Fantasea Line

FA6500 V2 Housing

(Cat. No. 1525)

For Sony a6300 and a6500

Instruction Manual

TABLE OF CONTENTS

DISCLAIMER

While every effort has been made in order to ensure that the information included in this instruction manual is accurate and complete, no liability will be accepted for any errors or omissions. Fantasea Line reserves the right to change product specifications and features described herein at any time without prior notice. No part of this instruction manual may be copied, translated or reproduced without the prior written permission of Fantasea Line. Fantasea Line makes no warranties aside from limited product warranty as described at the end of this manual.

INTRODUCTION

IMPORTANT NOTICES	Please read this manual carefully in order to properly operate the **FA6500 V2 Housing**. Store this manual in a safe place for further reference once you have read it.
	When using the housing to accommodate the **a6300** camera, a few simple steps should first be followed in order to convert the housing to fit this camera. Please follow the instructions provided in the section “Converting the Housing for Use with Sony a6300” prior to installing the camera inside the housing. Alternatively, this conversion can be carried out by an authorized Fantasea dealer or a Fantasea service center.

The **FA6500 V2 Housing** features a stylish and ergonomic design, specifically created for the **Sony a6500** and **a6300** mirrorless digital cameras. The **FA6500 V2 Housing** is manufactured to the highest professional standards of function, style and durability. It is depth rated to 60m/200 feet and features ergonomically designed and labeled controls. The Fantasea **FA6500 V2** is the ultimate waterproof home for the **Sony a6500** and **a6300** cameras.

The **FA6500 V2 Housing** is ideal for outdoor and underwater photography. Underwater photographers can dive or snorkel and capture all the excitement of this fascinating world, while outdoor photographers also have the option of capturing the action of outdoor and water sports activities, such as paddle sports, sailing, boating, surfing, fishing, hunting, backpacking and camping. The **FA6500 V2 Housing** is shock resistant and protects the camera from water, sand, dust, frost, impact, as well as other damaging elements and harmful occurrences. The **FA6500 V2 Housing** was designed to be compatible with a complete accessory system, enabling photographers to enhance the quality of their images.

FEATURES & SPECIFICATIONS

- Depth rated to 60m/200 feet
- Made from durable injection molded Polycarbonate
- Access to all essential camera controls and functions with clearly labeled controls
- Shock resistant
- Double O-ring protection for a perfect watertight seal
- M16 top port for a variety of connections, including HDMI or electronic strobe triggering bulkheads
- M16 rear port for Vacuum safety systems
- Hybrid Vacuum Safety System including moisture detector (optional)
- Special cold-shoe mount for lighting accessories
- Double fiber optic cable port
- Removable anti-glare hood for the LCD screen
- Easy and secure installation of camera
- Protective housing body cap
- Extended shutter release included for easy access when using housing tray and handles
- Interchangeable lens port and lens gear accessories are available, allowing for the use of a wide range of lenses
- Additional optional housing accessories are available
- Weight (without camera and lens port on land): 980g / 34.5 oz
- Weight (with camera and FML Flat Port on land): 1,645g / 58 oz
- Dimensions (without accessories): 20.5 x 14.5 x 15.5 cm \ 8 x 5.7 x 6.1 inch (W x D x H)
- Manufacturer's warranty

INCLUDED IN PACKAGE

(Corresponding numbered descriptions appear on the following page)

1. FA6500 V2 Housing
2. Housing protective body cap
3. Nano fiber optic plug adaptor x 2
4. Hand lanyard
5. Extended shutter release
6. Anti-glare hood for LCD screen
7. a6300 conversion kit
8. Sticker for camera flash
9. FML1 lens port opening tool
10. Screwdriver
11. Silica gel packs
12. Silicone grease
13. O-ring remover
14. Spare back door O-ring seal
15. Lens cloth
16. M16 port cap for Vacuum Valve (if valve is removed)

Hybrid Vacuum Safety System Components (Optional)

17. Vacuum pump
18. Rubber fitting for pump
19. Wrench
20. Double-sided stickers

IDENTIFICATION OF HOUSING PARTS

Note	1. Please refer to the **Sony a6500** and **a6300** camera instruction manuals for detailed descriptions and instructions regarding all camera controls and functions. 2. It is strongly recommended that you familiarize yourself with all the controls topside before using these controls underwater.

Housing View #1 – Top/Front - *Corresponding numbered descriptions are listed on the following page*

Numbered descriptions below refer to corresponding numbers on the top/front housing graphic on the previous page:

1. **Shutter Release –** Activates the camera shutter release button and auto focus prior to taking the picture.
   Note that the shutter release trigger can be replaced with an extended trigger (included in the package) for easier access when the housing is mounted on a tray & handle/arm system. For further instructions please refer to the section “Preparing the Housing”.

2. **On/Off-** Pushing this control activates the camera power switch button and turns the camera on/off.

3. **C1 Button –** Pushing this control activates the camera C1 (Custom 1) button. Various functions can be assigned to this button through the camera menu, providing access to favorite and most frequently used settings, thereby allowing quick operation based on your personal preferences and shooting habits.

4. **Control Dial –** Turn this dial to quickly adjust settings in each shooting mode, fine-tune functions or browse through menu items. Note that the function of the control dial in Manual exposure shooting mode can be set through camera menus.

5. **C2 Button –** Pushing this control activates the camera C2 (Custom 2) button (on the **Sony a6500** camera only). Various functions can be assigned to this button through the camera menu, providing access to favorite and most frequently used settings, thereby allowing quick operation based on your personal preferences and shooting habits.

6. **Mode Dial –** Turn this dial to change shooting modes.

7. **Flash Push-Down Control** – Pushing this control presses the built-in flash back into the camera body after it has been popped-up by using the Flash Pop-Up control. Note that slight pressure should be applied when pushing this control in order to completely press the built-in flash back into the camera body. The built-in flash clicks once it has been properly pushed back down and this can also be verified by a dedicated marking on the camera LCD screen.

8. **Cold-Shoe Mount for Lighting Accessories-** Enables mounting a flash, video light, torch or focus light on top of the housing by using a dedicated connector. For further information regarding such connectors, please visit the Fantasea website – www.fantasea.com

9. **M16 Accessory Port –** This port features a standard M16 thread hole and allows for optional connectors and accessories to be installed on the housing, including HDMI, vacuum valve or electronic strobe triggering bulkheads. For such accessories offered by Fantasea, please visit the Fantasea website – www.fantasea.com
   To remove the M16 port cover insert a coin into the dedicated slot featured on the cover and turn the cover counterclockwise until it can be safely removed. Store the cover for possible future use. Follow the instructions provided with the selected accessory product in order to install it inside the housing.

Important Notice	*Once the M16 port cover has been removed and replaced, it important to carry out the first dive with the housing empty (no camera installed inside) in order to verify that the housing watertight seal has not been affected during the replacement.*

10. **Double Fiber Optic Cable Port –** The 2 fiber optic cable ports with the inserted adaptors allow for easy attachment of up to 2 fiber optic cables to the housing. For further instructions, please refer to the section “Underwater Flashes & Strobes” in this manual.
    Note that the FA6500 V2 Housing blocks the output of the built-in flash and prevents it from being visible in images captured. This ensures that only the external strobes connected to the system illuminate the subject, thereby diminishing the effects of backscatter, as well as shadowing caused by housing lens port and lens accessories mounted on the housing.

11. **Lens Dial** – When a zoom lens is installed on the camera and a compatible lens gear is installed on the lens, turning this dial rotates the lens ring. For proper and smooth operation, it is recommended to install a Fantasea lens gear on the lens. For further instructions regarding installation of the lens gear, please refer to the instruction manual provided with your lens gear and/or lens port. For lens ports and lens gears compatible with your housing, please visit the Fantasea website – www.fantasea.com

12. **Interchangeable Lens Port System –** The housing features an FML interchangeable lens port system, which allows using a wide range of lenses underwater. The housing is compatible with any FML lens port, as well as other lens ports available in the market. For compatibility information, please visit the FA6500 V2 Housing page on the Fantasea website – www.fantasea.com
    For further instructions regarding lens ports installation and removal please refer to the section “Installing and Removing Lens Ports”.

13. **Lanyard Loops –** The 3 lanyard loops featured on the housing (one loop at the bottom of the axis side of the housing and two top and bottom loops at the opposite side of the housing) are used to attach a Hand Lanyard or Hand Strap to the housing, as well as to secure accessories using snap cords or secure strings.

14. **Latch Dial Lock –** Ensures the secure dial doesn't accidently open during the dive. For further instructions, please refer to the sections "Opening the Housing" and "Closing the Housing".

15. **Latch Dial –** When locked fully into place, this dial ensures the housing is properly closed and watertight sealed. For further instructions, please refer to the sections "Opening the Housing" and "Closing the Housing".

Housing View #2 – Front - *Corresponding numbered descriptions are listed on the following page*

18. Lens Release Control

16. Lens Port Lock

17. Tripod Mounting Screw Holes
(bottom of housing)

16. **Lens Port Lock –** When set to the “lock” position, the Lens Port Lock ensures that the fully closed lens port doesn’t accidently open during the dive. When set to the “unlocked” position, the lens port can be removed and replaced. For further instructions regarding lens ports installation and removal please refer to the section “Installing and Removing Lens Ports”.

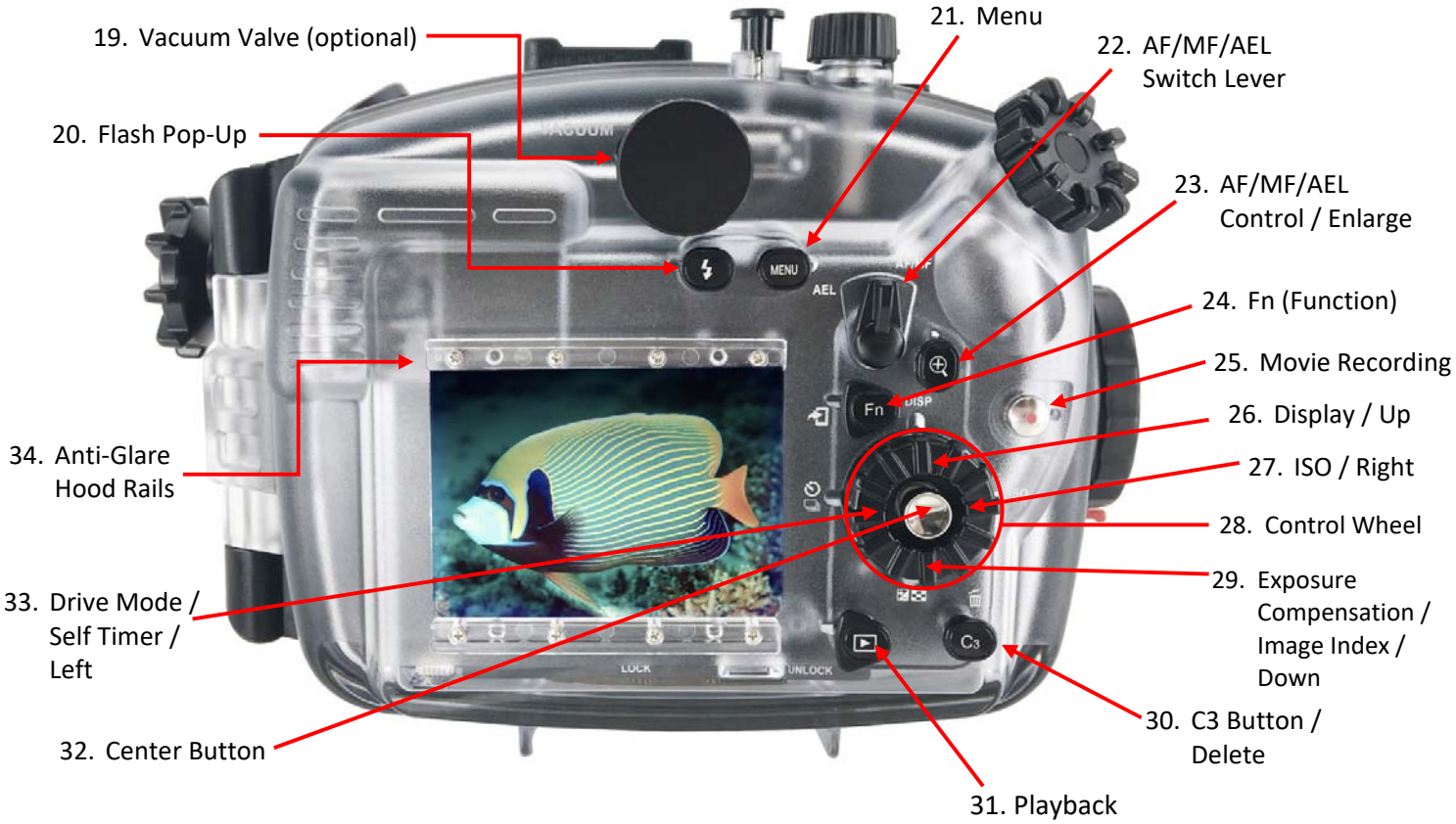
Important Notice	*The Lens Port Lock must not serve as an indication of a proper watertight seal and does not ensure that the lens port was properly installed on the housing. For lens port installation guidelines and double check procedures, please refer to the section “Installing and Removing Lens Ports”.*

17. **Tripod Mounting Screw Holes –** Enable mounting the housing on a tray or tray & handle system, thereby allowing for the addition of various image enhancement accessories. The 3 adjustment screw holes provide flexibility with respect to the choice of tray and the position of the housing mounted on it. This configuration also allows for the use of 2 set screws for the tray mount, thereby preventing any swiveling of the housing on the tray.

