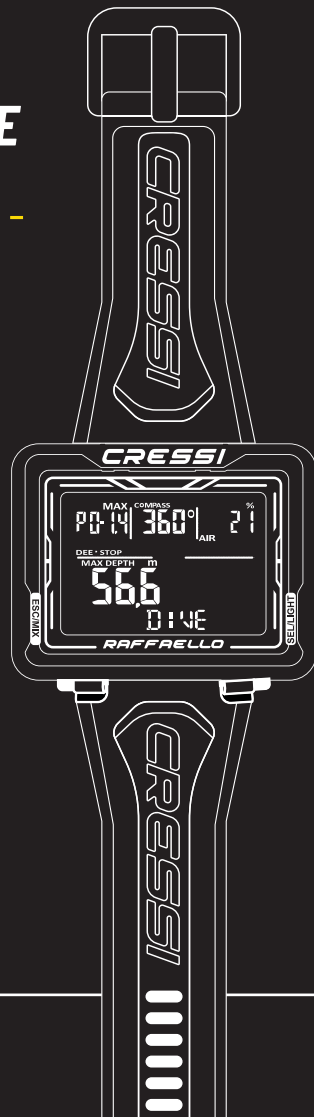


CRESSI RAFFAELLO



EN DIRECTION FOR USE RAFFAELLO



CRESSI QUALITY PRODUCTS SINCE 1946

www.cressi.com

WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **INGESTION HAZARD:** The product contains non user replaceable cell batteries.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH OF CHILDREN**.
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.
- **BATTERY TYPE:** CR2450R.
- **NOMINAL VOLTAGE:** 3V.



WARNING

- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- **BATTERY TYPE:** CR2450R.
- **NOMINAL VOLTAGE:** 3V.
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.

Congratulations on your purchase of your RAFFAELLO dive computer, a sophisticated and complete instrument, manufactured to ensure you the utmost safety, efficiency, and reliability.

MAIN SPECIFICATIONS.

DIVE COMPUTER

- CRESSI RGBM algorithm. New algorithm from the Cressi - Bruce Wienke collaboration based on the Haldane model integrated with RGBM factors for safe decompression calculation in multi-day repetitions.
- Fabrics: 9 with saturation half-times between 2.5 and 480 minutes;
- Dive' programme: Comprehensive processing of dive data, including any decompression, of every dive performed with Air or EAN (Enhanced Air Nitrox).
- Complete setting of %O₂ (oxygen percentage) and PO₂ (oxygen partial pressure) parameters with the possibility of setting PO₂ between 1.2 bar and 1.6 bar and %O₂ between 21% and 50% for the first mixture, between 21% and 99% for the second, between 21% and 99% for the third.
- Possibility of a Nitrox dive following an air dive (even with desaturation in progress).
- Deep Stop engageable or disengageable.
- **GAGE** function for diving without decompression calculation and re-settable depth stopwatch.
- **FREE** function for free diving with switchable alarms.
- Display with 'PCD System' for perfect understanding and readability of values.
- 12/24-hour time with minutes and seconds.
- Calendar.
- Dive planning with manual sliding of the safety curve.

- Change of units from metric (metres and °C) to imperial (ft-°F) by user.
- Audible and visual alarms.
- Graphic oxygen toxicity indicator at CNS.
- Highly efficient backlit display.
- Log book with the ability to store up to 80 hours (AIR/GAGE/EAN) and 32 hours (FREE).
- Dive history memory.
- Possibility of eventual Reset (desaturation reset), useful for instrument rental.
- Bluetooth interface with general data and dive profile (optional).
- CEILING function.
- Navigation compass.

GENERAL WARNINGS AND SAFETY RULES.

IMPORTANT: Read this instruction manual carefully, including the section on safety regulations. Make sure that you understand the use, functions and limitations of the instrument before using it! DO NOT use the instrument without having read this instruction manual in its entirety!

IMPORTANT: this instrument is to be considered as a diving aid and does not replace the use of dive tables.

⚠ DANGER: NO DIVE COMPUTER CAN COMPLETELY ELIMINATE THE RISK OF DECOMPRESSION SICKNESS (MDD) (EMBOLISM). IT MUST BE VERY CLEAR THAT A DIVE COMPUTER CANNOT COMPLETELY ELIMINATE THE RISK OF MDD. IN FACT, THE COMPUTER CANNOT TAKE INTO ACCOUNT THE PHYSICAL CONDITION OF EACH INDIVIDUAL DIVER, WHICH CAN CHANGE ON A DAILY BASIS. IT IS ADVISABLE, THEREFORE, TO UNDERGO A THOROUGH MEDICAL EXAMINATION BEFORE ENGAGING IN DIVING

ACTIVITY AND TO ASSESS YOUR PHYSICAL FITNESS BEFORE EACH DIVE. IT IS IMPORTANT TO REMEMBER THAT THE CIRCUMSTANCES THAT CAN INCREASE THE RISK OF MDD CAN ALSO DEPEND ON EXPOSURE TO COLD (TEMPERATURES BELOW 10° C), SUBOPTIMAL PHYSICAL CONDITIONS, SEVERAL SUCCESSIVE DIVES OR DIVES OVER SEVERAL DAYS, DIVER FATIGUE, THE INTAKE OF ALCOHOLIC BEVERAGES, DRUGS OR MEDICATIONS, DEHYDRATION. IT IS GOOD PRACTICE TO AVOID ALL THESE SITUATIONS AND THOSE THAT MAY PUT YOUR SAFETY AT RISK: EVERYONE MUST BE RESPONSIBLE FOR THEIR OWN SAFETY!

IMPORTANT: this instrument should only be used by certified divers: no computer can replace thorough diver training. Remember that the safety of a dive is only guaranteed by adequate preparation.

IMPORTANT: the Cressi RAFFAELLO computer is designed for amateur sports use only and not for professional use requiring prolonged dive times, which increases the risk of MDD.

IMPORTANT: Perform preliminary checks before using the computer, checking the battery charge status and display indications. DO NOT dive if these are unclear or faded, and especially if the low battery icon appears.

IMPORTANT: During the dive, also equip yourself with a depth gauge, pressure gauge, timer or watch and decompression tables. Always ensure that the cylinder pressure is adequate for the planned dive and, while diving, frequently check the amount of air in the cylinders using the pressure gauge.

⚠ DANGER: DO NOT DIVE AT ALTITUDE BEFORE SETTING THE CORRECT ALTITUDE LEVEL. CHECK THE ALTITUDE LEVEL ON THE DISPLAY ONCE IT HAS BEEN SET. REMEMBER THAT DIVING AT ALTITUDES HIGHER THAN 3,000 M (10,000 FT) ABOVE SEA LEVEL SIGNIFICANTLY INCREASES THE DANGER OF MDD.

⚠ DANGER: WAIT FOR THE 'NO FLY' ICON TO DISAPPEAR FROM THE COMPUTER DISPLAY BEFORE TRAVELLING BY AIR.

IMPORTANT: the use of this instrument is strictly personal; the information it provides refers exclusively to the person who used it during the dive or during the repeated series of dives.

⚠ DANGER: CRESSI DOES NOT RECOMMEND USING THIS INSTRUMENT FOR DECOMPRESSION DIVING. HOWEVER, IF FOR ANY REASON YOU WERE FORCED TO GO BEYOND THE LIMITS OF THE SAFETY CURVE, THE CRESSI RAFFAELLO COMPUTER WOULD BE ABLE TO PROVIDE YOU WITH ALL THE INFORMATION REGARDING DECOMPRESSION, ASCENT AND THE RELATIVE INTERVAL AT THE SURFACE.

IMPORTANT: do not dive with cylinders containing Nitrox mixtures without personally checking their content and the correct percentage of O₂ (%O₂). Then set this value on your computer for the mixture for which the computer will process the decompression calculations, remember that the computer does not accept decimal values of %O₂.

IMPORTANT: Check the setting of the instrument parameters before diving.

⚠ DANGER: RAFFAELLO always maintains the last set oxygen percentage. It is essential for the diver's safety to always check this parameter before each dive.

⚠ DANGER: CRESSI DOES NOT RECOMMEND NITROX DIVING WITHOUT HAVING SUCCESSFULLY COMPLETED A SPECIFIC COURSE RELATED TO THIS TYPE OF DIVING. THIS IS DUE TO THE FACT THAT SUCH DIVES MAY EXPOSE THE DIVER TO RISKS DIFFERENT FROM THOSE ASSOCIATED WITH AIR DIVING, WHICH MAY INCLUDE SERIOUS PHYSICAL INJURY AND IN EXTREME CASES, EVEN DEATH.

⚠ DANGER: FOR SAFETY REASONS, THE RAFFAELLO COMPUTER HAS THE PO₂ LIMIT SET BY THE MANUFACTURER AT 1.4 BAR EVEN WHEN DIVING WITH AIR. IN CASE YOU NEED TO INCREASE THE SAFETY MARGIN EVEN FURTHER, YOU CAN SET THE PO₂ TO LOWER VALUES, UP TO 1.2 BAR WITH 0.1 BAR DECREMENTS.

IMPORTANT: after a dive carried out with RAFFAELLO in GAGE mode (depth gauge-timer), the instrument does not perform saturation and desaturation calculations for the remaining 48 hours after using the depth gauge.

IMPORTANT: avoid all dives with highly risky profiles, such as, for example, those with a so-called 'yo-yo' profile, those with inverted profiles or several consecutive multi-day dives, as they are potentially dangerous and at high risk of MDD!

IMPORTANT: There is currently no validated scientific literature that allows more than two dives per day for periods of one or more weeks without the risk of decompression sickness. It is therefore important for one's health not to exceed two dives per day. It is also recommended to take a rest period of at least two hours between dives.

IMPORTANT: whenever you realise you are in the presence of factors that may increase the risk of MDD (decompression sickness) choose and set the most conservative Safety Factor (SF1 and SF2), thus making the dive safer.

