



[pro]master®

# Carbon Fiber GH31C [ Professional Gimbal Head ]

## Assembling the GH31C

When you first unbox the GH31C you will find its parts in a disassembled state in the included bag making it as compact as possible for storage and travel. Begin by removing all 4 components which include the: main body of the GH31C, Platform (6), Smooth-control Handle (10), and Quick Release Plate (16).

Set the QR Plate (16) aside for now. Connecting the plate is explained in the next section of this manual.

Take hold of the Platform (6) and loosen its Platform Knob (5). Now slide the Platform (6) onto the Arm (3) so it appears like Figures 1 and 2. The Platform (6) will reach a stopping point at the bottom of the Arm (3). Now tighten the Platform Knob (5) to hold it in place.

Locate the Smooth-control Handle (10). The use of this handle is optional. The Smooth-control Handle (10) offers greater leverage and control over your camera rig and can be especially useful when taking video footage. To attach the Smooth-control Handle (10) loosen the Arm Tension Control Knob (1) as well as the Arm Lock Knob (2). Rotate the Arm (3) and Platform (6) about 90 degrees upward so the bottom of the Platform (6) is facing you while the Arm (3) is to your left. Notice the connection port in the bottom of the Platform (6) directly on the underside of the Quick Release Receiver (7). Attach the Smooth-control Handle (10) to this area and use the Smooth-control Handle Attachment Knob (11) to tighten it in place. Notice the Smooth-control Handle (10) can be attached in a variety of positions. Begin with a position similar to that shown in Figure 1. As you become proficient you may choose to place it in a different position, depending on your rig and the desired movement. Once the handle is attached, return the Arm (3) and Platform (6) to its normal resting position as shown in Figure 1.

Now mount the GH31C to your tripod, or other mounting base, as you would a typical photographic head. Be sure it is attached firmly and all grub screws (where applicable) on your tripod are properly tightened.

## Attaching Your Camera, Lens, or Rig to the GH31C

Attach the Quick Release Plate (16) to the tripod port on the bottom of your camera, video camera or lens. In most cases you will use the Small Mounting Bolt (19) which is a 1/4"-20 type thread. However, the Large Mounting Bolt (18) may be necessary with some gear. It has a 3/8"-16 thread.

Professional lenses and cameras often have two mounting holes, for which you can use both the Small Mounting Bolt (19) and Large Mounting Bolt (18) simultaneously. If you prefer to remove one of the mounting bolts, remove the Rubber Cover (20) from the bottom of the QR plate, slide out the bolt, and replace the Rubber Cover (20). When mounting any camera, camcorder, or lens, slide the bolt(s) within the slot in the QR plate to achieve the best positioning of the plate. Always mount the plate parallel to the direction of your lens for proper operation of this gimbal.

The Anti-twist Pin (17) is designed for an anti-twist hole found in the bottom of some camcorders and lens mounting rings. If your camera or lens does not have this hole you can remove the pin by unscrewing it from the bottom of the QR Plate with a flathead screwdriver. Or, since the pin is spring loaded, you can leave it in place and it will retract on its own when it makes contact with the bottom, flat surface of your camera or lens.

Before mounting your rig to the GH31C, tighten the Arm Lock Knob (2) and the Base Lock knob (14). With the QR Plate (16) firmly attached to your equipment, open the jaws of the Quick Release Receiver (7) by turning the Quick Release Knob (9) counterclockwise and place the QR Plate (16) into the receiver. Continue to hold your rig as you now firmly tighten the Quick Release Knob (9). Once you are sure the QR Plate (16) is firmly connected to the GH31C you can slowly let go of it. Take note of the two Safety Bolts (21) in the QR Plate (16) which prevent the plate from accidentally sliding out of the gimbal. These bolts can be removed if you prefer, but be cautious in doing this as your equipment can slide out of the gimbal and fall more easily.

## **Operating the GH31C**

Begin by balancing your rig. With the Base Lock Knob (14) tightened, slowly/slightly loosen the Arm Lock Knob (2) followed by the Arm Tension Control Knob (1). If the Arm (3) of the GH31C begins to move, the rig is out of balance. Tighten the Arm Tension Control Knob (1). With a firm hold on your rig slightly loosen the Quick Release Knob (9). Once this knob is loosened enough to slide the rig and its QR Plate (16) within the Quick Release Receiver (7), slide it forward or backward a little bit to counteract the movement of the Arm (3). Tighten the Quick Release Knob (9) and repeat these steps again until a balance point is achieved.

