

# GAMMA ALPHA HD

## OWNER'S MANUAL



OCEANREEF  
underwater, naturally.

# GAMMA ALPHA HD - OWNER'S MANUAL

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## 1 - INTRODUCTION

For more than 75 years, OCEAN REEF has been involved in the underwater diving industry. We have contributed much to this industry, from fins and snorkels to the most modern systems of underwater communication. Through the spirit of intrepid pioneers, brilliant inventors, passionate divers, and dynamic entrepreneurs, OCEAN REEF has been able to turn dreams into reality in the underwater world.



If you lose this manual or if you should require more copies, you can download it at [diving.oceanreefgroup.com/support/](https://diving.oceanreefgroup.com/support/) or contact the Manufacturer: Mestel Safety SRL, Via Arvigo 2, 16010 Sant'Olcese (GE), IT. Phone: +39 0107082011. E-mail: [infoitaly@oceanreefgroup.com](mailto:infoitaly@oceanreefgroup.com). Website: [diving.oceanreefgroup.com](https://diving.oceanreefgroup.com)

The Manufacturer has carefully worded and edited this owner's manual. However, in no event the Manufacturer will be responsible for any damage caused by the incorrect interpretation of its content, nor due to any misprints and/or incompleteness in the text.

The Manufacturer will not accept liabilities for any damage caused by:

- Insufficient, incorrect and improper maintenance, failing to comply with the manual's recommendations
- Absence of periodic tests and checks
- Incorrect and improper use
- Failing to comply with guidelines included in the owner's manual
- Alterations and/or modifications of the Vesper

If any of the above were to occur, considering these actions are potentially dangerous to the health and life of the users, the manufacturer is released of any responsibility and the warranty is void.

The Manufacturer is an ISO 9001:2015 certified company ([https://diving.oceanreefgroup.com/support/#ISO\\_CC](https://diving.oceanreefgroup.com/support/#ISO_CC)).

## 2 - GENERAL WARNINGS / OWNER'S RESPONSIBILITIES

### WARNINGS, CAUTIONS AND NOTES

Pay special attention to information provided in warnings, cautions, and notes that are accompanied by these symbols:



A **WARNING** indicates a procedure or situation that, if not avoided, could result in serious injury or death to the user.



A **CAUTION** indicates any situation or technique that could cause damage to the product, and could subsequently result in injury to the user.



A **NOTE** is used to emphasize important points, tips, and reminders.

### IMPORTANT

The content of this manual is based upon the latest information available at the time of print. OCEAN REEF reserves the right to modify any products, processes and manufacturing techniques at any time. It is the technicians' responsibility to acquire the latest information and parts from OCEAN REEF for service and repairs to be performed.

If the instructions provided in the manual are unclear or difficult to understand, please contact OCEAN REEF at [infoitaly@oceanreefgroup.com](mailto:infoitaly@oceanreefgroup.com) before using the equipment or attempting any repairs.



Carefully read this instruction manual before use, and keep it for future reference.



While this is a product of high quality, the user is not exempt from problems connected with the incorrect use of the product or failure to follow the rules of safe diving.



Do not modify or alter in any way the GAMMA ALPHA HD



DO NOT USE the unit if it is overheating, if it is leaking battery fluid, if water has leaked the unit, if there is smoke coming from the unit or if any part is broken.



Before using the GAMMA ALPHA HD the user must ensure that the product has been properly inspected and maintained. (See Chapter 20 Maintenance, Cleaning and Storage).



OCEAN REEF refuses all responsibility for damages caused by non-compliance with the instructions contained in this manual. These instructions do not extend the warranty or the responsibilities stated by OCEAN REEF terms of sales and delivery.



In order to maintain the warranty, service and routine, maintenance of the products must be performed by the end user as indicated by OCEAN REEF and described in chapter - MAINTENANCE, CLEANING AND STORAGE.

For details, contact an authorized OCEAN REEF dealer at: <https://diving.oceanreefgroup.com/shop-dealers/>



### 3 - REMINDERS AND TIPS FOR USE



Before charging, please make sure the charging port is dry.  
Charge in a safe, dry place.



Use the original charger only.  
It is your responsibility solely to assure the charger works properly.



Product should be stored in shade, dry and cool location.  
Do not expose to extreme low and high temperatures.  
Do not leave the product under direct sunlight.  
Operating temperature: 0°C (32°F) and +40°C (104°F)



It is not a touch screen!



When not in use or at the end of each use, make sure that the surface unit (video and audio parts) has been turned off.



Make sure there is no dirt, debris or water in any part of the unit, especially in the rubber pin connector. If any dirt, debris or water is found, remove it.



Do not dismantle or repair the communication unit by yourself.



GAMMA ALPHA HD monitor, like all displays, need to be handled with care to prevent damage to the LCD liquid crystals, prevent from getting hits and in general handle with care during use and transport.



Before diving, check the surface unit, mouse and remote control battery.



This product should not be exposed to chemical products such as sunscreen or insect repellents as some components may melt or damage plastics.



Talking and listening while underwater requires practice. With experience, divers will become more proficient in the use of the communications system.



Do not allow it to fall or be knocked around.



When storing, be mindful of open ports - failing to place the caps well can result in screen damages.  
When shipping, make sure you protect the unit by adding some protective layer between the screen and the rest of the unit. soft, thin foam will help.

