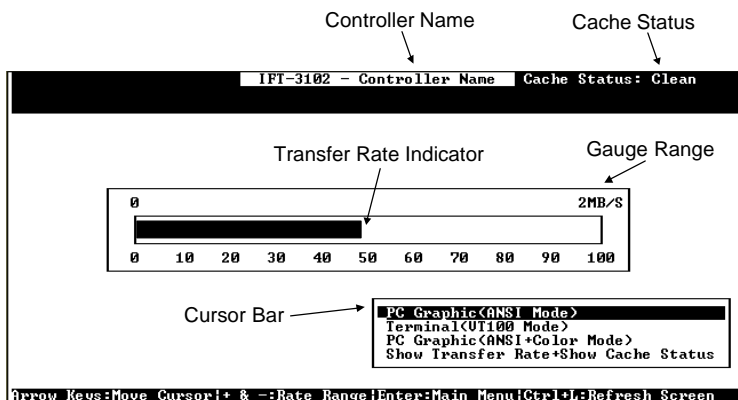


Chapter 8 RS-232C Terminal Interface

8.1 Understanding the Information on the Screen

8.1.1 The Initial Screen



Cursor Bar: Move the cursor bar to a desired item, then press **ENTER** to select.

Controller Name: Identifies the type of controller.

Transfer Rate Indicator: Indicates the current data transfer rate.

Gauge Range: Use + or - keys to change the gauge range in order to view the transfer rate indicator.

Cache Status: Indicates the current cache status.

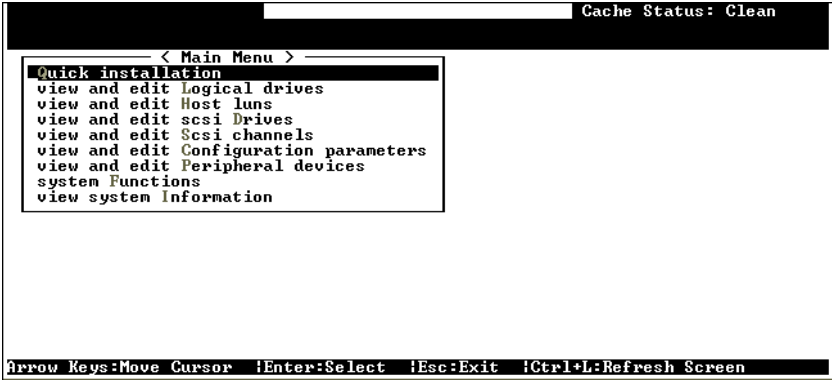
PC Graphic (ANSI Mode): Enters the Main Menu and operates in ANSI mode.

Terminal (VT-100 Mode): Enters the Main Menu and operates in VT-100 mode.

PC Graphic (ANSI+Color Mode): Enters the Main Menu and operates in ANSI color mode.

Show Transfer Rate+Show Cache Status: Press ENTER on this item to show the cache status and transfer rate.

8.1.2 Main Menu



Use the arrow keys to move the cursor bar through the menu item, then press **ENTER** to choose a menu, or **ESC** to return to the previous menu/screen.

8.1.3 Logical Drive Status

I0:61%

Cache Status: Clean

Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
U	P0	RAID5	2021	INITING	3	1	0	
U	1	NONE						
U	2	NONE						
U	3	NONE						
U	4	NONE						
U	5	NONE						
U	6	NONE						
U	7	NONE						

Arrow Keys:Move Cursor iEnter:Select iEsc:Exit iCtrl+L:Refresh Screen

- LG** Logical Drive number.
P0: Logical Drive 0 of the Primary Controller
- RAID** RAID Level.
- Size(MB)** Capacity of the Logical Drive.
- Status** Logical Drive Status.
- INITING** The logical drive is now initializing.
- INVALID** The logical drive was created with "Optimization for Sequential I/O",

ID	The SCSI ID of the drive.	
Size (MB)	Drive Capacity.	
Speed	xxMB	The maximum sync. transfer rate of this drive.
	Async	The drive is using asynchronous mode.
LG_DRV	x	The SCSI drive is a drive member of logical drive x. If the Status column showed "STAND-BY", the SCSI drive is a Local Spare Drive of logical drive x.
	Global	The SCSI drive is a Global Spare Drive.
Status	INITING	Processing initialization.
	ON-LINE	The drive is in good condition.
	REBUILD	Processing Rebuild.
	STAND-BY	Local Spare Drive or Global Spare Drive. The Local Spare Drive LG_DRV column will show the logical drive number. The Global Spare Drive LG_DRV column will show "Global".
	NEW DRV	The new drive has not been configured to any logical drive or as a spare drive.
	USED DRV	The used drive has not been configured to any logical drive or as a spare drive.
	BAD	Failed drive.
	ABSENT	Drive does not exist.
	MISSING	Drive once exist, but is missing now.
	SB-MISS	Spare drive missing.

Verdor and Product ID The vendor and product model information of the drive.

8.1.5 SCSI Channel Status

Cache Status: Clean

< Main Menu >

Quick installation
view and edit Logical drives
view and edit Host luns
view and edit scsi Drives
view and edit scsi channels

U
V
S
U

Chl	Mode	PID	SID	DefSynClk	DefWid	Term	CurSynClk	CurWid
0	Host	0	NA	20.8MHz	Wide	On	Async	Narrow
1	Drive	7	NA	20.8MHz	Wide	On	20.8MHz	Wide
2	Drive	7	NA	20.8MHz	Wide	On	Async	Narrow

Arrow Keys:Move Cursor iEnter:Select iEsc:Exit iCtrl+L:Refresh Screen

- Chl**

The SCSI channel ID.
- Mode**

Channel mode.

Host Host Channel mode

Drive Drive Channel mode
- PID**

Primary controller SCSI ID mapping:
* Multiple SCSI IDs were applied (Host Channel mode only).

(ID number) The Primary Controller is using the SCSI ID for host LUN mapping.

NA No SCSI ID applied (Drive Channel mode only).
- SID**

Secondary controller SCSI ID mapping:
* Multiple SCSI IDs were applied (Host Channel mode only).

(ID number) The Primary Controller is using the SCSI ID for host LUN mapping.

NA No SCSI ID applied (Drive Channel mode only).
- DefSynClk**

Default SCSI bus sync clock:

 ???.?M The default setting of the SCSI channel is ??? Mhz in Synchronous mode.

Async The default setting of the SCSI channel is Asynchronous mode.

DefWid Default SCSI Bus Width:

Wide 16-bit SCSI

Narrow 8-bit SCSI

Term Terminator Status:

On Terminator is enabled.

Off Terminator is disabled.

Diff The channel is a Differential channel. The terminator can only be installed/removed physically.

CurSynClk Current SCSI bus sync clock:

???.?M The default setting of the SCSI channel is ??? Mhz in Synchronous mode.

Async The default setting of the SCSI channel is Asynchronous mode.

(empty) The default SCSI bus sync clock has changed. Reset the controller for the changes to take effect.

CurWid Current SCSI Bus Width:

Wide 16-bit SCSI

Narrow 8-bit SCSI

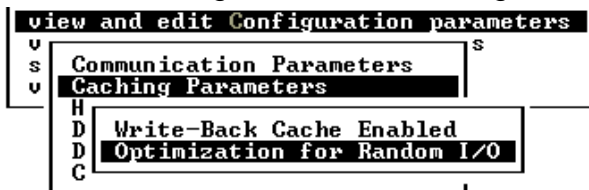
(empty) The default SCSI bus width has changed. Reset the controller for the changes to take effect.



IMPORTANT:

- *Only a terminator with Single-Ended channel can be enabled/ disabled through the above setting.*
- *A terminator with Differential channel must be removed/ installed physically.*

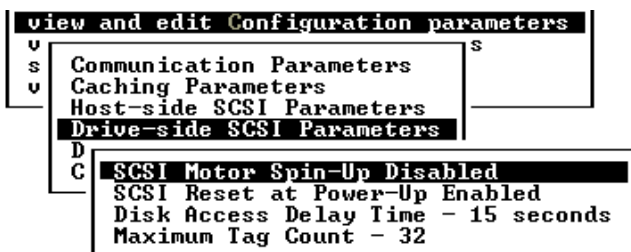
8.1.6 Viewing the Current Setting of Each Function



Most of the current setting of each function can be viewed in the menu.

In the example shown above:

- The current setting of "Write-Back Cache" is "Enabled".
- The current setting of Optimization is "Optimization for Random I/O".



In the example shown above:

- The current setting of "SCSI Motor Spin-Up" is "Disabled".
- The current setting of "SCSI Reset at Power-Up" is "Enabled".
- The current setting of "Disk Access Delay Time" is "15 seconds".
- The current setting of "Maximum Tag Count" is "32".

8.2 Viewing and Editing Logical Drives

8.2.1 Creating a Logical Drive

Cache Status: Clean								
Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
U	0	NONE						
U	Create Logical Drive ?							
U	<input type="button" value="Yes"/> <input type="button" value="No"/>							
U	3	NONE						
U	4	NONE						
U	5	NONE						
U	6	NONE						
U	7	NONE						

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “View and Edit Logical Drives” in the Main Menu. The current logical drive configuration and status will be displayed on the screen. Choose a logical drive number that has not yet been defined, then press **[Enter]**. A prompt “Create Logical Drive?” will appear. Select “Yes” and press **[Enter]**.

Cache Status: Clean								
Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#F	NAME
U	0	NONE						
U	1	NONE						
U	2	NONE						
U	3	NONE						
U	4	NONE						
U	5	NONE						
U	6	NONE						
U	7	NONE						

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

A list of supported RAID levels will appear. Choose a RAID level for this logical drive.

Cache Status: Clean									
1 of 4 Selected									
Q	LG	RAID	Size<MB>		Status	#OnLine	#STB	#F	RAID 5 NAME
U	0	Slot	Ch1	ID	Size<MB>	Speed	LG_DRU	Status	Vendor and Product ID
V	1	*	1	0	1010	40MB	NONE	USED DRU	SEAGATE ST31055W
V	2		1	1	1010	40MB	NONE	USED DRU	SEAGATE ST31055W
V	3		1	2	1010	40MB	NONE	USED DRU	SEAGATE ST31055W
V	4		1	4	1010	40MB	NONE	USED DRU	SEAGATE ST31055W
V	5	NONE							
V	6	NONE							
V	7	NONE							
Arrow Keys:Move Cursor !Enter:Select !Esc:Confirm !Ctrl+L:Refresh Screen									

The drives can be tagged for inclusion by positioning the cursor on the drive and then pressing [Enter] to select. An asterisk (*) will appear on the drive that has been selected. Press [ESC] when done.

Cache Status: Clean

U	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
V	0	NONE						
V	Maximum Drive Capacity : 1010MB							
V	Assign Spare Drives							
V	Logical Drive Assignments							
V	3	NONE						
V	4	NONE						
V	5	NONE						
V	6	NONE						
V	7	NONE						

Arrow Keys:Move Cursor !Enter:Select !Esc:Confirm !Ctrl+L:Refresh Screen

To limit the capacity of each drive included in the logical drive, select "Maximum Drive Capacity", then enter the maximum capacity that will be used by each drive.

You can assign a Local Spare Drive by choosing "Assign Spare Drives" in the above screen. A list of available drives will be displayed on the screen. Mark an asterisk (*) on the drive(s) that will be assigned by moving the cursor bar to that device, then pressing [Enter]. Press [ESC] when done.

To exit this menu, press [ESC].

A prompt to confirm the changes will appear. Select **Yes** to create the logical drive, or **No** to cancel.

