

DIVELINK[®]

DIVER RECALL SYSTEM

MODEL: COM-DR-HYD

OPERATOR'S MANUAL



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Introduction

Congratulations, you have purchased the finest Diver Recall System on the market. Please take time to read this entire manual carefully so that ease of use and trouble free operation is achieved. It is recommended that this manual stay with the unit at all times so that all operators can familiarize themselves with the Divelink Diver Recall System.

The Diver Recall System is an easy to use system consisting of state of the art electronics. The unit is capable of projecting sound as far as 1500 meters through the water under ideal conditions.

Warning: This device can emit very loud sound transmissions underwater. It is important to understand the proximity of divers to the Underwater Loudspeaker before sending full volume voice/siren sounds. If a diver is in the immediate vicinity of the Underwater Loudspeaker during a full volume transmission, it can startle the diver and/or increase stress level, which is contrary to dive training and safety procedures.

Product Description

Surface Unit

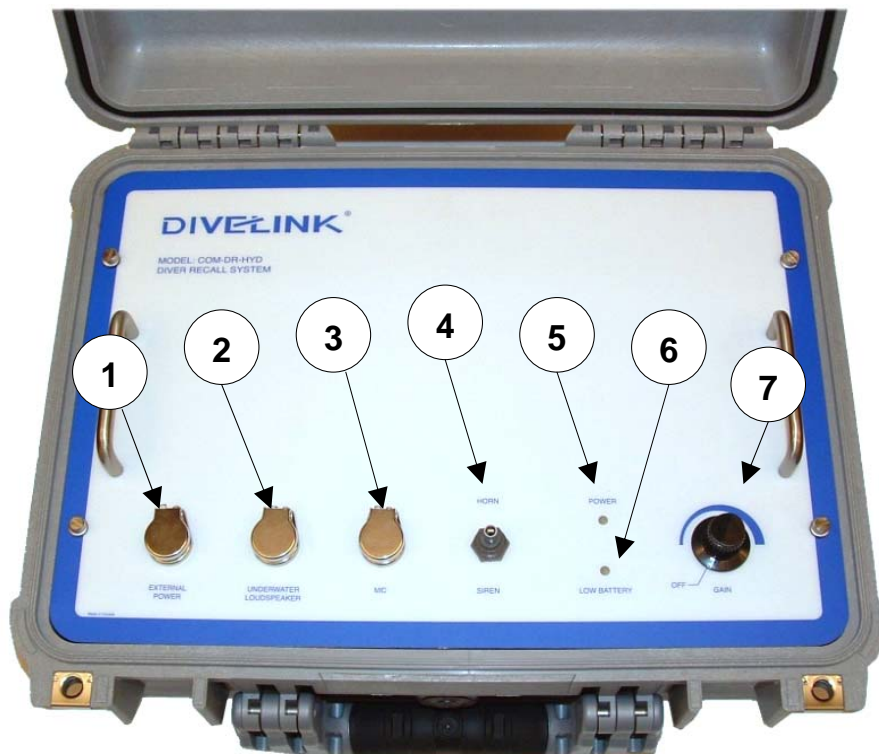
The diver recall surface unit is the main component of the system. It has a straightforward user interface (Operator's Panel) and a durable watertight case to protect the sophisticated electronics. It is powered by a high quality, internal and rechargeable sealed lead acid battery. The system is designed to be portable and able to be used anywhere at any time. Included with the system is a powerful underwater loudspeaker and hand held microphone for voice transmission.

Operator's Panel

Table 1 describes the Operator's Panel control and indicator items.

Item	Function
1. EXTERNAL POWER	Connection for charging battery.
2. UNDERWATER LOUDSPEAKER	Connection for underwater loudspeaker.
3. MIC	Connection for hand-held microphone.
4. HORN/SIREN	Switch to activate either horn or siren.
5. POWER	Indicates that power is on.
6. LOW BATTERY	Indicates battery condition.
7. GAIN	Power switch and volume control.

Table 1: Operator's Panel Control Descriptions



Operator's Panel

Assembling the Equipment

Plugging in the Loudspeaker

To plug the underwater loudspeaker into the Operator Panel:

1. Apply a small coating of grease, such as Dow Corning® 4 Electrical Insulating Compound, onto the contacts of the loudspeaker plug.
2. On the Operator Panel, flip up the waterproof cover of the UNDERWATER LOUDSPEAKER connection.
3. Plug the loudspeaker cable fully into the UNDERWATER LOUDSPEAKER connection.

Plugging the hand-held microphone

To plug the hand-held microphone into the Operator Panel:

1. Apply a small coating of grease, such as Dow Corning® 4 Electrical Insulating Compound, onto the contacts of the hand-held microphone plug.
2. On the Operator Panel, flip up the waterproof cover of the MIC connection.
3. Plug the hand-held microphone cable fully into the MIC connection.

Plugging in an External Power Source

The external power source is used for battery charging. To plug in the battery charger:

1. On the Operator Panel, flip up the waterproof cover of the EXTERNAL POWER connection.
2. Plug the supplied charger fully into the EXTERNAL POWER connection.
3. Refer to Table 2 for an explanation of the LED indicators.

