

i470TC
(P/N NS157000)

Dive Computer Owner's Manual

NOTICES

LIMITED TWO-YEAR WARRANTY

For warranty details and to register your product, refer to www.aqualung.com.

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i470TC Dive Computer Owner's Manual, Doc. No. 12-7937

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PATENT NOTICE

U.S. patents have been issued to protect design features of our products. The list of patents issued and pending are available at dive-patent.com.

DECOMPRESSION MODEL

The program within the i470TC simulates the absorption of inert gases into the body by using a mathematical model. This model is merely a way to apply a limited set of data to a large range of experiences. The i470TC dive computer model is based upon the latest research and experiments in decompression theory. Still, using the i470TC, just as using any other No Decompression Tables, is no guarantee of avoiding decompression sickness, i.e. "the bends". Every diver's physiology is different, and can even vary from day to day. No machine can predict how your body will react to a particular dive profile.

DANGERS, WARNINGS, CAUTIONS, AND NOTES

Pay attention to the following symbols when they appear throughout this document. They denote important information and tips.

-  **DANGERS:** are indicators of important information that if ignored would lead to severe injury or death.
-  **WARNINGS:** are indicators of important information that if ignored could lead to severe injury or death.
-  **CAUTIONS:** indicate information that will help you avoid faulty assembly, leading to an unsafe condition.
-  **NOTES:** indicate tips and advice that can inform of features, aid assembly, or prevent damage to the product.

RESPONSIBLE COMPUTER DIVING

- Always plan each dive.
- Always limit your dive to the level of your training and experience.
- Always make your deepest dive first.
- Always make the deepest part of every dive first.
- Check your computer often during the dive.
- Do a safety stop on every dive.
- Allow adequate surface interval between each dive.
- Allow adequate surface interval between each day of diving (12 Hours or until your computer clears).
- Read and understand this manual thoroughly before using the i470TC.



WARNINGS:

- This manual is to be used in conjunction with the Aqua Lung Dive Computer Safety and Reference Manual, Doc. 12-7835. It contains general safety warnings and recommendations for use of this product.
- The i470TC is intended for use by recreational divers who have successfully completed a internationally recognized course in scuba diving (for air use) and diving with enriched nitrogen-oxygen (nitrox) breathing gas mixtures (for nitrox use).
- It must not be used by untrained persons who may not have knowledge of the potential risks and hazards of scuba diving and diving with enriched nitrogen-oxygen (nitrox) mixtures.
- You must obtain scuba certification in diving with enriched nitrogen-oxygen mixtures (nitrox) before using the i470TC for nitrox diving.
- Before using this product for military or commercial applications, contact Aqualung for recommendations, limitations, and warnings for such use. <https://milproaqualung.com>.
- As with all underwater life support equipment, improper use or misuse of this product can cause serious injury or death.
- Never participate in sharing or swapping of a dive computer.
- Conduct your dives in such a manner so as to insure that you continuously check the computer's proper function.
- Read and understand this owner's manual completely before diving with the i470TC.
- If you do not fully understand how to use this dive computer or if you have any questions, you should seek instruction in its use from your authorized Aqua Lung dealer before you utilize this product.
- If your i470TC stops working for any reason while operating, it is important that you have anticipated this possibility and are prepared for it. This is an important reason for not pushing the tables, oxygen exposure limits, or entering decompression without proper training. If you dive in situations where your trip would be ruined or your safety would be jeopardized by losing the use of your i470TC, a backup instrument system is highly recommended.
- Each numeric and graphic display represents a unique piece of information. It is imperative that you understand the formats, ranges, and values of the information represented to avoid any possible misunderstanding that could result in error.
- Remember that technology is no substitute for common sense. The dive computer only provides the person using it with data, not the knowledge to use it. Remember also that the dive computer does not actually measure and test the composition of your body tissue and blood. Using an Aqua Lung dive computer, just as using any other Decompression Tables, is no guarantee of avoiding decompression sickness. Every diver's physiology is different and can even vary from day to day. No machine can predict how your body will react to a particular dive profile.
- Diving at high altitude requires special knowledge of the variations imposed upon divers, their activities, and their equipment by the decrease in atmospheric pressures. Aqua Lung recommends completion of a specialized altitude training course by a recognized training agency prior to diving in high altitude lakes or rivers.
- Repetitive dives in a series should only be conducted at the same altitude as that of the first dive of that series. Repetitive dives made at a different altitude will result in an error equal to the difference in barometric pressure, and possibly a false dive mode with erroneous data.
- If the i470TC is activated at an elevation higher than 4,270 m (14,000 ft), it will immediately shutdown.
- Decompression diving or diving deeper than 39 m (130 ft) will greatly increase your risk of decompression sickness. This should only be attempted by those properly trained and certified in decompression diving. It is important to completely understand the features, functions, and specifically the limitations of the i470TC. Based on this the diver must decide if the i470TC is suitable for the dive activities and dive profiles being planned.
- Using an i470TC is no guarantee of avoiding decompression sickness.
- The i470TC enters Violation Mode when a situation exceeds its capacity to predict an ascent procedure. These dives represent gross excursions into decompression that are beyond the boundaries and spirit of the i470TC's design. If you are following these dive profiles, Aqua Lung advises that you should not use an i470TC.

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- If you exceed certain limits, the i470TC will not be able to help you get safely back to the surface. These situations exceed tested limits and can result in loss of some functions for 24 hours after the dive in which a violation occurred.

EUROPEAN UNION REGULATIONS:

- EC type examination conducted by SGS Fimko Oy, Takomotie 8 Helsinki, 00380 Finland Notified Body No. 0598
- HP gas pressure sensing components are in conformity with EN250:2014 - Respiratory equipment - open-circuit self-contained compressed air diving apparatus - requirements, testing and marking – clause 6.11.1 Pressure Indicator. EN 250:2014 is the standard describing certain minimum performance requirements for SCUBA regulators to be used with air only sold in EU. EN250:2014 testing is performed to a maximum depth of 50 M (165 FSW). A component of self-contained breathing apparatus as defined by EN250:2014 is: Pressure Indicator, for use with air only. Products marked EN250 are intended for air use only. Products marked EN 13949 are intended for use with gases containing more than 22% oxygen and must not be used for air.
- Depth and time measurements are in conformity with EN13319:2000 - Diving Accessories - depth gauges and combined depth and time measuring devices
- The air used must comply with EN 12021. EN 12021 is a standard that specifies the allowable contaminants and component gasses that make up compressed air. This is the equivalent of the USA Compressed Gas Association's Grade E air. Both standards allow very small amounts of contaminants that are not harmful to breathe, but can cause a problem if present in systems using gases with a high percentage of oxygen.
- Electronic instruments are in compliance with Directive 2004/108/EC Electromagnetic compatibility (EMC) EN 61000 part 6-1: Generic Standards - immunity for residential, commercial and light-industrial environments
- In accordance with EU regulation 2016/425, may it be known that Aqua Lung Trading as manufacturer of this product issues a Declaration of Conformity, available here www.aqualung.com.
- The manufacturer's date code can be found on the underside of the i470TC in the format 00/00 (month/year).

CAUTION:

- Transmitters and gas integrated dive computers marked EN250 are certified for use with air only. Transmitters and gas integrated dive computers marked EN13949 are certified for use with nitrox only.

RISK ASSESSMENT:

The air integrated dive computer is intended to address the risk of breathing gas loss. This is accomplished by monitoring the level of remaining gas in the UBA (Underwater Breathing Apparatus) and providing the diver with a continuous readout of the remaining gas supply and user set alarms.

The digital pressure indicator has several user defined alarms. Alarms are addressed in the user manual beginning on page 36 (items 1, 5, 6; 7).

1. Audible - feature allows the diver to set audible alarms to ON or OFF.
5. DTR (Dive Time remaining) - can be set for a specific reserve of dive time remaining, dive time is calculated based on air time, oxygen accumulation (O2 time remaining), and no deco time.
6. Turn Alarm - set a pressure to alarm at designated turn pressure 70 to 205 BAR (1000 to 3000 PSI)
7. Press Alarm - To emphasize a low gas condition, the Pressure Alarm monitors the active gas. It allows you to set an alarm to trigger at a designated cylinder pressure. The default setting is 50 BAR (800 PSI).

In addition, recreational diving requires that the diver be fully trained in order to acquire filled gas cylinders or access many diving venues. Diver training focuses on the proper use of the pressure indicator and dive planning. This is to assure that the diver is able to correctly use the pressure indicator to complete the dive with a reserve supply of breathing gas.



- UKCA type examination conducted by: SGS UK Ltd, Rossmore Business Park, Ellesmere Port, Cheshire CH65 3EN, UK, Notified Body No. 0120.
- Depth and time measurements are in conformity with UKCA directives.
- Electronic instruments are in compliance with UKCA Electromagnetic compatibility requirements.
- In accordance with UK regulation 2016/425, may it be known that Aqua Lung Trading as manufacturer of this product issues a Declaration of Conformity, available here www.aqualung.com.
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GETTING STARTED

BASICS

Welcome to your new i470TC. The i470TC is an easy to use dive computer utilizing a four button interface. Divers may choose between four modes of functionality consisting of Watch, Dive, Gauge, and Free Mode. Though the i470TC is easy to use, you will get the most out of your new i470TC if you take some time to familiarize yourself with its displays and operation. Information has been organized into easy to follow sections to aid you in learning all you need to know. There is also a glossary at the end of this guide for any terms that may sound unfamiliar.

INITIAL ACTIVATION

i470TC Dive Computers are placed in a Deep Sleep mode prior to being shipped from the factory. The intent is to extend storage life of the Battery, before the unit is initially placed into service.

In this mode, Date and Time are updated as they normally would be. However, they are not displayed. Upon waking the i470TC up, the correct Date and USA Pacific Time will be displayed and it will be ready to operate with full functions.

To wake the i470TC up from Deep Sleep mode, simultaneously depress the  (Select) and  (Down) buttons for 3 seconds until the display comes on displaying the Watch Main Time screen, then release them.

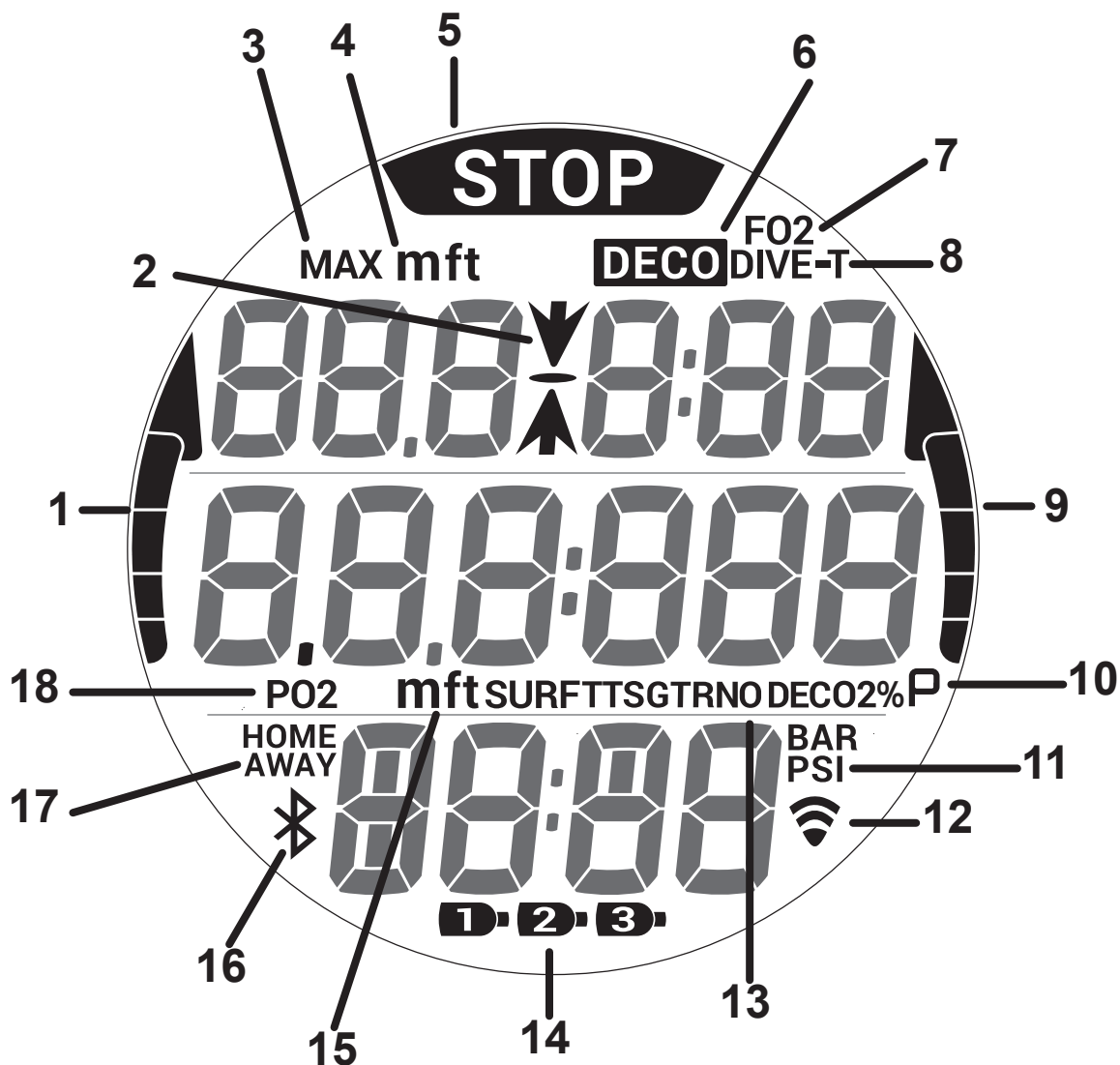
 **NOTE:** Once the i470TC is brought out of the Deep Sleep mode, it can only be placed back into it by the factory.

STANDBY (POWER SAVING) MODE

The i470TC shall enter Standby mode 10 minutes after Dive, Gauge, or Free Surface Modes has been activated (or 10 minutes after the post dive transition period has ended) and no button presses or dives have been initiated.

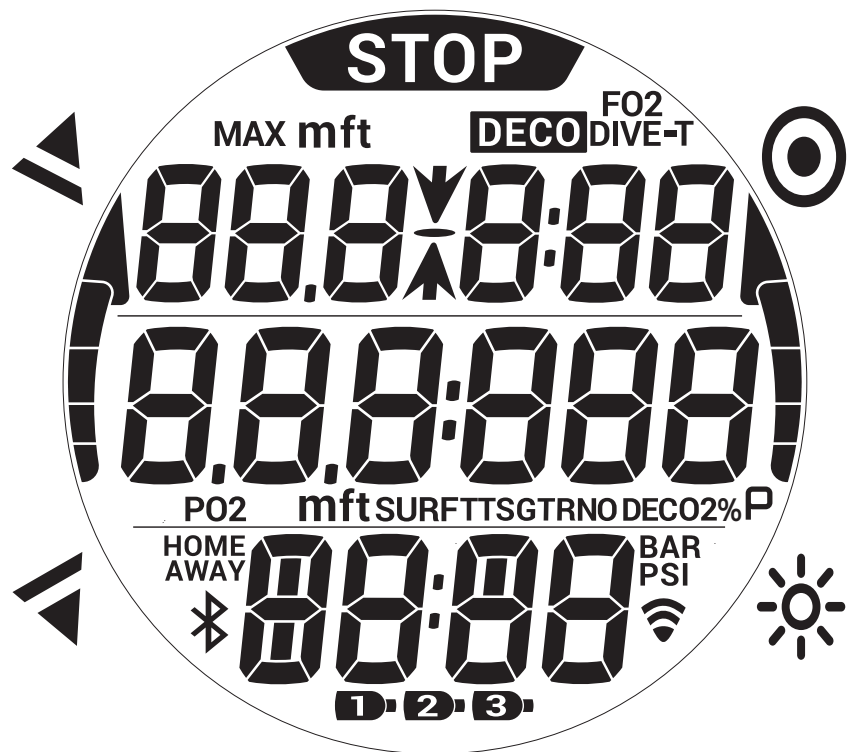
 **NOTE:** Bluetooth function shuts down during Standby Mode to save battery life.

DISPLAY ICONS



1	Ascent Rate
2	Descend or Ascend
3	Value is Max
4	Depth ID (units)
5	Stop Message
6	Decompression
7	Fraction of Oxygen
8	Dive Time or #
9	Nitrogen Loading Bar Graph
10	Time ID

11	Gas Pressure ID (units)
12	Daily Alarm Set/Transmitter Signal
13	Value ID
14	Gas #
15	Depth ID (units)
16	Bluetooth
17	Time Zone ID
18	Partial Pressure of Oxygen



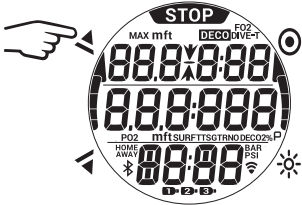
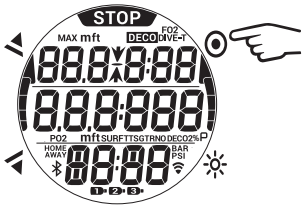
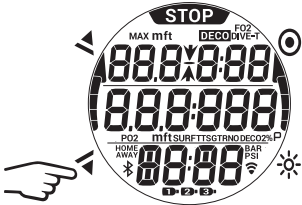
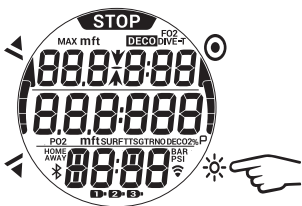
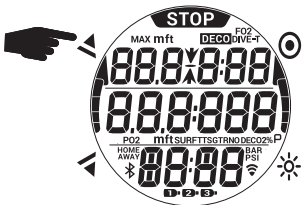
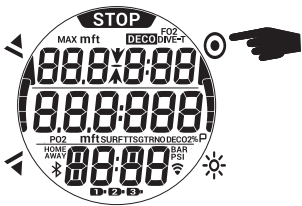
BUTTONS

The i470TC utilizes 4 control buttons called the ▼ (Down), ▲ (UP), ◎ (Select), and ☀ (light) buttons. They allow you to select mode options and access specific information. They are also used to enter settings, activate the backlight, and acknowledge the audible alarm.

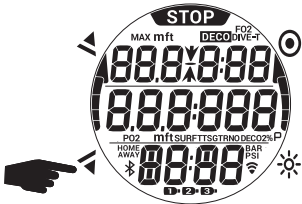
Pressing different combinations of these buttons will navigate through different menus and options of the i470TC. The symbols in the table below will illustrate how to proceed through the menus.

SYMBOL	MEANING
	PRESS BUTTON LESS THAN 2 SECONDS
	HOLD BUTTON GREATER THAN 2 SECONDS

BUTTON FUNCTIONS

ACTION	FUNCTION
	• to move upwards through menu selections • to increase a setting • to toggle a setting • to access Alt screens
	• to select/save an option or setting • to enter a menu • to access Last Dive screens
	• to move downwards through menu selections • to decrease a setting • to toggle a setting • to access a main menu from a Main screen
	• to activate the backlight
	• to switch between Watch Mode and the active diving mode, while on the Main screen • to scroll or increase a setting value at a faster rate • to reset chronograph (Watch Mode)
	• to exit or step back to the previous screen, setting, or exit out of the current menu



ACTION	FUNCTION
	• to switch between Watch Mode and the active diving mode, while on the Main screen • to exit a menu directly to the Main screen

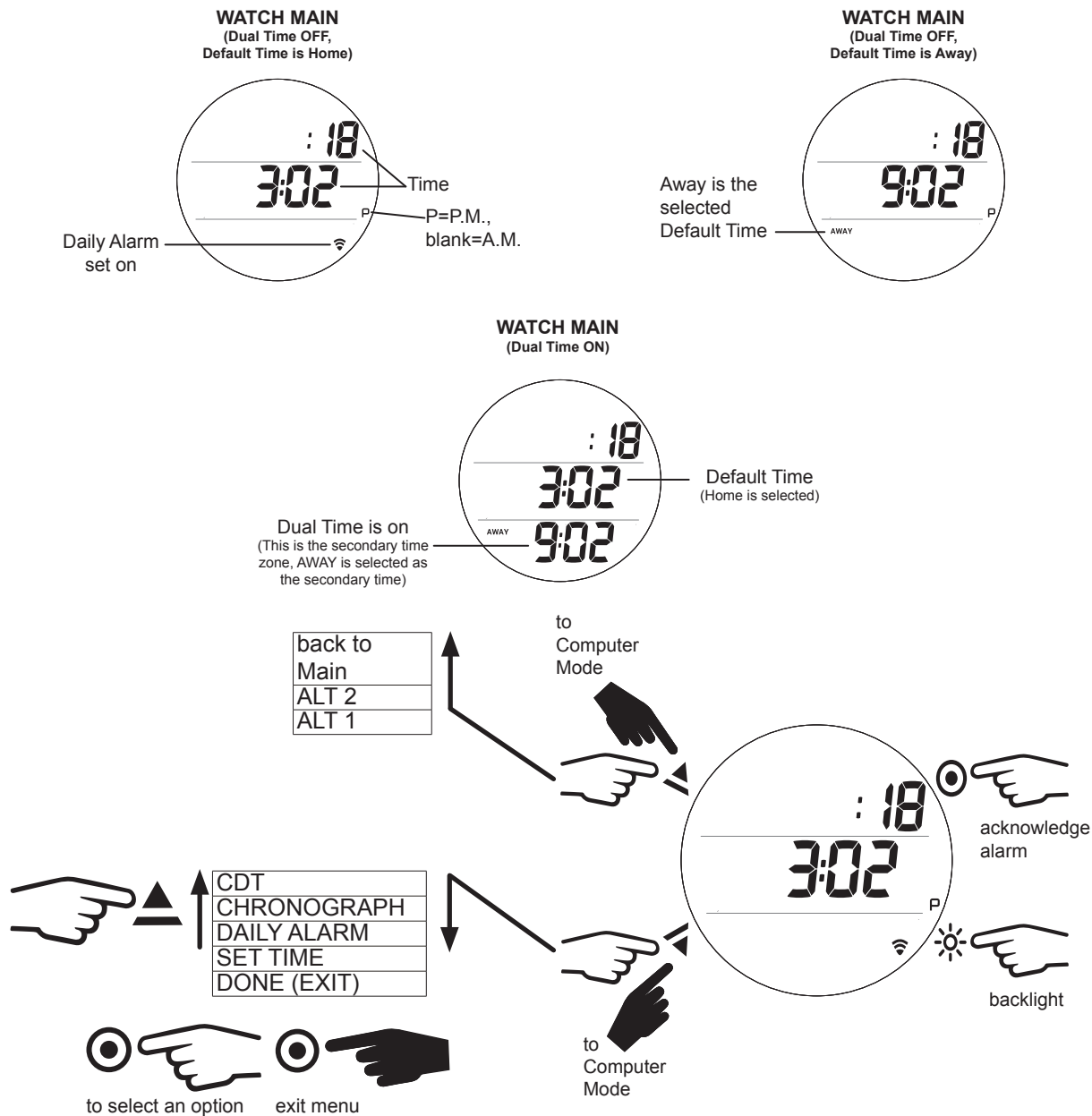


WATCH MODE

WATCH MAIN SCREEN

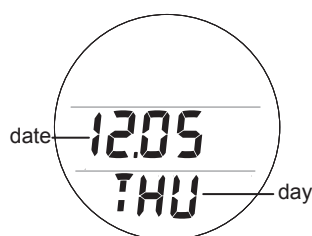
The Watch Main screen is the default screen of the i470TC. The i470TC allows you to choose between displaying one or two time zones. This is useful when wearing the i470TC as your primary timepiece while travelling.

NOTE: The terms **HOME** and **AWAY** are intended to represent two different time zones, your local and destination time zones respectively. Either time can be set as the Default Time. If **DUAL** time is set **ON**, the time zone that is not set as the Default Time will display in the bottom section of the screen.



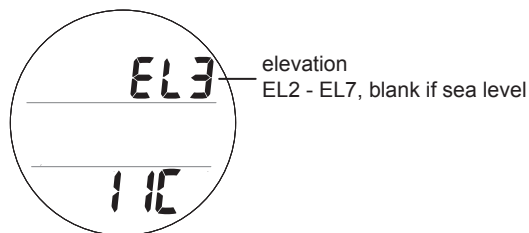
ALT 1

ALT 1 displays the date and day of the week.