Now you will adjust the gimbal so your rig pivots properly, rather than swings. Loosen the Platform Knob (5) and slide your rig upward with the Platform (6) along the Arm (3) until the center of your lens is aligned vertically with the white triangle-shaped marker at the top of the Vertical Adjustment Scale (4). The “center of your lens” refers to the vertical center of its barrel. You can also use the vertical center of the lens-to-camera mount as a visual guide for this. Once you have found this proper “pivot point” for the lens, tighten the Platform Knob (5) and once again loosen the Arm Tension Control Knob (1) slowly. Your camera should remain in place, level on the GH31C. If it does not, repeat the balancing process as described in the above paragraph.

Once you have found the ideal placement of a particular camera/lens combination use the markings on the Vertical Adjustment Scale (4) and the Receiver Adjustment Scale (8) to make a note of their positions. When you want to attach this exact rig to the GH31C in the future you can pre-set it to these positions using the scales before mounting the rig to the gimbal. This is both faster and easier to accomplish without the weight of the rig on the gimbal.

With your camera and lens attached and balanced you can now enjoy using the GH31C. For fast action type movements loosen the Base Lock Knob (14), the Pan Tension Control Knob (12), the Arm Tension Control Knob (1), and the Arm Lock Knob (2). A properly balanced rig will provide

fast movements for quick tracking of moving objects with these controls loosened. This is how most gimbals are used. The GH31C is also capable of smooth, controlled movements. Apply some tension using the Arm Tension Control Knob (1) and the Pan Tension Control Knob (12) to slow down and control the movements in a fluid-like fashion. Use different amounts of tension on these controls to achieve your desired movement or lock one in place (using the appropriate lock knobs) to isolate movement to just the other. Use the Smooth-control Handle (10) to apply movement to the GH31C in the most controlled fashion. This is especially useful when capturing video footage and when using smaller, lighter-weight cameras, lenses, or camcorders.

## **Operational Tips**

1. The GH31C is rated with a maximum load capacity of 33 lbs / 15 kg. This assumes a properly balanced load. If the camera and lens are not properly balanced there is a danger of tipping and falling which could lead to damage to your equipment or to your person. Always be sure to properly balance your rig.
2. Be advised that while the GH31C can handle a load up to 33 lbs / 15 kg, your tripod to which the GH31C is attached, must also be able to handle this load, including movements you will apply to the rig via the gimbal (swings and pans).

Here are some tips to help ensure a stable tripod setup:

- If possible, attach the GH31C directly to the column platform of your tripod. Do not connect the GH31C to a ball head or pan/tilt head as this will greatly reduce stability.
  - Always use the tripod's legs to achieve your desired working height rather than its column. Only extend the column if absolutely necessary. Extending the column of the tripod greatly reduces stability.
  - If your tripod has multi-angle legs and you can achieve your desired working height with the legs set at a wider angle, thereby creating a larger base, do so. This improves stability.
  - Always be sure your tripod is level even if the ground it is placed on is not. Use the leg adjustments to achieve a level state for the gimbal before mounting your camera and balancing it.
3. The locking knobs (2 and 14) are not infinitely adjustable. These use internal gears that lock into place every few degrees for the most solid, stable lock-system. Do not use these as if they were tension control knobs. They are only designed to be fully locked or fully loosened. Any other use may damage the gimbal.
  4. This gimbal head is designed for use with Dovetail (arca-type) quick release plates. If the included plate is not long enough to achieve proper balance with your camera and lens, consider a longer plate such as the ProMaster 5547 or 5554, or similar, which are designed for this task.
  5. Cold weather performance is only a guide. The GH31C's performance in cold weather can be affected by moisture as well as temperature and load. With increases in moisture and/or decreases in temperature you will notice the GH31C's movements begin to slow down as the unit's joints become stiff. In this case you may want to be sure all the tension adjustments on the GH31C are set to their loosest setting to regain movement. If possible, do your best to keep the GH31C dry to prevent moisture from affecting performance.

