



# Setup, Use and Care Guide

---

## PC350 Housing

**Gates Underwater Products, Inc**

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

Dear Gates Customer,

Welcome to the Gates family! You now own one of the finest underwater housings available, and we thank you for choosing Gates! For over 34 years Gates has crafted the most **reliable, durable** and **dependable** housings to suit many needs, from recreational diving to treasure hunting, marine research and Hollywood productions to U.S. Navy programs.

You see, at Gates, your selection of our product is only the beginning. We are here to service you, the customer, for as long as you own our product. Our Customer Service is second to none. We'll make every reasonable effort to support you wherever your adventures land you, including remote corners of the globe. Anytime you need advice, parts, overhaul, repair, or just want to chat, Gates will take care of you promptly and to your satisfaction.

**Please read through all the documentation** contained in this package to familiarize yourself with a Gates housing **before** diving. It contains important and valuable information so your new housing is easy to learn and use. Soon you'll be capturing images and showing your friends and colleagues the splendor of the undersea realm.

**Complete and return the warranty card** enclosed in this package to activate your *2-year warranty*. You'll receive 2 years of warranty coverage for your investment and unprecedented peace of mind, only from Gates.

Gates wishes you the greatest success in your diving adventures. May you capture the memories of a lifetime and the envy of your friends. And remember.....

**Don't take a chance...Take a Gates!**

Sincerely,

John Ellerbrock  
President and General Manager

**Gates Underwater Products, Inc**

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

# **Gates Housing Setup and Use**

## **For Sony PC350**

**Congratulations** on owning a new **Gates** housing! You've selected a product that will provide years of value and reliable service. This housing was custom designed for the PC350 camera for a compact and easily transportable package. Please read through this entire guide to familiarize yourself with the Gates PC350 housing. The following easy setup guidelines will explain how to prepare and use your camera and housing so you'll get the best results from your video endeavors.

### **First Time Use**

Every Gates housing is pressure tested before leaving the factory to assure a watertight seal. As a precaution, however, it's a good idea to first use the housing **without** your Sony PC350 inside. Rough or abusive handling during shipment could have caused unnoticed damage after leaving the factory. In addition, you can get a good feel for the use of an underwater housing without worrying about getting a good shot. You can simply concentrate on the technique of holding the housing in position while fine tuning your buoyancy.

After removing the housing from its shipping container or Gates Pak, carefully inspect for any damage that may have occurred during shipment. If you discover any, contact Gates or your dealer immediately for assistance.

### **Preparing the Housing**

- ✍ Two stainless steel safety latches secure the housing halves. They have a positive locking feature, so to open them you must first depress the center bar release while lifting the rear lever. Depress the bar and lift the rear lever on the top latch, then undo it from its catch hook. Release the two side latches in this manner.
- ✍ Separate the rear half of housing from the front.
- ✍ Remove the camera mount plate from the housing. Note the positioning of the mount plate for later installation with the PC350 camera attached.
- ✍ Pull all side controls on the PC350 housing out as far as they will go.

### **Gates Underwater Products, Inc**

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

## Preparing the PC350 Camera

Your Sony PC350 will need some preparation before installing into the housing.

- ✎ **Remove the lens hood** completely from camera.
- ✎ **Install** a tape, Memory Stick, and charged battery.
- ✎ **Tighten the hand strap** to its shortest position, and tuck the 'tail' back into the hand strap.

**CAUTION:** Failure to perform this step may result in the hand strap becoming caught in the housing seal and accidental flooding.

- ✎ **Install the camera** onto the mount plate using one of the short ¼-20 flat head screws threaded into the tripod mount found on the bottom of the camera. A screwdriver or coin may be used to tighten snug, but do not over tighten.



## Installing the PC350 Camera Into the Housing

- ✎ **Carefully slide camera on its mount plate** into the front housing half. Look to see that the screw hole on the housing mount tab aligns with the threaded hole on the mount plate.
- ✎ **Install the supplied flat head screw** through mounting tab into the mounting plate. Tighten screw snug with medium screwdriver or a small coin. Be careful not to scratch o-ring sealing surface with the screw driver.
- ✎ **Press in controls.** When the camera is installed into the front housing half, press in controls until they touch the camera and see that they work properly (refer to the next section for more detail on controls)
- ✎ **Open the LCD fully.** It should contact and rest against a small tab on the far left inside of the housing.