Cache Status: Clean

LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
0	NONE						
Raid Level : RAID 5 Online SCSI Drives : 3 Maximum Drive Capacity : 1010 MB Spare SCSI Drives : 0 Logical Drive Assignment: Primary Controller Create Logical Drive ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
6	NONE						
7	NONE						

Arrow Keys: Move Cursor !Enter: Select !Esc: Exit !Ctrl+: Refresh Screen

When a fault-tolerant RAID level (1, 3 or 5) has been selected, the controller will start initializing parity. A progress indicator will be displayed on the screen. After initialization is done, the created logical drive is also complete.

```

IO:8%                               Cache Status: Clean

Q
U
U
U
U
U
S
U

LG RAID Size<MB> Status #OnLine #STB #Fail NAME
0 NONE                                     Initializing
1
2
3      8% Completed
4 NONE
5 NONE
6 NONE
7 NONE

Arrow Keys:Move Cursor   !Enter>Select   !Esc:Exit    !Ctrl+L:Refresh Screen

```

8.2.2 Viewing Logical Drives and Drive Members

Choose “View and Edit Logical Drives” in the Main Menu. The current logical drive configuration and status will be displayed on the screen. Refer to “8.1.3 Logical Drive’s Status” for detailed descriptions. To view the SCSI drive members of the logical drive, choose the logical drive by pressing **[Enter]**.

Cache Status: Clean								
Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
U	P0	RAID5	2021	GOOD	3	0	0	
U		View scsi drives						
U		Delete logical drive						
U		Partition logical drive						
U		logical drive Name						
U		logical drive Assignments						
	4	NONE						
	5	NONE						
	6	NONE						
	7	NONE						

Arrow Keys:Move Cursor iEnter:Select iEsc:Exit iCtrl+L:Refresh Screen

Choose “View SCSI Drives”. The member drive information will be displayed on the screen. Refer to “8.1.4. SCSI Drive’s Status” for the detailed descriptions of each item.

8.2.3 Deleting a Logical Drive

Choose the logical drive you wish to delete, then press **[Enter]**. Choose “Delete logical drive”. Choose **Yes** when prompted to confirm.

8.2.4 Partitioning a Logical Drive

Choose the logical drive you wish to partition, then press **[Enter]**. Choose “Partition logical drive”, then press **[Enter]**. Choose **Yes** to confirm.

Cache Status: Clean								
Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
U	P0	RAID5	2021	GOOD	3	0	0	
U		View scsi drives						
U		Delete logical drive						
U		Partition logical drive						
U	1	Partition Logical Drive ?						
U	4	Yes No						
	5	NONE						
	6	NONE						
	7	NONE						

Arrow Keys:Move Cursor iEnter:Select iEsc:Exit iCtrl+L:Refresh Screen

The screen will display a partition table of up to 8 partitions with the last partition selected. Press **[Enter]** and type the desired size for the

selected partition, then press **[Enter]**. The remaining size will be allotted to the next partition.

Cache Status: Clean							
Q	LG	RAID	Size(MB)	Status	Partition	Offset(MB)	Size(MB)
U	P0	RAID5	2021	GOOD	0	0	2021
U	View scsi drives				Partition Size (MB):		
U	Delete logical drive						
U	Partition logical drive						
U	logical drive Name						
S	logical drive Assignments				3		
	4	NONE			4		
	5	NONE			5		
	6	NONE			6		
	7	NONE			7		

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

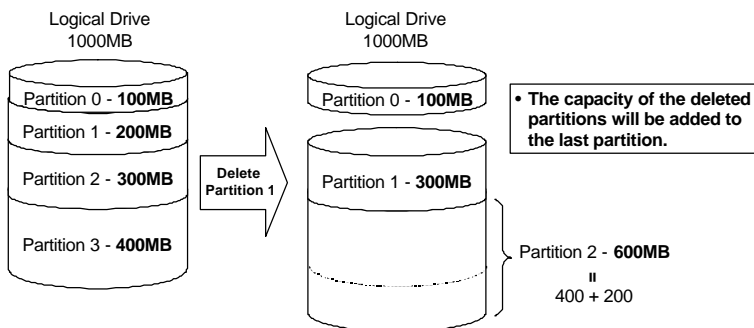
8.2.5 Deleting a Partition of a Logical Drive

Cache Status: Clean							
Q	LG	RAID	Size(MB)	Status	Partition	Offset(MB)	Size(MB)
U	P0	RAID5	2021	GOOD	0	0	100
U	View scsi drives				1	100	200
U	Delete logical drive				Partition Size (MB): 0		
U	Partition logical drive						
U	logical drive Name						
S	logical drive Assignments						
	4	NONE			4	1000	1021
	5	NONE			5		
	6	NONE			6		
	7	NONE			7		

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose the logical drive of the partition you wish to delete, then press **[Enter]**. Choose “Partition logical drive”. The current partition table of the logical drive will be displayed in tabulated form. Move the cursor bar to the partition you wish to delete, then press **[Enter]**. Enter “0” on the partition size to delete this partition.

The capacity of the deleted partition will be added into the last partition.



IMPORTANT:

- The capacity of the deleted partition will be added into the last partition.
- As long as a partition has been changed, it is necessary to re-configure all host LUN mappings. All the host LUN mappings will be removed with any partition change.

8.2.6 Assigning a Logical Drive Name

Cache Status: Clean								
Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
0	P0	RAID5	2021	GOOD	3	0	0	
1		View scsi drives						
2		Delete logical drive						
3		Partition logical drive						
4		logical drive Name						
5		Current Logical Drive Name: New Logical Drive Name: 2GB-1_						
6	NONE							
7	NONE							

Enter:Set to Default !Esc:Exit !Ctrl+L:Refresh Screen

Choose the logical drive you wish to assign a logical drive name, then press **[Enter]**. Choose "Logical drive name", then press **[Enter]** again. The current logical drive name will be displayed on the screen. You may now enter the new logical drive name in this field. Enter the logical drive name, then press **[Enter]** to save the new name.

8.2.7 Rebuilding Logical Drive

```
Cache Status: Clean
```

Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
V	P0	RAID5	2021	DRU FAILED	3	0	1	
V	View scsi drives							
V	Delete logical drive							
V	Partition logical drive							
V	logical drive Name							
V	Rebuild logical drive							
V	1	Rebuild Logical Drive ?						
	5	Yes	No					
	6	NONE						
	7	NONE						

Arrow Keys:Move Cursor !Enter>Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose the logical drive that has a failed member drive, then press **[Enter]**. Choose “Rebuild logical drive”, then press **[Enter]**. When prompted with “Rebuild Logical Drive?”, select **Yes**.

[illegible]

The rebuilding progress will be displayed on the screen.

R0:22%
Cache Status: Clean

Q	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
Q	P0	RAID5	2021	REBUILDING	3	0	0	
V	<div style="border: 1px solid black; padding: 5px; margin: 5px;"> View scsi drives Delete logical drive Partition logical drive logical drive Name Rebuild progress logical drive Assignments </div>							
V								
V								
V								
V								
S	5	NONE						
S	6	NONE						
S	7	NONE						

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

When rebuilding has already started or the logical drive has been automatically rebuilt by a Local Spare Drive or Global Spare Drive, choose “Rebuild progress” to view the rebuilding progress.



IMPORTANT:

- The Rebuild function will appear only when a logical drive (with RAID level 1, 3 or 5) has a failed drive member.
- Refer to “3.2.3 Automatic Rebuild and Manual Rebuild” for more information.

8.2.8 Dynamic Logical Drive Expansion

Cache Status: Clean

Q	LG	RAID	Size(MB)	Status	#LN	#SB	#FL	NAME
Q	P0	RAID0	2020	GOOD R	2	-	0	
V	<div style="border: 1px solid black; padding: 5px; margin: 5px;"> View scsi drives Delete logical drive Partition logical drive logical drive Name logical drive Assignments Expand logical drive add Scsi drives </div>							
V								
V								
V								
V								
S	5	Add Drives to Logical Drive ?						
S	6	<div style="display: flex; justify-content: space-around;"> Yes No </div>						
S	7	NONE						

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose the logical drive that you will add SCSI drives to; then press [Enter]. Choose “Add SCSI Drives”; then press [Enter].

```

Cache Status: Clean
1 of 1 Selected

```

Q	LG	RAID	Size(MB)	Status	0	#LN	#SB	#FL	NAME
U	P0	RAID0	2020	GOOD	R	2	-	0	
U	View scsi drives								
U	Delete logical drive								
U	Partition logical drive								
U	logical drive Name								
U	logical drive Assignments								
U	Expand logical drive								
U	add Scsi drives								
5	Slot	Ch1	ID	Size(MB)	Speed	LG_DRU	Status	Vendor and Product ID	
6	*	2	2	2047	20MB	NONE	NEW DRU	SEAGATE ST32550W	
7	NONE								

```

Arrow Keys:Move Cursor  !Enter:Select  !Esc:Confirm  !Ctrl+L:Refresh Screen

```

Press **[Enter]** to select the SCSI drive(s) that you will add to the logical drive; then press **[Enter]**. An asterisk (*) will appear by each of the drives selected. When you have finished selecting, press **[Esc]**. Confirm that these SCSI drives are to be added to the logical drive by selecting **Yes**.

A0:25%
Cache Status: Clean

Q	LG	RAID	Size(MB)	Status	O	#LN	#SB	#FL	NAME
U	P0	RAID0	2020	GOOD	R	2	-	0	
V				Adding					
V	1	<div style="border: 1px solid black; height: 40px; width: 100%;"></div> <div style="background-color: #ccc; width: 30%; height: 15px; margin: 5px;"></div> <div>25% Completed_</div>							
V	2								
V	3								
V	4	NONE							
V	5	NONE							
V	6	NONE							
V	7	NONE							

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Cache Status: Clean									
Q	LG	RAID	Size(MB)	Status	0	#LN	#SB	#FL	NAME
U	P0	RAID0	3030	GOOD	R	3	-	0	
U	1	NONE	<div>Notification</div> <div>[218A] Add SCSI Drive to Logical Drive 0 Completed</div>						
U	2	NONE							
U	3	NONE							
U	4	NONE							
S	5	NONE							
S	6	NONE							
S	7	NONE							
ESC:View Next Message !Ctrl+C:Clear All Messages !Ctrl+L:Refresh Screen									

Upon completion the new volume will be displayed for the logical drive.



IMPORTANT:

- Mode 1 Expansion (as described in Chapter 3) can only be performed on RAID 0, 3 and 5 logical drives. Mode 1 Expansion cannot be performed on an NRAID or RAID 1 logical drive.
- Mode 1 Expansion (Expanding logical drives by adding more SCSI hard disk drives) cannot be canceled once started. If a power failure occurs, the Mode 1 Expansion will be paused and the controller will NOT automatically continue the expansion when the power comes back on. Resumption of the RAID expansion must be performed manually.
- If a member drive of the logical drive fails during RAID expansion, the Mode 1 expansion will be paused. The expansion will resume automatically after logical drive rebuild has been completed.


8.2.9 Logical Drive Parity Check

Cache Status: Clean

Q	LG	RAID	Size(MB)	Status	0	#LN	#SB	#FL	NAME
U	P0	RAID5	2021	GOOD	R	3	0	0	
U	View scsi drives								
U	Delete logical drive								
U	Partition logical drive								
U	logical drive Name								
U	logical drive Assignments								
U	Expand logical drive								
U	add Scsi drives								
U	Check parity								
6	Check Logical Drive Parity ?								
7	<div>YesNo</div>								

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose the logical drive that you would like to check the parity for, and then press **[Enter]**. Choose “Check Parity”, then press **[Enter]**. When prompted with “Check Logical Drive Parity?”, select **Yes**.



IMPORTANT:
If a Logical Drive Parity Check is stopped by a drive failure, the parity check cannot restart until logical drive rebuild has been completed.

8.3 Viewing and Editing Host LUNs

8.3.1 Mapping a Logical Drive to a Host LUN

Cache Status: Clean

< Main Menu >

Quick installation

view and edit Logical drives

view and edit Host luns

U

U

U

U

S

view system Information

Map Logical Drive ?