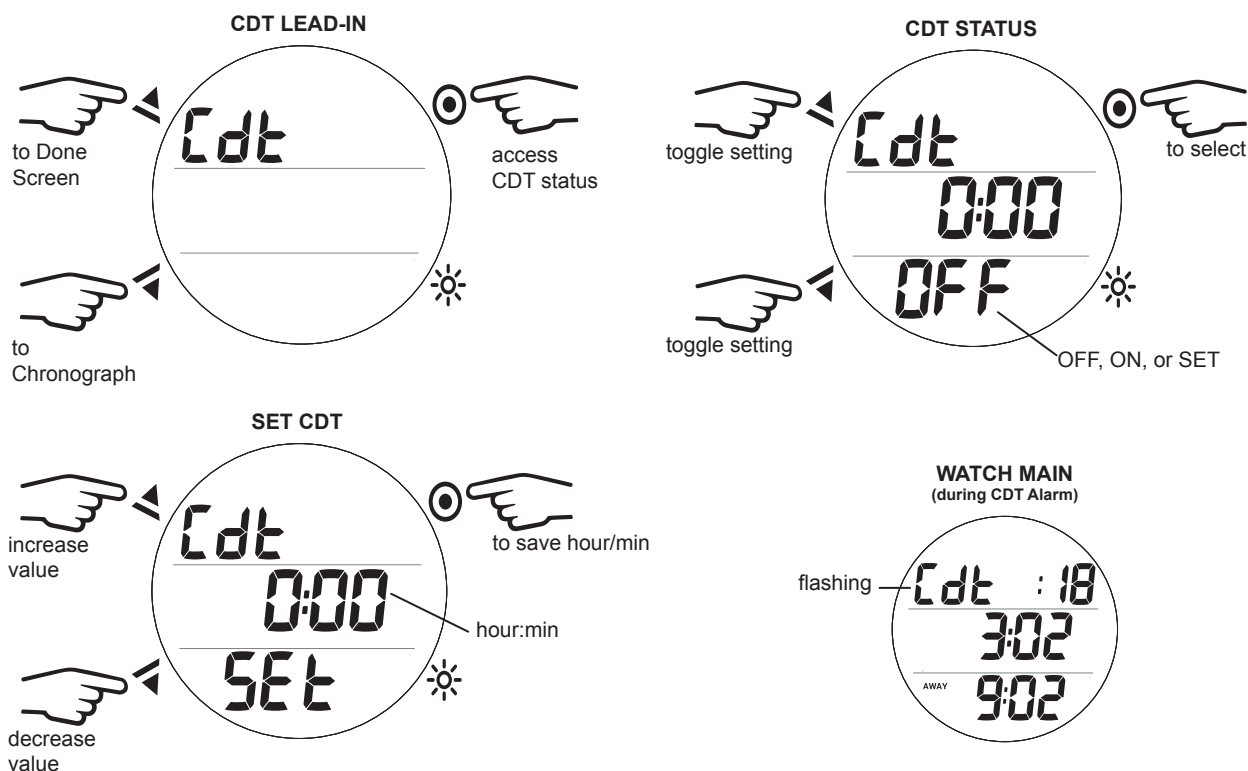
ALT 2

ALT 2 displays the temperature and elevation.

**WATCH MAIN MENU****CDT (Countdown Timer)**

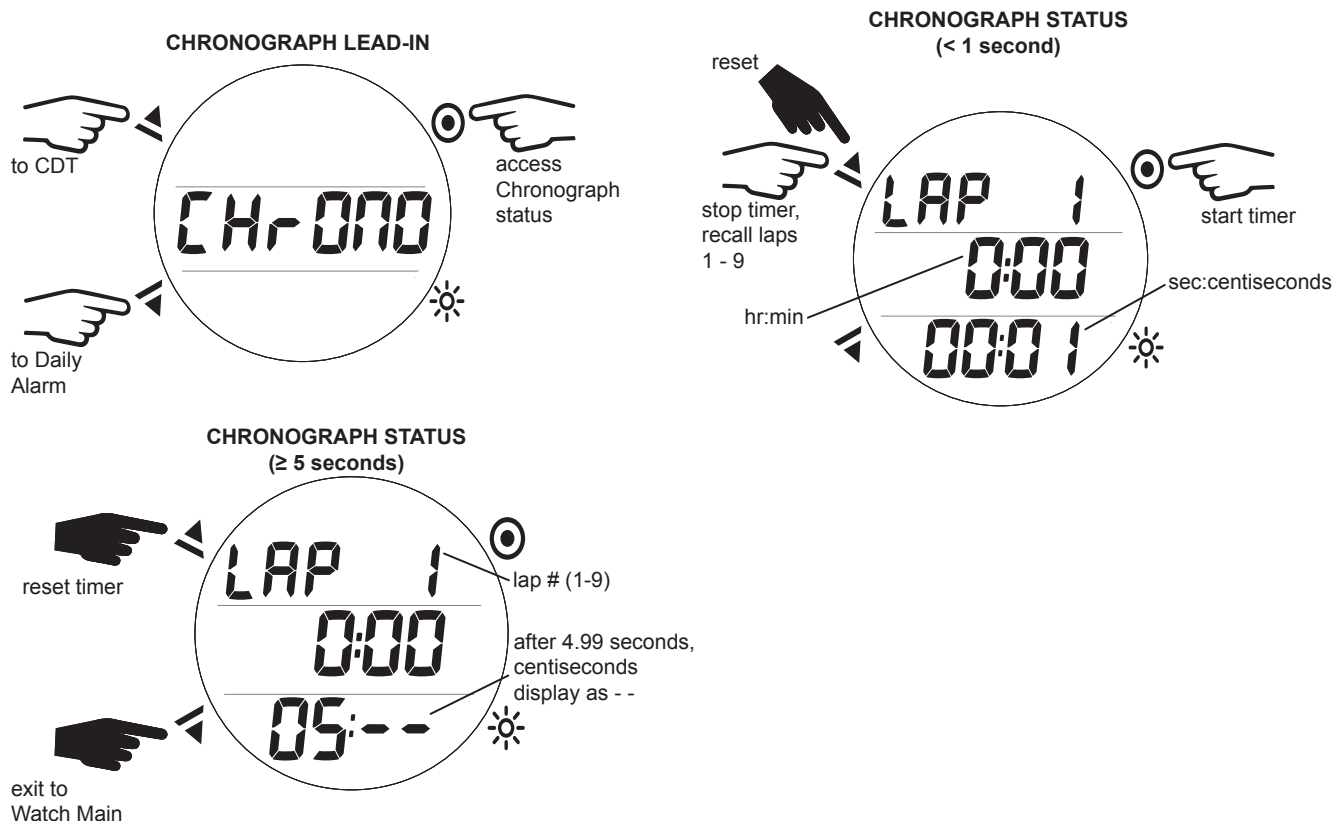
This feature allows you to program a countdown timer with audible alarm. The initial options are OFF or SET. To set the timer you must save an hour value then the minute value. You may choose a value between 0:01 and 23:59. Once a countdown time is set, the ON selection becomes available in Set CDT screen. If On is selected, the CDT will run in the background until it counts down to 0:00, or it is set OFF. When a set Countdown time reaches 0:00, the Audible Alarm will sound. During which time the graphic CDT will flash on the Watch Main screen.

NOTE: Switching to Dive, Gauge, Free modes, or initiating a dive will terminate the CDT and revert the CDT setting to OFF.



CHRONOGRAPH

The chronograph has a 9 lap memory. After 9, subsequent laps will be recorded and the earliest lap discarded. If the Chrono continues to run and reaches 9:59:59.99, it will stop and record that as a Lap. Subsequent presses of SELECT then have no effect.



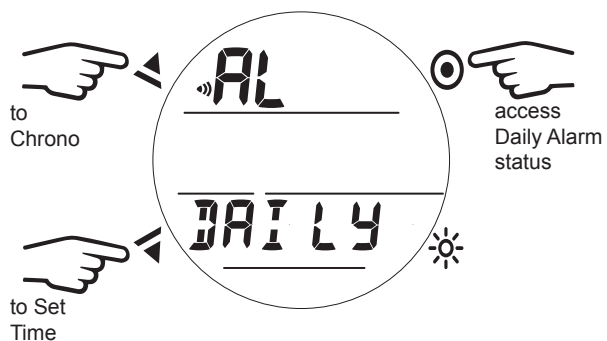
NOTE: If the Chrono continues to run and reaches 9:59:59.99, it will stop and record that as a Lap. Subsequent presses of , then have no effect.

NOTE: Once the Chronograph has been set and started, it will remain on and displayed (or continue to run in the background) while on the surface until reset by the user. Upon descending to 1.5 M/5 FT (i.e., entry into a Dive, Gauge, or Free Mode dive), operation will be terminated and the counter will reset to 0:00:00.00 (hr:min:sec.centisecond).

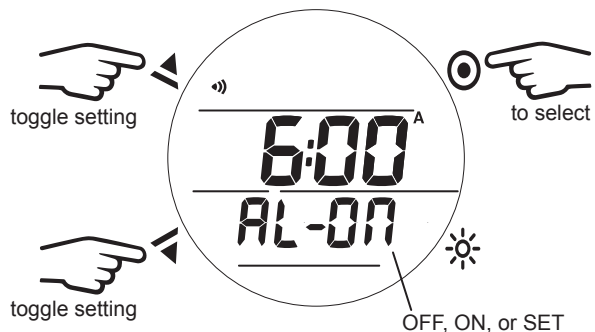
DAILY ALARM

When set ON, the Daily Alarm, that runs in the background, will sound the audible alarm at the time set every day when that time equals the Watch Default Time selected. The Audible will not sound while operating in dive computer modes. Operation reverts back to Watch Main after selection of ON or OFF options.

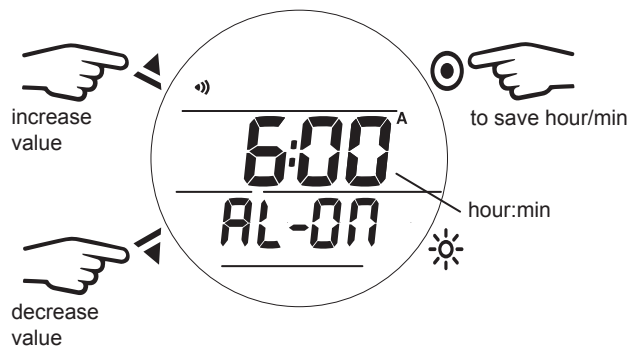
DAILY ALARM LEAD-IN



DAILY ALARM STATUS

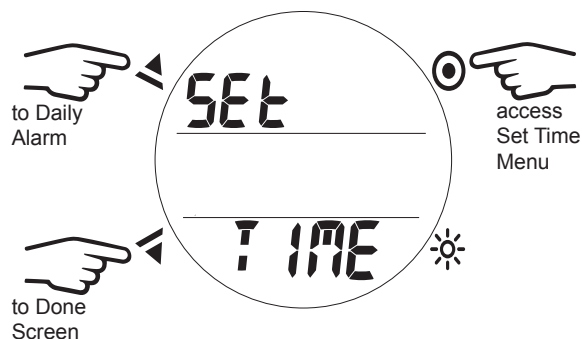


SET DAILY ALARM



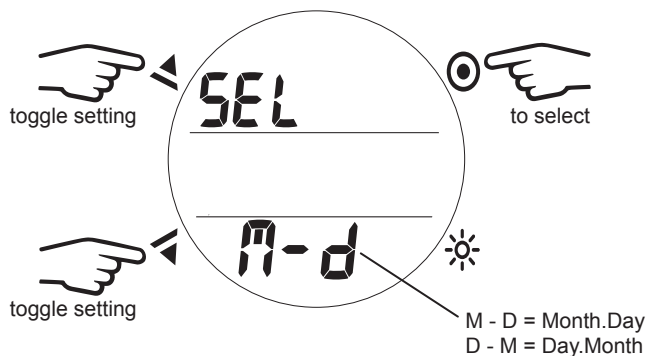
SET TIME MENU

Selecting Set Time accesses a sub menu. Within this menu you can set the time settings: Date Format, Hour Format, Default Time, Set Differential Time, Time of Day, Date, and Dual Time.



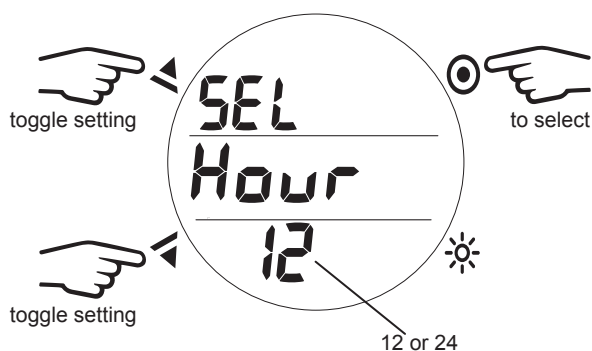
1. Date Format

Choose your preferred date format.



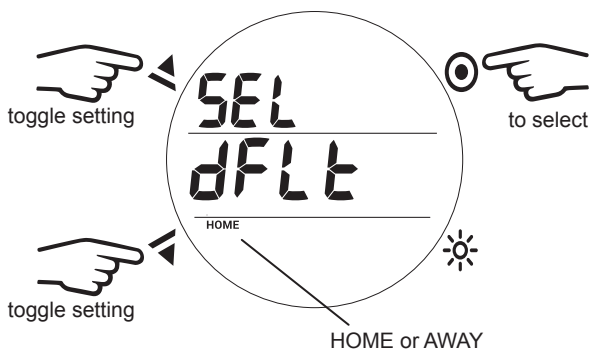
2. Hour Format

Choose your preferred hour format.



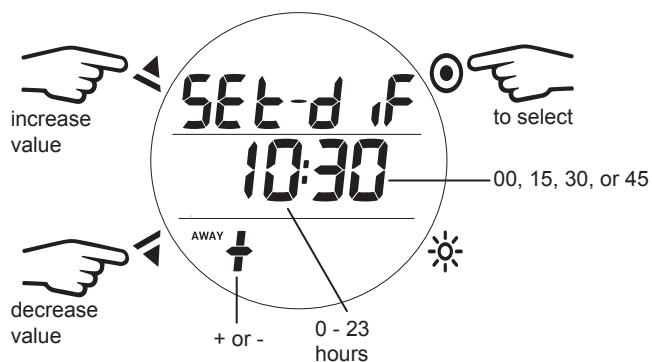
3. Default Time

This setting allows you to choose the time HOME or AWAY that displays as the default on the Watch Main.



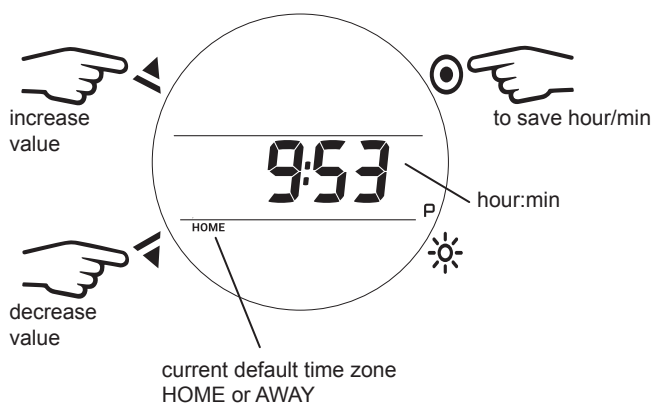
4. Set Differential Time

Differential Time allows you to set another time zone, other than HOME time, that is referred to as AWAY Time.



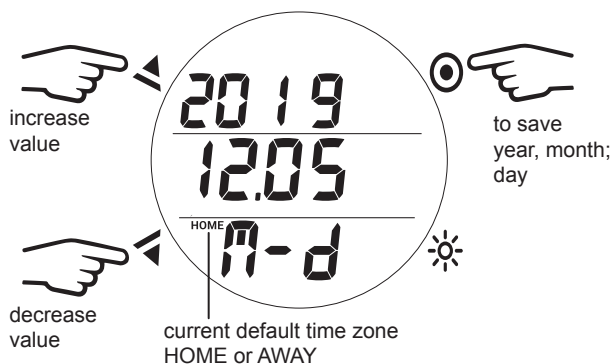
5. Time Of Day

Set the Default (Home or Away) time. Set hours then minutes.



6. Date

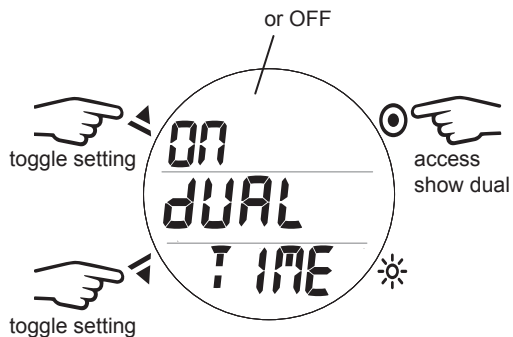
Set the year, month, and day in order. The corresponding digit will flash, allowing it to be set.



7. Dual Time

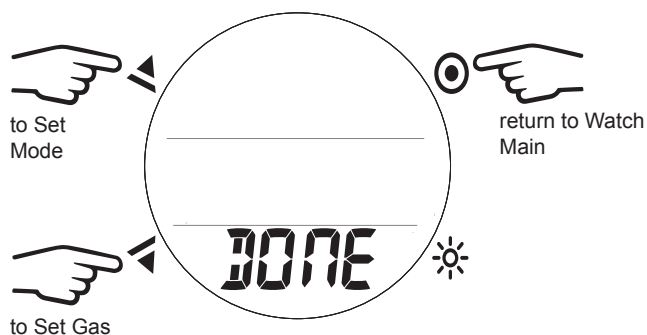
This setting allows you to choose whether or not to show dual time zones, both HOME and AWAY, on the Watch Main screen. If you select yes, the secondary time reading will display at the bottom of the Watch Main screen.

NOTE: If the Set Dual Time in the Set Time menu is set to OFF (00 hour difference), the secondary time will not be displayed on the Watch Main screen.



DONE SCREEN (WATCH MAIN MENU)

The Done Screen is a gateway to exit the Watch Main Menu and return to the Main Menu.



DIVE FEATURES

DTR (DIVE TIME REMAINING)

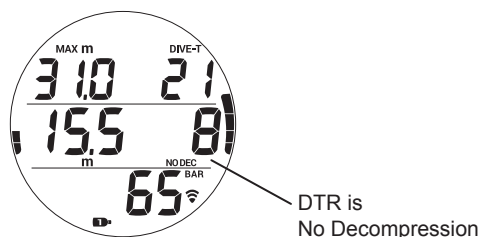
The i470TC constantly monitors No Decompression status and O2 Accumulation, and will display whichever time is the least amount available as DTR on the No Decompression Dive Main screen. The Time being displayed will be identified by the NO DEC (no decompression time) or O2 icons.

NO DECOMPRESSION

No Decompression is the maximum amount of time that you can stay at your present depth before entering decompression. It is calculated based on the amount of nitrogen absorbed by hypothetical tissue compartments. The rates each of these compartments absorb and release nitrogen is mathematically modeled and compared against a maximum allowable nitrogen level.

Whichever compartment is closest to this maximum level is the controlling compartment for that depth. Its resulting value NO DEC (no decompression) will be displayed. It will also be displayed graphically as the N2 Bar Graph, see Bar Graphs below.

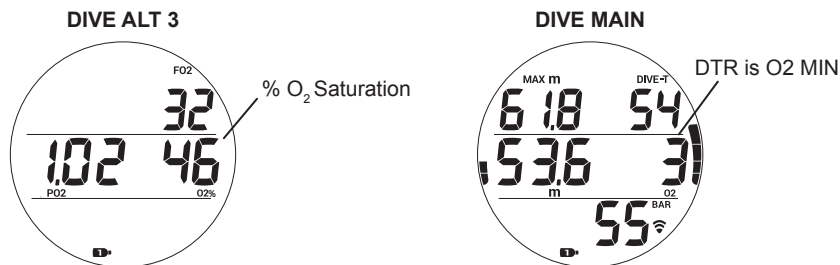
As you ascend, the N2 Bar Graph segments will recede as control shifts to slower compartments. This is a feature of the decompression model that is the basis for multilevel diving, one of the most important advantages that Aqua Lung dive computers offer.



O2 MIN (OXYGEN TIME REMAINING)

When set for nitrox operation, O2 SAT (Oxygen Saturation) during a dive is displayed on an ALT screen as a percentage of allowed saturation identified by the O2 % icon. The limit for O2 % (100%) is set at 300 OTU (Oxygen Tolerance Units) per dive or 24 hour period. See the chart at the back of this manual for specific times and allowances. O2% (O2 saturation) and O2 (O2 min) values are inversely related; as the O2 % value increases the O2 (O2 min) value decreases.

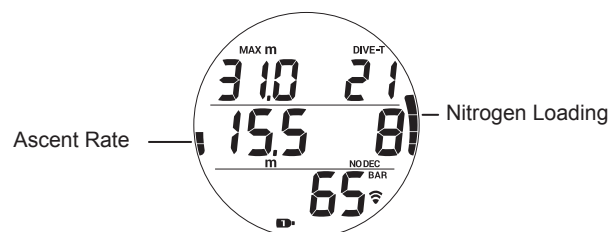
When the O2 (O2 min) value becomes less than the No Decompression calculations for the dive, DTR (Dive Time Remaining) will be controlled by O2% (Oxygen Saturation) and the O2 (O2 min) value will be displayed as the DTR on the Dive Main screen, identified by the O2 icon.



BAR GRAPHS

The i470TC features two specific bar graphs.

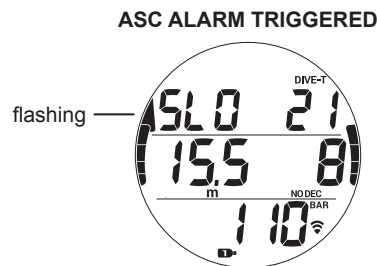
1. The one on the left represents ascent rate. It is referred to as the ASC Bar Graph.
2. The one on the right represents nitrogen loading. It is referred to as the N2BG (N2 Bar Graph).



ASC BAR GRAPH

The ASC Bar Graph provides a visual representation of ascent speed (i.e., an ascent speedometer). When the ascent is faster than the recommended 9 mpm (30 fpm), all segments and the message SLO (slow) flash until the ascent is slowed.

# OF SEGMENTS	ASCENT RATE, MPM (FPM)
0	0 - 3 (0 - 10)
1	3.1 - 4.5 (11 - 15)
2	4.6 - 6 (16 - 20)
3	6.1 - 7.5 (21 - 25)
4	7.6 - 9 (26 - 30)
5	> 9 (> 30)



N2BG (NITROGEN BAR GRAPH)

The N2BG represents your relative No Decompression or Decompression status. The first four segments represent No Decompression status and the fifth indicates a Decompression condition. As your Depth and Elapsed Dive Time increase segments are added. As you ascend segments recede, indicating that additional No Decompression time is available. The i470TC monitors multiple different nitrogen compartments simultaneously and the N2BG displays the one that is in control of your dive at any given time.

ALGORITHM

The i470TC utilizes the Z+ algorithm to calculate nitrogen tissue loading. Performance is based on Bühlmann ZHL-16C algorithm model. To create even greater margins of safety with respect to decompression, a Conservative Factor as well as No Decompression Deep and Safety Stops can be included for No Decompression dives.

CONSERVATIVE FACTOR

When the CF is set On, the dive time remaining, NO DEC (No Decompression)/O2 (O2 min), which are based on the algorithm and used for N2/O2 calculations and displays relating to Plan Mode, will be reduced to the values available at the altitude level that is 3,000 ft (915 m) higher than the actual altitude at activation. Refer to the charts in the back of this manual for dive times.

DEEP STOP

When the Deep Stop selection is set ON, it will trigger after descending deeper than 24 m (80 ft). The i470TC then calculates (continually updating) a Stop Depth equal to ½ the Max Depth.

NOTE: The Deep Stop feature only works in DIVE Mode while within No Decompression times.

- While 3 m (10 ft) deeper than the calculated Deep Stop, you will be able to access a Deep Stop Preview screen that will display the current calculated Deep Stop Depth/Time.
- Upon initial ascent to within 3 m (10 ft) below the calculated Stop Depth, a Deep Stop screen displaying a Stop Depth at ½ the Max Depth will appear with a countdown timer beginning at 2:00 (min:sec) and counting down to 0:00. If you descend 3 m (10 ft) below, or ascend 3 m (10 ft) above, the calculated Stop Depth for 10 seconds during the countdown, the No Decompression Main will replace the Deep Stop Main display and the Deep Stop feature will be disabled for the remainder of that dive. There is no Penalty if the DS is ignored.
- In the event that you enter Decompression, exceed 57 m (190 ft), or a High O2% (Oxygen Saturation) condition, ≥ 80%, occurs, the Deep Stop will be disabled for the remainder of that dive.
- The Deep Stop is disabled during a High PO₂ Alarm condition, ≥ set point.

SAFETY STOP

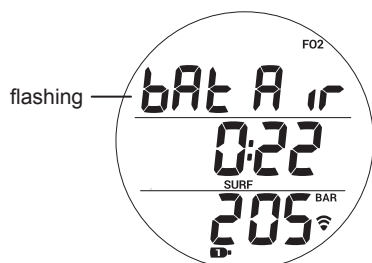
Upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop depth set for 1 second on a No Decompression dive in which Depth exceeded 9 m (30 ft) for 1 second, a beep will sound and a Safety Stop at the depth set will appear on the Dive Main display with a countdown beginning at the Safety Stop time set and counting down to 0:00.

- If the Safety Stop was set for OFF, the display will not appear.
- In the event that you descend 3 m (10 ft) deeper than the Stop Depth for 10 seconds during the countdown, or the countdown reaches 0:00, the No Decompression Main screen will replace the Safety Stop Main screen which will reappear upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop depth set for 1 second.
- In the event that you enter Decompression during the dive, complete the Decompression obligation, then descend below 9 m (30 ft); the Safety Stop Main will appear again upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop depth set for 1 second.
- If the diver ascends to within 0.91 m (3 ft) from the surface for 10 seconds, the Safety Stop is to be canceled.
- There is no penalty if you surface prior to completing the Safety Stop or choose to ignore it.