## 4 - PACKAGE CONTENTS



INCLUDES:



**1 - SURFACE UNIT  
W/MIC & CHARGER,  
REMOTE CONTROL AND MOUSE**

**2 - PROFESSIONAL AUDIO  
50 M. CABLE**

Can be ordered separately /  
custom length

**3 - PROFESSIONAL VIDEO  
50 M. CABLE**

Can be ordered separately /  
custom length



**3 - UW UNIT 2.0**

Can be ordered separately /  
custom length



**4 - CAMERA**

Can be ordered separately /  
custom length



REMOTE CONTROL



MOUSE



CHARGER



MICROPHONE

## 4.1 SURFACE UNIT



**Scan the QR code and  
watch the video tutorial**



- 13" full HD backlit, anti-reflective screen.
- AHD 1080p wide angle Camera (120°)
- Possibility to split screen both camera for contemporary viewing.
- Digital audio/video out (HDMI).
- PC/Mac connection USB-A (not included) Plug & Play.
- Internal recording devices: programmable DVR with 320GB expandable to 1TB recording both audio and video.
- Backup recording: digital audio+video via USB-A (pen drive or HDD not included).
- 12V rechargeable battery
- Audio/video recall
- Stand-by autonomy: 24h.
- Recharge total max time: 2h45m
- Battery duration 1video 1 audio 50m : 5h20m
- Battery duration 1video 1 audio 200m: 5h
- Battery duration 2video 2 audio 200m: 4h30m

The GAMMA ALPHA HD is a hardwired, full-duplex underwater audio and video communication system for conversations between the surface and one or two divers.

With powered volume for both diver and surface.

Moreover, the volume of the underwater comm. unit can be adjusted from the surface unit to allow the divers to have the best comfort during the dive.

With regards to the video, the installed 13" full HD color monitor displays the video feed coming from the UW camera of diver 1 or diver 2.

This communication unit is specifically designed to meet the needs of professional and commercial divers that cannot compromise on a full duplex, hands free, clear audio/video communication system.

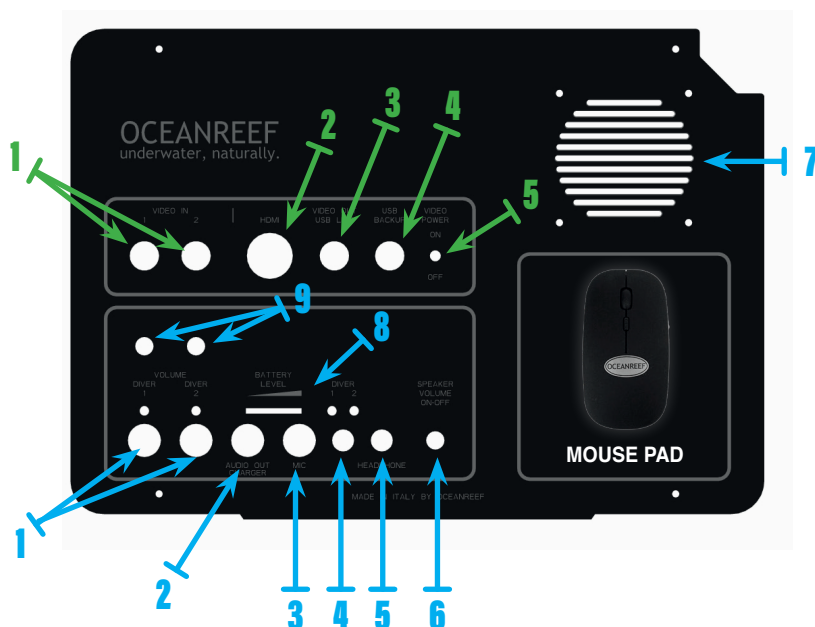
The underwater comm. unit can be sold separately, and customized for use with some other brand surface units, but is designed to be used specifically with the OCEAN REEF hardware surface unit (GAMMA ALPHA - ALPHA PRO X-DIVERS).

The range depends on cable length.

(cable length customizable upon request - up to 200 metres /600ft)

Speaker and microphone as featured in all comm. units, but what looks like a push to talk button is actually a recall button.

## SURFACE UNIT GLOSSARY



Surface unit, hardwired, full duplex underwater communication. It has the following features:

### AUDIO

1. 2 ports for 2 communication cables - Gamma Alpha can receive audio from two divers)
2. External power & audio out port (audio out cable optional)
3. Microphone
4. Switch for communication between surface & diver 1, surface & diver 2, surface & diver 1 & diver 2 (cross talk)
5. Headphone port (headset optional)
6. On/Off and speaker volume adjustment switch
7. Incorporated Speaker
8. Battery level indication
9. Underwater comm unit. volume adjustment (for both divers)

### VIDEO

1. 2 ports for 2 video cables - Gamma Alpha can receive video from two divers)
2. HDMI cable port
3. Video out / USB Live port
4. USB Backup port
5. Video power ON/OFF



The serial number on the Surface unit is located on the top inside cover of the case.



## MOUSE AND REMOTE CONTROL

As we will explain in the instructions of this manual, most of the operations in the GAMMA ALPHA HD can be performed with the mouse (as for a simple laptop/pc). Make sure the mouse is charged before using it and that it has been switched on (in the back of the mouse). Use the designed space on the surface unit panel to get the best response from your mouse. The monitor's remote control is also useful for calibrating and setting the light/color and audio playback.

