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INTRODUCTION

Congratulations! You have just purchased the most sophisticated underwater communication system on the market.

DIVELINK is a voice operated wireless transceiver for underwater communication between two or more divers. It allows divers to talk "hands free" to each other, or to the surface with a DIVELINK surface unit.

DIVELINK is worn on the head on the face mask strap.

DIVELINK employs the latest in micro-electronics technology, and has been engineered to be as simple to use as possible. There are no adjustments to slow you down. *DIVELINK is fully automatic*. An advanced voice analysis circuit engages the transmitter when voice is detected, then switches back to receive mode immediately after talking.

Ordering Information

The head mounted style diver communicator is available in several configurations. The following options are available, and will be specified at the time of purchase:

COM-FF **This is the prefix for the head mount style Full Face Mask Diver Communicator.**
Order with separate Microphone model MPC-xxx listed below:

Options:

Frequency

OPTION-1x One channel (select A, B or C instead of "x") with Emergency Tone on power switch position 3.
OPTION-2xx Two channels (select AB, AC, BC etc. instead of "xx") – power switch also selects channel.

"x"	Frequency Selection
A	31250 Hz Upper Sideband
B	Public Safety Channel
C	32768 Hz Upper Sideband

Ordered separately from above:

MPC-

-AGA	AGA Interspiro Mk II Full Face Mask.
-DRAGER	Drager Full Face Mask.
-EXO	EXO Full Face Mask.
-KM48	Kirby Morgan Super Mask M48.
-MANTIS	Mantis Full Face Mask.
-POSEIDON	Poseidon Atmosphere Full Face Mask.
-REEF	Ocean Reef Neptune Nira.
-SCUBAPRO	SCUBAPRO Full Face Mask.
-UC01	Half Mask mouthpiece for use with eye mask.

This manual will refer to the above options, and will describe operation of the communicator unique to each option.

GENERAL PREPARATION

Charging the Battery Pack

BAT-U01-EM-NIMH

The standard battery shipped with the COM-FF unit is the BAT-U01-EM-NIMH Nickel Metal Hydride battery pack. Charge the battery pack with CHG-QC1-UNIV until all lights appear. After the pack is used to power DIVELINK, it is not necessary to fully discharge the battery pack before recharging. A partially discharged pack will continue to give good service when recharged routinely to full capacity from the partially charged state. For best results use the battery within two weeks after charging.

Use only chargers supplied by DIVELINK. Use of any charger other than charger CHG-Q01-UNIV with the model BAT-U01-EM-NIMH battery pack will void the warranty.

Ensure that the battery pack O-ring is lubricated with silicone grease, is not damaged, and stays in its groove. Silicone grease is available from your local dive shop and is also used for the O-ring on your SCUBA tank. Annual replacement of the O-Ring is essential, and the O-Rings may be ordered under part number ORG-01.

You may want to consider purchasing another DIVELINK battery pack. This will allow you to extend the in-field operating time of DIVELINK communicators by connecting fresh batteries during the surface interval.

Alternately, at a later date you can order the following Energy Management battery packs under the following ***part numbers***:

The DIVELINK model BAT-U01-EM-NIMH is a fast-charge type Nickel Metal Hydride battery pack. It contains a digital battery management system that limits charge and at the same time provides a “gas gauge” display of charge at all times during active use. Charge with quick charger CHG-QC1-UNIV.

CHG-QC1-UNIV with BAT-U01-EM-NIMH

These quick charge packs can also be charged with car cigarette lighter charger model CHG-CIG, ordered separately.

CHG-CIG

The Energy Management Battery Pack*:*

The BAT-U01-EM-NIMH is an “intelligent” battery pack. It monitors the amount of charge and discharge activity, and will display the percentage of charge. It also cuts off the charge current automatically when at 100% charge, regardless of fast or slow charge.

To use this battery pack, simply plug it into your DIVELINK unit. When you turn the unit on, you will notice that the LED’s in the battery pack will light up after about 30 seconds. (This delay is normal and may vary.) The LED’s will light up when there is charge or discharge activity and indicate how much energy is in the battery pack (please refer to the Charge Status table below).

When the red (far left) LED is the only one lit, or if it is flashing, then it is time to recharge the battery pack using the supplied charger. When the first five LED’s are lit, (red to green) the battery pack is fully charged and ready for use. The battery pack does not have to be fully charged before it can be used, but the DIVELINK unit won’t get as much operation time out of partially charged pack.

The sixth LED indicates the charge status. If it is off, the internal energy management (EM) system is allowing a full rate charge to the battery. When this LED is on, or on and flashing occasionally, it means that the battery is fully charged and no further charge will be accepted if plugged into a charger.

You may notice that your battery pack reacts slightly to temperature changes. The EM computer monitors the temperature of the battery pack, and will shut down the charging if the battery gets too warm. If the battery is in a warm environment when charging, it may not get a full charge and if you were to then use it in a cool environment, you may notice that the fully charged battery seems to lose charge quickly at first. This can be avoided by charging the battery in a cool dry place, out of direct sunlight.

BAT-U01-EM-NIMH

Specifications

BAT-U01-EM-NIMH:
Battery Type: Nickel Metal Hydride
Battery Rating: 1650 mAH matched cells
Battery Life: Over 9 hours.
Short Circuit: Continuous Short Circuit is Allowable.
Amperage: Up to 300 mA continuous current is available.
Voltage: 9.6 Volts under load at full charge.
Charger: May be charged with
- CHG-QC1-UNIV (quick charger)
- CHG-CIG (car cigarette lighter plug charger)

