



DG100

DIGITAL DEPTH GAUGE AND TIMER OPERATIONS MANUAL



RJE International, Inc.

YOUR SOURCE FOR DIVER NAVIGATION AND UNDERWATER RELOCATION EQUIPMENT

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WARNING

Diving is a dangerous and potentially life threatening activity. The DG100 digital depth gauge must be used by a person who is certified by a recognized agency (PADI, NAUI, SSI, NASDS, YMCA, etc.). Improper use or misuse of the DG100 could result in serious injury or death. Do not use the DG100 until you have fully read and understand instructions and safety precautions in this manual.

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DG100 Diver Navigation Board Operations Manual
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In addition, the DG100 can be charged using a standard USB to mini-B cable and a standard PC. This function is also used to change the state of the display from Imperial to Meter (see page 9)



• Maintenance

Although build for the rigors of underwater use, the TAC-DG is a precision tool and should be treated as such. Avoid violent bumps and drops that could effect the reliability of the gauge. The DG100 is completely potted and there is very little maintenance involved with the unit. Do not exceed the maximum depth of 330ft (100M) as this may damage the unit.

O-ring replacement: There are two o-rings seated in the battery charging compartment located at the back of the DG100. It is recommended that these o-rings get replaced every 12 to 18 months of use. Please contact RJE International to order these o-rings under part number DG100-02.

Occasionally, the cover over switches "A" and "B" with trap sand and debris. To clean the switch assembly, remove the switch cover plate by unscrewing two allen head screws at the back of the DG100. Remove plate slow to insure that the switch springs do not get lost. Rinse assembly and switch cavity and reassembly.

• DG100 Specifications

Depth Range	0-330ft (0-100m)
Depth Tolerance	Typically $\pm 2\%$
Depth Resolution	0.1ft/0.1m
Altitude Compensation	6000ft (1,828m)
Display	Red LED
Dive Timer Tolerance	$\pm 1\%$
Leg Timer Functions	Start / Pause / Reset
Led Timer Duration	99 hours max
Battery	Rechargeable Lithium Polymer
Battery Life	300 charges
Operational Life	20 hours
Operating Temperature	29°F - 95°F (-2°C - 42°C)
Housing	Injected molded plastic
Depth Rated	300ft (100m)
Dimension	3.5" x 2.5" x 1.0" (89mm x 64mm x 25mm)
Weight in Air	3.35oz (95gr)

- **Surface Mode with Battery Charger Connected**
When the unit is connected to the charge cable it will automatically enter **SURFACE MODE**. Functions are identical with the exception of the A & B Button Together.



A-Button and B-Button Together will toggle the unit between Imperial and Metric depth units. The corresponding Status LED will subsequently be illuminated.

- **Hibernation Mode**

In **HIBERNATION MODE** the screen will not display any information. To wake unit, press either the A or B button momentarily.



When the unit wakes from **HIBERNATION MODE** the six digit serial number is shown on the top row of displays and battery health is shown as a percentage of 100. 3.7v = 100%, 3v = 0%.



- **Battery Charging**

The DG100 comes with a rechargeable battery that provides up to 20 hours of continuous use. The battery, in the DG100, can be recharged over 300 times before having to replace the unit. Upon activation, the display briefly indicates the battery health in a form of percentage, 100% is full charged and it is recommended that you charge the DG100 before every dive.

To charge the DG100, remove the battery charge cap from the back of the unit by turning it counter clockwise until the slots line up. Use a flat object to lift the cap from the body of the DG100.

Battery
Charging Cap



Plug USB connector from DG100 Battery Charger (DG100-01) into the back of the DG100 and then plug the charger onto a 110/220 volt outlet. The DG100 will charge to 100% in 12 hours with 90% completed in 2 to 3 hours time.

PREFACE

PROPERTY

The information, descriptions, photos, and illustrations in this manual are the property of RJE International, Inc. Materials may not be reproduced or disseminated without prior written consent of RJE International, Inc.

