

Sun™ StorEdge™ L1800 Tape Drive Upgrade Instructions



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Sun StorEdge L1800 Tape Drive Upgrade Instructions

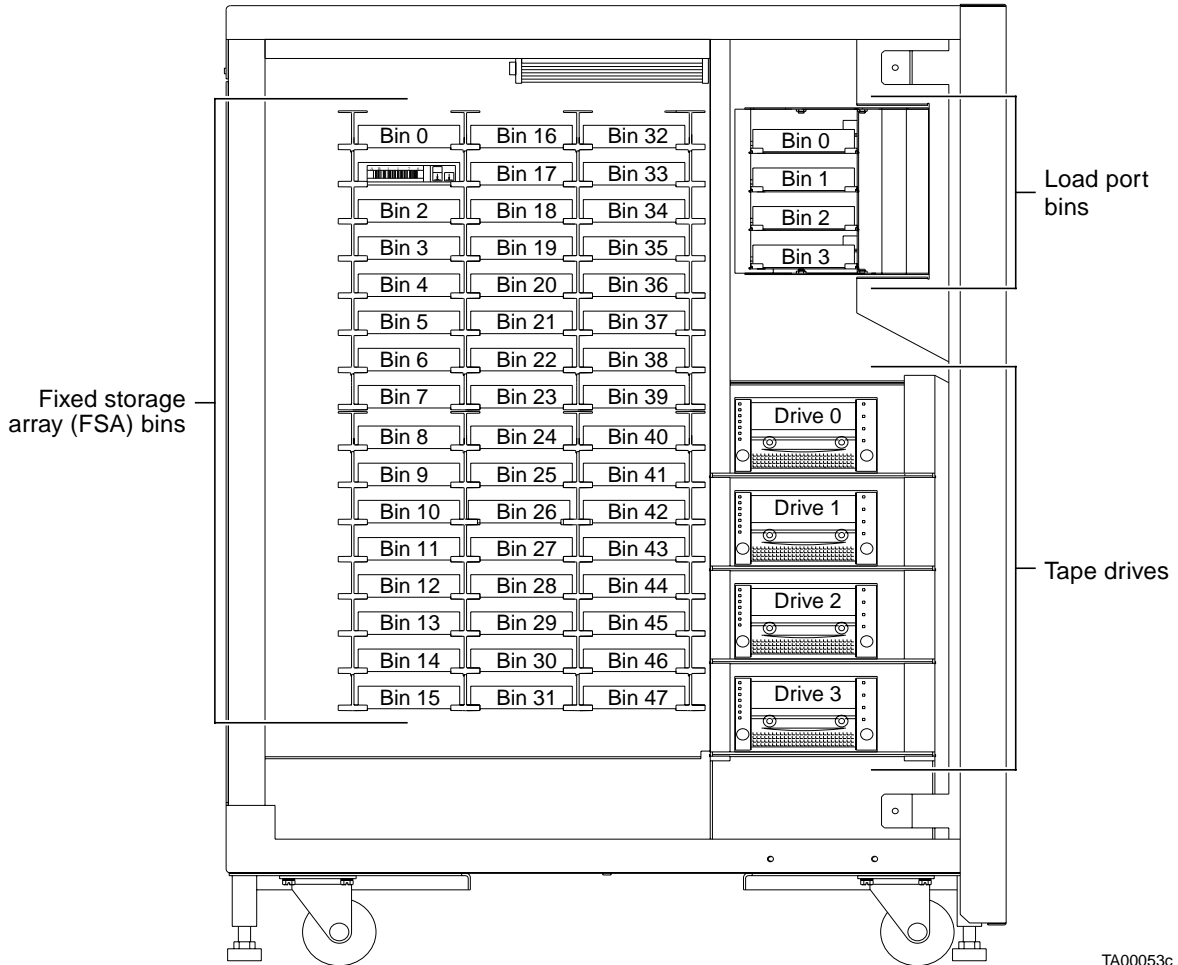
This document explains how to upgrade a Sun StorEdge L1800 library by installing one or more DLT™7000 tape drives. TABLE 1 lists the specifications for the DLT7000 tape drive.

