SCUBAPRO®

Aladin 2G

deep down you want the best
scubapro.com

SAFETY CONSIDERATIONS

You must carefully read and understand this entire manual before using your Aladin 2G.

⚠ WARNING

Diving has many inherent risks. Even if you follow the instructions of this manual in a careful manner, it is still possible that you may be seriously injured or die from decompression sickness, oxygen toxicity or some other inherent risk of scuba with Nitrox or compressed air. Unless you are fully aware of these risks and are willing to personally accept and assume responsibility for those risks, do not use Aladin 2G.

Guidelines for the use of Aladin 2G

The following guidelines for using Aladin 2G are derived from the latest medical research and the recommendations of the American Academy of Underwater Sciences for diving with diving computers. Following these guidelines will greatly increase your safety while diving, but cannot guarantee that decompression sickness or oxygen toxicity will not occur.

- Aladin 2G is designed for dives with compressed air (21% O_2) and Nitrox (22 to 100% O_2) only. Do not use Aladin 2G for dives made with other mixed gases.
- It is absolutely necessary to check the set mixture before each dive and to compare it to the gas mixture currently used. Always remember: setting an incorrect mixture carries an inherent risk of decompression sickness and/or oxygen toxicity! Maximum deviation from the measured mixture must not exceed 1% O_2. An incorrect gas mixture can be lethal!
- Only use Aladin 2G with open circuit breathing systems.
- Only use Aladin 2G for diving with an independent breathing apparatus.
  Aladin 2G is not designed for long term exposures with Nitrox.
- Always observe the visual and audible alarm signals. Avoid situations of increased risk which are marked with a warning sign in this operating manual.
- Aladin 2G has a ppO_2 warning. The default limit is set at 1.4bar ppO_2 max. It can be changed between 1.2 and 1.6bar.
- Frequently check the "oxygen clock" (CNS O_2). Ascend and finish the dive if the CNS O_2 exceeds 75%.
- Never dive deeper than the Maximum Operating Depth (MOD) pertinent to the gas mixture in use.
- Always check the diving limits considering the oxygen content and standard sports diving procedures (decompression sickness, oxygen toxicity).
- In accordance with the recommended maximum diving limit of all instructional agencies, do not dive deeper than 40 metres/130 feet.
- The danger of nitrogen narcosis has to be taken into consideration. Aladin 2G gives no warning about this.
- On all dives, with or without dive computer, make a safety stop for at least 3 minutes at 5 metres (15 feet).
- All divers using dive computers to plan dives and indicate or determine decompression status must use their own computer, which they take with them on all dives.
- If Aladin 2G fails at any time during the dive, the dive must be terminated, and appropriate surfacing procedures (including a slow ascent and a 3 to 5 minute safety stop at 5 metres /15 feet) should be initiated immediately.
- Comply with the ascent rate and carry out any decompression stop required. If the computer should fail for any reason, you must ascend at a rate of 10m (30ft) per minute or less.

- On any given dive, both divers in a buddy pair must follow the most conservative dive computer for that particular dive.
- Never dive without a buddy. Aladin 2G does not substitute for a dive buddy.
- Only make dives that are appropriate to your level of dive training. Aladin 2G does not increase your knowledge of diving.
- Always dive with back-up instruments. Make sure that you always use back-up instrumentation including a depth gauge, submersible pressure gauge, digital bottom timer or dive watch, and have access to decompression tables whenever diving with a dive computer.
- Avoid repeated ascents and descents (yo yo diving).
- Avoid repeated heavy workload while at depth.
- Plan the dives to be shorter if they are made in cold water.
- After finishing the decompression or at the end of a no-stop dive, the final stage of the ascent should be as slow as possible.
- You MUST be familiar with all signs and symptoms of decompression sickness before using Aladin 2G! Seek IMMEDIATE treatment for decompression sickness should any of these signs or symptoms occur after a dive! There is a direct correlation between the effectiveness of treatment and the delay between the onset of symptoms and the treatment for decompression sickness.
- Only dive with Nitrox after you have been thoroughly instructed by a recognized institution.

Repetitive dives

- Do not start your next dive before your CNS O_2% status has dropped below 40%.
- When diving with Nitrox, make sure your surface interval is long enough (just like diving with compressed air). Plan for a minimum surface interval of two hours. Oxygen, too, needs sufficient time to leave the body.
- Match gas mixture to the intended dive.
- Do not attempt a repetitive dive if the no-dive warning ⊘ is visible on the display.
- Plan a day without diving once a week.
- If you have to change computers, wait at least 48 hours before carrying out your next dive.
- Diving after a reset of the remaining saturation (reset, see page 62, or battery replacement, see page 68) may lead you into potentially hazardous situations which could result in death or serious injury. After a reset of the remaining saturation do not dive for at least 48 hours.

Altitude and diving

- Do not dive at altitudes higher than 4000m (13000ft).
- After a dive do not rise to altitudes that Aladin 2G prohibits via the flashing altitude range number (see page 31).

Flying after diving

- After diving, wait at least 24 hours prior to flying.

$C\epsilon$

TABLE OF CONTENTS

English

1. INTRODUCTION

Congratulations on purchasing Aladin 2G and welcome to SCUBAPRO. From now on you will enjoy the assistance of the most extraordinary dive computer - equipped with SCUBAPRO's most innovative technology - while diving.

Aladin 2G enables you to use two different gas mixtures during the same dive. However, for an easy reading this manual mainly refers to dives with a single gas mixture. Information for diving with two gas mixtures is marked with ÎÎ or has been summarized in special chapters.

We thank you for choosing Aladin 2G and we hope you will enjoy safe dives in the future! Further information on SCUBAPRO dive computers and other products by SCUBAPRO can be found on our web page at www.scubapro.com.

To make this manual easier to read we will use the term "Aladin 2G" as an abbreviation for "SCUBAPRO Aladin 2G diving computer" throughout this booklet.

Safety considerations
Dive computers provide divers with data; they, however, do not provide the knowledge how this data should be understood and applied. Dive computers cannot replace common sense! You must therefore carefully read and understand this entire manual before using your Aladin 2G.

Important remarks concerning signal words and symbols
This operating manual makes use of the following icons to indicate especially important comments:

☞ *NOTE:*
Information and tips which are important for optimal use of the functions of Aladin 2G.

Danger!

⚠ **WARNING**
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

The following symbols are used in the operating manual:

-`26`-   Flashing display

->   Page reference e.g. ->10

ÎÎ   Valid only for dives with 2 gas mixtures

Audible signals

•)) 4 s •))   Audible attention signal

•)•)•) •)•)•)   •)•)•) •)•)•)   Audible alarm signal

Instructions for manual input

◖ ○   Press left push button
● ○   Press and hold (1 second) left push button

○ ◗   Press right push button
○ ●   Press and hold (1 second) right push button

● ●   Press and hold (1 second) both push buttons

◯ **Alternate displays**
By pushing ○ ◗ during the dive you can scroll through alternate displays.

How to get back to the first display:
• scrolling with ○ ◗ through the displays
• after 5 seconds: automatically if marked with ⟐
• after 5 seconds: directly by pushing 1x ○ ◗

E.g. Max depth ○ ◗ > Temperature ○ ◗ > Temperature, Time ⟐ ○ ◗ > Max depth

⟐   Time out after 5 seconds without operation. Display switches back to original indication.

Quick reference

Time of day / Date
Decompression depth / Level stop depth
Desaturation time (DESAT)
Duration of no-dive warning
Duration of surface interval

Current depth
Altitude sections
Logbook icon
Decompression stop obligation / Ignored decompression stop
Decompression stop indicator
Level stop indicator
Decompression stop duration
Level stop duration
MB level icon (input / MB level reduced)
O₂ mix icon (input)
Max depth
Temperature
MB level
Maximum Operating Depth (MOD)
Average depth
Dive number

Apnea icon

PDIS icon

Average depth icon

Too fast ascent

Gauge icon

Setting icon
Service icon

Do not fly icon
No-dive warning

Dive time / No-fly time / SOS duration
Repetitive dive number
Battery icon
No-stop indicator
Ascent time icon
No-stop time / Total ascent time
MB no-stop time
Partial pressure of oxygen ppO₂
Alarm clock icon / Infrared icon
Nitrogen loading bar (dive)
Residual Nitrogen bar (surface)
Desaturation
Battery condition
O₂ mix
Oxygen toxicity CNS O₂%
Ascent rate

$[\circlearrowleft]$ Icon for stopwatch and safety stop timer
AMPM AM/PM icon
DESAT Desaturation icon

Operating scheme

"->" means "more information at page"

Off

• (Desat. time CNS O₂% ⊘) ->15
• Date ⊘ ->16
• Battery condition ⊘ ->16

Gas d
O₂%
->48

Gas 1
O₂%
->21

Time of day display

| MB Level L0-L5 ->37 | Dive mode selection (Algo): deco/gauge/ APNEA ->35 | Altitude adjustment ->58 | Set 3 ->63 (Apnea) | Set 2 ->63 | Set 1 ->58 | Dive planner ->54 | Logbook ->56 |

○ ● Enter
○ ◑ / Scroll / Change setting
◐ ○
● ○ Backlight
● ● Exit
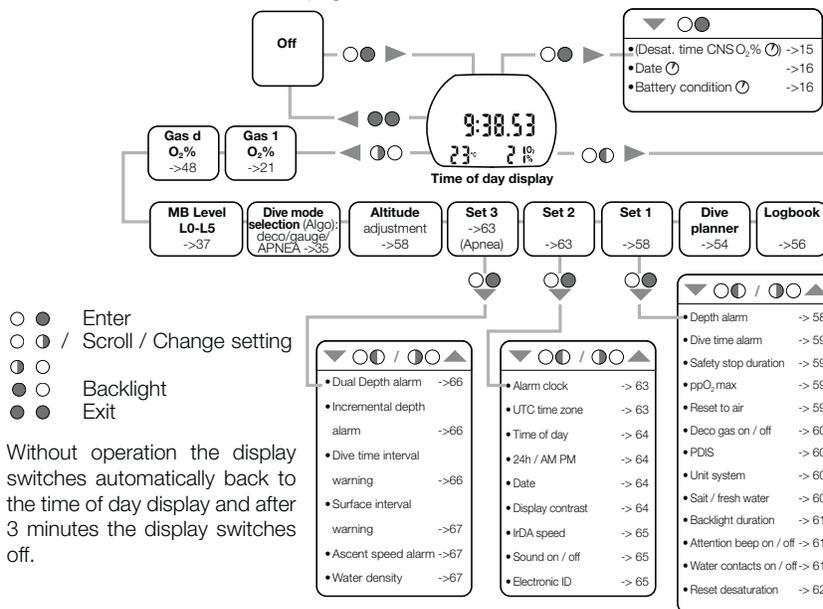
Without operation the display switches automatically back to the time of day display and after 3 minutes the display switches off.

• Dual Depth alarm ->66
• Incremental depth alarm ->66
• Dive time interval warning ->66
• Surface interval warning ->67
• Ascent speed alarm ->67
• Water density ->67

• Alarm clock -> 63
• UTC time zone -> 63
• Time of day -> 64
• 24h / AM PM -> 64
• Date -> 64
• Display contrast -> 64
• IrDA speed -> 65
• Sound on / off -> 65
• Electronic ID -> 65

• Depth alarm -> 58
• Dive time alarm -> 59
• Safety stop duration -> 59
• ppO₂ max -> 59
• Reset to air -> 59
• Deco gas on / off -> 60
• PDIS -> 60
• Unit system -> 60
• Sait / fresh water -> 60
• Backlight duration -> 61
• Attention beep on / off -> 61
• Water contacts on / off -> 61
• Reset desaturation -> 62

See also page 15

Display switched off

Gas d O$_2$%	Gas 1 O$_2$%		Logbook	Diveplanner
[O$_2$]	[O$_2$]	(clock)	(book icon)	PLn

◄ / ► ◄ / ► ◄ / ►

Gas d O$_2$% column:

Oxygen concentration

ppO$_2$ max

Confirmation

Gas 1 O$_2$% column:

Oxygen concentration

ppO$_2$ max

Confirmation

Logbook column:

Page 1

Max depth — 28.9 35 — Dive time
Date of the dive — 09.02.04 — Battery performance
— 2 I% — O$_2$ mix
Dive number

Page 2

Altitude range (if >0) — — Repetitive dive number
10:32.50 — Starting time
Minimum temperature — 25° — 8% — CNS O$_2$% at the end

Page 3

SOS if applicable — SoS Int — Surface interval if applicable
2:35
(MB level) — L2 50%
O$_2$ mix deco gas (if used)

Exit

After the oldest dive:

Statistic information

Deepest dive — 28.9 26 — Longest dive
23 h — Cumulative bottom time
Number of dives — 53

Diveplanner column:

Surface interval

No-stop dive

Add (MB-) No-stop time
99:
3.0 2 I%
Depth

Decompression dive

Bottom time
Add 22:
1: 3 4
27.0 4

Exit

2. SYSTEM AND OPERATION

2.1 System description

Aladin 2G displays all important dive and decompression data and has a memory which stores the full dive data. The data can be transmitted with an infrared interface (IrDA) and SmartTRAK software to a Windows® personal computer.
SmartTRAK software CD is included with the Aladin 2G package.

Aladin 2G

SmartTRAK

— Infrared port

Infrared Interface
(option)

2.2 Operation

☞ NOTE: On page 7 and 15 you will find an operating schematic.

2.2.1 Push buttons

Aladin 2G can be operated with two push buttons (○ ○). Operation of the push buttons is divided into "press" (◑ / ◐) and "press and hold (1 second)" (● / ●).

At the surface:

Push buttons
Water contacts
(one on front and one on
back, inaccessible)

○ ●/● ○ • Switch on Aladin 2G (time of day display)
   ○ ● • Comparable to the ENTER or RETURN key of
           a keyboard
   ○ ● • Enter into the displayed sub menu
   ○ ● • Open the displayed setting
   ○ ● • Confirm or enter the displayed value or setting
◑ ○/○ ◐ • Scroll through a menu
◑ ○/○ ◐ • Once entered with ○ ● into a sub menu or
           setting:
             • Increase (○ ◐) or decrease (◑ ○) the
               indicated value
             • Change the setting
   ● ○ • Operate the backlight
   ● ● • Exit the current function or menu and switch to
           the time **of day display**
   ● ● • Switch off Aladin 2G

Apnea mode:

   ○ ● • Start dive manually

Underwater dive mode (Algo):

○ ◑ • Access alternate displays ⬭
◐ ○ • Set bookmark
○ ● • Operate the backlight
◐ ○ • Activate the safety stop timer (dive mode only, in depths < 6.5m / 20ft)

Gauge mode (stopwatch):

◐ ○ • Restart

🗇🗇 Diving with two mixtures:

○ ● • Initiate switch to gas d or gas 1
   • ○ ◐ Interrupt switching process
○ ● • Confirm switch to gas d or gas 1

2.2.2 Water contacts

On submerging in water the water contacts switch on Aladin 2G automatically.

> ### ⚠ WARNING
>
> **If you have chosen the option "Water contacts off" ("set 1", ->58), Aladin 2G will turn on with a delay of up to 1 minute into the dive. This will affect functioning of the computer. Make sure that the computer is on before starting the dive.**

2.2.3 SmartTRAK

With SmartTRAK you can configure Aladin 2G, transfer dive data to a personal computer and graphically display the data. To start the communication, turn on Aladin 2G and place it so that its infrared port is in front of the infrared interface. If Aladin 2G detects an infrared device within range 🔊 appears.

Configuring Aladin 2G

To configure Aladin 2G, select "Dive Computer Settings" under "OPTIONS" on the main menu bar of SmartTRAK after having established communication between your PC and Aladin 2G. The following window will appear:
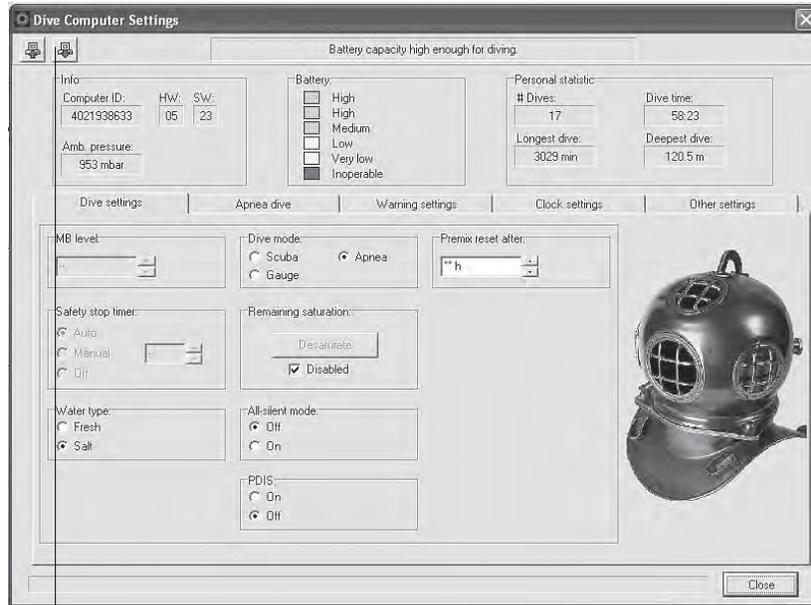
When making any changes to the settings via SmartTRAK, you must press the "Write" icon for the changes to take effect.