LOW BATTERY WHILE ON THE SURFACE

Warning Level

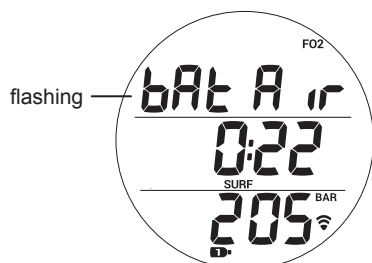
- The i470TC functions continue but the backlight is disabled.
- The bAt graphic will flash.



Alarm Level

- If in Dive Computer mode, the bAt message flashes the same as a warning. The difference is, after 5 seconds, operation will revert to Watch Time with the bAt message flashing until the battery is changed or voltage cannot sustain operation.

⚠ WARNING: Change the battery before diving if your i470TC indicates the Battery Low Warning or Alarm.



LOW BATTERY DURING A DIVE

Warning Level

- The i470TC functions continue but the backlight is disabled.
- The bAt message flashes upon entry into Surface Mode.

Alarm Level

- The i470TC functions continue but the backlight is disabled.

- Upon entry into Surface Mode, the bAt message flashes then operation reverts to Watch Time.

GAS TIME REMAINING

The i470TC calculates GTR (Gas Time Remaining) using a patented algorithm that is based on the diver's gas consumption rate and current depth. GTR is the time you can remain at your present depth and still safely surface with the cylinder pressure reserve that you selected during setup (the End Pressure alarm setting).

Cylinder pressure is measured once each second and an average rate of consumption is calculated over a 90 second period, and used in conjunction with the depth to predict the amount of gas required to make a safe controlled ascent, including the No Decompression Deep and Safety Stops and any required Decompression Stops. Gas consumption and depth are continuously monitored and GTR reflects any change in circumstances, such as beginning to breathe more rapidly when swimming against a current which the i470TC will recognize as a change and adjust GTR accordingly.

NOTE: GTR is displayed numerically (from 0 to 99 min) on the Dive Alt 1 screen. GTR will display the maximum value 99 when the actual value exceeds 99 minutes.

DIVE ALT 1

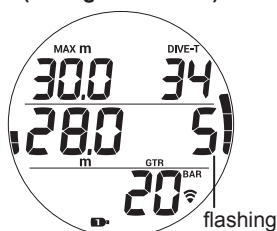


GTR Alarm

When GTR (Gas Time Remaining) decreases to 5 minutes, the audible will sound and the GTR icon and value will flash in place of the Dive Time Remaining (NO DEC, O2) values on the Dive Main screen. If it decreases to 0, the audible will sound again. The digits will continue to flash until GTR becomes greater than 5 minutes. At which time, Dive Time Remaining is restored on the Dive Main Screen. GTR will be viewable on the Dive Alt 1 screen regardless of the alarm status.

Upon activation of the alarm >> You should initiate a controlled ascent while monitoring cylinder pressure. However, there is no reason to panic, the i470TC has allowed for the gas necessary for a safe ascent including the No Decompression Deep, Safety Stops (if set on), and any required Decompression Stops.

DIVE MAIN
(during GTR Alarm)



AUDIBLE/VISUAL ALARM

While operating in Dive or Gauge Mode, the audible alarm will emit 1 beep per second for 10 seconds when alarms strike, unless it is set to Off. During that time, the audible alarm can be acknowledged and silenced by pressing the SELECT button.

An LED warning light, on the side of the housing, is synchronized with the audible alarm and flashes as the audible alarm sounds. It will turn off when the alarm is silenced. The audible and LED alarms will not be active if the audible alarm is set to OFF (a Set Alarms setting).

Free Dive Modes have their own alarms which emit multiple beeps multiple times which cannot be acknowledged or set to OFF.

Events that emit (10) beeps >> each sound for ½ sec with ½ sec silence between beeps:

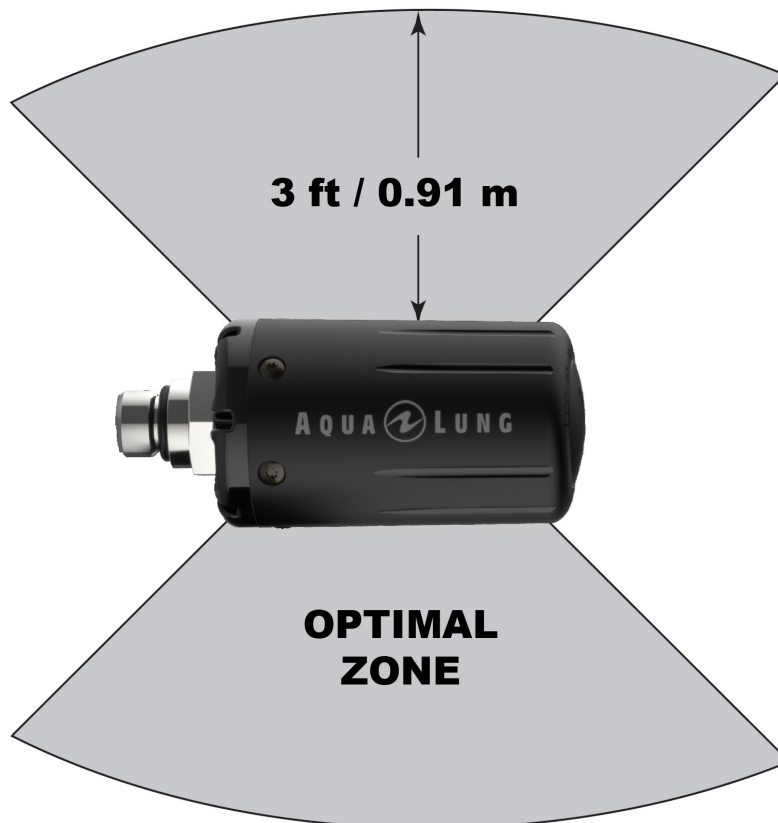
- Conditional Violation
- Delayed Violation 1
- Delayed Violation 2
- Delayed Violation 3
- Gas Time Remaining Alarm
- Turn Pressure Alarm
- Press Alarm
- Ascent Alarm
- PO2 Alarm
- Depth Alarm
- N2BG Alarm
- High O2 Warning and Alarm
- Entry into Deco
- EDT Alarm
- DTR Alarm
- Gas Switch Alarm
- Watch Daily Alarm
- Watch CDT Alarm

Events that emit (3) short beeps:

- FREE - CDT Alarm.
- FREE - N2 Bar Graph Alarm.
- FREE - Violation, entry into Decompression.
- FREE - DA1 to DA3 Alarms.

PROXIMITY OF THE TMTs (TRANSMITTERS) AND i470TC

The i470TC can be used with the Aqua Lung Transmitter (P/N NS119113). The TMTs emit low frequency signals that radiate out in semicircular patterns parallel to the length dimension of the TMT. A coiled antenna inside the i470TC wrist unit receives the signals when it is positioned within a zone parallel to or at a 45 degree angle to the TMT as illustrated.



The i470TC cannot effectively receive a signal when it is held out to the ends of the TMT or held at distances greater than 0.91 m (3 ft) in front of the TMT. Best reception is achieved when the i470TC is within less than 0.91 m (3 ft) of the TMT.

When installed into the high pressure ports of the regulator first stages, the TMTs must be positioned so that they face horizontally outward from the cylinder valves.

Link Interruption

On The Surface:

You may at times move the i470TC out of the signal pattern of the TMT, resulting in a temporary loss of the link signal. The i470TC will indicate this by flashing the transmitter link icon and message LOST in place of gas pressure value. The link will be restored within 4 seconds after the i470TC is moved back into its correct position.

An interruption may also occur while the i470TC is within 3 feet (1 meter) of a running DPV, or shortly after a strobe flashes. The link should be restored within about 4 seconds after the i470TC is moved out of that area.

If the link is not restored within a short period of time, dashes will replace gas pressure.



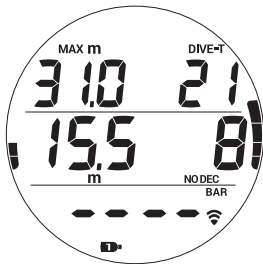
NOTE: If the bluetooth is on and active, expect a slight delay in connecting to a transmitter.

Underwater:

During a dive, you may at times move the i470TC out of the signal pattern of the TMT, resulting in a temporary loss of the link signal. The i470TC will indicate this by flashing the transmitter link icon and LOST message in place of the gas pressure value. The link will be restored within 4 seconds after the i470TC is moved back into its correct position.

An interruption may also occur while the i470TC is within 3 feet (1 meter) of a running DPV, or shortly after a strobe flashes. The link will be restored within 4 seconds after the i470TC is moved out of that area.

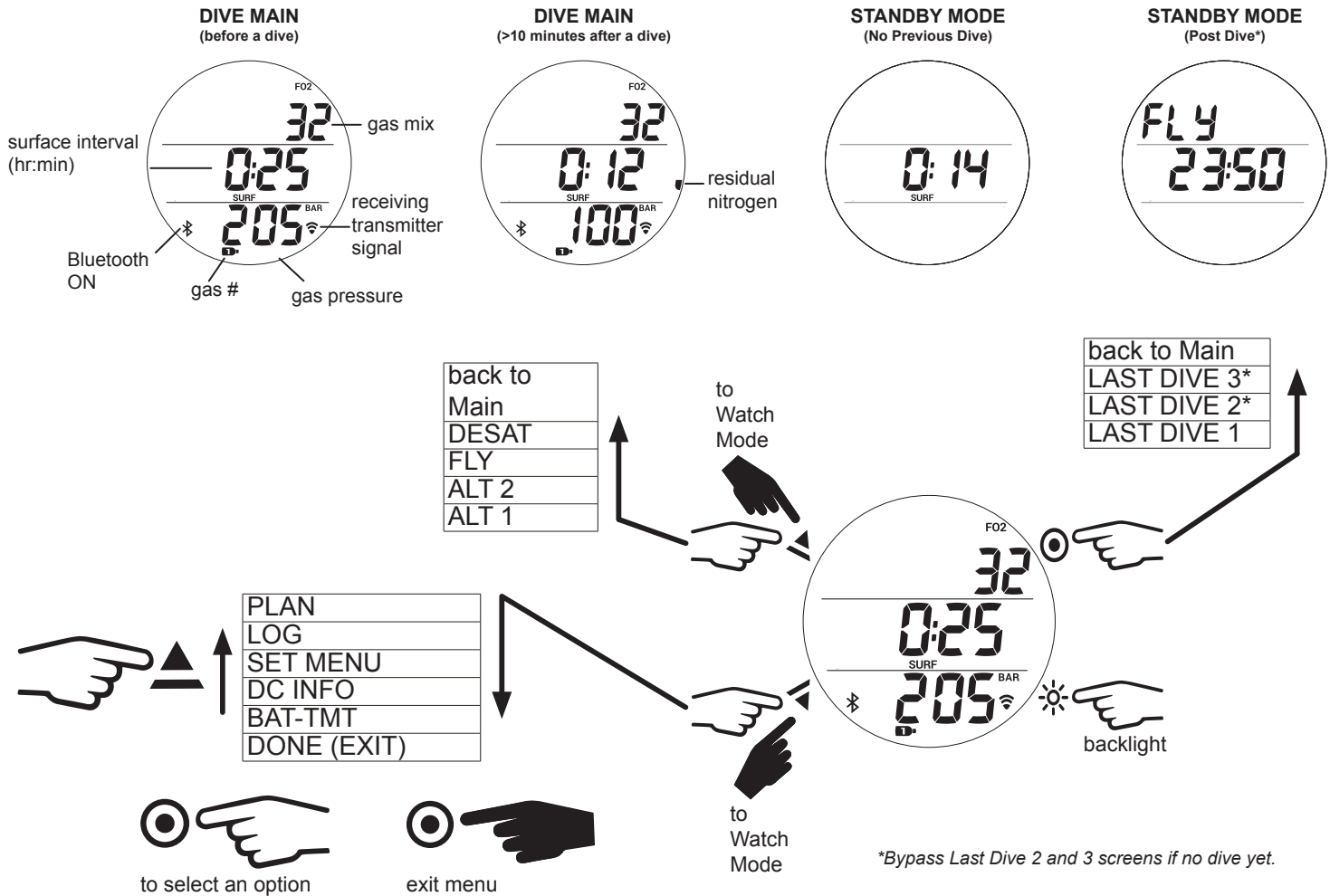
If the link is not restored within 1 minute, the audible alarm will sound, dashes will replace gas pressure, and GTR values (on Dive Alt 1 screen).



DIVE SURFACE MODE

ON THE SURFACE BEFORE A DIVE

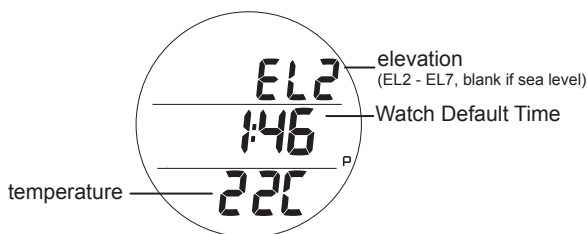
The Dive Main screen will display the SURF (Surface Time) and the selected FO₂ of the breathing gas. The surface time displayed is the time since activation or the surface interval after a dive.



ALTERNATE SCREENS

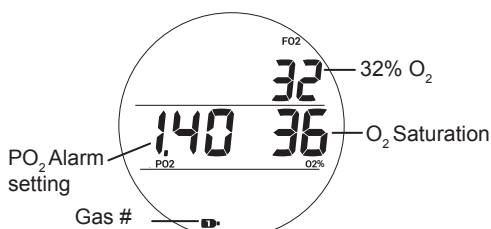
ALT 1

The ALT 1 screen displays time of day, temperature, and current elevation readings.



ALT 2

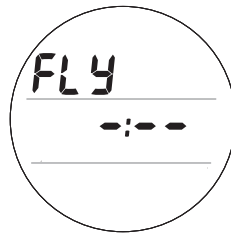
The ALT 2 screen displays only after a nitrox dive. It displays the current oxygen saturation level, PO₂ Alarm setting, and the current gas mix.



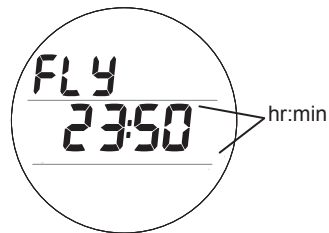
FLY

The FLY screen displays the Time to Fly countdown. The Time to Fly countdown shall begin counting from 23:50 to 0:00 (hr:min), 10 minutes after surfacing from a dive.

NO PREVIOUS DIVES



10 MIN AFTER A DIVE

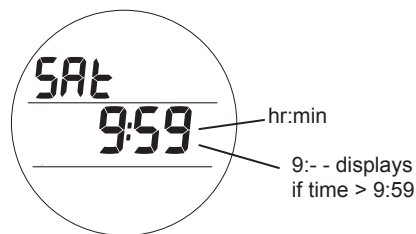
**DESAT**

The DESAT screen displays the DESAT (desaturation) countdown. The DESAT counter shall provide calculated time for Tissue Desaturation at sea level taking into consideration the CF (Conservative Factor) if it was set on. It shall begin counting down 10 minutes after surfacing from DIVE or FREE dives counting down from a maximum of 23 to 10 (hr only), then 9:59 to 0:00 (hr:min). When the DESAT countdown reaches 0:00 (hr:min), which will generally occur prior to the FLY countdown reaching 0:00 (hr:min), it will remain on the display as 0:00 until the Fly count down reaches 0:00.

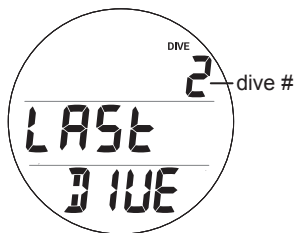
NO PREVIOUS DIVES



10 MIN AFTER A DIVE

**LAST DIVE SCREENS****LAST DIVE 1**

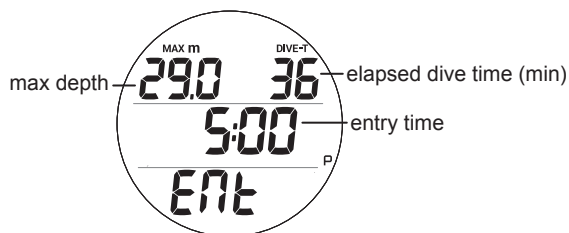
The Last Dive screens provide convenient access to data from the previous dive. The LAST DIVE 1 screen displays the graphic LAST DIVE and the previous dive number, 0 displays if no dive yet during the activation period.



NOTE: Last Dive 2 and 3 screens will be bypassed if there have been no previous dives during the activation period.

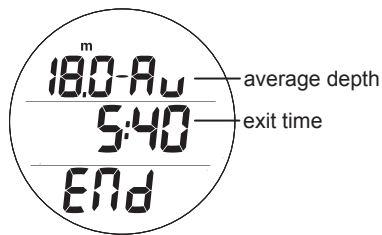
LAST DIVE 2

The LAST DIVE 2 screen displays the dive ENT (entry) time, maximum depth, and elapsed dive time.



LAST DIVE 3

The LAST DIVE 3 screen displays the dive ENd (exit) time and Av (average) dive depth.

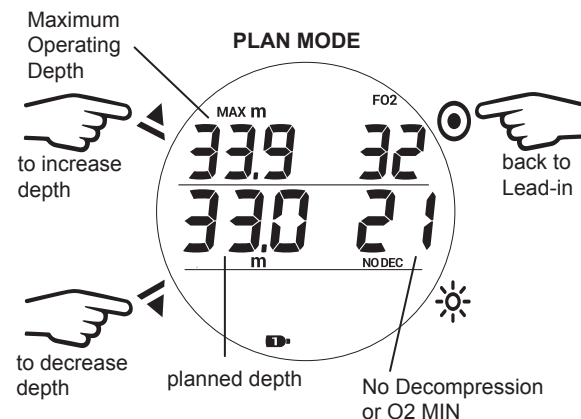
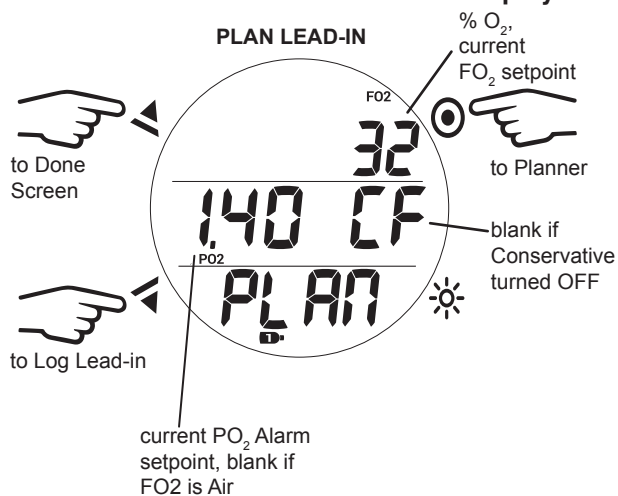


DIVE MAIN MENU

PLAN

This mode calculates dive depth and time limits. To do so, it accounts for any residual nitrogen, oxygen, surface intervals, the programmed gas mix, and PO₂ alarm setting. Either NO DECO (No Decompression) or O₂ MIN limits are displayed, depending on whether nitrogen or oxygen levels will be the limiting factor. The time limit will display as 1-99 minutes, all times greater than 99 display as 99.

NOTE: Depths exceeding the MOD (Maximum Operating Depth), if nitrox, or that have less than 1 minute allowed dive time will not be displayed.

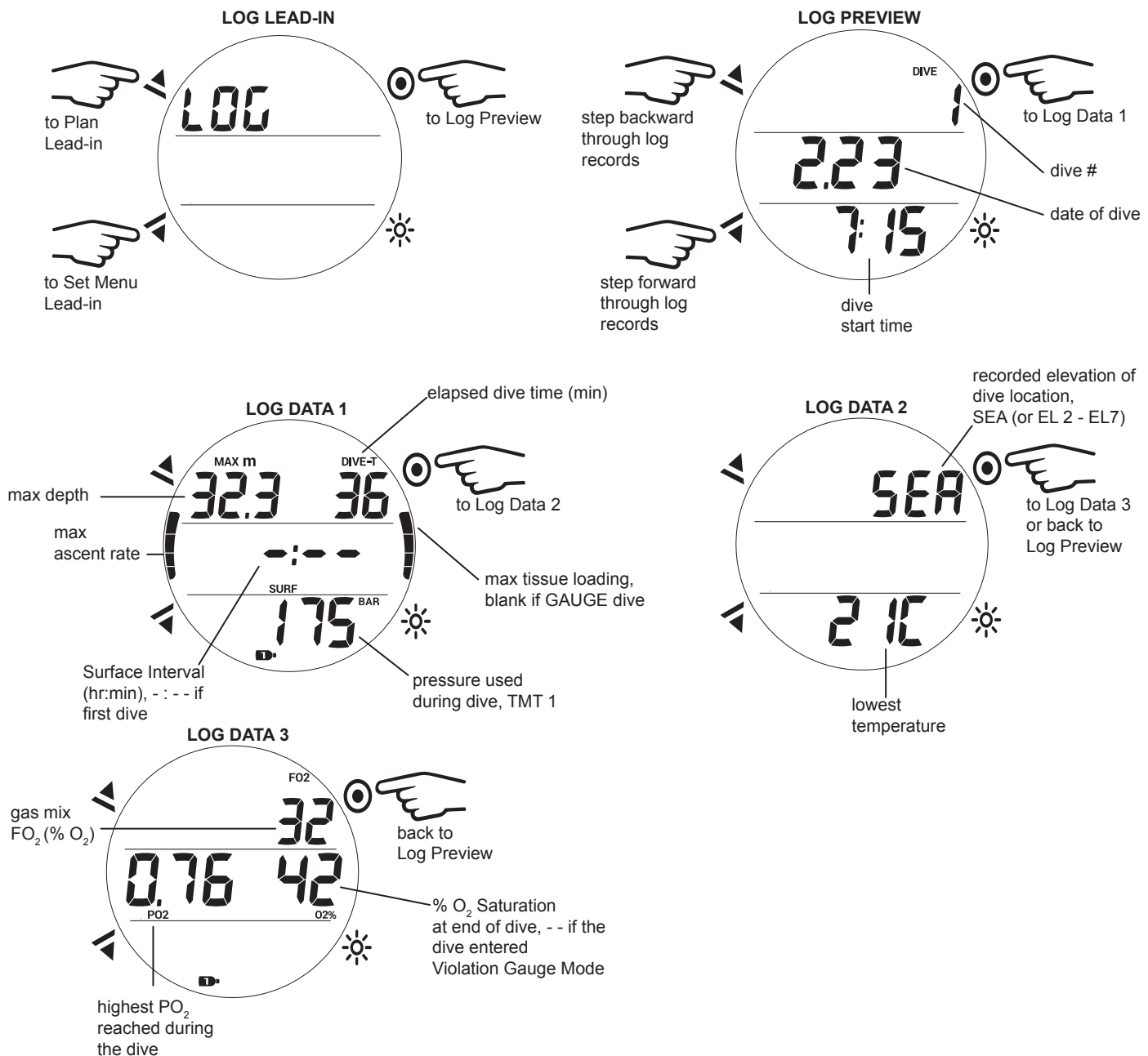


LOG

The log stores Information from the latest 24 Dive and/or Gauge mode dives for viewing.

- If no dives are recorded, the message NONE YET will be displayed.
- After exceeding 24 dives, the most recent dive is stored while the oldest is deleted.
- Dives are numbered from 1 to 24 starting each time a dive is activated in either Dive (or Gauge) mode. After the post dive 24 hour period has elapsed and the unit shuts off, the first dive of the next activation period will be recorded as dive #1.
- In the event that dive time (DIVE MIN) exceeds 999 min, the data at the 999 interval is recorded in the Log upon surfacing of the unit.
- The message GAU (Gauge) or VIO (violation) will display, in the upper left, if applicable on the Log Preview.