## 4.2 PROFESSIONAL SURFACE/DIVER AUDIO CABLE



### Professional surface/diver cable (50meters -165 ft long) (if sold separately code OR033134)

6 pin cable/wire with yellow rope exterior. The cable's diameter is 10mm with a resistance of more than 4000 Newtons. The cable includes waterproof rubber 6 pin connector at the diver side and DIN metal connector on the surface side. The Professional cable is also available at any length on request (up to 200 metres).

75 m / 264 ft OR033166 - 100 m / 328 ft OR033167 - 150 m / 492 ft OR033168 - 200 m / 656 ft OR033169



4000 N is the tear up strength, audio signal may be lost earlier!



It is important to pay attention that the cable does not get stuck on the boat or on the seafloor. This is to retrieve an unconscious diver.



It is also very important to keep the cable slightly buoyant, by attaching a small buoy or floating device to the cable a few feet away from the underwater comm. unit. - OCEAN REEF cable floaters available as an accessory.



It is a good idea to connect the cable with a hook to the BC, avoiding any traction between the surface and the underwater comm. unit.. OCEAN REEF cable fleeter is available as an optional.



During the dive the surface operator must slowly feed the cable out to the underwater diver as needed, while keeping voice contact. It is not advised to simply throw the cable into the water. The same procedure should be used when the dive is completed and the cable has to be brought on board.

## 4.3 PROFESSIONAL SURFACE/DIVER VIDEO CABLE



**One surface/diver video cable  
(50 meters -165 ft long)  
(if sold separately code OR008575)**

4 pin cable/wire with yellow rope exterior. The cable's diameter is 10mm with a resistance of more than 4000 Newtons. The cable is a mini RG59 + 4x0.18mm<sup>2</sup> cable with a polyurethane jacket to better resist to salt water.

The cable includes waterproof rubber 4 pin connector at the diver side and DIN metal connector on the surface side.

The Professional cable is also available at any length on request (up to 200 metres).

75 m / 264 ft OR008576 - 100 m / 328 ft OR008577 - 150 m / 492 ft OR008578 - 200 m / 656 ft OR008579



Do not try to connect a different kind of camera to the GAMMA-ALPHA 2010 surface unit! You will risk damage to your camera.



The video camera may be handled or connected to the right side of your Neptune SPACE mask. The cable must be fixed to the BC avoiding direct tension.

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### ALSO AVAILABLE - SOLD SEPARATELY AS ACCESSORY:



1 ALPHA PRO X DIVERS / GAMMA ALPHA bag this bag is designed to be incredibly durable to carry coil cables, it is bright colored and easy to spot

2 2 cable floaters (x3) useful accessory to keep audio/v cables floating avoiding entanglement

3 Cable fleeter avoid any traction between the surface and the underwater comm. unit.

4 Floating cables option

## 4.4 UNDERWATER COMM. UNIT. AP 2.0

### Underwater comm. unit AP 2.0 (if sold separately code OR033135)



- Waterproof piezoelectric speakers (X2)
- D-Mic microphone
- Full-duplex system
- Audio recall button
- 6 pin waterproof connector

The underwater comm. unit can be connected to any professional OCEAN REEF Mask using the OCEAN REEF Extender Frame



The connector between the cable and the underwater comm. unit can be disconnected and connected again underwater



Do not touch the hydrophobic membrane of the mic - as it may break with any sharp object that may damage it.



Routinely, clean the microphone contacts and check the integrity of the hydrophobic membrane and the casing. If the microphone is flooded, it CANNOT BE recovered and must be replaced.



The serial number on the underwater comm. unit is wrapped around the mic contacts or laser engraved on the battery compartment lid.



#UNDERWATERNATURALLY

## 4.5 UNDERWATER WIDE ANGLE AHD CAMERA



1080P Bullet AHD Camera, wide angle Camera (120°), 1/3" Sony CMOS Sensor, 1080P, 2.8mm board lens, 40m/130ft water resistant housing.

Housing is:

- Diameter 3,4 cm
- Length : 12,7 cm

AHD Camera code = OR008511

## 5 - ASSEMBLING THE UNDERWATER COMM. UNIT 2.0

Assembling the underwater comm. unit 2.0 on the Extender Frame.

Start removing from the Extender Frame both side neutrals connections, as shown in the picture below.



Begin mounting the left (the one connected to the mic), earphone of the underwater comm. unit 2.0 securing it to the Extender Frame exactly like a neutral or an earphone support. Bridges have L and R written on them for identification. Finish by screwing firmly the bridges on the inside.



Be careful to insert the support in the correct position with no gap between the support and the frame.





Proceed connecting the MIC on the COMMUNICATION side port of the mask by screwing it on. The crown around the PTT will turn until flush.



Last, connect the R earphone to the right side of the Extender Frame by having the cable connecting the two ears passing underneath the straps into the face seal groove.



## 6 - POSSIBLE AUDIO INTERACTIONS

By adding an additional surface/diver cable and underwater comm. unit, the Gamma Alpha HD may communicate with two divers at the same time. It is also possible for the surface to switch between each of the divers.

