COMODO

COMODO**RIGS**.COM

BWL0725/2 Orbit User Guide • 01/2014

COMODO

orbit

SINGLE SHOT CINEMA

USER GUIDE

CONTENTS

INCLUDED IN BOX

1 x Orbit Camera Rig
2 x Small Extension Arms
2 x Medium Extension Arms
2 x Large Extension Arms
1 x Allen Key
1 x User Guide

orbit
SINGLE SHOT CINEMA

ORBIT SPECIFICATIONS

Part Code: VB1850

Weight: 2Kg (4.4lbs)
Weight in Bag: 3.6Kg (7.9lbs)

Orbit Dimensions (WxHxD)
48cm x 36cm x 15cm
18 $^{9}/_{10}$" x 14 $^{2}/_{5}$" x 5 $^{9}/_{10}$"

Orbit Bag Dimensions (WxHxD)
55cm x 44cm x 17.5cm
21 $^{3}/_{5}$" x 17 $^{3}/_{10}$" x 6 $^{9}/_{10}$"

WARRANTY & LEGAL NOTICE

All Comodo products are covered by a two-year warranty against any faulty design, materials and workmanship.

If a product does not work on arrival, or up to a maximum period of four weeks from the date of dispatch of the product, it should be returned to the dealer/retail outlet from where it was purchased for exchange (subject to stock availability). If the faulty unit was part of a kit, the dealer/retailer may choose to only replace the unit and not the entire kit.

Alternatively the dealer may offer to repair the unit as soon as possible at no charge.

If neither an exchange nor repair is possible for the faulty unit, then a full refund may be made.

If a warranty fault occurs after the initial four week period (and within the maximum two year warranty period), then the unit should be returned to the dealer, who will arrange to repair the unit as soon as possible, at no charge.
This warranty does not apply to consumable items such as fuses or consumable type batteries.
Should a unit be returned at any time within the two year warranty period, and it is judged to have experienced any of the following;

Failure to follow working instructions correctly, accidental or wilful damage, misuse, alteration or repair by a non-authorised Comodo service/repair centre, then the warranty will be deemed invalid and any repairs required will be payable by the owner.

The dealer, in advance of undertaking any work that may be required, should notify the cost of any repairs to the owner.

No warranty repairs can be undertaken to any units without proof of purchase.

All warranty repairs or returns must be conducted with the dealer from where the product was purchased.

Other terms and conditions may be applicable in specific countries, if stated at the time of purchase.

Requesting Service - Comodo products purchased throughout the world will have varying service and repair processes depending upon the region it is purchased in.

Please visit: http://www.ComodoRigs.com/Warranty to determine how to correctly process your service and repair request.

The pioneering Comodo Orbit is the only rig designed to fulfil all the demands of 'single shot cinema' film-making and is perfectly suitable for use as a conventional camera stabiliser too.

Single Shot Cinema is an intimate cinema-vérité film technique that enables a scene to be shot in a single take using just one camera moving fluidly around the subject - recording all the camera angles that express the film-maker's personal perception of that moment. The camera movement itself becomes the primary cinematic expression.

Designed by Leonard Retel Helmrich, the multi-award-winning Dutch cinematographer and film-maker and manufactured exclusively by Bowens, as part of the Comodo camera rig and grip range, this pioneering rig is designed for use with camcorders and HD-DSLR cameras.

Orbit's patented twin grip stabilisation allows operators to move freely with the action, finessing the camera into places hitherto impossible with other support systems - thus enabling a true Single Shot Cinema experience.

The twin-grips also reduce operator fatigue inherent with single grip stabilisers and, uniquely, enables the Orbit to be smoothly and easily passed across from one operator to the next, allowing the camera to appear to 'fly' through windows, doorways and other narrow spaces to achieve shots that previously could only have been partly replicated using cumbersome camera cranes with all their associated restrictions and time-consuming set-ups.

Retel Helmrich, a world-acclaimed director and guru of the Single Shot Cinema shooting technique, plus a raft of related technical camera innovations, has gained honours at both the Sundance Film Festival and the International Documentary Film Festival Amsterdam (IDFA).

