X-Port™ 20 Switch
(XP20-2000i-C)

Installation Guide
for any

2000i

Equipped

with an

NEC VT470 or VT570 Projector

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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U.S. Patent Nos. 5,448,263; 6,141,000; 6,337,681. Canadian Patent No. 2,058,219. Other U.S., Canadian and foreign patents pending.

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Installing an X-Port™ 20 Switch in a 2000i with an NEC VT470 or VT570 Projector

This kit contains:

- an antistatic wrist strap
- an X-Port 20 switch
- a serial (computer) switch label
- two 4-40 x 1/4" pan head screws (may already be attached to the ribbon cable on the X-Port 20)
- four #6 nylon washers
- four 6-32 x 1/4" machine screws
- four tie wraps
- a 6" (15.2 cm) MOD4 cable
- a guest laptop cable bundle (includes serial, video and audio cables in a black velcro sleeving)

Tools required (but not included):

- Phillips® screwdrivers
- a 5/32" hex key (available in the accessory kit for the 2000i)
- wire cutters or sturdy scissors

These instructions show you how to:

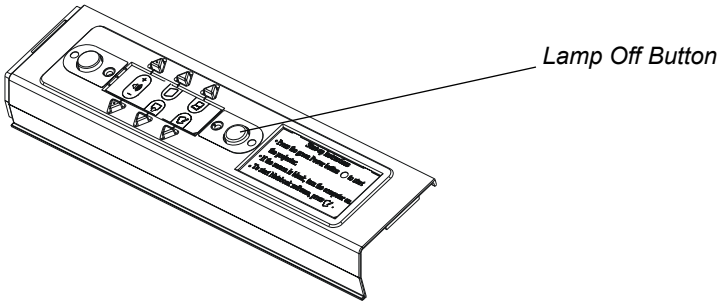
- install an X-Port 20 switch in the *Rear Projection* SMART Board 2000i interactive whiteboard that's equipped with an NEC VT470 or VT570 projector
- connect a guest laptop

The X-Port 20 switch is an RS-232 serial switch that lets you connect a guest laptop to the interactive whiteboard. You can then write over the displayed guest laptop image with a pen tray stylus and control the guest laptop by touching the interactive screen. The X-Port 20 switch also lets you switch between the guest laptop, the resident computer and a VCR/DVD player by pressing a button on the cabinet Control Panel. (If no X-Port 20 switch is installed, you're restricted to only switching between the resident computer and a VCR/DVD player.)

CAUTION Wear the supplied antistatic wrist strap throughout this installation. This wrist strap protects electronic components from damage due to electrostatic discharge. Attach the adhesive end of the strap to your wrist and wrap the copper tape on the other end around a grounded object.

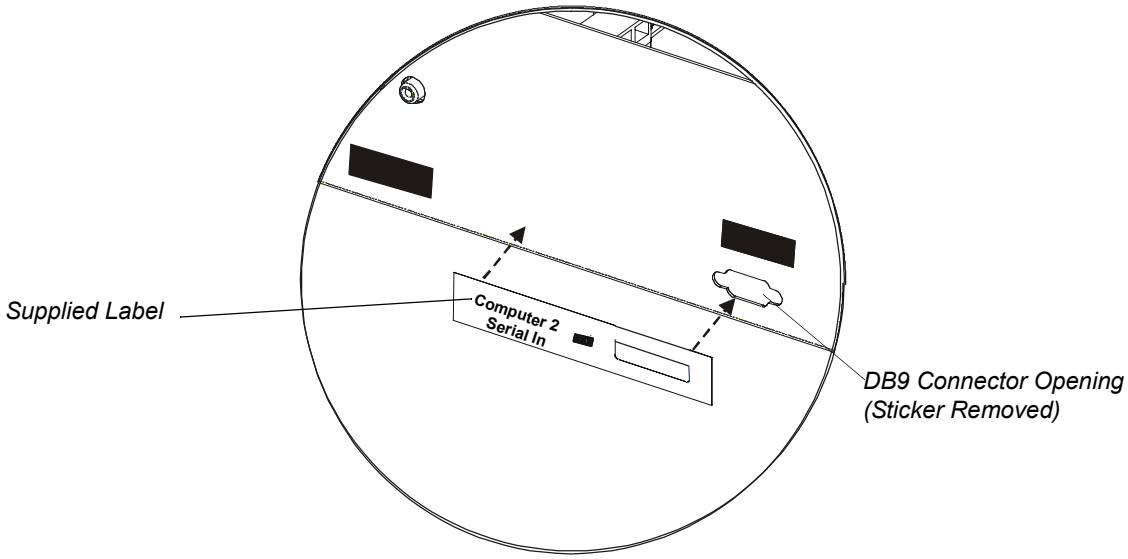
To mount the X-Port 20 switch

1. Shut down the resident computer. Then press and hold the **Lamp Off** button on the Control Panel for approximately three seconds. The lamp begins a 60 second cool-down period before powering off. Wait until you hear the projector cooling fan stop (3–4 minutes), and then unplug the 2000i from the power outlet.

