

PS Series Backlight Bulb Replacement

Introduction

This document describes the procedures required to replace the backlight bulbs in PS Series PowerStations, referred throughout the rest of this document as the PowerStation. This document is included with the following backlight bulb kits:

- BLR-7000
- BLR-7010
- BLR-8000

It includes instructions for opening the PowerStation, accessing and replacing the bulbs, reassembling the unit and closing the PowerStation, and restoring the unit to operation.

These instructions describe the procedures used on 12" and 15" PowerStations. The 12" PowerStation incorporates a Philips display while the 15" PowerStation incorporates a Sharp display. While the majority of the steps are identical, differences will be clearly identified in the text.



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

Before You Start

Important Follow these instructions carefully. Although it is possible to perform backlight bulb replacement in the field, it is ideal if the PowerStation could be returned to the factory for backlight bulb replacement. Returning the unit to the factory would avoid possible inadvertent damage to the PowerStations delicate components.

1. Turn off the unit and disconnect the PowerStation from the power source.
2. Remove the unit from its enclosure (if installed) to gain access to the display.
3. Place the PowerStation on an ESD mat and ensure you have enough working space to remove the major assemblies of the PowerStation.

Consult your *PS PowerStation User Guide* if you need help with the removal.

Opening the PowerStation

In order to replace 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. Place the PowerStation on an ESD mat, display face down.
2. Remove the screw on the left side of the unit holding the L shaped bracket to the unit. The bracket is located next to the upper backshell pin as shown in figure 1.

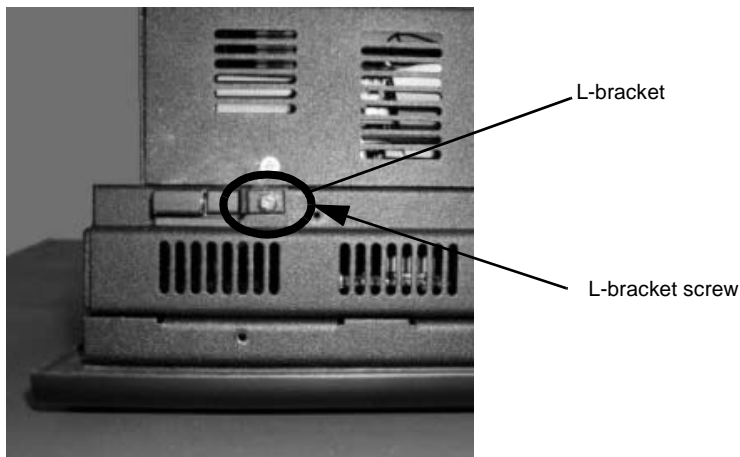


Figure 1: L Bracket Location

3. Remove the four screws holding the backshell plate to the backshell assembly.
4. Set aside the backshell plate.



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

5. Disconnect the large ribbed display cable by pressing in on the connector tabs and pulling up on the connector. Refer to figure 2.
6. Remove the touchscreen cable by pressing in on the cable tab and lifting up on the cable. Refer to figure 2.