TABLE 1 DLT7000 Tape Drive Specifications

Native Mode		With 2:1 Compression	
Transfer Rate	Capacity	Transfer Rate	Capacity
5 Mbytes/second	35 Gbytes	10 Mbytes/second	70 Gbytes

Library Configuration

FIGURE 1 illustrates how the StorEdge L1800 bins and drives are numbered.



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FIGURE 1 StorEdge L1800 Numbering Convention

Note – The two-drive configuration of the StorEdge L1800 uses drive bays 0 and 1. When installing an additional drive in a two-drive library, always use the uppermost drive bay.

Preparing for the Upgrade

To prepare for the upgrade procedure, you must:

- Check the contents of the upgrade kits—page 3
- Verify the robotics controller firmware—page 4
- Turn off the library—page 5
- Remove the right panel—page 6

Note – References to left or right mean your left or right as you face the library. References to the left or right panel of the library, however, correspond to your left or right as you face the front of the library.

Note – These instructions pertain to all library models unless otherwise indicated.

▼ To Check the Upgrade Kits

1. Make sure you have all the items listed in TABLE 2.

You need a separate upgrade kit for each drive you plan to add to the library.

TABLE 2 Single-Drive Upgrade Kit—PN 6210178

Qty	Description
1	DLT7000 Differential Tape Drive Assembly with Stepper Motor, Interface PWA, SCSI Y Cable, and Mounting Plates (PN 6210208)
1	SCSI Cable (PN 6210567)
1	SCSI Terminator (PN 0415619)
2	10/32 x 1/2 inch SEM (PN 0615031)
1	<i>Sun StorEdge L1800 Tape Drive Upgrade Instructions</i> (PN 6211127)

▼ To Verify Model and Firmware Revision

1. Open the Config: Library screen in the control panel.

For more information, refer to the *Sun StorEdge L1800 Operator's Guide*.

2. Check the display for the correct model number and firmware revision.

The correct model number for the L1800 is "6210090." The robotics controller firmware must be v2.10 or higher.

3. If the incorrect model number appears in the display, follow the instructions in the *Sun StorEdge L1800 Operator's Guide* to change the model number.

4. If the firmware version is not v2.10 or higher, load the latest version of the firmware before proceeding with this procedure.

For instructions, refer to the flash download procedure in the *Sun StorEdge L1800 Diagnostic Software User's Manual*.

▼ To Turn Off the Library

1. Press the Standby button on the control panel.
2. Verify that the control panel displays *System Offline*.
3. At the back panel, set the power switch to the “O” (off) position (FIGURE 2).
4. Remove the power cord from the receptacle just below the power switch.

