

## Chapter 5 : " Hot Swap "

This chapter explains how to remove and install the "Hot-Swap" parts without interrupting the data access while the disk array is on.

The "Hot-Swap" parts include :

- Hard Disk Drives
- Redundant Power Supply Units
- Cooling Fans

Follow the steps below and refer to the diagrams to remove and install the "Hot-Swap" parts.

## Removing / Installing Hard Disk Drives

**a. Unlock the HDD Tray**

(When a HDD error occurs, the HDD LED indicator lights up " RED ")

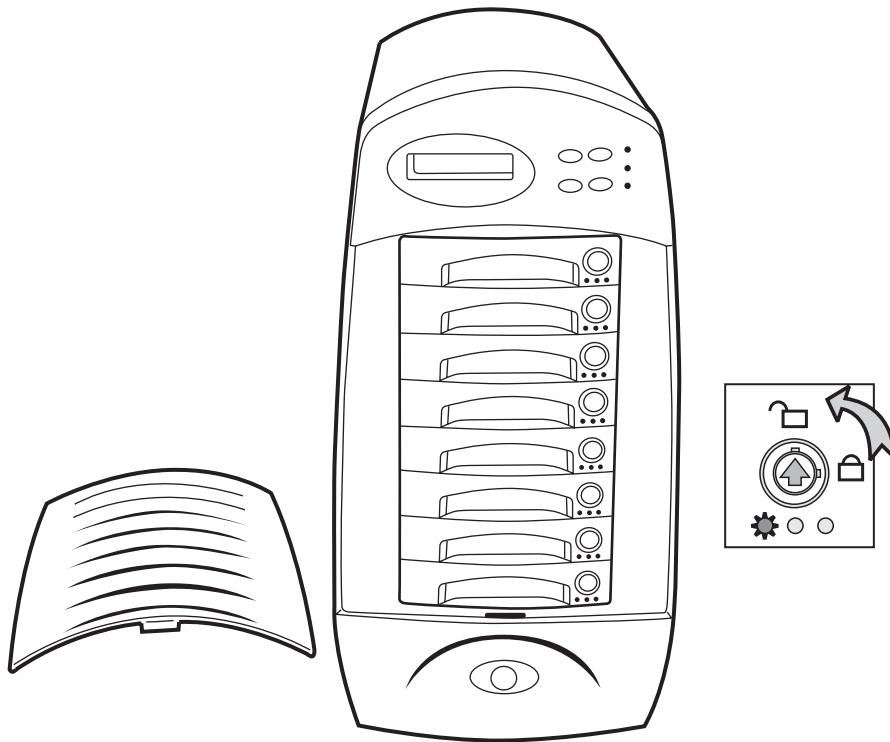


Figure : Swap HDD ( Unlock )

b. Gently pull-out the HDD tray

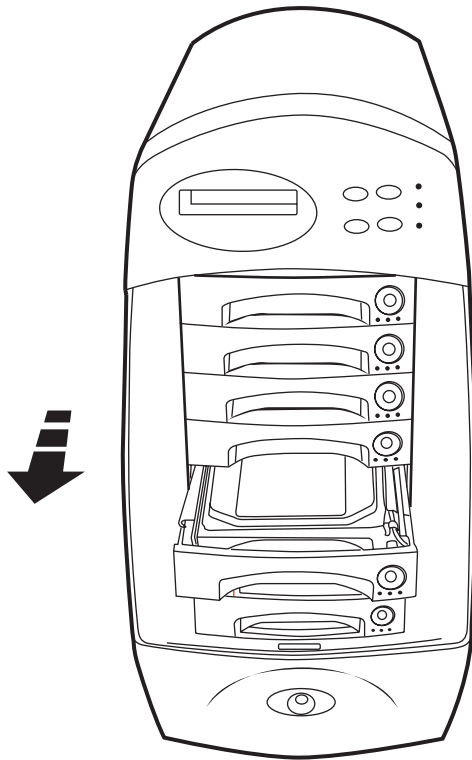


Figure : Swap HDD ( Pull-out )