English

The following settings may be changed with SmartTRAK or via set 1/set 2/set 3 directly on Aladin 2G:

Scuba Setting	Range	Default	Page
• Depth alarm	5 - 100m (20 - 330ft) on/off	40m (130ft),off	58
• Dive time alarm	5-195min, on/off	60min, off	59
• Safety stop duration	1-5min	3 minutes	59
• Maximum partial pressure of oxygen (ppO$_2$ max)	1.2-1.6bar	1.4bar	59
• Time limit to reset the O$_2$% mix to air	no reset / 1 - 48hrs	no reset	59
• Deco gas	on/off	off	60
• PDIS (Profile Dependent Intermediate Stop)	on/off	off	60
• Unit system	metric/imperial		60
• Water type	on (salt water)/off (fresh water)	on (salt water)	60
• Backlight illumination duration	2-12s ; push on / push off	6s	61
• Audible attention signals	on / off (SmartTRAK: selective)	on	61
• Water contacts	on / off	on	61
• Reset desaturation	on / off	no reset	62
• Gauge mode	on / off	off	33
• Alarm clock	0 - 23h 59min, on/off	12:00, off	63
• UTC (Universal Time Change) zone	±13hrs, increments: 15min		63
• Time of day	hours:minutes		64
• 24 or AM/PM setting	24 (off) / AM/PM (on)		64
• Date			64
• Display contrast	1 (low) -12 (high)	4	64
• IrDA speed setting (only "set 2")	low / high	low	65
• Sound	on / off	on	65
Apnea Setting			
• Dual Depth alarm 1	5-100m (20-330ft)	10m (35ft), off	66
• Dual Depth alarm 2	5-100m (20-330ft)	20m (65ft), off	66
• Incremental depth alarm	5-100m (20-330ft), way down, way up, both off	5m (20ft), off	66
• Dive time interval warning	15s-10min, on/off	30s, off	66
• Surface interval warning	15s-10min, on/off	1 min, off	67
• Ascent speed alarm	0.1-5m/s (1-15ft/s)	1 m/s (3 ft/s), off	67
• Water density	1.000-1.050 kg/l	1.025 kg/l	67

The following data may be recalled with SmartTRAK:

- Number of past dives
- Total duration of dives
- Deepest dive
- Longest dive
- Atmospheric pressure
- Dive profile

- Logbook
- Temperature curve
- Alarms and attention messages
- Bookmarks
- Average depth
- Battery condition

Downloading your dives

Aladin 2G's memory allows you to store approximately 25 hours of SCUBA dive profile information in 4 second sampling intervals. In Apnea mode the display is updated faster (in 0.25s intervals and logbook in 1s intervals), therefore in Apnea mode at least 6h of Apnea profiles will be stored. With SmartTRAK you can transfer this information to the PC in order to visualize and analyze your dives on the monitor. To download data from Aladin 2G, click on "NEW" under the "LOGBOOK" menu to open and name a new logbook or open an existing logbook. Then click on the "TRANSFER DIVES" icon: a box will appear on the screen identifying the computer being downloaded, and a progress bar will show the status of the transfer.

You can choose between transferring all dives or new dives only (default setting) from Aladin 2G's memory. If you choose to transfer new dives only, SmartTRAK will only transfer dives that are more recent than the most recent dive already saved in the PC logbook. To transfer all dives, you must change the default setting by selecting "Transfer" under "Dives" in the main menu bar.

Once the data is downloaded, a window will show you a summary table of all dives; for the selected dive, another window will show you its details. From these windows you can add and edit your dive information.

Dive window

Dive information panel

Dive profile panel

Alarm symbols

Notes panel

Dive computer display

Tissue panel

Physiology panel

Dive table

(Screenshot: Andi.slg - SmartTRAK [User: -] - [Dive Table] — dive log table; contents illegible)

2.2.4 Switching on the display

- automatically, on submerging in water* or when adaptation to atmospheric pressure is necessary;
- manually, by pushing ● ○ or ○ ●. If switched on with ● ○ all segments light up for 5 seconds.
- Afterwards the display shows the time of the day, the O_2 mix and the temperature.

☞ NOTE: *This display is called time of day display. Most navigation descriptions start from this display. At the surface Aladin 2G returns automatically to this display.*

If there is a remaining saturation from the last dive or from a change of altitude, Aladin 2G also displays the "do not fly" time, the "do not fly" icon, the current altitude range and the prohibited altitude range (->31).

☞ NOTE: *When Aladin 2G is in state of rest no information is displayed but the atmospheric pressure is continuously monitored. If a change in altitude range is detected, Aladin 2G switches on for 3 minutes automatically ->31.*

* Only if the option "Water contacts on" ("set 1", ->61) is chosen. See warning ->10.

Time of day display

2.2.5 How to navigate Aladin 2G at the surface

Starting from the **time of day display** you can enter into different menus.

"->" means "more information at page"

			Off

• (Desat. time CNSO₂% ⏱)	->15
• Date ⏱	->16
• Battery condition ⏱	->16

9:38.53

23 ℃   2 1⁰⁄₁%

Time of day display

Gas d O₂% ->48	Gas 1 O₂% ->21

MB Level L0-L5 ->37	Dive mode selection (Algo): deco/gauge/ APNEA ->35	Altitude adjustment ->58	Set 3 ->63 (Apnea)	Set 2 ->63	Set 1 ->58	Dive planner ->54	Logbook ->56
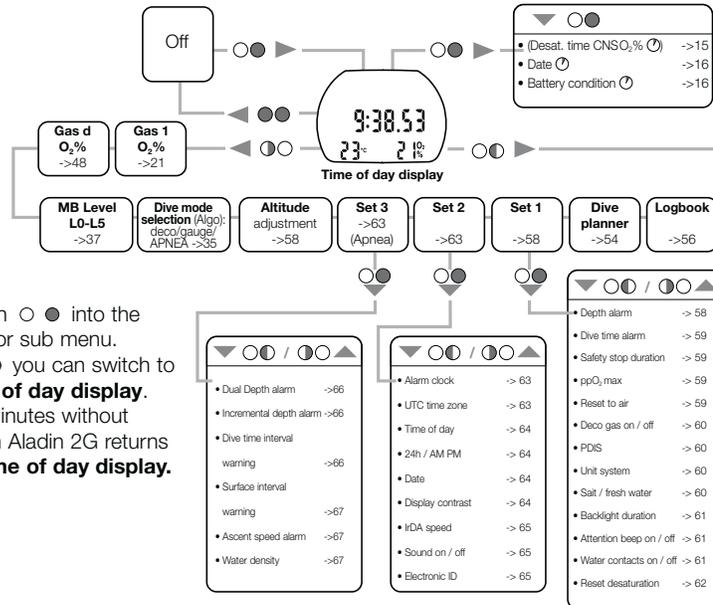
- Enter with ○ ● into the function or sub menu.
- With ● ● you can switch to the **time of day display**.
- After 3 minutes without operation Aladin 2G returns to the **time of day display.**

• Dual Depth alarm ->66
• Incremental depth alarm ->66
• Dive time interval warning ->66
• Surface interval warning ->67
• Ascent speed alarm ->67
• Water density ->67

• Alarm clock -> 63
• UTC time zone -> 63
• Time of day -> 64
• 24h / AM PM -> 64
• Date -> 64
• Display contrast -> 64
• IrDA speed -> 65
• Sound on / off -> 65
• Electronic ID -> 65

• Depth alarm -> 58
• Dive time alarm -> 59
• Safety stop duration -> 59
• ppO₂ max -> 59
• Reset to air -> 59
• Deco gas on / off -> 60
• PDIS -> 60
• Unit system -> 60
• Salt / fresh water -> 60
• Backlight duration -> 61
• Attention beep on / off -> 61
• Water contacts on / off -> 61
• Reset desaturation -> 62

2.2.6 Checking the desaturation time

No-fly time
Do not fly icon
No-dive warning
Residual nitrogen bar
Desaturation time
Oxygen toxicity
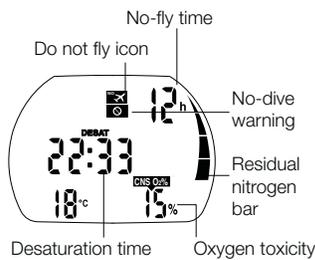
From the **time of day display** you can check the desaturation time* by pushing ○ ● . Desaturation time is determined either by oxygen toxicity, nitrogen saturation or the regression of microbubbles, depending on which requires the longer time.

The display switches back to the **time of day display** after 5 seconds without operation.

* Only displayed if there is a remaining saturation due to the last dive or change of altitude.

> **⚠ WARNING**
>
> For the calculations of the desaturation and no-fly time it is assumed that the diver breathes air while on the surface.

2.2.7 Checking the surface interval

Surface interval

From the time of day display you can check the surface interval by pushing ○ ◐ (logbook menu).

The surface interval is the time since the end of the last dive and is displayed as long as there is remaining saturation.

2.2.8 Displaying the date

Date

From the time of day display you can display the date by pushing 1x or 2x ○ ● (depending on whether there is desaturation time left).

The display switches back to the time of day display after 5 seconds without operation.

2.2.9 Checking the battery condition
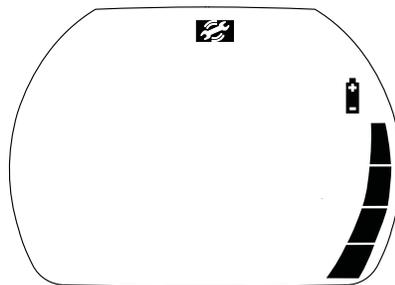
Battery condition / performance

From the time of day display you can check the battery condition by pushing 2x or

3 x ○ ● (depending on whether there is desaturation time left).

Aladin 2G displays the estimated remaining battery performance for 5 seconds as a bar graph. If the bar graph shows 3 segments the battery warning appears ->21 and the battery has to be replaced ->68.

> ### ⚠ WARNING
>
> • If the bar graph shows 2 segments, the battery symbol will blink, on the surface and in dive mode, to alert the diver of a dangerous situation: the battery may not have enough energy to finish a dive.
> • Replace the battery when the steady battery symbol appears (3 segments)!

☞ NOTE: The temperature influences the battery performance. In cold water it is lower than in warm water. If the battery shows 4 segments on the surface, it is possible for it to drop to 3 segments during the dive. If this is the case, the backlight will be temporarily disabled. See below.

Bar graph interpretation

Battery performance high enough for diving.

Battery warning appears. Backlight deactivated. Replace the battery! ->68

Diving not possible, dive planner and settings are disabled
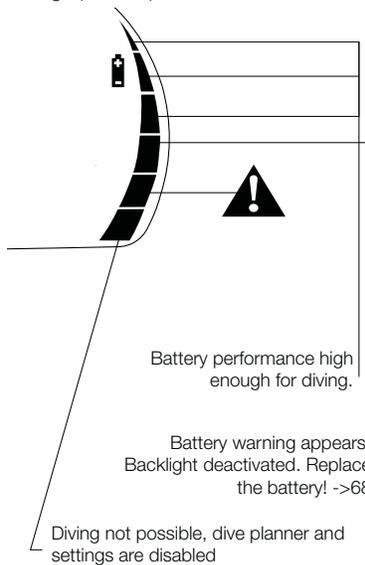
⚠ WARNING

Flashing battery warning. Audible alarms and attention messages disabled! Backlight deactivated! Risk of computer malfunction. Do not let the battery reach this condition!

Aladin 2G marks dives started with 3 or less segments in the logbook with the battery symbol.

Logbook information is not lost even when the battery is removed for a long time.

2.2.10 Active backlight

The display of Aladin 2G can be illuminated both on the surface and underwater.

The backlight can be activated by pushing ● ○ . The light will turn off automatically. The default duration is 6 seconds. The duration can be changed in "set 1" (->58) or with SmartTRAK between 2 and 12 seconds. It can also be set to "push on / push off", in which case the light stays on until you turn it off by pressing ● ○ again. The backlight can only be activated if the computer display is on.

☞ *NOTE: Repeated activation of the backlight will reduce battery life.*

☞ *NOTE: Keeping the backlight permanently on represents a severe strain on the battery. In warm waters (20 °C/68 °F and above), a new battery can sustain 20-40 1-hour dives with the backlight always on. In cold waters (4 °C/40 °F and below) the low battery warning may* come on within the first dive. For temperatures between 4 °C/40 °F and 20 °C/68 °F the life of a new battery will be somewhere between 1 and 20 1-hour dives. Aladin 2G monitors the battery level throughout every dive, and if the available energy drops below the warning threshold, Aladin 2G will automatically disable the backlight to prevent a computer shut down.

2.2.11 Switching off the display

From the time of day display you can switch off Aladin 2G by pushing ● ● .

On the surface Aladin 2G switches off automatically after 3 minutes without operation.

2.2.12 Alarm clock

The alarm clock goes off only at the surface. If the alarm clock is "on", the time of day display shows [▶◀)].

When alarm is triggered: [▶◀)] flashes and special attention beeps are played for 30 seconds or until the user presses a button.

Setting the alarm clock: ->63 ("set 2")

2.3 SOS mode

Time remaining until SOS mode switches off automatically

Activation: automatic

If the diver remains above a depth of 0.8m (3ft) for more than three minutes without observing a prescribed decompression stop, the computer will automatically switch into SOS mode after the dive.

Push ○ ● to see the "SOS" sign and the remaining length of the SOS mode. The

dive will be entered in the logbook with "SOS".

The SOS mode will be unlocked after 24 hours.

While in SOS mode, the computer cannot be used for diving. The computer can however be used in gauge mode ->33. All segments in the nitrogen loading bar will flash throughout the dive.

Diving within 48 hours after the end of an SOS mode will result in shorter no stop times or longer decompression stops.

⚠ WARNING

- Serious injury or death may result if a diver does not seek immediate treatment should any signs or symptoms of decompression sickness occur after a dive.
- Do not dive to treat symptoms of decompression sickness!
- Diving in SOS mode is extremely dangerous and you must assume full responsibility for such behavior. SCUBAPRO will assume no liability.

A diving accident can be analyzed at any time in the logbook and downloaded to a PC by means of the infrared interface (IrDA) and SmartTRAK software.

3. DIVING WITH ALADIN 2G

3.1 Terminology / Symbols

The information on the display of Aladin 2G varies depending on the kind of dive and the dive phase.

☞ NOTE: For information about diving with microbubble (MB) levels see ->37. Specific features of "Diving with two gas mixtures", are described in chapter 8 ->48.

3.1.1 General terminology / Display during no-stop phase

Current depth
In metres (feet)

Dive time
Duration of the dive (min)

Nitrogen loading bar

No-stop time
Remaining time at a given depth during which ascent is allowed without decompression stop (min).

Max depth
Max depth reached during the dive

Oxygen toxicity
CNS O₂%

Ascent rate
(Only while ascending)

No-stop phase
Dive phase during which surfacing is allowed without stop.

Decompression phase
Dive phase during which surfacing is allowed only after decompression stops are completed.

Time ▶

Depth

Current depth   24min

26.2m   Max depth

37min dive time   No-stop time

Elapsed bottom time

⬯ (Max depth ○ ◐ >) Temperature
   ○ ◐ > Temperature ⏱, O₂ mix ⏱ and time of day ⏱ ○ ◐ > (Max depth)...

3.1.2 Display during decompression phase

Decompression stop
All required decompression stops must be observed.

Decompression stop depth
Deepest stage is displayed.

Decompression stop duration
Prescribed duration of the decompression stop at the displayed decompression stage (minutes).

Total ascent time
Including decompression stops in minutes.

Time ▶

Depth ▼

Total ascent time to surface (7min)

3m

6m   Deepest decompression stop depth

2min
Decompression stop duration

35.7m

No-stop range   Decompression range

English

3.1.3 Nitrox information (O$_2$ information)

For dives with compressed air in normal recreational diving, nitrogen is the decisive gas for the decompression calculations. When diving with Nitrox, the risk of oxygen toxicity rises with the increase of the fraction of oxygen and the increase of depth and can limit dive time and the max depth. Aladin 2G includes this in the calculations and displays the necessary information:

O$_2$% mix Fraction of oxygen: The fraction of oxygen in the Nitrox mixture can be set between 21% (normal compressed air) and 100% in 1% increments. Your selected mix will be the basis for all calculations.

ppO$_2$ max Maximum allowed partial pressure of oxygen: the higher the fraction of oxygen in the mixture, the shallower the dive depth at which this value of the partial pressure of oxygen is reached. The depth at which ppO$_2$ max is reached is called Maximum Operating Depth (MOD). When you enter the settings for the gas mixture, Aladin 2G will display the ppO$_2$ max limit setting and the corresponding MOD. Aladin 2G warns you audibly and visually once the depth is reached at which the ppO$_2$ reaches the maximum allowed value ->25.

☞ NOTE:
- *Default setting of ppO$_2$ max is 1.4bar. The value of ppO$_2$ max can be set by means of SmartTRAK or with "set 1" between 1.2 and 1.6bar (->59). It can also be changed at the time of setting the gas mixture (->21).*
- *The CNS O$_2$% value/alarm is not influenced by the selected ppO$_2$ max setting.*

CNS O$_2$% Oxygen toxicity: With the increased percentage of oxygen, the oxygen in the tissues, especially in the central nervous system (CNS), becomes important. If the partial pressure of oxygen rises above 0.5bar, the CNS O$_2$ value increases, if the partial pressure of oxygen is below 0.5bar, the CNS O$_2$ value decreases. The closer the CNS O$_2$ value is to 100%,

the closer the limit where symptoms of oxygen toxicity can occur.
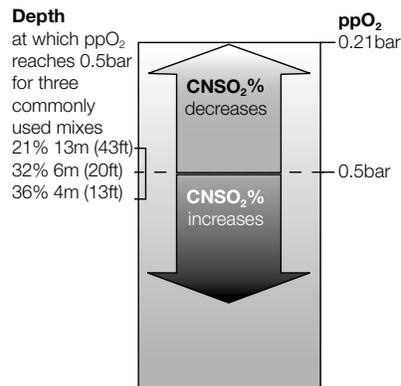
⚠ WARNING

Nitrox diving may only be attempted by experienced divers after proper training from an internationally recognized agency.

3.2 Attention messages and alarms

Aladin 2G draws the diver's attention to certain situations and warns the diver of unsafe diving practices. Attention messages and alarms are visual and / or audible.

☞ NOTE:
- *The audible attention messages can be switched off in "set 1" ->58 or SmartTRAK. With SmartTRAK they can be switched off selectively.*
- *In addition, the sound can be turned off completely in "set 2" ->65.*

⚠ WARNING

If you turn off the sound you will have no audible warnings. Without audible warnings you could inadvertently get into potentially hazardous situations which could result in death or serious injury.

⚠ WARNING

Serious injury or death may result from failing to immediately respond to alarms given by Aladin 2G.

3.2.1 Attention messages

Attention messages are communicated to the diver visually by symbols, letters or flashing figures. In addition, two short audible sequences can be heard (in an interval of 4 seconds) in two different frequencies under water.

•)) 4s •)) (can be switched off)

Attention messages come up in the following situations (more information can be found on the listed pages):

	Page
• Maximum Operating Depth / ppO_2 max is reached	25
• Set max depth is reached	24
• Oxygen toxicity reaches 75%	26
• No-stop time less than 3 minutes	27
• Prohibited altitude (surface mode)	31
• Entering decompression (when diving with L0)	27
• Half of set dive time is reached	23
• Set dive time is reached	23
• 🛢🛢 Depth for tank switch has been reached	52

Diving with MB levels (L1-L5):

	Page
• MB no-stop time = 0	40
• MB level stop ignored	40
• MB level reduced	41
• Entering decompression when diving with MB level L1-L5	41

3.2.2 Alarms

Alarms are given to the diver visually by flashing symbols, letters or figures. In addition, an audible sequence in one frequency can be heard during the whole duration of the alarm.

