



**APPENDIX TO UNDERWATER  
COMMUNICATION UNITS MANUAL**

**OCEANREEF®**  
connecting divers

**THE  
AV  
MS  
ES  
ES**



## **GSM VHF**

### **Basic configuration code : OR033123**



The GSM VHF is a very unique communication system with the integration of Ultrasonic / Underwater communication features and the VHF long distance communication requirements. It is mainly dedicated to Rescue Team Divers and was developed thanks to the collaboration with the Italian Red Cross.

The unit is made by a complete GSM standard hardwired to a specially modified waterproof radio carrying bag in which a number of different models of VHF radios may be inserted and interfaced.

It is necessary to specify the kind of the radio used and OCEAN REEF will customize the required interface cabling.

The waterproof radio carrying bag may be connected to the BCD or shoulder of the diver (carabineer and strap are included in the package).

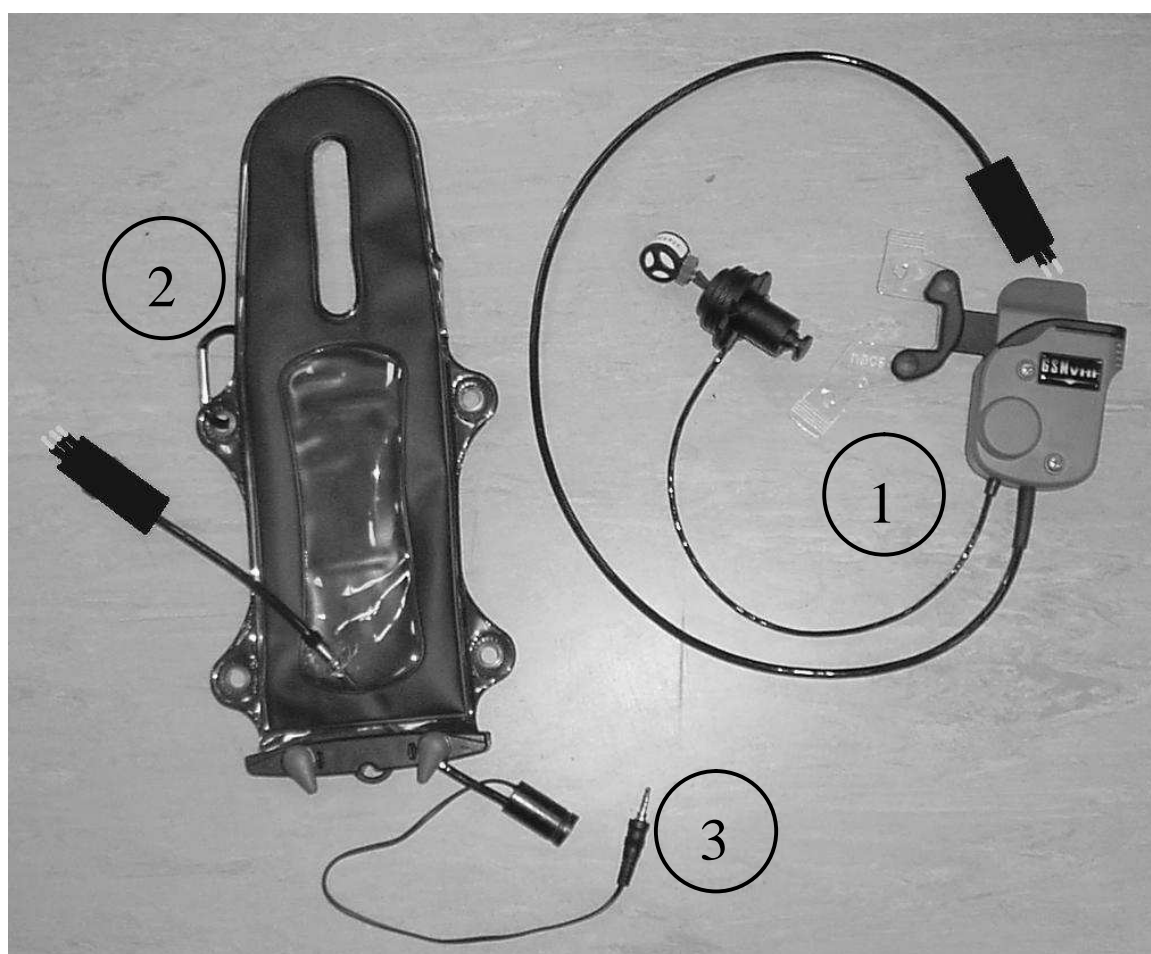
The GSM may be disconnected from the waterproof radio carrying bag by a rubber waterproof installed connector. It allows for the diver to separate the mask / com unit from the VHF radio complex.

When the diver is underwater he/she may communicate with other divers and the surface with the GSM unit acting as a PTT unit. While at the surface, the radio operates and receives audio that can be heard through the speaker of the GSM unit while the transmission is effected by the mask built in microphone just by pressing the PTT. The diver doesn't need to press any additional button to switch from an ultrasonic diving scenario to air VHF communication. The diver may communicate at the surface with any operator on a helicopter, boat or land even at long distance (depending on the kind of installed radio). One does not need to remove the mask and may continue to operate by wearing the mask and the underwater communication unit (GSM). The two systems (underwater and VHF) have completely independent sources of power. The VHF works even if there is no battery in the main unit of the GSM or if it is switched off.