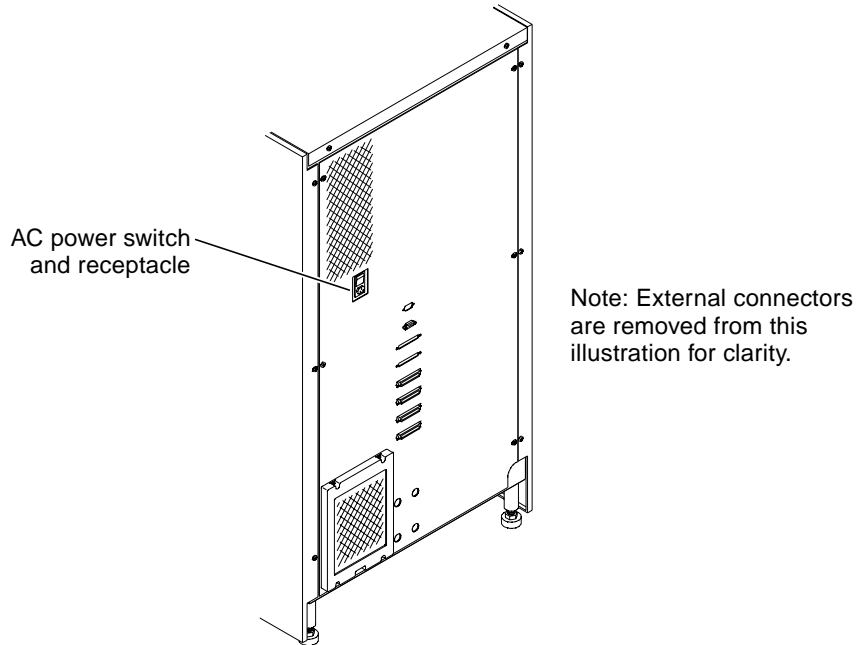


FIGURE 2 Library Power Switch and Receptacle

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▼ To Remove the Right Panel

1. Using a Phillips screwdriver, remove the three screws that secure the right panel to the back of the library frame (FIGURE 3).
2. Slide the right panel toward the back of the library to disengage the panel from the retention tabs on the right side of the frame.
3. Lift the panel away from the frame.

