To turn on the system, press any button on the Control Panel (other than the “System Off” button).

When the red light next to a “Sources” button is blinking, the system is warming up.*
When the red light next to a “Sources” button is solid, that source is ready to use.

*It may take up to three minutes for the system to warm up. Please be patient.

Control Panel Tips

Please remember to turn off the system when you are done using it.

✓ Once the system is turned off, it will take approximately 3 minutes for the cool-down cycle to complete.
✓ Since it is not possible to restart the system until this cycle is complete, use VIDEO MUTE if you plan to use the system again during your class period.
✓ To ensure that the auto-shutdown feature does not interrupt your class, press any source button at the start of your class. The auto-shutdown feature shuts the system off after 4 hours without a system selection.

To switch between sources:
Press the Source button of the item you wish to display.

Please note: The light next to the newly-selected source button will blink while that source warms up. When the light stops blinking, the source is ready to use.

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**Connecting a Laptop**

✓ The standard cables are located in the pocket of the instructor station. You may need to flip up a cover to access the cables.

1. Connect the VGA cable to the laptop before you turn on the laptop. Be sure to align the cable with the port and push it in straight, taking care to not bend the pins.

   ![VGA Cable Connection](image)

   **Please note:** Some Apple laptops have a DVI (or mini-DVI) port, rather than the standard VGA port. To use the projection system, you will need to use a VGA adapter to connect your computer to the laptop cable. If you do not have a VGA adapter, you can purchase one at the U of M Bookstore.

2. Connect the thin audio cord into the headphone jack of your laptop (not the microphone jack).

3. Press the “LAPTOP” source button on the control panel. The projector will take approximately 3 minutes to warm up.

4. When the “Laptop” source button stops blinking, start the laptop.

✓ If the laptop image does not appear, activate the external display:

   **For PC (Windows-based) Laptops:** To activate the external display, you must press and hold the Function key (labeled “Fn”); while holding down the “Fn” key, press the appropriate secondary key (as noted in the chart at right). The image should appear on the screen.

   **For Mac (Apple) Laptops:** To activate the external display, open “System Preferences” on your laptop. Click on “Displays,” then “Detect Displays.” The image should appear on the projection screen.

<table>
<thead>
<tr>
<th>Type of PC Laptop</th>
<th>Keys to Press</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer or Aspire</td>
<td>Fn+F5</td>
</tr>
<tr>
<td>Asus eee mini</td>
<td>Fn+F8</td>
</tr>
<tr>
<td>Dell</td>
<td>Fn+F8</td>
</tr>
<tr>
<td>Gateway</td>
<td>Fn+F3</td>
</tr>
<tr>
<td>HP or Compaq</td>
<td>Fn+F4</td>
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<tr>
<td>HP Mini</td>
<td>Fn+F2</td>
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<tr>
<td>Lenovo (IBM)</td>
<td>Fn+F7</td>
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<tr>
<td>Sony Vaio</td>
<td>Fn+F7</td>
</tr>
<tr>
<td>Toshiba</td>
<td>Fn+F5</td>
</tr>
</tbody>
</table>

**Laptop Tips**

**If You Need to Adjust the Laptop Volume:**

Increase the system volume by using the volume up/down buttons on the touch screen.

✓ If you cannot hear any audio, verify that the "Audio Mute" button on the system control panel is not on. When this button is selected, the audio will not play.

✓ You can also increase the volume by adjusting the volume on the laptop itself (using the laptop’s control panel). If that does not work, verify that the laptop’s mute button is not selected.

**If the Image is Distorted, or You See an Error Message that Indicates “Frequency Out of Range”:** You may need to adjust the monitor resolution.

✓ **For PC Laptops:** From the Start Menu, open the Control Panel and double-click on the “Display” icon. Select the “Settings” tab, and adjust the screen resolution to **1024 by 768 pixels**.

✓ **For Mac Laptops:** Open “System Preferences” on your laptop. Click on “Displays,” and in the “VGA Display” window select “**1024 x 768, 60.0 Hz**” from the list.
**Using the VHS Player**

1. Press the button marked “VHS” on the control panel (located on the instructor station).
2. The projector will take approximately 3 minutes to warm up. When the red light next to the button stops blinking, the system is ready for use.
3. Insert your videotape.
4. Use the buttons on the front panel of the VHS player to control the player.

