Indigo^2 IMPACT™ Presenter Board Installation Guide

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For regulatory and compliance information, turn to Appendix B.

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Introduction

This guide explains how to install the Indigo² IMPACT™ adapter board for Indy Presenter™ (1024 x 768) and the Silicon Graphics® Presenter 1280 (1280 x 1024) flat panel monitors in your Indigo² IMPACT™ workstation.

Chapter 1 explains how to install the Presenter board in your workstation.

Chapter 2 provides troubleshooting information.

Appendix A describes how to identify the Presenter board and graphics boards with option boards attached.

Appendix B provides regulatory information.

Read this guide once all the way through before you start to work. Then you'll be familiar with the Indigo² system and the parts you'll be working with. If you find a term you haven't seen before, refer to your workstation's owner's guide. The glossary in the owner's guide for your workstation contains definitions of many of the terms used in this manual.

It's always a good idea to back up your system. If you have not backed up your system recently, take this opportunity to do so. For instructions on backing up your system, see your *Personal System Administration Guide*. It is located on your desktop in the Toolchest under Help, Online Books.

Product Support

Silicon Graphics®, Inc., provides a comprehensive product support and maintenance program for its products. If you are in North America and would like support for your Silicon Graphics supported products, contact the Technical Assistance Center at 1-800-800-4SGI or your authorized service provider. If you are outside North America, contact the Silicon Graphics subsidiary or authorized distributor in your country.

Chapter 1

Installing the Indigo² IMPACT Presenter Board

To use the Indy Presenter (1024 x 768) or Presenter 1280 (1280 x 1024) flat panel monitor with your Indigo² IMPACT workstation, you need to install the Indigo² IMPACT Presenter board in your workstation.

Note: With the Presenter board installed, you cannot install other GIO option boards that connect to the graphics board or board set via flex cables. Also, you cannot install two Indigo² Solid IMPACT graphics boards and two Presenter boards to run two Presenter monitors.

Preparing the workstation consists of the following steps that will be covered fully in this chapter:

1. Shutting down the system and checking the version of your PROM chip from the Command Monitor.
2. Removing the cover.
3. Removing the graphics board or board set.
4. Removing and replacing the PROM chip on the system board (if necessary).
5. Identifying and removing an option board if one is installed on top of the graphics board or board set.
6. Preparing the graphics board or board set by installing standoffs, replacing the pull straps, and attaching the flex cables.
7. Attaching the Presenter board to the graphics board set.
8. Reinstalling the board set into the workstation.
9. Connecting the external audio cable.
10. Replacing the cover.

The Indigo² IMPACT Presenter Package Components

Your Indigo² IMPACT Presenter packages include the following items. If anything is missing, contact your sales representative.

- Indigo² IMPACT Presenter board in an antistatic bag
- standoffs and pull straps for installing the board
- PROM chip
- CD
- black audio cable
- PROM chip removal tool
- Phillips screwdriver and hexnut wrench
- antistatic wrist strap
- *Indigo² IMPACT Presenter Board Installation Guide* (this manual)

Checking the Date of the PROM Chip

You may or may not need to replace your workstation's PROM chip, depending on the date of the PROM.

Follow these steps to check the date of your workstation's PROM while shutting down your system.

1. Shut down the system.
   - From the System menu in the toolchest, select "System Shutdown."

   If you have set a root password, you are prompted to enter it.

   You see a cautionary message confirming shut down of the system. Click *OK* to shut down without powering off the system.

   Next you see the notifier shown in Figure 1-1.

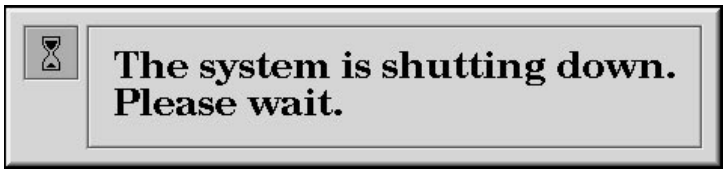

Figure 1-1 System Is Shutting Down Notifier

Then you see the notifier shown in Figure 1-2.

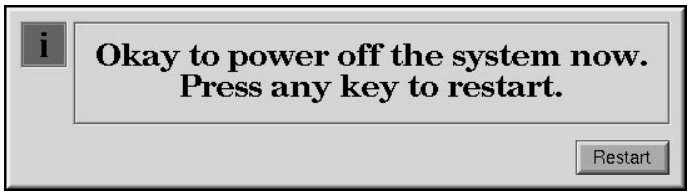

Figure 1-2 Okay to Power Off Notifier

- Click the *Restart* button.

You then see the message shown in Figure 1-3.

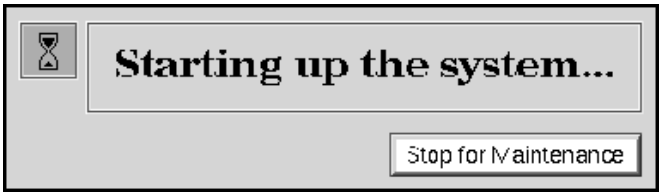

Figure 1-3 Starting Up the System Notifier

- Click the *Stop for Maintenance* button, or press the **<Esc>** key.

2. When the System Maintenance menu appears, press **5** on the keyboard, or click the *Enter Command Monitor* icon.
3. To check the date of your PROM, at the >> prompt, type

   `version`

   and press <**Enter**>

You see a line similar to this:

```
PROM Monitor SGI Version 5.3 Rev E IP22 Jan 29, 1996 (BE)
```

The date of the PROM is "Jan 29, 1996." You might want to make a note of it.

- If your PROM is dated *before* January 29, 1996, you *must replace the PROM chip*. Complete all the hardware installation steps described in this manual.
- If your PROM is dated January 29, 1996 or later, you *do not need to replace the PROM chip*. When installing the upgrade, skip the section "Removing and Replacing the PROM Chip" on page 14, but complete all the other installation steps.

4. After you have checked your PROM date, type **`exit`** to exit the PROM monitor and press <Enter>.

   The System Maintenance menu displays again.

You have now checked the date of your PROM chip and are ready to shut down the system.

Turning Off the Power

Follow these steps to shut off the power.

1. Shut off the system power.
   - Snap the front cover away from the top edge of the chassis and tip it down, as shown in Figure 1-4.
   - Press and release the power button.

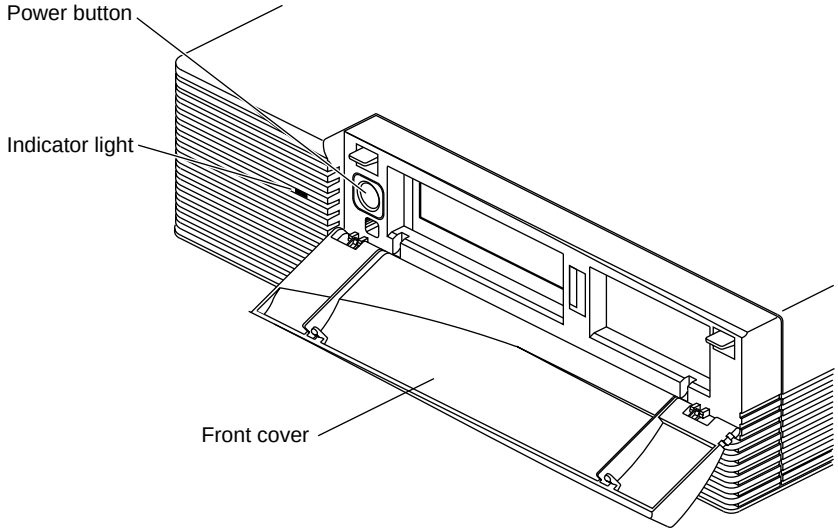

Figure 1-4 Turning Off the Power

The system shuts off automatically within a few minutes.

Removing the Cover

Follow the steps below to disconnect the monitor and power cables and remove the top cover. You must remove the bezel before you can remove the cover.

Before removing any exterior cables, familiarize yourself with their location on the rear of the chassis so that you'll find it easier when reconnecting them later.

1. If the monitor is on top of the workstation, move it to one side.

   Caution: Your monitor is very heavy. Have someone help you move it.

2. Disconnect the monitor and power cables from the back of your Indigo^2 IMPACT workstation.
3. Remove the lockbar, if one is installed.
4. Remove the front bezel.
   - Press down on the tabs on each side of the bezel, as shown in Figure 1-5.

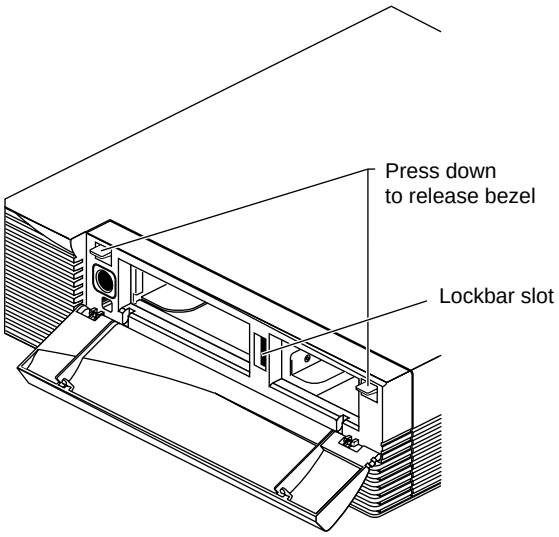

Figure 1-5 Releasing the Bezel

- Pull the bezel down and away from the chassis, as shown in Figure 1-6.

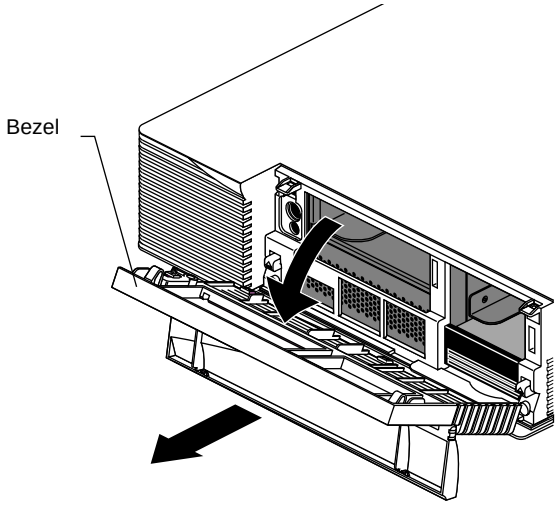

Figure 1-6 Removing the Bezel

5. Remove the cover.
   - Press up on the tabs on each side of the drive openings, as shown in Figure 1-7.

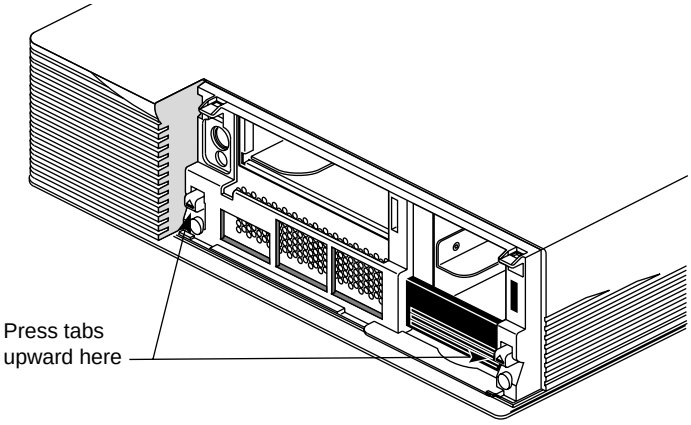

Figure 1-7 Pressing Up the Tabs

- Pull up on the cover and rotate it back and away from the chassis, as shown in Figure 1-8.

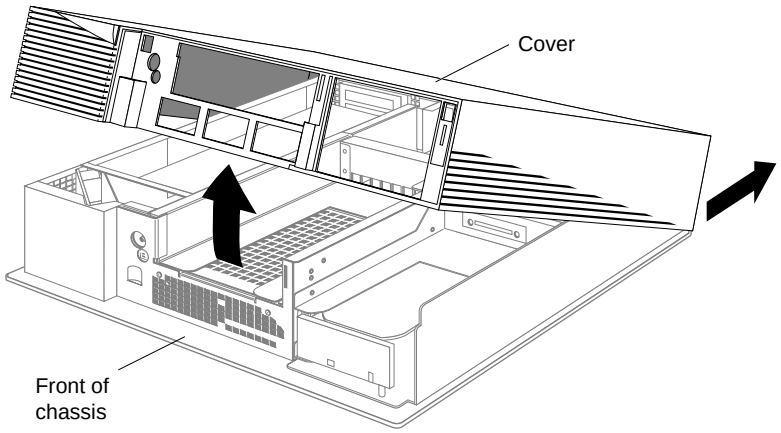

Figure 1-8 Removing the Cover

Tip: If the cover is difficult to raise, check the locking levers of the drives to be sure they are fully locked. The levers should be pushed all the way to the right.

Attaching the Wrist Strap

Wear the wrist strap to prevent the flow of static electricity, which can damage the components in the Indigo² IMPACT workstation.

Caution: The components inside Indigo² IMPACT are extremely sensitive to static electricity. Handle all chips and modules carefully, and wear the wrist strap shipped with this package while replacing parts inside the system.

To attach the wrist strap, follow these steps:

1. Unwrap the first two folds of the band and wrap the exposed adhesive side firmly around your wrist.
2. Unroll the rest of the band and peel the liner from the copper foil at the opposite end.