•)•)•)•) •)•)•)   •)•)•)•) •)•)•)•)

An alarm occurs in the following situations (more information can be found on the listed pages):

	Page
• Oxygen toxicity reaches 100%	26
• Ignored decompression	28
• Exceeding the prescribed ascent rate (Particular scale of beeps, ->25)	24
• Altitude alarm	31

• 🔋 Low battery alarm (without audible alarm): the battery icon appears if the battery has to be replaced   68
• Apnea mode alarm   35

3.3   Preparation for the dive

You have to check the settings of Aladin 2G especially before the first dive. All settings can be checked and changed directly at Aladin 2G or via SmartTRAK.

3.3.1   Setting the gas mixture and ppO₂ max [O₂→]

⚠ WARNING

Before every dive and after changing the tank, make sure that the settings for the gas mixture correspond with the current mixture used. An incorrect setting causes Aladin 2G to miscalculate this particular dive. If the fraction of oxygen is set too low this can lead to oxygen poisoning without warning. If the value is set too high decompression sickness may occur. Inaccuracies in the calculations are carried over to repetitive dives.

🛢🛢 For dives with two gas mixtures please read page 48 for further reference.
To set the gas mixture, Aladin 2G must be in user mode (time of day display).

◗ ○ or ○ ◖ until [O₂→]

1. Push ◗ ○ or ○ ◖ until the GAS 1 O_2 menu appears.

2. Confirm that you wish to change the oxygen fraction of gas 1 by pushing ○ ●.

ppO$_2$max

Max Operating
Depth MOD
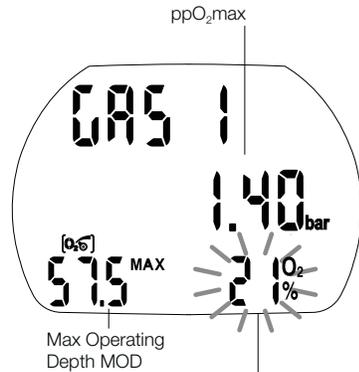
Change the O$_2$% mix by ○ ◐ (+)
and ◐ ○ (–)

3. Change the oxygen fraction in incre-
ments of 1% by pushing ◐ ○ or
○ ◐. Aladin 2G will display the current
fraction of oxygen, the maximum partial
pressure limit (ppO$_2$ max) and the MOD.
4. Confirm the selected percentage with
○ ●.
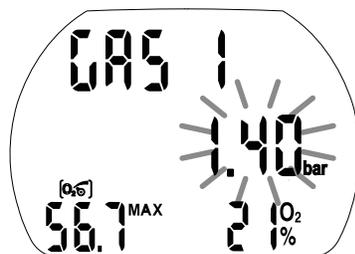
Change the ppO$_2$ max by ○ ◐ (+) and
◐ ○ (–)

5. By pushing ◐ ○ or ○ ◐ you can
change the ppO$_2$ max for the chosen
fraction of oxygen down to 1.0bar. Ala-
din 2G will now display the correspond-
ing MOD for the new ppO$_2$ max.
6. Confirm your ppO$_2$ max settings with
○ ●.

☞ *NOTE:*
- *Without confirmation the display will
disappear after 3 minutes and your
entries will not be accepted.*
- *Automatic reset of the O$_2$% mix to
21% can be set with "set 1" ->58 or*

*SmartTRAK between 1 and 48 hours
or to "no reset" (default).*

3.3.2 [↺] *Setting the MB level*

See chapter 6, ->37

3.3.3 ⬚⬚ *Preparation for diving with
two gas mixtures*

See chapter 8, ->48

3.3.4 *Preparation for the dive and
function check*
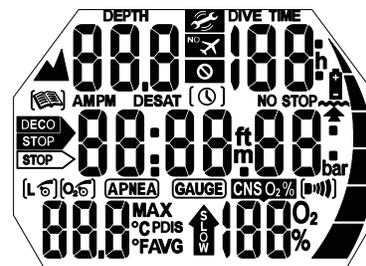
Switch on Aladin 2G by pushing ● ○ and
check the test display: Are all elements of
the display activated? Do not use Aladin 2G
if the display does not show all elements.
When switching on Aladin 2G with ○ ●,
the test display will not appear.

⚠ WARNING

Check the battery capacity before each dive
->16.

3.4 Functions during the dive

3.4.1 Immersion

If the water contacts are deactivated (->61),
switch on Aladin 2G before immersion.

⚠ WARNING

If you have chosen the option "Water contacts
off" ("set 1" or SmartTRAK), Aladin 2G will turn
on with a delay of up to 1 minute into the dive.
This will affect functioning of the computer.
Make sure that the computer is on before
starting the dive.

After immersion, starting at a depth of
about 0.8m (3ft), all diving functions

are monitored, i.e. depth and dive time displayed, max depth stored, saturation of tissues calculated, no-stop time or decompression prognosis determined, ascent rate controlled and displayed and the correctness of the decompression procedure supervised.

3.4.2   Setting bookmarks

During the dive you can create bookmarks in your dive profile by pressing ◑ ○ . The logbook icon 📖 appears for 4 seconds and an audible signal confirms the creation of the bookmark. These bookmarks will be graphically displayed in the dive profile of SmartTRAK.

3.4.3   Dive time
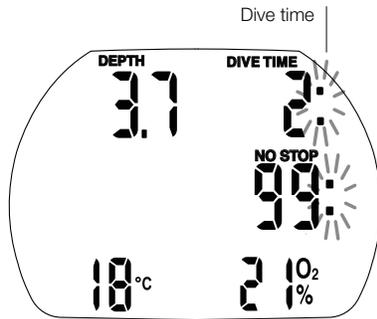
Dive time

The whole time spent below a depth of 0.8m (3ft) is displayed as dive time in minutes. The time above 0.8m (3ft) is counted as dive time only if the diver descends again below 0.8m (3ft) within 5 minutes.

While the dive time is running, the colons on the right of the figures are flashing in one second intervals. Maximum dive time displayed is 199 minutes.

☞ NOTE: If a dive lasts longer than 199 minutes the dive time display starts again at 0 minutes.

⚠ WARNING

Half time alarm (turn around alarm) ->59
If half of the set maximum dive time has elapsed, an audible signal goes off and 🔊 flashes for 1 minute.

⚠ WARNING

Set dive time has elapsed ->23, 59
An audible signal goes off and the dive time starts flashing.

3.4.4   Current depth / O_2% mix

Current depth is given in 10cm increments in metric setting and 1ft increments in imperial setting.

Current depth O_2% mix   Nitrogen loading bar
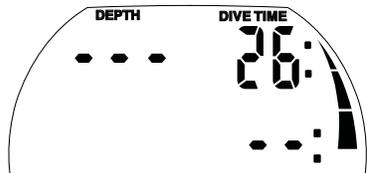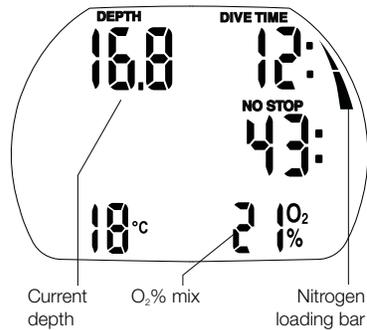
At a diving depth of less than 0.8m (3ft) the display shows "– – – ".

The O_2% mix is diplayed as long as CNS O_2% = 0 and no ascent speed is indicated.

3.4.5   Max depth / Temperature

Max depth   CNS O_2%
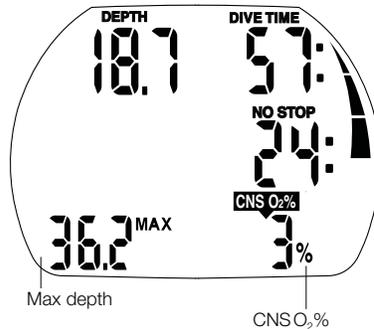
Max depth is only displayed if it exceeds the current depth by more than 1m (3ft) (maximum indicator function). If max depth is not displayed, Aladin 2G shows the temperature.

⬭ ○ ◑ > Temperature, O_2 mix ☉
    ○ ◑ > Temperature ☉, Time ☉,
        O_2 mix ☉
    ○ ◑ > Max depth

Set max depth reached
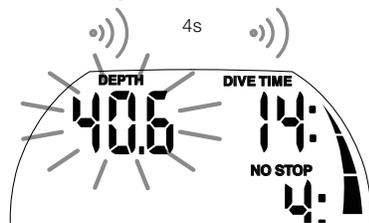
⚠ WARNING

If the max depth set with SmartTRAK or "set 1" has been reached (default 40m/130ft) and the depth alarm is turned on, the depth display will flash.
Ascend until the depth stops flashing.

3.4.6 Ascent rate

Ascent rate

Optimal ascent rate varies depending on depth between 7 and 20m/min (23 and 67ft/min). It is displayed as a percent of the reference variable ascent rate. If the ascent rate is greater than 100% of the set value, the black arrow "SLOW" appears. If the ascent rate exceeds 140%, the arrow starts flashing.
Aladin 2G provides an audible alarm if the ascent rate is 110% or greater. The intensity of the alarm increases in direct proportion to the degree that the prescribed ascent rate is exceeded.

⚠ WARNING

The prescribed ascent rate must be observed at all times! Exceeding the prescribed ascent rate can lead to microbubbles in the arterial circulation which can lead to serious injury or death due to decompression sickness.

- In case of an improper ascent Aladin 2G may require a decompression stop even within the no-stop phase because of the danger of microbubble formation.
- The decompression duration necessary for the prevention of microbubbles can increase massively if the ascent rate is exceeded.
- From great depth a slow ascent may cause heightened saturation of tissues and an extension of both decompression duration and total ascent time.
  At shallow depth, a slow ascent may shorten the decompression duration.

• Display of the ascent rate has the priority over "CNS O$_2$".

⚠ WARNING

Ascent rate	Visual alarm	Audible alarm

110%	🔼	⋅)) ⋅)) ⋅)) ⋅))
140%	⚡	⋅))) ⋅))) ⋅))) ⋅)))
160%	⚡	⋅⋅)))) ⋅⋅)))) ⋅⋅)))) ⋅⋅))))
180%	⚡	⋅⋅)))))) ⋅⋅)))))) ⋅⋅)))))) ⋅⋅))))))

Reduce ascent rate

Excessive ascent rates for longer periods are entered in the logbook.

The following ascent rates correspond to the 100% value in Aladin 2G.

depth (m)	speed (m/min)	depth (ft)	speed (ft/min)
<6	7	<20	23
<12	8	<40	26
<18	9	<60	29
<23	10	<75	33
<27	11	<88	36
<31	13	<101	43
<35	15	<115	49
<39	17	<128	56
<44	18	<144	59
<50	19	<164	62
>50	20	>164	66

3.4.7 Partial pressure of oxygen (ppO$_2$ max) / Maximum Operating Depth (MOD)
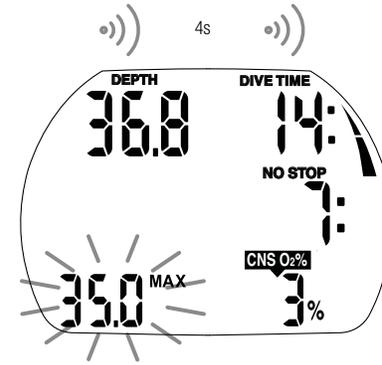
Max Operating Depth MOD

The maximum partial pressure of oxygen ppO$_2$ max (default 1.4bar) determines the Maximum Operating Depth (MOD). Diving deeper than the MOD will expose the diver to oxygen partial pressures higher than the set maximum level.

The ppO$_2$ max and consequently the MOD can be reduced manually (->21, setting the gas mixture, point 5).

In addition the maximum allowed ppO$_2$ can be set by means of SmartTRAK or with "set 1" between 1.2 to 1.6bar ->59.

⚠ WARNING

The MOD is a function of ppO$_2$ max and the mixture used. If during the dive the MOD is reached or exceeded Aladin 2G sends an audible attention message and the MOD is displayed (flashing) in the lower left corner.
Ascend to a depth shallower than the displayed MOD in order to diminish the danger of oxygen poisoning.

⚠ WARNING

The MOD should not be exceeded. Disregarding the warning can lead to oxygen poisoning.

3.4.8 Oxygen toxicity (CNS O_2%)
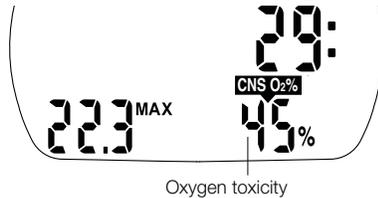
Oxygen toxicity

Aladin 2G calculates oxygen toxicity based on depth, time and the gas mixture and displays it in the location of the ascent rate. The toxicity is expressed in 1% increments of a maximum tolerated value (O_2 clock). The symbol "CNS O_2" is displayed together with the percentage.
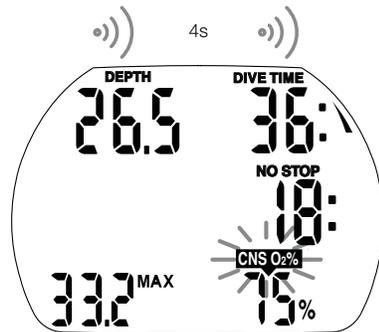
⚠ WARNING

An audible attention signal goes off if oxygen toxicity reaches 75%. The symbol "CNS O_2" flashes.
Ascend to shallower depth to decrease oxygen loading and consider terminating the dive.
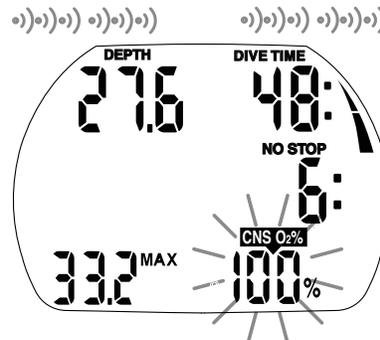
⚠ WARNING

When oxygen toxicity reaches 100%, an audible alarm goes off every 4 seconds. "CNS O_2" and the percentage value flash. Danger of oxygen toxicity!
Start procedure for terminating the dive.

☞ *NOTE:*
- *During an ascent and if the CNS O_2% value does not increase anymore (due to a lower partial pressure of oxygen), the audible warning is suppressed.*
- *During the ascent, the display of the oxygen toxicity is replaced by the ascent rate. If the ascent is stopped, the display changes back to the indication of the CNS value.*
- *Aladin 2G will display CNS O_2% values exceeding 199% with 199%.*

3.4.9 Nitrogen loading bar graph

The nitrogen loading bar gives a graphical representation of how close to decompression you are. As you absorb nitrogen during the dive, more and more segments of the bar will light up. Depending on your depth, the segments can light up more or less rapidly.

1-3 segments (green area):
you are safely within the no-stop range

4-5 segments (yellow area):
you are approaching decompression.
When the no-stop time drops below
3 minutes the 5 segments will start
flashing.**

6 segments (red area): you now have
mandatory decompression obligation(s)
which you must observe before
reaching the surface.

** Depending on your profile, the no-stop time may drop
below 3 minutes before the upper 5 segments are lit. In
this case, only those segments that are lit will flash.

If you have entered decompression,
the 6th segment will turn off as soon as
you complete your last decompression
obligation to indicate that you are no longer
in decompression.

3.4.10 Decompression information

NO STOP and the no-stop time (minutes)
are displayed if no decompression stops
are necessary.

No-stop time

Nitrogen loading bar
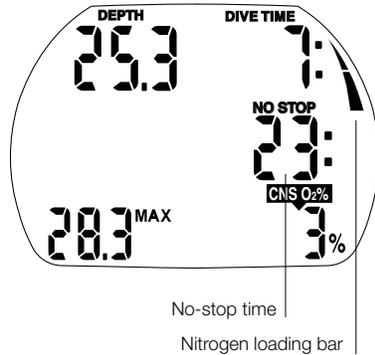
☞ *NOTE:*

- *No-stop display "99:" means
  remaining time of 99 minutes or
  more.*
- *No-stop time is influenced by the
  water temperature.*

⚠ WARNING

**If no-stop time drops below 3 minutes, an
audible attention signal is activated, the no-**

stop value and the nitrogen loading bar begin
to flash.
If no-stop time is less than 1 minute, the no-
stop display shows the flashing value "0".
In order to prevent a decompression dive,
ascend slowly until the no-stop time is
5 minutes or more.

No-stop time less than 1 minute
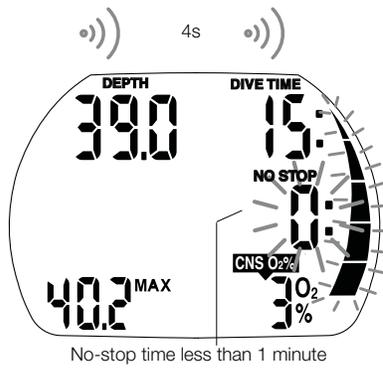
⚠ WARNING

**Decompression diving requires advanced
training from a recognized agency. Do not
attempt decompression diving without proper
training from a recognized agency.**

Decompression values

Decompression obligation

Decompression
stop duration

Decompression
depth
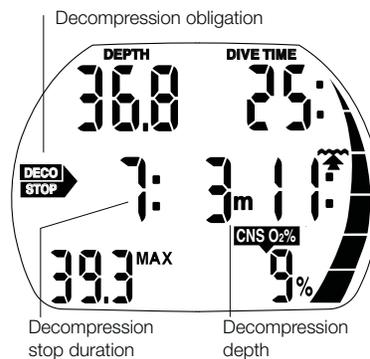
On entering the decompression phase,
"NO STOP" disappears, the ⏩ symbol
appears and an attention beep goes off.
The nitrogen loading bar stops flashing and
the 6th segment lights up (red area). The
deepest decompression stage in metres
(feet) is displayed and the decompression

stop duration of the displayed stage appears in minutes. The display "7: 3m (10ft)" means that a decompression stop of 7 minutes at a depth of 3m (10ft) has to be made.

When a decompression stop has been completed, the next (shallower) decompression stop is displayed. When all decompression stops have been completed, the 🔲 symbol extinguishes, "NO STOP" and no-stop time reappear.

