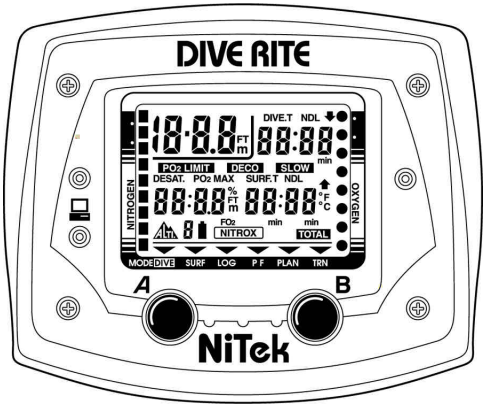
NiTek Dive Computer

User Guide



Dive Rite

Date of purchase: _____

www.diverite.com

DEVELOPED BY	Dive Rite 175 NW Washington Street Lake City, FL 32055 Phone: 386.752.1087 Fax: 386.755.0613 Web: www.DiveRite.com
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WARRANTY INFORMATION	Dive Rite will—at its sole discretion—repair or replace NiTek components proved to be damaged by faulty manufacture or material, at no cost, for a period of up to one year (365 days) from the date of purchase. This warranty applies only to the original retail purchaser. It does not cover commercial or rental use, nor does it extend to units purchased from other than an authorized Dive Rite dealer. This warranty specifically excludes battery depletion or other conditions resulting from misuse, negligence, alteration, accident, or unauthorized repair. To make a claim under this warranty, the owner must have registered his/her warranty using Dive Rite's website (www.diverite.com). He or she must then return the damaged items to Dive Rite, along with a copy of the original purchase invoice or receipt. No warranty service will be performed for other than registered owners. This warranty becomes void if NiTek components are damaged by anything other than normal recreational diving use, or if they have been serviced or repaired by other than authorized Dive Rite dealers. Repairs made under this warranty will not extend the warranty period. All further claims, especially for damage after diving accidents, are excluded from coverage under this warranty. Dive Rite has no obligation to honor any extension of this warranty. This warranty is in lieu of all other warranties, expressed or implied. No other person or representative is authorized to assume for Dive Rite any other liability in connection with the sale of this product.

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Chapter 1

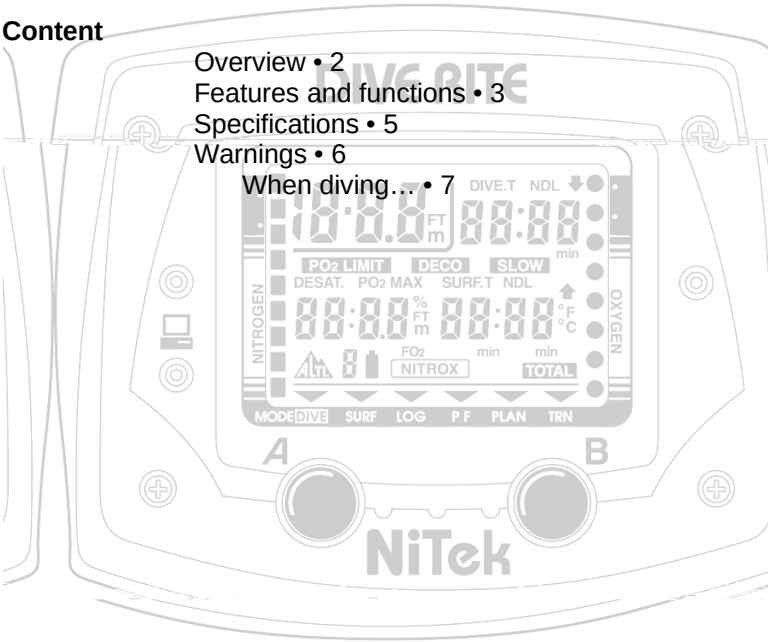
Introduction

Summary

This chapter provides an overview of the NiTek, lists the NiTek's features and functions, and covers warning information that should be read before using your NiTek.

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Overview

Congratulations on your purchase of the NiTek dive computer. The NiTek is a sophisticated and comprehensive dive computer that was designed to offer you the latest in dive computer technology, safety, and reliability.

The NiTek dive computer is a multifunctional computer for recreational diving, providing information on depth, dive times, no-decompression and decompression times, and nitrogen and oxygen absorption and elimination during all dive phases, including ascent, surface interval times, and subsequent dives.

This information is displayed on an easy-to-read display, providing simple and direct communication between the diver and the computer. With an easy-to-read display, the diver has no problem following and reading the displayed information.

The NiTek comes standard with a number of modes, including a time mode, dive set mode, dive plan mode, log mode, profile mode, PC transfer mode, and dive mode.

Note: It is extremely important that you carefully read and understand this manual. Make sure you fully understand how the NiTek operates before diving with it.

This manual has been divided into three chapters:

- **Introduction:** Covers the features and functions, specifications, and warnings for the NiTek
- **Using the NiTek:** Covers the operation of each mode for the NiTek
- **Care and maintenance:** Covers how to properly care for and maintain the NiTek and change the battery

Features and functions

The NiTek incorporates a number of important modes and features:

- The NiTek turns on automatically upon descent
- On the surface, the NiTek constantly displays a minimum of date and time
- The NiTek uses easily accessible and highly reliable push buttons instead of exposed electrical contacts
- The NiTek can be programmed to monitor exposure to either air or a Nitrox mixture from EAN22 to EAN50 during a dive
- The NiTek is capable of functioning up to a depth of 328 feet (100 meters)
- The NiTek automatically adjusts for altitudes up to 19,685 feet (6,000 meters)
- The NiTek displays a variety of data underwater including: time of day, current and maximum depths, no-decompression dive time elapsed and remaining, and water temperature
- The NiTek displays data specifically related to the use of Enriched Air Nitrox (EANx) including: fraction of oxygen (FO2) setting, partial pressure of oxygen (PO2), and an oxygen limit index (OLI) representing the cumulative effect of a diver's exposure to elevated PO2s (the theoretical "CNS clock") as a bar graph
- Through a combination of audible and visible alarms, the NiTek alerts the diver to a number of possibly hazardous situations including: violation of ascent rate, no-decompression state, and whether mandatory decompression stops are necessary or if the diver has ascended above a mandatory stop ceiling. Nitrox specific warnings occur when the diver approaches or exceeds a limiting PO2 of 1.6 atmospheres, and when cumulative exposure to elevated PO2s exceeds recommended limits.
- The NiTek can be programmed to display data in Imperial or metric units

- Special mode indicators make it easy to determine what display mode or screen you are in at any time
- The NiTek's memory capability enables it to hold and display log data on up to 10 dives
- Detailed dive-profile information is stored for each dive through a one-minute sample interval
- Dive data can be uploaded and stored in a dive log format on a desktop or laptop computer using the NiTekLogic™ software and optional PC interface
- The NiTek can calculate decompression stop requirements for stops as deep as 49 feet (15 meters)