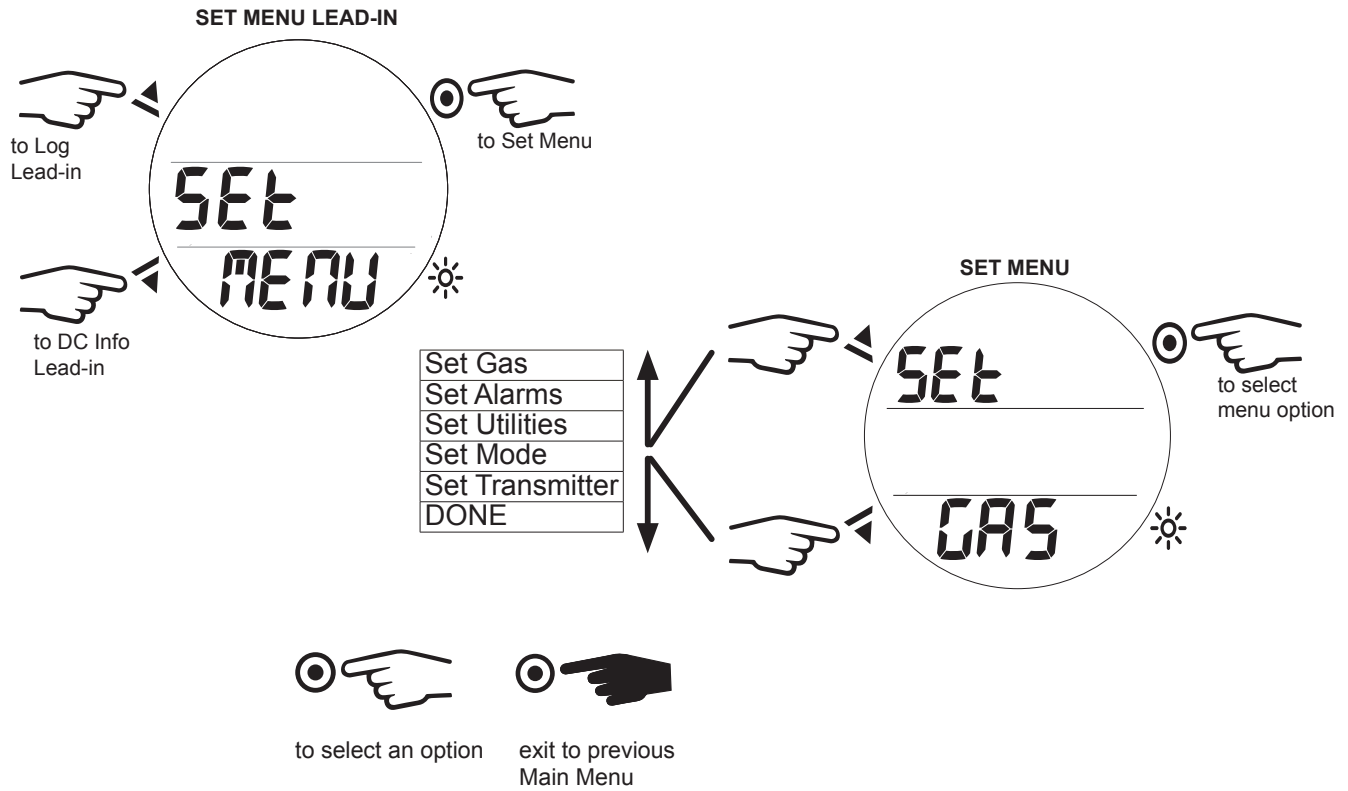
NOTE: New data will automatically overwrite the oldest data in memory when the memory becomes full. If you do not remember to log or download your dives, they will be lost when the memory overwrites. See the Uploading/Downloading Data section p. 71 of this manual for instructions on downloading dives.



NOTE: Log Data 3 only displays for nitrox dives; it is bypassed if the dive was an air dive.

SET MENU

The Set Menu allows you to access Set Gas, Set Alarms, Set Utilities, Set Mode, and Set Transmitter.

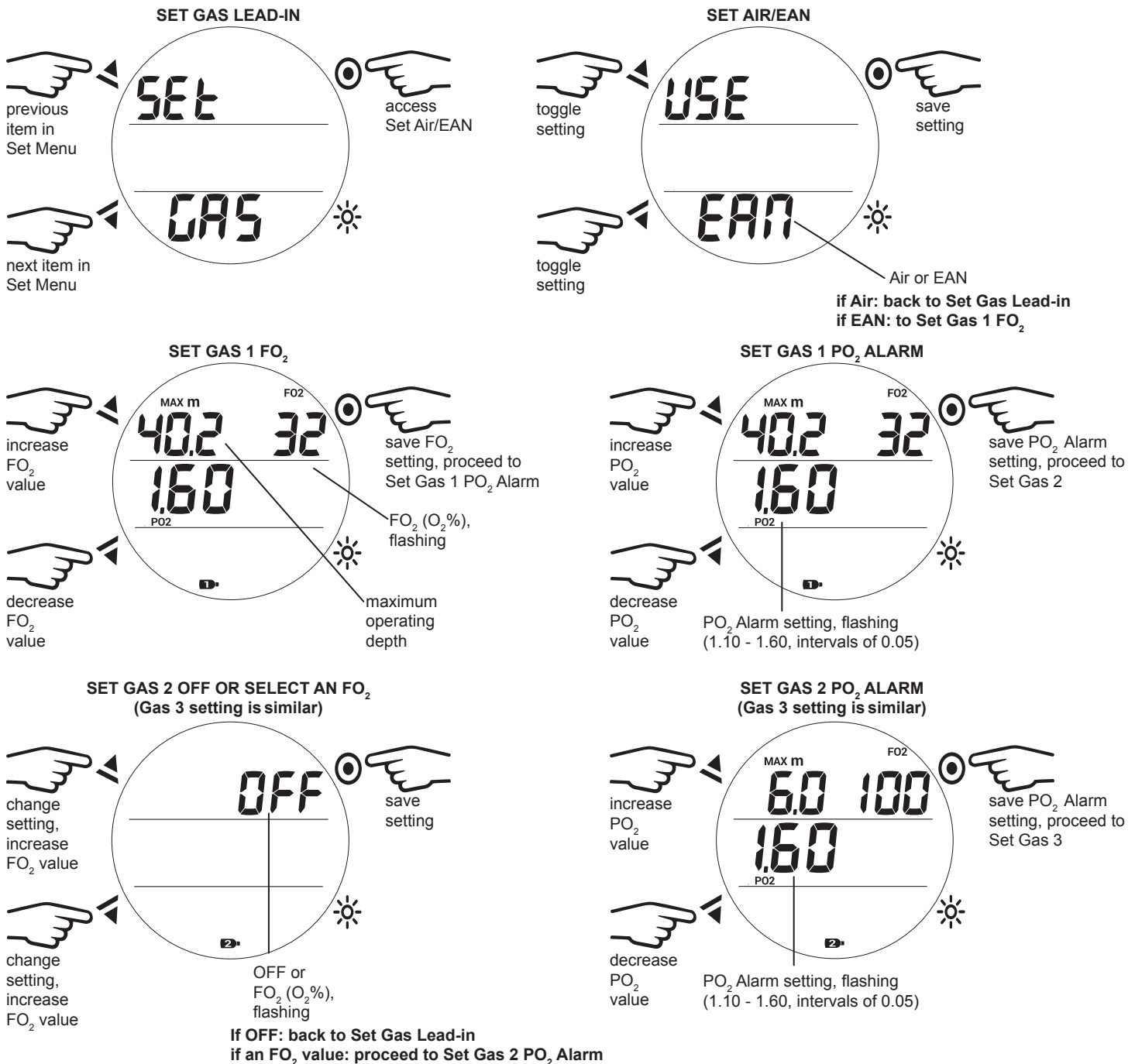


SET GAS

Pressing  (Select) button while viewing the Set Gas Lead-in screen accesses the Set Air/EAN (Enriched Air Nitrox) screen. Within this screen you can select whether to use Air or Nitrox gas mixes. If Air is selected, the i470TC will return you to the Set Gas Lead-in screen in the menu. If EAN is selected, the i470TC will allow you to choose a gas FO_2 (% O_2) between 21-100%, PO_2 Alarm settings, and whether to use 1, 2, or 3 gases. Additionally, the i470TC allows for each gas to have individual PO_2 alarm settings. Within the Set Gas PO_2 Alarm 1, 2, and 3 screens the current PO_2 Alarm setting and corresponding MOD (Maximum Operating Depth) are displayed.

NOTE: When FO_2 is set for AIR, oxygen related data (such as PO_2 , % O_2 , and O_2 Saturation) will not be displayed at any time during the dive, on the surface, or in Plan Mode. Though these oxygen values will be tracked internally for use in any subsequent nitrox dives.

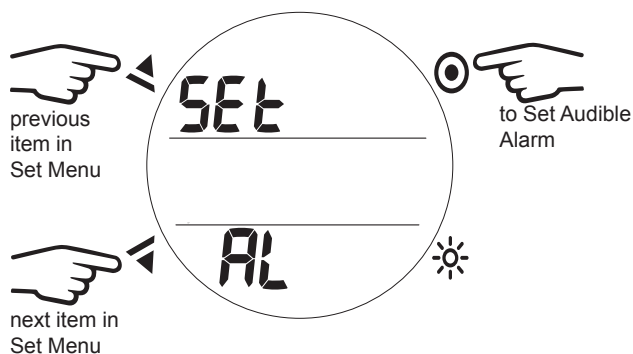
NOTE: Gas 1 cannot be set to OFF.



SET ALARMS

Within this submenu you can customize the following seven alarm settings.

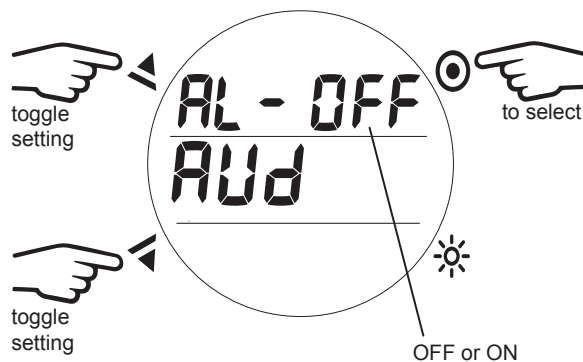
SET ALARMS LEAD-IN



1. AUDIBLE ALARM

The Audible Alarm feature allows you to set audible alarms ON or OFF.

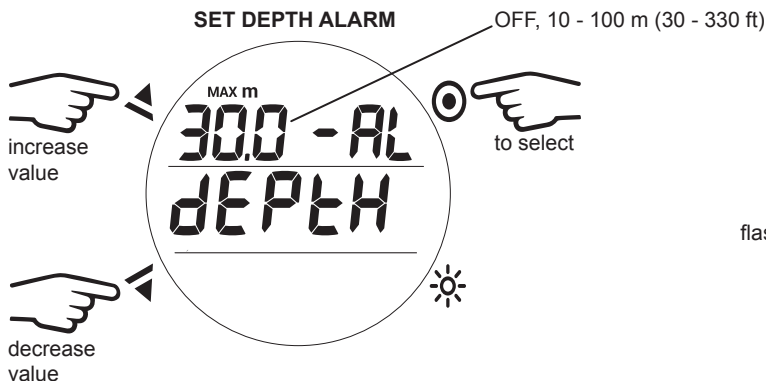
SET AUDIBLE ALARM



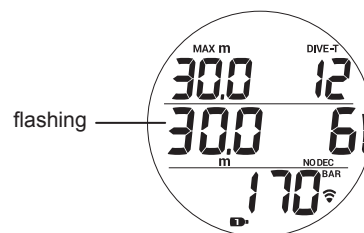
2. DEPTH ALARM

The Depth Alarm feature allows you to set a maximum depth alarm.

SET DEPTH ALARM

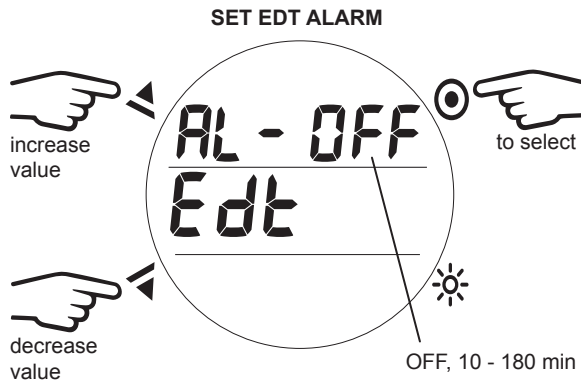


DEPTH ALARM TRIGGERED

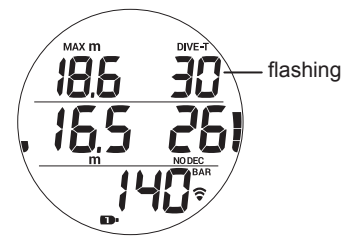


3. EDT (Elapsed Dive Time) ALARM

This feature allows you to set an alarm to go off at a predetermined amount of dive time.

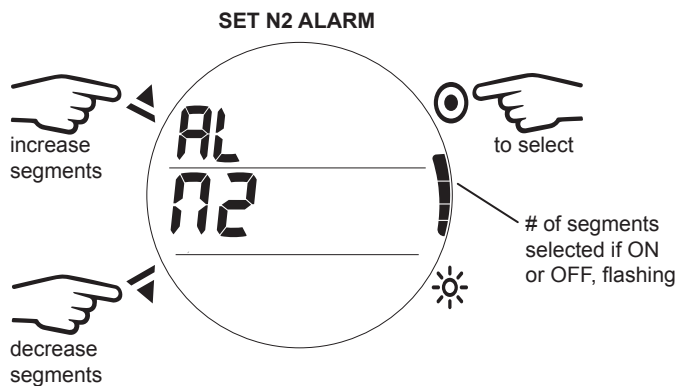


EDT ALARM TRIGGERED

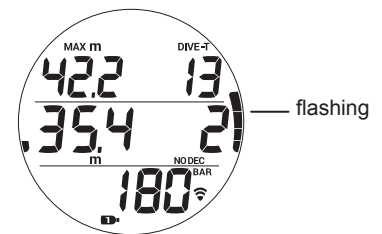


4. N2 (Nitrogen) ALARM

This feature allows you to set an alarm to go off at a predetermined number of N2 bar graph segments.

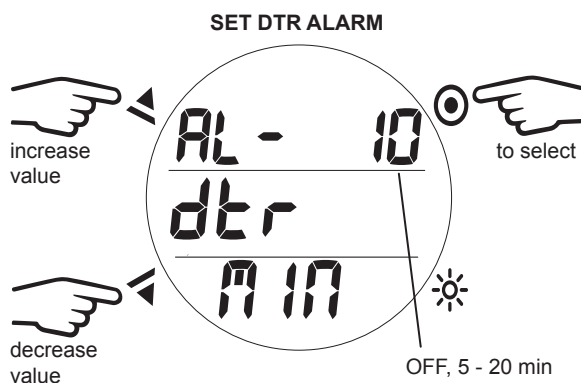


N2 ALARM TRIGGERED

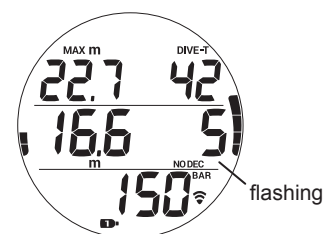


5. DTR (Dive Time Remaining) ALARM

This feature allows you to set an alarm to go off with a designated reserve of dive time remaining.

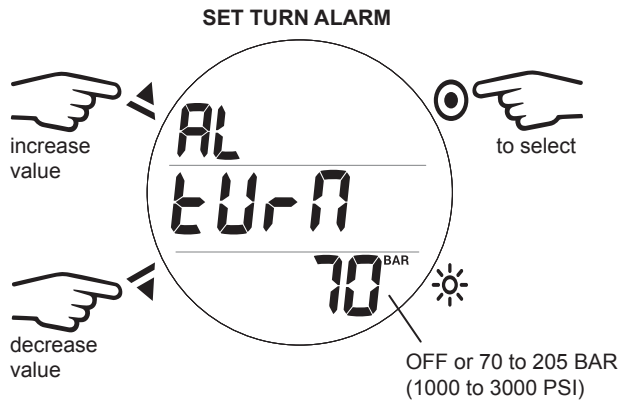


DTR ALARM TRIGGERED

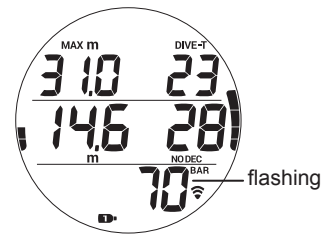


6. TURN (Turn Pressure) ALARM

The Turn Pressure Alarm allows you to set an alarm to trigger at a designated turn pressure.



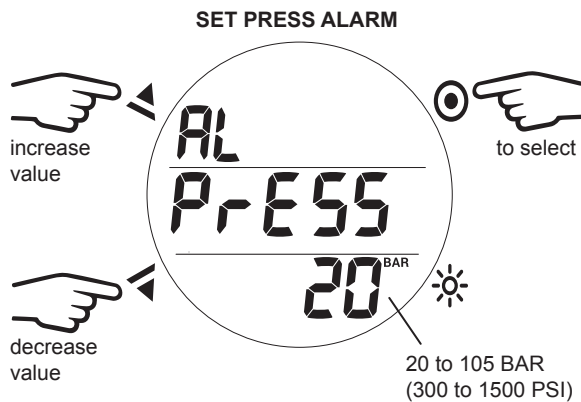
TURN ALARM TRIGGERED



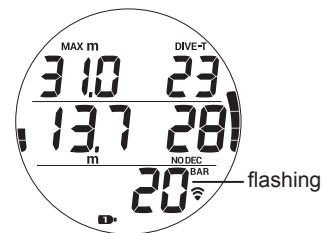
7. PRESS (Pressure) ALARM

The Pressure Alarm allows you to set an alarm for when you reach a designated end pressure.

NOTE: The Pressure Alarm only considers the active gas when diving with multiple gas transmitters.

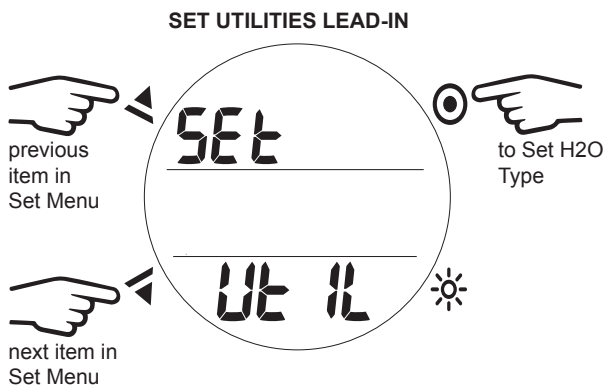


PRESS ALARM TRIGGERED



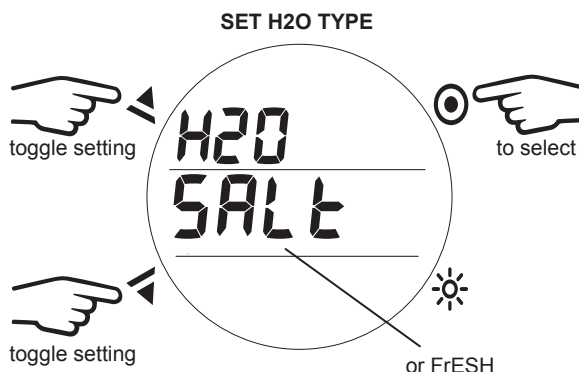
SET UTILITIES

Within the Set Utilities menu you can customize the following nine operational functions.



1. H₂O TYPE (Water Type)

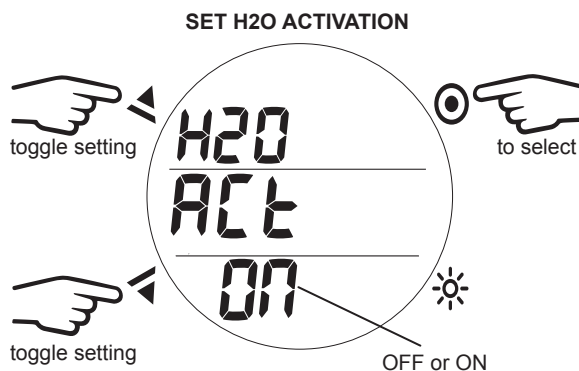
The H₂O Type feature allows you to set SALt or FrESH water environment for accurate depth calculations.



2. H₂O ACTIVATION

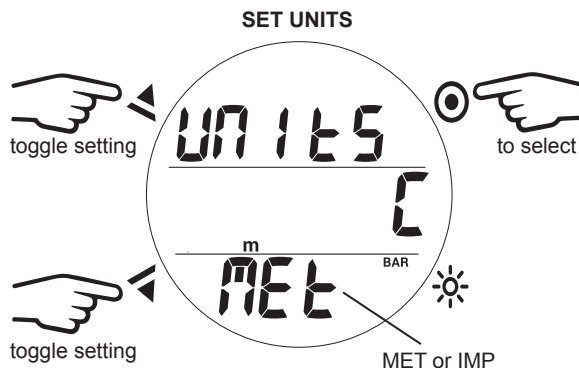
The H₂O Activation feature allows you to turn OFF water contact activation.

⚠ WARNING: With H₂O Activation turned OFF, you **MUST** remember to manually activate the Dive Mode before any dive.



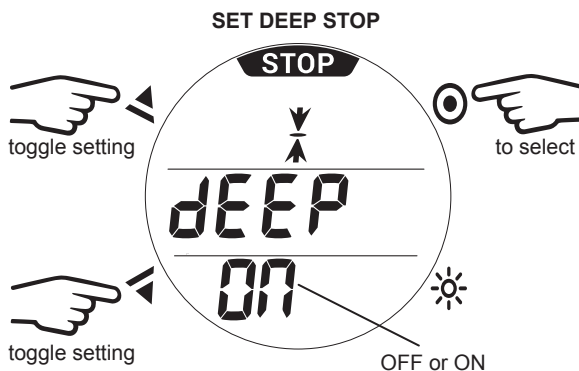
3. UNITS (IMP/MET)

The Units feature allows you to select whether MET (metric) or IMP (imperial) units of measure will be displayed.



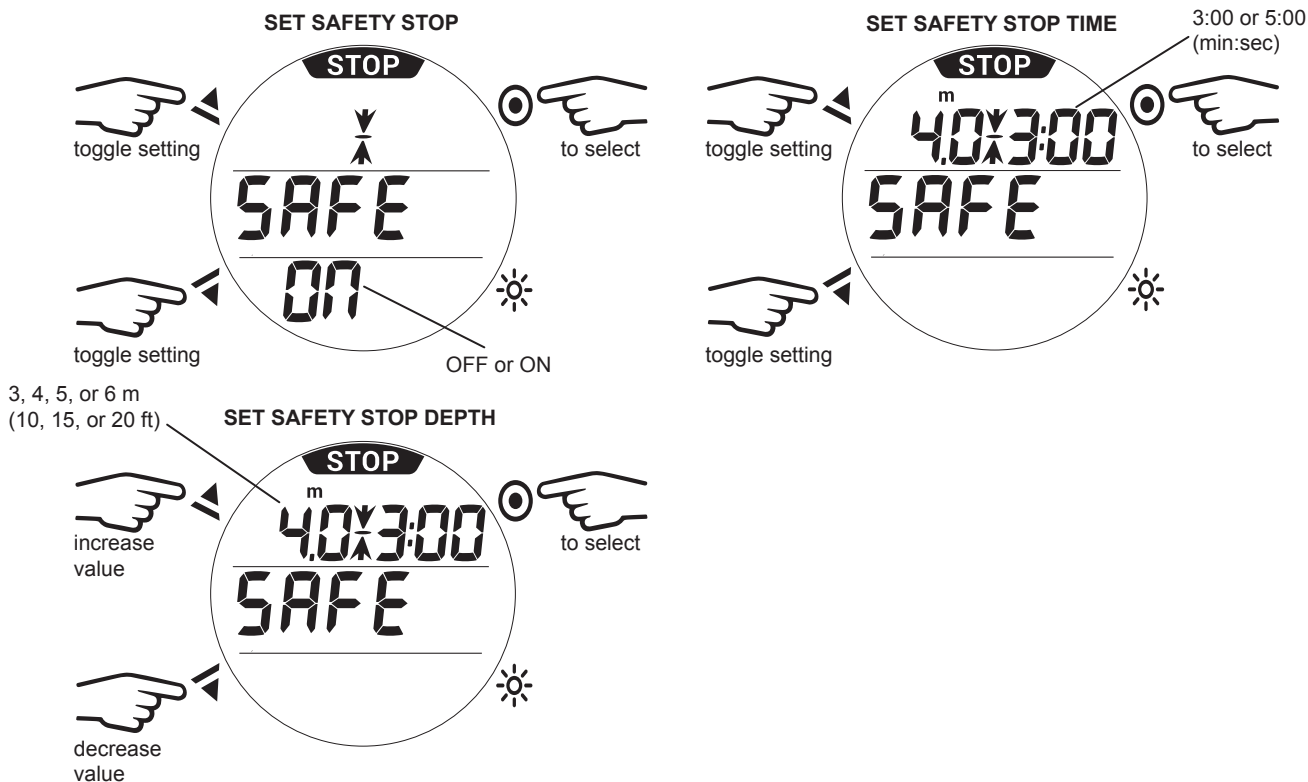
4. DEEP STOP

The Deep Stop feature can be set ON or OFF.



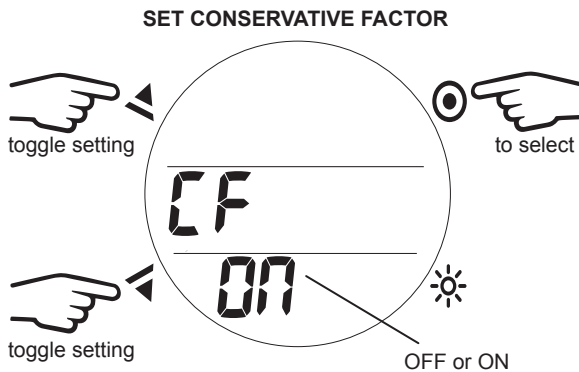
5. SAFETY STOP

The Safety Stop feature can be set ON or OFF. If ON is selected, you may choose from an available 3 or 5 min Safety Stop at depths of 3, 4, 5, or 6 m (10, 15, or 20 ft).



