

LCD Backlight Bulb Replacement

Introduction

This document describes the procedures required to replace the backlight bulbs (model number BLR-6090) in P2, P3, P4, and P5 LCD PowerStations. It includes instructions for opening the PowerStation, removing the display and backlight assemblies, replacing these assemblies, closing the PowerStation, and restoring the unit to operation.



Warning Observe normal precautions against electrostatic discharge (ESD) to prevent damage to the PowerStation or the backlight assembly.

Before You Start

Turn off the unit and disconnect the PowerStation from the power source. You also must remove the unit from its enclosure (if installed) to gain access to the display. Consult your *PowerStation User Guide* if you need help with the removal.

Be sure that you have the following tools:

- Slotted head (#2) screwdriver
- Phillips head (#0) screwdriver
- Quarter inch nutdriver

Opening the PowerStation

In order to replace the backlight bulbs, you must first open the PowerStation.

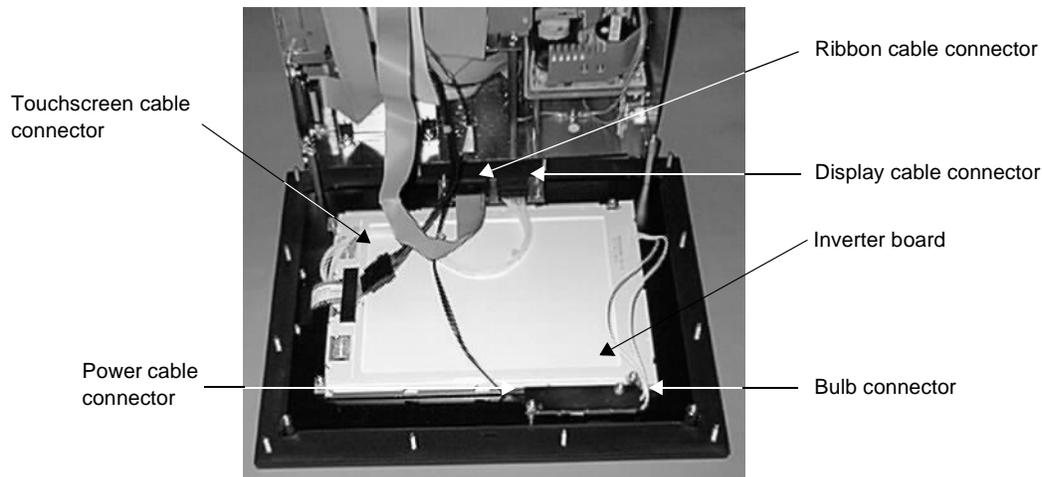


Warning For safety reasons, the PowerStation should be opened only by qualified service personnel.

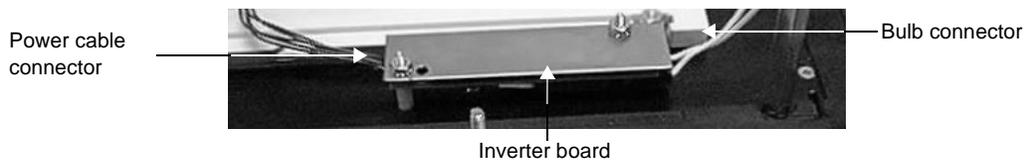
To open the PowerStation, complete the following steps:

1. Unscrew the four large captive screws located at each corner of the PowerStation's back cover.
2. Lift the back cover off the faceplate far enough to gain access to the internal cables. See the illustration at the top of the next page for the location of the cable connectors.

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3. Push the ejectors on the ribbon cable connector upward, away from the display. This will release the ribbon cable connector.
4. Carefully remove the ribbon cable connector from its holder.
5. Disconnect the remaining 4 cables shown in the previous illustration by gently pulling out on the connectors. See the following illustration for the location of the cables on the inverter board.



6. Remove the back cover completely.

Warning Do not touch any of the exposed components on the backlight display; you may damage the equipment.

Removing the Display Assembly

After opening the PowerStation, remove the display assembly.

To remove the display assembly, complete the following steps:

1. Pry up one end of the cable holder that holds the touchscreen cable to the backlight assembly and pull the cable out of the holder.

Note The display connector is attached to the display below the touchscreen cable. It is not necessary to detach this cable if you have already detached the other end in the previous section, "Removing the Back Cover."

2. Remove the four nuts securing the display assembly to the faceplate; they are located in each corner of the display assembly. Two of the nuts are quarter-inch, and two are quarter-inch stand-offs.

Important When removing the nuts, be careful not to lose the spacer and lock washers located between them and the display assembly.

3. Lift the display assembly away from the faceplate. Carefully turn the display towards you so that the front of the unit is in view.
4. Gently lay the display down on the work surface.

Removing the Backlight Assembly

After you have removed the display assembly, you will be able to remove the backlight assembly.

To remove the old backlight assembly, complete the following steps:

1. Remove the three screws securing the backlight assembly to the display. See the following illustration for the location of the securing screws.



Note On early models, the two screws on the same side of the display are covered by the gasket. On these models, you must remove the gasket material covering the screws. On later models, the gasket will be notched to allow access to the screws.

2. Turn the display over so the display is facedown on the workbench.
3. Bend the metal tabs located along the top, bottom, and left side of the display away from the faceplate.
4. Lift the backlight assembly away from the display.
5. Discard the old backlight assembly.

Important Be sure that no dust collects on the display while the backlight assembly is being replaced.

Replacing the Backlight Assembly

To replace the backlight assembly, complete the following steps:

1. Take the replacement backlight kit out of the package.
2. Place the new backlight assembly on the display.

Note The notched end of the backlight assembly must go over the circuit portion of the display.

3. Bend the metal tabs located along the top, bottom, and left side of the display back over the backlight assembly.
4. Turn the display assembly over so the display is face up.
5. Replace the three screws that were removed in step 1 of *Removing the Backlight Assembly* on page 3.

Replacing the Display Assembly

After you have replaced the backlight assembly, replace the display assembly in the PowerStation.

To replace the display assembly, complete the following steps:

1. Lift the display off the work surface. Carefully turn the display away from you so the side of the assembly that faces the front of the unit is parallel to the faceplate.

2. Gently lay the display down on the faceplate.
3. Replace and tighten the four nuts that secure the display to the faceplate. Two of the nuts are quarter-inch, and two are quarter-inch stand-offs.

Important When replacing the stand-offs, make sure that you install the spacer and lock washers between the nuts and the backlight assembly.

4. Reconnect all cables to the locations shown on page 2. Push firmly on the connectors to be sure they are securely connected.

Note The connectors are designed to fit only with the appropriate cable.

Closing the PowerStation

After you have replaced the display assembly, close the PowerStation.

To close the PowerStation, complete the following steps:

1. Connect the back cover ribbon cable to the ribbon cable connector, and ensure that the cable is properly oriented on the connector. Place the cable on the connector and push in on the connector until the ejectors snap into place.
2. Replace the back cover onto the front of the PowerStation, making sure that you do not pinch any of the internal cables.
3. Secure the back cover with the four large captive screws that you removed in step 1 of *Opening the PowerStation* on page 1.

Restoring the PowerStation

To restore the PowerStation to operation, complete the following steps:

1. Test the bulbs by connecting the PowerStation to a power source and turning the unit on. If a problem arises, consult these instructions or the *PowerStation User Guide*.
2. Turn off the PowerStation and disconnect it from the power source.
3. Return the PowerStation to its enclosure (if previously installed).
4. Reconnect the PowerStation to the power source.
5. Turn the PowerStation on and resume operations.

