

# **B**'air Owner's Manual



READ THIS MANUAL, in its entirety, before using your B'air. Failure to follow the instructions it gives, or to heed the warnings it provides, can lead to *serious personal injury* or *death*.

### **B'air Limited Warranty**

- Dive Rite will—at its sole discretion—repair or replace b'air system components proved to be damaged by faulty manufacture or material, at no cost, for a period of up to one year (365 days) from the date of purchase.
- This warranty applies only to the original retail purchaser. It does not cover commercial or rental use, nor does it extend to units purchased from other than an authorized Dive Rite dealer.
- This warranty specifically excludes battery depletion or other conditions resulting from misuse, negligence, alteration, accident or unauthorized repair.
- To make a claim under this warranty, the owner must have completed and returned the Warranty Registration card, or registed on line at *www.diverite.com*. He or she must then return the damaged items to Dive Rite, along with a copy of the original purchase invoice or receipt. No warranty service will be performed for other than registered owners.
- This warranty becomes void if the b'air system components are damaged by anything other than normal recreational diving use, or if they have been serviced or repaired by other than authorized Dive Rite dealers.
- Repairs made under this warranty will not extend the warranty period.
- All further claims, especially for damage after diving accidents, are excluded from coverage under this warranty.
- Dive Rite has no obligation to honor any extension of this warranty.

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### Introduction

The B'air is designed to provide recreational divers with an affordable, easy-to-use dive computer that, properly cared for, will provide years of reliable service.

#### **Key Features**

Among the B'air's key features:

- The B'air activates automatically upon descent; it need not be manually activated prior to entering the water (although we recommend doing so).
- It automatically adjusts for altitudes of up to 7,782 ft/2,400 m, and is capable of functioning at depths of up to 328 ft/100 m.
- The B'air displays a variety of data, including: date; time of day; current, max and average depths; no-decompression dive time elapsed and remaining; and water temperature.
- The B'air provides audible and visible alarms for violation of ascent rate, no-decompression status and mandatory decompression stops.
- If needed, the B'air can calculate deco requirements for stops beginning up to 39 ft/12 m deep.
- The B'air's Random Access Memory (RAM) enables it to hold and display log data on up to ten dives.
- Depending on use, the B'air's battery can last for up to seven years before needing replacement.

#### **Common Sense Warnings**

As is true of every piece of diving equipment—including all dive computers—the B'air's abilities are not limitless. Thus, there are certain limitations and restrictions of which you must be aware, and certain precautions you must take, when using the B'air.



Before using your B'air, it is extremely important you read the following points—as well as similar warning and caution notices that appear throughout this manual—and follow the recommendations they provide. Failure to do so could result in: *damage to or loss of equipment; serious personal injury;* or, *death.* 

- The B'air is designed for use by *certified, recreational divers* who have maintained a sufficient level of knowledge and skill proficiency through a combination of formal training, ongoing study and experience. It *is not* intended for use by persons who lack these qualifications and, thus, may not be able to identify, assess and manage the risks scuba diving entails.
- The B'air *is not* intended for use by commercial, military or technical divers, whose activities may take them beyond the commonly accepted depth limits for recreational diving.
- The B'air is designed for use by divers breathing normal compressed air. It *does not* provide a means of tracking exposure to the elevated partial pressures divers may encounter when breathing Enriched Air Nitrox (EAN*x*).
- Although the B'air is capable of calculating decompression stop requirements, this ability is provided as a safety feature only, should recreational divers accidentally exceed the No-Decompression Limits (NDLs). *Dives requiring mandatory stage decompression carry substantially greater risk than dives made well within no-decompression limits*. Divers should not use the B'air to plan or execute dives that will intentionally exceed no-decompression limits.

