

Vision XS

For GoPro Hero 9



www.hugyfot.com



Hugyfot User Manual

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History

In 1953, René Hugenschmidt is introduced to recreational diving in Nervi, Italy. From that moment on, he decides to dedicate his life to Underwater Photography. The young Swiss Engineer transformed his Zürichsee workshop into a Hugyfot plant, initially fabricating underwater housings for Agfa, Edixa, Exakta, Kodak, Leitz, Voigtländer, and Zeiss cameras. Meanwhile, the Cousteau-Gagnan regulator is released and the world's first diving magazine is published in Paris. Professor Hans Hass, Austrian Marine Biologist and Underwater film pioneer, known for his documentaries Adventures in the Red Sea (1951) and Under the Caribbean (1954), sparks people's interest in the underwater world. The diving industry is starting to take shape.

In 2004 Luc Leys, manufacturer of underwater lighting systems, takes over the company and moves it to Erembodegem in Belgium.

The broad experience this company has built in the field of metal working and constructional engineering is implemented in the housings' production process. Hugyfot introduces the HugyCheck system in 2009. This pre-dive check system enables the photographer to perform a vacuum test prior to entering the water. This test indicates whether the housing has been closed properly, and whether the housings' O-rings are in good condition. The HugyCheck system is awarded "Innovation of the year 2009" during the DuikVaker dive show in Utrecht (Netherlands).

In 2019 Hugyfot BV is founded by 2 former employees of the Hugyfot production plant. Jutha and Sven take all sales, marketing and product development activities for there account The production unit remains at Erembodegem (Belgium).



Jutha Heyman &
Sven Van Langenhove
Hugyfot Owners

1953 ...

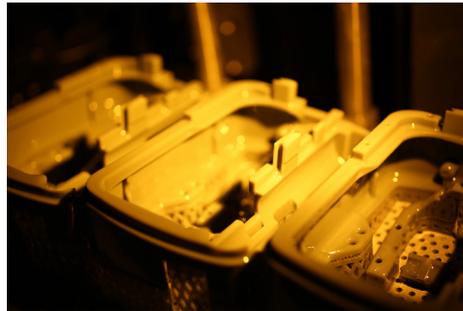


Thank you for purchasing the Hugyfot Vision Xs for Hero 9 housing.

When traveling to remote areas to capture exceptional images, leave nothing to chance what concerns your equipment. Using reliable gear is particularly important when shooting underwater photos and videos. Hugyfot products are renowned for their ergonomic, functional and innovative designs. The durable housings are CNC machined out of solid blocks of marine grade aluminum, hard anodized and coated with a durable Surlon®KE non-stick layer for extra protection. The camera tray inside the housing is 3D printed using the latest resin printing technologies. All parts are hand fitted and assembled. Each housing is carefully inspected and pressure tested to ensure reliable and flawless operation before leaving production.

This housing is small, light and easy to handle, the ideal travel companion to record your diving adventures. Depth rating is 150m.

The HDMI monitor used in your Hugyfot Vison Xs housing has a bright IPS display of 1920x1080 pixels that offers stunning colors in a 160° viewing angle (in all directions). The incorporated Feelworld F5 monitor offers professional features like Peaking Focus Assist, Histogram, Zebra exposure, Zoom, ... amongst many other. Two supplied batteries; one monitor battery and one USB battery pack to power the GoPro camera offer approximately 3 hours of battery life to the housing.



The Hugyfot Vision Xs for Hero 9 comes standard with the Hugy-Check Xs pre-dive vacuum check system for maximum protection of your equipment.

The GoPro Hero 9 camera needs the GoPro Media Mod accessory to obtain HDMI output. This accessory is therefore necessary to operate the housing.