NOTE: in the case of air travel, take the instrument with you in the pressurised cabin.

NOTE: Cressi reminds us that sports diving must be conducted within the safety curve and at a maximum depth of 40 m, the limit for sports diving: going outside these limits means significantly increasing the risk of MDD.

FREE DIVING

IMPORTANT: The safety of free diving depends on the rational ability of each of us to process theoretical and practical knowledge with common sense and prudence in order to avoid accidents. This instrument must therefore only be considered an aid to skin-diving for people who are diligently prepared for the risks involved in this activity. It must therefore be used only and exclusively when one has complete theoretical and practical training in free diving techniques and its dangers.

⚠ DANGER: IT MUST BE VERY CLEAR THAT A DIVE COMPUTER CANNOT AND DOES NOT AIM TO ELIMINATE THE RISK OF SYNCOPE OR TARAVANA SYNDROME. IN FACT, THE COMPUTER MERELY INDICATES DIVE, SURFACE AND DEPTH TIMES. THE INFORMATION PROVIDED TO THE DIVER HAS THE VALUE OF MERE DATA THAT BECOMES SAFETY INFORMATION ONLY AND EXCLUSIVELY ONCE IT HAS BEEN SIFTED AND PROCESSED BY THE HUMAN MIND. A SOUND AND THOROUGH THEORETICAL PREPARATION IS THEREFORE RECOMMENDED.

IMPORTANT: This instrument should only be used by certified divers: no computer can replace thorough diver training. Remember that safety in freediving is only guaranteed by adequate preparation.

IMPORTANT: The Cressi RAFFAELLO computer is designed for amateur sports use only and not for professional use.

IMPORTANT: Carry out preliminary checks before using the computer, checking the battery charge status and display indications. DO NOT dive if these are unclear or faded, and especially if the low battery icon appears.

⚠ DANGER: Before using the computer, do some preliminary checks, checking the battery charge status and the indications on the display. DO NOT dive if these are unclear or faded and especially if the low battery icon appears.

IMPORTANT: Check the setting of the instrument parameters before diving.

IMPORTANT: Deep apnea is a risky discipline and requires a lot of practical and theoretical training to be practised safely. It is therefore important to obtain a licence from an accredited diving school. However, it is recommended to be fully aware of one's limits and to practice this discipline well within them. It is recommended never to dive alone and to always be accompanied by a buddy ready to intervene in case of need.

IMPORTANT: Deep apnea is a risky discipline and requires a lot of practical and theoretical training to be practised safely. It is therefore important to obtain a licence from an accredited diving school. However, it is recommended to be fully aware of one's limits and to practice

this discipline well within them. It is recommended never to dive alone and to always be accompanied by a buddy ready to intervene in case of need.

NOTE: in the case of air travel, take the instrument with you in the pressurised cabin.

Cressi reserves the right to make changes to the instrument without prior notice as a result of the constant technological updating of its components.

INTRODUCTION

The Cressi RAFFAELLO computer is an advanced recreational instrument that can provide all the necessary information on depth, dive times, any decompression requirements, ascent speed and surface intervals between dives (AIR and NITROX).

Nitrogen uptake and release is constantly processed by sophisticated software, adjusting it to the amount of inert gas contained in the various mixes that can be used. This information is shown on the instrument's display thanks to the PCD System (Priority Compartment Digit Display), which allows a simple and direct 'dialogue' between diver and computer, guaranteeing a perfect understanding of all the data useful at that precise moment and excellent readability in every situation of use. The computer is also equipped with a clock, calendar and has a versatile dive memory (logbook).

RAFFAELLO's mathematical model can make calculations of the saturation and desaturation of a dive performed either using air or using hyperoxygenated mixtures (Nitrox). In the latter case, it is possible to set all the parameters concerning the mixture of our dive: from the maximum PO₂ value allowed (between 1.2 bar and 1.6 bar), to the percentage of oxygen in the mixture (%O₂): between 21%

and 50% O₂ (GAS1) between 21% and 99% (GAS2,GAS3). The instrument can also be set by the user to either metric (m-°C) or imperial (ft-°F) units. The instrument can, moreover, be set by the user both on metric (m-°C) and imperial (ft-°F) units of measurement. The RAFFAELLO dive computer can be connected to a portable device via the Cressi interface (accessory) and the relevant APP (accessory). It is very important that you read this instruction manual carefully and understand its exact meaning; failure to do so could cause serious damage to your health. The purpose of this manual is to guide you in understanding all the functions of the computer before using it for diving.

HOW THE RAFFAELLO COMPUTER WORKS

CLOCK FUNCTION RAFFAELLO is equipped with an intuitive multi-level circular menu that is easy to consult.

BUTTON FUNCTIONS



LEFT/ESC button if pressed briefly, this button is used to scroll through the various menus and to set the settings in descending order. If pressed and held, this button is used to exit the various menus. If pressed and held in dive mode (NITROX) this button allows you to change GAS1/GAS2/GAS3. If pressed and held in GAGE mode this button is used to enter the depth stopwatch function. **RIGHT/SEL** button If pressed and held briefly, this button is used to scroll through the various menus and to set adjustments in ascending order. If pressed and held, this button is used to enter the various menus and to confirm. If pressed and held for a long time in hour or dive function, the backlight is switched on.

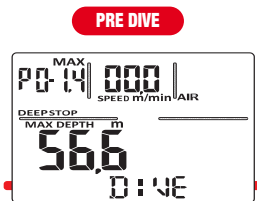
SPEED/COMPASS

press the **LEFT/RIGHT** buttons simultaneously to alternate between the vertical speed display and the compass display.

SWITCH ON

EN

To switch the computer on, briefly press the LEFT button or the RIGHT button,  the computer appears on the PRE DIVE screen where all dive data is displayed.



The computer is ready to start a dive. Before diving Always check if the data is correct

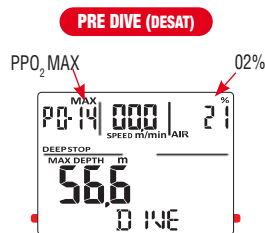
NOTE: The computer is able to switch on automatically on a dive within 20 seconds when you go deeper than 1.2m/4ft even if it is not switched on by the diver. However, Cressi recommends turning the instrument on and checking its parameters.

The computer will return to the stand by function (off) after 10 minutes of inactivity on the surface.

DESAT TIME

After a dive, if DESAT time in AIR mode is still active, the computer will alternate between the DESAT and PRE DIVE screens. If DESAT time in NITROX mode is still active, the computer will alternate between the DESAT and PRE DIVE screens GAS1, GAS2*, GAS3* (*if activated).

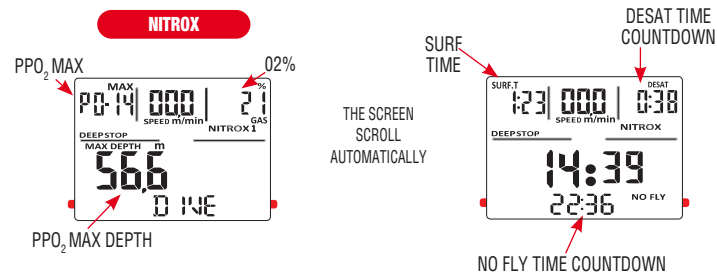
SWITCH ON (DESAT) AIR



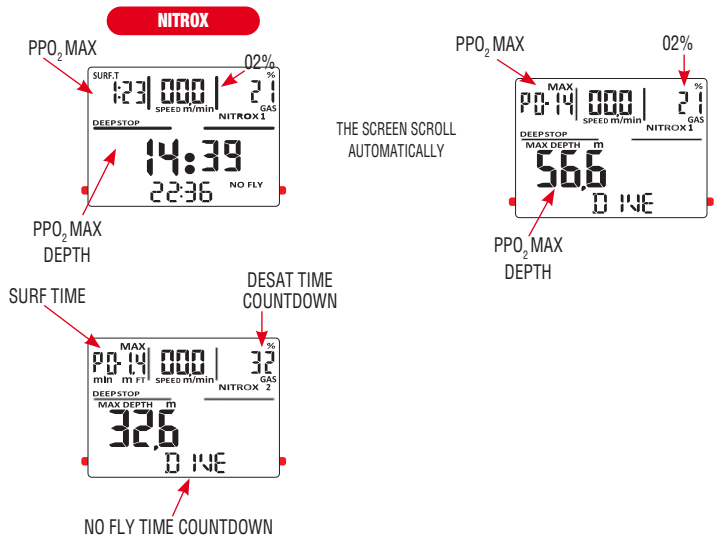
THE SCREEN SCROLLS AUTOMATICALLY



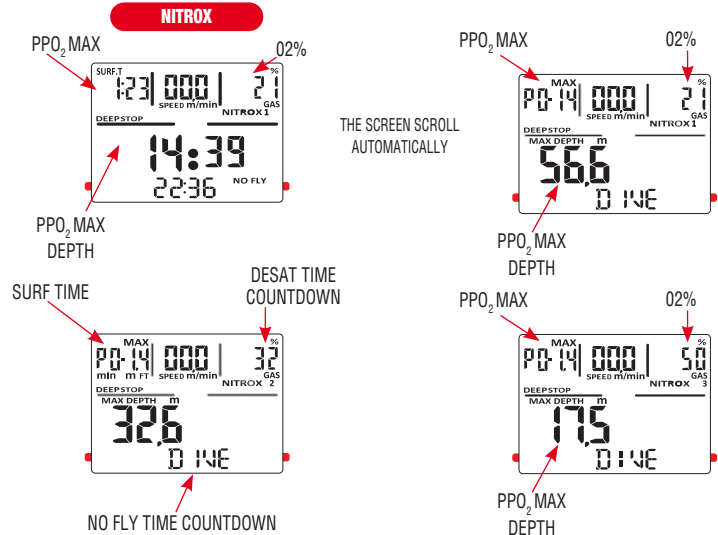
SWITCH ON (DESAT) NITROX (1 GAS)



SWITCH ON (DESAT) NITROX (2 GAS)



SWITCH ON (DESAT) NITROX (3 GAS)



MAIN MENU

PRE DIVE



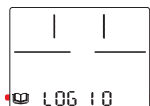
TIME



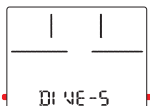
MODE-SET



LOGBOOK



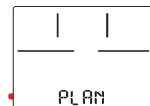
DIVE-SET



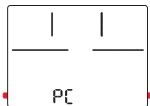
TIME SET



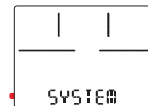
PLANNING



PC LINK

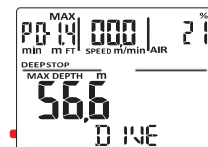


SETTING & INFO SYSTEM



PRE DIVE AIR

PRE DIVE



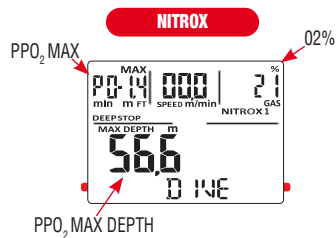
The computer is ready for diving.

