SMART
Expression™ 503

User's Guide

SMART
Technologies Inc.

FCC Warning

This equipment has been tested and found to comply with the limits for a "Class B" digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (this can be determined by turning the equipment off and on) the user is encouraged to try to correct the interference by one or more of the following measures:

● Reorient or relocate the receiving antenna.
● Increase the separation between the equipment and receiver.
● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
● Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications to this "Class B" digital device that have not been expressly approved by SMART Technologies Inc. could void the user's authority to operate the equipment.

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About This Guide

This guide is intended for both the ongoing and occasional guest laptop user of the resources that reside in the SMART Expression™ cabinet.

You'll quickly discover that using an Expression cabinet is simplicity itself. First, press the Main Power Switch in the Control Panel to power up all the equipment inside. When you open a file on the internal computer, that file will be displayed automatically by the resident projector. If a SMART Board™ interactive whiteboard is connected, you can control your presentation by pressing on the board's touch-sensitive surface. If you want to print the contents of a file, simply select the **Print** command from the application with which you are working, and collect the pages from the on-board printer.

Clearly, using the Expression cabinet does not demand any unusual expertise. The information in this guide is intended to help you make *optimal* use of the multimedia resources available in your cabinet. Much of this guide is directed towards the guest-laptop user.

The seven sections of the guide are summarized below.

Overview (Pages 1-8)
An overview of features that includes instructions on Control Panel use, as well as tips on using peripherals and connection panels, and making network and modem connections.

Software (Pages 9-11)
A description of the software that accompanies the Expression cabinet, both in terms of the programs installed on the internal computer and the programs that may be optionally run or installed on a guest laptop to enhance a presentation.

Guest Laptop Use without/with a SMART Board Interactive Whiteboard (Pages 12-25)

Describes Expression cabinet use for the guest laptop user when an interactive whiteboard is *not* part of the system. The final section describes the options for a guest laptop user when a SMART Board interactive whiteboard is available.

Adjusting the Projected Image (Pages 26-27)

Provides information on adjusting the projected image.

Tips and Troubleshooting (Pages 28-33)

Provides general tips plus troubleshooting help specifically for laptop users.

Maintenance (Pages 34-38)

Gives you cleaning instructions and information on cabinet disassembly and shelving adjustment.

Contacting SMART Technologies (Pages 39-40)

Tells you how to contact us if you encounter a problem.

Other Documentation

A variety of documentation is available, all of which should be found on the Accessory Shelf, located just above the internal computer. If an interactive whiteboard is connected to the Expression cabinet, look for the *SMART Board User's Guide* to help you make the most of this powerful, touch-sensitive presentation tool.

You should also find a complete set of owner's manuals on the Accessory Shelf for each piece of equipment installed in the Expression cabinet. Consult these manuals if you have difficulty with any installed equipment.

Contents

Contents

Overview

The Expression mobile multimedia cabinet integrates a customized selection of peripheral presentation devices into a complete easy-to-use computer and communications package. Your Expression cabinet has been configured to suit your particular multimedia needs.

The figure below shows the location of possible peripherals in relation to the Expression cabinet. Note that the printer and scanner are both located on sliding shelves for greater ease of use. Also, note the Accessory Shelf located directly above the computer cavity.
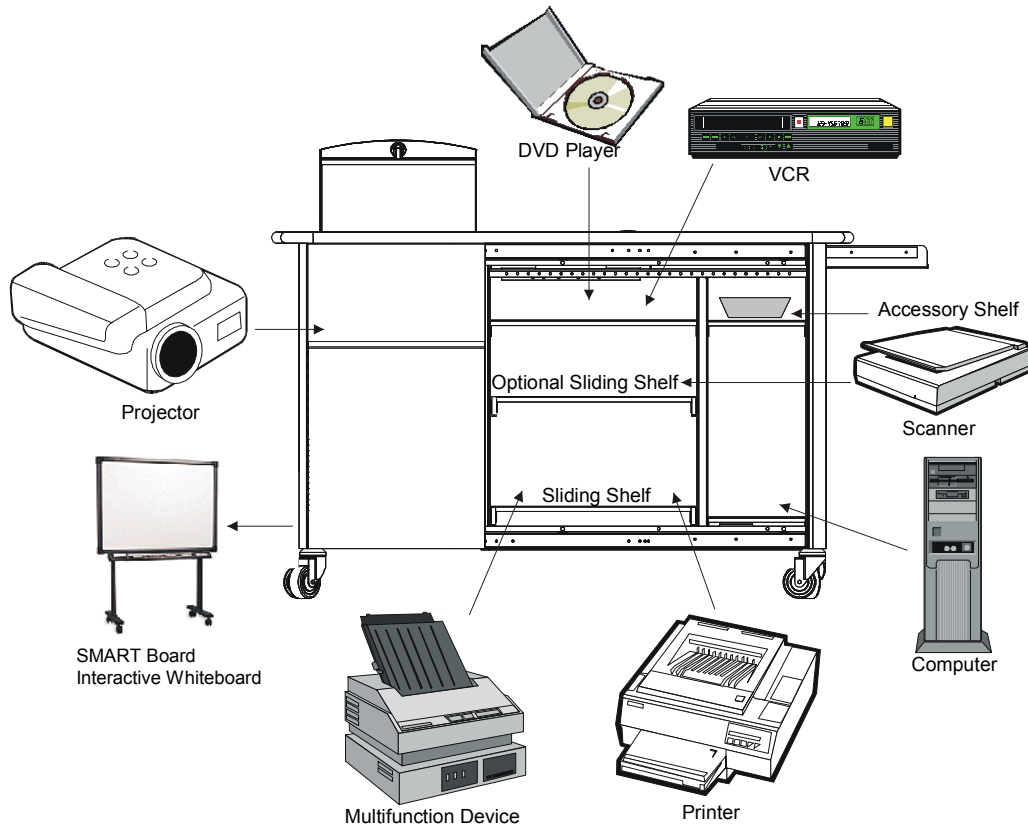
The Accessory Shelf

If you require information about any of the equipment installed in the cabinet, look on the Accessory Shelf (located just above the computer), where you should find the owner's manual for each integrated device.

If a SMART Board interactive whiteboard is connected to the cabinet, you should also find a *SMART Board User's Guide* on the Accessory Shelf. While the interactive whiteboard is an easy, natural tool that requires no special expertise to use, this guide provides detailed instructions on advanced usage, so you can take full advantage of every feature.

The Accessory Shelf should also contain the SMART Board Software CD and printer/scanner driver disks for the guest laptop user. For more information on accompanying software, turn to page 9 of this guide.

The Control Panel

Located on top of the cabinet, next to the projector mirror, the Control Panel provides you with controls for power, sound, and display switching, as well as a means of providing power to external devices. In addition, the Control Panel allows guest laptop users to connect their laptops and gain control of cabinet equipment.

Control Panel components are shown in the figure on the next page.

*Cables for Guest Laptop Connection

AC Power Outlet

Main Power Switch

Display Source Switch

Volume Control Dial

Control Panel
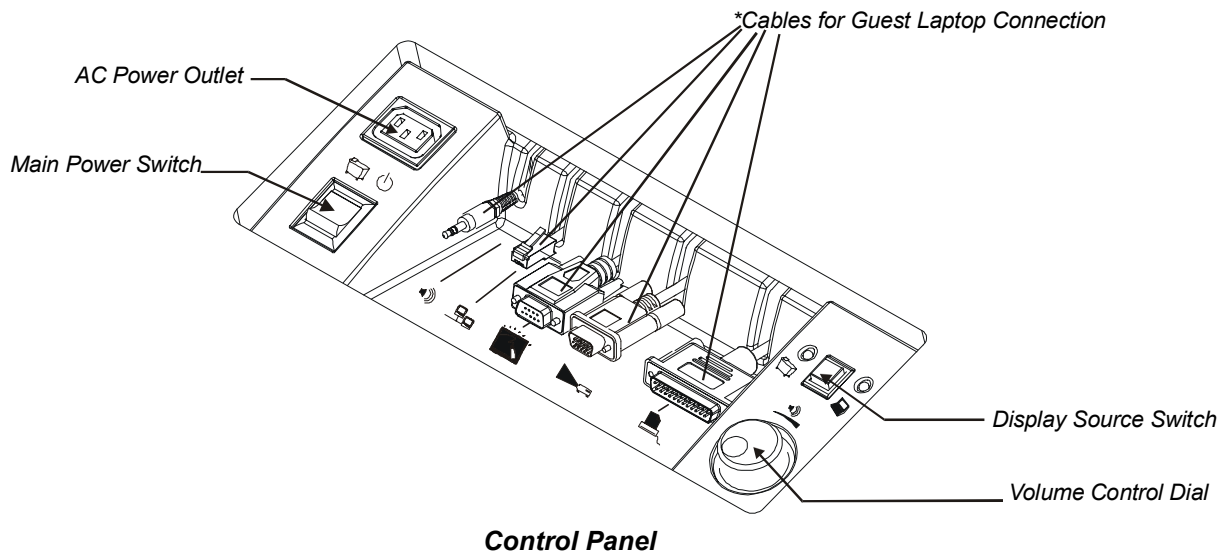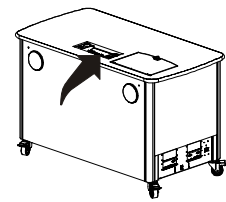
*NOTE: Those cables specifically intended for connecting a guest laptop computer to the Expression cabinet are discussed later in this manual.

