# **REMOVING AND REPLACING A HARD DRIVE**

**Important info:** Your LaCie professional DAS gives you instant updates on the health of the enclosure and its hard drives. In addition to LED status indications, you can configure the system to send you email alerts (see <u>LaCie Desktop Manager</u>). It is highly recommended that you address all warnings and alerts immediately. Ignoring a potential problem or urgent hardware alert can lead to irreparable damage to the DAS and a serious loss of data.

# **REMOVING A HARD DRIVE**

#### RAID FAST

**Important info:** LaCie is not responsible for any lost data and cannot guarantee that your data will be saved by following these steps.

If you remove a hard drive from an unprotected array when the LaCie 2big is powered on, **you can lose all your data**. If one of the drives in RAID FAST mode has been removed and the front LED turns solid red, try the following:

- 1. Power off the device using a long press on the front LED button or unplug the power cable from the device.
- 2. Eject and reinsert the hard drive with the red LED.
- 3. Wait 10 seconds and, if applicable, connect the power cable to the device.
- 4. Power on the LaCie 2big by pressing the front LED button.

**Important info:** Adding hard drives that are part of LaCie 2big RAID FAST array to another enclosure or, directly to a computer, will corrupt data.

#### RAID SAFE

You can replace one drive from a protected array while the device is powered on without losing data. This process is referred to as "hot-swapping" and can be performed when a hard drive in a protected array has failed (see <u>LEDs and LED Power Button</u> for health indications).

### RAID JBOD

Each hard drive in JBOD mode is treated as a separate volume. Therefore, removing one of the hard drives is similar to disconnecting a standard plug and play hard drive. Before removing a hard drive, make certain to eject its volumes from your computer. For instructions on how to properly eject a hard drive, see <u>Unmounting</u> <u>Your Drive</u>.

When removing one drive improperly, it is likely that both volumes will unmount at the same time. However, the volume for the hard drive that is within its slot will reappear.

# **REPLACING A HARD DRIVE**

The front LED lets you know the state of a RAID array.

- Solid blue: the RAID is healthy.
- Blinking red (SAFE only): the RAID is degraded.
- Solid red: the RAID is broken.

The drive LED for the failed hard drive will turn red or turn off, allowing you to identify the drawer that must be replaced. Drive LEDs are on the top end of the drawer.

**Important info:** Contact your LaCie reseller or LaCie technical support if a hard drive or part fails. LaCie 2big enclosures, drives, and parts that experience failure and are within the warranty period must be replaced by equivalent replacement parts from LaCie. Installing third-party drives and parts will void the warranty.

# RAID SAFE: degraded versus broken

A degraded RAID SAFE means that one of the hard drives has failed and that RAID protection is not in effect. However, your data remains intact on the healthy hard drive and you can continue to use the device. RAID protection will take effect once the replacement hard drive is installed and the array has completed data synchronization.

A broken RAID SAFE means that both hard drives have failed or, a hard drive has failed during RAID synchronization. All data is lost if the RAID is broken.

#### Remove the failed hard drive

**Important info:** DO NOT remove the failed hard drive before receiving the replacement hard drive from LaCie. Both drive trays must remain in the enclosure for proper airflow.

**Caution:** After continuous use of the product, the hard drives may be hot. Use caution when opening a drive bay and removing a hard drive.

1. Place your finger on the indent on top of the drive bay handle and gently pull it away from the LaCie 2big.



2. Grasp the drive tray handle and carefully extract the hard drive. Place the hard drive tray on a flat, even surface.



### Install the replacement hard drive

**Important info:** A failed hard drive within the warranty period must be swapped with a replacement hard drive from LaCie. Replacement hard drives for the LaCie 2big are shipped within the tray.

The steps below can be performed while the enclosure is powered on or powered off.

- 1. Before touching the replacement hard drive, make certain that you are properly grounded to avoid electrostatic discharge.
- 2. Carefully insert the replacement hard drive tray into the empty hard drive bay. You will feel a bit of resistance when the drive tray is almost flush. Gently push the drive tray handle until the it snaps into place.

# STATUS FOLLOWING A HARD DRIVE SWAP

Refer to the table below for the RAID behavior following a hard drive swap:

RAID Mode	Data	Status
FAST	All data has been lost with the hard drive failure.	The LaCie 2big recreates FAST mode with the new hard drive and your operating system prompts you to format the volume.
SAFE	Data is protected on the healthy hard drive.	The LaCie 2big synchronizes the data with the new hard drive.
JBOD	All data stored on the failed hard drive is lost. Data on the healthy hard drive remains accessible.	The LaCie 2big maintains the JBOD configuration; your operating system prompts you to format the replacement hard drive.

### **RAID** configuration times

The table below provides estimated times to configure the RAID.

RAID	Time to complete	
FAST	Less than a minute	
SAFE	Several hours to one or more days (see note below)	
JBOD	Less than a minute	

The time to complete the RAID SAFE synchronization is based upon total hard drive capacity. Though the time to synchronize may take several hours, you can begin using the volume immediately by initializing it with your operating system's disk utility (see <u>Formatting</u>).

Performance may be affected during RAID synchronization.

# Automatic power off and RAID SAFE synchronization

In general, the LaCie 2big powers off when the computer is shut down. However, the device remains powered on if it is in the midst of a RAID SAFE synchronization.