- The B'air is designed to be used by only one diver at a time. Divers should not share a single B'air—or any other dive computer—on the same dive. Additionally, no diver should lend his or her B'air to anyone else until it calculates that no measurable residual nitrogen remains after previous dives, and is able to enter its Sleep Mode. Further, no diver should use his or her B'air for repetitive dives—unless that same B'air has accompanied him or her on all previous dives in the same repetitive dive series.
- Neither the B'air—nor any other dive computer presently available—physically measures the amount of nitrogen present in body tissues, or the rate at which this nitrogen is being absorbed or released. Instead, the B'air monitors depth and time, and uses this data to work a mathematical formula designed to emulate how *individuals in good general health and whose physical characteristics do not place them among those at higher risk of decompression illness* are assumed to absorb and release nitrogen from body tissues. Thus, the B'air cannot compensate for factors such as age, obesity, dehydration, cold or exertion, which experts believe place divers at greater risk of DCI. If these, or similar factors apply to you or diving, you should use the B'air—and any other dive computer or dive table—with even greater caution.
- Experts still know surprisingly little regarding the exact nature and causes of decompression illness (also known as decompression sickness, DCI or DCS). Susceptibility to DCI may vary substantially from person to person and from day to day. *Neither the B'air—nor any other dive table or dive computers—can guarantee that you will not suffer decompression illness. Even though you use these items correctly, you may still suffer DCI.* Use your B'air conservatively, and in conjunction with other dive planning devices, such as dive tables. Do not rely on the B'air, or any similar device, as your sole means of avoiding decompression illness.

## Using the B'air

The key to using the B'air correctly is learning to access, recognize and interpret the data presented in its various display modes. The B'air is capable of displaying far more data than can fit in a single screen. Thus, to help avoid confusion, it displays only that data which is relevant to a particular situation. For example, the data appearing when the B'air is in its Date/Time Set Mode is very different from that appearing when it is in Dive or Deco Mode.

The B'air is capable of presenting ten different display modes. In the balance of this manual, we will identify each of these modes, and explain:

- What the purpose of each mode is.
- How you enter and exit each mode.
- What data you will see in each mode, and how to interpret it.
- What audible and/or visible warnings may be heard or displayed in each mode, and how to respond to them.

#### **Accessing Display Modes**

There are some display modes that the B'air enters and/or exits automatically. For example, by taking the B'air under water, you automatically activate its Dive Mode. After sufficient inactivity, your B'air will automatically enter its Sleep (Battery Saver) Mode.

To access other modes, you may need to push one of the two large, orange buttons appearing on the B'air's face. These are the PLAN and LOG buttons.



**Figure 1:** The front of the B'air, showing its Liquid Crystal Display (LCD) in Check Mode, and the two large plan and log buttons.

You will find both buttons easy to use. In some instances, you may need only press a button once and release it to achieve the desired result . In other instances, you may need to hold the button down until you get the result you wish. This manual will outline clearly which procedure to follow for each mode or task.

#### Sleep (Battery Saver) Mode

So long as there is sufficient battery voltage, your B'air never turns completely off. Even when it appears to be "asleep," the B'air monitors factors such as battery voltage and altitude. Nevertheless, to prolong battery life, your B'air is programmed to project data on its Liquid Crystal Display (LCD) only when absolutely necessary.



**Figure 2:** *Sleep (Battery Saver) Mode.* 

**To enter this mode:** There is actually nothing you can do to force your B'air into Sleep Mode. If you have activated your B'air—but not taken it diving—it will return automatically to Sleep Mode after five to six minutes. If, on the other hand, your B'air calculates that there is still residual nitrogen present from previous dives, it will not enter Sleep Mode until it determines that all residual nitrogen is, effectively, gone.

**What you will see:** When the B'air is in Sleep Mode, its Liquid Crystal Display (LCD) will normally be black, as it appears in Figure 2.

**Warnings you may encounter:** As shown in Figure 2, there is one warning that may appear, even though the rest of the B'air is "asleep." This is the *Low Battery* warning. This warning may or may not blink on and off. The Low Battery warning means that the B'air's battery lacks sufficient voltage to function properly.

Once the Low Battery warning appears, it will remain visible in all display modes except Log Mode. Additionally, the presence of the Low Battery warning will prevent the B'air from entering Dive Mode—a feature designed to help prevent the B'air from failing under water.



Once the Low Battery warning appears, you must return your B'air to Dive Rite or you local authorized Dive Rite distributor for battery replacement. This is a "factory only" procedure and cannot be performed by consumers or local Dive Rite dealers.

Before sending your B'air in for battery replacement, be sure to copy all dive log data to your log book, as the battery replacement process erases all such data from the B'air's *Random Access Memory* (RAM).

The battery that comes with your B'air is designed to last up to seven years under normal use. Several factors may affect battery life; therefore, do not be surprised if you get significantly more or less use from your B'air's battery.

**To exit this mode:** You can exit Sleep Mode (i.e, cause your B'air to "wake up") by pressing either the PLAN or LOG button, or by taking it under water.