Operation

General

Because the Diver Recall System contains sensitive electronic equipment, it should be exposed to as little water as possible. The unit must not be immersed in water, or operated by a wet diver.

While a few drops of water are permissible, they should be towed off immediately. In particular, the front panel of the unit, and any attached equipment, should be kept clean and dry.

i **Important! Under no circumstances should the cover be closed then stored if the front panel is wet. Doing so creates a closed environment that causes the trapped water to evaporate. This produces a moist atmosphere that can corrode the internal components over time.**

Lowering the Underwater Loudspeaker

The Underwater Loudspeaker is captivated by a harness. There is a ring on the harness that a rope may be fastened to for lowering purposes.



The customer should supply a suitable rope to secure the underwater loudspeaker onto the surface vessel when lowered and operating.



Important! These signals are loud and can be potentially dangerous to divers in close proximity of the underwater speaker - particularly if the volume is set to maximum.

Warning: This device can emit very loud sound transmissions underwater. It is important to understand the proximity of divers to the Underwater Loudspeaker before sending full volume voice/siren sounds. If a diver is in the immediate vicinity of the Underwater Loudspeaker during a full volume transmission, it can startle the diver and/or increase stress level, which is contrary to dive training and safety procedures.

Battery Indicator with No Charger Plugged In

Based on the conditions of the POWER indicator light, LOW BATTERY indicator light and POWER switch, the Surface Unit will have various conditions (see Table 2). This is without the charger plugged in.



POWER Indicator	LOW BATTERY Indicator	POWER Switch	Condition of Surface Unit
X	X	OFF	Off
O	X	ON	On, battery good
O	X/O sometimes on during transmission	ON	normal operation, battery good
O	O always on during transmission	ON	battery is weak – recharge it
X	O	ON	recharge battery

O=Light is on X=Light is off

**Table 2: Indicator Lights and Power Switch Settings
(Charger Not Plugged In)**

Turning the unit on

To turn the unit on, turn the GAIN knob clockwise (see Table 1). When you do so, the POWER indicator light should turn on. After the initial click this knob acts as the volume control. Continue turning it clockwise for increased volume to the underwater loudspeaker.

Sending Voice

To send a voice transmission to divers in the water:

1. Ensure the hand-held microphone is plugged in.
2. Push and hold the Push-To-Talk (PTT) button on the side of the microphone.
3. Say what needs to be said.
4. Release the PTT button when done talking.

Using the Horn and Siren

To activate the horn or siren, simply push the HORN/SIREN switch to either HORN or SIREN. This switch is momentary so it will have to be held on for a continuous tone.

Maintenance

Opening the unit

The only reason to remove the Surface Unit front panel is to install a new battery.



Important!: Opening the electronic enclosure inside the Surface Unit is a factory service procedure only. Opening it your self will void the warranty. There are no user-serviceable parts inside. See the section entitled “Servicing”.

Cables

All cables should be kept free of cuts. If damaged, the cable should be replaced by a new one. Use of plastic strapping (“Quick-Tie”, Zap-Strap”) can damage cables and cause leakage/corrosion and failure. Use of these ties voids warranty. Replacing the underwater speaker cable or hand-held microphone cable is a factory service procedure only. See the section entitled “SERVICING” for instructions on how to return equipment to the factory.

Battery Charge Indicator with Charger Plugged In

The charger may be plugged in at all times to keep the battery in fully charged condition. The Unit will regulate charge current and indicate fully charged condition with the front panel Power Indicator Lights. The status of the Battery may therefore be determined by viewing the Power Indicator Lights:

When the charge adapter CHG-S08-UNIV is plugged in to EXTERNAL POWER connector on the front panel:



A fully charged battery will be indicated as charged if the LOW BATTERY light is OFF.



A battery requiring further charge will indicate so when the LOW BATTERY light is ON.

The Charger CHG-S08-UNIV may be connected indefinitely to the COM-DR-HYD system. The internal electronics regulate the charge and ensure that an overcharge condition is not reached. It is recommended that the battery is charged at least once every four months.



Important! Do not allow the unit to be stored with a discharged battery in freezing conditions. If the Gel Cell battery is frozen while fully discharged, it may fail.

Option - Waterproof Connectors

It is possible to operate the unit with the case closed using part number OPTION-WP-EXT. This option is beneficial when operating during severe weather conditions, and may be ordered with the unit or may be retrofitted at a later date.

With OPTION-WP-EXT the hand held microphone **MIC-DR-WP** and the underwater loudspeaker **SPKR-DR-WP** may be plugged into waterproof connectors at the side of the case, and will be delivered with a different connector than the type used to plug in to the front panel.



Plug in with force until the edge of the connector lines up with the plug.



Connectors

Apply a small coating of grease, such as Dow Corning® 4 Electrical Insulating Compound onto the contacts of the microphone and underwater loudspeaker plugs.