Important Notice	*Screws longer than 7mm should not be screwed into the housing Tripod Mounting Plate, as they might damage the plate and housing.*

18. **Lens Release Control –** Pushing this control presses the camera Lens Release button, which allows for unscrewing a lens and removing it from the camera while the camera is accommodated inside the housing. This is especially useful when using exceptionally large lenses which cannot be installed on the camera prior to inserting it into the housing. In such cases, the lens should be installed and removed through the lens port. For further instructions please refer to the section “Installing the Camera”.

Housing View #3 – Rear - *Corresponding numbered descriptions are found below the image*



19. **Flash Pop-Up** – Pushing this control pops-up the camera built-in flash.
    Note that once the camera built-in flash has been popped up, it can be pushed back into the camera body and disabled using the Flash Push-Down control.

20. **Vacuum Valve (optional)** – Housings which the Fantasea Hybrid Vacuum Safety System is installed inside, feature the Vacuum Valve in this position. For instructions of use, please refer to the section "Fantasea Hybrid Vacuum Safety System".

Important Notice	*Prior to opening a vacuumed housing, the vacuum should be released using the Vacuum Valve.*

21. **Menu** – Pushing this control activates the camera menu button.

22. **AF/MF/AEL Switch Lever** – Rotating this lever switches the function of the AF/MF/AEL button. When the AF/MF/AEL lever is rotated leftwards and pointed at AEL, pushing the AF/MF/AEL control locks the exposure (AE lock). When the AF/MF/AEL lever is rotated rightwards and pointed at AF/MF, pushing the AF/MF/AEL control temporarily switches the focusing mode between auto focus (AF) and manual focus (MF).

23. **AF/MF/AEL Control / Enlarge** – Push this control to activate the camera AF/MF/AEL Button / Enlarge Button.
    In shooting mode, push this control to activate the AF/MF/AEL button, which either locks exposure (when AF/MF/AEL Switch Lever is set to “AEL”) or switches between manual and auto focus modes (if AF/MF/AEL Switch Lever is set to “AF/MF”).
    In Playback mode, push this control to enlarge the reviewed image.

24. **Fn (Function)** - Pushing this control activates the camera Fn (Function) button.
    In shooting mode, pushing this control allows recalling up to 12 registered functions.
    a. Push the Function control.
    b. Select the desired function by pushing the up/down/left/right sides of the control wheel.
    c. Select the setting value by turning the control wheel.
    d. Some functions can be fine-tuned using the control dial.
    e. Push the center button to confirm the selection.
    f. To adjust settings from the dedicated settings screen, select the desired function (step b), push the center button and adjust settings on the dedicated settings screen.
    In playback mode, push this control to send the reviewed image to a smartphone.

25. **Movie Recording** – Pushing this control activates the camera Movie button and starts/stops recording a video.

26. **Display / Up** - Pushing this control activates the camera Display / Up button.

27. **ISO / Right** - Pushing this control activates the camera ISO / Right button.

28. **Control Wheel** - Rotating this wheel operates the camera control wheel, thereby enabling to alter exposure values, navigate through menus and other functions assigned to the control wheel.

29. **Exposure Compensation / Image Index / Down** – Pushing this control activates the camera Exposure Compensation / Image Index / Down button.

30. **C3 Button / Delete –**
    In shooting mode, push this control to activate the C3 button (on the **a6500** camera) or the C2 button (on the **a6300** camera). Various functions can be assigned to this button through the camera menu, providing access to favorite and most frequently used settings, thereby allowing quick operation based on your personal preferences and shooting habits.
    In playback mode, push this control to delete images.

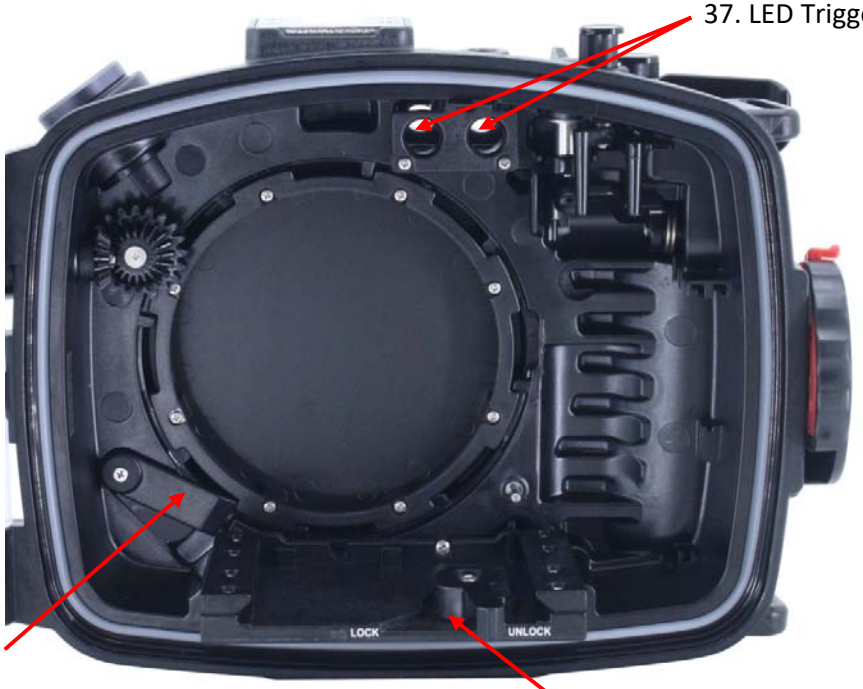
31. **Playback –** Pushing this control allows entering the playback mode and reviewing images or videos stored on the memory card.

32. **Center Button** - Pushing this control activates the camera center button, which is mainly used to confirm selections.

33. **Drive Mode / Self Timer / Left –** Pushing this control activates the camera drive mode / self timer / left button.

34. **Anti-Glare Hood Rails–** The anti-glare hood enables a better view of the LCD screen when shooting in bright conditions. It can be removed and installed during the dive. For further instructions, please refer to the section “Preparing the Housing”.

Housing View #4 – Front Door Interior - *Corresponding numbered descriptions are found on the following page*



35. **Camera Tray Port** – The camera tray allows for easy installation of the camera inside the housing and ensures the camera is positioned securely and steadily during the dive.
    Note that the camera battery compartment can be opened when the camera is installed on the tray, allowing for easy and quick battery and memory card replacement without having to remove the camera from the tray.
    The camera tray port secures the camera tray and ensures the camera is positioned firmly and tightly inside the housing, allowing for smooth operation in all depths.
    For further instructions, please refer to the section “Installing the Camera”.

Important Notice	*Prior to mounting the camera on the tray, the camera LCD screen should be tilted upward by pulling its bottom part outward in order to allow proper attachment to the tray.*

36. **Lens Port Lock (Internal View)** – After a lens port has been installed and the lens port lock has been locked, it is recommended to examine the lock inside the housing to confirm that the port has been properly installed and the port lock has been completely locked. For further instructions, please refer to the section “Installing and Removing Lens Ports”.

37. **LED Trigger Ports** – Designed to allow the use of an LED Flash Trigger inside the housing. The LED Flash Trigger is a useful accessory when making use of slave strobes connected to the housing with fiber optic cables. It attaches to the camera hot-shoe on one end and to the two LED Trigger Ports on the other end. When an image is captured, the device LEDs installed inside the LED Trigger Ports trigger the slave strobe without activating the camera built-in flash. This spares camera battery consumption and also prevents the built-in flash recycle time from limiting continuous shooting. For LED Trigger Ports available, please visit the Fantasea website – www.fantasea.com

SONY A6500 AND A6300 MIRRORLESS DIGITAL CAMERAS

The Sony a6500 and a6300 are APS-C interchangeable lens compact cameras that provide the power to shoot professional-looking stills and movies while carrying only a compact and lightweight camera. An enhanced buffer for continuous shooting of up to 307 shots, in-camera 5-axis optical image stabilization, super-speed AF and High-density Tracking AF Technology extend the range of shooting capabilities.

"The a6500 packs an incredible amount of technology and features into a very small camera. For the money, you get a light-weight, weather-sealed body with excellent still image quality, excellent 4K video quality, a degree of in-body stabilization and the ability to photograph high speed action with ease. And if you take the time to fully customize the camera, you can really make it sing." *(dpreview.com)*

Sony a6500 Highlights

- 24.2-megapixel Exmor CMOS (23.5 x 15.6 mm) sensor for outstanding light sensitivity
- Interchangeable lens system
- Fast (0.05 s) AF with 425 phase-detection AF points
- Built-in 5-axis image stabilization
- BIONZ X™ image processing engine for superior detail reproduction
- 4K movie recording with full pixel readout/no pixel binning
- Huge buffer for up to 307 images (around 36 seconds) in continuous shooting
- 11 FPS continuous shooting and 8 fps live-view continuous shooting
- High-durability shutter tested to approx. 200,000 release cycles with low vibration
- Lock-on AF for maintaining focus on a moving subject automatically
- Slow and quick motion – Up to 5x slow motion and up to 60x quick motion in full HD
- Focal plane phase-detection auto focus for A-mount lenses
- Auto focus in Focus Magnifier for sharpest results
- Dust and moisture resistance build

SETTING UP THE HOUSING

Important Notes	**<u>It is important that a first dive is always carried out with the housing empty (no camera installed inside)</u> in order to verify that the housing watertight seal has not been affected during lens port installation, M16 port accessories installation, transport or long periods of storage.**
	When using the housing to accommodate the **a6300** camera, a few simple steps should first be followed in order to convert the housing to fit this camera. Please follow the instructions provided in page 19 prior to installing the camera inside the housing. Alternatively, this conversion can be carried out by an authorized Fantasea dealer or a Fantasea service center.