6. CONSERVATIVE FACTOR

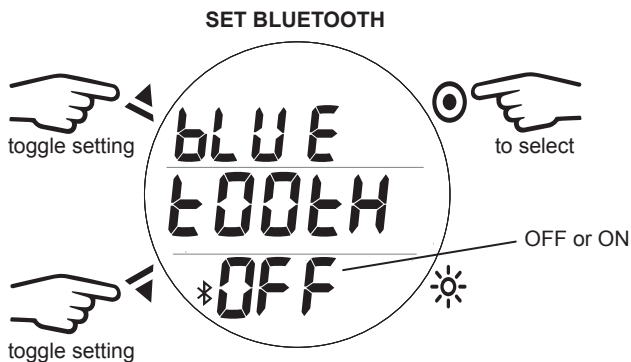
The Conservative factor tables feature can be set ON or OFF.



7. BLUETOOTH (Bluetooth Communication)

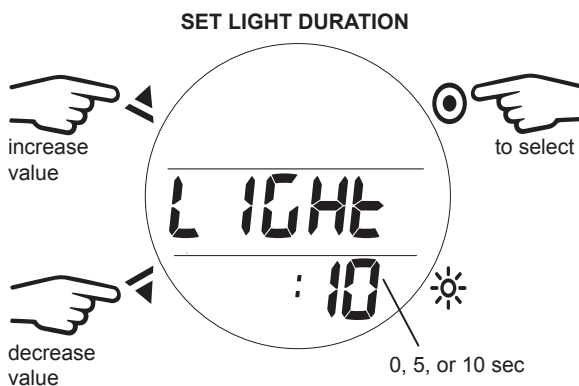
Within this screen the Bluetooth® may be turned ON or OFF. When ON is selected, dashes will display sequentially at the top of the screen indicating that Bluetooth® is initiating. When Bluetooth® is turned on it will operate in sniffing mode (searching for compatible devices) while on the surface and the i470TC is not in Standby Mode. Communication with your i470TC must be initiated with your mobile device using Diverlog+ software.

NOTE: When Bluetooth® is ON the Bluetooth® icon will be displayed when on the surface and in Dive, Gauge, or Free Mode but not during Watch or Standby Mode. Bluetooth® is temporarily deactivated when the i470TC enters Watch Mode, Standby Mode, or a dive is started. The i470TC returns to "sniffing" mode when the i470TC returns to Surface Mode after a dive or a button is pushed to wake the computer from Standby Mode on the surface. You will notice the Bluetooth® icon flashing as the Bluetooth® function is reinitiating.



8. LIGHT DURATION

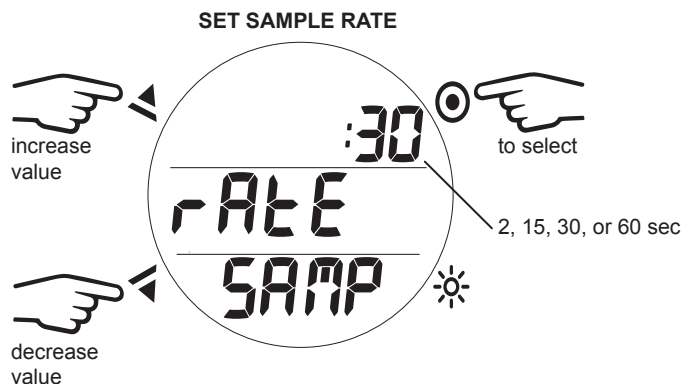
This setting is the duration the backlight stays on after releasing the buttons.



9. SAMPLING RATE

The Sample Rate controls how frequently the i470TC stores a data snapshot for Diverlog + Download during a dive. Setting options are 2, 15, 30, or 60 second intervals. Shorter intervals will provide a more precise record of your dives.

NOTE: New data will automatically overwrite the oldest data in memory when the memory becomes full. The i470TC Log and Diverlog + Download data are stored separately in different partitions of the memory. The Log only stores a short summary of each dive. Alternately, the Diverlog + Download function stores much larger files for each dive. Depending on the chosen settings and dive durations, it is possible to see dives stored in the i470TC's on-board Log that have already been overwritten in the Diverlog + Download Partition. Choosing a longer Sample Rate interval will consume less memory per dive. Remember to download your dives more frequently if you are using a shorter Sample Rate interval.

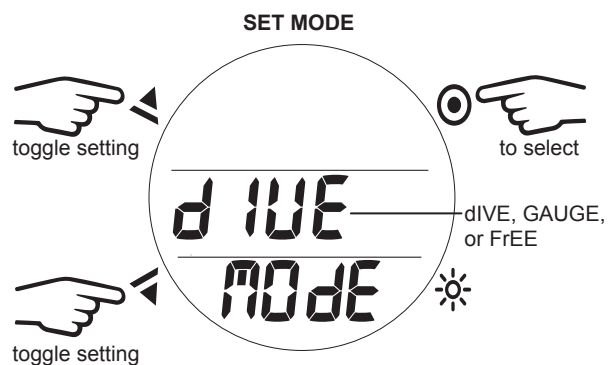
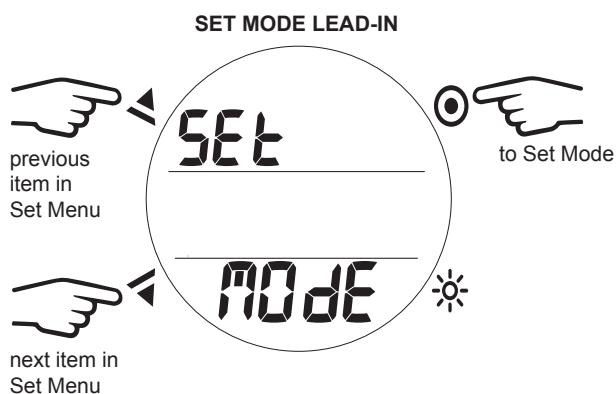


DIVE & GAUGE DOWNLOAD MEMORY CAPACITY	
SAMPLE RATE (seconds)	MAXIMUM HOURS
2	4
15	32
30	64
60	128

SET MODE (OPERATION MODE)

Set Mode allows you to choose between Dive (standard recreational dive), Gauge, and Free (free diving) modes of operation.

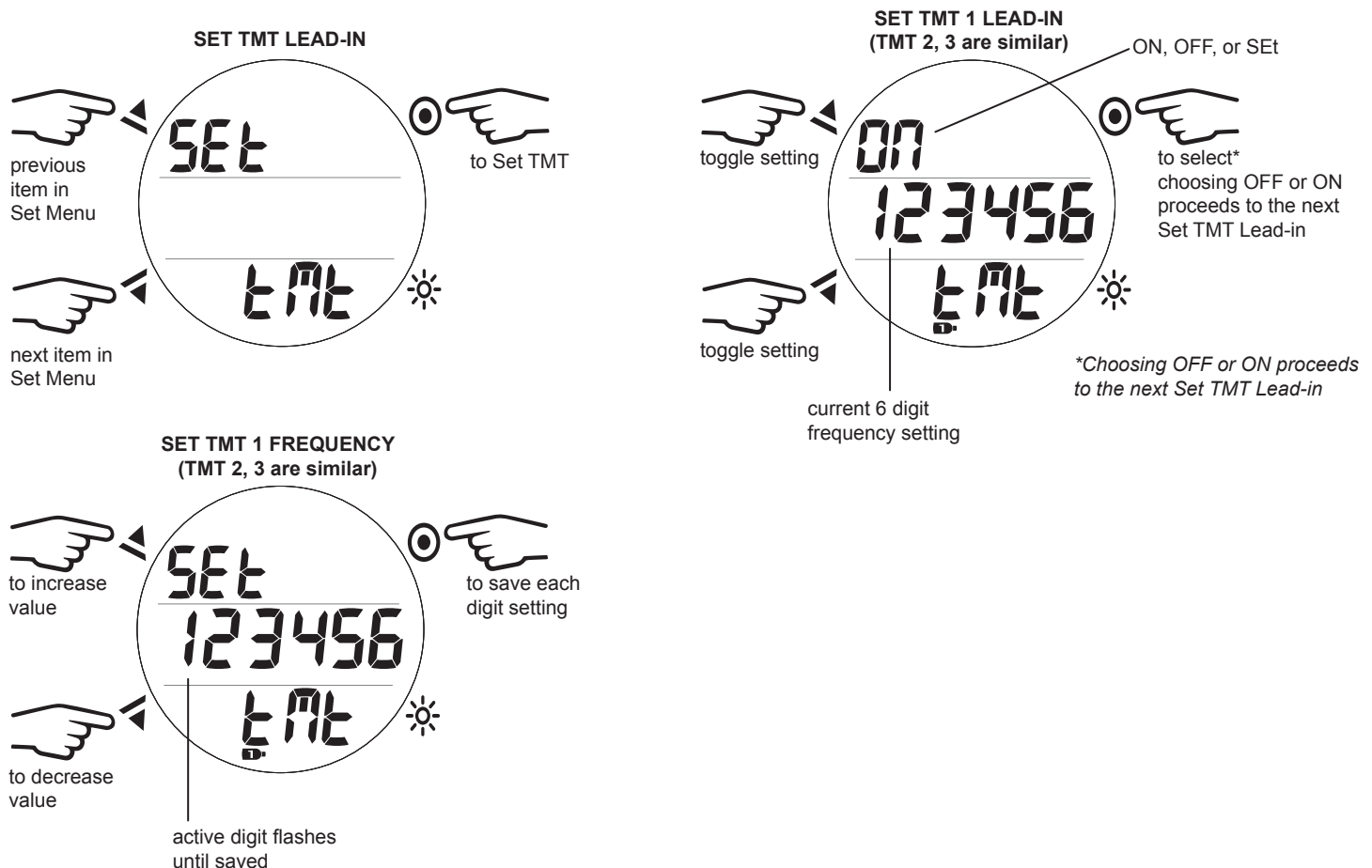
NOTE: Once a dive is conducted in Gauge mode, the i470TC shall operate with limited functions without any decompression or oxygen monitoring functions. A 24 hour surface interval shall be required for the unit to operate as a full function dive computer in Dive or Free mode.



SET TMT (TRANSMITTER)

The i470TC can use up to 3 transmitters to monitor gas supplies. The Set TMT Menu allows for the programming of the wrist unit to receive the signals from selected Aqua Lung transmitters. See the Dive Mode Features section (p. 27) for further information on transmitters.

- NOTE:** If the transmitter is set OFF for the active gas, the pressure reading will be absent on the Main Screen.
- NOTE:** Transmitter 2 cannot be set to ON unless transmitter 1 is set to ON. Likewise, transmitter 3 cannot be set to ON unless transmitter 2 is also set ON. If you attempt to do so, the i470TC will display the message tUrN ON tMt and the transmitter # icon.
- NOTE:** If the bluetooth is on and active, expect a slight delay in connecting to a transmitter.

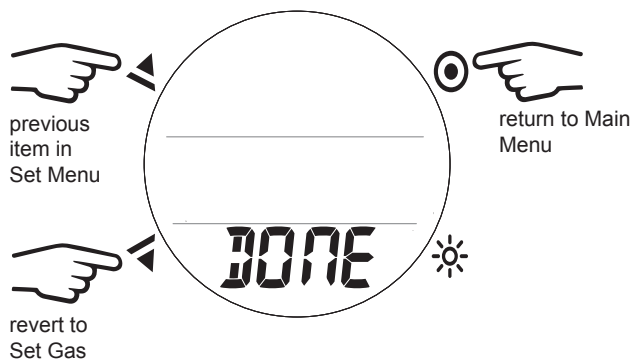


- NOTE:** The serial number can be located in two places directly on the transmitter (see below).



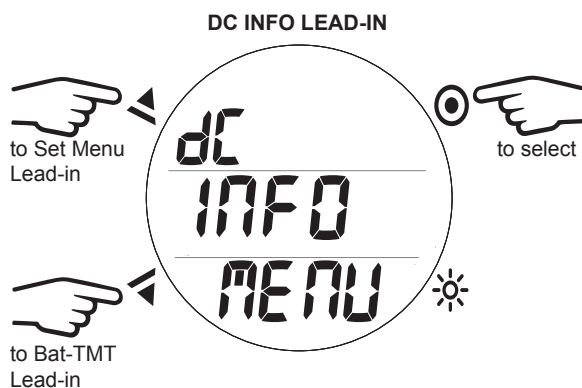
DONE SCREEN (SET MENU)

The Done Screen is a gateway to exit the Set Menu and return to the Main Menu.



DC INFO MENU

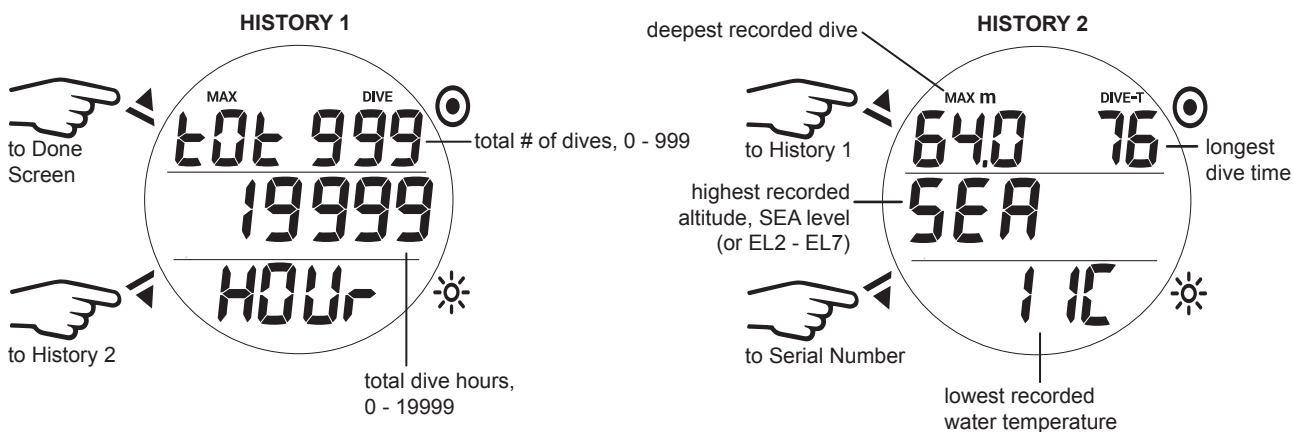
The DC Info Menu allows access to stored information about your i470TC.



1. HISTORY

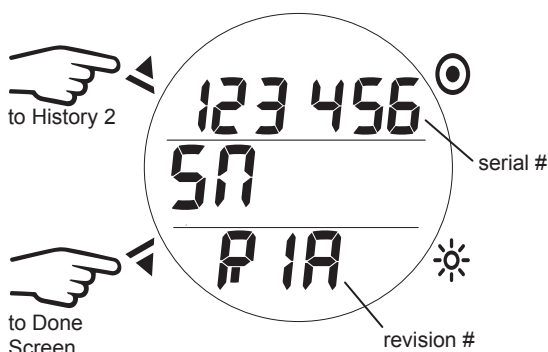
History is a summary of all basic data recorded during Dive and Gauge mode dives.

NOTE: Dives made in Free mode are not shown in History or the Log Mode. Free dive data is only visible using the Download software.



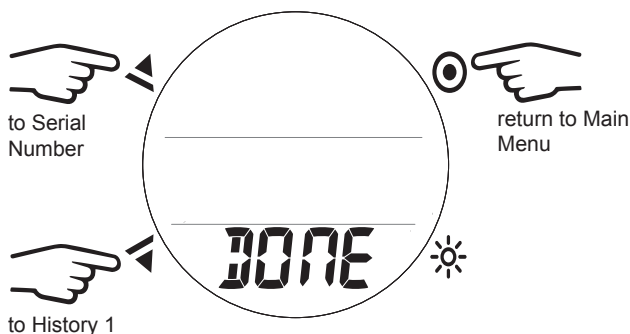
2. SERIAL NUMBER

Information displayed on the Serial Number screen should be recorded and kept with your sales receipt; it will be required in the event that your i470TC requires factory service.



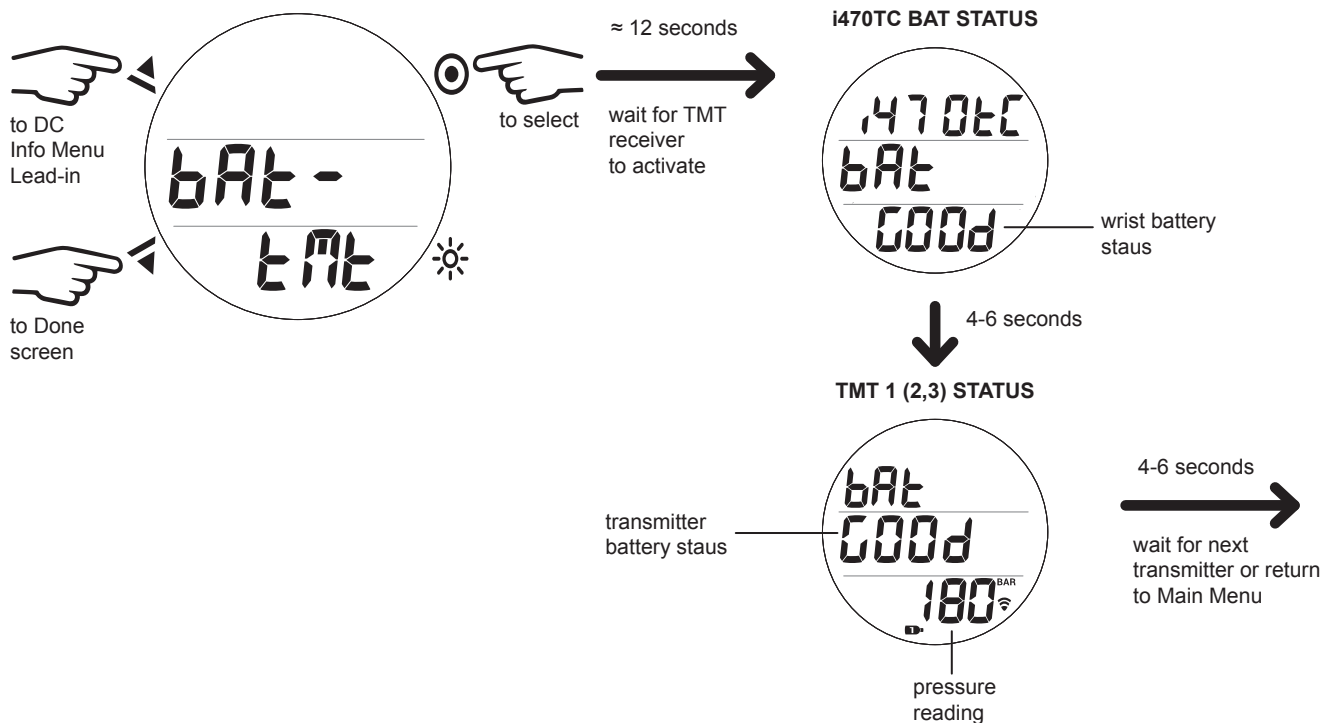
3. DONE SCREEN (DC INFO MENU)

The Done Screen is a gateway to exit the DC Info Menu and return to the Main Menu.



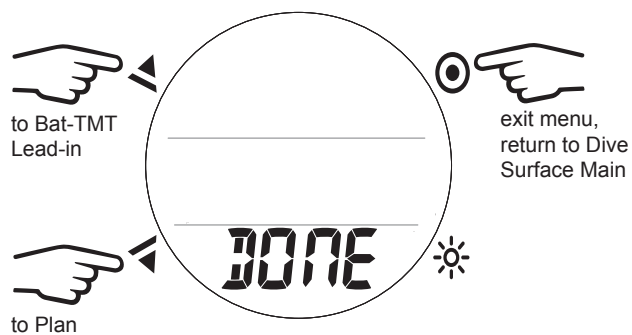
BAT-TMT

The Bat-TMT feature checks battery and connection status for the wrist module and transmitters. It will show the battery status of the i470TC wrist module first. Then it will automatically cycle through any active transmitters before returning to the Main Menu.



DONE SCREEN (MAIN MENU)

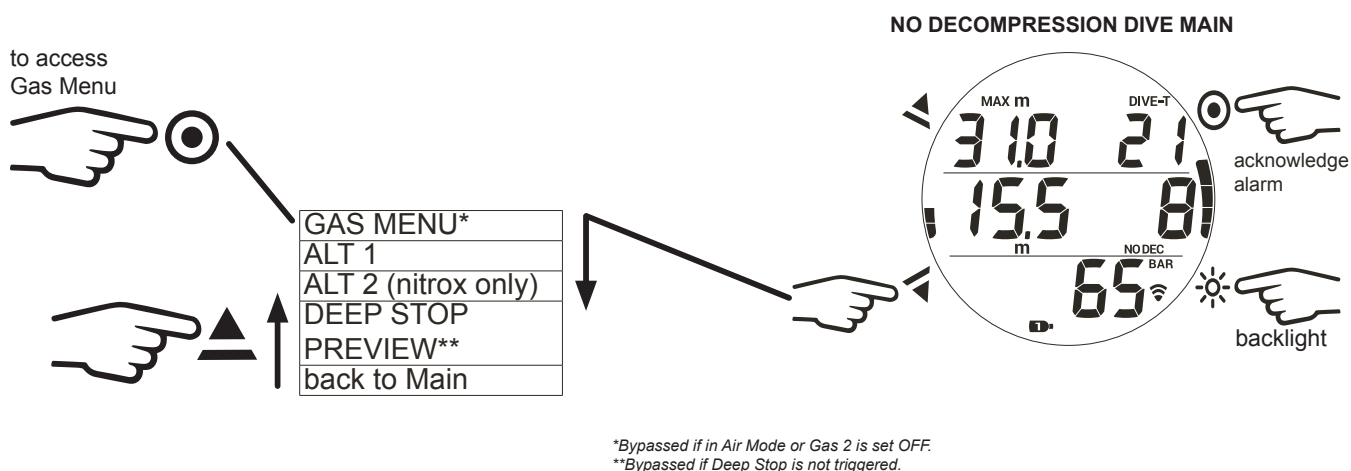
The Done Screen is a gateway to exit the Main Menu and return to the Dive Surface Main Screen.



DIVE OPERATION

INITIATING A DIVE

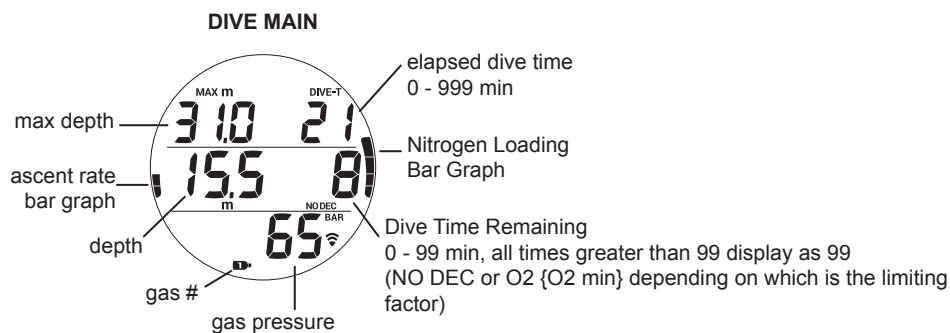
With the i470TC in Dive mode, a dive will commence upon descending to 1.5 m (5 ft) for at least 5 seconds. Below is a diagram to help you navigate Dive mode functions.



NO DECOMPRESSION DIVE MAIN

From the Main screen you can see all critical dive parameters. During a dive an audible alarm may sound and the priority of information displayed may change. This is to indicate a safety recommendation, warning, or alarm. The following information in this chapter demonstrates and describes an uneventful dive, in terms of safety. Alarms are described in the Complications section of this chapter.

⚠ WARNING: Before diving with the i470TC take time to familiarize yourself with both normal and alarm conditions of operation.



GAS MENU

The Gas Menu allows you to manually switch gases during the dive. The Gas Menu Lead-in screen is bypassed if your i470TC is set to Air or Gas 2 is set OFF. See the following section "Gas Switches" for further details on this feature.

DIVE ALT 1

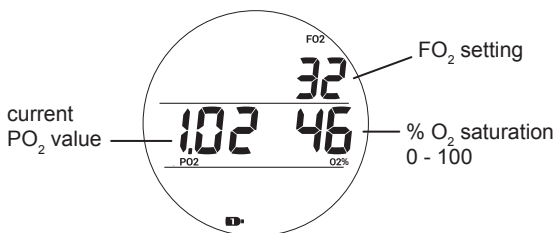
This screen simply tells you the GTR (Gas Time Remaining), current time of day, and ambient temperature.

■ NOTE: See p. 25 for further information on the GTR feature.



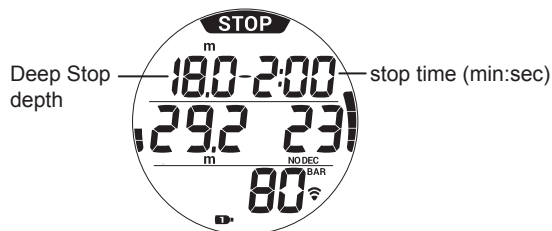
DIVE ALT 2

The ALT 2 screen displays information pertaining to nitrox; it is bypassed if the i470TC is set for air.