Specifications

Algorithm: Buhlmann ZH-L16

Sample tissues: 9

Tissue half-lives: from 5 to 640 minutes

Size and weight
- Diameter: 2.5 in (62 mm)
- Height: 1.0 in (25 mm)
- Weight: 4 ounces (115 g)

Display face
- Low battery indicator
- Two user buttons
- Water immersion switch

Depth sensor
- Measuring range: 0 to 328 feet (0 to 100 m) measured every second
- Accuracy: +/- 3% + 2 feet (0.5 m)
- Surface interval time: from 0 to 48 hrs
- Diving time: from 0 to 599 minutes
- Ascent rate warning: 26 to 52 feet per minute (8 to 16 m)

Thermometer
- Measuring range: 23 °F to 104 °F (-5 to 40 °C)
- Accuracy: +/- 4 °F (2 °C)
- Measurement interval: Every minute

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

Altitude
- Altitude function monitoring: from 0 to 19,685 feet (6,000 m) measured every 10 minutes
- Accuracy: +/- 800 feet (250 meters)

Battery
- Li/MnO2 CR 2032 3V button battery
- Average battery life: About 3 years (50 dives/year)
- Replacement: User replaceable or return to manufacturer

Breathing gas
- O2 setting range: 21 to 50 percent
- O2 setting: 1% increments

Dive log
- Dive logging: Maximum of 10 dives
- Profile logging: Maximum of 10 dives
- Profile sampling rate: 1 minute

Warnings

This information has been developed for your safety. Please read and understand this manual completely before using your NiTek dive computer.

Important safety information:

- Before using your NiTek, it is extremely important that you read the following points—as well as similar warning and caution notices that appear throughout this manual. Failure to do so could result in damage to or loss of equipment, serious personal injury, or death.
- The NiTek is designed for use by certified divers who have maintained a sufficient level of knowledge and skill proficiency through a combination of formal training, ongoing study, and experience. It is not intended for use by persons who lack these qualifications and thus, may not be able to identify, assess, and manage the risks scuba diving entails. Use of the NiTek in conjunction with Enriched Air Nitrox (EANx) requires that divers be trained and certified for Nitrox diving.
- The NiTek is not intended for use by commercial or military divers whose activities may take them beyond the commonly accepted depth limits for recreational or technical diving.
- Although the NiTek is capable of calculating decompression stop requirements, users must remember that dives requiring mandatory stage decompression carry substantially greater risk than dives made well within no-decompression limits.
- The NiTek is designed for use by one diver at a time. Divers should not share a single NiTek—or any other dive computer—on the same dive. Additionally, no diver should lend their NiTek to anyone else until it calculates that no measurable residual nitrogen remains after previous dives and no longer displays the “desaturation time” indicator while in time mode. Further, no diver should use their NiTek for repetitive dives—unless that same properly functioning NiTek has accompanied them on all previous dives in the same repetitive dive series and is thus, accurately monitoring the diver’s total exposure to oxygen and nitrogen.

- Neither the NiTek—nor any other dive computer—physically measures the amount of nitrogen present in body tissues or the rate at which nitrogen is being absorbed or released. The NiTek monitors depth and time, and uses this data to work a mathematical formula designed to emulate how individuals in good general health and whose physical characteristics do not place them among those at higher risk of decompression illness (DCI) are assumed to absorb and release nitrogen from body tissues. Thus, the NiTek cannot compensate for factors such as age, obesity, dehydration, cold, or exertion, which experts believe place divers at greater risk of DCI. If these, or similar factors apply to you, use the NiTek—and other dive computers or dive tables—with even greater caution.
- Little is known regarding the exact nature and causes of decompression illness (also known as decompression sickness, DCI, or DCS). Susceptibility to DCI may vary substantially from person to person and from day to day. Neither the NiTek—nor any other dive table or computer—can guarantee that you will not suffer decompression illness. Even though you use these items correctly, you may still suffer DCI. Use your NiTek conservatively and in conjunction with other dive planning devices, such as dive tables. Do not rely on the NiTek, or any similar device, as your sole means of avoiding decompression illness.

When diving…

- Do not “push” the no-decompression limits (NDLs). Make safety stops before ascending. If you exceed the no-decompression limits, check your breathing gas supply at all stop depths.
- The NiTek does not monitor breathing gas supply. You must monitor this yourself, on every dive, using a submersible pressure gauge or equivalent device.
- Do not rely solely on this or any other dive computer. Take a back-up dive computer or dive tables (along with a separate means of monitoring depth and dive time).
- Be aware that the NiTek makes assumptions regarding residual nitrogen based on altitude settings. Avoid making

abrupt changes in altitude following a dive, as doing so may be very dangerous.

Chapter 2

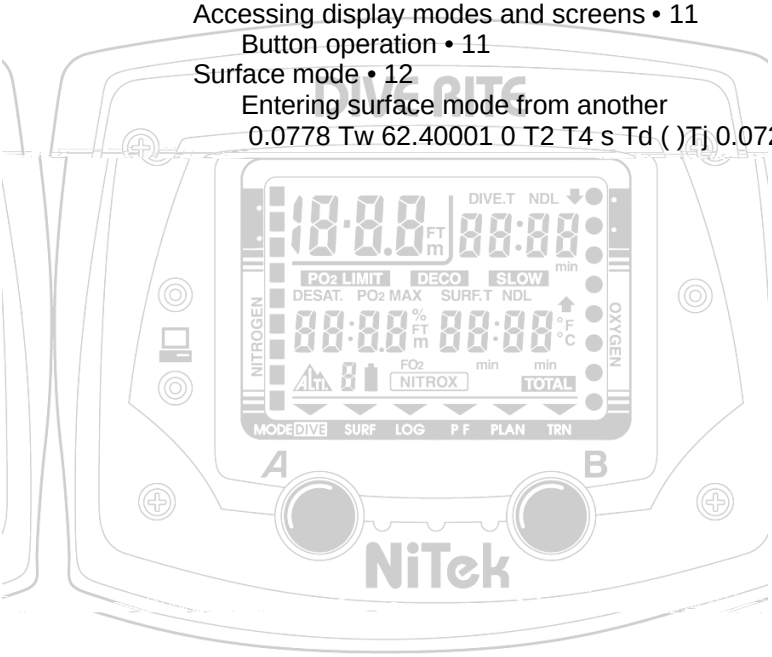
Using the NiTek

Summary

This chapter provides topics about using, setting, and understanding each of the modes and options of the NiTek.