3. Attach the copper foil to a convenient and exposed electrical ground, such as a metal part of the Indigo² IMPACT workstation.

You are now ready to remove the graphics board set.

Removing the Graphics Board Set

You need to remove your graphics board or board set to do the following:

- reach the PROM chip on the system board to replace it (if necessary)
- install the IMPACT Presenter board on top of the graphics board set

Note: Depending on the graphics configuration of your workstation, there may be one graphics board (Indigo² Solid IMPACT), or a two-board (Indigo² High IMPACT) set, or a three-board (Indigo² Maximum IMPACT) set. Follow the instructions in this chapter for your graphics configuration.

To remove the graphics board or board set, follow these steps:

1. Make sure the wrist strap is attached to a metal part of the system. (See "Attaching the Wrist Strap" on page 8.)
2. Move the system or position yourself so that you are facing the expansion slots, as shown in Figure 1-9.
3. Open the metal panel in front of the expansion slots by pulling up on the panel and lowering it.

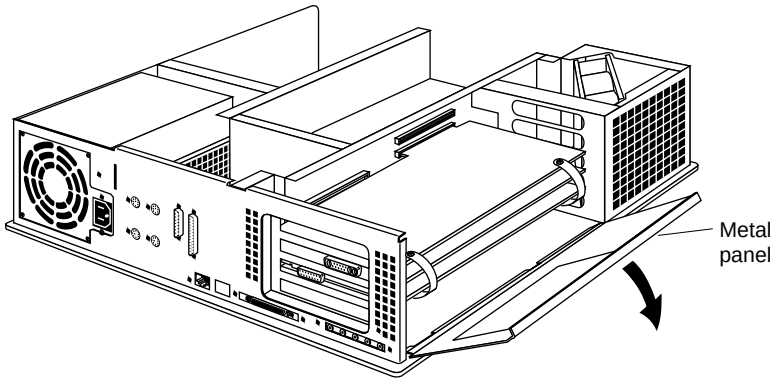

Figure 1-9 Lowering the Metal Panel in Front of the Expansion Slots

4. Remove the retention pin that secures the graphics board set, as shown in Figure 1-10.

   Tip: Note the position of the retention pin so that you know how to reinstall it later. It sits in front of the board, not beside it.

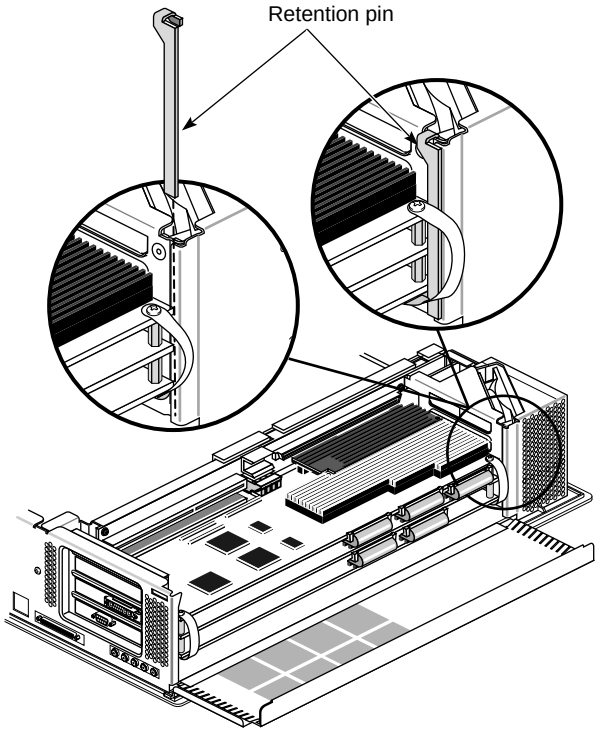

Figure 1-10 Removing the Retention Pin

5. Locate the slot directly above the top slot currently being used. This is the slot for the Presenter board. (If any other option boards are attached or in that slot, see Table 1-1 or Table 1-2 on page 32 before replacing any boards.)
6. Remove the screws that attach the blank I/O panel and the graphics boards to the chassis. See Figure 1-11.
   - Loosen each screw with the screwdriver.

- Unscrew and remove the screws by hand. The screws are very small and easy to lose. If you drop a screw into the chassis, retrieve it to prevent shorting the system.

7. Remove the I/O blank panel.

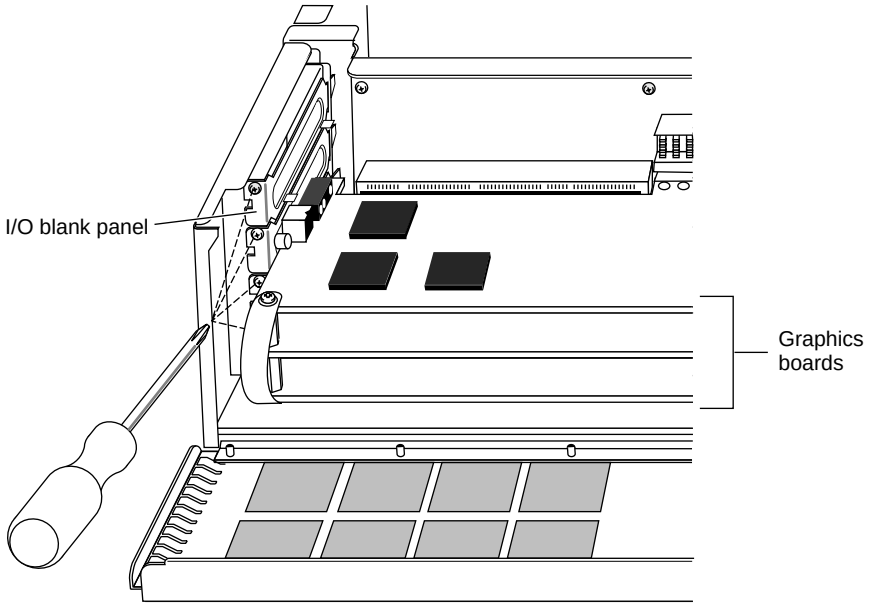

Figure 1-11 Removing the Slot Cover Screws and Slot Cover

8. Prepare an antistatic surface where you will place the board set after removing it. An empty antistatic bag, or a clean, dry desktop works well.

9. Pull the straps to remove the graphics board set from the chassis, as shown in Figure 1-12.

   Tip: It may take some pressure to detach the boards from the midplane connectors. Place your thumbs against the chassis and your index fingers against the standoffs for added leverage as you pull.

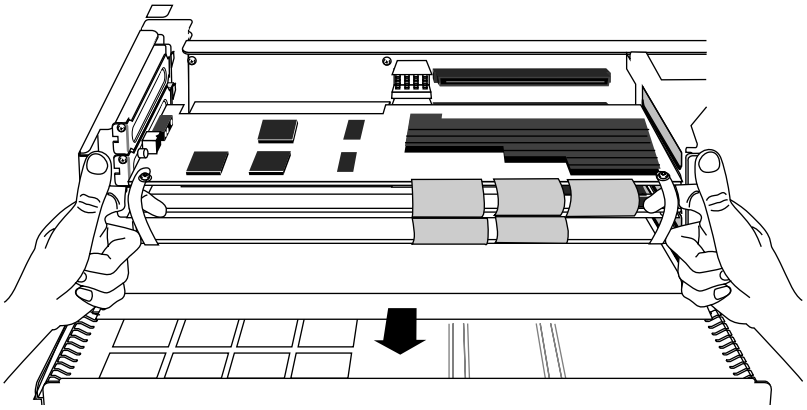

Figure 1-12 Removing the Graphics Board Set From the Chassis

10. Place the board set down on the antistatic surface you prepared.

You are finished removing the graphics board set. Follow the instructions in the table below.

If:	Then:
You are replacing the PROM chip	Go to "Removing and Replacing the PROM Chip" on page 14.
You are *not* replacing the PROM chip	Go to "Attaching the Presenter Board to the Graphics Board or Board Set" on page 18.

Removing and Replacing the PROM Chip

If your PROM chip is dated *before* January 29, 1996, follow the steps below to remove and replace it. (You should have already checked the version of your PROM chip before shutting down and opening up the system. See "Checking the Date of the PROM Chip" on page 2.)

1. Locate the PROM chip. The PROM chip is located in a socket on the system board, below the slot from which you removed the graphics board, as shown in Figure 1-13.

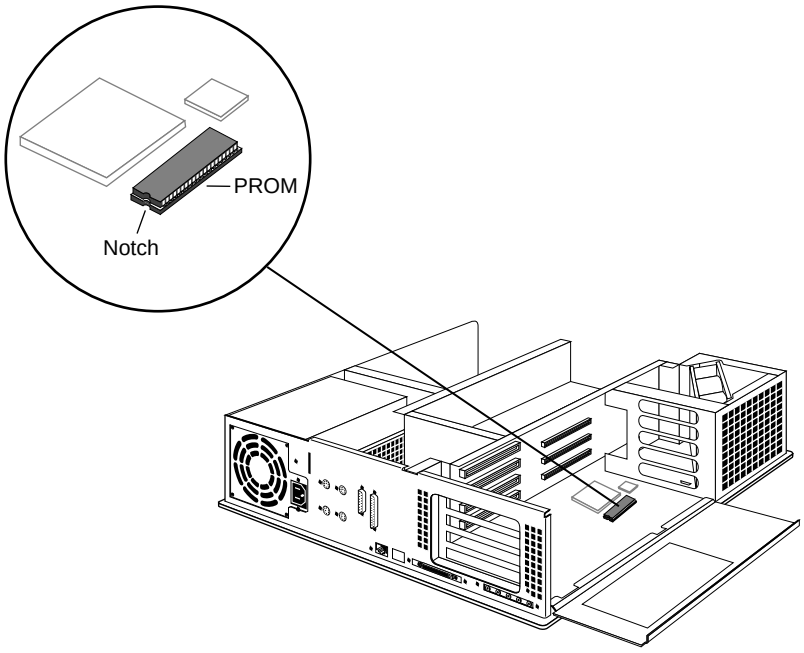

Figure 1-13 Locating the PROM Chip on the System Board

2. Before removing the PROM chip, familiarize yourself with it. Note that it has a semicircular notch at one end, as shown in Figure 1-13. You'll use this notch to orient the new PROM when you install it.

3. Remove the PROM chip from the system board.

   The PROM chip is seated in a socket that is permanently attached to the system board. You remove the PROM chip with a chip removal tool, included in this package. The tool looks like a pair of huge tweezers. When you use the tool, be sure to insert it under the PROM chip itself, and not under the socket.

   - Insert the chip removal tool between the PROM chip and the socket on the board, as shown in Figure 1-14. Work the chip away from the socket in a rocking motion, pulling up on one side of the chip and then on the other side. It may be difficult to loosen.
   - Continue the rocking motion until the PROM chip is all the way out of the socket.

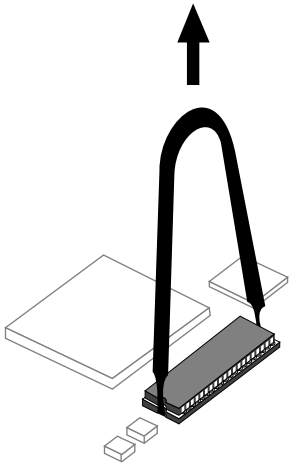

Figure 1-14 Removing the PROM Chip

4. Install the new PROM chip.

   - Grasp the new PROM chip. Orient it above the socket on the system board so the end with the semicircular notch lines up with the notch in the socket. (See Figure 1-15.)
   - Line up all of the pins on the PROM with the corresponding holes in the socket.

   Make sure you line up the notch on the PROM chip with the notch in the socket and that all the pins are aligned with corresponding holes. If you install the PROM chip backwards, or if the pins are not aligned, you will damage the PROM chip, and the system will not power on.

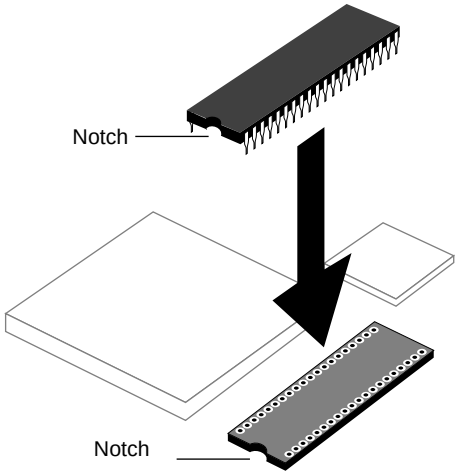

Figure 1-15 Lining Up the PROM Chip

5. Once the pins are lined up, press down firmly on the top of the PROM chip until it is completely and evenly seated in the socket, as shown in Figure 1-16.

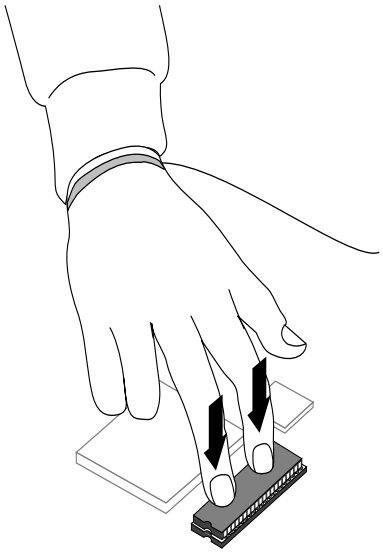

Figure 1-16 Pressing the PROM Chip Into the Socket

6. Visually check to make sure all the pins on the PROM are inserted correctly in the holes on the socket, and the PROM is seated all the way.