Tips for Operating Expression and Its Peripherals

Your cabinet peripherals are all linked to the interior computer via switching mechanisms that allow the equipment to be shared with a guest laptop user. All peripherals except the projector and the optional SMART Board interactive whiteboard are accessed by opening the rear access door.

NOTE: The figure on the next page may not reflect your particular configuration of peripherals.

Open rear
access door

VCR

Accessory Shelf

Scanner

Computer

Printer/
Multifunction Device
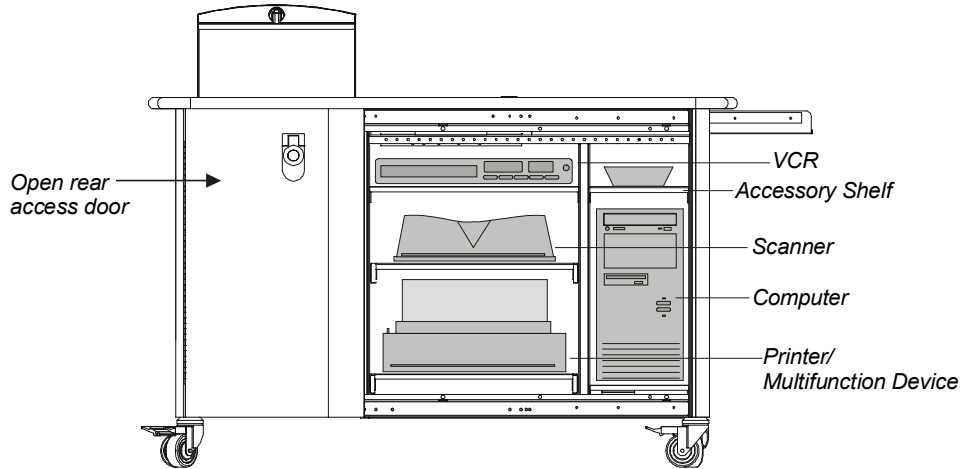
Installed Computer, VCR, Scanner and Printer/Multifunction Device

In the paragraphs that follow, we offer a few tips for using peripherals and the features of the Control Panel.

Adjusting the Volume

*Volume
Control*

The Volume Control Dial in the Control Panel controls audio input from all sources. Audio input from an exterior sound system (if available), the VCR or DVD player, a guest laptop and the internal computer are simultaneously controlled by this dial. If a room sound system is connected to the Expression cabinet, turning the Volume Control Dial will automatically adjust the level of sound to the room speakers as well as to the cabinet speakers.

Switching on the Power

*Main Power
Switch*

The Main Power switch supplies power to all cabinet peripherals at the same time. For some computer and projector models, however, you may need to toggle on the interior computer or projector separately after you've switched on the Main Power Switch.

Connecting the Power Cord
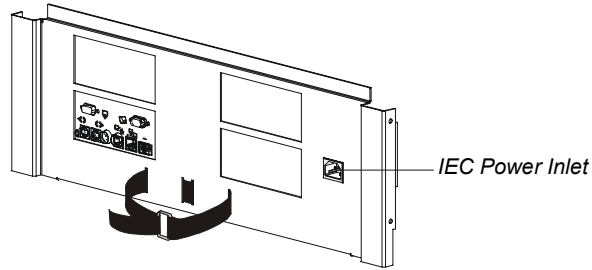
Expression IEC Power Inlet

The power for Expression is delivered via a single power cord. If it hasn't been done, connect the IEC-to-country-specific power cord #99-100 from the IEC power inlet (on the right of the Standard Connection Panel) to an external outlet. If not attached to the power inlet, the power cord should be located in the Accessory Basket.

Operating the Projector

Before turning on the projector, make sure the mirror flap is raised.
The projector bulb can generate a significant amount of heat while in use, and the open mirror flap is the only point of ventilation for the projector.

Warning

Open mirror flap

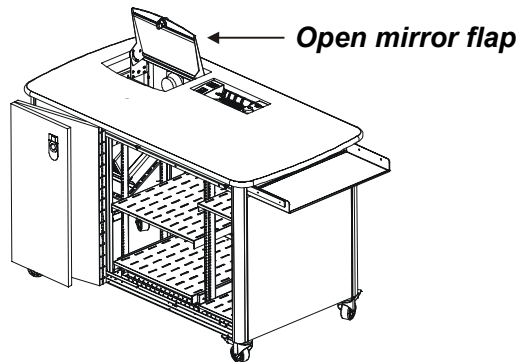*Expression Cabinet with Open Mirror Flap*

Similarly, before turning off the Main Power Switch, it's a good idea to put the projector into Standby Mode to allow sufficient time for the bulb to cool down before turning the power off.

You may also need to toggle the projector on separately when the Main Power Switch is switched on.

Information on adjusting the projected image can be found on page 26.

Switching the Projector to the VCR/DVD Player

To project the video image from the VCR or DVD player, switch the video source for the projector from computer to VCR/DVD. This normally entails pressing a Switch to Video Output button on the projector's remote control or on the projector itself. If you have difficulty locating such a button, consult the projector owner's manual for more information.

Using the Printer

You can slide the printer shelf out for easier access. Consult the owner's manual for the printer (located on the Accessory Shelf) for complete operating instructions.

The Connection Panels

If you face the speakers, you'll see the Connection Panels on the lower-right side of the cabinet.
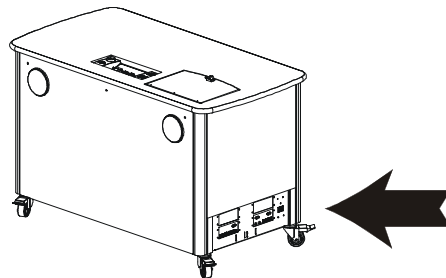
The Connection Panel lets you connect external video, audio and serial devices (such as a SMART Board interactive whiteboard), as well as make a network connection.

Connection Panel

Cable Management Strap
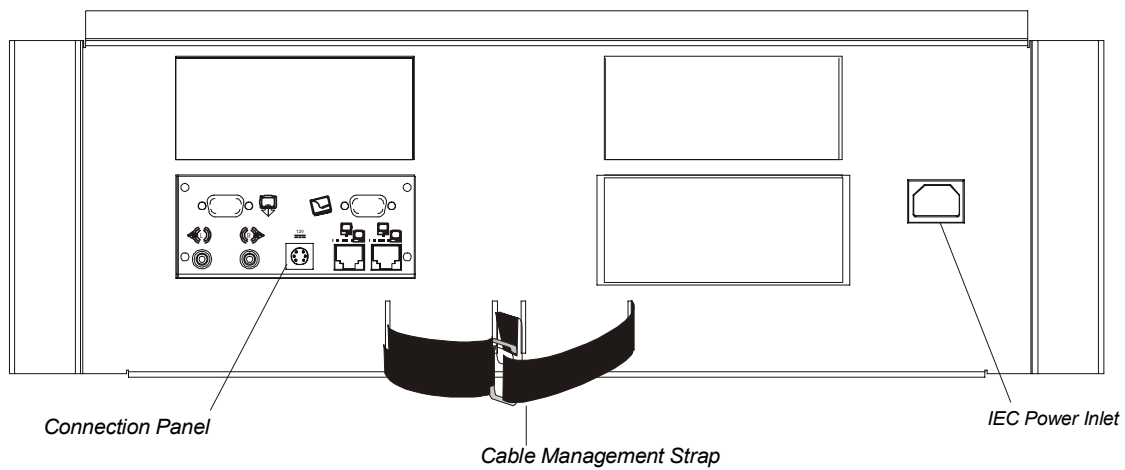
IEC Power Inlet

Connection Panels

The IEC power inlet for the Expression cabinet power cord, which delivers power to the entire cabinet, is located to the right of the Connection Panel.

Connection Panel

1 Interactive whiteboard serial connection: A DB9 serial port connector for connecting the SMART Board interactive whiteboard to the internal computer.