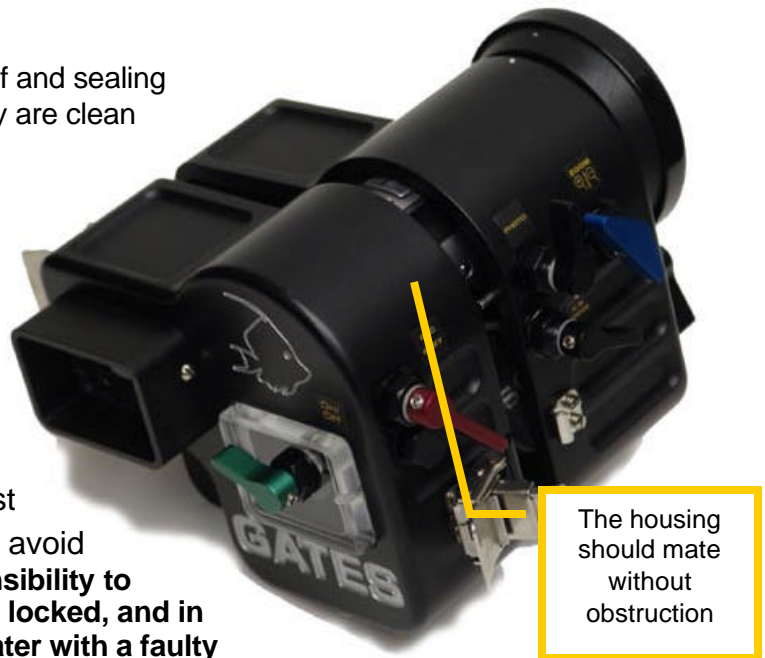
## Gates Underwater Products, Inc

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

## Closing the housing

- ✎ **Carefully inspect** o-ring on back half and sealing surface on front half. Make sure they are clean and in good condition.
- ✎ **Place back half onto the front** housing half. Align holes in back with alignment pins on front. You will 'feel' when the housing halves align and seat together properly.
- ✎ **Locate and close** the two latches at the same time.

 **Caution:** The safety latches must be **closed** and **locked** prior to use to avoid opening underwater. **It is your responsibility to make sure the latches are secure and locked, and in good condition. DO NOT enter the water with a faulty latch. Gates will replace a damaged or faulty latch free of charge.**



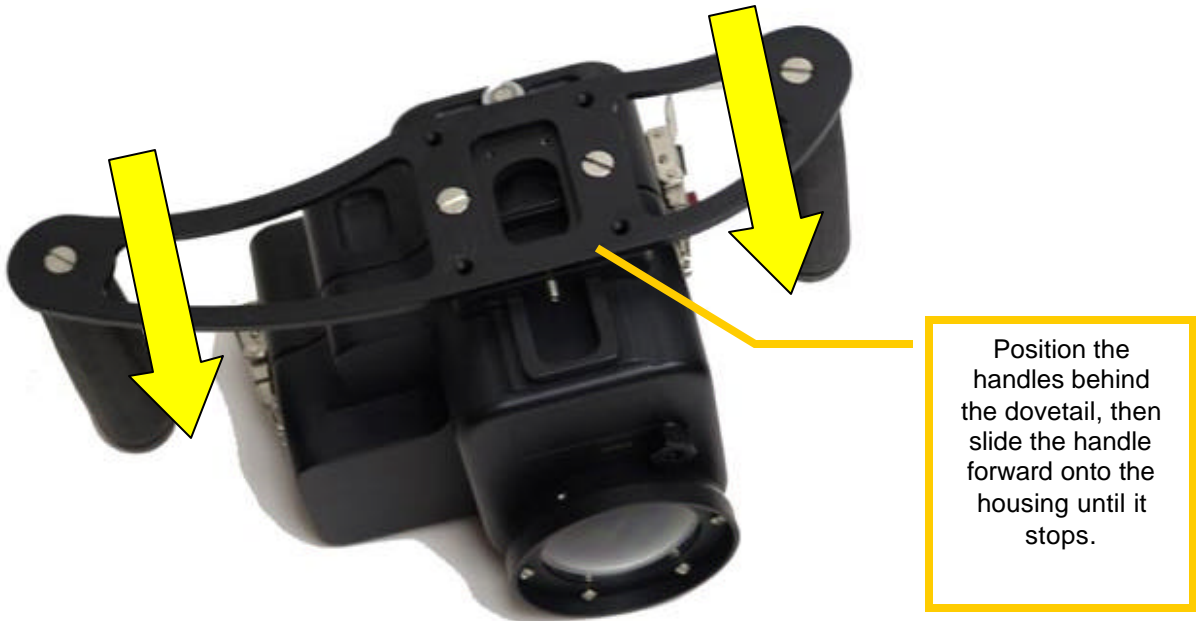
- ✎ **Carefully inspect the parting line** between front and rear housing. If this line is not even all the way around, remove the back and determine the reason. (O-ring out of place, hand strap interference, etc.) *Failure To Do This May Result In A Wet Camera!*
- ✎ **Press controls** in until they touch camera buttons. Note positioning of each control as it touches the camera button/switch it is designed to actuate.
- ✎ **Power up the camera.** Check all controls for the proper operation before entering water.
- ✎ **Check the Port.** It should be seated flush on the front bulkhead with no uneven gaps. If the port is not seated properly, remove the port and re-install per directions in a subsequent section of this document. Also check that the dot on the port is aligned with the dot on the housing.