YesNo

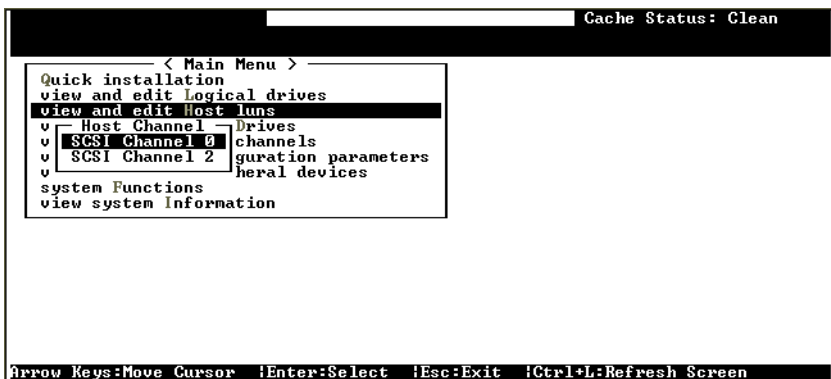
sels

ion parameters

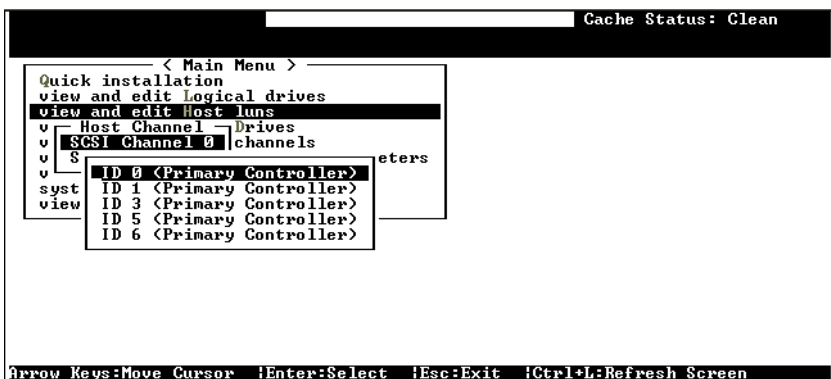
devices

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “View and edit Host luns” in the Main Menu, then press **[Enter]**. When prompt with “Map Logical Drive?”, select **Yes**.



A list of host channels will be displayed on the screen. Choose the host channel you wish to map.



If the host channel has been assigned multiple SCSI IDs, a list of the host channel's SCSI IDs will be displayed on the screen. Choose the SCSI ID you wish to map, then press **[Enter]**.

```

< Main Menu >
Quick installation
view and edit logical drives
view and edit host luns
  Host Channel Drives
  SCSi Channel 0 channels
    ID 0 <Primary Controller>
    ID 1 <Primary Controller>
    ID 3 <Primary Controller>
    ID 5 <Primary Controller>
    ID 6 <Primary Controller>
  
```

LUN	LG_DRU	Partition	Size(MB)	RAID
0				
1				
2				
3				
4				
5				
6				
7				

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

A list of LUNs and their respective mappings will be displayed on the screen. To map a host LUN to a logical drive's partition, select an available LUN (one not mapped yet) by moving the cursor bar to the LUN, then pressing [**Enter**].

```

< Main Menu >
Quick installation
view and edit logical drives
view and edit host luns
  Host Channel Drives
  SCSi Channel 0 channels
    ID 0 <Primary Controller>
    ID 1 <Primary Controller>
    ID 3 <Primary Controller>
    ID 5 <Primary Controller>
    ID 6 <Primary Controller>
  
```

LUN	LG_DRU	Partition	Size(MB)	RAID
0				

LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
P0	RAID5	2021	GOOD	3	0	0	
ID 3 <Primary Controller>							
ID 5 <Primary Controller>							
ID 6 <Primary Controller>							

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

A list of available logical drives will be displayed on the screen. Move the cursor bar to the desired logical drive, then press [**Enter**].

Cache Status: Clean									
< Main Menu >					LUN	LG_DRU	Partition	Size(MB)	RAID
Quick installation									
view and edit Logical drives									
view and edit Host luns					0				
v	Host	LG	RAID	Size(MB)	Status	#OnLine	#STB	#Fail	NAME
v	SCSI								
v	S	ID	P	Partition	Offset(MB)	Size(MB)	3	0	0
v	sys	ID 3		0	0	100			
v	view	ID 5		1	100	200			
		ID 6		2	300	300			
				3	600	400			
				4	1000	1021			

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

A partition table of the logical drive will be displayed on the screen. Move the cursor to the desired partition, then press **[Enter]**.

Cache Status: Clean									
< Main Menu >					LUN	LG_DRU	Partition	Size(MB)	RAID
Quick installation									
view and edit Logical drives									
view and edit Host luns					0				
v	Host	LG	Map	Logical Drive: 0	ne	#STB	#Fail	NAME	
v	SCSI		To	Partition : 2	3	0	0		
v	S	ID		Channel : 0					
v	sys	ID 3		ID : 3					
v	view	ID 5		Lun : 0 ?					
		ID 6		Yes No					
				2	300	300			
				3	600	400			
				4	1000	1021			

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

The prompt shown above will display the mapping you wish to create. Choose **Yes** to create the LUN mapping you selected. In the example above, partition 2 of logical drive 0 will map to LUN 0 of SCSI ID 3 on host channel 0.

8.3.2 Viewing and Deleting the LUN Mappings

Choose the host channel and SCSI ID of the LUN mapping you wish to view or delete.

<div> <div> <div>< Main Menu ></div> <div>Quick installation</div> <div>view and edit Logical drives</div> <div>view and edit Host luns</div> <div>Host Channel</div> <div>SCSI Channel 0</div> <div>Drives</div> <div>channels</div> <div>ID 0 <Primary Controller></div> <div>ID 1 <Primary Controller></div> <div>ID 3 <Primary Controller></div> <div>ID 5 <Primary Controller></div> <div>ID 6 <Primary Controller></div> </div> <div> <div>LUN</div> <div>LG_DRU</div> <div>Partition</div> <div>Size(MB)</div> <div>RAID</div> </div> </div>					
0	0	2	300	RAID5	
1	0	0	100	RAID5	
Delete Host Lun ?			200	RAID5	
Yes No			400	RAID5	
4	0	4	1021	RAID5	
5					
6					
7					

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

A list of the current LUN mapping will be displayed on the screen. Move the cursor bar to the LUN mapping you wish to delete, then press **[Enter]**. Select **Yes** to delete the LUN mapping, or **No** to cancel.

8.3.3 Pass-through SCSI Commands

<div> <div> <div>< Main Menu ></div> <div>Quick installation</div> <div>view and edit Logical drives</div> <div>view and edit Host luns</div> <div>Host Channel</div> <div>CHL 0 ID 0 <Primary Controller></div> </div> <div> <div>Slot</div> <div>Chl</div> <div>ID</div> <div>Size(MB)</div> <div>Speed</div> <div>LG_DRU</div> <div>Status</div> <div>Vendor and Product ID</div> </div> </div>							
	2	0	1010	40MB	0	ON-LINE	SEAGATE ST31055W
Map	Physical Drive Chl: 2					ON-LINE	SEAGATE ST31055W
To	Physical Drive ID : 0					ON-LINE	SEAGATE ST32550W
	Host Channel : 0						
	Host ID : 0 ?						
Yes No							

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

If you have primary and secondary controllers, move the cursor to the controller for the device that you wish to map; then press **[Enter]**. You will be prompted to map a SCSI ID to a physical drive.

WARNING:



- *Pass-through SCSI Commands are only intended to perform maintenance functions for a drive or device on the drive side. Do not perform any destructive commands to a disk drive (i.e., any commands that write data to a drive media). If a disk drive is a spare drive or a member of a logical drive, such a destructive command may cause a data inconsistency.*
- *When a drive/device is mapped to a host SCSI ID so that Pass-through SCSI Commands can be used, the data on that drive/device will not be protected by the controller. Users who employ Pass-through SCSI Commands to perform any write commands to drive media do so at their own risk.*

8.4 Viewing and Editing SCSI Drives

Cache Status: Clean

< Main Menu >

Quick installation

view and edit Logical drives

view and edit Host luns

view and edit scsi Drives

view

view

view

syst

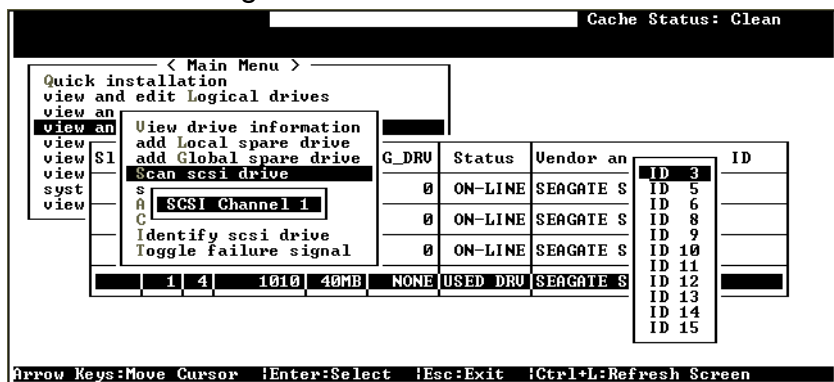
view

Slot	Chl	ID	Size(MB)	Speed	LG_DRU	Status	Vendor and Product ID
	1	0	1010	40MB	0	ON-LINE	SEAGATE ST31055W
	1	1	1010	40MB	0	ON-LINE	SEAGATE ST31055W
	1	2	1010	40MB	0	ON-LINE	SEAGATE ST31055W
	1	4	1010	40MB	NONE	USED DRU	SEAGATE ST31055W

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

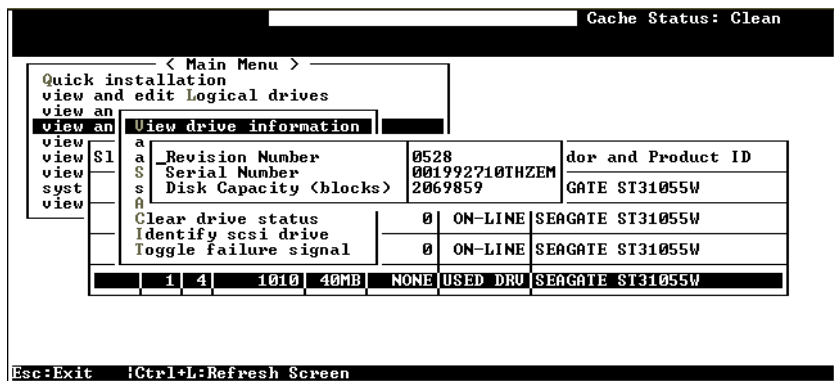
Choose “View and Edit SCSI Drives” in the Main Menu. All drives attached to the drive channels will be displayed on the screen. Refer to “8.1.4 SCSI Drive’s Status” for detailed descriptions of each column.

8.4.1 Scanning a New SCSI Drive



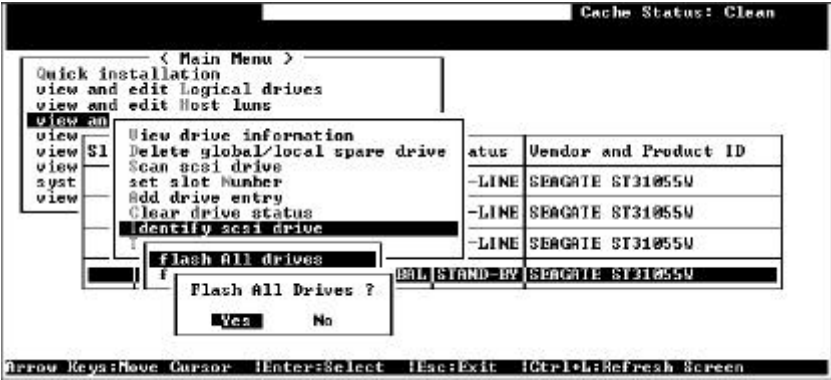
Choose a drive and press **[Enter]**. Choose “Scan SCSI drive”, then press **[Enter]**. The menu may vary according to the drive status. Choose the drive channel and SCSI ID of the drive you wish to scan, then press **[Enter]**.