PREPARING THE CAMERA

1. Install a (preferably empty) memory card (32 GB+ capacity recommended) and a fully charged battery inside the camera.
2. Remove the camera strap from the camera if one was installed.
3. Note that there is no need to remove the eyepiece rubber cup, as it doesn't interfere with installation or operation of camera inside the housing.
4. Install the selected lens on the camera and remove the lens cap from lens.
5. If making use of a lens gear and/or light shading pad, install them on the lens following the instructions provided with these accessories.
6. Built-in Flash Push Down Reminder Sticker – **Prior to installing the camera inside the housing, the camera built-in flash must be pushed into the camera body. Any attempt of installing the camera into the housing with the flash popped-up might damage the camera and the housing and will necessarily interfere with a proper watertight seal of the housing.** A dedicated wa er was designed for the purpose of reminding you to push the built-in flash into the camera body prior to installing it into the

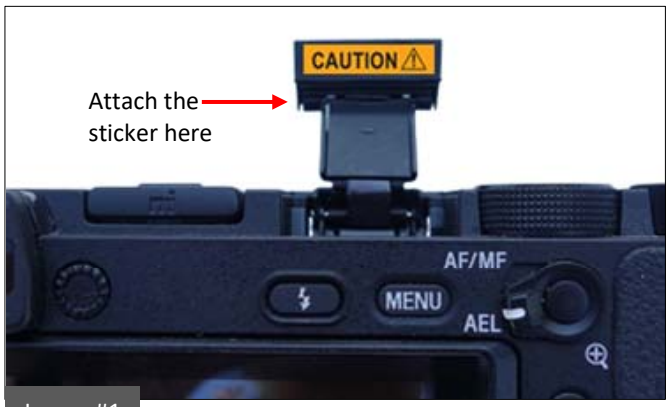


Image #1

housing. It is recommended to attach this sticker on the camera, at the back of the popped–up built-in flash (image #1).

7. Monitor/Finder setting - The a6500 and a6300 cameras are equipped with a sensor which is capable of automatically switching the display between the electronic viewfinder and the LCD monitor. Default camera settings activate this sensor and enable the automatic switch. In order to ensure that the LCD monitor doesn't turn off automatically underwater, **it is important to set the Monitor/Finder setting to Monitor (Manual)** prior to installing the camera inside the housing. This should be done through the settings menu of the camera.
8. It is also recommended to program the camera to the most frequently used settings prior to installing the camera in the housing. Such optional settings include assigning functions to custom buttons (C1, C2 and C3 on a6500) and customizing menu items to include most frequently used items.

WHEN USING THE HOUSING FOR THE FIRST TIME

1. Peel the transparent plastic screen protector off the back door exterior of the housing.
2. Install the hand lanyard on the housing by inserting it through the lanyard loop on the bottom right of the housing (facing from back), then pulling it through itself and testing it in order to make sure it is secure (image #2).


Image #2

3. Open the housing (see section "Opening the Housing") and remove the anti-glare hood out of the housing. Secure the anti-glare hood to the housing by tying its secure string around the lanyard loop at the bottom left side of the housing. Install the anti-glare hood over the anti-glare hood rails at the back of the housing. First install the anti-glare hood over the top rail (image #3) and then gently and carefully stretch it downwards to install it on the bottom rail, making sure it's sitting securely on both upper and lower rails (image #4).


Image #3


Image #4

4. Installing the Extended Shutter Trigger – When mounting the housing on a tray & handle or tray & arm system, you might consider replacing the shutter release trigger with the extended replacement trigger included in the package. The extended trigger provides easier access to the shutter release when an arm or handle are mounted next to the housing. To replace the shutter release trigger with the extended one included, complete the following steps:
    a. Identify the Extended Shutter Release Kit (image #5).
    b. Using the screwdriver included in the kit, remove the screw that secures the shutter release trigger (image #6). Store it safely, although a spare screw is included in the kit.


Image #5


Image #6

    c. Remove the trigger by pulling it out and away from the housing (image #7). **Note that once the trigger has been removed, the control metal shaft can be accidently pushed in, resulting with the spring in the interior of the control slightly moving out of place and thus disabling proper operation of the control. Therefore, make sure not to push the control shaft into the housing.** Store the removed trigger for possible future use.
    d. Install the replacement extended trigger on the exposed metal shaft of the control by aligning the protrusion featured on the control with the shape of the shaft (image #8).


Image #7

Image #8

e. Using your finger, apply slight counterforce on the control inside the housing to prevent the shaft from being pushed into the housing while installing the replacement extended trigger.

f. Using the screwdriver, install the screw in order to secure the replacement extended trigger in place (image #9).

g. Install the camera inside the housing (see section “Install the Camera”) and test the housing shutter release control to ensure it properly activates the camera shutter release button.

Image #9

h. Note that if encountering problems with operation of the control upon completing the replacement, the spring featured on the interior of the control might have accidently moved out of place. This being the case, remove the shutter release trigger again, gently push the metal shaft of the control towards the housing, rearrange the spring inside the housing so it sits entirely below the black plastic lever of the control (image #10), push the control metal shaft back out and reinstall the trigger.

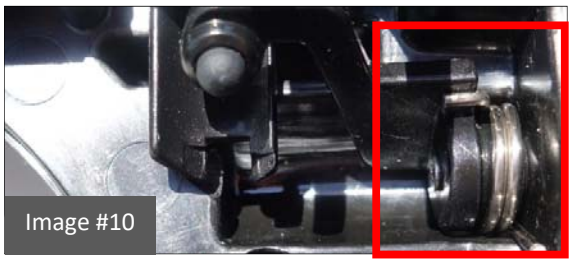


Image #10

CONVERTING THE HOUSING FOR USE WITH SONY a6300

When using the housing to accommodate the a6300, a few simple steps should be followed in order to convert the housing to fit this camera. Please follow the instructions below prior to installing the camera inside the housing. Alternatively, this conversion can be carried out by an authorized Fantasea dealer or a Fantasea service center.

An a6300 conversion kit is included in the package. All conversion components mentioned below should be extracted from this kit. It is best to mark and store all components removed from the housing during this conversion process for possible future use. Note that 5 extra e-clips are included in the kit, in case any of the e-clips removed get lost during the conversion. Once conversion is complete, test the housing by installing the camera inside (see section “Installing the Camera”) and activating all housing controls to ensure they can be all easily and properly be operated.

1. C1 button –
    a. Open the housing (see section “Opening the Housing”) and identify the interior component of the C1 button – a black lever secured to the control shaft with an e-clip (small metal clip) (image #11).
    b. Using a screwdriver or a similar tool, gently remove the e-clip featured at the bottom of the black lever (image #12). Make sure you’re removing the e-clip that is positioned beneath the lever rather than above it, as removing the e-clip above the lever will damage the watertight seal of the control. Also, make sure not to cause any damage to the housing when using sharp tools.

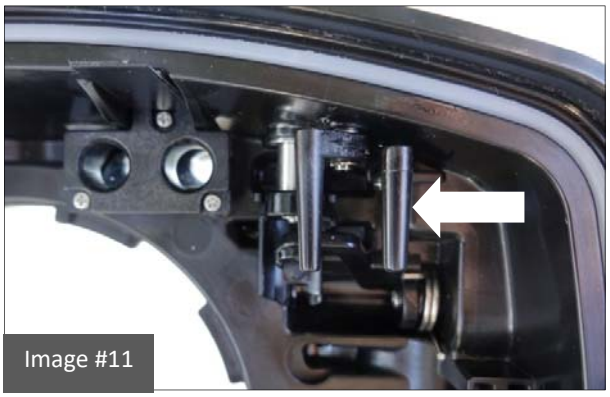


Image #11


Image #12

    c. Gently remove the lever by pulling it down, out and away from the control shaft using your fingers. You might find it easier to do so when depressing the control from out of the housing.
    d. Store the e-clip and lever removed for possible future use.
    e. Identify the thin black plastic tube included in the conversion kit (image #13).
    f. Install the black plastic tube on the control by pushing it upwards against the exposed metal shaft of the control, so that the metal shaft is fully inserted inside the black plastic tube (image #14).


Image #13

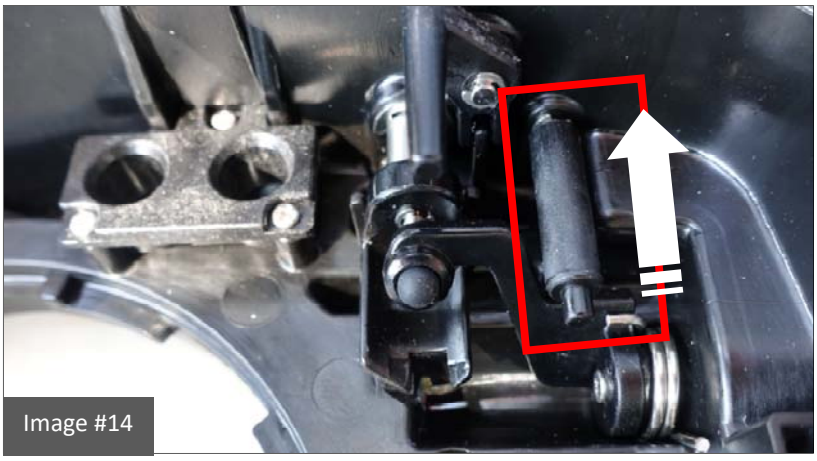


Image #14

1. C2 button – This button has no function when accommodating the a6300 inside the housing. To avoid confusion, peel off the C2 label from this control or instead, attach the blank label sticker included in the conversion kit (image #15).
2. C3 button – Peel off the C3 label from this control and instead, attach the C2 label sticker included in the conversion kit (image #16).

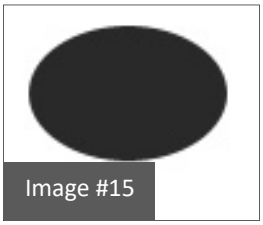


Image #15

Image #16

3. Shutter Release –
    a. Open the housing and identify the interior component of the shutter release – a lever with a black rubber featured at its end (image #17).
    b. Remove the black rubber tip by gently pulling it out and store it for possible future use (image #18).

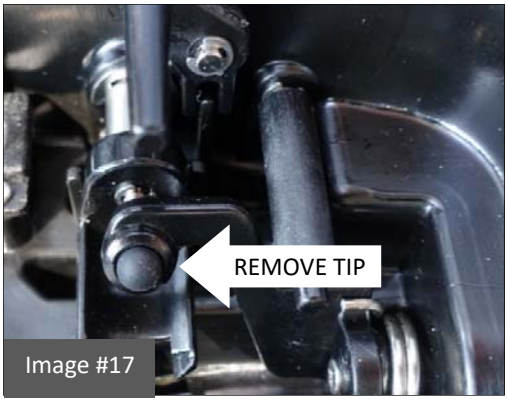


Image #17

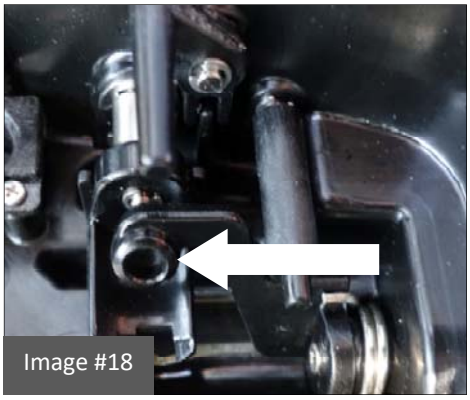


Image #18

4. On/Off –
    a. Open the housing and identify the interior component of the On/Off control – a black half-cup-shaped plastic component secured to the control shaft with an e-clip (image #19 on the following page).
    b. Using a screwdriver or a similar tool, gently remove the e-clip featured at the bottom of the black component (image #20 on the following page). Make sure you're removing the e-clip that is positioned <u>beneath</u> the black component rather than above it, as removing the e-clip <u>above</u> the black component will damage the watertight seal of the control. Also, make sure not to cause any damage to the housing when using sharp tools.