DEEP STOP PREVIEW

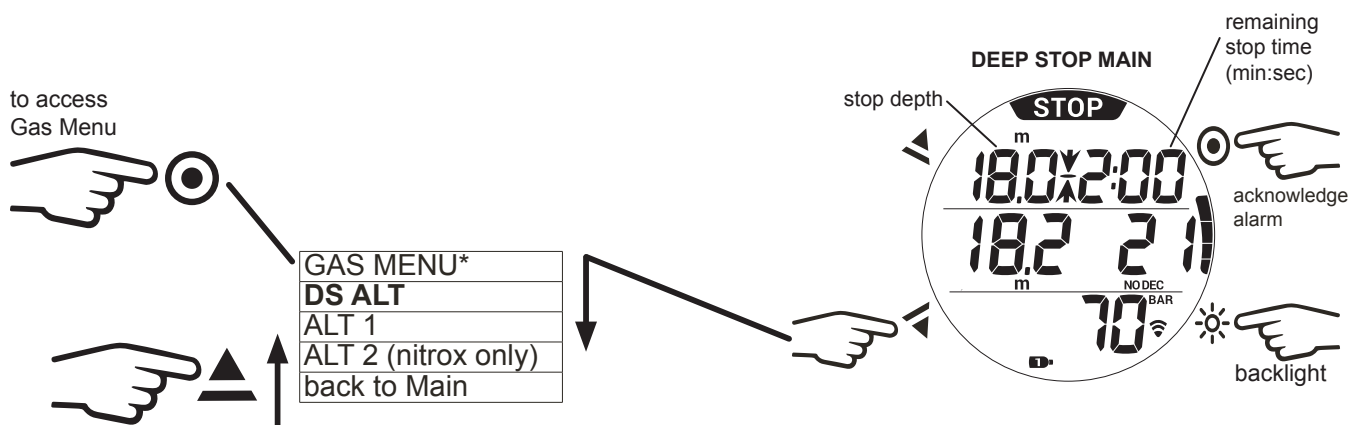
If Deep Stop was set to ON in the Utilities Menu, the Deep Stop preview screen is available after exceeding 24 m (80 ft) of depth. The Deep Stop is always at a depth half that of your maximum depth during the dive. This preview screen keeps track of that depth for you.



DEEP STOP MAIN

If triggered, the Deep Stop will activate upon ascending to within 3 m (10 ft) below the calculated Deep Stop depth. The stop time will be displayed and count down to 0:00 as long as you stay within 3 m (10 ft) above or below the stop. While Deep Stop Main is displayed, Max Depth and Dive-T (elapsed dive time) are moved to an alternate screen (DS ALT, see bold below). The Deep Stop feature is described in greater detail in the Dive Features chapter for further details.

NOTE: The i470TC does not penalize for a missed Deep Stop.

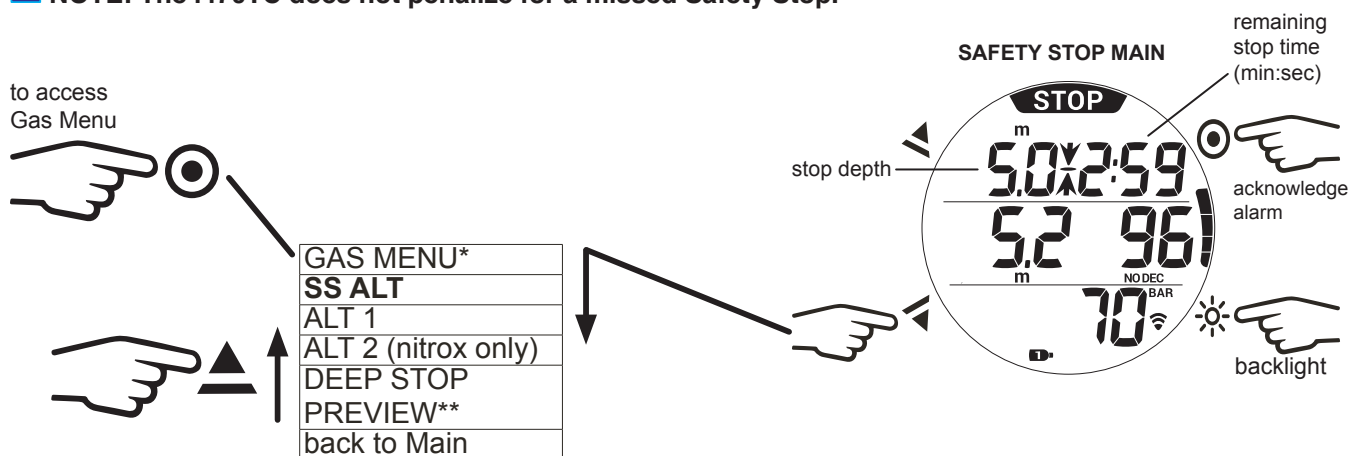


**Bypassed if in Air Mode or Gas 2 is set OFF.*

SAFETY STOP MAIN

If triggered, the Safety Stop will activate upon ascent to within 1.5 m (5 ft) deeper than the Safety Stop depth on a No Deco dive. The stop time will then countdown to 0:00. While the Safety Stop is triggered, Max Depth and Dive-T (elapsed dive time) are moved to an alternate screen (SS ALT, see bold below). The Safety Stop feature is described in greater detail in the Dive Features chapter for further details.

NOTE: The i470TC does not penalize for a missed Safety Stop.

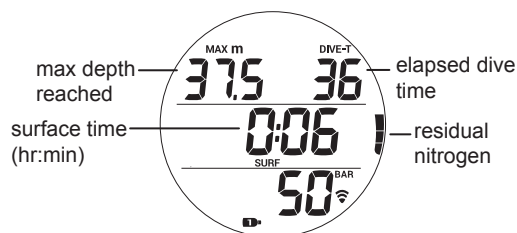


*Bypassed if in Air Mode or Gas 2 is set OFF.

SURFACING

Upon ascending to 0.9 m (3 ft) the i470TC transitions to Dive Surface mode.

NOTE: The i470TC requires a 10 minute surface interval to record a subsequent dive as a separate dive in the Log. Otherwise, the dives will be combined and recorded as a single dive in the i470TC memory.



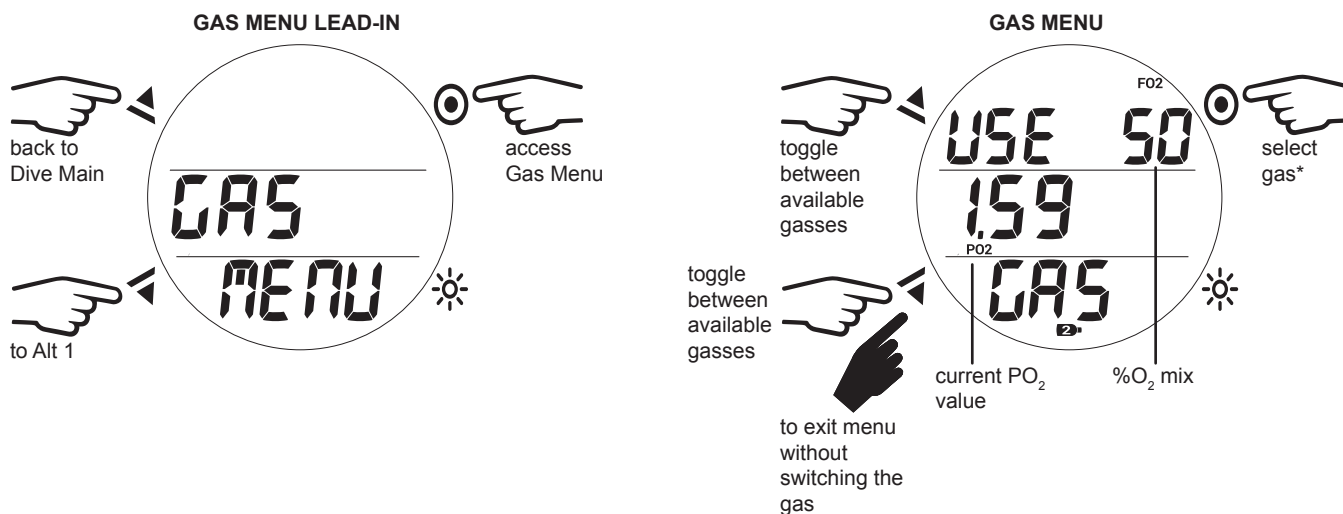
GAS SWITCHES

⚠ WARNINGS:

- Historically, many accidents and near misses have occurred by switching to the wrong gas at the wrong depth. **DO NOT** attempt gas switch decompression dives without proper education and training to do so from an internationally recognized training agency.
- Diving deeper than 39 m (130 ft), will greatly increase your risk of decompression sickness.
- Decompression diving is inherently hazardous and greatly increases your risk of decompression sickness, even when performed according to the dive computer's calculations.
- Using an i470TC is no guarantee of avoiding decompression sickness.
- The i470TC enters Violation Mode when a situation exceeds its capacity to predict an ascent procedure. These dives represent gross excursions into decompression that are beyond the boundaries and spirit of the i470TC's design. If you are following these dive profiles, Aqua Lung advises that you should not use an i470TC.
- If you exceed certain limits, the i470TC will not be able to help you get safely back to the surface. These situations exceed tested limits and can result in loss of some functions for 24 hours after the dive in which a violation occurred.

OVERVIEW

- All dives begin with GAS 1.
- The active gas defaults to GAS 1 after 10 minutes on the surface.
- Gas switches can only be made when gas 2 is set on.
- Gases cannot be switched while on the surface.
- The Gas Switch Menu cannot be accessed during the sounding of alarms.
- If an alarm strikes while in the Gas Switch Menu, the switch operation is terminated (reverting to the Dive Main screen).

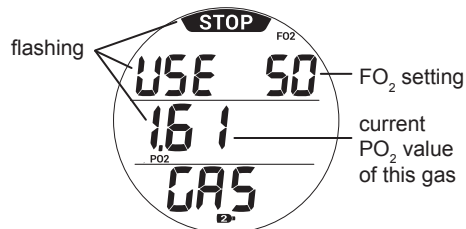


**If no button is pressed the i470TC will revert to the Dive Main screen after 10 seconds.*

NOTE: The active gas will not display in the Gas Menu.

If the current PO_2 value is greater than 1.6, then a warning not to switch will display. The i470TC will maintain the current gas without switching. The diver may override the i470TC and force the gas switch by pressing the  (Select) during the "STOP USE" message.

⚠ WARNING: Switching to gases with a PO_2 above 1.6 has a high risk of oxygen poisoning, convulsions, and drowning. Doing so should always be avoided. It is intended as a last resort option because of the likelihood of injury or drowning. Always dive within your training, experience, and skill level.



The i470TC may take a few seconds to connect to the chosen transmitter. During this time the message SEArCH tMt will be displayed.



COMPLICATIONS

The preceding information has described standard dive operations. Your new i470TC is also designed to help you to the surface in less than ideal situations. The following is a description of these situations. Take some time to familiarize yourself with these operations before diving your i470TC.

DECOMPRESSION

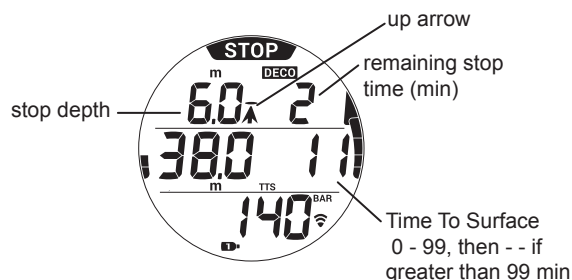
Decompression (deco) mode activates when theoretical No Decompression time and depth limits are exceeded. Upon entry into decompression, the audible alarm will sound and the alarm LED will flash. The full Nitrogen Loading Bar Graph and Up Arrow icon will flash until the audible is silenced.

- Once within 3 m (10 ft) below the required Stop Depth (stop zone), the Full Stop icon (both Arrows with Stop Bar) will be displayed solid.

To fulfill your decompression obligation, you should make a safe controlled ascent to a depth slightly deeper than, or equal to, the required stop depth indicated and decompress for the stop time indicated. The amount of decompression credit time that you receive is dependent on Depth, with slightly less credit given the deeper you are below the Stop Depth indicated. You should stay slightly deeper than the required Stop Depth indicated until the next shallower Stop Depth appears. Then you can slowly ascend to that indicated Stop Depth but not shallower.

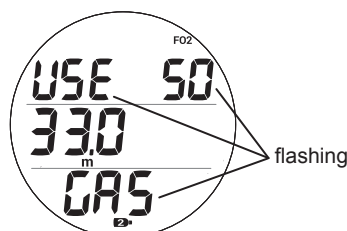
DECOMPRESSION ENTRY

Upon entry into decompression (deco) the audible alarm will sound and the alarm LED will flash until the audible is silenced. The up arrow and full Nitrogen Loading Bar Graph icons will flash. Additionally, the stop depth, stop time, and the TTS (Time To Surface) values will be displayed. TTS includes stop times at all required Decompression Stops plus vertical ascent time based on the max ascent rate allowed.



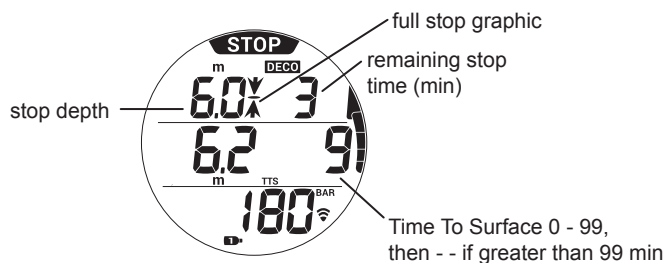
GAS SWITCH WARNING

If gas 2 (3) is set on and the current gas is not the best gas when approaching the decompression stop zone, the i470TC will warn you to switch gases. You must confirm the gas switch by pressing the  (Select) button. If the gas switch is not confirmed within 30 seconds, no switch will be made. Though you may still manually switch gases at any time throughout the dive by using the Gas Switch menu.



DECOMPRESSION STOP MAIN

Decompression (deco) Stop Main will display upon ascending to within 3 m (10 ft) below the Decompression Stop depth. The full stop graphic (opposed arrows with stop bar) will be displayed solid. While Decompression Stop Main is displayed, you may access up to 3 ALT displays by pressing the ADV button to cycle through them. They are similar to the No Decompression Main, Dive ALT 1, and Dive ALT 2 displays, respectively.

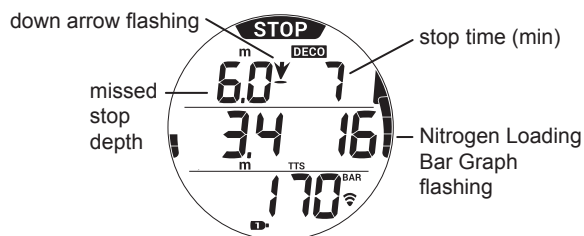


CONDITIONAL VIOLATION (CV)

Upon ascent above the required Decompression (deco) Stop depth, operation will enter Conditional Violation during which time no off gassing credit will be given.

The Audible alarm will sound and the alarm LED will flash. The full Nitrogen Loading Bar Graph and down arrow will flash until the audible alarm is silenced, then the Nitrogen Loading Bar Graph will be solid.

- The down arrow continues to flash until descending below the required Stop Depth (within stop zone), then the full stop graphic (opposed arrows with stop bar) will be on solid.
- If you descend deeper than the required Decompression Stop before 5 minutes elapse, Decompression operation will continue with no off gassing credit given for time above the Stop. Instead, for each minute above the Stop 1½ minutes of penalty time will be added to the required Stop Time.
- The added penalty (decompression) time will have to be worked off before obtaining off gassing credit.
- Once the penalty time is worked off, and off gassing credit begins, required Decompression Stop Depths and Time will decrease toward zero. The Nitrogen Loading Bar Graph will recede into the No Decompression zone, and operation will revert to No Decompression mode.

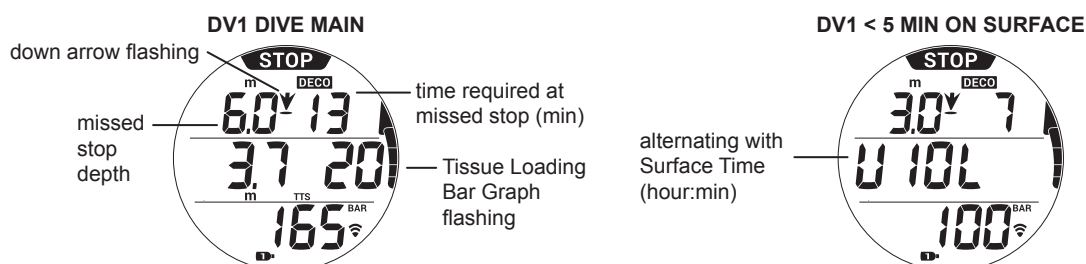


DELAYED VIOLATION 1 (DV 1)

If you remain shallower than a Decompression Stop Depth for more than 5 minutes, operation will enter DV1* which is a continuation of CV with penalty time still being added. Again, the audible alarm will sound and the full Nitrogen Loading Bar Graph will flash until it is silenced. ALT screens are accessed and appear similar to Decompression ALT screens.

**The difference is that 5 minutes after surfacing from the dive, operation will now enter Violation Gauge Mode.*

- The down arrow continues to flash until descending below the required Stop Depth, then the full stop graphic will be on solid.
- If the DV1 status is ignored, the i470TC will enter DV1 Surface mode for 5 minutes upon surfacing from the dive. The down arrow and Decompression Stop depth/time will be displayed. Surface Time will alternate with the message VIOL (violation) during this time too. After 5 minutes on the surface in DV1 mode, the unit will enter VGM (Violation Gauge Mode).

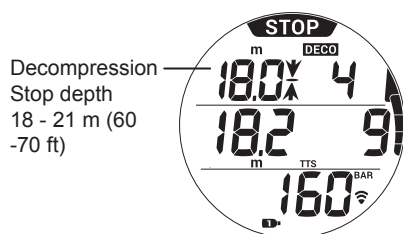


DELAYED VIOLATION 2 (DV 2)

If the calculated Decompression obligation requires a Stop Depth between 18 m (60 ft) and 21 m (70 ft), operation will enter DV2.

The audible alarm will sound and the alarm LED will flash. The full Nitrogen Loading Bar Graph will flash until the audible is silenced.

- The up arrow flashes if 3 m (10 ft) deeper than the required Stop Depth.
- Once within 3 m (10 ft) of and below the required Stop Depth, the full stop graphic (opposing arrows with stop bar) will be displayed solid.

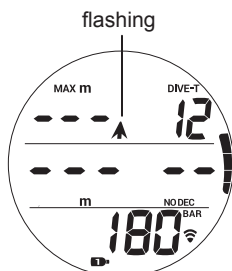


DELAYED VIOLATION 3 (DV 3)

If you descend deeper than the maximum functional depth*, the audible alarm will sound, the alarm LED will flash, and the up arrow will flash. Additionally, Current Depth will only indicate dashes signifying that you are too deep.

*The maximum functional depth (330 ft / 100 m) is the depth at which the i470TC can properly perform calculations or provide accurate display information.

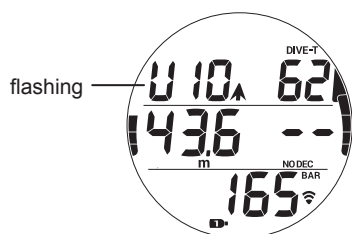
Upon ascending above the maximum functional depth, current depth will be restored. However, the log for that dive will display dashes for max depth.



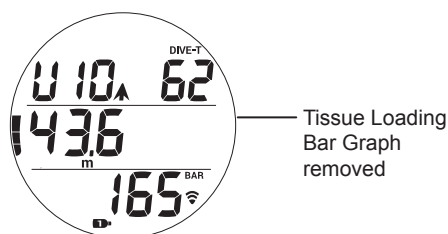
VIOLATION GAUGE MODE (VGM) DURING A DIVE

During Dive mode dives, operation will enter VGM when Decompression requires a Stop Depth greater than 21 m (70 ft). It will also enter VGM if Deco is activated during a dive in Free mode, described later. Operation would then continue in VGM during the remainder of that dive and for 24 hours after surfacing. VGM turns the i470TC into a digital instrument without any decompression or oxygen related calculations or displays. Upon activation of VGM, the audible alarm will sound and the alarm LED will flash. The message VIO (violation) with the up arrow will flash. After the audible alarm becomes silent (10 seconds), the NO DECO (No Decompression) and Nitrogen Loading Bar Graph will not display for the rest of the dive.

VGM DURING AUDIBLE



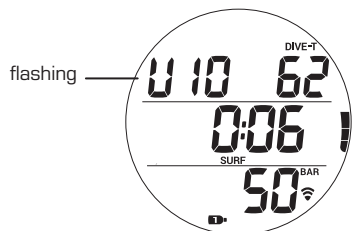
VGM AFTER AUDIBLE



VIOLATION GAUGE MODE (VGM) ON THE SURFACE

The message VIO (violation) is displayed until 24 hours elapse with no dives. During that 24 hours, VGM lockout does not allow access to the Set Gas, Plan, Desat, and Free mode features/screens. All Watch functions will be allowed.

- The Fly countdown timer provides the time remaining before normal operation can resume with full features and functions.
- In the event that a dive is made during the 24 hour lockout period, a full 24 hour surface interval must then be served before all functions are restored.

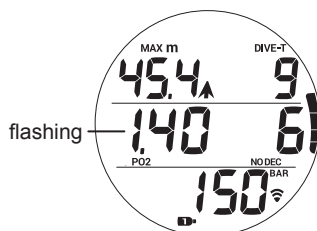
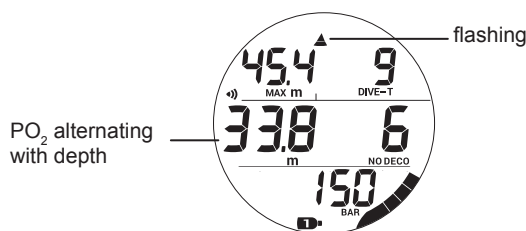


HIGH PO₂

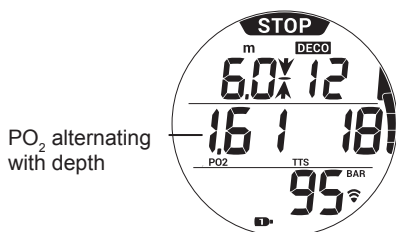
Alarm >> at ²Set Point value, except in Deco then at greater than 1.60.

Alarm

If PO₂ continues to increase and reaches the alarm set point, the audible alarm sounds again. The PO₂ value will flash in place of depth during the audible alarm. After the audible alarm is silenced, the PO₂ will alternate with depth. Additionally, the up arrow will flash continually until PO₂ decreases below the alarm set point.

DURING AUDIBLE ALARM**AFTER AUDIBLE ALARM****PO₂ During Decompression**

The PO₂ alarm setting does not apply when in Decompression. If PO₂ exceeds 1.60 while at a Decompression Stop, the PO₂ value with icon will alternate with current depth until the PO₂ value decreases below 1.60.

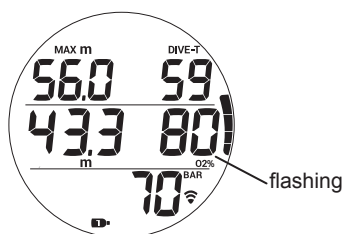
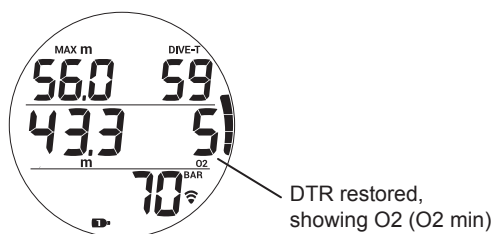
**HIGH O₂ SAT (OXYGEN SATURATION)**

Warning >> at 80 to 99% (240 OTU)

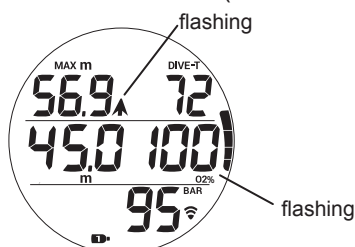
Alarm >> at 100% (300 OTU)

Warning

When O₂ reaches the Warning Level, the audible alarm sounds and the O₂ % (O₂ saturation) value will flash in place of the DTR (Dive Time Remaining). The DTR will be restored when the audible alarm is silenced.

DURING AUDIBLE ALARM**AFTER AUDIBLE ALARM****Alarm**

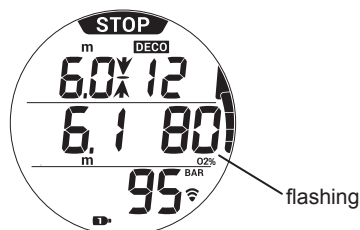
If O₂ % (O₂ saturation) reaches the Alarm level, the audible alarm sounds. At the same time, the up arrow and the O₂ % (O₂ saturation) value will flash in place of DTR until surfacing.



Warning During Decompression

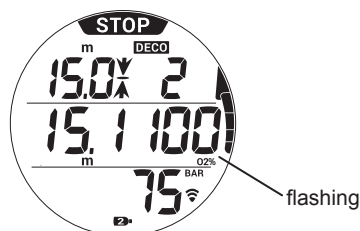
When O2 % (O2 saturation) reaches the Warning Level, the audible alarm sounds and the O2 % (O2 saturation) value will flash in place of Time To Surface. The Time To Surface will be restored when the audible alarm is silenced.

