

Installation Guide

Rear Projection SMART Board™ 4000i Interactive Whiteboard

Registration Benefits

In the past, we've made new features available as free software upgrades. Register your SMART product to be notified of free upgrades like these.

Keep the following information available in case you need to contact Technical Support:

Serial Number _____

Date of Purchase _____

Register online at www.smarttech.com/registration

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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U.S. Patent Nos. 5,448,263; 6,141,000; 6,326,954; 6,337,681; 6,741,267; 6,747,636; 6,803,906; 6,919,880; 6,947,032; 6,954,197; 6,972,401 and 7,151,533. Canadian Patent No. 2,058,219. European Patent No. 1,297,488. Other U.S., Canadian and foreign patents pending.

Important Information

Please read this manual carefully before setting up and using the *Rear Projection SMART Board™* 4000i interactive whiteboard.

WARNING



The projector inside the unit is a high brightness light source. Don't look directly into the beam of light. Prevent children from looking directly into the beam.

WARNING



To reduce the risk of fire or electric shock, don't expose this product to rain or moisture.

WARNING



(For European customers only)

Use the 4000i with European TN and TT power distribution systems only. The 4000i isn't suitable for older, IT-type power distribution systems found in some European countries. "This system (IT-type) is widely used isolated from earth, in some installations in France, with impedance to earth, at 230/400V, and in Norway, with voltage limiter, neutral not distributed, at 230V line-to-line." (IEC 60950:1999)

Contact qualified personnel if you're uncertain about the type of power system available where you're installing the 4000i.

CAUTION



The projector inside the 4000i has been designed for use under normal operating conditions only. Normal operating conditions are defined as product use that does not exceed eight hours per day and 260 days per year. Exceeding these operating conditions could cause projector damage. Damage caused by such extended use won't be covered by the product warranty.

Other Precautions

For operating safety and to avoid damage to the cabinet and its parts, please read the following information carefully.

- Move the unit with care. Quick stops, excessive force and movement over uneven surfaces can overturn the unit.
- If you transport the 4000i, ship it in an upright position only, and never lay it facedown. In addition, ensure that the projector is secure, or remove the projector from the cabinet and package it with as much padding as is reasonably possible to protect it from vibration and shock.
- If you transport the 4000i over a long distance, completely repackage it using the original packaging. This packaging was designed with optimal shock and vibration protection. If the original packaging isn't available, pack all the components with as much padding as reasonably possible to protect them from vibration or shock.
- Clean the interactive whiteboard surface regularly so that dust doesn't build up on the surface and adversely affect the operation of the 4000i.

- Don't touch the rear surface of the screen or apply isopropyl alcohol, water or acetone to it. These fluids will damage the diffusion coating, resulting in a permanent deterioration in display quality.
- If you inadvertently smudge the rear surface of the screen, dab it carefully with a soft cloth and alcohol-free glass cleaner. Don't spray glass cleaner directly on the back of the screen; spray it lightly on the cloth and then gently dab the rear surface until the marks are removed.
- The 4000i uses digital cameras located inside the screen frame. Don't allow excess glass cleaner to flow into the crack between the frame and the writing surface, because the cleaner could damage these cameras.
- Lock the casters after you set up the cabinet so that it remains stationary when in use.
- Avoid setting up and using the 4000i in an area with excessive levels of dust, humidity or smoke.
- Avoid exposing the 4000i to extreme heat or cold. The operating temperature range is from 41°F to 85°F (5°C to 29°C) with up to 80% humidity (non-condensing). The shipping and storage temperature range is from 14°F to 95°F (-10°C to 35°C) with up to 80% humidity (non-condensing).
- Make sure there is a power outlet near the 4000i that remains accessible during use.
- Use safe practices when you're connecting the 4000i power cord to a power outlet. For example, make sure your hands are dry and don't insert the plug into a dusty outlet.
- If possible, disconnect the 4000i's power cord from the power outlet before thunderstorms. However, don't touch the 4000i or its power cord during a thunderstorm, because you may be at risk of electrical shock.
- If you won't use the 4000i for an extended period, disconnect the unit's power cord from the power outlet.
- Disconnect the 4000i's power cord from the power outlet before you install or service any components.
- This 4000i comes with a three-prong, grounding-type power plug (designed to fit into a grounding-type power outlet). If you can't insert the plug into a power outlet, contact an electrician to replace the power outlet. Don't modify the power plug.
- Don't modify the power cord. Handle it carefully and avoid bending it excessively. Don't place the power cord in an area where it's likely to be stepped on or pinched by items placed on or against it. If you must run a cable over the floor, lay it in a flat, straight line, and secure it to the floor with tape or a cable management strip of contrasting color.
- If your 4000i requires replacement parts, use the parts that are specified by SMART Technologies Inc.

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About the 4000i

The 4000i is a *Rear Projection* SMART Board interactive whiteboard cabinet with an integrated liquid crystal display (LCD) projector and a 66" (167.6 cm) diagonal interactive screen.

A mirror system in the cabinet reflects the projected image onto the back of the interactive whiteboard screen, eliminating the shadows that may occur in a front projection system.

You can switch between different projector input sources (host computer, VCR, DVD player and guest laptop) with the press of a control panel button.

DViT™ (Digital Vision Touch) technology uses digital cameras to track objects on the interactive whiteboard. Each camera recognizes the position of a pen tray tool or your finger on the screen and sends this information to the computer for processing. You can perform normal computer operations, such as opening and closing applications, scrolling through files and opening your browser by touching the screen.

4000i Features

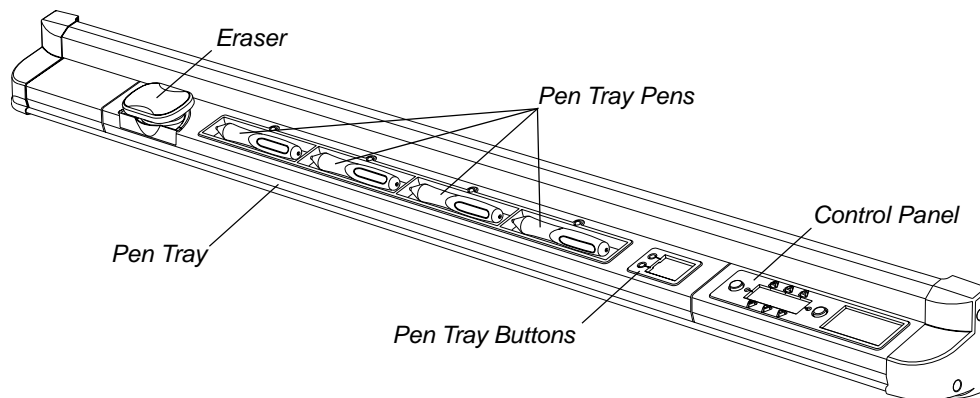
- Touch sensitive, rear projection interactive whiteboard that you can use like a standard computer. You can write over any application in digital ink using a pen tray pen or your finger and save your digital ink notes as a Notebook™ software file for reference and distribution.
- Integrated projectiondesign® F20 projector with short-throw lens.
- Audio system.
- Pen tray (including four pens and an eraser), a wireless keyboard and a wireless mouse.
- Control panel with projector, volume and source switching controls. The control panel also provides button-press access to Notebook software and Floating Tools.
- Connection panel at the rear of the cabinet that allows you to connect a network cable, printer and room audio system.
- Locking front doors for enhanced security.
- Minimal floor space requirements: the 4000i fits through most standard doorways for room-to-room mobility.

The projectiondesign F20 Projector

The F20 projector has SXGA+ resolution (1400 × 1050 pixels) and is adapted for use in the 4000i.

NOTE: See page 14 for information on adjusting the projected image.

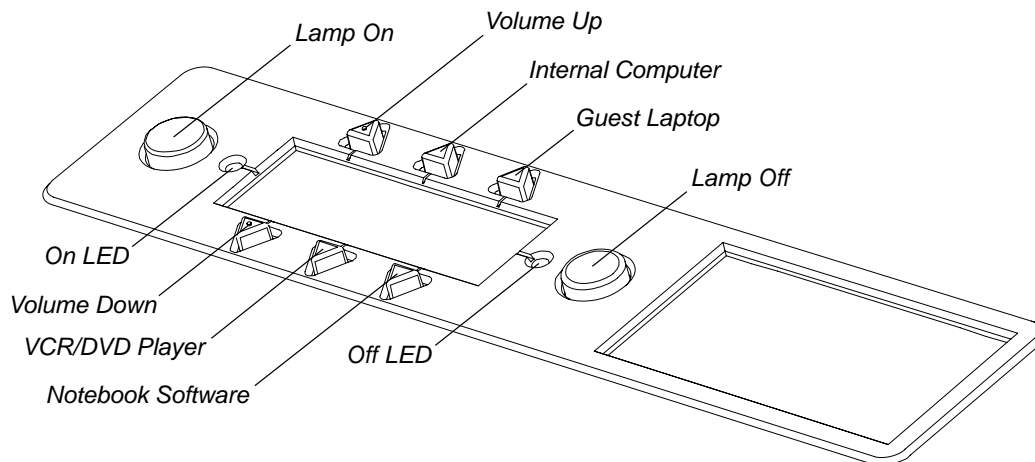
Pen Tray Features



Using a pen tray pen, you can write over the computer image with digital ink. You can use SMART Board software to change any of these pens to highlighters, assign a new color, or alter their width. You can also change the eraser's size.