CHARGE STATUS LIGHTS					
20%	40%	60%	80%	100%	Charged
RED	AMBER	AMBER	AMBER	GREEN	GREEN

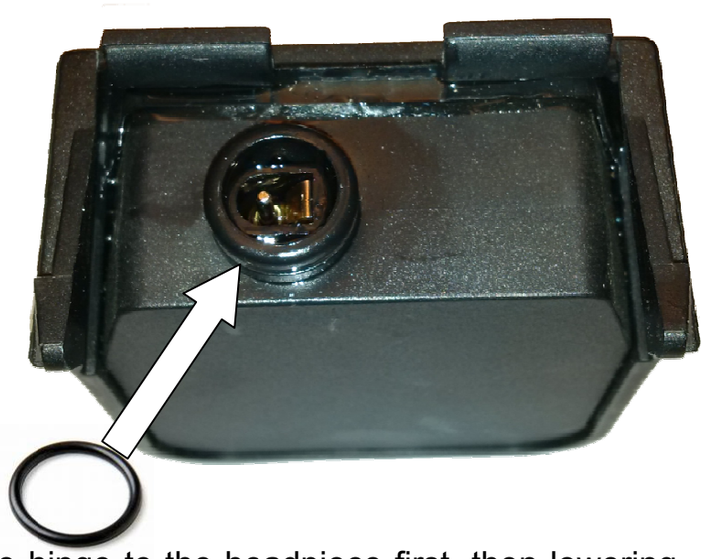
Charger CHG-QC1-UNIV is a UNIVERSAL voltage mains input charger
(100-240 VAC 50-60Hz) with plug adapters for:

Japan
North America
Europe
UK
Australia
China

CHG-QC1-UNIV with Plug Adapters

Installing the Battery Pack

The connection at the battery pack and at the headpiece must be clean, DRY and free of corrosion. A light coating of silicone grease on the terminals will help prevent corrosion. Do not fill the terminal cavity completely with grease. Both the battery pack and headpiece should be inspected every time before connecting.

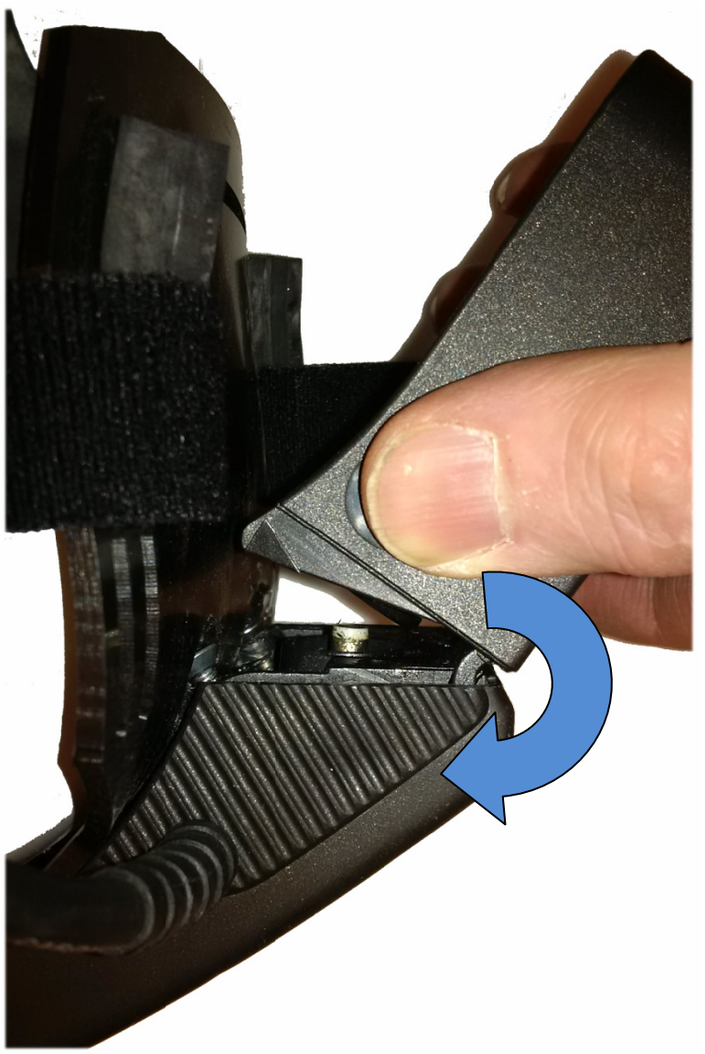


Ensure that the O-Ring is installed and has grease applied. Replace it annually as part of a maintenance program.
O-Rings may be ordered, part: ORG-01

Insert the charged battery by attaching the hinge to the headpiece first, then lowering the pack so that the sides snap into the headpiece. **Ensure that both sides snap into the headpiece.**

Removing the Battery Pack

To remove the battery pack, use the following procedure to prevent water from dropping onto the terminals: DRY the pack with a towel, **turn the communicator so the battery pack connection is DOWN**, then press the dimples on the sides of the battery pack together using your thumb and forefinger. Rotate and lift the pack away until the hinge separates.



Never disconnect the battery pack under water. If this occurs, the battery pack will need to be replaced and cannot be repaired. By the time you get to the surface, the battery terminals will be corroded. The warranty does not cover this circumstance, however the headpiece will not be damaged if:

1. The battery pack is not reconnected under water.

2. The connector on the headpiece is flushed thoroughly with fresh water and dried.

The battery pack is filled with a neutral electrical insulation gel. This prevents water ingression or condensation, and also helps dissipate heat during fast charge.

Mask Type to connect

Communicators for Full Face Masks

Full Face Mask communicators are shipped with a headpiece adapter plate and underwater disconnectable waterproof microphone suited to your Full Face Mask:

 Model COM-FF with Kirby Morgan M48	 Model COM-FF with Poseidon Atmosphere
 Model COM-FF with SCUBAPRO	 Model COM-FF with Mantis
 Model COM-FF with Interspiro AGA	 Model COM-FF with Drager

Full Face Mask Model DIVELINK Communicators

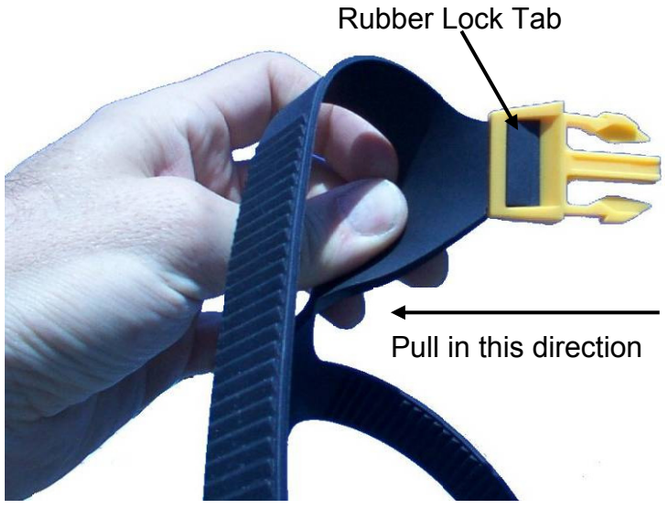
Attaching Your Full Face Mask

The COM-FF DIVELINK models for full face mask come with a plastic adapter plate that is specific to the full face mask model to accommodate various types of spider strap configuration.