## Gates Underwater Products, Inc

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

### Handle Installation

- ✂ **Remove the knurled brass retainer** from the handles, then place the handles just behind the dovetail found on the bottom of the housing (see photo).
- ✂ **Slide the handles** onto the housing dovetail. It may take firm pressure to fully seat the handles until they come to a solid stop.
- ✂ **Attach the knurled brass retainer** to secure the handles onto the housing.



### Gates Underwater Products, Inc

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

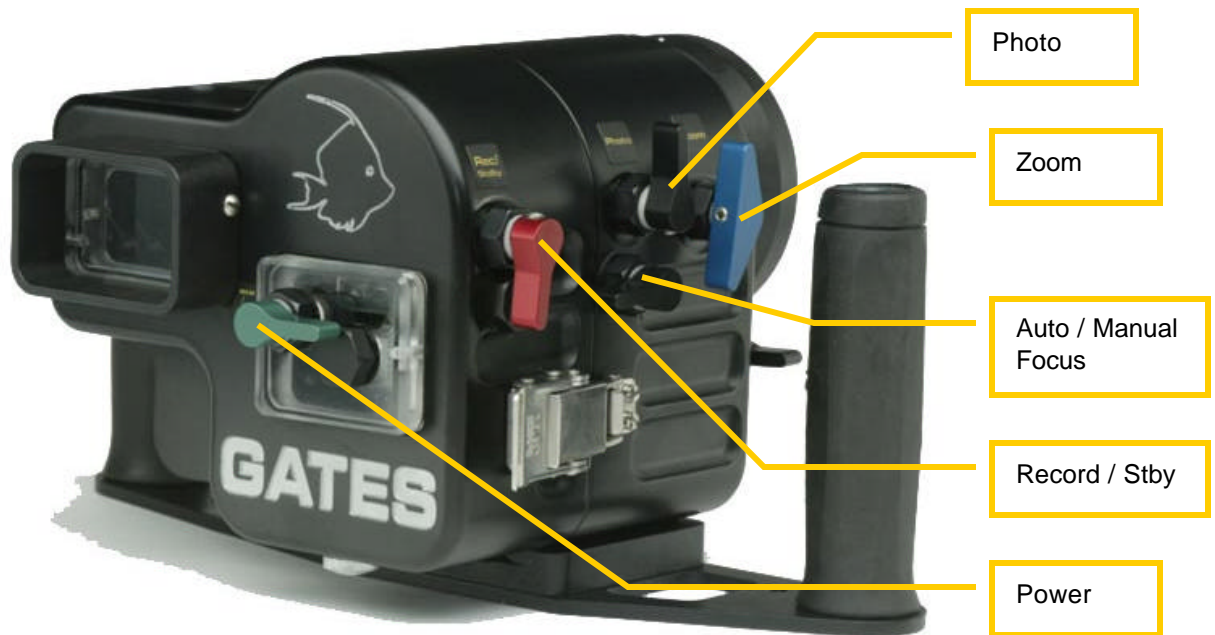
## Controls

Your Gates housing utilizes 100% mechanical controls to provide you with the most reliable operation possible. They are all rotational in nature: that is, there are no push buttons that can become sticky or depress under pressure. There are no batteries to change and little maintenance to perform (see 'Housing Care and Maintenance' section).