#### **Check Mode**

When you "awaken" your B'air from Sleep Mode, the first thing it will do is enter Check Mode. In this mode, the B'air projects its full segment display. Check Mode provides you with the opportunity to test your B'air for proper function before taking it under water.



Figure 3: Check Mode.

**To enter this mode:** From Sleep Mode, press either the PLAN or LOG button, or take it under water.

What you will see: As shown in Figure 3, all *pixels* (picture elements) on your B'air's Liquid Crystal Display (LCD) should appear clearly during Check Mode.

**Warnings you may encounter:** There are no specific warnings that appear during Check Mode; however, you should examine the display carefully to make certain all pixels appear clearly.



If all pixels do not appear clearly during Check Mode, *do not* take your B'air diving. Instead, you should return it to Dive Rite or your local Dive Rite distributor for immediate service. Failure to do so could result in: *damage to or loss of equipment; serious personal injury;* or, *death*.

Although it is possible to take your B'air diving without first activating it on land, we do not recommend this. Instead, you should "awaken" your B'air first (by pressing either the plan or log buttons), then observe it in Check Mode to help ascertain that everything is functioning properly. If you do not do so, it is theoretically possible that your B'air could give you erroneous information under water, and you would not be aware that it was doing so.

**To exit this mode:** Within two to three seconds of entering Check Mode, your B'air should automatically enter either Surface or Dive Mode, depending on whether you activated the computer by pressing its PLAN or LOG buttons, or by taking it under water.

#### **Surface Mode**

Assuming that you follow the recommended procedure of activating and checking your B'air before taking it under water, it will remain in Check mode for from two to three seconds, then enter Surface Mode. Your B'air will also enter Surface mode immediately upon ascending from any dive.



**To enter this mode:** There is no specific action you must take to get your B'air to enter Surface Mode—other than to press its PLAN or LOG buttons if it is "asleep." You will discover that Surface Mode is the B'air's default mode whenever it is "awake" and not under water.

What you will see: If your B'air does not calculate that there is residual nitrogen present from previous dives, it will display only the current date and time.

- *Date Format*—The format the B'air uses to display the current date is that common in the USA and Japan, in which the first set of one or two digits signifies the month, and the second set of one or two digits (following the hyphen) signifies the day. Thus, a date of *11-3* would represent the third of November.
- *Time Format*—The B'air uses the 24-hour clock format, common in aviation and military service, to signify time of day. Thus, a displayed time of *13:04* would represent 1:04 PM.

12-Hour Clock	24-Hour Clock	12-Hour Clock	24-Hour Clock
12:00 AM	00:00	12:00 pm	12:00
1:00 AM	01:00	1:00 pm	13:00
2:00 AM	02:00	2:00 pm	14:00
3:00 AM	03:00	3:00 pm	15:00
<b>4:00</b> AM	04:00	4:00 pm	16:00
5:00 AM	05:00	5:00 pm	17:00
6:00 AM	06:00	6:00 pm	18:00
7:00 AM	07:00	7:00 pm	19:00
8:00 AM	08:00	8:00 pm	20:00
9:00 AM	09:00	9:00 pm	21:00
10:00 AM	10:00	10:00 pm	23:00
11:00 AM	11:00	11:00 pm	23:00

If your B'air calculates that there is residual nitrogen present from previous dives, it will also display the *Surface Interval Time* (SIT) that has elapsed since ascending, and a symbolic representation of the overall quantity present on its *Residual Nitrogen Bar Graph*.

• *SIT Format*—The format your B'air uses to display Surface Interval Time is HOURS:MINUTES.

• *Residual Nitrogen Bar Graph*—This is a row of nine pixels that represents the overall saturation of body tissues with nitrogen. When all nine pixels appear under water, it means you have reached (or exceeded) the No-Decompression Limit (NDL). On the surface, fewer than nine pixels should appear, and the number of pixels appearing should diminish over time—as the level of excess nitrogen present in your system diminishes as your surface interval passes.

Among the greatest benefits of this symbolic representation of nitrogen levels during surface intervals is that it helps you decide how long to wait before re-entering the water. For example, should you elect to make a repetitive dive when there are more than just a few pixels appearing, you will discover that your available no-decompression dive time ends up being very short. Thus, it makes sense to wait until fewer pixels appear, and you can enjoy longer bottom times with a greater margin of safety.