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0.0778 Tw 62.40001 0 T2 T4 s Td ( )Tj 0.07201 Tc 0



Getting started

The NiTek has many modes and screens and a number of options that can be changed depending on your dive location and profile. The following is a checklist of general things that you should pay attention to before, during, and after a dive.

Before a dive

- Check that the proper time and date are set. If you traveled, your NiTek may be set to your home time zone.
- Check that the proper mix is set
- Make sure that you review the dive plan mode for maximum depths and times for the mix you are using

During a dive

- Monitor the NiTek throughout your dive for depth and time
- Monitor the nitrogen and oxygen loading bar graphs
- Pay attention to any alarms, such as an ascent rate warning
- Follow the no-decompression limits or complete the required decompression displayed and perform the necessary safety stop

After a dive

- Monitor surface interval time if making another dive
- Follow the no-fly requirements
- Review your dive using the log mode and profile mode
- Download the dive log to your PC if you have the optional PC interface

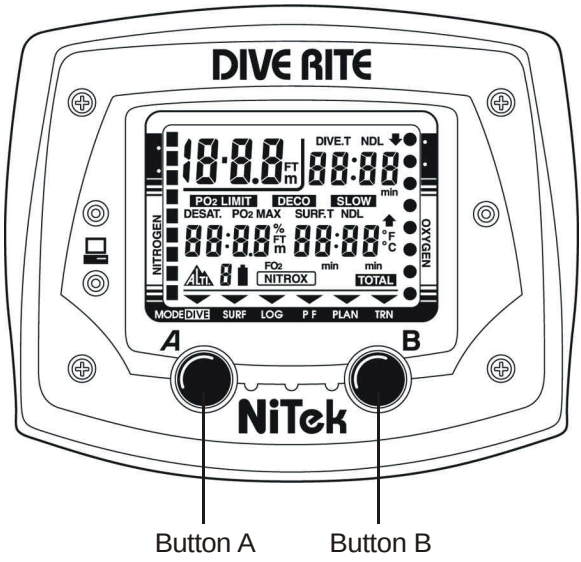
Accessing display modes and screens

There are some display modes that the NiTek enters and/or exits automatically. For example, by taking the NiTek underwater, the dive mode automatically turns on. Upon surfacing, the NiTek automatically enters the surface mode.

Accessing other modes or screens requires the use of the NiTek's buttons.

Button operation

The NiTek has two buttons (A and B), which are used to access the different modes and screens. To use the buttons, simply press the button once or hold the button down depending on what you are trying to do. The correct procedure to use is clearly defined in each topic throughout the manual.

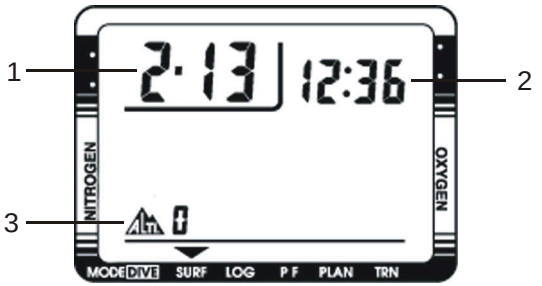


The front of the NiTek, showing the two buttons that are used to access and setup the different modes and screens

Surface mode

Surface mode is the NiTek's default mode. The computer returns to this mode automatically upon surfacing from a dive and from other modes when a period of time has passed without the buttons being pressed.

The arrow at the bottom of the display points to SURF.



(1) Date: This is the date in month and day format.

(2) Time: This is the time of day in 24-hour (military) format.

(3) Altitude: This is the current altitude you are at. See "Altitude operation" for more information.

The NiTek may display additional information concerning exposure to nitrogen and oxygen, desaturation time, and surface interval time. These items are covered in "Surface mode (upon surfacing from a dive)."

Setting the time and date

Setting the time and date is done through the surface mode. You can enter or change the year, month, day, hours, minutes, and seconds in this mode.

To set the time and date:

1. Press buttons A and B simultaneously for five seconds.

   The "hour" field flashes.

2. Press button B to set the hour or press button A to go to another field, such as minutes.

3. Using button's A and B, set the year, month, day, hour, minutes, seconds. The time is based on a 24-hour format.

   For example, 1:00 PM would be 13:00.

4. When finished, press button A to return to surface mode.

Setting the computer for metric or Imperial operation

The NiTek can calculate and give you values in Imperial units or metric units. When in Imperial, depth values are expressed in feet and temperatures are expressed in Fahrenheit (°F). When in metric, depth values are expressed in meters and temperatures are expressed in Celsius (°C).

To set for metric or Imperial operation:

1. Press buttons A and B simultaneously for five seconds to enter time set mode.
2. Press and hold buttons A and B simultaneously for 30 seconds.

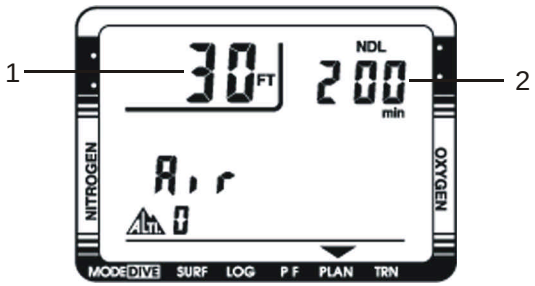
   The computer changes to either feet (ft) or meters (m).

3. When finished, press button A to scroll through the time and date settings until the computer returns to the surface mode.

Dive plan mode

Dive plan mode enables you to determine how long you can stay at various depths while remaining within the no-decompression limits. The no-decompression time limits are based on the gas percentage that is set. If you are making a dive within 24 hours of a previous dive, the no-decompression time limits are based on the residual nitrogen remaining.

The two most important values that are displayed on the screen in dive plan mode are the depth and no-decompression time limit for the gas percentage that is set.



(1) Depth: When you first enter dive plan mode, the initial depth displayed is 30 feet (9 meters). You can advance the depth in 10-foot (3 meter) increments. Fourteen different dive plan depth increments can be displayed to a maximum depth of 157 feet (48 meters).

(2) No-decompression limit (NDL): Depending on the depth displayed and the current FO2 setting, the available no-decompression limit, up to a maximum of 200 minutes, is displayed. If the computer is in FO2 default, a series of horizontal lines appears.

If the NiTek calculates that there is residual nitrogen present from previous dives, the available no-decompression limits are shorter. Depending on how much residual nitrogen is present, no NDL time may be displayed for some deeper depths. If this takes place, a series of horizontal lines are displayed. Similarly, for combinations of depth and FO2 that would cause a diver to

exceed a limiting PO2 of 1.6 atmospheres, a series of horizontal lines appears in place of the no-decompression limit.

To enter dive plan mode:

1. Press button A.

   The arrow at the bottom of the display points to PLAN.

2. Press button A to increment the depth.

   The no-decompression time limits change automatically based on the depth.

