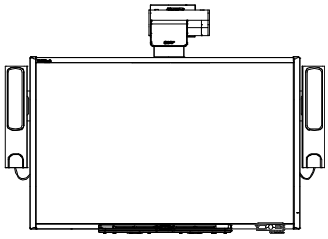

SMART Board™ 685ix Premium Interactive Whiteboard System

Installation on the FUWM-600 Fixed Unit Wall Mount

Extraordinary made simple™

Product registration

If you register your SMART product, we'll notify you of new features and software upgrades.

Register online at www.smarttech.com/us/Product+Registration.

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

Serial number: _____

Date of purchase: _____

FCC warning
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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Patent No. US5448263; US6141000; US6320597; US6326954; US6337681; US6540366; US6741267, US6747636; US7151533; US7289113; US7499033; US7626577; US7687736; CA2058219; and CA2252302. Other patents pending.

Important information

Before you install and use your SMART Board™ 685ix Premium interactive whiteboard system, read and understand the safety warnings and cautions in this user's guide. This information describes the safe and correct operation of your SMART Board interactive whiteboard and its accessories and helps prevent injuries and equipment damage.

If you own a SMART product other than a SMART Board 685ix Premium interactive whiteboard system, refer to the installation manual for your product for relevant warnings and maintenance instructions.

NOTE

In this document, the term "interactive whiteboard" refers to your interactive whiteboard and its accessories and options.

Safety warnings and cautions

WARNINGS

- Failure to follow the installation instructions included with your interactive whiteboard, or found in this guide, could result in personal injury or product damage.
- Two people are required to safely mount your interactive whiteboard on a wall mount because it could be too heavy for one person to safely maneuver. When you lift your interactive whiteboard, you and your assistant should stand on either side of the screen, supporting its weight at the bottom corners while balancing the top with your other hands.
- Do not leave cables on the floor where they can be a tripping hazard. 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 a contrasting color. Handle cables carefully and avoid excessive bending.
- To reduce the risk of fire or electric shock, do not expose your SMART Board interactive whiteboard to rain or moisture.
- There are no user-serviceable parts inside the pen tray. Only qualified personnel should disassemble the pen tray's printed circuit boards, and this procedure must be done with proper electrostatic discharge (ESD) protection.

CAUTIONS

- If you need to lean your interactive whiteboard against a wall before you mount it, make sure that it remains in an upright position, resting on its pen tray brackets, which are designed to sustain your interactive whiteboard's weight.
- Do not rest your interactive whiteboard on its side or on the top of its frame.
- Do not add any extra weight or excessive pressure to a wall-mounted interactive whiteboard or its pen tray. SMART designed the brackets to support only the weight of your interactive whiteboard during normal use.
- For operating safety and to avoid damage to your interactive whiteboard, connect its USB connector only to a computer that has a USB compliant interface and that bears the USB logo. In addition, the USB source computer must be compliant with CSA/UL/EN 60950 and bear the CE mark and CSA and/or UL mark(s) for CSA/UL 60950.

Other precautions

To ensure operating safety and to prevent product damage, observe the following precautions.

- Don't set up or use your interactive whiteboard in an area with excessive levels of dust, humidity or smoke.
- If your SMART Board interactive whiteboard requires replacement parts, make sure that the service technician uses replacement parts specified by SMART Technologies or parts with the same characteristics as the original.
- Be aware that security cable locks aren't designed to be a solid protection measure because the lock can be torn out. However, potential thieves might be reluctant to try to sell a product with a broken security cable lock hole, which would readily identify it as a stolen item.

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Chapter 1

Installing your SMART Board 685ix Premium interactive whiteboard system

IMPORTANT

- Use the instructions in this guide to install your SMART Board 685 interactive whiteboard, UX60 projector and extended control panel (ECP) on the fixed unit wall mount 600 (FUWM-600).
- The instructions in your SMART Board 685 interactive whiteboard box do not include instructions for installing the UX60 projector or ECP, and the instructions in the *SMART Board 685ix and SBD685 Interactive Whiteboard System* document do not show how to mount the interactive whiteboard or projector on the wall mount.
- Refer to the *FUWM-600 Computer* installation instructions included with the wall mount, document 99-01035-20, to install the wall mount.

In this chapter

Refer to these topics for information about mounting your SMART Board 685ix interactive whiteboard system on the FUWM-600.

- *Before installing the SMART Board 685ix interactive whiteboard system* on page 2
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Before installing the SMART Board 685ix interactive whiteboard system

Environmental requirements

Before installing your system, refer to the environmental requirements in the *SMART Board™ 685ix Interactive Whiteboard System Configuration and User's Guide*, document 99-00984-20, provided with your system.

Verify the installation of the FUWM-600 wall mount and the computer

You must complete the installation of the FUWM-600 wall mount and the computer before you can install the UX60 projector, the SMART Board 658 interactive whiteboard and the ECP. Refer to the *FUWM-600 Computer* installation guide, document 99-01035-20, provided with your FUWM-600 unit for more information.

Mounting your SMART Board 685ix interactive whiteboard system on a FUWM-600

Important

Before mounting your interactive whiteboard system on the FUWM-600, carefully read and observe the following instructions to ensure operating safety and to prevent damage to your product.