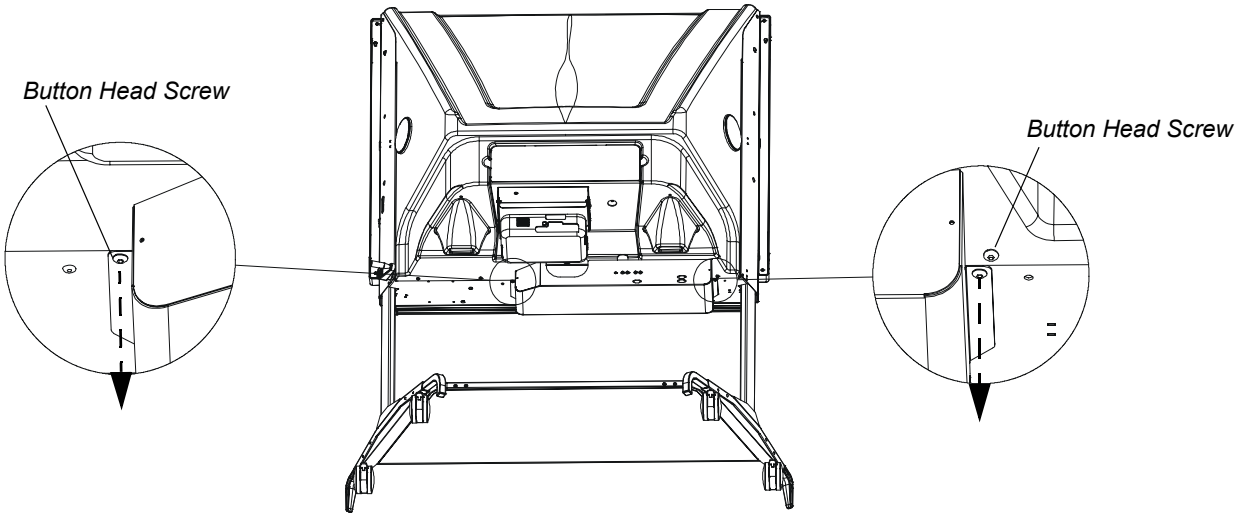


2. Make sure the casters are locked and all four anti-tip feet are extended.

3. Remove the sticker that covers the DB9 opening. Place the supplied **Computer 2 Serial IN** label over the lower opening, as illustrated below.



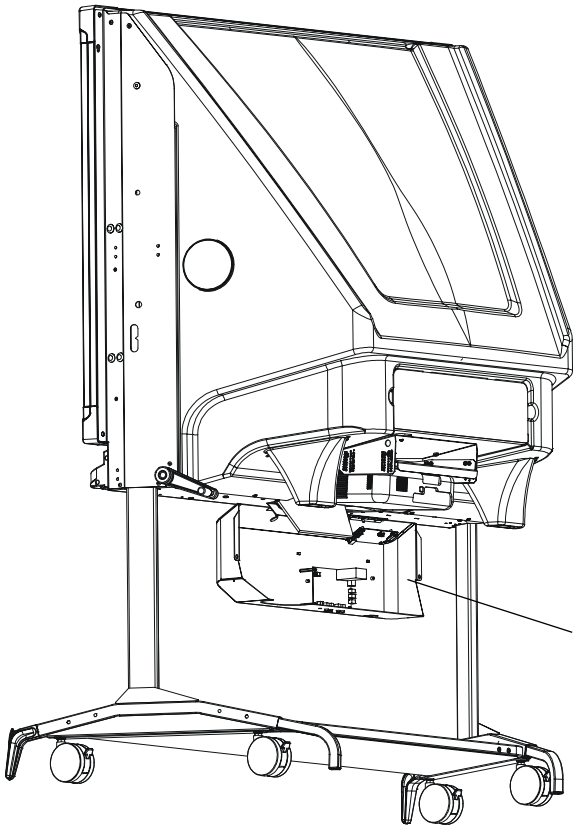
4. While propping up the electronics tray with one hand (so it doesn't fall suddenly), remove the two button head hex screws on either side of the tray using a 5/32" hex key (provided in the accessory kit for the 2000i). Put the hex screws in a safe place as you'll need them to secure the electronics tray at the end of this installation.