If you are substantially above sea level, your B'air will also display its current altitude settings. We will discuss these shortly.

Warnings you may encounter: There are none—other than the Low Battery Indicator discussed earlier.

**To exit this mode:** You can exit Surface Mode in a variety of ways. Among them:

- Allow Your B'air to go "Back to Sleep"—If you have awakened your B'air from Sleep Mode and take no further action within five to six minutes, it will return to Sleep Mode automatically. If your B'air has been under water in the past 24 hours, it will also go "back to sleep" once it calculates that there is no longer residual nitrogen present.
- *Enter Another Mode*—You can either take the steps outlined shortly to enter *Dive Plan*, *Date/Time Set* or *Sleep* Modes, or simply take your B'air under water, thus activating *Dive Mode*.

#### **Using Your B'air at Altitude**

Among the B'air's many features is the fact it adjusts automatically for diving at altitudes of up to 7,872 ft/2,400 m. To show that it has made this adjustment, the B'air displays its altitude settings in the form of mountain symbols with the numbers 1 and 2 on them. This is what the symbols mean:

Symbol	Altitude Range
(None)	Sea Level to 2,624 ft/800m
One Mountain Shows	2,624 ft/800m to 5,249 ft/1,600 m
Two Mountains Show	5,249 ft/1,600 m to 7,872 ft/2,400 m
(Both Mountains Flash)	Above 7,872 ft/2,400 m (Out of Range)

Prior to using your B'air at altitudes substantially above sea level, you should find out what the actual altitude of your dive site is, and make certain that the altitude settings your B'air displays accurately matches this height.



Do not use your B'air to dive at altitude unless the altitude settings accurately match the actual height above sea level. Doing so could cause the B'air to display inaccurate information.

You should also not use your B'air to dive at altitude when both altitude setting symbols and appear and flash on and off. This means that you are above an altitude of 7,872 ft/2,400 m, which is beyond the B'air's ability to function accurately.

Failure to heed this warning can result in decompression illness, leading to *serious personal injury* or *death*.

It is also important your B'air not be in Dive Mode when making sudden, substantial changes in altitude—such as when flying in an airplane. This would most likely result from storing your B'air with wet dive gear, which might touch its external electrical contacts and fools the B'air into thinking it is under water. It can interfere with your B'air's ability to function accurately.



Do not pack or store your B'air with wet dive equipment. Doing so may cause it to erroneously enter Dive Mode and interfere with its ability to accurately process and display data.

Your B'air monitors and adjusts for changes in altitude in all modes except Dive and Date/Time Set Mode. It will display its current altitude settings in all modes except Log and Sleep Modes (in Log Mode it displays the altitude settings applicable to a particular dive).

Upon arriving at altitude, your B'air's Residual Nitrogen Bar Graph may show that there is excess nitrogen present, even though you may not have made any dives in the preceding 24 hours. It may also display a surface interval value, which later re-sets itself.

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

#### **Dive Plan Mode**

Your B'air's Dive Plan Mode enables you to answer the question, "If I enter the water right now, how long will the B'air allow me to stay at various depths while remaining within the NoDecompression Limits?" Among the benefits of activating your B'air before taking it under water is that it enables you to "scroll" through Dive Plan Mode to help better estimate and plan your dive.



**To enter this mode:** From Surface Mode, simply press the PLAN button once and release it.

**What you will see:** When you first enter Dive Plan Mode, your B'air will display a depth of either 30 feet or 9 metres, and the allowable No-Decompression Limit (NDL), in minutes, that it projects for this depth. If you do nothing else, within four seconds, your B'air will "scroll," displaying the available No-Decompression Limit for the next 9.8 ft/3.0m depth increment. This will continue until the B'air reaches a depth of 157 ft/48m. At this point, the B'air will again display the No-Decompression Limit for 30 ft/9m, then continue "scrolling" through subsequent depths until the cycle again repeats itself.

• You can accelerate the scrolling process by repeatedly pressing and releasing the PLAN button. Doing so will cause the B'air to advance to the next depth increment each time you press the PLAN button (it is normal for there to be a slight delay before the available No-Decompression Limit appears). Here are the No-Decompression Limits the B'air displays when it calculates that there is no residual nitrogen present from previous dives:

Depth (Feet)	Depth (Metres)	Time (Minutes)
30	9	200
39	12	105
49	15	66
59	18	47
69	21	35
79	24	25
89	27	19
98	30	16
108	33	13
118	36	11
128	39	9
138	42	8
148	45	7
157	48	7

If your B'air calculates that there is residual nitrogen present from previous dives, the available No-Decompression Limits it displays will be shorter. The B'air will also display Surface Interval Time and its Residual Nitrogen Bar Graph during Dive Plan Mode just as it does during Surface Mode.