The housing controls are designed by Gates engineers, to the extent possible, to feel and behave like the camera controls. With time and use, the housing controls will become quite familiar and you'll find operating them requires similar 'finesse' as the camera controls.

To help familiarize you with the housing controls, Gates recommends reviewing each control individually, how it actuates the corresponding camera control, and actually operating it to get a 'feel' for the control. You can view all front housing controls with the housing open. After reviewing all controls, perform a 'simulated' dive by operating the controls as you would in the water.

One final note about controls: when operating any control *out of water*, you may need to press the control against the housing, into the position it would naturally find while under water pressure. The controls are designed to operate properly in this position.



### **Power (Tape/Memory/VCR/Off)**

This control is easily identified by the green color. The control toggles the camera through 3 modes when rotated slightly counterclockwise: 'Tape' (for video), 'Memory' (for digital stills captured to a Memory Stick), Play/Edit (for playback). When rotated slightly clockwise, the control moves to the 'Off' position. These positions are exactly

### **Gates Underwater Products, Inc**

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

like that found on the camera switch, and you can see the switch move into each position through the window as it changes between modes.

### **Zoom**

The Zoom control is blue color for easy identification. It operates with a simple up/down motion on the lever trigger. *Note: this control must be returned to the 'neutral' position after setting the desired zoom distance.* Other functions on the camera may not properly operate if the zoom switch is depressed in either 'zoom' or 'telephoto' conditions. If you find that other functions will not operate properly, check that the zoom control is in the 'neutral' position.

### **Record/Standby**

The Record Standby control is red, and operates by a short upward motion on the lever trigger. Press once to record, press again for Standby. You will 'feel' the record/standby button on the camera actuate through the control as it is depressed. This control will return to its neutral position automatically.

### **Still Photo**

This control operates with a short forward motion on the lever trigger, and you will feel the photo button on the camera depress.

### **A/M Focus (Auto/Manual Focus)**

This trigger control moves the Auto/Manual button. It acts as a 'wiper' across the button to toggle between auto and manual focus modes. The control should be "parked" in a slightly rearward facing direction when not being used.

To become familiar with the operation of this control, Gates recommends opening the housing and observing the 'wiping' action of this control across the button. You'll quickly get a feel for the control and operating it underwater.

## **Gates Underwater Products, Inc**

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

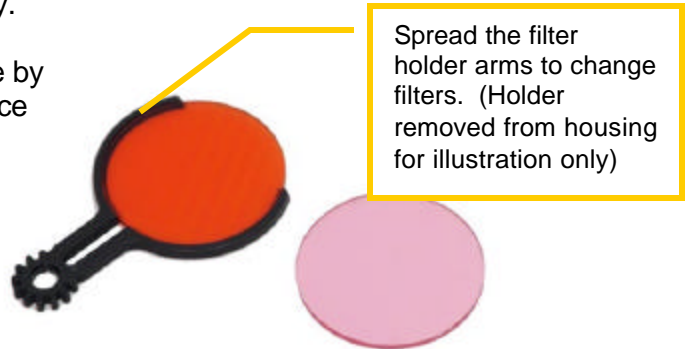
## Changing Filters

The color correction filter in your housing may be changed to accommodate different gradient filters. “Blue water” and “green water” are the two most common, recognizable by their orange and purple color, respectively.

✂ **Removal.** The color filter is held in place by the spring action of the filter holder. Notice also the filter rests against a small step around the edge of the filter holder. To remove, push the filter away from this step. You may find the filter also has a small amount of silicone adhesive applied to secure it in place. Remove any residue of this adhesive before installing another filter.

✂ **Installation.** Rest the filter against one side of the filter holder, then gently spread the filter holder apart while pressing the filter into it. It will ‘snap’ into place when seated.

✂ **Cleaning.** You will likely have fingerprints on the filter after installing, so clean the filter according to the directions in the “Cleaning Ports and Filters” section.




## Changing Ports

Gates offers several ports for your PC350 housing, which attach with a bayonet-style mount. Port changes are easy and straightforward:

✂ **Removal.** You will see alignment dots on the housing and on the port. When aligned the port is fully engaged and ready for underwater use. Turning the port 90 degrees, or ¼ turn in either direction to face the dot left or right allows the port to release from the front of the housing. Gently pull the port directly away from the housing to do so.