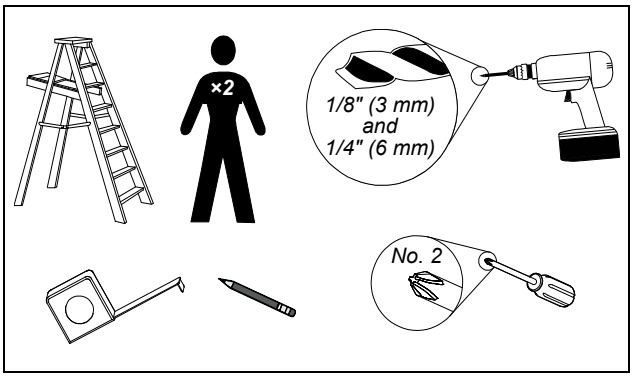
WARNINGS

- Failure to follow these instructions could result in personal injury and product damage
- Two people are required to safely mount your projector and interactive whiteboard on the wall mount because they could be too heavy for one person to safely maneuver. When you lift your interactive whiteboard, you and your assistant should stand on either side of the screen, supporting its weight at the bottom corners while balancing the top with your other hands.
- Do not leave cables on the floor where they can be a tripping hazard. 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 a contrasting color. Handle cables carefully and avoid excessive bending.

Tools required

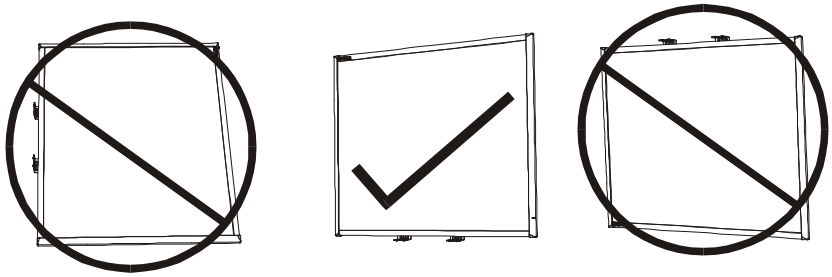
To mount your interactive whiteboard on the FUWM-600 wall mount, you need the following tools, which aren't included with your interactive whiteboard system:

- a Phillips® No. 2 screwdriver (all screws must be tightened by hand)
- an electric drill with a 1/8" (3 mm) and a 1/4" (6 mm) drill bit
- a measuring tape
- a pencil
- a stepladder



CAUTION

- If you need to lean your interactive whiteboard against a wall before you mount it, make sure that it remains in an upright position, resting on its pen tray brackets, which are designed to sustain your interactive whiteboard's weight.



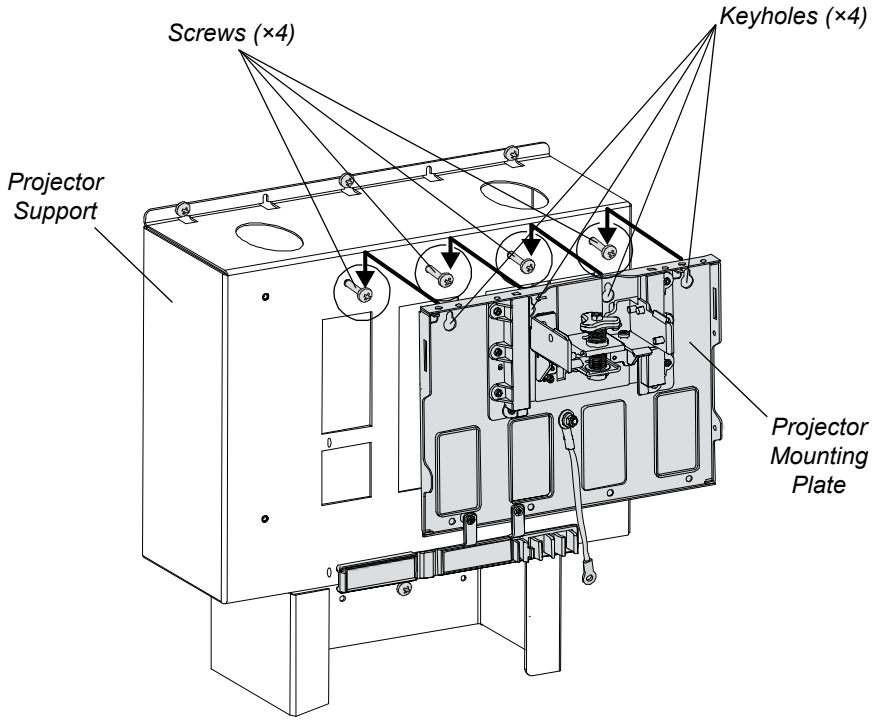
- Do not rest your interactive whiteboard on its side or on the top of its frame.

Installing the projector mount and wall mount bracket

To install the projector mount, use the screws labeled *f (×7)* shown on page 27 of the *FUWM-600 Computer* installation guide.