You have now finished installing the new PROM chip and are ready to install the Presenter board on the graphics board.

Attaching the Presenter Board to the Graphics Board or Board Set

Attaching the Presenter board to the graphics board or board set consists of

- identifying and removing an option board if one is installed on top of the graphics board set
- preparing the graphics board or board set by installing standoffs, replacing the pull straps, and attaching the flex cables
- attaching the Presenter board to the graphics board set
- attaching the flex cables to the Presenter board
- reinstalling the board set into the workstation
- attaching the audio cable to the exterior
- replacing the cover

The path you take in these instructions depends on which graphics board or board set is installed in your system. Follow the instructions in the table below.

If your workstation has	Then
Indigo^2 High IMPACT (two-board set) or Indigo^2 Maximum IMPACT (three-board set) graphics	Go to “Preparing the Board Set: Indigo2 High IMPACT or Indigo2 Maximum IMPACT Graphics” on page 19.
Indigo^2 Solid IMPACT (single board) graphics	“Preparing the Board: Indigo2 Solid IMPACT Graphics” on page 23.

Preparing the Board Set: Indigo² High IMPACT or Indigo² Maximum IMPACT Graphics

If your workstation has Indigo² Solid IMPACT graphics, go to "Preparing the Board: Indigo2 Solid IMPACT Graphics" on page 23.

If your workstation has Indigo² High IMPACT or Indigo² Maximum IMPACT graphics, follow these instructions.

Since the Presenter board attaches to the graphics board set, you need to make sure that there is no other option board on top of the graphics board set. See Appendix A for illustrations identifying graphics board sets with attached option boards.

The Indigo² Maximum IMPACT graphics board set is shown in Figure 1-17. It has three boards. The Indigo² High IMPACT board set looks similar, except that it has two boards.

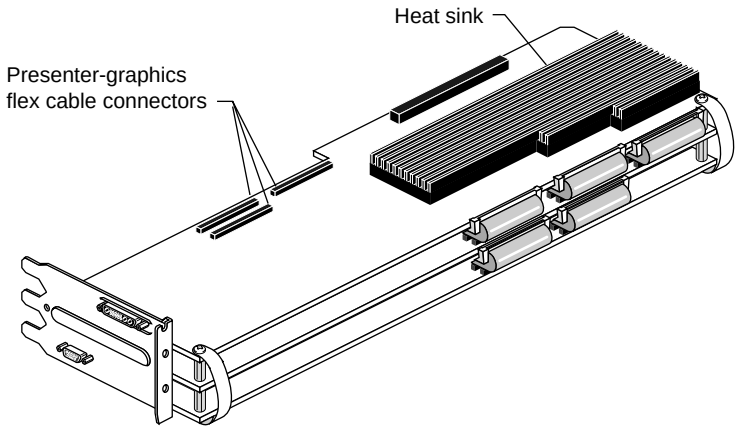

Figure 1-17 Identifying the Indigo² High IMPACT or Indigo² Maximum IMPACT Graphics Board Set

1. Go to step 3 if no option board is attached to the graphics board set.
2. If there is another board attached to the graphics board set, remove it by detaching the cables, screws, and pull straps and lifting it off the board. See Figure 1-18.
   - Remove the screws from the four corners of the board.
   - Detach the pull straps from option board; pull sideways to release the adhesive on the back of the strap.
   - Disconnect the flex cables by pushing down on the levers on each end of the cable, and pulling up on the connector.

   Tip: If the standoffs spin as you remove the screw, use the wrench that comes with this package to hold the standoffs steady.

   - Remove the option board from the standoffs. Skip to "Attaching the Flex Cables: Indigo2 Solid IMPACT, High IMPACT, and Maximum IMPACT Graphics" on page 26.

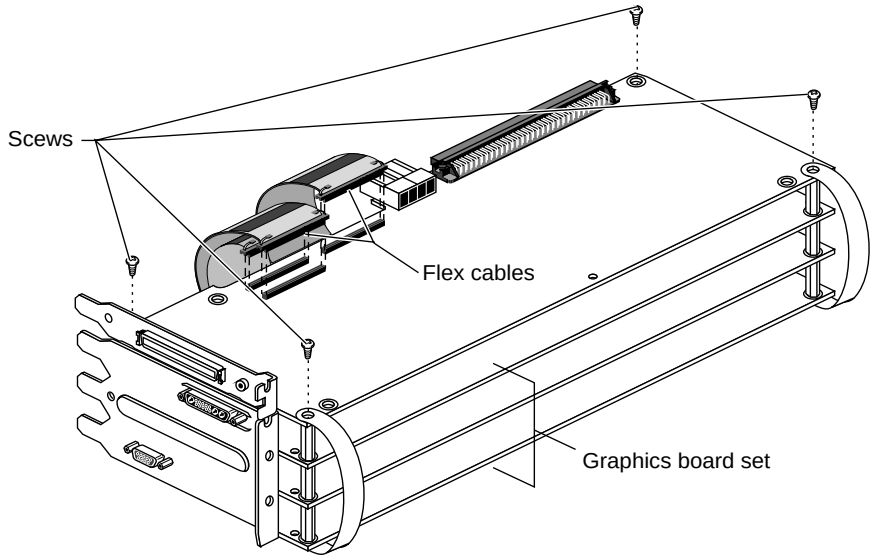

Figure 1-18 Removing an Option Board From the Graphics Board Set

3. If no option board is attached above the graphics board, remove the four screws from the corners of the graphics board set, as shown in Figure 1-19. Detach the pull straps from the top of the board. They are held in place by adhesive as well as screws.

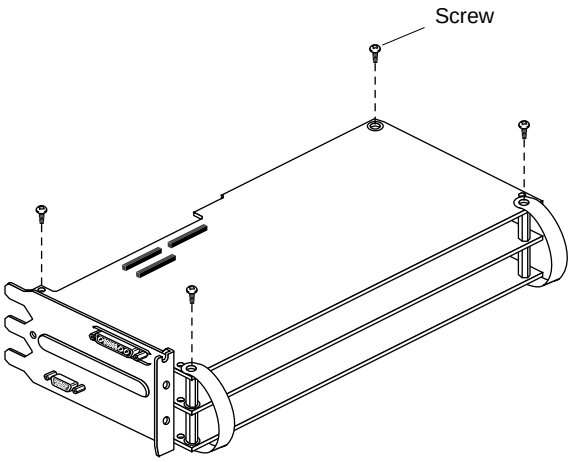

Figure 1-19 Removing the Graphics Board Set Screws

4. Install the four standoffs in the same corner screw holes from which you removed the screws. See Figure 1-20.

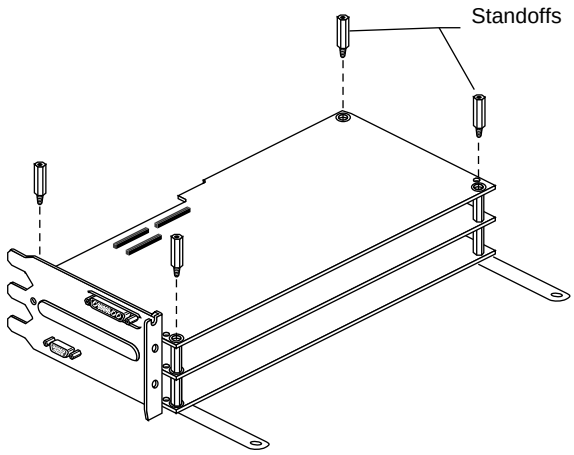

Figure 1-20 Installing the Standoffs

5. Remove the screws that attach the pull straps to the bottom of the graphics board set, as shown in Figure 1-21. (You can turn the board set upside-down.) You can throw away the pull straps. If you removed an option board in step 2, you do not need to replace the pull straps.

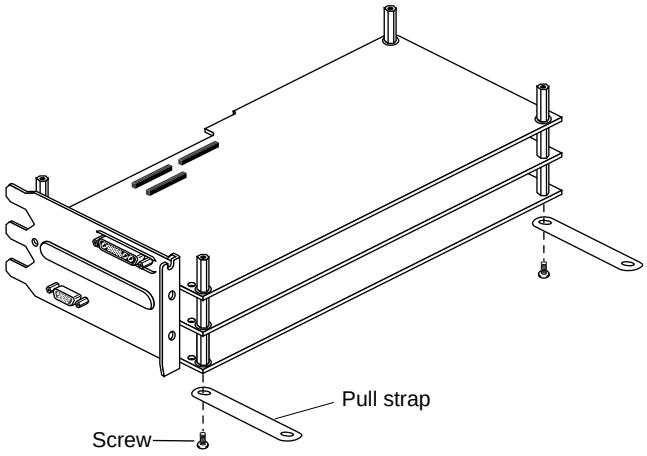

Figure 1-21 Removing the Screws That Attach the Pull Straps

6. Select the new pull straps for the graphics boardset.
   - If you have an Indigo² High IMPACT graphics board set, select the pull straps labeled 3-Board.
   - If you have an Indigo² Maximum IMPACT graphics board set, select the pull straps labeled 4-Board.
7. Attach the pull straps to the bottom of the graphics board set.
   - Peel the adhesive strips off both ends of the pull straps.
   - Line up the hole in the pull strap and the hole in the board and attach the pull strap to the bottom of the board.
   - Replace the screws. You can turn the board upside down.
8. To attach the flex cables, go to "Attaching the Flex Cables: Indigo2 Solid IMPACT, High IMPACT, and Maximum IMPACT Graphics" on page 26.

Preparing the Board: Indigo² Solid IMPACT Graphics

If you have Indigo² Solid IMPACT graphics, follow the instructions in this section.

Since the Presenter board attaches to the graphics board, you need to make sure that there is no other option board on top of the graphics board set. See Appendix A for help identifying graphics boards with attached option boards.

The Indigo² Solid IMPACT graphics board is shown in Figure 1-22.

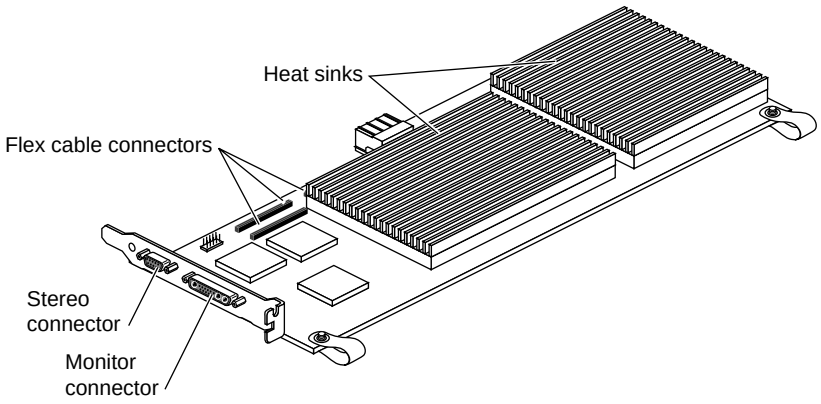

Figure 1-22 Identifying the Indigo² Solid IMPACT Graphics Board

1. If no option board is attached to the Indigo² Solid IMPACT graphics board, go to step 3.
2. If there is another board attached to the graphics board set, remove it by detaching the cables, screws, and pull straps and lifting it off the board. See Figure 1-18.
   - Remove the screws from the four corners of the board
   - Detach the pull straps from option board; pull sideways to release the adhesive on the back of the strap.
   - Disconnect the flex cables by pushing down on the levers on each end of the cable, and pulling up on the connector.
   - Remove the option board from the standoffs.

   Tip: If the standoffs spin as you remove the screw, use the wrench that comes with this package to hold the standoffs steady.
   - Go to "Attaching the Flex Cables: Indigo2 Solid IMPACT, High IMPACT, and Maximum IMPACT Graphics" on page 26.

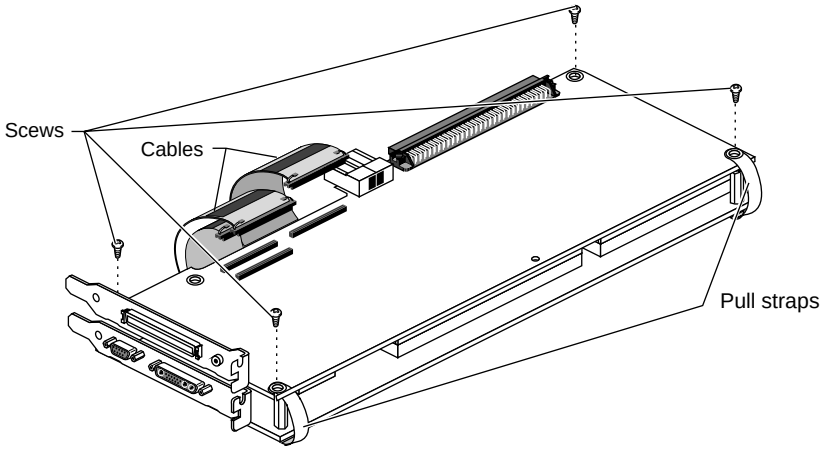

Figure 1-23 Removing an Option Board From an Indigo² Solid IMPACT Board

3. If no option board is attached to the Indigo² Solid IMPACT graphics board, remove the pull straps from the top of the board, as shown in Figure 1-24.
   - Remove the two screws that pass through the pull straps. Detach the pull straps from the top of the board.

