

# APNEA HR APNEA

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## FREEDIVING MANUAL

Congratulations on your purchase of a SEAC diving computer.

The SEAC Apnea dive computer is a technologically advanced device designed and manufactured to provide all the information that every diver needs.

Periodically check **[www.seacsub.com](http://www.seacsub.com)** for any updates to this manual.

## GENERAL WARNINGS

- **WARNING!**

Read the user manual fully before using the SEAC computer.

Using the computer incorrectly will void the warranty and can permanently damage the computer.

- **WARNING!**

Only use the dive computer after you have read all sections of the instruction manual and you have understood how it works.

- **WARNING!**

The dive computer is not a substitute for diver training and should only be used by divers who have been properly trained and who have earned the appropriate license issued by a Certified Teaching Association.

- **WARNING!**

Freediving entails risks of syncope, taravana, pulmonary edema, and hemoptysis, and in general other risks related to diving: even a thorough reading of this manual and use of the instrument does not exclude potential dangers.

- **WARNING!**

The computer cannot take into account individual physiological changes that can change from one day to the next. For this reason it's good practice to use the device conservatively and cautiously, remaining within the limits shown by the computer in order to minimize the risks.

- **WARNING!**

It is strictly forbidden to freedive in the 12 hours after diving with scuba equipment!

Violating this rule could considerably increase the risk of decompression sickness.

- **WARNING!**

No fly time after a freediving session

Because no in-depth hyperbaric studies are available that are sufficient to evaluate the safety of flying for freedivers, in order to avoid decompression sickness following deep freedives, it is recommended that you wait 18 to 24 hours before boarding a plane, depending on the total dive time, the number of dives, and the average depth of the session.

Even for sessions with depths of less than 15-20 mt/50-65 ft and a limited number of dives, a pre-flight interval of at least 12 hours is recommended.

You should stay consistently up-to-date on DAN updates and instructions.

- **WARNING!**

Do not share one computer between two divers during the dive. Every diver must have their own instrument to provide information and save only that diver's data.

- **WARNING!**

Before diving, you must check the battery charge. Do NOT dive if the low battery icon is visible on the display. Always check that the display shows no signs of any malfunction and that it is clearly legible.

The Battery icon on the display has 2 segments:

Segment 1: Battery Outline ==> Battery lower than Minimum Voltage (do not dive).

Segment 2: First Bar from the bottom ==> Battery lower than 2.1V (Low level. The voltage could plummet during a dive in especially cold water).

- **WARNING!**

Always check that the settings are correct for your dive, and don't allow anyone else to tamper with your computer before the dive. If it has been tampered with by another person, check that your settings are correct.

- **WARNING!**

It is important to keep in mind that your body undergoes changes, even daily changes, that a computer cannot account for. If your physical condition is not excellent, or if you feel any physical problems, do not dive!

- **WARNING!**

The normal functions of the product could be disturbed by strong electromagnetic interference.

In this case, simply reboot the product to restore normal function, following the instructions provided in this manual (see "Reset") and use the product in another position.

- **WARNING!**

Strictly avoid pressing on the side grill of the sensor with your fingers, especially if the sensor compartment is full of water, because this could distort the measurement of zero, and could therefore result in an incorrect measurement of depth during the next dive.

In FREE mode, if you notice a measurement of anything other than zero on the surface, you need to reset the device to zero out the sensor measurement (see the instructions and warnings on using the RESET further on in this manual) or wait a few hours for the system to reestablish the correct zeroing.

## SWITCHING ON THE APNEA



If the display is off, press the LL and HR buttons at the same time until it turns on.

## TECHNICAL CHARACTERISTICS

### HARDWARE

<b>Type:</b>	Wristwatch computer.
<b>Screen:</b>	LCD Icons/Segments/Transflective matrix with user-adjustable contrast.
<b>Backlighting:</b>	LED, user-adjustable.
<b>Battery:</b>	CR2450, non-rechargeable, 3V 600mAh, user-replaceable (we strongly recommend that you have this done at an authorized SEAC center, also replacing the O-ring in the battery compartment).
<b>Buttons:</b>	4
<b>Pressure/Temperature sensor:</b>	Piezoresistive.
<b>Alarm Type:</b>	Audible and visual.
<b>PC/Mac connection:</b>	Serial via USB with special dedicated cable (optional).
<b>Accelerometers:</b>	3-axes
<b>Min/max usage temperature:</b>	-10°C (14°F)/ 60°C (140°F)
<b>Min/max storage temperature:</b>	-20°C (-4°F)/ 70°C (158°F)
<b>Maximum operating depth:</b>	100m/328 ft

