



Spectra Tape Series Libraries T200, T380, T680, T950, and TFinity LCD Replacement Instructions

SPECTRALOGIC.COM

Copyright

Copyright © 2010-2015 Spectra Logic Corporation. All rights reserved. This item and the information contained herein are the property of Spectra Logic Corporation.

Notices

Except as expressly stated herein, Spectra Logic Corporation makes its products and associated documentation on an "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, BOTH OF WHICH ARE EXPRESSLY DISCLAIMED. In no event shall Spectra Logic be liable for any loss of profits, loss of business, loss of use or data, interruption of business, or for indirect, special, incidental or consequential damages of any kind, even if Spectra Logic has been advised of the possibility of such damages arising from any defect or error.

Information furnished in this manual is believed to be accurate and reliable. However, no responsibility is assumed by Spectra Logic for its use. Due to continuing research and development, Spectra Logic may revise this publication from time to time without notice, and reserves the right to change any product specification at any time without notice.

Trademarks

BlueScale, CC, Spectra, SpectraGuard, Spectra Logic, TeraPack, and TranScale are registered trademarks of Spectra Logic Corporation. ArchiveGrade, BlackPearl, IntraCloud, nTier Verde, and Verde are trademarks of Spectra Logic Corporation. All rights reserved worldwide. All other trademarks and registered trademarks are the property of their respective owners.

Part Number

90940065 Revision B

Revision History

Revision	Date	Description
A	July 2010	Initial release
B	March 2015	Updated trademarks.

Contacting Spectra Logic

To Obtain General Information

Spectra Logic Website: www.spectralogic.com

United States Headquarters

Spectra Logic Corporation
Phone: 1.800.833.1132 or 1.303.449.6400
International: 1.303.449.6400
Fax: 1.303.939.8844

European Office

Spectra Logic Europe Ltd.
Phone: 44 (0) 870.112.2150
Fax: 44 (0) 870.112.2175

Spectra Logic Technical Support

Technical Support Portal: support.spectralogic.com

United States and Canada

Phone:
Toll free US and Canada: 1.800.227.4637
International: 1.303.449.0160

Europe, Middle East, Africa

Phone: 44 (0) 870.112.2185
Deutsch Sprechende Kunden
Phone: 49 (0) 6028.9796.507
Email: spectralogic@stortrec.de

Mexico, Central and South America, Asia, Australia, and New Zealand

Phone: 1.303.449.0160

To Obtain Documentation

Spectra Logic Website: support.spectralogic.com/documentation

Contents

Introduction 5

BEFORE YOU BEGIN	5
Estimated Time to Complete	5
Ensure ESD Protection	5
Gather Tools and Supplies	6
Identify the FRU Kit Components	6
Prepare to Power Off the Library	7

Replacing the T200, T380, or T680 LCD 9

PREPARE FOR THE REPLACEMENT	9
Power Off the Library	9
Remove the Front Panel	10
REMOVE THE LCD PANEL	12
INSTALL THE NEW LCD	14
COMPLETE THE REPLACEMENT	17
Install the Front Panel	17
Power On the Library	19
Calibrate the Touch Screen	19
Restart Backups	20
Return the Old LCD Assembly to Spectra Logic	20

Replacing the T950 LCD 21

PREPARE FOR THE REPLACEMENT	21
Power Off the Library	21
Remove the Cosmetic Cover	22
REMOVE THE LCD PANEL	25
INSTALL THE NEW LCD	27
Install the Snap Bushing	27
Mount the LCD Panel	28
Connect the Cables	29

COMPLETE THE REPLACEMENT	32
Install the Front Panel	32
Power On the Library	34
Calibrate the Touch Screen	34
Restart Backups	35
Return the Old LCD Assembly to Spectra Logic	35

Replacing the TFinity LCD **37**

PREPARE FOR THE REPLACEMENT	37
Power Off the Library	37
Remove the Cosmetic Cover	39
REMOVE THE LCD PANEL	41
INSTALL THE NEW LCD PANEL	45
Mount the LCD Panel	46
Connect the Cables	47
COMPLETE THE REPLACEMENT	50
Install the Cosmetic Cover	50
Install the Light Bar	52
Power On the Library	53
Calibrate the Touch Screen	53
Restart Backups	54
Return the Old LCD Assembly to Spectra Logic	54

Return the Component **55**

Return Guidelines	55
Return Procedure	55

Introduction

This guide provides instructions for replacing the LCD (operator panel) in the Spectra T200, T380, T680, T950, or TFinity library (referred to in these instructions as “the library”). The guide provides separate chapters for each type of library.

Task	Described beginning on...
Before You Begin	this page
Replacing the T200, T380, or T680 LCD	page 9
Replacing the T950 LCD	page 21
Replacing the TFinity LCD	page 37

BEFORE YOU BEGIN

For all of the libraries, make sure that you address the requirements in this section to prepare for the maintenance procedure. Any additional requirement that are specific to a particular library are described in the chapter for that library.

Estimated Time to Complete

Replacing the LCD requires 30 to 45 minutes. This time estimate includes the time required to calibrate the touch screen after the installation is complete.

Ensure ESD Protection

The repair environment for the library must be free of conditions that could cause electrostatic discharge (ESD). To protect the library from ESD, follow these procedures when repairing or testing the library:

- Place a static protection mat on the work surface used while removing and installing library components. Use a 1-megohm resistor to ground the static protection mat.
- Wear a static protection wrist band whenever you handle library components that have been removed from their antistatic bags. Connect this wrist band to the static protection mat or to other suitable ESD grounding.
- Keep all components in antistatic bags when not in use.

Gather Tools and Supplies

You must have the following to complete this procedure:

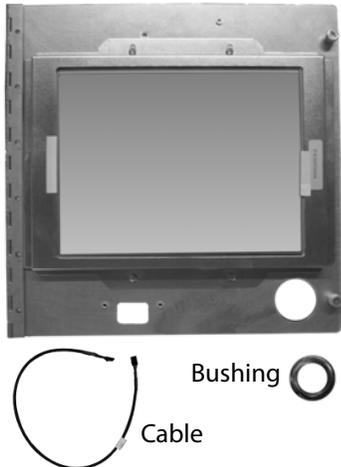
- The following tools from the library tool kit:
 - #2 Phillips screwdriver
 - 5/16-inch open end wrench or nut driver (T200, T380, T680 only)
- Small wire cutter (T950 and TFinity only)
- A new LCD assembly from Spectra Logic
 - T200, T380, and T680 libraries: P/N 91019834
 - T950 and TFinity libraries: P/N 90949037

Note: The LCD panel assembly for the T200, T380, and T680 libraries is different from the one used for the T950 and TFinity libraries. Make sure that you have the correct assembly.

Identify the FRU Kit Components

Unpack and identify the components that shipped with the LCD FRU kit using the following table for reference.

Note: Keep the packaging to return the LCD panel you replaced to Spectra Logic.

Library	Component	# Provided	Description
T200 T380 T680		1	LCD panel assembly with power button attached to frame
T950 TFinity	 Cable Bushing	1 1 1 2 2	<ul style="list-style-type: none"> ▪ LCD panel assembly ▪ T950 power button cable (PN 90947080) ▪ Snap bushing (PN 6840) ▪ Cable tie holder ▪ Cable ties

Prepare to Power Off the Library

The library must be powered off during the replacement procedure. Therefore, backups cannot run during LCD replacement. Use the following steps to prepare the library for power down.

1. Use your backup software to stop any backups running to the library.
2. Use your backup software to move any cartridges that are currently in tape drives back their storage location.
3. If you cannot use your backup software, then move the cartridges using the BlueScale web interface as described in the *User Guide* for your library.
4. Using the BlueScale web interface, pause PostScan if it is running as described in the *User Guide* for your library. Any tapes currently being scanned are returned to their storage locations.
5. Power down the library as described in the chapter corresponding to your library.

Replacing the T200, T380, or T680 LCD

This chapter describes replacing the LCD in a Spectra T200, T380, or T680 library.

Note: The relative locations of the components and the procedures are the same for all three libraries unless otherwise indicated.

PREPARE FOR THE REPLACEMENT

Before beginning this replacement procedure, make sure that you address the requirements in [Before You Begin on page 5](#) and then perform the steps in the following sections.

Power Off the Library

1. Prepare the library to be powered off, as described in [Prepare to Power Off the Library on page 7](#).
2. Power off the library from the front panel.

Note: Refer to the *Spectra T200, T380 & T680 Libraries User Guide* for instructions if the BlueScale Soft Power option is enabled.

 - a. Press the front panel power button for approximately six seconds or until the button's LED starts flashing.
 - b. Wait for power-off sequence to complete. It takes from one minute to five minutes (depending on the library) while the library allows applications to shut down gracefully.
3. Make sure that the transporter is idle.

4. Set the main power switches on the library back panel to the off position.

Note: If you have redundant power supplies installed, make sure you turn off both power switches.

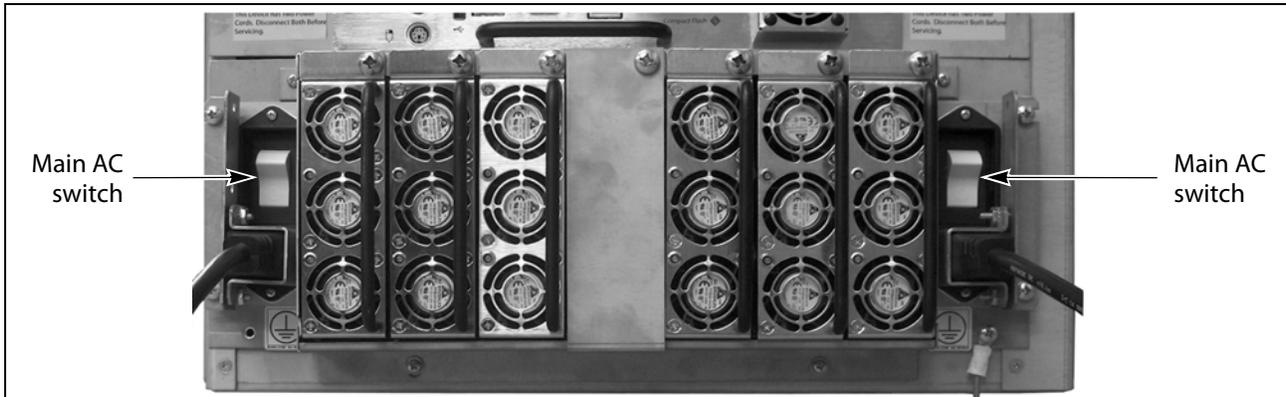


Figure 1 Turn off library AC power switches.

Remove the Front Panel

1. From the front of the library, pull firmly outward on the top edge of the filter cover panel to release the magnetic latches and tip the cover out from the front panel.

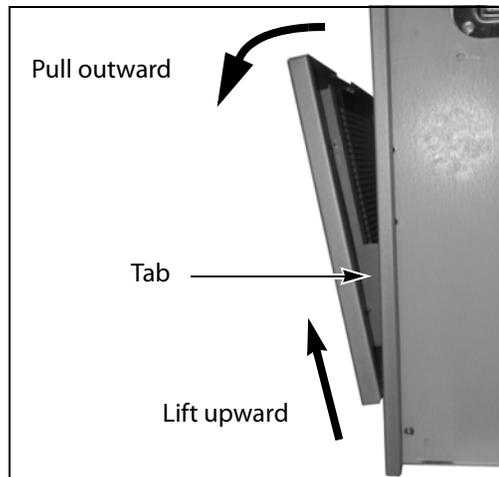


Figure 2 Remove the filter cover panel.

2. Lift the cover upward to disengage the tabs on each side of the cover from the slots in the front of the library.
3. Remove the cover and set it aside.

- Using your fingers or a #2 Phillips screwdriver, loosen, but do not remove, the two knurled screws securing the bottom of the library front panel to the chassis.

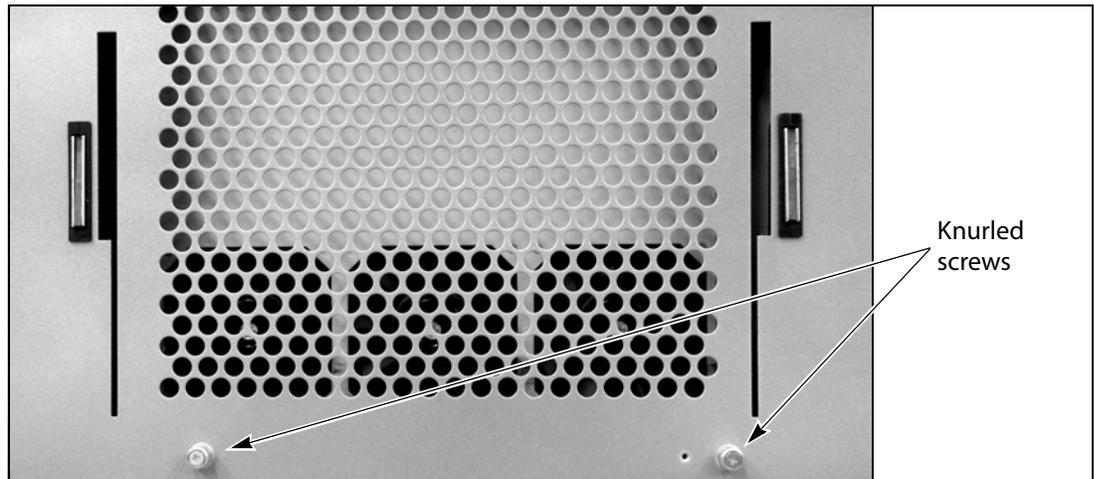


Figure 3 Loosen the front panel screws.

- Lift the front panel outward and away from the chassis to disengage the two nuts on the back of the front panel from the holes on either side of the chassis. Set the cover aside.

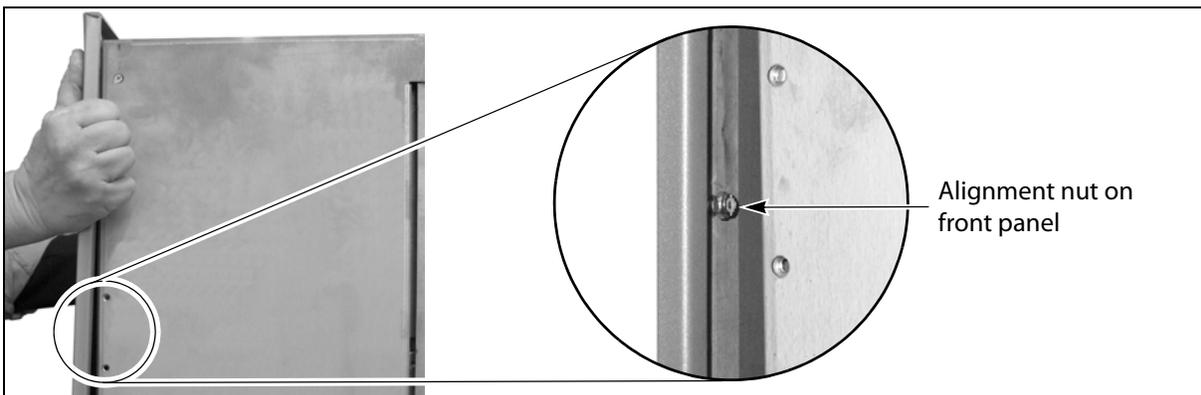


Figure 4 Remove the front panel.

REMOVE THE LCD PANEL

Follow these steps to remove the LCD panel from the library.

1. Detach the LCD panel assembly from the chassis.

T380 and T680

- a. Use a 5/16-inch open end wrench or nut driver, remove the four Keps nuts that secure the LCD panel to the front of the chassis.
- b. Carefully lift the assembly off the threaded studs extending from the front of the chassis.