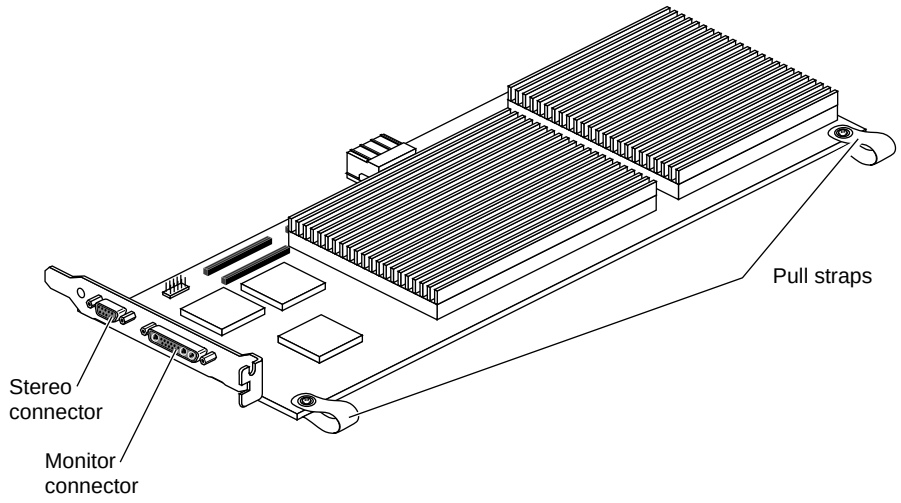

Figure 1-24 Preparing the Indigo² Solid IMPACT Graphics Board

Note: If the pull straps come loose from the bottom of the board, use the pull straps labeled 3-Board from the set you received.

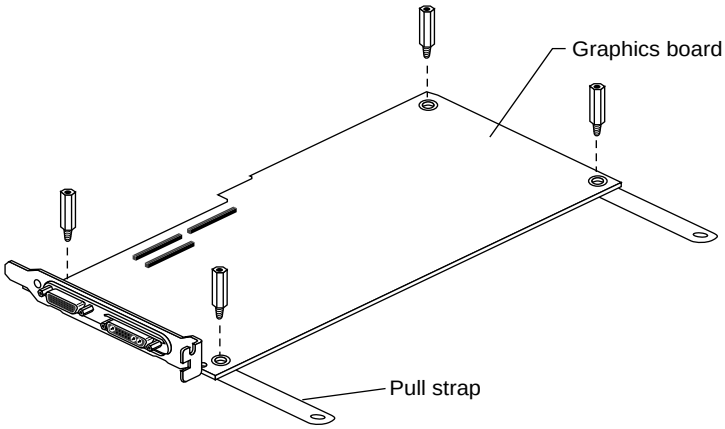

Figure 1-25 Attaching the New Pull Straps to the Indigo² Solid IMPACT Board

4. Install four standoffs into the four corners of the board.

Attaching the Flex Cables: Indigo² Solid IMPACT, High IMPACT, and Maximum IMPACT Graphics

Follow these steps to attach the flex cables to the graphics board or board set.

Note: The following illustrations show a Indigo² Maximum IMPACT graphics board set. The instructions are the same for all three graphics configurations.

1. Attach the two flex cables to the graphics board connectors, as shown in Figure 1-26 and Figure 1-27.
   - Attach one end of the two-connector cable to the single connector on the graphics board.
   - Attach the two connectors from one end of the four-connector cable to the pair of connectors on the graphics board.

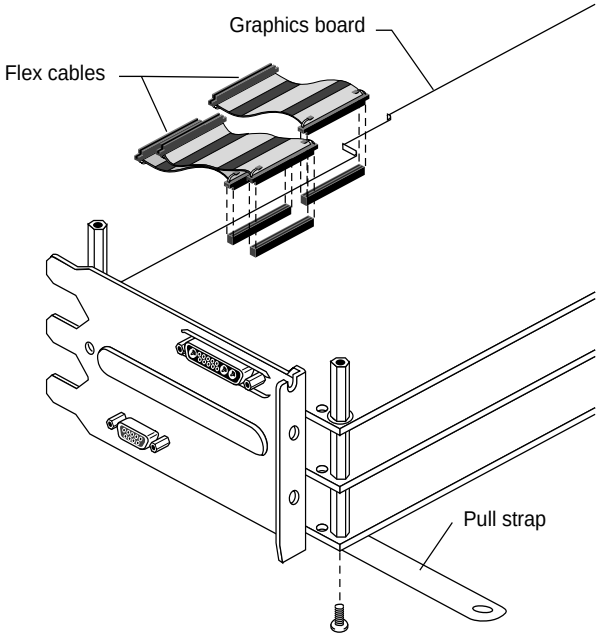

Figure 1-26 Attaching the Flex Cables to the Graphics Board

2. Use your thumb and fingers to squeeze the cable connectors into the connectors on the board. (See Figure 1-27.) Attach the connectors one at a time. Figure 1-28 provides a side view of a correctly and incorrectly seated cable connector.

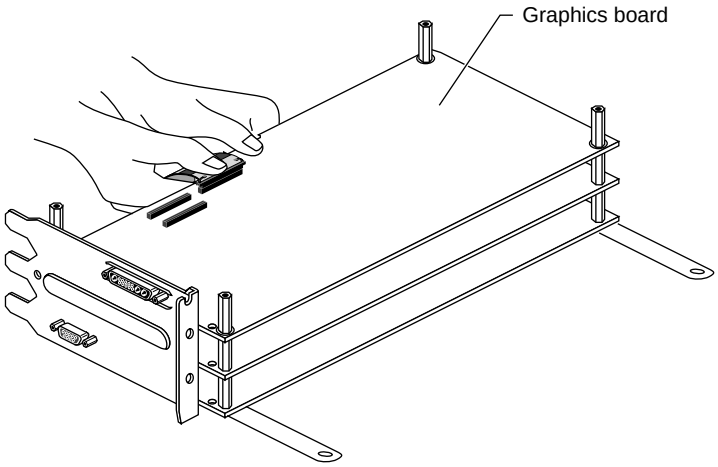

Figure 1-27 Attaching the Flex Cable Connectors

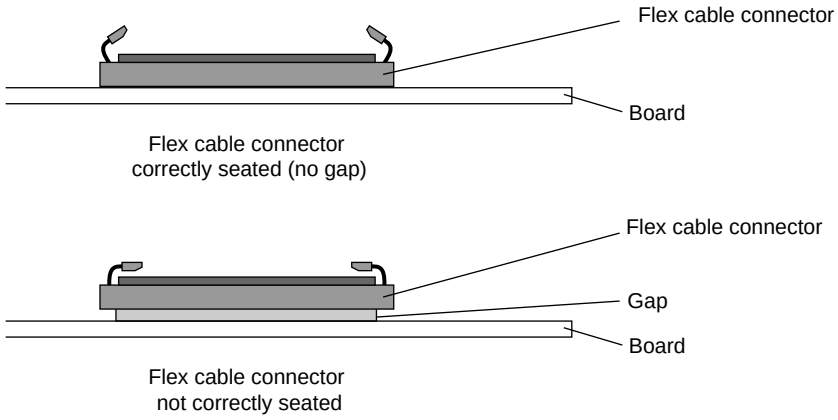

Figure 1-28 Side Views of the Flex Cable Connector

3. Slip the inner cable through the release levers of the outer cable of the two-cable set, as shown in Figure 1-29.

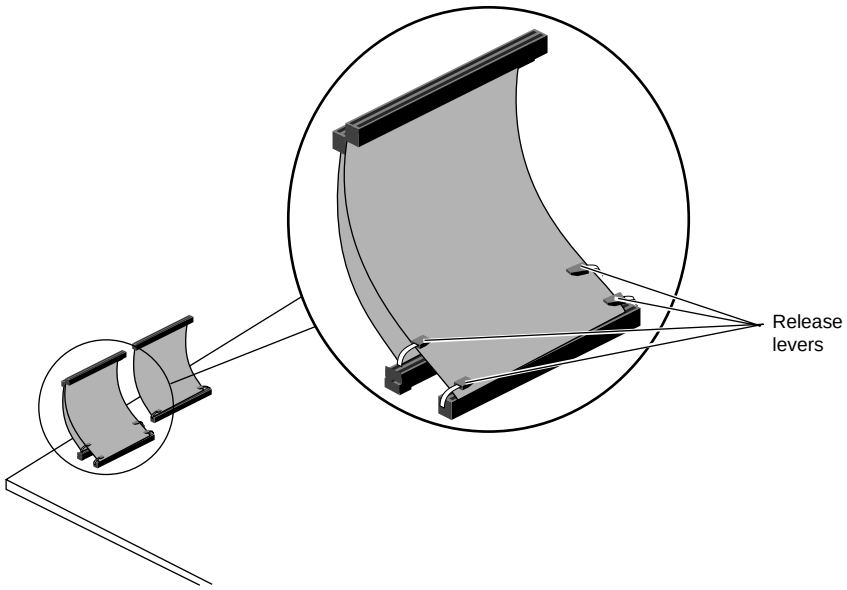

Figure 1-29 Slipping the Inner Cable Through the Outer Cable

Now go to the next section "Attaching the Presenter Board to the Graphics Board or Board Set" on page 30.

Attaching the Presenter Board to the Graphics Board or Board Set

Follow these steps to attach the Presenter board to either the Indigo² Solid IMPACT, High IMPACT, or Maximum IMPACT graphics boards. The illustrations show a Maximum board set, but the instructions are the same for all three graphics configurations.

1. Attach the Presenter board to the graphics board set, as shown in Figure 1-30.
   - Align the Presenter board over the top board of the graphics board set.
   - Position the pull straps over the screw holes on the Presenter board. Then insert and tighten the screws.
   - Insert and tighten the remaining two screws. See Figure 1-30.

     As you tighten the screws, alternate among them so that the board is fastened evenly.

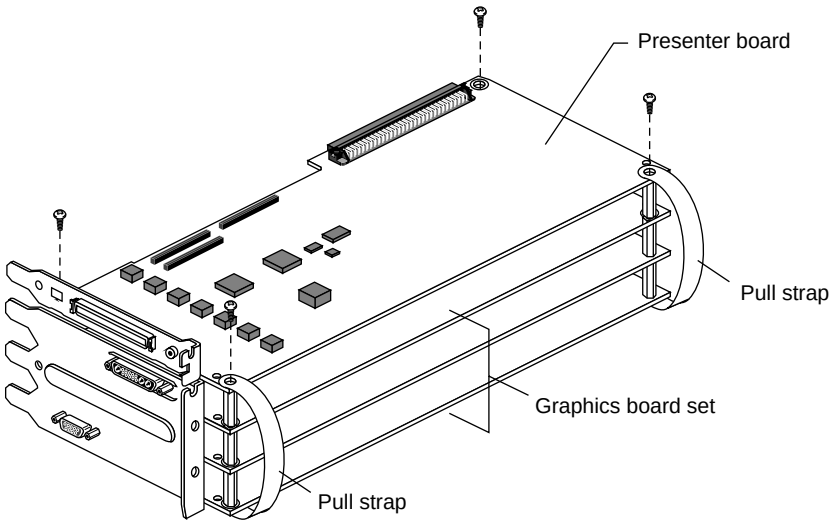

Figure 1-30 Attaching the Presenter Board to the Graphics Board Set

2. Attach the two flex cables to the corresponding connectors on the Presenter board, as shown in Figure 1-31.
   - Attach the single connector of the two-connector cable to the single connector on the Presenter board.

Note: Slide the top cable through the levers of the lower cable of the four-connector cable before you connect the cables to the board. See Figure 1-31.

   - Attach the two connectors of the four-connector cable to the pair of connectors on the Presenter board.

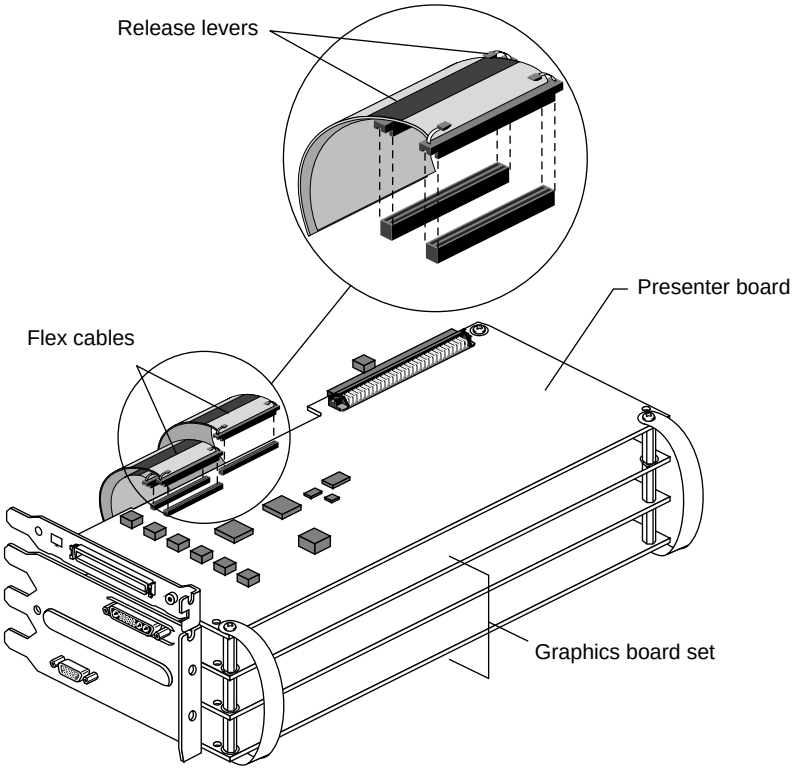

Figure 1-31 Attaching the Flex Cables to the Board

You have now attached the Presenter board to the graphics board set and are ready to reinstall the board set in the chassis.