He says: "Now an operator can move inside an event and go with the camera to the right spot, at the right moment…that's what Single Shot Cinema is all about. Big things and small things are equally important."

Orbit from Comodo allows camera operators to create breathtaking orbits, sweeps and even crane-style shots - all from a flexible and highly versatile handheld camera rig.

Adds Retel Helmrich: "You can almost fly around. Choose to stay low to the ground or go high up to the ceiling – you're very free, yet still very steady. You can use your camera like you write – and you can describe the scenes with your camera movements. That's actually the essence of Single Shot Cinema – capturing the moment as much as possible in one shot, to be later condensed into shorter scenes with minimal editing – it's about cutting from movement to movement."

New York Times critic John Anderson notes in a 2011 review of Retel Helmrich's production: Shape of the Moon: "In this film a barefoot man crosses a railroad trestle a thousand feet above an Indonesian valley, stepping briskly along a beam barely wider than his feet. We see him from behind. We see him from above. Most alarming, we see him from the side, by means of a camera that seems mounted in mid-air. It's breathtaking, what the subject is doing. But a man with a camera is doing it too."

Rob Moss, film lecturer at Harvard adds: "Retel Helmrich's camera glides through spaces in a way that just seems impossible. Sometimes you stop looking at the movie and look at the shot. I think it's delightful."

Of course, the Comodo Orbit is perfectly suitable for use as a conventional camera stabiliser too, even if you're not looking to shoot using the Single Shot Cinema technique.

Look out for more advanced video tutorials on Single Shot Cinema techniques at:

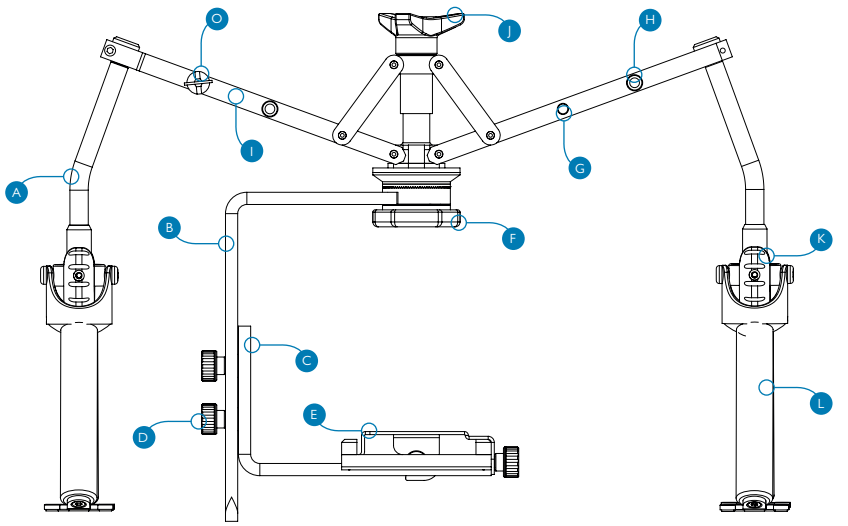
Comodorigs.com

Join the Single Shot Cinema Facebook community for advice, tips and tricks and online master classes:

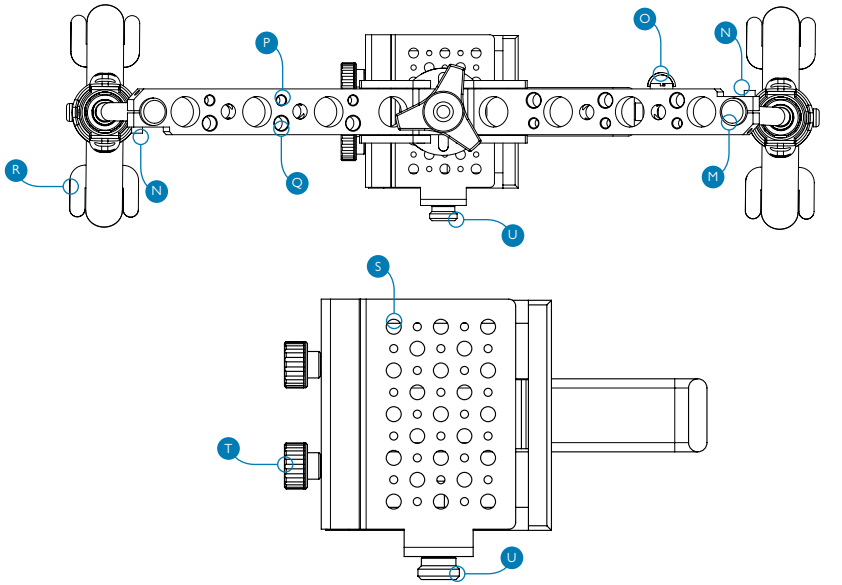
Facebook.com/orbitrig

'Leonard Retel Helmrich's camera glides through spaces in a way that just seems impossible.'

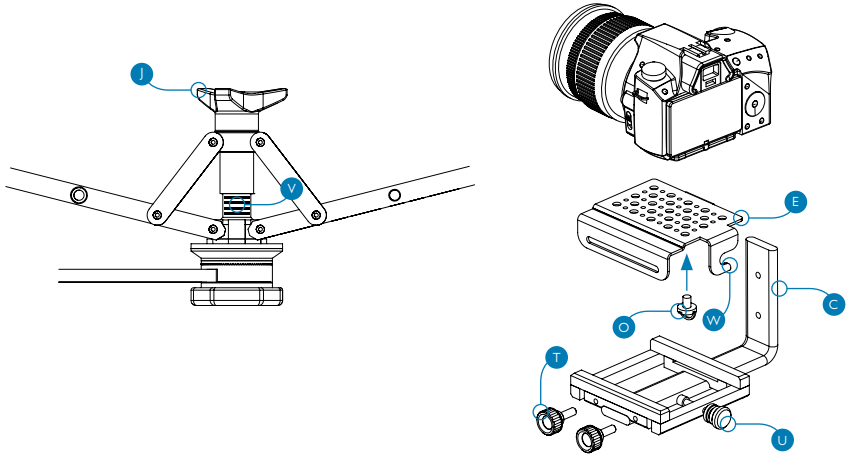
Rob Moss, film lecturer at Harvard University



A	Angled Support Post	**E**	Camera Mount Platform	**I**	Adjustable Arm		
B	Upper Camera Support	**F**	Camera Support Knob	**J**	Vertical Adjustment Knob		
C	Lower Camera Support	**G**	1/4” Accessory Thread	**K**	Hand Grip Gimbal		
D	Height Adjustment Knobs	**H**	3/8” Accessory Thread	**L**	Padded Hand Grip		



M	Post Extension Cover	**P**	3/8” Accessory Thread	**S**	Camera Screw Receiver		
N	Post Removal Screw	**Q**	1/4” Accessory Thread	**T**	Camera Platform Screw		
O	Camera Mount Screw	**R**	Base Foot	**U**	Horizontal Adjustment Knob		



SET-UP...EASY AS...

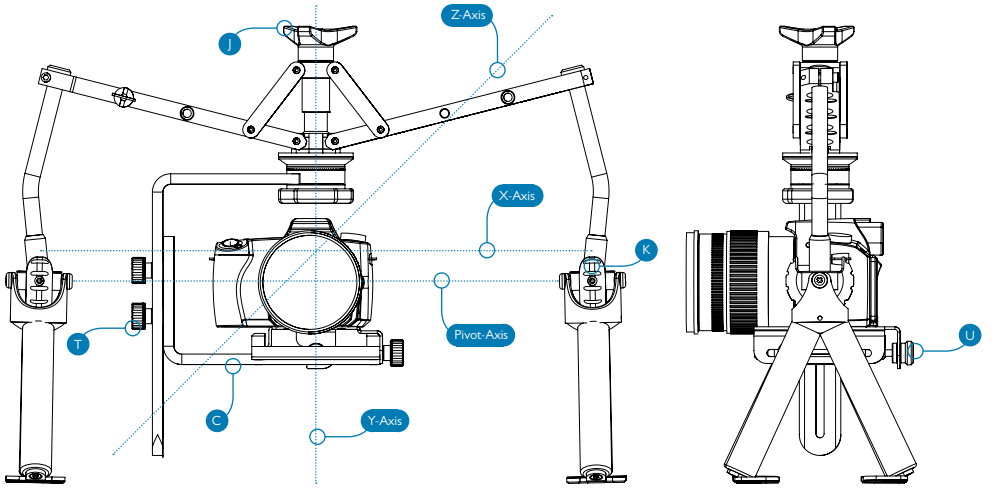
1... Vertical adjustment
2... Mounting camera
3... Balancing camera
4... Fine-tune adjustment