This package includes

- 1 Hugyfot Vision Xs for Hero 9 housing
- 1 Hugyfot HugyCheck Xs pre-dive vacuum system and its pump
- 1 Red Filter and Protection Kit
- 1 Feelworld F5 monitor with its battery and charger
- 1 Varta 2600mAh Battery Pack
- 1 Installed HDMI cable
- 1 USB-A to USB-C cable
- 1 Hugyfot 5" Sunhood
- 1 Vision Xs camera tray with 2 handles, each with its 1" armball and sacrificial Zink Anode
- 1 Vision Xs Service Kit
- User manual

1 Safety precautions

To prevent personal injury and/or damage to equipment, read this user manual carefully as well as the supplied monitor owner's manual.

To prevent personal injury

- Only use battery packs specified in this User Manual and follow manufacturer's instructions.
- Remove leaking battery packs immediately from your Hugyfot Vision Xs. Leaking occurrences are extremely rare. Handling a defective battery pack must be done with care, avoiding exposure to bare skin, inhaling gas emissions or contact with fluids that could leak from a defective battery pack.
- Keep battery packs away from children.
- Dive within your level of training, maintain awareness of your depth, tank pressure and decompression limits at all times.

- Your Hugyfot Vision Xs underwater housing is designed to withstand depths of up to 490 feet (150 meters), well beyond recreational dive limits, as well as most technical dive depths. Stay within safety dive limits in keeping with your level of certification and expertise. Do not use your Hugyfot Vision Xs housing at depths beyond your training level and skills.

To prevent equipment damage

- Never leave your Hugyfot Vision Xs housing in direct sunlight as heat buildup may exceed recommended temperature ranges, causing permanent damage to electronic components, including your camera.
- Your Hugyfot Vision Xs housing is designed to operate between 32°F and 86°F (0°C and 30°C).
- Do not use paint thinners, benzene nor harsh solvents to clean your Hugyfot Vision Xs housing, as these products will damage the finish of your housing, can cause fire and are harmful to your health.

- Your Hugyfot Vision Xs housing is developed and machined with great precision. Treat it with care. Avoid dropping or exposing to impacts.
- The inside of your Hugyfot Vision Xs housing is not waterproof and must be kept dry at all times. Avoid water droplets from entering your housing. In the event salt water enters your housing, pad it dry immediately using an absorbent towel. Use a damp cloth to remove any salt crystals.
- Ambient humidity and temperature differentials may cause condensation inside your Hugyfot Vision Xs housing, particularly when moving it from cold to warm environments. Avoid condensation by keeping your housing in a sealed bag or an airtight case. Allow your housing to acclimate, then remove it from the bag or case. To reduce risk of condensation, do not open your housing between dives.
- If condensation forms inside your Hugyfot Vision Xs housing, do not use it. Open your housing, remove the camera, battery packs and allow condensation to completely evaporate before using it.
- Following any extended period of storage, check that your Hugyfot Vision Xs housing is operating properly before diving.
- Thoroughly rinse your Hugyfot Vision Xs housing in fresh water after each dive. Repeatedly push all buttons and levers while submerged to purge trapped water and flush internal spring mechanisms.
- Your Hugyfot Vision Xs housing has two (2) O-rings. Carefully inspect, service and lubricate each O-ring before diving.
- Hugyfot recommends having your Vision Xs housing serviced every 2 years, at a minimum, by an authorized Hugyfot dealer.

3 Housing overview

- 1 Hugyfot Vision Xs GoPro housing
- 2 GoPro shutter release control
- 3 GoPro on/off control
- 4 Flat port for GoPro Hero and LCD screen
- 5 Easy flip red filter with flat port cover
- 6 Sturdy aluminum handles with 1" ball mounts and Zink Anodes
- 7 Closing latches
- 8 Monitor sun hood
- 9 Feelworld F5 4K 5" HDMI monitor with battery
- 10 Monitor adjustment buttons
- 11 HugyCheck Xs vacuum system
- 12 Dual o-ring system
- 13 Vision Xs cradle for GoPro Hero and its external power pack
- 14 External power pack for GoPro Hero and USB-C cable
- 15 GoPro Media Mod (not included)
- 16 GoPro Hero 9 camera (not included)
- 17 Handle tray with center tripod hole and 2 M6 mounting holes



4 Monitor sun hood 5 Opening the housing

Your Hugyfot Vision Xs housing comes with pre-installed monitor sun hood. This reduces glare and unwanted reflections.