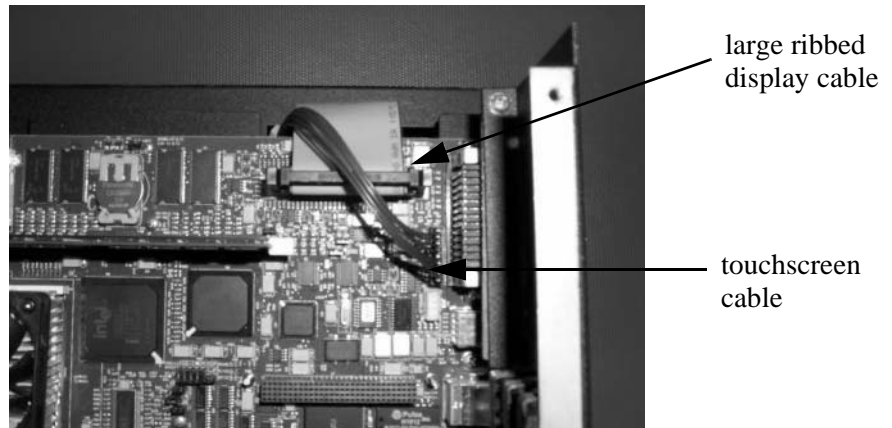


Figure 2: Display and Touchscreen Cable Locations

7. Remove the two screws securing the backshell to the display assembly.
8. Lift up on the backshell and be sure to feed the large ribbed display cable and touchscreen cable through the upper right slot in the backshell.
9. Tilt the backshell and slide it off the backshell pins.
10. Set aside the backshell section.
11. Remove the three screws securing the display assembly to the bezel. Refer to figure 3 for a Philips (12" unit) display or figure 4 for a Sharp (15" unit) display.
12. Lift the display assembly off the bezel. Be careful to slide the display assembly up out of the lower bezel tabs.
13. Slide the touchscreen cable through the slot in the lower left of the bezel assembly.
14. Disconnect the backlight bulb cables from the inverter board by gently pulling on the connector. Refer to figure 3 for a Philips (12" unit) display or figure 4 for a Sharp (15" unit) display.
15. *Philips display (12" unit) only:* Disconnect the small ribbed display cable from the display adapter board. Refer to figure 3.
16. *Sharp display (15" unit) only:* Disconnect the small cable from the display adapter board. Refer to figure 4.