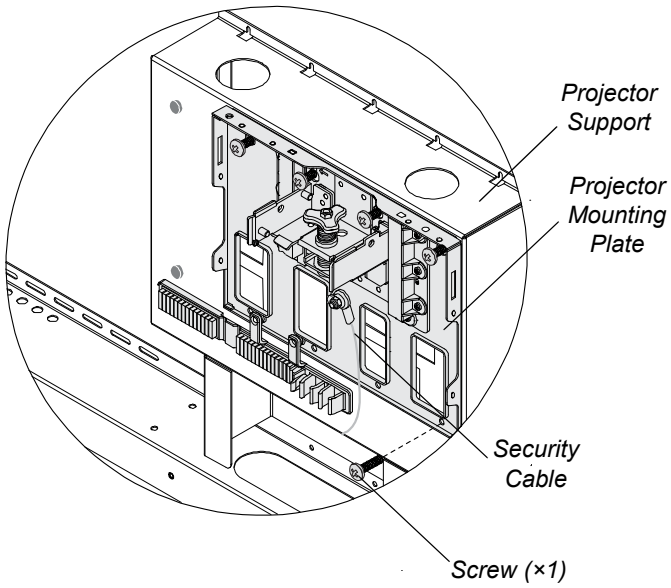
To install the projector mount

1. Using a Phillips No. 2 screwdriver, insert four screws into the four top-right holes of the projector support leaving the screw heads 1/4" (6 mm) from its surface.

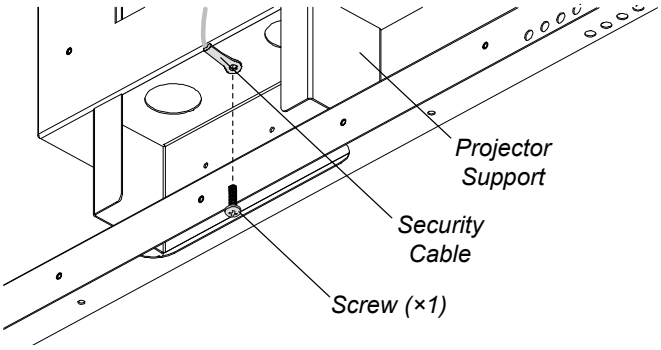


2. Place the projector mounting plate keyholes over the screws, and then tighten the screws.

3. Insert one screw into the hole in the bottom-right corner of the projector support.

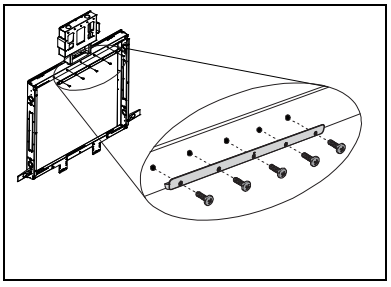


4. Use one screw to attach the loose end of the security cable to the bottom of the projector support.



To install the wall mount bracket

Using a Phillips No. 2 screwdriver, secure the wall mount bracket to the wall mount with the included screws.



IMPORTANT

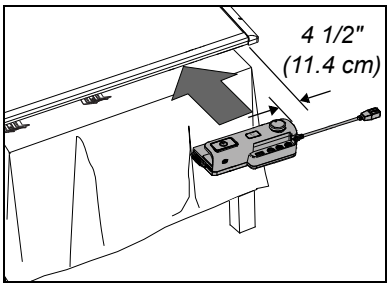
Use only one of the two wall mount brackets provided with your SMART Board 685 interactive whiteboard.

Installing the ECP on the interactive whiteboard's frame

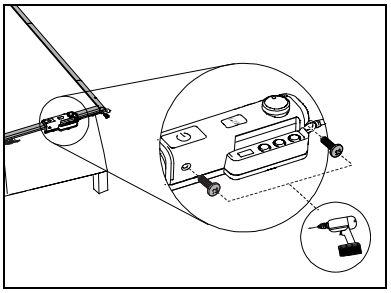
Before you install the interactive whiteboard, temporarily attach the ECP to the lower-right of the frame using self-tapping screws. Later in the installation, you'll permanently attach the ECP after connecting all of its cables.

To install the ECP

1. Lay the interactive whiteboard on its back on a flat surface.
2. Position the ECP module on the bottom frame 4 1/2" (11.4 cm) from the inside edge of the right frame.



3. Using the ECP as a template, drill two 1/8" holes in the bottom frame.
4. Using a Phillips No. 2 screwdriver, attach the ECP to the frame with two included self-tapping screws.
5. Remove those two screws and the ECP. Put the screws in a safe location and keep the ECP nearby to use in a later procedure.



IMPORTANT
You must remove the ECP so you can connect cables to it before you permanently attach it to the interactive whiteboard's frame.

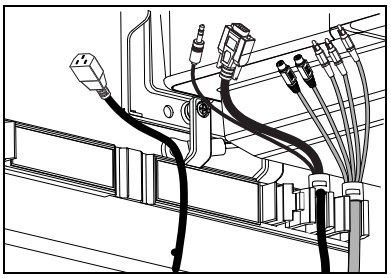
6. Place the interactive whiteboard in a safe location until later in the installation.

Installing the ECP and projector cables and the guest computer harness

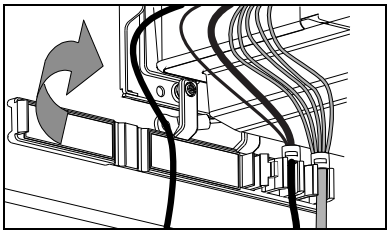
Because the ECP cables, projector cables and guest computer harness are installed inside the wall mount frame, behind the interactive whiteboard, you must install them now.