The sun hood is fastened with 3 M3 screws. It is possible to remove or replace the sun hood by loosening the 3 screws. You can then slide the sun hood of the housing.

With the sun hood installed, your Hugyfot Vision Xs housing can safely be opened and closed, provided it is placed on a flat stable surface with the monitor screen faced down.



For easy opening and closing your Hugyfot Vision housing is equipped with 2 locking latches.

Opening the housing

- 1 Release the vacuum by unscrewing the large vacuum valve on the rear monitor shell. Without releasing the vacuum, it is impossible to open the housing.
- 2 Place the housing on a flat stable surface with the monitor (with installed sun hood) faced down.
- 3 Open both latches
- 4 You can pull the shells apart by applying light force to separate the valve part and the body part of the HugyCheck system.



6 Installing the camera- and monitor battery

The Hugyfot Vision Xs housing is designed to work with the Feelwold F5 4K HDMI 5" Monitor. This 1920x1080 monitor offers professional features and performance. Also included is a Varta 2600mAh battery pack to extend the battery life of the GoPro camera. The battery lifetime of the housing is approximately 3 hours.

- 1 Open the housing as described in chapter 5.
- 2 Snap the battery onto the monitor. The monitor accepts 2 types of batteries; for Sony type batteries insert in the middle with the battery contacts pointed to the left and slide towards left, for Canon type batteries you have to point the contacts to the right and slide to the right.

- 3 Plug the USB-A to USB-C cable into the external battery pack for GoPro and mount the battery pack into the cradle with the bottom (no connections) first into the notch on the left side of the camera tray.
- 4 Install the battery pack into the camera tray, push the USB power cable behind the notch on the right side and close the Velcro wrap.
- 5 To release the monitor battery from the monitor, first remove the Varta battery pack to get access to the battery release button of the monitor. Push the release button and slide the battery towards the middle of the monitor.



7 Installing the GoPro Media Mod

The GoPro Hero 9 camera needs the GoPro Media Mod accessory to obtain HDMI output. This accessory is therefore necessary to operate the housing. At first use it needs to be installed in the housing, once installed it can remain in the housing (recommended).

- 1 Open the housing as described in chapter 5.
- 2 Gently unscrew the top retainer with a hex 2 mm key.
- 3 Gently unscrew the bottom L-shaped retainer with a hex 2,5 mm key.



- 4 Temporarily store the 2 retainers and their screws.
- 5 Gently connect the USB-C cable to the Media Mod.
- 6 Unscrew the 2 black screws of the HDMI cable retainer 2-3 turns with a hex 2 mm key, do not remove these screws, just untighten them.
- 7 Gently push the Media Mod onto



- 8 Re-install the top and bottom retainers. Do not apply excessive force when re-tightening the screws as this will damage the plastic thread in the camera tray.
- 9 Install the GoPro camera by opening the latch of the Media Mod and by pushing gently the camera into place. Close the latch when the camera is fully inserted.



8 Closing the housing

- 1 Place the Hugyfot Vision Xs housing on a flat stable surface with the monitor (with installed sun hood) faced down.
- 2 Your housing has two o rings. Carefully inspect, service and lubricate each o ring before diving.
- 3 Align and push the front shell onto the back shell.
- 4 Close both latches.



9 HugyCheck Xs vacuum system

Your Hugyfot Vision Xs GoPro housing comes with the Hugy-Check Xs system. This pre-dive vacuum system consists of 2 parts, a valve and a body.