Deco stop depths deeper than 27m (90ft) are displayed as " – – : – – ".

Ignored decompression alarm

Total time of ascent

Total ascent time

As soon as decompression stops are necessary Aladin 2G shows the total time of ascent. This includes the ascent time from the current depth to the surface and all decompression stop obligations.

☞ *NOTE:*
- *The total time of ascent is calculated on the basis of the prescribed ascent rate. Total time of ascent can be subject to change if the ascent rate is not ideal (100%).*
- *Ascent time greater than 99 minutes is displayed as " – – ".*

⚠ WARNING

The decompression alarm is activated if the decompression stop is ignored. The arrow 🔲 , the decompression stop duration and decompression stop depth begin to flash and an audible alarm goes off.

Due to the formation of microbubbles, decompression can increase massively if a decompression stop is ignored. When the surface is reached during the decompression alarm, the arrow 🔲 , the decompression stop duration and decompression stop depth continue flashing, in order to point to the risk of a decompression accident. The SOS mode is activated 3 minutes after the dive if corrective action is not taken (->17).

If the total (cumulative) duration of the decompression alarm is longer than one minute, it is entered in the logbook.

Descend to the prescribed decompression stop depth immediately!

⚠ WARNING

On all dives with Aladin 2G, make a safety stop for at least three minutes at a depth of 5m (15ft).

3.4.11 Safety stop timer

Safety Stop
icons

Remaining time span
(minutes / seconds)
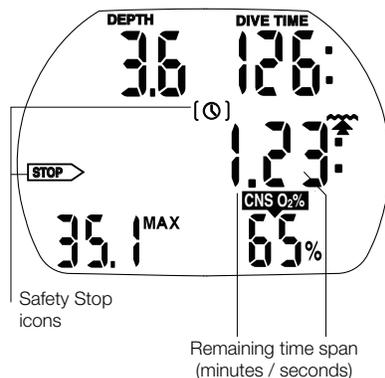
The safety stop timer displays the time span a diver should spend at the safety stop depth at the end of the dive. The timer starts automatically when depth is shallower than 6.5 m and counts back from 3 minutes (default) to zero. It can be restarted manually any number of times. The duration of the timer can be set between 1 and 5 minutes.

The safety stop timer will be activated under the following conditions: depth <6.5 m (21ft), no-stop display 99 min, gauge mode is switched off, stop time is selected (1-5 min) at set 1 menu.

Activate the safety stop timer by pressing ◑ ○ . The timer begins to count backwards and a bookmark will be created in the dive profile. If you press again, the timer will start again from the full value.

The safety stop timer will switch off automatically if the depth exceeds 6.5 m (21 ft) or the no-stop phase is shorter than 99 minutes.

3.5 Functions at the surface

3.5.1 End of a dive

Depth less than 0.8m (3ft)
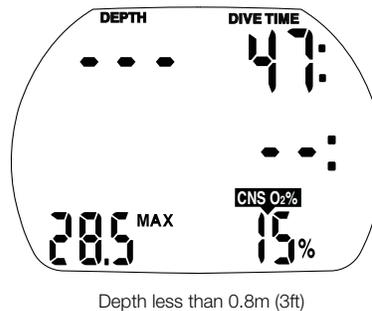
After reaching the surface (<0.8m/3ft) Aladin 2G remains in dive mode for 5 minutes. The delay allows for surfacing for a short period for orientation.
After 5 minutes the dive is closed and it is entered into the logbook. The time of day is then displayed for 3 minutes, after which the computer turns off.

⚠ WARNING

For the calculations of the desaturation and no-fly time it is assumed that the diver breathes air while on the surface.

3.5.2 Residual nitrogen bar graph

The segments in the residual nitrogen bar graph will gradually turn off as Aladin 2G follows the offgassing of your tissues during your surface interval. There is a 1:1 equivalence in the meaning of the segments between diving and surface. Thus, on a repetitive dive the bar will resume from its status on the surface just prior to the dive. There are two exceptions however:
• the uppermost segment will stay lit until the desaturation time is completely extinguished. This is done to show that there is desaturation time left and that a dive started at this point will be logged as a repetitive dive. If the remaining desaturation time is very short, this segment could however at first disappear during the dive;
• during the 24 hours of an SOS-lock, all segments will stay on.

3.5.3 Desaturation time, No-fly time and No-dive warning

No-fly time

Do not fly icon

No-dive warning

Ascent to altitude range 4 prohibited

Time of day

Residual nitrogen bar
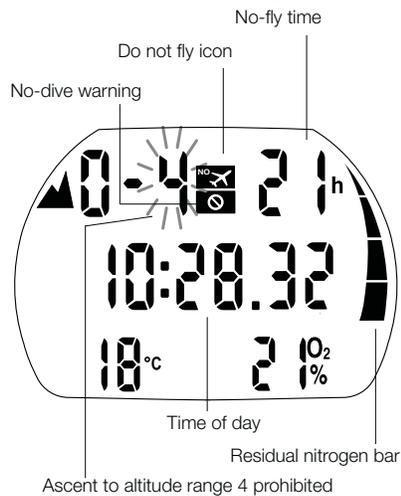
5 minutes after a dive Aladin 2G shows the time of day, the "do not fly time", the no-dive warning (if applicable), the current altitude range and the prohibited altitude range (->31).

**No-fly time** is the time in hours that should pass before a flight and is displayed and adjusted until the value becomes 0 hours.

> ⚠ **WARNING**
>
> Flying while Aladin 2G displays "do not fly" may lead to serious injury or death from decompression sickness.

> ⚠ **WARNING**
>
> If the "no-dive" warning is visible during the surface interval, the diver should not undertake another dive.

To check the remaining **desaturation time** and oxygen toxicity press ○ ●.

Desaturation time

Residual nitrogen bar
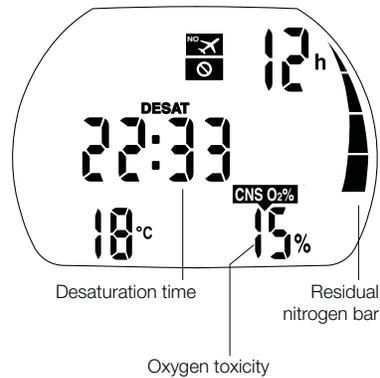
Oxygen toxicity

To check the **elapsed surface interval** press ○ ◐.
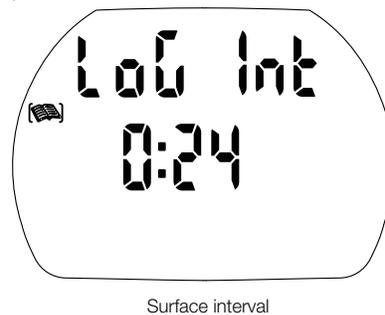
Surface interval

Desaturation time is determined either by oxygen toxicity, nitrogen saturation or the regression of microbubbles, depending on which requires the longer time.

🚫 **No-dive warning**

If Aladin 2G detects a situation of increased risk (due to the potential of microbubble accumulation from previous dives or a CNS O_2 level above 40%), the no-dive symbol will appear on the display. The duration of the no-dive warning is visible in the dive planner menu. Aladin 2G recommends this as minimum surface interval in order to reduce the number of microbubbles and/or to reduce the CNS O_2 level below 40%.

☞ *Note:* You should not undertake a dive as long as the no-dive warning message is displayed on the computer screen. If the warning is prompted

by microbubble accumulation (as opposed to CNS O_2 over 40%) and you dive anyway, you will have shorter no-stop times or longer decompression times. Moreover, the duration of the no-dive warning at the end of the dive can increase considerably.

3.6 Diving in mountain lakes

3.6.1 Altimeter

The altitude adjustment ->58 does not affect altitude ranges nor any calculations.

3.6.2 Altitude ranges

Altitude icon

Altitude range 2

Aladin 2G measures the atmospheric pressure every 60 seconds even while the display is switched off. If the computer detects a sufficient increase in altitude, it switches on automatically and indicates the new altitude range (1-4) and the desaturation time. Desaturation time indicated at this moment refers to adaptation time at this altitude. If the dive starts within this adaptation time, Aladin 2G treats it as a repetitive dive, since the body is offgassing.

Altitude is divided into five ranges, which are influenced by barometric pressure. That is why the defined altitude ranges overlap on their fringes. If a mountain lake is reached, the altitude range is indicated at the surface (**time of day display**), in the logbook and in the dive planner by a stylized mountain and the current altitude range. Sea level to an altitude of approximately 1000m (3300ft) is not indicated. In the following diagram, you can see the approximate breakdown of the altitude ranges:
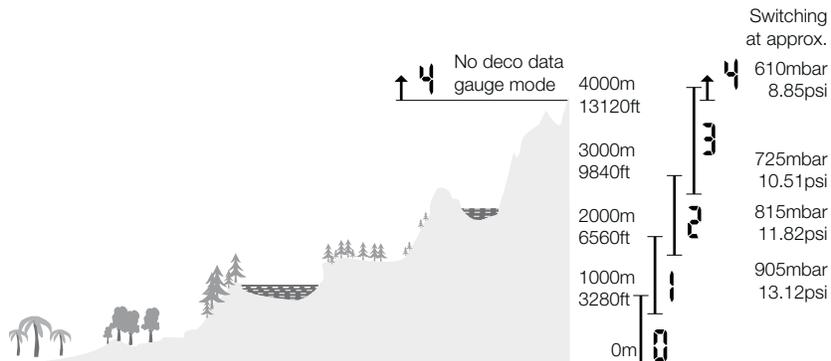
Altitude ranges

3.6.3 Prohibited altitude
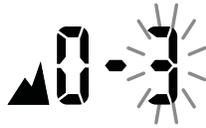
Ascent to altitude range 3 and 4 prohibited. Max allowed altitude: 2650m (8694ft).

> ⚠️ **WARNING**
>
> **Aladin 2G shows via flashing altitude segments while at the surface to which altitude the diver may not rise.**

Max altitude: 850m/2790ft

Max altitude: 1650m/5413ft

Max altitude: 2650m/8694ft
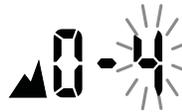
Max altitude: 4000m/13120ft

The ascent prohibition can also be displayed together with an altitude range:

Example: You are at 1200m (3937ft) (altitude range 1) and you may ascend to range 2 only (2650m / 8694ft). You may not rise to the altitude range 3 or 4.
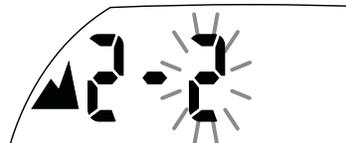
> ⚠️ **WARNING**
>
> **If an ascent to a prohibited altitude is detected, an audible alarm goes off for 1 minute. Descend to a lower altitude.**

3.6.4 Decompression dives in mountain lakes
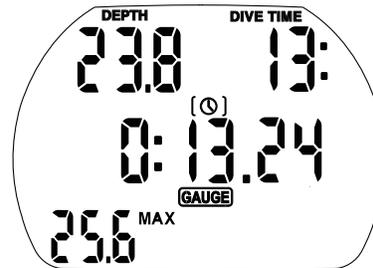
Dive at altitude range 4: no deco data (gauge mode)

In order to assure optimal decompression even at higher altitudes, the 3m (10ft) decompression stage is divided into a 4m (13ft) stage and a 2m (7ft) stage in altitude ranges 1, 2 and 3. The prescribed decompression stop depths are, in sequence, 2m / 4m / 6m / 9m… (7ft / 13ft / 20ft / 30ft…).

If atmospheric pressure is below 620mbar (8.99psi) (altitude higher than 4100m / 13450ft above sea level), Aladin 2G switches automatically to gauge mode and no decompression data is calculated and displayed.

In addition, the dive planner is not available anymore.

4. GAUGE MODE

⚠ WARNING

In gauge mode ALL audible and visual alarms and attention messages are turned off.

In gauge mode Aladin 2G will display depth, dive time and max depth. By pressing ○ ◐ you can scroll from the max depth to the temperature, to the average depth, to the time of day and back to the max depth. By pressing ◐ ○ you can restart the stopwatch. This generates a bookmark. Gauge mode does not support the calculation of no-stop time or the supervision of decompression. Supervision of ppO$_2$ max and CNS O$_2$% will also be switched off. Aladin 2G will display no information about microbubble development. The settings for the gas mixture, MOD and microbubble level cannot be set and the dive planner cannot be selected.

Switching the gauge mode on and off
Gauge mode can be switched on and off at the surface, when there is no desaturation and no-dive in gauge mode has been made in the last 48 hours.

⚠ WARNING

- **Dives in gauge mode are performed at your own risk!**
- **After diving in gauge mode you must wait for at least 48 hours before using a decompression computer.**

After diving in gauge mode, Aladin 2G can not be used as dive computer for 48 hours.

Procedure:
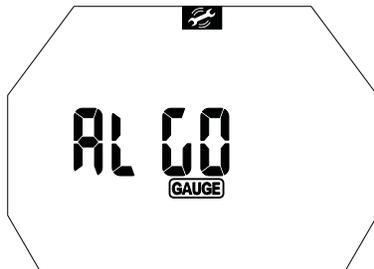
1. From the time of day display push ◐ ○ or ○ ◐ until the "ALGO" is displayed. (If Aladin 2G shows " – – – " the gauge mode cannot be switched "on" or "off". Aladin 2G shows " – – – " for 48 hours after a dive in gauge mode and as long as there is remaining desaturation after a dive in computer mode.)

2. Confirm with ○ ● that you wish to activate or deactivate the gauge mode. "deco", "gauge" or "apnea" starts flashing.

3. By pushing ◐ ○ or ○ ◐ the mode will scroll between: Gauge, Deco (SCUBA diving) or Apnea. Select: "Gauge".

4. Confirm your settings with ○ ● .

Without confirmation the display will disappear after 3 minutes and your entries will not be accepted.

Diving in gauge mode
The following information is displayed in gauge mode:

Current depth — 28.6 16.
Stopwatch — 0:12.54
Max depth / Temperature / Average depth (AVG) — 32.7 MAX
Dive time
Gauge icon
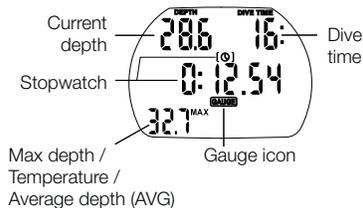
○ ◐ >Temperature
○ ◐ >Average depth (AVG)
○ ◐ >Temperature ⏱, Time ⏱
○ ◐ >Max depth

The **average depth** is continuously updated and represents the time averaged depth since the beginning of the dive.

You can **reset the average depth** at any time by pushing ○ ● . This generates also a bookmark.

Stopwatch

In gauge mode, after immersion, Aladin 2G will automatically monitor the dive time and at the same time activate the stopwatch. The stopwatch will run for a maximum of 24 hours.

◑ ◯ Resets time and starts stopwatch from zero.
Each start (restart) of the stopwatch creates a bookmark.

After diving in gauge mode
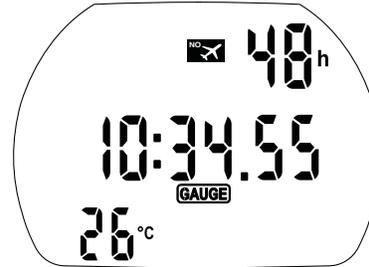
Remaining time during which Aladin 2G cannot be used in computer mode

Aladin 2G shows the remaining time span during which it cannot be used in computer mode. Once the waiting period is over, the gauge mode can be switched off manually ->33.

The no-fly time after diving in gauge mode is 48 hours.

Desaturation time will not be displayed.

5. APNEA MODE

5.1 Switching the Apnea mode on and off

Apnea mode can be switched on and off like Gauge mode, when there is no desaturation and no apnea dives have been made in the last 48 hours.

⚠ WARNING

Apnea diving after SCUBA diving is not recommended. Check the latest recommendation from your Instructor or Diving organization.

⚠ WARNING

Aladin 2G doesn't track nitrogen intake to your body at Apnea mode. Therefore no fly time after Apnea diving is set to 48 hours. Also SCUBA diving after Apnea is recommended only after sufficient surface time. Check the latest recommendation from your Instructor or Diving organization.

Procedure:

1. From the time of the **day display** push ○ ◑ or ◑ ○ until ALGO is displayed.
2. Confirm with ○ ● that you wish to activate or deactivate the Apnea mode. "deco", "gauge" or "apnea" starts flashing.
3. By pushing ○ ◑ scroll between modes and select the apnea mode.
4. Confirm your setting with ○ ● .

⚠ WARNING

SCUBAPRO highly recommends professional training in apnea or free diving techniques and physiology before conducting breath hold dives. No dive computer can replace the need for proper dive training. Insufficient or improper training may cause a diver to commit errors that can lead to serious injury or death.

⚠ WARNING

Deep repetitive Apnea dives are not recommended; leave enough recovery time between your Apnea dives.

⚠ WARNING

All breath hold dives include a risk of shallow water blackout, that is, a sudden loss of consciousness due to oxygen starvation.

Apnea diving is the most natural form of diving, known also as Free diving or Breath hold diving. Due to specific demands on Apnea diving, Aladin 2G has now this mode integrated.

Apnea mode is comparable to Gauge mode, it doesn't have a dive algorithm and all decisions are left to the diver. Therefore SCUBAPRO recommends:

1. Never apnea dive alone.
2. Make only apnea dives which your education and physical condition allow.

In apnea diving fast descents and ascents are allowed. Therefore Aladin 2G uses faster sampling of the depth for higher accuracy. Aladin 2G updates display and maximum depth every 15 seconds, logbook is updated every second.

5.2   Diving in Apnea mode

The following information is displayed in Apnea mode:
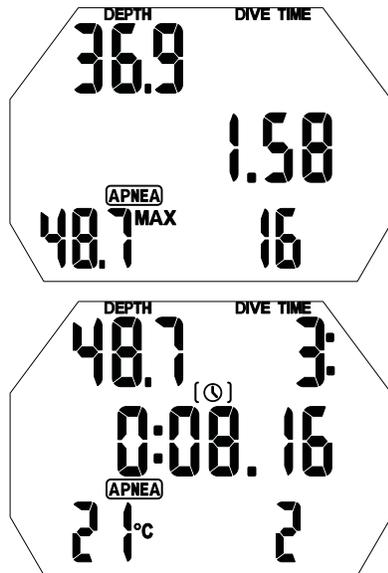
In Apnea mode the dive can be started manually by pressing ○ ●. This function allows fast sampling to start straight from the surface. Automatic start of the apnea dive will happen from depth of 0.8m/3ft.
Once activated the Apnea mode will run 15 minutes after surfacing. This allows you to start a repetitive apnea dive with precise data in the logbook. Surface mode can be stopped with long press ○ ●.