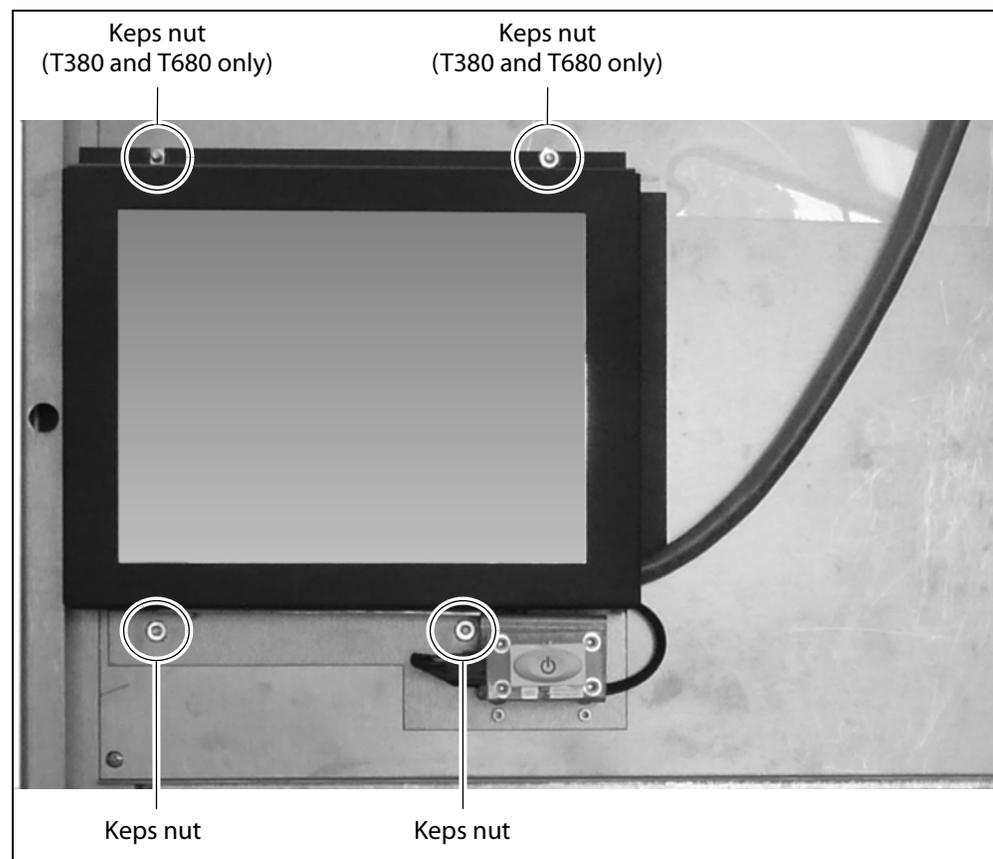


Figure 5 Remove the Keps nuts that secure the LCD panel to the chassis.

T200

- a. Use a 5/16-inch open end wrench or nut driver, remove the two Keps nuts that secure the bottom LCD panel to the front of the chassis.



Important

In the T200 the top two nuts are inaccessible. Instead of Keps nuts, there are two nylock nuts. Do not loosen or remove these nuts.

- b. Carefully lift the bottom edge of the LCD panel off the studs and then slide the LCD panel downward to disengage the slots in the top edge of the panel from the nylock nuts.

2. Turn the assembly over so that you can access the printed circuit board on the back of the assembly.

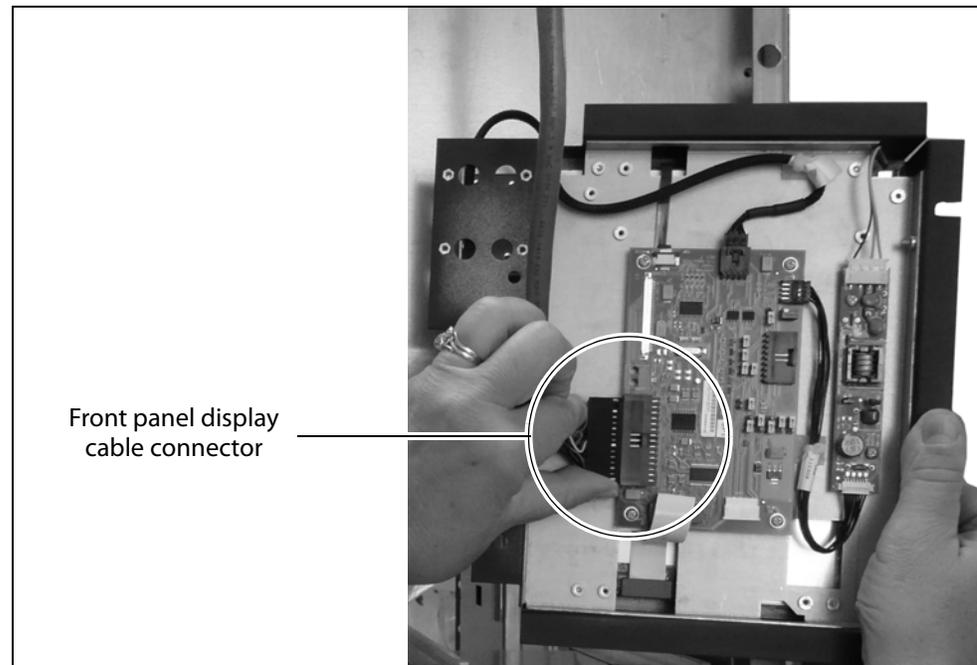


Figure 6 Disconnect the front panel display cable from the printed circuit board.

3. Disconnect the front panel display cable from the printed circuit board.
4. Set the LCD panel aside for return to Spectra Logic (see [Return the Component on page 55](#)).

INSTALL THE NEW LCD

Use the following steps to install the new LCD assembly.

1. Connect the front panel display cable to the connector on the printed circuit board mounted on the back of the LCD panel. Make sure the connector is fully seated.



Caution

The connector is not keyed. Make sure that pin 1 on the connector is toward the left and the raised ridge at the front of the connector is up.

Note: Pin 1 is labeled on the connector.

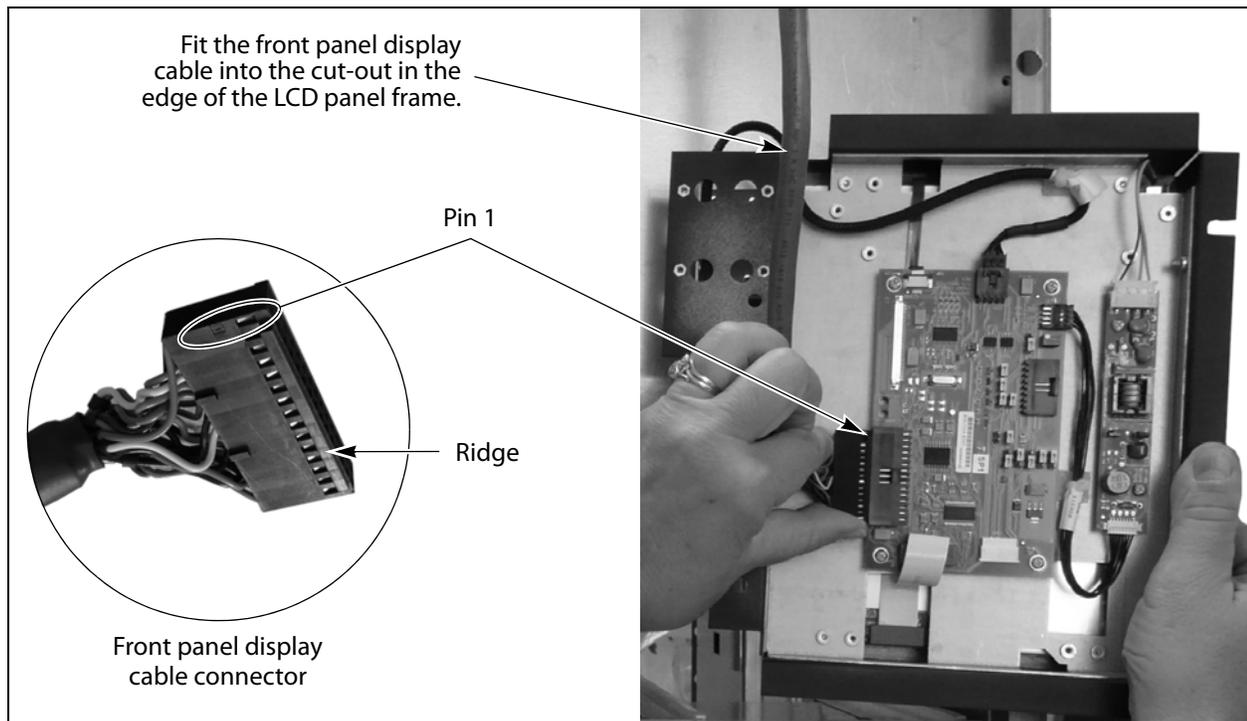


Figure 7 Connect the front panel display cable to the LCD panel printed circuit board.

2. Route the front panel display cable so that it fits into the cut-out on the right-hand side of the LCD panel frame (see [Figure 7](#)).

3. Mount the LCD panel assembly on the chassis.

T380 and T680

- a. Orient the LCD panel assembly so that the slots in the frame are toward the top and the front panel cable extends to the right, out from under the edge of the LCD panel frame.
- b. While holding the front panel display cable in the cut-out, position the LCD panel assembly so that the holes and slots in the LCD panel frame fit over the threaded studs extending from the front of the chassis.



Caution

Make sure that the front panel cable fits through the cut-out on the right-hand side of the LCD panel frame. Make the cable is not pinched between the LCD panel and the chassis.

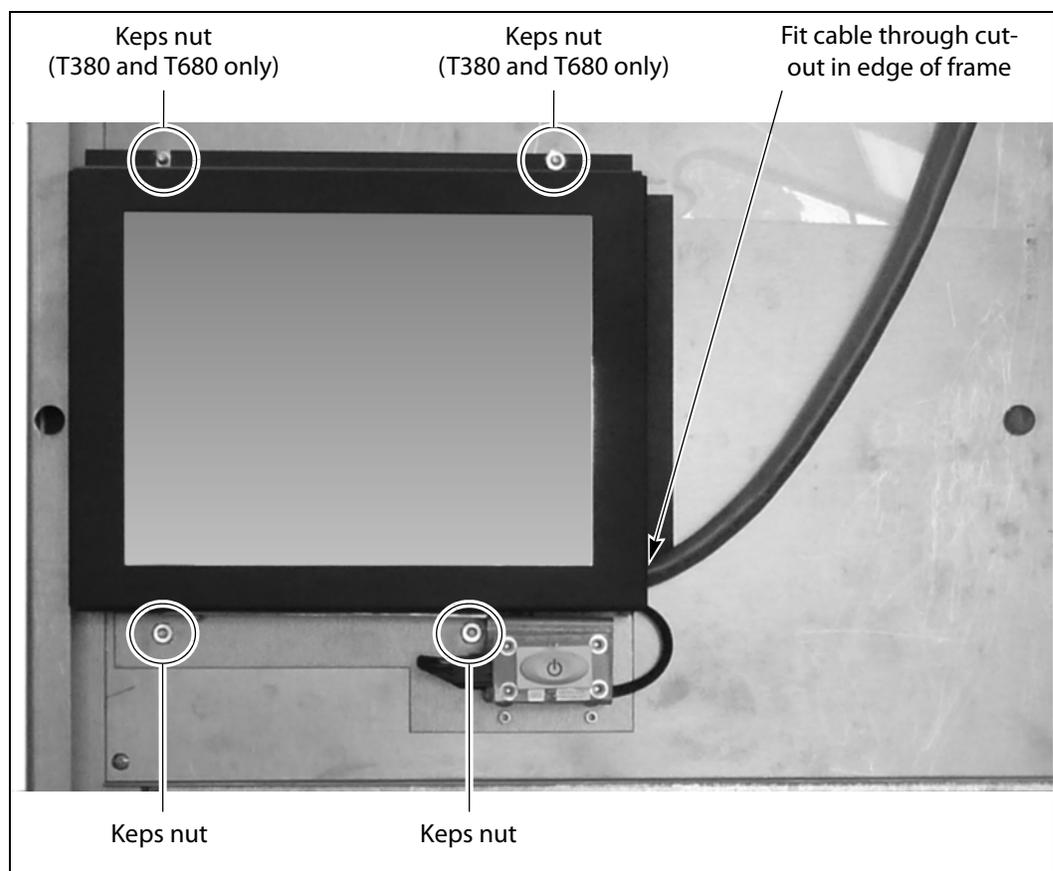


Figure 8 Mount the LCD panel assembly on the front of the T380 or T680 library.

- c. Using a 5/16-inch open ended wrench or nut driver, install the four Keps nuts on the threaded studs to secure the LCD panel assembly to the chassis. Tighten the nuts securely.

T200

- a. Orient the LCD panel assembly so that the slots in the frame are toward the top and the front panel cable extends to the right, out from under the edge of the LCD panel frame.

- b.** Slide the slots in the top edge of the LCD panel frame under the nylock nuts, which are under the upper lip of the chassis.

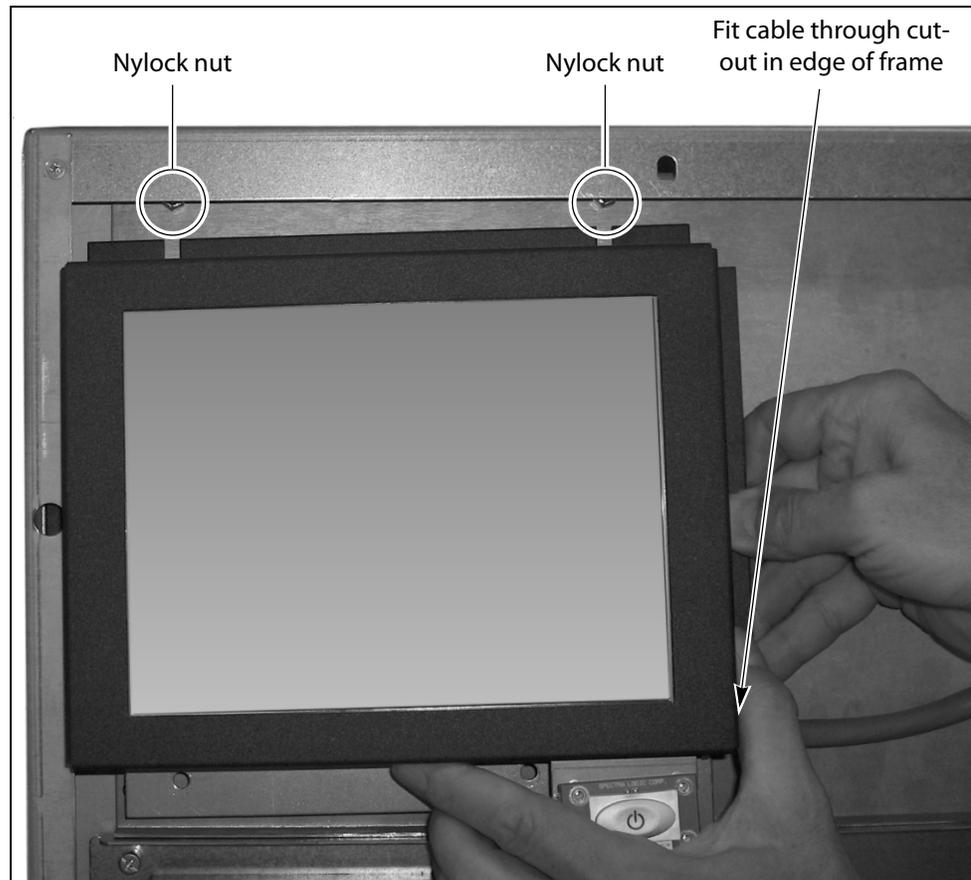


Figure 9 Mount the LCD panel assembly on the front of the T200 library.

