Chapter 6 Fibre

Fibre-to-IDE models of the IFT-6300 come in both one and two channel configurations. The two channel model has two DB-9 fibre ports and two user-configurable fibre IDs (one for each channel). The Fibre-to-IDE models are otherwise identical.

6.1 Physical

The primary physical difference between SCSI-to-IDE IFT-6300 models and Fibre-to-IDE models are the host data ports. On Fibre-to-IDE models, the SCSI ports have been replaced by one or two DB-9 Fibre ports to the left of the DB-9 serial COM port on the rear panel of the unit. See figures 6-1 and 6-2 below.

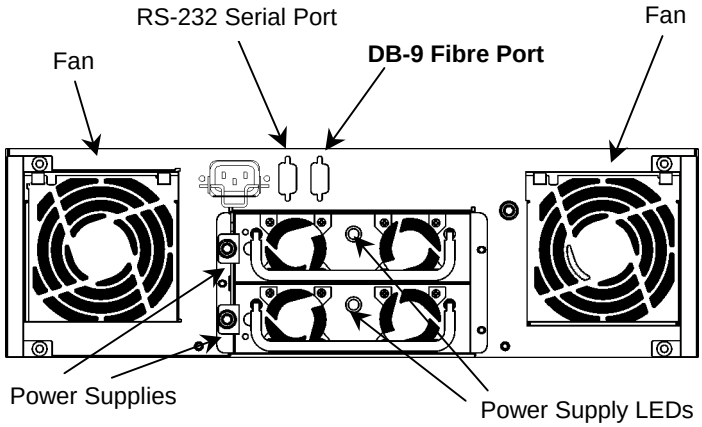


Figure 6-1 : Rear Panel, 1 Channel Fibre-to-IDE Model

Note too that the SCSI ports are not present on Fibre-to-IDE models (for obvious reasons). All other physical aspects of Fibre-to-IDE models, front panel indicators and controls, hard disk compatibilities and tolerances, power supplies and fans, are identical to SCSI-to-IDE models as described throughout this User's Manual.

The two channel Fibre-to-IDE model (6300-8F1D) has two DB-9 fibre ports replacing the two SCSI ports on the SCSI-to-IDE models (see figure 6-2 below).

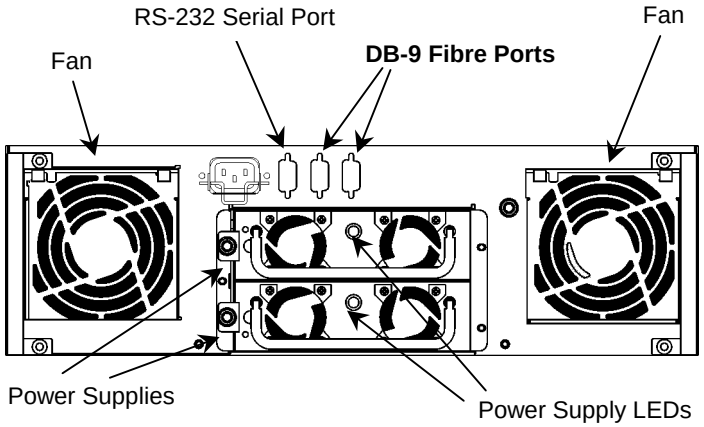


Figure 6-2 : Rear Panel, 2 Channel Fibre-to-IDE Model

Host Requirements

In order for the IFT-6300 (Fibre models) to be connected to the host computer, the host must have a fibre host bus adapter installed. Most commonly, a host bus adapter (HBA) is an add-on card that includes external fibre ports used to connect with fibre devices, including the IFT-6300 array.

For Fibre-to-IDE models, use an industry-standard copper cable with a DB-9 compatible connector on one end, or an optical cable with an MIA to connect to the IFT-6300 enclosure. Two channel models will need two cables in order to utilize redundant loop capabilities through a single host (see *"Two Channel Fibre Redundancy"* below for important information about redundant loops).

Once the array has been connected, you must reboot the host and then assign the RAID array a drive letter designation. Each OS has a different procedure for assigning drive letters to storage devices. Consult your particular OS's documentation and the documentation for your HBA for more information.