8.4.2 Viewing Drive Information



Choose the SCSI drive you wish to view, then press **[Enter]**. Select “View drive information”. The revision number, serial number and disk capacity (counts in block; one block refers to 512K) of the drive will be displayed on the screen.

8.4.5 Identifying a Drive



Move the cursor bar to the drive you wish to identify, then press **[Enter]**. Choose "Identify SCSI drive", then choose "Flash all drives" to flash the read/write LEDs of all the drives in the drive channel. Choose **Yes**.

Cache Status: Clean											
< Main Menu >											
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Quick installation view and edit Logical drives view and edit Host luns view an view S1 view view syst view </div> <div style="width: 50%;"> View drive information Delete global/local spare drive Scan scsi drive set slot Number Add Clear Ident f </div> <div style="width: 45%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>atus</th> <th>Vendor and Product ID</th> </tr> </thead> <tbody> <tr> <td>-LINE</td> <td>SEAGATE ST31055W</td> </tr> <tr> <td>AGATE ST31055W</td> <td></td> </tr> <tr> <td>AGATE ST31055W</td> <td></td> </tr> </tbody> </table> </div> </div>				atus	Vendor and Product ID	-LINE	SEAGATE ST31055W	AGATE ST31055W		AGATE ST31055W	
atus	Vendor and Product ID										
-LINE	SEAGATE ST31055W										
AGATE ST31055W											
AGATE ST31055W											
Flash Channel:1 ID:4 SCSI Drive ?											
<div style="display: flex; justify-content: space-around;"> Yes No </div>											
flash Selected drive											
OBAL STAND-BY SEAGATE ST31055W											
Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen											

Or choose “Flash selected drive” to flash the read/write LED of the selected drive only. Choose **Yes**.

8.4.6 Deleting a Spare Drive (Global / Local Spare Drive)

Move the cursor to a Local Spare Drive or Global Spare Drive, then press **[Enter]**. Choose “Delete Global/Local Spare Drive”, then press **[Enter]** again. Choose **Yes**.

Cache Status: Clean											
< Main Menu >											
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Quick installation view and edit Logical drives view and edit Host luns view an view S1 view view syst view </div> <div style="width: 50%;"> View drive information Delete global/local spare drive S Delete Spare Drive ? Yes No Toggle failure signal </div> <div style="width: 45%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>atus</th> <th>Vendor and Product ID</th> </tr> </thead> <tbody> <tr> <td>-LINE</td> <td>SEAGATE ST31055W</td> </tr> <tr> <td>-LINE</td> <td>SEAGATE ST31055W</td> </tr> <tr> <td>-LINE</td> <td>SEAGATE ST31055W</td> </tr> </tbody> </table> </div> </div>				atus	Vendor and Product ID	-LINE	SEAGATE ST31055W	-LINE	SEAGATE ST31055W	-LINE	SEAGATE ST31055W
atus	Vendor and Product ID										
-LINE	SEAGATE ST31055W										
-LINE	SEAGATE ST31055W										
-LINE	SEAGATE ST31055W										
1 4 1010 40MB GLOBAL STAND-BY SEAGATE ST31055W											
Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen											

8.4.7 SCSI Drive Utilities

From the “View and Edit SCSI Drives” menu, select the drive that the utility is to be performed on; then press **[Enter]**. Select “SCSI Drive Utilities”; then press **[Enter]**. Choose either “SCSI Drive Low-level Format” or “Read/Write Test”.

Cache Status: Clean

< Main Menu >

- Quick installation
- view and edit Logical drives
- view and edit Host luns
- view and edit scsi Drives**

Slot	Chl	ID	Size(MB)	Speed	LG_DRU	Status	Vendor and Product ID
view	2	0	1010	40MB	NONE	NEW DRU	SEAGATE ST31055W
view							
view							
syst							
view							

- View drive information
- Scan scsi drive
- set slot Number
- add drive Entry
- Identify scsi drive
- scsi drive Utilities**

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

SCSI Drive Low-level Format

Cache Status: Clean

< Main Menu >

- Quick installation
- view and edit Logical drives
- view and edit Host luns
- view and edit scsi Drives**

Slot	Chl	ID	Size(MB)	Speed	LG_DRU	Status	Vendor an	ID 0	ID 1	ID 2	ID
view	2	0	1010	4							
view											
view											
syst											
view											

- View drive informat
- S
- s
- a
- R
- scsi**

[WARNING!!] Channel 2 ID 2 SCSI Drive
All data on the disk will be erased !

!! Low-Level Format Disk !!

Yes No

ID 13
ID 14
ID 15

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “SCSI Drive Low-level Format” and confirm by selecting **Yes**.



IMPORTANT:

- Do not switch the controller's and/or SCSI disk drive power off during the SCSI Drive Low-level Format. If any power failure occurs during a drive low-level format, the formatting must be performed again when power resumes.
- All of the data stored in the SCSI disk drive will be destroyed during a low-level format.
- The SCSI disk drive on which a low-level disk format will be performed cannot be a spare drive (local or global) nor a member drive of a logical drive. The "SCSI Drive Low-level Format" option will not appear if the drive is not a "New Drive" or a "Used Drive".

Read/Write Test

Cache Status: Clean

< Main Menu >

Quick installation

view and edit Logical drives

view and edit Host luns

view and edit scsi Drives

Slot	Chl	ID	Size(MB)	Speed	LG_DRU	Status	Vendor and Product ID
2	0		1010	40MB	NONE	R/W TEST	SEAGATE ST31055W

view

view

view

syst

view

view

Scan sc

set add

Clea A

scsi D

Execute Drive Testing ?

Yes No

Execute Drive Testing

Read/Write Test

DRU SEAGATE ST31055W

abled - Disabled

ite

ST32550W

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose "Read/Write Test"; then press **[Enter]**. The following options are available for the test: the automatic reassignment of bad blocks (choose "Enabled" or "Disabled"), aborting the test when an error occurs (choose "Enabled" or "Disabled"), and testing the drive for "Read and Write" or for "Read Only". To begin the test choose "Execute Read/Write Test"; confirm by selecting **Yes**.



IMPORTANT:

The option to run these utilities disappears after you have created a logical drive. This is because running these utilities will destroy data on a hard disk drive.

8.5 Viewing and Editing SCSI Channels

Cache Status: Clean

< Main Menu >

Quick installation
view and edit Logical drives
view and edit Host luns
view and edit scsi Drives
view and edit Scsi channels

Chl	Mode	PID	SID	DefSynC1k	DefWid	Term	CurSynC1k	CurWid
0	Host	*	NA	20.8MHz	Wide	On	Async	Narrow
1	Drive	?	NA	20.8MHz	Wide	On	20.8MHz	Wide
2	Host	0	NA	20.8MHz	Wide	On	Async	Narrow

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “View and Edit SCSI Channels” in the Main Menu. A list of all the channels will be displayed on the screen. Refer to “8.1.5 SCSI Channel Status” for detailed information.

8.5.1 Redefining a Channel Mode

Cache Status: Clean

< Main Menu >

Quick installation
view and edit Logical drives
view and edit Host luns
view and edit scsi Drives
view and edit Scsi channels

Chl	Mode	PID	SID	DefSynC1k	DefWid	Term	CurSynC1k	CurWid
0	Host	*	NA	20.8MHz	Wide	On	20.8MHz	Wide


channel Mode

Change Mode to Drive Channel ?

Yes No

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose the channel you wish to change, then press [Enter]. Choose “Channel Mode”, then press [Enter]. A dialog box will appear asking you to confirm the change. Select **Yes** to change the mode of the selected SCSI channel.



IMPORTANT:
Every time you change the channel mode, you must reset the controller for the changes to take effect.

8.5.2 Viewing and Editing a SCSI ID / Host Channel

Cache Status: Clean

< Main Menu >

- Quick installation
- view and edit Logical drives
- view and edit Host luns
- view and edit scsi Drives
- view and edit Scsi channels**

Chl	Mode	PID	SID	DefSynClk	DefWid	Term	CurSynClk	CurWid
0	Host	0	NA	20.8MHz	Wide	On		

channel Mode

- view and edit scsi id**
- scsi terminator
- sync transfer Clock
- Wide transfer

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose a Host channel, then press **[Enter]**. Choose “View and Edit SCSI ID”. A list of the existing ID(s) will be displayed on the screen.

Adding a SCSI ID

Cache Status: Clean

< Main Menu >

- Quick installation
- view and edit Logical drives
- view and edit Host luns
- view and edit scsi Drives
- view and edit Scsi channels**

Chl	Mode	PID	SID	DefSynClk	DefWid	Term	CurSynClk	CurWid
0	Host	0	NA	20.8MHz	Wide	On		

ID 0 <Primary Controller> de On

2 H Add Channel SCSI ID de On Async Narrow

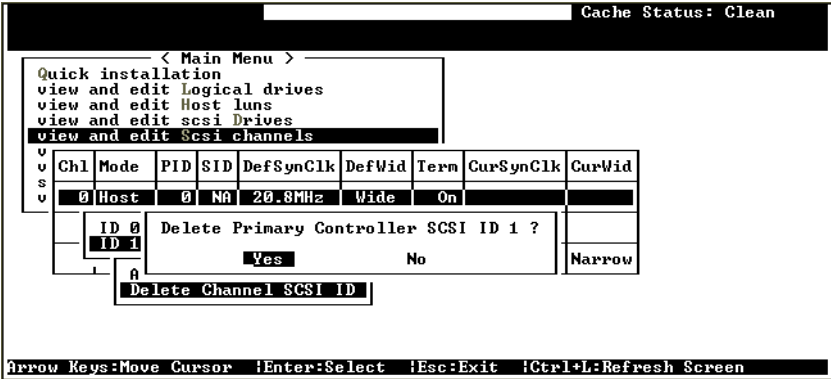
D Primary Controller
Secondary Controller
Both Controllers

ID
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Press **[Enter]** on one of the existing SCSI ID. Choose “Add Channel SCSI ID”, then choose “Primary Controller”. A list of SCSI IDs will appear. Choose a SCSI ID. DO NOT choose a SCSI ID used by a device that belongs to the same SCSI channel.

Deleting a SCSI ID



Choose the SCSI ID you wish to delete. Choose “Delete Channel SCSI ID”. The dialog box “Delete Primary Controller SCSI ID?” will appear. Select **Yes**, then press **[Enter]** to delete.



IMPORTANT:

- Every time you change a channel’s SCSI ID, you must reset the controller for the changes to take effect.
- The default SCSI ID of the Host channel is 0, the Drive channel is 7.
- If only one controller exist, you must set the Secondary Controller’s SCSI ID to “A”. If a secondary controller exist, you need to set a SCSI ID.
- Multiple SCSI ID can be applied to the Host channel while the Drive channel, one SCSI ID or no SCSI ID.
- At least a controller’s SCSI ID has to be present on the SCSI bus.

8.5.3 Setting a Primary Controller Channel

SCSI ID / Drive Channel

Cache Status: Clean

< Main Menu >

Quick installation
 view channel Mode
 view Primary controller scsi id
 view Secondary controller scsi id
 v scsi Terminator
 v sync transfer Clock
 v Wide transfer
 v View and edit scsi target

ID 0
ID 1
ID 2
ID 3
ID 4
ID 5
ID 6
ID 7
ID 8

Term	CurSynClk	CurWid
On		

Change Primary Controller SCSI ID ?