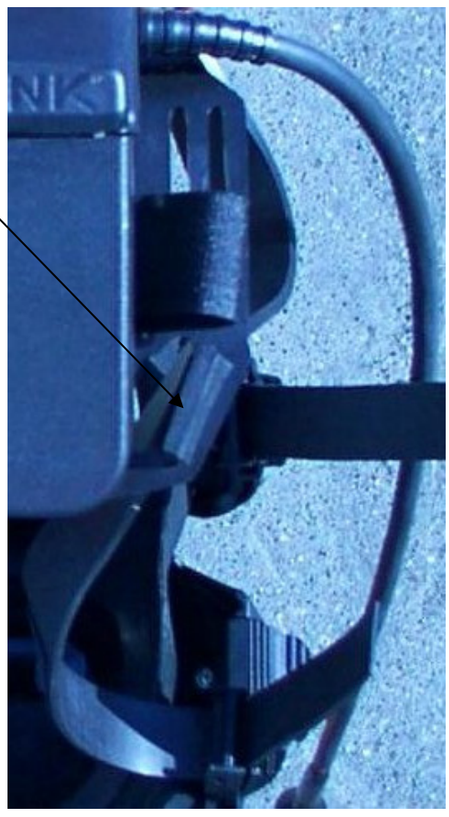
Mask Type to connect

Kirby Morgan M48 Full Face Mask

Remove the plastic male and female snap connectors from the M-48 spider straps by using a blunt flat instrument (such as a blunt butter knife). Lay the flat side of the snap connector down on a flat hard surface and push down with force on the ***Rubber Lock Tab*** while pulling gently on the spider strap. (You may need an assistant to hold the snap in place).



Push the rubber lock tabs of the spider strap through the lower holes of the adapter plate.



Use double sided Velcro at the nose of the communicator to go up, through the adapter plate slot, then down the next slot, then around the spider strap.

Mask Type to connect

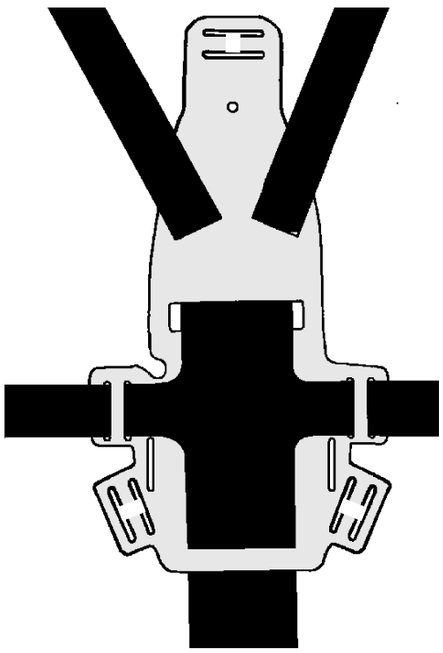
SCUBAPRO or Poseidon Full Face Mask

If existing, remove the five plastic rivets from the ends of each of the five straps, then remove the straps from the mask. Weave the straps through the five slots provided on the edges of the adapter plate. The velcro strap is then attached through two slots to secure the battery pack.

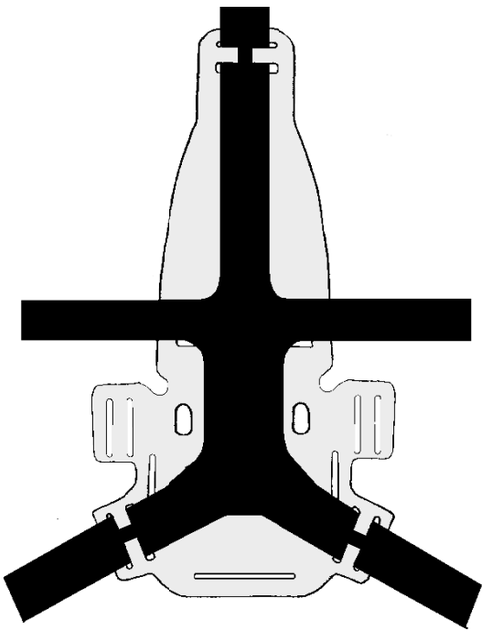
Mask Type to connect

Adapter Plate and Full Face Straps

The PLA-ADP-KIT adapter plate provides slots for alternate full face masks.

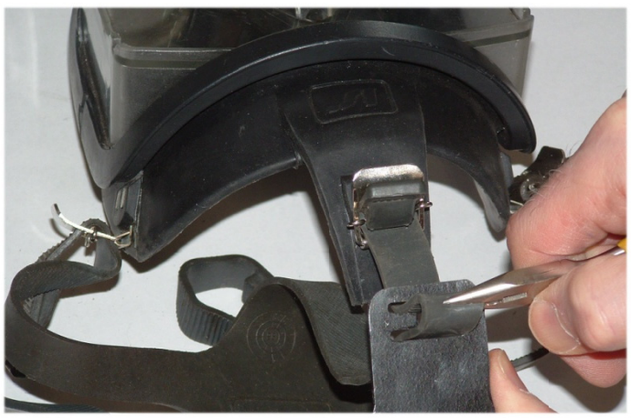


PLA-ADP-KIT
Ocean Reef



PLA-ADP-KIT
Interspiro AGA

The AGA mask straps may be installed at three locations in the slots without removing the straps from the full face mask buckles. The straps are installed in the slot then pulled through as shown above with needle nose pliers.

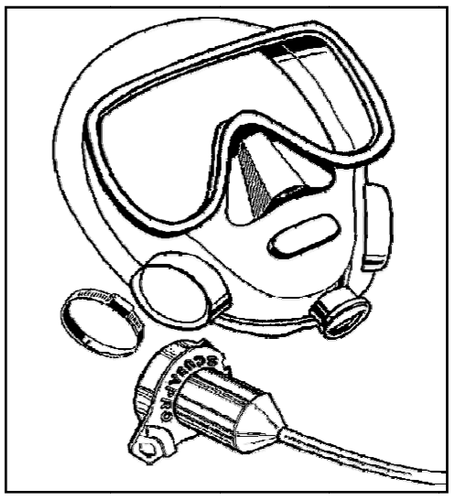


INSTALLATION of MICROPHONES to FULL FACE MASKS

SCUBAPRO Full Face Mask Microphone Installation

Remove the bottom left strap buckle from the blank plug on the full face mask. Loosen the plug band and remove the plug that normally comes with the stock full face mask.