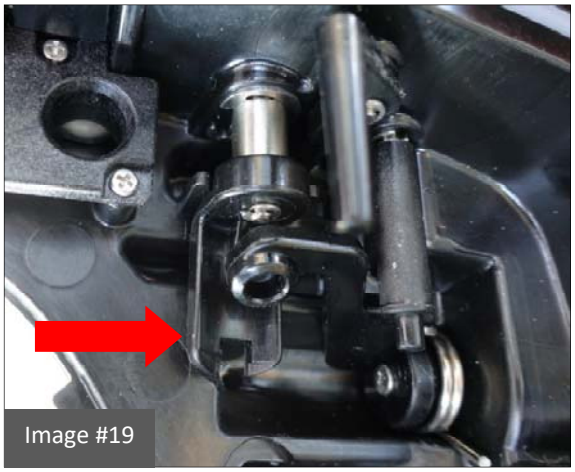


Image #19

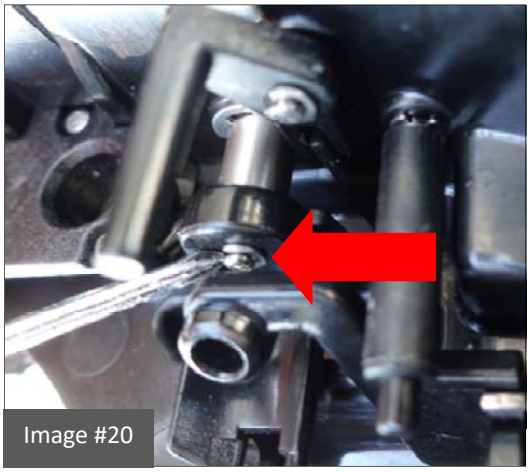


Image #20

c. Gently remove the black plastic component by pulling it down, out and away from the control shaft using your fingers. You might find it easier to do so when depressing the shutter release control from out of the housing, thereby clearing more space for the black plastic component to be removed.
d. Store the e-clip and black plastic component removed for possible future use.
e. Identify a similar (but not identical) replacement component in the conversion kit (image #21).


Image #21

f. Install the new (replacement) component by inserting the control shaft into the dedicated hole in the replacement component.
g. Reinstall an e-clip on the shaft, right below the replacement component, using a set of pliers. Be careful not to lose the e-clip during the process. First position the e-clip around the dedicated engraving on the shaft, then push the e-clip against the shaft until it snaps into place and clicks. You might find it easier to do so when depressing the control from out of the housing.
h. Test the control by gently trying to pull it out in order to make sure it has been properly installed.

5. Movie Recording –
   a. Open the housing and identify the interior component of the Movie Recording control – a black lever featuring a black rubber tip at its end, secured to the control shaft with an e-clip (image #22).


Image #22

b. Using a screwdriver or a similar tool, gently remove the e-clip featured at the end of the lever (image #23). Make sure you're removing the e-clip that is positioned beneath the lever rather than above it, as removing the e-clip above the lever will damage the watertight seal of the control. Also, make sure not to cause any damage to the housing when using sharp tools.


Image #23

c. Gently remove the black lever by pulling it out and away from the control shaft using your fingers (image #24). You might find it easier to do so when depressing the control from out of the housing.
d. Store the e-clip and black lever removed for possible future use.
e. Identify a similar replacement component in the conversion kit (image #25).


Image #24


Image #25

f. Install the new (replacement) lever by inserting the control shaft into the dedicated hole in the replacement lever (image #26). Make sure the lever is pointed upwards when installing it on the shaft.
g. Reinstall an e-clip on the shaft using a set of pliers. Be careful not to lose the e-clip during the process. First position the e-clip around the dedicated engraving on the shaft, then push the e-clip against the shaft until it snaps into place and clicks. You might find it easier to do so when


Image #26

depressing the control from out of the housing.

h. Test the control by gently trying to pull it out in order to make sure it has been properly installed.

6. Front Stopper –
   a. Identify the front stopper included in the conversion kit (image #27). This stopper should be attached to a dedicated indentation inside the front door of the housing (image #28).
   b. Peel off the paper from the back of the stopper to expose the glue applied on its sticker side.
   c. Attach the stopper inside the front door of the housing by pushing it into the round groove found right underneath the On/Off lever, with the sticker side of the stopper facing the groove (image #29). Make sure the stopper is attached within an accurate position to ensure perfect operation of all controls underwater.

Image #27

Image #28

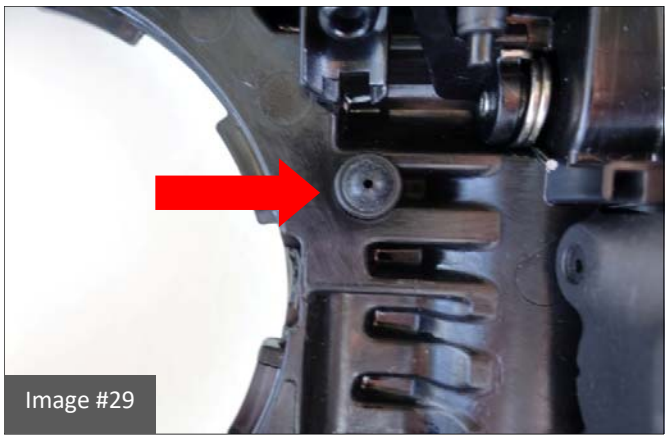


Image #29

Important Note	Although the conversion process described above should not have any effect on the watertight seal of the housing, **it is important that the first dive upon completing the conversion is carried out with the housing empty (no camera installed inside)** in order to verify that the housing watertight seal has not been accidently affected.

INSTALLING M16 PORT ACCESSORIES

The port above the housing axis features a standard M16 thread hole and allows for optional connectors and accessories to be installed on the housing, including HDMI or electronic strobe triggering bulkheads. For such accessories offered by Fantasea, please visit the Fantasea website – www.fantasea.com

1. To remove the M16 port cover insert a coin into the dedicated slot featured on the cover and turn the cover counterclockwise until it can be safely removed (images #30 and 31).

Image #30

Image #31

2. Store the cover for possible future use.
3. Follow the instructions provided with the selected accessory product in order to install it inside the housing and make sure the M16 port accessory installed consists of an O-ring for maintaining the watertight seal of the housing.

Important Note	Once an accessory has been installed using the M16 port, **it important to carry out the first dive with the housing empty (no camera installed inside)** in order to verify that the housing watertight seal has not been affected during the replacement

MOUNTING AND REMOVING LENS PORTS

The housing features an FML interchangeable lens port system, which allows using a wide range of lenses underwater. The housing is compatible with any FML lens port, as well as other lens ports available in the market. For compatibility information and lens ports available, please visit the Fantasea website – www.fantasea.com

1. Mounting a lens port on the housing:
   a. If possible, it is recommended to mount the lens port on the housing prior to installing the camera inside. If using exceptionally large lenses which cannot be installed on the camera prior to inserting it into the housing, the camera and lens can be installed inside the housing prior to mounting the lens port. Please refer to section "Installing the Camera" - step 18.
   b. For smooth installation and removal of the lens port, it is recommended to apply a slight amount of Fantasea Silicone Grease over the lens port O-ring prior to installing it on the housing.
   c. Turn the lens port lock rightwards, so it's seated at the "UNLOCK" position (image #32).
   d. Remove the body cap from the housing lens port hole. Store for future use.
   e. Hold the lens port against the housing port hole and align the white line marking on the lens port with the white line marking on the housing (image #33).
   f. Carefully push the lens port against the housing until it's fully inserted inside the port hole. Examine the lens port from all directions to make sure it was evenly inserted.

Image #32

Image #33

g. While still applying slight pressure on the lens port against the housing, turn the lens port clockwise until it reaches a point where it can't be turned any farther. The white marking on the lens port should now be aligned with the lock engraved on the housing (image #34).
h. To secure the lens port in place, turn the lens port lock leftwards, so it's seated at the "LOCK" position (image #35).


Image #34

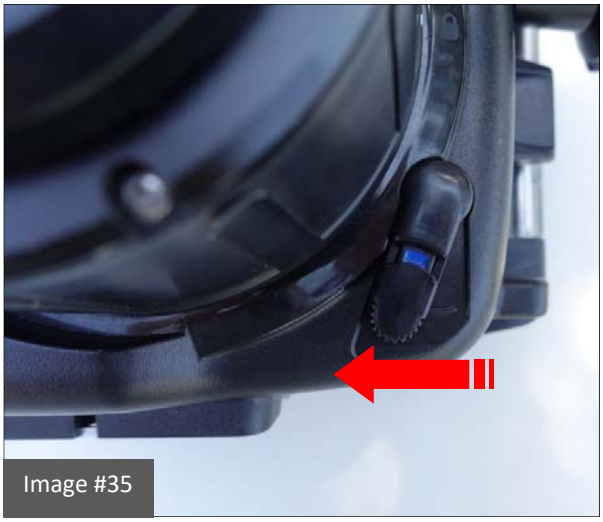


Image #35

i. Once the lens port has been installed and the lens port lock has been locked, it is recommended to open the housing and examine the lock from the inside. If the port has been properly installed and the port lock has been completely locked, the lock is positioned in between lens port "teeth" and blocks them from turning (image #36).


Image #36

j. If the lens port features a lens cap, it's best to secure it with a secure string to one of the housing lanyard loops.
k. Note that lens ports offered by various manufacturers might feature assembly and locking markings that are either different than those featured on the housing or placed differently. If mounting such lens ports on the housing and encountering resistance when attempting to push the port against the housing, simply turn the port a bit until reaching the point where the port can be inserted completely into the

housing, even if housing and port markings are no longer aligned. Continue with steps “h” and “i” above to make sure the port has been properly installed and locked.

Important Note	Once a lens port has been mounted on the housing, **it is important to test the housing empty (no camera installed inside)** in a body of water in order to verify that the housing watertight seal has not been affected during lens port installation.

2. Removing a lens port from the housing:
    a. Make sure to dry the housing exterior prior to opening the lens port in order to avoid water coming in contact with the camera or lens once the lens port is removed.
    b. If the lens cap is secured to the housing with a snap cord or secure string, detach the string or remove the lens cap.
    c. Turn the lens port lock rightwards, so it’s seated at the “UNLOCK” position (image #32).
    d. Hold the housing in one hand and the lens port with the other. It is recommended to hold the lens port using a silicone pad for maximum friction. Turn the lens port counterclockwise until reaching a point where it can’t be turned any farther. The white marking on the lens port should now be aligned with the white marking on the housing (image #33).
    e. If encountering resistance when attempting to turn the lens port counterclockwise as a result of significant pressure changes, it is recommended to use the FML1 lens port opening tool. Insert the lens port opening tool into the dedicated slots found on the front ring of the lens port (image #37). Use the lens port opening tool to turn the lens counterclockwise while carefully applying slight pressure against the lens port. Make sure not to scratch the lens port using the lens port opening tool.

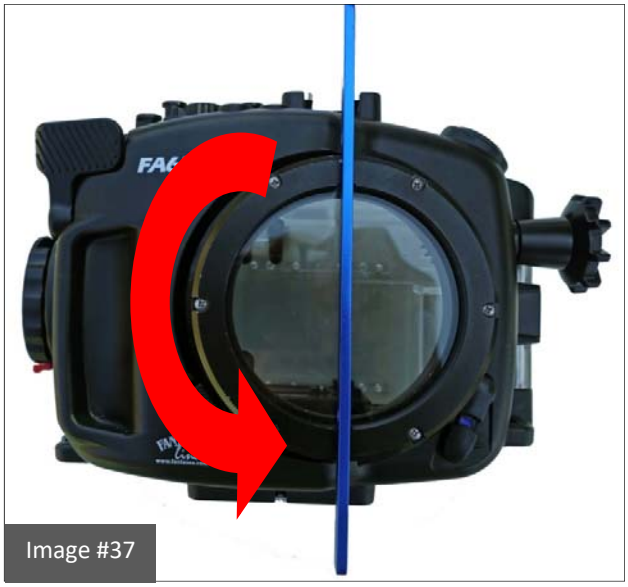


Image #37

    f. Separate the lens port from the housing by pulling it out and away from the housing.

g. Note that it is recommended to store the lens port separated from the housing during transportation and storage.
h. To protect the housing during storage and transportation, it is recommended to mount the body cap on the housing lens port hole and secure it by turning it clockwise.

