

Start by verifying the following:

1. Cables are properly connected and fully seated.
2. LED on SCSI terminator at rear of unit is "ON".
3. Power "ON/OFF" switch is working. Wait 10 seconds between power on and off.
4. Loader and drive can be detected.
5. Unit passes POST – failures during POST are due to a failure of the basic functionality of the unit.
6. All functions on the LCD are working.
7. Unit has latest loader FW and drive FW. If not, upload latest code.
8. Magazines can be ejected.

Common Failures

1. Power On Self Test (POST)

Causes:

- Could be a firmware upgrade issue.

If a recent FW upgrade has occurred, the unit might have been powered off before the reboot was complete. A secondary boot code is available, but it requires removing the loader top cover and changing two jumpers. Then a new code load must be done without an early power off.

2. Initialization Failure

Actions:

- a. Look at the loader logs acquired from the RMU Remote Management Unit.
- b. Compare the error reported on the OCP with the error reported in the hard queue.
- c. Disconnect the SCSI (Fiber or SAS) cable, Remove all tapes from the magazines and drive, then power cycle the unit.
 - i. Remove magazine(s) and inspect for problems with the movement of the slots by turning the large white gear on the side. Movement should smooth in both directions. Magazines can be damaged if mishandled (dropped) To avoid magazine damage, handle the magazine as shown on pages 33–35 of the User's Guide, 81-81317-07.
- d. If blanks are available (right and/or left), insert them and power cycle the unit.
 - i. Does the unit become System Ready?
 - If yes – Remove one blank and insert a magazine.
 - ii. Does the OCP display show the left/right magazine inserted?
 - If yes – Remove the second blank and insert a second magazine.

3. Power Failures

Symptoms:

Unit failed to power up; unit is dead; no power; power switch intermittent, must be unplugged before it can be powered back on.

Causes:

The problem is most likely caused by turning the power switch on too quickly after the unit has been shut off. When a Superloader is powered off with the switch on the back of the unit, a capacitor in the power supply discharges, which takes about seven seconds. The unit can't be turned back on until the discharge is complete.

Actions:

- a. Leave the switch in the OFF position for 10 seconds before powering on again.
- b. Is the unit totally dead, no lights, power or sound?
 - If yes – Replace the loader.

4. Tape Stuck in Drive

Actions:

To remove a tape stuck in a drive:

- a. Disconnect all data cables from the Superloader.
- b. Power cycle the unit and wait 10 minutes (do this 2x, if necessary).
- c. Use the following OCP Commands
 - i. Commands
 - ii. Eject
 - iii. Tape – Mail Slot
 - iv. From Drive
- d. If the tape still remains stuck, use the stuck tape removal procedure #6-66736-02 published in CSWeb.

5. Tape Sticks in Drive During Backups and/or Restores in Backup Exec

Cause:

When performing backups and/or restores in Backup Exec, a degaussed cartridge loaded to the drive may result in a stuck tape. The drive will send a 03x53x00 (Media load or eject failed) back to Backup Exec. Instead of marking the tape as bad, Backup Exec takes the drive offline

Actions:

Stop and restart all services by following these steps:

- a. From the **Devices** tab on Backup Exec, right click on the drive that has been placed offline and select **Online**.
- b. From the option (radio) buttons at the top of the application, select **Tools > Backup Exec Services**.
- c. From the Backup Exec Services Manager, select **Stop All Services**.
- d. Select **Yes** to verify that you want to stop all services.
- e. Once all services have been stopped, select **Restart All Services**.
- f. Once all services have been restarted, right click on the selected Robotic Library and select **Unlock** This will allow the user to remove the “bad” cartridge by issuing a move command from the loader Operator Control Panel by moving the “bad” cartridge from the slot that it resides in to the mail slot.
- g. Once the bad cartridge has been removed, **Lock** the loader. Resume normal operations.

6. Low Speed, Poor Performance, Low Transfer Rate

Cause:

The overall performance of the Superloader3 depends on the configuration of the host system on which it is operating. A low sustained data transfer rate can be caused by a down-rev version of the host adapter device driver.

Actions:

- a. Update the driver. Updates can be downloaded from www.adaptec.com .