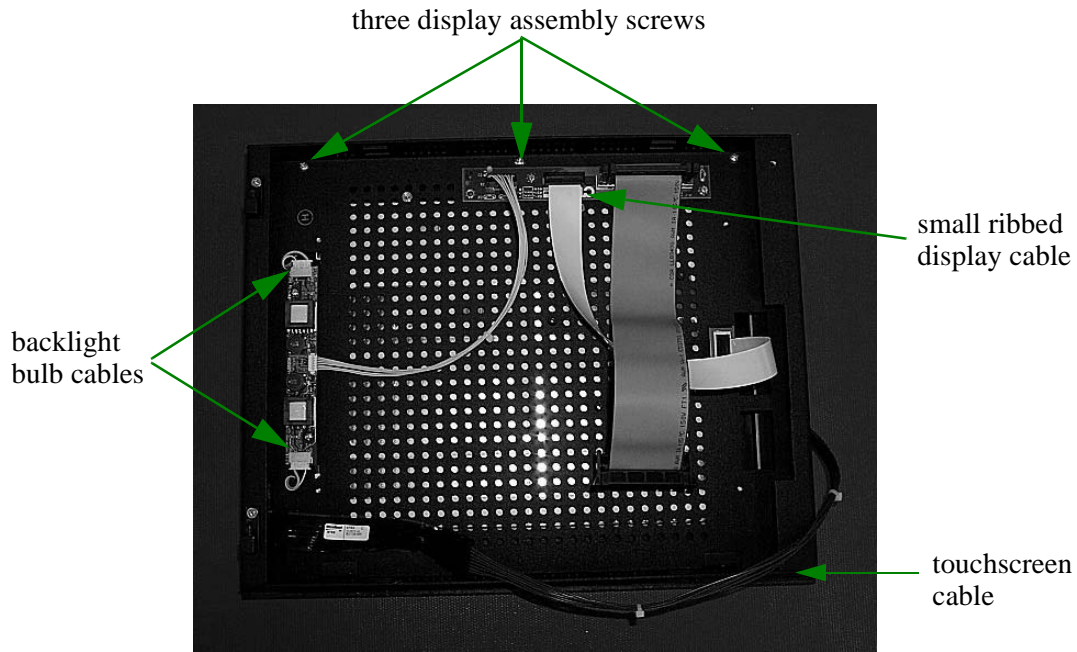


Figure 3: Philips (12" Unit) Display Assembly Cable Locations

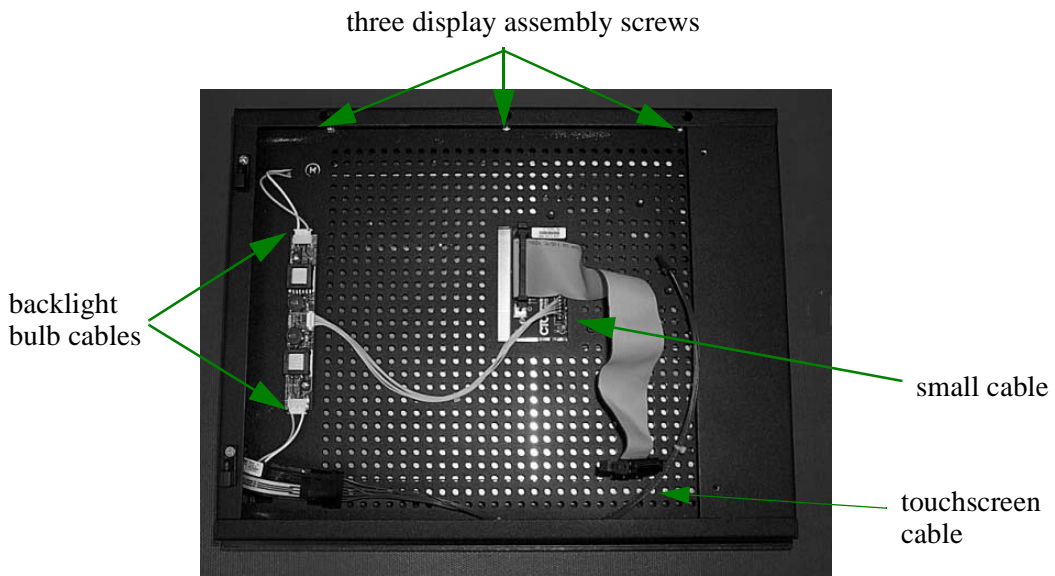


Figure 4: Sharp (15" Unit) Display Assembly Cable Locations

17. Flip the display assembly over so that the display is facing up.

Accessing and Replacing the Bulbs

After you have opened the PowerStation and separated the display assembly from the rest of the unit, you will be able to remove the backlight bulbs. CTC Parker recommends that you replace both bulbs at the same time.

Important During the following steps be careful not to leave fingerprints or dust on the display front surface.

To gain access to the backlight bulbs and replace them, complete the following steps:

1. Weave the backlight bulb cables through the slots in the display assembly.
2. *Philips display (12" unit) only:* Weave the small ribbed display cable through the slot in the display assembly.
3. Remove the four screws from the display. Refer to figure 5 for a Philips (12" unit) display or figure 6 for a Sharp (15" unit) display.