**ONE YEAR UNCONDITIONAL WARRANTY**

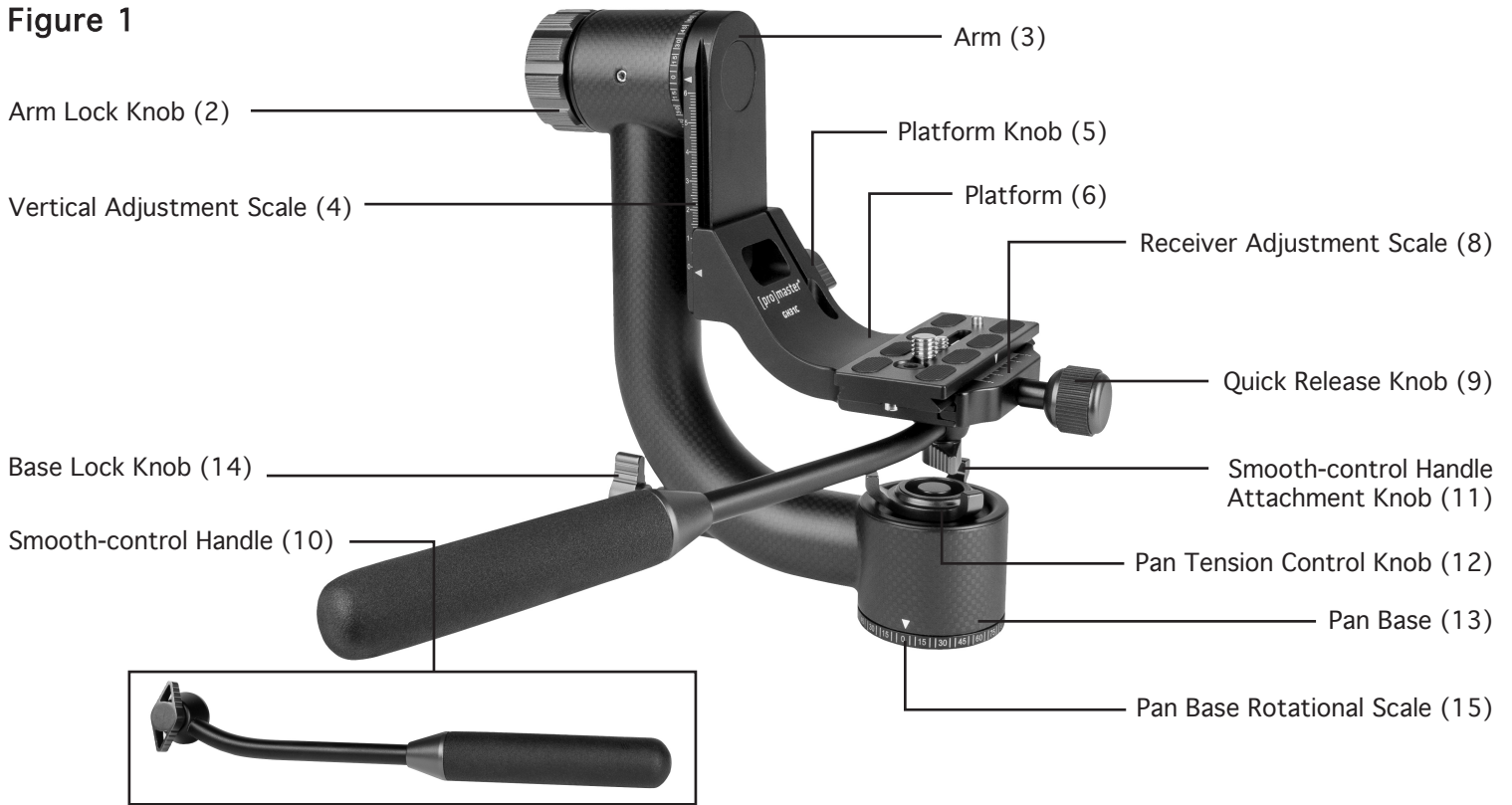
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**Figure 1**



**Figure 2**