The top pen tray button opens the SMART Keyboard for on-screen typing. The bottom button makes your next contact with the interactive whiteboard a right-click. You can also configure these buttons to perform other functions.

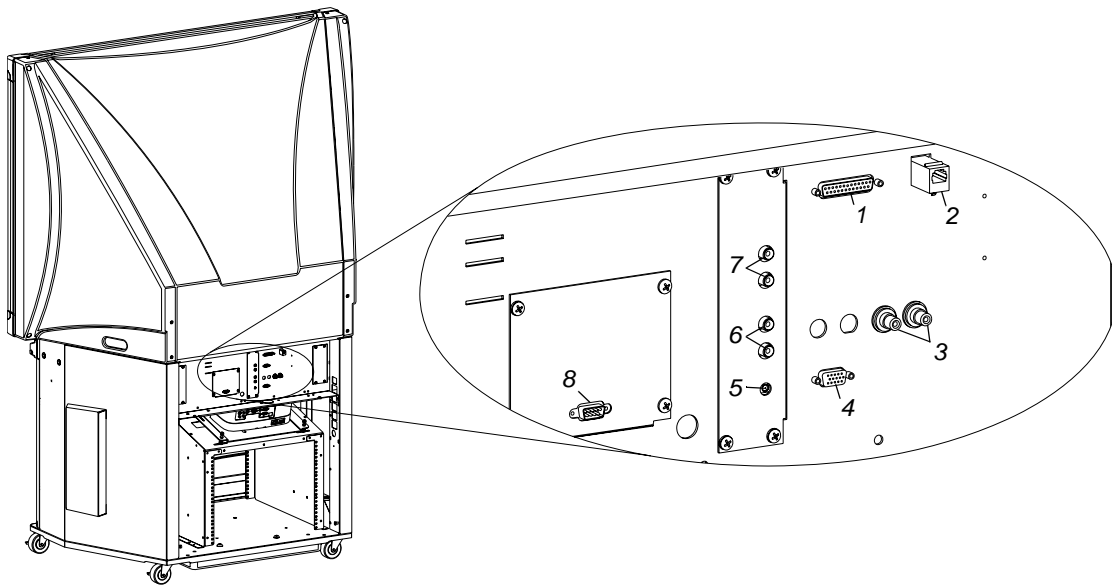
Control Panel



You can use the control panel to start the 4000i, put the 4000i into Standby mode, change the display source of the projector, adjust the volume of the internal sound system and start Notebook software.

Connection Panel

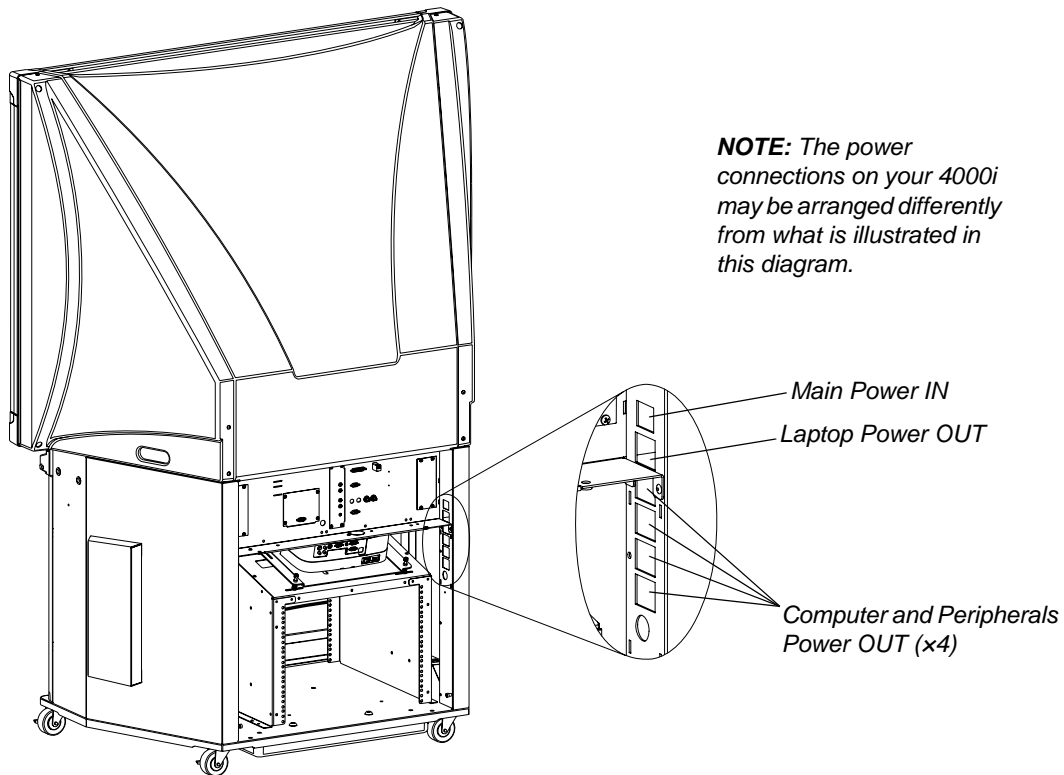
You can use the connection panel to make a variety of external connections to the 4000i cabinet.



1. **Printer (Female)** – Enables connection to an external printer. See page 9 for more information.
2. **Network** – Enables connection to a network. See page 10 for more information.
3. **VCR/DVD Audio OUT** – These cables are already linked with an RCA cable to the **Audio IN** jacks on the connection panel. Keep the right and left channel connections correct for stereo sound.
4. **Computer 2 Video IN (Female)** – Used to connect a guest laptop. See page 10 for more information.
5. **Computer 2 Audio IN (Female)** – Used to connect a guest laptop. For more information, see page 10.
6. **Audio IN** – These connectors are already linked with an RCA cable to the **VCR/DVD Audio** jacks on the connection panel. Keep the right and left channel connections correct for stereo sound.
7. **Room Audio OUT** – Enables connection to an external sound system. See page 10 for more information.
8. **Computer 2 Serial IN (Female)** – Used to connect a guest laptop. See page 10 for more information.

Main Power Input and Power Outputs

The Main Power IN and Power OUT connections are located to the right of the connection panel (when you face the rear of the cabinet).



Main Power IN – Provides power to the 4000i cabinet from a wall receptacle.

Laptop Power OUT – Provides power to a guest laptop.

Computer and Peripherals Power OUT – Provides power output to other devices inside the 4000i cabinet. You can use these cables for the internal computer, projector and peripherals, such as VCRs, DVD players and printers.

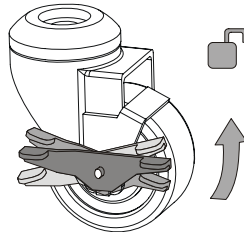
Setting Up the 4000i

Use this section of the manual to learn how to:

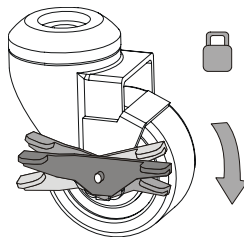
- position the 4000i (this page)
- install and connect the computer (page 6)
- connect a VCR or DVD player (page 7)
- connect a printer (page 9)
- connect a guest laptop (page 10)
- connect a network (page 10)
- connect an external sound system (page 10)

Positioning the 4000i

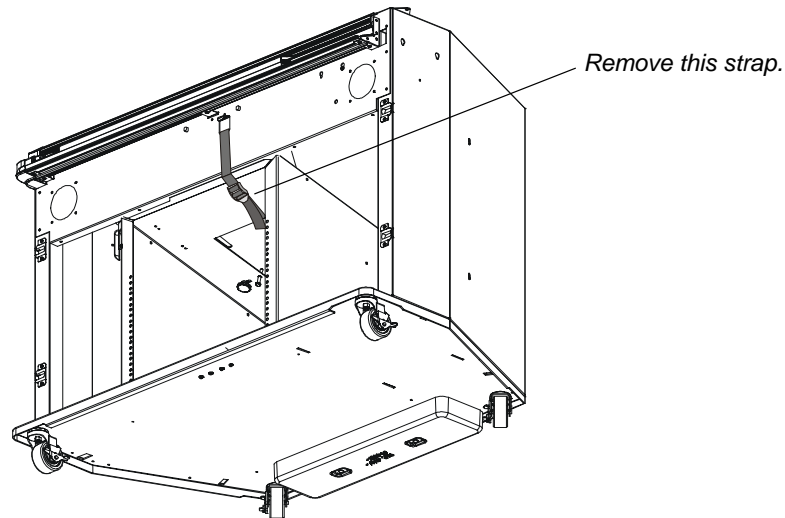
1. Remove the interactive whiteboard from its shipping carton.
2. Unlock the casters by pressing up on the caster-lock tab.



3. Move the 4000i to its required location. Leave enough space around the unit to comfortably perform assembly and connection procedures.
4. Lock the casters by pressing down on the caster-lock tab.



5. Open the cabinet's front doors. Unbuckle and remove the strap that secures the small mirror located in the middle of the speaker panel, below the projector platform.