RAID Management

In addition to an HBA, host computers that want to use the RAIDGuide Java GUI management software must meet the following minimum configuration: Pentium or above compatible (or equivalent PC or workstation) running Windows NT or Windows 2000. A host computer running RAIDGuide must also either have a network (LAN) card installed and running or MS Loopback Adapter installed and running. (See the end of Section 2.4 for more information.)

If RS-232 terminal management is used, the IFT-6300 is compatible with Solaris (SPARC, x86) and Linux workstations and computers.

Two Channel Fibre Redundancy

The two channel fibre model allows for one host to be connected to the RAID subsystem on two separate fibre loops. This fibre loop redundancy capability permits data to continue to be available in the event of a data transmission failure on either loop.

WARNING!

Using two fibre channels requires a third-party "volume management" software to prevent data loss. DO NOT USE two redundant channels to connect to a single host unless you have installed software to manage data flow to the RAID array. Failure to do heed this warning will result in data corruption.

6.2 Front Panel Commands : 1 Channel

This section is a description and explanation of changes made to the system front panel navigation for one channel Fibre-to-IDE subsystems. The additional commands and information are available via the LCD only on fibre models. (See Chapter 4 for more information about other front panel commands.)

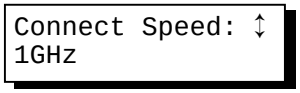
The controller firmware's basic features allow you to create, monitor and maintain a RAID array directly via the LCD panel. This section describes the basic displays and functions provided via the LCD.

Ready Mode Fibre Supplement

After a RAID has been setup and is operating normally, the controller will operate in ready mode and will display various information via the LCD, pressing the up and down arrow keys on the front panel navigates from one display to another. The displays described here only appear on one channel fibre models:

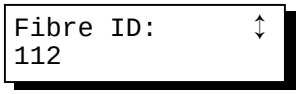
After the "I/F Card Type" display –

Connect Speed – indicates the optimum host speed on the fibre channel (based



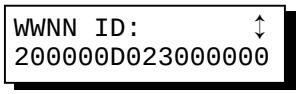
on the type of interface) of the currently connected host.

Fibre ID – displays the current Fibre ID assigned to the disk array (see below for information about setting the fibre ID).

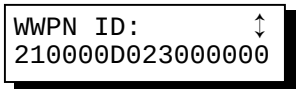


(**Fibre ID** replaces the **SCSI ID** variable described in *Section 4.1 Basic Features.)*

WWNN ID – the WWNN ID is a unique identifying number assigned to each unit at the factory. A WWNN is a **W**orld **W**ide **N**ode **N**ame used to differentiate between fibre devices.



WWPN ID – the WWPN ID is a unique identifying number assigned to each unit at the factory. A WWPN is similar to a WWNN in that it is used to help identify the particular fibre device from all other fibre devices. WWPN stands for **W**orld **W**ide **P**ort **N**ame.

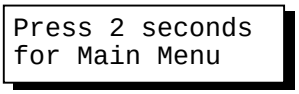


Neither the WWNN nor the WWPN is user-configurable.

Set Fibre ID Option

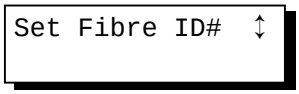
This section explains how to set the Fibre ID number and is a fibre-only models supplement to *Section 4.2 Advanced Options.* Because misuse of this function (as well as those functions described in the related Section 4.2) can cause operational problems including data loss, we recommend that only experienced users access them.

To access the Fibre ID set menu, press the Menu/Exit button for two seconds. The following display will appear prior to the first menu:

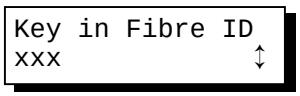


The first option available after two seconds to Fibre-to-IDE subsystems is "Set Fibre ID#".

Set Fibre ID# – Fibre IDs permit Fibre devices to be connected on



the same bus. The default ID is 112. The Fibre ID option can be set to any number from 0 to 125 but no two Fibre devices on the same bus can have the same ID.



Select an ID from 0 to 125 choose yes and press the Enter button.

The new ID setting will not take effect until the unit is reset or powered down and then back on.

(The **Set Fibre ID** option replaces the **Set SCSI ID** option described in *Section 4.2 Advanced Options.)*

6.3 Front Panel Commands : 2 Channels

This section is a description and explanation of changes made to the system front panel navigation for two channel Fibre-to-IDE subsystems. The additional commands and information are available via the LCD only on two channel fibre models. (See Chapter 4 for more information about other front panel commands.)