Rear View of 2000i with
Back Legs Removed for Clarity

Location of Button Head Screws

5. Carefully swing the electronics tray down so it hangs vertically.



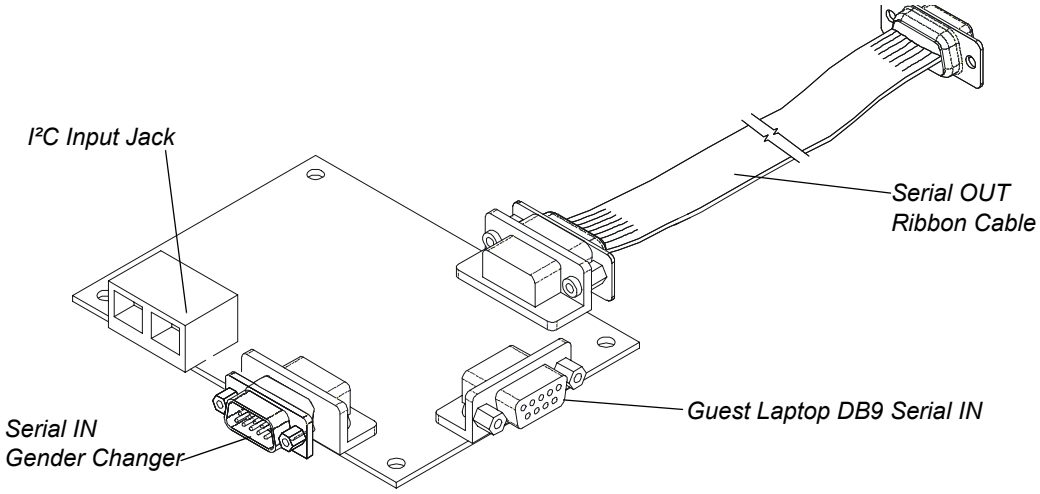
Open Electronics Tray

6. Familiarize yourself with the components of the supplied X-Port 20 switch. In particular, take note of the I²C input jack and the gender changer on the left side of the card.

IMPORTANT

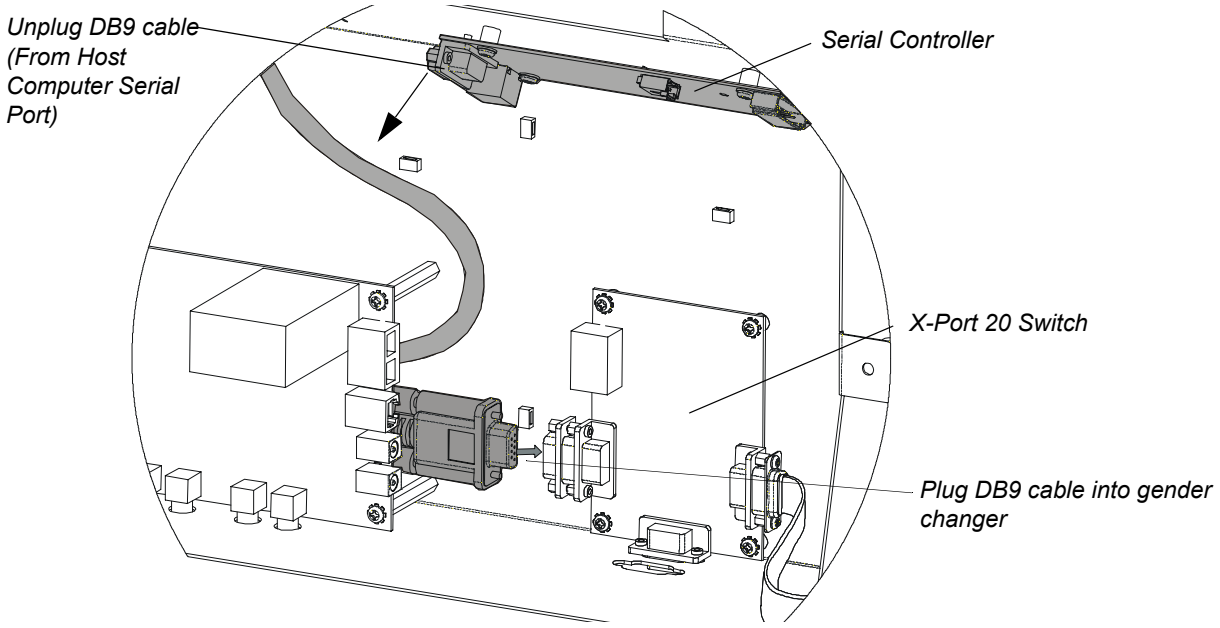
It is important to preserve the configuration of the X-Port 20 switch.