Reinstalling the Board Set in the Chassis

Replace the graphics board or board set with the Presenter board attached in the same slots from which you removed the graphics board. If you need help determining which slots to use, see the following tables. If you know which slots to use, go to step 1, page 33.

See Table 1-1 if your workstation has Indigo² Solid IMPACT graphics and Table 1-2 for Indigo² High IMPACT graphics. Indigo² Maximum IMPACT graphics and Presenter use all four slots.

For the location of the board slots, see Figure 1-32 on page 33.

Table 1-1 Placement of Boards: Solid IMPACT Graphics

Board Combination	Use Slots
Indigo² Solid IMPACT and Presenter	B and C
Indigo² Solid IMPACT and Presenter and 1 GIO	Indigo² Solid IMPACT and Presenter in B and C and the GIO in D
Indigo² Solid IMPACT and Presenter and 1 EISA	Indigo² Solid IMPACT and Presenter in B and C, and the EISA in A
Indigo² Solid IMPACT and Presenter and 2 EISAs	Indigo² Solid IMPACT and Presenter in C and D, and EISAs in A and B

Table 1-2 Placement of Boards: High IMPACT Graphics

Board Combination	Use Slots
Indigo² High IMPACT and Presenter board	A, B and C, or B, C, and D
Indigo² High IMPACT and Presenter and 1 EISA	Indigo² High IMPACT and Presenter in B, C, and D and the EISA in A
Indigo² High IMPACT and Presenter and 1 GIO	Indigo² High IMPACT and Presenter in A, B, and C, and the GIO in D

The Indigo² Maximum IMPACT and Presenter boards use all four slots.

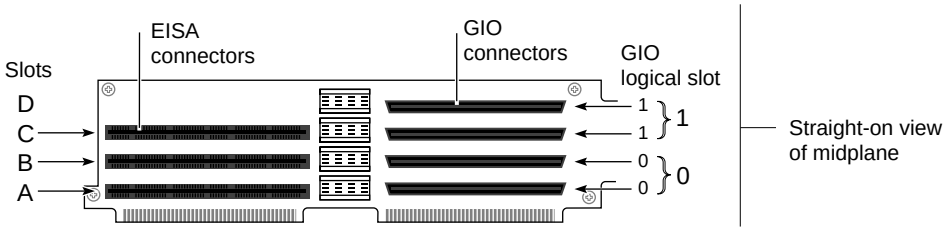

Figure 1-32 Locating the EISA and GIO Slots

Note: Although there are four GIO connectors, only one of each pair of GIO connectors, 0-0 or 1-1, may be used. You may connect only one GIO board or board set to one "0" connector in the pair 0-0, or to one "1" connector in the pair 1-1.

1. Re-install the graphics board set, with the Presenter board attached, in the same slots from which you removed it.

   - Align the metal extensions on the left of the board set with the slots in the chassis, and at the same time align the right edges of the board set with the metal grooves in the chassis, as shown in Figure 1-33.

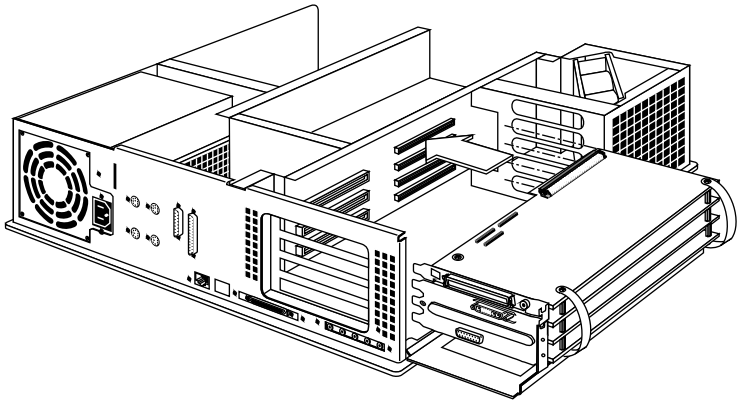

Figure 1-33 Aligning the Board Set With the Chassis

   - Slide the board set into the chassis and push the board connectors into the corresponding midplane connectors. See Figure 1-34.

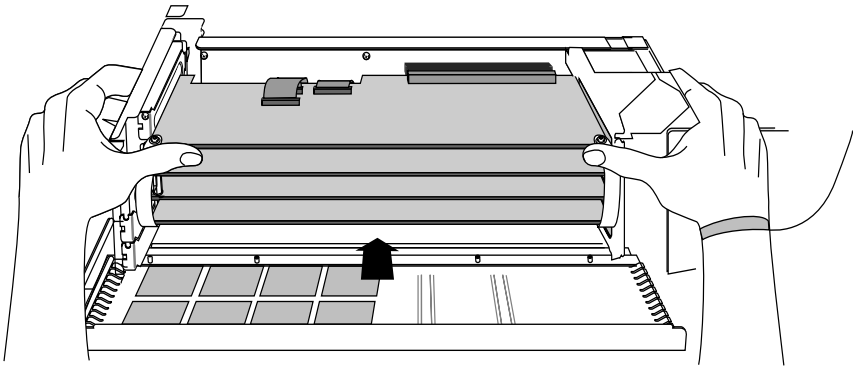

Figure 1-34 Inserting the Board Set Into the Chassis

Tip: You have to use a great deal of pressure to push the board connectors completely into the midplane connectors. When the connectors are completely seated, the metal panels on the left should be flush with the chassis. Figure 1-35 shows a top-down view of a GIO connector that is seated correctly and one that is not. A correctly seated connector has no gap between the two connectors.

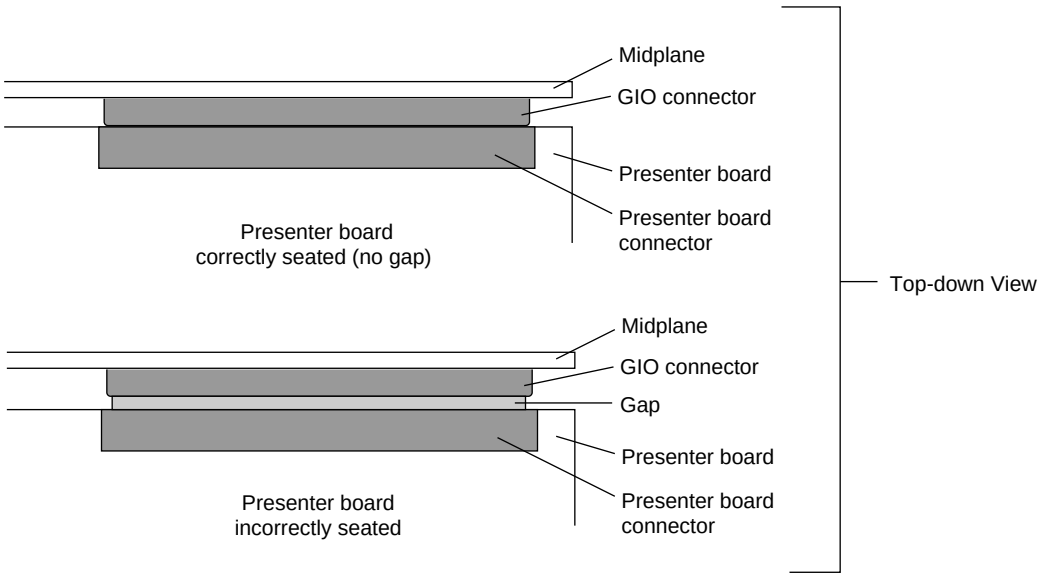

Figure 1-35 Checking the Seating of the GIO Connectors

2. Insert and tighten the screws that hold the board set to the chassis. The screw openings are on the metal extension on the left side of each board. See Figure 1-36.

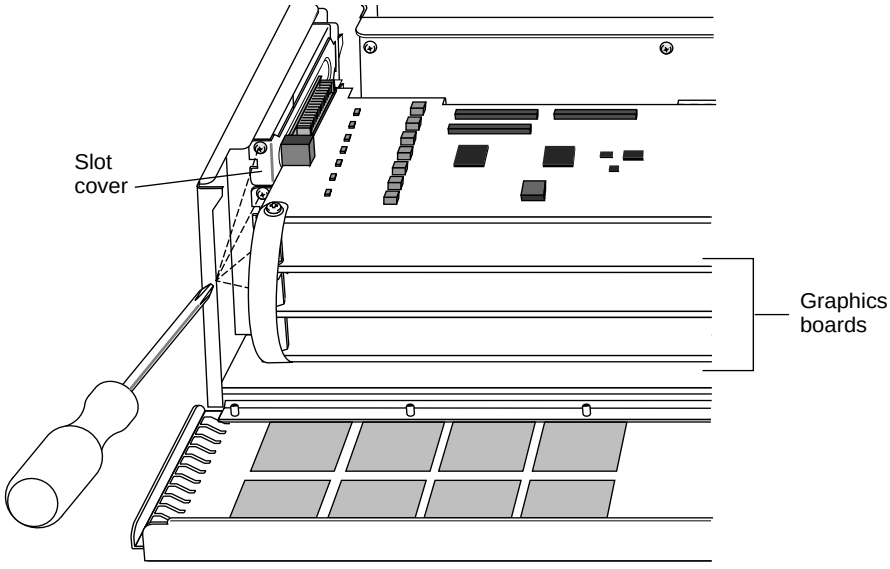

Figure 1-36 Securing the Board Set to the Chassis

3. Insert the retention pin that you removed earlier, as shown in Figure 1-37. This secures the Presenter and graphics boards to the chassis.

   Tip: If you cannot insert the retaining pin or close the metal panel, the boards are not completely seated in the midplane connectors.

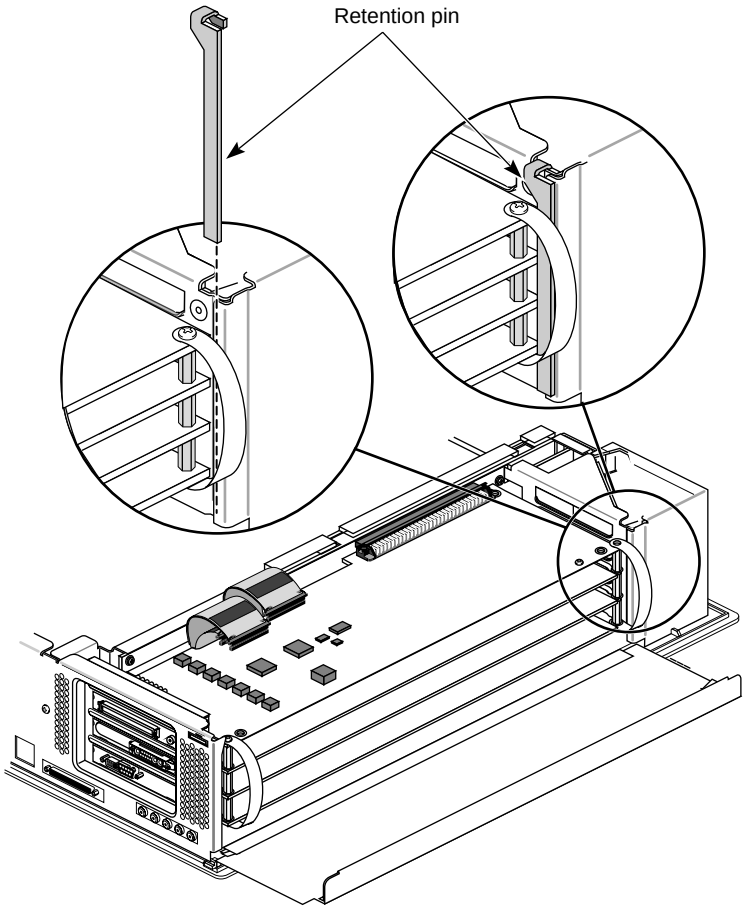

Figure 1-37 Inserting the Retention Pin

4. Connect the short black audio cable as follows:
   - Connect one end to the Presenter board's audio connector, as shown in Figure 1-38. (You can connect either end.)
   - Connect the other end to the line output connector on the rear of the Indigo² chassis.