3. When finished, press and hold button A for three seconds to return to surface mode.

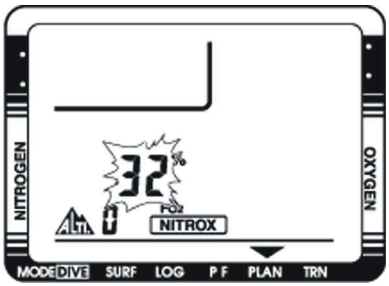
WARNING: Do not plan dives to depths deeper than those for which the NiTek is capable of displaying an available no-decompression limit. Doing so could cause you to exceed the no-decompression limits or a limiting PO2 of 1.6 atmospheres. This may increase your risk of decompression illness or CNS oxygen toxicity and can lead to serious personal injury or death.

Setting the FO2 gas percentage

While in dive plan mode, you can set the FO2 gas percentage that you are going to use on your dive. The FO2 gas percentage can be set for air to 50 percent oxygen.

Note: It is important to check the FO2 gas percentage prior to every dive to make sure the gas percentage programmed matches the gas percentage you are using for the dive.

When you enter the FO2 set mode, the depth and NDL disappear and the FO2 value flashes.



To set the FO2 gas percentage:

1. Press buttons A and B simultaneously for six seconds.

   The FO2 gas percentage flashes.

2. Press and release button B to increase the percentage.

   Press and hold button B to increase the percentages rapidly.

3. When finished, press button A to return to dive plan mode.

4. To return to surface mode, press button A for three seconds.

Note: If a Nitrox mixture is set, the NITROX symbol is displayed at the bottom of the screen.

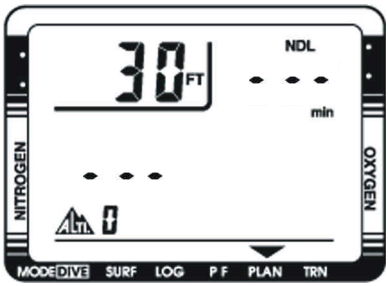
Understanding FO2 default

In your entry-level Enriched Air Nitrox training, you learned that among the greatest risks Nitrox (EANx) use poses is CNS oxygen toxicity. CNS oxygen toxicity can occur if Nitrox is breathed at depths where the partial pressure of oxygen (PO2) exceeds safe limits.

The NiTek is designed to help divers avoid such situations by presenting information and warnings regarding current PO2 levels and cumulative exposure to elevated PO2s. To do so, the NiTek must be set to an FO2 that accurately matches the concentration of oxygen in the gas mixture being breathed.

Similarly, the NiTek is designed to help divers avoid decompression illness by providing no-decompression limits (NDLs) or mandatory decompression stop information. Again, to do so, the NiTek must be set in a manner that accurately matches the concentration of nitrogen being breathed.

When this information is not available, the NiTek attempts to protect divers by basing its oxygen- and nitrogen-exposure calculations on a “worst case” assumption. This is, that calculations are based on a mixture containing up to 79 percent nitrogen and 99 percent oxygen. This “worst case” calculation is what is referred to as the FO2 default setting.



Default warning indicated by a dashed line for the gas mix and NDL

When and how FO2 default occurs

One factor in determining if and when your NiTek's FO2 setting is in default, is whether you set it for air or Nitrox.

- If you set the mix for air (an FO2 of 21 percent), the computer assumes that subsequent dives will be made using air. This means that the mix set for air remains set for air, dive after dive, without defaulting.
- If you set the mix for Nitrox (FO2s of 22 to 50 percent), the computer assumes that subsequent dives will be made on Nitrox. Thus, to protect you from accidentally diving a Nitrox mixture that cannot accurately be monitored, the computer's FO2 setting defaults 10 minutes after surfacing from a dive.
- If you set a Nitrox mixture, but do not dive with the computer, the NiTek holds the programmed gas mixture until midnight, then defaults. The computer does not default at midnight if you are diving.

Dealing with FO2 default

The best way to deal with FO2 default is to simply avoid it. Make sure that prior to every dive you check the FO2 setting for gas mix you are diving. Make sure it accurately matches what you are going to breath during the dive.

When the computer is in FO2 default mode, dashed lines appear in place of the gas percentage and NDL. This indicates that you need to set the gas percentages to the correct FO2.

If you go diving when the computer is in FO2 default mode, the NiTek's alarm sounds and the O2 bar graph and PO2 Limit symbols flash. The computer's ability to accurately monitor your exposure to oxygen no longer exists.

Note: You should not rely on the NiTek as the sole means of tracking your exposure to elevated partial pressures of oxygen (PO2s). It is recommended that you use either a second Nitrox-capable computer or another tracking method, such as Nitrox tables.

Dive mode

Dive mode is automatically entered when the computer enters the water. It begins performing its dive calculations once you descend below 5 feet (1.5 meters).

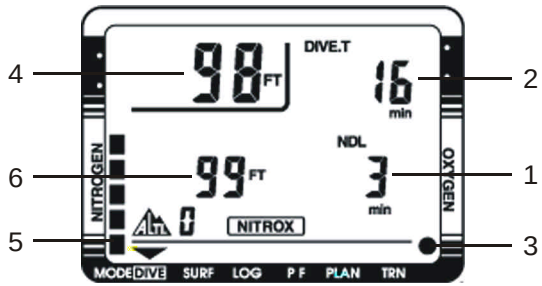
Caution: Prior to diving, always check to ensure that the FO2 setting is correct and that the computer is not in FO2 default.

While in dive mode, the computer calculates and displays information about your dive and prompts you with safety stop information and warnings if needed.

While underwater, there are two screens you can toggle between.

Primary underwater screen

When you enter the water, the primary screen shows your depth, max depth, remaining no-decompression limit, dive time, PO2, and nitrogen and oxygen bar graphs.



(1) Remaining no-decompression limit (NDL): This is the time that is remaining (in minutes) before you reach the no-decompression limit. This NDL time limit increases when you ascend and decreases when you descend.

(2) Dive time: This is the time spent (in minutes) underwater, measured from the time you descended below 5 feet (1.5 meters).

(3) Oxygen bar graph: This is the oxygen limit index (OLI) that calculates the cumulative effect of your exposure to elevated partial pressures of oxygen (PO2s). There are a maximum of eight bars. When all bars are displayed, it means that you have

used 100 percent of your “CNS” clock. This graph increases when you descend due to higher partial pressures and may decrease when you ascend.