c. Unscrews and Unplug the Cables

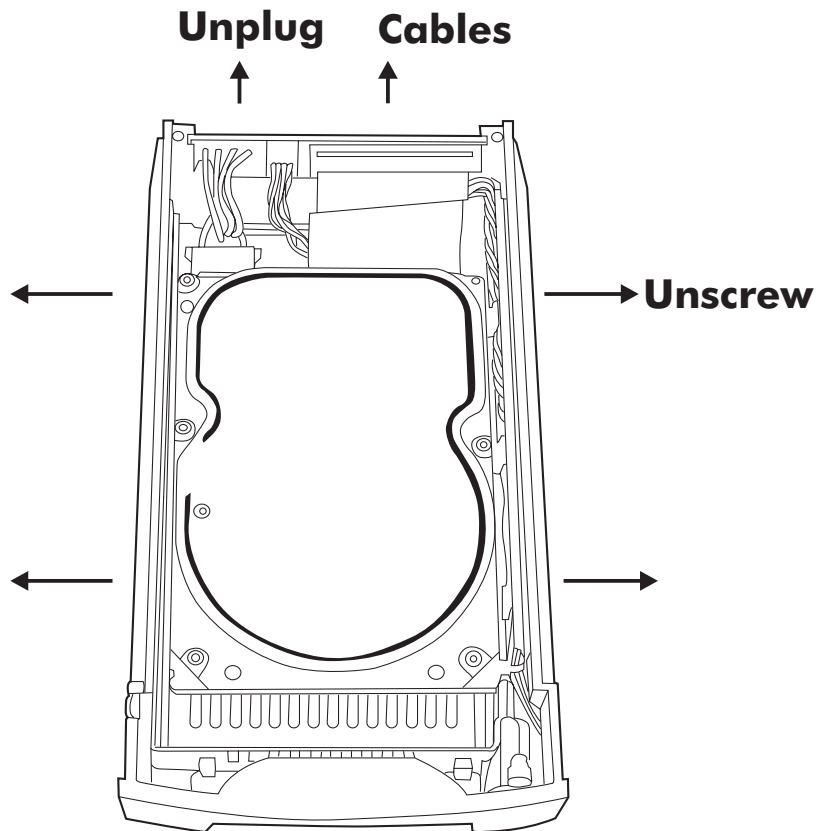


Figure : Swap HDD ( Unplug cables )

### d. Replace with a new Hard Disk Drive

It must be same capacity or greater than the faulty drive, if you replace with a Hard Disk Drive of insufficient capacity, the Disk Array's built-in buzzer will sound and the intelligent Auto-Rebuild function will not be started.

- ©For best performance, we recommend you swap with an identical Hard Disk Drive.

### e. Gently slide-in the HDD tray and lock up to start the Auto-Rebuild

When you have installed the replacement disk drive, screw in all the screws and plug in the cables. You may now gently slide in the HDD tray into the chassis and lock up it.

- ©Data Auto-Rebuild will be started automatically when you lock up the HDD tray.

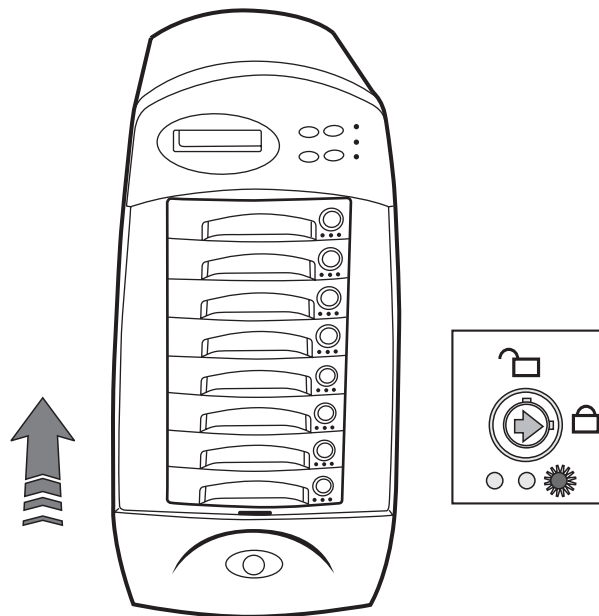


Figure : Swap HDD ( Lock Up )

### Removing / Installing the Redundant P/S Unit

There are two LED indicators on the front panel which display the status of the redundant power supplies. While the power supply is working properly the two LED indicators light up " Green ", if any one of them fail, the LED indicator will go off and the redundant power supply buzzer alarm will sound.