OPENING THE HOUSING

Important Notice	*Prior to opening a vacuumed housing, the vacuum should be released using the Vacuum Valve. For further instructions, please refer to the section "Fantasea Hybrid Vacuum Safety System".*

1. Pull the small red tab located at the bottom of the latch dial outwards (up and away from the housing), as indicated by the arrow direction (image #38). There is no need to apply any force.
2. While holding the lock dial up, turn the latch dial counterclockwise until the red latch tab is located at the top of the latch and cannot be turned any farther (image #39). There is no need to apply any force.


Image #38

Image #39

3. Carefully open the back side of the housing.

CHECKING THE O-RING

1. Prior to each closure of the housing, the back door **black** O-ring should be visually inspected. If there is any debris present, including dirt, sand, dust, hair or any other matter, it must be cleaned to ensure a proper watertight seal.
2. In order to clean the **black** O-ring, first remove it from the housing:
    a. Insert the O-ring remover between the black O-ring and the groove it is seated in (image #40).
    b. Slip the tip of the inserted O-ring remover below the black O-ring, while making sure the O-ring doesn't get damaged (image #41).
    c. Carefully hold the O-ring with your fingertips in order to remove it from the groove.

Image #40

Image #41

3. Cleaning the O-ring is a simple matter of wiping it with a damp, soft cloth to remove the foreign matter. **Be careful the cloth you use does not leave any of its own material behind as this can also affect the effectiveness of the seal**.
4. Apply a slight layer of Fantasea Silicone Grease on the black O-ring. Please note that the amount of lubrication required on the O-ring is only enough to allow it to slip into place without friction, so it does not twist or become dislodged. More grease is not necessarily better, and in some cases might interfere with the watertight seal of the housing.
5. When replacing the O-ring, place it back into the groove starting at one corner and gently pressing it into the groove all around the housing until it is all seated in the groove and no part of it is sticking up or out of the groove.

6. The white O-ring featured on the back side of the front door should be visually inspected prior to each dive. If there is any debris present, gently wipe the area with a soft microfiber cloth in order to cleanse it.
7. **The white O-ring featured on the back side of the front door shouldn't be removed unless it's damaged.**

INSTALLING THE CAMERA

Since the **FA6500 V2 Housing** is specifically designed for the **Sony a6500** and **a6300** mirrorless digital cameras, installing the camera in the housing is quite simple.

1. If possible, it is recommended to install the camera inside the housing after the lens port has been mounted on the housing. If using exceptionally large lenses which cannot be installed on the camera prior to inserting it into the housing since the lens is too large be inserted through the housing lens port hole, the lens port should be mounted on the housing only after the camera and lens have been inserted. In such cases, please follow the instructions provided in step 18 below for camera installation.
2. Open the housing (see section "Opening the Housing").
3. Prepare the camera following the instructions provided in the section "Preparing the Camera".
4. Turn the camera tray port lock rightwards, to the "UNLOCK" position (image #42).
5. Remove the camera tray from its port by gently sliding it out.

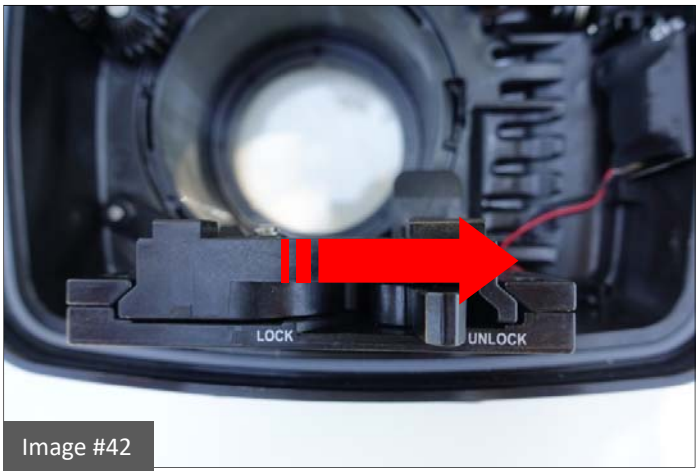


Image #42

6. **Prior to mounting the camera on the tray, the camera LCD screen should be tilted in order to allow proper attachment to the tray. Pull out the bottom of the LCD screen all the way out (image #43). After camera installation, the LCD screen should be realigned for a clear view.**


Image #43

7. Mount the camera on the tray by installing the mounting screw featured on the tray into the mounting screw hole found at the bottom of the camera (image #44 on the following page). Make sure to follow the diagram printed on the tray and install the camera facing forward. Once the screw has been tightened, make sure that the camera is positioned steadily on the tray.

8. Note that the camera battery compartment can be opened when the camera is installed on the tray, allowing for easy and quick battery and memory card replacement without having to remove the camera from the tray.
9. Prior to installing the tray and camera into the housing:
    a. **Make sure that the built-in flash is pushed down into the camera body. Any attempt of installing the camera into the housing with the flash popped-up might damage the camera and the housing and will necessarily interfere with a proper watertight seal of the housing.**
    b. Make sure the camera is turned off and that the housing On/Off control is set at the "Off" position as well.
    c. Turn the AEL/AF/MF control on both the camera and the housing to AEL. Failing to do so will disable the control once the camera is accommodated inside the housing.
    d. Turn the Mode Dial on and housing so the Auto (green symbol) shooting mode is selected and aligned with the white mark on the left of the wheel (image #45). This will allow for the camera and housing mode dials to be aligned, so the housing mode dial will indicate the proper mode selected by the camera dial.

Image #44

Image #45

e. Pull the housing Mode Dial up and away from the housing to allow for smooth installation of the camera (image #46).

Image #46

10. Install the tray with camera into the camera tray port by holding the tray parallel to the housing, aligning the rods of the tray with those featured on the tray port and sliding the tray all the way in (image #47).
11. Turn the camera tray port lock leftwards, to the "LOCK" position (image #48). Make sure that the tray was properly installed and locked by gently trying to pull it out.

Image #47

12. Realign the camera LCD screen by slightly pushing its bottom inwards and pulling its top outwards until it reaches a complete vertical angle (image #49).
13. If making use of any electronic triggers, such as a LED Flash Trigger or an electronic strobe bulkhead, attach the accessory to the camera hot-shoe connection.
14. If inserting a silica gel pack inside the housing in order to prevent moisture, it is best to insert it on the left side of the camera and to attach it with tape to the housing wall, where it doesn't interfere with proper housing operation. It is important to make sure that the silica gel pack doesn't stick out, or else it might interfere with the watertight seal of the housing.

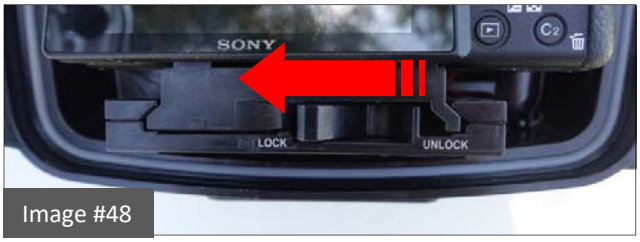


Image #48

15. If making use of a Vacuum System, make sure it is fully charged and turn it on prior to closing the housing (see section "Hybrid Vacuum Safety System").
16. Close the housing (see section "Closing the Housing").
17. When using an exceptionally large lens, you might find that the lens cannot be installed on the camera prior to inserting it into the housing, as the lens is too large to be fully inserted inside the housing port hole. In such cases, the lens

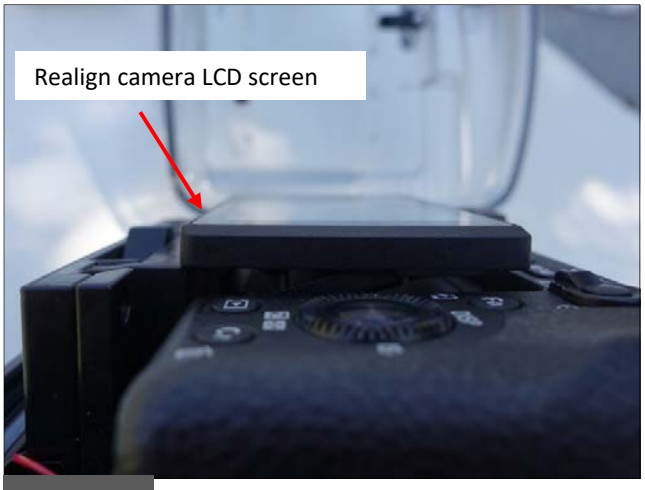


Image #49

should be installed on the camera after the camera has been inserted into the housing. The lens port should be mounted on the housing only after the lens has been installed. Follow the steps below:

a. Prepare the housing as described in the section “Preparing the Housing”, only without mounting the lens port.
b. Prepare the camera as described in the section “Preparing the Camera”, only without installing the lens on the camera.
c. Follow the instructions provided above in this section to install the camera (without the lens) inside the housing.
d. Once the camera is installed, the lens can be mounted on the camera through the housing lens port hole (image #50). Align the white dot on the lens with the one marked on the camera, attach the lens to the camera and turn it clockwise until it clicks.
e. Mount the lens port on the housing (see section “Installing and Removing Lens Ports”).
f. To remove the camera and lens from the housing, follow the instructions provided at the end of the section “Removing the Camera from the Housing”.

Image #50

CLOSING THE HOUSING

1. Turn the latch dial so that the small red tab located on the latch is pointed towards the front side of the housing (image #51 on the following page).
2. Carefully close the back door of the housing, pushing it against the front door, while making sure there is nothing sticking out of the housing or impairing the smooth closure of the back door. Then firmly press the back door against the forward section of the housing.
3. Turn the secure dial clockwise till the lock dial clicks. The small red tab should then be pointed towards the bottom of the housing (image #52 on the following page).
4. Gently try pulling the back door away from the front door. If the housing is properly closed, it should be impossible to open the back door.

Image #51

Image #52

5. Visually inspect the black O-ring through the transparent back door for proper closure. Make sure it isn't twisted or out of the groove and that no foreign matter has been caught in the seal, such as secure lines, sand, grit, hairs or any other foreign substance.
6. Test housing control buttons to make sure that the camera was properly installed inside the housing and that nothing interferes with normal operation of the camera. It is recommended to take a few images once the camera has been installed inside the housing and prior to the dive in order to ensure proper operation.
7. Prior to diving with the housing, submerge it in a shallow tub of water or rinse tank. Carefully look at the housing to make sure no bubbles are escaping from it, no water is entering and the moisture alarm (if installed inside the housing) doesn't beep.
8. If a Vacuum Safety System is installed inside the housing, perform a pre-dive check to confirm the watertight seal of the housing. See "Hybrid Vacuum Safety System" section for further instructions.
9. Note that once the camera has been installed inside the housing, if placing the housing on a surface with the lens port facing down, its center of gravity will necessarily make the housing drop on its side, potentially causing damage to the camera and housing. Therefore, it is best to avoid placing the housing on a surface with the lens port facing down. If the housing must be placed with the lens port facing down, make sure to support it so it doesn't drop on its side.

REMOVING THE CAMERA FROM THE HOUSING

1. After use, thoroughly rinse the housing fresh water. Prior to opening the housing, make sure both your hands and the housing are clean and dry. It is recommended to have a clean, dry and soft towel handy in order to dry your hands and the water drops on the housing.

2. Open the housing as described in the section “Opening the Housing”. Take sufficient care that no water drips from your hair and body onto the housing and camera.
3. If an accessory is connected to the camera hot-shoe, disconnect it to allow for safe camera removal.
4. Turn the camera tray port lock rightwards, to the “UNLOCK” position (image #53).
5. Remove the camera tray from its port by gently sliding it out.
6. Loosen the screw that secures the camera to the tray.
7. Remove the camera from the tray.
8. Reinstall the tray inside the housing to avoid losing it.