Do not remove the ribbon cable or gender changer.



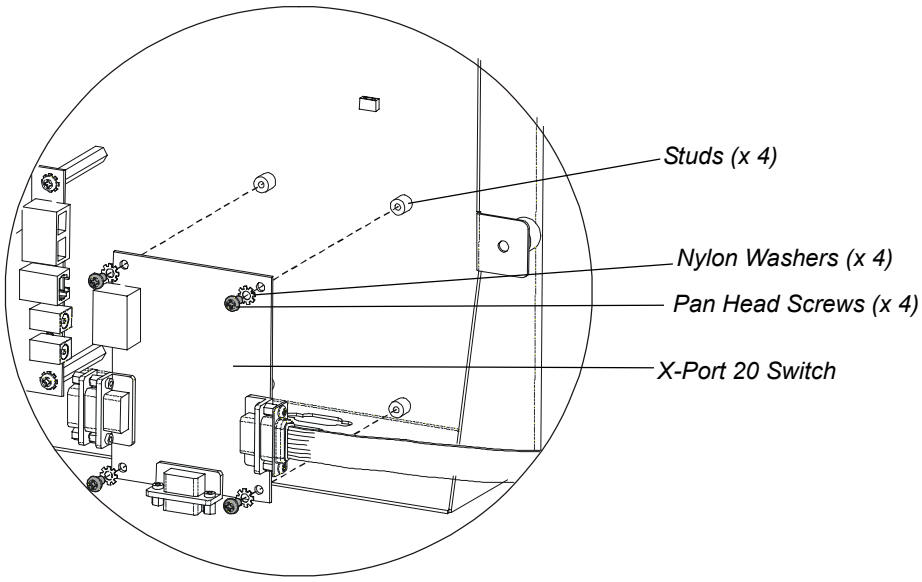
Components of the X-Port 20 Switch

7. Unplug the DB9 cable from the serial controller and plug it into the gender changer on the left side of the X-Port 20 switch, and then tighten the thumbscrews on the connector.



Rerouting the DB9 Cable to the X-Port 20 Switch

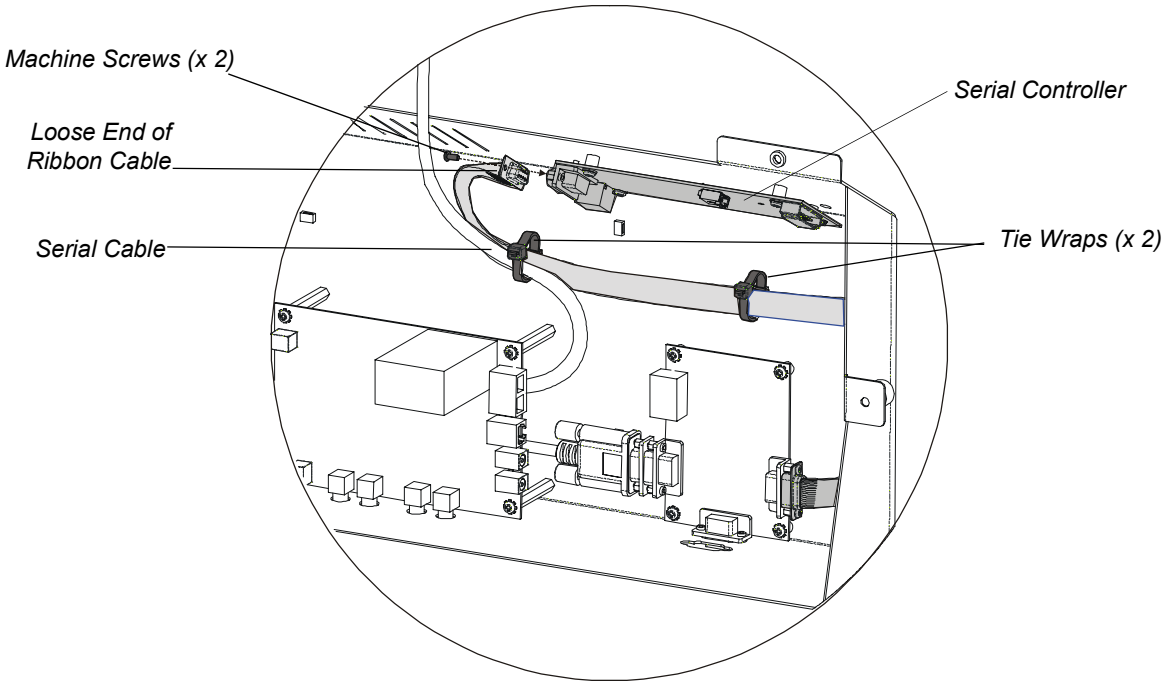
8. Using a Phillips screwdriver, install the X-Port 20 switch on the studs in the electronics tray and secure it in place with the four supplied pan head screws and nylon washers.



