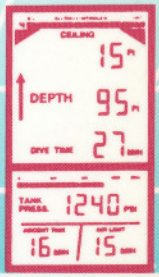
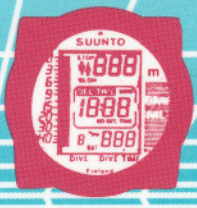
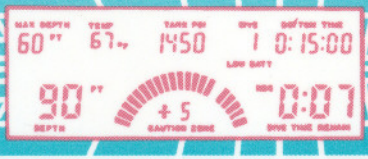
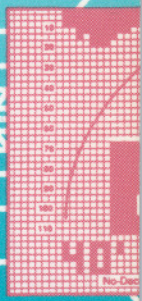
DIVE COMPUTERS

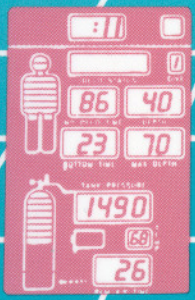
A CONSUMER'S GUIDE TO HISTORY, THEORY & PERFORMANCE











KEN LOYST
WITH KARL HUGGINS & MICHAEL STEIDLEY

Table of Contents

Acknowledgements 6

Introduction 7

Chapter 1
History and Development of Dive Computers 11

Chapter 2
Dive Computer Theory Developments 23

Chapter 3
Physiology of Decompression Sickness 33

Chapter 4
Tissue Half-Times and M-Values. 49

Chapter 5
Guidelines for Using Dive Computers 59

Chapter 6
How Dive Computers Work 65

Chapter 7
Computer Assisted Multi-Level Diving 69

Chapter 8
A Comparison of Current Computer Features 77

Chapter 9
High Altitude Diving and Flying After Diving 145

Chapter 10
Decompression Diving First Aid & Treatment 155

Glossary of Dive Computer Terms 163

Bibliography 173

Index 177

1991

Dive Computers: A Consumer's Guide To History, Theory, and Performance is specifically designed for any diver that either owns a dive computer or is considering purchasing one. **Dive Computers** is a diver's guide to using dive computers safely and to making an intelligent decision as to which dive computer would best fit your diving needs. Get the straight facts about dive computers currently available. Information includes history of dive computers, historical references of the pioneers in decompression theory, explanations of decompression theory and multi-level diving, and a systematic computer comparison and performance section with 24 dive computers.

For those of us who love the underwater world, the advent of dive computers has greatly enhanced our recreation. Using computer assisted multi-level diving techniques will allow more time underwater. Dive computers are tools that must be understood and used properly. Take the time to comprehend decompression and dive computer theory so that you may better interpret their strengths and limitations, and, in turn, realize increased diving safety.

About the authors:

Ken Loyst

Ken is the Publisher/Editor of ***Discover Diving*** magazine, an international diving publication. He is co-author of ***Diving With Dive Computers***, the first publication on dive computers, and author of numerous comparison articles on these electronic devices. A diving instructor and instructor trainer since 1972, Ken stays active testing dive equipment and diving as a professional underwater photographer.

Karl E. Huggins, M.S. Bioengineering

Karl was a co-developer of the EDGE dive computer, which was the first successful microprocessor based dive computer in the U.S. He is presently an Associate Researcher, Diving Instructor, and member of the Diving Control Board for the University of Michigan. Karl is a member of the DAN Advisory Board for Sport Diving Decompression, the American Academy of Underwater Sciences, the Undersea and Hyperbaric Medical Society, and presently holds the position of Decompression Safety Coordinator on the National Association of Search and Rescue's Diving and Water Rescue Committee. He is the 1990 recipient of the Leonard Greenstone Award for Diving Safety.

Michael Steidley

Michael is the Southwest Regional Business Consultant for the National Association of Underwater Instructors. He is also co-author of ***Diving With Dive Computers***, the first publication on dive computers. Michael is an active diving instructor and instructor trainer and underwater photographer.

ISBN 0-922769-09-5

51295

9 780922 769094

Watersport Books
A Division of Watersport Publishing Inc.
P.O. Box 83727
San Diego, California 92138