When you need to replace the redundant power supply unit , refer to the redundant power supply status LED indicator on the front panel to find the failed power supply unit and follow these steps to swap it.

#### a. Unscrew the faulty unit

(For Safety reasons, you should switch off the faulty unit's power switch)

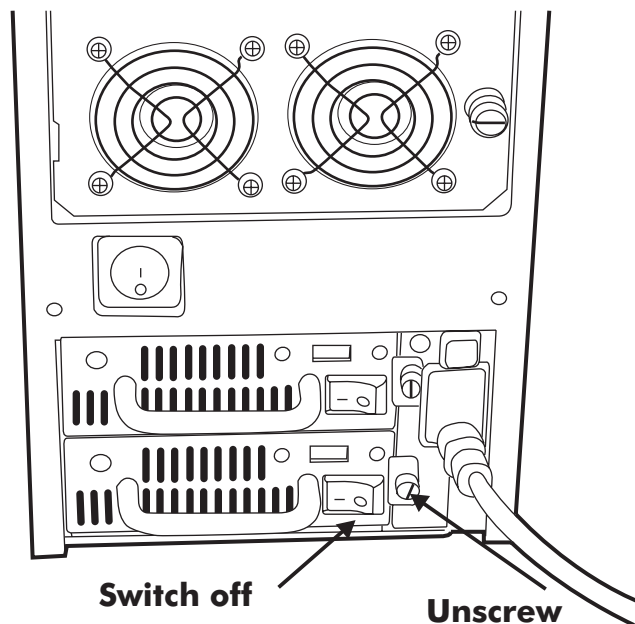


Figure : Swap P/S unit ( Unscrew )