To install the cables to the projector cable support

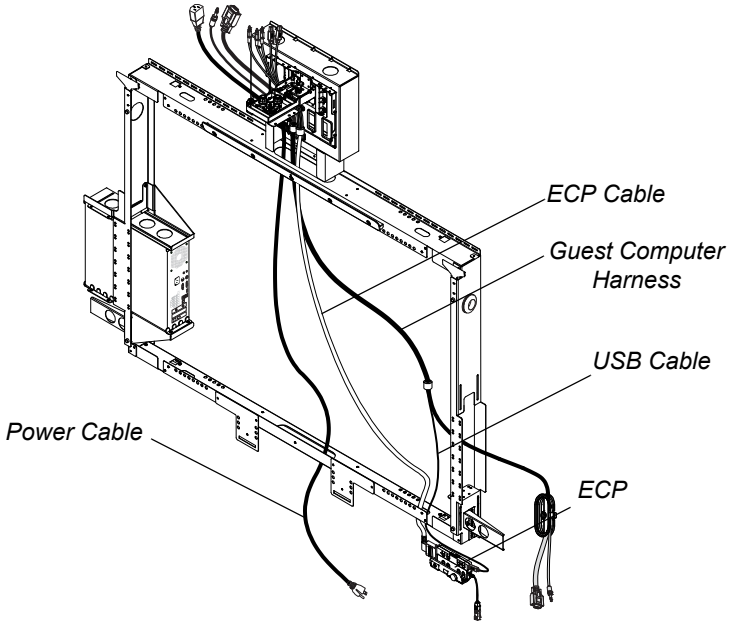
1. Position the five-connector end of the ECP cable and the two-connector end of the guest computer harness on the right end of the wire management clip, and then push them into their slots in clip.
2. Place the female end of the power cable to the left of the cable clips leaving enough length to connect to the projector's power connector.



3. Close the wire management clip.



4. Route the ECP cable through the opening in the lower right of the bottom frame of the wall mount, and then connect it to the ECP.



5. Route the USB cable of the guest computer harness through the opening in the lower right of the bottom frame of the wall mount, and then connect it to the ECP.
6. Route the guest computer harness through the opening in the right side of the wall mount.
7. Route the projector's power cable through an opening in the bottom or side of the wall mount closest to your wall outlet.

NOTE

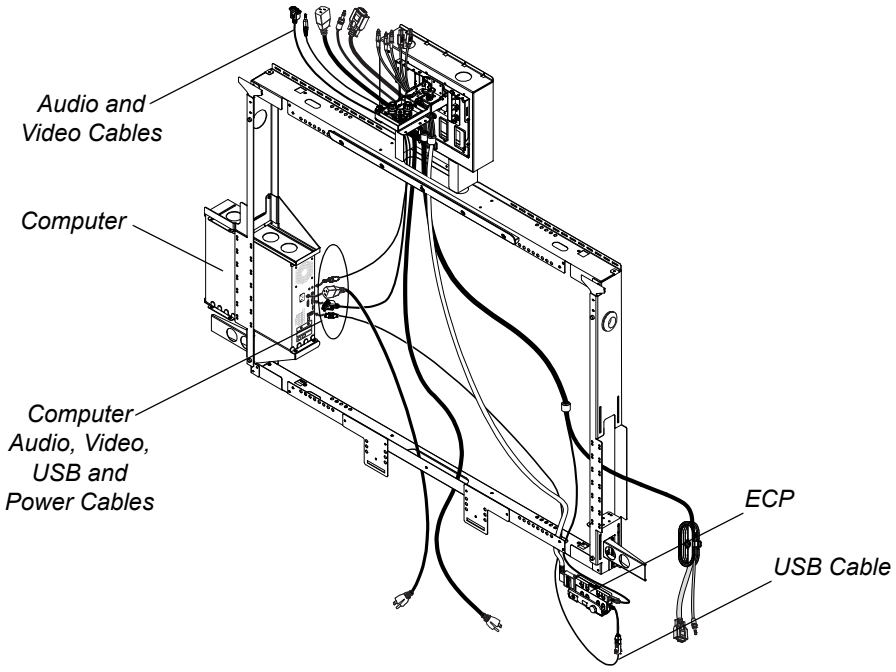
Don't connect the power cable to a wall outlet at this time.

Installing the computer cables

You're unable to access the computer's rear connection panel after you install the interactive whiteboard, so you must connect the computer cables now.

To install the computer cables

1. Connect the audio, video, USB and power cables to the computer's rear connection panel.



2. Route the power cable through an opening in the bottom or side of the wall mount closest to your wall outlet.
3. Route the USB cable through the opening in the lower right of the bottom frame of the wall mount, and then connect it to the ECP's captive USB connector.
4. Route the audio and video cables up to the projector's wire management clip, and then open the clip.
5. While holding the projector's power cable in place, place the audio and video cables beside the power cable, leaving enough length to connect them to the projector's connectors.

   NOTE
   Don't let the cables cross as they pass through the clip.