Image #53

18. When using an exceptionally large lens which cannot be removed from the housing with the camera, as it’s too large to pass through the housing lens port hole, the lens should be dismounted prior to removing the camera from the housing. Follow the steps below:
    a. After use, thoroughly rinse the housing fresh water as described in step 1 above.
    b. Remove the lens port from the housing (see section “Installing and Removing Lens Ports”).
    c. Detach the lens from the camera. With one hand, push the “Lens Release Control”. With the other, grab the lens and turn it counterclockwise until it cannot be turned any farther (image #54). Once the lens has been turned, it can be removed from the camera by pulling it away from the camera body.
    d. Remove the camera from the housing by following steps 2-8 above.

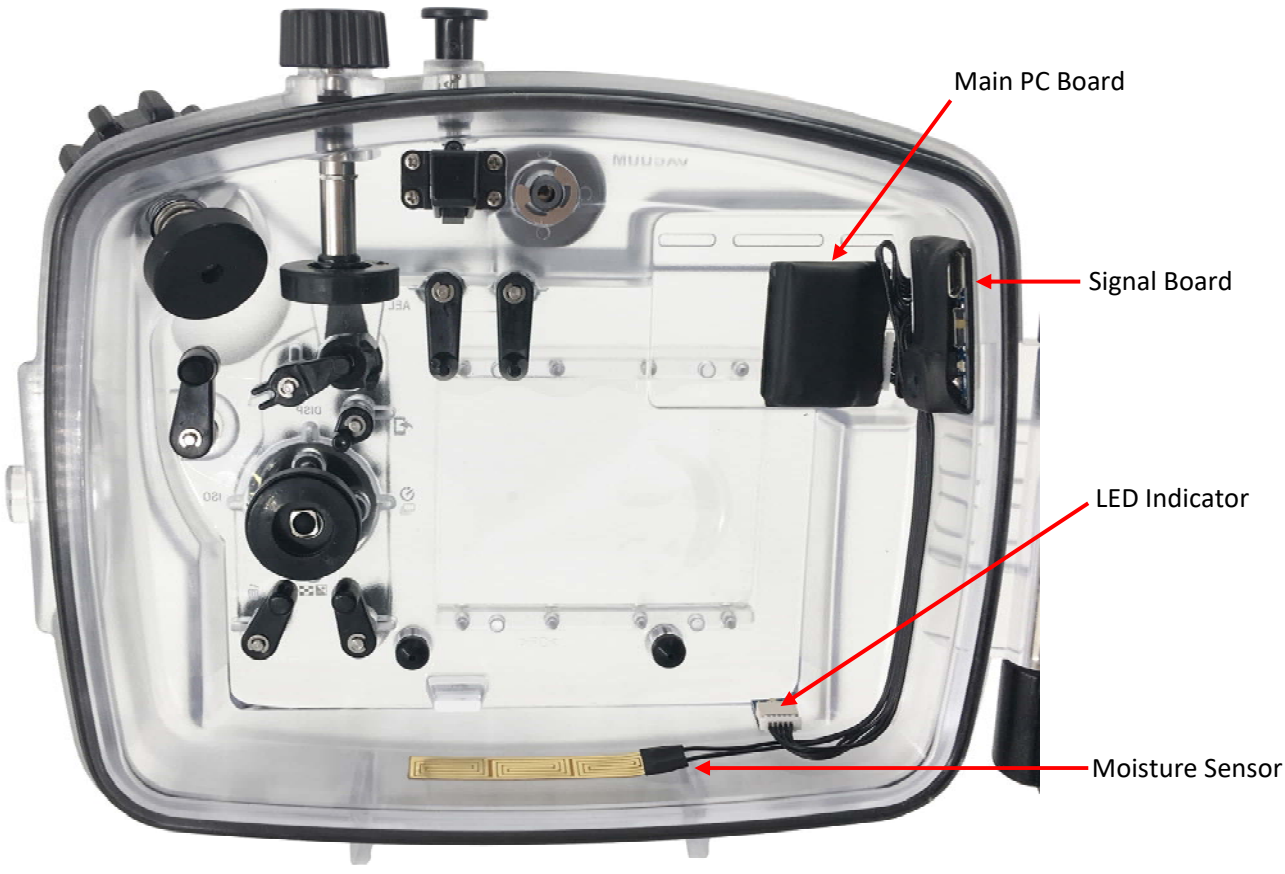
Image #54

FANTASEA HYBRID VACUUM SAFETY SYSTEM

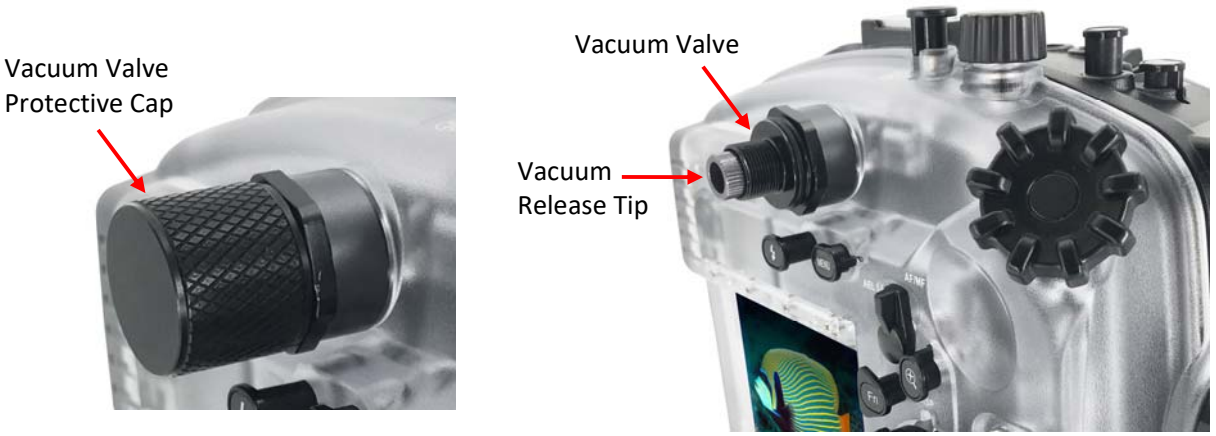
The Fantasea Hybrid Vacuum Safety System is an optional pre-dive vacuum test and leak detector safety system. The system allows confirming the watertight seal of the housing prior to the dive using the vacuum system and monitoring the housing seal during the dive using the moisture detector.
Follow the instructions below to safely charge and use the system.

Important Notice	1. Instructions provided below refer to housings which the system is already installed in. In case of installing a new vacuum system that was separately purchased, please refer to the installation guide included with the vacuum system. 2. **Use of the Hybrid Vacuum Safety System must not replace any of the other safety measures conducted in order to ensure a complete watertight seal of the housing before and during the dive.**

Identification of System Parts (Housing Back Door Interior)



Identification of System Parts (Housing Back Door Exterior)



Charging the Unit

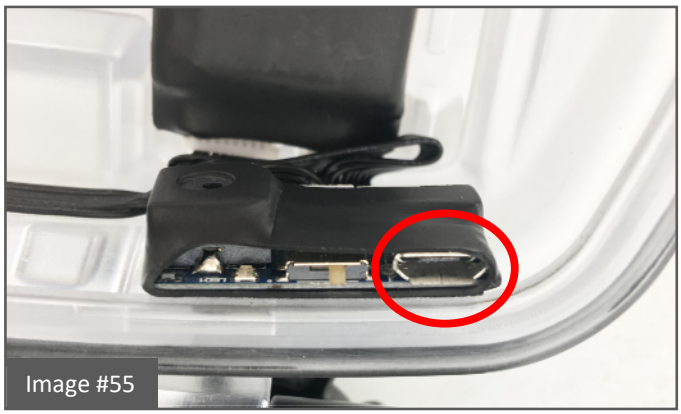


Image #55

1. Turn the unit on using the power switch featured on the Signal Board.
2. The LED Indicator will start flashing blue:
    a. Slow flashing (approx. 1 flash per second) indicates a charged battery.
    b. Rapid flashing (approx. 4 flashes per second) indicates low battery.
3. To charge the unit, connect it to a USB charger using a standard Micro-USB cable (not included). Note that it is best using an android phone charger unit for this purpose.
4. Connect the micro-USB end of the cable to the Micro-USB port on the Signal Board (image #55). Connect the other end of the cable to a USB port or USB charger.
5. The unit should start charging and the LED Indicator should start flashing green.
6. **Make sure to keep the unit turned on during charging.**
7. When charging is complete, the LED Indicator stops flashing and remains green.
8. Disconnect the cable and turn the unit off using the power switch on the Signal Board to save battery power. If the unit is left turned on, the battery will drain within a few days.
9. During charging, keep the charger away from highly flammable materials or products and never leave the charger unattended when in use.
10. Never apply any type of pressure on the battery, expose it to direct heat or chemicals.
11. Battery must not be charged in temperatures below freezing or above 50°C (122°F).

12. To extend the battery's lifespan:
    a. Avoid draining the battery all the way to 0%. Even though the unit can handle a few more dives even when the LED Indicator starts rapidly flashing blue, it is best to connect the unit to a charger at this point.
    b. During long periods of storage, the unit should be stored partially charged in a cool and dry area.

Performing a Pre-Dive Check

1. Prior to closing the housing, turn the unit on using the power switch on the Signal Board. The switch should be pushed leftwards in order for the unit to be turned on. Make sure the unit is properly charged and that the LED indicator flashes slowly (approx. 1 flash per second).
2. Lock the housing, lens port and all other accessories which their installation might have an effect on the watertight seal of the housing. **Camera should be turned off prior to the pre-dive check.**

Important Notice	The housing should be completely set up for the dive prior to performing the vacuum pre-dive check. Any modifications carried out on the housing after the pre-dive test has been completed necessarily turn the check results irrelevant and require performing an additional pre-dive check.

3. Remove the protective cap from the Vacuum Valve by gently turning it counterclockwise and screwing it out (image #56). Make sure you're only removing the protective cap when turning it, rather than the complete valve. If the valve screws out together with its cap, use the wrench included in order to tighten the valve inside the port. This will allow for easy and safe removal of the protective cap when screwed out.

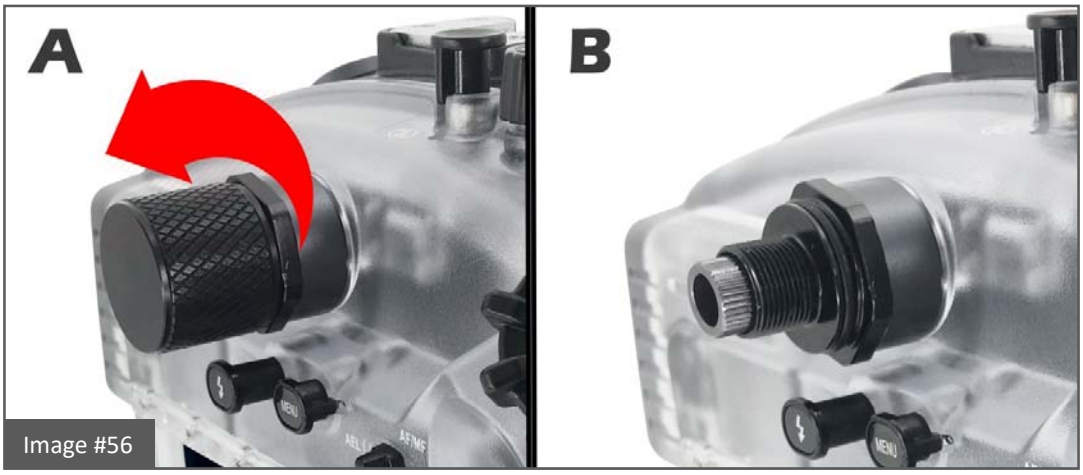


Image #56

4. Install the Rubber Fitting on the Vacuum Pump. Hold the Rubber Fitting against the Vacuum Pump so its wide opening faces the funnel of the pump. Insert the funnel of the pump into the Rubber Fitting and then push the fitting against the funnel until it is fully inserted (image #57).