Warnings you may encounter: Depending on how much residual nitrogen the B'air calculates is present, it may not display any available No-Decompression dive time for some deeper depths. Instead, it will simply show a series of double hyphens (—).



Do not plan dives to depths deeper than those for which the B'air is capable of displaying an available No-Decompression Limit. Doing so could cause you to exceed the No-Decompression Limits—which may, in turn, *substantially increase your risk of decompression illness*.

**To exit this mode:** You may exit Dive Plan Mode in a variety of ways:

- *Go Diving*—Taking the B'air under water will cause it to automatically leave Dive Plan Mode and enter Dive Mode.
- *Return to Surface Mode*—To do so, simply press and hold the PLAN button for at least two seconds.
- *Access Date/Time Set Mode*—To do so, press and hold the LOG button for at least five seconds (we will describe Date/Time Set Mode next).
- *Do Nothing*—If the B'air calculates there is *no* residual nitrogen present from previous dives, it will return automatically to Sleep Mode within five to six minutes. If the B'air calculates there *is* residual nitrogen present, it will return automatically to Surface Mode within five to six minute.

#### **Date/Time Set Mode**

A further benefit of activating and checking your B'air, prior to taking it under water, is that it enables you to make certain the date and time are set correctly. When you first use your B'air, you will most likely discover that the month, day and minute are already correct; however, depending on your time zone, the hour may not be correct.



Figure 6: Date/Time Set Mode.

**To enter this mode:** From Dive Plan Mode, press and hold the LOG button for at least five seconds (be aware, however, that you cannot access Date/Time Set Mode within ten minutes of surfacing from a dive).

**What you will see:** Upon accessing Date/Time Set Mode, your B'air's Liquid Crystal Display (LCD) should appear exactly as shown in Figure 6. The digits representing the current hour, however, will be flashing on and off.

- To change the hour, simply press the PLAN button. Each time you do so, the number shown will advance by one. If you press and hold the PLAN button, the numbers displayed will advance rapidly. If you accidentally go past the number you were shooting for, simply continue; you will eventually cycle back through to the number desired.
- If the hour displayed is correct—or you have changed it to the correct hour and wish to proceed further—simply press the LOG button. The seconds display will now flash. You can either change this using the PLAN button, or continue on to the minutes display.

By repeating this process, you will eventually cycle through all the date/time parameters shown, in the following order: *hours; seconds; minutes; year; month; date.* 

Warnings you may encounter: None, other than those discussed previously.

**To exit this mode:** You may exit Date/Time Set Mode in a variety of ways:

- *Return to Surface Mode*—To do so, simply complete the process of scrolling through and, if necessary, changing all the various date and time settings. You will return to Surface Mode automatically.
- *Go Diving*—Taking the B'air under water will cause it to automatically leave Date/Time Set Mode and enter Dive Mode.
- *Do Nothing*—If the B'air calculates there is *no* residual nitrogen present from previous dives, it will return automatically to Sleep Mode within five to six minutes. If the B'air calculates there *is* residual nitrogen present, it will return automatically to Surface Mode within five to six minutes.

#### **Dive Mode**

Among the B'air's key features is the fact it enters Dive Mode automatically upon descent. As discussed previously, we strongly recommend activating your B'air ahead of time, so that you may double check that: it is functioning properly; the date and time settings are correct; and, the dive you are planning falls well within the available No-Decompression Limits (NDLs). Nevertheless, your B'air will not "lock up" nor make erroneous assumptions regarding altitude or depth if you fail to do so.



**To enter this mode:** Simply take the B'air under water. It will enter Dive Mode automatically.

**What you will see:** When you first enter Dive Mode, your B'air's audible warning (a series of half-second beeps, separated by a half second of silence) will sound for several seconds. The B'air will display a variety of data, including:

- Current Depth—The depth at which the B'air is right now.
- Maximum Depth—The deepest point reached during this dive.
- Actual Bottom Time (ABT)—Time spent (in minutes) under water thus far.
- *Remaining No-Decompression Limit (NDL)*—Time remaining (in minutes) before you reach the No-Decompression Limit *assuming you remain precisely at your present depth.* The available No-Decompression Limit will increase if you ascend; decrease if you descend.
- *Residual Nitrogen Bar Graph*—A visual representation of how much nitrogen the B'air assumes your body has absorbed. When all nine pixels appear, it means you are at or have exceeded the No-Decompression Limit.