6. Close the wire management clip.

Installing SBA speakers and cables

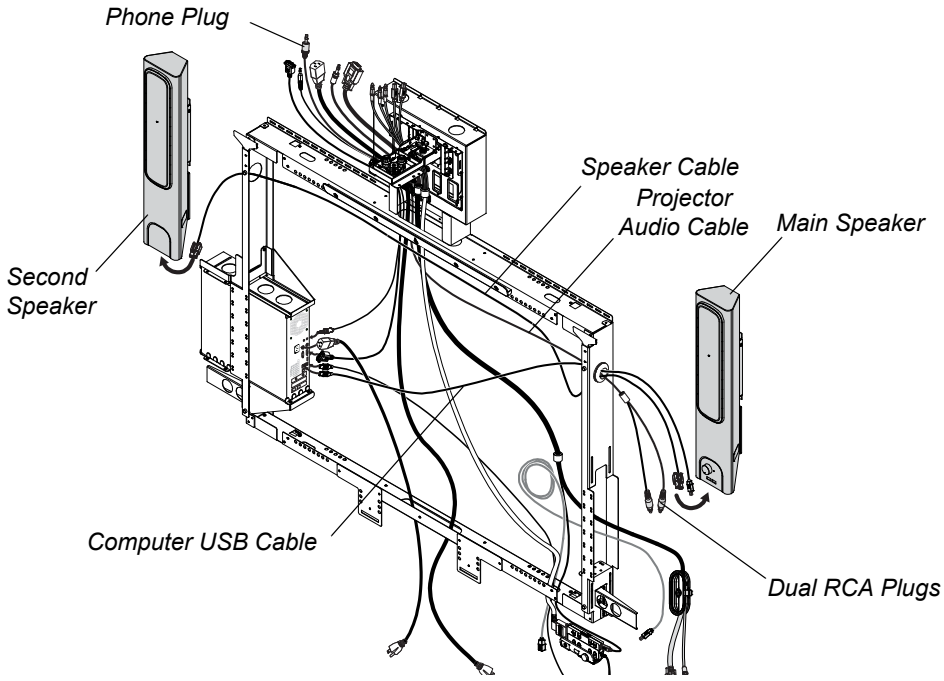
SMART recommends that you install your SMART Board Audio (SBA) speakers on the wall on each side of the interactive whiteboard instead of attaching them to the interactive whiteboard.

NOTES

- You can install the speakers now or after you've installed the interactive whiteboard.
- The following procedures show the main speaker mounted to the right of the interactive whiteboard, which maintains the correct left to right stereo image. If control module accessibility or proximity to a power outlet requires it, you can mount the main speaker on the left and change the routing of the speaker cables accordingly.

To install the SBA speakers and cables

1. Refer to the *SBA Speakers for SMART Board Interactive Whiteboards* installation guide provided with the speakers to install them.
2. Route the 1/8" (3.5 mm) phone plug end of the phone-to-dual-RCA audio cable (included with the FUWM-600) up to the projector's wire management clip, and then open the clip.



3. While holding the other cables in place, place the audio cable beside them, leaving enough length to connect to the projector's phone jack.

NOTE

Don't let the cables cross as they pass through the clip.

4. Close the wire management clip.
5. Connect the other end of the audio cable from the projector mount to the main speaker.
6. Route the speaker cable from the main speaker to the second speaker through the oval openings in the top right and top left of the wall mount, and then connect it to both speakers.
7. Optionally, you can connect a USB cable from the computer to the main speaker.

   NOTE
   If you connect a USB cable directly from the computer to the speaker, you can't control the audio volume with the projector's remote control.

8. Coil up and secure any excess cable inside the wall mount frame.

Installing additional cables

If you wish to connect your interactive whiteboard system to a network, a room control system or other peripheral audio-visual devices, connect them now using the techniques outlined in the previous procedures. Ensure that all cables are routed through openings in the sides or bottom of the wall mount frame.

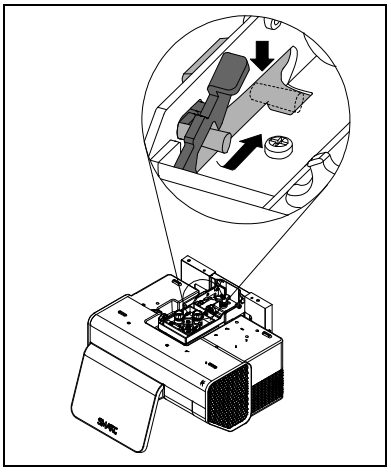
Installing the UX60 projector

WARNING
Two people are required to safely mount your UX60 projector on the wall mount because it could be too heavy for one person to safely maneuver.

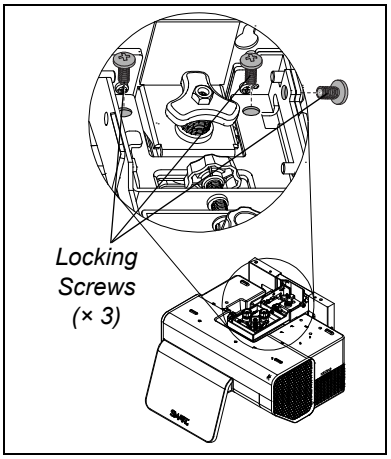
To install the UX60 projector

1. With the help of another person, fully insert the projector adjustment module into the wall mount bracket guide pins.

   You hear a click when the adjustment module is fully inserted and the spring is locked.