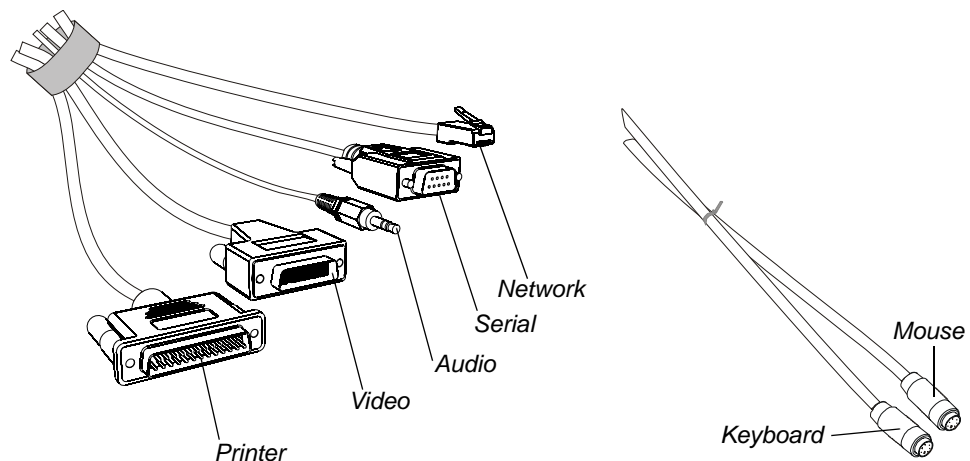
Installing and Connecting a Computer

To install and connect a computer

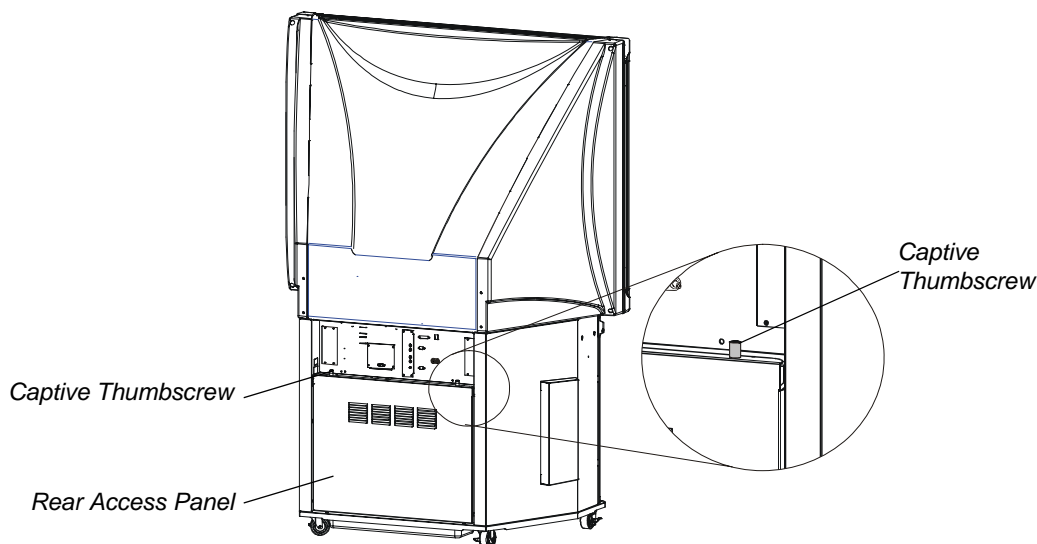
1. While facing the front of the cabinet, slide the computer into place at the right-hand side of the cabinet, above the computer straps. Use the straps to secure the computer.

NOTE: The computer straps enable you to roll the cabinet from room to room without having to remove the computer. However, these straps won't secure the computer during cabinet shipment. If you need to transport the 4000i, remove the computer before you ship it.

2. Locate the tie-wrapped bundle of cables dangling inside the cabinet. There are also power, keyboard and mouse cables located nearby.



NOTE: You can remove the 4000i's rear access panel if you need greater access to the computer's connection panel. To remove the rear access panel, loosen the two captive thumbscrews at the top of the rear access panel. Rotate the top of the rear access panel toward you and then pull it up, releasing it from the cabinet. Reattach the rear access panel to the back of the cabinet after you turn on the projector and internal computer.



3. Connect the Computer 1 Video cable to the computer's DVI connector.
4. Connect the Computer 1 Audio cable to the computer's audio line OUT connector.
5. Connect the Computer 1 Serial cable to an available serial connector on the computer.
NOTE: If the computer doesn't have an available serial receptacle, connect the provided SMART USB adapter between the Computer 1 Serial cable and the computer's USB receptacle.
6. Connect the Printer cable to the computer's DB25 (printer) connector.
7. Connect the Network cable to the computer's network adapter (if applicable).
8. Connect the Mouse and Keyboard cables to the computer's PS/2 mouse receptacle and the PS/2 keyboard receptacle.
9. Connect the AC Power cable to the computer's power connector.

To connect the power cable

1. Connect the power cable in the accessory box to the power inlet at the rear of the 4000i.
2. Connect this power cable to an available power outlet.

Connecting to a VCR and/or DVD Player

You can connect a VCR to the projector, using either the composite video cable or the S-video cable bundled inside the cabinet. To connect a DVD player to the projector, use the S-video cable bundled inside the cabinet. You can then switch the display source to the VCR or DVD player by pressing the **VCR/DVD Player** button on the 4000i's control panel.

If you want to connect both a VCR and a DVD player to the projector, you must use the composite video cable for the VCR and the S-video cable for the DVD player. If both are connected, pressing the **VCR/DVD Player** button alternates the display source between the VCR and the DVD player. There is a three-second delay before the alternate display source appears.

Although there is only one external audio connection, you can link the VCR and DVD player audio connections to automatically use the audio signal from the active video source.

When you switch to another video source (such as the internal computer) and then press the **VCR/DVD Player** button, the last active video source appears.

To connect a VCR to the 4000i

1. Connect an RCA composite video cable inside the cabinet to the VCR's video output jack. This jack may be labeled **To Monitor**.

NOTE: If the VCR has an S-video output, you can connect the S-video cable bundled inside the cabinet to the VCR. However, if you use the S-video cable to connect to the VCR, you won't be able to use this cable to connect to a DVD player.

2. Connect the RCA cables inside the cabinet to the VCR's **RCA Audio** (may also be labeled **Audio OUT**) outputs. Keep the right and left channel connections correct for stereo sound.

NOTE: You can't connect these audio cables to both the VCR and the DVD player. However, you can link the audio connections of the DVD player and VCR (see page 9 for more information).

3. Connect the VCR's power cable to an available power outlet in the cabinet.

To connect a DVD player to a 4000i

1. Connect the S-video cable inside the cabinet to the DVD player's **S-video OUT** receptacle.

NOTE: Alternatively, you can connect the RCA composite video cable bundled inside the cabinet to the DVD player. However, the S-video cable provides better image quality than the composite video cable.

2. Connect the RCA audio cables inside the cabinet to the DVD player's **RCA Audio** (or **Audio OUT**) outputs. Keep the right and left channel connections correct for stereo sound.

NOTE: You can't connect these audio cables to both the VCR and the DVD player. However, you can link the audio connections of the DVD player and VCR (see page 9 for more information).

3. Connect the DVD player's power cable to an available power outlet in the cabinet.

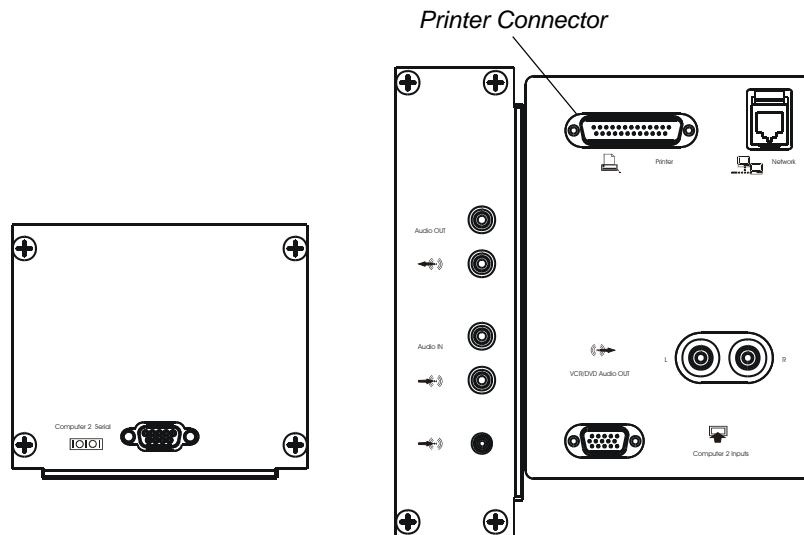
To link the VCR and DVD player audio connections

1. If there is a tape in the VCR, remove it.
2. Connect standard RCA audio cables (not supplied) from the DVD player's **RCA Audio** (or **Audio OUT**) outputs to the VCR's **RCA Audio** (or **Audio IN**) inputs. Keep the right and left channel connections correct for stereo sound.
3. Connect the RCA audio cables bundled inside the cabinet to the VCR's **RCA Audio** (or **Audio OUT**) outputs. Keep the right and left channel connections correct for stereo sound.