From the TOP screen, briefly pressing the LEFT/RIGHT   buttons scrolls through the main menu screens:

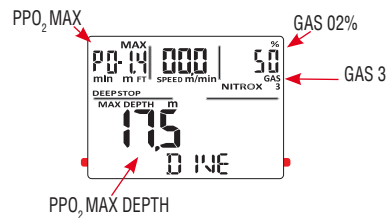
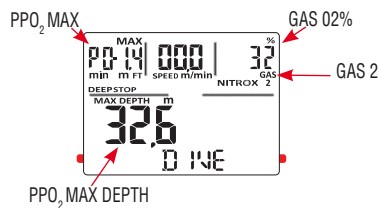
PRE DIVE → ORA/DATA → MODE-S → LOG → DIVE-S → TIME-S → PLAN → PC → SYSTEM

From each of these screens, pressing the **SEL** button accesses the relevant functions:

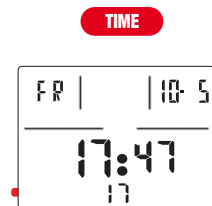
PRE DIVE NITROX



The computer is ready for diving. If more than one GAS is used, the screens will change every second, displaying the dive-related settings.



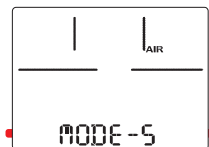
TIME/DATE



The current time and date can be displayed on this screen.

MODE-S (MODE-SET)

MODE SET



The **MODE-S** function allows you to choose the desired dive mode. To enter the **MODE-S** function press the **SEL** button.

SET will be displayed on the first line and the currently selected mode (flashing) will be shown. by pressing the **◀▶** buttons the various modes can be selected

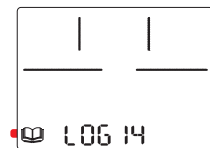
- AIR to control air diving
- EAN to control dives in enriched air (Enhanced Air Nitrox)
- FREE for free diving
- GAGE for the depth gauge function

Confirm the desired mode by pressing the **SEL** button until you hear the confirmation beep. Press the **ESC** button (3 sec.) to return to the main menu.

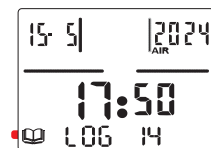
NOTE: When diving in FREE - GAGE - AIR/NITROX mode, it will not be possible to change modes until the NO FLY time has elapsed. The NO FLY time is set to: 48 hours for GAGE dives; 24 hours for FREE dives; 12,24 or 48 HOURS for AIR/NITROX depending on the type of dive.

LOGBOOK

From this screen, pressing the **SEL** button accesses the dive log:



RAFFAELLO's memory allows you to record up to 80 hours of diving in AIR/EAN/GAGE mode or 32 hours in FREE mode with pressure and temperature data. Dives are numbered in date order, from most recent to oldest. By briefly pressing the **◀▶** buttons you can scroll through the dive dates.



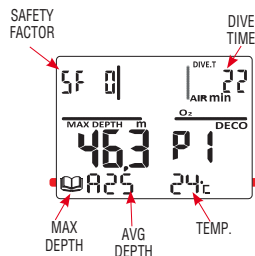
On the first line is the day month and year of the dive. On the middle line is the start time. Pressing the **SEL** button displays the data for the selected dive.

NOTE: the logbook is not resettable

LOG AIR

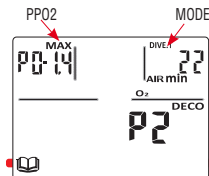
The AIR dive log consists of 2 pages that can be scrolled by briefly pressing the buttons  

Page 1 shows:



- The safety factor SF (0/1/2)
- The total dive time DIVE.T (min)
- The maximum depth reached in the dive MAXDEPTH (m/FT)
- The number of the page being consulted P(1/2)
- The average depth of the dive A. (m/FT)
- The minimum temperature of the dive (°C/°F)
- Possible mountain icon
- Possible icon of exceeding the set limit of PPO2

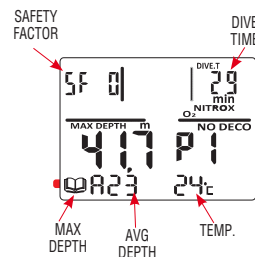
Page 2 shows:



- The maximum partial pressure value PP02 (1.2/1.6)
- The type of immersion (AIR)

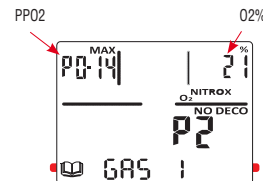
LOG EAN

The EAN (NITROX) dive log consists of 2 or more pages that can be scrolled by briefly pressing the   buttons on page 1 is indicated:



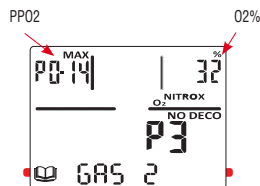
- The safety factor SF (0/1/2)
- The total dive time DIVE.T (min)
- The maximum depth reached in the dive MAXDEPTH (m/FT)
- The number of the page being consulted P(1/2)
- The average depth of the dive A.(m/FT)
- The minimum temperature of the dive °C/°F
- Possible mountain icon
- Possible icon of exceeding the set limit of PPO2

Page 2 shows:



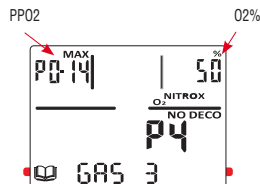
- the maximum PP O2 partial pressure value (1.2/1.6)
- the percentage of oxygen in the mixture (21/50%)O2

Page 3 shows:



- The maximum PP O2 partial pressure value (1.2/1.6) relative to GAS2
- The percentage of oxygen in the mixture (21/99%) O2 relative to GAS2

Page 4 states:

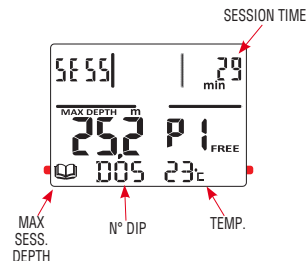


- The maximum PP O2 partial pressure value (1.2/1.6) relative to GAS3
- The percentage of oxygen in the mixture (21/99%) O2 relative to GAS3

LOG FREE

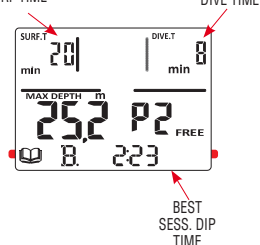
The FREE (apnea) dive log consists of 2 pages that can be scrolled by briefly pressing the buttons  

Page 1 shows:



- The total session time SESS (min)
- The maximum depth reached in the session MAXDEPTH (m/FT)
- The number of the page being consulted P(1/2)
- The consecutive number of dives D.(01,02,03...)
- The minimum temperature of the session °C/°F

Page 2 shows: SURF TIME DIVE TIME

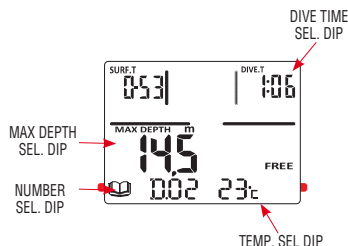


- The duration of the session divided into Dive Time and Surf Time
- The maximum depth of the session
- The time of the longest dive of the session

single dive log:

Pressing the **SEL** button from one of the two pages of the FREE logbook leads to the logbook of data for individual dives. In this logbook, briefly pressing the **◀▶** buttons displays the dives progressively with the following data:

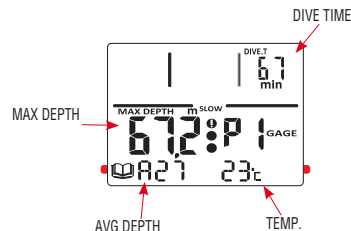
- Surface time of the previous dive SURF.T (min)
- Dive time of the displayed dive DIVE.T (min- Maximum depth of the displayed dive MAXDEPTH (m/FT)
- Number of the displayed dive D. (D1,D2,D3...)
- Minimum temperature of the displayed dive °C/°F



(Single dive log can be viewed only if the session is less than 100 dives). To view single data in sessions with more than 100 dives use the Cressi interface (accessory).

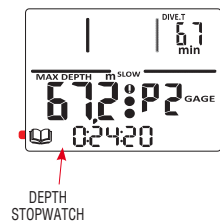
LOG GAGE

The GAGE dive log consists of 2 pages scrollable with the buttons **◀▶**. Page 1 shows:



- The dive time DIVE.T (min)
- The maximum depth reached in the dive MAXDEPTH (m/FT)
- The average depth of the dive A.(m/FT)
- The minimum temperature of the dive °C/°F

Page 2 shows:



- The time recorded by the depth stopwatch

DIVE-SET: DIVE PARAMETER SETTING. AIR / NITROX

EN

Once the MODE SET (MODE-S) menu has been set in the AIR mode, NITROX can be changed by accessing the DIVE SET (DIVE-S) menu. Press the **SEL** button. To access the dive-set menu.