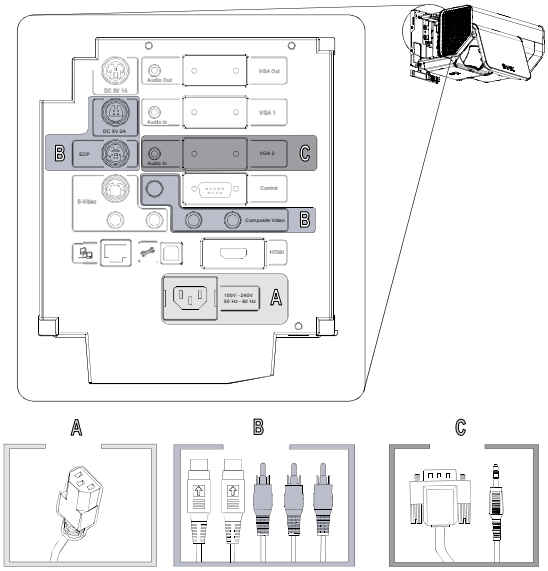


2. Using a Phillips No. 2 screwdriver, safely secure the system using three locking screws.



3. Remove the cover from the left side of the projector.

4. Connect the five ECP cable connectors, the two guest computer harness connectors and the power cable to the projector connection panel.



5. Connect the computer's video and audio cable to the VGA 1 inputs.

6. Connect the SBA speaker audio cable to the Audio Out connector, and then connect any other optional cables.

7. Replace the cover.

Securing the cables

Before you mount the interactive whiteboard on the wall mount, secure the cables to prevent strain on connectors and to keep excessively long cables hidden behind the interactive whiteboard.

To secure the cables

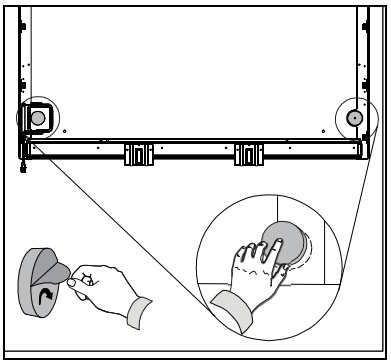
Using the included cable ties, secure all the cables to points inside the wall mount frame, ensuring that they don't interfere with the interactive whiteboard when it's mounted on the frame.

Mounting the interactive whiteboard

Follow this procedure to mount your SMART Board 685 interactive whiteboard on the FUWM-600.

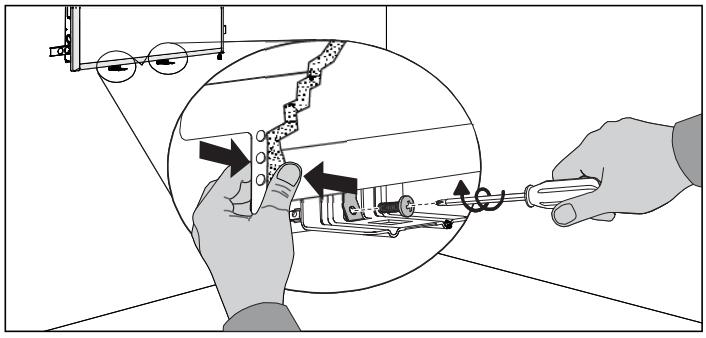
To mount your interactive whiteboard

1. Attach the round spacers to the back of the interactive whiteboard.



   NOTE
   The round spacers are provided with the FUWM-600.

2. Verify that no cables or hardware that can interfere with the wall mount are attached to the back of the interactive whiteboard.
3. With the help of another person, hang your interactive whiteboard on the wall mount near the center of the bracket.
4. Using a Phillips No. 2 screwdriver, insert a bolt through the left pen tray bracket into the left captive nut in the wall mount. Repeat with the right pen tray bracket.



   NOTE
   Don't tighten the bolts at this time. Leave them loose so that you can slide the interactive whiteboard sideways to align it with the projector's image. See *Aligning your interactive whiteboard with the projector* on page 13.

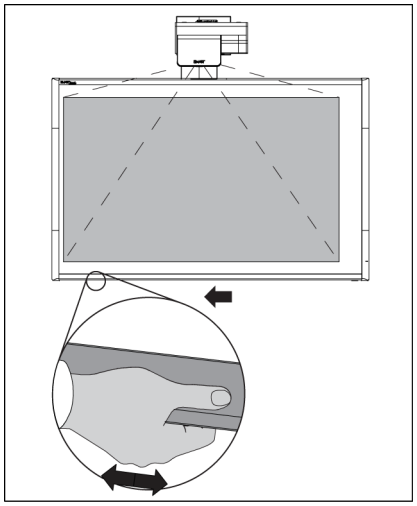
Completing your installation

Refer to the following procedures to finish installing your interactive whiteboard system.