When you switch video sources, the audio source for the cabinet speakers changes with it. If the audio source doesn't switch along with the video source, refer to the instructions you received with the VCR for additional setup procedures.

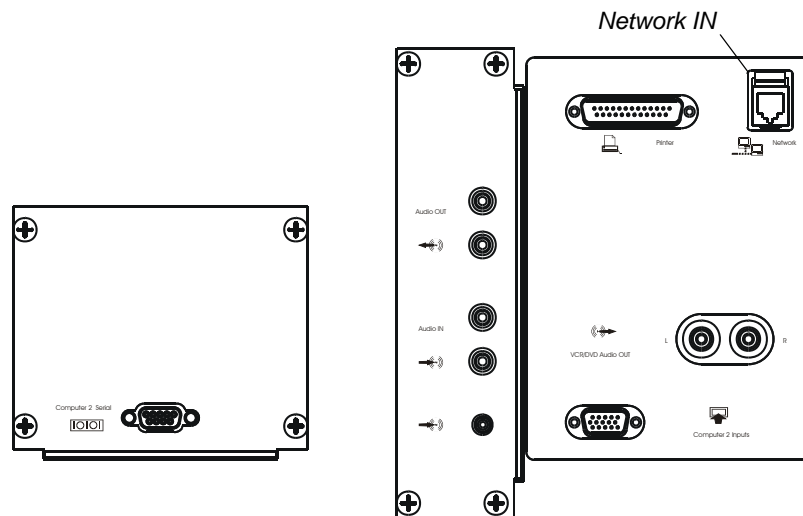
Connecting a Printer

Connect a DB25 printer cable (not supplied) from the printer to the **Printer Connector** receptacle on the connection panel.



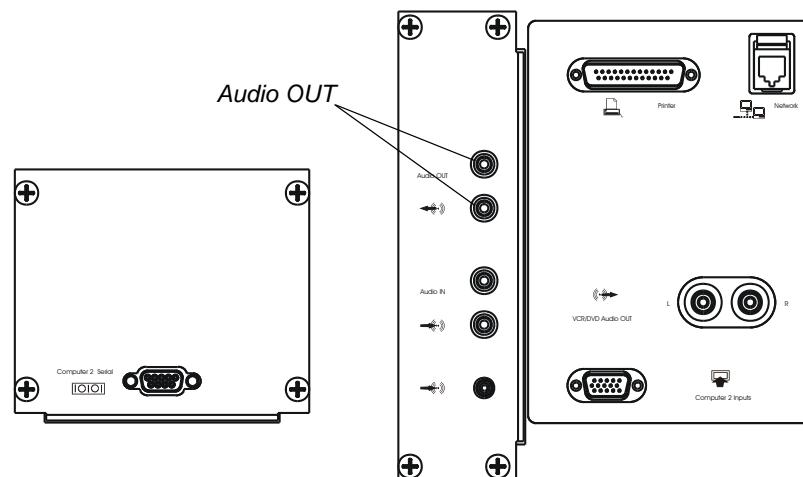
Connecting the 4000i to a Network

Connect a standard male-to-male RJ45 network cable (not supplied) from the network cable outlet to the **Network IN** receptacle on the connection panel.



Connecting an External Sound System

Connect standard RCA audio cables (not supplied) from the external sound system's RCA Audio Inputs to the two **Audio OUT (L/R)** jacks on the connection panel. Keep the right and left channel connections correct for stereo sound.

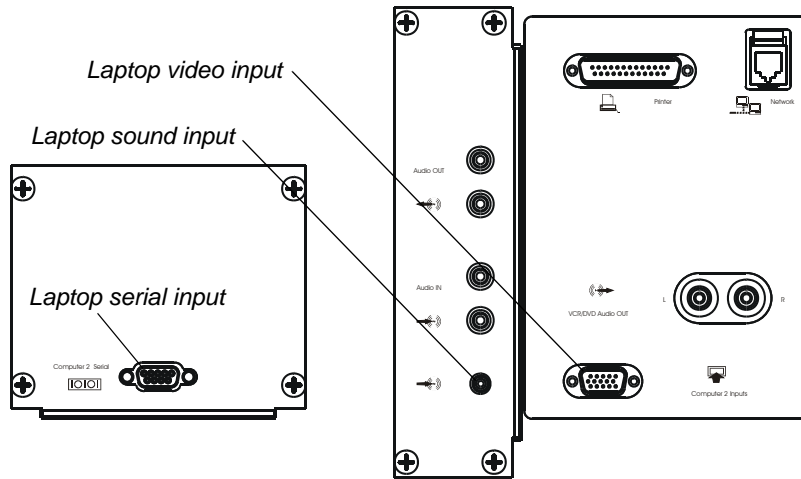


Connecting a Guest Laptop

With the guest laptop shelf, you can connect a laptop computer to the 4000i and switch the source of the 4000i's data input between the internal computer and the guest laptop.

To connect a guest laptop

1. Connect the included bundle of laptop connection cables to the corresponding receptacles on the 4000i's rear panel.



2. Connect the other end of the laptop connection cables to the appropriate receptacles on the guest laptop.

NOTE: Most modern laptops have USB 2.0 receptacles instead of a DB9 serial receptacle. The 4000i includes a DB9 serial to USB converter cable in the bundle of laptop cables.

Finalizing the Installation

Use this section of the manual to learn how to:

- configure the computer settings (this page)
- select the projector's picture settings (page 14)
- adjust the projected image (page 14)
- install SMART Board software on the connected computer (page 17)
- configure the computer port (page 18)
- orient the interactive whiteboard (page 18)

NOTE: Turn the 4000i and host computer on before proceeding (see *Turning On the 4000i* on page 19).

Configuring the Computer Settings

For optimal configuration, use the following recommended settings for the computer inside the 4000i cabinet.

Recommended Settings

Set the computer to turn off the monitor after one hour of inactivity and to switch the hard disk(s) to Standby mode after two hours. This prevents the computer from unexpectedly switching to Standby mode while you're presenting.

When the 4000i's active display source is the computer, the computer stops sending an RGB video signal to the projector after the set period of inactivity. After approximately five minutes with no RGB signal, the projector switches to Standby mode.

NOTE: If the projector's input source is the video source (either composite or S-video), the projector won't switch to Standby mode.

To change the settings in the Windows® operating system, double-click the **Power Options** icon in the control panel and adjust the settings in the **Power Schemes** tab. For Macintosh computers, click the **Energy Saver** icon in the **System Preferences** application. For detailed information on changing power management settings, see your computer's operating system instructions.

Matching the Computer's Resolution to the Projector Resolution

The projector resolution is 1400 × 1050 pixels (SXGA+) and you must ensure that the computer's resolution is the same. If the computer's resolution is set to anything other than this optimal resolution, you may not see the entire projected image, or the image may be too small to fill the screen, even when you adjust it. For more information on changing the computer's resolution, see your computer's operating system instructions.

NOTE: You may need to adjust the computer's refresh rate to obtain the best results. Set the computer to an initial refresh rate of 60 Hz and adjust this rate up or down until you've determined the ideal refresh rate. For more information on changing the computer's refresh rate, see your computer's operating system instructions.

Selecting the Projector's Picture Settings

The projectiondesign F20 projector has two picture quality settings. If you turn eco mode off, the projector displays its brightest image, but this setting also reduces the life of the lamp. To display an acceptable image without reducing the lamp's life, turn eco mode on.

To select the projector's picture setting

1. Press **MENU** on the projector's remote control.
2. Select the **dynamic** menu.
3. Press the remote control's arrow buttons to find and select the **eco mode** category.
4. Select **on** or **off**. The projector's image quality changes to reflect your choice.
5. Press **OK** on the remote control to return to the main menu, and press **menu** on the remote control to exit.

Adjusting the Projected Image

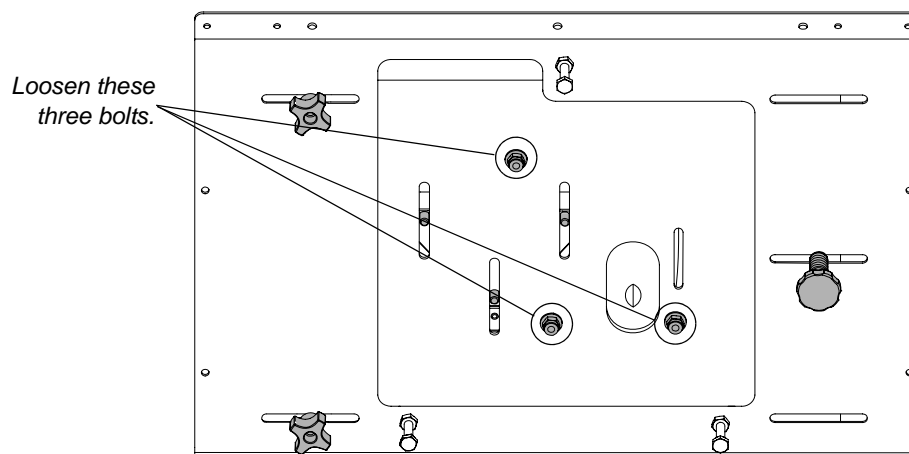
You may need to adjust the projector to display a focused image that fits on the screen. Complete the following procedures only as required.