The parameters that can be changed through the DIVE-S menu in NITROX mode are as follows: DEEPSTOP - SAFETY FACTOR (SF) - ALTITUDE (ALT)-DEPTH (MAXIMUM DEPTH ALARM) - CEILING MODE -OXYGEN PERCENTAGE %O2 GAS1 (21-50%) OXYGEN PARTIAL PRESSURE PPO2 GAS1 (1.2-1.6) OXYGEN PERCENTAGE GAS 2 OFF/21%-99% GAS PARTIAL PRESSURE2 (1.2-1.6) - OXYGEN PERCENTAGE GAS 3 OFF/21%-99% GAS PARTIAL PRESSURE3 (1.2-1.6).

DEEP STOP

There are various diving didactics and various decompression theories in the world and each of these has been developed based on important scientific notions, laboratory tests and practical trials. Some of these, while conducting certain dives, validate and require deep stop or DEEP STOP while others do not contemplate such a decompression profile.

RAFFAELLO is set up by the company with DEEP STOP active.

The DEEP STOP icon indicates deep stop activation.

Press the **SEL** button, to activate/deactivate DEEP STOP until you hear the confirmation beep.

Press the **ESC** button to return to the main menu.

SF (SAFETY FACTOR)

The Safety Factor or Safety Factor is an additional parameter intended to make diving safer if there are personal factors that increase the risk of MDD. It is changeable by the diver to three values: SF0/SF1/SF2. The manufacturer's default setting is SF0, i.e. off.

To change the Safety Factor (SF), press the **SEL** button and adjust the desired safety factor by pressing the **◀▶** buttons SF0/SF1/SF2).

Confirm by pressing **SEL** until you hear the confirmation beep.

Press the **ESC** button to return to the main menu.

ALT (ALTITUDE)

When diving at altitude, adjust the computer as follows:

Press the button **SEL** and then press the buttons **◀▶**

to adjust the correct altitude value according to the table shown on page 17.

Press the **SEL** button until you hear the confirmation BEEP.

Press the **ESC** button to return to the main menu.

No mountains	- 0 to 700 m
One mountain	- 700 to 1500 m
Two mountains	- 1500 to 2400 m
Three mountains	- 2400 to 3700 m

Each icon indicates that the computer has consequently modified its mathematical model according to the altitude set. The latter must obviously correspond to the actual altitude reached and must be within the computer's altitude level ranges (none, one, two, or three mountains). It is good to remember that when we go to altitudes (higher altitudes than where we live), our physique undergoes alterations due to the supersaturation of nitrogen that must rebalance with the external environment. In the same way, it is important to remember that due to the lower partial pressure of oxygen in the atmosphere, our body needs a certain period of acclimatization. It is therefore advisable, after arrival at altitude, to wait at least 12 to 24 hours before diving.

⚠ DANGER: RAFFAELLO does not automatically handle altitude dives, so it is essential to set the altitude level correctly and observe the acclimatization period before diving.

⚠ DANGER: Dives made at altitudes above 3000 m above sea level result in a consistent increase in the danger of MDD.

DEPTH (MAXIMUM DEPTH ALARM)

The RAFFAELLO computer is equipped with a user-settable maximum depth alarm, which is very useful for educational diving. The alarm can be adjusted from a Maximum of 50m (164 FT) to a minimum of 10m (32FT) in steps of 2m (6FT). To set the maximum depth limit, from the DEPTH screen press the **SEL** button to enter the function, then press the **◀▶** buttons to set the desired maximum depth and confirm with the Long **SEL**.

MAXIMUM DEPTH ALERT WHILE DIVING:

If the set maximum depth is exceeded while diving, 3 consecutive beeps will be heard and the depth value will start flashing until it returns below the set threshold press **ESC** to return to the main menu. **ESC** to return to the main menu.

NOTE: the computer is set from the factory with DEPTH in OFF.

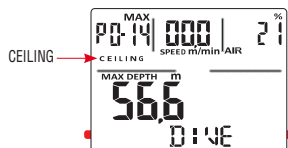
CEILING

The CEILING function allows you to optimize the decompression curve by decreasing the decompression curve by 1 meter instead of using stages at multiples of 3 meters. This optimization allows you to reduce the decompression time by up to 10% depending on the type and duration of the dive.

From this screen, pressing the **SEL** button will enable/disable the CEILING function.



In case the CEILING function has been activated, the PREDIVE screen will display the corresponding icon.



PARTIAL OXYGEN PRESSURE PO2

RAFFAELLO is set by the company with a basic Partial Oxygen Pressure (PO2) value of 1.4 bar for both Air and Nitrox dives in order to ensure maximum safety during any type of diving.

OXYGEN PARTIAL PRESSURE SETTING PO2 (AIR)

In the PPO2 screen, press the **SEL** button to enter the function. The partial pressure value will start flashing. Press the **◀▶** buttons briefly until the desired partial pressure is set.

Press **SEL** to confirm your choice, the computer will beep to confirm.

Press **ESC** then the button to return to the main menu.

SETTING PERCENTAGE OXYGEN %O2 AND OXYGEN PARTIAL PRESSURE PO2 (NITROX)

In the %O2 GAS1 screen, press the **SEL** button to enter the function.

The O2 GAS1 percentage will start flashing.

Press the **◀▶** buttons briefly to increase/decrease the oxygen percentage. When you reach the desired percentage, press **SEL** confirm.

The computer will beep for confirmation.

Then press the **▶** button to switch to the screen of PPO2 GAS1. In case you want to change the partial pressure, press the **SEL** button to enter the function.

Then briefly press the **◀▶** buttons to set the desired partial pressure PPO2 GAS1 and confirm with the **SEL** button, the computer will beep for confirmation.

Then press **ESC** button to return to the main menu or press **▶** button to enable GAS2.

ENABLING GAS2

The RAFFAELLO computer is set with GAS2 in OFF.

To enable gas and change its percentage, press the **SEL**.

Then press **▶** button briefly until the desired percentage is obtained (Available values range from 21% to 99% in steps of 1%). When the desired percentage is reached, press the **SEL** button to confirm. The computer will beep to confirm. Then press the **SEL** button briefly to set the desired partial pressure PPO2 GAS2 and confirm with the **SEL** button. Next press the **ESC** button to return to the main menu, or press the button **▶** to enable GAS3.

ENABLING GAS3

The RAFFAELLO computer is set with GAS3 in OFF. To enable gas and change its percentage, press the button **SEL**.

Then press the **▶** button briefly until the desired percentage is obtained (Available values range from 21% to 99% in steps of 1%). When you have arrived at the desired percentage, press the **SEL** button to confirm. The computer will beep to confirm. Then briefly press the **▶** button to set the desired partial pressure PPO2 GAS3 and confirm with the button **SEL**.

Then press the **ESC** button to return to the main menu.

IMPORTANT: The computer keeps the last PO2 setting entered until manually reset by the diver to different values.

NOTE: As the maximum PO2 set and the mixture oxygen %O2 change, the computer tells us the maximum depth that can be reached.

IMPORTANT: PO2 is set by the manufacturer to the base (default) value of 1.4 bar, both for diving with Air and diving with Nitrox mixtures. This ensures that the diver's dive is protected by following the values recommended for sports diving. In case it is necessary to increase the safety margin of our dive, it will be possible to set the PO2 to lower values, up to a minimum of 1.2bar. Available values range from 1.2 to 1.6 with 0.1bar steps. The set value will remain stored on the computer until re-set by the diver.

DIVE-SET: SETTING DIVE ALARMS. FREE

Once the MODE SET (MODE-S) menu is set in the FREE mode, alarms can be activated and changed by accessing the DIVE SET (DIVE-S) menu. Press the **SEL** button to access the dive-set menu.

The alarms available in the FREE mode are as follows: (SURF-T) - (DEPTH) - (STEP) - (DIVE-T)

Surface Time Alarm (SURF-T)

By activating this alarm, after the previously set time has elapsed, the computer will beep three times to warn that the surface time has been exceeded and the surface time shown on the display will begin to flash. The setting can be based on the elapsed time, from 1'00" to 10'00" in 30" steps or on the ratio of the time of the previous dive to the surface time, from F1 to F5. In the latter case, the computer will multiply the dive time of the previous dive by the set factor. For example, if the previous dive lasted 1'20" and a ratio of F2 was set, the surface time will be 1'20" x 2 = 2'40". Press **SEL** to enter the function, press the **◀▶** buttons to set the desired time, then press **SEL** to confirm.

Depth Alarm (DEPTH)

By activating this alarm, once the previously set depth has been exceeded, the watch will beep three times to warn that the depth has been exceeded, and the depth shown on the display will begin to flash. The depth that can be set ranges from 1m. (3 ft.) to 50 m. (164 ft.) in steps of 1 meter (3 ft.). Press **SEL** to enter the function, then press **◀▶** to set the desired depth, then press **SEL** to confirm.

Depth interval warning (STEP)

EN

A warning can be activated whenever a depth interval is exceeded, such as every 2m. (6ft.). By activating this warning, every time a depth interval is exceeded the watch will beep three times. The settable interval ranges from 2m. (6ft.) to 25m. (82ft.) in steps of 1m. (3ft.). Press **SEL** to enter the function, press the   buttons to set the desired depth, then press **SEL** to confirm.

Dive time alarm (DIVE-T)

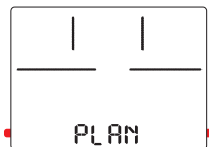
By activating this alarm, after the previously set time has elapsed, the watch will beep three times to warn that the dive time has been exceeded, and the dive time shown on the display will begin to flash. The settable time ranges from 0'10" to 6'00" in 0'10" steps. Press **SEL** to enter the function, press the   buttons to set the desired time, then press **SEL** to confirm. Press **ESC** to exit the alarm setting.