Install the DIVELINK microphone plug, and orient such that the buckle attachment is at the correct location for the strap buckle, then tighten the plug band. Re-attach the bottom right strap buckle.



Ocean Reef Full Face Mask Microphone Installation

The Ocean Reef full face mask comes with two blank plugs for microphone or alternate regulator. Unscrew the plug on the right side of the mask but make sure the O-Ring remains on the seat of the mask. Replace it with the DIVELINK microphone part MPC-REEF after disconnecting the microphone from the DIVELINK headpiece.

MPC-REEF

Ocean Reef Full Face Mask

AGA or Poseidon Full Face Mask Microphone Installation

The AGA or Poseidon full face mask comes with a blank plate in the microphone port. Unscrew the two screws and remove the blank plate.

This is DIVELINK microphone adapter part number MPC-AGA for AGA (similar part MPC-POSEIDON for Poseidon).

MPC-AGA

Press the microphone into the port, ensure the O-Ring fits properly, and tighten screws.

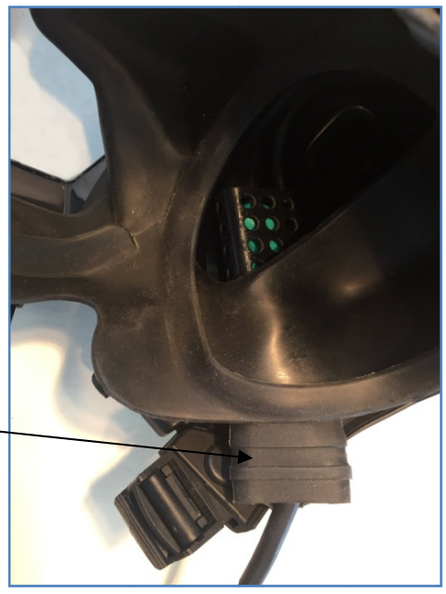
AGA Full Face Mask with Blank Plate

Kirby Morgan M48 Full Face Mask Microphone Installation

Divelink Part Number MPC-KM48

The DIVELINK waterproof microphone mounts into the communications port located on the LEFT side of the mask skirt as seen from the inside.

1. DO NOT cut off the end of the communications port (as per Page 18, Kirby Morgan manual). Instead, use an exacto-knife (or box cutter) to cut a small 'x' , ¼" long in the centre of the bottom of the communications port.



2. Grease the inside of the port with a small amount of Dow Corning #4 silicone.

3. From **INSIDE** the mask, feed the microphone plug through the cut in the communications port.

4. Pull the microphone cable through and locate the microphone cage fully down into the rubber cavity.

5. Finally, secure a tie wrap in the groove around the middle of the Communications Port to secure the microphone.

Keep the end of the tie wrap away from the chin to prevent abrasion.

6. Cut off the excess tie wrap with small cutters.

7. Apply grease to the two connections on the universal plug and connect to the diver's EAR-MIC Harness.

HOW TO INTEGRATE DIVELINK with a Sport Mask

Mask Type to connect	Sport Mask

Communicator for Sport Eye Mask

Some SCUBA customers prefer to use a sport eye mask instead of a full face mask. The COM-FF Communicator may be converted for use with a sport eye mask. There are two parts that may be ordered for this:

1. MPC-UC01 Microphone and Strapless Mouth Mask

2. RUB-HSTASM headpiece strap and attachment hardware.

Model COM-FF with mouth mask MPC-UC01

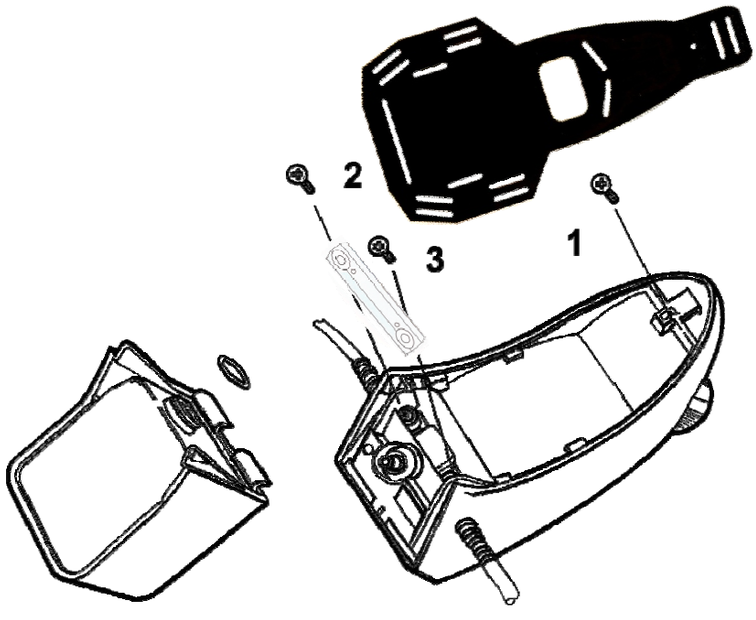
Mouth Mask MPC-UC01

RUB-HSTASM Headstrap Assembly

HOW TO CONVERT COM-FF to suit half mask MPC-UC01

Remove the battery pack.