1 Drive	8	?	20.8MHz	Wide
2 Host	0	NA	20.8MHz	Wide

ID 14
ID 15
NA

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

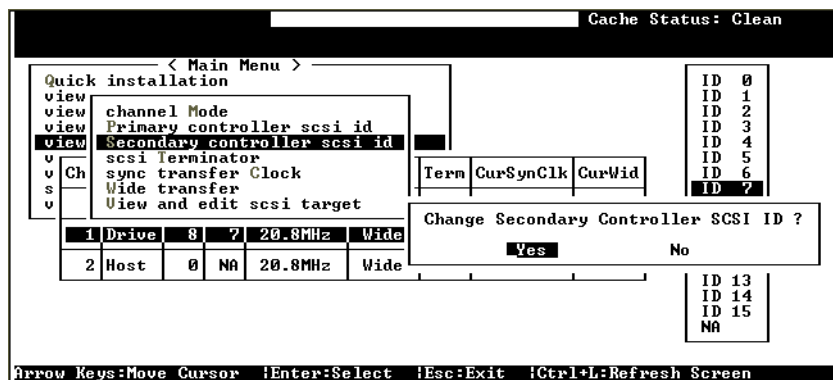
Choose a Drive channel, then press **[Enter]**. Choose “Primary Controller SCSI ID”. A list of SCSI IDs will be displayed on the screen. Only one SCSI ID can be assigned to the drive channel of a controller. Now choose a SCSI ID for the drive channel of the Primary Controller. The dialog box “Change Primary Controller SCSI ID?” will appear. Select **Yes**, then press **[Enter]**.



IMPORTANT:

- Every time you change a channel's SCSI ID, you must reset the controller for the changes to take effect.
- The default SCSI ID of the Host channel is 0, the Drive channel is 7.
- If only one controller exist, you must set the Secondary Controller's SCSI ID to "A". If a secondary controller exist, you need to set a SCSI ID.
- Multiple SCSI ID can be applied to the Host channel while the Drive channel, one SCSI ID or no SCSI ID.
- At least a controller's SCSI ID has to be present on the SCSI bus.

8.5.4 Setting a Secondary Controller SCSI ID / Drive Channel



Choose a Drive channel, then press **[Enter]**. Choose “Secondary Controller SCSI ID”. A list of SCSI IDs will be displayed on the screen. Only one SCSI ID can be assigned to the drive channel of a controller. Now choose a SCSI ID for the drive channel of the Secondary Controller. The dialog box “Change Secondary Controller SCSI ID?” will appear. Select **Yes**, then press **[Enter]**.



IMPORTANT:

- Every time you change a channel's SCSI ID, you must reset the controller for the changes to take effect.
- The default SCSI ID of the Host channel is 0, the Drive channel is 7.
- If only one controller exist, you must set the Secondary Controller's SCSI ID to “A”. If a secondary controller exist, you need to set a SCSI ID.
- Multiple SCSI ID can be applied to the Host channel while the Drive channel, one SCSI ID or no SCSI ID.
- At least a controller's SCSI ID has to be present on the SCSI bus.

8.5.5 Setting a SCSI Channel Terminator

Cache Status: Clean

< Main Menu >

Quick installation
 view channel Mode
 view Primary controller scsi id
 view Secondary controller scsi id
 view **scsi terminator**

Disable Channel Terminator ?						rm	CurSynClk	CurWid
Yes No						On		
1 D						On		

2	Host	0	NA	20.8MHz	Wide	On	Async	Narrow
---	------	---	----	---------	------	----	-------	--------

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose the channel you wish the terminator enabled or disabled, then press **[Enter]**. Choose “SCSI Terminator”, then press **[Enter]**. A dialog box will appear. Choose **Yes**, then press **[Enter]**.



IMPORTANT:

- Only a terminator with Single-Ended channel can be enabled/disabled through the setting shown above.
- A terminator with Differential channel must be removed/installed physically. The LCD will present this as “Diff”.

8.5.6 Setting a Transfer Speed

Cache Status: Clean

< Main Menu >

Quick installation
 view channel Mode
 view Primary controller scsi id
 view Secondary controller scsi id
 view scsi Terminator
 view **sync transfer Clock**
 view Wide transfer
 view and edit scsi target

						Term	Cu	
						On		

Change Sync Transfer Clock ?							
Yes No							


1	Drive	8	?	20.8MHz	Wide	On		
2	Host	0	NA	20.8MHz	Wide	On	Async	Narrow

20.8MHz
 16.6MHz
 5.0MHz
 4.0MHz
 3.3MHz
 2.8MHz
 2.5MHz
 2.2MHz
 2.0MHz
 1.8MHz
 Async

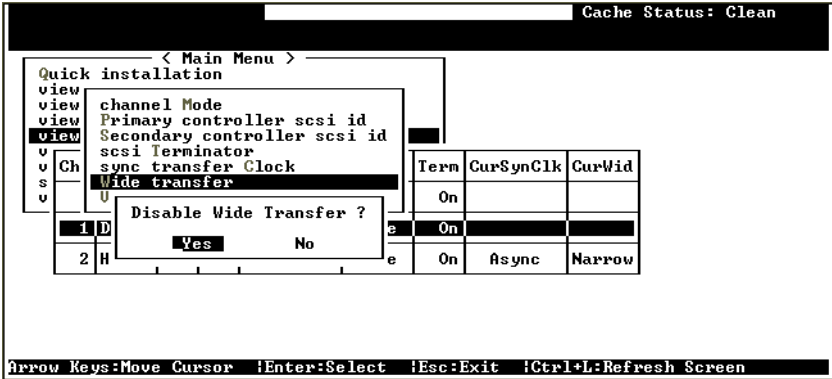
Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Move the cursor bar to a channel, then press **[Enter]**. Choose “Sync Transfer Clock”, then press **[Enter]**. A list of the clock speed will


appear. Move the cursor bar to the desired speed and press **[Enter]**. A dialog box “Change Sync Transfer Clock?” will appear. Choose **Yes**.

 **IMPORTANT:**
Every time you change the SCSI Transfer Speed, you must reset the controller for the changes to take effect.

8.5.7 Setting a Transfer Width



Move the cursor bar to a channel, then press **[Enter]**. Select “Wide Transfer”, then press **[Enter]**. A dialog box “Disable Wide Transfer?” or “Enable Wide Transfer?” will appear. Choose **Yes**.

 **IMPORTANT:**
Every time you change the SCSI Transfer Width, you must reset the controller for the changes to take effect.

8.5.8 Viewing and Editing SCSI Target / Drive Channel

Cache Status: Clean

< Main Menu >

Quick installation

view channel Mode

view Primary controller scsi id

view Secondary controller scsi id

view scsi Terminator

view sync transfer Clock

view Wide transfer

view View and edit scsi target

Term	CurSynClk	CurWid
On		

1	Drive	8	7	20.8MHz	Wide	On		
2	Host	0	NA	20.8MHz	Wide	On	Async	Narrow

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Move the cursor bar to a Drive channel, then press **[Enter]**.
Select "View and Edit SCSI Target", then press **[Enter]**.

Cache Status: Clean								
Quick view	Slot	Ch1	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount
view	9	1	0	12	Wide	Enabled	Enabled	Def<32>
view	Slot number					bled	Enabled	Def<32>
view	maximum sync. xfer Clock					bled	Enabled	Def<32>
view	maximum xfer Width					bled	Enabled	Def<32>
view	Parity check					bled	Enabled	Def<32>
view	Disconnect support					bled	Enabled	Def<32>
view	maximum Tag count					bled	Enabled	Def<32>
view	Restore to default setting					bled	Enabled	Def<32>
view		1	5	12	Wide	Enabled	Enabled	Def<32>
view		1	6	12	Wide	Enabled	Enabled	Def<32>
view		1	9	12	Wide	Enabled	Enabled	Def<32>

A list of all the SCSI targets and their current settings will appear. Press **[Enter]** on a SCSI target and a menu list will appear on the screen.

Slot Number

Cache Status: Clean								
Quick view	Slot	Ch1	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount
view	9	1	0	12	Wide	Enabled	Enabled	Def(32)
view	Slot number						bled	Def(32)
view	Slot Number : _						bled	Def(32)
view	Restore to default setting						bled	Def(32)
view	1	5	12	Wide	Enabled	Enabled	Def(32)	
view	1	6	12	Wide	Enabled	Enabled	Def(32)	
view	1	9	12	Wide	Enabled	Enabled	Def(32)	

Enter:Clear Slot Number !Esc:Exit !Ctrl+L:Refresh Screen

Choose “Slot Number”, then press **[Enter]**. Enter a slot number, then press **[Enter]** again.

Please refer to Chapter 12, Fault-Bus, for more information.

Maximum Synchronize Transfer Clock

Cache Status: Clean								
Quick view	Slot	Ch1	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount
view	9	1	0	12	Wide	Enabled	Enabled	Def(32)
view	Slot number						bled	Def(32)
view	maximum sync. xfer Clock						bled	Def(32)
view	Synchronous Transfer Period in 4ns units						bled	Def(32)
view	Maximum Sync. Xfer Clock:						bled	Def(32)
view	1	5	12	Wide	Enabled	Enabled	Def(32)	
view	1	6	12	Wide	Enabled	Enabled	Def(32)	
view	1	9	12	Wide	Enabled	Enabled	Def(32)	

Enter:Set to Default !Esc:Exit !Ctrl+L:Refresh Screen

Choose “Maximum Sync. Xfer Clock”, then press **[Enter]**. A dialog box will appear on the screen. Enter the clock, then press **[Enter]**.

Please refer to Appendix D, Sync. Clock Period and Sync. Clock Frequency, for more information.

Maximum Transfer Width

								Cache Status: Clean
Quick view	Slot	Chl	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount
view	9	1	0	12	Wide	Enabled	Enabled	Def<32>
view	Slot number maximum sync. xfer Clock					bled	Enabled	Def<32>
view	maximum xfer Width					bled	Enabled	Def<32>
view	Set SCSI Target Maximum Xfer Narrow only ?							f<32>
view	Yes No							f<32>
view	1	5		12	Wide	Enabled	Enabled	Def<32>
view	1	6		12	Wide	Enabled	Enabled	Def<32>
view	1	9		12	Wide	Enabled	Enabled	Def<32>

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “Maximum Xfer Width”, then press **[Enter]**. Choose **Yes** in the dialog box to confirm the setting.

Parity Check

								Cache Status: Clean
Quick view	Slot	Chl	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount
view	9	1	0	12	Wide	Enabled	Enabled	Def<32>
view	Slot number maximum sync. xfer Clock					bled	Enabled	Def<32>
view	maximum xfer Width					bled	Enabled	Def<32>
view	Parity check					ed	Enabled	Def<32>
view	Disable Parity Checking ?					ed	Enabled	Def<32>
view	Yes No					ed	Enabled	Def<32>
view	1	6		12	Wide	Enabled	Enabled	Def<32>
view	1	9		12	Wide	Enabled	Enabled	Def<32>

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “Parity Check”. Choose **Yes** in the dialog box that followed to confirm the setting.

Disconnecting Support

Cache Status: Clean

Quick view	Slot	Ch1	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount	
view	9	1	0	12	Wide	Enabled	Enabled	Def(32)	
view	Slot number						bled	Enabled	Def(32)
view	maximum sync. xfer Clock						bled	Enabled	Def(32)
view	maximum xfer Width						bled	Enabled	Def(32)
view	Parity check						bled	Enabled	Def(32)
view	Disconnect support						bled	Enabled	Def(32)
view	Disallow target disconnect ?						Enabled Def(32)		
view	Yes No						Enabled Def(32)		
view	1	6		12	Wide	Enabled	Enabled	Def(32)	
view	1	9		12	Wide	Enabled	Enabled	Def(32)	

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “Disconnect Support”. Choose **Yes** in the dialog box that followed to confirm the setting.


Maximum Tag Count

Cache Status: Clean

Quick view	Slot	Ch1	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount	
view	9	1	0	12	Wide	Enabled	Enabled	Def(32)	
view	Slot number						bled	Enabled	Def(32)
view	maximum sync. xfer Clock						bled	Enabled	Def
view	maximum xfer Width						bled	Enabled	Default
view	Parity check						bled	Enab	
view	Disconnect support						bled	Enab	
view	maximum tag count						bled	Enab	
view	Restore to default setting						Set Maximum Tag Count ?		
view							Yes No		
view	1	5		12	Wide	Enabled	Enab	16	
view	1	6		12	Wide	Enabled	Enabled	Def 32	
view	1	9		12	Wide	Enabled	Enabled	Def 64	
view								128	

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “Maximum Tag Count”, then press [Enter]. A list of available tag count numbers will appear. Move the cursor bar to a number, then press [Enter]. Choose **Yes** in the dialog box that followed to confirm the setting.