2. Video OUT

1. DB9 Serial Port (Whiteboard)

LAPTOP COMPUTER

5. Network Connections

3. Audio OUT

4. PS/2 Power (Whiteboard)
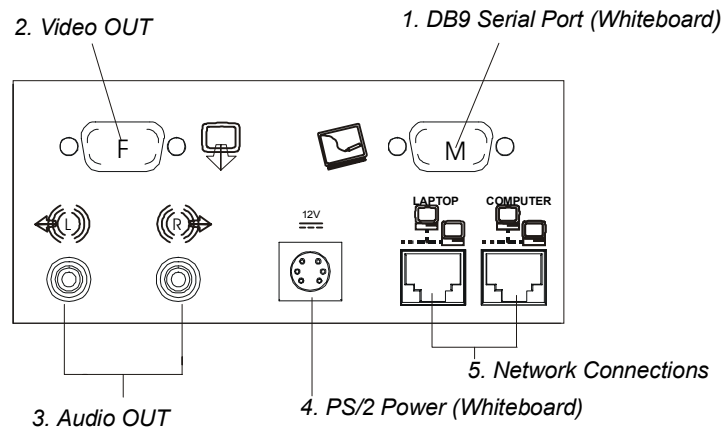
2   An external video output (DB15 HD video port) for connecting an external projector or monitor, if this external video feature is supported by the internal projector.

3   External audio outputs (left and right RCA audio jacks) for delivering unamplified sounds to an external sound system (controlled by the Volume Control Dial in the Control Panel).

4   Whiteboard power: A female mini-DIN 6-position PS/2 connector to provide power to the SMART Board interactive whiteboard.

5   Two RJ45 jacks (8-wire) for internal and guest-laptop network connection.

Software

The internal computer should have all the necessary software installed to enable optimal operation of the cabinet's internal and external multimedia components. You won't need to install printer or scanner drivers, for example, as this will have been done for you. Similarly, if you have a SMART Board interactive whiteboard connected to the Expression cabinet, you should already have the SMART Board driver and SMART Notebook software installed on the internal computer.

Of course, SMART Board software is available for installation regardless of whether a SMART Board interactive whiteboard is connected to the Expression cabinet. You may want to install the SMART Board driver on the internal computer, for example, to take advantage of the accompanying SMART Bulb Saver program, and so extend the life of your projector's bulb.

SMART Board Software

SMART Board Driver

This program activates the SMART Board interactive whiteboard, translating board contact into mouse functionality, and Pen Tray tool use into the appearance of electronic ink (writing and erasing).

With the SMART Board driver, finger contact with the board can control any application projected onto it as effectively as a mouse. You can touch on the board to start up the program, and then pick up a stylus from the Pen Tray and write in virtual, electronic ink over it. Interactive whiteboard contact can be configured to produce a left or right mouse click, draw a circle, rectangle, or straight line, write in 16 colored pens or highlighters, or selectively erase annotations.

SMART Notebook software is installed automatically with the SMART Board driver. Notebook software provides a complete range of annotation-creation and note-capturing features.

GUEST LAPTOP NOTE: The guest laptop user can, if he chooses, install the full SMART Board driver program on his hard drive. This is intended as an option for those laptop users who will be using Expression with a SMART Board interactive whiteboard on a continuing basis, or for those who want to configure the SMART Pen Tray tools to suit their presentation needs.

SMART Bulb Saver

SMART provides software that is designed to extend the life of the projector bulb. The program is called SMART Bulb Saver, and it's part of the SMART Board driver.

If an interactive whiteboard is connected to your Expression cabinet, this program should already be installed on the internal computer's hard drive. You may wish to install SMART Board driver – even if a board is not attached to the Expression cabinet – just to take make use of the Bulb Saver program.

The SMART Bulb Saver will automatically turn your projector off when a specified period of time elapses. As soon as activity resumes on the SMART Board, or when the associated keyboard is touched or the mouse is moved, SMART Bulb Saver will turn the projector back on. SMART Bulb Saver can also optionally shut down the computer or log off the current user.

To activate the SMART Bulb Saver:
1 Connect the appropriate cable from the projector's computer control connection to an available COM port on your computer.

2 Press Start ![Start], and select **Settings** > **Control Panel**.

3 Double-press Display.

The Display Properties dialog box will appear.

4 Press the Screen Saver tab.

5 Select **SMART Bulb Saver** from the Screen Saver drop-down list.

6 Press the Settings button.

The *SMART Bulb Saver* dialog box will appear. If you've previously installed an On-Screen Display Controller for your projector or plasma display, the serial port will be selected and associated with your display. You will likely have already specified the delay time. These values will be displayed in this tab. You can proceed to step 8.

7   If you haven't configured the On-Screen Display Controller, press the Display Control Panel button and configure the display with the serial port on your computer. Also select the delay time.

8   To use your own custom bitmap or company logo as the SMART Bulb Saver graphic, press the Custom tab and browse to the graphic file you want to use.

9   To shut down the computer or log off the current user, press the Shut Down tab and follow the instructions in that dialog box.

10 Press Apply and then OK.

Guest Laptop Use of the Expression Cabinet
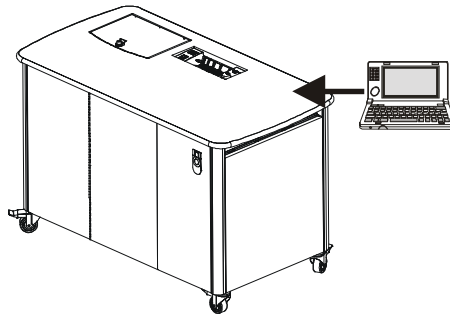
Just set your laptop on the cabinet and connect the video cable in the Control Panel to your laptop's video port. Your laptop will immediately become the video source for the projector. What you see on your laptop monitor will be displayed automatically by the projector onto any available surface. The speakers and printer also become dedicated to the laptop as soon as you connect the audio and printer cables in the Control Panel to your laptop.

NOTE: Laptop access to the cabinet resources doesn't depend upon the internal PC in any way. The internal PC doesn't need to be either powered up or present inside the cabinet for a guest laptop to successfully access such resources as the printer or projector.

Plug the laptop's power cord in here

For audio, plug into the laptop's audio out (if available)

For network connection, plug into the laptop's network input

To project the laptop's image, plug into the laptop's 15-pin video port

To use the printer, plug into the laptop's 25-pin parallel port
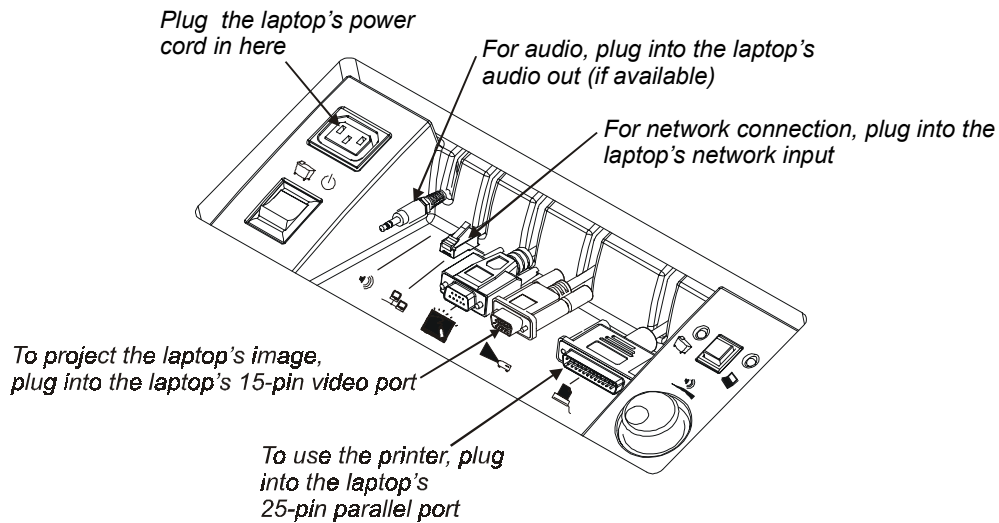
Control Panel Connections

Connecting Your Laptop to the Expression Cabinet

1   Make sure the Expression cabinet is powered up. If the Power Switch is not on, turn it on.

2   Put your laptop on top of the Expression cabinet and plug it into the power outlet on the control panel.

3   With the laptop turned off, plug the 15-pin projector cable connector in the Control Panel into the 15-pin video port on the rear of your laptop. If you don't want to use the printer or the sound system, you can turn on your laptop and proceed with your laptop demonstration.

4   To use the printer, plug the 25-pin printer cable into the 25-pin parallel port on the rear of your laptop.

5   To use the cabinet's network connection, plug the RJ45 network cable connector to the Network port on your laptop.

6   Plug the 3.5 mm RCA audio plug into the audio OUT on the rear of your laptop (if available).

7 Turn your laptop on. Your laptop image will now be projected on the display screen.

Activate Your Laptop's External Video Port

If you're unable to see your laptop desktop projected on the SMART Board interactive whiteboard, your laptop's external video port may be inactive. With newer laptops, you can synchronize the internal and external video ports at the software level, as follows:

1 Select **Start>Settings>Control Panel**, and then double-press **Display**.

2 Select the **Refresh** (or **Monitor Refresh**) tab.

3 Click the **CRT/Panel** option to activate simultaneous monitor and external video port display.

This procedure may not be possible with older laptop models. With some older laptop models, you may need to switch back and forth between the internal and external video port. If you aren't sure which commands or keyboard combinations are required for switching back and forth between the internal and external video ports of your laptop, consult your owner's manual.