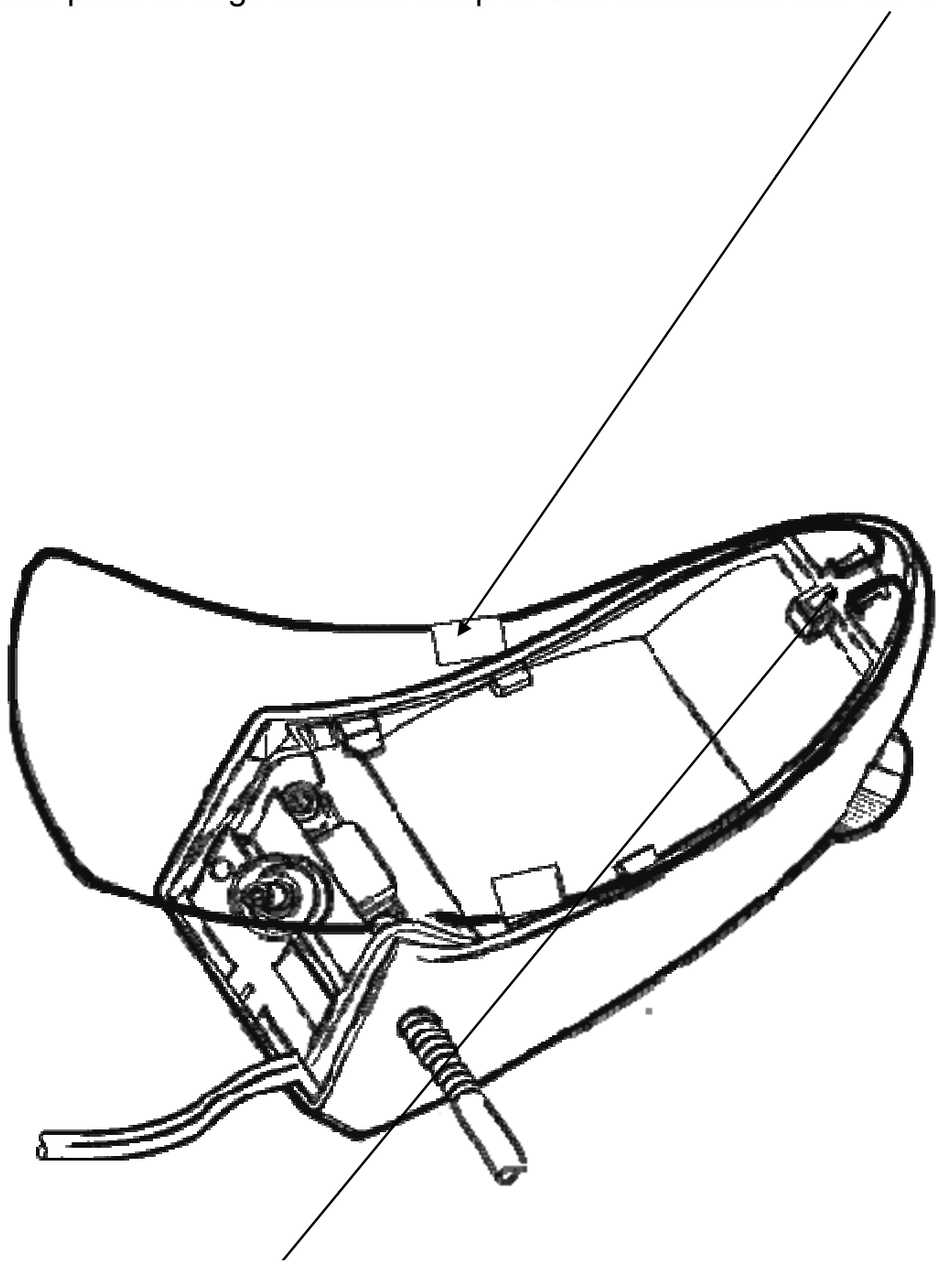
Remove the adapter PLA-ADP-KIT by unscrewing screws 1, 2 and 3, then removing the adapter plate and other mounting hardware.



Installation Instructions for the rubber head strap:

Install the wire frame into the channel in the head strap.

Install the stainless plate through the head strap so that it connects with the wire frame.



Slip the wire frame loop over the plastic tab on the main plastic housing

Install two screws attached to the stainless plate and into the main plastic housing. Allow the mounting plate to engage the wire spring as it is being tightened. Do not use excessive torque as these screws are self tapping, and the threading pressure may be exceeded, which will result in the plastic being stripped away.

Installation Instructions for the Strapless Half Mask with Microphone:

Remove the normal mouthpiece from your primary regulator and replace it with the DIVELINK mouth mask. Secure it with a zap strap. You may opt to attach the DIVELINK mouth mask to your secondary regulator. When first getting used to the mouth mask, try a few flood and clear exercises. As with any new SCUBA equipment, DIVELINK will take a few dives to get used to. Clarity of speech will improve with practise.

For clear voice communication underwater, an air cavity is necessary. The DIVELINK mouth mask uses a unique, patented retainer, designed to allow unobstructed, comfortable speech without the use of a head strap.

Before attaching the mouth mask to your regulator, do the following exercise:

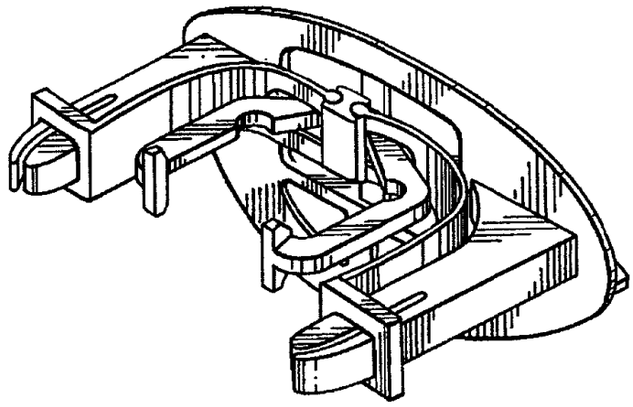
<u>To Use:</u> Place the retainer behind your front teeth. Pull the mouth mask gently away from your face and close your lips. Let the mouth mask come back to your face. (Your lips should be inside the mouth mask opening.) Relax your jaw and count to ten, aloud, letting your teeth separate slightly as you speak. Continue to practise speaking until you feel comfortable, and are being understood using the mouth mask, before diving.

The retainer will suit an average bite. A few people have an unusually narrow bite pattern. To accommodate this case, the retainer may be placed in boiling water and reformed inward slightly by bending the “U” shape together. Some people may have unusually short teeth. In this case, the tabs may be filed down to prevent them from pressing into gums at the base of teeth. The tabs may be replaced by ordering part number PLA-TPCASM.

