

# The Clearlight

*External Storage Enclosure for  
2.5" Hard Drives*



## User Manual & Installation Guide

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# Chapter 1 - Introduction

## Icon Key

Throughout this manual you will see icons on the left margin that denote either Notes or Special Remarks as outlined below:



General Notes and Tips



Remarks for PC users and Microsoft Windows OS



Remarks for Mac users and Apple Macintosh OS

## The Clearlight

The 'Clearlight' is a slim, compact, outstanding looking polycarbonate plastic enclosure made for all types of 2.5" hard drives (up to 12.5mm). Good handling and high performance makes accessing your data even easier and more efficient.

Product Dimensions:           14.0cm x 8.8cm x 2.6cm  
  5.51" x 3.46" x 1.02"

## Available Interfaces

- USB 2.0 High Speed
- Firewire 1394a
- Firewire 1394a & USB 2.0



If the red LED is blinking and not ON permanently, there is no problem with your unit. This only indicates the spin up of your drive or a temporary spike or slump in the power consumption and does not harm your drive or device at all. The product can be used normally.



If you see a permanent shining blue and red LED, add/use a power adapter for additional power supply and try again.



Features mentioned in this manual may vary between different models.

## Features

**Over Voltage Protection (OVP)** with a limit of 10% before shut down (max 30V). Protection for device or Hard Drive damage, caused by sudden voltage spikes in the power supply and wrong or faulty power adapter.

Indication: Blue LED off, Red LED on

**Low Voltage Detection (LVD)** indicating insufficient power supply. Add a power adapter! Other possible causes are either a sudden voltage slump in the power supply or a faulty power adapter.

Indication: Blue LED on, Red LED on

**Inverse-Polarity Protection** to prevent any damage to the device or Hard Drive caused by using a wrong adapter.

Correct: internal+, external-



**Automatic Detection of the Interface** for Combo Interface Units, which means that there is no mechanical switch required. The first cable detached will be the one used by the system until unplugged. If a second cable is plugged in, it will not affect the system at all and can be used as soon as the main cable is unplugged.

### LED indicator (double colored LED)

	Blue LED	Red LED
Status ON, working normal	ON	OFF
Status ON, low power (LVD)	ON	ON
Status ON, over voltage (OVP)	OFF	ON
Status OFF (or faulty PCB/LED)	OFF	OFF

\* Blue LED flickers on data access



Mac OS 8.6 users should use USB extension 1.41 or Firewire extension 2.6 and later, to be able to use USB 1.1 or 1394a.



Package Content may vary, depending on vendor & version.

## System Requirements

### PC Requirements

- Minimum Intel Processor II 350MHz, 64MB RAM
- USB 1.1 equipped PC; WinME, Win2000, WinXP
- USB 2.0 equipped PC; WinME, Win2000, WinXP
- 1394a equipped PC; Win98SE, WinME, Win2000, WinXP

### Mac Requirements

- Minimum Apple G3 processor (G4 for 1394b), 64MB RAM
- USB 1.1 equipped Mac; Mac OS 9.1, 9.2, 10.1.5, 10.2, 10.3
- USB 2.0 equipped Mac; Mac OS 10.2, 10.3
- 1394a equipped Mac; Mac OS 9.1, 9.2, 10.1.5, 10.2, 10.3

## Package Contents

- Clearlight
- Optional External Power Adapter  
Input 100-240V, Output 5V/2A
- Interface Cable
- Screw Package
- Driver CD  
(single USB 2.0 and 1394a/USB2.0 Clearlight only)