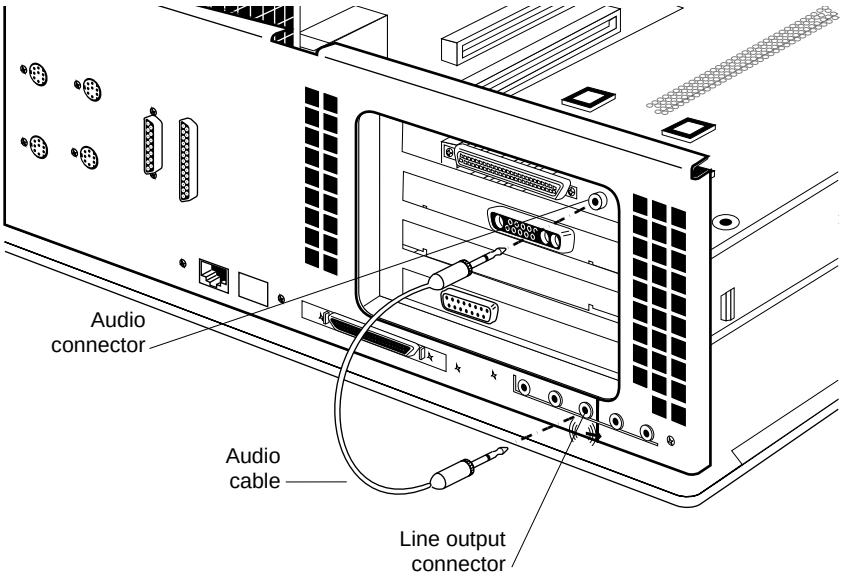

Figure 1-38 Connecting the Audio Cable

You are finished installing the Indigo² IMPACT Presenter board and are ready to replace the cover.

Replacing the Cover

To replace the cover, follow these steps.

1. Lift the metal panel and snap it down into place, as shown in Figure 1-39.

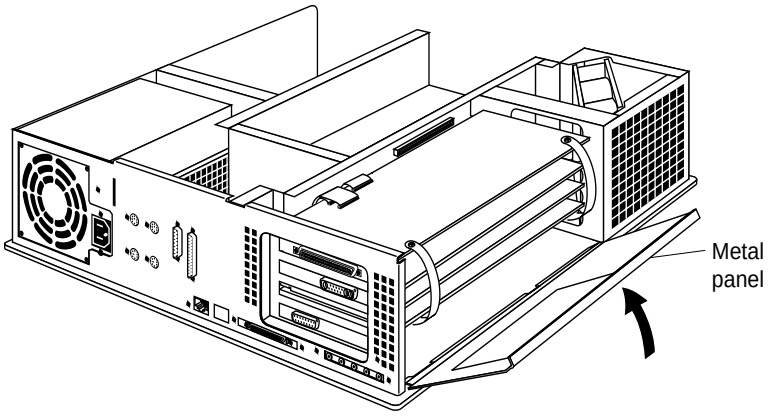

Figure 1-39 Closing the Metal Panel

2. Replace the top cover.
   - Locate the tabs on the inside and back of the top cover and the holes on the back of the workstation, as shown in Figure 1-40.
   - Face the front of the workstation and look through the holes as you slide the tabs into the holes.
   - Pull the cover down until it snaps into place. The cover fits tightly over the workstation.

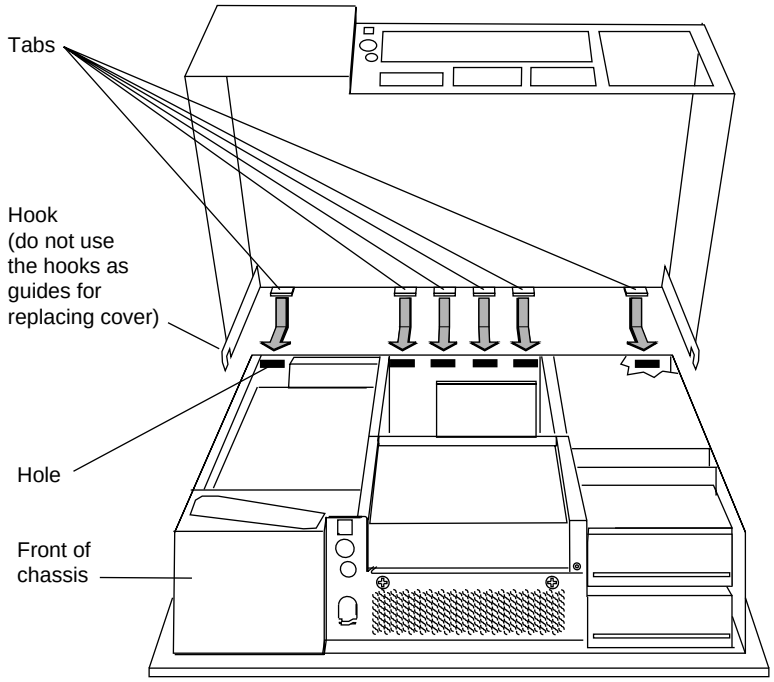

Figure 1-40 Replacing the Cover

3. Replace the bezel, as shown in Figure 1-41.
   - Insert the tabs on the bottom of the bezel into the grooves.
   - Pull up the bezel and snap it into place.
4. Replace the lockbar, if it was removed.
5. Close the front cover.

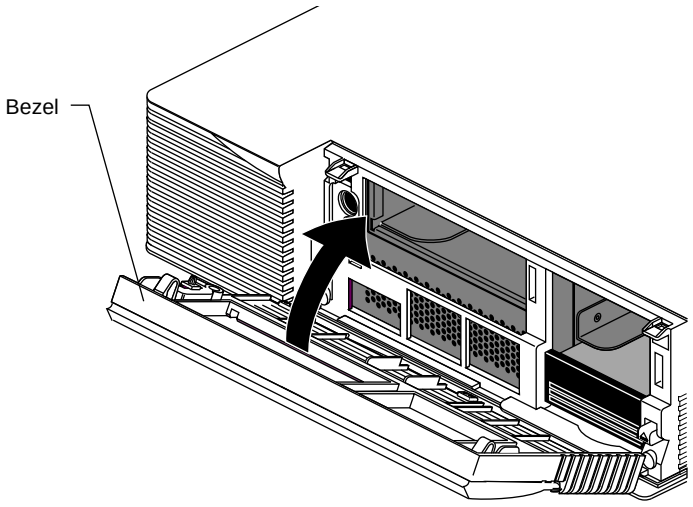

Figure 1-41 Replacing the Bezel

6. Reconnect the external cables you removed earlier. Be sure to connect the power cable. If you cannot remember where to reconnect the cables, refer to your workstation's owner's guide.

Connecting the Presenter Cables

After you have set up the Presenter monitor as described in its manual, connect the Presenter interface cable using the information in this section.

You do not need to turn off the workstation before connecting the cable.

Caution: The connectors have an elongated D shape. Make sure the D shapes match each other. If the cable is not installed correctly, the image on the presenter will be distorted.

1. Connect the interface cable to the Presenter connector on your workstation, as shown in Figure 1-42.
2. Connect the other end to the Presenter monitor. See the manual that comes with the Presenter monitor for details.
3. Connect the power cord from Presenter to an electrical outlet.

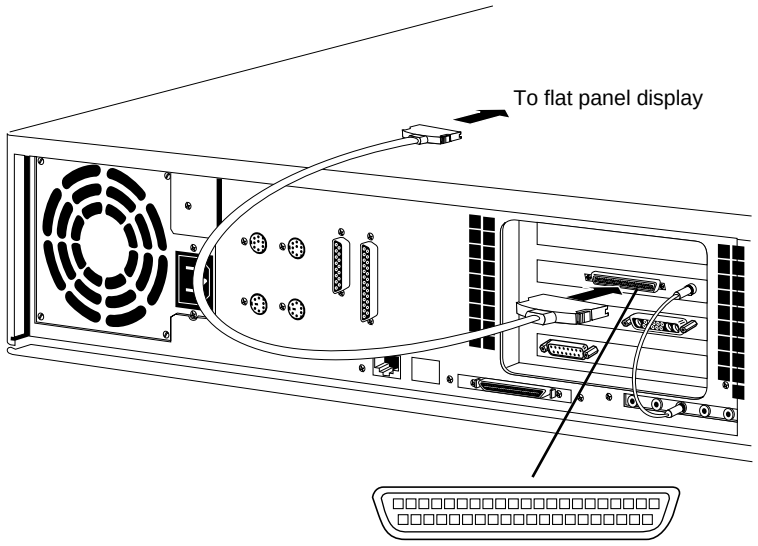

Figure 1-42 Location of the Connector for the Presenter Interface Cable

You are finished installing the Presenter board and are ready to install the software.

Installing the Software

Caution: You must install the correct software to prevent the Presenter 1280 flat panel from being permanently damaged.

The Presenter 1280 panel, after running two hours or more, can experience permanent damage if incorrect software is installed. The symptom is a discoloration, usually white or black, at the corners or edges of the panel, which grows in size as time passes.

This problem occurs only with Presenter 1280 running on IRIX 5.3.

Note: This problem does not occur with Indy Presenter (Presenter 1024). Follow the instructions in the next paragraph to install the software for either Presenter model.

Read the flier on software and PROM information that comes with the Indigo² IMPACT Presenter 1280 board. Also read the release notes on the CD for detailed information about the software. Then install the correct software. The correct software for the IRIX 5.3 baseline is on the CD with "Presenter 1280" in the title. Subsequent software releases, that is, IRIX 6.2 and later., do not require that the words, "Presenter 1280" be in the CD title.

Caution: If your baseline software is 5.3, install software only from a CD with "Presenter 1280" in the title.

Checking Presenter for Discoloration

After installing the software, follow these steps:

1. Run Presenter 1280 two hours. (The two-hour test period is valid if the screen saver runs, if content is displayed, or if a combination of the two occurs during the two-hour test period.)

   Caution: Do not run Presenter 1280 longer than two hours for this test, or the Presenter 1280 panel may be permanently damaged if the discoloration problem exists.

2. At the end of two hours, carefully inspect the corners and edges of Presenter 1280 for discolored areas.

   Caution: If you see discolored areas in the corners or on the edges of Presenter 1280, immediately turn off Presenter and disconnect the power cable and the cable between the Presenter 1280 and the Indigo² IMPACT adapter board.

3. Wait two hours to allow the panel to recover.
4. Read the release notes and flier again, and check the CD to determine which software to install.
5. Reinstall the software and run the test again.
   - Reconnect the power cable.
   - Reconnect the cable between the Indigo² IMPACT adapter board and Presenter.
   - Install the correct software.
   - Run Presenter 1280 again for two hours.
   - Recheck the corners and edges for discolored areas.

   Caution: Immediately turn off and disconnect Presenter 1280 if this installation is unsuccessful.
6. If your software installation is again unsuccessful, call your authorized service representative. See Chapter 2, “Product Support” on page 51 for help contacting your service representative.

Chapter 2

Troubleshooting Information

This chapter contains information on what to do if your system or installation experiences problems. Each section describes a problem and provides instructions on how to solve the problem.

For additional troubleshooting information, see the manual that comes with Presenter.

Checking Connections and Installation

If, after installing the hardware, software, and interface and power cables, Presenter does not light up, follow the steps below.

1. Check that the interface cable between Presenter and the Indigo² IMPACT is connected firmly.
2. Check that the Presenter power cable is connected.
3. Turn off the workstation by pressing and releasing the power switch on the front of the chassis.
4. Remove the top cover.
5. Check all the hardware you installed to make sure the boards are seated correctly and that the connectors are fitting snugly.
6. Run the diagnostics test for Presenter. See “Running Diagnostic Tests for Presenter.”

Running Diagnostic Tests for Presenter

If, after following the suggestions above, you still believe there is a problem with Presenter, run the Confidence Test from your CRT monitor. (If you are not running on the most current operating system, see the release notes on the CD that came with the Presenter board.) Follow these steps:

1. From the System toolchest, choose “Run Confidence Tests.”

   The Confidence Tests appears.

2. Select the *Presenter* icon and click *Open,* or double-click the icon.
3. Follow the instructions on each screen to test the display, speakers, and Presenter board.
4. To close the Confidence Test, press **<Esc>**.

If any of the tests indicate a failure, contact your service provider for further instructions. If you are instructed by your service provider to return the Presenter board, see “Removing the Presenter Board.”

Banding on the Screen of Presenter 1024

Indigo^2 IMPACT graphics supports visuals not previously available. These visuals are not optimal when used in conjunction with Presenter 1024, resulting in banding on smooth-shaded images.

If you are experiencing banding on smooth-shaded images using Presenter 1024, the software patch correcting this problem probably has not been installed. See the release notes for a technical explanation of the cause of banding, and for information about which software patch to install.

Creeping Discolored Areas on the Corners or Edges of Panel

The Presenter 1280 panel, after running two hours or more, can experience a serious problem if the incorrect software is installed. The symptom is a discoloration, usually white or black, at the corners or edges of the panel which grows in size as time passes. Eventually, as the discolored areas move toward the middle of the panel, black areas also develop before the flat panel is destroyed.

Caution: Turn Presenter 1280 off and disconnect it as soon as you notice discolored areas appearing at the corners or edges of your panel. Leaving Presenter 1280 turned on with this problem occurring can destroy it.

Note: This problem does not occur on Indy Presenter (Presenter 1024).

Read the flier on software and PROM information that comes with the Indigo^2 IMPACT Presenter 1280 board. Also read the release notes on the CD for detailed information about the software. Then install the appropriate software. The correct software is on the CD with "Presenter 1280" in the title. Subsequent software releases, that is IRIX 6.2 and later, do not require that the words "Presenter 1280" be in the CD title.

Caution: If your baseline software is 5.3, install software only from a CD with "Presenter 1280" in the title.

Checking Presenter for Discoloration

After installing the software, follow these steps:

1. Run Presenter 1280 two hours. (The two-hour test period is valid if the screen saver runs, if content is displayed, or if a combination of the two occurs during the two-hour test period.)