- c.** While holding the front panel display cable in the cut-out, position the LCD panel assembly so that the holes in the bottom of the LCD panel frame fit over the threaded studs extending from the front of the chassis (see [Figure 10](#) on page 17).
- d.** Using a 5/16-inch open ended wrench or nut driver, install the two Keps nuts on the threaded studs to secure the bottom of the LCD panel assembly to the chassis. Tighten the nuts securely.

COMPLETE THE REPLACEMENT

After you finish installing the new LCD, follow the steps in this section to complete the procedure.

Install the Front Panel

1. Grasp the left and right edges of the front panel and lift it into position on the front of the chassis.
 - a. Align the openings for the touch screen and the TAP with the front of the library.
 - b. Insert the alignment pin on the bottom edge of the front panel into the corresponding hole in the bottom edge of the chassis.
 - c. Fit alignment pin on the top edge of the panel and the two nuts extending from the back of the front panel into the corresponding holes on the edges of the chassis.

Note: Make sure that the power button fits into the cut-out in the front panel and that the front panel is flush against the front of the chassis.

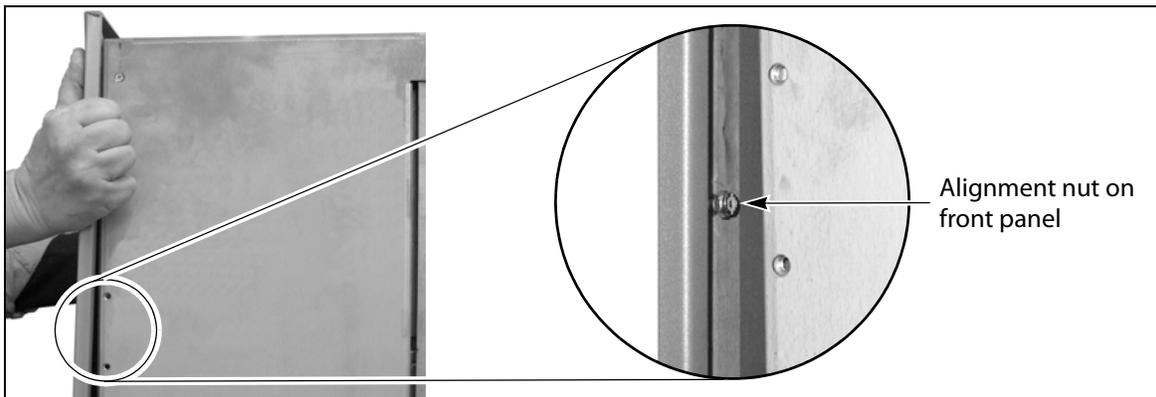


Figure 10 Install the front panel on the chassis.

- Using your fingers or a #2 Phillips screwdriver, tighten the two knurled screws on the bottom of the library front cover to secure it to the chassis.

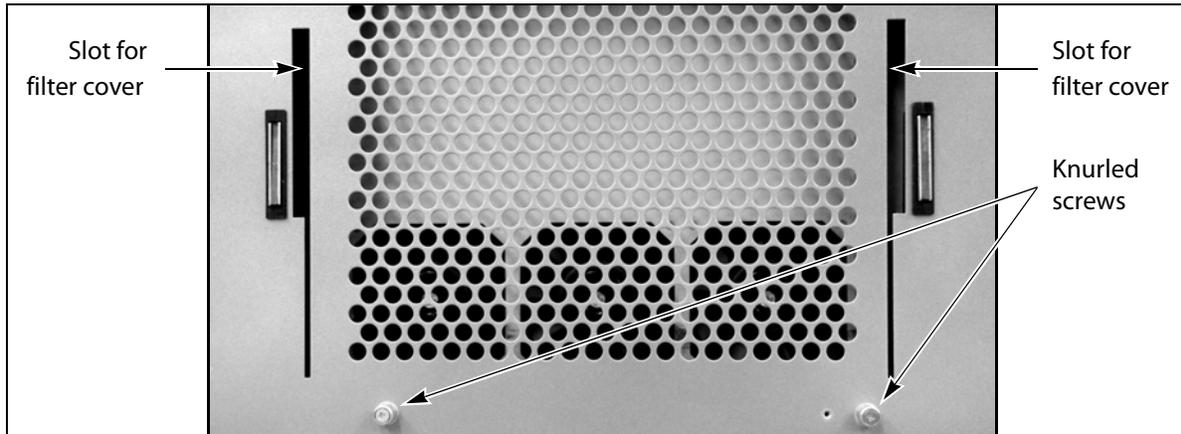


Figure 11 Install the front panel screws.

- Position the tabs on the back of the filter cover over the slots in the front cover (Figure 11).
- Make sure that the air filter is positioned on the inside of the filter cover.
- Engage the tabs with the slots in the front of the library, then slide the cover downward. Push the upper edge of the cover toward the front panel until the magnets secure it to the front panel.

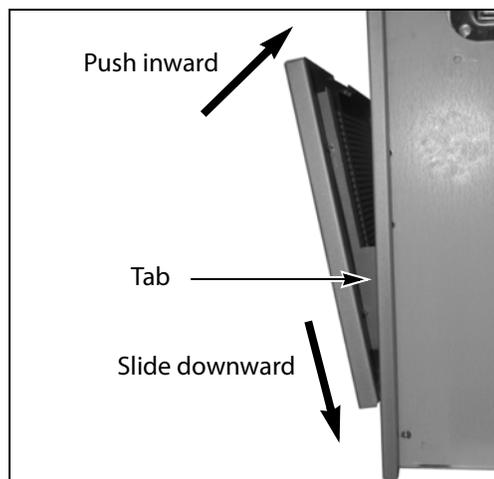


Figure 12 Install the filter cover.

Power On the Library

1. Set the AC power switches to the on position (see [Figure 1 on page 10](#)).
2. Press and hold the front panel power button for two to three seconds or until the button's LED illuminates.
3. Wait while the library completes its power-on sequence, which takes about five minutes (depending on the library configuration). During the power-on sequence the library initializes all of its installed components. The library is ready to begin operation when the login screen displays on the front panel.

Calibrate the Touch Screen

Note: Calibrating the touch screen also tests the LCD panel to ensure that it is working properly.

1. Log into the library with superuser or administrator privileges.
2. From the toolbar menu, select **Maintenance**  **Tools** to display the Maintenance Tools screen.
3. Select **Utilities**. The Utilities screen displays.
4. Select **Calibrate Touch Screen**.

Note: This utility is not available if you are using the BlueScale web interface from a remote computer. You must be standing in front of the LCD in order to calibrate it.

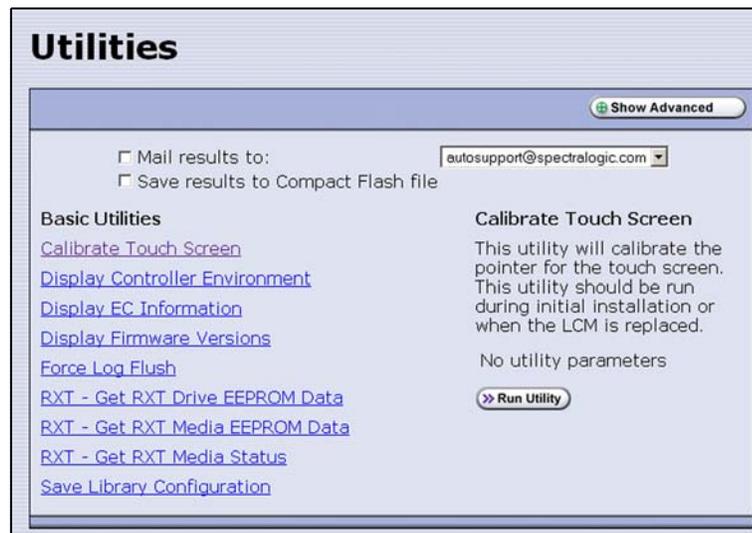


Figure 13 The Calibrate Touch Screen utility.

5. Select **Run Utility**. The touch screen displays a series of calibration target points.
6. Touch each point as it displays with either your finger or a stylus to recalibrate the touch points on the screen.
Note: Touch each point at a straight-on angle as close to the center of the target as possible.
7. When the calibration routine is complete, the Utilities screen redisplay.

Restart Backups

Use your backup software to restart any backup processes running on library.

Return the Old LCD Assembly to Spectra Logic

Refer to [Return the Component on page 55](#) for instructions.

Replacing the T950 LCD

This chapter describes replacing the LCD in the Spectra T950 library.

PREPARE FOR THE REPLACEMENT

Before beginning this replacement procedure, make sure that you address the requirements in [Before You Begin on page 5](#) and then perform the steps in the following sections.

Power Off the Library

1. Prepare the library to be powered off, as described in [Prepare to Power Off the Library on page 7](#).
2. Power off the library from the front panel.
 - Note:** Refer to the *Spectra T950 Library User Guide* for instructions if the BlueScale Soft Power option is enabled.
 - a. Press the front panel power button for approximately six seconds or until the button's LED starts flashing.
 - b. Wait for power-off sequence to complete. It takes from one minute to five minutes (depending on the library) while the library allows applications to shut down gracefully.
3. Make sure that the transporter is idle and does not contain a magazine.
4. Turn off the main power breakers on the back of the main frame.

- Notes:**
- If you have redundant power supplies installed, make sure you turn off both breakers.
 - It is not necessary to turn off the breaker switches on any drive expansion frames that are present.

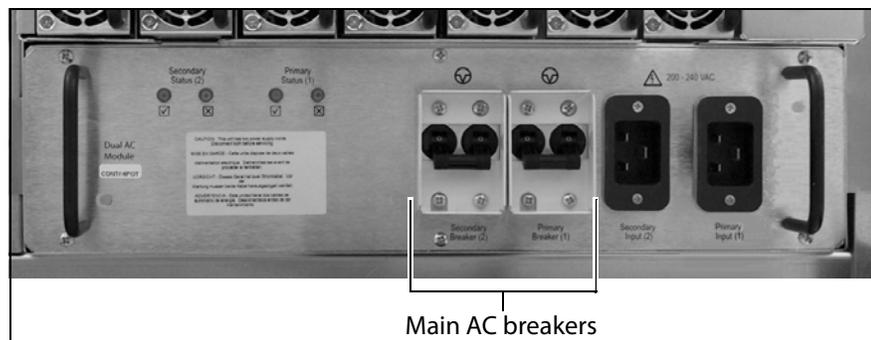


Figure 14 Turn off AC power breakers on the main frame.

Remove the Cosmetic Cover

Use the following steps to remove the cosmetic cover from the main drive frame.

1. Remove the filter cover by pulling outward on the handle at the top left of the panel (**A**) and the bottom right corner of the panel (**B**).

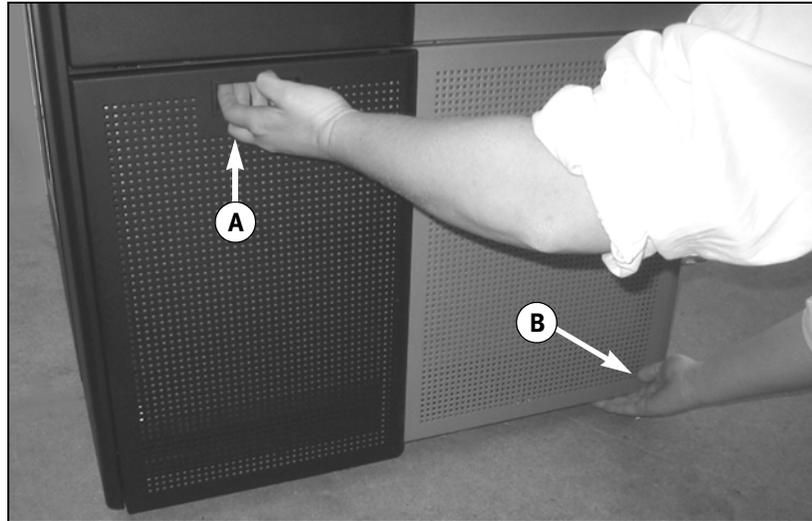


Figure 15 The filter cover.

2. Using a #2 Phillips screwdriver, remove the two flathead screws that secure the lip on the bottom of the cosmetic cover to the chassis.

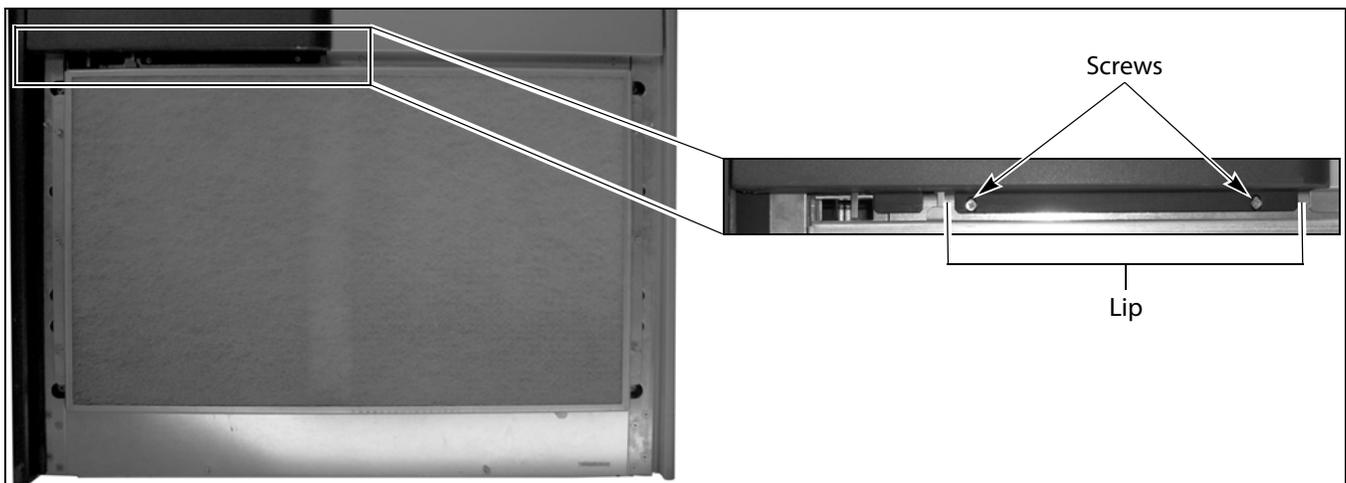


Figure 16 Remove the screw at the bottom of the side panel.

3. Remove the cosmetic cover from the front of the main frame.
 - a. Pull outward on the bottom edge of the cosmetic cover so that you can slide your fingers under the edges of the cover as shown in [Figure 17](#).
 - b. Working up from the bottom, use both hands to pull firmly outward on the cosmetic cover to disengage the ball studs on the back of the cover from the panel behind it until you reach the level of the power button ([Figure 18](#)).


Caution

Be careful as you loosen the cosmetic cover. The power button cable is attached to a connector on the back of the cover. Do not remove the cosmetic cover yet.

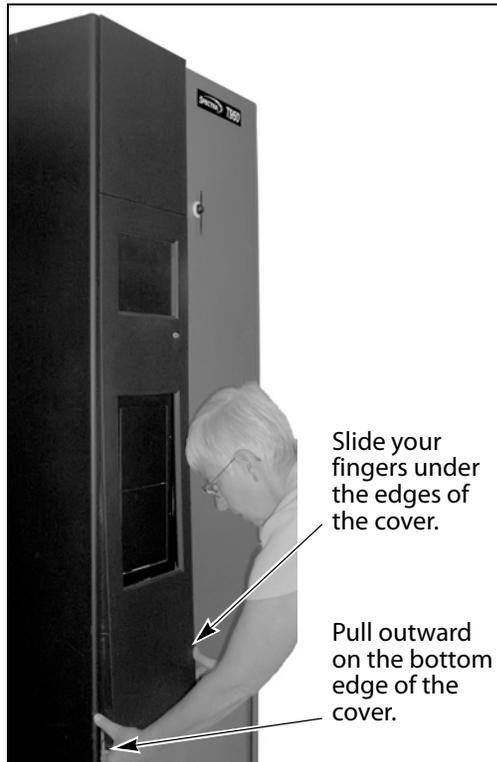


Figure 17 Pull the cover away from the ball studs.