NOTE: Don't adjust the image size and geometry based upon the projector's splash screen. The splash screen image is much smaller than the computer's projected image. Make sure you set the computer's resolution and refresh rate (see page 13) before you adjust the projected image.

While making adjustments to the projected image, check both the reflection in the small mirror and the actual image on the screen. For the best image, the reflection must be in the center of the small mirror, and the gap on each side of the mirror's image must be symmetrical.

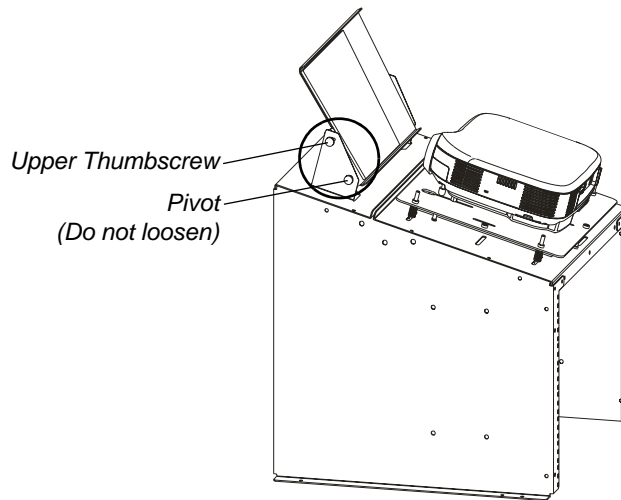
Preparing the 4000i

To adjust the projector, you must first remove the rear access panel (see page 7). Use the 7/16" nut driver included in the accessory kit to loosen the three locking bolts under the projector platform.



To move the image up or down

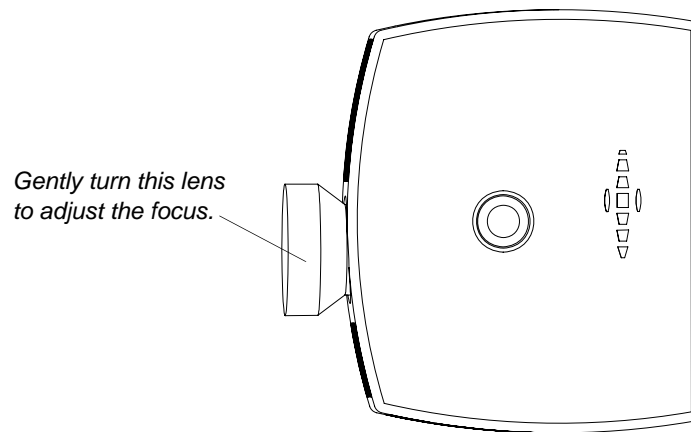
1. Loosen the upper thumbscrews on both sides of the small mirror. Don't loosen the lower pivot.
2. Gently push the mirror away from you to lower the image, or pull it towards you to raise the image.



3. When you've finished adjusting the mirror, tighten the thumbscrews.

To adjust the focus

Gently and slowly turn the projector's lens until the projected image appears clearly on the 4000i's screen.

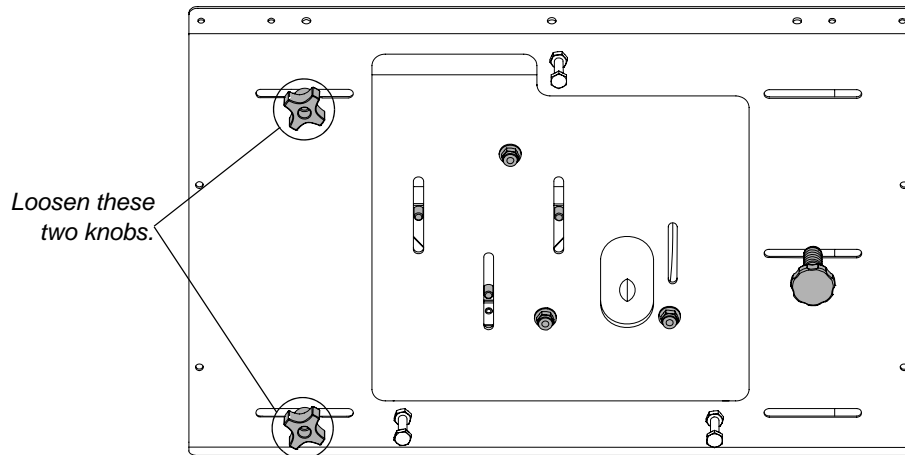




To adjust the image laterally (side to side)

1. Loosen the two knobs on the bottom left side of the mounting plate and slide the projector to the left or right.

If the projector won't slide after you've loosened the two knobs, try slightly loosening the spring-loaded knob on the right side of the projector plate. This right side knob also controls the projector's tilt (see *To adjust roll* on page 16), so be careful to only loosen this knob enough to allow the plate to slide.

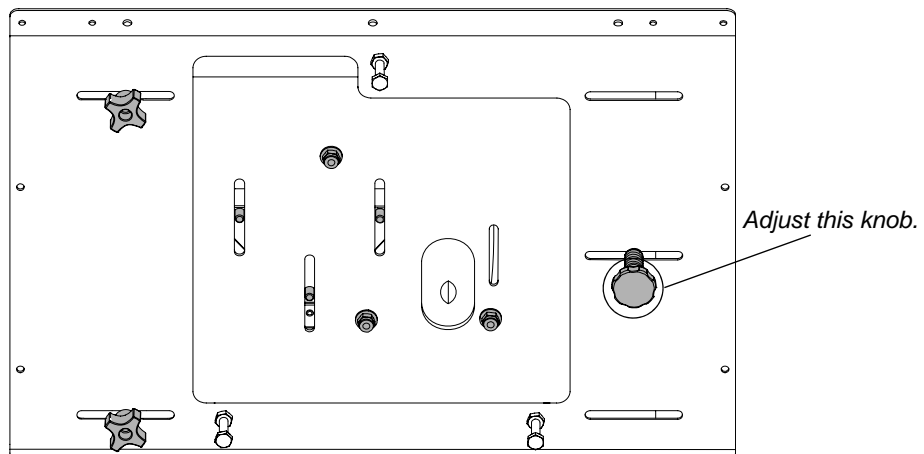


2. After you've adjusted the image, tighten the two knobs to lock the projector in place.

To adjust roll (the projector's tilt)



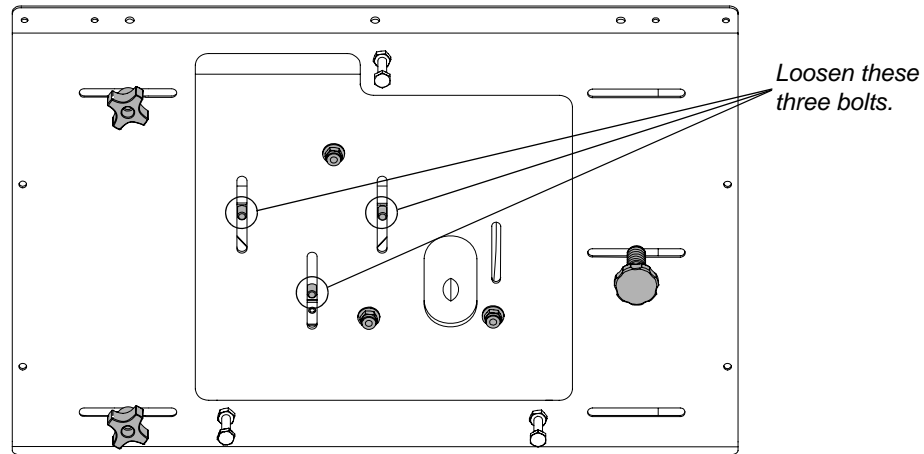
1. Tighten or loosen the knob on the right side of the projector's mounting plate until the projected image is level on the screen.



2. If you can't tighten the knob on the right side of the projector's mounting plate any further, adjust the roll by slightly loosening the two knobs on the left side of the projector's mounting plate.

To adjust the image size

1. Using the TR20 torx key included in the accessory kit, loosen the three bolts that attach the projector to the projector plate.



2. Slide the projector backward to increase the image size or forward to reduce the image size.
3. Tighten the three bolts you loosened in step 1.

IMPORTANT



After you've adjusted the projector, use the 7/16" nut driver to tighten the three locking bolts on the bottom of the projector's mounting platform that you loosened in *Preparing the 4000i* on page 14.

Installing SMART Board Software

You can install SMART Board software on any computer using the software CDs included with the 4000i.

TIP




During the installation, select the option to start the SMART Board tools automatically when you start the computer. This ensures that the interactive whiteboard is fully functional when you start the computer.

When SMART Board tools are open, the SMART Board icon appears in the notification area (Windows computers) or in the Dock (Macintosh computers).