The diver may decide the VHF band and channel before or during the dive (this feature is in accordance of the radio model) The GSM VHF doesn't come with the radio. It must be supplied separately. Use of VHF radio requires local authority's permission or licensing.

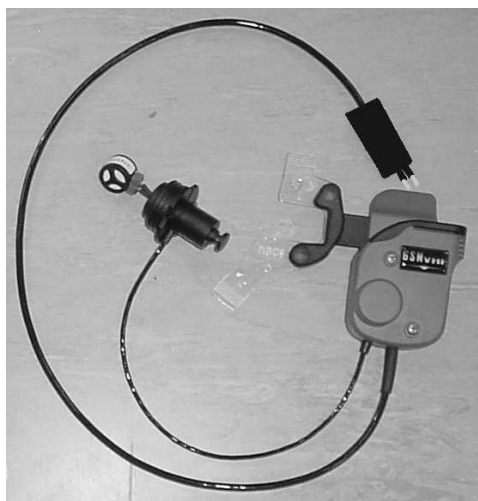
## COMPONENTS

1. GSM unit with connection to VHF
2. waterproof radio carrying bag with wire and connections
3. customized accessory to connect the radio to the GSM



## **Underwater Unit**

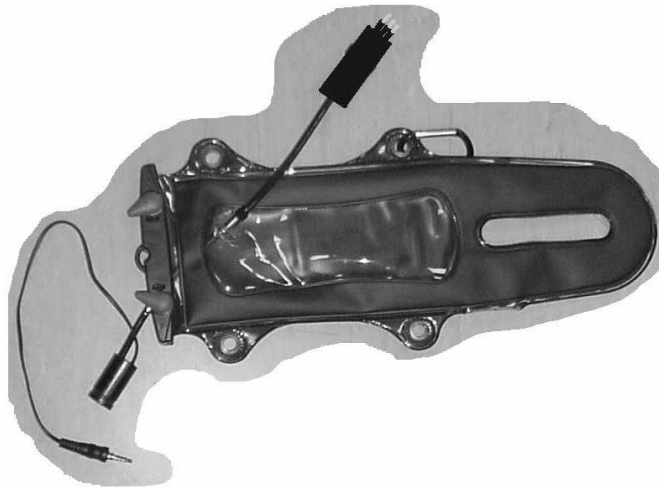
The underwater communication unit is a GSM unit. It has an orange high visibility color and a rubber coating and a cable with a connection coming out from the housing, this is for connection to the radio unit.



To see the GSM instructions please refer to the Underwater Communication Units Manual enclosed.

## **Waterproof Radio Carrying Bag With Wire And Connections**

The bag is made of a strong reinforced vinyl specifically designed for rigorous everyday use with a clear window to see inside. It has 4 buttonholes to fasten it to your BCD. Suitable for both left- and right-hand antenna radios. The underwater bag is guaranteed to 30ft/10 meters depth. The bag has been specifically modified with a valve to let the cable that connects the underwater unit (on the outside) to your vhf radio (inside).



### **Customized Accessory To Connect The Radio To The GSM (and radio on request)**

Qualified VHF radio tested by OCEAN REEF laboratories are the YAESU VX-7R and the ICOM IC-M87. Different models can be used if equipped with the accessory “speaker and microphone.”



## HOW TO USE THE GSM/VHF

The underwater communication unit works, when submerged, as a GSM (for user's manual please refer to the Underwater Communication Units Manual enclosed).

When the underwater unit is connected to the VHF, it works as the speaker. This mean that, when the VHF antenna is out of the water, you can talk to other people having a radio without taking off your Full Face Mask and by simply pressing the PTT button.

**The VHF will still work through the GSM even when the underwater unit is turned off (for example: out of water or without batteries).**

The underwater unit and VHF, if turned on, work together. If the divers head is underwater but the VHF antenna outside, the diver can talk to and receive communication from both divers and surface assistants at the same time.





## STEPS

1. Insert the batteries in the GSM and connect it to your FFM
2. Connect the cables between the GSM and the VHF
3. Turn on the radio and choose your channel
4. Check the transmission and the reception both as an Under Water Communication Unit and as a VHF radio
5. Lock the keyboard, if possible, and insert the radio inside the underwater bag and close it carefully (pic1)
6. Attach the radio in a comfortable position on your BCD so that the antenna is out of the water when at the surface (pic2)



1



2

## **WARNINGS**

To see the radio instructions please refer to your radio owners manual.

**If you dive too deep your radio may Implode! Please be careful.**

BEFORE USING YOUR GSM/VHF INQUIRE ABOUT  
LOCAL LAWS!





OCEAN REEF  
Via Arvigo 2, 16010 Genova (Italia)  
Phone +39 010 6598 611 Fax +39 010 6598 622  
e-mail [ocean.reef@oceanreefgroup.com](mailto:ocean.reef@oceanreefgroup.com)

OCEAN REEF, Inc.  
1699 La Costa Meadows Dr. Suite 101 San Marcos, CA  
92078  
Phone +1 760 744 9430 Fax +1 760 744 9525

OCEAN REEF on the Internet  
<http://www.oceanreefgroup.com>

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