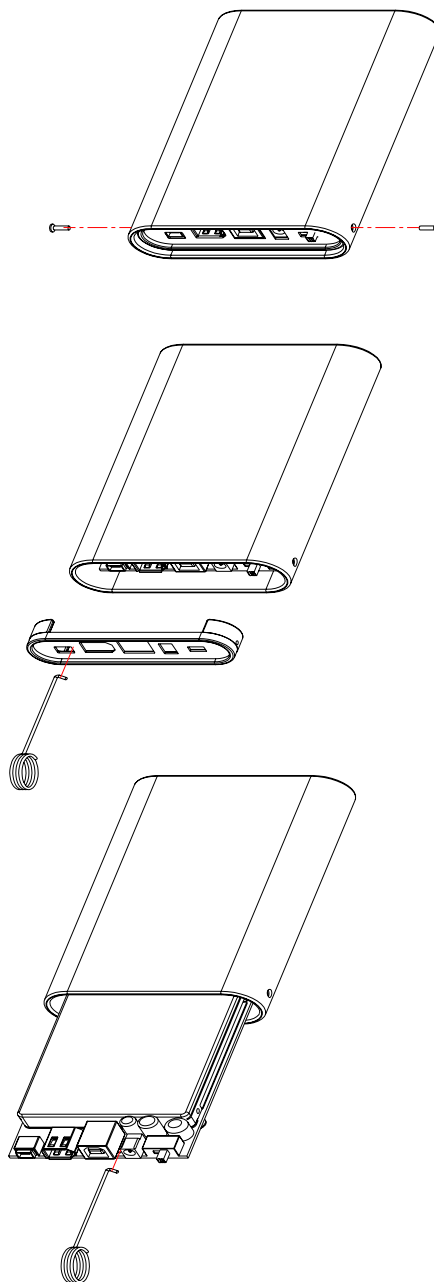
## Chapter 2 - Installing the HDD

### Preparing the Enclosure



Your unit might come with an installed hard drive. Before opening such an enclosure, please read the warranty and any other notes from your vendor carefully before doing so, as this might void your warranty.

Remove the 2 screws for the back panel (not mounted if factory new), remove the cover and use the hook to pull out the bridge board. There is a hole in the circuit board, use that or in case of the Clearlight 400+ version, you may gently pull on the USB connector.





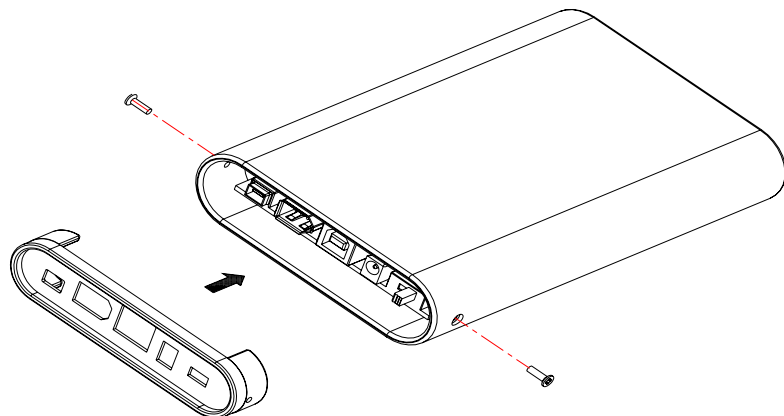
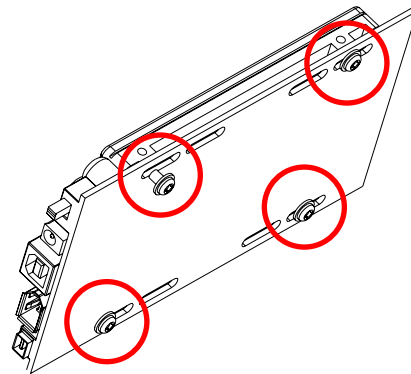
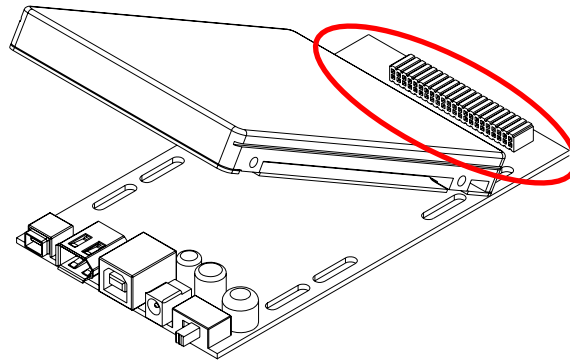
The hard drive jumper settings should be master.



Be careful not to damage any pins or components.

## Hard Drive Assembly

Connect the hard drive and mount the 4 screws on the back of the bridge board. Slide it back into the enclosure and mount the back panel and the 2 screws.



## Chapter 3 - System Set Up



4-pin Firewire ports and PCMCIA cards are non bus-powered! You will have to use an additional power adapter!



If you buy a spare power adapter for your working place or at home, make sure the output and polarity is identical with the power adapter supplied!



Most problems occur due to driver problems on the Host Card side!

