Bering●Box 800
User's Manual

Manual No. 11-80000-01 Rev A

Bering Technology, Inc.
1717 Dell Avenue
Campbell, CA 95008
(408) 364-6500

Note:

The information contained in this document is subject to change without notice. Every reasonable precaution has been taken in the preparation of this manual to insure its accuracy. However, Bering Technology, Inc. assumes no liability resulting from any errors or omissions in this manual, or from the use of the information contained herein, nor does it make a commitment to update the information contained herein.

Bering●Box is a trademark of Bering Technology, Inc.

Important FCC Information

This peripheral device generates and uses radio frequency energy, and if it is not installed and used properly, that is, in accordance with this manual, it may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class-A computing device in accordance with the specifications in subpart J of part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a commercial installation. However, there is no guarantee that interference will not occur in a particular installation. Operation of this equipment in a residential area may cause interference and is up to you, at your own expense, to take whatever measures may be required to correct the interference. You can test to see whether this equipment does cause interference with radio or television reception by turning the Bering●Box off and on while the receivers are on to see whether interference stops when the drive is off. If the drive is causing interference, try to correct the problem by one or more of the following measures:

- Be sure you're using shielded interconnect cables.
- Reorient the receiving antenna.
- Relocate the drive with respect to the receiver.
- Move the receiver away from the Bering●Box, or vice versa.
- Plug the computer into a different outlet so that the computer and receiver are on different circuits.

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may also find a booklet prepared by the Federal Communications Commission helpful. It is entitled *How to Identify and Resolve Radio-TV Interference Problems.* Request Stock No. 004-000-00345-4, from the U.S. Government Printing Office, Washington, D.C., 20402.

Printing History

New revision levels of the manual indicate a new rewrite of the manual. This may include new installation instructions for a particular operating system, or a new model of the Bering●Box subsystem. If the Revision level of the manual does not change from one printing to the next, this indicates that the newer printing is a maintenance upgrade, i.e. typographic errors, page references, etc.

If you have upgraded your Bering●Box to a later version than the last one listed in the following table, you should contact Bering Customer Service to determine the proper revision of the *Bering●Box 800 User's Manual* required for your Bering●Box subsystem.

Date = Date this manual was printed
Rev = Revision level of this manual

Date	Rev	Changes to manual
September 1999	A	First printing

Warranty Statement

Bering products sold in the U.S.A. and Canada carry a standard 90 day warranty against defects in materials and workmanship.* The drive mechanisms installed in the Bering●Box are covered by the original manufacturer's warranty following the end of the Bering●Box warranty. During the warranty period, Bering will, at its option, repair or replace equipment which proves to be defective. If a drive mechanism fails after the initial 90 day warranty, the original manufacturer of the drive should be contacted for warranty repair.

All repairs will be performed at the factory. Any other arrangement, such as on-site service, will be at your expense. Before any product is returned for repair, a Return Materials Authorization number (RMA) must first be obtained from a Customer Service representative.

Customer Service
Bering Technology, Inc.
1717 Dell Avenue
Campbell, CA 95008

(408) 364-6500
FAX (408) 374-8309
Email: help@bering.com

The selection and use of media, supplies, and consumables is the customer's responsibility. Bering reserves the right to exclude from the warranty any damage caused by misuse of the product, unauthorized modification, shipping damage, non-Bering-approved media, interface, software, or cleaning supplies.

NO OTHER WARRANTY IS EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. BERING SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES, DIRECTLY OR INDIRECTLY RELATED TO THE USE OR PERFORMANCE OF BERING PRODUCTS.

*For products sold outside the U.S.A. and Canada, contact your local Bering distributor, representative, or dealer for warranty terms. Repairs and upgrades carry a limited time warranty. Contact a Bering sales representative or Customer Service Representative for details on the warranty period for replaced parts and upgrades.

Configuration Settings

Use this table to record the configuration settings of your Bering Bering●Box disk drive subsystem.