Aladin 2G Apnea mode has special alarms and functions tailored to Apnea diving and Apnea training. You can select multiple alarm functions at the same time. The alarm functions setup is explained in page ->66.

6. DIVING WITH MICROBUBBLE (MB) LEVELS

☞ *NOTE:*

The following chapter deals with the characteristics of diving with microbubble (MB) levels. For general information about displays and features of diving with Aladin 2G see chapter 3.

Microbubbles are tiny bubbles that can build up inside a diver's body during any dive and normally dissipate naturally during an ascent and on the surface after a dive. Dives within no-stop time and observance of decompression stops do not prevent the formation of microbubbles in the venous blood circulation.

Dangerous microbubbles are those migrating into the arterial circulation. The reasons for the migration from the venous blood circulation to the arterial circulation can be a great many microbubbles collecting in the lungs. SCUBAPRO has equipped Aladin 2G dive computers with a new technology to protect from microbubbles.

The diver chooses – according to his/her needs – an MB level and influences through it the level of protection from microbubbles. Diving with MB levels requires additional ascent stops (level stops), the ascent is slowed down and the body gets more time to desaturate. This works contrary to the formation of the microbubbles and increases safety.

Aladin 2G features **6 microbubble levels** (L0-L5). Level L0 corresponds to SCUBAPRO's well-known decompression model ZH-L8 ADT and does not require level stops due to microbubble formation. Levels L1 to L5 offer additional protection from microbubble formation with level L5 offering the highest protection.

Similar to the display of information during decompression dives or dives within no-stop time, Aladin 2G displays depth and duration of the first level stop as well as the total time of ascent as soon as the MB no-stop time has run out. As the MB no-stop time is shorter than the ordinary no-stop time a diver will be required to carry out a stop (level stop) sooner than a diver using level L0.

If a diver ignores a required level stop, Aladin 2G will cascade to a lower MB level and the dive can not be completed with the initially chosen MB level. E.g. if a diver sets level L4 on Aladin 2G prior to the dive and during the dive ignores the recommended stops Aladin 2G will automatically adjust the setting to level L3 or lower.

### 6.1   Comparison of dives with MB level L0 and MB level L5

When two Aladin 2G are used simultaneously, one unit is set for example to MB level L5, the other to L0, the no-stop time will be shortened and level stops will be required before the diver has the obligation of a decompression stop. These additional level stops help dissipate the microbubbles.
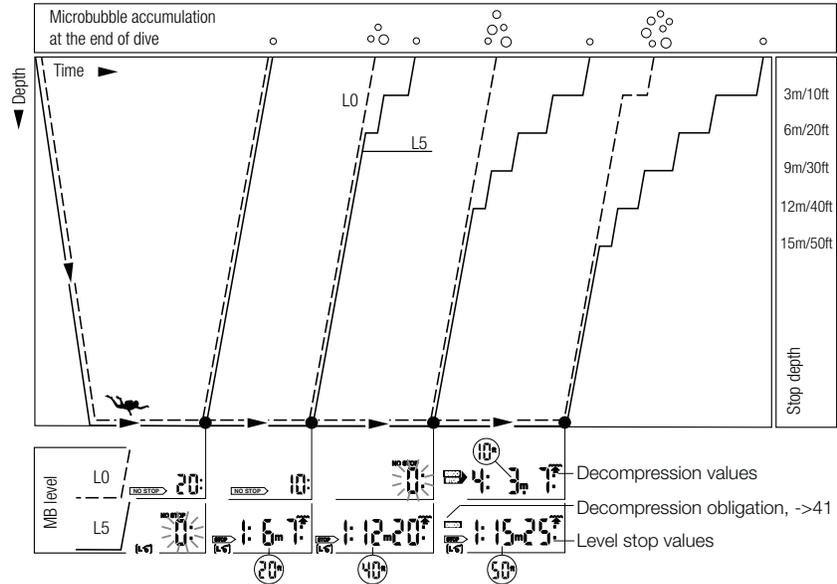
6.2   Terminology

This chapter will exclusively deal with terminology and display features used while diving with MB levels. All other features are described in chapter 3 (->19).

6.2.1   Display during MB no-stop phase
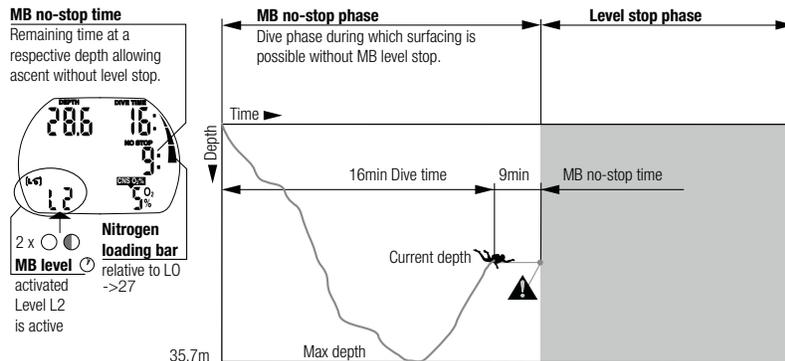
◯ (Max depth ◯ ◐ >) Temperature

    ◯ ◐ > MB level active ⏱
    ◯ ◐ > No-stop time relative to L0 ⏱
    ◯ ◐ > Temperature ⏱ and time of day ⏱
    ◯ ◐ > (Max depth)…

☞ *NOTE:*

Whereas the quantitative information relative to L0 can be seen by pressing the right button, qualitative information is always visible on the display in form of the nitrogen loading bar. In particular, when the L0 no-stop time is less than three minutes, the nitrogen bar will flash ->27. This will help you avoid entering inadvertently into decompression.

6.2.2 Display during level stop phase

Total ascent time
including level stops

Level stop depth
The deepest level stop is displayed.

Level stop duration
The duration of a level stop at a given level stop depth is displayed.

Nitrogen loading bar
relative to L0
->27

Total ascent time (14min)

Time ▶
Depth ▼

3m/10ft
6m/20ft
9m/30ft   Lowest level stop depth
3min
Level stop duration

35.7m

MB no-stop phase   **Level stop phase**
To complete the dive without cascading to a lower MB level all requested level stops must be observed.

◯   (Max depth ◯ ◐ >) Temperature
    ◯ ◐ > MB level active ⏱
    ◯ ◐ > No-stop time or deco information relative to L0 ⏱
    ◯ ◐ > Temperature ⏱ and time of day ⏱
    ◯ ◐ > (Max depth)…

6.3 Preparation for a dive with MB levels

6.3.1 Setting the MB level

To change the MB level Aladin 2G must be in user mode (**time of day display**).

◐ ◯ or ◯ ◐ until [L⑥]
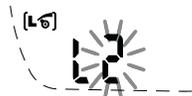
1. Push ◐ ◯ or ◯ ◐ until the symbol for MB levels [L⑥] appears.
2. Confirm that you wish to change the displayed MB level by pushing ◯ ●.
3. Change MB level by pushing ◐ ◯ or ◯ ◐.
4. Confirm the selected MB level with ◯ ●.

Without confirmation the display will disappear after 3 minutes and your entries will not be accepted.

Aladin 2G will display the [L⑥] symbol to confirm that an MB level beyond L0 (L1-L5) has been chosen. During the dive the

MB level is shown by pressing 2x ○ ◑ . If however a level stop is ignored, the new MB level is shown (->41).

☞ *NOTE:*

*MB levels have an influence on the dive planner.*

6.4 Functions during the dive with MB levels

6.4.1 Level stop information

MB no-stop time
While diving with MB levels L1 to L5 Aladin 2G will display the MB no-stop time instead of the ordinary no-stop time. Within the MB no-stop time no level stops are required.
"NO STOP" and the MB level symbol [L⑤] are visible. The remaining MB no-stop time is shown in minutes.

MB no-stop time
Nitrogen loading bar relative to L0
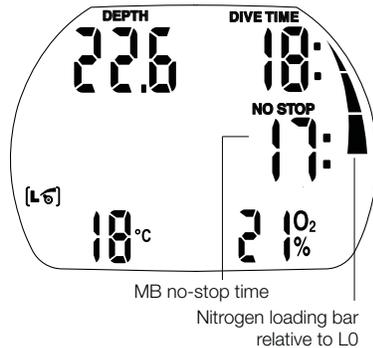
☞ *NOTE:*

- *Information and alarms for MB no-stop time and ordinary no-stop time are the same (->27).*
- *No-stop time relative to L0 is shown by pressing 3x ○ ◑ (see ◎)*
- *Regardless of the MB level, we generally recommend to perform a slow ascent during the last few metres / feet.*

Level stop

Level stop icon

Level stop duration Deepest level stop depth Total time of ascent
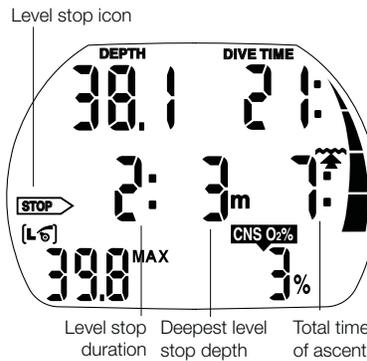
On entering the level stop phase, "NO STOP" disappears and the arrow STOP〉 appears. The STOP〉 arrow flashes for 8 seconds and an audible attention beep goes off. To complete the dive without cascading to a lower MB level, all requested level stops must be observed.
The deepest level stop is displayed in metres (feet). The display "2: 3m " ("2: 10ft") means that a level stop of 2 minutes at a depth of 3 metres (10 feet) has to be observed. Deco information relative to L0 is shown on an alternate display (see ◎).
When a level stop has been finished, the next higher level stop – if present – is displayed. When all level stops have been observed, the arrow STOP〉 extinguishes and "NO STOP" reappears. The indication of time shows the MB no-stop time again.
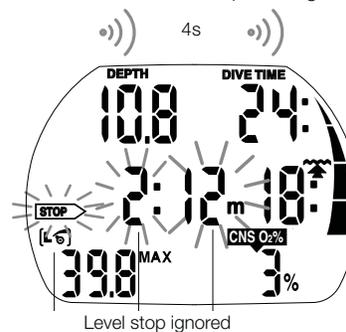
Level stop ignored

⚠ WARNING

The attention message "Level stop ignored" is activated if the requested level stop is not observed. An attention beep* goes off and the arrow STOP▷ , the depth and duration of the ignored level stop begin flashing.
To complete the dive without being reduced to a lower MB level, you must descend to the prescribed depth immediately!

MB level reduced
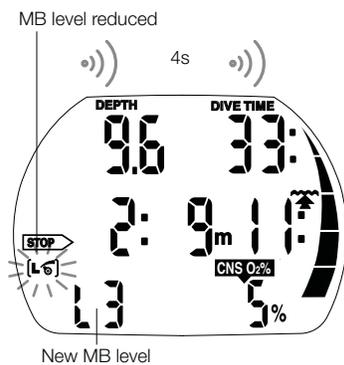
New MB level

⚠ WARNING

The warning "MB level reduced" is activated if the diver ascends more than 1.5m (5ft) above the required level stop. Aladin 2G reduces the MB level, an attention beep* goes off and the new MB level is shown in the lower left corner. To complete the dive without being further reduced to an even lower MB level the new level stop must be observed.

☞ *NOTE:*

* Attention beeps can be suppressed with "set 1" (->61) or via SmartTRAK.

6.4.2 Total time of ascent

Total ascent time
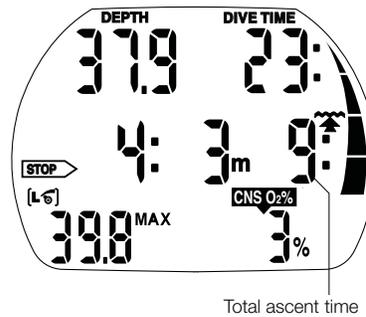
Aladin 2G displays the level stop information and the total time of ascent. This includes the time of ascent as well as all level stops.

☞ *NOTE:*

The total time of ascent is calculated on the basis of the prescribed ascent rate. Total time of ascent can be subject to change if the ascent rate is not ideal (100%).

6.4.3 Decompression obligation

Aladin 2G calculates and displays level stops to reduce microbubble formation, but it also calculates the diver's decompression data.

⚠ WARNING

Avoid decompression dives when diving with MB levels.
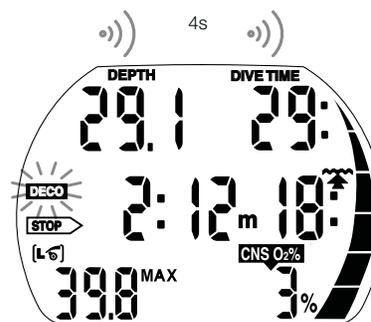
How to avoid decompression stops:
• Check ordinary no-stop time by pushing
  ○ ◐ until L0 appears.

• Observe the nitrogen loading bar (it is relative to L0) ->27, ->38, ->39.
• If the nitrogen loading bar flashes (less than 3 minutes to deco): ascend slowly a few metres/feet.

> ⚠ **WARNING**
>
> **At the beginning of a decompression phase an attention beep goes off and the** DECO **symbol flashes for 8 seconds.**
> **In order to prevent a dive with long decompression stops it is recommended that you ascend a few metres/feet on seeing this message.**

Decompression obligation

Level stop information

If decompression stops become obligatory, the DECO symbol will be displayed. The total ascent time will now also contain a decompression stop.

6.4.4 Level stop and deco stop

When the level stop depth equals the depth of the first obligatory decompression stop and if you are within 1.5m /5ft of the stop depth itself, Aladin 2G shows [DECO] and [STOP] (level stop). The indicated duration refers to level stop duration.

Since level stops are more restrictive than decompression stops, when all decompression obligations have been observed the display changes from [DECO STOP] to [STOP] only.

Level stop duration   Decompression stop depth = level stop depth

6.5 Complete a dive with MB levels
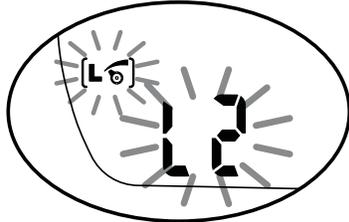
A dive with MB levels is completed the same way as a dive without MB levels (L0) (->29), save for the following exceptions:

If the MB level has been reduced during the dive, Aladin 2G will display a flashing MB level symbol and the current MB level for five minutes after reaching the surface. The dive is then completed and Aladin 2G changes to user mode with the MB level switching back to the original MB setting.

Repetitive dives and MB levels: If during a dive a level stop is being ignored and the diver starts another descent shortly afterwards, Aladin 2G might immediately request level stops. To complete the dive with the initially set MB level all level stops must be observed.

7. PDIS (PROFILE DEPENDENT INTERMEDIATE STOP)

7.1 Introduction to PDIS (Profile-Dependent Intermediate Stop)

The main purpose of a dive computer is to track your nitrogen uptake and recommend a safe ascent procedure. Diving within the so called no-stop limits means that at the end of the dive you can ascend directly to the surface, albeit at a safe ascent rate, while for dives outside of the no-stop limit (so-called decompression dives), you must perform stops at certain depths below the surface and allow time for excess nitrogen to be expelled from your body before finishing the dive.

In both cases, it can be beneficial to stop for a few minutes at an intermediate depth between the maximum attained depth during the dive and the surface or, in case of a decompression dive, the first (deepest) decompression stop.

An intermediate stop of this kind is beneficial as soon as the ambient pressure at that depth is low enough to ensure that your body is predominantly offgassing nitrogen, even if under a very small pressure gradient. In such a situation, you can still cruise along the reef and enjoy the dive, while your body gets a chance to slowly release nitrogen.

In recent times, so called "deep" stops have been introduced in some dive computers and tables, defined as half the distance from the maximum reached depth and the surface (or the lowest decompression stop). Spending 2 or 15 minutes at 30m/100ft would result in the same deep stop of 15m/50ft.
With PDIS, as the name suggests, Aladin 2G interprets your dive profile and suggests an intermediate stop that is a function of your nitrogen uptake so far. The PDI stop will therefore change through the course of the dive to reflect the continuously changing situation in your body. Along the same lines, PDIS will account for the accumulated nitrogen from previous dives, hence PDIS is also repetitive-dive dependent. Conventional deep stops completely ignore these facts.

The following figure quantifies the extent of PDIS and illustrates its dependence on cumulative nitrogen uptake for two sample dive profiles. This figure also demonstrates the conceptual difference between PDIS and the rather rudimental "deep" stops.

Specifically, the figure compares two dive profiles to a maximum depth of 40m/132ft but otherwise very different. Profile 1 stays at 40m/132ft for 7 minutes, then ascends to 30m/100ft for 3 minutes, followed by 12 minutes at 20m/65ft. Profile 2 stays less than two minutes at 40m/132ft, then ascends to 21m/69ft and stays there for 33 minutes. Both dive profiles are no-stop dives to the limit of entering decompression. The solid line with triangles represents the PDIS depth as displayed on the computer screen during the course of the dive for profile 1, the dotted line with triangles represents the PDIS depth as displayed on the computer screen during the course of profile 2. One can see that the displayed PDIS depth increases as more nitrogen is accumulated in the body, but does so very differently in the two dives due to the different exposure in the two profiles. The PDI stop is carried out at 25 minutes for profile 1 and at 37 minutes for profile 2, followed by the safety stop at 5m/15ft.