## Match the Laptop Resolution to the Projector Resolution

If your projected laptop image appears to shimmer, suffers from distortion, or is the wrong size, you may need to adjust the resolution of the laptop so that it matches the resolution of the projector, as described below.

To set your computer resolution to match the projector resolution:
1 Click Start button and select **Settings>Control Panel**.

The *Control Panel* window will open.

2 Double-click the **Display** icon.

The *Display Properties* dialog box will appear.

3 Click the **Settings** tab.

4 In the **Desktop area**, click and drag the sliding bar to adjust the pixel setting to match the resolution of your projector. To determine the projector's resolution, consult the projector's owner manual, which should be located on the Accessory Shelf.

5 Click Apply and then OK.

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Switching the Display Back to the Internal Computer

You may want to access programs resident on the internal computer or take advantage of its network connections. In this case, don't disconnect the laptop; simply push the Display Source Switch in the Control Panel.

LED indicating active internal computer

LED indicating active laptop
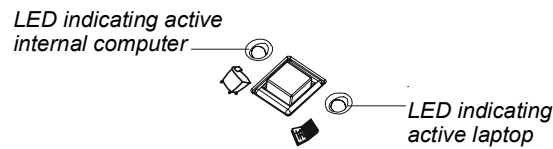
Close-up of Display Source Switch

Printing from Your Laptop

In order to use the cabinet printer, you must:

- install the printer driver (the disk for which is located on the Accessory Shelf)

- connect the 25-pin printer cable in the Control Panel to the printer port on the rear of your laptop
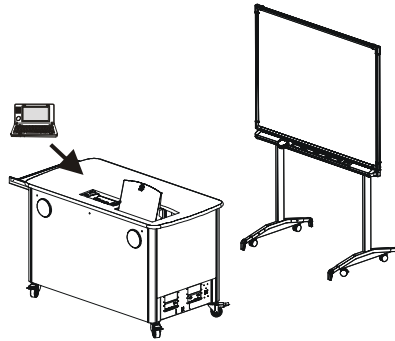
Printer Cable

You can now print selected or entire portions of any file you choose, as you would normally.

Guest Laptop Use of the Interactive Whiteboard

If the Expression cabinet to which you're connecting your laptop is attached to a SMART Board interactive whiteboard, you're in luck.

To dramatically enhance the effectiveness of your laptop presentation, install the full SMART Board software on your laptop's hard drive. This will install the SMART Board driver, SMART Notebook software and SMART Aware software.

Installing SMART Board Software

If you plan on connecting your laptop to the Expression cabinet on a continuing basis, you may want to install the SMART Board driver on your laptop's hard drive so you can control your presentation by touching the whiteboard. In addition, you can:

- use the note-taking and note-capturing capabilities of SMART Notebook software

- configure the pens, erasers and buttons to different sizes and/or functions

- configure one of the Pen Tray buttons to act as a Print Page button so you can print the current interactive whiteboard display on the internal printer.

- To use this function, you must also have the DB-25 printer cable connected to your laptop and the printer driver associated with the internal printer installed. Look on the Accessory Shelf (located above the computer) for a disk containing a copy of the printer driver.

- use a floating Save/Print Toolbar that lets you print or save whatever you write over any displayed application.

Installing the SMART Board software requires approximately 50 MB of disk space, depending on the current system files on your laptop.
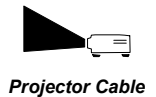
To connect the laptop and install the board driver:

Power On/Off

1 Make sure the cabinet is powered up. If the Power Switch is not in the on position, press it.

2 Put your laptop on top of the cabinet.

3 *With the laptop turned off*, make the following connections:

Projector Cable

- Plug the 15-pin projector connector into the 15-pin video port on the rear of your laptop.

Serial Cable

- Plug the 9-pin serial connector into the 9-pin serial port on the rear of your laptop.

- If you want to use the installed printer, plug the 25-pin printer cable into the 25-pin parallel port on the rear of your laptop.
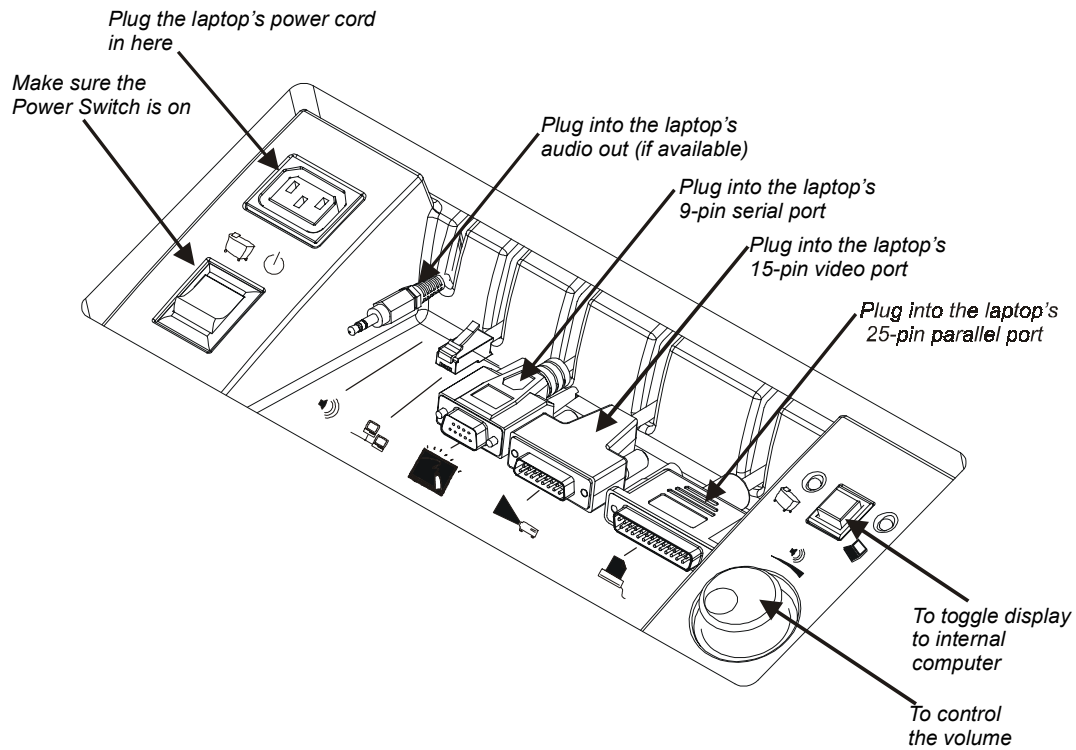
Printer Cable

  NOTE: To use the installed printer, you must install the associated driver. You should find the printer driver on a disk on the Accessory Shelf.

- Plug the 3.5 mm RCA audio plug in the Control Panel into the Audio Out on the rear of your laptop (if available).

4 Turn your laptop on.

A *New Hardware Found* message will appear. Depending on your operating system, you may also be prompted to install manufacturer's disks.

5 Insert the SMART Board software CD into your CD-ROM drive.

After installation, go to **Start**, **Programs**, **SMART Board Software**, and finally, click on **SMART Board Tools**. You should also open the SMART Notebook program in the same directory.

Plug the laptop's power cord
in here

Make sure the
Power Switch is on

Plug into the laptop's
audio out (if available)

Plug into the laptop's
9-pin serial port

Plug into the laptop's
15-pin video port

Plug into the laptop's
25-pin parallel port

To toggle display
to internal
computer

To control
the volume

6 Approach the SMART Board interactive whiteboard and touch the screen. If the pointer appears beneath your finger, the default orientation is fine. If it appears at some distance from your finger, press the SMART Board icon in the system tray and select **Orient** to perform a brief procedure that orients the computer image on the interactive whiteboard.

# Changing the Color, Size and Function of the Pen Tray Tools

The Pen Tray styluses can be reconfigured to alter the line thickness, color or opacity (to create a transparent highlighter effect). The size of the Pen Tray eraser can also be changed to suit individual needs, as can the function of the Pen Tray buttons.