Model _____

Serial Number (from rear of drive) _____

SCSI Address

Left _____

Right _____

Table of Contents

1

INTRODUCTION

Congratulations on purchasing what we think is the finest disk subsystem on the market. Bering drives are built for years of reliable service. We're sure you'll agree as you continue to work with your drive.

Bering●Box 800 series drive is compatible with HP and other computer systems with a SCSI interface.

The Bering●Box 800 series is a drive subsystem consisting of a chassis with optional fixed disk drive(s) with capacities of 4.0 GigaBytes and greater, removable media drive(s), or DDS tape drive(s) to meet the mass storage requirements of any operating system. These drives provide complete compatibility with all SCSI based computer systems and work stations. The Bering●Box 800H drives have single-ended SCSI-2 interfaces, while the 800HW drives have ultra-wide 68 pin SCSI interfaces, which provide the latest SCSI interface options.

Currently, the Bering●Box 800 subsystems come in the following SCSI configurations:

- Model 800H — a SCSI-2 box containing a single or multiple SCSI-2 drives
- Model 800HW — a 68 pin ultra wide box containing a single or multiple ultra wide SCSI drives

The Bering●Box 800 drives provide fast, reliable storage that's always available. The installation procedure is almost identical for all models. No software or hardware modifications are required. All Bering●Box drives support the latest SCSI Common Command Set (CCS).

Unpacking

Carefully unpack your Bering●Box near the location where you want to set it up, noting the packing method as you go. Save the packing materials — they'll come in handy if you ever want to transport the unit.

Besides this manual, the carton contains:

- The Bering●Box 800 drive
- A power cable
- Optional modules and cables

If any item is missing, please call your dealer or call Bering Customer Service at (408) 364-6500.

Conventions in this Manual

We'll use the following conventions to make the information more precise:

- **Keys** on the keyboard are indicated by capital letters enclosed in square brackets, e.g., [ENTER], regardless of whether the characters on your keys are actually capitalized. On the other hand, **buttons** on the Bering●Box are indicated by underlined capital letters alone followed by the word *button*, e.g. POWER button.
- A monospaced type font, `like this`, is used to convey text you should see on your screen, e.g., "you'll see:
  `Welcome!` on your monitor."
- The same font in contrast (either bold or regular) to the surrounding text, **`like this`**, is used to present the exact characters or keys you are to type or press, e.g., "type **`UTIL`** and press **`[ENTER]`** to continue." However, these keystrokes will not be typographically differentiated if they are conditional or theoretical. That is, you have the option of making one of several entries or we are speaking of hypothetical situations, e.g., "If you type **`Y`** and press **`[ENTER]`** the disk will be reformatted, but if you type **`N`** and press **`[ENTER]`** you will exit the program."
- Commands, program, utility, and file names are capitalized to distinguish them from the rest of the text. However, when in a command line, they will be represented in lower case letters unless upper case (capital) letters are actually required, e.g.

  in text: "... use the TYPE command to read text files."

  to be typed:
  type **`a:readme`**

- Italics in any type face, *like this*, have a limited number of possible meanings:

  Words as words, letters as letters, or numerals as numerals, e.g., "the word *enter* can be confused with the key on your keyboard, therefore we will use *type* in its place."

  Titles of books, booklets, or disks, e.g., *Bering●Box 800 User's Manual*.

  Symbolic of variable words, characters, or numerals. That is, something must be in the variable's place, but the exact contents vary with different situations and cannot be specified without knowing a particular situation. Variable is not synonymous with optional. Frequently the letter(s) *n* (for numerals), or *x* (for words or characters) are used to hold the place of the variable, e.g., "the program will answer that there are *n* widgets." Note however, that a capital *N* is used for clarity when you are to type the letter *n* usually to signify *No* even though you don't actually have to capitalize the letter when you type it.

