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DG100

DIGITAL DEPTH GAUGE AND TIMER

OPERATIONS MANUAL

RJE International, Inc.

YOUR SOURCE FOR DIVER NAVIGATION AND UNDERWATER RELOCATION EQUIPMENT

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DG100 SPECIFICATIONS

Depth Range	0-330ft (0-100m)
Depth Tolerance	+/- 1% of Full Scale
Depth Resolution	0.1ft/0.1m
Display	Red OLED Display
Dive Timer Tolerance	± 1%
Leg Timer Functions	Start / Pause / Reset
Led Timer Duration	24 hours max
Battery	Rechargeable Lithium Polymer
Battery Life	300 charges
Operational Life	35 hours
Operating Temperature	29°F - 95°F (-2°C - 42°C)
Housing	Aluminum with Injected molded plastic
Depth Rated	330ft (100m)
Dimension	2.15" x 2.15" x 1.15"
	(55mm x 55mm x 29mm)
Weight in Air	4.8oz (136gr)

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.

Remove cap with flat object

Plug USB connector from DG100 Battery Charger (DG100-01) into the back of the DG100 and then plug the charger into a 110/220 volt outlet. Note that the battery health indicator will start to flash. The DG100 will charge to 90% in 2 to 3 hours and to 100% in 12 hours. Once unit has completed charging, remove USB Connector and re-install USB cap. Ensure that the cap is properly installed to prevent flooding the unit. The DG100 will also display warning to re-insert USB cap before diving. To clear warning short press the "A" Button.

Insert USB connector into charging receptacle

Rebooting the Unit
If the battery level falls below zero percent, the DG100 will revert to a hibernation mode to protect the battery.

To wake up the DG100, the unit needs to be rebooted. Place the unit on charge for at least three hours. While keeping the unit connected to the battery charger, press and hold "A" and "B" button for five seconds. Now remove the USB connector for the back of the unit. The DG100 is now ready for use. Complete the charging process as necessary. **Note: DG100 will also display warning to re-insert USB cap before diving. To clear warning, short press A-Button.**

Changing Depth Scale and MAX Alarm Level
When the DG100 is connected to the battery charger, the unit can be toggled from displaying depth in FEET or METERS by long pressing the "B" Button. When the DG100 displays FSW, the unit is measuring depth in feet while displaying MSW indicates meters. At this point DG100 will display FSW or MSW with flashing "MAX" on the OLED display and "0" for depth.
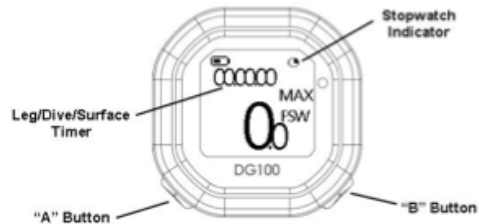
At this point, the operator must set "MAX" depth indicator levels. Short press the "B" Button to set the MAX Depth Alarm indicator by 10ft increments up to 200ft for FSW. For the MSW setting, the increments are 3M up to 60M. Short pressing "A" Button to lock MAX depth limit.

Remove the battery charger and re-install USB cap. Ensure that the cap is properly installed to prevent flooding the unit. **Note: DG100 will also display warning to re-insert USB cap before diving. To clear warning, short press A-Button.**
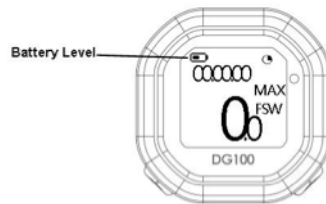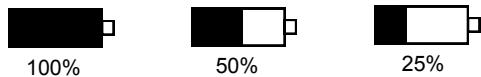
Stopwatch Mode

While in Dive or Surface Mode, "Short-Press" the "A" and "B" Button together to access "Stopwatch Mode". A small icon will appear in the right corner of the display. This mode allows the operator to start the timer, pause it, restart, and reset to zero. Once started, short press the "B" Button to start and pause the timer. Short press "A" Button to zero the timer. Pressing the "A" and "B" Button together the unit back to dive time or surface interval time (stopwatch icon will disappear).

Battery Health Indicator

The DG100 comes with a rechargeable battery that provides up to 35 hours of continuous use. Upon activation, the battery health indicator is located on the top-left of the display and looks like a battery. When fully charged the battery is full (see below). It is recommended you check the battery level before every dive.

Maintenance

The DG100 is designed to need very little maintenance to meet its functional requirements. Although built for the rigors of underwater use, the DG100 is a precision instrument and should be treated as such. Avoid violent bumps and drops that could effect the pressure transducer and reliability of the gauge. Do not exceed the maximum depth of 330ft (100M) as this may damage the unit. Use mild soap and rinse with fresh water after every use. Store in a cool and dry location when not in use. Replace the strap if it becomes frayed or damaged.

Battery Charging

The battery on the DG100 is a Lithium Ion and can be charged over 300 times to provide over 10,500 hours of dive time. The battery is sealed in the unit and functions just like a cell phone battery. A USB connector in the back of the unit provides access for the battery charger.
NOTE: To prevent damage to the battery, never drain the battery to zero percent. If the battery fails to charge, the unit will need to be rebooted

PREFACE

PROPERTY

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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, email or phone call. 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 a 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 consequentially 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.