 **IMPORTANT:**

- Disabling the Maximum Tag Count will disable the internal cache of the SCSI drive.

Restoring the Default Setting

Cache Status: Clean								
Quick view	Slot	Chl	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount
view	9	1	0	12	Wide	Enabled	Enabled	Def<32>
view	Slot number					bled	Enabled	Def<32>
view	maximum sync. xfer Clock					bled	Enabled	Def<32>
view	maximum xfer Width					bled	Enabled	Def<32>
view	Parity check					bled	Enabled	Def<32>
view	Disconnect support					bled	Enabled	Def<32>
view	maximum Tag count					bled	Enabled	Def<32>
view	Restore to default setting					bled	Enabled	Def<32>
Restore SCSI Target to default setting ?								Def<32>
Yes No								Def<32>
view	1	9		12	Wide	Enabled	Enabled	Def<32>

Arrow Keys:Move Cursor iEnter:Select iEsc:Exit iCtrl+L:Refresh Screen

Choose “Restore to default setting”, then press **[Enter]**. Choose **Yes** in the dialog box that followed to restore all the settings of the SCSI target.

8.6 Viewing and Editing Configuration Parameters

Cache Status: Clean	
< Main Menu >	
Quick installation	
view and edit Logical drives	
view and edit Host luns	
view and edit scsi Drives	
view and edit Scsi channels	
view and edit Configuration parameters	
view and edit Communication Parameters	
view and edit Caching Parameters	
view and edit Host-side SCSI Parameters	
view and edit Drive-side SCSI Parameters	
view and edit Disk Array Parameters	
view and edit Controller Parameters	

Arrow Keys:Move Cursor iEnter:Select iEsc:Exit iCtrl+L:Refresh Screen

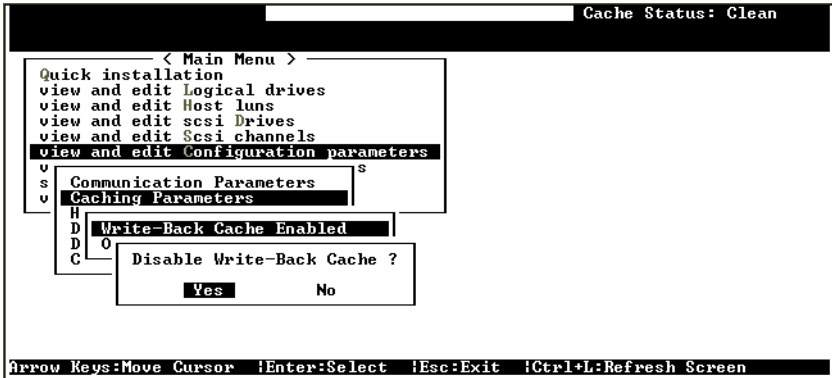
Choose “View and Edit Configuration Parameters”, then press **[Enter]**. Move the cursor bar to the desired item, then press **[Enter]**.

8.6.1 Communication Parameters

Refer to Chapter 11, Remote Administration for more information.

8.6.2 Caching Parameters

Write-Back Cache Enable/Disable



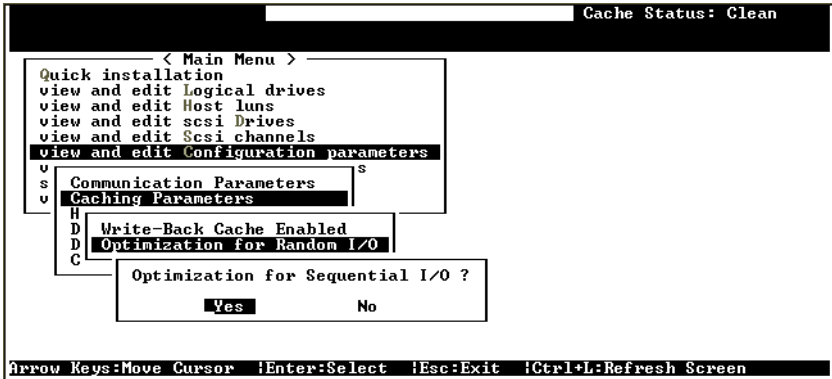
Choose “Caching Parameters”, then press **[Enter]**. Select “Write-Back Cache”, then press **[Enter]**. “Enabled” or “Disabled” will display the current setting of the Write-Back Cache. Choose **Yes** in the dialog box that followed to confirm the setting.



IMPORTANT:

- Every time you change the Cache Parameters, you must reset the controller for the changes to take effect.

Optimization for Random or Sequential I/O



Choose “Optimization for Random I/O” or “Optimization for Sequential I/O”, then press **[Enter]**. The “Random” or “Sequential”

dialog box will appear, depending on the option you have selected. Choose **Yes** in the dialog box that followed to confirm the setting.



IMPORTANT:

- Every time you change this setting, you must reset the controller for the changes to take effect.
- Refer to “3.4.1 Optimal for Sequential or Random I/O” for more information.

8.6.3 Host-side SCSI Parameters

Maximum Queued I/O Count

Cache Status: Clean

< Main Menu >

Quick installation

view and edit logical drives

view and edit Host luns

view and edit scsi drives

view and edit Scsi channels

view and edit Configuration parameters

u Communication Parameters

s Caching Parameters

u Host-side SCSI Parameters

D Maximum Queued I/O Count - 256

D LUNs per Host SCSI ID - 8

Auto

1

2

4

8

16

32

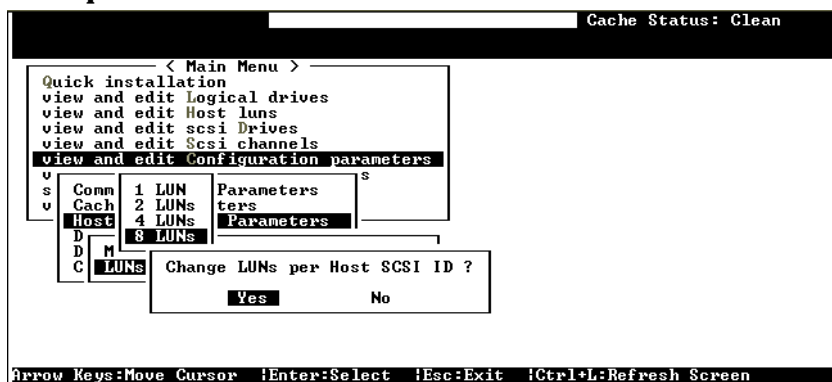
Set Maximum Queued Host I/O Count ?

Yes No

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

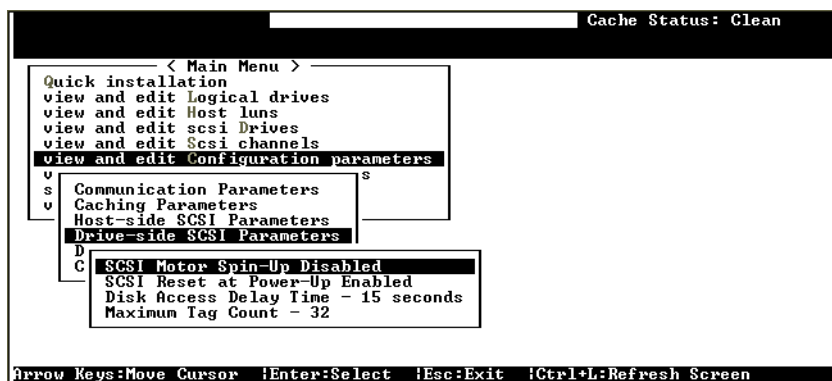
Choose “Host-side SCSI Parameters”, then press **[Enter]**. Choose “Maximum Queued I/O Count”, then press **[Enter]**. A list of available selections will appear. Move the cursor bar to an item, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting.

LUNs per Host SCSI ID



Choose “LUNs per Host SCSI ID”, then press **[Enter]**. A list of selections will appear. Move the cursor bar to an item, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting.

8.6.4 Drive-side SCSI Parameters



Choose “Drive-side SCSI Parameters”, then press **[Enter]**. The Drive-side SCSI parameters menu will appear.

SCSI Motor Spin-Up

Cache Status: Clean

< Main Menu >

Quick installation

view and edit Logical drives

view and edit Host luns

view and edit scsi Drives

view and edit Scsi channels

view and edit Configuration parameters

Communication Parameters

Caching Parameters

Host-side SCSI Parameters

Drive-side SCSI Parameters

SCSI Motor Spin-Up Disabled

Enable SCSI Motor Spin-Up ? nds

Yes No

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “SCSI Motor Spin-Up”, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting.

SCSI Reset at Power-Up

Cache Status: Clean

< Main Menu >

Quick installation

view and edit Logical drives

view and edit Host luns

view and edit scsi Drives

view and edit Scsi channels

view and edit Configuration parameters

Communication Parameters

Caching Parameters

Host-side SCSI Parameters

Drive-side SCSI Parameters

Disable SCSI Reset at Power-Up ?

Yes No

SCSI Reset at Power-Up Enabled

Disk Access Delay Time - 15 seconds

Maximum Tag Count - 32

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “SCSI Reset at Power-Up”, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting.

Disk Access Delay Time

Cache Status: Clean

< Main Menu >

Quick installation

view and edit Logical drives

view and edit Host luns

view and edit scsi Drives

view and edit Scsi channels

view and edit Configuration parameters

No Delay
5 secs
10 secs
15 secs
20 secs

Communication Parameters

Caching Parameters

Host-side SCSI Parameters

Drive-side SCSI Parameters

Set Disk Access Delay Time ?

SCSI Motor Spin-Up Disabled

SCSI Reset at Power-Up Enabled

Disk Access Delay Time - 15 seconds

Maximum Tag Count - 32

50 secs
55 secs
60 secs
65 secs
70 secs
75 secs

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

Choose “Disk Access Delay Time”, then press **[Enter]**. A list of selections will appear. Move the cursor bar on a selection, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting.

Maximum Tag Count (Tag Command Queuing)

Cache Status: Clean

Slot	Ch1	ID	SyncClk	XfrWid	ParityChk	Disconnect	TagCount
9	1	0	12	Wide	Enabled	Enabled	Def<32>
<div style="border: 1px solid black; padding: 2px;"> Slot number maximum sync. xfer Clock maximum xfer Width Parity check Disconnect support maximum tag count Restore to default setting </div>						bled	Def<32>
						bled	Def
						bled	Default
						bled	Enab
						bled	Enab
<div style="border: 1px solid black; padding: 2px;"> Set Maximum Tag Count ? <input checked="" type="button" value="Yes"/> <input type="button" value="No"/> </div>							
1	5	12	Wide	Enabled	Enab		
1	6	12	Wide	Enabled	Enabled	Enab	Def
1	9	12	Wide	Enabled	Enabled	Enab	Def

Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen

The controller (with Firmware 2.11 and above) supports tag command queuing with an adjustable maximum tag count from 1 to 128. The default setting is “Enabled” with a maximum tag count of 32. This setting can be changed or tag command queuing can be disabled. Choose “Maximum Tag Count”, then press **[Enter]**. A list of available tag count numbers will appear. Move the cursor bar to a number, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting.



IMPORTANT:

- Every time you change this setting, you must reset the controller for the changes to take effect.
- Disabling Tag Command Queuing will disable the Write-Back cache built in the hard drive.