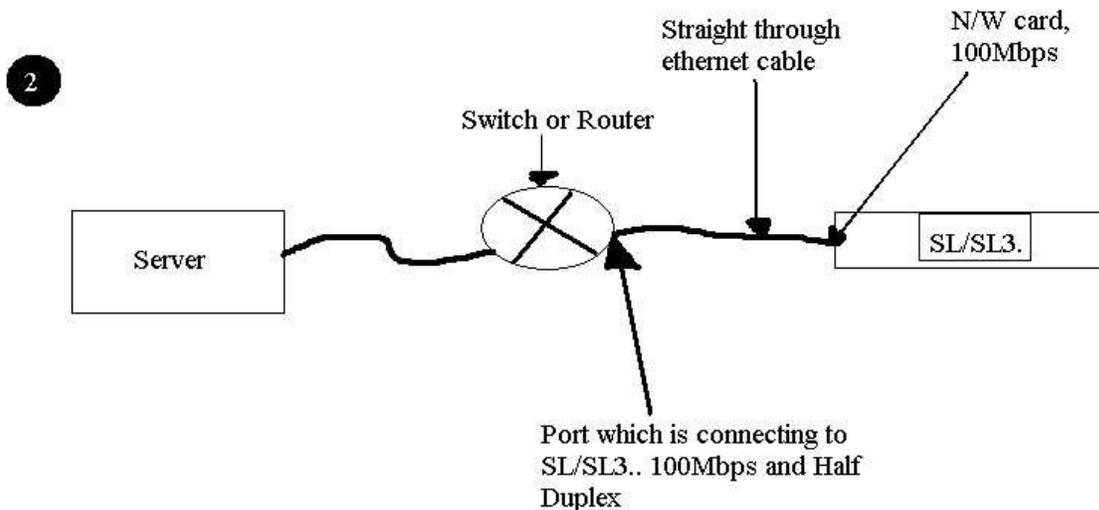
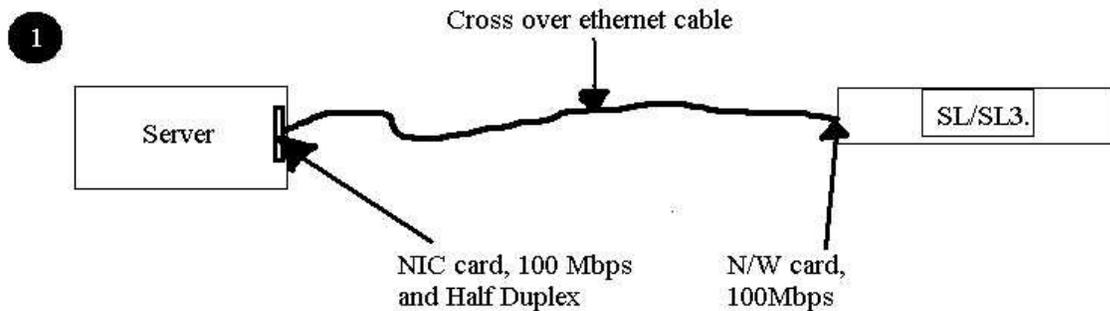
NOTE: Any updates to an Adaptec dual-channel host adapter must be done independently for both channels.

b. Test the drive:

- IBM drives: use **itdt-ge.exe**.
 - The utility is described at <http://www-01.ibm.com/support/docview.wss?uid=ssg1S4000662>
 - The utility can be downloaded from IBM's Fix Central Web site at http://www-933.ibm.com/support/fixcentral/options?productGroup0=ibm/StorageSystems&productGroup1=ibm/Storage_Tape&productGroup2=ibm/ST/Tapedevicedriversandsoftware&productGroup3=ibm/Storage_Tape/IBM+Tape+Diagnostic+Tool+ITDT.
- HP drives: use the appropriate version of HP_LTT.EXE, available at http://h20000.www2.hp.com/bizsupport/TechSupport/DriverDownload.jsp?pnameOID=406731&locale=en_US&taskId=135&prodTypeId=12169&prodSeriesId=406729
- Quantum drives: use **xTalk.exe**

7. No access to the Web GUI

To access the unit over the network, communicate to the IP address. To access Web GUI, use the following settings:



8. Backup Exec with Quantum LTO drives reports many soft write errors.

Background:

A large number of soft write errors may be reported by Symantec Backup Exec (on the Drive Properties page) after erase and backup operations with Quantum LTO tape drives.

If an end user reports more than 2400 soft write errors per GB, and backup jobs are failing due to write errors, perform the following.

Actions:

- a. Clean the tape drive several times, then monitor the soft write error count.
- b. Insert a brand new tape, then issue a command to re-tension the tape (via the backup application). Re-tensioning with a new tape is one of the most effective ways to remove stubborn debris that cannot be cleared with a cleaning tape.