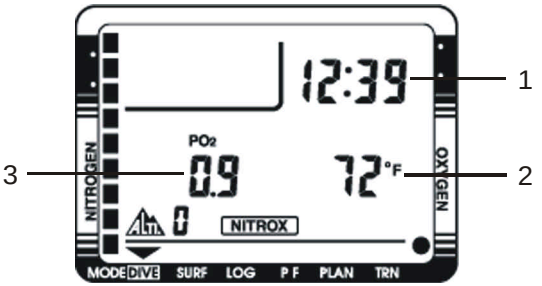
(4) Depth: This is the current depth.

(5) Residual nitrogen (N2) bar graph: This is how much nitrogen the computer assumes your body has absorbed. There are a maximum of nine bars. When all bars are displayed, it means that you are at or have exceeded the no-decompression limits.

(6) Max depth: This is the maximum depth reached during the dive.

Secondary underwater screen

While underwater you can change to the secondary dive mode screen that displays additional information. When you switch screens, time, temperature, and PO2 are displayed.



(1) Time: This is the time of day.

(2) Temperature: This is the lowest temperature that has been reached during the dive.

(3) PO2: This is the partial pressure of O2 at your current depth. It is based on the FO2 settings for the set gas mix.

To display the secondary dive mode screen:

1. Press and hold button A.

   The secondary screen is displayed.

2. Release button A to return to the primary dive mode screen.

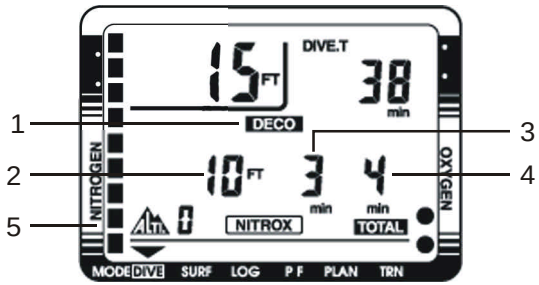
Warnings while in dive mode

While in dive mode, there are several warnings that you should be alert to.

Decompression warning

If you exceed the no-decompression limits, the computer enters decompression mode. An audible alarm sounds for three seconds indicating that you have decompression stop requirements.

Caution: Decompression diving is considered to substantially increase your risk of decompression illness more than dives made within no-decompression limits.



Decompression warning with “DECO” displayed

(1) Deco symbol: The “DECO” symbol displays indicating that you have to stop at the depth displayed.

(2) Required stop depth: This is the required decompression stop depth.

(3) Required stop time: This is the time you must remain at the indicated stop depth.

(4) Total ascent time: This is the total amount of time (in minutes) you must spend at the decompression stops and the ascent time between decompression stops. If total ascent time exceeds 99 minutes, the display alternates between the time required for the current stop and the total ascent time.

(5) Nitrogen (N2) bar graph: All nine bars are displayed, indicating that you are at or have exceeded the no-decompression limits and have entered decompression.

Default warning

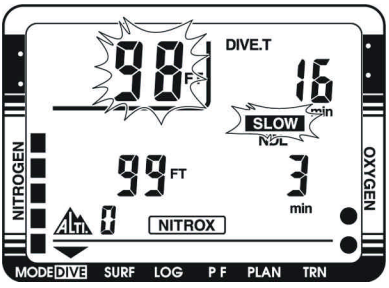
If the gas mix is in default at the beginning of a dive, an audible alarm sounds and the O2 bar graph and PO2 LIMIT symbols flash. If you ascend and set the mix percentage, you can restart the dive.

Ascent rate warning

The NiTek assumes that you keep your ascent rate within the following limits:

Depth range	Ascent rate
0 to 19 feet (0 to 5.9 meters)	26 feet (8 meters) per minute
20 to 59 feet (6 to 17.9 meters)	39 feet (12 meters) per minute
59 feet (18 meters) or deeper	52 feet (16 meters) per minute

If you exceed these ascent rates, an audible alarm sounds and “slow” is displayed and flashes on the screen. The warning displays until you slow your ascent to an acceptable rate or you reach 5 feet (1.5 meters). If the ascent rate is violated twice, the “slow” symbol appears in log mode after the dive.

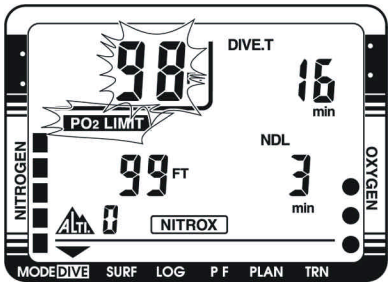


Ascent rate warning with “slow” and depth flashing

PO2 limit warning

The PO2 warning indicates that you have exceeded the 1.6 atmospheres for the gas you are breathing. When you reach 90 percent of the PO2 limit of 1.6 atmospheres, an audible alarm sounds for three seconds and PO2 LIMIT and depth flashes for three seconds. If you continue to descend and exceed a PO2 of 1.6 atmospheres, the audible alarm sounds again for three seconds and the PO2 LIMIT and depth flash until you ascend to a safer depth.

Note: If the PO2 alarms activate at a depth of 20 feet (6 meters) or less, you most likely have not exceeded the limiting PO2. It is more likely that you forgot to set the FO2 percentages prior to the dive. As a result, the computer has entered the FO2 default. See “Understanding FO2 default” for more information.



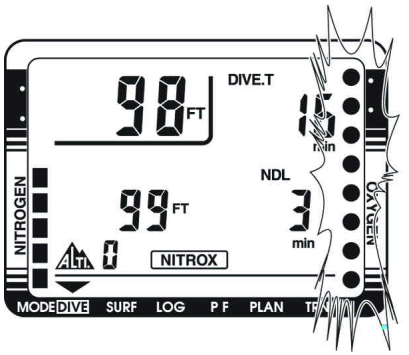
PO2 limit warning with the PO2 LIMIT and depth flashing

Oxygen limit index (OLI) warning

The NiTek’s oxygen limit index (OLI) reflects the cumulative effect of your exposure to elevated partial pressures of oxygen. The PO2 warning only accounts for the intensity of the exposure, but the OLI accounts for both the intensity and length.

When seven of the O2’s eight bars are displayed, the computer’s audible alarm sounds for three seconds, and the oxygen bar graph flashes for three seconds. If you do not ascend to a shallower depth, and all eight of the O2’s bars are displayed, the alarm sounds again and oxygen bar graph flashes again. The oxygen bar graph continues to flash until the bar graph drops to seven bars. This warning will appear in log mode after the dive.

Note: Should the OLI and PO2 warnings activate at roughly the same time—and at relatively shallows depths, early in the dive—you most likely have not exceeded your actual oxygen limits. What has happened, is that you forgot to set the FO2 percentages prior to the dive and the computer has FO2 defaulted. See “Understanding FO2 default” for more information.