## APPLICATION SOFTWARE

<b>Updates:</b>	Supported through serial port via USB.
<b>Factory mode:</b>	Supported to save energy, can be set by the user.
<b>Auto Recovery:</b>	Automatic reboot if software locks.
<b>Restore:</b>	Manual, through combination of buttons/ time.
<b>Dive modes:</b>	Freedive (with MSST "Minimum Suggested Surface Time").
<b>Water Type:</b>	Salt/Fresh.
<b>Alarms:</b>	Dive time, Dive depth, MSST violations, Alarm clock, Countdown.
<b>LogBook Sampling:</b>	Freediving = every 2 seconds or every second (user can set).
<b>LogBook Capacity:</b>	Capacity approx. 30 hours with sampling every 2"
<b>Stopwatch:</b>	simple START \ STOP \ RESET \ LAP.
<b>Countdown:</b>	resolution to one second.
<b>Fitness Function:</b>	Basic step counter
<b>Set Backlighting:</b>	Auto / Manual / Dive.
<b>Units:</b>	Metric / Imperial.
<b>Watch:</b>	24/12 hour format, dual time.
<b>Alarm:</b>	Daily.
<b>Reset:</b>	Tissues/Settings.

## **FUNCTIONS OF THE APNEA COMPUTER**

### **Software**

#### **a) MSST Minimum Suggested Surface Time**

The MSST is minimum interval of time on the surface that is suggested between two dives to reduce freediving risks.

#### **• WARNING!**

**The minimum suggested recovery times between two dives indicated by the MSST calculation can reduce, but not eliminate, the risks of accidents caused by freediving, such as syncope, Taravana, and/or hemoptysis, because there are many other factors to consider, such as age, body mass, training, physical condition, pre-existing medical conditions (both known and unknown to the diver), and more, which the Apnea computer software cannot calculate.**

The MSST is calculated differently for two depth brackets:

- To a depth of 30 meters or less, the MSST is twice the dive time in seconds, rounded up to the next whole minute. That means that for a dive with a dive time of 1 minute 40 seconds, the MSST is 4 minutes.
- For depths greater than 30 meters, it is the maximum depth reached during the dive divided by 5 and rounded up to the next whole minute. So, for a dive to a maximum depth of 41.00 meters, the MSST will be 9 minutes.

Calculation of the MSST is enabled by default. It can be disabled using the corresponding option in the "FREE SET" menu.

When MSST is active it will be displayed in the middle of the screen with the label "MSST" flashing until the countdown has concluded (the clock reaches 00:00).



## **b) Hydration**

### **• WARNING!**

It is well known that dehydration, along with other freediving conditions and the freediver's physical condition, can contribute to freediving accidents. To reduce these risks, the Apnea computer periodically reminds the freediver to hydrate by drinking water.

In every session, the reminder to hydrate will be displayed about every 2 hours.

The 2-hour interval count starts at the beginning of the first dive in the session.

The reminder is only visual, cannot be deactivated beforehand in the SET menu, and only appears while on the surface between two dives.

Press any button to clear the reminder.

To avoid the reminder being closed manually, it is shown on the surface. The countdown for the next 2-hour interval will start when the previous reminder is closed.

## **c) MSST Alarm**

The audible alarm for an MSST violation is emitted when the freediver goes back under water before the MSST elapses.

This alarm stops automatically after 10 seconds, or can be stopped manually by pressing any button.

This alarm can be switched off in the ALARMS menu.

MSST violations do not result in penalties in the calculation of the next MSST.

## **b) Depth Exceeded Alarm**

The Depth Exceeded audible alarm sounds when the freediver exceeds the depth value set in the corresponding section of the ALARMS menu, if activated.

This alarm stops automatically after 30 seconds, or can be stopped manually by pressing any button.

This alarm can be switched off in the ALARMS menu.

### **e) Dive Time Exceeded Alarm**

The Dive Time Exceeded audible alarm sounds when the freediver exceeds the Dive Time value set in the corresponding section of the ALARMS menu, if activated.

This alarm stops automatically after 30 seconds, or can be stopped manually by pressing any button.

This alarm can be switched off in the ALARMS menu.

## **Logbook**

- Approx. 30 hours with sampling every 2 seconds, or approximately 15 hours with sampling every second.

If the memory becomes completely full, the oldest dives will be deleted to make room for new dives.

## **Fitness function: step counter**

The step counter is a stand-alone application and only starts running when the user is in that application. Therefore, the application does not run in the background.

For the most precise calculation, it's important to set the "Height and Weight" values correctly.

The step counter application consumes battery more quickly.