✂ **Inspect the o-ring** -- Before installing a new port, perform an inspection and lubrication of the sealing o-ring. See “O-ring Care and Maintenance” in this Use and Care Guide for specific details.

✂ **Installation.** Mounting a different port is directly the opposite: insert the port into the front bulkhead of the housing with the alignment dot on the port facing left or right, or ¼ turn away from the dot on the top of the housing. You may need to gently push the port into the bulkhead to fully seat the port. Then turn the port until the dot on the port aligns with the dot on the housing. Be sure the port is fully seated and flush with the housing. You should see no gaps between the port and the housing.

 **Caution:** The Port must be fully seated and flush with the housing to avoid flooding.


### Gates Underwater Products, Inc

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com


## Cleaning Ports and Filters


Gates ports can be cleaned readily by following these simple guidelines.

- ✍ **Dust or Lint** can be blown with compressed air, preferably from a can. **Do not clean the surfaces if it is unnecessary.**
- ✍ **Salt deposits or sand** may also be removed with compressed air. Use a soft lens brush if necessary to brush away foreign material that remains.
- ✍ **If necessary, rinse fresh water** over the outside of the port to loosen any residual salt or sand that may remain. Do this with the **port sealed** on your housing to keep water away from the rear of the port.

 **Caution:** Do not submerge port models GP25A or GP35A wide angle ports in water when separated from the housing! These ports are not sealed from the backside and damage will result if submerged.

- ✍ **Only if necessary, clean the port** using a mild glass cleaning solution and a non-abrasive, lint free cloth. **Use light circular strokes** when wiping away cleaning solution and any foreign material. Excessive pressure used when cleaning dirty lenses (e.g., rubbing sand into the lens surfaces) may damage coatings. *Use a light touch.*

 **Caution:** Not all cloths are lint free and non-abrasive! Use of an abrasive material (such as cotton balls and cotton fabric) may scratch the glass and/or coating of Gates ports, and will void the warranty.

 **Tip:** Gates offers approved cleaning solutions and lint free cloths as accessory items. Use of these materials will not void your warranty.

## Diopters

Diopters may be used with the PC350 housing and the FP25 Flat Port for close up/macro video. There is sufficient space between the camera and port to utilize up to three diopters stacked on the camera.

**Note the Filter cannot be used with diopters.** When installing the camera with diopters ensure the filter is positioned as far as possible away from the port opening.

### Gates Underwater Products, Inc

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

## Lighting Systems

Your housing comes ready to accept different lighting systems depending on your requirements. The handle is quite versatile and designed to suit most any application.

The top of each handle has a ¼-20 threaded hole to attach a variety of light arms, including Ultralight™ arms and link-style flexible arms. They are also handy for monitors, brackets, accessories, or virtually anything necessary for shooting your video.

On the bottom of the handle assembly are several mounting holes for securing batteries. They too are ¼-20 thread size and are very versatile to accept many different configurations. They can be used for brackets, mounts, arms, etc.

### **NiteRider™ Lighting Systems**

This section addresses assembly of the NiteRider™ lights to your Gates housing. It does not cover operation of the light, as this is contained in the User Manual included with your NiteRider™ light system.

#### **Light Head Arms**

Your NiteRider™ light system comes with a light arm mounting link(s) that will mount to the handle of your Gates housing. The mounting links resemble a single link of the arm, but with a threaded bolt attached.

- ✍ **To install the mounting links** onto your Gates housing, simply **thread them into the top of the handles** on your Gates housing. Screw them in until fully seated, and tighten them snugly, but do not over tighten.
- ✍ **Note the arms** consist of locking, movable links that provide a flexible arm for easy positioning of your light beam. Each link can be separated and re-assembled easily. This allows easy attachment of the arm to your housing.
- ✍ **Attach the light arms.** With one hand firmly on the handle of your Gates housing, grasp the light arm at the end that will attach to the housing. The light arm will mate to the link you just installed in the previous step. **Firmly press them together** until they “snap” and lock together. You may need to apply some effort, but they will lock securely.
- ✍ **To remove the light arms**, grasp the handle of your Gates housing and the light in the same way you did to assemble them. **DO NOT PULL the links apart.** Rather, **bend the light arm sideways** until the arm and mounting link separate.
- ✍ You can connect and remove the light arms at your pleasure. They are quite durable and will withstand many cycles of assembly and removal.