To reconfigure the Pen Tray tools:

1   Press the SMART Board icon and select **Control Panel**.

2   Press on the Pen Tray tab.

3   Press any of the large tool buttons.
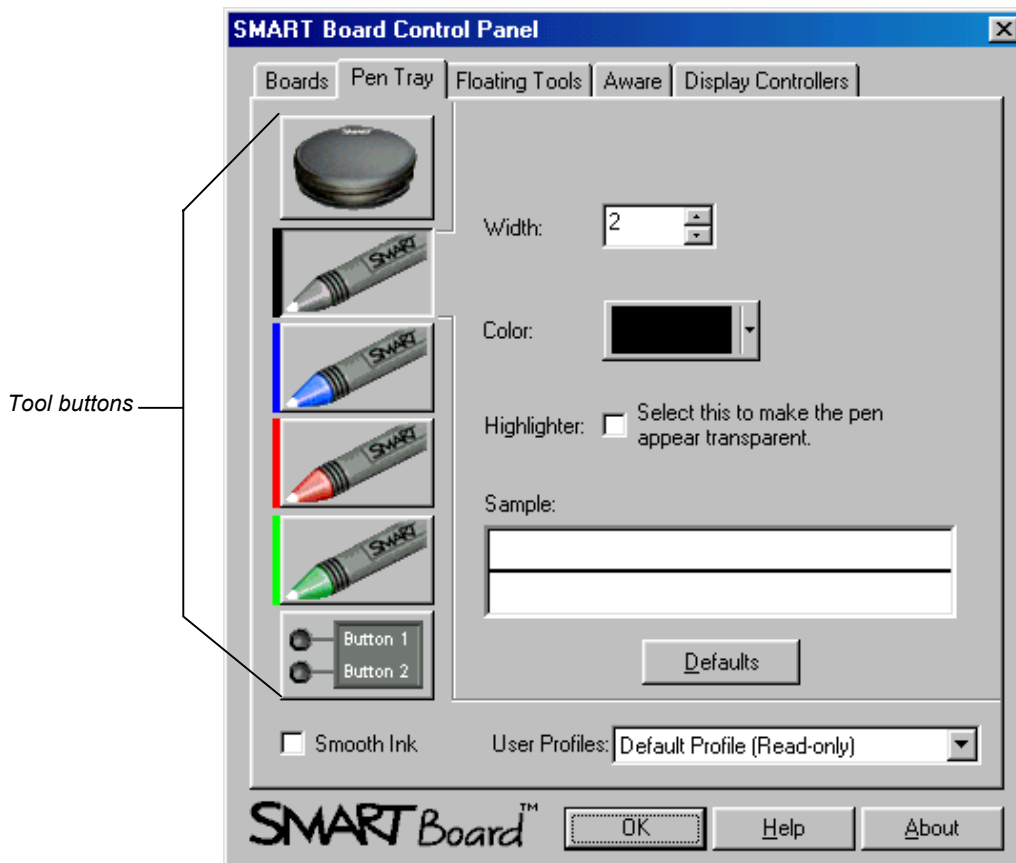
The configuration area to the right of the buttons will alter to let you change the settings for the selected tool.
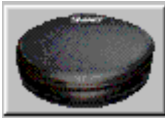
4   To change the eraser settings:
Select **Specify Size** and scroll to set the number of pixels between 10 and 100 for the new eraser diameter.

NOTE: 10 pixels is approximately fingertip-sized.

or

Select **Automatically size eraser to SMART Board size** to have the eraser sized to match your interactive whiteboard.

To change the stylus settings:
- To change the width (the default is 2 pixels), scroll up or down in the **Width** box to increase or decrease line width. The width range is from 1 to 32 pixels.

- To change the stylus to a highlighter, select the **Highlighter** check box.

- To change the color, press the arrow button in the **Color** box. A basic 16-color palette will appear. For a greatly expanded color palette, press the Other button at the bottom of the basic palette.

A preview of the selected color and width will appear in the **Sample** box.

To configure a Pen Tray button to print the current page:

1   Ensure the printer cable in the Control Panel is connected to the printer port on the rear of your laptop.

2   Install the printer driver disk located on the Accessory Shelf.

3   Click the SMART Board icon in the system tray and select **Control Panel**.

4   Click the Buttons tab, and then select the button (projected) you want to change to a Print Page button.

5   Select **Print Page.**

6   Click OK. Press the button configured as Print Page and the current interactive whiteboard screen will be sent to the internal printer.

Optimizing Interactive Whiteboard Use with Notebook Software

SMART Notebook software is installed as a component of SMART Board software: Use it with the SMART Board interactive whiteboard to provide file space for capturing what you write on the board and a repository for annotations written over other applications.

- The **File>Save** command in Notebook software lets you save whatever you write on the interactive whiteboard as a multi-page .nbk file. This file can be printed, sent later as an e-mail attachment, saved as a series of HTML pages either on your Local Area Network or the Internet, or even as a Microsoft® NetMeeting™ Whiteboard file for subsequent conferencing.

- If the Expression cabinet you're using has a scanner, Notebook software's **Picture from Scanner** command in the **Insert** menu is a useful means of importing a scanned image.

- If you have Notebook software running in the background while any other program is open, a Save/Print toolbar will appear each time you lift a Pen Tray pen to annotate over that displayed program. You can save the annotation (and an image of the underlying application, if you choose) just by pressing a button on the toolbar. A new page is automatically opened in Notebook software to receive the annotation.

- Notebook software has a Screen/Window/Region Capture tool that you can use to capture annotations together with the image of the underlying application to the current open page in Notebook software.

Guest Laptops: Using Notebook Software on the Internal Computer

If you simply want a space for recording meeting notes or entering audience input, press the Display Source Switch and use the internal computer's copy of Notebook software. You can write notes in a Notebook file, and then print those notes on the cabinet printer after the meeting for distribution. However, if you save that information, remember that you'll be saving it to the internal computer's hard drive.

If there's no available guest-laptop network connection, you can press the Display Source switch to take advantage of the internal computer's network resources or Internet browser.
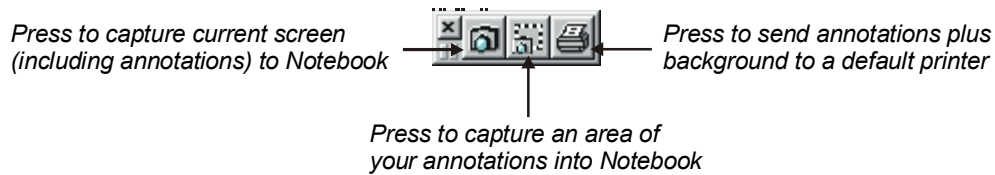
Saving What You Write on the Interactive Whiteboard

To save a Notebook file:

1 If you're working directly in Notebook software, select **Save** from the **File** menu.

The *Save As* dialog box will appear if you're saving a file for the first time.

2 In the **File name** box, type in a name, using the default .nbk extension.

The new file will be automatically saved in the current directory and drive, unless you specify otherwise in the **Save in** box.

3 To print this file, select **Print** from the **File** menu, and select whether to print the entire file or selected parts. Remember, you must make a physical connection to the internal printer via the 25-pin cable in the Control Panel, and you must also install the driver for the resident printer. Look on the Accessory Shelf for the driver disk.

With the Save/Print Toolbar

1 If you're working with Notebook software running in the background, the Save/Print toolbar will appear when you lift a Pen Tray tool.

2   Click the first button to save your annotations, plus the application
        background, as separate objects in the current Notebook file.

Press to capture current screen   *Press to send annotations plus*
(including annotations) to Notebook   *background to a default printer*

Press to capture an area of
your annotations into Notebook

3   Click the middle button to capture an area.

4   Click the third button to send the current screen to the internal printer.

NOTES:

- The middle button is especially handy if you need temporary blank
  space to elaborate on a point made during a presentation in
  another Windows application without disturbing that application or
  losing your annotations.

- The last button sends the annotations, plus the application
  background, to the internal printer. Remember, to use the printer
  you must connect the 25-pin printer cable in the Control Panel to
  the printer port at the back of your laptop. You're also required to
  install the driver for the cabinet printer on your laptop's hard drive.
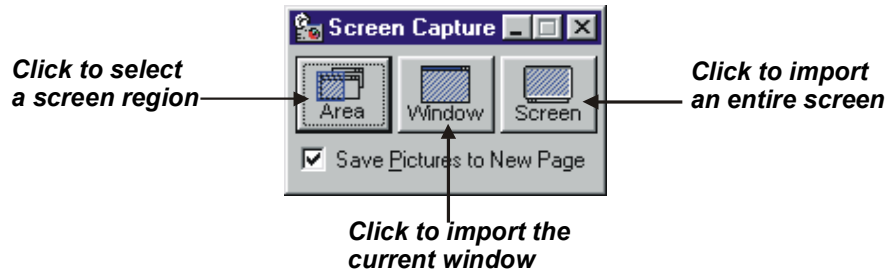 The disk containing the printer driver is on the Accessory Shelf.

Using the Screen Capture Tool

You can capture a screen, a window or a screen region to the current
Notebook page with Notebook software's Screen Capture tool.