Step counting is based on the interpretation of data provided by the accelerometer only. Therefore, step counting accuracy has some limitations:

- It depends strictly on where the watch is worn (wrist, belt, ankle, etc.).
- It depends strictly on how the user wears it (for example, a watch that is loose around the wrist will not count steps correctly).
- It also depends on the type of activity. Certain activities generate false positives (moving the hands, car/motorcycle/train/subway trips, washing dishes, etc.).
- It depends on how long the activity lasts. Steps are only counted once a given number have been detected in a row.
- The accuracy of the step counter application cannot be guaranteed for 100% of the population because individual users walk and move differently.
- The maximum identification frequency of steps is 3Hz (3 steps per second).

Step counter data are displayed in the following range:

- 0-99999 steps.
- Exercise duration (hours:minutes) 00:00 – 99:59
- Calories (kcal) 0-99999
- Distance: 0.0 – 99.99 (km or mi)

## Reboot

There are three ways to reboot:

- Manually: long-press the HR / LR / LL buttons at the same time for at least 20 seconds.

- **WARNING!**

**End users should only reboot this way in special situations, for example when asked to do so by an authorized Seac technician in an online technical support session to solve a problem with the device.**

- Automatically: in the event of Application Software errors to prevent "Freezing" (this is an indication of an electronic defect or a bug).
- Commanded by computer: when updates are required.

## Battery/Run-time

The computer is powered by a 3V CR2450 battery with a nominal capacity of 600 mAh.

The battery capacity varies based on environmental conditions.

The battery run-time varies depending on how the product is used and which functions are used.

The run-time drops noticeably when backlighting, audible alarms, step counter, PC connections, and updates are used.

When the Software Application is launched, a test of the battery under load is performed. When this happens you may notice the backlighting turn on temporarily. If the battery voltage under load is less than 2.0V (Minimum Voltage), the device will remain off or locked, on a screen with the words "**LOW BAT**". In some cases you may see a continuing Reset for a few cycles.

If the battery voltage under load is below 1.8V (Start Voltage), the backlighting may remain on continuously until the computer battery is completely drained. In this case, the computer will not turn on at all and no text appears on the LCD.

The Battery icon on the display has 2 segments:

Segment 1: Battery Outline ==> Battery lower than Minimum Voltage (do not dive).

Segment 2: First Bar from the bottom ==> Battery lower than 2.1V (Low level. The voltage could plummet during a dive in especially cold water).

Theoretical run-time, linked strictly to the quality of the battery installed:

Mode	Theoretical average run-time (years)
Factory Mode	8.4
Watch	3.0
100 sessions/year	2.9
200 sessions/year	2.7
300 sessions/year	2.1

The data indicated above:

- refer to a new battery of recent manufacture (and therefore not subject to excessive auto-draining);
- refer to use at 25°C/77°F;
- refer to use that does not entail direct exposure to sunlight;
- do not include consumption by backlighting and audible alarms.

## Time and Time Zones

The computer can handle two time zones:

- Local Time: Time at the user's location.
- Home Time: The time at home.

The reference time is always the LOCAL time, and is indicated in the center of the Watch screen, or in secondary screens during FREE dives.

The Home time can only be changed by editing the value of the "UTC HOME" time zone in the "SYS SET" menu.

If "UTC LOC" and "UTC HOME" are the same, only one time is shown on the Watch screen.

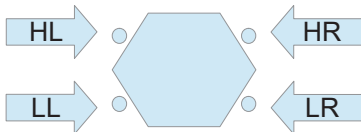
If the two parameters do not match, the LOCAL Time is shown in the center of the screen (the date indicated refers to this Time), while the HOME time is shown on the lower right.

If the date for each of the two Times is different, the date offset from the HOME Time will be shown on the lower right: "+1 / -1".

## DiveLogger

Dive data can be downloaded to be saved, viewed, and processed. The software for both Windows 10 and Mac is available for free download on the website [www.seacsub.com](http://www.seacsub.com). However, to connect the Apnea to a PC you need a special USB cable that can be purchased separately.

## KEYS NOMENCLATURE



## MENU AND SETTINGS

Methods for entering all the settings menus listed below:

- From the "watch" display, press the LL (Menu/Scroll) button once. LOG will appear on the display. From here, press the LR button multiple times (RESET/-) until the name of the desired function appears on the display. At this point, to enter the corresponding setting/editing submenu, confirm your choice with the LL button (Menu/Scroll).
- From any position you're in, press the LL (Menu/Scroll) and LR (Reset/-) buttons at the same time to return to the main screen (watch).