AUDIO DIVER MODE CHART:

<b>DIVER 1 SELECTED</b>		
	<b>Receive from</b>	<b>Talk to</b>
<b>Surface</b>	Diver 1 & 2	Diver 1
<b>Diver 1</b>	Diver 2 & Surface	Surface
<b>Diver 2</b>	None	Diver 1 & Surface

<b>DIVER 2 SELECTED</b>		
	<b>Receive from</b>	<b>Talk to</b>
<b>Surface</b>	Diver 1 & 2	Diver 2
<b>Diver 1</b>	None	Diver 2 & Surface
<b>Diver 2</b>	Diver 1 & Surface	Surface

<b>DIVER 1&amp;2 SELECTED</b>		
	<b>Receive from</b>	<b>Talk to</b>
<b>Surface</b>	Diver 1 & 2	Diver 1 & 2
<b>Diver 1</b>	Diver 2 & Surface	Diver 2 & Surface
<b>Diver 2</b>	Diver 1 & Surface	Diver 1 & Surface

## 7 - ASSEMBLING THE CAMERA



To protect the camera always add extra tape in the central part

The best way to mount the camera to your ocean reef full face mask is with the ocean reef professional accessories mount (available separately as accessory)



**OR025260** - Professional Accessories Mount Kit R - (w/universal slide and clamping band)



**OR025270** - Professional Accessories Mount Kit R+L (w/universal slide and clamping band)



1

Insert the camera in the clamping band. Make sure the clamping band is centered on the camera housing. Tighten clamping band on housing with wrench or flathead screwdriver.



2

Mount camera + universal slide on rail system and adjust position as preferred with the release button.



3

Camera must be free to rotate at this stage (When the unit will be on - adjust camera horizon by rotating the camera using a leveled horizontal element).

#UNDERWATERNATURALLY

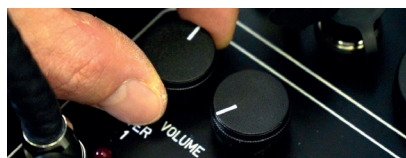
## 8 - UNDERWATER CABLES SET-UP



First connect video cable to video in 1 (if you need second diver audio - use port diver 2)  
Then connect audio cable to diver 1 (if you need second diver audio - use port diver 2)



Set the diver 1 volume at half the volume (also 2 if cabling diver 2 is connected to the unit).



Then connect the 2 pin video and the 3 pin audio cable and check for right connection (underwater camera and uw communication unit)



Cabling should be secured to diver BCD for safety of the diver and to avoid direct stress on connectors.

The intended setup is designed by adding the OCEAN REEF cable fleeters (sizes for both single and multiple cables threading) – available sold separately. It is highly recommended to secure topside cables also to avoid direct stress on connectors/topside unit.



NOTE! – Thread the cabling in the cable fleeter before plugging in video/audio cables!

CABLE FLEETER  
ORO33148 (10-20 MM)  
ORO33149 (25-38 MM)

## 9 - TEST THE UNDERWATER AND SURFACE COMMUNICATION UNIT



Once your cable set up is done and inserted the microphone in the MIC input port you are ready to test the unit.



Turning on the unit through the main **POWER ON/OFF SWITCH**  
Green light on the bottom right corner of the monitor = unit ON.



Power on the unit required some seconds due to sync process - wait until the complete sync and start-up has finished

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### TEST THE UNDERWATER COMM. UNIT

Hold the comm unit close to your ear - talk in the surface mic - test volume/function.



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### TEST THE SURFACE COMM. UNIT

Open the SAV and don the full face mask. Talking inside the mask will result in hearing volume on the speaker, you can also adjust the volume and set as preferred



## 10 - START/STOP RECORDING



Cassette recorder symbol

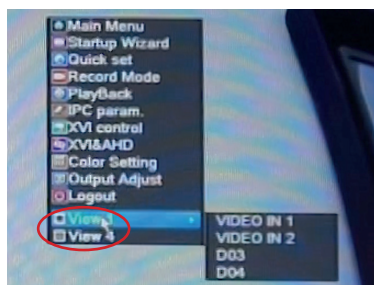
### START RECORDING

Using the included mouse right click anywhere on the screen and select → record mode in the **Manual** line you can select → diver 1 or 2 or both and then → confirm to start recording.

The cassette recorder symbol (bottom left corner of screen) confirms when the recording has started.

### VIDEO DISPLAY OPTIONS

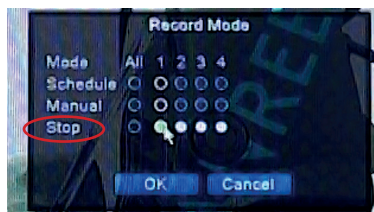
Video display options → right click on screen; **View 1** → Video in 1 or 2 you can also select **View 4** → and select split screen option to see both videos at the same time.



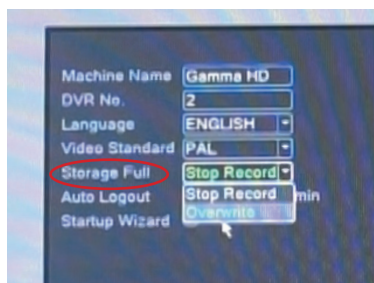
### STOP RECORDING

To stop recording: right click on the screen and select → record mode in the **Stop** line you can select → diver 1 or 2 or both and then → confirm to stop recording.