### Connection to your Computer

A few tips on how to connect your external storage enclosure:

- Make sure your PCI Host Card is installed correctly
- Double check that the Host Card driver is up to date
- If required, update your Operating System or BIOS
- Only one interface at the time can be used
- Only one computer at the time can access the drive
- To use one drive on several computers, it can be shared through one computer on the network (1394 network, company network)
- Firewire can be daisy chained
- All devices in a daisy chain have to be switched on to permit the hub/daisy chain function
- Do not cover the Enclosure and leave enough room around it for the drive to cool down
- Do not expose the product to water or humid conditions
- If possible, arrange the cables so they do not cross each other
- Always check for visible damage and defects of power and interface cables before using it
- We recommend using the cables and adapter supplied with your product

### Bus Power Operation

Bus power is supported for devices with 6 Firewire connectors, as well as USB. Your port on the host side has to provide sufficient bus power to enable this function.

If the supplied bus power is limited or insufficient, an external power adapter or additional USB/PS2 power cable is required. To reduce the power consumption, you can use a shorter cable (20-30cm) or choose a drive with lower RPM speed (4200RPM) and lower power consumption (0.5A).





If the system doesn't recognize the drive, turn on the power first, before connecting the USB/Firewire cable.



Win98 does not support Firewire, you need to upgrade your OS to Win98SE or higher.



For safe removal of your drive and to assure that no data is lost, always follow the unplug procedure. If not, an error message will show up.

## Installation on a PC (Microsoft Windows)

### Win2000 or WinXP with a USB or Firewire connection:

- Turn on your Computer and start Windows
- Connect the Clearlight and turn it on
- Let Windows search and install the driver automatically
- Open "My Computer" to see your external hard drive \*\*

### Win98SE with a Firewire connection:

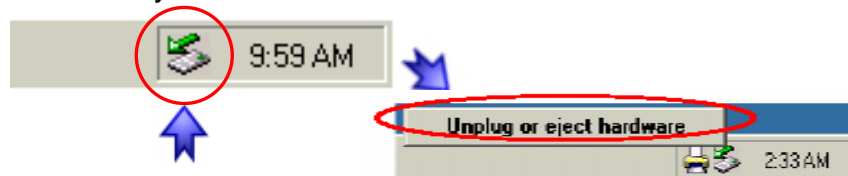
- Turn on your Computer and start Windows
- Connect the Clearlight and turn it on
- Let Windows search and install the driver automatically
- Open "My Computer" to see your external hard drive \*\*

### Win98/SE with a USB connection:

- Turn on your Computer and start Windows
- Insert the driver CD into your CD-ROM
- Connect the Clearlight and turn it on
- Follow the onscreen instructions and install the drivers
- Open "My Computer" to see your external hard drive \*\*

### Unplug Procedure:

- Click on the taskbar icon for external hardware
- Choose your external hard drive and confirm to remove it



\*\* For factory new drives and formatting, see "Partitioning & Formatting"



If the system doesn't recognize the drive, turn on the power first, before connecting the USB/Firewire cable.



For Mac OS 8.6, the USB extension has to be at least v1.41.



For Mac OS 8.6, the Firewire extension has to be at least v2.6.



For safe removal of your drive and to assure that no data is lost, always follow the unplug procedure. If not, an error message will show up.

## Installation on a Macintosh (Apple Mac OS)

### Mac OS 9.x or Mac OS 10.x with a Firewire or USB connection:

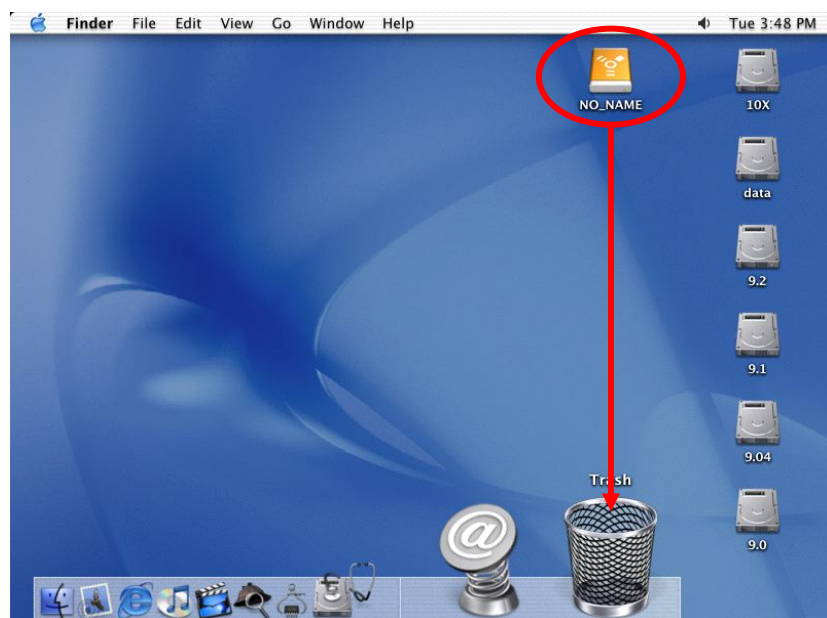
- Turn on your computer and start Mac OS
- Connect the Clearlight and turn it on
- No driver installation required
- The external drive will mount and show up on your desktop\*\*