DURING AUDIBLE ALARM



Alarm During Decompression

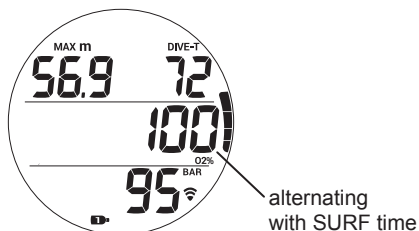
When O2 % (O2 saturation) reaches the Alarm Level, the audible alarm sounds and the O2 % (O2 saturation) value will flash in place of Time To Surface until surfacing.



Alarm On Surface

- If O2 % is 100% upon surfacing while in No Decompression, O2 % (O2 saturation) 100% will alternate with Surface Time until the O2 % (O2 saturation) value decreases below 100%.
- If you surface due to 100% O2 without having completed the Decompression obligation, the full N2 bar graph and O2 % (O2 saturation) value (100) will flash with O2 % icons for the first 10 minutes, then operation will enter Violation Gauge Mode.

SURFACE, 100% O2 SAT

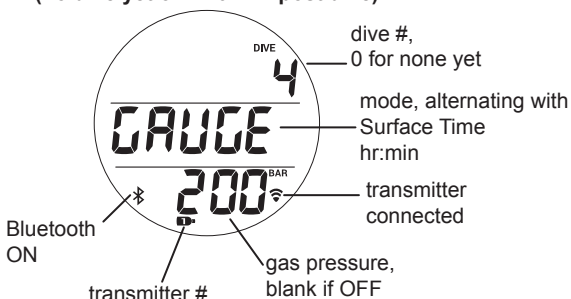


GAUGE MODE

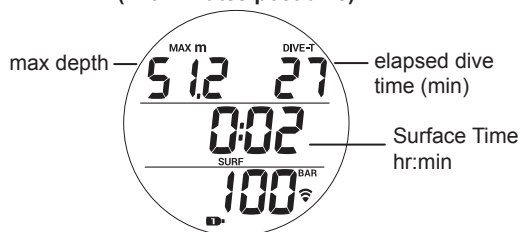
ON THE SURFACE BEFORE A DIVE

There are two Gauge Surface Main screens. The first screen displays when there have been no dives yet or the surface interval after a dive has exceeded 10 min. The second screen displays only during the first ten minutes after a dive.

GAUGE SURF MAIN
(no dive yet or > 10 min post dive)



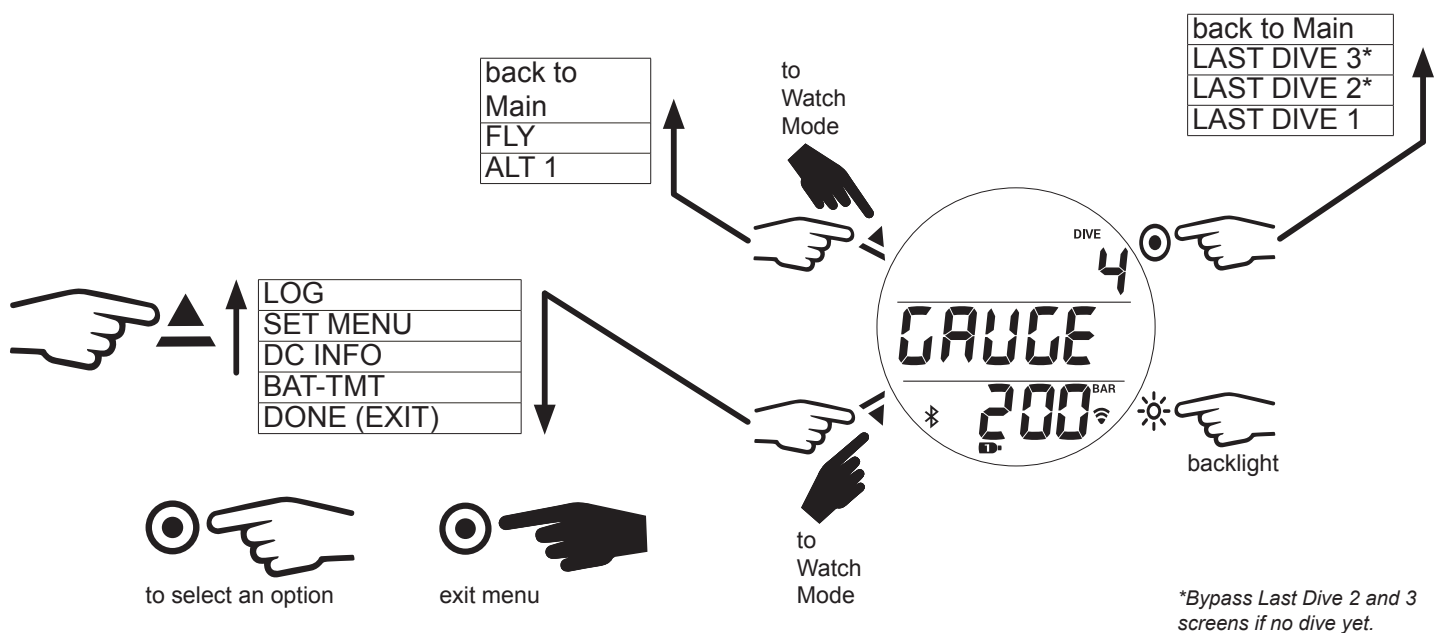
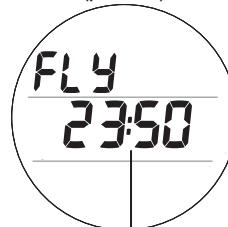
GAUGE SURF MAIN
(<10 minutes post dive)



GAUGE STANDBY MODE
(no previous dive)



GAUGE STANDBY MODE
(post dive)

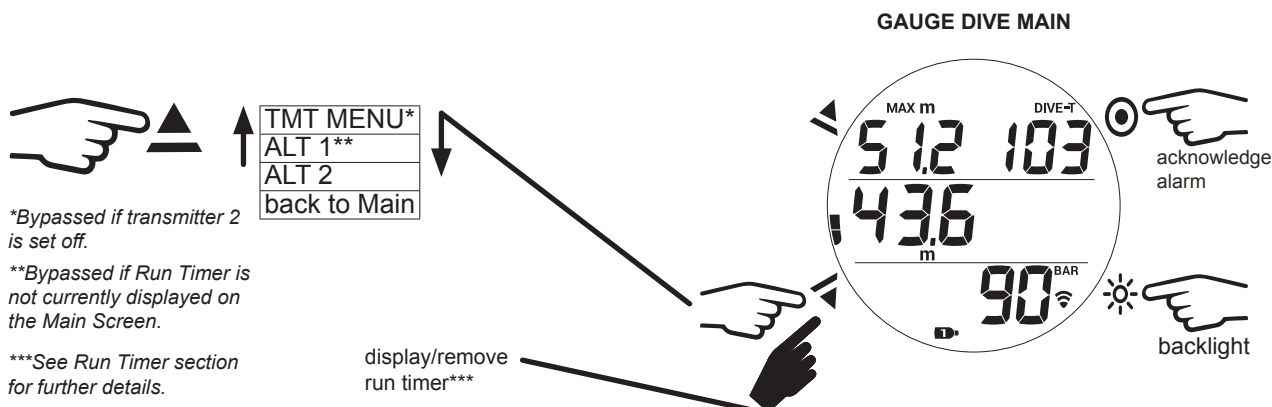


*Bypass Last Dive 2 and 3 screens if no dive yet.

NOTE: Gauge Surface ALT screens and Menu options are similar to those described previously for Dive Mode. See the Dive Surface Mode chapter for further details. Features unique to Gauge Mode are described in the following sections.

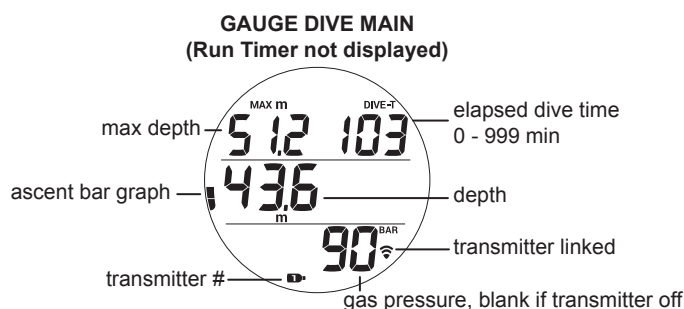
INITIATING A DIVE

With the i470TC in Gauge Mode, a dive will commence upon descending to 1.5 m (5 ft) for longer than 5 seconds. Below is a diagram to help you navigate Gauge Dive Mode functions. The dive will end and revert to Surface Mode upon ascent to 0.9 m (3 ft) of depth for at least 1 second.



GAUGE DIVE MAIN

The Gauge Dive Main provides basic information including depth, dive time, max depth, and ascent rate during the dive.



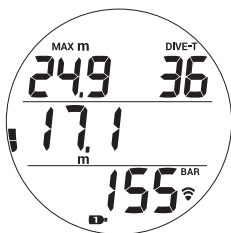
TMT (TRANSMITTER) MENU

The TMT Menu allows you to see the gas pressure from another transmitter (gas source) during the dive.

NOTE: The TMT Menu operates as a simpler version of the Gas Menu used in Dive Mode (described on p. 48, 51; 52).

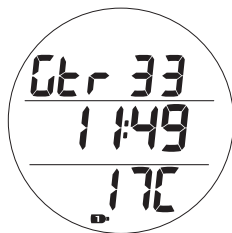
GAUGE DIVE ALT 1

This screen only displays when the Run Timer is displayed on the Dive Main screen. Otherwise, it is bypassed. It is equal to the Gauge Dive Main screen.



GAUGE DIVE ALT 2

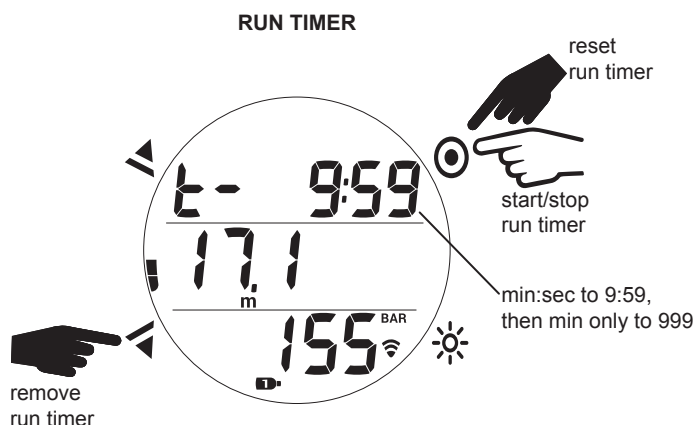
This screen simply tells you the current time of day and ambient temperature.



RUN TIMER

The Gauge Mode allows for a Run Timer to be added or removed from the Gauge Dive Main screen by pressing and holding the ▼ (Down) button.

NOTE: Once the Run Timer is added and started, it can be removed and continue to run in the background until it is again added. Though it can only be started and stopped while it is being displayed.

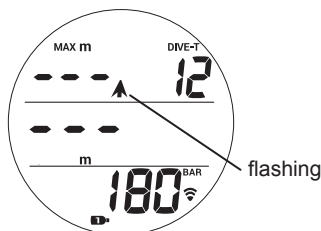


DELAYED VIOLATION 3 (DV3)

If you descend deeper than the maximum functional depth*, the audible alarm will sound and the alarm LED will flash. At the same time, the up arrow will flash and depth will only indicate dashes signifying that you are too deep. The max depth will also be represented by dashes.

**The maximum functional depth (100 m / 330 ft) is the depth at which the i470TC can properly perform calculations or provide accurate display information.*

Upon ascending above the maximum functional depth, current depth will be restored, however, max depth will continue to be displayed as dashes for the remainder of that dive. The Log for that dive will also display dashes for max depth.



FREE MODE

FREE DIVE MODE DETAILS

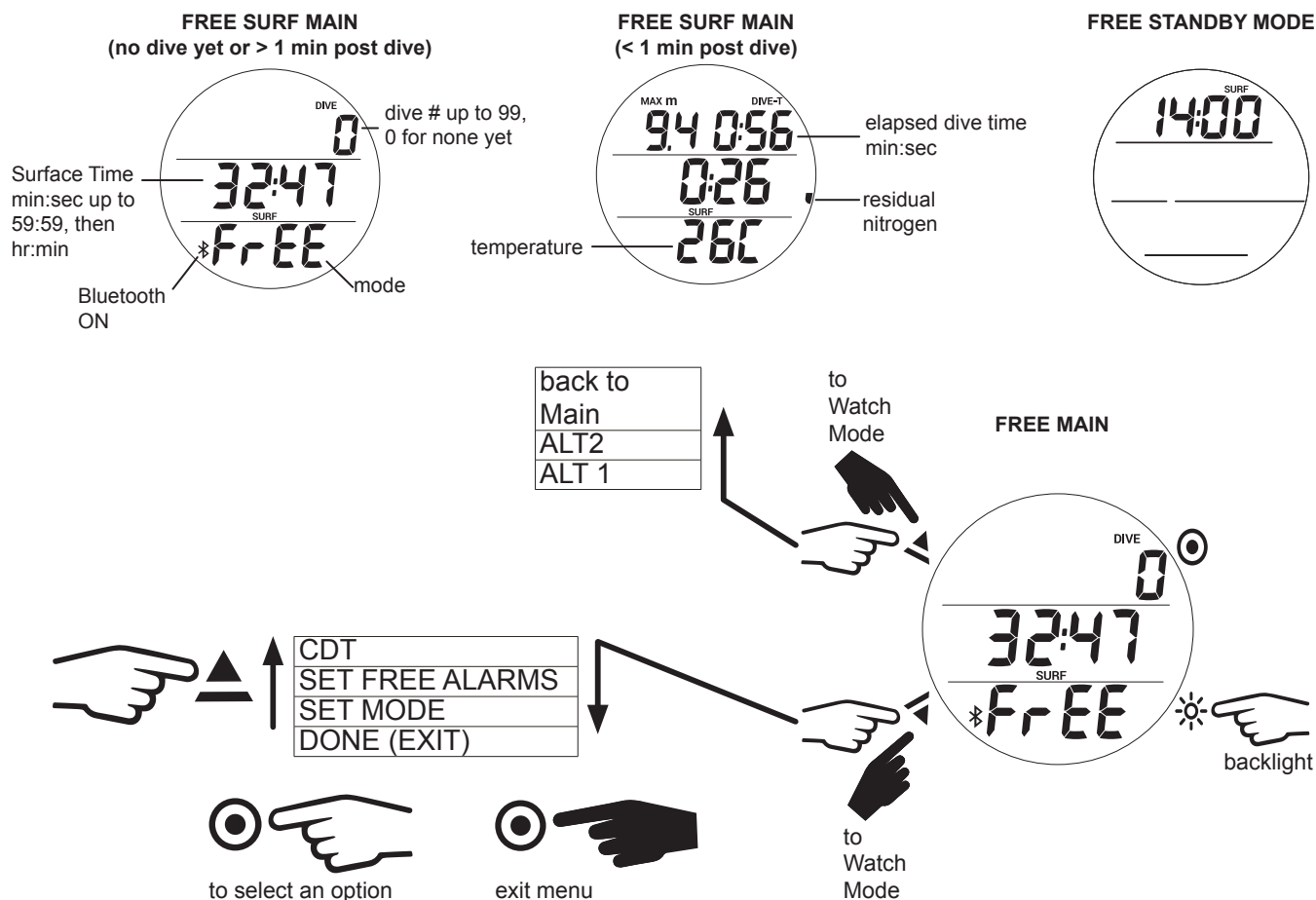
- Although breathing apparatus is not utilized for free dive activities, nitrogen tissue loading remains a factor. Nitrogen loading is calculated based upon a fixed FO_2 of Air.
- Since a user has the option of alternating between SCUBA and free dive activities within a 24 hour period, nitrogen calculations and the displayed value of No Decompression Dive Time Remaining are carried over from one operating mode to the other, which permits the user to maintain awareness of nitrogen absorption and off-gassing status.
- The mathematical models currently used in the i470TC are based on no decompression/decompression multi-level repetitive dive schedules.
- These algorithms do not take into account the physiological changes associated with the high pressures that competitive type free diving can expose a diver to.

WARNINGS:

- **Ensure that you know which operating mode is selected (Dive, Gauge, or Free) prior to commencing any dive.**
- **Conducting Free dives within a 24 hour period after conducting SCUBA dives, combined with the effects of multiple rapid free dive ascents, increases your risk of decompression sickness. Such activities may result in accelerated entry into decompression which could cause serious injury or death.**
- **Combining competitive type free dive activities that involve multiple descents/ascents with activities utilizing SCUBA during the same 24 hour period is not recommended. Presently, there is no data relating to such activities.**
- **It is highly recommended that anyone planning to become involved in competitive type free dive activities obtain proper instruction and training from a recognized free diving trainer. It is imperative that the physiological affects be understood and the diver is physically prepared.**

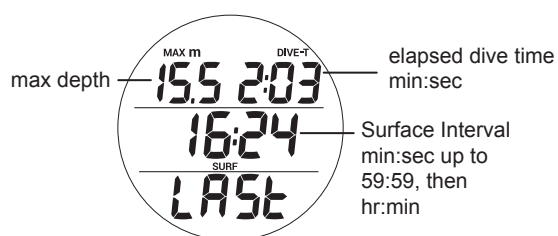
ON THE SURFACE BEFORE A DIVE

There are two Free Surface Main screens. The first screen displays when no dives have been made or greater than one minute after surfacing. The second screen displays only during the first minute after a dive.



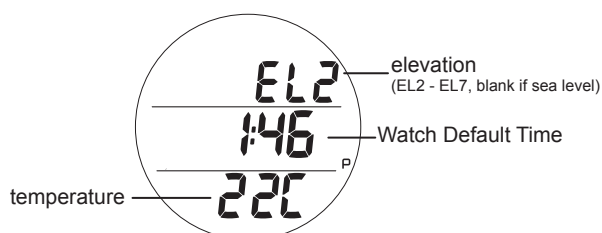
ALT 1

This screen displays data from the previous dive.



ALT 2

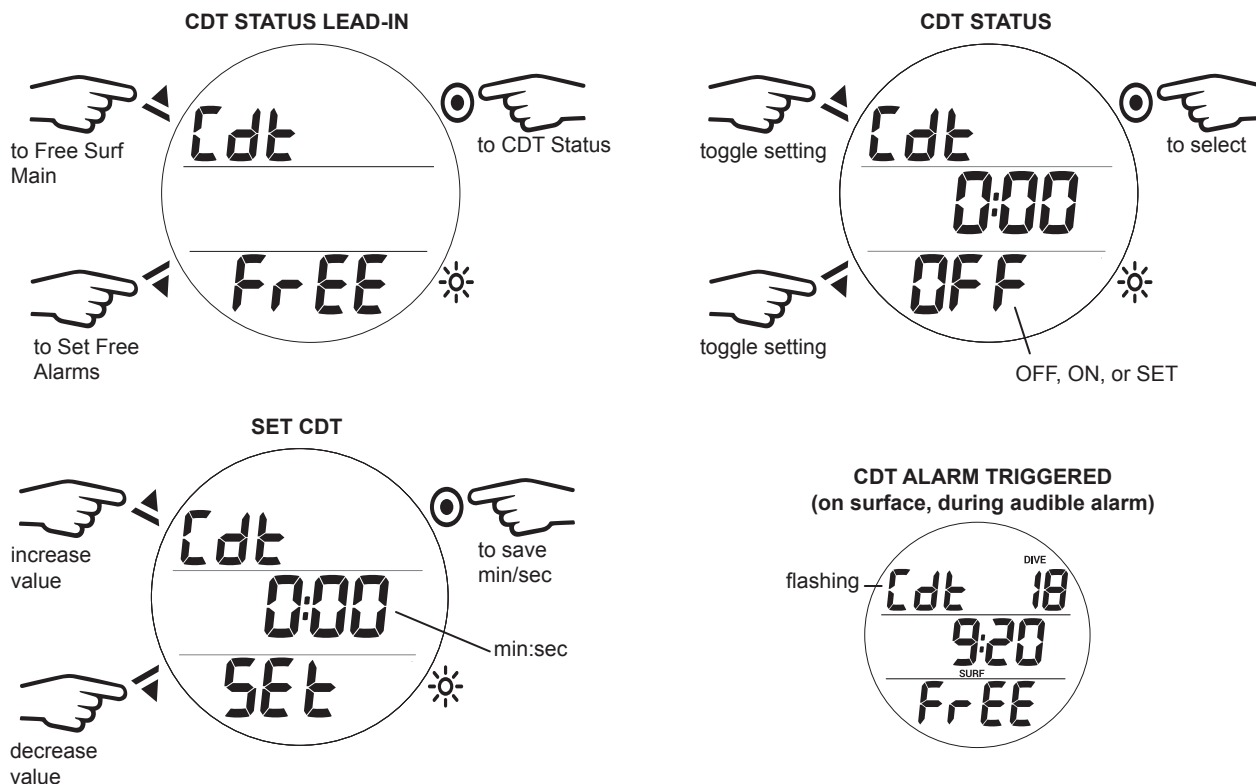
This screen displays current time of day, temperature, and elevation.



COUNTDOWN TIMER (CDT)

The i470TC allows you to set a CDT time from 0:01 - 59:59 (min:sec). On the surface the CDT must be started and stopped in the CDT Status screen by selecting ON or OFF. The CDT will run in the background, while on the surface and during dives, until it counts down to 0:00, or it is turned OFF. When a set CDT time reaches 0:00, the audible will sound. During which time the graphic CDT will be displayed flashing on the Surface or Dive Main until the audible is silent.

NOTE: Setting the CDT does not start the countdown. You must select ON in the CDT Status screen to start the CDT.



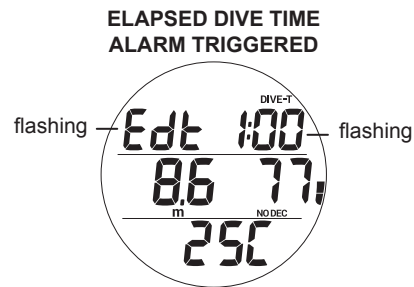
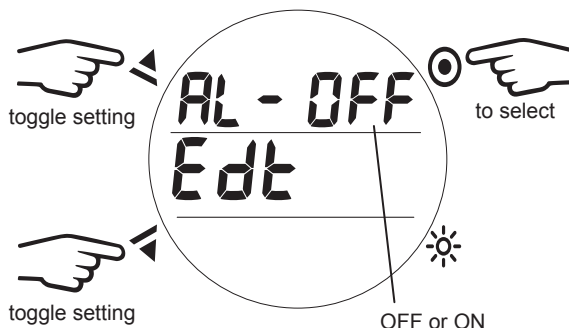
SET FREE ALARMS

Within this submenu you can customize the following Free Mode alarm settings.



1. Elapsed Dive Time Alarm

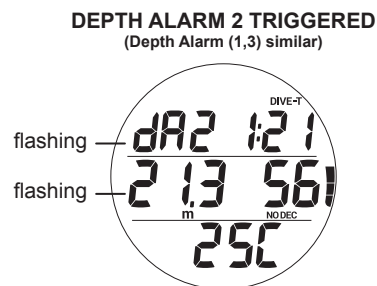
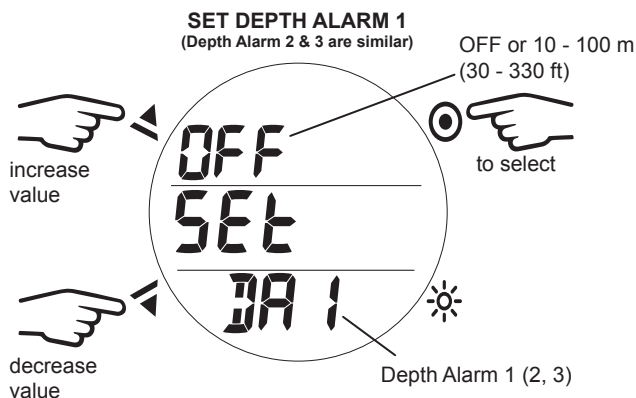
The EDT (Elapsed Dive Time) Alarm sounds the audible alarm every 30 seconds while underwater in Free Dive mode.



2. Depth Alarms 1-3

There are 3 Free Depth Alarms that can be set at progressively deeper depths, in intervals of 1 m (10 ft).

NOTE: Each successive Depth Alarm can only be set deeper than the Depth Alarm that precedes it. For example: If Depth Alarm 1 is set for 10 m then Depth Alarm 2 settings start at 11 m.

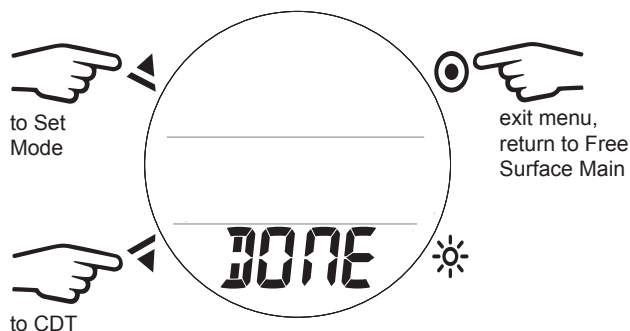


SET MODE (OPERATION MODE)

This feature functions the same as in Dive Mode, see pg. 42.