2

INSTALLING THE BERING●BOX

This chapter describes the installation procedure for the Bering●Box and is divided into three sections. The "Quick-Start Procedure" section enables experienced users to begin operation right away. The "Connecting the Bering●Box Drives" section helps new users connect the disk drive to SCSI based systems before going on to the next chapter for additional operating instructions.

Quick-Start Procedure

This section describes the quick-start procedure to set up the Bering●Box 800. There may be some adjustments necessary before the Bering●Box can operate in your particular environment.

The default parameter settings are as follows:

SCSI address: 0

1. Turn off your computer and connect the Bering●Box to the computer using a SCSI cable.

   If you are mixing wide and narrow SCSI devices on the SCSI chain, you must use an active wide SCSI terminator to terminate the chain.

   If necessary, refer to the next section in this chapter.
2. Terminate the SCSI chain with an active SCSI terminator.
3. Set each SCSI address switch on the Bering●Box to a unique address.
4. Turn on the Bering●Box and wait for the drive to spin up.
5. Turn on your computer.
6. Initialize the disk and begin using the Bering●Box.

▲ CAUTION: *Make sure that other equipment or appliances which might generate electrical noise or a power surge (such as electric typewriters or heaters) are on separate circuits.*

Connecting the Drive

For specific installation and configuration instructions for your SCSI based computer, refer to the Operations manual for your operating system.

▲ CAUTION: *Turn off your computer and unplug the power cord from the wall outlet. Disconnect any other obstructing cables attached to the back panel of your computer.*

1. Turn off your computer, then connect one end of the SCSI cable to the SCSI connector on the back of the computer and the other end to either SCSI connector on the back panel of the SCSI subsystem.

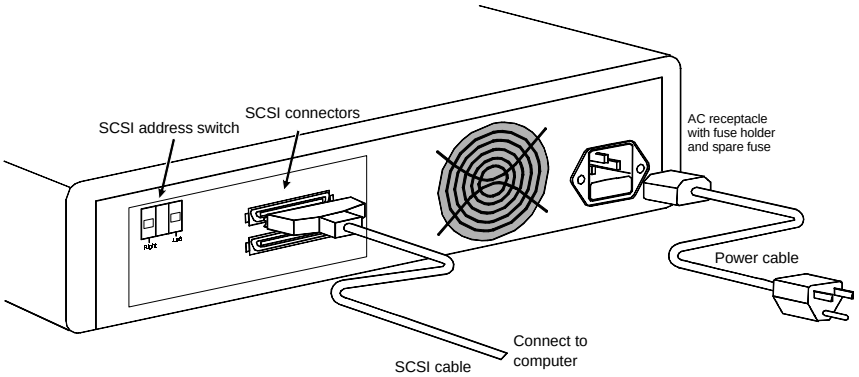

Figure 2-1: SCSI subsystem rear panel

2. If the Bering●Box is the last drive on the SCSI chain, install a terminator on the remaining SCSI connector on the rear panel of the SCSI subsystem. The SCSI terminator should only be installed on the last device on the SCSI chain.

   If you do not have a terminator or you have one, but it's the wrong type, contact Bering Technology sales.

3. Locate the SCSI address selector on the rear panel of the SCSI subsystem and make any changes at this time.

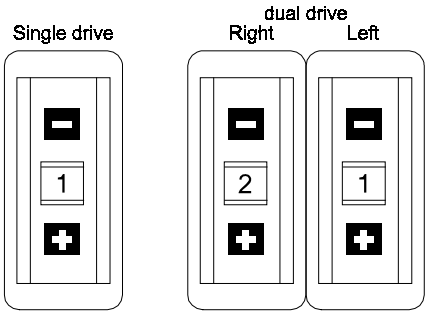

Figure 2-2: SCSI address selector

The SCSI address selector sets the SCSI subsystem's priority. There will be one address selector switch for each drive installed in the Bering SCSI subsystem. Push the top button to select a lower address. Push the bottom button to select a higher address. Use this address to establish a unique identity for each device connected to the SCSI Interface. Ensure that no other devices on the SCSI chain use the same SCSI address. The HP SCSI Interface (host adapter) is defaulted to SCSI address 7, but it is switch selectable, so ensure that the SCSI subsystem is not using the same address as the SCSI interface (host adapter) in the computer.