Doing this will result in cassette recorder symbol disappearing from bottom left corner of screen.



NOTE! You can select how the GAMMA ALPHA HD is going to operate once the internal storage space is all used = automatically stop recording / overwrite.

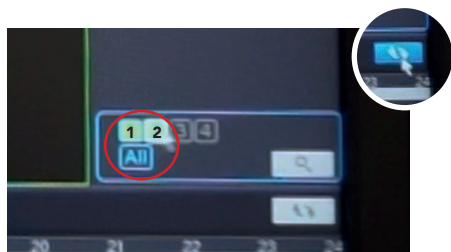


### STOP RECORD/OVERWRITE SETTINGS

Right click on the screen → main menu → system → general → **Storage Full** → stop record/overwrite → then confirm simply by pressing the "ok" button.



## 11 - ACCESS PLAYBACK



refresh button

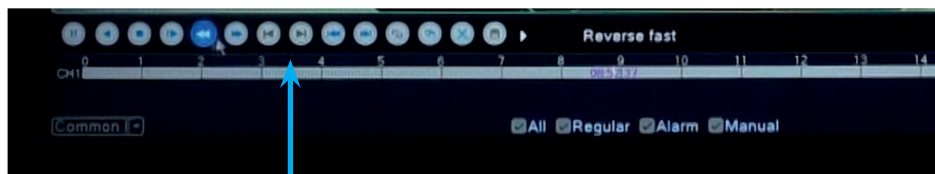
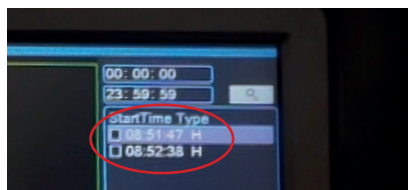
Right click on the screen → Playback → choose which channel you want to access **(1/2 or ALL)** click the refresh button to display the files.

Remote control →



On the right side: list of multimedia contents and related data for each file.

Playback audio volume can be adjusted via included monitor remote control.



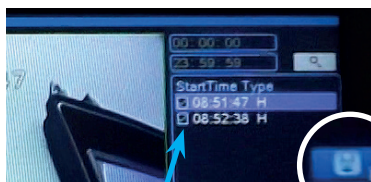
**BOTTOM LEFT: PLAYBACK MENU**

#UNDERWATERNATURALLY

## 12 - EXPORT FILES ON EXTERNAL DRIVE



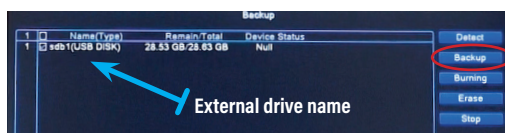
Insert pen drive or hard disk in the USB BACKUP port right click on the screen → playback → choose which channel you want to access (1/2 or all) → click the refresh button to display the files list of multimedia contents and related data for each file → (as shown before).



Flag/unflag files to confirm

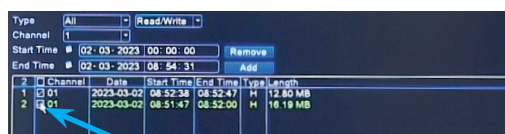
Choose the files you want to save in your pen drive → click drive icon to proceed saving

Drive icon



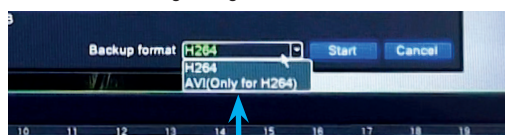
External drive name

External drive will be automatically detected by the unit and displayed  
If not → click "Detect" button  
Click → **"Backup"** button to save files.



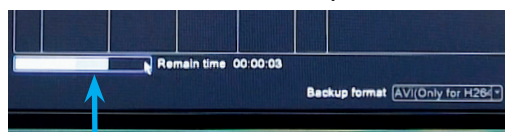
Flag/unflag files to double confirm

Confirm the files you want to save, simply flag/unflag the files →



Format options

Choose the format in which you want to save the file → click "start" to initiate export

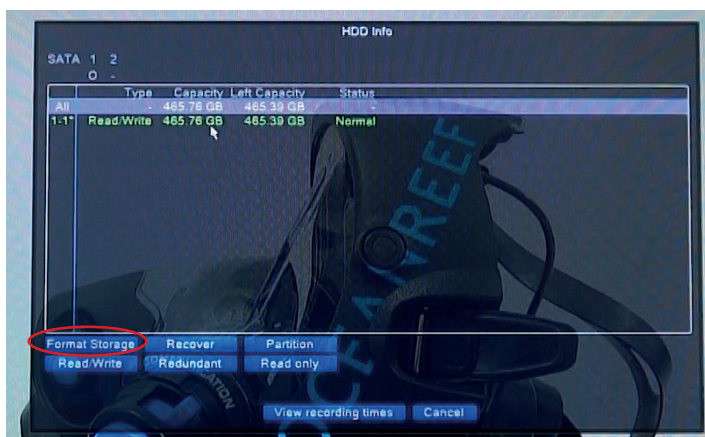


Remain export time

Confirm the files you want to save, simply flag/unflag the files → choose the format in which you want to save the file → click "start" to initiate export