- The smaller part on top of the front shell contains a one-way valve and is sealed with a cap. We call this part the valve.
- The bigger part on top of the monitor shell contains 2 stacked LR44 batteries, the HugyCheck electronics, both green and red signaling LED's and the vacuum release system. We call this part the body.

- 1 For first time use you will need to remove the transport sticker from the 2 stacked LR44 batteries in the body part. The LR44 batteries need to be installed each with the positive side first. For your convenience they are delivered shrink wrapped together.
- 2 Turn on the Hugycheck Xs vacuum system by screwing the body part completely till the end. Do not apply excessive force, this will not improve the sealing. You will see now the red LED which is slowly blinking.

- 3 Remove the cap from the valve part and install the vacuum pump.
- 4 Pump until the red LED changes to green and continue pumping 3 strokes more.
- 5 Seal the valve by screwing the cap back on.

Wait for at least 10 minutes and check if the green LED is still blinking. We recommend to prepare your housing and use the Hugycheck Xs vacuum system 2 hours prior to the dive.

Blinking green LED indicates no pressure leak and safe to dive. Always verify if the green LED is still blinking before entering the water and before rinsing your housing.

To open the housing you will have to release the vacuum first. To release the vacuum turn the body part counter-clock wards until you hear an air sucking sound. Both green and red LEDs are turned off and your Hugycheck Xs vacuum system is now turned off.

For long time storage or transport we recommend to remove the LR44 batteries (or put the transport sticker back on the batteries).



10 Using your Hugyfot Vision Xs

With the monitor and GoPro Hero installed and with the Hugycheck Xs vacuum system blinking green you are now ready to use the housing.

- 1 You should now see the monitor status light in the left bottom corner lit red
- 2 Power on the monitor by pushing shortly the red top button
- 3 Power on the GoPro Hero by pushing shortly the side button (on/off)
- 4 You will get the media menu at startup, in this menu you can browse and review your clips. Move the white marker by pushing the side button (on/off) until the GoPro Hero camera icon is highlighted white. Press the shutter to enter the camera menu.
- 5 In the camera menu you get at the bottom from left to right; the record icon, the recording mode, the capture settings, the back to media menu icon and the hide settings icon. On top you see from left to right the remaining SD card recording capacity in the selected

resolution and framerate and the remaining battery capacity % of the GoPro Hero (bigger) and monitor (smaller)

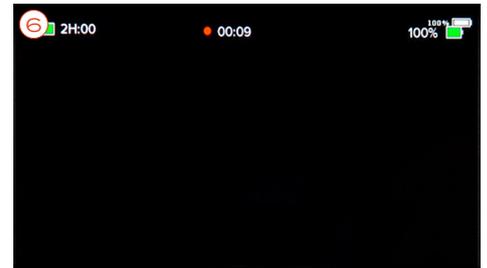
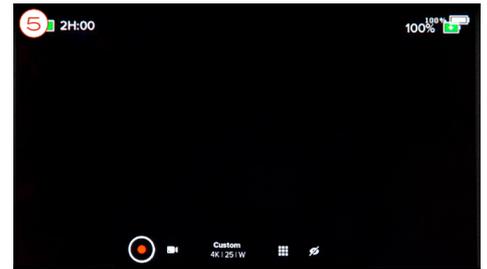
By pushing the side button (on/off) you can choose and change each of these setting by pushing the shutter lever. To start recording change until the record icon is highlighted white. Press the shutter to start recording.

Each capture mode has presets that make it easy to switch to the best mode and settings for your shot. These presets will have to be programmed before you install the Hero 9 camera in the housing. Once installed you will not be able to access the touch screen of the GoPro to change a particular setting like the resolution, framerate, capture angle, stabilisation and pro tune settings.

We recommend creating your own different capture presets so you can switch between these during your dive. Please consult your camera's user manual on how to program these presets.

We recommend not to use Hypersmooth stabilisation as it can cause a delay of 1 to 2 seconds on the HDMI output. This is related to the GoPro camera, not to the housing.