4. Ensure that the subsystem is switched off by checking that the **POWER** button on the front of the Bering●Box subsystem is not pressed in. Plug the power cord securely into the AC line receptacle on the rear panel of the subsystem. Plug the other end of the power cord into a properly grounded power outlet.

3

OPERATING THE DISK DRIVE

This chapter describes the operating procedures for the Bering●Box 800 series drives. The Bering●Box 800 series is essentially a Plug and Play device, so operation is as simple as powering on the drive.

Front Panel

Figure 3-1 illustrates the front panel of the Bering●Box 800 containing one or more fixed disks. A model with a DDS tape and/or removable media will have an opening in the front for access to each device.

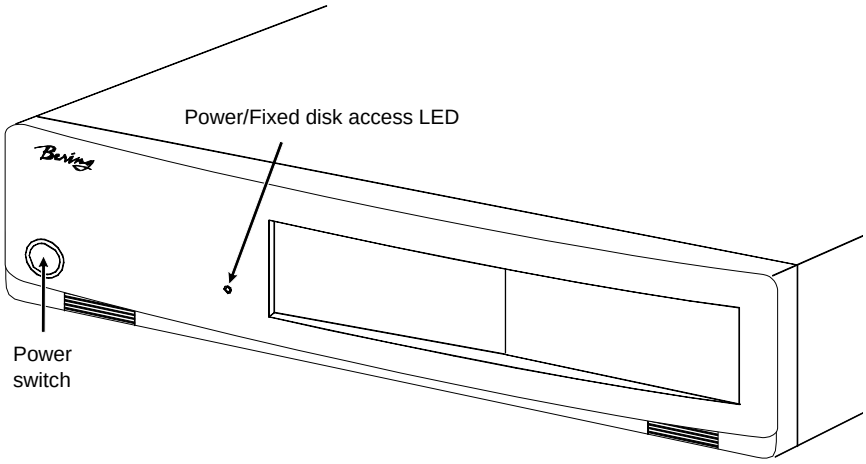

Figure 3-1: Bering●Box Front Panel

1. Press the **POWER** switch on the rear panel of the Bering●Box.

   The Bering●Box will begin its power up self-test procedures.

   The Bering●Box should be powered on prior to powering on the computer system in order for the drive to be recognized by the operating system and the SCSI controller in the computer.

Orientation

The 800 series drive should be operated in a horizontal orientation (bottom down). For the best data integrity, the drive should be operated in the same orientation in which it was formatted.

4

CARING FOR THE DISK DRIVE

This chapter describes how to care for your Bering●Box disk drive. As long as you protect your Bering●Box from hazards, it will provide you with years of service.

General Safeguards

You can preclude many problems by taking preventive measures.

- Avoid overheating by placing the Bering●Box where adequate airflow can circulate around it. Be particularly careful to avoid blocking the cooling vent at the rear of the unit.
- Make sure it is plugged into a grounded electrical outlet. Verify that the outlet is actually grounded. The Bering●Box should be on the same circuit as your computer.
- Make sure that other equipment or appliances which might generate electrical noise or a power surge are on separate circuits.
- Do not expose you Bering●Box to extreme heat or cold. Prolonged exposure to excessive heat, direct sunlight, or freezing conditions will harm the drive.
- Keep it away from moisture, dirt, and contaminants such as spilled liquids, steam, or excessive dust. Do not smoke near the Bering●Box.
- Avoid exposure to magnetic fields such as those emitted by magnets, speakers, or telephone equipment.
- Avoid bumping the Bering●Box while it is running.
- Always set the Bering●Box upright on a flat surface.

You don't need to worry about leaving the Bering●Box on for a long time - it doesn't use much power. It's normal for the drive to feel warm (but not hot) after it's been running for a while.