Image #57

5. Place the housing on a flat surface in a shaded area and in a manner that enables the housing to be left stable and uninterrupted during the pre-dive check.
6. Connect the Vacuum Pump to the Vacuum Valve by gently pushing the exposed valve all the way into the Rubber Fitting of the pump.
7. Use the Vacuum Pump to pump air out of the housing by gently and steadily pulling and releasing its handle (image #58). While doing so, carefully watch the LED Indicator through the back door of the housing to monitor the air pressure inside the housing as it progresses through the following stages:

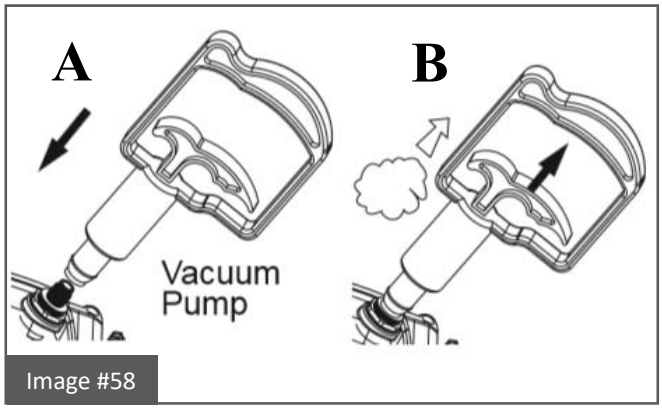


Image #58

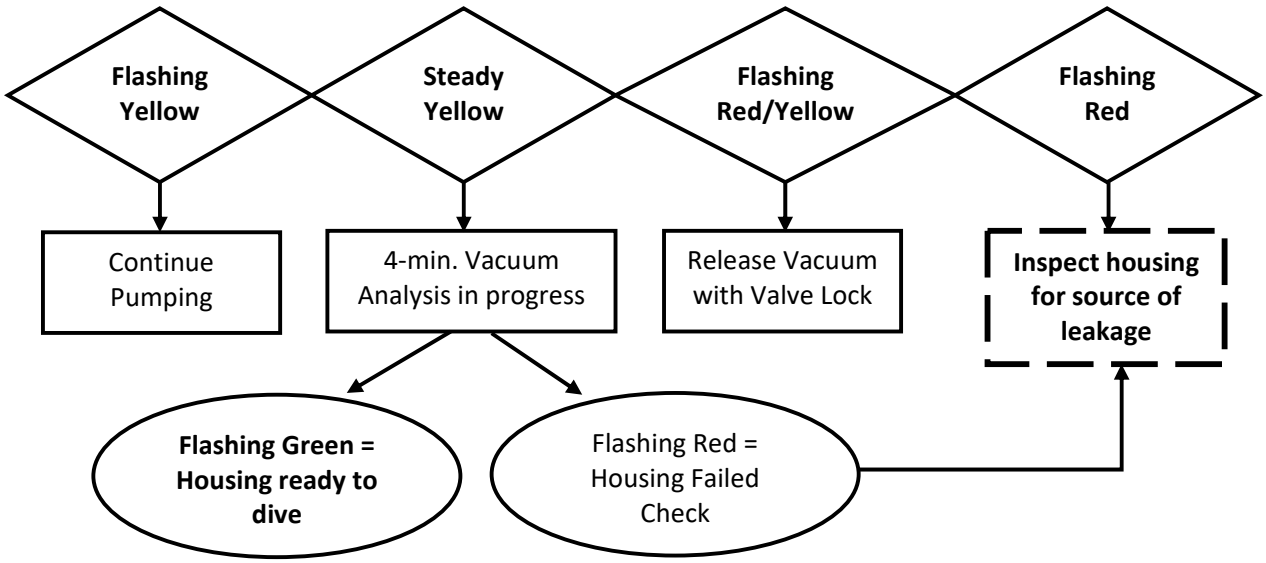
   a. Yellow flashing <u>rapidly</u> – air pressure has started to drop. Continue pumping.
   b. Yellow flashing <u>slowly</u> – air pressure continues to drop. Continue pumping. Note that that pumping should be carried out at a slower pace as the Indicator LED flashes slower and air pressure approaches the optimal level.
   c. Steady yellow (no flashing) – air pressure has reached the optimal level. Stop pumping and allow the analysis to begin.
   d. Yellow & Red flashing alternately – indicates over pumping and under pressure inside the housing. Stop pumping and carefully release a bit of the vacuum by turning the Vacuum Release Tip counterclockwise and pulling it out (image #59) until the LED Indicator turns steady yellow, indicating a proper pressure for the check. If the LED Indicator starts flashing yellow again, overpressure has been produced inside the housing due to excessive vacuum release. Use the Vacuum Pump to extract air again until the LED indicator turns steady yellow.

Image #59

8. The analysis beings once the LED Indicator turns steady yellow. Carefully disconnect the Vacuum Pump from the Vacuum Valve and reinstall the Protective Cap over the valve.

9. **Analysis duration is approx. 3-4 minutes. During this time, the housing must be left uninterrupted.** Avoid moving the housing or pushing any of the housing controls during the analysis.
10. Once the analysis is complete, the LED Indicator will turn either red or green, depending on the results:
    a. Green flashing – The housing passed the check. It is watertight sealed and ready for the dive.
    b. Red flashing – The housing failed the check. Inspect the housing for potential leakage sources. If failing to find the source, it is recommended to reinstall and lock all system components, visually inspect all o-rings and make sure nothing interferes with the watertight seal of the housing.
11. If during the analysis the LED Indicator starts flashing in yellow or alternately red and green, the analysis has been interrupted by over-pressure or under-pressure correspondingly. Follow the steps below to allow the analysis to properly continue:
    a. Yellow flashing - Use the Vacuum Pump to extract air again until the LED indicator turns steady yellow.
    b. Red and Green flashing - Release a bit of the vacuum by turning the Vacuum Release Tip counterclockwise and pulling it out (image #59) until the LED Indicator turns steady yellow.
12. In case of a significant air leakage detected anytime during the process, the LED Indicator will turn flashing red.

Pre-Dive Check LED Indicator Diagram



13. Once the pre-dive check is complete and the watertight seal of the housing has been confirmed:
    a. Reinstall the Protective Cap over the Vacuum Valve if it hasn't been reinstalled yet. Note that the Vacuum Valve is watertight even without the Protective Cap, as long as the Vacuum Release Tip isn't pulled out during the dive. However, the Protective Cap ensures the Vacuum Valve remains locked during the dive, so it's recommended to reinstall it prior to diving with the housing.
    b. Dive with the housing without detaching or attaching any accessories which their installation might have an effect on the watertight seal of the housing.

Important Notice	The Vacuum Safety System was designed to test and confirm the watertight seal of the housing prior to the dive only. Monitoring the watertight seal of the housing during the dive is carried out using the Moisture Detector included in the system. See "Moisture Detector" section below for further information.

14. After the dive:
    a. **Prior to opening the housing, make sure to completely release the vacuum** by turning the Vacuum Release Tip counterclockwise and pulling it out (image #59). This prevents stressing the housing Latch Dial.
    b. Turn the system off using the power switch on the Signal Board to save battery life.

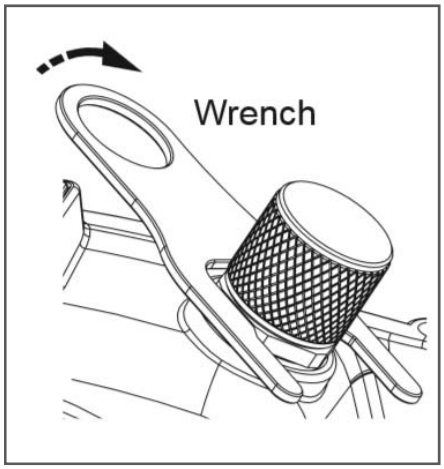
Moisture Detector

The Moisture Detector allows monitoring the watertight seal of the housing during the dive. Moisture detectors are very sensitive, so whenever moisture is detected by the sensor, the LED Indicator starts flashing red and a warning alarm starts beeping, thereby alerting of a possible leak.

1. You can test the Moisture Detector (image #60) by placing a wet finger over the moisture sensor unit at the bottom of the housing.
2. In order to silence the alarm after it starts beeping:
    a. Gently wipe the Moisture Sensor unit with a soft dry cloth in order to dry it off.
    b. Switch the Vacuum System off using the power switch on the Signal Board.

Image #60

System Care & Maintenance



1. In between the dives, use the wrench included to make sure the Vacuum Valve is tightly screwed into its port and was not accidently loosened when unscrewing the Protective Cap. Fit the wrench around the edges of the Vacuum Valve base and turn it clockwise until encountering fair resistance (image #61). Do not over tighten the Vacuum Valve to prevent the port or valve from being damaged.
2. The O-ring positioned between the Vacuum Valve and its port should be annually maintained:
    a. Remove the Vacuum Valve from its port using the wrench. Fit the wrench around the edges of the Vacuum Valve base and turn it counterclockwise until the valve has been completely unscrewed.
    b. Visually inspect the O-ring featured at the base of the Vacuum Valve. If there is any debris present, including dirt, sand, dust, hair or any other matter, it must be cleaned to ensure a proper watertight seal.
    c. In order to clean the O-ring, first remove it from the Vacuum Valve.
    d. Cleaning the O-ring is a simple matter of wiping it with a damp, soft cloth to remove the foreign matter. Be careful the cloth you use does not leave any of its own material behind as this can also affect the effectiveness of the seal.
    e. Apply a slight layer of Fantasea Silicone Grease on the O-ring. Note that the amount of lubrication required on the O-ring is only enough to allow it to slip into place without friction, so it does not twist or become dislodged. More grease is not necessarily better, and in some cases might interfere with the watertight seal of the housing.
    f. Reinstall the O-ring and then reinstall the Vacuum Valve using the wrench.
    g. Confirm that the housing watertight seal hasn't been interfered using the vacuum pre-dive check prior to diving with the housing again.
3. **Never soak or wash the interior of the housing with water. This will cause irreparable damage to all Hybrid Vacuum Safety System electronic components!**

Vacuum Valve Removal

1. In case of removing the Vacuum Valve for whatever reason, follow the steps below:
    a. Remove the Vacuum Valve from its port using the wrench. Fit the wrench around the edges of the Vacuum Valve base and turn it counterclockwise until the valve has been completely unscrewed.
    b. Install the M16 Cap included in the package on the Vacuum Valve port by screwing it all the way in (image #62).

Image #62

Important Notices	1. Once the Vacuum Valve has been removed and an M16 port cap has been installed on the port, it important to carry out the first dive with the housing empty (no camera installed inside) in order to verify that the housing watertight seal has not been affected during the replacement. 2. The Vacuum Valve port was designed to accommodate the Vacuum Valve only and any other components should not be installed on this port. For installation of electronic strobe triggering bulkheads, HDMI connectors or any other accessories, use the standard M16 Port found at the top left corner of the housing.

OPTIONAL ACCESSORIES

FOR THE FULL SELECTION OF FANTASEA ACCESSORIES COMPATIBLE WITH THE FA6500 V2 HOUSING, PLEASE REFER TO THE FANTASEA WEBSITE – WWW.FANTASEA.COM

UNDERWATER FLASHES & STROBES

Underwater strobes (external flashes) were designed to improve the color, lighting and quality of your underwater images. Since light and color are absorbed by water, using a strobe is recommended in all depths, during daylight and night dives.
Note that the **FA6500 V2 Housing** blocks the output of the built-in flash and prevents it from being visible in images captured. This ensures that only the external strobes connected to the system illuminate the subject, thereby diminishing the effects of backscatter, as well as shadowing caused by housing lens port and lens accessories mounted on the housing.
The **FA6500 V2 Housing** can be used both with underwater slave flashes and electronic strobes.
For a full selection of external strobes available, please visit the Fantasea website – www.fantasea.com

Slave Flashes
Slave flashes feature a slave sensor which triggers the external flash to fire in sync with the camera built-in flash. A fiber optic cable connects between the camera housing and the slave flash. The output of the camera built-in flash (or LED flash trigger if using one) is transmitted through the fiber optic cable to the slave sensor of the slave flash, which is then triggered to fire in sync with the camera.