- 6 When recoding the remaining time, the elapsed time and battery capacity of both GoPro and monitor are displayed from left to right.
- 7 After using your Vision Xs housing we recommend removing all batteries from the housing, both the monitor as the GoPro Media Mod have a stand-by function and keep consuming a small amount of power when not used. Removing the batteries for storage will protect them from deep discharge.

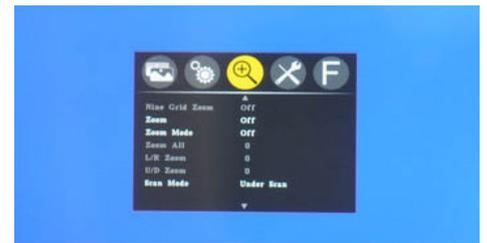
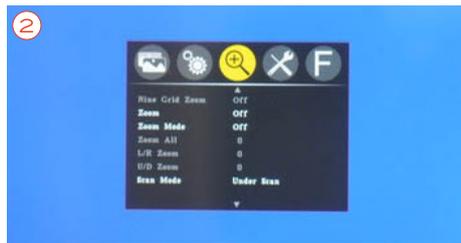
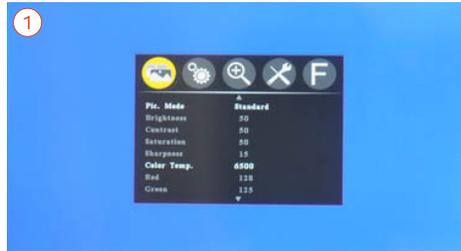


11 Adjusting the monitor

Your Hugyfot Vision Xs HDMI Monitor housing is equipped with a powerful HDMI monitor that offers professional features like histogram, peaking focus assist, zoom, check field, false colors, nine grid and many other. We will only highlight some interesting features here, please consult the manual of the monitor is provided that with your housing for more details. From left to right 8 controls are offered:

F1 F2 Left Right
Menu Down Up Power

1. To access the settings, press the menu button
2. You can travel through the menu sections by pushing the Left and Right buttons
3. We will now show you how to program the function buttons F1 and F2. Select the last section marked 'F' by pushing either Left or Right button. Press the Down button to enter into the menu section and choose which key to program, press Right button to enter into the choice menu and make choose the desired function with the Up and Down buttons. Press repeatedly the Menu button to go back or exit the menu.



12 Charging the monitor battery

Charge the camera power pack with the provided micro USB cable. Plug into a standard 5V USB outlet (not provided). Depending on the USB outlet charging will take 2 to 6 hours.

The status LED on the power pack will blink during charging;

- 1 blink = battery depleted
- 2 blinks = 25% charged
- 3 blinks = 50% charged
- 4 blinks = 75% charged
- Steady light = battery charged

This indication is the same when discharging the battery where 4 blinks indicate full battery.



Charge the monitor battery with the supplied cradle charger. The cradle charger needs a 5V USB input with at least 1A output current (like the supplied USB EU outlet power source). When charging the LED will lit continuous red until the battery is charged. Then the LED will turn to continuous green.



13 Macro lens

Capture small subjects in sharp focus, with plenty of detail to fill your screen with a Macro lens. Your Hugyfot Vision Xs can be upgraded with an easy flip macro lens (sold separately). Install an easy flip lens holder to your Hugyfot Vision Xs housing by following these steps:

Mount the hinge of the easy flip lens holder to the right of housing flat port using two M3 Allen hex screws (provided with easy flip lens holder). Keep hinge straight edge to the left and curved edge to the right.

Mount the easy flip lens holder onto the hinge and fasten it with the provided Allen hex screw, threading it from the bottom.

Once mounted to your housing, a macro lens can be flipped in front of your GoPro Hero 9, or flip aside when not in use. When recording video or taking photos with your GoPro Hero 9, avoid image vignetting by not choosing wide angle camera's field setting.