If your model has the OPTION-WP-EXP external connectors for case-closed operation, then apply grease lightly to the rubber parts only of the water proof connectors. Avoid filling the connector holes completely with grease as this will tend to resist proper connection when pressing the connectors together. Conversely it is also important that grease does not completely wipe off the rubber parts as this will cause wear. Therefore, regular maintenance should include the light application of grease to both parts of any open connector pair.

Part Numbers and Spares

<p>Fast Charger</p> <p>CHG-S08-UNIV for COM-DR and COM-S Surface Units</p> <p>Has adapters for:</p> <ul style="list-style-type: none">• North America• Japan• China• Australia• Europe and UK	 A black rectangular fast charger with a power cord and a coiled cable. To its left are three black plastic adapters: a circular one, a rectangular one with a notch, and a smaller rectangular one.
<p>Microphone for standard Diver Recall Unit MIC-DR</p> <ul style="list-style-type: none">• 1/4" plug for panel	 A black handheld microphone with a coiled cable and a 1/4-inch audio plug at the end.
<p>Underwater Loudspeaker for standard Diver Recall Unit SPKR-DR</p> <ul style="list-style-type: none">• 1/4" plug for panel	 A blue circular underwater loudspeaker with a black cable and a 1/4-inch audio plug. The speaker has a logo on its face that reads "Diver Recall System".

<p>Microphone for Diver Recall Unit with Weather Proof option MIC-DR-WP</p>	 <p>A black, coiled microphone with a rectangular body. The body has a small white label with a red 'F' logo and the text 'FEDERAL SIGNAL CORPORATION'. A black cable with a two-pin connector is attached to the bottom of the microphone.</p>
<p>Underwater Loudspeaker for Diver Recall Unit with Weather Proof option SPKR-DR-WP</p>	 <p>A blue, circular underwater loudspeaker with a black cable. The speaker has a circular logo in the center that reads 'DiveLink' and 'SPKR-DR-WP'. The cable is coiled and ends in a black connector.</p>

Technical Specifications

Underwater Loudspeaker type: High power under water speaker

Audio Output: 300 Hz-10 kHz frequency range

Output Power: 100W nominal

Nominal Range: 1500 meters (4500 feet) with siren

Audio Input: Microphone provided for voice input

Siren and horn sounds internally generated.

Replaceable Parts: SPKR-DR (1/4" Plug) Underwater Loudspeaker

Lubell Labs LL916H with approx. 7.5 M (25 ft)

cable and Harness

SPKR-DR-WP (Weatherproof Plug)

Microphone: MIC-DR (1/4" Plug)

MIC-DR-WP (Weatherproof Plug)

Battery: BAT-S12 sealed lead-acid battery 12 Volt 7.2Ah

Operation Time: 12 Hours with 5% transmit time

Warranty: Standard Divelink One year warranty

Housing: Heavy Duty Watertight Case

Dimensions: Approx. 16" L x 13" W x 7" D

Weight: Approx. 18 lbs with battery

Underwater Loudspeaker Specifications

Depth Range: 6' min – 25' max

Size: 9" diameter x 6" axial

Weight: 12.5 lbs in air, 2 lbs in water

Directivity: Omni directional

Warranty

Validation

The validity of your warranty is conditional upon the completion of a warranty card, which is supplied with this manual. Mail the warranty card, along with a copy of your purchase receipt, to the factory within 15 days of purchase. The warranty card and purchase receipt are kept on file at the DIVELINK factory, in order for you to be eligible for the one-year coverage and any warranty service.

Period and Coverage

The manufacturer warrants the Surface Unit 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 that:

- The unit is used under normal conditions, and in compliance with the operating instructions set out in this manual.
- The unit is not used for purposes other than those for which it was designed, or otherwise is not abused, misused, or subjected to unusual conditions.
- No unauthorized attachments or modifications are made to the unit.

Should the unit 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.

Transferability

This warranty is non-transferable and is solely for the benefit of the original purchaser.

Limitations

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

This warranty specifically does not extend to damage to the unit caused by improper maintenance, modification or tampering.

Disclaimer

The unit is intended for use only by certified SCUBA divers who are aware of and trained to deal with the risks and hazards associated with diving. The unit is not proclaimed or intended to be used as a substitute for safe diving practices. It is the personal responsibility of anyone operating the unit to ensure that they and their partner(s) observe all rules of their certification training.

The manufacturer, its distributors and retailers make no warranties, either expressed or implied, with respect to the unit, or this owner's manual, except for those stated earlier.

It is expressly understood that in purchasing or using the unit, the purchaser or any other person who uses it accepts it "as is", with the entire risk as to its quality, performance, merchantability, or fitness for any particular purpose resting with the user. These conditions exclude replacement of defective parts as required by the original purchaser in the first year after purchase, as described in the Period and Coverage section.



Important!: By purchasing the unit, 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: Please contact DIVELINK for the service center nearest you.

Telephone: 1-250-479-4868

E-mail: sales@divelink.net

Internet Web Page: www.divelink.net

Warranty/Repair Conditions

Any defect of the unit in workmanship or material, as covered in the Warranty and Disclaimer 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)