## User Data Memory:

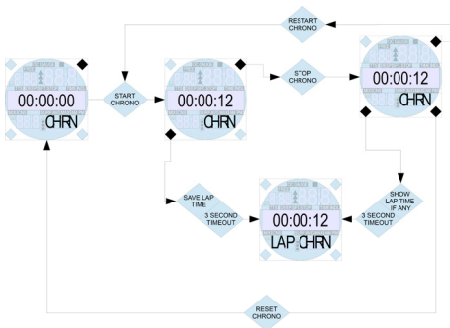
The computer settings data that the users enters/edits, the tissue data, and the current date/time are saved every 15 minutes.

Therefore, if you change the battery, the data that are restored on reboot are at most 15 minutes old, so the time will only need to be adjusted manually by a few minutes.

## Stopwatch timer - Chrono

The stopwatch can run in the background, even when the step counter is running (by activating it before the step counter).

To enter the stopwatch function from the watch screen or the dive screen (FREE) press the HR button followed by the LR button until the word CHRONO appears. Then confirm with the LL button.



## Countdown - CDT DWN

The resolution of the countdown is in seconds.

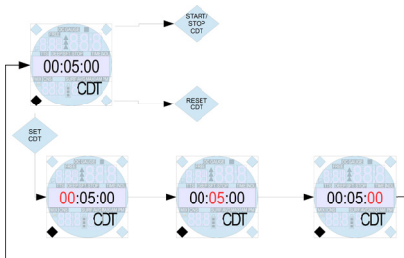
It can be set to a maximum of 99 hours, 59 minutes, and 59 seconds.

Five seconds from the end of the time set, an audible alarm will sound each second.

At the end of the countdown, another alarm will sound. This alarm stops automatically after 30 seconds, or can be disabled manually by pressing any button.

The countdown can run in the background even when using the step counter (simply launch it first).

To enter the Countdown function from the watch screen, press the HR button followed by the LR button until the words CDT DWN appear. Then confirm with the LL button.





## Alarm - CLK ALM

The alarm is daily, and is synchronized to local time.

Only one alarm can be set.

The alarm lasts 60 seconds and can be stopped early by pressing any button.

To enter the Alarm function from the watch screen press the HR button followed by the LR button until the words CLK ALM appear. Then confirm with the LL button. From here you can activate the alarm (ON/OFF) and set the time. Press the LL and LR buttons at the same time to confirm, returning to the main screen.

## Alarms (ALARMS)

### • WARNING!

**Apnea allows you to suppress audible alarms. However, we recommend that you only make this choice after careful consideration and with full awareness. Audible alarms are an important warning for possible violations and behavior errors during the dive.**

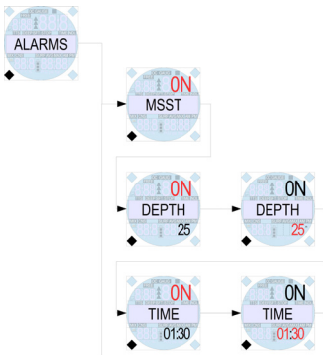
Press the LL button once, then the LR button twice. The word ALARMS will appear in the center of the display. Next, press LL once to enter the submenu where you can enable (ON) or disable (OFF) each, and set the depth and time parameters:

- MSST alarm (ON-OFF)
- setting the depth limit and the alarm for when it is exceeded (ON-OFF)
- setting the dive time limit and the alarm for when it is exceeded (ON-OFF)

All the audible alarms can be enabled (ON) or disabled (OFF) using the HR or LR buttons and confirmed using the LL button.

### • WARNING!

**Except for special situations, we do not recommend disabling audible alarms.**



## Display

**BACKLIGHT BRIGHTNESS LEVEL (BKL LEV):** Levels available from 0 to 3 (if you select "0" backlighting will not activate)

**BKL TIME:** duration of the backlight in seconds in AUTO mode; selectable from 2" to 60"

**BKL MODE:** 3 modes:

**AUTO** by choosing this option, the backlight will remain on for the preset time.

**MAN:** the backlighting will be turned on/off manually using the HL button. In watch mode, the backlighting will turn off automatically after 600 seconds.

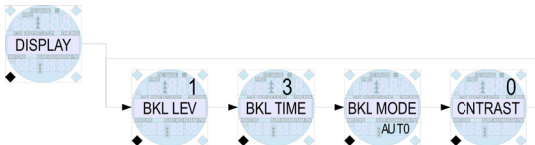
**DIVE:** by activating this option, the backlighting will activate automatically when the dive begins and will remain on for the full duration of the dive.

• **WARNING:**

intense use of the backlight will consume the battery faster, so it will not last as long.

