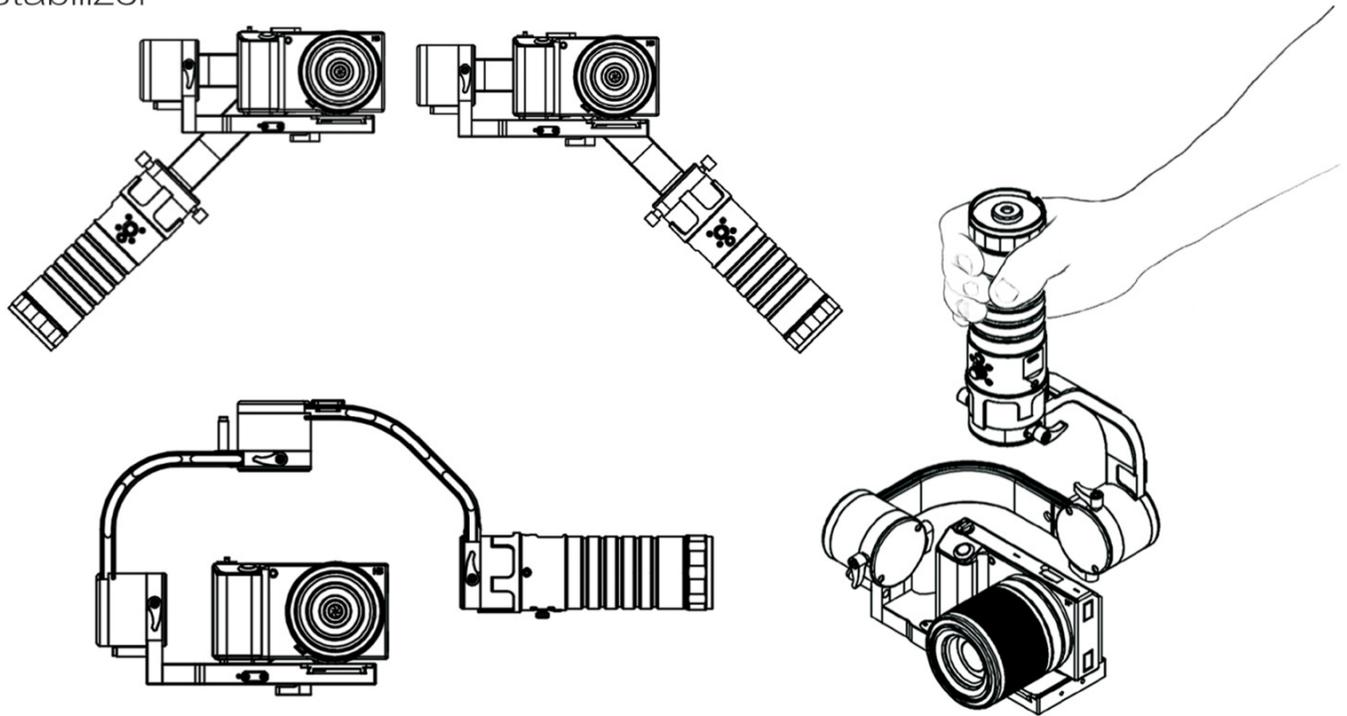


Camera Supported

Camera with weight less than 1.7kgs (Including lens) most SLR or DSLR including Canon 5D/6D/7D and Sony A7R2, A7S+24-70/12-35, Panasonic GH4+12-35, GH3+14-140

Possible handheld angles and camera position

Adjust handheld positions and angles to achieve ideal results. There are no limitation of angles and positions within the capable range of the stabilizer



Note

1. The DS1 is tuned precisely before leaving the factory, if tuning is necessary please refer to 4C (Gyro Calibration Mode) to return to factory default setting.
2. Micro USB is for wired remote control and joystick calibration purpose, micro USB is for processor calibration by authorized personnel. Please note that standard USB output on the handel is 5V with at least 0.5A.
3. The design voltage range suitable for battery holder is less or 5v, do not be used any without permission or incompatible chargers or batteries OR may cause a fire, explosion or other hazard.

Declaration

Beholder is the licensed trademark of TRD Beholder. Unauthorized use of this trademark will be prosecuted. This product has patent granted in most countries and copyrighted. Counterfeit products will not entitle to any after service. Please check on web for authorized agents or contact us at:

Website: <http://www.teamrebeldesign.com/>

Email: Beholder@TeamRebelDesign.com

Beholder DS1 Specifications:

Dimensions:

Stabilizer: 300 x 175 x 160 mm,
11.8 x 6.9 x 6.3 Inches

Package: 375 x 200 x 100 mm,
14.8 x 7.9 x 3.9 Inches

Weight:

Net weight
(excluding camera): 1090 grams, 2.4 Pounds

Total package: 1790 grams, 3.9 Pounds

Supported Cameras:

Maximum Payload: 1700g, 3.7 Pounds
Sony A7 series
GH4, G7 series
NEX series
DMC series
Canon 5D, 7D, GX7
Nikon D810, D800

Battery: 3* 3.7v Li-ion 18650 2600mAh

Range of Motion: 90° – 180°

Yaw: 355°

Pitch: 355 ± 180° (effective operating range)

Roll: 355 ± 60° (effective operating range)

Battery Life: 3~4 hours (depending on conditions,
such as camera & lens weight,
operating environments and settings)