The easy flip lens holder can be used in combination with a variety of M67 threaded lenses. Hugyfot offers a kit that includes an easy flip lens holder and an M67 (+10) diopter macro lens.



M67 (+10)
diopter macro
lens



Easy flip
lens holder

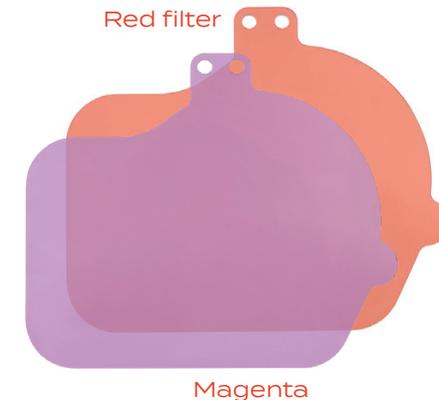
14 Red and Magenta Filter

Your Hugyfot Vision Xs housing comes standard with an easy flip red filter with flat port cover. An optional magenta filter is available (sold separately).

Protect the flat port of your Hugyfot Vision Xs housing by keeping the flat port cover closed when not in use.

Use an easy flip red filter for blue water or an easy flip magenta filter for green water. On land, natural light contains all the colors of the spectrum. Reds rapidly deplete the deeper you go, and as light travels through the water column. A red filter attenuates overabundance of blue spectrum light, keeping available reds, restoring natural colors and improving contrast. Use a red filter for depths at or beyond 10 feet (3 meters). Filter performance is contingent upon available ambient light and visibility.

Red and magenta filters reduce the amount of pass through light reaching your camera lens. When diving in poor visibility or insufficient ambient light, filter effectiveness is reduced. In situations like this, Hugyfot recommends recording video or taking photos using video lights.



15 Video lighting system

Your Hugyfot Vision Xs housing can be upgraded with LED video lights. When filters can't get the job done, a video lighting system is the perfect solution, enhancing performance of your Hugyfot Vision Xs housing. Hugyfot recommends using the Arius 1500 video lighting system (sold separately).

Use video lights when:

- Diving in conditions with low ambient light.
- During night dives.
- Deep dives.
- Macro videography or photography.
- Capturing natural vivid colors.

Hugyfot Arius 1500 video lights are equipped with 4 'true color' LEDs, producing 1,500 lumen at 5,700 Kelvin color temperature, sporting a wide 120° of top shelf quality beam, free of hotspots and powered by a rechargeable Li-Ion battery that provides 1 hour of continuous light at full power.

16 Maintenance

When paired with the Hugyfot Arius 1500 video lighting system, your Hugyfot Vision Xs housing is a formidable piece of equipment designed to maintain 100% neutral buoyancy.



O-rings

- Inspect, service and lubricate the O-rings of your Hugyfot Vision Xs housing before diving.
- Carefully remove them by using the supplied plectrum tool. Be careful not to scratch the o ring seating. Gently insert the tool between the o ring and its seating and push the o ring out. Never use a screwdriver, knife, pliers, tweezers or any sharp metal.
- Shore diving in sandy areas or where fine particles are in suspension from currents or surf, increase the chance of unwanted particles, grains of sand or debris from adhering to the O-rings of your Hugyfot Vision Xs housing. We recommend you inspect, service and lubricate your O-rings immediately after opening your housing.
- When cleaning O-rings, find a well-lit place free of dust, hair, sand or debris. Take your time and gently run your fingers along the O-ring. Don't pull or stretch it. Your fingers are the best way to determine the presence of unwanted particles.
- If available, run your O-rings under the faucet. Use room temperature tap water, carefully removing unwanted particles by rubbing one O-ring at a time between your

fingers. If needed, feel free to apply a dab of dish soap, tho-roughly rinse under the faucet, then let your O-rings air dry.