Installing the X-Port 20 Switch in the Electronics Tray

To connect the X-Port 20 switch

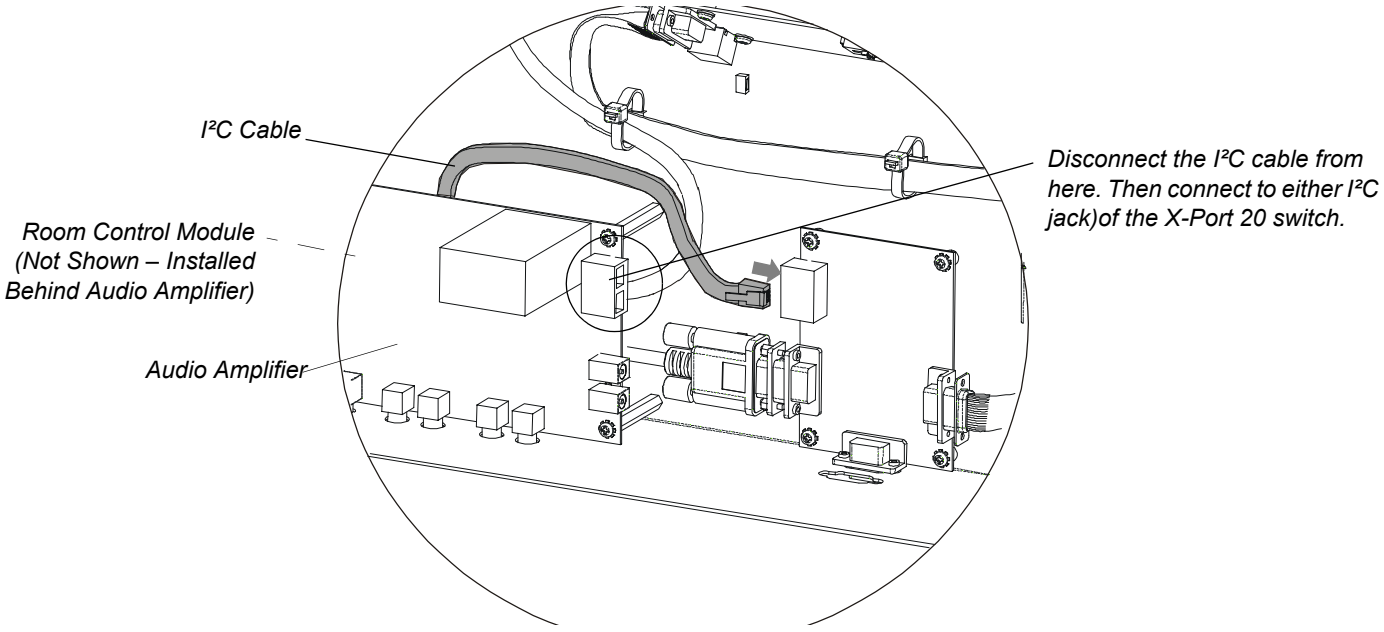
1. Attach the loose end of the DB9 female-to-female ribbon cable to the serial controller using the two supplied machine screws. Secure the ribbon cable and serial cable in place, as shown below, using two of the supplied tie wraps.