To install SMART Board software

1. Turn the computer and the projector on.

	<p>IMPORTANT If you're using a USB adapter to connect the interactive whiteboard to the computer and the computer can't find an appropriate driver, unplug the USB adapter from the computer, install SMART Board software and then reconnect the USB adapter.</p> <p>If the <i>Found New Hardware</i> wizard appears, browse to the SMART Board software CD so that the wizard can locate the correct driver.</p>
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2. Close all open applications on the computer.
3. Insert the SMART Board software CD into the CD drive.
 - On Windows computers, the installation starts automatically. Follow the on-screen instructions. If the CD doesn't start automatically, select **Start > Run**, type **x:\autorun.exe** (where x: is the CD drive), and press ENTER.
 - On Macintosh computers, double-click the **SMART Board Install CD** icon that appears on the desktop. Double-click the **SMART Board Software** icon and follow the on-screen instructions. You may require an administrator's password to complete the installation.

Configuring the Computer Port

After you install SMART Board software and connect the interactive whiteboard, the screen becomes fully interactive. However, sometimes SMART Board software can't locate the port to which the interactive whiteboard is connected.

If the screen isn't touch sensitive, configure the port in SMART Board software. If the interactive whiteboard is connected with a USB adapter, disconnect the USB connector from the computer, wait ten seconds, and reconnect it. For more information, see the SMART Board software Help.

Orienting the Interactive Whiteboard

Although the interactive whiteboard is oriented by default, you may want to perform an orientation to ensure that the computer accurately tracks contact with the screen. For more information, see the SMART Board software Help.

Basic Operations

Use this section of the manual to learn how to:

- start the 4000i (this page)
- switch the 4000i to Standby mode (page 21)
- turn off the 4000i (page 22)
- work with the interactive whiteboard (page 22)
- change the projector's display source (page 24)
- adjust the volume (page 25)

CAUTION

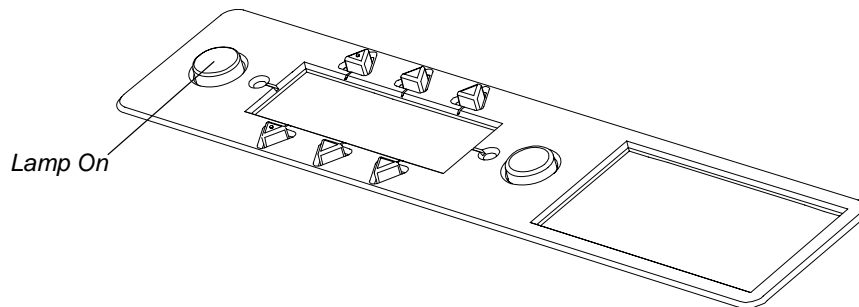


The air vents that cool the 4000i's projector and computer are located at the back of the unit. Do not push the 4000i against a wall when it's in use, or the vents will be blocked and the unit can overheat.

Turning On the 4000i

If you haven't done so already, turn on the computer.

If the 4000i is in Standby mode, press the **Lamp On** button on the control panel to restore power to the projector lamp.



To start the 4000i

Use the following table to restore the 4000i to a fully operational state.

What You See	What You Should Do
The screen is black and the Lamp On LED is blinking intermittently (short flashes between long pauses)	The projector is in Standby mode (with the lamp off). Press the Lamp On button on the control panel. The Lamp On LED indicator blinks quickly as the lamp warms up. After approximately 60 seconds, a <i>No Input</i> message appears or the screen is restored to its last active state.
The <i>No Input</i> message appears and the Lamp On LED is steadily illuminated	The projector lamp is on but you've selected an inactive display source or the computer is off or in Standby mode. Press a key on the connected keyboard to activate the computer. OR Press a source button on the control panel to select an active source. If the <i>No Input</i> message remains, turn on the computer or press the computer's reset button, and log on as usual using the connected keyboard.
The screen is black and the Lamp On LED is blinking slowly	The projector lamp is turning on, and the logon screen will appear after approximately 60 seconds.
The screen is black and the Lamp Off LED is blinking rapidly	The projector lamp is in Reversible Standby mode. If you don't press a button to restore the image for three minutes, the On LED indicator blinks slowly for 60 seconds as the lamp turns off and cools down. If this happens, follow the instructions in the first row of this table to restore the 4000i to an operational state.
The logon screen appears	The projector lamp is still on. You can log on as usual using the connected keyboard.
The Lamp On LED continues to blink intermittently, even though you've pressed the Lamp On button to start the system	Projector problems are preventing the projector lamp from warming normally. Examine the projector status LED indicator, and then consult the troubleshooting section of the projectiondesign F20 user's guide.
The Lamp Off and On LEDs are both flashing constantly	The system can't detect a projector. Review the projectiondesign F20 user's guide to make sure the projector is connected properly.

Switching the 4000i to Standby Mode

CAUTION



The projector inside the 4000i has been designed for use under normal operating conditions only. Normal operating conditions are defined as product use that does not exceed eight hours per day and 260 days per year. Exceeding these operating conditions could cause projector damage. Damage caused by such extended use won't be covered by the product warranty.

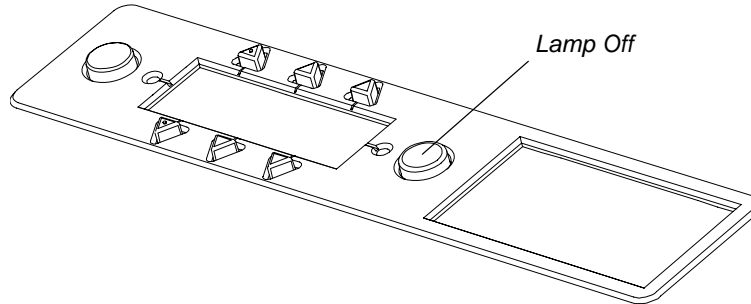
At the end of a session, log off from the computer (for security purposes), and switch the 4000i to Standby mode to turn off the projector lamp and conserve the lamp's life. Close and lock the cabinet's front doors for additional security.

To maintain normal operating conditions, switch the projector to Standby mode outside of normal, daily (eight hour) operation. In Standby mode, the lamp is turned off and the projector remains on.

You can also configure the computer's power management settings (see *Configuring the Computer Settings* on page 13) to stop sending a video signal after a period of idle time. The projector turns off when there is no video signal.

To switch the 4000i to Standby mode

1. Log off the computer at the end of a session or shut down the computer at the end of the day.
2. Press the **Lamp Off** button to switch the projector to Reversible Standby mode for three minutes.



The projector lamp remains on for three minutes so that you can immediately restore the projected image by pressing any button on the control panel. After three minutes have elapsed, the lamp cools down for 60 seconds and then turns off.

To skip Reversible Standby mode, press and hold the **Lamp Off** button for three seconds and then release the button. The lamp cools down for 60 seconds and then turns off.

Turning Off the 4000i

If you won't use the 4000i for an extended period, turn off the projector.

To turn off the projector

1. Shut down the computer.
2. Press and hold the **Lamp Off** button for three seconds. The lamp turns off immediately and cools down for 60 seconds.
3. When the cooling fan stops, turn off the power switch at the back of the projector.
4. Disconnect the 4000i power cable from the power outlet.

Using the SMART Board Interactive Whiteboard



Touch control is enabled on the 4000i after you connect the computer and install SMART Board software. However, to get the most from the 4000i, you must also open the SMART Board tools. When SMART Board tools are open, the SMART Board icon appears in the notification area on Windows computers, or in the Dock on Macintosh computers.

SMART Board software also allows you to customize the pen tray tools. You can change the eraser size and the color and transparency of the pen tools.

Using the pen tray tools

You can use a pen tray tool to write over the projected image with digital ink. In SMART Board software, you can change the pens to highlighters, assign them new colors and alter their widths. You can also change the size of the area erased by the pen tray eraser. For more information about customizing the pen tray tools, see SMART Board software Help.

NOTE: The tips of the pen tray pens are black because the digital cameras that detect contact with the interactive surface more readily detect dark objects. If you use a different writing object, choose one that has a dark tip.

Using the pen tray buttons

Press the top pen tray button to activate the on-screen SMART Keyboard. Press the bottom pen tray button to make your next contact with the interactive screen a right-click. You can also reconfigure these buttons to perform other functions. For more information on using and customizing the pen tray buttons, see SMART Board software Help.

SMART Board tools

SMART Board tools include all interactive features beyond basic touch control and pen tray button use. You can use SMART Board tools to configure pen and tool attributes and to access SMART Video Player, SMART Recorder and the on-screen keyboard.

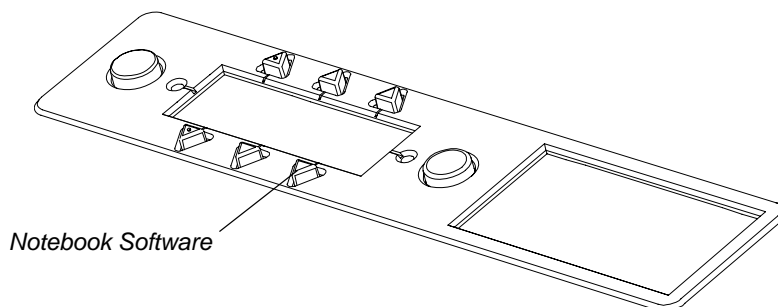
NOTE: The available SMART Board tools may vary between operating systems.

SMART Board tools must be running before you can use the pen tray pens and eraser. To write on the interactive whiteboard with a pen tray pen, make sure the SMART Board icon appears in the notification area on Windows computers, or in the Dock on Macintosh computers.