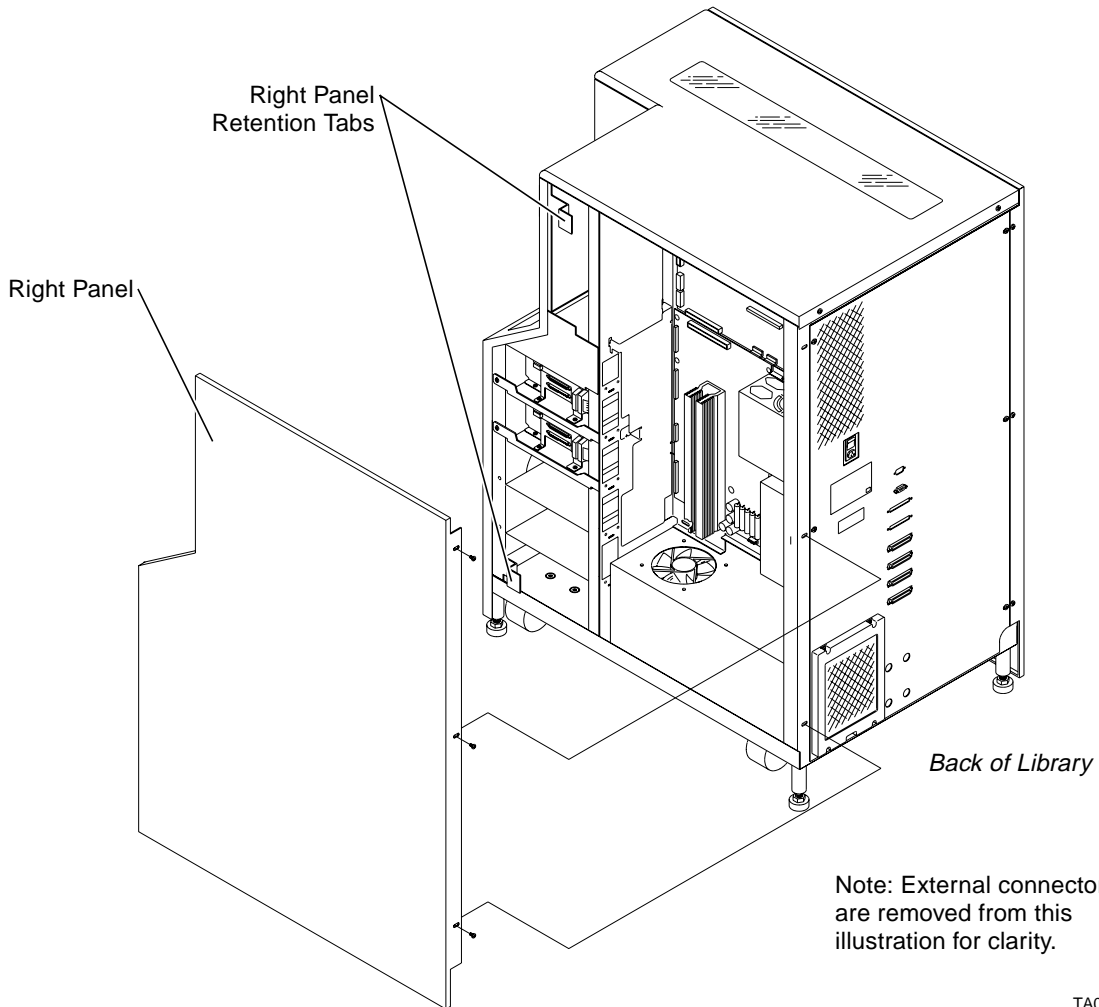


FIGURE 3 Removing the Right Panel

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Upgrade Procedure

This upgrade procedure consists of several major steps:

- To Connect the Drive Cables—page 7
- To Set Tape Drive SCSI IDs—page 8
- To Configure the Robotic Controller—page 9
- To Reinstall Cosmetic Panels—page 10
- To Turn On the Library—page 10
- To Recalibrate the Library—page 11
- To Run System Tests—page 11
- To Place the Library Online—page 11

▼ To Connect the Drive Cables

1. Referring to TABLE 3 and FIGURE 4, connect the drive cables to the tape drive interface PWA.
2. Refer to Appendix B in the *Sun StorEdge L1800 Facilities Planning and Installation Guide* for instructions on configuring internal SCSI cables for your particular bus configuration.

TABLE 3 Cable Connections DLT7000 Tape Drive

Cable	Drive #	Cable Connector #	Connects to:
Tape Drive SCSI #3 Cable Assy (6210567)	0,1,2,3	SCSI Cable	J1
Tape Drive SCSI #2 Cable Assy (6210566)	0,1,2,3	SCSI Cable or Terminator	J2
Tape Drive Power Extension Cable Assy (6210569)	0 (top)	J1	Power
	1	J1	Power
	2	J1	Power
	3	J2	Power
Tape Drive Interface Cable (6210562)	0 (top)	P4	J6
	1	P3	J6
	2	P2	J6
	3	P1	J6

TABLE 3 Cable Connections DLT7000 Tape Drive

Cable	Drive #	Cable Connector #	Connects to:
Load Port Solenoid/Tape Drive Handle Actuator Cable Assy (6210563)	0 (top)	J4	J7
	1	J3	J7
	2	J2	J7
	3	J1	J7

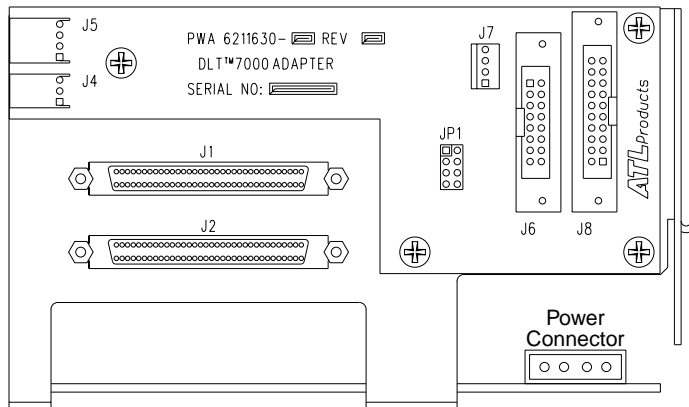


FIGURE 4 DLT7000 Tape Drive Interface PWA

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▼ To Set Tape Drive SCSI IDs

1. Set the jumpers at JP1 on the tape drive interface PWA (see FIGURE 4) as indicated in TABLE 4.

This is the hardware default SCSI ID for each drive.