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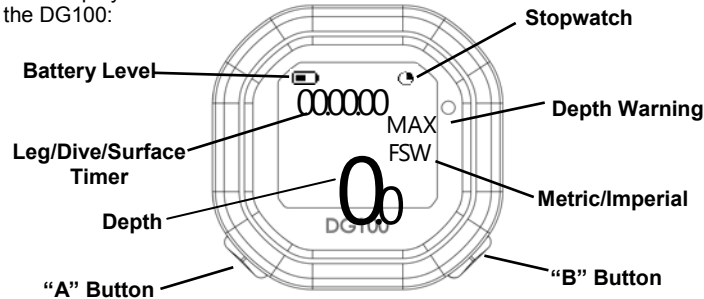
Introduction

The DG100 is a digital depth gauge that measures and displays depth accurately from 0 to 330Ft (0-100m) resolution is 0.1ft (0.1m). The DG100 also functions as a "bottom timer", "surface interval timer", and has a separate "stop- watch" feature. These features are available once the unit is activated. The DG100 operates in three modes, "Dive Mode", "Surface Mode" and "Hibernation Mode". These modes are independent of each other even though that share some of the same functions.

Once the DG100 is immersed in water and senses depth of 3 feet (1 meter) it activates and enters "Dive Mode". In this mode the DG100 operates as a depth gauge, tracks your dive time, allows access to the "stop-watch" mode, and several safety functions. Once in the "Dive Mode" the DG100 cannot be de-activated.

When ascending to the surface, if the DG100 senses a depth of 3ft (1 meter) or less for 60 seconds it will enter "Surface Mode". In this mode the DG100 tracks surface intervals up to 24 hours. While in "Surface Mode" the DG100 memory can be accessed and allows the diver to recall their deepest excursion and display it. When recalling the max depth, the total dive time is also displayed.

After 10 minutes on the surface, the DG100 will enter "Hibernation Mode" and shuts down. Please note the unit is not powered off but hibernating. Always check battery level before a dive. The DG100 can be put into "Hibernation Mode" or woken up by pushing the function buttons.

Below are display and control functions of the DG100:

DISPLAY STATUS INDICATOR:
MAX = Maximum Depth
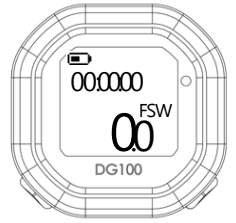FSW = Feet of Sea Water
MSW = Meters of Sea Water

Depth readings and stopwatch/dive/surface times are provided through a large Red OLED display. The DG100 buttons supply access to these functions. An ambient light sensor automatically adjusts brightness of the display. All functions of the DG100 are controlled through buttons on each side of the display. Buttons are operated in two modes "Short Press" or "Long Press". The "Short Press" is the quick press and release of the button to access a desired func-

Using the DG100

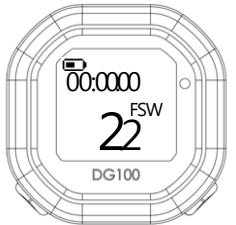## Activation and De-activation of the unit

The DG100 will enter "Dive Mode" automatically once immersed in water to a depth of approximately 3 feet (1 meter). **NOTE: The DG100 cannot be please in hibernation while in "Dive Mode".** While in 'Surface Mode" you can activate the unit by "Short Press" either "A" or "B" button.

While in "Surface Mode" you can place the DG100 into hibernation by "Long Press" the "A" button. After being in "Surface Mode" for 10 minutes the unit will automatically enter "Hibernation Mode"
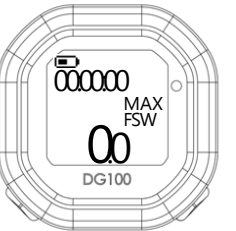
Monitoring Depth

Once in "Dive Mode" the DG100 will continually display the depth in real time to 330ft (100m). The depth will be displayed in FSW (feet-of-seawater) or MSW (meters-of-seawater) based on the settings. The display will indicate FSW or MSW to represent the proper setting. **NOTE: Please note this setting when planning your dive.** During the dive, the operator can toggle between the current dive and the maximum depth obtained during the dive by long pressing the B-Button. See Maintenance for changing depth scale.

Max Dive Indicator

The "MAX" Status will illuminate once the DG100 exceeds programed "MAX" depth. **NOTE: The default setting for "MAX" depth is 30ft (9m).** The "MAX" status remains on and can only be reset by re-entering "Dive Mode" from "Surface Mode" (new dive) or by attaching the DG100 to a USB port. See Maintenance for setting the Max Dive Indicator

Dive and Surface Timer Once the DG100 enters 'Dive Mode" a timer starts to monitor the length of the dive on the top of the display in hours: minutes: seconds. The DG100 will stop monitoring the dive time once the unit is less than 3ft (1m) from the surface for more than 60 seconds. Once the unit has exceeded 60 seconds, it enters "Surface Mode" and displays surface time for up to 24 hours. The surface interval time will reset upon the next dive or when the timer exceeds 24 hours.