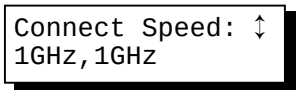
The controller firmware's basic features allow you to create, monitor and maintain a RAID array directly via the LCD panel. This section describes the basic displays and functions provided via the LCD.

Ready Mode Fibre Supplement : 2 Channels

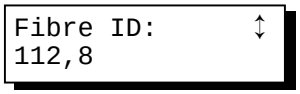
After a RAID has been setup and is operating normally, the controller will operate in ready mode and will display various information via the LCD, pressing the up and down arrow keys on the front panel navigates from one display to another. The displays described here only appear on two channel fibre models:

After the "I/F Card Type" display –

Connect Speed – indicates the optimum host speed on each fibre channel (based on the type of interface) of the currently connected host.

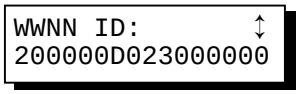


Fibre ID – displays the current Fibre IDs assigned to the disk array (see below for information about setting the fibre IDs).

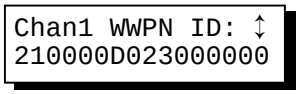


Note that there are two IDs, one for each channel. (**Fibre ID** replaces the **SCSI ID** variable described in *Section 4.1 Basic Features.)*

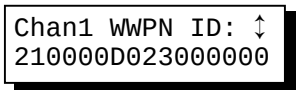
WWNN ID – the WWNN ID is a unique identifying number assigned to each unit at the factory. A WWNN is a **W**orld **W**ide **N**ode **N**ame used to differentiate between fibre devices.



Channel 1 WWPN ID – the WWPN ID number assigned to fibre channel 1. A WWPN is a **W**orld **W**ide **P**ort **N**ame used to differentiate between fibre devices.



Channel 2 WWPN ID – the WWPN ID number assigned to fibre channel 2. A WWPN is a **W**orld **W**ide **P**ort **N**ame used to differentiate between fibre devices.

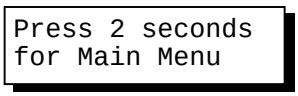


Neither of the WWPN IDs is user-configurable.

Set Fibre ID Option : 2 Channels

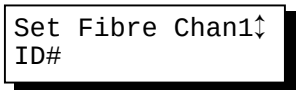
This section explains how to set the Fibre ID numbers for each channel and is a two channel fibre-only models supplement to *Section 4.2 Advanced Options.* Because misuse of this function (as well as those functions described in the related Section 4.2) can cause operational problems including data loss, we recommend that only experienced users access them.

To access both Fibre ID set menus, press the Menu/Exit button for two seconds. The following display will appear prior to the first menu:



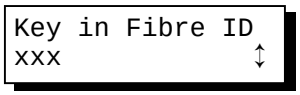
The first option available after two seconds to Fibre-to-IDE subsystems is "Set Fibre Chan1 ID#".

Set Fibre Chan1 ID# – Fibre IDs permit Fibre devices to be connected on the same bus. The default ID is 112. The Fibre Channel 1 ID option can be



set to any number from 0 to 125 but no two Fibre devices on the same bus can have the same ID.

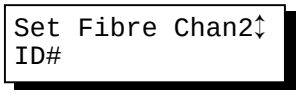
Select an ID from 0 to 125 choose yes and press the Enter button.



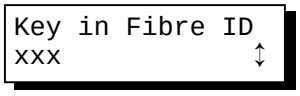
The new ID setting will not take effect until the unit is reset or powered down and then back on.

The second option available after two seconds to Fibre-to-IDE subsystems is "Set Fibre Chan2 ID#".

Set Fibre Chan2 ID# – Fibre IDs permit Fibre devices to be connected on the same bus. The default ID is 112. The Fibre Channel 2 ID option can be set to any number from 0 to 125 but no two Fibre devices on the same bus can have the same ID.



Select an ID from 0 to 125 choose yes and press the Enter button.



The new ID setting will not take effect until the unit is reset or powered down and then back on.

(The **Set Fibre Chan1 ID** and **Set Fibre Chan2 ID** options replace the **Set SCSI ID** option described in *Section 4.2 Advanced Options.)*

6.4 Software

The RAIDGuide management software for both SCSI-to-IDE and Fibre-to-IDE is identical. There are no additional functions or options related to fibre operations.