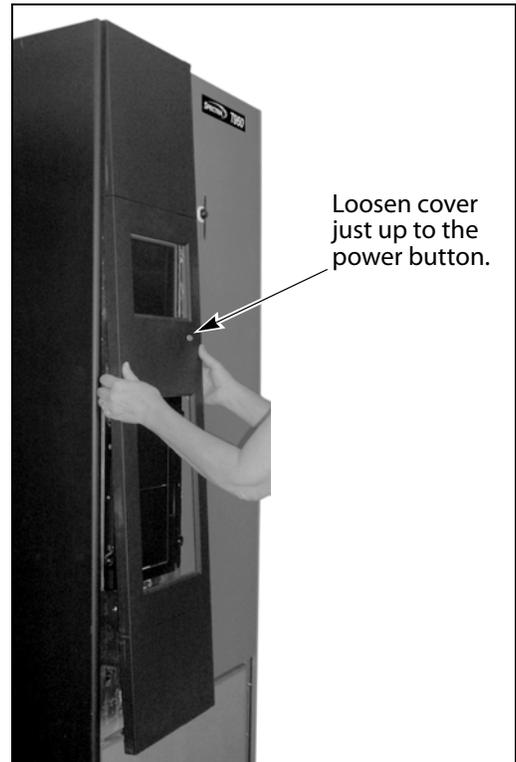


Figure 18 Loosen the cover just up to the level of the power button.

- c. From the left side of the cosmetic cover, reach behind the cover and locate the power switch connector.
- d. Press in on the connector release tab and disconnect the power cable from the power switch mounted on the back of the cosmetic cover.

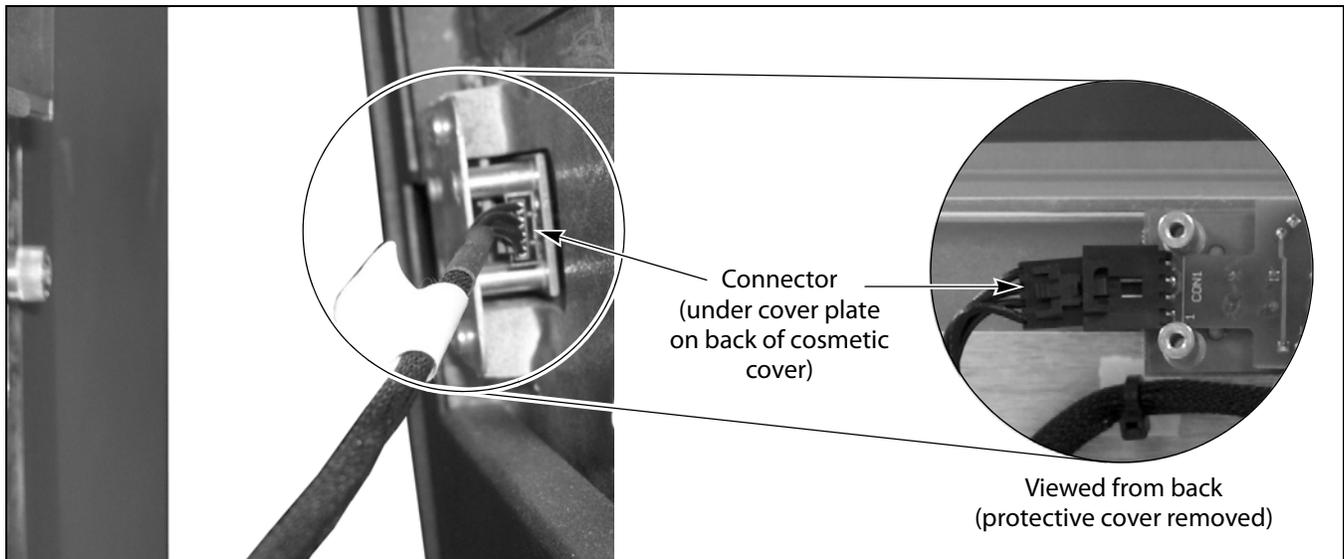


Figure 19 Remove the screws securing the power button mounting bracket to the LCD assembly.

4. Use both hands to lift the cover upward to disengage to two tabs at the top of the cover and lift away from the top of the chassis.

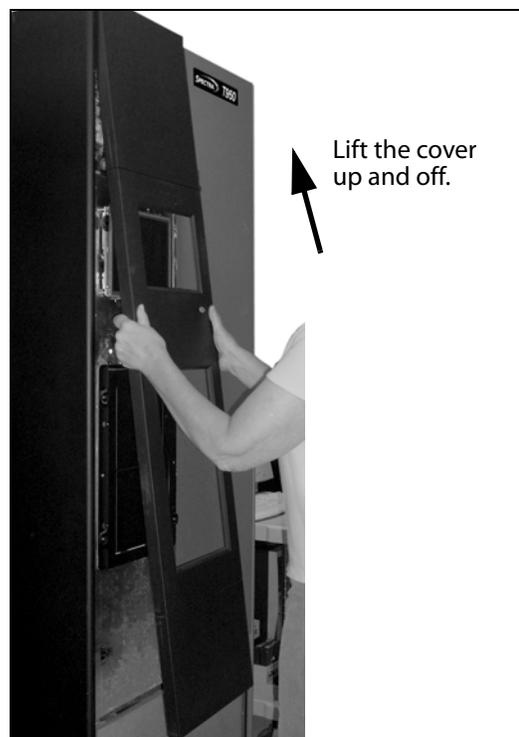


Figure 20 Loosen the panel just up to the level of the power button.

5. Set the cosmetic cover aside.

REMOVE THE LCD PANEL

Follow these steps to remove the LCD panel from the library.

1. Using your fingers or a #2 Phillips screwdriver, loosen but do not remove the two captive knurled screws that secure the hinged LCD panel closed.



Figure 21 Loosen the knurled screws to open the hinged LCD panel.

2. Open the LCD panel, exposing the cables behind it.

3. Disconnect the front panel display cable from the printed circuit board on the back of the LCD panel.

Note: If a cable tie secures the cable to the panel, use wire cutters to cut the tie. Be careful not to damage the cable.

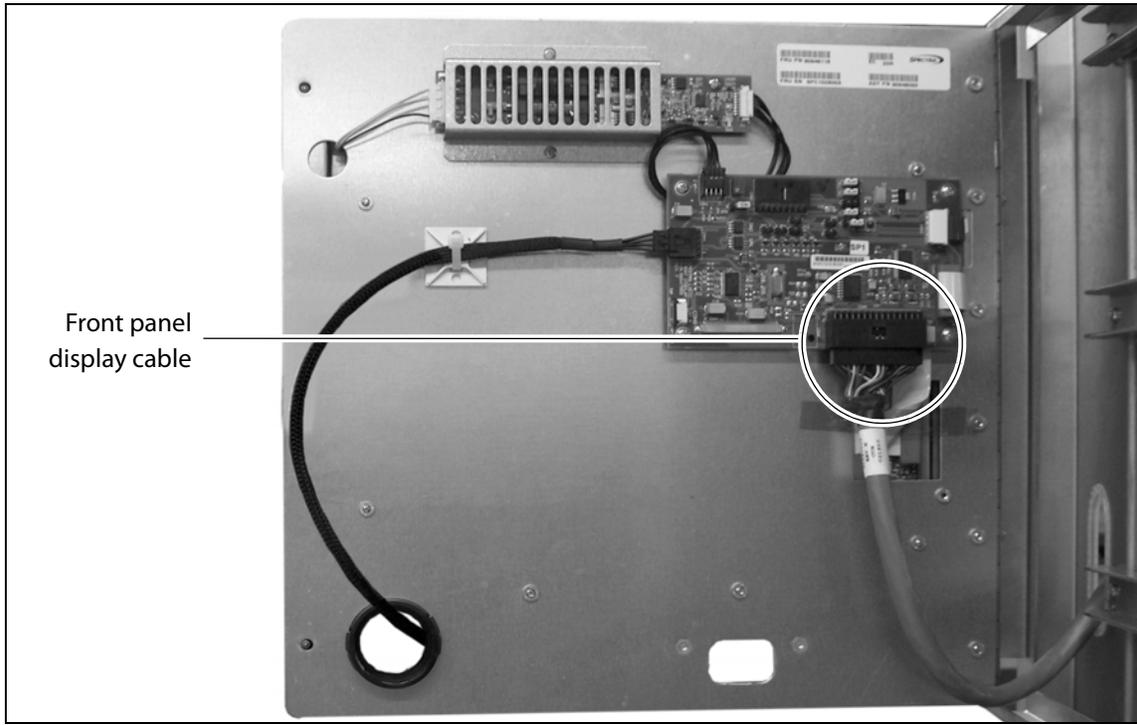


Figure 22 Disconnect the front panel display cable from the LCD panel.

4. Position the cable in the opening behind the LCD panel so that it will not be pinched when you close the panel.
5. Close the LCD panel and use the two knurled thumb screws to secure it closed (see [Figure 21](#) on page 25).

- Using a #2 Phillips screwdriver, remove the screws that secure the hinge on the left side of the LCD panel to the chassis. Set the screws aside; you will use them to install the new LCD panel.

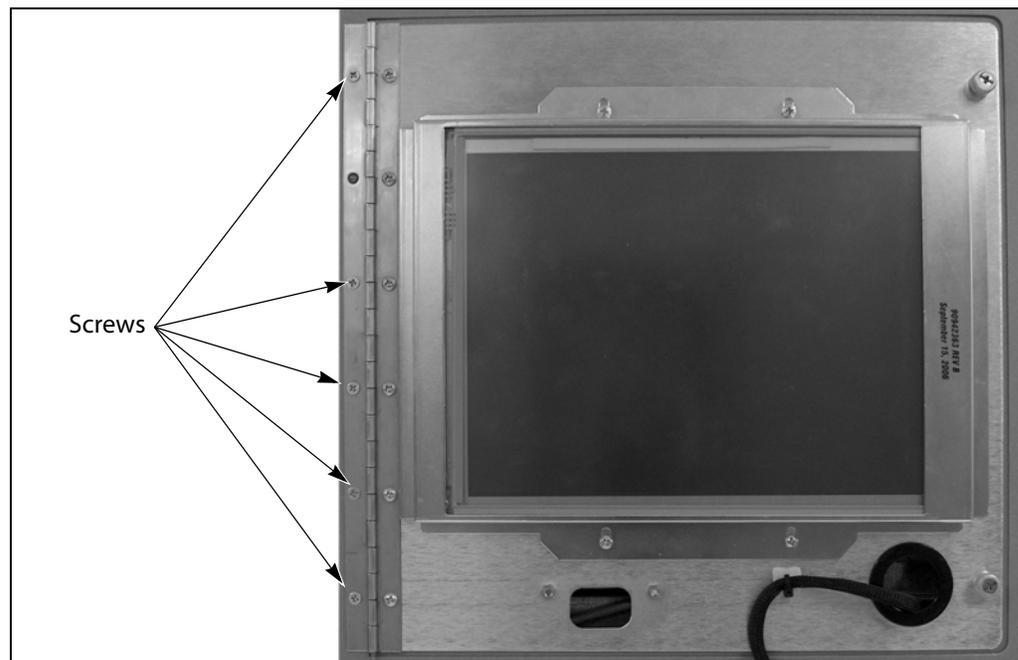


Figure 23 Remove the screws securing the LCD panel hinge to the chassis.

- While supporting the panel, loosen the knurled screws and lift the LCD panel away from the chassis.
- Set the LCD panel aside for return to Spectra Logic (see [Return the Component on page 55](#)).

INSTALL THE NEW LCD

Use the steps in the following sections to install the new LCD assembly.

Install the Snap Bushing

Note: Your LCD FRU may already have the black snap bushing installed. If so, skip this section and proceed to [Mount the LCD Panel on page 28](#).

- From the front of the LCD panel, position the black snap bushing, flat side toward the outside, over the circular hole in the LCD panel.
- Press the bushing into the hole.

Mount the LCD Panel

1. Open the hinge along the left side of the LCD panel.
2. Position the LCD panel over the opening as shown in [Figure 24](#).



Figure 24 Attach the LCD panel to the chassis.

3. Attach the LCD panel to the chassis.
 - a. Align the holes in the hinge with the corresponding holes in the chassis.
 - b. While holding the panel in place, temporarily secure the panel to the chassis by tightening the two knurled screws.
 - c. Using a #2 Phillips screwdriver, install the screws you removed from the old LCD panel to secure the hinge to the chassis. Tighten the screws securely.

Connect the Cables

1. Using your fingers or a #2 Phillips screwdriver, loosen the knurled screws and open the LCD panel.
2. Connect the T950 power button cable.

Note: Your LCD FRU may already have the T950 power cable connected to the LCD panel.

- a. Connect the end of the cable furthest from the attached part number label to the printed circuit card mounted on the back of the LCD panel.

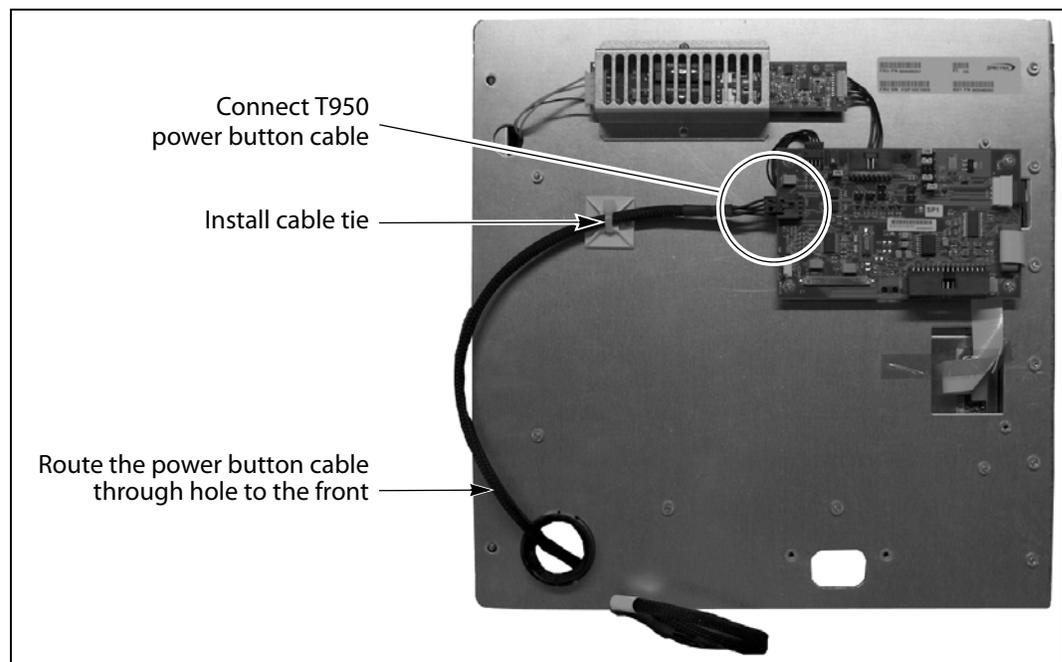


Figure 25 Connect the T950 power cable to the LCD panel.