Rerouting the Ribbon Cable

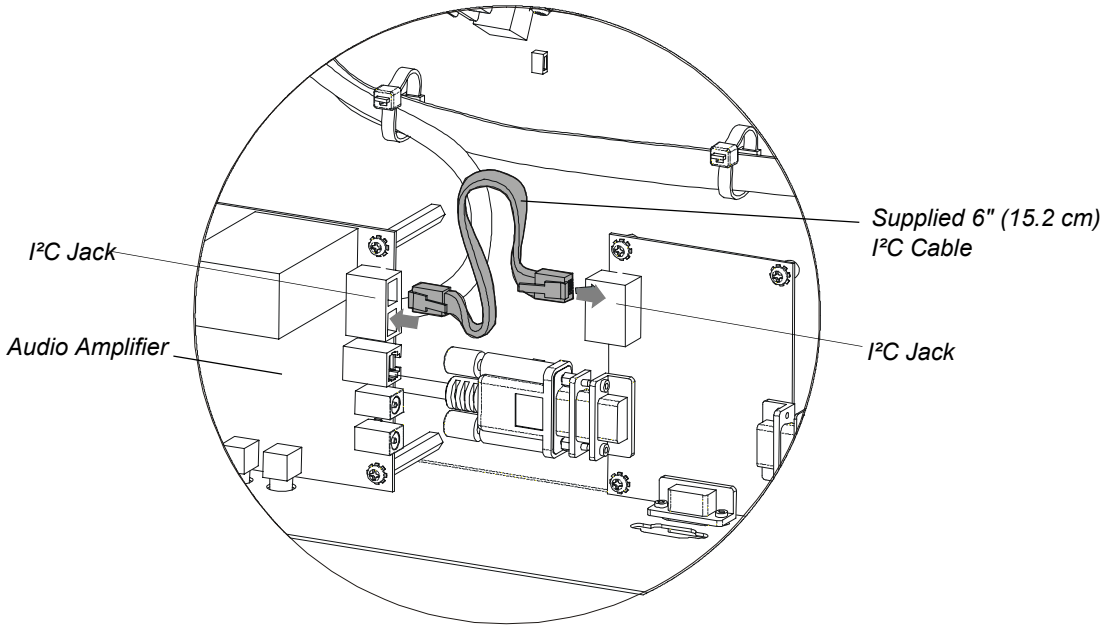
2. If you have a Room Control Module installed, disconnect the I²C cable (that runs between the audio amplifier and the Room Control Module) from the audio amplifier and connect it to either of the two I²C input jacks on the X-Port 20 switch.

   NOTE: If you don't have a Room Control Module installed, proceed to step 4.



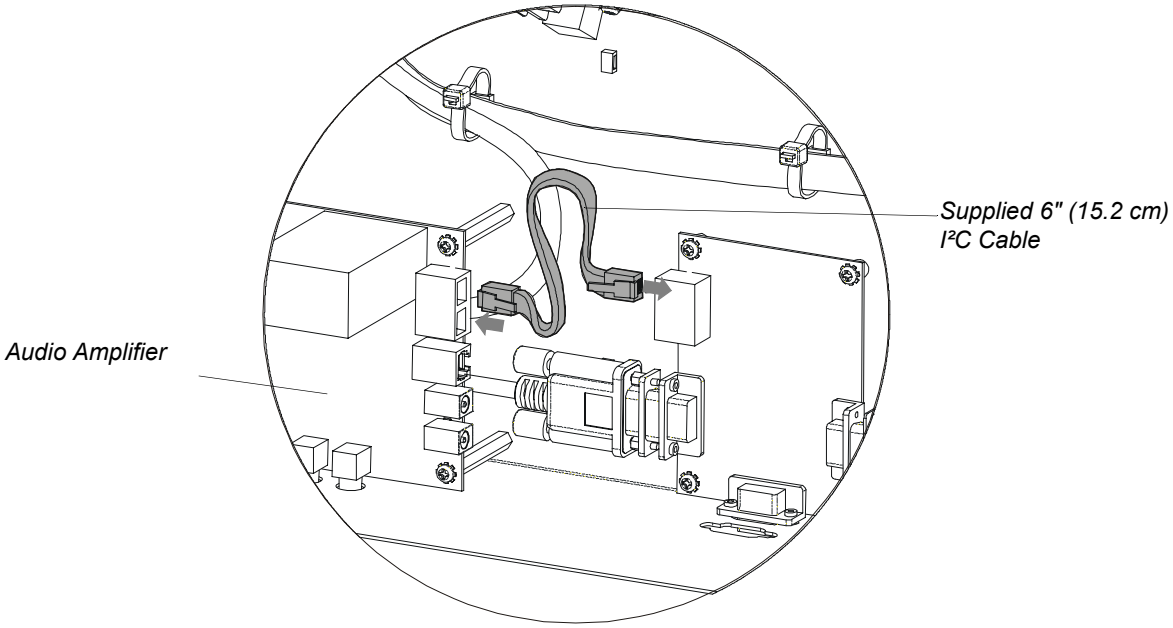
Rerouting the Room Control Module (if applicable)

3. Connect the supplied 6" (15.2 cm) I²C cable from the audio amplifier (either I²C jack) to the empty I²C jack of the X-Port 20 switch.