9. Error 93

Background:

On occasion the SL3 may post a Hardware Error Type (93) on the OCP and in the Hard Event Log. This entry is very intermittent and has no negative effect on the autoloader operation.

Action:

Press the **ESC** key and clear the error message. The “*Hardware Error Type(93)*” message on the OCP can always be safely ignored and is only reported if an event is encountered at the 500-hour calibration check.

10. Calibration Failure

Action:

- Magazine
 - a. Remove magazine(s).
 - b. Inspect for problems with the movement of the slots by turning the large white gear on the side. Movement should smooth in both directions.

NOTE: Magazines can be damaged if mishandled (dropped) To avoid magazine damage, handle the magazine as shown on pages 33–35 of the User’s Guide, 81-81317-07.

11. Communication Failure

Action:

- Failure between drive and loader – 6E and/or 6F
 - a. Disconnect the SCSI (Fiber or SAS) cable, Remove all tapes from the magazines and drive, power cycle the unit.
 - b. If the error persists, get the loader logs.
- With Host and/or Backup software
 - a. Ensure that the device manager in the PC/Server had been disabled.
 - b. Check to see if all external cables are correct and seated properly.

- c. Check to see if the SCSI termination is correct.
- d. Disconnect the SCSI (Fiber or SAS) cable, Remove all tapes from the magazines and drive, power cycle the unit.

12. Error 24 in hard queue: ignore this error and press the ESC key.

13. Error B7 – Refer to the attached TSB.



TSB_B7 Position
Error Immediately Aft

Note: This document is attached to this PDF file, starting on the next page.
Do not use the above link.

Hardware/Software Technical Bulletin

Title: B7 Position Error *Immediately After a Move from the Mailslot*
Product: Superloader3
Originator: Sally Castro

Solution Type	Solutions
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Status	RTS Review
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Distribution	Partners/Public
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Category	Libraries
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Product Line	Superloader3
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Platform	
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Fact	<p>B7 position error may occur if operator does not push the cartridge to the hard stop.</p> <p>If an operator is watching the OCP closely when pushing a cartridge very slowly thru the mailslot and then stops pushing the cartridge just as the prompt on the OCP changes to "Enter to Continue" the B7 error can occur</p>
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Fact	<p>Pushing a cartridge and then stop when the mail slot door starts to close will result in a Missed tape and the cartridge pushed out from the mailslot.</p>
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Fact	
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Fact	
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Symptom	<p>Customer cartridge was stuck in the picker when loading the cartridge from the mailslot.</p> <p>This duplication of the [B7] failure was duplicated by moving a cartridge from the mailslot to a magazine slot with the following the steps:</p> <ul style="list-style-type: none">• With the loader top cover removed• Issue command 'move from the mailslot to slot 1'• Insert tape until the door start to close• Move the cartridge <u>very very</u> slowly and stop when the OCP display changes to 'Enter to Continue...'• Remove fingers from the mailslot• Door shuts• Picker starts to rotate
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- Picker pin cannot get into the notch on the right side of cartridge

Cause

The reason for the failure is that the cartridge present sensor inside the picker is activated just before the cartridge notch is in the correct location for the picker pin to enter into the notch. This is a very difficult situation to create. The cartridge movement into the picker has to be **very** slow and you must be watching the OCP to see it change from 'Insert Tape, Push Until Prompted' to 'Enter to Continue...' and then stop pushing the tape.

Action

When a Superloader3 gets a [B7] error immediately following a move from the mailslot there are two different recovery methods for this error mode were proven out in the FA lab:

1. Immediately after the [B7] error open the mailslot door

- By gently pulling on the bottom of the door toward you with a thin object – a large paper clip will do. Straighten out the paper clip and form a small hook on it.



- The cartridge will be inside the mailslot and partly in the picker.
- Hold the door open and place the hook of the paper clip in the write protect opening and pull the cartridge out through the mailslot.
- Power cycle to clear all the errors
- Next time push the cartridge in through the mailslot to the hard stop – don't be timid.

2. Issue a command via the OCP to move a cartridge “ from the Mailslot to the Mailslot”.

- The loader will go through some retries and motors running but in two minutes and 15 seconds it will move the cartridge out of through the mailslot.
- Remove the tape from the mailslot.
- Power cycle to clear all the errors.
- Next time push the cartridge in through the mailslot to the hard stop – don't be timid.

Effectivity

Applies to all Superloader3 units with different drive models.