- b. Route the cable through the hole in the LCD panel, out to the front of the panel.
- c. Use a cable tie holder and cable tie to secure the power button cable to the back of the LCD panel as shown in [Figure 25](#).
- d. Adjust the position of the power button cable so that it will not be pinched by the LCD panel when you close it.

3. Connect the front panel display cable to the connector on the printed circuit board.
 - a. Connect the front panel display cable to the connector on the printed circuit board mounted on the back of the LCD panel. Make sure the connector is fully seated.



Caution

The connector is not keyed. Make sure that pin 1 on the connector is to the left and the raised ridge at the front of the connector is up.

Note: Pin 1 is labeled on the connector.

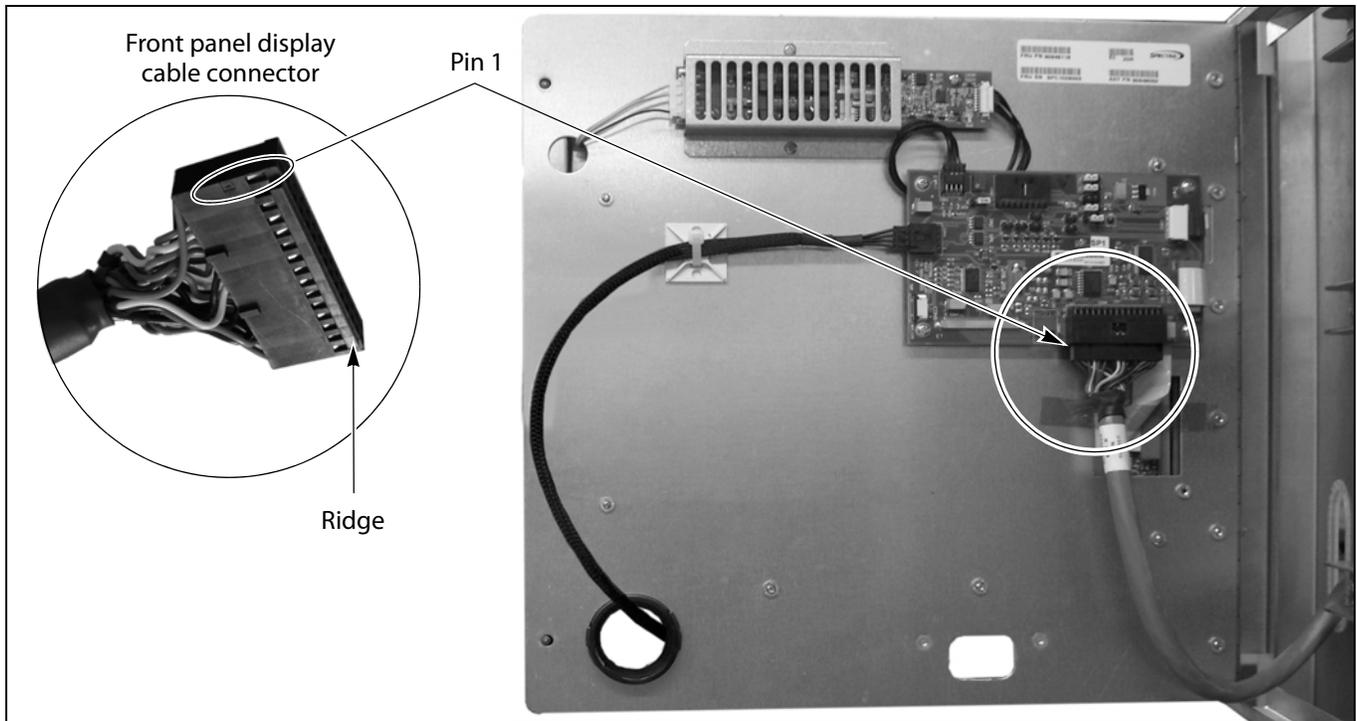


Figure 26 Connect the front panel display cable to the printed circuit board.

- b. Use a cable tie holder and cable tie to secure the front panel cable to the back of the LCD panel.
 - c. Adjust the position of the front panel cable and the power cable so that they will not be pinched by the LCD panel when you close it.
4. Close the LCD panel and tighten the knurled screws to secure it in place (see [Figure 23](#) on page 27).



Caution

Make sure that you do not pinch the cables between the LCD panel and the chassis.

5. Use a cable tie holder and cable tie to secure the power button cable to the front of the LCD panel as shown in [Figure 27](#).

**Important**

Make sure that most of the length of the cable is toward the free end of the cable to provide sufficient length to allow easy connection to the power button on the back of the cosmetic cover.

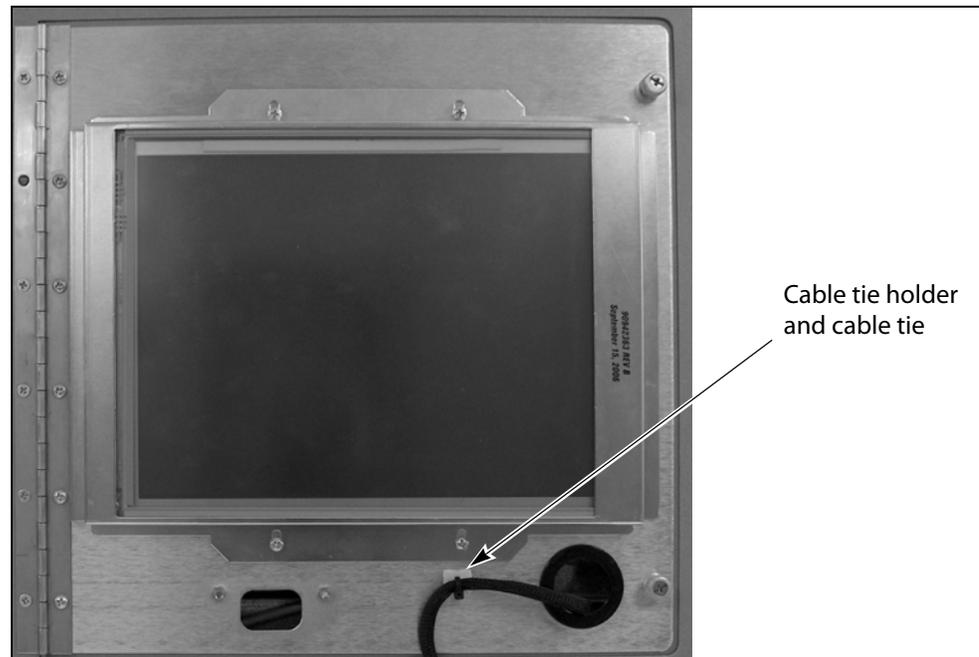


Figure 27 Secure the power button cable to the front of the LCD panel.

COMPLETE THE REPLACEMENT

After you finish installing the new LCD, follow the steps in this section to complete the procedure.

Install the Front Panel

1. Using both hands, lift the cosmetic cover and align the openings with the LCD panel and the TAP.
2. Insert the tabs on the top edge of the cover into the slots in the top edge of the library chassis and then lower the cover into place over the LCD and the TAP.



Important

Leave the cover hanging freely from the top edge of the library. Do not press the cover into place yet.

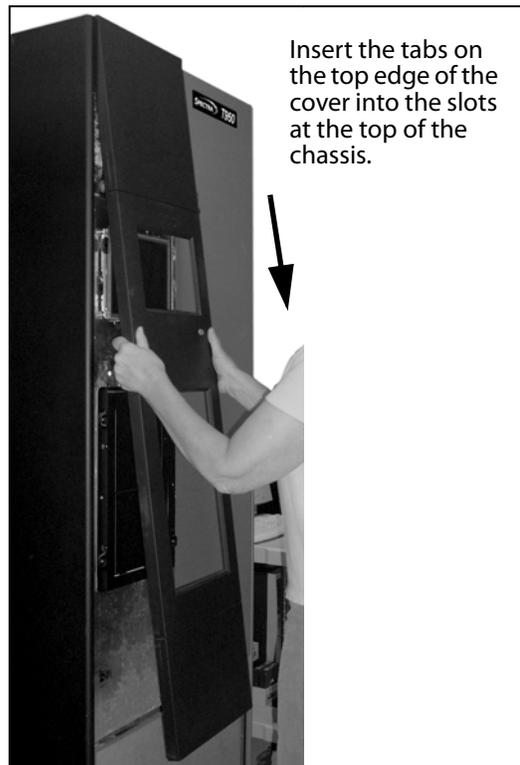


Figure 28 Mount the cosmetic cover on the front of the library.

3. With the cosmetic cover hanging from the top edge, reach around the left side of the cover and plug the power button cable into the connector on the back of the cosmetic cover.

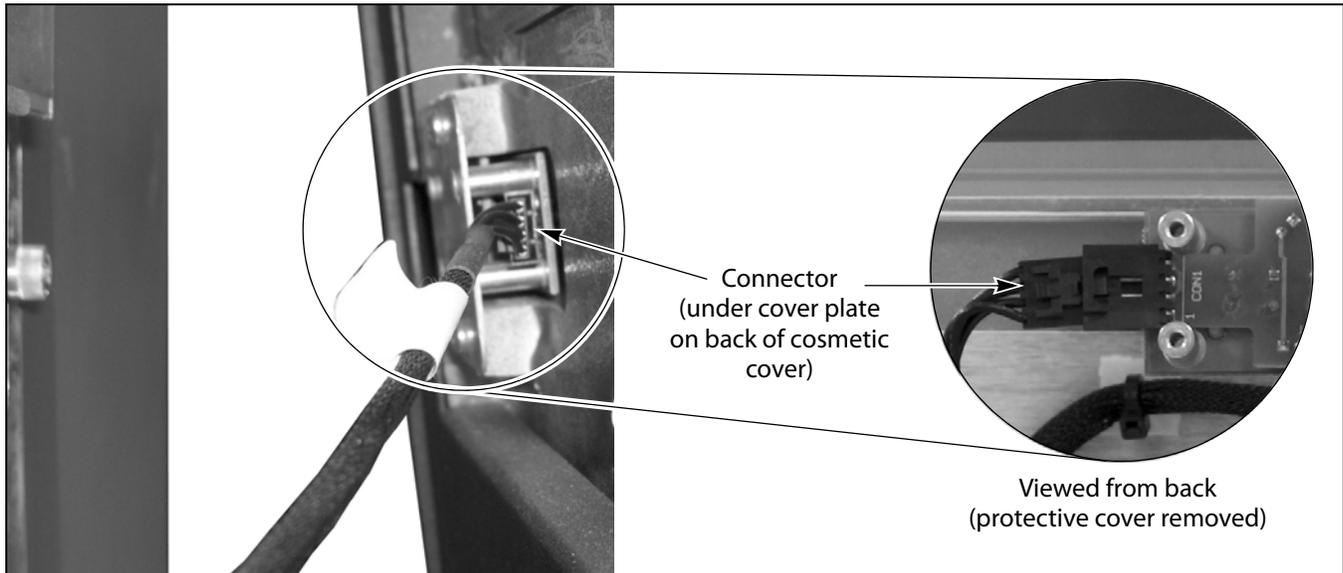


Figure 29 Remove the screws securing the power button mounting bracket to the LCD assembly.

4. Let the cosmetic cover drop down into place and then push firmly inward along the length of the cover to snap the ball studs on the back of the cover into the snap-in connectors on the front of the library.
5. Using a #2 Phillips screwdriver, install the two flathead screws that secure the lip on the bottom of the cosmetic cover to the chassis.

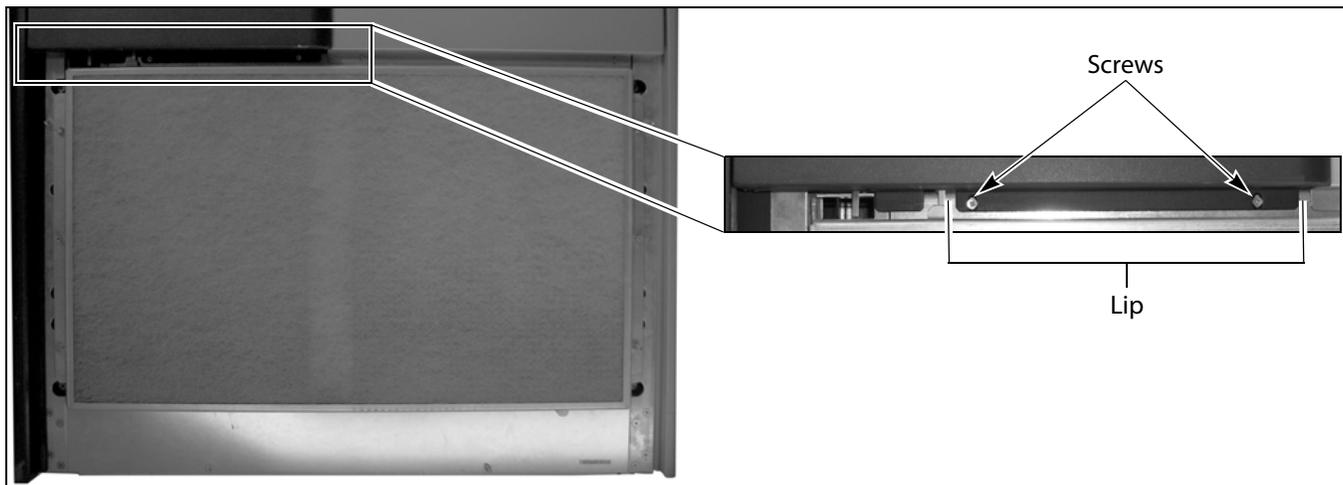


Figure 30 Remove the screw at the bottom of the side panel.

6. Orient the filter cover over the fan assembly and the push firmly inward on the sides of the cover to snap it into place.

Power On the Library

1. Set the AC power breakers on the main frame to the on position (see Figure 14 on page 21).
2. Press and hold the front panel power button for two to three seconds or until the button's LED illuminates.
3. Wait while the library completes its power-on sequence, which takes about five minutes (depending on the library configuration). During the power-on sequence the library initializes all of its installed components. The library is ready to begin operation when the login screen displays on the front panel.

Calibrate the Touch Screen

Note: Calibrating the touch screen also tests the LCD panel to ensure that it is working properly.

1. Log into the library with superuser or administrator privileges.
2. From the toolbar menu, select **Maintenance**  **Tools** to display the Maintenance Tools screen.
3. Select **Utilities**. The Utilities screen displays.
4. Select **Calibrate Touch Screen**.

Note: This utility is not available if you are using the BlueScale web interface from a remote computer. You must be standing in front of the LCD in order to calibrate it.

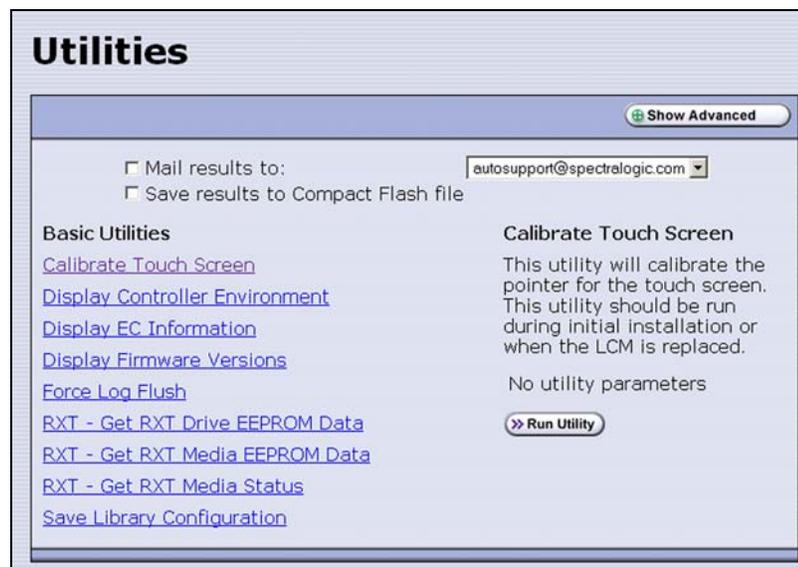


Figure 31 The Calibrate Touch Screen utility.