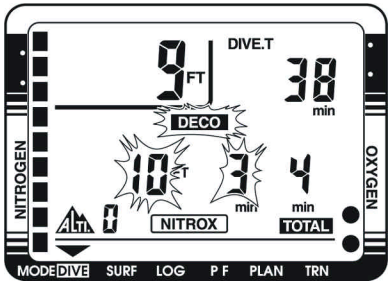
OLI warning with the oxygen bar graph flashing

Decompression stop violation warning

A decompression stop violation warning takes place when you ascend to a shallower depth than the indicated stop depth or if you do not spend sufficient time at the required depth before ascending. When you enter this violation, the computer’s audible alarm sounds, and the stop depth, stop time, and “DECO” flashes. These items continue blinking as long as you remain shallower than the indicated stop depth.

Note: During a deco stop violation, the computer’s ascent rate warning does not function.

Caution: If you do not correct an indicated deco stop violation, the warnings continue for several minutes after surfacing. At this point, the computer is not usable for the next 24 hours.



Out-of-range warning

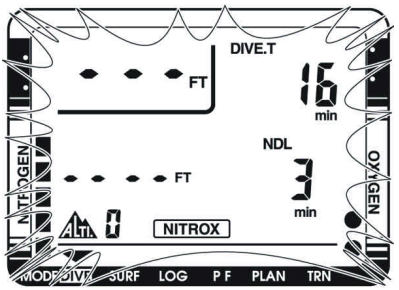
The following can cause the out-of-range warning:

- Descend below the computer's maximum operating depth of 328 feet (100 meters)
- Exceed an actual bottom time of 599 minutes
- Accrue decompression stops depths of greater than 49 feet (15 meters)

The out-of-range warning consists of:

- The audible alarm sounds for ten seconds
- Dashed lines appear in place of the current and maximum depth
- The entire screen flashes

WARNING: A NiTek displaying an out-of-range warning is incapable of displaying other critical information such as depth, time, ascent rate, PO2, OLI and deco stop violations, and required decompression stops. For this reason, you should not, under any circumstance, use a NiTek in such a way that would cause an out-of-range warning. Under such conditions, the risk of serious personal injury or death would be substantial.


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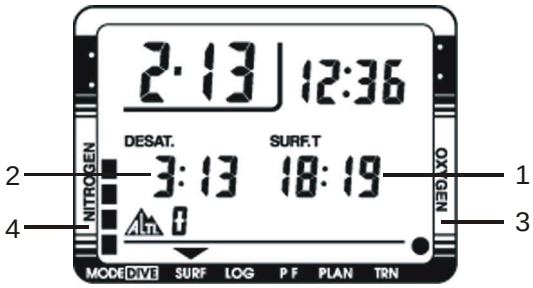
Surface mode (upon surfacing from a dive)

Once you surface from a dive, the NiTek automatically switches to surface mode. In addition to the normal information displayed in surface mode such as time of day, there is other information that is displayed that pertains to the dive you just completed. This includes:

- Desaturation time
- Surface interval time
- Nitrogen (N2) bar graph
- Oxygen limit index (OLI) bar graph

This additional information is displayed on the screen until the NiTek calculates that it is no longer needed or after 24 hours have passed since the last dive.

Note: If you are making repetitive dives, you need to pay attention to your surface interval and use it in conjunction with plan mode. This ensures that you stay within no-decompression limits.



(1) Surface interval time: This is the amount of time you have spent on the surface since your last dive if there is residual nitrogen present from a previous dive. It can display up to 24 hours of surface interval time.

(2) Desaturation time: This is the amount of time, expressed in hours and minutes, that must pass before the residual nitrogen levels drop to a point where subsequent dives are treated as a single (non-repetitive) dives.

(3) Oxygen OLI bar graph: This indicates CNS toxicity level at the end of the dive. This drops as your surface interval time increases.

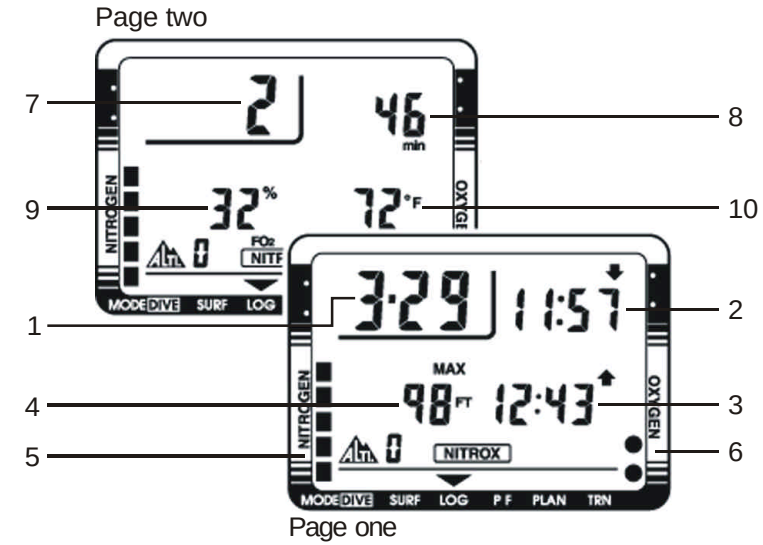
(4) Nitrogen (N2) exposure bar graph: This is the amount of residual nitrogen in your body at the end of the dive. This drops as your surface interval time increases.

WARNING: It is recommended that you wait at least 24-hours following any dive before flying in an aircraft or driving to altitude. Failure to allow sufficient surface interval time before doing so may increase your risk of decompression illness (DCI).

Log mode

For each dive (up to ten total), the NiTek stores information, such as depth, time, temperature, etc. in a log. This stored log information can be viewed directly from the NiTek's screen when in log mode.

Because of the amount of information the NiTek stores, there are two pages that you can toggle between for each dive. Each dive has a date and is assigned a number, beginning with one, for the day.



Page one and two for a dive in log mode

(1) Date: This is the month and day of the dive.

(2) Start time: This is the time you started the dive, indicated by a down arrow.

(3) Stop time: This is the time you surfaced from the dive, indicated by an up arrow.

(4) Maximum depth: This is the maximum depth reached during the dive.

(5) Nitrogen (N2) exposure bar graph: This is the amount of residual nitrogen in your body at the end of the dive.

(6) Oxygen OLI bar graph: This indicates CNS toxicity level at the end of the dive.

(7) Dive number: This is the dive number for the day (first dive of the day, second dive of the day, etc.).

(8) Dive time: This is the actual in water time for the dive.

(9) FO2 gas percentage: This is the FO2 gas percentage that you entered for the dive. All calculations were based on this percentage.

(10) Temperature: This is the coldest temperature reached during the dive.

To view a dive log:

1. Press button B.

   The arrow at the bottom of the display points to LOG.