TIME SET (TIME-S) TIME AND DATE CORRECTION

From this screen, pressing the **SEL** button accesses the time/date correction function. Briefly pressing the   buttons will scroll through the following screens: H24/H12 - hours - minutes - d-m/m-d (day-month or month-day display) - day - month - year. Press **ESC** to exit the function **SEL** accesses the time/date correction function. Press the   buttons briefly to scroll through the following screens: H24/H12 - hours - minutes - d-m/m-d (day-month or month-day display) - day - month - year. Press **ESC** to exit the function.

PLAN (IMMERSION PROGRAMMING)

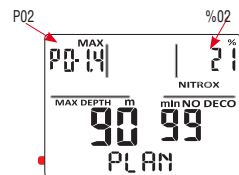
From this screen, pressing the **SEL** button accesses the PLAN function:



The PLAN function allows you to display, depending on the mixture used in the mode (Nitrox or Air), the no-decompression time still available at the various depths (safety curve). When you enter the PLAN function, the display shows the SURF time, if any, in case you want to simulate diving in the following hours. If you want to set the SURF interval time, press the buttons to increase the surface time to the chosen value.



Available times are 00:10, 00:20, 00:30, 00:45, 01:00, 01:30, 02:00, 03:00, 04:00, 05:00, 06:00, 12:00, 24:00. In case you do not want to set a time interval leave the value at 00:00 and go to the scheduler. If you want to simulate the dive immediately, from this screen, pressing the **SEL** button will enter the PLAN function.



Values are provided either for the first dive of a (possible) series, or during the 'surface interval between two or more successive dives. In this case RAFFAELLO takes into account the residual nitrogen and reduces accordingly, the times on the curve. The safety curve values (no-decompression times) for the various depths between 9m (29ft.) and 48m (157ft.) will appear on the screen, with manual increments of the latter of 3m (10FT) being obtained by pressing the buttons Press the **ESC** button to exit the function.

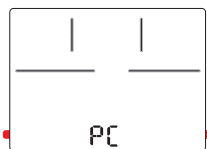
NOTE: The PLAN function is disabled in case the computer is in STOP or in case it is set in the GAGE/FREE function.

PC LINK - COMPATIBLE PC INTERFACE

RAFFAELLO Cressi can be interfaced to a portable device. To connect devices download the Cressi app from

- Play Store/App Gallery - (Android)
- App Store - (iOS)

Access the PC function of RAFFAELLO pressing the   buttons from the main menu.



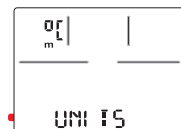
Then, by following the instructions given in the app's wizard, you can download all the data contained within RAFFAELLO, profiles and data related to your dives.



SYSTEM - SYSTEM MENU

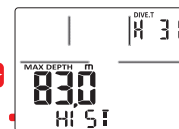
The system mode allows you to download data to portable devices, change system settings, reset the instrument, etc. From the SYSTEM screen, pressing the key will take you to the following menu:

CHANGE UNITS



PUSH  TO CHANGE UNITS

HISTORY



MAX DEPTH HISTORY
HOURS IN USE COUNTER

INFO



FIRMWARE VERSION
SERIAL NUMBER
NUMBER OF BATTERY CHANGES

HIGH SPEED ASCENT ALARM



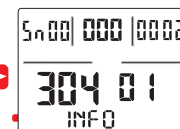
PUSH  TO CHANGE ON/OFF ALARM SPEED

SLEEP



PUSH  TO ENTER SLEEP MODE

TISSUE ERASE



SWITCH TO YES  AND PUSH  5 SECONDS TO PUT THE WATCH INTO SLEEP MODE OR RETURN

The sleep mode allows you to save battery power in periods of not use the instrument

SWITCH TO YES  AND PUSH  5 SECONDS TO PUT THE WATCH INTO SLEEP MODE OR RETURN

UNITS - SETTING METRIC/IMPERIAL UNITS OF MEASUREMENT

The RAFFAELLO computer can indifferently make its calculations either by expressing values in metric units (depths expressed in meters and temperatures expressed in °C) or in imperial units (feet and °F). To make the change of units of measurement, from the UNITS screen press the **SEL** button to change the unit of measurement check measurements set, then press **ESC** to exit the function.

HISTORY (HIST) - DIVE HISTORY MEMORY.

The HIST screen shows the non-resettable dive history memory: The first line displays the number of total hours of use in dive Hxxx and the second line displays the maximum depth reached.

INFO

The INFO screen provides system information: On the first line is displayed the serial number Sn xxxxxx On the second line is displayed the firmware version 1xx and the number of battery changes made by the user. The clock leaves the factory with the battery change counter at 00.

EXCLUSION OF ASCENT ALARM IN AIR/NITROX/GAGE MODES.

This function allows the fast ascent sound alarm (over 12m/min) to be turned off.

WARNING: Excessively fast ascent speed increases the risk of decompression sickness! This function is reserved for instructors who take full responsibility for disabling the ascent rate alarm (AL.SP). In any case, when this function is activated, the computer displays a crossed-out speaker icon during the entire dive .

To activate the alarm mute function, from the AL.SP screen press the **SEL** button to enter the function, briefly press the   buttons to change the ON/OFF setting, press the **SEL** button to confirm the choice.

T.ERASE (TISSUE ERASE) INSTRUMENT RESET

With the T.ERASE function, all calculations related to desaturation that may be in progress are reset to zero. Logbook, profile and historical memory of performed dives remain stored even after the instrument is reset. This function can be particularly useful when renting the instrument in DivingCenters

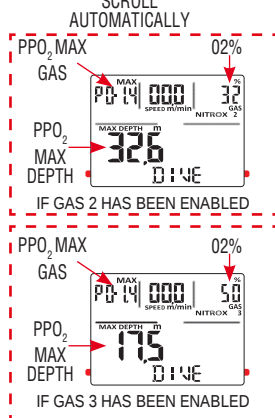
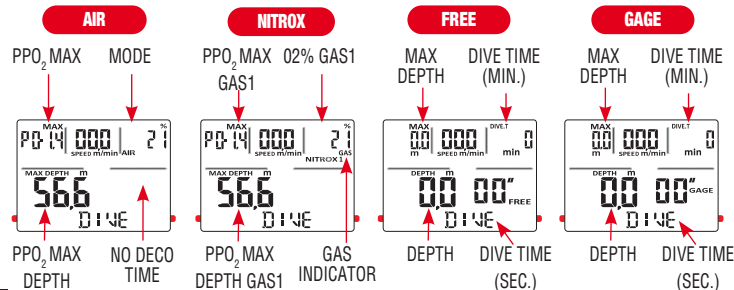
DANGER: Never reset the instrument if it is to be used underwater for subsequent dives!

To proceed to reset the instrument from the T.ERASE screen press the **SEL** button to enter the function, at which point the flashing NO, and the words SURE? will appear. Briefly press the   buttons to toggle between NO and YES, and immediately press and hold the **SEL** button for 5 seconds: A countdown from 5 to zero seconds will begin, at the end of which three beeps will be heard to confirm that the instrument has been reset.

DIVE (PRE DIVE)

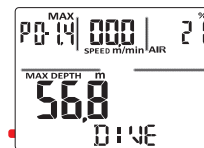
The DIVE (pre dive) screen is the one that precedes the dive. From this screen you can check all the previously set parameters of the diver.

It is important before diving to set the computer to dive and check the correctness of the parameters that will accompany the diver throughout the dive.

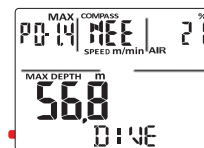


COMPASS

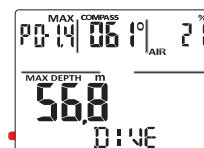
RAFFAELLO is equipped with a digital compass with automatic compensation. The compass usable underwater (DIVE) or on the surface (PRE DIVE). When the compass is not active the first line of the display shows the vertical speed (shown).



The vertical speed can be displayed in m/min or FT/min depending on the metric/imperial setting. To activate the compass press the buttons simultaneously, the compass will be displayed instead of the vertical speed indicating the cardinal points as in the figure:

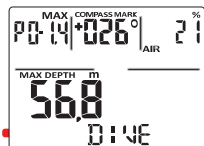


Pressing the two buttons again simultaneously will display the compass in degrees (ordinal numbers) 0°-359°



REFERENCE DIRECTION

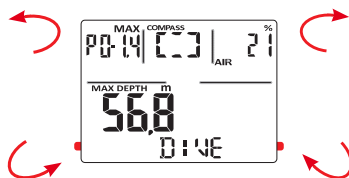
When the compass is displaying declination in degrees you can enter your reference direction. To activate the reference point, after choosing your direction, press the   buttons simultaneously for 2 seconds, the display will switch to the reference state indicated by the MARK icon.



Press the   buttons simultaneously to return to the ordinal number display, press again to return to the vertical speed display.

CALIBRATION OF THE COMPASS

In some cases, such as after exposure to magnetic fields, it may be necessary to recalibrate the compass. Should the animation in the figure appear, rotate RAFFAELLO in the 3 axes until the compass value reappears.



IN IMMERSION COMPUTER FUNCTIONS

The RAFFAELLO computer can be set in three different modes:

- AIR if the dives are made with air and you want to have the decompression calculation.
- NITROX if the dives are made with one or more Nitrox hyperoxygen mixtures and you want to have the decompression calculation.
- FREE if the dives are made in apnea with dive counts, and surface and depth alarms.
- GAGE if you do not wish to have the decompression calculation but have the indications time, instantaneous depth, average depth of the dive.