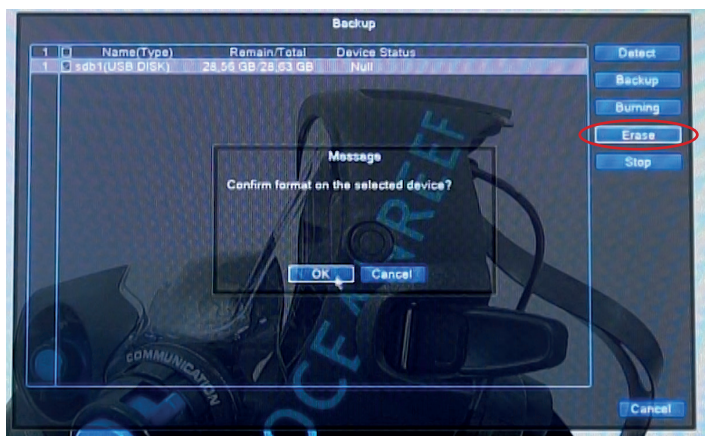
## 13 - DELETE ALL FILES ON GAMMA HD



Right click on the screen → Main Menu → Advanced → HDD info

Select the hard disk and click on **"Format Storage"** button then confirm simply by pressing the "OK" button.

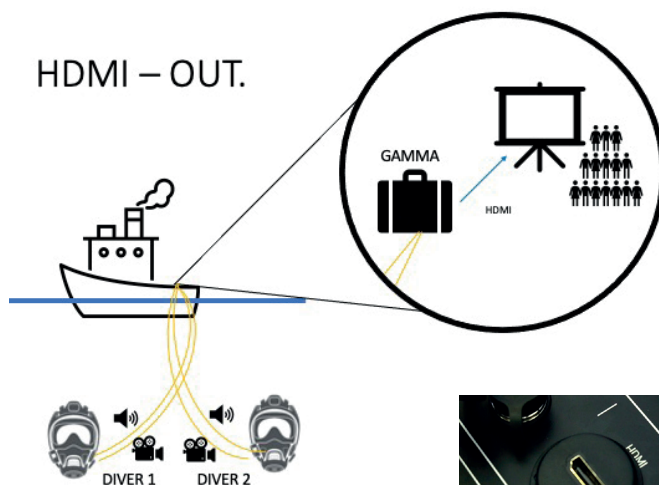
## 14 - DELETE ALL FILES ON EXTERNAL DRIVE



Insert pen drive or hard disk in the usb backup port

Right click on the screen → Main Menu → System → Backup  
select hard disk and click **"Erase"** button  
then confirm simply by pressing the "OK" button

## 15 - HDMI CABLE CONNECTION



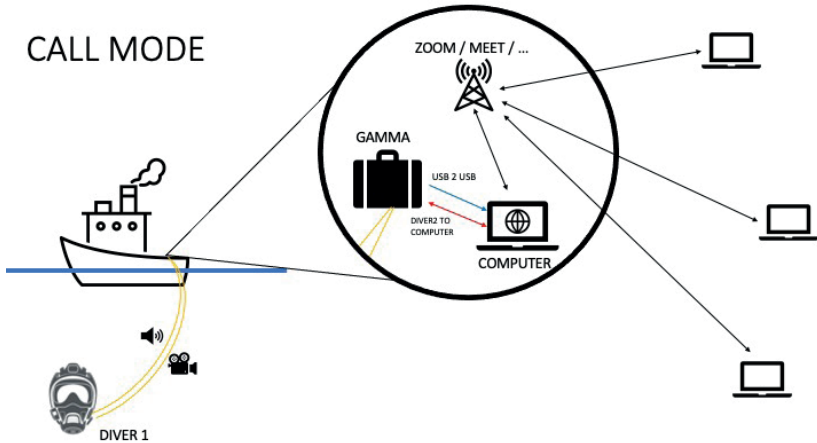
Video and audio out from Gamma Alpha HD to a screen



Use a (non provided) HDMI cable.  
Connect it to the HDMI Gamma Alpha HD port.  
Connect other end of cable to your screen.



## 16 - DIVER 2 TO COMPUTER CALL MODE



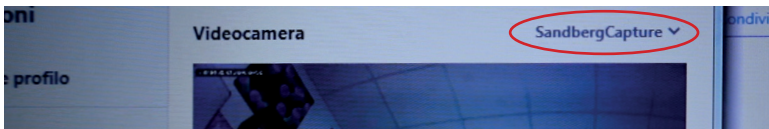
The Diver 2 to Computer - "Call Mode" allows the use of audio and video of diver 1 to be displayed live on an internet based call (ie : google meet, zoom, teams, skype). Diver 1 will be one of the participants of the call.

NOTE: it is possible to use the call mode for more than 1 diver



VIDEO SIGNAL

Use a (not provided) USB type A male to male cable.  
Connect it to the video out/ USB live Gamma Alpha HD port.  
Connect other end of cable to your PC or MAC computer



Your Computer should automatically recognize the uw camera as an external video device. Name: "**Sandberg capture**".  
Just like an external webcam or camera

#UNDERWATERNATURALLY



Connect the (optional) Diver 2 to Computer (Code:OR08513) cable to the Diver 2 port on the GammaAlpha HD



Turn the audio unit on by turning the speaker volume button.

Set Diver 1 and Diver 2 volume to half power.