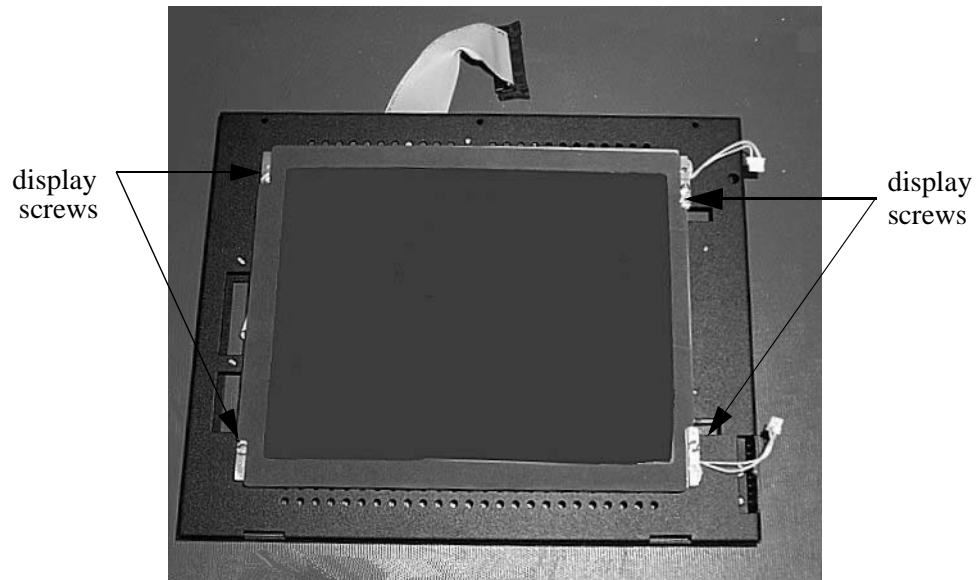


Figure 5: Philips Display (12" Unit) - Display Screw Location

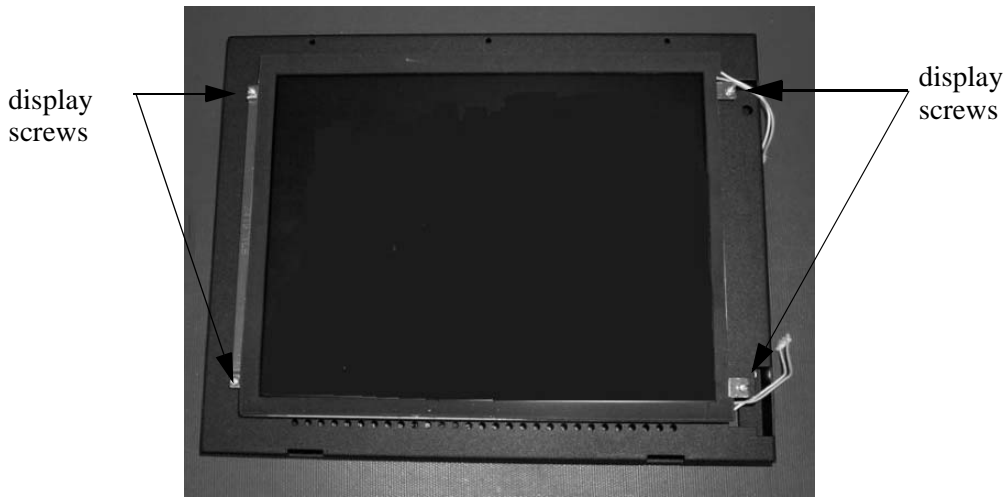


Figure 6: Sharp Display (15'' Unit) - Display Screw Location

4. Remove the display from the display assembly and lay it aside.
5. *Sharp display (15'' unit) only:* Flip the display so that it is face down.
6. Remove the small screw holding the backlight bulb in the tray. Refer to figure 7 for a Philips (12'' unit) display or figure 8 for a Sharp (15'' unit) display.

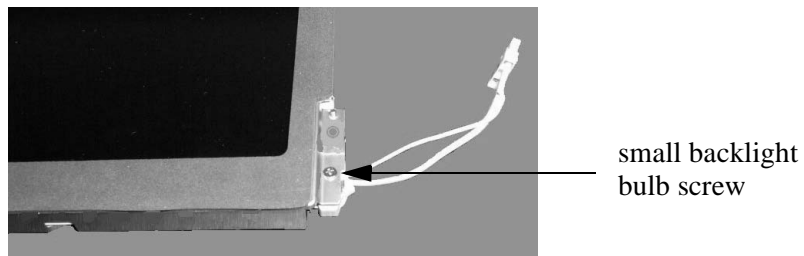


Figure 7: Philips Display (12'' Unit) - Backlight Screw Location

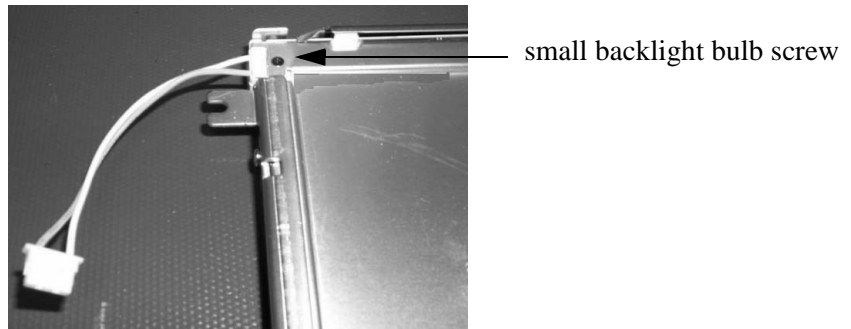


Figure 8: Sharp Display (15" Unit) - Backlight Screw Location

7. *Philips display (12" unit) only:* Flip the display so that it is face down.
8. *Philips display (12" unit) only:* Gently unwrap the backlight bulb cables from the strain relief post. Refer to figure 9.