STEP 1...VERTICAL ADJUSTMENT

Before attaching your camera to the Orbit ensure that the rig is placed onto a flat surface. Next, turn the 'vertical adjustment knob' (J) until there are four marker stripes visible (V). Doing this before attaching your camera will allow you equal vertical adjustment (up and down) when fine-tuning the balancing of your camera.

STEP 2...MOUNTING CAMERA

Connect your camera to the 'camera mount plate' (E) using the provided 'camera mount screw' (O). The position in which the camera is mounted to the plate will be dependant on your chosen camera and its specific centre-of-gravity; usually the correct mounting position will be the central hole or just behind the central hole on the mount plate. You may have to mount the camera a number of times during the balancing procedure before you find the correct hole/mount position for your specific camera. Once your camera is attached to the mount plate connect it to the 'lower camera support' (C). When attaching the mount plate to the lower camera support, you must ensure that the 'hook' (W) on the rear of the mount plate matches up with the slot in the 'horizontal adjustment knob' (U).



Once the mount plate is in place, connect and tighten the 'camera platform screws' (T) to secure in place.

STEP 3...BALANCING CAMERA

The most important part of the Orbit set-up is balancing your camera's 'centre-of-gravity'. The centre-of-gravity for each camera will change and be dependant on the specific lens used.

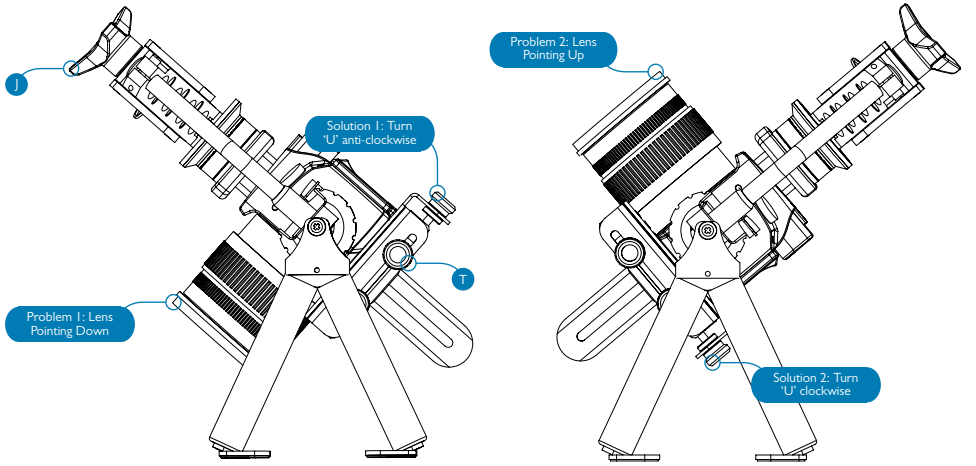
To balance the camera on the Orbit, the Pivot-axis should be aligned with the X, Y and Z-axis. The Pivot-axis is the axis between the two 'hand grip gimbals' (K). When the camera's centre-of-gravity (X,Y and Z-axis) is balanced along the Pivot-axis, you will be able to tilt the camera forwards or backwards on the Orbit and the camera will remain in position.

To balance the camera's centre-of-gravity, first adjust the 'lower camera support' (C) to move the camera up or down along the Y axis until somewhere between the middle and top of the cameras lens meets the Pivot-axis.

STEP 4...FINE-TUNE ADJUSTMENT

To fine-tune the balancing of the camera use a combination of the 'vertical adjustment knob' (J) and the 'horizontal adjustment knob (U)'.