If the Bering●Box does get hot, make sure the fan is running properly, the vent at the rear is not blocked, and that the unit is placed where plenty of air can circulate around it.

5

TROUBLESHOOTING & SERVICE

This chapter describes basic trouble-shooting procedures. It is divided into three sections: “Before You Do Anything Else,” “Maintenance,” and “Technical Support.”

Before You Do Anything Else

Often, problems with disk drives can be resolved by using the following check list.

- Is the power cord securely connected to the Bering●Box and to a wall outlet?
- Is the power switched on and the AC fuse in the back of the drive intact?

  To check the fuse, use a screwdriver to open the fuse compartment on the back of the Bering●Box. If the fuse is blown, replace it with the spare fuse in the compartment, or purchase a replacement of the same size and type. (“slow blow,” 1.6A, 250V)

- Are any of the pins on the cable connectors loose, broken, or shorted?
- Has the drive been properly formatted for your operating system?
- Are all cables installed correctly?
- Was the drive up to speed and on-line before you started your computer?

  If you attempt to start up or otherwise access a floppy without a diskette, the computer may not recognize the drive.

- Does each device connected to the SCSI chain have a unique address?

Maintenance

There are no user serviceable parts in the Bering●Box. The outside case of the Bering●Box may be cleaned periodically with a damp cloth and a mild detergent.

▲ CAUTION: *Never remove the cover of the Bering●Box. This voids the warranty.*

Fuse Replacement

If the drive fails to power on the AC fuse may be blown. The fuse is located in the AC input jack.

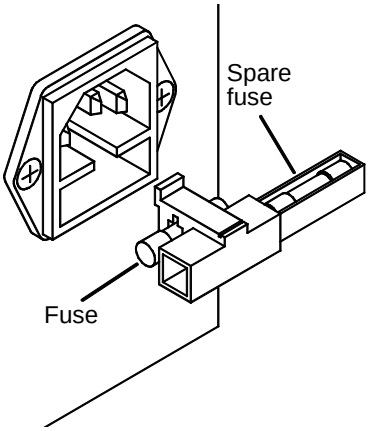

Figure 5-1: Replacing the AC fuse

Technical Support

All repairs will be performed at the factory. Any other arrangement, such as on-site service, will be at your expense, and must have prior arrangement. Before any product is returned to Bering for repair, a Return Materials Authorization (RMA) must be obtained from a Customer Service representative.

Bering Technology, Inc.
Technical Support
1717 Dell Avenue
Campbell, CA 95008

(408) 364-6500
FAX (408) 374-8309
Email: help@bering.com

Prior to calling for Technical Support, please have the following information available:

- The model number and serial number of the Bering●Box.
- The type of computer you're using, the operating system, the software version, and any other programs or utilities being affected.
- An exact description of the problem, including any error messages received from the operating system or application.
- The steps you have taken to correct the problem.

A

SPECIFICATIONS

General

Power Requirements

Line voltage	115/230 volts AC
Line frequency	50/60Hz
Current	0.5 AMP

Physical

Interface	
800H	SCSI -2 CCS (Common Command Set)
800HW	SCSI-3 Ultra Wide CCS
Dimension	12.8" x 14" x 3" 32.5 x 35.5 x 8.25 cm
Shipping weight	25 lbs. 11.3 Kg

Accessories

Cable, SCSI, 1.5m (5.0 ft.) 50 pin Hi Density to 50 pin Centronics	ACCS-7120
Cable, SCSI, 1.0m (3.3 ft.) 50 pin Centronics to 50 pin Centronics	ACCS-7123
Cable, SCSI, wide, 2m (6 ft) 68 pin HD68 to HD68	ACCS-7732
Cable, SCSI, wide 1m(3 ft) HD68 to HD50	ACCS-7736
SCSI terminator, active, Centronics 50	ACCS-7701
SCSI terminator, active, HD68	ACCS-7702
Rack Mount Kit - 19"	ACCS-7206