NOTE: The RAFFAELLO computer is set by the company to the AIR function for air immersion with the PO2 pressure set to 1.4 and the oxygen percentage set to 21%. To set percentages other than Air 21%, activate the mode

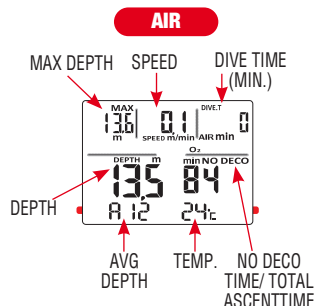
WARNING: Before diving, it is recommended to set the computer to DIVE by pressing either of the   buttons. In this way the computer will activate the computation of the dive parameters in a maximum time of 2 seconds as soon as the depth of 1.20 meters is reached. In case of forgetting, the computer will activate automatically but in a maximum time of 20 seconds as soon as the same depth is reached.

SAFETY CURVE DIVES.

AIR FUNCTION: DIVING WITH AIR.

When set in AIR mode, the following information is highlighted on the display during a safety curve dive:

- Elapsed time spent diving (Dive.T min.).
- Current depth value (Depth m./Ft.).
- Maximum depth reached (Max m./Ft.).- Average depth (m./Ft.).
- No decompression time (No Deco min.).
- Current temperature, expressed in °C or °F.
- Ascent rate indicator.
- Altitude level indicator if set.
- SF Safety Factor.
- Bar graph representing the O2 toxicity level at CNS.

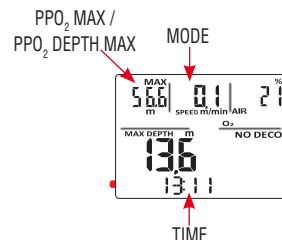


Other important information is obtained by pressing the push-buttons during the dive and represents:

- The maximum PO2 set.
- The selected mode (Air).

And the relative percentage of oxygen

- The current depth
- The current time.



NITROX FUNCTION : DIVING WITH NITROX.

The RAFFAELLO computer keeps stored in memory the previously entered Oxygen %O₂ setting until it is manually reset by the diver to different values. It is therefore important to understand the following: Artificial breathing mixtures pose very serious risks to humans if not perfectly known, analyzed and studied in all their aspects inherent to diving activity. It is of paramount importance to understand that THE MIXTURE THAT YOU BREATHE MUST BE EXACTLY EQUAL TO THAT SET ON THE COMPUTER. HOWEVER, the decompression and gas toxicity information provided by the computer WILL BE DANGEROUS FOR LIFE. Before, after, and during a NITROX dive, it is imperative to check the Oxygen percentage and make sure it exactly matches that of the cylinder.

BEFORE A NITROX DIVE.

The RAFFAELLO computer always keeps the program for diving with Air active until it is set by the diver for use with Nitrox mixtures. In this case the NITROX icon will appear on the display and will remain present during the dive and as long as RAFFAELLO remains set to MODE-S NITROX. In order for the computer to adapt its calculation algorithm to the new parameters, once the Nitrox program has been activated, it is necessary to set on the computer the exact values of the percentage of oxygen (%O₂) contained in the cylinder we will be using, after having meticulously analyzed its contents.

DANGER: The use of this computer with hyperoxygenated mixtures (NITROX) is intended only for those who have successfully completed a comprehensive training course in the use of such mixtures.

DANGER: Do not dive with cylinders containing Nitrox mixtures whose oxygen percentage you have not personally verified.

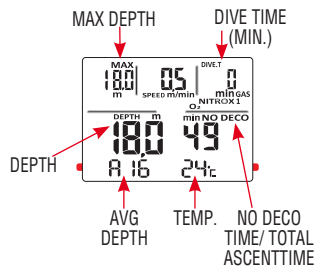
IMPORTANT: Always check the %O₂ (percentage of Oxygen) value set on the computer before starting the dive! This is possible on the surface, through the main DIVE screen and the DIVE SET screen that allow us a quick view of the previously set parameters.

IMPORTANT: It should be remembered that for the same dive times, a Nitrox mixture provides longer no-decompression times than those with air. However, it is essential to strictly adhere to the maximum depth allowed by the Nitrox mixture used.

DIVING WITH NITROX

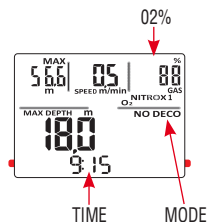
During a Nitrox safety curve dive in addition to all the information of a normal Air dive, the following will also be present:

- Bar graph representing O₂ toxicity level at CNS.
- NITROX icon GAS1, GAS2, GAS3



Other important information is obtained by pressing the buttons during the dive and represents:

- The maximum PO₂ set.
- The set oxygen percentage %O₂.
- The maximum attainable depth relative to the maximum set PO₂.
- The current time.



GASSWITCHING (MULTI-GAS IMMERSION) BEFORE GASSWITCHING:

The RAFFAELLO computer always keeps the Air dive program active by default until it is changed and set by the diver for use with two mixtures in the EAN (NITROX) mode. Dive mode setting). In this case, the NITROX icon will appear on the display and remain present during the dive and until the RAFFAELLO settings are changed again. In order for the computer to adapt its calculation algorithm to the new parameters, it is necessary to set on the computer the exact values of the percentage of oxygen (%O₂) contained in the cylinders we will use, after meticulously analyzing their contents.

GAS SWITCHING DURING THE DIVE.

During the ascent of a dive, if the computer is set in the MODE-S NITROX mode, the primary GAS1 mixture icon will flash as soon as the maximum operating depth of the second GAS2 mixture is reached to alert you that from that altitude to lower altitudes it will be possible to make the gas change. At this point to make the mixture change you need to press one of the two buttons to go to the second page, then press the button. At this point the word GAS1 will appear on the last line. Pressing the button will display the word GAS2 with the parameters of the second mixture and then the third mixture. Holding down button will display the word GAS2 with the parameters of the second mixture and then the third mixture. Holding down

DANGER: In case the current depth is greater than the maximum depth allowed by GAS2 the computer will not allow gas change. In case the current depth is greater than the maximum depth allowed by GAS2 or GAS3 the computer will not allow gas change.

NOTE: The primary GAS1 mixture icon will not flash in case the maximum operating depth of the second GAS2 mixture or the third GAS3 mixture is not exceeded during descent.

PO2 ALERT.

The computer can constantly monitor another fundamental parameter related to Oxygen: the Partial Pressure (PO2) value. Oxygen toxicity can in fact occur either by excessive exposure or by exceeding the maximum PO2, which in practice means exceeding the limit depth allowed by the mixture in use. As already seen, the PO2 limit value is set by the diver between 1.2 bar and 1.6 bar. RAFFAELLO considers the value of 1.6 bar as the maximum allowable limit of Partial Pressure, and depending on the mixture used, it automatically reports the maximum depth that can be reached. It should not be forgotten that even when employing air, the limit of oxygen toxicity can be reached. This limit varies according to the PO2 set.

RAFFAELLO has an in-house preset value of 1.4 bar, to which corresponds, in air, a maximum depth of 56.6 m (186 ft). Of course, it is possible to set the computer to other PO2 values, up to a maximum of 1.6 bar only when on the surface in the DIVE-5 PPO2 SET screen.

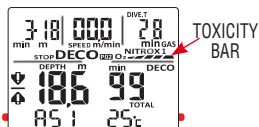
To alert the diver of excess PO2, the computer presents a **PO2** alarm. When the limit depth corresponding to the set PO2 (1.2 bar to 1.6 bar) is reached, in fact, an acoustic alarm will go off and at the same time a visual one that will make the PO2 icon and the current depth flash. As soon as you go below the limit depth again, the audible alarm will cease and the current depth will stop flashing as will the **PO2** icon. However, the latter will remain lit both during the rest of the dive and in the LOG BOOK.

CNS TOXICITY DISPLAY

The Cressi RAFFAELLO computer is able to graphically represent the level of Oxygen toxicity to the Central Nervous System (CNS). It is related to the Partial Pressure of Oxygen and the diver's exposure time to high Partial Pressures of Oxygen (PO₂). The level of Oxygen toxicity is represented in the display by a column formed by a 5-segment bar, indicating increasing amounts of accumulated oxygen. When all segments are illuminated, it means having reached 100% of the maximum allowable tolerance at CNS and being in severe danger of hyperoxia. One can therefore understand the importance of being able to constantly monitor this figure, which, being a function of Partial Oxygen Pressure and exposure time, should always be kept under control during a dive. When the oxygen level reaches guard values, close to the maximum allowable toxicity (corresponding to 4 out of 5 lit segments), the bar graph starts flashing and a temporary audible alarm is triggered, indicating that we are close to a toxic situation at CNS. In the event that the situation remains so or worsens (100% permissible toxicity), the bar and writing continue to flash and the temporary audible alarm is repeated until, on ascending, the Partial Oxygen Pressure decreases below 0.6 atmospheres. At that point the bar graph stops flashing, but the alarm will still be reported in the Logbook.

NOTE: The result of oxygen exposure calculations is rounded up to the next higher percentage value.

DANGER: Do not use hyperoxygenated mixtures, either in diving or decompression, without having attended specific courses. The Nitrox Base certification from the various educational agencies only qualifies you to use standard hyperoxygenated mixtures (Ean 32 and Ean 36), within the no-decompression limits.



ASCENT RATE

The ascent speed is indicated on the display by a dot indicator, located in the center of the display, which functions according to the table in the figure below. If, during the ascent phase, the maximum allowable speed values are exceeded, SLOW and the three flashing icons will appear simultaneously on the display, and an audible alarm will be heard. Under these conditions, ascent should be stopped until the SLOW wording disappears and the display returns to normal conditions.

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0.0 - 3.9 m/min.	4.0 - 7.9 m/min.	8.0 - 11.9 m/min.	12 - > 12 m/min.
0.0 - 12 ft./min.	13 - 26 ft./min.	26 - 39 ft./min.	40 - > 40 ft./min.