**CONTRAST:** 5 display contrast levels can be selected.

For each mode, set the choice using the HR (+) and LR (-) buttons and confirm with the LL button (Mode) and move to the next selection. Press LL and LR at the same time to return to the main view.



## System settings (SYSTEM)

The settings below are possible in this mode: hour/minute (TIME), date (DATE), UTC second time zone (UTC LOC), UTC primary time (UTC HOME), 12/24 hour format (FORMAT), unit of measure meters and °C -MTR or feet and °F -IMP (UNITS).

The reference time is always the LOCAL time, and is indicated in the center of the watch screen, or in secondary screens SCUBA/GAUGE/FREE during the dive.

The Home time can only be changed by editing the value of the "UTC HOME" time zone in the "SYS SET" menu.

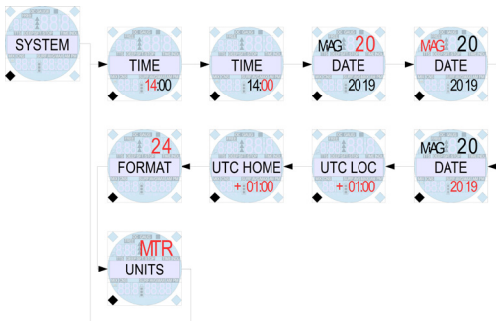
If "UTC LOC" and "UTC HOME" are the same, only one time is shown on the watch screen.

If the two parameters do not match, the LOCAL time is shown in the center of the screen (the date indicated refers to this time), while the HOME time is shown on the lower right.

If the date for each of the two times is different, the date offset from the HOME time will be shown on the lower right: "+1 / -1".

For each mode, set the choice using the HR (+) and LR (-) buttons and confirm

with the LL button (Mode) and move to the next selection. Press LL and LR at the same time to return to the main view.



## PC Mode

To connect your Apnea to a PC or Mac to link with the Dive Logger software and download your data, your Apnea must be set to this mode before you connect it to the computer with the special USB cable (optional).



## Info mode

The Info screen shows: the name of the model, the serial number (which is also laser engraved on the back of the case), and the firmware version installed.



## Reset

To avoid resetting by mistake and losing the user settings as a result, you need to confirm a reset twice:

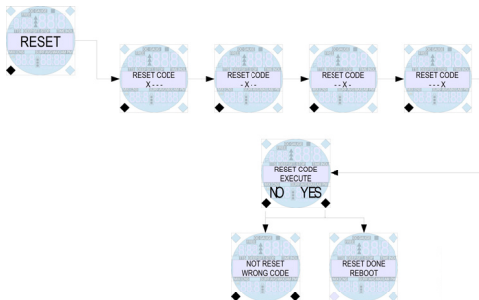
Enter a four-digit security code. The security code is **"2429"**.

If the code entered is valid, before performing a reset, you will need to confirm the operation.

If the operation is successful, the message **"RESET DONE"** will appear.

- **WARNING!**

**On the watch screen, the icon of the "WARNING" symbol will appear on the lower left to alert the diver and remind them that the computer was reset, and as a result all the alarms were cleared and will need to be set up again. This symbol will disappear after the next FREE dive.**



## OFF (factory mode)

"Factory Mode" is a special function for reducing energy consumption to a minimum and helping the battery last as long as possible.

The computer will be "off", while still keeping all settings, storage, and time calculation in memory.

On the screen that reads **"EXECUTE"**, you can confirm the choice to switch the Apnea OFF using the LR button (YES) or reject the selection with the LL button (NO).

To exit "Factory mode" and reactivate the Apnea, press the LL and HR buttons at the same time.



## DIVE PARAMETERS

### Freerset

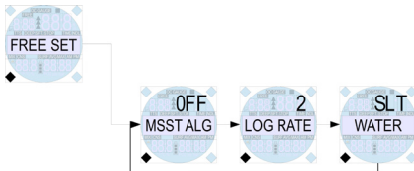
Press the LL button once, followed by the LR button once. The word **FREESSET** will appear in the middle of the display. Press the LL button once to enter the submenu where you'll be able to:

- activate (ON) or deactivate (OFF) calculation of the MSST (minimum suggested surface time) algorithm between two dives.
- decide whether to save the data every second (1") or every two seconds (2").
- select the type of water, salt (SLT) or fresh (FRH).

Press the LL button once to move on to the next set.

To edit the options in each set, use HR and LR.

Confirm your choice with the LL button, or press the LL and LR buttons at the same time to return to the main screen.