5. Select **Run Utility**. The touch screen displays a series of calibration target points.
6. Touch each point as it displays with either your finger or a stylus to recalibrate the touch points on the screen.
Note: Touch each point at a straight-on angle as close to the center of the target as possible.
7. When the calibration routine is complete, the Utilities screen redisplay.

Restart Backups

Use your backup software to restart any backup processes running on library.

Return the Old LCD Assembly to Spectra Logic

Refer to [Return the Component on page 55](#) for instructions.

Replacing the TFinity LCD

This chapter describes replacing the LCD in the Spectra TFinity library.

PREPARE FOR THE REPLACEMENT

Before beginning this replacement procedure, make sure that you address the requirements in [Before You Begin on page 5](#) and then perform the steps in the following sections.

Power Off the Library

1. Prepare the library to be powered off, as described in [Prepare to Power Off the Library on page 7](#).
2. Power off the library from the front panel.
 - Note:** Refer to the *Spectra TFinity Library User Guide* for instructions if the BlueScale Soft Power option is enabled.
 - a. Press the front panel power button for approximately six seconds or until the button's LED starts flashing.
 - b. Wait for power-off sequence to complete. It takes from one minute to five minutes (depending on the library) while the library allows applications to shut down gracefully.
3. Make sure that the transporter is idle and does not contain a magazine.
4. Turn off the main power breakers on the back of the main frame.

- Notes:**
- If you have redundant power supplies installed, make sure you turn off both breakers.
 - It is not necessary to turn off the breaker switches on any drive expansion frames that are present.

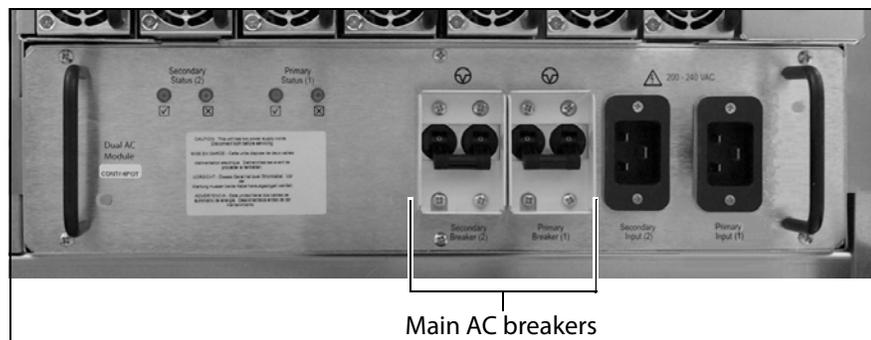


Figure 32 Turn off AC power breakers on the main frame.

Remove the Light Bar

The light bar is located along the top front edge of each frame. You only need to remove the light bar from the main drive frame.

1. Using your fingers, lift upward on the left end of the light bar to disengage the ball stud on the back of the bar from the hole in the chassis.



Caution The light bar is fragile. Handle it with care as you remove it.

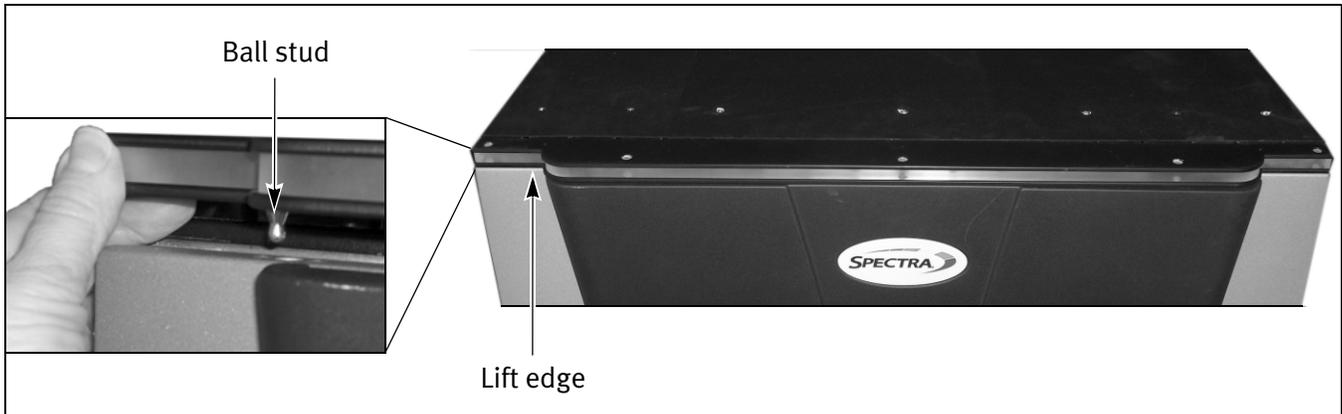


Figure 33 Remove the light bar.

2. Lift up on the other end of the light bar to disengage the ball stud on that end from the hole in the chassis.
3. Remove the light bar and set it aside. You will reinstall it later.

Remove the Cosmetic Cover

Use the following steps to remove the cosmetic cover from the main drive frame.

1. Remove the fan filter cover by first pulling firmly outward on bottom center of the panel (**A**). Then pull pulling outward on the handle at the top center of the panel (**B**). Set the cover aside.

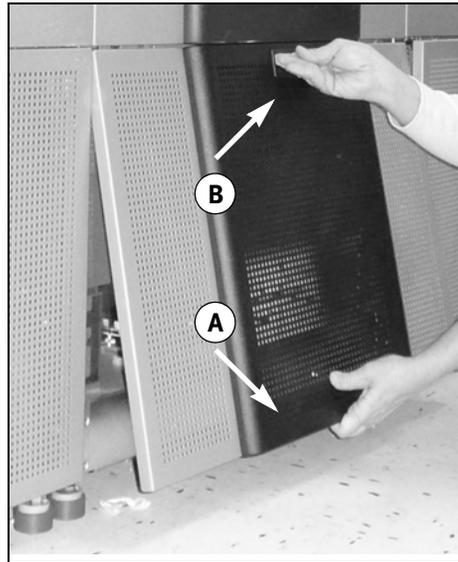


Figure 34 Remove the fan filter cover.

2. Using a #2 Phillips screwdriver, remove the two flathead screws that secure the lip on the bottom of the cosmetic cover to the chassis.

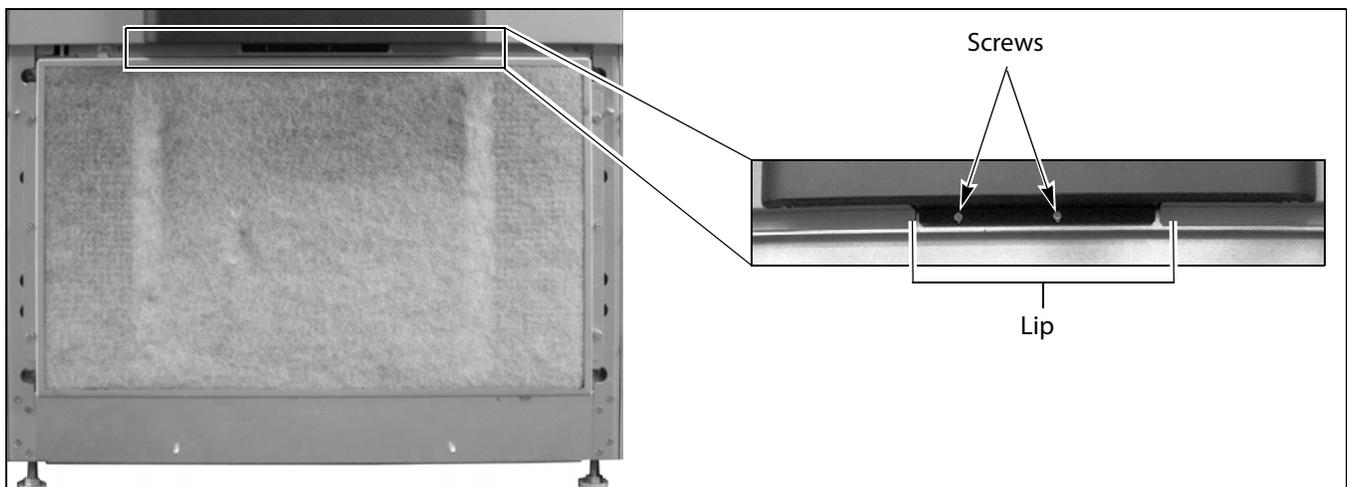


Figure 35 Remove the screw at the bottom of the side panel.

3. Remove the cosmetic cover from the front of the main frame.
 - a. Pull outward on the bottom edge of the cosmetic cover so that you can slide your fingers under the edges of the cover as shown in [Figure 36](#).
 - b. Use both hands to pull firmly outward on the cosmetic cover to disengage the four ball studs on the back of the cover from the panel behind it.



Figure 36 Pull the cover away from the ball studs. **Figure 37** Lift the cover up and off the chassis.

4. Use both hands to lift the cover upward to disengage to two tabs at the top of the cover and lift away from the top of the chassis.
5. Set the cosmetic cover aside.

REMOVE THE LCD PANEL

Follow these steps to remove the LCD panel from the library.

1. Using a #2 Phillips screwdriver, remove the two screws that secure the power switch bracket to the LCD assembly.

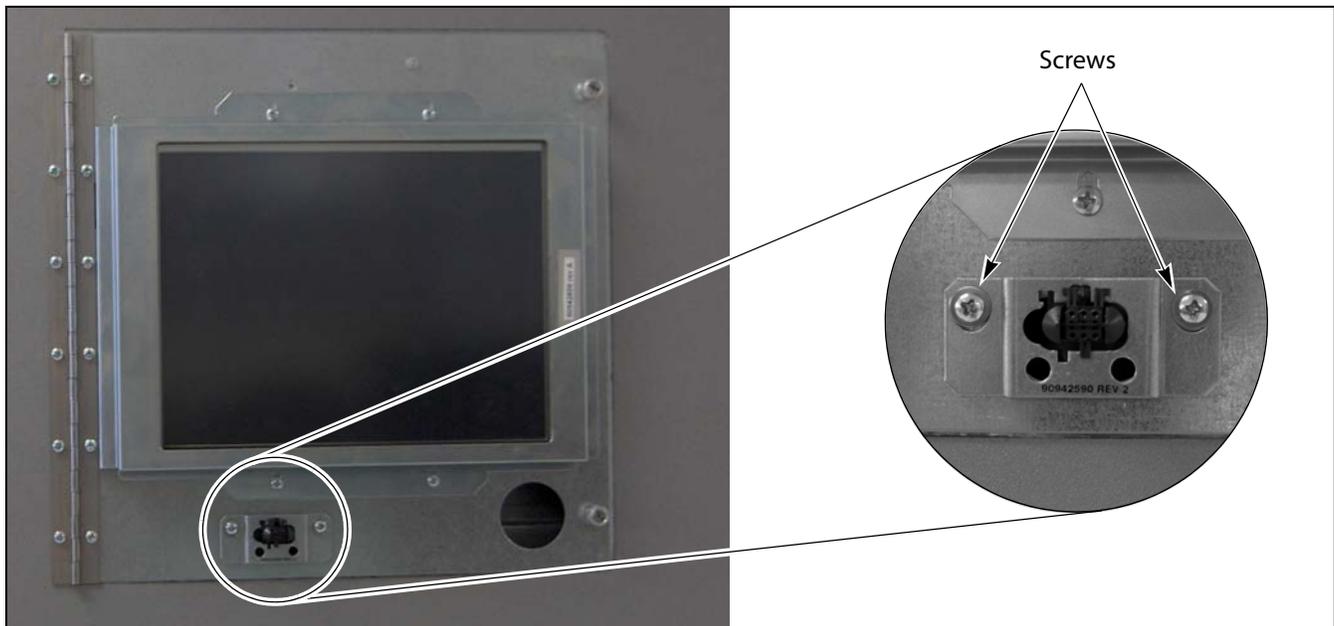


Figure 38 Remove the screws securing the power button mounting bracket to the LCD assembly.

2. While using your thumbnail to pull slightly outward on the back of the power button housing to disengage it from the back of the mounting bracket, slide housing to the left so that the tabs on the front housing align with the cut-outs in the mounting bracket.

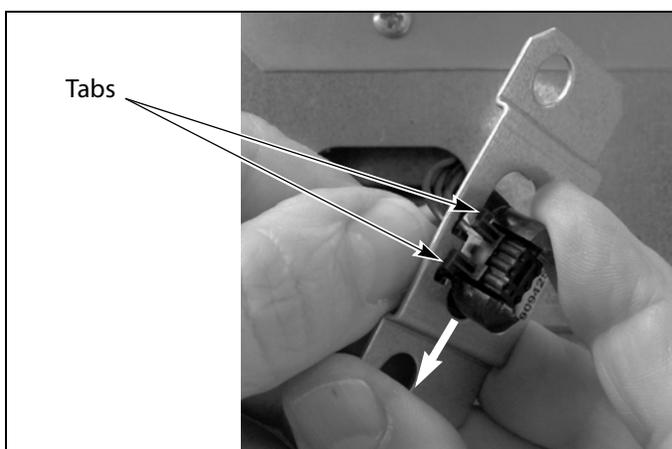


Figure 39 Remove the mounting bracket from the power button cable.

3. Disengage the switch from the mounting bracket.

4. Push the cable through the hole in the panel into the open space behind the panel.
5. Using your fingers or a #2 Phillips screwdriver, loosen but do not remove the two captive knurled screws that secure the hinged LCD panel closed.

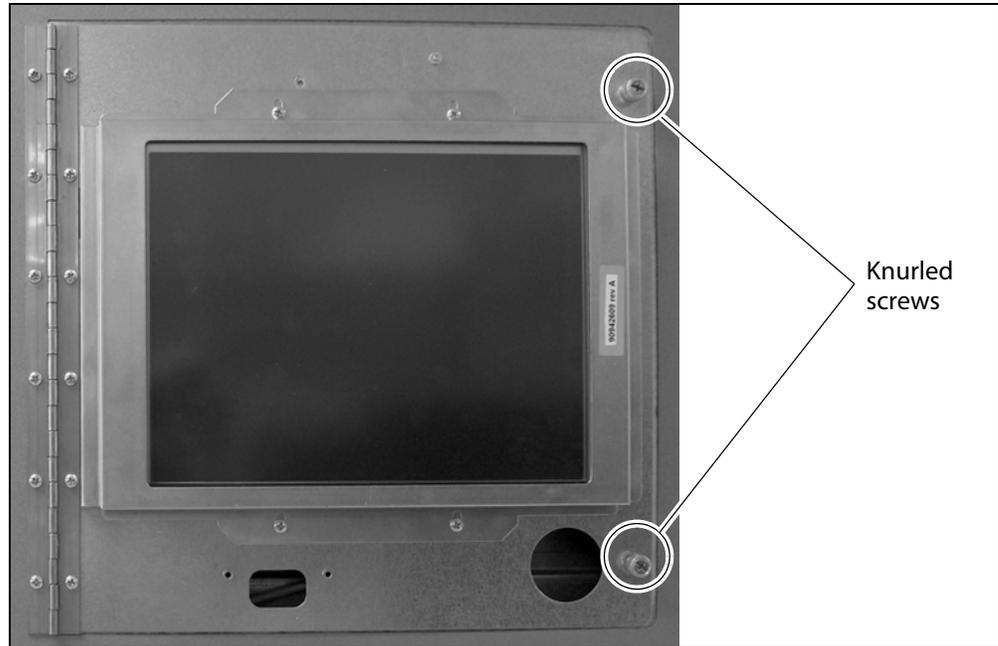


Figure 40 Loosen the knurled screws to open the hinged LCD panel.