### Mac OS 10.2 or 10.3 with a Firewire 800 or USB 2.0 connection:

- Turn on your computer and start Mac OS
- Connect the Clearlight and turn it on
- No driver installation required
- The external drive will mount and show up on your desktop\*\*

### Unplug Procedure:

- Drag the external hard drive icon into the trash bin
- Turn off your device



\*\* For factory new drives and formatting, see "Partitioning & Formatting"



You can choose to create several partitions but be aware that if you want to change this at a later point, it's required to format the drive again or use 3<sup>rd</sup> party software.



Win98/SE and WinME do not recognize NTFS formatted drives, so if you want to use your drive on those platforms, we recommend you to use FAT32 instead.



If you use this device to backup your data using a 3<sup>rd</sup> party software running MS-DOS, we recommend you to format the drive using FAT32.

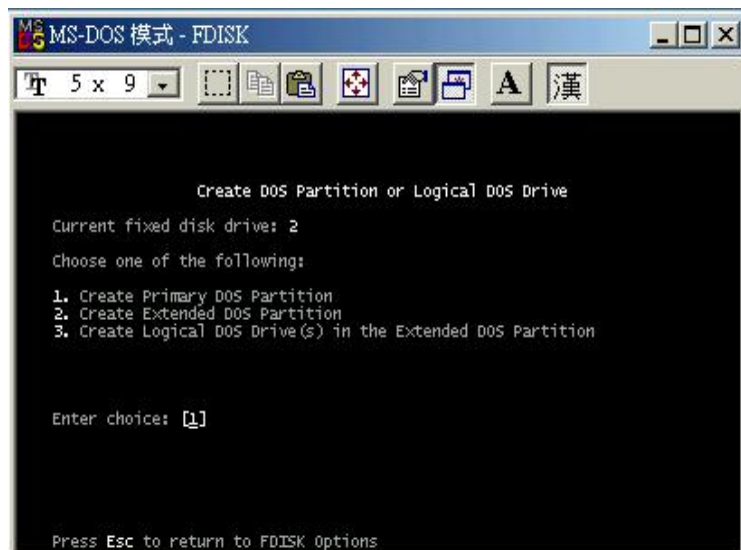
## Partitioning & Formatting

Be aware that this will destroy all your existing data on the drive, so make sure you have a backup! This step is usually only required the first time you install a factory new hard drive, if you change the format or want to erase all data on your drive.

### PC running Win98/SE or WinME:

MS-DOS command "fdisk" (press Enter to confirm)

- Type "fdisk" and press Enter
- Select "Y" and press Enter
- Enter "5" to change the drive
- Select the drive you want to format
- Choose "1" and follow the onscreen instructions





Mac OS does not recognize NTFS formatted drives, to use your device on both platforms, we recommend you using FAT32.



If you use Win2000 or WinXP and FAT32, the biggest single partition you can create will be 32GB. To create larger partitions, you need to use the DOS command under Win98SE or WinME or change to NTFS format.

