

11. Dive Planning

- Operating modes for various breathing gases
- Decompression stop data
- A wireless transmitter that provides both cylinder pressure and remaining air data
- Dive profile lifetime history memories

Dive Computers

Advantages

- The maximum-depth penalty of the dive tables is avoided.
- Dive profile information is accurate.
- Dive computers store a record of the dive profile.
- You can eliminate common errors made when using manual dive planners.
- Dive computers offer additional features, such as an ascent rate indicator.

Disadvantages

- Dive computers are electronic instruments that can fail.
- Dive computers are expensive to purchase and service.
- Each diver must have a separate computer.
- The mathematical model varies from one type of computer to another, so some confusion results when each diver of a buddy team uses a different type of computer.

- ◉ A multiple-step ascent rate indicator
- ◉ Altitude adjustment
- ◉ A dive-planning mode
- ◉ Backlighting displays
- ◉ Audible alarms

An integrated, wireless-transmitting, digital-compass dive computer provides dive-planning information before, during, and after your dives. This type of computer is a highly desirable device. Central processing units (CPUs) in closed-circuit rebreathers (CCRs) are also sophisticated dive computers that provide highly technical dive-planning information.

The advantages of dive computers greatly outweigh the disadvantages, and computers have become an almost essential item for scuba divers.

After a dive, you and your buddy should reflect on your experience. How closely did the actual dive match the dive that you planned? If there were deviations from the plan, what caused them? Could you have prevented the deviations with a different plan or approach? What changes can you make to improve the next dive? Some problems require research, or you may need to ask the advice of a diving professional. The experience of each dive should affect your plans for future dives. Your dives with your buddy should progress more smoothly each time you dive together. Each time you visit a dive site, your dive procedures should improve. A review of each dive with your buddy and a discussion about future diving are valuable parts of dive planning. Even if you have a new dive buddy for a dive, you should plan your dives together and discuss the experience afterward. It is a good idea to keep notes about your dives on a waterproof slate and transfer unusual experiences to your dive log along with the usual data. Reflecting on past experiences from time to time will help you become a better diver.

The saying “If you fail to plan, you plan to fail” is true for scuba divers. All phases of dive planning are important and help ensure enjoyable and successful underwater experiences. Follow the recommended steps for planning, get area orientations when appropriate, have contingency plans, and discuss your dives with your buddy.

Dive profiles are a large portion of dive planning. Plan to dive conservatively. No dive-planning device can guarantee that you will not develop decompression illness after diving. The deeper, longer, and more frequently you dive, the greater your risk of decompression illness. Limit multiple-day and multilevel dives because repetitive multiple-depth profiles make you more susceptible to decompression illness. Make a rest stop at the end of every dive, avoid improper profiles, and have surface intervals of an hour or more. After three consecutive days of repetitive diving, wait a full day before diving again. Exercise good judgment and common sense.

1. What is the most difficult task of dive planning?
2. How can you make dive planning easier and be more likely to accomplish it?
3. You have a dive planned, the weather and water conditions are good, and you catch a cold virus the day before your dive. Cold medicine minimizes your congestion. What should you do?
4. A friend who has more diving experience than you invites you to dive on a shipwreck that is located at a depth of 120 feet (36.6 m). How should you respond to his invitation?

5. Would you rather plan a dive by using a dive computer or by using dive tables? What is the advantage of each approach?
6. You have been diving at a resort for a week. None of your dives have required decompression other than safety stops. Your plane leaves the day after tomorrow at 10 a.m. When should you stop diving?
7. If you have to go over a mountain pass with an altitude of 5,000 feet (1,525 m) to return home after diving, what action do you need to take?