6. Open the LCD panel, exposing the cables behind it.

7. Disconnect the power button cable and the front panel display cable from the printed circuit board on the back of the LCD panel.

Note: If cable ties secure the cables to the LCD panel, use wire cutters to cut the ties. Be careful not to damage the cables.

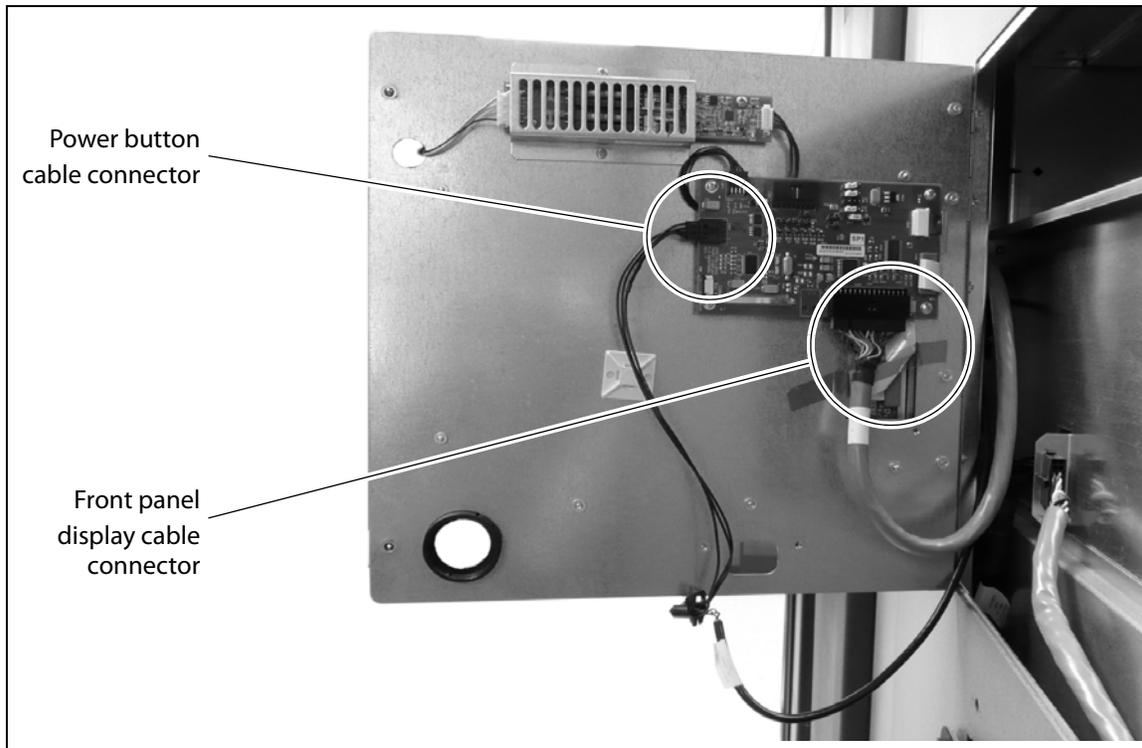


Figure 41 Disconnect the power button cable and front panel display cable from the LCD panel.

8. Position both cables in the opening behind the LCD panel so that they will not be pinched when you close the LCD panel.
9. Close the LCD panel and tighten the two knurled thumb screws to secure it closed (see [Figure 40](#) on page 42).

- Using a #2 Phillips screwdriver, remove the six screws that secure the hinge on the left side of the LCD panel to the chassis. Set the screws aside; you will use them to install the new LCD panel.

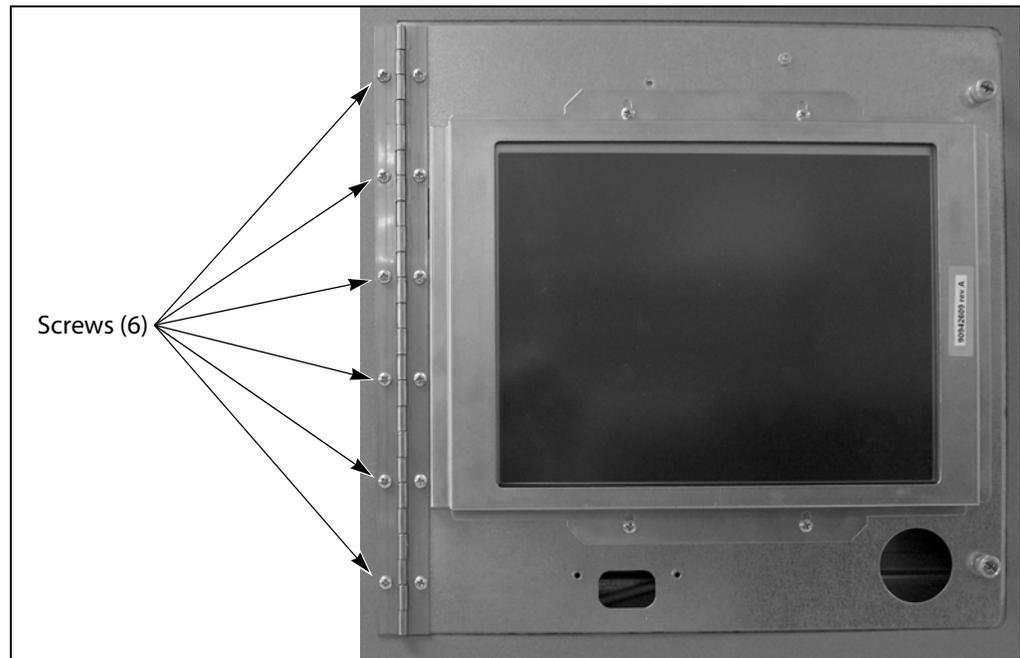


Figure 42 Remove the six screws securing the LCD panel hinge to the chassis.

- While supporting the panel, loosen the knurled screws and lift the LCD panel away from the chassis.
- Set the LCD panel aside for return to Spectra Logic (see [Return the Component on page 55](#)).

INSTALL THE NEW LCD PANEL

Use the steps in the following sections to install the new LCD assembly.

Note: Your LCD FRU may have the T950 power cable connected to the LCD panel instead of loose in the kit. If the cable is connected, remove it.

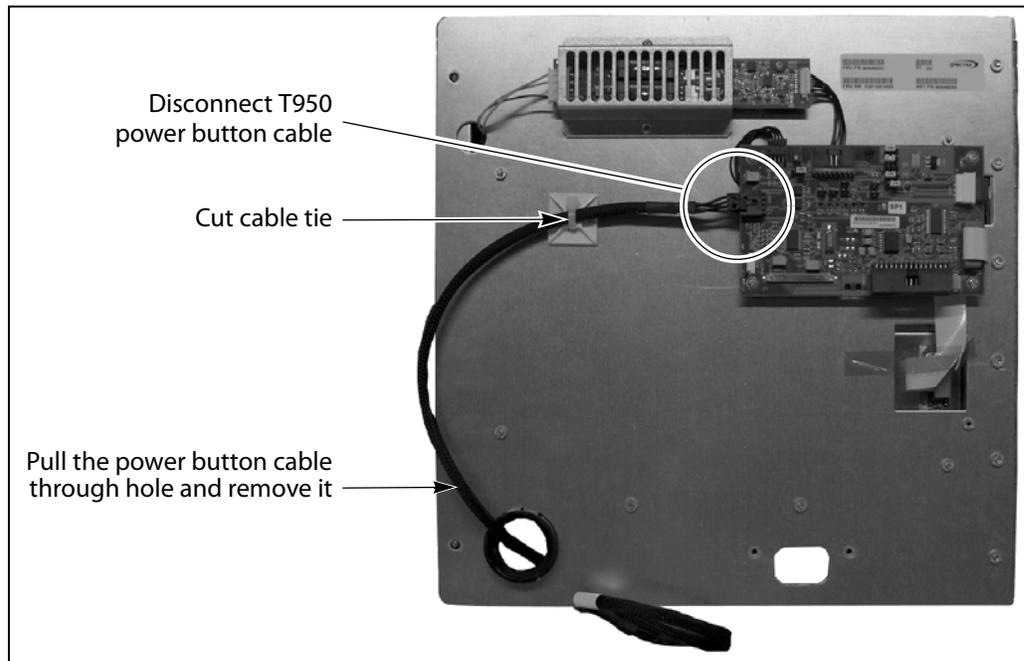


Figure 43 Remove the T950 power cable from the LCD panel.

Mount the LCD Panel

1. Open the hinge along the left side of the new LCD panel.
2. Position the LCD panel over the opening as shown in [Attach the LCD panel to the chassis](#).



Figure 44 Attach the LCD panel to the chassis.

3. Attach the LCD panel to the chassis.
 - a. Align the holes in the hinge with the corresponding holes in the chassis.
 - b. While holding the panel in place, temporarily secure the panel to the chassis by tightening the two knurled screws.
 - c. Using a #2 Phillips screwdriver, install the six screws you removed from the old LCD panel to secure the hinge to the chassis. Tighten the screws securely.

Connect the Cables

1. Using your fingers or a #2 Phillips screwdriver, loosen the knurled screws and open the LCD panel.
2. Connect the power button cable and the front panel display cable to their respective connectors on the printed circuit board mounted on the back of the LCD panel. Make sure the connectors are fully seated.



Caution

The front panel display cable connector is not keyed. Make sure that pin 1 on the connector is to the left and the raised ridge at the front of the connector is up.

Note: Pin 1 is labeled on the connector.

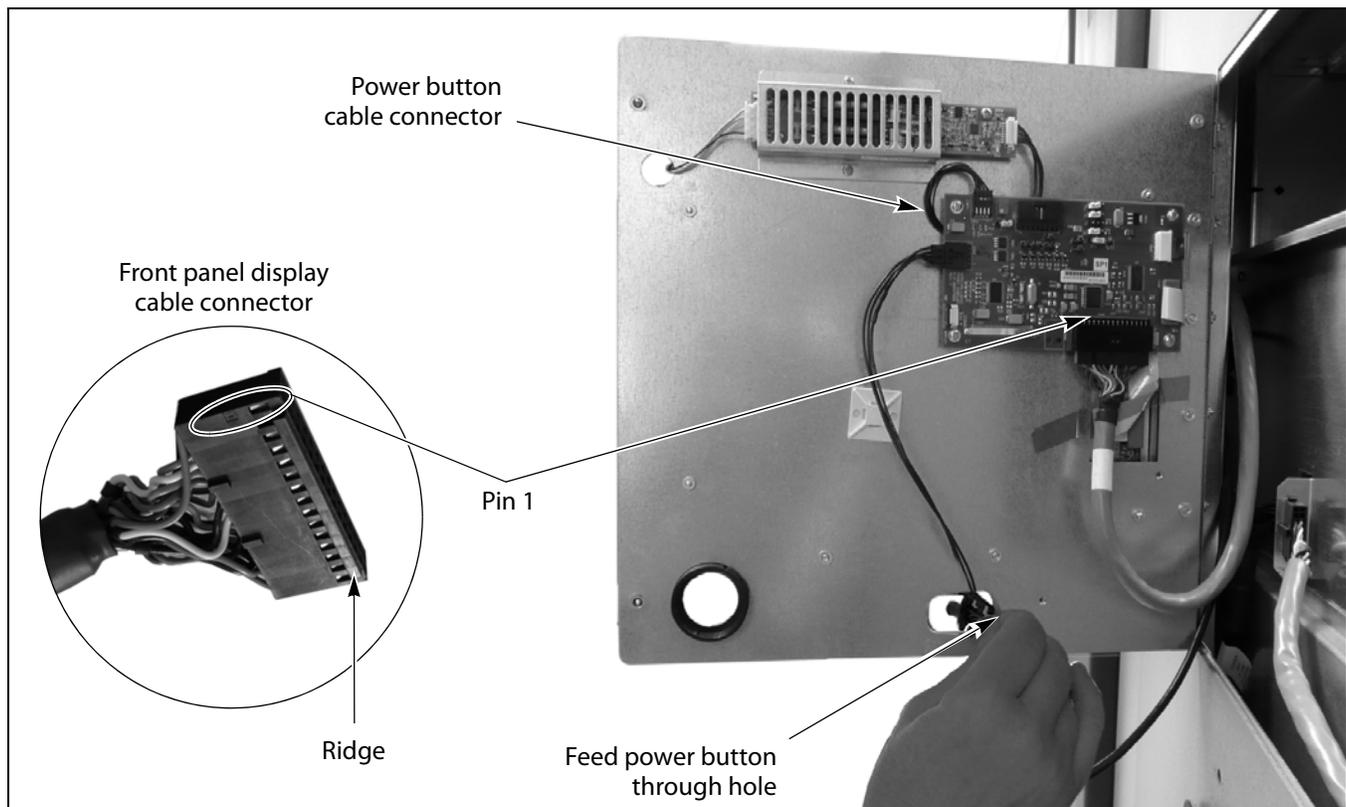


Figure 45 Connect the power button cable and front panel display cable to the printed circuit board.

3. Insert the power button through the hole closest to the hinge, out to the front of the panel.
4. Use a cable tie holders and cable ties to secure the power button cable and the front panel cable to the back of the LCD panel.
5. Adjust the position of the front panel cable and the power cable so that they will not be pinched by the LCD panel when you close it.

6. Close the LCD panel and tighten the knurled screws to secure it in place.



Caution

Make sure that you do not pinch the power cable between the LCD panel and the chassis.

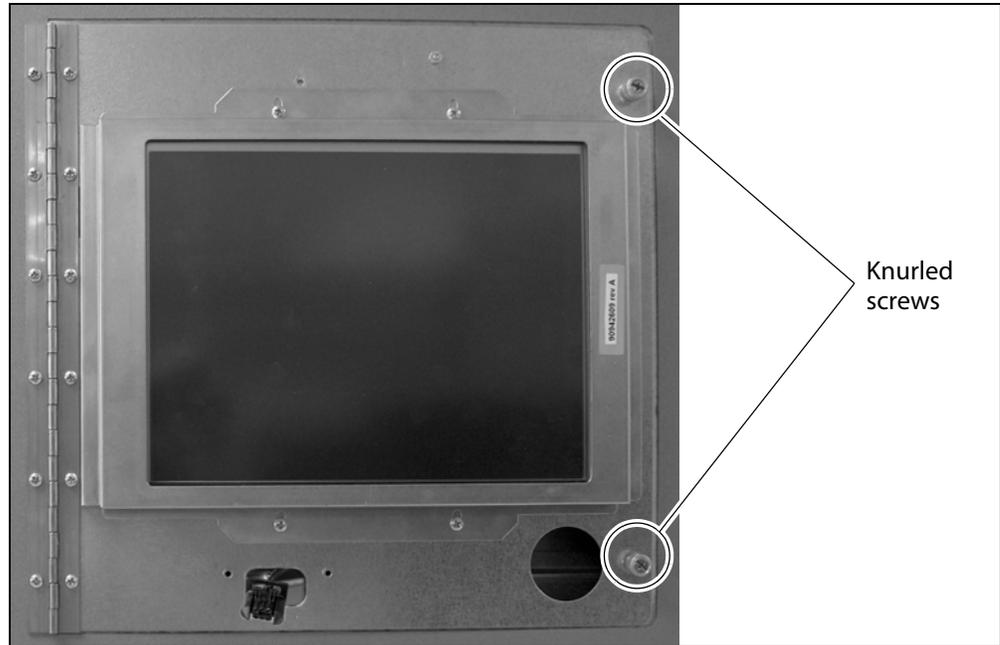


Figure 46 Tighten the knurled screws secure the LCD panel closed.

7. Orient the power button mounting bracket so that the raised center portion is away from the library and the notches in the opening are toward the top (see [Figure 47](#)).