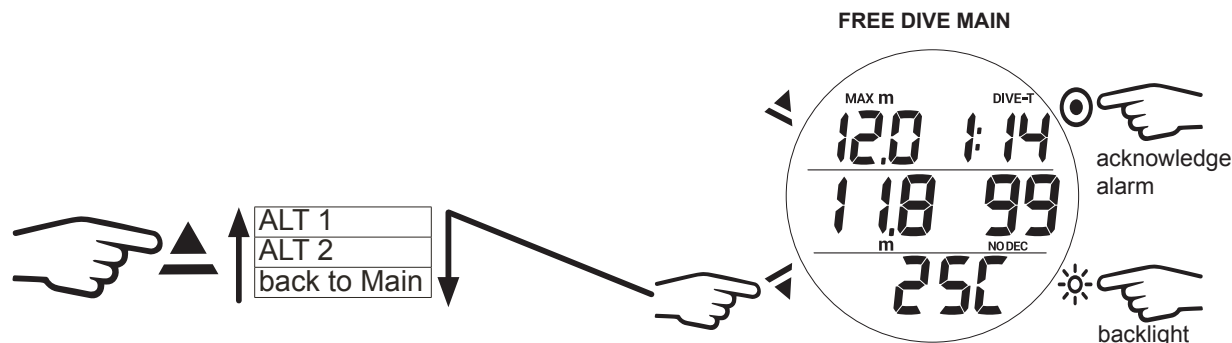
DONE SCREEN (FREE SURFACE MAIN MENU)

The Done Screen is a gateway to exit the Free Surface Main Menu and return to the Free Surface Main Screen.



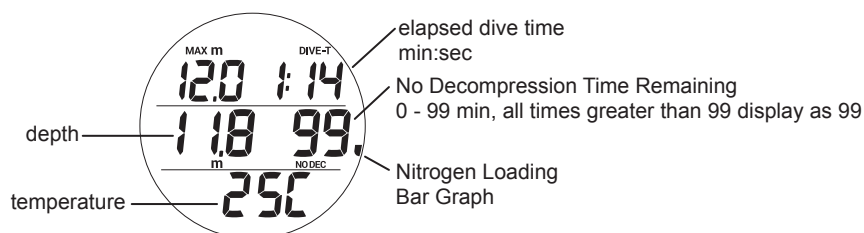
INITIATING A DIVE

With the i470TC in Free Mode, a dive will commence upon descending to 1.5 m (5 ft) for longer than 5 seconds. Below is a diagram to help you navigate Free Dive Mode functions. The dive will end and revert to Surface Mode upon ascent to 0.9 (3 ft) of depth for at least 1 second.



FREE DIVE MAIN

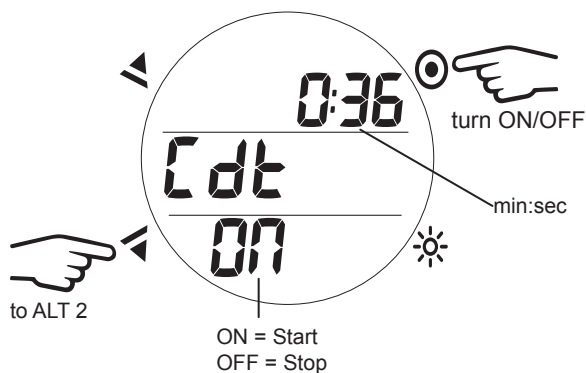
The Free Dive Main provides basic information including depth, no decompression time, dive time, temperature and nitrogen loading during the dive.



FREE DIVE ALT 1

This screen Displays the Countdown Timer status. The Countdown Timer can be started and stopped in this screen by selecting ON or OFF. After the time runs down to 0:00, the countdown timer will reset to the original preset time.

NOTE: The Countdown Timer must be preset on the surface while in the Free Surface Mode.



FREE DIVE ALT 2

This screen simply tells you the max depth and current time of day.



HIGH NITROGEN ALARMS

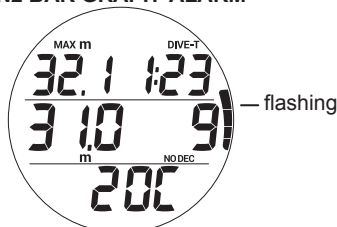
When nitrogen increases to the caution level (4 N2 Bar Graph segments), the audible alarm will sound 3 sets of 3 beeps. During this time the N2 Bar Graph segments will flash on the Free Dive Main screen.

If nitrogen continues to increase to the Decompression level (all 5 N2 Bar Graph segments), the audible alarm will sound again. At this time the N2 Bar Graph segments will flash, and NO DECO (no decompression) time will be displayed as 0 min.

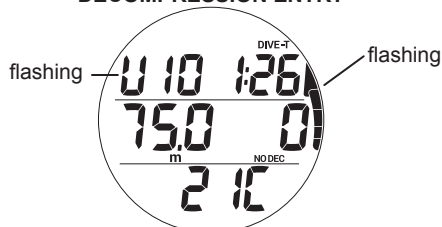
When the audible alarm is silenced, the N2 Bar Graph and NO DECO (no decompression), values are removed. Then the message VIO (violation) and the Up Arrow flashes until on the surface.

After surfacing, the graphic VIO (violation) flashes. Then after 1 minute on the surface, the dive computer operation locks into Violation Gauge Mode for 24 hours. Access to Watch Mode will be as usual.

N2 BAR GRAPH ALARM



DECOMPRESSION ENTRY



VIOLATION AFTER
1 MIN ON THE SURFACE



REFERENCE

UPLOADING/DOWNLOADING DATA

As previously described (p. 41), the i470TC can be paired using the Bluetooth® feature. This requires a mobile device with Bluetooth® running Diverlog+ software.

The Settings Upload portion of the program can be used to set/change the Gases, Set AL group (Alarms), Set UTIL group (Utilities), and Set TIME group (Time/Date) using the same Interface System. The Mode settings must be entered using the i470TC button controls.

Information available for retrieval* (download) from the i470TC includes items such as dive number, surface interval time, depth, dive time, start dates/time, lowest temperature, sampling rate, set points, N2 Bar Graph, and ASC Bar Graph.

**FREE Dive information is only available using the DiverLog + application.*

Refer to the Diverlog+ software application for further instruction on linking your i470TC to your mobile device.

CARE AND CLEANING

Protect your i470TC from shock, excessive temperatures, exposure to chemicals, and tampering. Protect the lens against scratches with an Instrument Lens Protector. Small scratches will naturally disappear underwater.

- Soak and rinse the i470TC in fresh water at the end of each day of diving, and check to ensure that the areas around the Low Pressure (Depth) Sensor, wet contacts, and buttons are free of debris or obstructions.
- To dissolve salt crystals, use lukewarm water or a slightly acidic bath (50% white vinegar/50% fresh water). After removal from the bath, place the i470TC under gently running fresh water. Towel dry before storing.
- Keep your i470TC cool, dry, and protected during transport.



SERVICE

⚠ WARNING: At a minimum, annually check the altitude reading on the ALT 2 screen (p. 15) and Pre-Dive Planner (p. 32, 76) for accuracy. If your i470TC is ever out of calibration (incorrect elevation reading, incorrect No Deco Dive Times in the planner, or showing a depth reading at the surface) or displays an error code message (EEP, ALT, CAL, ERR, CSM, A-D), it must be serviced at the factory before use.

If required to return your i470TC to the USA factory:

- Obtain an RA (Return Authorization) number by contacting <http://www.aqualung.com/us/support/contact-us> or (760) 597-5000
- Record all dive data in the Log and/or download the data stored in memory. All data will be erased during factory service.
- Package it using a protective cushioning material.
- Include a legible note stating the specific reason for return, your name, address, daytime phone number, serial number(s), and a copy of your original sales receipt and Warranty Registration.
- Send freight prepaid and insured using a traceable method.
- Non-warranty service must be prepaid. COD is not accepted.
- Additional information is available on the Aqua Lung web site AquaLung.com or on the local Aqua Lung web site that serves your global region.

⚠ CAUTION: The procedures that follow must be closely adhered to. Damage due to improper battery replacement is not covered by the i470TC's warranty.

BATTERY REPLACEMENT

- NOTE:** The procedures that follow must be closely adhered to avoid entrance of water into the unit. Damage due to improper battery replacement (or subsequent leakage of moisture into the unit) is not covered by the i470TC's warranty.
- NOTE:** The i470TC can be sent to Aqua Lung, Regional Distributor, or Authorized Dealer Service Facility for proper battery change service which includes pressure (depth) and leak testing to the max operating depth. Standard charges for service will apply.

The battery compartment should be opened only in a dry and clean environment with extreme care taken to prevent the entrance of moisture or dust.

As an additional precautionary measure to prevent formation of moisture in the battery compartment, it is recommended that the battery be changed in an environment equivalent to the local outdoor temperature and humidity (e.g., do not change the battery in an air conditioned environment then take it outside during a hot sunny day).

Inspect the buttons, lens, and housing to ensure they are not cracked or damaged. If there is any sign of moisture in the i470TC, **DO NOT** attempt to use it for diving until it receives proper service by the Aqua Lung factory or an authorized regional distributor.

Data Retention

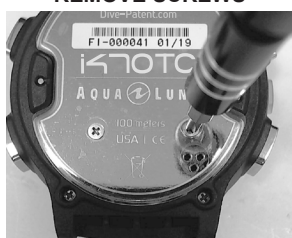
When the battery is removed, settings and nitrogen/oxygen calculations for repetitive dives will be retained in volatile memory until a new battery is installed.

All parts needed for the battery change are provided in the i470TC Battery Kit available from your Aqua Lung Dealer.

Battery Removal

- It is not necessary to remove the wrist straps.
- Locate the battery compartment on the back of the unit.
- Using a screwdriver carefully remove the two retaining screws.
- Lift the cover and O-ring up and away from the housing.
- Turn the case to one side to drop the battery into your hand. If necessary, gently loosen it with the tip of your finger. **DO NOT** use tools to pry it out, or short the positive (+) top of the Battery to the negative (-) contact under it.
- Discard or recycle the battery according to local regulations governing disposal of lithium batteries.

REMOVE SCREWS



COVER REMOVAL



BATTERY REMOVAL



Inspection

- Closely check all of the sealing surfaces for any signs of damage that might impair proper sealing.
- Inspect the button, lens, and housing to ensure they are not cracked or damaged.

⚠ WARNING: If damage or corrosion is found, return your i470TC to an authorized Aqua Lung dealer, and DO NOT attempt to use it until it has received factory prescribed service.

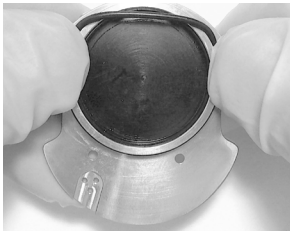
- Remove the cover O-ring. Discard, and **DO NOT** attempt to reuse it.

⚠ CAUTION: DO NOT use tools to remove the O-ring. To ensure proper sealing, O-ring replacement is required each time the battery is replaced.

REMOVE O-RINGBattery Installation

⚠ CAUTION: The O-ring must be a genuine Aqua Lung part that can be purchased from an authorized Aqua Lung dealer. Use of any other O-ring will void the warranty.

- Very lightly lubricate the new O-ring with silicone grease and place it in the O-ring groove of the cover.
- Place a new 3 volt type CR2430 lithium battery, negative side down into the battery cavity. Ensure that it is evenly positioned.
- Carefully place the battery cover (with O-ring) into position on the rim of the battery compartment, then press it evenly and completely down into place.
- Maintain the battery cover securely in place, and carefully install the retaining screws with a screwdriver.

REPLACE O-RING**INSTALL BATTERY****INSTALL COVER****REPLACE SCREWS**Testing

- Activate the unit and ensure that the LCD is clear and sharp in contrast. If any portions are missing or appear dim, or if a low battery condition is indicated, return the i470TC to an authorized Aqua Lung dealer for evaluation before use.
- Verify all set points prior to diving.

ALTITUDE SENSING AND ADJUSTMENT

Prior to the first dive of a series of repetitive dives, Altitude (i.e., ambient pressure) is measured upon activation of Dive Surface Mode and every 15 minutes until a dive is made or operation reverts to Watch Mode.

- While it is operating in Watch Mode after a dive, measurements are taken every 15 minutes during the 24 hour period after surfacing.
- Measurements are only taken when the unit is dry.
- Two readings are taken, the second reading 5 seconds after the first. The readings must be within 1 foot (30 cm) of each other to record that ambient pressure as the current altitude.
- No adjustments are made during any time that the wet contacts are bridged.

When diving in high altitude waters from 916 to 4,270 m (3,001 to 14,000 ft), the i470TC automatically adjusts to these conditions providing corrected depth, and reduced No Deco and O₂ Times at intervals of 305 m (1,000 ft).

At an elevation of 916 m (3,001 ft), Depth calibration automatically changes from feet of seawater to feet of fresh water. This is the first adjustment to the algorithm. When the Conservative Factor feature is set to ON, No Deco Times are calculated based upon the next higher 915 m (3,000 ft) Altitude. All adjustments for altitudes greater than 3,355 m (11,000 ft) are then made to allowable dive times for 4,270 m (14,000 ft). At Sea Level, calculations are based upon an altitude of 6,000 ft.

The i470TC will not function as a dive computer above 4,270 m (14,000 ft).

TECHNICAL DATA

NO DECOMPRESSION TIME LIMITS

Z+ ALGORITHM >> NDLS (HR:MIN) AT ALTITUDE (METRIC)

Altitude (meters)	0 to 915	916 to 1220	1221 to 1525	1526 to 1830	1831 to 2135	2136 to 2440	2441 to 2745	2746 to 3050	3051 to 3355	3356 to 3660	3661 to 3965	3966 to 4270
Depth (M)												
9	3:37	2:41	2:31	2:23	2:16	2:10	2:04	1:59	1:54	1:50	1:43	1:37
12	1:55	1:27	1:21	1:15	1:12	1:08	1:05	1:03	1:00	0:58	0:55	0:54
15	1:08	0:55	0:53	0:51	0:49	0:47	0:44	0:42	0:39	0:37	0:36	0:34
18	0:50	0:39	0:37	0:35	0:33	0:32	0:30	0:28	0:26	0:24	0:23	0:22
21	0:36	0:28	0:26	0:24	0:23	0:21	0:20	0:19	0:18	0:17	0:16	0:16
24	0:27	0:20	0:19	0:18	0:17	0:16	0:15	0:14	0:13	0:12	0:11	0:11
27	0:20	0:16	0:15	0:13	0:12	0:11	0:11	0:10	0:09	0:09	0:09	0:08
30	0:16	0:12	0:11	0:10	0:09	0:09	0:09	0:08	0:08	0:07	0:07	0:07
33	0:13	0:09	0:09	0:08	0:08	0:07	0:07	0:07	0:07	0:06	0:06	0:06
36	0:10	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05
39	0:09	0:07	0:06	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04
42	0:08	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04
45	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:04
48	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
51	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03
54	0:05	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03
57	0:05	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03

Z+ ALGORITHM >> NDLS (HR:MIN) AT ALTITUDE (IMPERIAL)

Altitude (feet)	0 to 3000	3001 to 4000	4001 to 5000	5001 to 6000	6001 to 7000	7001 to 8000	8001 to 9000	9001 to 10000	10001 to 11000	11001 to 12000	12001 to 13000	13001 to 14000
Depth (FT)												
30	3:17	2:30	2:21	2:14	2:08	2:02	1:57	1:52	1:47	1:39	1:34	1:29
40	1:49	1:21	1:15	1:11	1:08	1:05	1:02	1:00	0:57	0:55	0:53	0:51
50	1:05	0:53	0:51	0:49	0:47	0:44	0:42	0:39	0:37	0:35	0:34	0:33
60	0:48	0:37	0:35	0:33	0:32	0:30	0:28	0:26	0:24	0:23	0:22	0:21
70	0:35	0:26	0:24	0:23	0:21	0:20	0:19	0:18	0:17	0:16	0:16	0:14
80	0:26	0:19	0:18	0:17	0:16	0:15	0:14	0:13	0:12	0:11	0:11	0:10
90	0:19	0:15	0:14	0:13	0:12	0:11	0:10	0:10	0:09	0:09	0:08	0:08
100	0:16	0:11	0:10	0:10	0:09	0:09	0:08	0:08	0:07	0:07	0:07	0:07
110	0:12	0:09	0:08	0:08	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05
120	0:10	0:08	0:07	0:07	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05
130	0:08	0:07	0:06	0:06	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04
140	0:07	0:06	0:05	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04
150	0:06	0:05	0:05	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03
160	0:06	0:05	0:05	0:04	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03
170	0:05	0:04	0:04	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03
180	0:05	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03
190	0:04	0:04	0:04	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:03	0:00

ALTITUDE LEVELS

DISPLAY	RANGE: METERS (FEET)
SEA	0 to 915 (0 to 3,000)
EL2	916 to 1,525 (3,001 to 5,000)
EL3	1,526 to 2,135 (5,001 to 7,000)
EL4	2,136 to 2,745 (7,001 to 9,000)
EL5	2,746 to 3,355 (9,001 to 11,000)
EL6	3,356 to 3,965 (11,001 to 13,000)
EL7	> 3,965 (13,000)

OXYGEN EXPOSURE LIMITS

(from NOAA Diving Manual)

PO ₂ (ATA)	MAX DURATION SINGLE EXPOSURE (MIN)	MAX TOTAL DURATION 24 HOUR DAY (MIN)
0.60	720	720
0.70	570	570
0.80	450	450
0.90	360	360
1.00	300	300
1.10	240	270
1.20	210	240
1.30	180	210
1.40	150	180
1.50	120	180
1.60	45	150

SPECIFICATIONS

CAN BE USED AS

- Watch
- Dive Computer (Air or Nitrox)
- Digital Depth Gauge/Timer
- Free Dive Computer

DIVE COMPUTER PERFORMANCE

- Bühlmann ZHL-16C based Z+ algorithm
- Decompression in agreement with Bühlmann ZHL-16C
- No Decompression Deep Stops - Morroni, Bennett
- Decompression Deep Stops (not recommended) - Blatteau, Gerth, Gutvik
- Altitude - Bühlmann, IANTD, RDP (Cross)
- Altitude corrections and O2 limits based on NOAA tables

OPERATIONAL PERFORMANCE

Function:	Accuracy:
• Depth	±1% of full scale
• Timers	1 second per day

Dive Counter:

- DIVE/GAUGE displays Dives #1 to 24, FREE displays #1 to 99 (0 if no dive made)
- Resets to Dive #1, upon diving (after 24 hours with no dives)

Dive Log Mode:

- Stores 24 most recent DIVE/GAUGE dives in memory for viewing
- After 24 dives, adds 25th dive in memory and deletes the oldest dive

Altitude:

- Operational from sea level to 4,270 m (14,000 ft) elevation
- Measures ambient pressure every 30 minutes when inactive, upon activation, every 15 minutes while activated.
- Does not measure ambient pressure when wet.
- Compensates for Altitudes above sea level beginning at 916 m (3,001 ft) elevation and every 305 m (1,000 ft) higher.

Power:

- (1) 3 volt, CR2430, lithium battery (Panasonic or equivalent)
- Shelf life Up to 7 years (dependent on battery manufacturer)
- User replacement battery (annual recommended)
- Use Life 1 year or 300 dive hours if (qty: 2) 1 hour dives per dive day.

Low Battery:

- Warning - will trigger at 2.75 volts, Battery change recommended
- Alarm - will trigger at 2.50 volts, change the Battery

Operating Temperature:

- Out of the water - between -6.6 and 60 °C (20 °F and 140 °F).
- In the water - between -2.2 and 35 °C (28 °F and 95 °F).

Nitrogen Loading Bar Graph

- No Decompression Normal Zone
- No Decompression Caution Zone
- Decompression Zone

segments

- 1 to 3
- 4
- 5 (all)

Ascent Rate

- Normal zone
- Normal zone
- Normal zone
- Normal zone
- Caution zone
- Too Fast zone (flashing)

<u>Segments</u>	<u>MPM</u>	<u>FPM</u>
0	0 - 3	0 - 10
1	3.5 - 4.5	11 - 15
2	5 - 6	16 - 20
3	6.5 - 7.5	21 - 25
4	8 - 9	26 - 30
5 (all)	> 9	> 30

NUMERIC DISPLAYS:

- Dive Number
- Depth
- FO₂ Set Point
- PO₂ Value
- Dive Time Remaining
- Time To Surface
- No Decompression Deep Stop Time
- No Decompression Safety Stop Time
- Decompression Stop Time
- DIVE/GAUGE Elapsed Dive Time
- DIVE/GAUGE Gas Pressure
- Free Elapsed Dive Time (< 9 min)
- Free Elapsed Dive Time (≥ 10 min)
- Surface Interval Time
- Free Surface Interval Time
- Time to Fly & Desaturate
- Temperature
- Time of Day
- Free Countdown Timer
- Violation Countdown Timer

Range:

- 0 to 24
- 0 to 100 m (330 ft)
- (0 - 99.9 M, > 99.9 then 100 M)
- Air, 21 to 100 %
- 0.00 to 5.00 ATA
- 0 to 99 min, display 99 if >99 min
- 0 to 99 min, display - - if >99 min
- 2:00 to 0:00 min:sec
- 5:00 to 0:00 min:sec
- 0 to 999 min
- 0 to 999 min
- 0 to 300 bar (0 - 4350 psi)
- 0:00 to 9:59 min:sec
- 10 to 999 min
- 0:00 to 23:59 hr:min
- 0:00 to 59:59 min:sec,
- then 1:00 to 23:59 hr:min
- 23:50 to 0:00 hr:min*
- * starting 10 min after the dive
- 18 to 60° C (0 to 99° F)
- if outside of temp range, then displays - -
- 0:00 to 23:59 hr:min
- 59:59 to 0:00 min:sec
- 23:50 to 0:00 hr:min

Resolution:

- 1
- .1/1 M (1 FT)
- 1 %
- 0.01 ATA
- 1 minute
- 1 minute
- 1 second
- 1 second
- 1 minute
- 1 minute
- 1 bar (5 psi)
- 1 second
- 1 minute
- 1 minute
- 1 second
- 1 minute
- 1 minute
- 1°
- 1 minute
- 1 second
- 1 minute

Max Functional Depth:

- Dive/Free/Gauge

Limit:

- 100 m (330 ft)

Rated Working Pressure:

- 0 to 300 bar (0 - 4350 psi)

FCC ID: MH8A

FCC COMPLIANCE:

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1.) this equipment may not cause harmful interference, and 2.) this equipment must accept any interference received, including interference that may cause undesired operation.

FCC INTERFERENCE STATEMENT:

This equipment has been tested and found to comply with the limits for an Intentional Radiator, a Class B Digital Device, pursuant to Part 15 of FCC Rules, Title 47 of the Code of Federal Regulations. These rules are designed to provide reasonable protection against harmful interference in a commercial or residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician.

⚠ CAUTION: Changes or modification to this unit not expressly approved by Aqua Lung International could void the user's authority to operate the equipment.

ABBREVIATIONS/TERMS

ACT = Activation	HOME = Home Time Zone
AL = Alarm	IMP = Imperial (measure)
ALT = Alternate	LAST = Previous (dive)
ASC = Ascent Rate	LO = Low (battery)
ATA = Standard Atmosphere (unit)	M = Meters (depth)
AUD = Audible Alarm	MET = Metric
AWAY = Secondary Time Zone	MFD = Maximum Functional Depth (equipment limits)
BAT/BATT = Battery	MIN = Minutes (time)
CDT = Countdown Timer	MOD = Maximum Operating Depth
CF = Conservative Factor	N2 = Nitrogen
CHNG = Change	N2BG = Nitrogen Bar Graph
CHRO = Chronograph	NDL = No Decompression Limit
DA/dA = Depth Alarm (Free Dive)	NDC = No Decompression (DTR)
DCS = Decompression Sickness	NO DECO = No Decompression (DTR)
DEC/DECO = Decompression	O2 = Oxygen
DFLT = Default	O2 MIN = Oxygen Time Remaining (DTR)
DS = Deep Stop	O2 SAT = Oxygen Saturation
DSI = Dive Surface Interval	PLAN = Dive Planner
DTR = Dive Time Remaining	PO2 = Partial Pressure of O2 (ATA)
DUAL = Dual Time Zones Displayed	SAFE = Safety (stop)
DURA = Duration (backlight)	SAT = Desaturation Time
EDT = Elapsed Dive Time	SEA = Sea Level
EL = Elevation (altitude)	SEC = Seconds (time)
ERR = Error	SHO = Show
FLY = Time To Fly	SLO = Slow Down
FO2 = Fraction of Oxygen (%)	SN = Serial Number
FORM = Format (date, time)	SR = Sample Rate
FREE = Free Dive Mode	SS = Safety Stop
FT = Feet (depth)	SURF = Surface
GAU/GAUG/GAUGE = Digital Gauge Dive Mode	TTS = Time To Surface
GLO = backlight	VIO/Viol = Violation
GTR = Gas Time Remaining	
H2O = Water	
HIST/HIS = History	

AQUALUNG

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