The solid line with open circles on the other hand represents the depth that would be displayed by a computer following the conventional deep stop method, and it would be the same for the two dive profiles. Deep stops completely ignore any facts about the dives themselves aside for the max depth.
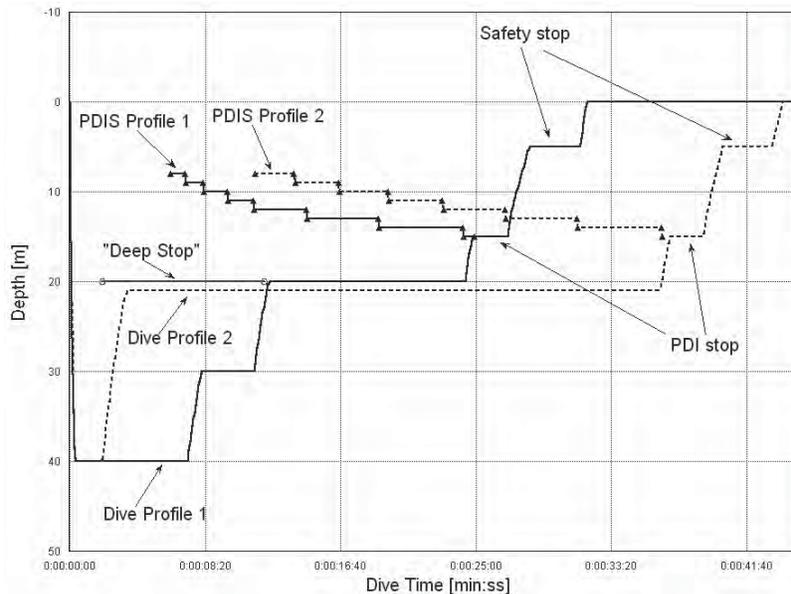
7.2 How does PDIS work?

The mathematical decompression model in Aladin 2G, called ZH-L8 ADT MB PMG, tracks your decompression status by dividing your body into 8 so-called compartments and mathematically following the uptake and release of nitrogen in each with the appropriate laws of physics. The various compartments simulate parts of your body such as central nervous system, muscles, bones, skin and so on.

The depth of the PDI stop is calculated as that at which the leading compartment for the decompression calculation switches from ongassing to offgassing, and the diver is advised to perform a 2-minute stop **above** the displayed depth (this is the opposite of a decompression stop, where you are asked to remain just **beneath** the displayed depth). During this intermediate stop, the body is not taking up any more nitrogen in the leading compartment, but rather releasing nitrogen (though under a very small pressure gradient). This,

combined with the relatively high ambient pressure, inhibits bubble growth.

It should be noted that the two fastest compartments, with 5 and 10 minutes half times respectively, are not considered for the determination of the PDI stop depth. This is due to the fact that these compartments are only "leading" for very short dives, for which an intermediate stop is not required at all.

☞ *NOTE:*

> **The PDI stop is not a mandatory stop** and it is **NOT** a substitute for the 3-5 minute safety stop at 5m/15ft.

⚠ WARNING

Even when performing a PDI stop, you still MUST perform a safety stop at 5m/15ft for 3 to 5 minutes. Performing a 3 to 5 minute stop at 5m/15ft at the end of any dive is still the best thing you can do for yourself!

7.3 Special considerations when diving with more than one gas mixture (Aladin 2G)

Switching to a higher oxygen concentration mix during the dive influences the PDI stop. This needs to be accounted for, in line with the predictive nature of multigas handling in ZH-L8 ADT MB PMG.

When diving with more than one gas mixture, Aladin 2G displays the PDIS depth according to the following rules:
• if the PDI stop calculated for the bottom mix (gas 1) is deeper than the switch depth, than this calculated value is displayed;
• if the PDI stop calculated for gas 1 is shallower than the switch depth to gas d, then the displayed PDI stop is a function of gas d.

In case of a missed gas switch, Aladin 2G reverts to the PDI stop for the actively breathed mix.

7.4 Diving with PDIS

☞ *NOTE:*

To use the PDIS feature, you must set **PDIS** *to* **ON** *in the* **PDIS** *menu under* **Set 1***. The default setting is* **OFF***.*

When the calculated PDI stop is deeper than 8m/25ft, Aladin 2G shows it on the display and continues to do so until you reach the displayed depth during an ascent. The displayed value changes during the dive as Aladin 2G tracks the uptake of nitrogen in the 8 compartments

and updates the PDIS depth accordingly to reflect the optimum at all times.

The PDIS depth is shown in the lower left corner, with the label **PDIS**. During a no-stop dive, as soon as you reach that depth during an ascent, a 2-minute countdown will appear in place of the no-stop value with label **STOP**. In addition, the PDIS label will blink. You can have one of three situations:
• you have spent 2 minutes within 3m/10ft above the indicated depth. The countdown timer disappears and the **PDIS** value is replaced by the label **YES** as an indication that you have performed the PDI stop;
• you have descended by more than 0.5m/2ft below the PDIS. The countdown timer disappears and will reappear again, starting at 2 minutes, the next time you ascend to the PDIS depth;
• you have ascended by more than 3m/10ft above the PDIS. The **PDIS** value and countdown timer are replaced by the label **NO** to indicate the fact that you have not performed the PDI stop.

If Aladin 2G is displaying a decompression obligation when you reach the PDIS depth during an ascent, all rules apply the same way, but the 2-minute countdown runs in the background and is not displayed on the screen. The PDIS label however will still be blinking to show you that you are in the PDIS range.

☞ *NOTE:*

Aladin 2G issues no warnings relating to a missed PDI stop.

When diving with MB levels, PDIS follows the same rules as described above. MB levels, however, introduce stops earlier and deeper than the L0 base algorithm. As such, the PDIS display may be delayed and for certain dives it may not be displayed at all. This for instance would be the case for a shallow dive with air (21% oxygen) and MB level L5.

8. 👥 DIVING WITH TWO GAS MIXTURES

Switching depth (MOD gas d)

Bottom mix (gas 1) Deco mix (gas d)
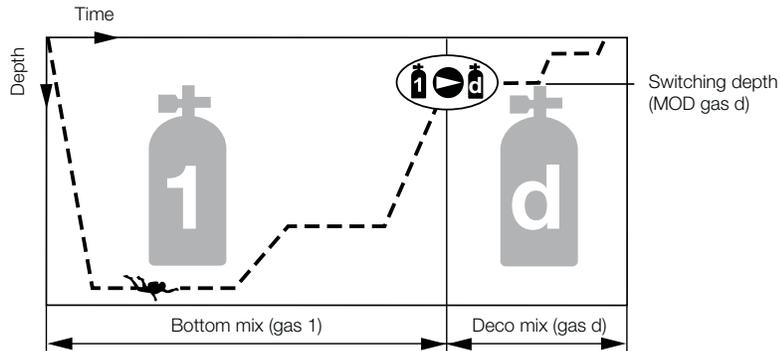
👉 *NOTE:*

The following chapter deals with the characteristics of diving with two gases.

Aladin 2G enables you to use two different Nitrox mixtures during the same dive. Tank 1 contains the bottom mix (gas 1) and tank d contains the deco mix (gas d).

Switching the deco gas option on and off

In order to enable two-gas diving you must turn on the deco gas option in the SET 1 menu ->60.

Setting the gas mixture and the depth for changing the gas mixture

O₂ fraction

100%

21%

Range of O₂ fraction
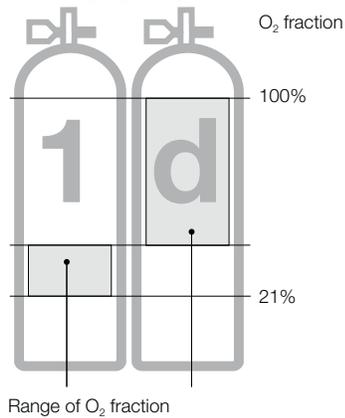
During dives with two gas mixtures the bottom mix (gas 1) contains the lower fraction of oxygen. Aladin 2G will only accept settings corresponding with this order.

⚠ **WARNING**

For gas mixtures having an oxygen percentage of 80% or greater the ppO_2 is fixed at 1.6bar and cannot be altered in any way.

Depth for change of gas mixture, MOD
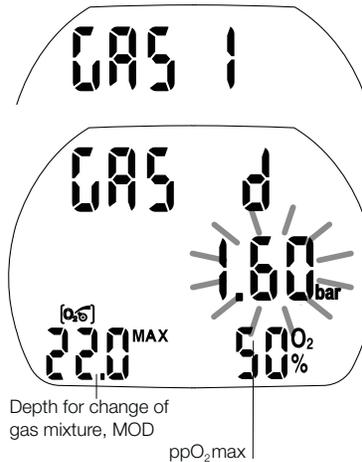
ppO_2 max

Procedure:

1. Enter the setting for the fraction of oxygen and the ppO_2 max (MOD) for gas 1

(bottom mix) according to the instructions on page 21 (points 1-6).

2. Repeat the process in the Gas d O$_2$ menu to set the oxygen fraction and ppO$_2$ max for gas d. Note that in this case the resulting MOD corresponds to the depth at which you plan to switch from gas 1 to gas d during the ascent phase (switch depth).

3. If you set gas d to "−−O$_2$%", Aladin 2G will compute the dive considering gas 1 only.

Aladin 2G will only accept a gas switch depth (MOD gas d) as input where the maximum partial pressure of oxygen (ppO$_2$ max), as pre-set manually (->21 point 5) or by means of SmartTRAK, is not exceeded.

☞ *NOTE:*

- *During the ascent an audible and visual attention message will indicate that you have reached the depth which requires the change to gas d ->52.*
- *Without confirmation with ○ ● the display will disappear after 3 minutes and your entries will not be accepted.*
- *If the deco gas option is turned on and the oxygen fraction of gas d is set to a value other than "--O$_2$%", in surface mode and up to a depth of 0.8m Aladin 2G will display "2G" in the lower right corner of the display instead of a percentage value.*

☞ *NOTE:*

- *The time to reset the O$_2$% mix to air can be set with SmartTRAK between 1 hour and 48 hours or to "no reset" (default).*
  After the reset, the oxygen fraction of gas 1 is set to 21% and gas d is set to "− − O$_2$%" (single gas dive).

Switching between single-gas and two-gas diving

If gas d is not going to be used during the next dive you can either set it to "− − O$_2$%" (->48, point 2) or you can turn off the deco gas option in SET 1. When you turn off the deco gas option in SET 1, the setting in the Gas d O$_2$ menu remains but Aladin 2G calculates the dive using gas 1 only.

If the deco gas option is turned off, the GAS d O$_2$ menu will display OFF in the lower left corner (instead of an MOD) and the ppO$_2$ setting will not appear.

Functions during a dive with two gas mixtures

⚠️ **WARNING**

Diving with more than one gas mixture represents a much higher risk than diving with a single mixture, and mistakes by the diver may lead to serious injury or death.
During dives with several gas mixtures, always make sure you are breathing from the tank you intended to breath from. Mark all your tanks and regulators, so they can under no circumstances be mixed up! Before every dive and after changing a tank, make sure that each gas mixture is set to the correct value for the corresponding tank.

**Predictive decompression prognosis**

The calculation of decompression data is based on the assumption that the change of gas mixture will be performed at the previously selected switch depth (MOD gas d). If a diver ignores the required change or changes the mixture belatedly, Aladin 2G will readjust the decompression calculation accordingly. In case of an ignored switch the dive computer will then base its calculations on the assumption that the diver will ascend to the surface with gas 1.

🗁 **Alternate displays during a dive with two gases**

☞ *NOTE:*

All displays time out after 5 seconds and the default display is shown again. (Only exception is the temperature, screen 2 below.)

1 The default display shows the predictive decompression prognosis, which assumes the diver will switch to the deco gas at the specified switch depth. In the bottom left corner the temperature is displayed unless the current depth is 1m/3ft shallower than the max depth, in which case the max depth is displayed.

2 Upon pressing the right button, the temperature and the current O_2% are shown in the lower row. O_2% will time out after 5 sec while the temperature remains.

3 Upon pressing the right button, "GAS 1" or "GAS d" appears in the middle row to indicate the currently active gas and the MOD appears in the bottom left corner. "GAS 1" or "GAS d" will time out after 5 seconds unless the right button is pressed again.

4 In case that gas 1 is the active gas, pressing the right button one more time shows O_2% of gas 1 in the bottom right corner and the decompression information in case the deco gas is not used (decompression information relative to gas 1 only). This is the calculation that Aladin 2G would switch to in case, having reached the switch depth, the diver did not confirm the switch. The decompression information and the O_2% blink.

5 If an MB level greater than L0 is active, pressing the right button one more time shows the predictive decompression information and in the bottom left corner the currently active MB level.

6 Pressing the right button again shows the predictive decompression information relative to L0 together with the L0 symbol at the bottom left.

7 One more right button push shows the decompression information relative to L0 if only gas 1 is used, with the decompression information and the O_2% of gas 1 blinking.

8 Upon pressing the right button again, the time of day appears in the middle row.

Gas 1 active, MB level L0

Max depth
CNS O$_2$%
Predictive decompression information

Temperature
O$_2$ mix ⏱ of the currently active tank

MOD gas 1

Decompression information ⏱ assuming that you finish the dive with gas 1

O$_2$ mix gas 1 ⏱

Time ⏱

Gas d active, MB level L0

Max depth
CNS O$_2$%
Predictive decompression information

Temperature
O$_2$ mix ⏱ of the currently active tank

MOD gas d

Time ⏱

Gas 1 active, MB level L1-L5

Max depth
CNS O$_2$%
Predictive decompression information relative to active MB level

Temperature
O$_2$ mix ⏱ of the currently active tank

MOD gas 1

Decompression information ⏱ assuming that you finish the dive with gas 1

O$_2$ mix gas 1 ⏱

Active MB level ⏱
Predictive decompression information relative to active MB level

Predictive decompression information ⏱ relative to L0

Decompression information ⏱ relative to L0, assuming that you finish the dive with gas 1

Time ⏱

Gas d active, MB level L1-L5

Max depth
CNS O$_2$%
Predictive decompression information relative to active MB level

Temperature

MOD gas d
O$_2$ mix ⏱ of the currently active tank

Active MB level ⏱
Predictive decompression information relative to active MB level

Predictive decompression information ⏱ relative to L0

Time ⏱

Changing the gas mixture

Switch depth
4s
DEPTH / DIVE TIME
22.0 / 48:
GAS d
22.0 MAX / 50 O₂%
Switch to gas d
MOD gas d

After immersion, Aladin 2G automatically selects gas 1.

> ⚠ **WARNING**
>
> When during an ascent the switch depth is reached (MOD gas d), an audible warning goes off and "GAS d", its MOD and O₂% blink for 30 seconds.

Procedure:
1. Switch to the regulator with gas d and start breathing.
2. Confirm the change by pressing ○ ● within 30 seconds. "GAS d" and the oxygen fraction of gas d is displayed for 5 seconds without blinking.

To interrupt the switch process at any point, press ○ ◐ .

DEPTH / DIVE TIME
22.0 / 48
GAS d
60.8 MAX / 50 O₂%

Change to gas d confirmed

No change of gas mixture:
If a diver fails to confirm the change of gas mixture or interrupts the switching procedure by pressing ○ ◐ , Aladin 2G displays "GAS 1", the MOD and the oxygen fraction for 5 seconds. Aladin 2G continues to calculate with gas 1 only and adapts the decompression calculation accordingly.

☞ *NOTE:*
If after the decompression calculation has readjusted itself to reflect the failed switch the diver goes again below the switch depth (MOD of gas d), Aladin 2G will revert to the decompression calculation that considers gas d also, since upon ascending again the diver will have a renewed opportunity to perform the switch once the switch depth is reached.

DEPTH / DIVE TIME
22.0 / 48:
GAS 1
60.8 MAX / 21 O₂%

Failed or interrupted switch

MOD gas 1
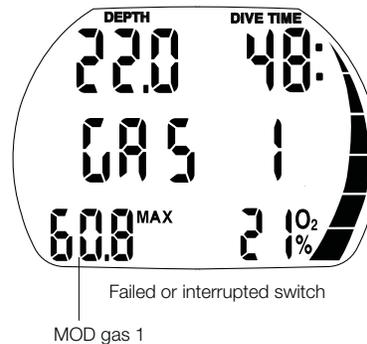
Belated change of gas mixture:
A diver can catch up on a required change to gas d until he reaches the surface.
1. Initiate the switching process by pressing ○ ● . Aladin 2G displays "GAS d", MOD and the oxygen fraction of gas d blinking for 30 seconds.
2. Switch to the regulator with the deco gas mixture and start breathing.
3. Confirm the change by pressing ○ ● . "GAS d" and the oxygen fraction of the deco gas is displayed for 5 seconds without blinking. The decompression calculation will readjust accordingly. (Press ○ ◐ to interrupt the switch process at any time.)

Submerging again after a change to gas d:

If after a change to gas d the Maximum Operating Depth (MOD) of gas d is exceeded, the ppO_2 max warning will appear ->25.

Change back to gas 1, which is suited for this depth, or rise to the Maximum Operating Depth of gas d. Failure to do so can result in oxygen poisoning.

1. Initiate the switching process by pressing ○ ●. Aladin 2G displays "GAS 1", MOD and the oxygen fraction of gas 1 for 30 seconds.

2. Switch to the regulator with gas 1 and start breathing.

3. Confirm the change by pressing ○ ●. "GAS 1" and the oxygen fraction of gas 1 is displayed for 5 seconds without blinking. Afterwards the decompression calculation will readjust accordingly.

9. DIVE PLANNER

Aladin 2G has a dive planner which allows the planning of no-stop dives and decompression dives.
Basis of the planning:
- selected fraction of oxygen and MOD
- selected water type
- selected MB level
- water temperature of the most recent dive
- altitude range (if any)
- status of saturation at the time the dive planner is selected

- assuming a normal workload of the diver and observance of the prescribed ascent rates
- ⌂⌂ assumption: the change to gas d is performed at the selected MOD of gas d.

9.1 Planning a no-stop dive

To select the dive planner Aladin 2G must be in user mode (**time of day display**). Push ◐ ○ or ○ ◑ until the symbol for the dive planner PLn appears. (The dive planner cannot be selected in gauge mode.)

Select dive planner
◐ ○ or ○ ◑
until PLn

if ⊘

Enter the dive planner

Dive planner symbol

if rep. dive

⊘ The no-dive warning and its duration are displayed if Aladin 2G detects an increased risk due to the accumulation of microbubbles.

No-dive warning (Do Not Dive)

Duration of the warning

Input of the surface interval by pushing ◐ ○ / ○ ◑

No-stop time or MB no-stop time

Set desired depth (◐ ○ and ○ ◑)

Icon for MB level L1-L5

CNS O₂%

Enter the dive planner with ○ ●.

The input window for the time interval is displayed if there was a remaining desaturation (DESAT) before the dive planner has been selected. This surface interval between now and the beginning of the dive can be changed with ◐ ○ and ○ ◑ in steps of 15 minutes. Aladin 2G displays the CNS O₂% value and the altitude section to which you may not rise at the end of the selected surface interval.

⊘ If the no-dive warning and its duration has been displayed, Aladin 2G proposes this time – rounded up to the next 15 minutes – as surface interval. If the proposed interval is shortened, the no-dive warning appears.