8. Position the power button inside the opening in the mounting bracket so that the tabs on the front of the button align with the openings in the mounting bracket.

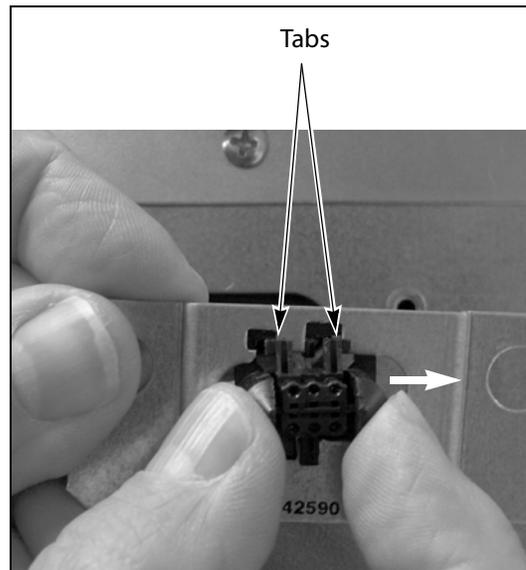


Figure 47 Insert the power button into the mounting bracket.

9. Slide the button to the right until the tab on the back of the switch latches into place, locking the button into the mounting bracket.
10. Position the mounting bracket over the two mounting holes in the front of the LCD panel.
11. Using a #2 Phillips screwdriver, install the two screws, each with a washer, to secure the mounting bracket to the LCD panel (see [Figure 38 on page 41](#)).

**Caution**

Make sure that you do not pinch the power cable between the LCD panel and the mounting bracket.

**Important**

Make sure that the power button and the mounting plate have some freedom to move after they are secured to the LCD panel. This will allow the button to “float” into place when the cosmetic cover is installed.

COMPLETE THE REPLACEMENT

After you finish installing the new LCD panel, use the steps in the following sections to complete the replacement process.

Install the Cosmetic Cover

Use the following steps to install the cosmetic cover.

1. Orient the cosmetic cover so that the sensor switch on the front of the library aligns with the opening in the back of the cover.

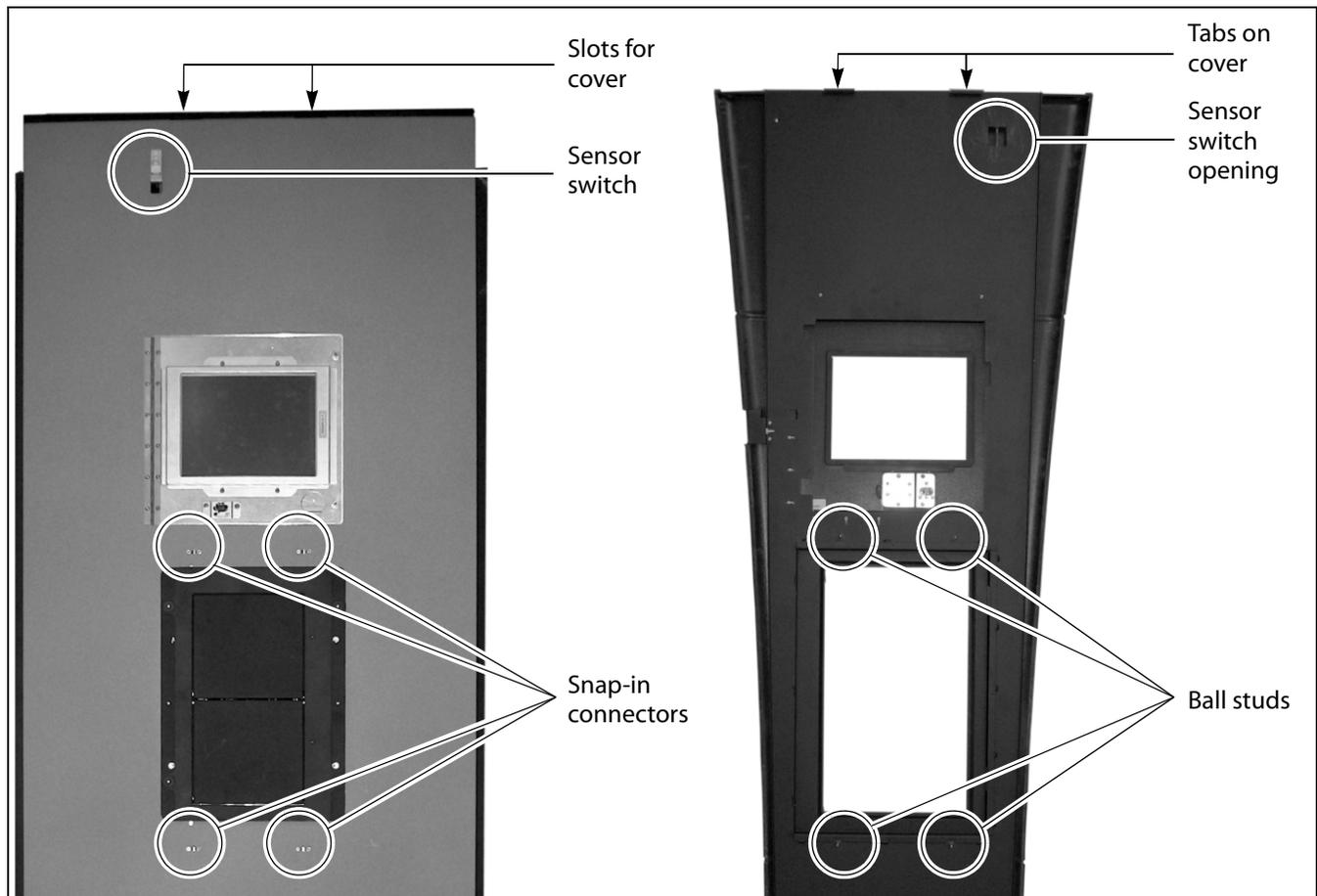


Figure 48 Position the cosmetic cover over the front of the library.

2. Using both hands, lift the cosmetic cover and align the openings with the LCD panel and the TAP.
3. Insert the tabs on the top edge of the cover into the slots in the top edge of the library chassis.

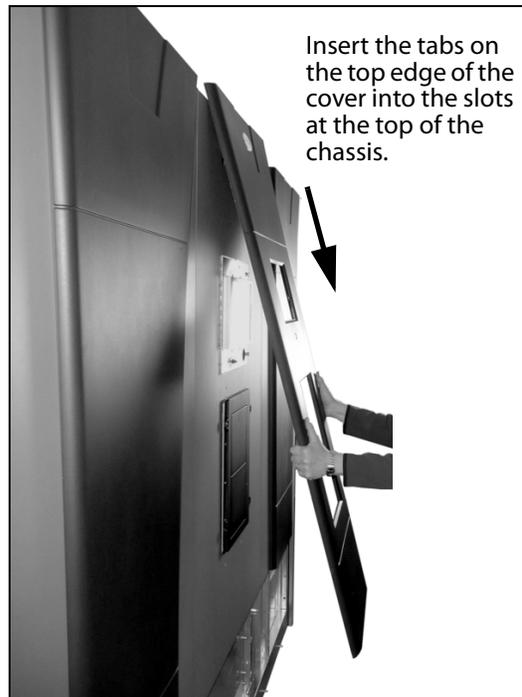


Figure 49 Mount the cosmetic cover on the front of the library.

4. Guide the hole in the back of the cover over the sensor switch on the front of the library and then lower the cover into place over the LCD and the TAP.
5. Push firmly inward along the length of the cosmetic cover to snap the four ball studs on the back of the cover into the snap-in connectors on the front of the library.

- Using a #2 Phillips screwdriver, install the two flathead screws that secure the bottom of the cover to the chassis.

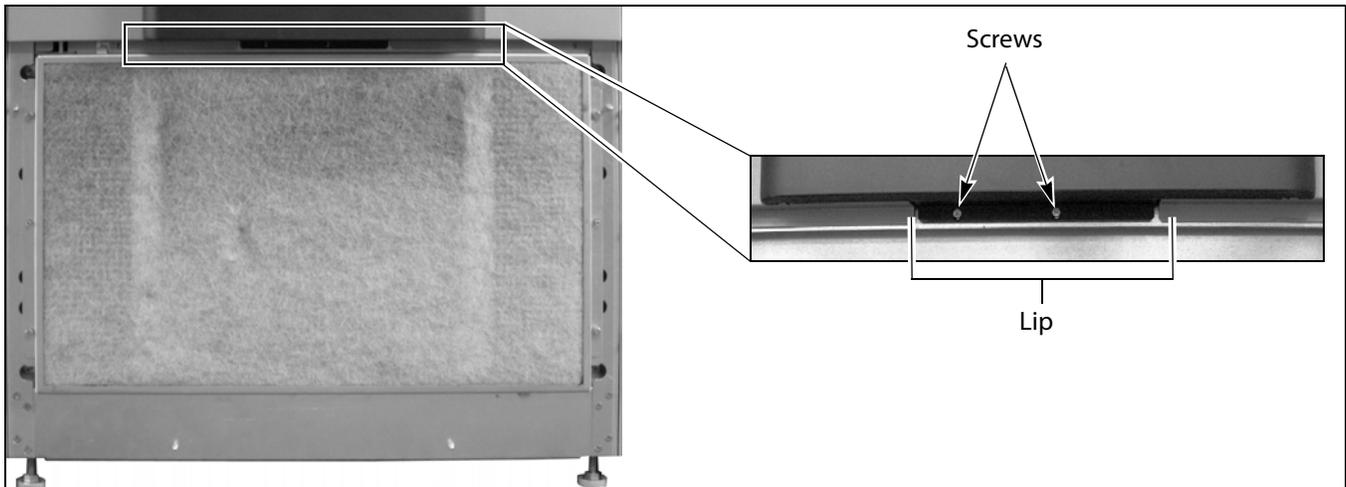


Figure 50 Remove the screw at the bottom of the side panel.

- Orient the filter cover over the fan assembly and the push firmly inward on the sides of the cover to snap it into place.

Install the Light Bar

- Orient the light bar with the curved edge toward the front of the library.



Caution The light bar is fragile. Handle it with care as you install it.

- Position the light bar so that the ball studs on the bottom of the bar align with the holes in the top edge of the chassis.

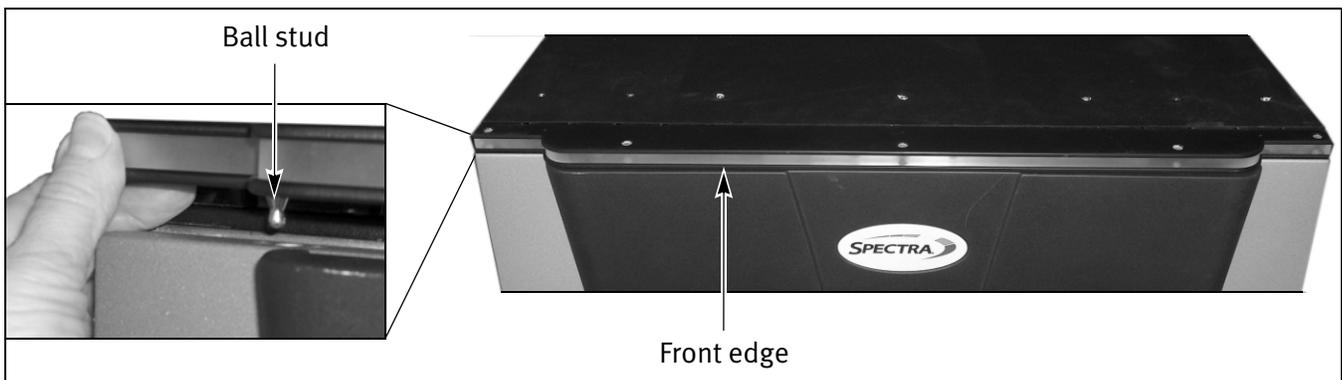


Figure 51 Install the light bar.

- Press the light bar down to engage the ball studs with the snap-in connectors in the top of the chassis.

Power On the Library

1. Set the AC power breakers on the main frame to the on position (see Figure 32 on page 37).
2. Press and hold the front panel power button for two to three seconds or until the button's LED illuminates.
3. Wait while the library completes its power-on sequence, which takes about five minutes (depending on the library configuration). During the power-on sequence the library initializes all of its installed components. The library is ready to begin operation when the login screen displays on the front panel.

Calibrate the Touch Screen

Note: Calibrating the touch screen also tests the LCD panel to ensure that it is working properly.

1. Log into the library with superuser or administrator privileges.
2. From the toolbar menu, select **Maintenance**  **Tools** to display the Maintenance Tools screen.
3. Select **Utilities**. The Utilities screen displays.
4. Select **Calibrate Touch Screen**.

Note: This utility is not available if you are using the BlueScale web interface from a remote computer. You must be standing in front of the LCD in order to calibrate it.

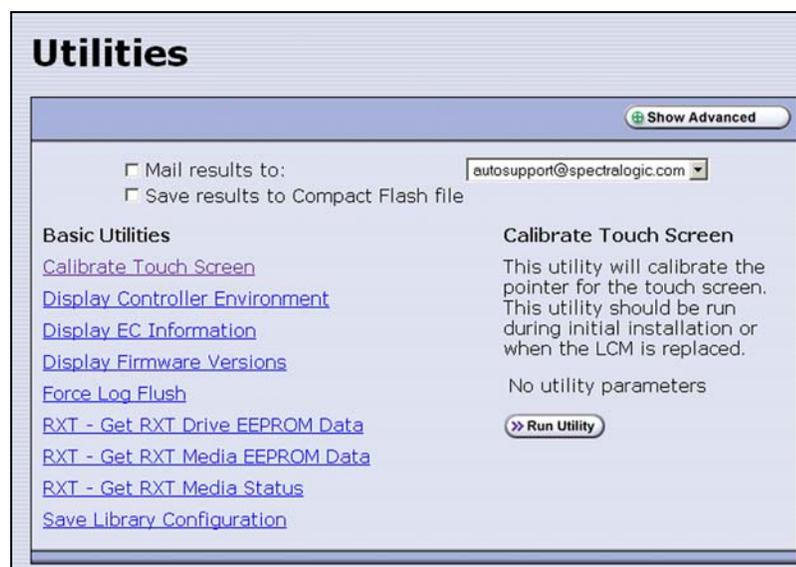


Figure 52 The Calibrate Touch Screen utility.

5. Select **Run Utility**. The touch screen displays a series of calibration target points.

6. Touch each point as it displays with a stylus to recalibrate the touch points on the screen.
Note: Touch each point at a straight-on angle as close to the center of the target as possible.
7. When the calibration routine is complete, the Utilities screen redisplay.

Restart Backups

Use your backup software to restart any backup processes running on library.

Return the Old LCD Assembly to Spectra Logic

Refer to [Return the Component on page 55](#) for instructions.

Return the Component

After you complete the replacement procedure, use the information in this section when returning the defective component to Spectra Logic.

Return Guidelines

Unless Spectra Logic Technical Support informs you otherwise, return the defective component to Spectra Logic as described in the following section. If Spectra Logic Technical Support informs you that the component does not need to be returned, dispose of it in the manner appropriate for your company guidelines

Return Procedure

Pack the defective component using ALL the packaging that the replacement part arrived in (including any anti-static bags or foam inserts).



Caution

Severe damage can occur if the component is not packaged correctly, and you may be invoiced if it is received with damage due to improper or insufficient packaging.

Use the return label and instructions that were included with the replacement part when preparing to ship the defective component. If you cannot locate these, contact Spectra Logic for another copy (see [Contacting Spectra Logic on page 2](#)). The return label and RMA printed on it are used to associate the returned part with your account. To avoid being invoiced for failure to return the part, do not ship the part back without the RMA return label.