## USER SETTINGS RANGE

MENU	PARAMETER	RANGE	DEFAULT	UNIT	NOTES
FREE SET	MSST ALGO	ON/OFF	ON		
	LOG RATE	1-2	2		
	WATER	SALT/ FRESH	SALT		
MENU	PARAMETER	RANGE	DEFAULT	UNIT	NOTES
ALARMS	MSST	ON/OFF	OFF		
	DEPTH	ON/OFF	OFF		RANGE 3 mt/10 ft 99 mt/325 ft
	TIME	ON/OFF	OFF		RANGE 10s - 5990s

MENU	PARAMETER	RANGE	DEFAULT	UNIT	NOTES
DISPLAY	BKL LEV	0-3	3		
	BKL TIME	2-60	3	Seconds	
	BKL MODE	AUTO/ MAN/DIVE	AUTO		
	CONTRAST	0-5	0		
MENU	PARAMETER	RANGE	DEFAULT	UNIT	NOTES
SYS SET	TIME	-	-		
	DATE	-	-		
	UTC LOC	-12:00 / +14:00	+1:00		Rome Time Zone
	UTC HOME	-12:00 / +14:00	+1:00		Rome Time Zone
	FORMAT	24/12	24		
	UNITS	METRIC/ IMP	METRIC		



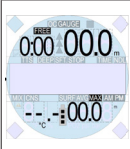
## APNEA DURING THE DIVE

### • WARNING!


This manual does NOT replace adequate training!

## DIVE IN FREE MODE

Main screen in FREE dive mode before the dive

	<p>Dive time – Depth</p> <p>Instantaneous descent or ascent speed during the dive; or, surface time: the timer starts as soon as the diver emerges.</p> <p>Temperature – maximum depth reached during the current dive</p>
--	--

Screen during the descent and ascent

	<p>Dive time – current depth</p> <p>Instantaneous ascent and/or descent speed</p> <p>Temperature – maximum depth reached during the current dive</p>
--	--

### • Set Depth Exceeded Alarm

The Depth Exceeded audible alarm sounds when the freediver exceeds the depth value set in the corresponding section of the ALARMS menu, and only if it has been activated. The alarm stops automatically after 30 seconds, or can be turned off manually by pressing any button. This alarm can be switched off in the ALARMS menu.

### • Set Dive Time Exceeded Alarm

The Dive Time Exceeded audible alarm sounds when the freediver exceeds the Dive Time value set in the corresponding section of the ALARMS menu, and only if it has been activated. The alarm stops automatically after 30 seconds, or can be turned off manually by pressing any button. This alarm can be switched off in the ALARMS menu.

When the diver surfaces, two counters launch immediately in the center of the display:

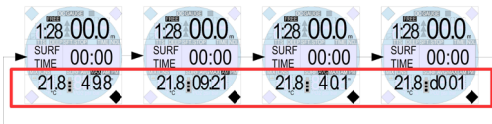
	<p><b>SURF:</b> indicates the surface interval. It continues to indicate surface time, even when the MSST has dropped to zero.</p> <p><b>MSST:</b> indicates the Minimum Suggested Surface Time between one dive and the next in countdown mode. When the countdown ends, it means that the minimum suggested surface time is up, so you can take your next dive.</p>
--	---

## • WARNING!

**If you fail to respect the MSST and dive early, the Apnea computer will signal a violation with an auditory alarm as soon as you descend past 1.5 mt/5 ft. (This alarm can be disabled in the FREESSET ALARMS settings, but the diver is completely responsible for this choice.)**

**This alarm stops automatically after 10 seconds, or can be stopped manually by pressing any button.**

In addition to the main screen, other information is also available on the surface. You can scroll through 3 screens in which the information on the lower right changes. The other information on the display remains the same. The following information is available:



Maximum depth

Current Time

Average depth of  
the session

Number of dives  
in the session



Two hours after a session begins, and then every subsequent 2 hours, the center of the screen will display a warning to hydrate by drinking water. This notice will reappear each time the diver emerges, until the diver accepts by pressing one of the two lower buttons. Two hours after confirming, the warning will appear again, and this pattern will continue for the rest of the session. The function cannot be disabled from the SET menus.

The session ends automatically one hour after the last dive. It can also be ended manually by pressing the LL and LR buttons together and then confirming by pressing the button next to the word YES on the display (otherwise, you can return to the current session by pressing the button next to NO).

## AFTER THE DIVE

### Logbook

The computer memory intended for saving FREE dives taken is limited to:

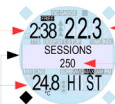
- Approx. 30 hours with sampling every 2 seconds
- Approx. 15 hours with sampling every second

Logbook display



Historic summary screen

Maximum dive time executed



Maximum depth reached

Minimum temperature

Total sessions

Navigating between sessions



Max. session time

Session number

Dives in the session

Min. session time

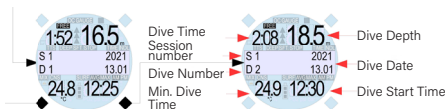


Max. session depth

Session date

Session start time

## Navigating between dives in a single session



## Connect your APNEA computer to your Mac or PC

The APNEA can be connected to your Mac or PC through the DiveLogger program to download dives and run updates.