SAF-TE Enclosure Monitoring

		Cache Status: Clean
< Main Menu >		
Quick	SCSI Motor Spin-Up Disabled	
view	SCSI Reset at Power-Up Enabled	Disabled
view	Disk Access Delay Time - 15 seconds	50 ms
view	SCSI I/O Timeout -Default(? seconds)	100 ms
view	Maximum Tag Count - Disabled	200 ms
view	Periodic Drive Check Time - Disable	500 ms
C	Periodic SAF-TE Device Check Time - Disabled	1 second
v	Periodic Auto-Detect Failure Drive Swap Check Time	2 seconds
v		5 seconds
C		10 seconds
H		20 seconds
		30 seconds
	Drive-side SCSI Parameters	
	Disk Array Parameters	
	Redundant Controller Parameters	
	Controller Parameters	
Set Periodic SAF-TE Device Check Time ?		
Yes No		
Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen		

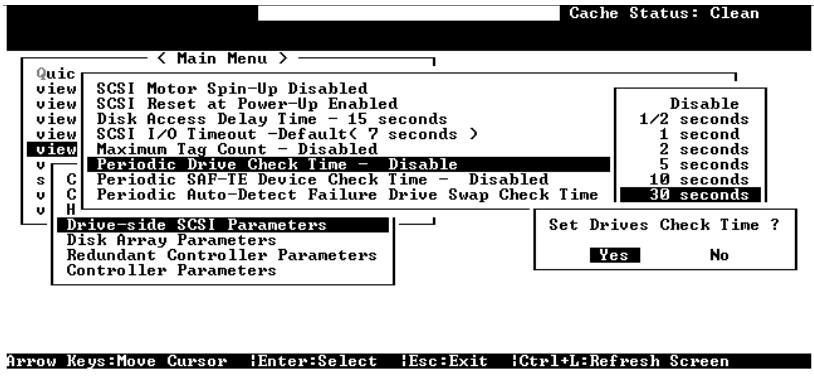
Choose “Periodic SAF-TE Device Check Time – Disabled”; then press [Enter]. Move the cursor to the desired interval; then press [Enter]. Choose **Yes** in the dialog box that follows to confirm the setting.

Detection of Drive Hot Swap Followed by Auto Rebuild

		Cache Status: Clean
< Main Menu >		
Quick	SCSI Motor Spin-Up Disabled	
view	SCSI Reset at Power-Up Enabled	
view	Disk Access Delay Time - 15 seconds	
view	SCSI I/O Timeout -Default(? seconds)	
view	Maximum Tag Count - Disabled	
view	Periodic Drive Check Time - Disable	
C	Periodic SAF-TE Device Check Time - Disabled	
v	Periodic Auto-Detect Failure Drive Swap Check Time - Disabled	
C		
H		
	Drive-side SCSI Parameters	Disabled
	Disk Array Parameters	5 seconds
	Redundant Controller Parameters	
	Controller Parameters	
Set Periodic Auto-Detect Failure Drive Swap Check Time ?		
Yes No		
Arrow Keys:Move Cursor !Enter:Select !Esc:Exit !Ctrl+L:Refresh Screen		

Choose “Periodic Auto-Detect Failure Drive Swap Check Time”; then press [Enter]. Move the cursor to the desired interval; then press [Enter]. Choose **Yes** in the dialog box that follows to confirm the setting.

Idle Drive Failure Detection



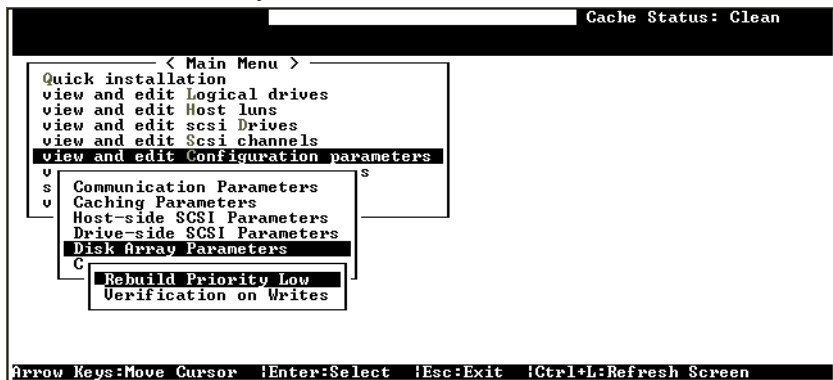
Choose “Periodic Drive Check Time – Disable”; then press **[Enter]**. Move the cursor to the desired interval; then press **[Enter]**. Choose **Yes** in the dialog box that follows to confirm the setting.



IMPORTANT:

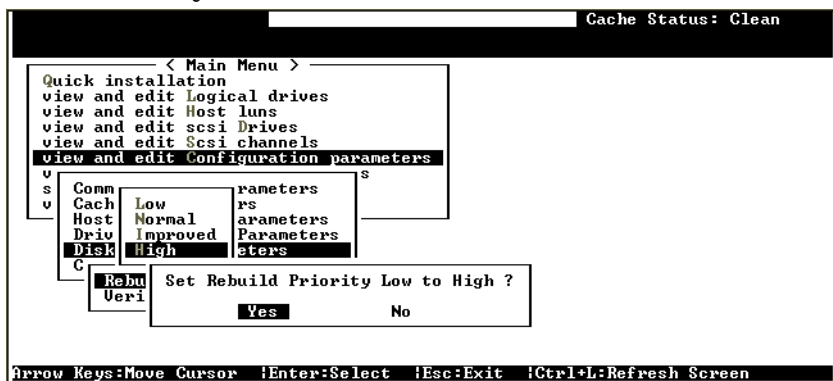
- By choosing a time value to enable the “Periodic Drive Check Time”, the controller will poll all of the connected drives in the controller’s drive channels at the assigned interval. Drive removal will be detected even if a host does not attempt to access data on the drive.
- If the “Periodic Drive Check Time” is set to “Disabled” (the default setting is “Disabled”), the controller will not be able to detect any drive removal that occurs after the controller has been powered on. The controller will only be able to detect drive removal when a host attempts to access the data on the drive.

8.6.5 Disk Array Parameters



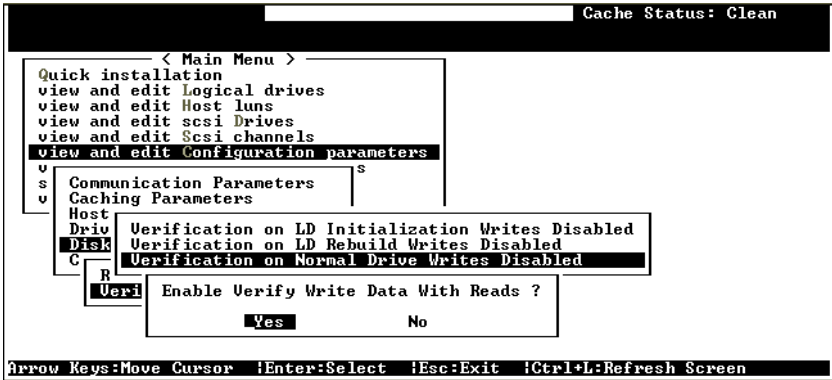
Choose "Disk Array Parameters", then press **[Enter]**. The Disk Array Parameters menu will appear.

Rebuild Priority



Choose "Rebuild Priority", then press **[Enter]**. A list of the priority selections will appear. Move the cursor bar to a selection, then press **[Enter]**.

Verification On Writes



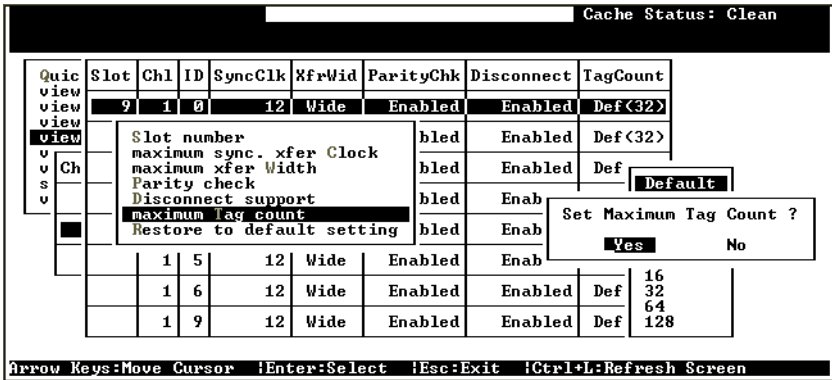
Choose “Verification on Writes”, then press **[Enter]**. Move the cursor bar to an item, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting. (Refer to section 3.3.2 for more information.)



IMPORTANT:

- Every time you change this setting, you must reset the controller for the changes to take effect.
- Refer to “3.5.2 SCSI Reset at Power-Up” for more information.

Maximum Tag Count (Tag Command Queuing)



The controller (with Firmware 2.11 and above) supports tag command queuing with an adjustable maximum tag count from 1 to 128. The default setting is “Enabled” with a maximum tag count of 32. This setting can be changed or tag command queuing can be

disabled. Choose “Maximum Tag Count”, then press **[Enter]**. A list of available tag count numbers will appear. Move the cursor bar to a number, then press **[Enter]**. Choose **Yes** in the dialog box that followed to confirm the setting.



IMPORTANT:

- Every time you change this setting, you must reset the controller for the changes to take effect.
- Disabling Tag Command Queuing will disable the Write-Back cache built in the hard drive.

SAF-TE Enclosure Monitoring

Cache Status: Clean	
< Main Menu >	
Quick view view view view view view v s v v C v v C H	<div style="border: 1px solid black; padding: 5px;"> SCSI Motor Spin-Up Disabled SCSI Reset at Power-Up Enabled Disk Access Delay Time - 15 seconds SCSI I/O Timeout - Default(7 seconds) Maximum Tag Count - Disabled Periodic Drive Check Time - Disabled Periodic SAF-TE Device Check Time - Disabled Periodic Auto-Detect Failure Drive Swap Check Time Drive-side SCSI Parameters Disk Array Parameters Redundant Controller Parameters Controller Parameters </div> <div style="float: right; border: 1px solid black; padding: 5px; margin-top: 10px;"> Disabled 50 ms 100 ms 200 ms 500 ms 1 second 2 seconds 5 seconds 10 seconds 20 seconds 30 seconds </div> <div style="clear: both;"></div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;"> Set Periodic SAF-TE Device Check Time ? Yes No </div>
Arrow Keys: Move Cursor !Enter: Select !Esc: Exit !Ctrl+L: Refresh Screen	

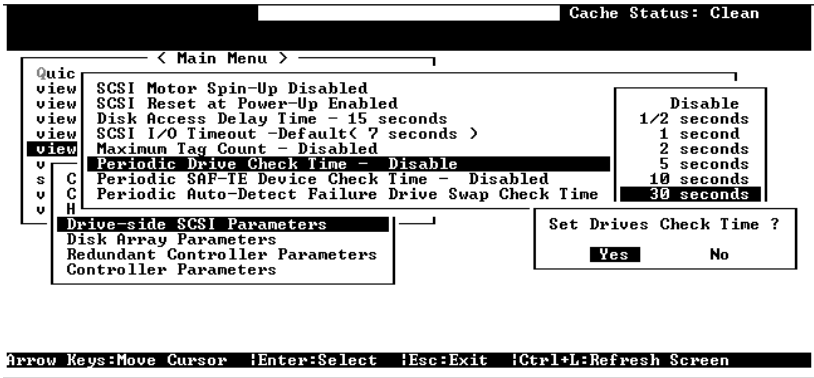
Choose “Periodic SAF-TE Device Check Time – Disabled”; then press **[Enter]**. Move the cursor to the desired interval; then press **[Enter]**. Choose **Yes** in the dialog box that follows to confirm the setting.

Detection of Drive Hot Swap Followed by Auto Rebuild

Cache Status: Clean	
< Main Menu >	
Quick view view view view view view v s v v C v v C H	<div style="border: 1px solid black; padding: 5px;"> SCSI Motor Spin-Up Disabled SCSI Reset at Power-Up Enabled Disk Access Delay Time - 15 seconds SCSI I/O Timeout - Default(7 seconds) Maximum Tag Count - Disabled Periodic Drive Check Time - Disabled Periodic SAF-TE Device Check Time - Disabled Periodic Auto-Detect Failure Drive Swap Check Time - Disabled Drive-side SCSI Parameters Disk Array Parameters Redundant Controller Parameters Controller Parameters </div> <div style="float: right; border: 1px solid black; padding: 5px; margin-top: 10px;"> Disabled 5 seconds </div> <div style="clear: both;"></div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;"> Set Periodic Auto-Detect Failure Drive Swap Check Time ? Yes No </div>
Arrow Keys: Move Cursor !Enter: Select !Esc: Exit !Ctrl+L: Refresh Screen	

Choose “Periodic Auto-Detect Failure Drive Swap Check Time”; then press [Enter]. Move the cursor to the desired interval; then press [Enter]. Choose **Yes** in the dialog box that follows to confirm the setting.

