



## VZ-ProLite Camera Stabilizer Instruction Manual

Please read the instruction manual thoroughly before operating your ProLite stabilizer for the first time to avoid injuring yourself or damaging the unit.

The robust construction of the ProLite makes it an excellent long-term investment, but its precision design also means that you must exercise care in the storage, transport, and operation of the unit to ensure optimal long-term performance.

You should also review the accompanying instructional DVD before attempting to shoot usable footage with the ProLite. The standard ProLite comes equipped with 3 subsystems:



and the following: padded case, DVD, hex wrench, BNC-RCA video cable, battery/charger, & docking post (for mounting sled on a C-stand or light stand).

**Page 2**

***For ProLites Equipped with Optional Battery Mounts***

If you ordered your ProLite with one of the optional battery mounts (Anton Bauer, NP1, V-lock), your kit will not include the battery and charger. You must supply your own battery system in this case.

***Subsystems  
The Vest***

The purpose of the vest is to comfortably distribute the weight of the camera and stabilizing system on your body. To achieve optimal results, you should adjust the vest so that it fits snugly.

Adjust the vertical fit by adjusting the straps, pulling the chrome release pin and sliding the chest plate up or down until you find the right position.

Adjust the tightness of the vest around your waist using the Velcro strap, drawing it around evenly on both sides of the lower vest pad.

Adjust the tightness around your torso by positioning the Velcro straps across the back of the vest and securing the buckles to the chest plate. Make the vest as tight as possible to maximize operational quality and comfort. Once you've adjusted the vest, remove it for easy re-suiting by unclipping the buckles and strap on one side only.



**Page 11**

***Low Mode Assembly***

The Low Mode kit (optional) consists of the camera cage, the sled-to-arm tie rod, and a few screws. Start by attaching the dovetail plate, upside-down, to the top of the camera cage using the supplied screws (the top of the cage has threaded holes). Then turn the sled upside-down and slide the dovetail plate into the stage. Mount the camera inside the cage using the supplied screw. Connect the sled to the arm using the tie rod; the gimbal handle should fit into the round hole on the oval shaped end of the tie rod and the squared end should slide over the post on the spring arm. The stage knobs and multiple cage holes allow for horizontal balance adjustment, and you can adjust the vertical balance using the same adjustments as in normal upright mode.



Camera cage may differ slightly from those pictured

#### Page 4

First, insert the charged battery into its housing and plug in the connector cable, then tighten the screws. To prepare the camera for attachment to the sled you should first find the center of gravity (CG) of the camera. The CG is the point at which the camera will balance best, and it can be determined by using a rounded object such as a pencil. Set the camera lengthwise on top of the pencil so that it is balanced to find the lateral center (side-to-side), and then set it on top of the pencil in a perpendicular orientation to find the longitudinal center (front-to-back). The spot where the lateral and longitudinal centers intersect is the CG – you may want to mark it with a grease pencil or marker (depending on how pristine you want to keep your camera).

Once the CG is determined, you must mount the camera to the dovetail (mounting plate) using a hole that will put the CG closest to the center of the mounting platform. Look at the bottom of the dovetail, and on one side you will see a metal rack of teeth and on the other side a pair of sloped end stops. When you attach the dovetail to the camera, you want the rack to be on the same side as the LCD panel / viewfinder so that it will line up with the brass pinion gear in the dovetail channel of the stage.



#### Page 9

You will want to play with the independent adjustments of each arm section until you get the right cumulative force, but it's probably not a good idea to have one section fully tensioned and the other totally slackened. There should be some degree of balance between the two sections, but the lower arm section does bear more weight, so the individual adjustments will likely be different. Set the adjusters until the camera base floats at a level below your collarbone, but the arm should not feel 'mushy'.

The float point is not necessarily an exact setting, and you may find that what works for you is slightly different than another person's preferred float point. The important thing is the end result: you have a sled that rises and falls with slight force and absorbs most of the shock imparted by walking.

Now you should be able to turn on the monitor and begin practicing, assuming the battery is charged. You may need to adjust the balance slightly after positioning the monitor.

**Page 10**  
**OPERATION**

For instructions on operation, watch the DVD. Generally speaking, you have to keep in mind that the stabilizer will not work like a magic wand and instantly transform your shots into brilliant footage. Operator skill is critical, and it takes many hours of practice to master this device, but the reward for all the practice will be substantial. Here are a few simple quick-start guidelines:

- Hold the system by the gimbal handle to control the orientation and elevation of the sled.
- With the other hand, lightly grasp the center post of the sled just below the gimbal, holding it close to the gimbal for optimal control.
- Delicately grasp the center post with your fingertips, like a flute – do not grab it like a handlebar.
- Practice good posture and hold the sled close to your body.
- Fine-tuning of the balance adjustments may be necessary a few times during operation.
- The way you walk will affect the quality of stabilization, so you need to develop a light-footed rhythmic pattern.
- Practice for at least 20 hours before attempting to acquire usable footage.

The DVD contains detailed, clear instructions and tips on operation, and if you have any general questions, visit the website – [www.varizoom.com](http://www.varizoom.com). If you've watched the video and practiced and still have technical questions, call 512-219-7722.

**Page 3**  
**The Sled**

The Sled is the subsystem that holds the camera, viewing monitor, and battery. The Sled mounts to the arm, and in tandem they create a stabilizing effect.