   Caution: Do not run Presenter 1280 longer than two hours for this test, or the Presenter 1280 panel may be permanently damaged if the discoloration problem exists.

2. At the end of two hours, carefully inspect the corners and edges of Presenter 1280 for discolored areas.

   Caution: If you see discolored areas in the corners or on the edges of Presenter 1280, immediately turn off Presenter 1280 and disconnect the power cable and cable between the Presenter and the Indigo^2 IMPACT adapter board.

3. Wait two hours to allow the panel to recover.
4. Read the release notes and flier again, and check the CD to determine which software to install.
5. Reinstall the software and run the test again.
   - Reconnect the power cable.
   - Reconnect the cable between the Indigo² IMPACT adapter board and Presenter.
   - Install the correct software.
   - Run Presenter 1280 again for two hours.
   - Recheck the corners and edges for discolored areas.

   Caution: If this installation is unsuccessful, immediately turn off Presenter 1280 and disconnect the power cable and cable between the Indigo² IMPACT adapter board and Presenter 1280.
6. If the software installation is unsuccessful, call your authorized service representative. See Chapter 2, "Product Support" on page 51 for help contacting your service representative.

"Product Support" on page 51 provides information about contacting your service representative.

Removing the Presenter Board

If you need to remove the Presenter board for any reason, follow these steps:

1. Power off the Indigo² IMPACT workstation by pressing and releasing the power switch. (See "Turning Off the Power" on page 5 if necessary.)
2. Disconnect the power and monitor cables from the rear of the workstation.
3. Disconnect the small black audio cable from the audio connector on the Presenter board and from the line output connector on the rear of the chassis. (See Figure 2-1.

Note: The illustrations show an Indigo² Maximum IMPACT board set with the Presenter board attached. The instructions are the same for Indigo² Solid IMPACT and Indigo² High IMPACT graphics.

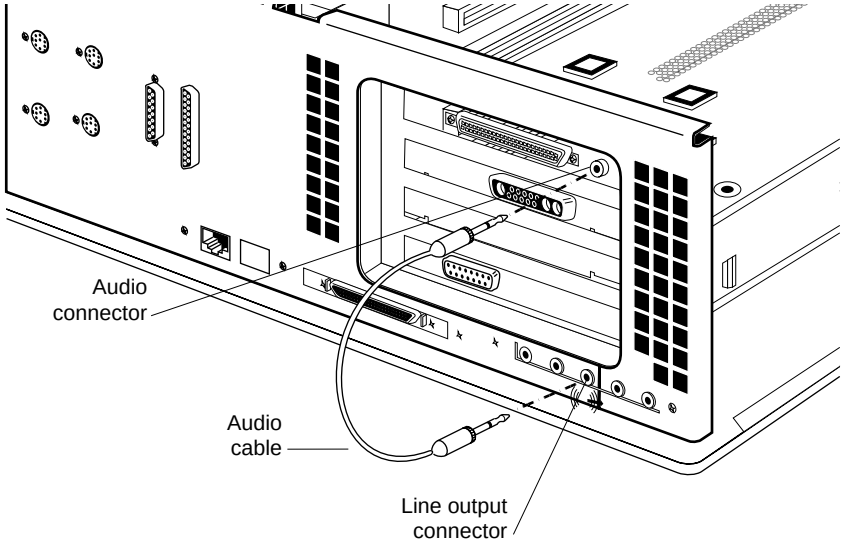

Figure 2-1 Removing the Audio Cable

4. Remove the front bezel and top cover of your Indigo² IMPACT workstation. (If necessary, see "Removing the Cover" on page 5.)
5. Open the metal panel in front of the expansion slots by pulling up on the panel and lowering it.
6. Use a Phillips screwdriver to remove the screws that hold the board set to the chassis. The screw openings are on the metal extension on the left side of each board. (If necessary, see Figure 1-11.)
7. Remove the board set from the chassis, as shown in Figure 2-2. Depending on which graphics your system has, it is either a two, three, or four-board set. The top board is the Presenter board.
   - Place your index fingers behind the plastic loops on each side of the board set.
   - Brace your knuckles and thumbs against the chassis frame and pull the board set out of its slots.

   Note: It may take some pressure to detach the boards from the midplane connectors.

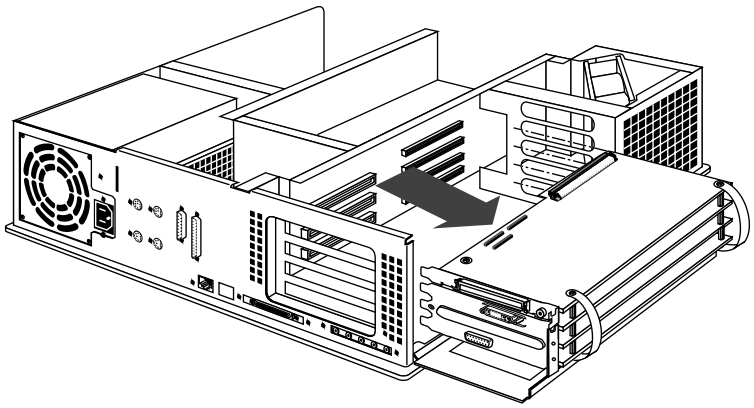

Figure 2-2 Removing the Board Set From the Chassis

8. Disconnect the two flex cables from the connectors on the Presenter board, as shown in Figure 2-3.
   - Disconnect the cable that is attached to the single flex connector on the Presenter board.
   - Disconnect the cable that is attached to the two flex connectors on the Presenter board.
9. Use a Phillips screwdriver to remove the four Phillips screws shown in Figure 2-3.

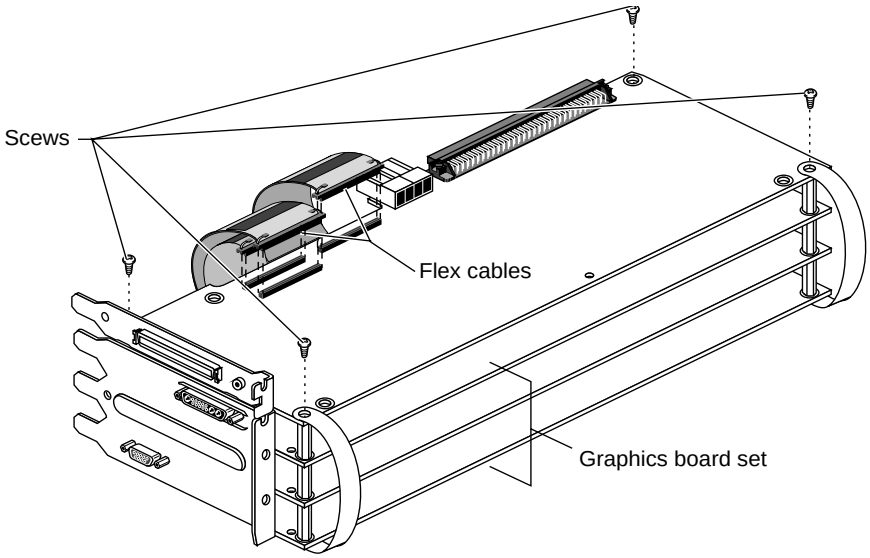

Figure 2-3 Disconnecting the Flex Cables

10. Detach the pull straps from the top of the Presenter board. The straps have adhesive backing.
11. Remove the Presenter board from the standoffs.
12. Install the replacement board, following the instructions in "Attaching the Presenter Board to the Graphics Board or Board Set" on page 18.

Product Support

Silicon Graphics provides a comprehensive product support and maintenance program for its products. If you are in North America and would like support for your Silicon Graphics-supported products, contact the Technical Assistance Center toll free at 1-800-800-4SGI, or your authorized service provider. If you are outside North America, contact the Silicon Graphics subsidiary or authorized distributor in your country.