Notebook software

With Notebook software, you can create annotations with digital ink and import graphics, text, clip art and files from any other application. Notebook software can also capture anything you write on the interactive whiteboard over any application. For more information, see SMART Board software Help.

To launch SMART Notebook software, press the **Notebook Software** button on the control panel.



NOTE: This button only works when SMART Board software is installed and running on the internal computer (see page 17).

Using Floating Tools

Floating Tools are a virtual version of the pen tray tools. For example, you can press the **Pen** button and then drag your finger on the screen to produce a line of digital ink. Floating Tools also include a number of features that aren't in the pen tray, such as a spotlight, the ability to capture your notes and to restore cleared notes. For more information on using the Floating Tools, see SMART Board software Help.

To open Floating Tools, press and hold the **Notebook** button for three seconds, or press the **SMART Board** icon in the notification area on Windows computers or in the Dock on Macintosh computers, and select **Floating Tools**.

LinQ software

With LinQ software, you can link a laptop to a SMART interactive product. After you establish a connection, you can use LinQ software to show the laptop's video output on the interactive screen.

To establish a communication link between the 4000i and a laptop, you must:

- install and open LinQ software on the laptop computer.
- be connected to the same network as the 4000i's internal computer.
- start the mobile device manager software on the 4000i's internal computer.

For more information about LinQ software and mobile device manager software, see <http://www2.smarttech.com/st/en-US/Support/Downloads/LinQ/>.

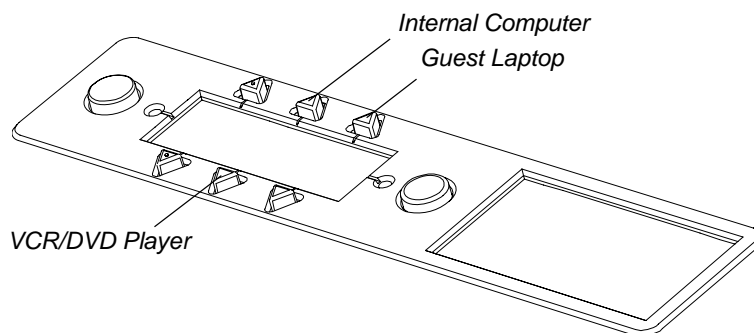
Changing the Projector's Display Source

IMPORTANT



The 4000i is optimized for use with a high-resolution computer data signal.

You can use the three source buttons on the control panel to change the projector's video and audio input source. Choose from the internal computer, a connected guest laptop or an external computer, a VCR or a DVD player.



NOTE: It takes a few seconds for the 4000i to switch from one input source to another. During that time, all control panel buttons are disabled.

To switch to a connected VCR or DVD player

Press the **VCR/DVD Player** button on the control panel.

If both a VCR (composite video connection) and a DVD player (S-video connection) are connected to the projector, pressing this button switches between the two. There is a three-second delay before the alternate display source appears.

When you press the **VCR/DVD Player** button, you switch to the input source that was last active. For example, if you view a DVD and then switch the display source to the internal computer, pressing the **VCR/DVD Player** button will switch the display source to the DVD player.

To switch to the internal computer

Press the **Internal Computer** button on the control panel.

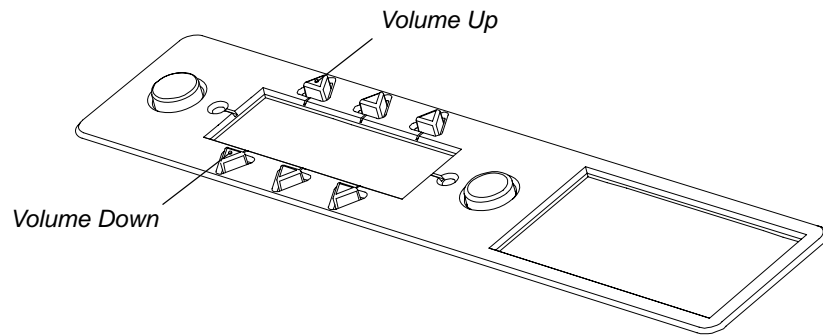
To switch to a guest computer

Press the **Guest Laptop** button on the control panel.

Adjusting the Volume

To increase the volume, press and hold the **Volume Up** button on the control panel.

To decrease the volume, press and hold the **Volume Down** button on the control panel.



To restore the default volume level (no sound), press and hold both **Volume** buttons simultaneously.

Maintaining the 4000i

Use this section of the manual to learn how to:

- clean the interactive whiteboard and other components (this page)
- clean the projector (page 28)
- replace the projector's lamp (page 28)
- restore the projector's settings (page 29)
- calibrate the cameras (page 29)

Cleaning the Screen and Other Components

Before you clean the interactive whiteboard, turn off the computer. If you touch the screen when the computer is in any other state, you may activate program components or scramble desktop icons. Switch the projector to Standby mode so you can see dirt and streaks on the screen.

Clean the screen's external surface regularly so that dust buildup doesn't disrupt the 4000i's operation. Don't spray glass cleaner directly onto the screen surface. Instead, spray the cleaner lightly on a soft cloth and then gently wipe the screen surface.

If there is permanent marker ink on the screen, you can remove it by completely covering it with the ink from a high-odor dry-erase marker (*not* a low-odor marker), and then wiping the screen with a soft cloth. If any trace of the original permanent ink remains, spray a soft cloth with standard, alcohol-free glass or whiteboard cleaner, and gently wipe clean.

The back of the interactive whiteboard screen is well protected from handling because it's located inside the 4000i cabinet. However, if you must clean the rear of the interactive screen, dab it gently with a soft cloth that's been sprayed with standard, alcohol-free glass cleaner. Don't apply the cleaner directly to the rear surface.

The 4000i's cameras are well protected from dust and dirt, so you should only have to clean the lenses occasionally. When you do so, don't spray glass cleaner directly onto the lens. Instead, spray the cleaner on a cotton-tipped swab and gently rub it on the lens. If excess glass cleaner flows into the crack between the frame and the screen, the fluid could damage the cameras.

CAUTION



Do not, under any circumstances, apply isopropyl alcohol, water or acetone to the rear surface of the interactive screen. These fluids damage the diffusion coating, resulting in permanent deterioration of display quality.

Periodically dust the mirrors and unit components of the 4000i using a soft cloth. To clean the mirrors, use a standard, alcohol-free glass cleaner.

Cleaning the Projector

Clean the projector and its lens periodically.

To clean the projector

1. Shut down the computer and the projector.
2. Wipe the projector's casing with a damp cloth. If necessary, use a mild detergent. Don't use a strong detergent or a solvent such as alcohol or thinner.
3. Carefully wipe the lens with lens paper.

CAUTION



Be careful not to scratch or mark the lens.

Replacing the Projector Lamp

When the lamp reaches the end of its life, the projector's power LED turns solid red. See page 20 in the projectiondesign F20 user's guide for more information on the projector's indicator LED functions.

CAUTIONS



Always replace the projector lamp *only* with projectiondesign Part No. 400-0402-00.

Never use another bulb in place of the one recommended by the manufacturer.

To view the lamp's remaining lifespan

1. Press **MENU** on the projector's remote control.
2. Select the **dynamic** menu.


The *estimated remaining* category displays the remaining lamp time in hours. This number changes if you switch eco mode on or off (see *Selecting the Projector's Picture Settings* on page 14).
3. Press the **OK** button on the remote control to return to the main menu, and press the **MENU** button to exit.

To replace the projector lamp

1. Follow the instructions on pages 31 and 32 of this guide to remove the projector from the 4000i cabinet.
2. Replace the projector lamp as described in the projectiondesign F20 user's guide.
3. Follow the instructions on pages 31 and 32 of this guide in reverse order to install the projector in the 4000i cabinet.

Restoring Projector Settings

Use the following procedure to restore the projector's optimal settings that have been accidentally altered.



IMPORTANT When you restore the projector's optimal settings, the projected image on the 4000i's screen is reversed because the projector's default orientation isn't correct for the 4000i's mirror configuration.

You must complete steps 4 through 6 in the procedure below with the screen text reversed to correct the projected image.

To restore the projector's optimal settings

1. Press the **MENU** button on the projector's remote control.
2. Select the **utilities** menu.
3. Select **factory reset**.
The projector reverts to its original configuration.
4. Press the **OK** button on the remote control to return to the main menu.
5. Select the **setup** menu.
6. Change **orientation** to **desktop rear** to correctly orient the F20 projector's output for the 4000i's mirror configuration. After you complete this step, the projected image is no longer reversed.
7. Change **RS232 baud rate** to **19200** to enable communication between the F20 projector and the 4000i interactive whiteboard.
8. Press the **OK** button on the remote control to return to the main menu, and press the **MENU** button to exit.

Calibrating the Cameras

Each digital camera in the interactive screen is calibrated to recognize the position of a pen tray tool or your finger on the screen's surface and to send this information to SMART Board software. SMART Board software then interprets the information as mouse clicks or as digital ink in the appropriate location.

If the cameras become misaligned for any reason, you may notice gaps in your writing or that an area of the screen may become unresponsive to your touch. Perform a calibration procedure to resolve this issue. For more information about calibration procedures, see SMART Board software Help.

Appendix A: Removing and Replacing the Projector

To remove the projector, you must remove the 4000i's rear access panel, disconnect the projector's cables and detach the projector.