WARRANTY

RJE International, Inc. warrants the DG100 to be free of defects in material and workmanship for a period of one year from date of delivery to the original purchaser. Obligation under this warranty is limited to repair or, at the sole discretion of RJE International, replacement of any product returned to our facility or authorized distributor. All products shall be shipped to RJE FREIGHT PREPAID and shall be returned to customer FREIGHT COLLECT. Equipment may not be returned without prior authorization which must be requested in writing. Upon authorization a Case Number will be issued. The Case Number must appear on the outside of the shipment, as well as, in all pertaining correspondence. Shipments received without an Case number will be refused by RJE International. This warranty does not apply in cases where the product malfunctions as a result of mishandling or improper use.

LIABILITY

RJE International, Inc. assumes no liability for damages, losses, or cost incurred consequential through operation or malfunction of any RJE International, Inc. product.

CHANGES

RJE International, Inc. reserves the right to make changes in design or specifications at any time without any obligation to modify previous units. This manual is provided for information and reference purpose only and is subject to change without notice.

CUSTOMER SUPPORT

We always welcome our customers feedback and product improvement ideas. If you have any questions or comments, contact us at:

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DG100 Digital Depth Gauge and Timer

The DG100 is a digital depth gauge that measures and displays depth accurately from 0 to 330Ft (0-100m). Using state-of-the-art pressure transducer, the DG100 depth resolution is 0.1ft (0.1m) and is altitude compensated to 6,000ft (1,828m). In addition, the DG100 also warns the diver if he exceeds 33ft (10m) with a flashing indicator on the display.

The DG100 also tracks the dive time automatically once activated, and will store the total dive time upon surfacing. In addition to tracking total the dive time, the DG100 also tracks leg times. The leg time functions are independent of the dive time. Upon surfacing, the DG100 switches to "Surface Mode" and the surface timer activates. While in "surface Mode" the DG100 memory can be access and allows the diver to recall their deepest excursion and display it. When recalling the max depth, the total dive time is also display. Other depth gauges can be supply with the DG100 series board. Contact a RJE International sales representative to discuss these options.

• Display and Controls



Depth readings are provided to the diver through a large Red LED display on the bottom of the screen. Both dive and leg time are display at the top of the screen. The DG100 buttons supply access to these functions. Using ambient light sensor, that is built-in to the screen, the DG100 automatically adjust brightness of the LCD display.

All functions of the DG100 are control through buttons on each side of the display. Buttons are operated in two modes Short Press or Long Hold. In Short Press operation it is the release of the button that performs the desired function, this is intentional so as to avoid accidental button activation. A Long Hold is defined as lasting 2 seconds or more.

STATUS LED:

MAX = Maximum Depth

FSW = Feet of Sea Water

MSW = Meters of Sea Water

• Dive Mode

The unit will enter **DIVE MODE** upon registering an increase of approximately 1 meter of sea water. Whilst in **DIVE MODE** it is not possible to hibernate the unit. A single press of the A-Button will register nothing.



B-Button Hold will toggle between the current depth and maximum depth obtained during the dive. The MAX Status LED will illuminate. Dive Timing functions are not affected. A-Button and B-Button Together will switch the unit from **DIVE MODE** to **STOPWATCH MODE**. Upon re-entering **DIVE MODE** the overall dive duration will be shown.

• Stopwatch Mode

A-Button Long Hold = Reset / Lap Function

B-Button Press = Start / Stop Stopwatch



• Surface Mode

The unit will enter **SURFACE MODE** either upon awakening from **HIBERNATION MODE** or when connected to the battery recharger.

Upon first use the unit will commence a surface timer. If the unit has previously been under pressure in the past 24 hours it will show the current surface interval.

FUNCTIONS:

A-Button Long Press will switch the unit from **SURFACE MODE** to **HIBERNATION MODE**

B-Button Hold will display the maximum depth and duration of the last dive performed. A-Button and B-Button Together will switch the unit from **SURFACE MODE** to **STOPWATCH MODE**.