Idle Drive Failure Detection



Choose “Periodic Drive Check Time – Disable”; then press [Enter]. Move the cursor to the desired interval; then press [Enter]. Choose **Yes** in the dialog box that follows to confirm the setting.

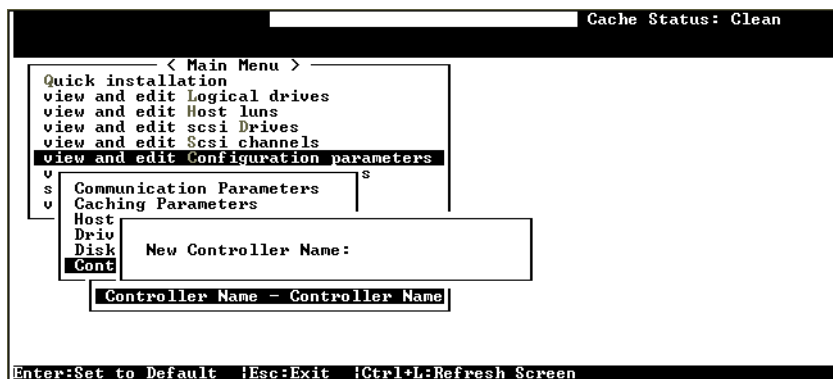


IMPORTANT:

- By choosing a time value to enable the “Periodic Drive Check Time”, the controller will poll all of the connected drives in the controller’s drive channels at the assigned interval. Drive removal will be detected even if a host does not attempt to access data on the drive.
- If the “Periodic Drive Check Time” is set to “Disabled” (the default setting is “Disabled”), the controller will not be able to detect any drive removal that occurs after the controller has been powered on. The controller will only be able to detect drive removal when a host attempts to access the data on the drive.

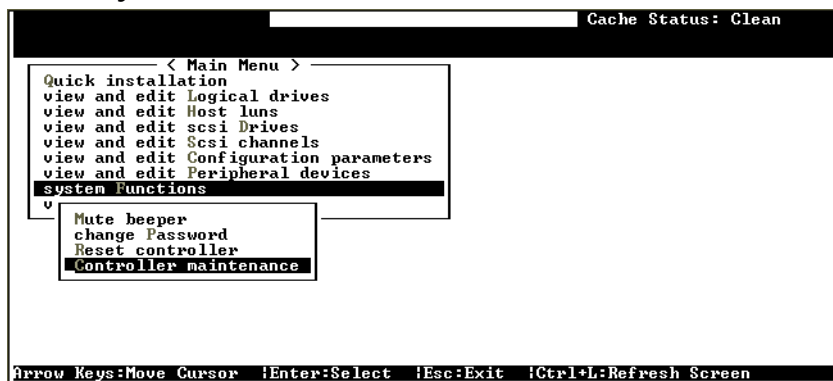
8.6.5 Controller Parameters

Controller Name



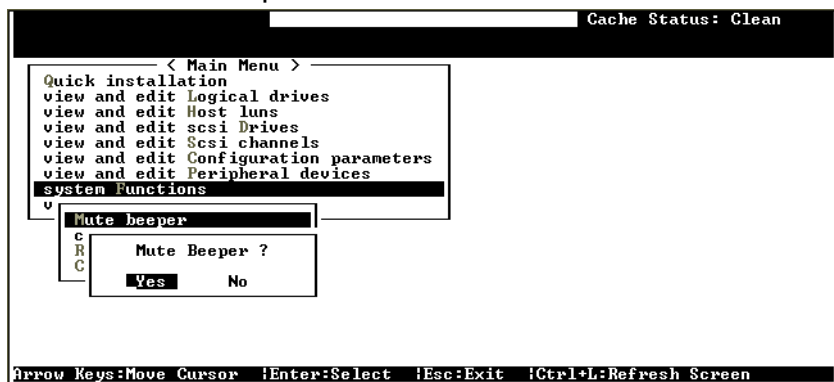
Choose “Controller Parameters”, then press **[Enter]**. The current controller name will be displayed. Press **[Enter]**. Enter the new controller name in the dialog box that followed, then press **[Enter]**.

8.7 System Functions



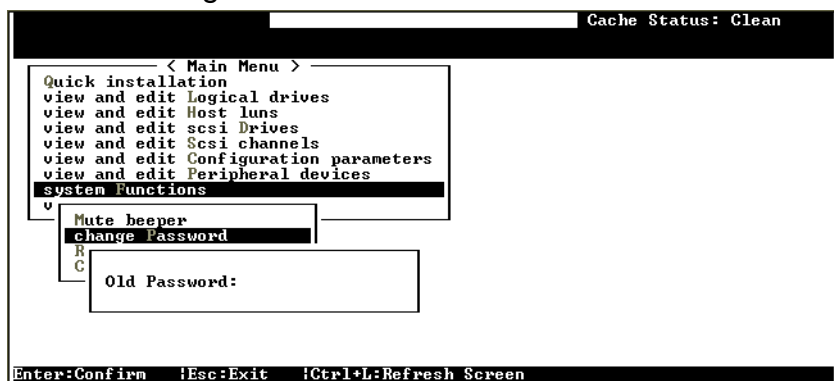
Choose “System Functions” in the Main Menu, then press **[Enter]**. The System Functions menu will appear. Move the cursor bar to an item, then press **[Enter]**.

8.7.1 Mute Beeper



When the controller's beeper has been activated, choose "Mute beeper", then press **[Enter]**. Choose "Yes" and press **[Enter]** in the next dialog box to turn the beeper off temporarily. The beeper will still activate on the next event.

8.7.2 Change Password



Use the controller's password to protect the controller from unauthorized entry. Once the controller's password has been set, regardless of whether the front panel, the RS-232C terminal interface or the GUI RAID Manager is used, the user can only configure and monitor the RAID controller by providing the correct password.



IMPORTANT:

- The controller will verify the password only when entering the Main Menu from the Initial screen. Always go back to the Initial screen when the controller is going to be unattended.
- The controller password and controller name are sharing a 16-character space. The maximum characters for the controller password is 15. When the controller name occupied 15 characters, there is only one character left for the controller password and vice versa.

Changing the Password

To set or change the controller password, move the cursor bar to “Change Password”, then press **[Enter]**.

If a password has previously been set, the controller will ask for the old password first. If the password has not yet been set, the controller will directly ask for the new password. The password can not be replaced unless a correct old password is provided.

Key-in the old password, then press **[Enter]**. If the password is incorrect, it will not allow you to change the password. Instead, it will display the message “Password incorrect!”, then go back to the previous menu.

If the password is correct, or there is no preset password, it will ask for the new password.

Setting a New Password

The screenshot shows a terminal-style interface. At the top right, it says "Cache Status: Clean". The main menu is titled "< Main Menu >". It lists several options: "Quick installation", "view and edit Logical drives", "view and edit Host luns", "view and edit scsi Drives", "view and edit Scsi channels", "view and edit Configuration parameters", "view and edit Peripheral devices", and "system Functions". The "system Functions" option is highlighted with a black bar. Below it, a sub-menu is displayed with options: "Mute beeper", "change Password", and "R C". The "change Password" option is highlighted with a black bar. Below this, a text input field is labeled "New Password:". At the bottom of the screen, a status bar contains the text: "Enter:Confirm iEsc:Exit iCtrl+L:Refresh Screen".

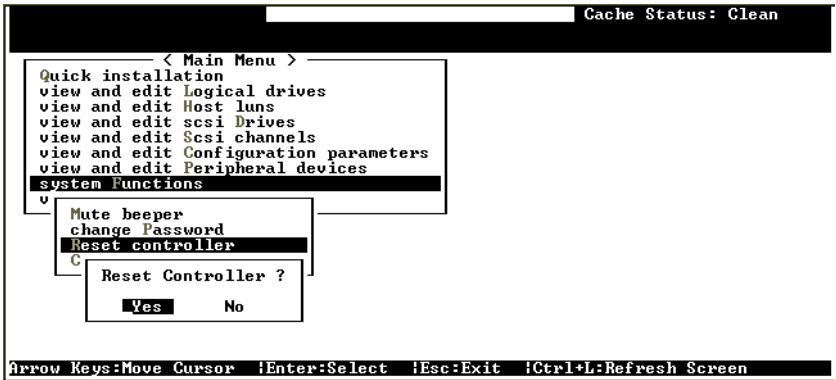
Enter the desired password in the column, then press **[Enter]**. The next dialog box will display “Re-Enter Password”. Enter the password again and press **[Enter]**.

The new password will now become the controller's password. Providing the correct password is necessary when entering the Main Menu from the Initial screen.

Disabling the Password

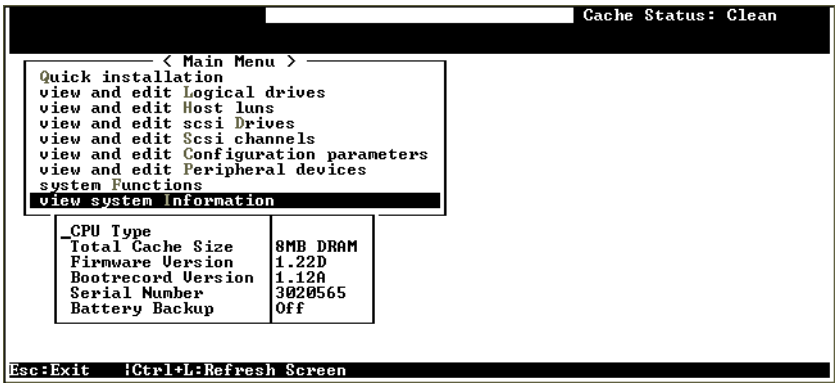
To disable or delete the password, press **[Enter]** only in the password column that is used for entering a new password. The existing password will be deleted. No password checking will occur when entering the Main Menu from the Initial screen.

8.7.3 Reset Controller



To reset the controller without powering off the system, move the cursor bar to “Reset Controller”, then press **[Enter]**. Choose **Yes** in the dialog box that followed, then press **[Enter]**. The controller will now reset as well as power-off or re-power-on.

8.8 Viewing System Information



To view the system's information, move the cursor bar to "View System Information", then press [Enter].

A list of information will appear.

CPU Type	The type of CPU installed in the RAID controller.				
Total Cache Size	The total DRAM size installed in the controller.				
Firmware Version	The version of the firmware.				
Bootrecord Version	The version of the boot record.				
Serial Number	The serial number of the controller.				
Battery Backup	<table><tr><td>On</td><td>When the battery pack (DA-ACCY-BA) and the battery daughter board (DA-ACCY-BD) are installed and functioning normally, "On" appears in this column.</td></tr><tr><td>Off</td><td>When the battery pack (DA-ACCY-BA) and the battery daughter board (DA-ACCY-BD) are not installed, or are not functioning normally, "Off" appears in this column.</td></tr></table>	On	When the battery pack (DA-ACCY-BA) and the battery daughter board (DA-ACCY-BD) are installed and functioning normally, "On" appears in this column.	Off	When the battery pack (DA-ACCY-BA) and the battery daughter board (DA-ACCY-BD) are not installed, or are not functioning normally, "Off" appears in this column.
On	When the battery pack (DA-ACCY-BA) and the battery daughter board (DA-ACCY-BD) are installed and functioning normally, "On" appears in this column.				
Off	When the battery pack (DA-ACCY-BA) and the battery daughter board (DA-ACCY-BD) are not installed, or are not functioning normally, "Off" appears in this column.				