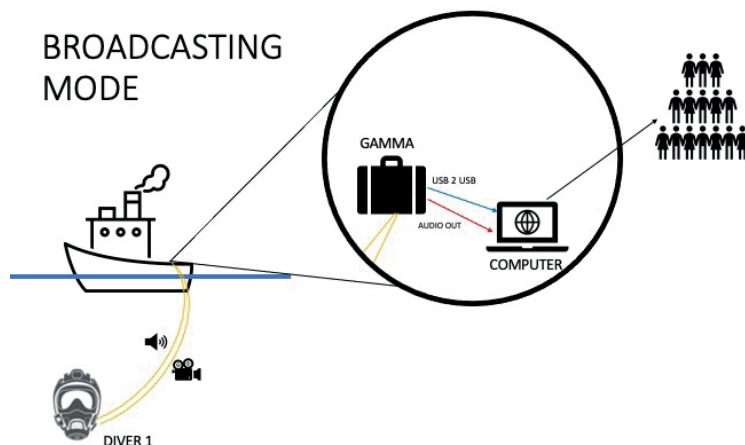


Make sure both channels (Diver1 and Diver 2 ) are on!



Connect audio out and microphone jack connectors of the "Diver 2 to Computer" cable to your computer

## 17 - USB LIVE CABLE AND AUDIO OUT CABLE: *BROADCASTING MODE*



With Alpha Gamma HD it is also possible to use the broadcasting mode using the USB male to male cable (not supplied) in the USB live port and the audio out cable (sold separately as optional) as shown above at pag

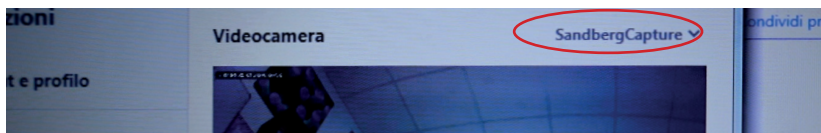


NOTE! if you do not need to broadcast the audio signal you can simply use only the USB male to USB male cable for video signal out.



VIDEO SIGNAL

Use a (not provided) USB type A male to male cable.  
Connect it to the video out/ USB live Gamma Alpha HD port.  
Connect other end of cable to your PC or MAC computer



Your Computer should automatically recognize the uw camera as an external video device. Name: "**Sandberg capture**".  
Just like an external webcam or camera

#UNDERWATERNATURALLY



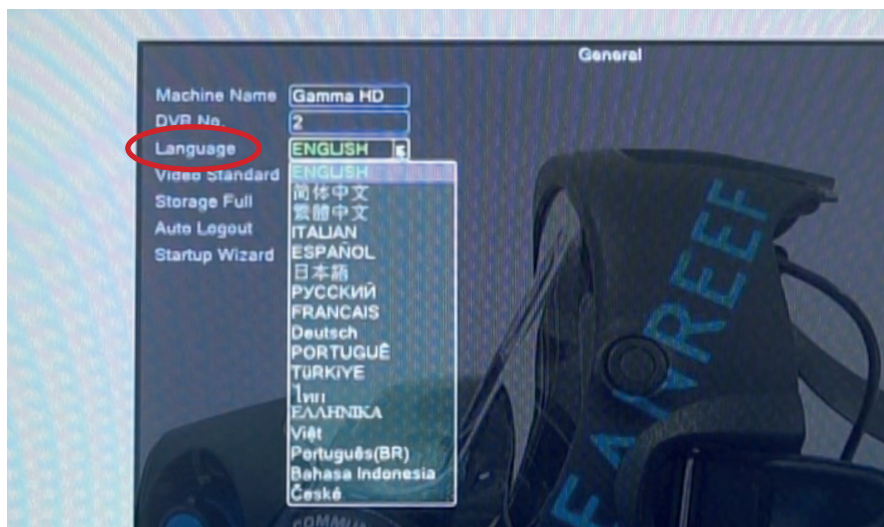


Use a (optional) audio out cable (code: 008590)  
 Connect it to the AUDIO OUT/CHARGER Gamma Alpha HD port.  
 Connect other end of cable to your audio source

## 18 - USEFUL SETTING OPTIONS TO KNOW

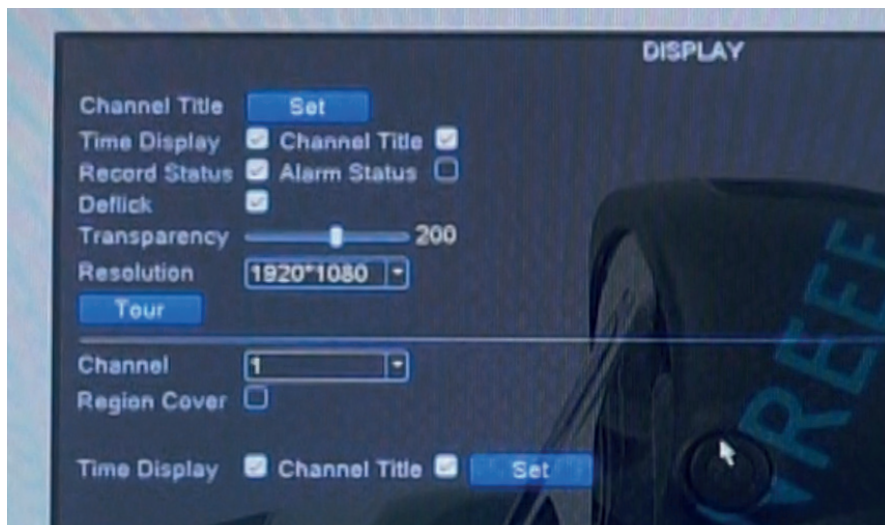
### SETTING THE LANGUAGE

Right click on the screen → main menu → system → general → select your preferred language → "ok" to confirm