Attaching Fiber Optic Cables to the Housing

1. The FA6500 V2 Housing features 2 fiber optic cable ports which allow for easy attachment of up to 2 fiber optic cables to the housing.
2. These fiber optic cable ports were designed to accommodate the type of adaptors included with the housing (see image #63). If the fiber optic cable you have features a different type of adaptor, remove this adaptor from the end of the cable and use the adaptors included with the **FA6500 V2 Housing** instead.


Image #63

3. To attach a fiber optic cable to the housing, first remove the adaptor from the housing fiber optic cable port by pulling it out using your fingers or the aid of a small needle nose set of pliers (image #64). Make sure not to damage the fiber optic cable.
4. Insert the exposed end of the fiber optic cable into the small hole of the adaptor unit, starting from the end that features a screw and pushing it towards the end that features an O-ring (image #65),

until the fiber optic cable reaches the end of the adaptor, which can be verified by looking from the other side of the adaptor. The fiber optic cable should be extending out no more than 1mm.


Image #64

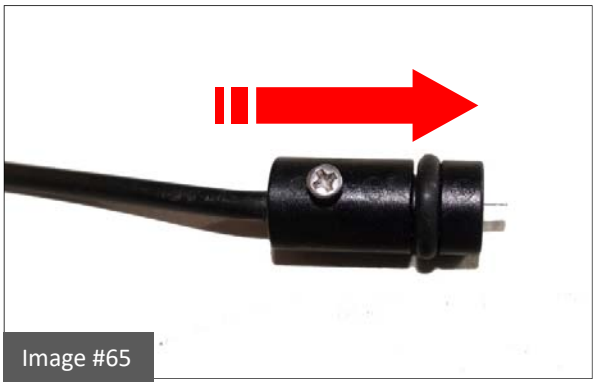


Image #65

5. Use the screwdriver included in order to tighten the screw on the adaptor (image #66). Tighten it enough to stabilize the fiber optic cable inside the adaptor, but don't tighten it too strongly. **Tightening the screw too much might damage the fiber optic cable.**
6. Once the fiber optic cable has been installed inside the adaptor, install the adaptor back to its port. It's recommended to apply some Fantasea Silicone Grease on the small o-rings of these adaptors, so they can be installed and removed more easily. Insert the adaptor with the end featuring the screw pointing out of the housing and then push it all the way into the port (image #67).


Image #66


Image #67

9. Follow the instructions in your strobe manual on how to synchronize your camera with the external flash and to select the proper pre-flash program for your camera. It is recommended to test the synchronization when photographing opposite a mirror. In this case, the output of the slave flash should be visible in the test shot taken.
10. Note that an optional LED Flash Trigger can be used to trigger the slave flash instead of being triggered by the camera built-in flash. See “Led Flash Trigger” section for further information.

Electronic Strobes

Electronic strobes can be attached to the housing using electronic sync cords. These sync cord connect to the housing electronic strobe bulkhead (separately purchased), which connects to the camera hot-shoe. The **FA6500 V2 Housing** features an M16 Accessory Port, which allows for the installation of an electronic strobe bulkhead in the housing. Note that such a bulkhead should be separately purchased. For further information, visit our website – www.fantasea.com

LED FLASH TRIGGERS

The **FA6500 V2 Housing** features two dedicated ports inside the housing, which were designed to allow the use of an optional LED Flash Trigger. The LED Flash Trigger is a useful accessory when making use of slave flashes connected to the housing with fiber optic cables. It attaches to the camera hot-shoe on one end and to the two LED Trigger Ports on the other end. When an image is captured, the device LEDs installed inside the LED Trigger Ports trigger the slave strobe without activating the camera built-in flash. This spares camera battery consumption and also prevents the built-in flash recycle time from limiting continuous shooting.
For LED Flash Triggers available, please visit the Fantasea website – www.fantasea.com

FLASH & VIDEO LIGHTING SETS

A variety of Fantasea flash and video lighting sets are available for the FA6500 V2 Housing, enabling you to further enhance your images and videos. These sets include trays, arms, strobes, video lights, focus lights and more.

INTERCHANGEABLE LENS PORTS

The housing features an FML interchangeable lens port system, which allows using a wide range of lenses underwater. The housing is compatible with any FML lens port, as well as other lens ports available in the market. For compatibility information, please visit the FA6500 V2 Housing page on the Fantasea website – www.fantasea.com

LENS ACCESSORIES

Some lens ports compatible with the FA6500 V2 Housing can be used in combination with a variety of “wet” conversion lenses and color correction filters. These lenses and filters are mounted over the housing lens port and can be installed and removed during the dive, providing flexibility in composition preferences and a wide range of enhancement options according to changing diving conditions. Such lens accessories include:

- **Optical Wide Angle Wet Lenses:** Wide angle lenses allowing for high quality wide angle images. Perfect for shooting seascape, divers, ship wrecks and schools of fish, without moving further away from the subject, thereby still taking full advantage of water clarity and artificial light sources.
- **SharpEye Macro Lenses**: Perfect for shooting close-up images of fish, corals, textures and more. These macro lenses magnify the subject and enable the camera to focus on short distances for creating super sharp images.
- **RedEye & PinkEye Color Correction Filters**: Used to restore the colors absorbed by the water. In shallow depths, these filters can serve as an attractive alternative to artificial light sources.
- **EyeGrabber Lens Holders**: Attach to Flex or Ball & Joint arms, enabling safe, secure and easily accessible storage for your lens accessories when not in use during the dive.

COLD-SHOE CONNECTOR FOR LIGHTING ACCESSORIES

The Cold-Shoe Mount featured on the housing enables mounting a flash, video light, night dive torch or focus light on top of the housing by using a standard Cold-Shoe connector mount.

M16 PORT ACCESSORIES

The housing is equipped with a standard M16 port which allows for optional connectors and accessories to be installed on the housing, including HDMI and electronic strobe triggering bulkheads. Note that such accessories should only be installed on the M16 port featured on the top left corner of the housing. The port featured at the back door of the housing was designed for the Vacuum Valve only.
For such accessories offered by Fantasea, please visit the Fantasea website – www.fantasea.com.

CARE & MAINTENANCE

The Fantasea **FA6500 V2 Housing** requires only a minimum amount of care for safe and reliable performance. The following tips will enable you to get the best results:

1. Always rinse your housing in streaming fresh water and if possible soak the housing in a fresh water tub or rinse tank for about 20 minutes after every dive in order to dissolve the salt water crystals from around the controls and openings of the housing. Manipulate each of the movable controls to assist the removal of salt particles from these tight areas.
2. Allow the housing to dry thoroughly before packing away for the day or for the trip home. You may use a soft towel or cloth to dry the housing. Be sure there is no grease or other debris on the towel.
3. Visually check the condition of the black O-ring before every dive. If it is dirty, clean it with fresh water and dry it with a soft cloth as described throughout the manual. If it is damaged in any way, such as cut or perforated, replace it before using the housing again.
4. It is recommended to slightly lubricate the black O-ring periodically. It's important to note that the amount of lubrication required on the O-ring is only enough to allow it to slip into place without friction, so it does not twist or become dislodged. More grease is not necessarily better, and in some cases might interfere with the housing watertight seal.
5. Use only the supplied silicone grease for lubricating the back door black O-ring. Use of any other grease might impair the watertight seal of the housing.
6. Avoid removing the white O-ring featured on the back side of the front door unless it's damaged.
7. Be careful not to get greasy fingerprints or dirt on a lens port. This will affect the image quality. Wipe any dirt or grease off with fresh water and a soft cloth.
8. Never handle the housing with your hands coated in suntan, oil or cream. Avoid getting any oils, creams or petrol-related substances or liquids on the housing surface, as this can distort and damage the housing materials.
9. Do not drop the housing on hard surfaces, it could crack and its watertight seal might be damaged.
10. Do not disassemble or modify the housing, as this may cause leaks.
11. Do not leave the housing in direct sunlight, inside a car in hot weather, or near a heater. Heat may warp the housing and cause leaks. If you have to leave the housing in the sun, it is important to cover it with a towel.
12. Travel with the housing protected in a padded case. It is best to remove the camera from inside the housing when traveling and to provide it with its own protective case or compartment. Store the lens port separated from the housing during transportation and storage and install the body cap on the housing lens port hole.
13. Always leave the housing slightly open when transporting by air.
14. Never dive with the Fantasea **FA6500 V2 Housing** to a depth greater than 60 meters/200 feet.
15. It is important to carry out the first dive without the camera inside the housing. Check that the watertight seal has not been affected during transport, lens port installation, M16 port accessories installation and long periods of storage.
16. It is likewise recommended to visually monitor the housing during every descent, especially for the first 10 meters/33 feet. If water is observed entering the housing or bubbles escaping from it, the

housing should be rotated to a *port down position* and held that way as you return to the surface immediately and get it out of the water.

17. When mounting wet lenses on lens ports featuring a thread, it is recommended to follow the guidelines below in order to avoid wearing out the threads of the lens port and lenses over time:
    a. Prior to installing the lens on the lens port, it is recommended to apply a small amount of Fantasea Silicone Grease on the threaded area of the lens (and adaptor, if used) to reduce the amount of friction.
    b. Install the lens on the housing lens port underwater only and remove it prior to ending the dive. Once removed, the lens can be mounted on a lens holder. Avoid having the lens assembled on the housing on land as much as possible, as it is heavier and exerts more pressure on the threads.
    c. It is recommended to reduce wearing of the threads by using lens mounting accessories such as bayonet mounts or flip adaptors.
    d. These guidelines apply to all wet lenses brands and models, but especially important when making use of relatively heavy wet lenses.

FANTASEA PRODUCT CONSUMER LIMITED WARRANTY

“Fantasea” warrants this Fantasea Line branded product against defects in materials and workmanship under reasonable use for a period of ONE (1) YEAR, (two years, where required by law as determined by the origin of the authorized dealer). This warranty is effective from the date of retail purchase from Fantasea or an authorized Fantasea dealer, by the original end-user purchaser (“Warranty Period”). This warranty does not cover any commercial use of the product. If a product defect arises and a valid claim is received within the Warranty Period, at its option, Fantasea, or its authorized service facilities will either (1) repair the product defect at no charge, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product. The warranty will not extend beyond the original warranty period. Your Fantasea Product should be registered within 30 days of purchase. You must keep the proof of purchase which indicates the date on which the purchase was made; as you may be required to show proof of purchase if you need warranty service. The following conditions apply: 1. This warranty extends to the original purchaser only. It is not assignable or transferable. 2. The warranty does not cover damage resulting from misuse, abuse, negligence, or accidents. Proper maintenance of the Product is the responsibility of the owner. 3. The warranty does not cover damage directly or indirectly resulting from the use of unauthorized replacement parts or service performed by unauthorized facilities. 4. This warranty does not cover any damage to any other product used in conjunction with the Fantasea product, including cameras and lenses, and resulting from any defect in the product materials or workmanship. 5. The cost of sending the product back to Fantasea or its authorized service facilities is the responsibility of the customer. 6. The warranty does not cover any incidental damages resulting from any defects in the product. This expressly includes any travel reimbursements or any other costs associated with the purchaser’s optional use of the product. The conditions of this warranty are expressly in lieu of all other expressed warranties, including the payment of consequential or incidental damages for the breach of any warranty. Please register your product on line at this URL: http://www.fantasea.com/registration.