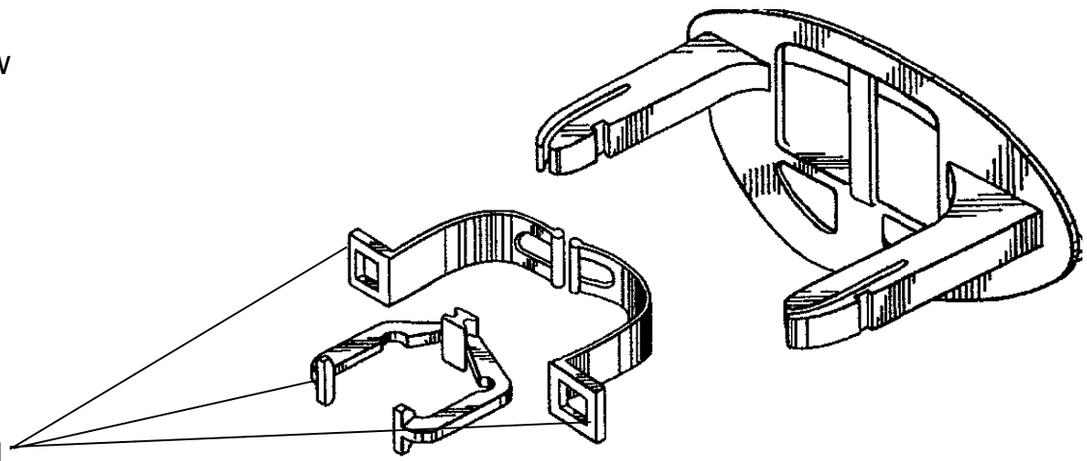
DIVELINK Mouth Mask Model MPC-UC01*

Internal Mechanism of Mouth Mask:

Baffle Plate, Spring and Retainer*



Exploded View



PLA-TPCASM
(three parts)
Springs and Retainer: Reorder Part Number PLA-TPCASM *Patented

Microphone Connector Operation and Maintenance

The microphone may be unplugged from the DIVELINK headpiece by means of the underwater connector. This allows the microphone and cord to remain attached to your regulator and low pressure hose. The microphone may be disconnected underwater for extended periods of time. To disconnect, PULL STRAIGHT APART.

Do NOT bend the connector during this process.

It is important to apply silicone grease to each side of the connector regularly to prevent wear, corrosion and salt buildup. Use DOW-CORNING DC-4 or equivalent.

The socket of the connector may be cleaned with a Q-tip and rubbing alcohol.

The underwater connector allows you to switch to an alternate regulator and still maintain communications during your dive, or to swap quickly with other gear equipped with DIVELINK mouth mask MPC-UC01 such as a secondary regulator.

You can use DIVELINK as a receive only student model by unplugging the microphone.

OPERATION

Earphone Location

The earphone may be used as a normal underwater loudspeaker over the ear canal, or as a bone conductor.

When diving with a hood, it is recommended that the earphone be placed under the hood against the skull or ear. If no hood is worn, place the earphone in the earphone holder supplied with your unit. The earphone holder attaches to your mask strap. In either instance once the earphone is in place, test to ensure good sound conduction by switching on the DIVELINK and brushing your finger over the transducer. You should hear a swishing sound like sandpaper on wood.

When underwater, try different earphone positions to determine where you can hear best. These may be over the ear canal, on the mastoid bone or on the cheek bone.

Powering Up

Power up DIVELINK by rotating the switch to **ON**, the middle position. To conserve battery power and operating time it would be best to wait until you are in the water before turning **ON** DIVELINK.

When you speak into DIVELINK, you will hear only the sound of your own voice. When you finish speaking, exhale normally and you will hear other DIVELINK transmissions. DIVELINK is a "hands free" communicator. Transmission is activated by speech (VOX).

Emergency Signal

This is shipped as standard for single channel units not otherwise specified as having options. If you want to activate the Emergency Signal, turn the three position power switch from OFF, past ON, to **E**. Other divers within range will then hear the Emergency Signal.

The Emergency Signal will cycle through an 8 second active period and an 8 second inactive period. If you talk into the DIVELINK during the active period, other DIVELINK users within range will hear both the Emergency Signal and your speech. You will be able to hear other DIVELINK transmissions only during the inactive period.

Two Channel Option

Another type of function will occur with the third position of the communicator power switch if the Frequency option is specified as Two Channel:

Frequency	**-2xx**	Two channels – power switch selects channel.

If you want speak on Channel ONE, turn the switch to ON. Other divers within range will then hear the channel ONE. If you want to speak on Channel TWO, turn the switch to the right, to the next detent "**E**" (for "Extra" under which the various OPTION functions are activated).

Whisper Mode

With this Special Option, the transmitted signal is reduced to a range of approximately 15 M (50 feet). This option is useful for multiple dive groups in a small area using DIVELINK communications.

Special	**-WHISPER**	Whisper Mode on power switch third position (available with single channel units only).

If you want speak with FULL POWER, switch to **ON**. If you want to speak in WHISPER MODE, switch to "**E"** (for "Extra" under which the various OPTION functions are activated).

PRE-DIVE CHECK

Ensure that a fully charged battery is properly connected to the DIVELINK unit.

DIVELINK can transmit and receive through air over a short distance (up to 30 cM). To function check turn on all DIVELINK units. Place them within 10 cM (approx 2 inches) of each other, speak into one unit and listen on another unit.

Just prior to entering the water, test for proper earphone placement.

Equalize ear pressure often while diving.

Pressure on the ear drum after a change in depth will reduce your ability to hear bone conduction. If you find that transmissions seem faint, then clear your ears.

Operating Technique for Best Results

- Speak clearly, enunciate without distorting speech. A quiet voice will produce the clearest transmission.
- Speak in a normal, relaxed (quiet) tone. Do not yell. Shouting will not increase range.
- Relax jaw, do not clench teeth, move lips normally inside DIVELINK (UC01) mouth mask.
- Keep exhalation to a bare minimum to limit background noise when transmitting.
- Use protocol such as "do you copy... roger that ... over...."
- Practice listening without holding your breath, controlling your breathing (pause a moment before transmitting a reply)
- Remember to use a trigger word (repeat your first word) this will activate the system. (VOX)

RANGE The maximum range of your DIVELINK system will be up to 500 Meters in a clear unobstructed pathway between divers, and depends on the local acoustic environment. Water clarity does not affect range.