2. If desired, modify these settings using the library control panel.

For more information, refer to the *Sun StorEdge L1800 Operator's Guide*.

TABLE 4 SCSI ID Jumpers

SCSI ID Jumper Table for DLT7000 Drives						O = open S = short
Drive Number	SCSI Address	JP1 1 -- 2	JP1 3 -- 4	JP1 5 -- 6	JP1 7 -- 8	
0 (top)	2	O	S	O	O	
1	3	S	S	O	O	
2	4	O	O	S	O	
3 (bottom)	5	S	O	S	O	

▼ To Configure the Robotic Controller

- Set robotic controller jumpers JP3 and JP4 as shown in TABLE 5.

FIGURE 5 shows the location of JP3 and JP4.

TABLE 5 Robotic Controller JP3 and JP4

Jumper Setting	Jumper Installed
JP3 Pin1 -- Pin2	Yes
JP4 Pin 1 -- Pin 2	No
JP4 Pin 3 -- Pin 4	No
JP4 Pin 5 -- Pin 6	No
JP4 Pin 7 -- Pin 8	No
JP4 Pin 9 -- Pin 10	No
JP4 Pin 11 -- Pin 12	No
JP4 Pin 13 -- Pin 14	No
JP4 Pin 15 -- Pin 16	No
JP4 Pin 17 -- Pin 18	No
JP4 Pin 19 -- Pin 20	No
JP4 Pin 21 -- Pin 22	No
JP4 Pin 23 -- Pin 24	No

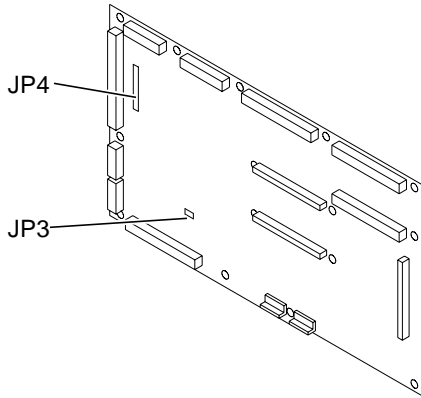


FIGURE 5 Robotic Controller JP3 and JP4

▼ To Reinstall Cosmetic Panels

- Reverse the removal instructions in “To Remove the Right Panel” on page 6.

▼ To Turn On the Library

1. **Verify the following:**
 - The front door and load port are closed
 - All outer panels are attached
 - All rear panel connections are secured
2. **Connect the power cord from the back panel to a grounded power outlet.**
3. **Turn the library on by setting the power switch to the “|” (on) position.**
After several seconds, the control panel displays system status.
4. **If the library is online, press the Standby button.**
5. **Verify that the control panel displays `System Offline`.**

▼ To Recalibrate the Library

1. **Set the number of drives to reflect the additional drive(s) you installed.**

You can do this from the control panel. For more information, refer to the *Sun StorEdge L1800 Operator's Guide*.

2. **Select the `Calibrate Library` command in the control panel.**

This is also a control panel function. For more information, refer to the *Sun StorEdge L1800 Operator's Guide*.

▼ To Run System Tests

1. **Open the `Systest Library` command in the control panel.**

You can do this from the control panel. For more information, refer to the *Sun StorEdge L1800 Field Service Manual*.

2. **Select the `Swap Drives` option.**

This option moves tape cartridges to and from the newly installed DLT7000 tape drive(s).

3. **Press the `Select` button to start the test.**

Note – As an alternative to the control panel, you can use the diagnostic software to run system tests. To use the diagnostic software, refer to the *Sun StorEdge L1800 Diagnostic Software Manual*.

▼ To Place the Library Online

1. **With the library power applied and the control panel displaying `System Offline`, press the `Standby` button on the control panel.**
2. **Verify that the control panel displays `System Online`.**