### **Gates Underwater Products, Inc**

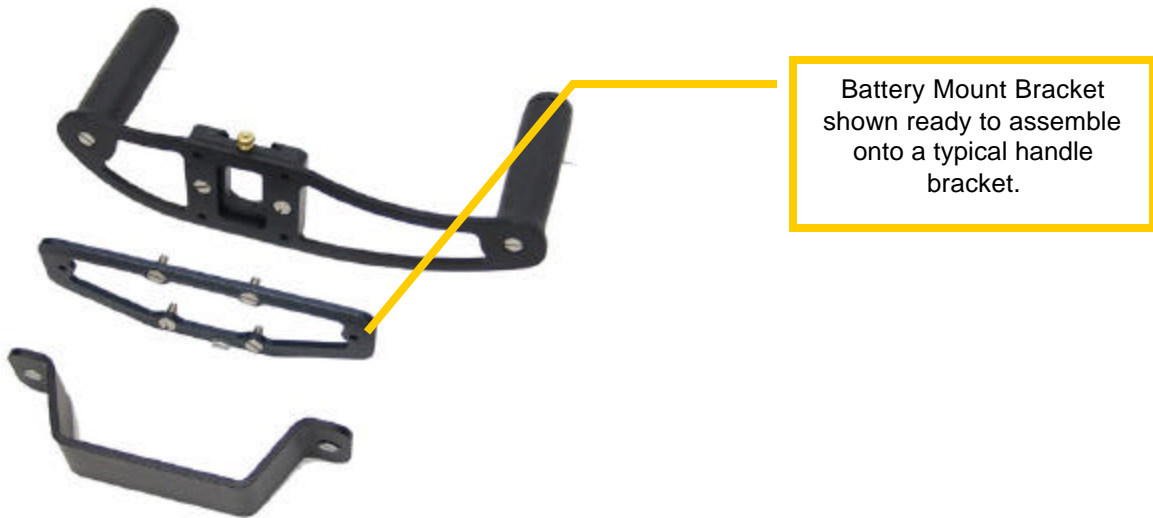
5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

## Battery Mount

If you purchased the NiteRider battery mount bracket, note there are two parts:

- ✍ **A straight 'wing' shaped plate** that mounts directly to the bottom of the handle bracket with four ¼-20 pan head screws; and
- ✍ **A 'U' shaped bracket** that in turn mounts to the 'wing' shape bracket with two shorter ¼-20 pan head screws.

Refer to the photo illustration for proper mounting and installation of the battery. Note that the battery may also be carried on a weight belt of BC pocket if so desired.



### Gates Underwater Products, Inc

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
Reliable@GatesHousings.com • www.GatesHousings.com

## Housing Care and Maintenance

Proper care of your Gates housing is important to provide you reliable operation and long life. You'll find all the guidelines in the "Housing Care and Maintenance" document included with your Gates housing. You can also find it on Gates web site at [www.gateshousings.com](http://www.gateshousings.com).

## O-Ring Care and Maintenance

Your Gates housing has 2 serviceable o-rings. One is located between the mating halves of the housing (the large orange one), and the other is located on each Port.

Servicing the o-rings is easy, and also covered in the "Housing Care and Maintenance" document in this package, and on the Gates website at [www.gateshousings.com](http://www.gateshousings.com).



**Caution:** Do not lubricate the large orange o-ring! It is a special silicone o-ring and can be damaged by petroleum-based lubricants.



**Caution:** *Never* use metal tools or objects for removing o-rings!

## Customer Support

If you have any questions or require further assistance with your Gates housing, contact your dealer or Gates directly and we'll be happy to assist.

Email: [Customersvc@GatesHousings.com](mailto:Customersvc@GatesHousings.com)  
Phone: 858-272-2501  
Fax: 858-272-1208

### Gates Underwater Products, Inc

5111 Santa Fe Street, Suite H • San Diego, CA • 92109 • 858.272.2501 • 800.875.1052 • 858.272.1208  
[Reliable@GatesHousings.com](mailto:Reliable@GatesHousings.com) • [www.GatesHousings.com](http://www.GatesHousings.com)