SOUND QUALITY DIVELINK transmits and receives ultrasound signals instead of radio waves. Ultrasonic provides the only practical means of long distance communications through water. An ultrasonic transmission will sound different than normal radio transmissions. A distant ultrasonic transmission may be heard along with a certain amount of echo or reverberation, caused by the physical environment. Solid objects, the ocean floor or surface may generate an echo. Ultrasound can also bounce off a layer of water that changes density, caused by temperature or salt content.

BARRIERS As with any wireless underwater communications system, DIVELINK transmission may be affected by a solid object such as a large rock or a ship's hull. Any transmissions that will be received in this case will be the result of reflections from the surface or ocean floor.

Under some circumstances the thermocline can become an invisible barrier. The thermocline is a layer of water located at the depth where warm water very rapidly becomes cool. Sometimes the thermocline will be reflective enough to prevent signals from penetrating, particularly at shallow angles. In other cases, warm water may mix with pockets of colder water due to wave action, and the resulting layer of mixed water will tend to reduce sound signals from DIVELINK. The key is to get

under the thermocline before expecting reliable communications.

INTERFERENCE Boat engines, depth sounders, other marine communications equipment and a variety of natural sources may cause noise with wireless underwater communications. Boat engines or high speed propellers will likely be the most common noise encountered; these noises are recognized as a clicking or whining sound. Dolphins or other related creatures use ultrasonics to range find and communicate. If they are within range, you may hear whistles and bursts of clicking.

Chemical Neutralizing Fluid

It is possible that the transmission range can be reduced by a thin layer of air bubbles blocking the ultrasonic signal at the antenna. In open water, this will not be the case, but when used in a pool that has been recently treated with chemicals, a thin layer of bubbles can build up on plastic surfaces. This is prevented by the use of the CHEMICAL NEUTRALIZING FLUID provided with DIVELINK. The antenna is the black knob at the top of the headpiece. A coating of this liquid around the antenna cylinder is all that is required, and will last throughout the dive.

CARE AND MAINTENANCE

Battery Pack and LOW POWER BEEP

DIVELINK has low power detection which will sound a short LOW POWER BEEP every 8 seconds when the battery has approximately 10 minutes of power remaining. Depending on circumstances, you may elect to inform the surface and other divers that you are low on power and are turning your unit off until you want to communicate with them.

Use only the charger supplied with the DIVELINK unit, and specified for use with your battery model.

Battery Maintenance

There is a maintenance procedure associated with DIVELINK battery packs to ensure that full operating time is achieved.

Battery Conditioning

Every 3 to 6 months it is important to fully discharge and then fully recharge the battery pack:

1. If the unit HAS NOT undergone a full discharge and full charge during normal use of the communicator, OR
2. If the unit HAS NOT been used for several months.

This is done by turning ON the DIVELINK for 8 hours, then removing the battery pack and fully charging it.

If this procedure is not followed then according to the battery manufacturer, it is possible that the battery can develop a shorter operating time as it will be undergoing partial charge/discharge or self discharge over time as opposed to full cycle charge/discharge conditioning. This effect is entirely reversible, and has to do with Nickel type batteries.

Why?

Nickel type batteries are used in the DIVELINK product line because they reliably supply the system with power, do not produce gas, are light weight and have no “memory”. Memory has much to do with cell reversal due to poorly matched cells in a pack, which over time will cause a pack to malfunction irreversibly. DIVELINK uses only SANYO matched cell battery packs, the best in the industry. These are tested for a complete cycle in the communicator before leaving the factory.

Although the Nickel type batteries used in DIVELINK products have no “memory”, it is important that Nickel batteries are conditioned every three to six months (as described above) to prevent the growth of crystalline formation in the chemistry of the battery. Crystalline growth consumes chemical resources of the battery and will therefore degrade how long the battery will last during use. It can

also cause the battery status lights in the battery to become incorrect over a period of years unless the batteries are conditioned regularly.

Other Battery Concerns

The Time Factor

It is important to be aware that Nickel type batteries lose charge over time. This is a phenomenon called “self discharge”. Self-discharge is reliably tracked by the battery indicator lights on the DIVELINK, as well as true capacity based on other factors including temperature.

After a full charge, the pack will lose 10% charge after 24 hours, partially due to an increased battery capacity as it cools after fast charging (meaning it could take more charge). Every month thereafter an additional charge loss occurs at a rate of up to 15% for NiMH.

After Taking Out of Storage

A common mode of operation is the use of DIVELINK equipment after long-term storage. When the DIVELINK is turned on after for example 3 months in storage, two lights may be on indicating 40% charge. It is best in this case to leave the unit ON until fully discharged (over 8 hours), then to place the unit on charge, as opposed to charging the unit up from 40% to 100%. This automatically provides battery conditioning and prevents the build-up of crystalline formation in the battery chemistry.

This knowledge is meant to assist customers in planning operations using DIVELINK equipment, and may greatly extend the service life of battery packs as well as ensure reliable operation over many years.

Cleanup

Rinse the outside of the DIVELINK with fresh water after use. It is possible for the switch to be removed by turning it past **E** so that it is pointing out to the side, then pulling the switch out. It is not necessary to flush this area after every dive, but may be flushed when the DIVELINK is to be stored for an extended period to prevent salt build up in the switch cavity.

Do not clean the DIVELINK with acetone or other harsh solvents. Mild dish washing soap may be used. When removing the battery pack, always inspect the O-Ring seat areas on the main housing and the battery pack, and remove any grit with a soft cloth. Do not use a sharp object to clean the O-Ring seats or to remove the O-Ring, as scratches in the plastic will allow water to leak past the O-Ring.

Storage and Handling

Do not drop or jar the DIVELINK. The antenna, located at the top of the headpiece, and the earphone are sensitive to sudden mechanical shock.

Do not stretch or cut the cables leading to mouthpiece or earphone. Water entering the electronic parts of the communicator through weakened wire seals, or penetrating a cut in the cable insulation, may cause corrosion. When storing the DIVELINK, ensure that the switch is **OFF**. If it is not in use for several days, detach the battery pack.

TECHNICAL SPECIFICATIONS

Model COM-FF

Transmission type: Wireless Ultrasonic

Modulation: Upper Side Band no carrier

Reference Freq. 31250 Hz Upper Side Band. Standard frequency, single channel supplied with emergency signal on power switch third position unless the following frequency option is indicated:

Frequency

-1x One channel (x= A, B or C) with Emergency Tone on power switch third position.
-2xx Two channels (xx= AB, AC, BC). Three position power switch selects channels.