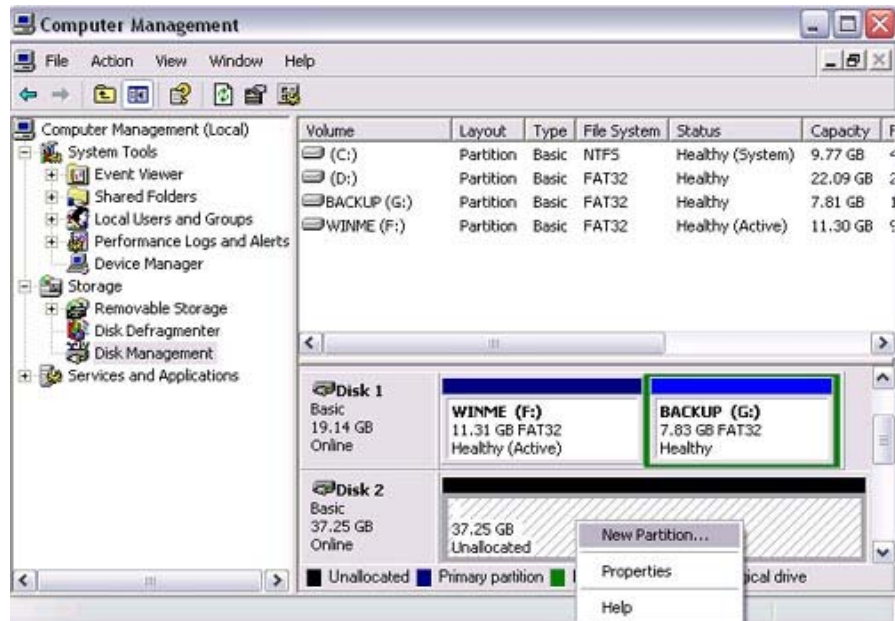


If you can not see the drive, make sure the jumper settings of your hard drive are correct, the drivers are installed and the power is turned on!

## PC running Win2000 or WinXP:

### Disk Management Program

- Right click on “My Computer” and choose “Manage”
- Select “Disk Management”
- Choose the drive you want to format and right click on it for further commands (Choose New Partition)
- Follow the Partition Wizard





If you want to use your drive on a PC running Microsoft Windows as well as on your Mac, we recommend you to use a PC to format the drive. Choose FAT32 when formatting and do not change anything on the partition or format on your Mac, otherwise the PC will not be able to recognize the drive anymore.



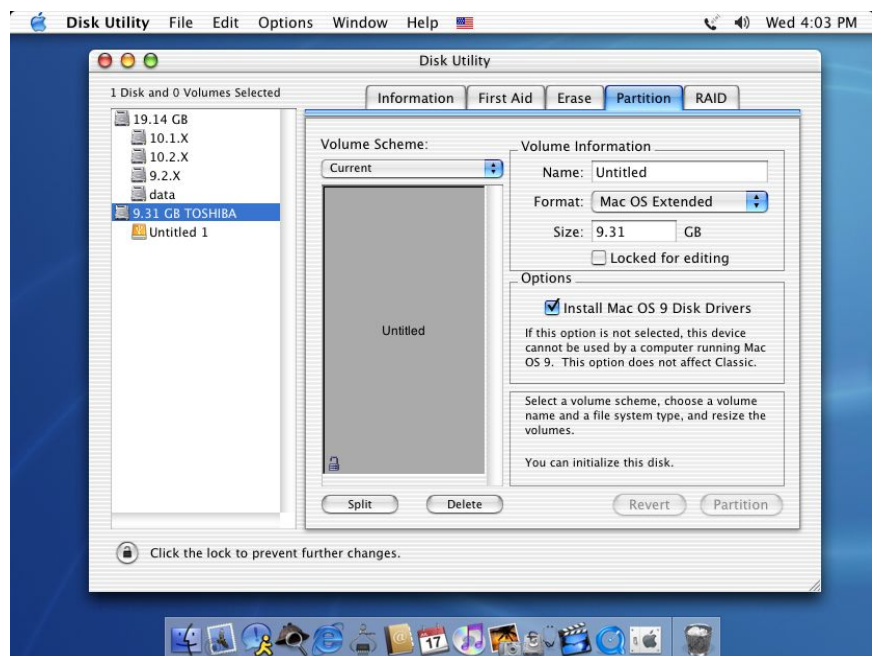
If you can not see the drive, make sure the jumper settings of your hard drive are correct, there are no extension conflicts and the power is turned on!

## Mac OS:

Mac OS9.2 and earlier, does not support creating partitions on an external drive. To do that, you would need to purchase additional 3<sup>rd</sup> party software. Initializing is no problem on all Operating Systems.

For Mac OS X, use the Disk Utility to format and create partitions on your external disk.

- Select “Disk Utilities” in the utilities folder
- Choose your external drive and format it according to your requirement





Please read your warranty carefully, as this may vary between different vendors!

## **Technical Questions:**

For RMA and other questions, please contact your vendor or check out their online support area!

## **About this Manual:**

This manual covers all interfaces and combinations for the Clearlight Enclosure. Images and descriptions might therefore slightly vary between this manual and the actual product you have.

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