2. Press button B to scroll back through the logged dives.

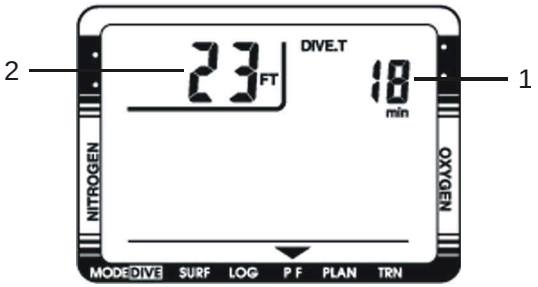
3. Once a dive log is selected, you can use button A to toggle between pages one and page two of the dive log.

   You can also press button B while on page two to scroll through the logged dives.

4. When finished, press and hold button B for three seconds to return to surface mode.

Profile mode

Profile mode enables you to see a record of the depths you reached at various points during a dive. You can display a detailed profile of each dive stored in the log. When a dive is selected, the computer automatically displays the depth and the time in the dive when you reached that depth until it reaches the end of the dive. Dive profile information is stored in one-minute intervals during a dive.



(1) Dive time: This tells you at what time during the dive you reached the depth indicated.

(2) Depth: This is the depth that corresponds to the displayed dive time (each minute of the dive).

To view a dive profile:

1. Press button B.

   The arrow at the bottom of the display points to LOG.

2. Press button B to select the dive that you want to view the profile for.

3. Press button A for five seconds.

   The arrow at the bottom of the display points to PF.

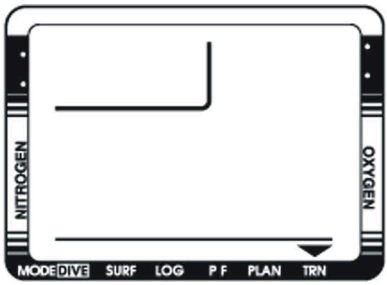
4. Press button A to advance the minutes, and view the dive depth for each minute desired.

5. When finished, press button B to return to log mode.

6. Select another dive to view a profile for or press button B for three seconds to return to surface mode.

PC transfer mode

You can transfer the stored dive log information to your personal computer using the optional NiTekLogic software and a PC interface.



Before transferring the dive log

You must complete the following before transferring the dive log.

- Install the NiTekLogic software onto your PC. Open the program > click Options > and check the Uploader tab. Make sure the COM port selection in the NiTekLogic software matches the COM port you are connecting to on your PC.
- Plug one end of the cable supplied with the interface into a COM port on your PC. Plug the other end into the interface module.
- Set the NiTek to PC transfer mode as described below.
- Place the NiTek on the interface module and secure the strap over the computer. Click the computer icon in NiTekLogic. A dialog box should appear indicating the beginning of data transfer. If it is not uploading, check your COM port settings.

Notes

- If the dialog box says “negotiating” and cuts off before saying “transfer,” there is probably a COM port setting issue. Check to see that you are using the correct COM port.

- If there is an error reported after the dialog box says “transfer,” check for a loose or dirty connection between the NiTek and the interface module.

To enter PC transfer mode:

1. Press button B.

   The arrow at the bottom of the display points to LOG.

2. Press button A for five seconds.

   The arrow at the bottom of the display points to PF.

3. Press buttons A and B simultaneously for five seconds.

   The arrow at the bottom of the display points to TRN.

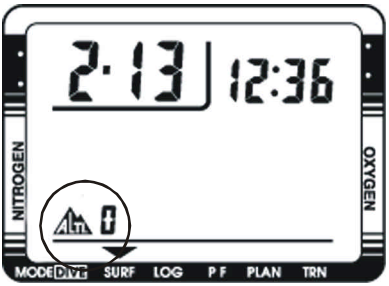
4. Transfer the dive log data to your PC.

5. When finished, press buttons A and B simultaneously for five seconds to return to log mode.

6. Press button B for three seconds to return to surface mode.

Altitude operation

The NiTek adjusts automatically for diving at altitudes of up to 19,685 feet (6,000 meters). To show that the NiTek has made the altitude adjustment, it displays the altitude settings using numbers.



Altitude rank symbols

Symbol	Altitude range
0	Sea Level to 3,281 feet (1000 meters)
1	2,297 to 5,906 feet (700 to 1,800 meters)
2	4,593 to 8,530 feet (1,400 to 2,600 meters)
3	7,546 to 19,685 feet (2,300 to 6,000 meters)
E	Out of range above 19,685 feet (6,000 meters)

Prior to using the NiTek at altitudes substantially above sea level, you should find out what the actual altitude of your dive site is. Make certain that the altitude settings the NiTek displays accurately match the altitude you are at.

Notes

- Do not use the NiTek unless the altitude settings accurately match the actual height above sea level you are diving in. Doing so could cause the NiTek to display inaccurate information.
- Do not use the NiTek when the “E” symbol is displayed. This means that you are above an altitude of 19,685 feet

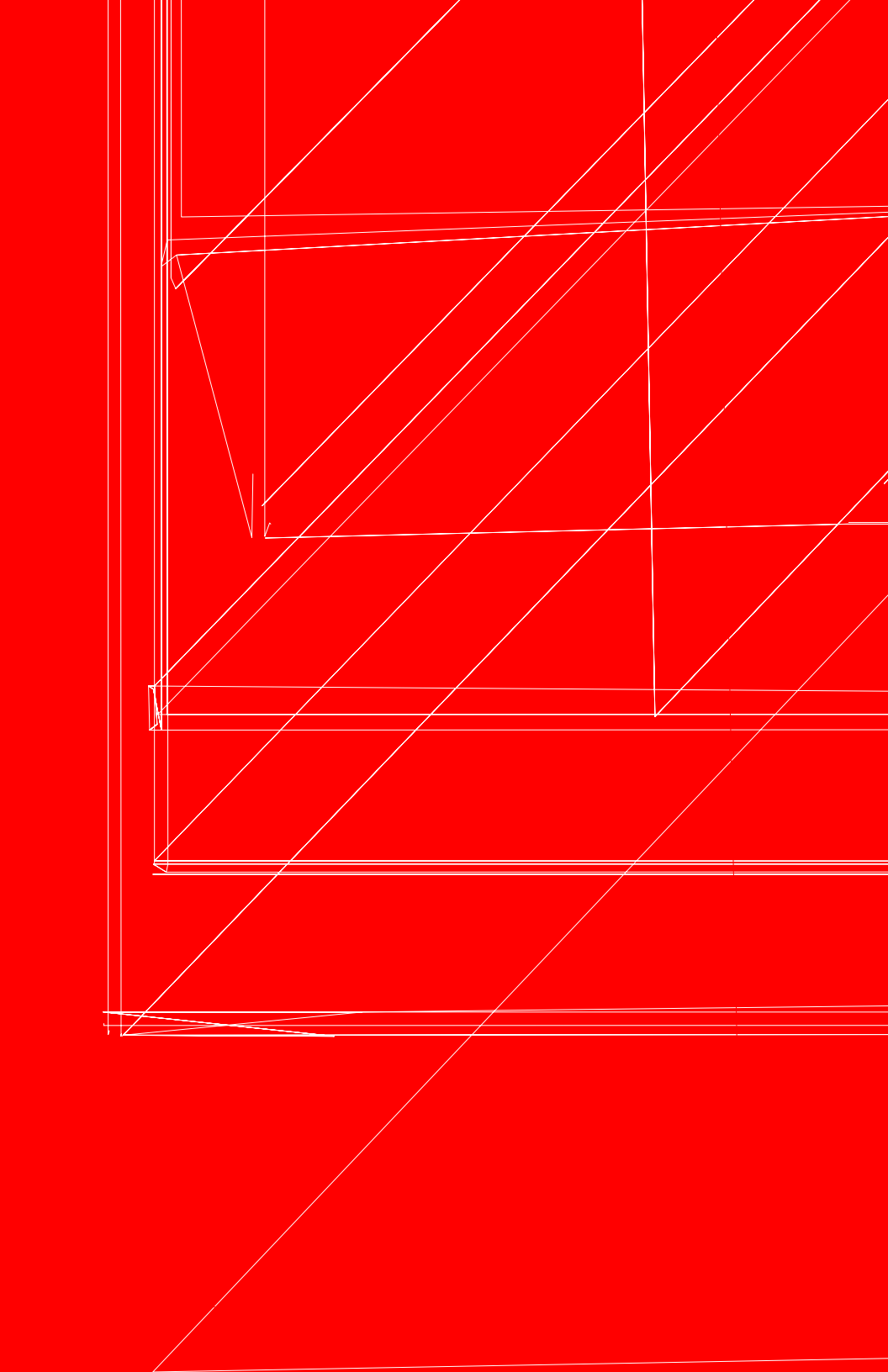
(6,000 meters), which is beyond the NiTek's ability to function accurately.

