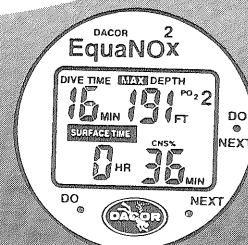
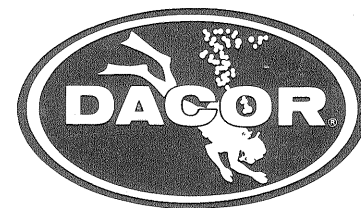


**DACOR<sup>®</sup>**  
**EquaNO<sup>2</sup>x<sup>™</sup>**  
**DIVING COMPUTER**  
**USER'S GUIDE**



# EquaNO<sup>2</sup>x COMPUTER OPERATION MANUAL

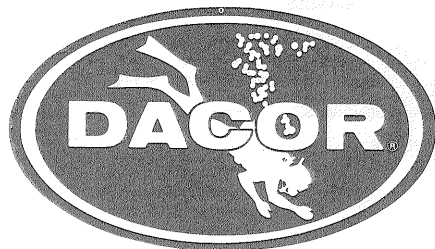
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**!WARNING**  
READ THIS MANUAL IN ITS ENTIRETY AND COMPLETELY UNDERSTAND HOW THE EquaNO<sup>2</sup>x COMPUTER WORKS BEFORE USING IT. THE INFORMATION CONTAINED WITHIN THIS MANUAL IS IMPORTANT TO YOUR PERSONAL SAFETY. IMPROPER USE, OR MISUSE, OF THIS PRODUCT CAN CAUSE SERIOUS INJURY OR DEATH.

**!WARNING**  
PAY CLOSE ATTENTION TO INFORMATION MARKED WITH THIS SYMBOL



## I. NITROX DIVING COMPUTER - AN INTRODUCTION

Welcome to the EquaNO<sup>2</sup>x COMPUTER! The EquaNO<sup>2</sup>x COMPUTER has been designed to be easy to use and to offer you the quality and features that will help make your time underwater as enjoyable as possible.

The EquaNO<sup>2</sup>x COMPUTER is an electronic dive instrument designed for use in recreational SCUBA diving. It provides information to the diver by monitoring the dive parameters and calculating dive tables along with other important information.

- Two different dive tables - NORMAL or HARD which can be selected based on the physical conditions of the diver, water conditions and recent dive history
- LCD light
- Underwater operation switch for the LCD light and beeps option
- Complete dive simulation program

The unique features that the EquaNO<sup>2</sup>x computer offers in addition to the standard information delivered by most computers are:

- Nitrox (EAN) diving capabilities:
  - Adjustable fraction of oxygen (FO<sub>2</sub>) from 21% to 50% in 1% increments
  - Adjustable oxygen partial pressure from 1.2 to 1.6
  - Modified Bühlmann table model with EAD calculation for Nitrox (EAN calculations by Dr Bill Hamilton, Hamilton Research Inc.)
  - CNS clock during diving
  - Current PO<sub>2</sub> display during diving
  - OTU monitor

This owner's manual includes detailed instructions and helpful diagrams to teach you how to properly use the EquaNO<sup>2</sup>x COMPUTER. It is crucial that you read this manual in its entirety and completely understand the features and functions before you use the EquaNO<sup>2</sup>x COMPUTER.

## II. FOR YOUR SAFETY

### !WARNING

ALL DIVERS MUST UNDERSTAND THAT THERE IS NO PROCEDURE OR DIVE COMPUTER, EVEN WHEN USED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, THAT WILL TOTALLY PREVENT THE POSSIBILITY OF DECOMPRESSION SICKNESS. ANY DIVING OR FLYING AFTER DIVING INVOLVES SOME RISK OF GETTING SOME FORM OF DECOMPRESSION SICKNESS. YOU MUST BE WILLING TO ACCEPT THIS RISK WHEN YOU DIVE.

No dive computer is a substitute for proper training and common sense. A dive computer should never be relied upon as the sole means of planning and monitoring a dive. Use back-up equipment and check it regularly. The purpose of this manual is to teach you how to use the EquaNO<sup>2</sup>x COMPUTER dive computer. It is your responsibility to know, understand and follow safe diving principles. Read and understand this manual in its entirety before using the EquaNO<sup>2</sup>x COMPUTER.

### Nitrox (EAN) diving safety precautions:

Only certified nitrox (EAN) divers are allowed to use the nitrox features of this nitrox diving computer.

To be able to use the EquaNO<sup>2</sup>x computer, you need to fully read and understand the operation principles of the EquaNO<sup>2</sup>x computer:

-you need to understand the working principles of dive tables and their use, along with EAD calculation from dive tables

-you need to understand and be able to calculate CNS oxygen toxicity effects

-you need to understand and be able to calculate whole body or pulmonary oxygen toxicity effects (OTU's)

-you need to understand oxygen partial pressure limits, and your personal limits in relation to oxygen partial pressure limits. EXCEEDING 1.4 ATA PO<sub>2</sub> CAN CAUSE SERIOUS INJURY OR DEATH !!!!

