

# Audio/Video Unit



**OWNER'S MANUAL**

**OCEANREEF**<sup>®</sup>  
connecting divers

**GAMMA-ALPHA 2010**



## **GAMMA-ALPHA 2010**

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## **WARNINGS, CAUTIONS, NOTES**

Pay special attention when 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.

## INTRODUCTION

The GAMMA-ALPHA is an hardwired audio and video communication system. The surface unit may be connected by audio and video to 2 divers.

The GAMMA-ALPHA allows conversations between the surface and one or two divers, powered volume for both diver and surface, adjustable volume (from surface unit) for both diver and surface.

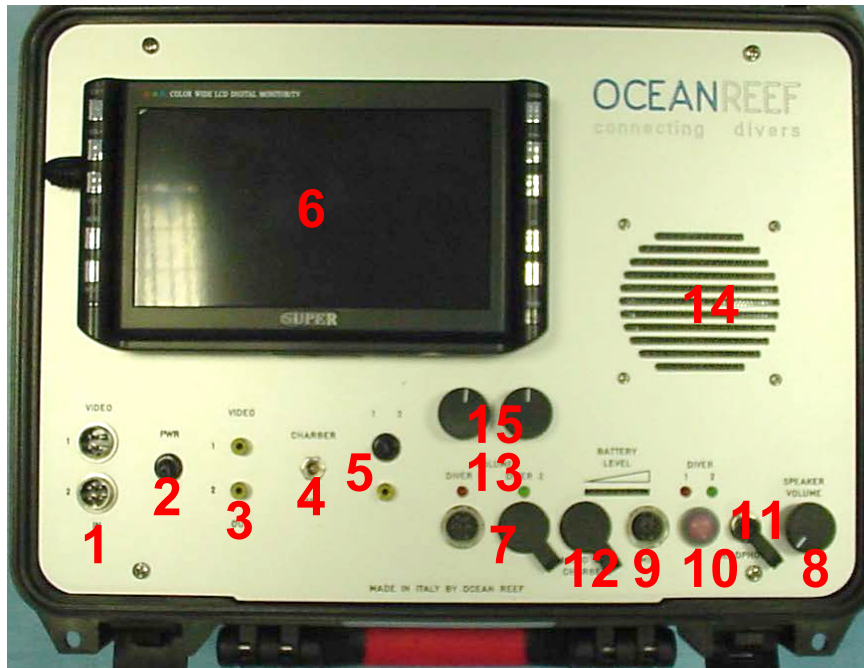
With regards to the video, the installed 7" LCD color monitor displays the video feed coming from the UW camera of diver 1 or diver 2. It is possible to switch the video to external monitors / recorders. There are 3 different possibilities of video recording: diver 1 through video out plug #1, diver 2 through video out plug #2, mixed through the video out plug under the switch. With this third option, one can record the same images you see in the 7 inch monitor.



## COMPONENTS

The system consists of the following items:

### Surface unit (OR033106)



#### VIDEO SIDE

1. 2 video input ports
2. Power switch
3. Video out port for diver 1 & 2
4. Charger port
5. Diver 1 or 2 switch for monitor and audio out
6. 7 inch colour monitor

#### AUDIO SIDE

7. 2 ports for 2 communication cables
8. On/off and volume adjustment switch
9. Microphone port
10. Switch for communication between surface & diver 1, surface & diver 2, surface & diver 1 & diver 2
11. Headset port (headset optional)
12. Battery charger, external power & audio out port (cables optional)
13. Audio/video recall
14. Incorporated speaker
15. Underwater unit volume adjustment (for both divers)
  - 12v rechargeable battery
  - Battery charger

**One professional surface/diver cable (50meters -165 ft long) (if sold separately code OR033134)**



1xmini rg59 + 4x0.18mm<sup>2</sup> cable with a polyurethane jacket to better resist to salt water. The whole cable is covered with a rope made to resist to 4000N pull strength.

The cable includes waterproof rubber 6 pin connector at the diver side and DIN connector on the surface side.

The Professional cable is also available at any length on request.

A carry-bag is available with the cable and sold separately as an accessory.