- Do not place the NiTek in dive mode when making sudden, substantial changes in altitude, such as when flying in an airplane. This can be caused by storing the NiTek with wet dive gear, which can touch its external electrical contacts and cause it to enter dive mode. This can interfere with the computer's ability to function accurately.

The NiTek monitors and displays altitude information in all modes, except PC transfer mode. Upon arriving at altitude, the NiTek's residual nitrogen bar graph may show that there is excess nitrogen present, even though you may not have made any dives in the preceding 24 hours.

If you have obtained the altitude specialty diver training which everyone should do before diving at altitudes substantially above sea level, you already understand that this should be expected. By ascending to a higher altitude from a lower one, your body has more nitrogen saturated in body tissues than would be present had you spent the preceding 24 hours at the higher altitude. By displaying residual nitrogen and a surface interval, your NiTek is merely reflecting this fact.

If the level of residual nitrogen calculated by the NiTek is unusually high (seven or eight bars) when going to altitude, the computer will be unable to enter dive mode. Avoid taking the computer to altitude when residual nitrogen levels are this high, and do not enter the water until nitrogen levels have dropped substantially.



Chapter 3

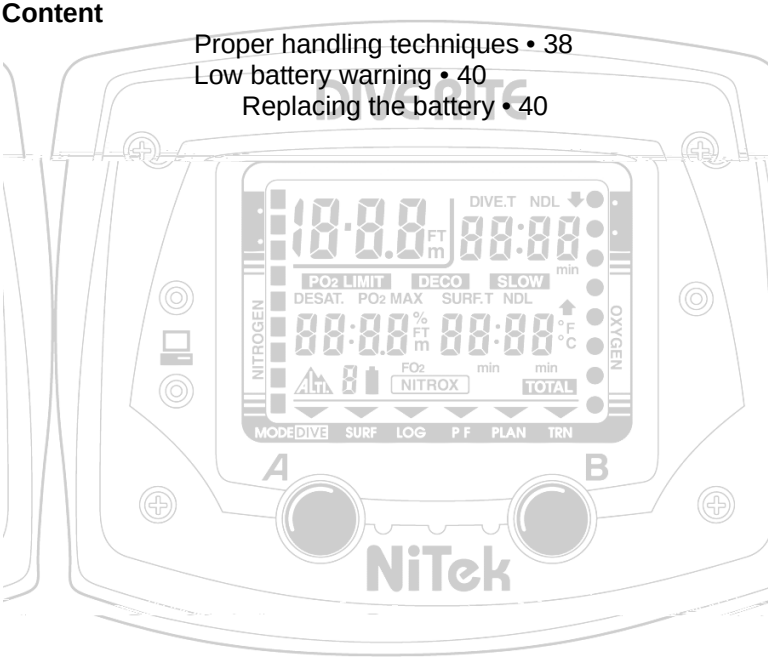
Care and maintenance

Summary

This chapter provides care and maintenance and battery information for the NiTek.

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Low battery warning • 40
Replacing the battery • 40



Proper handling techniques

The NiTek is constructed to withstand the most demanding diving conditions. It is, however, a high precision instrument, which requires proper care.

Caution: Failure to follow these handling techniques may result in damage to the NiTek.

- Do not store the computer in hot and/or humid environments. The pressure transducer is sensitive to both heat and humidity. If impaired, it may cause incorrect altitude or depth readings.
- When in hot and/or humid environments, dip the computer in water for several minutes to cool it to room temperature before using it. If it is cold, allow the computer to warm to room temperature. Do not take it underwater immediately after doing so.
- Do not transport your NiTek on an aircraft or take it to altitude while it is sealed in an air-tight container. Doing so may interfere with its ability to correctly read, display, and track depth information.
- The NiTek's Liquid Crystal Display (LCD) may darken if left in a hot environment (such as on a car's dashboard). It will return to normal once allowed to cool, however, extensive exposure to heat may shorten LCD life.
- Be aware that weather-related changes in air-pressure can cause incorrect display of altitude settings. Be sure to check indicated altitude settings against actual altitude before use. Your NiTek is not to be disassembled by anyone other than Dive Rite or its authorized dealers. Unauthorized disassembly will violate the warranty.
- If the NiTek does not appear to be functioning properly, do not use it to dive. Return it to your authorized Dive Rite dealer for repair.
- The NiTek should not come in contact with solvents or any type of chemical substances

- Do not use compressed air to dry the NiTek
- Do not use the NiTek in hyperbaric chambers if the device is not fully submerged in water
- Always rinse the computer with freshwater after use
- Store the NiTek in a cool, dry location. After diving, wipe the computer dry and store it in a location separate from other damp items.

Low battery warning

The battery that comes with the NiTek is designed to last for up to three years under normal use. You may get more or less use from the battery depending on how often it is used and how it is

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