**Using the Auxiliary Video (for External Devices)**

The data/video projector is capable of displaying audio and video from a variety of user-provided external devices (including portable DVD players, iPods, and more) using the VHS player. To connect an external video playback device, you will need to provide the appropriate AV cable (with yellow, white, and red connectors).

1. Connect the AV cables to the output jacks on the device and to the input jacks on the front of the VHS player.
2. Use the channel up/down buttons on the front of the VHS player to set it to “Line Input.” The VHS player display should read “F-1” or “L-1.”

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**Using the DVD Player**

1. Press the button marked “DVD” on the control panel (located on the instructor station).
2. The projector will take approximately 3 minutes to warm up. When the red light next to the button stops blinking, the system is ready for use.
3. Insert your DVD or CD.
4. Use the buttons on the front panel of the DVD player to control the player.

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**DVD Player Tips**

**To use Closed Captioning (DVD & VHS):**

To activate the closed captioning, locate the “Closed Captioning” switch near the VHS and/or DVD player. Flip the switch to the “ON” position.

*Please note:* When playing a DVD, if the captions do not appear, you may need to activate the closed captioning on the DVD’s menu of options.

**If the DVD image is freezing or distorted:**

- Remove the disc from the player.
- Check the disc for damage.
- Clean the disc (to remove smudges or fingerprints).
**Using the U of M Network**

**To connect to the wired network:**
Simply connect the Ethernet cord (in the pocket of the instructor station) to the Ethernet jack on your laptop.

*Please note: You will need to register and setup your computer for DHCP Service (Dynamic Host Configuration Protocol) prior to using the Ethernet connection.

**Wired Network Tips**

**Understanding DHCP:**
- Once registered and set up, DHCP allows you to automatically connect to the network on any campus classroom Ethernet jack.
- DHCP registration should be done in advance of the time you need to use the network, as the registration confirmation process may take several minutes.

DHCP registration can be done online at: [http://www.oit.umn.edu/network/setup-guides/](http://www.oit.umn.edu/network/setup-guides/)

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**Using the U of M Network**

**To connect to the wireless network:**
Simply open a web browser (e.g., Internet Explorer, Firefox, Safari). You will be prompted to log in with your U of M Internet ID (X.500) and password.

**Wireless Network Tips**

**If the connection is slow or does not work properly:**
- Verify that you are connected to the “UofM Wireless” connection.
- There may be other wireless network connections within range of the classroom. Connecting to a non-U of M network may cause the connection to be slow or not work properly.

**If you do not have a U of M Internet ID:**
You may qualify to purchase “Guest Access” to use the network.

For more information about obtaining guest access to the U of M network, please visit the following website:
[http://www1.umn.edu/wireless/information/access/index.html](http://www1.umn.edu/wireless/information/access/index.html)

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**Using the Overhead Projector**

1. Verify that the projector is plugged into a power outlet.
2. Turn on the projector power switch.
3. Turn the knob on the lens column to adjust the focus.
4. Turn off the power when you are finished using the projector.

**Overhead Projector Tip**

**If the projector lamp burns out:**
Switch to the alternate lamp.

Each overhead projector contains two lamps. If the primary lamp is out, you can switch to the alternate and continue using the projector:

1. Turn off the power to the projector.
2. Locate the flip-up door on the front corner of the projector. To switch to the alternate lamp, lift up on the flip-up door and turn the knob to the other lamp indicated (either “1” or “2”).
3. Close the flip-up door tightly.
4. Turn the power back on. The alternate lamp should now be functioning.

**Overhead Projector Tip**

**If the projector is on but does not project any light:**
Verify that the flip-up door is closed tightly.

- If you can hear the fan of the projector running, but the machine is not projecting anything, verify that the flip-up door is closed tightly (see #2 and #3 at right). The lamps will not illuminate if the door is ajar.

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**Data network service and support is provided by the Office of Information Technology. For further assistance with the wireless or wired network connection, please call the 1-HELP Technology Helpline at 612-301-4357.**