Appendix A

Identifying Graphics and Option Boards

Indigo² IMPACT Presenter Board

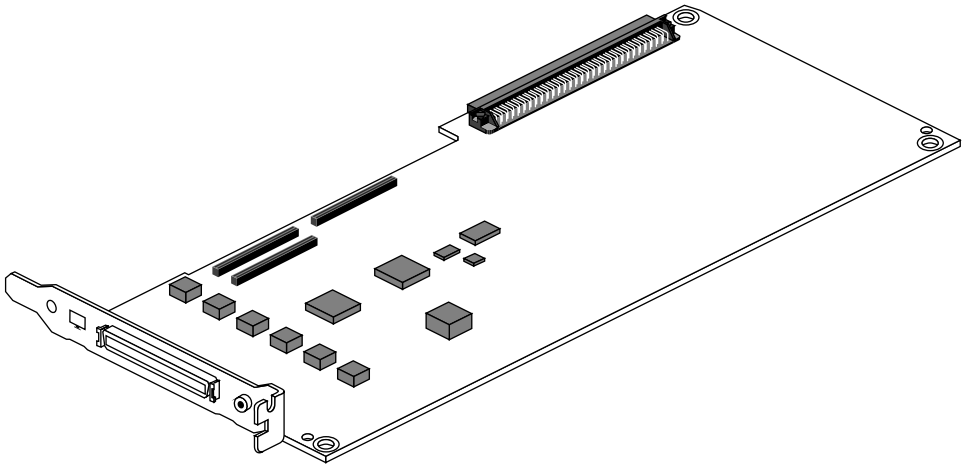

Figure A-1 Indigo² IMPACT Presenter Board

Graphics Boards and Option Boards

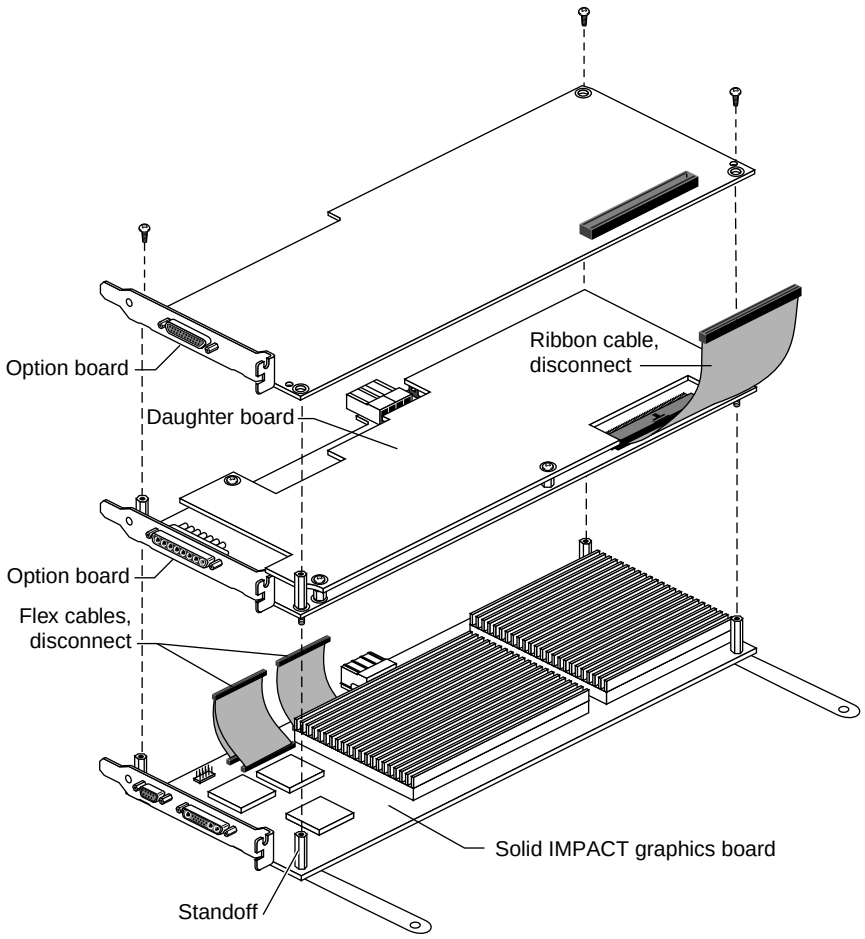

Figure A-2 Indigo² Solid IMPACT Graphics Board With Option Boards

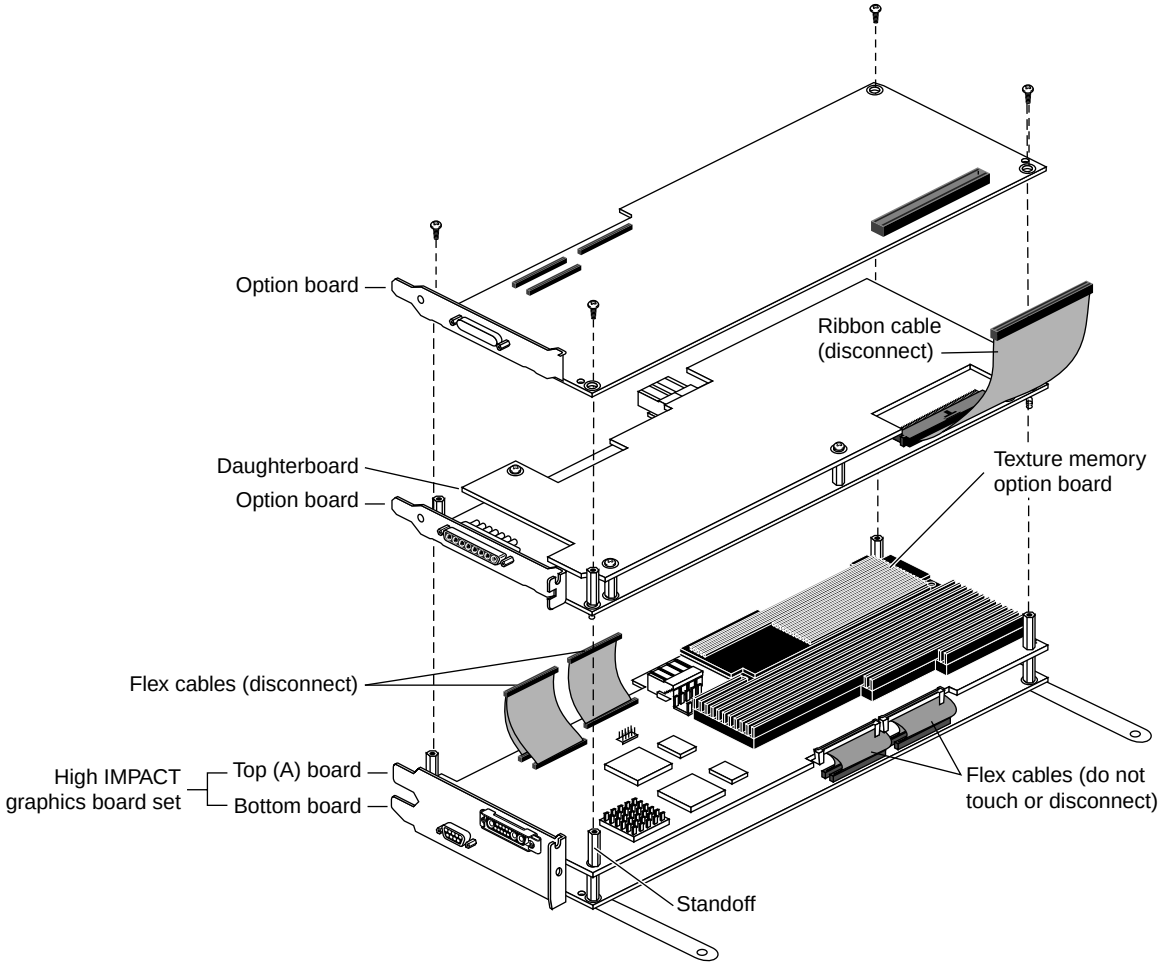

Figure A-3 Indigo² High IMPACT Graphics Board With Option Boards

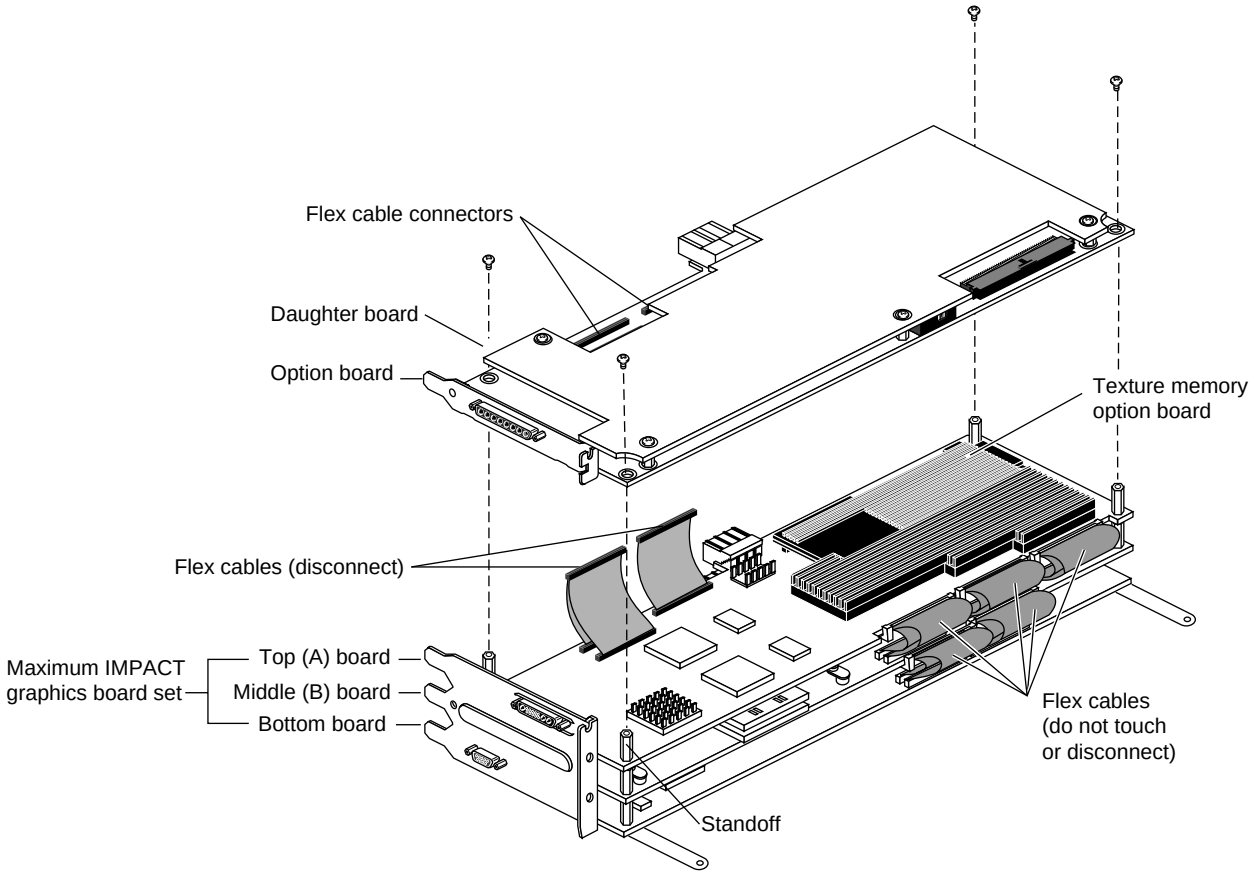

Figure A-4 Indigo² Maximum IMPACT Graphics Board With Option Boards

Appendix B

Regulatory Information

This chapter provides regulatory information about your workstation.

This chapter contains information on the following topics:

- "Manufacturer's Regulatory Declarations for the Indigo2 IMPACT Presenter Board" on page 57
- "Manufacturer's Declaration of Conformity" on page 58
- "Regulatory Label" on page 58
- "Electromagnetic Emissions" on page 58
- "Radio and Television Interference" on page 59
- "Shielded Cables" on page 60
- "Electrostatic Discharge" on page 60
- "Exterior of Workstation" on page 61

Manufacturer's Regulatory Declarations for the Indigo² IMPACT Presenter Board

Note: Your workstation has several governmental and third-party approvals, licenses, and permits. Do not modify this product in any way that is not expressly approved by Silicon Graphics. If you do, you may lose these approvals and your governmental agency authority to operate this device.

The Indigo² IMPACT Presenter board conforms to several national and international specifications and European Directives listed on the "Manufacturer's Declaration of Conformity." The CE mark insignia displayed on each device is an indication of conformity to the aforementioned European requirements.

Manufacturer's Declaration of Conformity

A "Manufacturer's Declaration of Conformity" is available on the World Wide Web. Look on the system (regulatory) label on the rear of your workstation to determine your CMN (model) number, which you will need to identify your Declaration of Conformity. See Figure B-1 (Exterior of Workstation) at the end of this chapter for the location of your system label.

To locate the information on the World Wide Web, enter the following in your Web browser location window:

```
http://www.sgi.com/Products/compliance/index.html
```

Locate and print or save your Declaration of Conformity. For future reference, make a note of your CMN number and the date on the Declaration of Conformity here:

_____

Regulatory Label

If you received a regulatory label with a graphics board upgrade, place the label below the logos and over the lower portion of the regulatory label on the rear of your workstation. See Figure B-1 for placement of the upgrade regulatory label.

Electromagnetic Emissions

This device complies with the Class A limits of Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

This device complies with Class A electromagnetic emissions limits of C.I.S.P.R. Publication 22, Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment, Germany's BZT Class A limits for Information Technology Equipment, and with Japan's VCCI Class 1 limits.

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Radio and Television Interference

The equipment described in this guide generates and uses radio frequency energy. If it is not installed and used in accordance with the instructions in this guide, it can cause radio and television interference.

This equipment has been tested and complies with the limits for a Class A computing device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in an industrial or office installation. However, there is no guarantee that the interference will not occur in a particular installation. This system is not certified for home use.

You can determine whether your system is causing interference by turning it off. If the interference stops, it was probably caused by the workstation or one of the peripherals. To tell if the interference is caused by one of the peripherals, try disconnecting one peripheral at a time to see if the interference stops. If it does, that peripheral is the cause of the interference.

If your workstation does cause interference to radio or television reception, try to correct the interference by using one or more of the following suggestions:

- Turn the television or radio antenna until the interference stops.
- Move the workstation to one side or the other of the radio or television.
- Move the workstation farther away from the radio or television.
- Plug the workstation into an outlet that is on a different circuit from the radio or television. (That is, make certain the workstation and the radio or television are on circuits controlled by different circuit breakers or fuses.)

Shielded Cables

The Indigo² IMPACT workstation is FCC-compliant under test conditions that include the use of shielded cables between Indigo² IMPACT workstation and its peripherals. Your Indigo² IMPACT workstation and any peripherals you purchase from Silicon Graphics have shielded cables. Shielded cables reduce the possibility of interference with radio, television, and other devices. If you use any cables that are not from Silicon Graphics, make sure they are shielded. Telephone cables do not need to be shielded.

In Germany, a shielded cable must be used on the Ethernet 10-BASE T port.

The monitor cable supplied with your system uses additional filtering molded into the cable jacket to reduce radio frequency interference. Always use the cable supplied with your system. If your monitor cable becomes damaged, a replacement cable should be obtained from Silicon Graphics.

Electrostatic Discharge

Silicon Graphics designs and tests its products to be immune to effects of electrostatic discharge (ESD). ESD is a source of electromagnetic interference and can cause problems ranging from data errors and lockups to permanent component damage.

It is important that while you are operating your Indigo² workstation you keep all the covers and doors, including the plastics, in place. The shielded cables that came with the workstation and its peripherals should be installed correctly, with all thumbscrews fastened securely.

An ESD wrist strap is included with some products, such as memory and graphics upgrades. The wrist strap is used when installing these upgrades to prevent the flow of static electricity, and it should protect your system from ESD damage.

Exterior of Workstation

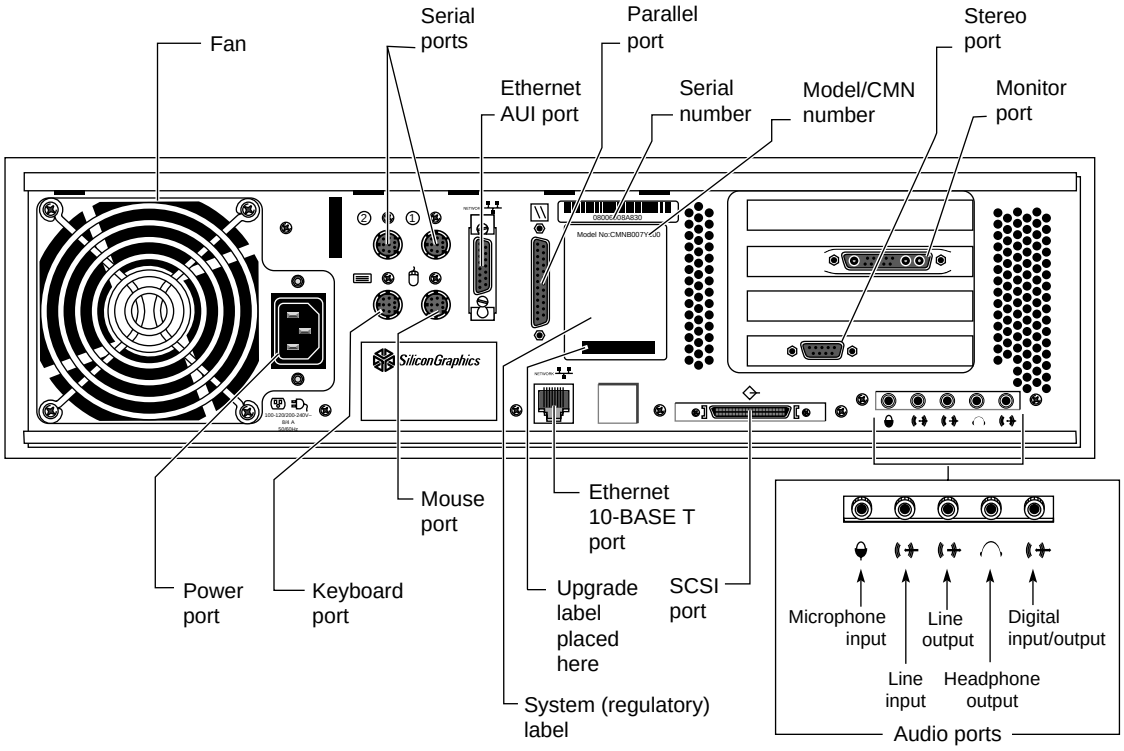

Figure B-1 Exterior of Workstation

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- Technical errors
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