Confirm the displayed interval with ○ ● (if applicable).
With ◐ ○ and ○ ◑ set the depth for which you want to know the no-stop time.

⌊ʟ⑤⌋ If an MB level has been selected (L1-L5), the MB no-stop time is shown.

Depths deeper than the MOD for the selected gas (O$_2$ mix) are not displayed.

⫯⫯ If the deco gas option is turned on, only the depth between the MOD of gas 1 and the MOD of gas d are displayed.

⊘ On page 30 you will find further information and safety considerations regarding the no-dive warning.

9.2 Planning a decompression dive
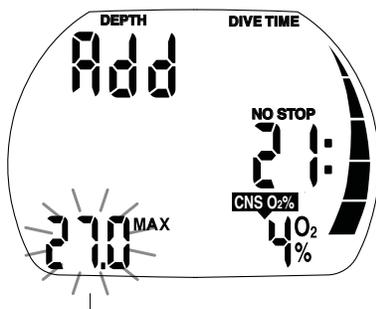
Confirm the desired depth with ○ ●

1. Activate the dive planner for a no-stop dive ->54.
2. Set the desired depth with ◐ ○ and ○ ◑ , then switch into decompression planning by pushing ○ ● . Aladin 2G shows the bottom time (no-stop time + 1 minute) and the appropriate decompression information or level stop data respectively.
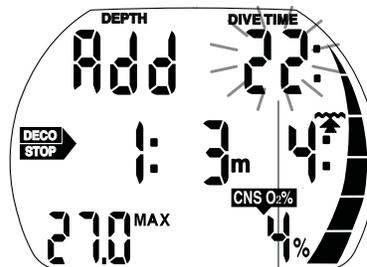
Set desired bottom time with ◐ ○ and ○ ◑

3. "Add" asks that you set the bottom time. This is done with ◐ ○ and ○ ◑ . Aladin 2G calculates the decompression information for this set bottom time. If an MB level (L1-5) is selected, Aladin 2G calculates the level stop data.

CNS O$_2$% values higher than 199% will be displayed as 199 %.
Ascent time greater than 99 minutes is displayed as " – – "
Deco stop depth deeper than 27m (90ft) is displayed as " – – : – – "
CNS O$_2$ equal or greater than 75%: CNS O$_2$% symbol starts flashing
CNS O$_2$ equal or greater than 100%: CNS O$_2$% symbol and CNS O$_2$% value are flashing.
MB level stop deeper than 27m (90ft): MB level will be reduced.

9.3 Leaving the dive planner

By pushing once or twice ○ ● you can exit the dive planner. This also occurs after three minutes without operation.

10. LOGBOOK

10.1 Survey

A dive is entered in the logbook if the dive time is longer than 2 minutes. Aladin 2G records the profiles of about 25 hours of diving. In Apnea mode all dives are entered in the logbook without time limit and at least 6h of Apnea profiles will be stored. This information can be transferred to a PC with the standard infrared interface (IrDA) and the Windows® software SmartTRAK. All dives in the memory can be displayed directly on the dive computer.

10.2 Operation

From the **time of day display** you can select the logbook 📖 with ○ ◐ .

○ ◐ until 📖

LoG Int
0:24
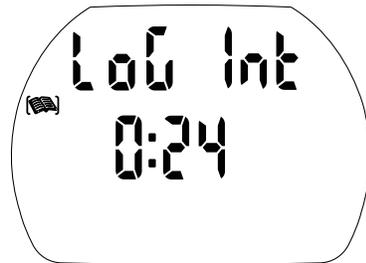
Surface interval

○ ●
↓

If there was a remaining desaturation time (DESAT) before selecting the logbook, the time since the last dive (surface interval) is displayed.

Page 1

With ○ ● you enter the logbook.
The most recent dive is displayed (dive number 1).
There are 3 pages for each dive.

Logbook icon   Dive time
          Max depth

DEPTH   DIVE TIME
28.9   35:
09.02.04
1   2 1 O_2%

Dive number
Date of the dive   Battery performance
                    O_2 mix
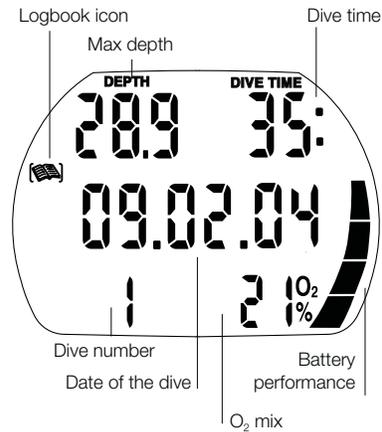
From here you can:

a) get more information about the displayed dive by pushing ○ ● (see below, "page 2"). Aladin 2G displays further information about the selected dive.

b) select other dives.
Each time you push ○ ◐ or ◐ ○ causes a jump to the next or previous dive.

At the end of the logbook Aladin 2G displays statistic information ->57.

Page 2

Altitude range   Repetitive dive number
(if >0)

▲2   1
10:32.50
CNS O_2%
25°C   8%

Minimum   CNS value at the
temperature   end of the dive
          Starting time

○ ◐
↓
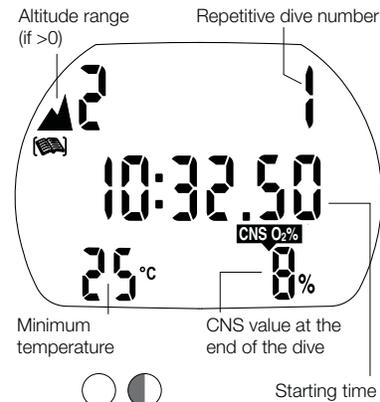
Push ○ ◐ to get more information about the dive.

Page 3

If a dive is started within adaptation time (after a change of altitude), the adaptation time is displayed instead of the surface interval.

SOS if applicable

Duration of surface interval (only with repetitive dives)

MB level (at the beginning of the dive)

🗌🗌 O_2 mix deco gas (if a switch has taken place during the dive)
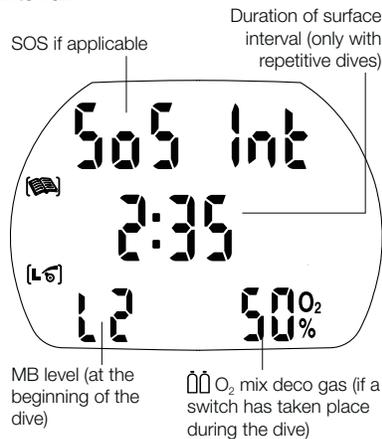
Further possible information about the dive:

🏃	Too fast ascent* (page 1)
DECO STOP ▶	Ignored decompression stop* (page 1)
SoS	Ignored decompression stop* (page 3)
GAUGE SoS	Diving in SOS mode (gauge mode) (page 3)
▲2	Altitude range (page 2)
[L5]	MB level dive (L1-L5) (page 3)
STOP ▷	Ignored MB level stop* (page 1)
DESAT	Desaturation was reset before the dive (in "set 1") (page 1, 2)
🔋 DESAT	Desaturation was reset before the dive by removing the battery (page 1, 2)
🔋	Battery quality factor has been 3 bars or less during the dive (page 1, 2, 3)
GAUGE	Diving in gauge (page 1, 2, 3)
AVG	Average depth (gauge mode) (page 3)

⊘	No-dive warning after the dive (page 1)
APNEA	Apnea mode dive (page 35)

*Alarms during the dive

○ ◐ gets you back to the dive list (first level screen within logbook). From here you can advance to the next dive of interest and press ○ ● to retrieve more information about that dive etc.

Statistic information

From the **time of day display** you can get the following statistic information over all dives. Push ○ ◑ , ○ ● and ◑ ○ :

Deepest dive   Longest dive

Cumulative bottom time

Number of dives
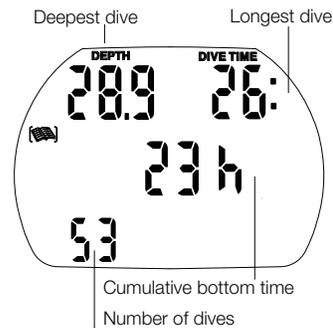
Leaving the logbook

By pushing once or twice ○ ● you can exit the logbook.

The logbook closes automatically after 3 minutes without operation.

11. SETTINGS

11.1 Altitude adjustment

The altitude adjustment does not affect altitude ranges nor any calculations.

Adjust the altitude indication to your current altitude.

1. Starting from the **time of day display** push ◑ ○ or ○ ◐ until the mountain symbol and the altitude appear.
2. Confirm that you wish to change the displayed altitude by pushing ○ ●. The altitude starts to flash.
3. Change the altitude in increments of 10m / 50ft by pushing ◑ ○ or ○ ◐.
4. Confirm the selected altitude with ○ ●.

11.2 Menu "set 1"

With menu "set 1" or SmartTRAK you can configure the following items (dive functions):

Setting	Range	Default	Page
• Depth alarm	5 - 100m (20 - 330ft) on/off	40m (130ft),off	58
• Dive time alarm	5-195min, on/off	40m (130ft),off	59
• Safety stop duration	1-5min	3 minutes	59
• Maximum partial pressure of oxygen (ppO$_2$ max)	1.2-1.6bar	1.4bar	59
• Time limit to reset the O$_2$% mix to air	no reset / 1 - 48hrs	no reset	59
• Deco gas	on/off	off	60
• PDIS (Profile Dependent Intermediate Stop)	on/off	off	60
• Unit system	metric/imperial		60
• Water type	on (salt water)/off (fresh water)	on (salt water)	60
• Backlight illumination duration	2-12s ; push on / push off	6s	61
• Audible attention signals	on / off (SmartTRAK: selective)	on	61
• Water contacts	on / off	on	61
• Reset desaturation	on / off	no reset	62

Starting from the time of day display push ◑ ○ or ○ ◐ until "set 1" appears.

Confirm that you wish to enter into the menu of "set 1" by pushing ○ ●.

Once entered into the menu you can scroll with ◑ ○ and ○ ◐ through the menu.

Setting the depth alarm

Status   Alarm depth
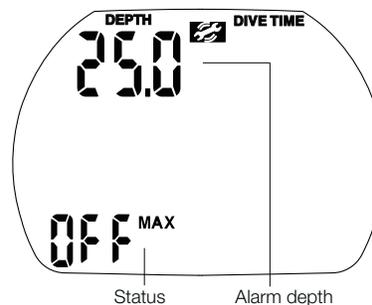
1. Confirm that you wish to change the depth of the alarm or to switch it on or off by pushing ○ ●. The depth starts to flash.
2. Change the depth in increments of 1 m/5 ft by pushing ◐ ○ or ○ ◑.
3. Confirm the selected depth with ○ ●. "On" or "Off" starts to flash.
4. "On" indicates "activated", "Off" indicates "deactivated".
   ○ ◑ switches between "On" and "Off". Confirm the selected status with ○ ●.

See also page 23.

Setting the dive time alarm

Status   Alarm time
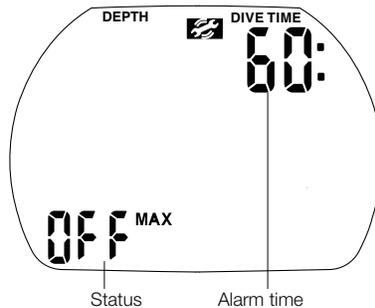
1. Confirm that you wish to change the time of the dive time alarm or to switch it on or off by pushing ○ ●. The alarm time starts to flash.
2. Change the alarm time in increments of 5 minutes by pushing ◐ ○ or ○ ◑.
3. Confirm the selected alarm time with ○ ●. "On" or "Off" starts to flash.
4. "On" indicates "activated", "Off" indicates "deactivated".
   Switch between "on" or "off" by pressing ○ ◑.
   Confirm the selected status with ○ ●.
   See also page 23,23.

Setting the safety stop duration

Duration of the safety stop
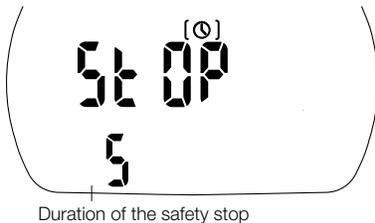
1. Confirm that you wish to change the duration of the safety stop by pushing ○ ●. The duration starts to flash.
2. Change the duration in increments of 1 minute or to off (inactive) by pushing ◐ ○ or ○ ◑.
3. Confirm the selected duration with ○ ●.

Setting the maximum partial pressure of oxygen (ppO$_2$ max)
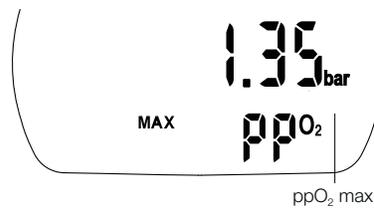
ppO$_2$ max

1. Confirm that you wish to change the ppO$_2$ max by pushing ○ ●. The current value starts to flash.
2. Change the value in increments of 0.05bar by pushing ◐ ○ or ○ ◑.
3. Confirm the selected value with ○ ●.

The ppO$_2$ max setting is valid for gas 1 and the deco gas.

Setting the time limit to reset the O$_2$% mix to air

Time limit to reset O$_2$ mix to air

1. Confirm that you wish to change the time limit of the reset by pushing ○ ●. The current setting starts to flash.
2. Change the time limit by pushing ◐ ○ or ○ ◑.
   (1 - 48hrs or no reset: "– – h")
3. Confirm the selected value with ○ ●.

Enabling two-gas diving
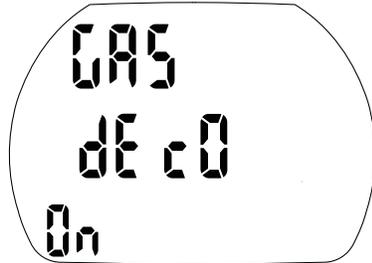
1. Confirm that you wish to enable two-gas diving by pushing ○ ● . "On" or "off" starts to flash.
   "On" indicates the deco gas is active, "off" indicates that only gas 1 will be used for decompression calculations.
2. Switch between "on" and "off" with ○ ◑ .
3. Confirm your choice with ○ ● .

PDIS (Profile Dependent Intermediate Stop)

1. Confirm that you wish to enable PDIS by pushing ○ ● . "On" or "off" starts to flash.
   "On" indicates that the PDIS timer will be automatically activated during the dive, "off" indicates that PDIS will be inactive.
2. Switch between "on" and "off" with ○ ◑ .
3. Confirm your choice with ○ ● .

Selecting the units
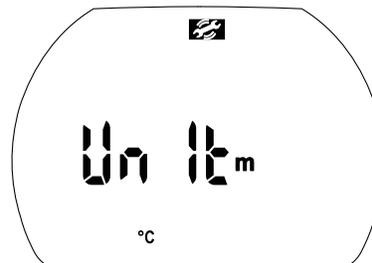
1. Confirm that you wish to change the units by pushing ○ ● . The selected units are displayed (m / ft / °C / °F).
2. Push ○ ● . "m" or "ft" starts to flash.
3. Switch with ○ ◑ between "m" and "ft".
4. Confirm the selected unit with ○ ● . "°C" or "°F" starts to flash.
5. Switch with ○ ◑ between "°C" and "°F".
6. Confirm the selected unit with ○ ● .

Selecting the water type
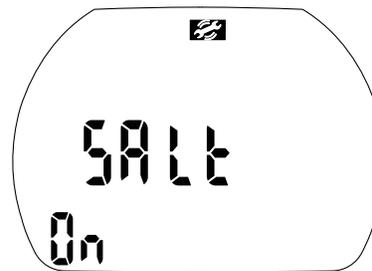
1. Confirm that you wish to change the selected water type by pushing ○ ● . "On" or "off" starts to flash.
   "Salt on" indicates salt water, "salt off" indicates fresh water.
2. Switch with ○ ◑ between "salt on" and "salt off".
   Confirm the water type with ○ ● .

Setting the backlight duration

1. Confirm that you wish to change the duration of the backlight illumination by pushing ○ ●. The value starts to flash.
2. Change the duration with ○ ◐. (2-12s or push on/push off)
3. Confirm it with ○ ●.

Switching the audible attention signals on and off
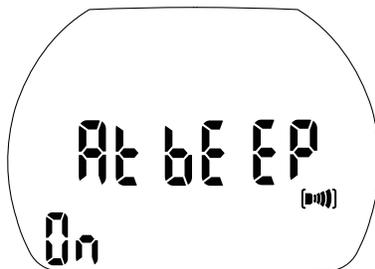
With this option you can switch off the audible attention signals only (the audible alarms remain active). Refer to page 20 to see this distinction.

1. Confirm that you wish to change the setting of the audible attention signals by pushing ○ ●. "On" or "off" starts to flash.
2. Switch between "on" or "off" by pressing ○ ◐.
3. Confirm the setting with ○ ●.

Switching the water contacts on and off
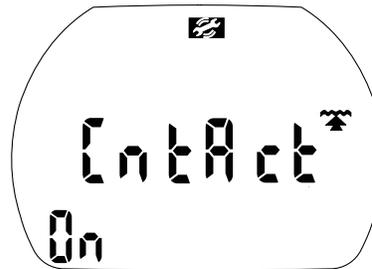
On submerging in water the water contacts switch on Aladin 2G automatically.

⚠ **WARNING**

If you chose the option "Water contacts off", Aladin 2G will turn on with a delay of up to 1 minute into the dive. This will affect functioning of the computer.
Make sure that the computer is on before starting the dive.

1. Confirm that you wish to change the setting of the water contacts by pushing ○ ●. "On" or "off" starts to flash.
2. Switch between "on" or "off" by pressing ○ ◐.
3. Confirm the setting with ○ ●.

Resetting the remaining saturation

> ### ⚠ **WARNING**
>
> **Diving after a reset of the remaining saturation may lead you into potentially hazardous situations which could result in death or serious injury.**
> **After a reset of the remaining saturation do not dive for at least 48 hours.**
> **If you dive after resetting the remaining saturation the computer will miscalculate your decompression, which may result in serious injury or death. Reset the remaining saturation only if you know you will not be diving, flying or going to higher altitude for the next 48 hours.**

Resetting the desaturation should only be done when there is a valid reason, e.g. loaning the computer to somebody who has not dived in 48 hours or more. When the computer itself has remaining saturation you must assume full responsibility for the consequences of resetting the remaining saturation.