Figure 9: Philips Display (12" Unit) Strain Relief Post

9. Carefully pull on the backlight bulb and slide it out from the slot. This may require applying pressure on the backlight bulb notches while sliding the bulbs out of the slot.
10. Insert the new backlight bulb into the slot.
11. *Philips display (12" unit) only:* Wrap the two wires coming from the

backlight bulb around the strain relief post. Wrap the small wire first, followed by the larger wire. Refer to figure 9.

12. Repeat steps 5 through 11 for the second backlight bulb.
13. Discard the old bulbs.

Reassembling the unit and closing the PowerStation

To reassemble the unit then close the PowerStation, complete the following steps:

1. *Philips display (12" unit) only:* Flip the display over so it is facing up.
2. *Philips display (12" unit) only:* Insert the small screw, removed in step 6 of the *Accessing and Replacing the Bulbs* section, into the backlight bulb slot. Repeat for both bulbs. Refer to figure 7.
3. *Sharp display (15" unit) only:* Insert the small screw, removed in step 6 of the *Accessing and Replacing the Bulbs* section, into the backlight bulb slot. Repeat for both bulbs. Refer to figure 8.
4. *Sharp display (15" unit) only:* Flip the display over so it is facing up.
5. Position the display on the display frame and secure in place using the four screws removed in step 3 of the *Accessing and Replacing the Bulbs* section. Refer to figure 5 for a Philips (12" unit) display or figure 6 for a Sharp (15" unit) display.
6. *Philips display (12" unit) only:* Weave the small ribbed display cable through the slot in the display frame.
7. Weave the backlight bulb cable connector's through the slots in the display frame.
8. Flip the unit over so the display is facing down.
9. *Philips display (12" unit) only:* Connect the small ribbed display cable onto the display adapter board. Refer to figure 3.
10. Plug the backlight bulb cables onto the inverter board being careful to orient the cables so they fit on the board connectors. Refer to figure 3 for a Philips (12" unit) display or figure 4 for a Sharp (15" unit) display.
11. *Sharp display (15" unit) only:* Connect the small cable to the display adapter board. Ensure the connector retainer snaps in place. Refer to

figure 4.

12. Position the display assembly on the bezel assembly. Be sure to slide the bezel tabs through the display assembly bottom slots.
13. Weave the touchscreen cable through the lower left slot in the display assembly.
14. Secure the display assembly to the bezel using the three screws removed in step 11 of the *Opening the PowerStation* section. Refer to figure 3 for a Philips (12" unit) display or figure 4 for a Sharp (15" unit) display.
15. Position the backshell assembly over the hinges on the display assembly.
16. Weave the large ribbed display cable through the slot in the backshell assembly.
17. Weave the touchscreen cable through the slot in the backshell assembly.
18. Connect the large ribbed display cable to the connector on the CPU board. Ensure the connector tabs snap in place. Refer to figure 2.
19. Connect the touchscreen cable to the CPU board. Ensure the connector retainer snaps in place. Refer to figure 2.
20. Secure the backshell assembly to the display assembly using the two screws removed in step 7 of the *Opening the PowerStation* section.
21. Secure the L shaped bracket, next to the upper left hinge of the unit using the screw removed in step 2 of the *Opening the PowerStation* section. Refer to figure 1.
22. Position the cover plate over the backshell assembly and ensure the plate tabs slide into the backshell slots.
23. Secure the cover plate to the backshell assembly using the four screws removed in step 3 of the *Opening the PowerStation* section.

Restoring the PowerStation

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

1. Test the new backlight bulbs by connecting the PowerStation to a power source and turning the unit on. If a problem arises, consult these in-

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structions or the *PS 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 on the PowerStation and resume operations.