Connecting the Audio Amplifier to the X-Port Serial/Video Switch (Room Control Module Installed)

4. If you don't have a Room Control Module installed, connect the supplied 6" (15.2 cm) I²C cable to either of the two I²C jacks on the the audio amplifier and either of the two I²C jacks the X-Port 20 switch.



Connecting the Audio Amplifier to the X-Port Switch (Room Control Module Not Installed)

5. Swing the electronics tray back to its original position, and insert the two button head screws that you removed earlier.

IMPORTANT Before you close the electronics tray, ensure no cable is crushed by routing them neatly inside the tray.

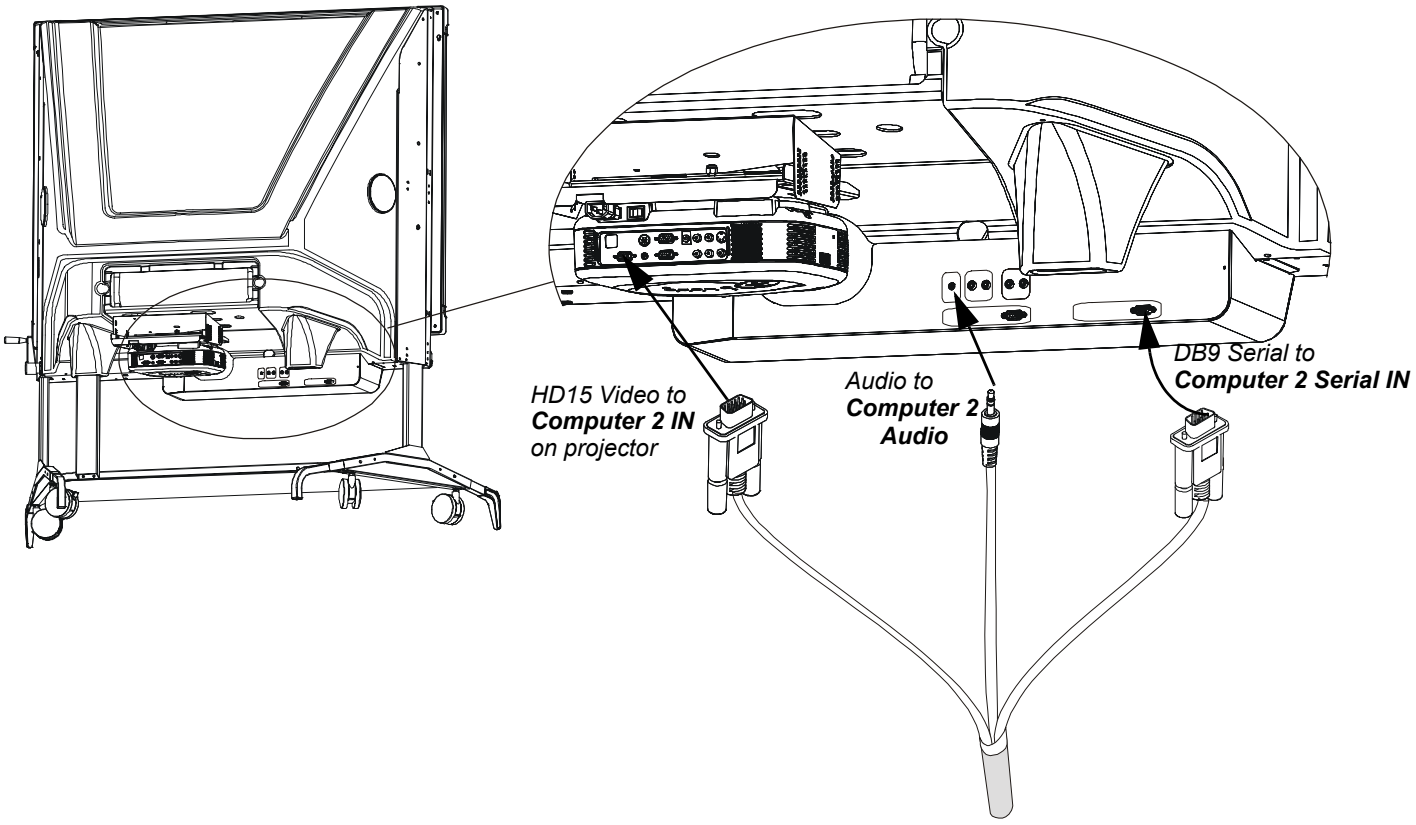
Use the supplied tie wraps to bundle the cables.