**Warnings you may encounter:** While in Dive Mode, you should be alert for the following warnings:

• *No Decompression Status*—You can help remain within the No-Decompression Limits (NDLs) by monitoring both the remaining No-Decompression Limit displayed on the right-hand side of the screen and the Residual Nitrogen Bar Graph. Bear in mind that the remaining No-Decompression Limit may decrease rapidly if you descend to deeper depths.

A good way to help ensure that your remain well within the No-Decompression Limits is to make certain that the Residual Nitrogen Bar Graph does not enter its *Caution Zone* (i.e., displays more than six pixels). If you do find yourself entering this Caution Zone, you should immediately either: ascend to a substantially shallower depth; or, ascend to safety stop depth, make a normal safety stop, then surface and end the dive.

• Ascent Rate Warning—The B'air's algorithm (the formula it works to determine your nitrogen uptake and release status) assumes you keep your rate of ascent withing the following limits:

Depth Range	Ascent Rate
0 ft/0m to 20 ft/6m	26 ft/8m per Minute
20 ft/0m to 60 ft/00m	39 ft/12m per Minute
60 ft/0m or deeper	52 ft/16m per Minute

If you exceed these ascent rates, the B'air will alert you in the following ways:

- The digits representing the current depth will flash on and off.
- The ascent-rate violation indicator in the lower right-hand corner of the display (-the word *slow*) will flash on and off.

The visible ascent rate warnings will continue until you slow your ascent rate to that which the B'air finds acceptable, or until you reach a depth of 5 ft/1.5m.

**To exit this mode:** The B'air returns to Surface Mode automatically upon ascent.

#### How the B'air Measures Actual Bottom Time and Surface Interval Time

Although the B'air automatically enters Dive Mode as soon as you take it under water, it does not begin to record Actual Bottom Time (ABT) until you descend below 5 ft/1.5m. Conversely, it assumes Actual Bottom Time ends and Surface Interval Time (SIT) begins as soon as you ascend above 5 ft/1.5m.

However, as Figure 8 shows, if you spend less than ten minutes at the surface, or above a depth of 5 ft/1.5m, then descend again, the B'air will count both descents—and the surface interval between them—as part of the same dive.



**Figure 8:** *How the B'air measures Actual Bottom Time and Surface Interval Time.* 

#### **Time/Temp Mode**

If, during the midst of a dive, you are curious as to the current time and temperature, the B'air can provide you this information.



Figure 9: *Time/Temp Mode*.

To enter this mode: Press and hold the PLAN button.

**What you will see:** The B'air will display the current time, using the 24-hour clock, and water temperature. The Residual Nitrogen Bar Graph will continue to appear as well.

#### Warnings you may encounter: None.

**To exit this mode:** Discontinue holding down on the PLAN button. The B'air will return to Dive Mode.

#### Deco Mode

Should you accidentally exceed the No-Decompression Limits, the B'air can provide you with decompression stop information.



Decompression diving is widely believed to entail substantially greater risk of decompression illness than dives made well within No-Decompression Limits (NDLs). The B'air provides decompression stop information solely as a contingency in case divers accidentally exceed the No-Decompression Limits; it *is not* designed or intended for use as a tool to plan or execute dives that participants know, going in, will entail mandatory decompression.



**To enter this mode:** You enter Deco Mode automatically by exceeding the No-Decompression Limits.

What you will see (and hear): As soon as you enter Deco Mode, the B'air's audible alarm will sound for three seconds. Additionally, all nine pixels of the Residual Nitrogen Bar Graph and the Deco Status indicator in the lower right-hand corner of the display will flash for several seconds. As this happens, the display itself will change from Dive Mode to Deco Mode. While in Deco Mode:

- The digits representing Current Depth and Actual Bottom Time (ABT) will display the same as they do while in Dive Mode.
- All nine pixels of the Residual Nitrogen Bar Graph and the Deco Status indicator in the lower right-hand corner of the display will appear.
- In place of maximum depth, a stop depth of 10 ft/3m, 20 ft/6m, 30 ft/9m or 40 ft/12m will appear.