The Sled can be adjusted at various points to change its weight distribution, which in turn enables you to accommodate cameras of different sizes, shapes and weights. The basic principles of sled adjustment are that you want the section of the sled below the pivot point to be effectively heavier (slightly) than the upper section, and you want the camera's mass to be centered on the rotating axis.

The Sled consists of three main sections:

**The Stage** enables you to adjust the horizontal balance of the system and also houses the video and power connectors.

**The Post and Gimbal** provide smooth pan and tilt action, a mounting socket for the spring arm, and a grip handle. This section also features one of several vertical balance adjustment points.

**The Lower Sled** holds the LCD monitor and the battery power source. This section provides a few vertical and horizontal balance adjustment points.



## Page 6

**P1 - Weight Plate Attachment** - If your fully loaded camera weighs less than 6 pounds, you will have to attach the supplied weight plate between the camera and the dovetail plate.



-Start by mounting the weight plate to the camera (above) – The weight plate comes with several screws, and you will use the shorter hex socket head screw to attach the weight plate to the camera. This screw will go into one of the counter-bored holes. You should try to position the weight plate so that the camera's CG lines up with the centermost hole of the weight plate. Use the supplied 3/16" hex wrench to tighten the screw.

-Next, attach the dovetail to the weight plate using the two slot-head screws (see pictures below). Slide the assembly into the stage and you're ready to continue.



## Page 7

You are now ready to put the systems together and learn the balancing and operation procedures. Re-suit yourself with the vest and remove the quick-release pin from the arm socket on the lower center section of the vest. Install the arm and replace the aircraft pin completely. Make sure the battery is installed securely on the lower sled. *Note: You can also balance the sled while mounted on a C-stand.*

Pick up the sled/camera assembly and place the gimbal handle onto the post at the top of the arm (*the post should be reversed for storage/transport*). The post should slide up into the socket of the gimbal handle. Now you can check the vertical balance of the sled. Make sure the dovetail is locked. Grasp the gimbal handle as a control point and hold the arm fairly close to your body. Using your free hand, turn the sled 90 degrees so that it is horizontally oriented, and let it drop back to the vertical position. **Keep** your free hand close to the center post in order to prevent the sled and monitor from colliding with other objects.

Ideal vertical balance is reflected by a "drop time" of 2-3 seconds, meaning it should take 2-3 seconds for the sled to swing down 90 degrees to the vertical plane (it will swing past that point, but count only until it reaches the vertical plane). If the system is top heavy, adjust the balance by repositioning the gimbal clamp upward, and if it is bottom heavy, move it downward. When you loosen the gimbal clamp, you should support the weight of the sled by grasping the center post firmly. You will notice that the gimbal clamp can slide up or down when loosened. You can also adjust the vertical balance by extending the lower sled downward.

### **Page 8**

Positioning the lower sled downward will make the system more bottom heavy, and it provides you with the capability of shifting the balance down without moving the gimbal to a position lower than you find agreeable.

To extend the lower sled, loosen the screw on the knurled clamp while supporting it from below. *Be careful not to overextend the lower sled, as there are wires inside the center post (there is a safety catch, but don't test it).* When you find the right position, tighten the knurled clamp again, but don't tighten it excessively – just tighten enough to fix the lower sled in place. Adjust until you get a 2-3 second drop time.

Now you can adjust the horizontal balance, which is accomplished by adjusting the longitudinal and lateral positions of the camera. First you will have to loosen the dovetail lock. If the sled tilts forward or backward, you can adjust the position of the dovetail using the knob at the front of the stage. If the sled tilts to one side, you can adjust the stage laterally by using the second knob. Both adjustments allow for very fine increments, so you will find it is best to turn the knobs slowly until you hit the “sweet spot” (where the camera stays totally level). Finish by tightening the dovetail lock.

You can also fine-tune the horizontal and vertical balance by adjusting the position of the battery housing. On the underside of the base of the sled, directly beneath the battery housing, you will find a thumbscrew. When loosened, the battery housing will slide down and back. This will affect both the vertical and horizontal balance.

The next step is to set the “float point”. This is essentially the ideal point of arm spring tension, the state in which the

### **Page 5**

sled rises and falls with slight force. At the end of each arm section you will find a thumbscrew for adjusting the spring tension. Clockwise turning increases tension while counter-clockwise turning decreases tension.

Once it is securely fastened, slide the mounting plate into the dovetail channel of the stage while making sure the rack is on the same side as the brass pinion gear. You may need to push up on the dovetail lock to fully install the plate. Position the dovetail so that the camera is fairly centered. When properly installed, the locking release pin should prevent the plate from sliding out, but you should go ahead and secure your camera by tightening the dovetail lock.

Plug your video cable from the camera to the video output on the back of the stage. Set the sled/camera assembly aside, as final setup must be done with the arm and vest on your body or using a C-stand. If you have one, you can mount the sled on the C-stand using the supplied docking post or optional balancing plate. Exercise caution to make sure the stand will not tip over.

### ***The Arm***

The arm is the link between your body and the sled. The arm provides vertical support and allows the camera and sled to float. The ProLite arm is a double-articulated, spring loaded arm, and it is designed to handle 2 to 12 pounds. For cameras under 6 pounds, you will have to use the supplied weight plate. Once you determine the exact weight of your fully loaded camera, you can decide if you need to use the weight plate.

If your fully loaded camera is between 6 and 12 pounds, you can skip section **P1** on page 6.