To activate Screen Capture:

1   Select **Launch Screen Capture** from the **View** menu.

A three-button Screen Capture toolbar will appear.

**Click to select
a screen region** ——————— **Screen Capture**

Area **Window** **Screen**

☑ Save Pictures to New Page

**Click to import
an entire screen**

**Click to import the
current window**

2 Click the first button to capture a selected area of the screen, click the
middle button to capture the current window, or click the final button to
capture an entire screen to a Notebook page.

NOTE: The Screen Capture toolbar will float over all open applications,
and can be moved by clicking and dragging the title bar to any screen
position.

Importing Scanned Pictures

If your cabinet has a scanner, Notebook software provides the tools to
import scanned pictures.

1 Select **Insert>Picture from Scanner>Select Source**.

The *Select Source* dialog box will appear with a list of the scanners
currently connected to your computer.

2 Select a scanner from the list and press the Select button.

3 Select **Insert>Picture from Scanner>Acquire**.

4 Scan your picture, following the instructions that came with the
scanner. (You should find the owner's manual for the scanner on the
Accessory Shelf.)

5 When the image appears in your scanner's *Photo Editor* dialog box,
adjust the picture as you like.

6 Exit the dialog box to view the scanned picture on the current
Notebook page, in the upper-left corner.

For more information on using Notebook software, read the online Help or look on the Accessory Shelf for the *SMART Board User's Guide.*

Adjusting the Projected Image
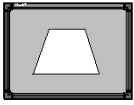
Keystoned Image

As you make the adjustments recommended below, keep in mind that while your goal is a centered image either on the interactive-whiteboard screen or any other surface, a perfectly square image is not always possible. Not only are the screen, projector, Expression cabinet and floor entirely separate physical variables, but the projector itself may have design constraints that may produce a slightly keystoned image shape that can't be adjusted.

GUEST LAPTOP NOTE: Guest laptop users should avoid making adjustments to the Expression cabinet, either by moving the cabinet or the mirror flap, as these alterations will affect the original alignment of the projected image from the internal PC. If the image projected by the laptop is unsatisfactory, read the section on laptop troubleshooting (page 29).

To center the projected image on a screen or wall:

1   Looking at the image from behind the Expression cabinet, visualize a line from the center of the mirror to the center of the screen or wall.

Visualized center line
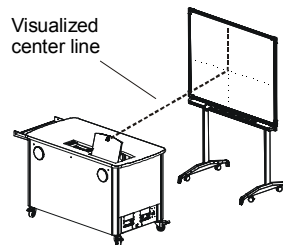
2   Tilt the mirror for vertical adjustment and move the cabinet side to side for horizontal adjustment.

Tilt mirror for vertical adjustment

Shift side to side for horizontal adjustment
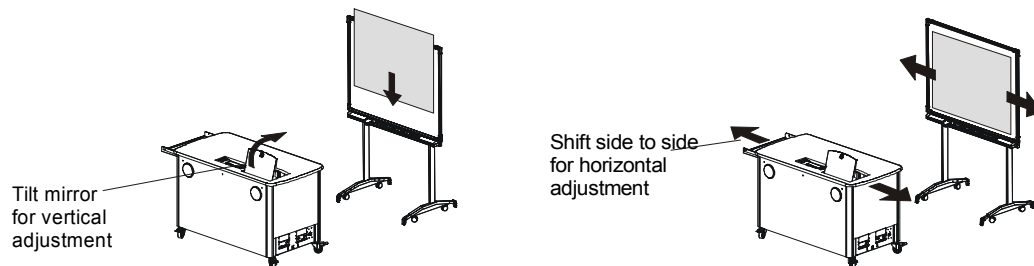
3 To enlarge the image, move the cabinet backward; to shrink the image, move the cabinet forward.

Move backwards or forwards to enlarge or shrink the image
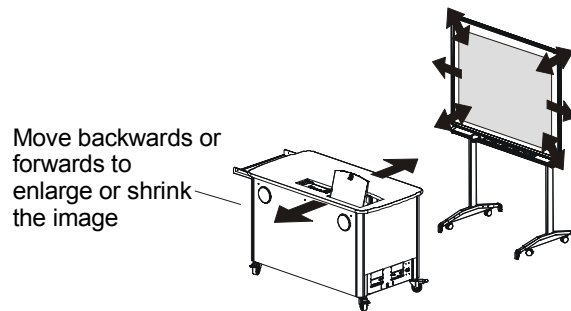
NOTE: If the projector has a zoom lens, you can set the zoom to near maximum (largest image at shortest distance), leaving a small portion of zoom to make final adjustments.

4 Maneuver the cabinet and adjust the mirror until the projected image is centered approximately an inch from the top and bottom, with the sides and top and bottom of the image even.

Keystoning Notes:

- If the image appears lopsided, you may need to rotate one side of the cart forward or backward. After correcting the lopsided image, you may need to center the image again.

Rotate side of cabinet
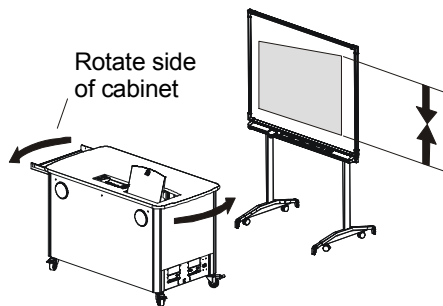
- If the sides are even, but the top and bottom of the image are not equal, you may need to adjust the image by loosening the projector straps and adjusting the feet of the projector up or down. To access the projector, remove the front and top panel as described on page 34.

Tips and Laptop Troubleshooting

General Tips

- When you flip the Main Power Switch to turn the Expression unit off, the computer will also turn off automatically. However, you may prefer to perform an orderly computer shutdown sequence prior to turning the Expression cabinet off.

- Once installed and running, you can use the projector's remote control to put the projector into standby mode before turning off the Expression cabinet, allowing the projector bulb to cool down before the system is shut down.

- If you're using the SMART Board interactive whiteboard, press twice wherever you'd normally double-click with a mouse to activate program components. Avoid lifting your finger from the surface of the interactive whiteboard between the first and second press of a double-press. This ensures that the two contact points are very close to each other, registering as a double-click rather than two discrete contact events.

- The SMART Board driver runs in the background, but the SMART Board Tools can be accessed with a right-mouse click on the SMART Board icon in the System Tray, as shown in the figure below.

If the SMART Board Tools have been minimized, you can press here.

Press here to access SMART Board Tools

Expression User's Guide
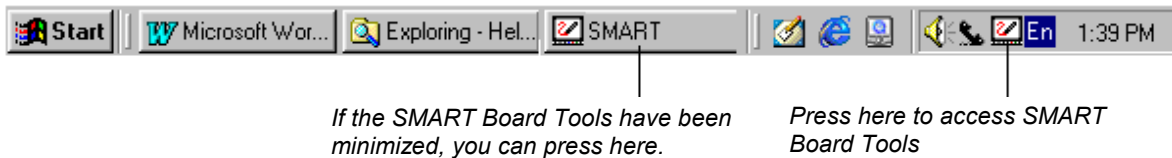
Troubleshooting for Guest Laptop Users

Symptom: The Control Panel projector cable has been connected to the laptop's 15-pin video port, but the laptop image is not projected onto the display screen.

First, check if the Display Source switch has been accidentally toggled to the internal computer. The laptop LED beside this switch should be illuminated, as shown below. If the internal PC LED is illuminated instead, press the Display Source switch to toggle the display source to the laptop.

*Internal PC LED:
Should be inactive*

*Laptop LED:
Should be illuminated*
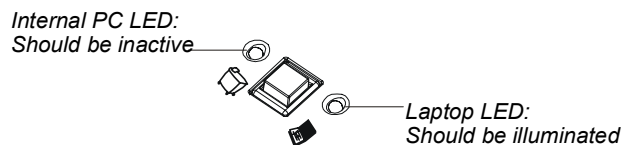
If the Display Source Switch indicates that the laptop is the current display source, your laptop's external video port may be inactive. With newer laptops, you can synchronize the internal and external video ports at the software level, as follows:

- Click **Start** and select **Settings>Control Panel>Display**.

- Select the **Refresh** (or **Monitor Refresh**) tab.

- Click the **CRT/Panel** option to activate simultaneous monitor and external video display.

This procedure may not be possible with older laptop model, so you may need to switch back and forth between the internal and external video port. If you aren't sure which commands or keyboard combinations are required for switching back and forth between the internal and external video ports of your laptop, consult your owner's manual.

Symptom: The laptop image is displayed on the SMART Board interactive whiteboard, but the interactive whiteboard isn't touch-sensitive.