Aligning your interactive whiteboard with the projector

To align your interactive whiteboard with your projector

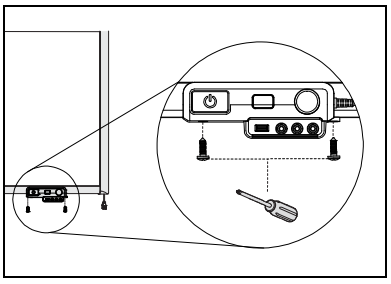
1. Plug the projector's power cable into a wall outlet, and then use the remote control to turn on the projector.
2. Follow the procedures in the *SMART Board 685ix Interactive Whiteboard System Configuration and User's Guide* to align the projector.
3. Slide the interactive whiteboard from side to side, while holding the bottom frame of the interactive whiteboard, to center the board on the projected image.
4. Tighten the bolts holding the pen tray brackets to the wall mount.



Attaching the ECP module

To attach the ECP module

1. Using the two screws you removed in the procedure *To install the ECP* on page 6, attach the ECP to the bottom frame of the interactive whiteboard.
2. Plug the USB B connector into the controller module's captive USB cable connector.

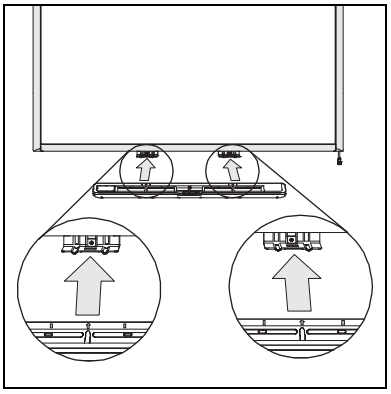


Installing the pen tray

To install the pen tray

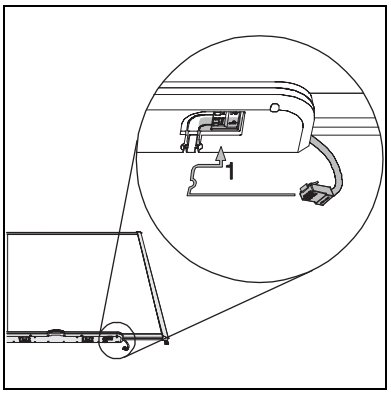
1. Position the pen tray in line with the two L-shaped metal brackets, and then slide it toward the wall until it rests snugly against the bottom frame of your interactive whiteboard.

   The pen tray clicks into place.



2. Route the control module's modular I²C cable through the cable management channel under the lower-right end of the pen tray, and then insert its connector into receptacle **1**.
3. Press the cable into the cable management channel on the bottom of the tray.

   This step protects the modular cable's RJ11 connector from damage if the pen tray is removed without first disconnecting the cable.
4. Place the four pens and the eraser into their respective slots in the pen tray.



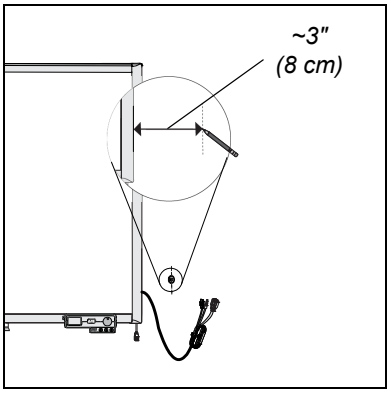
Mounting the guest computer harness

When the guest computer harness isn't in use, you can magnetically attach it to the wall beside the interactive whiteboard.

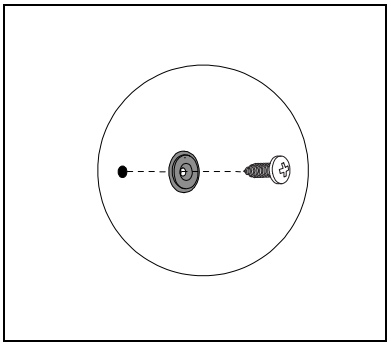
To mount the guest computer harness on the wall

1. Drill a 1/4" (6 mm), 1 3/4" (45 mm) deep hole in the wall approximately 3" (8 cm) to the right of interactive whiteboard frame near where the guest computer harness exits the side of the wall mount.

   NOTE
   Position the hole so the harness doesn't interfere with the SBA speaker or cables.



2. Using the screw and anchor provided, attach the steel washer to the wall.
3. Wrap the harness around the oval cable spool, and then press the spool's magnet onto the washer.



Orienting your interactive whiteboard

Your SMART Board interactive whiteboard includes default orientation data. Your interactive whiteboard's controller module uses this data if you haven't oriented your interactive whiteboard.

Orienting your interactive whiteboard ensures the greatest possible level of writing and touch accuracy. After you install SMART Meeting Pro Premium on your computer, orient your interactive whiteboard. Orient your interactive whiteboard if your projector or interactive whiteboard has moved since you last used it, or whenever the mouse pointer isn't properly aligned with your finger or a pen tray pen when you touch the screen.

Default manufacturing orientation

When your interactive whiteboard uses the default manufacturing orientation data, the touch point on the screen corresponds fairly well to the projected computer desktop image, provided that the projected image fills the entire interactive screen. The default orientation is a simple 2-point orientation, which can result in the projected touch point being offset from the actual contact location. To increase the accuracy of your touch, perform a 4-, 9-, 12- or 20-point orientation.

NOTE

You can restore the default orientation parameters by holding the Reset button on the controller module for at least three seconds.