- Discard and replace any damaged O-ring. Attempting to use a damaged O-ring can compromise a watertight seal.
- Service the grooves of your Hugyfot Vision Xs housing by running a foam makeup applicator or a lint-free cloth. Cotton swabs have fibers; therefore, we do not recommend their use. Remove unwanted particles, grains of sand, hair, fibers or any debris from the grooves where your O-rings sit.
- Once your O-rings have air dried, proceed to lubricate them with a small amount of Hugyfot silicone grease. Do not over lubricate the O-rings. Ideally, a uniformly applied thin coat or sheen is what you end up with. To accomplish this, place a very small dab of Hugyfot silicone grease between our thumb and index finger, gently running one O-ring at a time, to uniformly coat its surface. Over lubricating is a common mistake, which carries unwanted consequences, attracting hair, unwanted particles and debris that could potentially compromise a watertight seal. Do

-
- not over lubricate your O-rings.
 - Once the grooves of your Hugyfot Vision Xs housing are clean and your O-rings are lubricated, proceed to sit them one at a time. Inspect to ensure both O-rings are in place, in their grooves. Confirm that, sand, hair, fibers nor any unwanted particles are present. Proceed to close your housing.
 - When traveling by air, remove both O-rings before your trip, place them in a zip top bag and keep them inside your Hugyfot Vision Xs housing. This will reduce risk of dislodged O-rings from pressure differentials or an un-wanted vacuum seal from occurring. Inspect, service and lubricate both O-rings once you reach your destination and before diving it.
 - When storing your Hugyfot Vision Xs housing for a prolonged period of time, follow the suggested travel by air tip above. This will keep your O-rings relaxed, prolonging useful life.
 - Have your Hugyfot Vision Xs housing serviced every 2 years, at a minimum, by an authorized Hugyfot dealer.
 - Visit our website at: www.hugyfot.com for a list of authorized Hugyfot dealers near you.

HDMI Monitor disassembly instructions

If needed, it is possible to disassemble the HDMI monitor from the housing. Because of the fragility of the HDMI cable we do not recommend performing these actions on a regular base. Disassembly should only be performed in case of malfunctioning or periodic maintenance.

Following instructions should only be performed by persons with experience in fine mechanics. Damaged HDMI connections are never subject of manufacturer's warranty and are expensive to replace. Please send your Vision Xs housing for service to an accredited Hugyfot service center if needed.

1. Disassemble the GoPro Media Mod by performing the steps from chapter 7. Installing the GoPro Media Mod in reverse order
2. Unscrew the 2 black screws of the HDMI cable retainer and remove it
3. There are 2 screws, left and right side of the camera tray that fix the tray into the housing. Unscrew these approx.1cm
4. Unscrew the 2 bolts that fix the camera tray to the monitor
5. Now you can lift the camera tray together with the monitor out of

- the housing. Left side has to come out first. It is very important to lift these parts out together or you will damage the fragile HDMI cable that runs trough the camera tray. Also left side needs to be lifted first in order to not damage the HDMI connector that enters into the monitor on the right side. We recommend keeping the battery onto the monitor to offer better manipulation of the monitor.
6. Be careful not to damage the HDMI cable in manipulating these parts! You can now gently pull the HDMI connector from the monitor HDMI IN socket.
 7. If you need to replace the HDMI cable, follow the correct routing as pictured below
 8. Congratulations, you now have disassembled the monitor from the housing. To reassemble follow these instructions in reverse order. Remember that the HDMI cable is very fragile and should be handled with extreme care. In step 5, insert the tray and monitor together into the housing with the right (monitor HDMI connector) side first.

Do not apply excessive force when retightening the screws as this will damage the plastic threads in the camera tray.

①



④



⑦



②



⑤



⑧



③



⑥



Vision XS Maintenance Log

Housing serial number	Factory Quality control & pressure test (date)	Stamp
Date	Hugyfot Service Center	Stamp
Date	Hugyfot Service Center	Stamp
Date	Hugyfot Service Center	Stamp

Housing full service / Quality control & pressure test

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