## DISPLAY OPTIONS: HIDE/SHOW/MODIFY DATA ON RECORDING FRAME

Right click on the screen → Main Menu → System → Display → set data as preferred  
→ OK to confirm



Language changes after restarting the unit

## BALANCE CAMERA COLORS AND SETTINGS

Right click on the screen → color setting → adjust the settings as preferred → ok to confirm



It is also possible to adjust these settings with the remote control.

## BALANCE THE MONITOR COLORS AND SETTINGS

Right click on the screen → output adjustg → adjust the settings as preferred → ok to confirm



It is also possible to adjust these settings with the remote control.

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### Replacing the Mic

Remove the MIC assembly from the mask, unscrew few threads of the two little side screws and pull off the Mic. Replace with the new one being careful not to overtighten the little screws to avoid damages to the contacts and to mount the microphone in the same direction.





## 19 - TROUBLESHOOTING

Problem	Probable cause	What to do
<b>The surface unit does not turn on</b>	1. Low battery	1. Recharge the batteries
<b>The underwater comm. unit does not receive</b>	1. Power turned off 2. The surface diver cable is not attached to the surface unit 3. Low volume	1. Turn on the surface unit 2. Check the surface unit connection 3. Turn up volume
<b>Surface is not receiving audio signal</b>	1. Volume too low 2. Power turned off 3. Flooded microphone on underwater comm. unit	1. Raise volume on the surface audio and check the power 2. Turn on the surface unit 3. Return to surface, rinse in fresh water, replace mic
<b>Recall system</b>	1. Issues with the underwater comm. unit button 2. Issues with the surface unit alarm system	1. Return to surface, rinse in fresh water and send to OCEAN REEF service center 2. Return to surface and send to OCEAN REEF service center
<b>Surface not receiving video signal</b>	1. Disconnected plugs 2. General power off 3. Monitor turned off 4. Flooded camera	1. Disconnected plugs 2. General power off 3. Monitor turned off 4. Flooded camera
<b>Video signal not clear</b>	1. System not at full speed	1. Wait some minutes
<b>Colours not real</b>	1. Bad monitor settings	1. Adjust monitor or camera parameters

## 20 - MAINTENANCE, CLEANING AND STORAGE

### 20.1 MAINTENANCE AND CLEANING

The underwater comm. unit will work perfectly if the periodic program of maintenance and cleaning collected in Table 2 is applied during its whole life from the first use.

General and visual inspection means checking that all the components and parts are not damaged, and verifying there is not any wear and tear. No damages must be detected on the product. If damages are detected, the product cannot be used until repair.

TYPE OF ACTION	FIRST USE	BEFORE EACH USE	AFTER A DIVE
GENERAL FUNCTION CHECK	X	X	
GENERAL AND VISUAL INSPECTION	X	X	
CLEANING /RINSING (UNDERWATER COMM. UNIT. AND CABLE)			X

Table 2: Periodic maintenance program



**For optimum longevity of the product and the proper functioning of its parts, we recommend rinsing the underwater comm. unit and the cable thoroughly with fresh water after every use. DO NOT clean the product with any abrasive materials.**

**No chemical should be used. We recommend drying the unit with a soft, clean cloth.**



Do not use solvents (such as diluents) to clean the unit. They can cause irreparable damage. Only use neutral detergents.



Use fresh water to remove the seawater from your UW unit after each use. The product must be stored completely dry.



Do not expose the unit to direct sunlight for prolonged periods of time.

### 20.2 STORAGE

The product should be stored in a ventilated environment preferably between 0°C (32°F) and +40°C (104°F), avoiding the direct action of sunlight, pollution, dirt, etc.

## 21 - WARRANTY

1. The OCEAN REEF GAMMA ALPHA HD is guaranteed to be free of material or manufacturing defects for a period of 24 months from the time the unit is purchased.
2. For the duration of the above mentioned warranty, the Company's responsibility is limited to replacement of any parts that are defective and that have not been used incorrectly or handled negligently. The product must be returned to the outlet from which it was bought.
3. Even during the warranty period, this warranty shall not be valid where:
  - Damage was caused by incorrect handling or carelessness.
  - Damage was caused by the product falling after it was purchased.
  - Damage caused by fire, earthquake, floods, lightning, or other natural disasters.
  - The warranty card is not produced.
  - Your name, the date of purchase, and the distributor's name do not appear on the warranty card.
  - The product has not been serviced as required through an OCEAN REEF authorized service center.
  - The product has been tampered with or has been repaired/service with non-original parts.

You can find a copy of this and other OCEAN REEF manuals online on our website. In order to limit our paper consumption, and as a part of our environmental friendly and responsible approach, OCEAN REEF recommends, in case you lose or damage this manual, to consult the documentation present online rather than print it out.

Please refer to our web site:

[diving.oceanreefgroup.com/support/](https://diving.oceanreefgroup.com/support/)



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