If a program uses your laptop's COM port and resides in the Windows Start menu, you'll be unable to dedicate that COM port to the SMART Board interactive whiteboard. You must disassociate the program from the Start menu to free the COM port for SMART Board interactive whiteboard use, as follows:

1   Click **Start** and select **Settings>Control Panel**. Double-click **Taskbar and Start Menu** icon and click the **Start Menu Programs** tab.

2   Click the Remove button.

    A list of all programs that reside in the Start menu will appear.

3   Click on any program that uses your laptop's COM port.

4   Click the Remove button.

5   Re-boot your laptop.

6   Click the SMART Board icon in the system tray and select **Control Panel**.

    The SMART Board Control Panel will appear.

7   In the Boards tab, click the Connect button under **Serial Ports**.

    The *Select COM Port* dialog box will appear.

8   If you know the COM port to which the SMART Board unit is connected, type it or select it from the COM port drop-down list, and click the Select button under **Manual**.

    or

    If you're unsure of the correct COM port, click the Detect SMART Hardware button under **Automatic** to initiate hardware detection. Your COM ports will be searched for the presence of an attached interactive whiteboard until the correct COM port is located.

9   The Ready Light on the Pen Tray will change from red to green, indicating the interactive whiteboard is now touch sensitive. Open the SMART Board tools to use any Pen Tray stylus to write over projected applications.

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Symptom: The laptop image extends beyond or fails to fill the entire display screen.

First, ensure that your laptop's resolution matches the resolution of the cabinet projector.

To set your computer resolution to match the projector resolution:

1 Click Start button and select **Settings>Control Panel**.

   The *Control Panel* window opens.

2 Double-click the **Display** icon.

   The *Display Properties* dialog box appears.

3 Click the **Settings** tab.

4 Drag the sliding bar to adjust the pixel setting to match the resolution of your projector. To determine the projector's resolution, consult the projector's owner manual, which should be located on the Accessory Shelf.

5 Click Apply and then click OK.

If the image is still the wrong size, make sure your laptop's external video port is active.

With newer laptops, synchronize the internal and external video ports at the software level, as follows:

1 Click **Start** and then select **Settings>Control Panel>Display**.

2 Click the **Refresh** (or **Monitor Refresh**) tab.

3 Select the **CRT/Panel** option to activate simultaneous monitor and external video port display.

This procedure may not be possible with older laptop models. With some older laptop models, you may need to activate the external video port only. If you aren't sure which commands or keyboard combinations are required for switching back and forth between the internal and external video ports of your laptop, consult your owner's manual.

Symptom: The Expression printer isn't working.

First, check to ensure that the printer cable in the Control Panel is securely connected to the printer port of your laptop. If this connection is firm, you may not have the appropriate printer driver installed. Look on the Accessory Shelf for a disk containing the printer driver for the resident Expression cabinet printer and install the driver on your laptop.

Printer Tip: If you're projecting on a SMART Board interactive whiteboard, and you're running SMART Board software, you can also configure one of the SMART Pen Tray buttons to print the current page of the projected application *plus* any annotations you've made over top of it. Turn to page 20 for instructions on configuring the Pen Tray button to print the current page.

Symptom: You are unable to print a document using the cabinet's HP printer or multifunction device.

The heart of this problem lies in the HP DeskJet™ Toolbox software or HP OfficeJet™ Manager software which is installed on the internal computer to run the attached HP printer or multifunction device. This software may poll the HP multifunction device or printer at very frequent intervals, thereby monopolizing the bi-directional printer switch (making it unavailable for guest laptop use). The printer switch persists in maintaining the channel of communication between the internal computer and the HP device because of the software's frequent polling activities.

If you are running this HP printer management software, the guest laptop may receive error messages when attempts are made to print from it. The content of these error messages would suggest that two-way communication between the laptop and the printer is not working.

If the HP software is operating a multifunction device, you may want to keep using it. To solve the guest laptop problem, you may want to temporarily close down the HP software so the guest laptop can print, and then start it up again.

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However, if the HP management software is only used to manage a printer, we suggest you uninstall the printer-management software and then install a current HP-compatible printer driver from the Windows 95 or 98 list of installed printer drivers. Click **Start** and select **Settings> Printers>Add New Printers**. An *Add New Printer Wizard* will appear to assist you in installing an HP printer driver to replace the HP manager software.

Symptom: The Cursor appears at a considerable distance from your fingertip when you press the SMART Board interactive whiteboard.

This is likely a result of a poorly oriented laptop image. The cabinet may have been jostled to spoil the original orientation, or the first orientation attempt may not have been performed with sufficient care.

If you've installed the SMART Board software, press the SMART Board icon in the system tray and select **Orient** to perform a brief procedure that orients the computer image on the interactive whiteboard, ensuring that SMART Board software accurately tracks your touch.

Expression Maintenance

Cleaning Instructions

- Clean the Expression cabinet occasionally with a soft cloth and mild detergent cleanser. Never use solvents or an abrasive cleanser, as these may damage the surface of the cabinet.

- Clean the Control Panel at regular intervals by spraying a standard glass cleanser onto a soft cloth and then wiping the Control Panel. Do not spray the cleanser directly onto the Control Panel.

- Clean the mirror with a standard glass cleaner and a soft cloth.

- Clean the interior electrical components with compressed air.

Adding or Changing Cabinet Shelves

You may need to make adjustments to the interior shelves. Perhaps the projector shelf requires adjustment to align the projected image properly, or you may purchase a new peripheral, such as a scanner, and your shelving needs will change accordingly. Prior to adding or adjusting the shelves, you'll need to remove the top, front and side panels to gain unhindered access to the interior.

Before you begin, ensure that the cabinet is unplugged, particularly before removing the front panel. You should also ensure that the two casters on the front wheels are in the locked position.

Removing the Front, Top and Side Panels

Due to the weight of the panels, we recommend that two people perform the procedures that follow in this section.

The panels *must be removed* in the following sequence: Remove the front panel first, then the top, and, finally, the two side panels. Once removed, the panels should be laid flat or securely propped against a wall so they will be protected from damage and scratches. Also, place all removed fasteners in a secure place for later replacement.

Tools Required

- A security hex key for removing the security fasteners that secure the front panel to the frame (located on the Accessory Shelf)

- A 5/32" Allen key for removing the top and side panels (located on the Accessory Shelf)

3. Remove Side Panel

Brackets that hook onto lower rail

Security Bolts

2. Remove Top Panel

3. Remove Side Panel
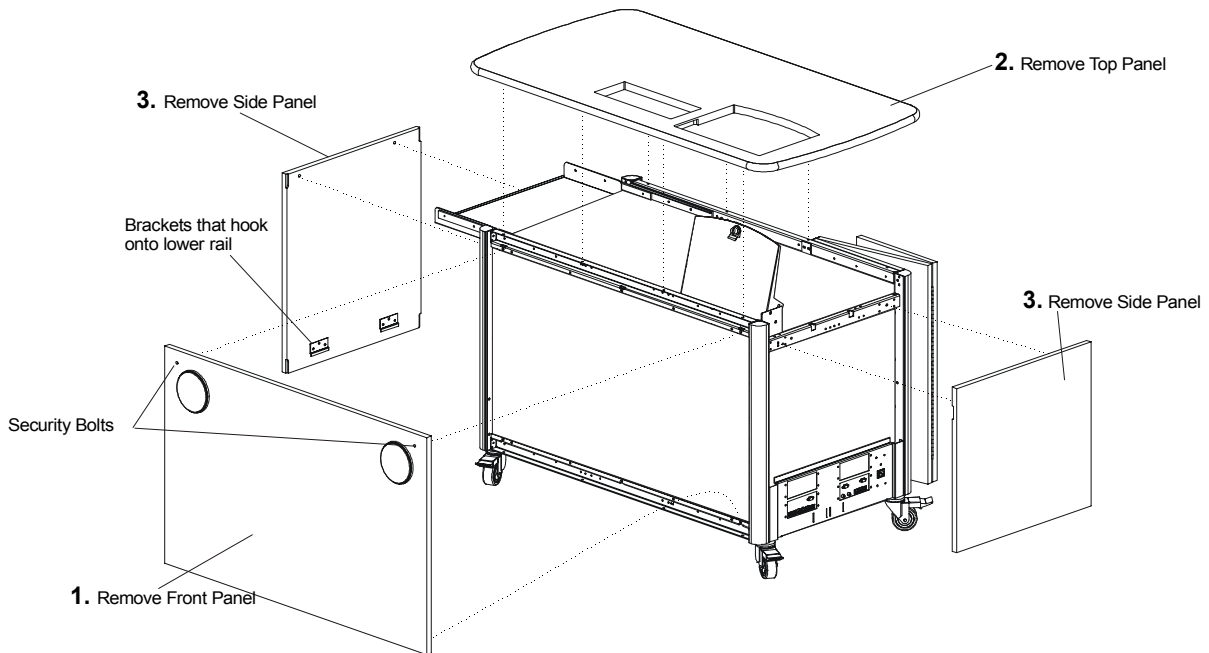
1. Remove Front Panel

Removing the Front, Top and Side Panels

1 To remove the front panel:

1 Remove the two security bolts from the top of the front panel (the side with speakers), using the security hex key provided in the Accessory Kit.