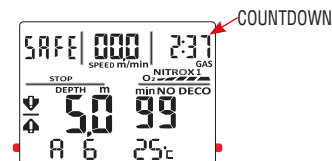
NOTE: In case the maximum ascent speed of 12m/min - 40ft/min is exceeded for an extended time, RAFFAELLO computer will make the next dive more conservative, but only if effected during the desat time, in order to preserve the diver from the risk of MDD.

icon indicates that the penalty factor is active.

DANGER: Too rapid an ascent speed exponentially increases the risk of MDD! Cressi always recommends that, at the end of each dive, a safety stop (commonly called a "safety stop") of 3 min at 5m (16 ft.) be made, which will be assisted by the computer (see next section).

SAFETY STOP - SAFETY STOP.

RAFFAELLO is programmed to automatically signal a safety stop (called a safety stop), after every dive deeper than 10m, as recommended by didactics and the latest studies on dive physiology. This stop should be performed in a depth range of 5m (16ft.) to 3m (9ft.), for the duration of 3 minutes.



The stop is indicated on the display with the SAFE icon; the display in this condition, clearly indicates the duration in minutes and seconds with a countdown. The safety stop is not mandatory but is strongly recommended if, for example, the maximum ascent speed is repeatedly exceeded. Cressi recommends respecting it at all times in order not to run into safety problems.

NOTE: During the safety stop, the maximum depth will be visible by pressing one of the two buttons

DECOMPRESSION WARNING ALARM

Whenever the time still available on the curve, indicated on the display by the NO DECO icon, drops to 3 minutes RAFFAELLO warns us by sounding an audible alarm. In this situation we are about to cross the limits of the safety curve and enter a decompression dive.

DEEP STOP

In order to avoid the risks related to micro-bubbles that form during ascent, RAFFAELLO is able to suggest a deep stop (DEEP STOP) lasting one or two minutes (in the case of decompression diving) at a depth that varies depending on the profile of the dive performed. During the dive, if the profile requires it, DEEP STOP will be displayed and an acoustic signal will be sounded. The stop icon with the altitude and stop time in minutes will appear. In case the Deep Stop is omitted by the diver, the alerts will be cancelled and the computer will recalculate the ascent schedule without that stop.

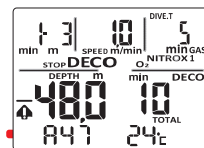
NOTE: Check that the deep stop is activated (see the DIVE SET section).

NOTE: In this circumstance, the maximum depth will be visible by pressing one of the two buttons  .

DIVING OUTSIDE THE SAFETY CURVE (DECOMPRESSION)

DANGER: Do not use this instrument to dive outside the safety curve! Cressi does not recommend using this computer to make decompression dives.

However, if during the dive due to inattention or emergency you were forced to go beyond the limits of the safety curve, RAFFAELLO would be able to assist you by providing all the information related to a proper ascent and the relevant decompression stages. When exiting the curve, the computer emits an audible alarm and simultaneously the display screen changes and looks as in the figure providing the diver with the following information:



- Stopover icon with flashing DEC at the bottom of the display indicating that we have exited the safety curve and need to make decompression stops. Upward-facing arrow will flash to prompt ascent.
- Depth of the first planned stop (the deepest one), indicated in meters (m) or feet (ft). This can vary from a maximum of 24 m, to a minimum of 3 m, with decrements of 3 m in 3 m.
- Duration in minutes of the first (deepest) decompression leg.
- TOTAL icon indicating the total ascent time, i.e., the time required to ascend to the deepest leg, respecting the ascent rate, plus the time to stop at that altitude and any other subsequent altitudes (including deep stop if necessary), plus the safety stop time, plus the time required to reach the surface after completing the decompression legs.
- Icon "DIVE. T" indicating the time spent diving.

NOTE: In this circumstance, the maximum depth will be visible by pressing one of the two buttons .

DANGER: NEVER ascend above the decompression altitude. To accidentally avoid this situation, keep during decompression at altitudes slightly deeper than the stage but always within the depth range established to perform decompression indicated by the instrument with the two icons (arrows) simultaneously lit and not flashing. It is good to remember that when decompression stops, the amount of gas required to complete the dive increases.

ALARM OF OMITTED DECOMPRESSION STAGE.

If, for any reason, the decompression stage is "forced" by ascending above the depth indicated by the computer, an audible alarm will be heard and at the same time, the decompression icon arrow pointing downward will flash in the display until you have descended at least to the stage depth or deeper than it. The computer allows a maximum time of 2 minutes to correct this dangerous situation, clearly evidenced by a continuous audible alarm.

After 2 minutes have elapsed without the diver having returned to the indicated decompression altitude, RAFFAELLO will enter the ERROR PROGRAM by flashing the "STOP" icon and will be inoperable for the next 48 hours, allowing access only to the Logbook and History functions. Subsequently, on the PRE DIVE screen the computer will display the flashing "STOP" icon, along with the word DECO and the stop icon with the arrow pointing upwards flashing, signifying that during the last dive the decompression stage was omitted. In case you re-enter the water in the next 48 hours RAFFAELLO will sound repeatedly displaying the word STOP on the display.

The same notice will be stored in the LOG BOOK indicating that on a given date the dive with the given number was made omitting the decompression leg.

DANGER: Under these conditions, one cannot dive for the next 48 hours. Monitor yourself in case of the onset of MDD symptoms, contacting DAN and a hyperbaric center and providing as much data as possible on the dive performed. In the opposite case and that is when you descend more than 1m below the stage depth the arrow that will flash will be the one indicating to ascend.

IN FREE DIVING (APNEA)

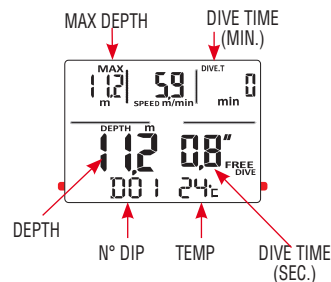
RAFFAELLO has a dedicated mode for freedivers with specific functions such as dive counts (time and depth) and surface recovery times.

IMPORTANT: This instrument should be used only by certified divers: no computer is in fact a substitute for thorough diver training. Remember that safety in freediving is only guaranteed by proper training.

DANGER: NO DIVE COMPUTER IS MEANT TO GUARD AGAINST THE RISK OF SYNCOPE OR TARAVANA SYNDROME. IN FACT, THE COMPUTER MERELY INDICATES DIVE AND SURFACE TIMES, DEPTHS, AND THE RELATIONSHIP BETWEEN THEM. THE INFORMATION THAT IS PROVIDED TO THE DIVER HAS THE MERE VALUE OF SIMPLE DATA THAT BECOMES SAFETY INFORMATION ONLY AND EXCLUSIVELY ONCE IT HAS BEEN SIFTED AND PROCESSED BY THE HUMAN MIND. A SOUND AND THOROUGH THEORETICAL PREPARATION IS THEREFORE RECOMMENDED.

When set in FREE mode, the following information is highlighted on the display from the first to the last line during the dive:

- Maximum depth reached (Max m.).
- Elapsed time of the current dive in minutes and seconds
- Value of the current depth (Depth m.).
- the number of the current plunge
- The current temperature, expressed in °C or °F.



Other important information is obtained by pressing either of the  buttons during the dive and represents:

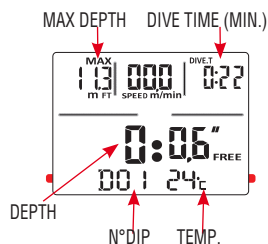
- The total time of the freediving session in minutes
- The maximum depth reached in the session
- The current time



SURFACE FREE (APNEA)

In the surface interval between two dives, the display will show the following data:

- Maximum depth previous dive.
- Dive time previous dive.
- Surface time minutes and seconds.
- Number of dives made.
- Temperature.



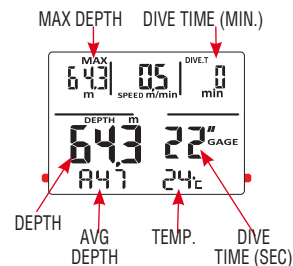
NOTE: After 30 minutes of surface the session will be automatically closed.

NOTE: To avoid the risk of MDD after FREE diving, no other diving modes are allowed in the next 24 hours.

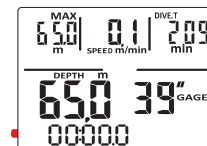
GAGE MODE: DEPTH GAUGE AND TIMER.

In addition to the AIR, NITROX, and FREE modes, the computer is equipped with a fourth program called GAGE (depth gauge and timer) that can be used for those who make so-called "technical" dives. In this case the instrument provides only the basic parameters of the dive, i.e. depth, dive time, average depth, temperature, and in no way performs the calculation of tissue saturation and desaturation, which must be programmed and calculated with specific software and/or special tables. In this regard, Cressi reminds you that sport dives must be conducted within the safety curve and at the maximum depth of 40 m (sport diving limit): going outside these limits means greatly increasing the risk of MDD! When set in GAGE mode, during a dive in the safety curve, the following information is highlighted on the display:

- Maximum depth reached.
- Dive time (minutes).
- Current depth.
- Dive time (seconds).
- Average depth (A).
- Temperature.

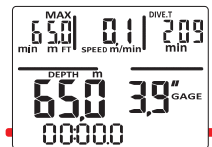


To display the current time, press one of the two buttons .



DEPTH STOPWATCH (DIVE GAGE)

While diving in GAGE mode, a resettable depth stopwatch can be activated. To activate in depth stopwatch hold down **ESC** button. The stopwatch data will appear in the last line as displayed below



Press the **▶** button to start or stop the stopwatch, press the **◀** button to reset the stopwatch.

Press **ESC** to return to displaying the average depth and temperature. The last data displayed by the stopwatch will be stored in the logbook.

IMPORTANT: The RAFFAELLO computer was made only for amateur sports use and not for professional uses, which require prolonged dive times, resulting in an increased risk of MDD.

DANGER: Cressi categorically advises against diving with gaseous mixtures other than air without having attended a specific course. This is in view of the fact that so-called "technical" diving can expose the diver to risks different from those of recreational diving, risks that can include serious physical harm and in extreme cases even death.