1. Confirm that you wish to reset the displayed saturation by pushing ○ ●. "On" starts to flash.
2. Switch between "on" or "off" by pressing ○ ◐.
3. Confirm the setting with ○ ●. If you have selected "off", "Code" and "000" appear.

4. Set the first digit by pushing ○ ◐ and ◐ ○. Confirm with ○ ●.

Repeat point 4 for the next 2 digits. If you entered the right code the desaturation will be reset to zero (desat off). Code: 313

English

11.3 Menu "set 2"

With menu "set 2" or SmartTRAK you can configure the following items:

Setting	Range	Default	Page
• Alarm clock	0 - 23h 59min, on/off	12:00, off	63
• UTC (Universal Time Change) zone	±13hrs, increments: 15min		63
• Time of day	hours:minutes		64
• 24 or AM/PM setting	24 (off) / AM/PM (on)		64
• Date			64
• Display contrast	1 (low) -12 (high)	4	64
• IrDA speed setting (only "set 2")	low / high	low	65
• Sound	on / off	on	65
• Show Aladin 2G electronic ID			65

Starting from the time of day display push ◑ ○ or ○ ◐ until "set 2" appears.

Confirm that you wish to enter into the menu of "set 2" by pushing ○ ●.

Once entered into the menu you can scroll with ◑ ○ and ○ ◐ through the menu.

Setting the alarm clock time

The alarm clock goes off only at the surface. "Sound" must be turned "on" in "set 2".
1. Confirm that you wish to set the alarm time by pushing ○ ●.
   The hours start to flash.
2. Set the hours by pushing ◑ ○ or ○ ◐.
3. Confirm the setting with ○ ●. The minutes start to flash.
4. Set the minutes by pushing ◑ ○ or ○ ◐.
5. Confirm the setting with ○ ●. "On" or "off" starts to flash.

6. "On" indicates "activated" (time of day display shows 🕪), "off" indicates "deactivated".
   Switch between "on" or "off" by pressing ○ ◐.
7. Confirm the selected status with ○ ●.

Setting the UTC offset (coordinated universal time)
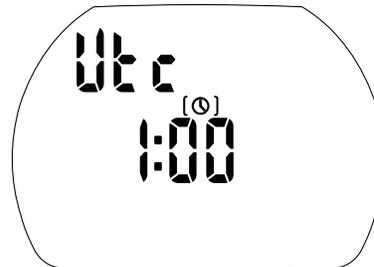
This setting allows you to quickly set the watch to a new time zone without affecting the actual time setting.
1. Confirm that you wish to set the UTC offset by pushing ○ ●.
   The hours start to flash.
2. Set the hours by pushing ◑ ○ or ○ ◐ (±13hrs).
3. Confirm the setting with ○ ●. The minutes start to flash.
4. Set the minutes in increments of 15 minutes by pushing ◑ ○ or ○ ◐.
5. Confirm the selected status with ○ ●.

Adjusting the time of day

Time of day

You can adjust it to your time zone either in this menu or using the UTC offset (see above).
1. Confirm that you wish to adjust the time of day by pushing ○ ●.
   The hours start to flash.
2. Set the hours by pushing ◑ ○ or ○ ◐.
3. Confirm the setting with ○ ●. The minutes start to flash.
4. Set the minutes by pushing ◑ ○ or ○ ◐.
5. Confirm the setting with ○ ●.

Selecting 24 hours or AM/PM setting
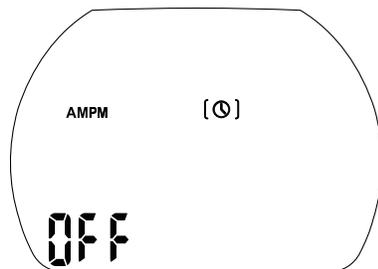
1. Confirm that you wish to change the setting by pushing ○ ●. "On" or "off" starts to flash.
2. Switch with ○ ◐ between "on" (AM/PM) and "off" (24h).
3. Confirm the setting with ○ ●.

The 24h - AM/PM setting influences the display of the date (see below).

Adjusting the date

Date (24h setting)

Day / Month / Year

Date (AM/PM setting)

Month / Day / Year

1. Confirm that you wish to adjust the date by pushing ○ ●.
   The first day (month) starts to flash.
2. Set the day (month) by pushing ◑ ○ or ○ ◐.
3. Confirm the setting with ○ ●. The month (day) starts to flash.
4. Set the month (day) by pushing ◑ ○ or ○ ◐.
5. Confirm the setting with ○ ●. The year starts to flash.
6. Set the year by pushing ◑ ○ or ○ ◐.
7. Confirm the setting with ○ ●.

Adjusting the display contrast
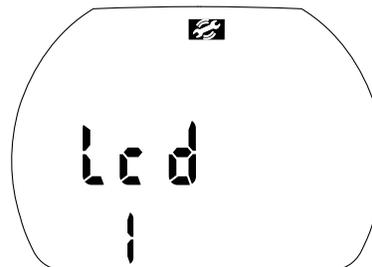
1. Confirm that you wish to adjust the display contrast by pushing ○ ●.
   The current setting starts to flash.
2. Set the contrast by pushing ◑ ○ or ○ ◐.
   Low contrast: (1), high contrast: (12)
3. Confirm the setting with ○ ●.

Selecting the IrDA speed
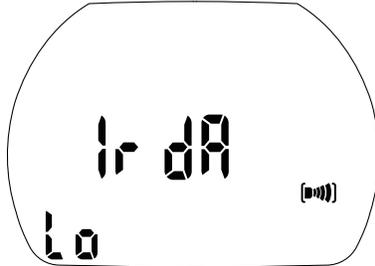
$$Ir\ dA$$
$$Lo$$

The default setting is low. For faster downloads you can set it to high, but not all IrDA interfaces are compatible with high.
1. Confirm that you wish to change the IrDA speed by pushing ○ ●. "Lo" (low) or "hi" (high) starts to flash.
2. Switch with ○ ◐ between low and high.
3. Confirm the setting with ○ ●.

Low: 9600 bits/second

High: max 57 600 bits/second

Switching the sound on and off

⚠ WARNING

If you turn off the sound, the buzzer is effectively deactivated. You will have no audible warnings (alarms and attention messages)! Without audible warning you could get into potentially hazardous situations, which could result in death or serious injury. You must assume full responsibility for turning off the sound.

$$Sound$$
$$On$$

$$CodE$$
$$000$$

1. Confirm that you wish to change the setting by pushing ○ ●. "On" or "off" starts to flash.
2. Switch with ○ ◐ between "on" and "off".
3. Confirm the setting with ○ ●. If you have selected "off", "Code" and "000" appear.
4. Set the first digit by pushing ○ ◐ and ◐ ○. Confirm with ○ ●.

Repeat point 4 for the next 2 digits. If you entered the right code the sound will be turned off.
Code: 313

☞ *NOTE:*

Setting the "sound" to "off" applies also to surface functions (mountain alarm, wake-up alarm, change of altitude range).

Showing the hardware electronic ID of Aladin 2G

$$Id$$
$$00\ 00\ 00$$
$$00\qquad 00$$

ID Number

This number is needed when reporting problems or for other maintenance related issues.

11.4 Menu "set 3" (Apnea)

With menu "set 3" or SmartTrak you can configure the following items:

Setting	Range	Default	Page
Dual Depth alarm	5-100m, 5-100m, on/off	10m (35ft), off 20m (65ft), off	66
Incremental depth alarm	5-100m, dn(down)/ up/ bth(both)/off	5.0m (20ft), off	66
Dive time interval warning	15s-10min, on/off	30s, off	66
Surface interval warning	15s-10min, on/off	1 min, off	67
Ascent speed alarm	0.1-5 m/s, (1-15 ft/s) on/off	1 m/s (3 ft/s), off	67
Water density	1.000-1.050 kg/l (Fresh water ~1.000, Ocean ~1.035)	1.025 kg/l	67

Starting from the time of the display push ◑ ○ or ○ ◐ until "set 3" appears.

Confirm that you wish to enter into the menu of "set 3" by pushing ○ ●.

Once entered into the menu you can scroll with ◑ ○ and ○ ◐ through the menu.

Setting the Dual Depth alarm

With this alarm you can set two independent depth alarms.

1. Confirm that you wish to change the settings of the Dual Depth alarm by pushing ○ ●. First depth value starts to flash.
2. Scroll first depth with ◑ ○ or ○ ◐.
3. Confirm the first depth alarm with ○ ●. Second depth alarm starts to flash.
4. Scroll second depth with ◑ ○ or ○ ◐.
5. Confirm the second depth alarm with ○ ●. On/off starts to flash.
6. Switch between on/off with ○ ◐.
7. Confirm the setting with ○ ●.

Setting the incremental depth alarm
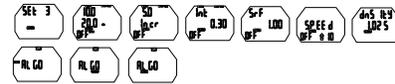
With this alarm you can set repetitive depth alarms at given depth increments.

1. Confirm that you wish to change the settings of the incremental depth alarm by pushing ○ ●. Increment value starts to flash.
2. Scroll value with ◑ ○ or ○ ◐.
3. Confirm the increment with ○ ●. Up/Down/Both/Off starts to flash.
4. Switch between Up/Down/Both/Off with ○ ◐.
5. Confirm the setting with ○ ●.

Setting the dive time interval warning
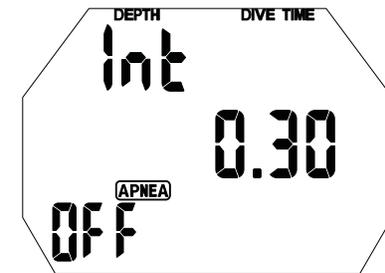
With this alarm you can set time alarm that repeats on given intervals.

1. Confirm that you wish to change the settings of the dive time interval warning by pushing ○ ●. Interval value starts to flash.
2. Scroll time value with ◑ ○ or ○ ◐.
3. Confirm the interval time with ○ ●. On/off starts to flash.
4. Switch between on/off with ○ ◐.
5. Confirm the setting with ○ ●.

Setting the Surface Interval warning

SrF
1.00
APNEA
OFF
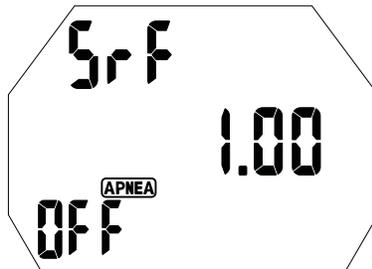
With this alarm you can set a time for recovery or start time for repetitive dive when training against given tables.
1. Confirm that you wish to change the settings of the Surface Interval warning by pushing ○ ● . Time value starts to flash.
2. Scroll time value with ◐ ○ or ○ ◐ .
3. Confirm the surface time with ○ ● . On/off starts to flash.
4. Switch between on/off with ○ ◐ .
5. Confirm the setting with ○ ● .

Setting the Ascent Speed alarm
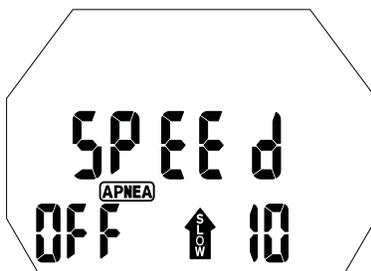
SPEEd
APNEA
OFF ⬆ **10**

With this alarm you can set ascent speed alarm.
1. Confirm that you wish to change the settings of the Ascent Speed alarm by pushing ○ ● . Time value starts to flash.
2. Scroll ascent speed value with ◐ ○ or ○ ◐ .
3. Confirm the maximum ascent speed with ○ ● . On/off starts to flash.
4. Switch between on/off with ○ ◐ .
5. Confirm the setting with ○ ● .

Setting the Water Density

dnS lty
1.025
APNEA

With this setting you can get optimized accuracy on depth reading when you know the salinity of the water.

1. Confirm that you wish to change the settings of the Water Density by pushing ○ ● . Density value starts to flash.
2. Scroll density value with ◐ ○ or ○ ◐ .
3. Confirm the setting with ○ ● .

12. APPENDIX

12.1 Technical information

Operating altitude: with decompression information: sea level up to approx. 4000m (13000ft); without decompression (gauge mode): unlimited.
Max displayed depth: 120m (395ft), resolution between 0.8m and 99.9m: 0.1m, >99.9m: 1m. The resolution in feet is always 1 foot.
Decompression calculation depth range: 0.8 to 120m (3 to 395ft)
Maximum environment pressure: 13bar (189psi)
Clock: Quartz clock, time, date, dive time display up to 199 minutes.
O_2 concentration: Adjustable between 21%O_2 (compressed air) and 100% O_2
Operating temperature: -10° to +50°C (14°F to 122°F).
Power supply: CR2450, recommended brands: PANASONIC, DURACELL, RENATA, ENERGIZER, SONY, VARTA.
Life of the battery: 2-3 years or 200-300 dives. Actual life of the battery depends on the quantity of dives per year, the use of the backlight and the length of the dives. In cold water the life of the battery is reduced. Not all CR2450 batteries are the same, and low quality batteries can have very short life.

12.2 Maintenance

Aladin 2G is virtually maintenance free. All you need to do is to rinse it carefully with fresh water after each use and to have the batteries changed when needed ->68. To avoid possible problems with your Aladin 2G, the following recommendations will help assure that it will give you years of trouble free service:

⚠ WARNING

- Avoid dropping or jarring your Aladin 2G.
- Do not allow your Aladin 2G to be exposed to direct, intense sunlight.
- Rinse your Aladin 2G thoroughly with fresh water after each dive.
- Do not store your Aladin 2G in a sealed

---

container; make sure there is free ventilation.
- If there are problems with the water contacts, use soapy water to clean Aladin 2G and dry it thoroughly. The surface of your Aladin 2G housing can be treated with silicone grease. Do not apply grease to the water contacts!
- Do not clean Aladin 2G with liquids containing solvent (apart from water).
- Check the battery capacity before each dive ->16.
- If the battery icon appears, replace the battery ->68.
- Diving with a weak battery: Aladin 2G may stop working during the dive, service icon and error code "E3" or "E6" appear. Close the dive and replace the battery ->68.
- On the surface: if service icon and error code "E3" appear, replace the battery ->68. All error codes other than E3: Aladin 2G must not be used for any further dives. Take your dive computer to an authorized SCUBAPRO UWATEC dealer.
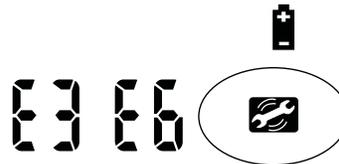
12.2.1 Replacing the battery

(Use only the original SCUBAPRO battery kit with O-ring.)

⚠ WARNING

Removing the battery clears all physiological data including saturation. This means that for a repetitive dive the computer will not compute correctly. Diving after replacing the battery when there is desaturation time left on the computer can lead to serious injury or death from decompression sickness.
Change the battery only under these conditions:
- After a dive if you know you will not be diving, flying or going to higher altitude for the next 48 hours.
- Before a dive if there is no desaturation time left on the computer.

The change must be made with particular care in order to prevent water from seeping in. The warranty does not cover damages due to an improper replacement of the battery.

⚠ WARNING

Never touch the metal surface of the battery with bare fingers.
The two battery poles must never be short circuited.

Procedure:
To replace the battery you need a coin or the SCUBAPRO universal tool and a clean cloth.

⚠ WARNING

• A leaking battery cap may lead to the destruction of Aladin 2G by water seeping in or cause Aladin 2G to switch off without prior notice.
• Always open the battery compartment in a dry and clean environment.
• Only open the battery compartment to replace the battery.

1. Dry Aladin 2G with a soft towel.
2. Turn the battery cap with a coin or with the SCUBAPRO universal tool.
3. Remove the battery cap.
4. Remove the O-ring carefully. Do not damage the sealing surfaces.
5. Remove the battery. Do not touch the contacts.

SCUBAPRO universal tool
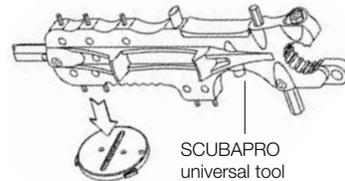
☞ *NOTE:*

Protect the environment and dispose the battery properly.

⚠ WARNING

If you notice traces of seeping water, damages, or other defects on the oring, do not use Aladin 2G for further dives. Take it to an authorized SCUBAPRO UWATEC dealer for check and repair.

6. Always insert a new O-ring when you replace the battery and dispose the old O-ring. Make sure that the new O-ring is in perfect condition, and that O-ring, O-ring groove and the sealing surfaces are free of dust and dirt. If necessary, clean the parts with a soft cloth. Fit the O-ring in the O-ring groove of the battery cap.

⚠ WARNING

7. Use only an original SCUBAPRO O-ring. This O-ring is Teflon coated and does not require additional lubrication.
8. Do not lubricate the O-ring as the lubricant will chemically attack the battery cap.

⚠ WARNING

9. Check the proper polarity of the battery. Aladin 2G can be damaged if you do not insert the battery correctly. Insert the new battery, with "+" pointing outwards, into the battery compartment.

After battery replacement Aladin 2G will perform an automatic test (8s) and gives a short beep when the test is done.
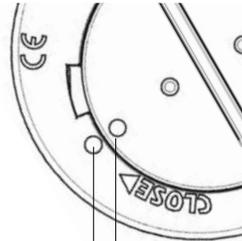
Alignment circles

⚠ **WARNING**

10. **The battery cap can be installed with a ±120° offset. The alignment circles are there to ensure proper positioning of the cap. If the rotation is stopped before alignment, watertightness may not be ensured. If the rotation is forced beyond the alignment, the cap may break. Damage to Aladin 2G due to improper placement of the battery cap is not covered by warranty.**

Push the battery cap firmly down and turn it clockwise until the two circles are aligned.

11. Check Aladin 2G by switching on ○ ● ->14.

12.3 Warranty

The warranty only covers dive computers which have been bought from an authorised SCUBAPRO UWATEC retailer. The warranty is given for a period of two years. Repairs or replacements during the warranty period do not increase the warranty period. In order to put forward a warranty claim: send the dive computer together with a dated receipt of the purchase to your authorised retailer or an authorised servicing point. SCUBAPRO reserves the right to determine the merits of a warranty claim and to determine whether the computer will be repaired or replaced. Excluded are faults or defects due to:

- excessive wear and tear;
- exterior influences, e.g. transport damage, damage due to bumping and hitting, influences of weather or other natural phenomena;
- servicing, repairs or the opening of the dive computer by anybody not authorised by the manufacturer;
- pressure tests which do not take place in water;
- diving accidents;
- improper placement of the battery cap.

English

12.4 Index