Know and remember the signs, symptoms, predisposing factors, prevention measures and treatment of CNS toxicity (oxygen toxicity). Constantly monitor yourself and your dive buddy for these signs and symptoms.  
Always take into account the predisposing factors to CNS toxicity.

Know and remember the signs, symptoms, predisposing factors, prevention measures and treatment of Pulmonary oxygen toxicity. Constantly monitor yourself and your dive buddy for these signs and symptoms.  
Always dive with a dive plan that excludes the possibility of pulmonary toxicity

Understand hypoxia and know how to avoid it

The EquaNO<sup>2</sup>x computer does not free you from making complete dive plans with table calculations for nitrox diving.

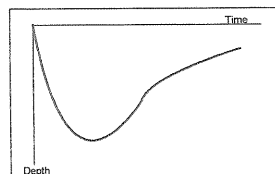
The EquaNO<sup>2</sup>x computer does not prevent you from taking a gas mix deeper than what is safe for that mix - you have to plan the mix and the dive.

The EquaNO<sup>2</sup>x computer does not prevent you from getting injured with miscalculated oxygen dosage for a dive - you have to plan the oxygen dosage prior to diving

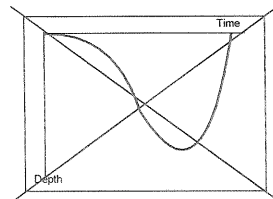
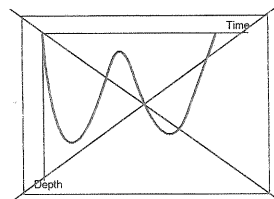
The EquaNO<sup>2</sup>x computer does not prevent you from getting injured due to inaccurate gas analysis

### Multilevel diving safety precautions:

The only dive profile that is considered safe is one where the deepest portion of the dive is made first and the diver then gradually works his way to shallower water avoiding additional descents. The following diagram gives an example of correct dive profile:



Reverse Profiles ( maximum depth reached shortly before surfacing), Yo-Yo Profiles (repeated descents and ascents), consecutive deep dives and repetitive decompression dives, should all be avoided. The following diagrams give example of incorrect profiles:



### Things to consider prior to diving with any dive computer:

1. Read the instructions and understand the operation of the computer thoroughly.
2. Do not dive for a minimum of 24 hours before using a dive computer to control your diving. This will allow your body to eliminate any nitrogen gained from previous dives. Not doing so will invalidate the data provided by the computer.
3. Make sure the computer is functioning properly.
4. Do not share a dive computer while diving.
5. Follow the most conservative computer when diving in pairs.  
If your dive computer malfunctions do not dive with a dive computer for a minimum of 24 hours.
7. Always plan your dive and dive your plan. Prior to initiating each dive, review the following with your buddy and any others with whom you are diving: maximum depth, profile, return time for sufficient air, safety stop, signals between buddies
8. Establish a back-up ascent procedure should the computer fail or if it seems that the data presented by the computer is erroneous.
9. Check the computer for no stop time for planned maximum depth. No stop dives should always include a planned safety stop at between 20' and 10' for 3-5 minutes.
10. Pre-determine a point at which the dive will be terminated due to minimum air supply. This point should consider sufficient air for a controlled ascent (including safety stops), return to the shore/dive vessel, exit from the water with some amount of air remaining.

11. Understand factors that may effect your ability to perform mentally and physically under potentially demanding and stressful conditions. These factors may include temperature, exhaustion, dehydration, age, physical condition, etc.
12. Never dive under the influence of alcohol or drugs. Even some over-the-counter drugs may have side effects incompatible with safe diving.
13. After exhaustive travel take at least one day off before diving. Be sure to drink plenty of non-alcoholic, non-caffeinated beverages.
14. Learn and remember the signs and symptoms of decompression illness. Report any signs and/or symptoms (or anything out of the ordinary) promptly for rapid and effective evaluation and possible treatment. Rapid reporting of decompression illness may enhance the likelihood of symptom resolution.

If you have any questions regarding your fitness to dive, drug interaction in the underwater environment or the signs/symptoms of decompression illness call the Divers Alert Network (D.A.N.) information line at 919-684-2948 (9-5 EST Monday - Friday). For diving emergencies, call 919-684-8111.

#### Things to consider while diving with a computer:

1. Check that the computer was activated prior to entering the water and monitor its performance throughout the dive. If it appears to be functioning improperly, abort the dive and follow predetermined ascent procedures.
2. If you and your buddy are using the same model computer, compare your display with your buddy's while underwater.
3. Frequently check for no decompression time.
4. Frequently check your air supply and communicate that information to your buddy.
5. Make the deepest portion of the dive first and work your way up to shallower water towards the end of your dive.
6. Avoid repeated ascents and descents ('yo-yo' diving) even in relatively shallow water.
7. If your computer, or your buddy's computer, malfunctions, terminate the dive and initiate predetermined ascent procedures immediately.