4- and 9-point user orientation

When you perform a quick 4-point or the standard 9-point orientation, the orientation data is saved in your interactive whiteboard controller module's flash memory (that is, the orientation data stays with your interactive whiteboard). If you connect a different computer, the orientation data for your interactive whiteboard remains unchanged.

12 or 20-point user orientation

You can also perform a 12-point or 20-point user orientation. Unlike the 4- and 9-point orientations, the drivers save the 12- and 20-point orientation data on your computer, and it therefore remains with your computer instead of your interactive whiteboard. Resetting the controller module won't clear the 12- or 20-point orientation data from your computer.

Setting orientation precision

The orientation procedure can be 4, 9, 12 or 20 touches, depending on the precision setting you specify. The following procedure shows you how to change the precision setting.

To select a 4-, 9-, 12- or 20-point orientation procedure

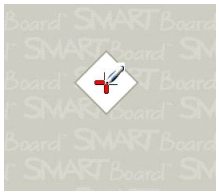
1. Press the **SMART Meeting Pro** icon in the Windows® notification area, and then press **Control Panel**.
2. Press **SMART Hardware Settings**.
3. If you have more than one SMART product connected, select the appropriate interactive whiteboard.
4. Select **Orientation/Alignment Settings** from the drop-down list.
5. Select the desired orientation setting, and then press **OK**.
6. Perform an orientation procedure (see below).

Orienting the interactive whiteboard system

To orient your interactive whiteboard

1. Hold down the two large pen tray buttons at the same time.

   The orientation screen appears.
2. Pick up a pen from the pen tray.
3. Beginning at the upper-left corner of the screen, touch the center of the target firmly with the tip of the pen until the target moves to the next point.



   TIPS
   - Don't flick the pen when you lift it from the screen.
   - Lift the pen at a right angle to the screen.

   NOTE
   Although you can use your finger to orient your interactive whiteboard, a fine-point tool such as a pen tray pen provides greater precision.
4. Repeat step 3 until you arrive at the last point.

   NOTE
   If you aren't satisfied with the precision of a particular point, press the left arrow key on your computer's keyboard to repeat the orientation for that point.
5. At the last point, touch the center of the target firmly and continue pressing until the message "Please wait while Orientation completes" appears.

   The orientation screen closes.

Appendix A

Hardware environmental compliance

SMART Technologies supports global efforts to ensure that electronic equipment is manufactured, sold and disposed of in a safe and environmentally friendly manner.

Waste Electrical and Electronic Equipment regulations (WEEE directive)

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

When you dispose of any electrical or electronic equipment, including SMART Technologies products, we strongly encourage you to properly recycle the electronic product when it has reached end of its life. If you require further information, please contact your authorized SMART reseller or SMART Technologies for information on which recycling agency to contact.

Restriction of Certain Hazardous Substances (RoHS directive)

This product meets the requirements of the European Union's Restriction of Certain Hazardous Substances (RoHS) Directive 2002/95/EC.

Consequently, this product also complies with other regulations that have arisen in various geographical areas, and that reference the European Union's RoHS directive.

Packaging

Many countries have regulations restricting the use of certain heavy metals in product packaging. The packaging used by SMART Technologies to ship products complies with applicable packaging laws.

China's Electronic Information Products regulations

China regulates products that are classified as EIP (Electronic Information Products). SMART Technologies products fall under this classification and meet the requirements for China's EIP regulations.

U.S. *Consumer Product Safety Improvement Act*

The United States has enacted the Consumer Product Safety Improvement Act which limits the lead (Pb) content in products used by children. SMART Technologies is committed to complying with this initiative.

Appendix B
Customer support

Online information and support

Visit www.smarttech.com/support to view and download user's guides, how-to and troubleshooting articles, software and more.

Training

Visit www.smarttech.com/trainingcenter for training materials and information about our training services.

Technical support

If you experience difficulty with your SMART product, please contact your local reseller before contacting SMART Technical Support. Your local reseller can resolve most issues without delay.

NOTE
To locate your local reseller, visit http://www.smarttech.com/us/Where+To+Buy.

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

Online	www.smarttech.com/contactsupport
Telephone	+1.403.228.5940 or Toll Free 1.866.518.6791 (U.S./Canada) (Monday to Friday, 5 a.m. – 6 p.m. Mountain Time)
Fax	+1.403.806.1256
E-mail	support@smarttech.com

Shipping and repair status

Contact SMART's Return of Merchandise Authorization (RMA) group, Option 4, +1.866.518.6791, for shipping damage, missing part and repair status issues.

General inquiries

Address	SMART Technologies 3636 Research Road NW Calgary, AB T2L 1Y1 CANADA
Switchboard	+1.403.228.5940 or Toll Free 1.866.518.6791 (U.S./Canada)
Fax	+1.403.228.2500
E-mail	info@smarttech.com

Warranty

Product warranty is governed by the terms and conditions of SMART's "Limited Equipment Warranty" that shipped with the SMART product at the time of purchase.

Registration

To help us serve you, register online at www.smarttech.com/us/Product+Registration.

SMART™

Toll Free 1.866.518.6791 (U.S./Canada)
or +1.403.228.5940
www.smarttech.com