b. Replace with a new power supply unit

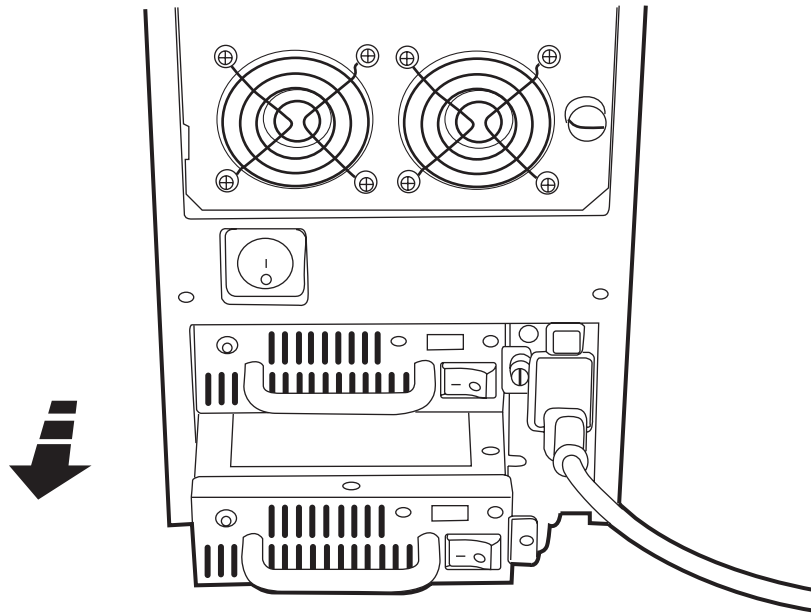


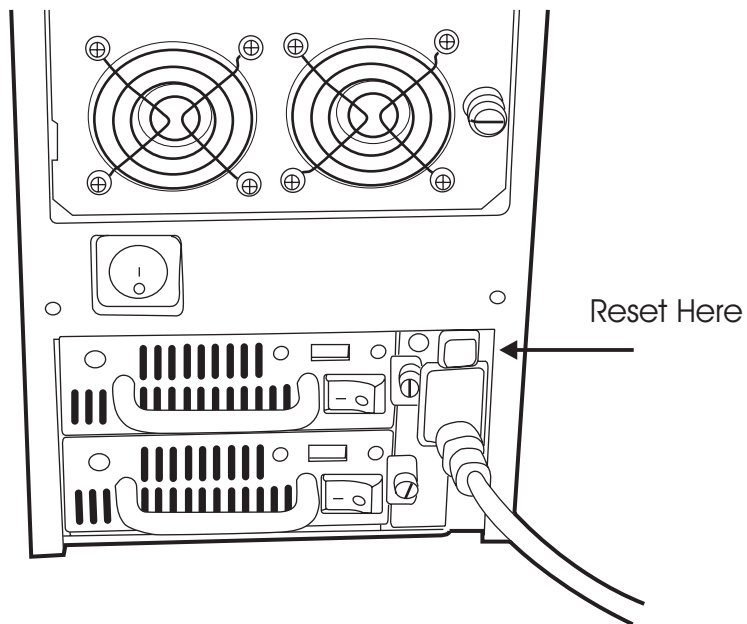
Figure : Swap P/S unit ( swap with a new unit )

### c. Press the Power Supply Reset switch

When you replace a new power supply unit, you should then push the power supply reset switch to stop the buzzer alarm and link the two power supply units together.

©The new power supply unit will link with the other unit immediately and will start working after you press the power supply reset switch, and the buzzer warning noise will stop.

- Reset the Power supply alarm





## Removing / Installing Cooling Fans

- Unscrew the Fan door and open the door to a 90 degree position

**! Caution :** Be careful , the high speed rotating fans may harm you. Don't touch the rotating Fans, If necessary, Unplug the Fan power connector first.

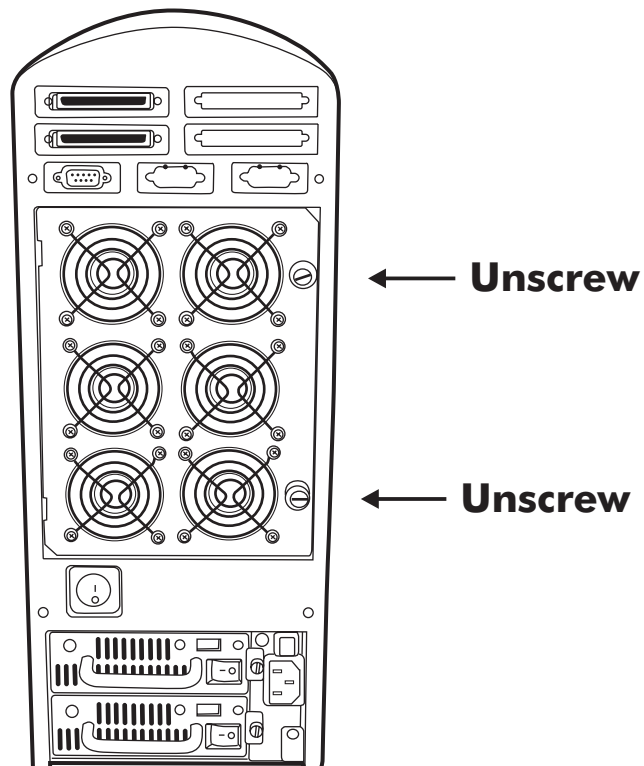


Figure : Swap cooling Fan ( Unscrew the Fan Door)

## Hot Swap

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- Unplug the Fan connector
  - Unscrew the faulty cooling fan and replace with a good one
    - ☆Important ! The cooling fan's air flow must point to the fan door, please refer to the label on the cooling fan.
  - Plug in the fan connector, close the fan door and screw it in
- ! **Caution** : The cooling fan will rotate immediately when you plug in the fan power connector.