#### Things to consider while ascending with a computer:

1. Start the ascent according to the most conservative dive profile.
2. Do not exceed the ascent rate defined on the computer.
3. Always do safety stops.

#### Things to consider when doing repetitive dives with a computer:

1. Do the deepest dive of the day first. All subsequent dives should be shallower.
2. Data provided by D.A.N. indicates an increased risk of decompression illness on repetitive dives deeper than 80'.
3. If you have violated any of your computer's parameters do not dive for a minimum of 24 hours.
4. Avoid repetitive dives if you have any factors that may contribute to decompression illness (exhaustion, dehydration, poor physical condition, fatigue, etc.)

#### Things to consider after diving with a computer:

1. Be sure to follow all rules and regulations regarding flying after diving.

### III. OVERVIEW OF THE EquaNO<sup>2</sup>x COMPUTER

#### FEATURES

The EquaNO<sup>2</sup>x provides the following information to help you control your dive:

Dive time  
Depth  
Maximum depth  
CNS %  
Current PO<sub>2</sub>  
OTU counter  
Dive number  
No stop time (time remaining before a decompression stop is required)  
Total ascent time (if you are in a decompression situation)  
Surface time  
Desaturation time

It gives the following warnings:

PO<sub>2</sub> limit violation  
CNS% violation  
Ascent rate  
Start ascent (no decompression stop time is up)  
Decompression dive is being entered  
Move to stop depth (decompression stop ceiling has been violated)  
Battery low

It gives the diver choices:

Fraction of oxygen FO<sub>2</sub> setting  
Oxygen partial pressure (PO<sub>2</sub>) limit setting  
Dive tables - conservative or normal  
Standard or metric scale  
Altitude group

Additional features:

OTU counter for pulmonary oxygen toxicity monitoring  
Dive profile memory  
Dive planning mode  
Allows you to scroll through the no stop times  
PC down load capability  
Battery can be replaced by the user without memory loss in profile memory  
Underwater operable switch for illuminated LCD

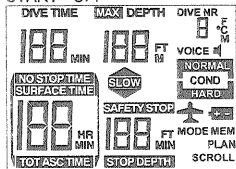
## LCD DISPLAYS

The visual displays on the LCD screen will change according to the information being delivered.

To protect the LCD from scratching you should apply one of the protective sheets that come with each unit, to the LCD surface. It is a removable sticker, that can later be changed to a new one, once it comes worn out.

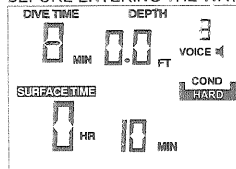
The screen examples in the manual are shown in either metric or imperial units, but you should use the display with which you are most comfortable with. The diagrams below show how the screen will appear during different aspects of the dive.

### START - UP:



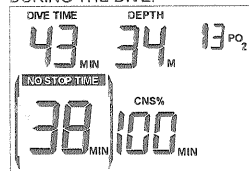
At start-up all segments light for 5-10 sec showing unit self test and adjusting to ambient pressure.

### BEFORE ENTERING THE WATER:



Before entering the water, computer shows surface time (=time from start-up), current  $PO_2$ , beeps on, dive conditions HARD and last dive time.

### DURING THE DIVE:



During the dive, computer shows Dive time 43 mins, Depth 34 m, current  $PO_2$  1.3 no-stop time left 38 mins, CNS% full 100%.

### DURING DECOMPRESSION:

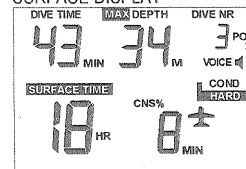


During decompression computer shows : Dive time 43 mins, depth 31 m, current  $PO_2$  1.6 Total ascent time 18 min with (first) stop at 10 meters. (CNS% gives way to deco stop).

### DURING SURFACE INTERVAL

During surface interval, the EquaNO<sup>2</sup>x computer will scroll between three different displays: Surface display, Nitrox features display and Desaturation display

#### SURFACE DISPLAY



During surface interval, the computer shows : Surface time 18Hrs 8 mins (from last dive), current  $PO_2$  0.3, dive time 43min, max depth 34m.

#### NITROX FEATURES DISPLAY



#### DESATURATION TIME DISPLAY



The nitrox features display will show current CNS% and gained OTU's. The computer will update the CNS percentage, also at surface. CNS clock half time is 60 mins.

The third and last surface display of the EquaNO<sup>2</sup>x is the desaturation time display, that gives the diver the time to desaturate, in hrs and minutes. The EquaNO<sup>2</sup>x desaturation time is calculated to normal sea level pressure + pressure equal to 1/2 foot sea water