IMPORTANT

2 Pull the top of the panel towards you *only until you can reach your hand behind the panel*. Then disconnect each speaker by depressing the tab on the speaker connector and firmly pulling the connector apart.

3 Lift the panel up and off the lower rail.

2 To remove the top panel:

1 Open the mirror flap at the top and the access door at the back of Expression cabinet.

2 Remove the three bolts that secure the top panel to the back of the cabinet (door side) using the 5/32" Allen key provided in the Accessory Kit. These bolts are located to the right of the door, and the heads of these bolts can be clearly seen from below.

Location of three top panel bolts on the back of the Expression cabinet

Unscrew top panel bolts from **underneath** the front and back top rails

Top Rail

Bolt head underneath top rail
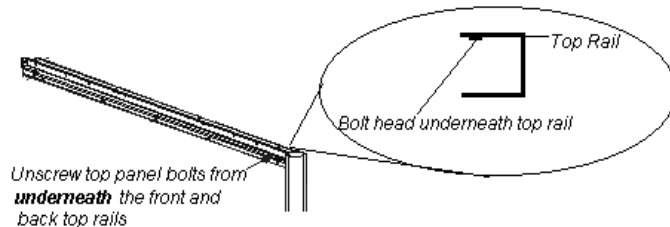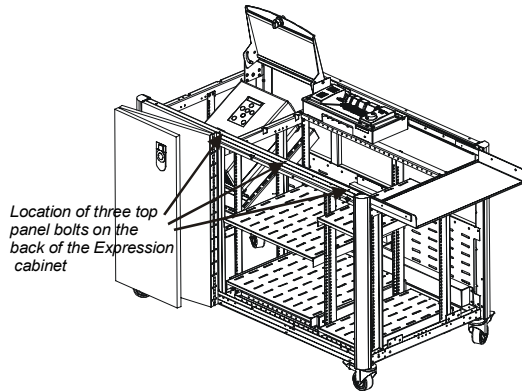
3 Remove the four bolts that secure the top panel to the front of the cabinet (speaker side) using the 5/32" Allen key.

4 Lift the top straight up and over the open mirror flap.

3   To remove the side panels:

1   Remove the two bolts that secure each side panel to the upper rail from the inside of the cabinet using the 5/32" Allen key.

Location of bolts
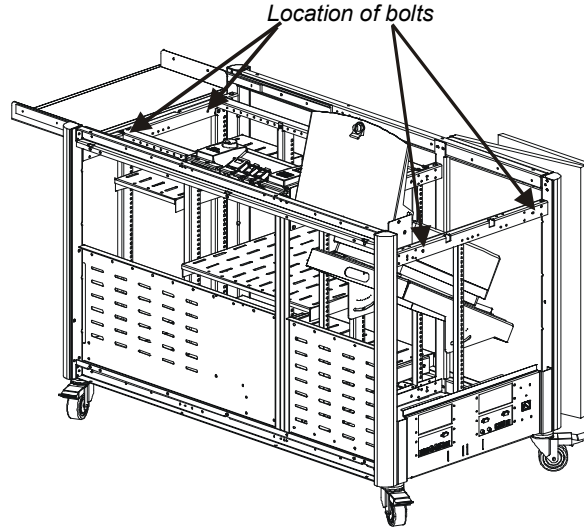
2   Lift each side panel up and off the lower rails.

Adjusting the Shelving

The cabinet is designed to support a wide variety of computer and multimedia equipment. There are certain size limitations, however, so if you're adding new or different peripheral models, be aware of the following cabinet dimensions:

- The projector cavity, containing the adjustable projector shelf, supports a variety of projectors up to 14" W x 9" H x 18" D (*35.6 cm x 22.9 cm x 45.5 cm*) in size.

- The peripheral cavity, which stores both the computer and other peripherals, is 29" W x 24" H x 18" D (*73.5 cm x 61 cm x 45.5 cm*). The computer area also contains a small accessory basket to store items from the Accessory Kit. The shelf upon which the basket rests can be adjusted or removed to accommodate an especially high computer tower.

To accommodate non-standard-sized equipment, you may need to move shelves up or down. However, once you remove the front, top and side panels these are very simple procedures.

The two standard shelves are 19"W x 18" D (*48.3 cm x 45.7 cm*) and 9" W x 18" D (*22.9 cm x 45.7 cm*).   Each shelf has a weight restriction of 50 lbs (*22.7 kg*).

To move the shelving up or down:

1   Remove the four screws that secure the shelf to the vertical uprights with a Philips screwdriver.

2   Slide the shelf clips to the new setting.

NOTE: Shelves can be moved up or down in half-inch increments.

Vertical Upright
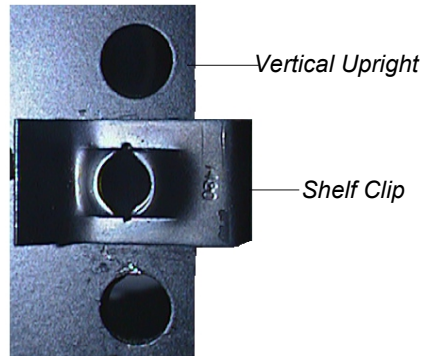
Shelf Clip

Shelf Clip on Vertical Support

3   Place the shelf in its new position, aligning it with the shelf clips, and then insert the four screws to secure the shelf.

Contacting SMART Technologies

SMART Technologies assumes no responsibility for the multimedia equipment installed in the Expression cabinet. However, if you have a problem with integrating the equipment, the cabinet itself and its component parts, SMART software, or the SMART Board interactive whiteboard, contact SMART Technical Support for assistance.

Contacting SMART Technical Support

Please note your Expression cabinet serial number before calling so we can better assist you. You'll find the serial number label just above the accessory shelf, to the left of the printer switch, and below the keyboard shelf.
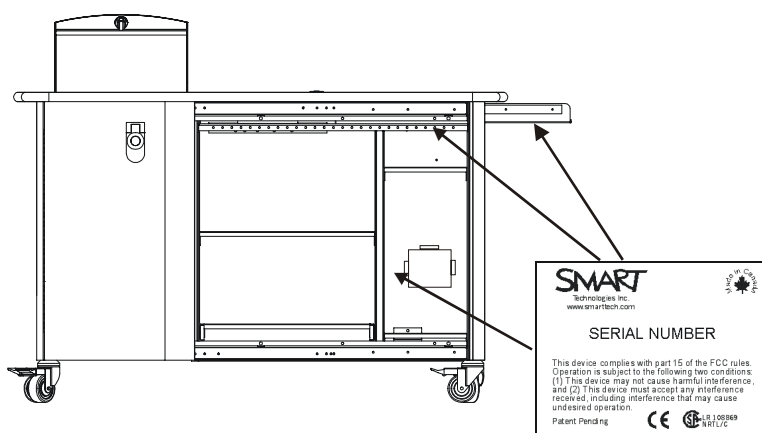
Your SMART Expression unit is covered by a one-year parts and labor warranty. All SMART software includes one year of free telephone, fax, and e-mail support.

You may contact SMART Technical Support at:

Tel.: Toll-free at 1.866.518.6791 (Canada/United States) or
+1.403.228.5940 in all other countries
(Available 7 a.m. – 6 p.m. Mountain Time from Monday to Friday)
Fax (24 hr.): +1.403.245.0366

E-mail: support@smarttech.com
Web site: www.smarttech.com

Please provide us with information about when you purchased the Expression cabinet or the SMART Board interactive whiteboard, the dealer's name, your operating system, and the name of the application software causing the problem, if applicable.

Other SMART Contacts

Main Switchboard: 1.888.42.SMART (Canada/United States) or +1.403.245.0333
    in all other countries
Sales and Marketing: 403.245.0333
Main Fax (24 hr.): +1.403.228.2500
E-mail: info@smarttech.com

Address: SMART Technologies Inc.
            Suite 600, 1177 - 11th Avenue SW
            Calgary, AB   CANADA   T2R 1K9

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Appendix: Identifying Cabinet Icons

The cabinet contains several icons that identify a variety of features and functions. Should a question ever arise as to what function or feature an icon represents, the charts below are provided for clarification.

Control Panel Icons

	Power On/Off		Audio Cable
	Internal PC Display Indicator		Network Cable
	Laptop PC Display Indicator		SMART Board Interactive Whiteboard Cable
	Volume Control Dial		Projector Cable
			Printer Cable

Standard Connection Panel Icons

	Video OUT		Audio Out (Left)
	SMART Board Interactive Whiteboard		Audio Out (Right)
1 2 V	12V DC Power Outlet		Network Connection

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