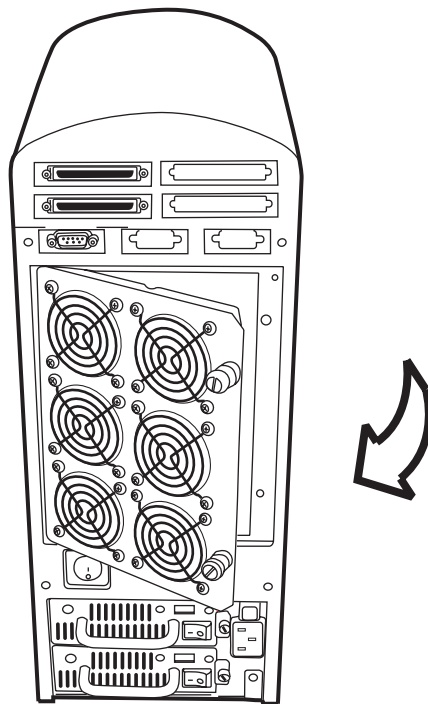


Figure : Swap Cooling Fan ( swap with a new Fan )

**Technical Specifications**

|                        |                                      |
|------------------------|--------------------------------------|
| Microprocessor         | Intel i80303 (64-bit RISC processor) |
| Cache Memory           | 64MB*<br>Maximum 512MB               |
| DRAM Slots             | One                                  |
| Module Type            | 144 Pin DIMM                         |
| DRAM Type              | SDRAM                                |
| DRAM Speed             | PC100/133                            |
| RAS access time        |                                      |
| CAS access time        |                                      |
| Parity                 | Non-Parity                           |
| Read Cache             | Read-Ahead                           |
| Write Cache            | Write Back*                          |
| Firmware               | Flash EEPROM ,256K x 8               |
| SCSI I/O Processor     | LSI SYM53C1010                       |
| Serial Port            | 1x RS232 (Asynchronous) Port         |
| Baud Rate              | 115,200 (Bits Per Second)            |
| Data Bits              | 8                                    |
| Stop Bit               | 1                                    |
| Parity                 | None                                 |
| RAID Levels            | 0 , 1 , 0+1, 3 or 5                  |
| Data Transfer Rate     | Up to 160MB/s (Synchronous)          |
| SCSI ID Assignment     | 0 ~ 14 ( 0* )                        |
| Tagged-command queuing | Up to 255 simultaneous data requests |

## Appendix

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|---|---|
| Interface : Host Channel<br>Disk Channels | 1* Ultra 160 LVD SCSI (68 pin)<br>8* EIDE ATA-100                   |
| Drives                                    | Hot Swap, User Replaceable<br>Up to Eight 3.5" drives ( 1" height ) |
| Maximum Fault<br>Tolerant Capacity        | > 1TB   |
| Drive MTBF                                | > 1,000,000 hrs   |
| Host Requirement                          | Host Independent  |
| Operating Systems                         | O/S Independent and Transparent                                     |
| Data Rebuild                              | Automatic Data Regeneration   |
| LCD Display Panel                         | 2 x 16 Characters   |
| Cooling Fans                              | 6cm Ball Bearing Fan<br>6 Fans                                      |
| Power Supply Capacity                     | Dual 300W Independent Power<br>Supplies                             |
| AC Input Voltage                          | 115 / 230V ( +/-10% ) , 60/50 Hz                                    |
| Environmental                             |   |
| Relative Humidity                         | 10% to 85% Non-condensing   |
| Temperature Operating :                   | 5°C ~ 40°C  |
| Storage :                                 | -25°C ~ 60°C  |
| Safety testing                            | UL, CE and FCC Class B  |
| Dimensions                                | 215mm(W) * 360mm(D) * 435mm(H)                                      |
| Weight                                    | 13 kgs ( W/O Disk Drive )   |

" \* " Default Settings

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