First adjust the system vertically. If you tilt the camera forwards or backwards and it does not stay in position i.e. it swings back in the opposite direction, it means that the camera balance is either front or back heavy and must be adjusted to counter-balance the weight.

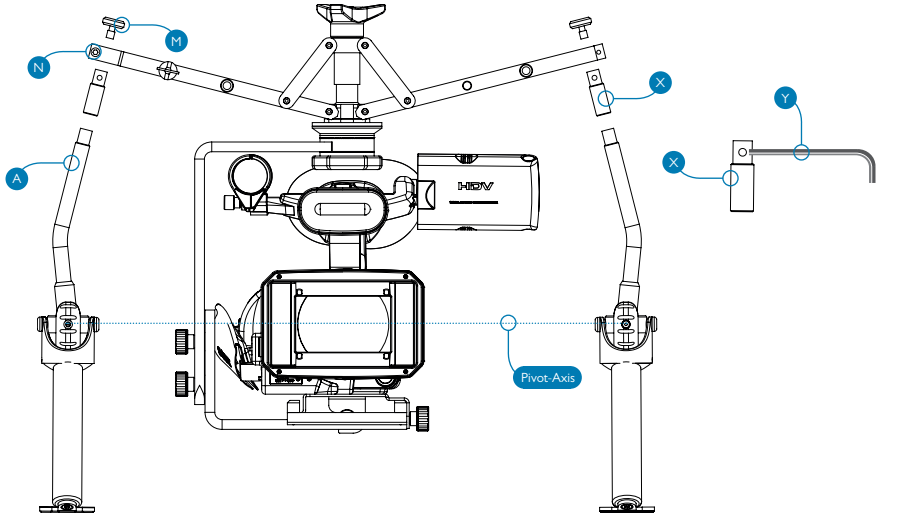


If (as shown in 'Problem 1') the lens is tilting down, this means the camera is front-heavy. To adjust the balance of the camera, release the 'camera platform screws' to loosen the tension of the 'camera mount platform', then turn the horizontal adjustment knob (U) 'anti-clockwise' to slide the camera (and camera mount platform) backwards. This will redistribute the weight and the camera's centre-of-gravity towards the rear.

If (as shown in 'Problem 2') the camera lens is tilting upwards, turn the horizontal adjustment knob (U) 'clockwise' to slide the camera (and camera mount platform) forwards. This will redistribute the weight and the camera's centre-of-gravity towards the front.
If you have adjusted your camera to a position where it begins to tilt in the opposite direction slowly, and with minimal movement, after being moved forward or backwards manually; tighten the 'camera platform screws' (T) so they lock the 'camera mount platform' in place.

Next, use the 'vertical adjustment screw' (J) to make last fine-tune adjustments to find your cameras centre-of-gravity and balance point.
By switching between the horizontal and vertical adjustment screws you will eventually find your camera's centre-of-gravity. Once balanced, your camera will stay in position when tilted forwards or backwards.

N.B. Set-up (mounting and balancing camera) should take between 10-15 minutes.



NOTES...

Once the centre-of-gravity has been found and the camera is balanced on the Orbit, any adjustment to the camera will unbalance the whole system.

For instance, changing the cameras battery for a different kind or size will alter the centre-of-gravity. Opening (or closing) the cameras LCD view screen or changing the lens will also have an affect on and unbalance the centre-of-gravity.

USING...EXTENSION ARMS

If you are using a camera which is larger than a traditional HD-DSLR or small camcorder, you may need to use the provided extension arms in order for the lens to be seated along the pivot axis. The Orbit is supplied with three different size extension arms (25mm, 50mm and 75mm).

To fit an extension arm to the Orbit first loosen the 'post removal screw' (N) using the provided 'Allen key' (Y). Do not fully remove the 'post removal screw'. Once the 'post removal screw' has been loosened, unscrew and remove the 'post extension cover' (M).

Next, insert the required 'extension arm' (X) and screw in place on top of the 'angled support post' (A). Tighten (or loosen) an 'extension arm' to/from the 'angled support post' using the supplied Allen key. Replace the 'post extension cover' (M) and be sure to re-tighten the 'post removal screw' (N) before using the Orbit.