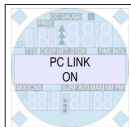
Updating your APNEA Dive Computer.

It's very important to keep your APNEA Dive Computer consistently up to date with the most recent version of the software.

The APNEA must be connected to a Mac or PC using the USB cable to run the updates.

### • WARNING!

**If an update is available, a new version of the operating system will be installed.**



After connecting your APNEA to your Mac or PC using the special USB cable and having set it to computer mode, the words "PC LINK ON" will appear and you can start the data transfer.

## Fitness function: step counter

The Apnea computer features a convenient step counter that is activated by an accelerometer inside the device, and special software, that when set with the user's information (height, weight and age), manages all data for the run or walk with considerable accuracy.

Step counter settings:

From the main screen (watch), press LR twice, and then LL once: set the HEIGHT on the appropriate screen and confirm by pressing LL. The next screen is WEIGHT, followed by AGE. In both cases confirm pressing by LL.



Press LL and LR together to return to the step counter screen. You can begin using it without any other steps required.

### • WARNING!

The step counter (STP) will show a slight delay, remaining at zero, during the first few steps. This is because the system has to register the movements and adjust to the correct measurement. Once it has done this, it will also show the steps that were not displayed immediately.

Pressing the LR button once will switch to the EXS TIME screen that shows time elapsed since it was launched. Pressing LR again will pull up CAL, indicating the count of calories burned so far. Finally, pressing LR will show the distance traveled.



To stop using the step counter and return to the watch screen, press HR. RESET PEDOMETER will appear. Confirm YES by pressing the adjacent LL button.

The step counter function will be terminated automatically and will switch to the watch screen if not used for 4 hours.



## REPLACING THE BATTERY

### • WARNING!

Batteries should always be replaced by an authorized SEAC Center, because this is a delicate operation with a high probability of subsequent flooding of the computer if performed by inexperienced personnel.

SEAC declines all responsibility for problems resulting from changing the battery.

### • WARNING!

When replacing the CR2450 battery, it's a good idea to also replace the O-ring of the battery cap with an original SEAC O-ring.

- Fully unscrew and remove the four screws from the battery compartment using a PH 00 model Phillips head screwdriver.
- Insert a small flathead screwdriver into the special opening located on the bottom of the cap to lift the lid.
- If needed, again using the small flathead screwdriver, prize up the battery from its housing and remove it.
- Insert the new battery, snapping it into its housing and making sure that the "+" polarity sign is facing outward.
- Remove the old O-ring from the housing in the metal cover and replace it with the new one. Make sure that the O-Ring is not damaged, and once inserted make sure it isn't twisted at any point.
- Position the cover on the APNEA case, and press it evenly downward. Make sure that in the area around the screws, the cover is flush with the case.
- Keep the cover pressed down on the APNEA case while replacing the three screws. Although the four screws are screwed through four metal

inserts fixed in the case, we recommend not tightening with excessive force to reduce the risk of stripping. The recommended torque is 12 Ncm. The O-ring seal on the battery compartment is radial, so excessive closing force on the compartment screws is not necessary.

## **NOTE**

Do not dispose of used batteries in the environment or discard them as ordinary waste; we recommend using special battery disposal services.

## **APNEA SERIAL NUMBER**

The APNEA serial number is engraved on the back of the case and can also be viewed on the display in the "INFO" function along with the version of the firmware installed.

## **EC CERTIFICATION**

APNEA is compliant with CE Regulations.

The EU Declaration of Conformity is available at: [www.seacsub.com](http://www.seacsub.com)

## **CARE AND MAINTENANCE**

- Keep your computer clean and dry. Do not expose the computer to chemical agents, including alcohol.

Use only fresh water to clean your computer, removing all saline deposits. Leave the computer to dry naturally; do not use jets of hot or cold air. A jet of pressurized air hitting the pressure sensor could damage it irreparably.

- Do not expose the computer directly to the sun or to sources of heat above 50°C. Store the computer in a cool (5°C - 25°C) and dry place.
- Do not place the computer in a hyperbaric chamber.

The computer is designed for a reading accuracy of  $\pm 2\%$ . The degree of accuracy required by the European standards is  $\pm 3.5\%$ .