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



It is fundamental to pay attention that the cable does not get stuck on the boat or on the seafloor. 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 unit. It is a good idea to connect the cable with a hook or retractor to the BC jacket, avoiding any traction between the surface and the underwater unit. 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

**One underwater unit (if sold separately  
code OR033135)**



- Waterproof piezoelectric speaker
- D-Mic microphone
- Full-duplex system
- Audio/video recall button
- 6 pin waterproof connector
- NACS support system



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



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



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

**One CCD micro video camera with underwater housing (if sold separately PAL = code OR008574 - NTSC = code OR008573)**



The cable is a mini RG59 + 4x0.18mm<sup>2</sup> cable with a polyurethane jacket to better resist to salt water. The whole cable is covered with a rope made to resist to 4000N pull strength. It is equipped with an 4pin connector on the surface side and a 4 pin rubber connector on the diver side.



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

## POSSIBLE AUDIO INTERACTIONS BETWEEN DIVERS AND SURFACE

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

### DIVER 1 SELECTED

	<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

### DIVER 2 SELECTED

	<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

### DIVER 1&2 SELECTED

	<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

## GAMMA-ALPHA 2010 POSSIBLE AUDIO CONFIGURATIONS

The 6 pin connector of the professional cable makes it possible to connect different underwater units to surface unit:

1. X-DIVER underwater unit
2. GSM CUBE<sup>3</sup>
3. MHA-2 trough the GC2008 or GC2010 adapter



You can choose the underwater unit you like, connect and disconnect it underwater, and use different kinds of them at the same time in the two diver ports.



Don't try to use the GC2008 or GC2010 adapter to connect the X-DIVER underwater unit or the GSM-CUBE<sup>3</sup> to the cable!!



Be careful about the correct alignment of the GC2008 adapter (see GC2008 folder)

## DIFFERENT POSSIBILITIES OF VIDEO RECORDING



The GAMMA-ALPHA 2010 has three different possibilities of video recording (or external screen playing):

Through plug #1 it is possible to record only diver one camera regardless of what is displayed on the monitor.

Through plug #2 it is possible to record only diver two camera regardless of what is displayed on the monitor.

Through plug #3 it is possible to record exactly what you see on the monitor (selected through the selection switch #4)

## TROUBLESHOOTING

<b>Problem</b>	<b>Probable cause</b>	<b>What to do</b>
The unit does not turn on	Low battery	Recharge the batteries
The underwater unit does not receive	Power turned off Flooded underwater unit The surface diver cable is not attached to the surface unit	Turn on the surface unit Return to surface, rinse in fresh water and send to Neptune service center Check the surface unit jack connection
Surface is not receiving audio signal	Volume too low Power turned off Flooded microphone on underwater unit Underwater unit not working	Raise volume on the surface audio and check the power Turn on the surface unit Return to surface, rinse in fresh water, replace mic Return to surface, rinse in fresh water and send to Neptune service center
Whistle noise	Defect in the alarm system	Return to surface, rinse in fresh water and send to Neptune service center
Alarm system not working	Defect in the underwater unit button Defect in surface unit alarm system	Return to surface, rinse in fresh water and send to Neptune service center Return to surface and send to Neptune service center

Surface not receiving video signal	Disconnected plugs	Connect plugs
	General power off	Switch on
	Monitor turned off	Switch on
	Flooded camera	Send for servicing
Video signal not clear	System not at full speed	Wait some minutes
Colours not real	Bad monitor settings	Adjust monitor parameters

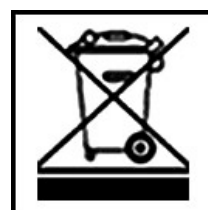
## WARRANTY

(1) OCEAN REEF communication units are guaranteed to be free of material or manufacturing defects for a period of 24 months from the time the unit is purchased. For the duration of the guarantee, the Company's responsibility is limited to replacement of any parts that are defective in our opinion, and that have not been used incorrectly or handled negligently. The unit must be returned to the outlet from which it was bought, along with the warranty card. The cost of transport is to be prepaid by the customer.

(2) Even during the guarantee period, this guarantee shall not be valid where:

- Damage was caused by incorrect handling or carelessness.
- Damage was caused by the unit falling after it was purchased.
- Damage caused by fire, earthquake, floods, lightning, or other natural disasters, pollution or electrical charges.
- The warranty card is not produced.
- Our name, the date of purchase, and the seller's name do not appear on the warranty card.

(3) Additional warranty cards cannot be issued. Keep your certificate in a safe place where it cannot be lost.





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