IMPORTANT: After a dive performed in GAGE mode, the instrument does not perform saturation and desaturation calculations for the next 48 hours.

DANGER: If you decide to reset the instrument, accessing the system mode will cancel the nitrogen memory, so the instrument will no longer be able to calculate a subsequent dive as such. Never use this function unless at least 48 hours have passed since the last dive.

When the Gage function is active, the GAGE icon will appear.

NOTE: The RAFFAELLO computer is set by the manufacturer in the MODE SET (MODE-S) AIR function.

COMPUTER USE WITH POOR VISIBILITY

At any time during the dive, if lighting conditions do not allow easy reading of the display, its backlighting can be activated by pressing the LIGHT button. The display backlight has a duration of a few seconds after which it will automatically turn off. Some dark spots may be seen on the display during backlighting. These spots are not to be considered a defect but are due to the use of a high-contrast display.

SURFACE INTERVAL

After a dive made with MODE-S AIR or MODE-S NITROX, when ascending to depths less than 0.8m, the display provides the following information:

- Surface interval in hours and minutes (SURF.T)
- Desaturation time (DESAT) that you need to wait before you can make a flight (in hours and minutes).
- NO FLY time and its icon. When present, air travel or travel to altitudes higher than the dive site should be avoided.
- Maximum depth of the dive just passed.
- Duration of the dive spent.

IMPORTANT: Following the guidance of the major diving and hyperbaric medicine organizations RAFFAELLO will apply no-flight times as follows: 12 hours after a single dive in the safety curve (without decompression). 24 hours after a dive outside the safety curve (with decompression) or after repetitive or multiday dives (multiday) if done correctly. 24 hours do 48 hours after using the GAGE function or if serious errors occurred in the conduct of the dive.

NOTE: If a dive is started after less than 2 minutes of surface interval, RAFFAELLO interprets it as a continuation of the previous one: the dive number remains the same and the duration calculation restarts where it stopped. On the other hand, dives made after at least a 2-minute interval at the surface are considered as successive dives. In case the dive was performed with the GAGE function, the instrument is unable to perform saturation and desaturation calculations for the remaining 48 hours since the end of the dive, represented by the SURF.T surface interval.

CARE AND MAINTENANCE

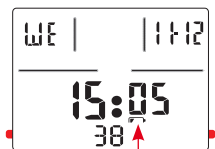
RAFFAELLO Cressi was designed and manufactured to withstand the harsh conditions of intense underwater use. It is good to remember, however, that this is a precision instrument that deserves all due care. It is a good idea to avoid violent shocks, protect it from excessive heat sources, always rinse it in fresh water after use, dry it thoroughly and never store it wet, and avoid contact with heavy equipment such as tanks.

IMPORTANT: Do not place the computer in contact with solvents or chemicals of any kind. Do not use compressed air to dry the computer. The button requires no special maintenance: never lubricate with oils or sprays of any kind.

NOTE: Changing the battery check the compartment: if signs of moisture appear inside send the instrument to an authorized service center. If there are any malfunctions, do not use the instrument underwater and contact an authorized Cressi dealer for servicing.

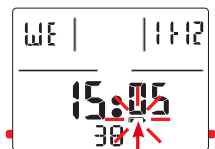
BATTERY REPLACEMENT.

Replacing the battery is a very delicate operation that should be carried out whenever the instrument indicates a low battery signal on the display. If the solid battery icon appears on the display, RAFFAELLO is able to perform all functions. However, it is recommended, especially if the computer is used in cold places, to replace the battery as soon as possible.



LOW BATTERY
(YOU SHOULD CHANGE
THE BATTERY SOON)

If the flashing battery icon appears on the display, for safety the dive functions are disabled.



LOW BATTERY
(YOU SHOULD CHANGE
THE BATTERY SOON)

IMPORTANT: Do not replace the battery when desaturation is in progress, as all data related to the desaturation calculation would be lost. In case, do not dive for the next 48 hours. After changing the battery, all settings will revert to the last value set by the user. Time and date must be reset. To replace the battery, use a screwdriver to unscrew the two screws of the cover on the back of the instrument. Remove the cover and observe the condition of the battery and the compartment that contains it. If you notice signs of corrosion due to seepage, contact an authorized Cressi center to have the instrument serviced. If everything appears to be in good condition, remove the battery from its housing while holding the computer facing downward. Replace the battery respecting the polarities (wrong polarity can damage the instrument). Before closing the cover, check for impurities on the housing and pass a light coat of silicone grease on the battery cover seal.

NOTE: It should be remembered that several factors affect the average battery life, such as, for example: the storage time of the instrument before purchase, the duration of diving, the use of backlighting, and the quality of the battery itself, whose average life varies with temperature, for example.

NOTE: Do not over-tighten the cap! Excessive tightening not only does not guarantee a better airtight seal of the battery compartment, but could even result in the cap itself breaking or difficulty in subsequent opening. **Do not touch or attempt to clean the pressure sensor!** Any malfunctions will be excluded from the warranty.

NOTE: Make sure of the watertightness of the instrument!

IMPORTANT: Any malfunction or flooding due to improper battery replacement is excluded from the warranty.

Algorithm: CRESSI RGBM algorithm.

Sample tissues: 9 with saturation emittimes between 2.5 and 480 minutes

Depth sensor:

- Calibration for salt water (in fresh water the indicated depths are about 3% less)
- Measuring range: 0-120m (0 ft. - 393 ft.), measured every second.
- Accuracy: +/- 1% (T 20°C).
- Reading resolution: 10 cm (0 to 100 m) / 1 m (100 to 120 m) / 1 ft (0 to 316 ft)
- Data acquisition interval 20 sec in surface and 1 sec in DIVE.

THERMOMETER:

- Resolution: 1 °C / 1 °F
- Measuring range: -5 °C +40 °C.
- Accuracy: +/- 2 °C /10 min change °T.

CLOCK:

- Accuracy: +/- 30 sec average per month.
- 24-hour display.

BATTERY:

3V CR 2430 battery.

WARRANTY

CRESSI LIMITED WARRANTY FOR CRESSI DIVE COMPUTERS AND RELATED ACCESSORIES

IMPORTANT NOTICE: This warranty does not limit the rights granted to the consumer by the applicable National Regulations concerning the sale of consumer goods.

Cressi provides this limited warranty to the purchaser of the Cressi dive computer of the Cressi dive computer accessories (product).

During the warranty period, Cressi or an authorized Cressi service center, will, at its sole discretion, remedy any defects in material, design and workmanship free of charge by repair of the product or replacement of the product in accordance with this limited warranty.

This limited warranty is valid and effective only in the country of purchase of the product, provided that Cressi originally intended the product for sale in that country. However in the case of purchase of the product in any of the member states of the European Union, Iceland, Norway, Switzerland and Turkey, and where Cressi originally intended the product for sale in any of those countries, this limited warranty is valid and effective in all of those countries.

Limitations to the service under this warranty may result from the presence of country-specific items in the products.

For countries outside the European Union and other than Iceland, Norway, Switzerland and Turkey, provided that the purchaser agrees to pay a

maintenance fee and reimbursement for shipping costs incurred by Cressi or an authorized Cressi center, it is possible to obtain service under the warranty in countries other than the country of purchase of the product. Any replacement parts will be provided free of charge in this case.

WARRANTY PERIOD

The warranty period runs from the date of retail purchase by the first purchaser.

The product may consist of multiple components which may be covered by a different warranty period, specifically this limited warranty is valid for a period of:

- A) two years for dive computers
- B) one year for consumables and accessories, including, but not limited to, straps, buckles, etc. (whether included in the sales package of the dive computer or sold separately).

To the extent permitted by applicable National Regulations, the warranty period will not be extended or renewed or modified in any way as a result of subsequent resale, product repair or product replacement authorized by Cressi. However, parts of the product repaired or replaced during the warranty period, or the replaced product will be warranted for the remainder of the original warranty period or for three months from the date of repair or replacement, whichever interval is longer.

HOW TO TAKE ADVANTAGE OF WARRANTY SERVICES

If you intend to make a claim under this limited warranty, contact your authorized Cressi retailer for information on how to file a claim; information will be provided on how to apply the warranty to your product. If you wish to return the product by shipping it to your authorized Cressi retailer, please ensure that transportation is prepaid.

The validity of claims made against this limited warranty, is subject to notifying Cressi or an authorized Cressi service center of the alleged defect within a reasonable time after the observation of the defect, and in no event later than the expiration of the warranty period. For any claim under this limited warranty, you must also provide your name and address, proof of purchase which must clearly state the name and address of the seller, date and place of purchase, and product type.

A warranty repair request will be fulfilled free of charge at the sole discretion of Cressi or an authorized Cressi center and the product will be repaired or replaced within a reasonable time. If the product is found not to comply with the terms and conditions set forth in this limited warranty, Cressi or an authorized Cressi center reserves the right to charge for maintenance and/or repair.

OTHER IMPORTANT NOTES

If the Product is repaired or replaced, data and content stored in the Product may be lost. Cressi or an authorized Cressi service center disclaims any liability for any damage or loss of content or data during repair or replacement of the Product.

Cressi therefore urges you to create back-up copies or make a written note of any important content or data stored in the Product. The Product or any part of it when replaced, becomes the property of Cressi. In the event a refund is awarded, the Product against which the refund is made must be returned to an authorized Cressi service center, as it becomes the property of Cressi and/or the authorized Cressi service center.

When repairing or replacing the Product, Cressi or an authorized Cressi service center, may use new products or parts as new or reconditioned.

Need support?

Cressi products are supported by a worldwide branches network, and they can provide support and warranty to customers. Ask for the closest one to you:



Headquarters

Italy:

Cressi Sub S.P.A.
Via G. Adamoli, 501
16165 Genova - Italy
info@cressi.com

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06610 La Gaude - France
info@cressi.com

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