European standards require that the unit be checked periodically to monitor the precision of its depth and time readings.

- The warranty will be forfeited if the computer is opened by an unauthorized service center.
- The computer is manufactured to withstand use in seawater, but after the dive



you must rinse it thoroughly in fresh water and not expose it to direct sunlight or sources of heat to dry it.

- Check that there are no signs of humidity inside the display.
- Do not attempt to open, modify, or repair the computer yourself. Always contact an Authorized Center or SEAC directly.

- **WARNING!**

**If you observe any humidity inside the mineral glass, the APNEA must be taken to an authorized SEAC center immediately.**

- **WARNING!**

**The mineral glass is subject to possible scratches resulting from improper use.**

- **WARNING!**

**Do not use jets of compressed air to dry or clean the APNEA. This could damage the pressure sensor.**

## **CERTIFICATE OF GUARANTEE**

The warranty has a duration of two (2) years for the non-professional end user in accordance with current European regulations.

To exercise the warranty, you must display a copy of your proof of purchase upon request.

SEAC guarantees the correct operation of this product as described in this document.

The warranty herein can be exercised according to the conditions and limits expressly indicated below:

1. The warranty has a duration of 2 (two) years starting from the time the product is purchased at a SEAC authorized dealer and requires no prior or subsequent formal validation.
2. The warranty is acknowledged only to the original buyer of the product at a SEAC authorized dealer. The warranty is strictly individual; it is not transferable to third parties unless previously and explicitly authorized by SEAC.

3. The warranty covers all damage to the device caused by malfunctions arising from factory defects. Each device is tested in a hyperbaric chamber before it is made available for purchase.

The warranty covers operating defects deriving from:

- Intrinsic defects caused by the use of materials considered unsuitable.
  - Clear errors in the design, manufacturing, or assembling of the product or its components.
  - Incorrect or inadequate instructions and recommendations for use.
4. Any repairs, modifications, transformations, adjustments or tampering in general carried out on the finished product or parts of it that are not authorized in advance by SEAC or that are carried out by non-authorized personnel automatically and immediately void the warranty.
  5. The warranty entitles you to assistance and free repair in the shortest possible time, or to a full free replacement of the product (at the sole discretion of SEAC) or parts of it whenever a malfunctioning defect specifically described in item 3 above is acknowledged by SEAC.
  6. This warranty may also be exercised by shipping the product believed to be defective to SEAC. The authorized intermediary for this operation must be the SEAC dealer where the product was purchased. If this is not practically possible, solely upon authorization from SEAC, customers may be authorized to send the defective product to any other SEAC dealer or directly to SEAC itself.

In order to exercise the warranty, the product must be accompanied by proof of purchase in the form of a copy of the receipt or invoice (or other equivalent fiscal record showing the name of the authorized SEAC dealer from which the product was purchased as well as the date of purchase).

Whenever SEAC receives a product which:

- is not accompanied by proof of purchase having the above mentioned characteristics;
- is in such condition as to determine the termination of the warranty in accordance with the provisions of item 4 above;
- has defects resulting from external and additional causes as compared to the ones specifically mentioned at item 3 above;

- has been used improperly and/or for uses other than those for which the product was designed;
- has clearly been damaged or deteriorated through intensive use or normal wear;

SEAC will not carry out any investigations on the product, and will advise the sender/authorized dealer.

If the sender still wishes an inspection to be performed, a request to that effect must expressly state that he/she is willing to bear all the costs relevant to said inspection (labor, spare parts if any, and shipping charges).

Failing this, SEAC will return the product at the expense and care of the recipient.

The warranty always excludes defects or imperfections deriving from:

- Damage caused by water seepage resulting from improper use; for example, dirty, damaged, or badly mounted seals resulting from changing the battery, incorrect closure of the battery compartment, etc.
- Rupture or scratching of the case, glass, or strap as a result of strong impacts.
- Damage resulting from excessive exposure to elevated or low temperatures.
- Damage caused by the use of compressed air to dry and/or clean the dive computer.
- Improper use or excessive stress.
- Failure to follow the usage instructions.
- External agents, such as damage due to transport, blows or falls, atmospheric agents, natural phenomena, or chemical agents.
- Unauthorized personnel performing maintenance or repairs or opening the device.
- Pressure testing out of the water.
- Accidents while diving.
- Use other than that intended for the product, or other than that indicated in the instruction manual. The warranty does not cover depletion of batteries.

Repairs or replacements made during the warranty period do not imply any right to an extension of the warranty itself.

#### • **WARNING!**

**Do NOT use solvents to clean the product. Use only running water.**

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## NOTES

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# seac

sea is calling

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# APNEA APNEA HR