Example: **-2AB** means
channel 1 is 31250,
channel 2 is Public Safety

-xx	Channel Reference Frequency
A	31250 Hz Upper Sideband
C	32768 Hz Upper Sideband
B	Public Safety (Classified)

Audio pass band: 400 Hz to 5000 Hz.

Transmission: Fully automatic Voice Activated Transmission (VOX) with transmitted speech returned to earphones. 1/2 Watt output power unless the following special options are indicated:

Special

-WHISPER Whisper Mode on power switch third position (available with single channel units only).

Reception: Automatic Gain Control. Automatic Squelch. Bone conduction listening device on bone close to ear or over the ear canal, no hood cutting required.

Range in water: Up to 500 Meters can be obtained depending on the local acoustic environment. WHISPER MODE – 15 Meters max.

Maximum Depth: 60 Meters.

Power Source: One 9.6 Volt 1650 mAH rechargeable NiMH battery pack, also available as an optional spare battery pack: Model BAT-U01-EM-NIMH Nickel Metal Hydride battery pack, quick charging with charger CHG-QC1-UNIV.

Battery pack and charger is included with unit but may also be orderable separately.

Charge Time: Over 4 hours for BAT-U01-EM-NIMH battery using CHG-QC1-UNIV.

Operating time: OVER 9 hours with BAT-U01-EM-NIMH: Fully charged battery pack, used within 2 weeks after full charge, the DIVELINK operating at 20% transmit duty cycle.

Diver Transciever: COM-FF

Weight out of Water 810 grams (with battery attached).

Specifications are subject to change without notice.

For spare parts relating to this product please see:

http://www.divelink.net/purchase/head-mount-diver

DISCLAIMER

The **DIVELINK** Communicator is intended for use only by certified divers who are aware of and trained to deal with the risks and hazards connected with diving. The **DIVELINK** Communicator is not proclaimed or intended to be used as a substitute for safe diving practices. It is the personal responsibility of every diver to ensure that they and their partner dive safely.

WARRANTY

The manufacturer warrants this product, for a period of one year from the original date of purchase, to be free of defects arising from material or craftsmanship used or provided by the manufacturer, provided the **DIVELINK** product is used under conditions of normal SCUBA use and in compliance with the operating instructions set out in the owner's manual. The validity of this warranty is conditional upon the completion of a warranty card, and its receipt, by the factory. (See Limitations).

This warranty is voided in the event that service, or repairs to the **DIVELINK** unit are not performed by a factory authorized service centre.

Should this **DIVELINK** Communicator prove to be defective within the warranty period, it will be repaired or replaced free of charge, at the election of the manufacturer, excluding shipping and handling charges.

LIMITATIONS

This warranty specifically does not extend to damage to face masks, regulators or hoses, arising from the use of the **DIVELINK** or any damage to the **DIVELINK** caused by improper maintenance, modification or tampering to the **DIVELINK**.

The original warranty card must be on file at the **DIVELINK** factory with a copy of your purchase receipt to be eligible for the one year coverage and any warranty service. The warranty card is supplied with this manual and must be mailed within 15 days of purchase. Warranty is non-transferable and is solely for the benefit of the original owner.

DISCLAIMER OF LIABILITY

The manufacturer, its distributors and retailers MAKE NO WARRANTIES, either expressed or implied, with respect to the DIVELINK Communicator, or this owner's manual except for those stated above. IT IS EXPRESSLY UNDERSTOOD that in purchasing or using the DIVELINK Communicator, the owner or any other person who may use it accepts it "AS IS" with the entire risk as to its quality, performance, merchantability, or fitness for any particular purpose being with the buyer or user. This excludes replacement of defective parts to the original owner, in the first year after purchase under the conditions set forth in the preceding limited warranty section.

By purchasing the DIVELINK it is agreed and understood that in no event will the manufacturer, its distributors or retailers be held liable for any personal injuries arising from its operation, or for any damages whether direct, indirect, incidental, or consequential, even if the manufacturer, distributor or retailer have been advised of such damages.

SERVICING

Contact Information

Mailing Address: DIVELINK Underwater Communications Ltd.
300 – 1095 McKenzie Avenue
Victoria, BC Canada V8P 2L5

Telephone: 1-250-479-4868

E-mail: sales@divelink.net

Web Page: www.divelink.net

Warranty/Repair Conditions

Any defect of the unit in workmanship or material, as covered in the *Warranty and Limitations* sections of this manual, and discovered within one year from the date of purchase, must be promptly reported to the DIVELINK factory.

No product returns will be accepted by the factory without a Returned Merchandise Authorization (RMA). The factory provides the RMA number and shipping instructions to the owner, who returns the defective part, freight prepaid, to the factory (see the section entitled *Sending Procedure*).

DIVELINK will repair or replace the defective part at no charge, within a reasonable time, as it deems necessary.

Sending Procedure

Inside the box in which you are sending the defective part, provide the following on a single sheet of paper:

- RMA number
- Your complete shipping address (no Post Office [P.O.] box numbers)
- Your phone number (with area code)
- Description of the problem for each part being returned (as detailed as possible)

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www.divelink.store

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Divelink offers user friendly voice underwater communications for SCUBA divers and Surface Vessels with the world's most sophisticated technology. Unrivaled Signal Clarity and reception is achieved by custom microchip circuitry for ultrasonic transmission and reception.

Divelink is the world's only diver underwater communication system that combines automatic voice activation, gain and squelch, to allow for hands free operation.

- **Rugged, waterproof microphones that may be flooded to 200 feet depth**
- **Compact and highly portable**
- **Rechargeable NiMH batteries included with diver units**
- **Versatile, simple operation with easy to read battery state**
- **Output power levels from 0.5 to 20 watts**
- **Ranges from 500 Meters to 3 kM**
- **Recreational, Training, Commercial, Police Search and Recovery, and Navy Markets**

Divelink products are designed and manufactured in Canada for divers worldwide, enhancing safety, cooperation and efficiency.

Click on a picture below to view each section of our product line...

Wireless Belt Pack Communicator

Head Mount Diver Communicators

Headset Surface Unit

Wireless Surface to Diver Communicator

Hardwire Surface to Diver Communicator

Diver Recall Surface Unit

DIVELINK Model COM-HW-RM2
Rack Mount Professional Hardwire Communicator System for connection with Public Address System

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