CAUTION



Do not touch the rear surface of the screen or apply isopropyl alcohol, water or acetone to it. These fluids will damage the diffusion coating, resulting in a permanent deterioration in display quality.

To remove the projector

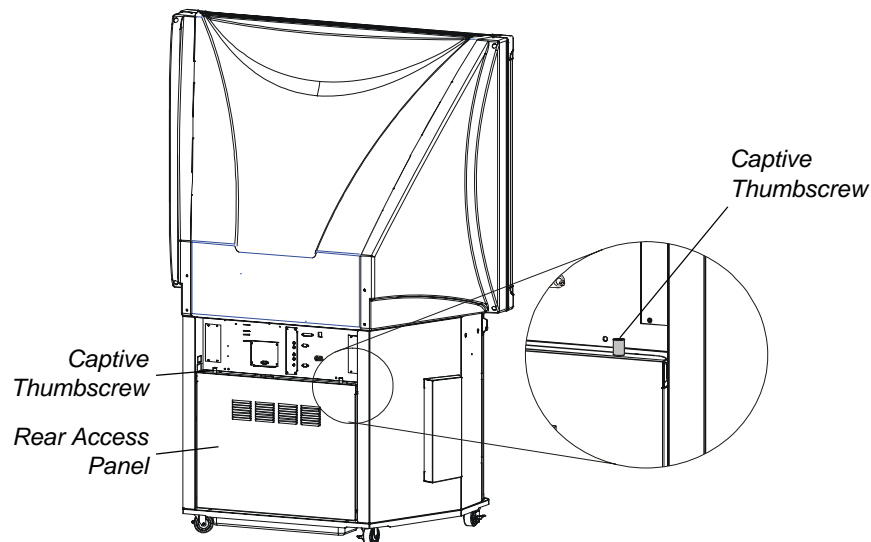
1. Turn off the 4000i following the instructions on page 22 of this guide.

WARNING



After you turn off the projector, allow at least one minute to elapse before you disconnect the 4000i's power cord from the power outlet. Don't touch or replace the projector lamp (which will be very hot) for at least an hour.

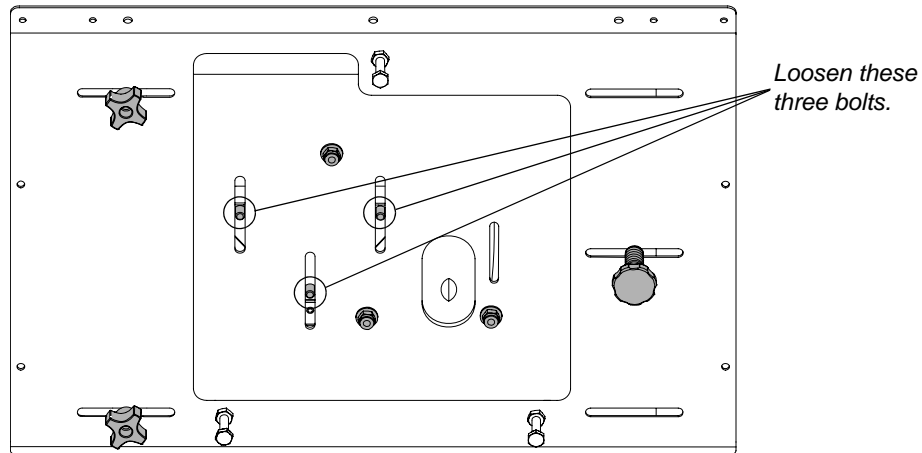
2. Loosen the two captive thumbscrews at the top of the rear access panel.



3. Rotate the top of the rear access panel toward you and then pull it up, releasing it from the cabinet. Put the rear access panel in a safe place.
4. Disconnect all of the cables from the projector, including the power cable.

NOTE: The projector cables are labeled so that you can easily restore their connections.

5. Using the TR20 torx key included in the accessory kit, loosen and remove the three bolts that attach the projector to the projector plate. Set these bolts aside.



- NOTE:** Don't change the position of any other screws, bolts or knobs.
6. Lift the projector off the mounting plate and remove it from the cabinet.
 7. Carefully place the projector on a flat surface.

NOTE: If you've removed the projector in order to replace the lamp, see the projectiondesign F20 user's guide for further information.

WARNING



Do not touch or replace the projector lamp (which will be very hot) for at least one hour after turning off the projector.

TIP



Prior to reinstalling the projector, clean the projector's lens and the small mirror in the cabinet. To clean the lens, carefully wipe it with lens paper. To clean the small mirror, spray a soft cloth with standard, alcohol-free glass cleaner and gently wipe it clean.

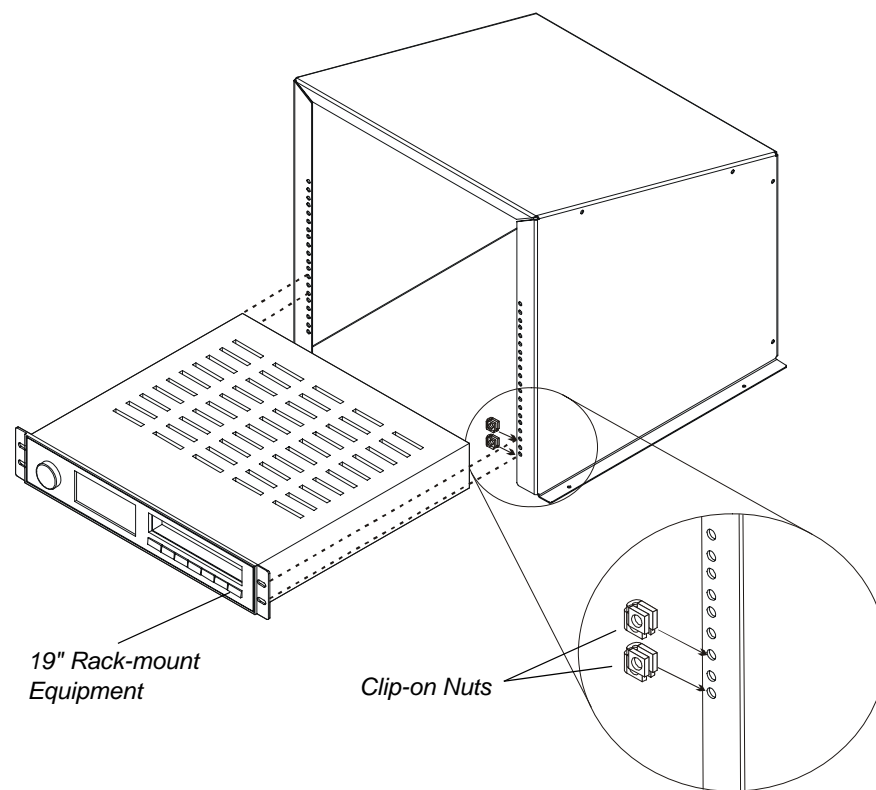
NOTE: To install the projector, follow the above instructions in reverse order.

Appendix B: Connecting Rack-Mount Equipment to the Projector Platform

Use the clip-on nuts (included) to secure rack-mount equipment to the sides of the projector platform, just below the projector itself. The projector platform can accommodate rack-mount equipment with a width of 19" (48.3 cm).

To connect rack-mount equipment to the projector platform

1. Attach the clip-on nuts from the accessory kit to the sides of the projector platform.
2. Connect the rack-mount equipment to the clip-on nuts using 10-32 \times 1/2" fasteners (not included).



Customer Support

Online Support

www.smarttech.com/support

Visit the SMART Technologies support site to view and download user's guides, "how-to" and troubleshooting articles, software and more.

Training

Visit <http://www.smarttech.com/trainingcenter> for free training materials and information about our training services.

Contacting SMART Technical Support

SMART Technical Support welcomes your call. However, if you experience difficulty with your SMART product, you may want to contact your local reseller first. Your local reseller may be able to resolve the issue without delay.

All SMART products include free online, telephone, fax and e-mail support:

Online: www.smarttech.com/contactsupport

Telephone: +1.403.228.5940 or Toll Free 1.866.518.6791 (Canada/U.S.)
(Monday to Friday, 7 a.m. – 6 p.m. Mountain Time)

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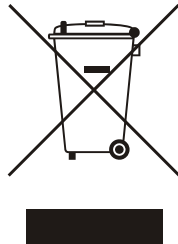
Waste Electrical and Electronic Equipment Regulations

Waste Electrical and Electronic Equipment (WEEE) regulations apply to all electrical and electronic equipment sold within the European Union.

When you dispose of any electrical or electronic equipment, including SMART products, we strongly encourage you to contact your local WEEE recycling agency for recycling and disposal advice.

Your SMART product required the extraction and use of natural resources for its production. It may contain hazardous substances. By disposing of electrical and electronic equipment appropriately, you lower the impact of these substances upon health and the environment and reduce the pressure on natural resources. Recycling agencies can reuse or recycle most of the materials from your product.

Please think about how you intend to dispose of any product that has a WEEE symbol or accompanying WEEE guidelines.



If you need more information on the collection, reuse and recycling of electrical and electronic equipment, please contact your local WEEE recycling agency.

Alternatively, contact your local reseller or SMART Technologies for information on the environmental performance of our products.

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