Do not ascend above the indicated stop depth until either a shallower stop depth appears or the B'air returns to its normal no-decompression Dive Mode.

- A stop time will appear, showing how long (in minutes) you are to remain at the indicated stop depth.
- A total ascent time will also appear. This indicates the total of the time you must spend (in minutes) at the current stop, time required at shallower stop depths (if any), plus ascent time required between stops.

Be aware that it is possible to make stops at depths deeper than those indicated; however, you may find doing so greatly increases the time you must spend at each stop. For example, let's say that the indicated stop is five minutes at 10 ft/3m. You choose, however, to make your stop at 15 ft/5m. You may discover that, by doing so, it takes seven or eight minutes (or more) before your "five minute" stop clears and the B'air returns to Dive Mode.

**Warnings you may encounter:** In so far as the B'air is not designed nor intended for planned decompression dives, you should consider the very fact you are in Deco Mode as a significant warning in itself. Once you enter this mode, you should further be alert to the possibility of a Deco Stop Violation warning.

A Deco Stop Violation takes place when you either ascend shallower than the indicated stop depth or do not spend sufficient time there before ascending. Here is how the B'air alerts you to such violations:

- The audible alarm will sound for five seconds.
- The digits indicating Stop Depth and Stop Time, along with the Deco Status indicator, flash on and off. This will continue as long as you remain shallower than the indicated Stop Depth.

If you find yourself in Deco Stop Violation, descend to or below the indicated Stop Depth and remain for the time shown. If conditions make this impossible, make your stop between 3-7ft/1-2m, and remain there until the B'air returns to Dive Mode (this may take considerably longer than the display suggests it will).



If you cannot correct an indicated Deco Stop Violation, the warnings will continue for five minutes after surfacing. At this point, the computer will not be usable for the next 24 hours.

**To exit this mode:** Complete the indicated decompression, then surface.

#### Log Mode

The B'air's Random Access Memory (RAM) can store and display data for up to ten dives. This makes it possible for users to make a series of dives, then later transfer key dive data to a separate log book.



**Figure 11:** Log Mode displays. The B'air alternates back forth between each screen every four seconds.

**To enter this mode:** From Surface Mode, press and release the LOG button.

What you will see: As shown in Figure 11, Log Mode consists of two separate display screens. These alternate back and forth with one another every four seconds.

Be aware that, when your B'air is new, or has just had its battery replaced, it will contains no dive data. Therefore; the Log Mode display will consist solely of horizontal dashes (—).

When actual dive data is present, here is what each screen tells you:

- *Screen One*—The B'air displays data for: date of dive; *average* dive depth; start of Actual Bottom Time (ABT); and, end of Actual Bottom Time (ABT).
- *Screen Two*—The data presented includes: dive number (for that particular day); *maximum* dive depth; Actual Bottom Time (ABT, in minutes); and, water temperature at maximum dive depth.

Some data will appear on both screens. This includes:

- *Altitude Setting*—The altitude setting, if any, that applied during this dive.
- *Residual Nitrogen Bar Graph*—As it appeared at the end of the dive

**Warnings you may encounter:** Log Mode also provides a record of many of the warnings that appeared during the dive.

- Ascent Rate Warning Indicator—If two or more Ascent Rate Violations occurred consecutively during the dive, Ascent Rate Warning Indicator will appear and flash on and off.
- *Deco Status*—If a dive exceeded the No-Decompression Limits, the Deco Status indicator will appear. If a Deco Stop Violation took place, this indicator will flash on and off.

**To exit this mode:** You can exit Log Mode in a variety of ways, including.

- Go Diving—The B'air will automatically enter Dive Mode.
- *Return to Surface Mode*—You can do so by simply pressing and releasing the PLAN button, or by holding the LOG button down for at least two seconds.

• *Do Nothing*—If the B'air calculates there is *no* residual nitrogen present from previous dives, it will return automatically to Sleep Mode within five to six minutes. If the B'air calculates there *is* residual nitrogen present, it will return automatically to Surface Mode within five to six minutes.

#### "Out of Range" Warning

The B'air has one other warning we have not discussed. This is the "Out of Range" Warning. It is virtually inconceivable that anyone who uses a B'air for its intended purposes would ever encounter this warning. Basically, a diver would have to at least one of the following:

- Exceed a depth of 328 feet/100m.
- Exceed an Actual Bottom Time (ABT) of 599 minutes.
- Incur a decompression obligation that required stops beginning at depths deeper than 39 ft/12m.