To connect a guest laptop

1. Remove the guest laptop cable bundle from the accessory box. You will connect one end to the rear of the 2000i cabinet and the other end to the laptop computer. Since the three connectors at each end are very similar, note that the end that connects to the 2000i contains a *male* DB9 serial connector. You'll connect the 2000i end first, as described in steps 2, 3, and 4 immediately below.
2. Connect the audio cable to the **Computer 2 Audio** port on the electronics tray (see figure below).
3. Connect the DB9 serial cable to the **Computer 2 Serial IN** port on the electronics tray (see figure below).

   NOTE: For a neat appearance, we recommend that you use two or three of the supplied tie wraps to wrap these two cables to adjacent cable bundles.
4. Connect the HD15 video cable cable to the **Computer 2 IN** port on the projector (see figure below). Route the cable along the top of the projector, threading it underneath the power cable and then plugging it into the **Computer 2 IN** port on the projector.

   NOTE: For a neat appearance, we recommend that you use one or two supplied cable wraps to wrap this cable to adjoining cable bundles.



Connecting the Guest Laptop Cable Bundle to the 2000i

5. Make sure the laptop is turned off. With the guest laptop on the laptop/videoconferencing shelf, connect the three cables on the laptop end of the guest laptop bundle – the **Computer 2 Audio**, **Computer 2 Video** and **Computer 2 Serial** cables – to the appropriate connectors on the guest laptop.

   NOTE: If the guest laptop has no available serial port or has USB ports only, a USB connection is possible. A SMART USB adapter cable was shipped with the 2000i and, if it is not used for connecting the host computer, you could use it to connect a guest laptop. If necessary, you can order another SMART USB adapter cable (Order No. USB-ADP).
6. Turn on the guest laptop.
7. If it's still unplugged, plug in the 2000i and press the **Lamp On** button on the Control Panel.

8. Press the **Guest Laptop** button in the Control Panel to switch to the guest laptop video source.

If the initialization screen does not appear on the interactive whiteboard, try activating the external video port on your guest laptop. Some laptops can't display their internal screens and activate the external video port or external monitor at the same time. You may also need to deactivate the internal video port on your guest laptop or put the internal and external video ports into simultaneous display mode, so that the guest laptop displays on both the guest laptop monitor and the interactive whiteboard at the same time.

With newer laptops, you can synchronize the internal and external video ports as follows:

NOTE: This procedure may vary for different operating systems.

a. From the **Start** menu, select **Settings > Control Panel > Display**.

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

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

This may not be possible with older laptop models, in which case you must switch back and forth between the internal and external video port. If you aren't sure which commands or keyboard combinations are required to do this, check the user's manual for your guest laptop.

You can now display the output of your guest laptop.

If the image on the screen is too large or too small

The projector and guest laptop resolution may not match. To adjust your guest laptop resolution to match the projector resolution, click the **Start** button, and select **Settings > Control Panel > Display**. Click the **Settings** tab, and adjust the resolution accordingly.

9. Insert the SMART Board software CD into the guest laptop's CD-ROM drive, and follow the on-screen instructions.
10. After you install SMART Board software, you should orient the interactive screen so that the cursor tracks your finger and the pen tray tools accurately.
11. Click the **Orient** button in the SMART Board tools and follow the on-screen instructions.

Customer Support

Contacting SMART Technical Support

SMART's Technical Support team welcomes your call. However, you may first want to contact your local reseller if you experience any difficulties with your SMART product, as they may be able to solve the problem without delay.

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

Telephone: 1.866.518.6791 (toll-free in Canada/U.S.) or +1.403.228.5940 (all other countries)
(Available 7 a.m. – 6 p.m. Mountain time from Monday to Friday)

Fax: +1.403.806.1256

E-mail: support@smarttech.com

Web Site: www.smarttech.com/support

When you phone Technical Support, it will be helpful if you have access to your 2000i and the X-Port 20 switch during the call.

The support representative may ask you for the following information:

- the serial number of the unit
- the version of the software that's causing the problem and the version of your computer's operating system (if applicable)

General Inquiries

Main Switchboard: 1.888.42.SMART (toll-free in Canada/U.S.) or +1.403.245.0333 (all other countries)

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