Were a B'air to encounter any one of these conditions, most of the data normally displayed would be replaced by a series of horizontal dashes (—), and the entire display face would flash on and off. The B'air would then be unusable for the next 24 hours.



A B'air displaying an "Out of Range" Warning is incapable of displaying other critical information such as depth, time, Ascent Rate and Deco Stop Violations, and required decompression stops. Unless a diver possess other dive planning resources upon which to fall back, the risk of serious personal injury or death under such conditions would be substantial. For this reason, you should not—under any circumstance—use a B'air in such a way that would cause the "Out of Range" Warning to be displayed.

### Additional Cautions and Warnings

You now know most of what you need to get started using your B'air in as safe a manner as possible. There are are a few more things we need to cover, however, before you take your B'air into the water for the first time.



Before using your B'air, it is extremely important you read the following points and follow the recommendations they provide. Failure to do so could result in: *damage to or loss of equipment; serious personal injury;* or, *death*.

#### **General Handling**

- Do not store the computer in hot and/or humid environments. The pressure transducer is sensitive to both heat and humidity. If impaired, it may cause display of incorrect altitude or depth data.
- When in hot and/or humid environments, dip the computer in water to cool it to room temperature before using it. Do not take it under water immediately after doing so. Similarly, allow the computer to completely warm to room temperature if it is cold and, again, do not take it under water immediately after doing so. *Failure to follow these instructions may result in damage to the B'air.*
- The B'air's Liquid Crystal Display (LCD) may darken if left in a hot environment (such as on a car's dash). It will return to normal once allowed to cool; however, extensive exposure to heat may shorten LCD life.
- Be aware that weather-related changes in air-pressure can cause incorrect display of altitude settings. Be sure to check indicated altitude settings against actual altitude before use.
- The B'air is not to be disassembled by anyone other than Dive Rite or its authorized distributors. Unauthorized disassembly violates the warranty.
- If the B'air does not appear to be functioning properly—in any manner—*do not use it to dive.* Return it instead to Dive Rite (or your local Dive Rite distributor) for repair.

### Battery

• All B'air functions may cease within two to three days of the Low Battery Indicator first appearing. Always have low batteries replaced promptly.

- A depleted battery that is left in a B'air for a long period of time may leak (yet another reason to have batteries replaced promptly.
- Remember that batter replacement may only be done by Dive Rite or its authorized distributors. Unauthorized disassembly violates the warranty.

### While Diving...

- Check battery level prior to diving. Remember the computer will not enter Dive Mode if the Low Battery Indicator appears.
- Do not "push" the No-Decompression Limits (NDLs). Make safety stops before ascending. If you accidentally exceed the No-Decompression Limits, make your decompression stops longer than those indicated. Check your breathing gas supply at all stop depths.
- Remember that the B'air *does not* monitor breathing gas supply. You must monitor this yourself, on every dive, using a submersible pressure gauge or equivalent device.
- Do not rely solely on this—or any other—dive computer. Take a back-up dive computer or tables (along with a separate means of monitoring depth and dive time).
- Be aware that the B'air makes assumptions regarding residual nitrogen based on altitude settings. Avoid making abrupt changes in altitude following a dive, as doing so may be very dangerous.
- The B'air *does not* have a "Time to Fly" function. We recommend you follow current medical recommendations for flying after diving, or wait until the B'air is capable of re-entering Sleep Mode (whichever is longer) before flying in an aircraft or driving to a higher altitude.

#### **Care and Maintenance**

- Rinse the B'air thoroughly in fresh water following every dive.
- Do not use cleansers, chemicals or solvent to clean the B'air. Use a soft cloth to gently wipe dirt or water stains from the computer.
- The glass display may be damaged (and its water resistance impaired) if exposed to: solvents such as alcohol or gasoline; cosmetic products such as hair spray or liquid soaps; alkaline substances; aromatic hydrocarbon solvents; and, halogenated hydrocarbon solvents.
- Store the B'air in a cool, dry location. After diving, wipe the computer dry and store it in a location separate from other damp items.

#### **Questions?**

If you have any questions regarding the use of your B'air, please feel free to write, phone, fax or e-mail Dive Rite.



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