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

**The Control Panel is located inside the Top Drawer of the Instructor Station.**

When a button is blinking, the system is warming up.* When a button stops blinking, that source is ready to use.

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

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**Touchscreen Control Panel**

**Laptop Connections**

---

**General Purpose Classroom Equipment Instructions**

**Tate Lab of Physics, Room 150**

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**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 **IMAGE 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.

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For additional assistance or to set up an equipment training session, please call the Classroom Support Hotline at 612-625-1086.
Connecting a Laptop

The standard cables are located on the top of the instructor station.

1. Connect the VGA or HDMI 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.

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

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

3. Press the “HDMI Laptop” or “VGA Laptop” source button on the control panel.

4. When the button stops blinking, start the laptop.

5. 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>
</tr>
<tr>
<td>HP Mini</td>
<td>Fn+F2</td>
</tr>
<tr>
<td>Lenovo (IBM)</td>
<td>Fn+F7</td>
</tr>
<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 control panel.

- 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 DVD/VHS Combo Unit**

1. Press the “DVD/VHS Combo” button on the touch screen control panel.

2. When the button stops blinking, the source is ready for use.

3. Insert your DVD, CD, or VHS tape.

4. Press the “DVD/VHS Controls” button to access the player controls (play, stop, fast forward, scan, menu, etc.).

5. Use the Transport Controls on the touch screen to control the player. To use the closed captioning, press the “Closed Captioning” button on the touch screen.

6. To return to the main menu, press Escape.

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**IF THE DVD IMAGE IS FREEZING OR DISTORTED:**

- Remove the disc and check it for damage.
- Clean the disc (to remove smudges or fingerprints).

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

To connect an external video playback device, you will need to provide the appropriate AV cable (with yellow, white, and red connectors). Connect the AV cables to the output jacks on the device and to either the input jacks on the front of the VHS/DVD combo player or the jacks on the equipment rack under “Auxiliary Input.”

- If using the jacks on the VCR/DVD combo:
  
  Use the channel up/down buttons on the front to set it to “Line Input.” The VHS player display should read "F-1" or "L-1.”

- If using the jacks on the equipment rack: Select the “Auxiliary Video” source.

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**Using Projector Aspect Ratio Controls**

The aspect ratio controls offer several different options to display content on the classroom’s widescreen projector. If you do not select any aspect ratio options:

- When displaying a computer screen, the projector will attempt to match the computer display settings.
- When displaying a video, VCR: the projector will display standard 4:3; DVD: projector will attempt to match settings encoded on the DVD.

**IF THE DISPLAY IS DISTORTED, EMPLOYING ASPECT RATIO CONTROLS MAY HELP CORRECT THE DISTORTION:**

- Press the button marked “Image Aspect” on the main touch screen.
- Follow the guidelines describing the type of signal to be displayed and choose a setting at the side or the auto set up at the bottom.
- Press Escape to return to the main screen.
- More information is available in the Widescreen Aspect Ratio guide at: [http://www.classroom.umn.edu/support/AspectRatio.html](http://www.classroom.umn.edu/support/AspectRatio.html)
**Using the Wireless Rechargeable Microphone**

1. Remove the mic from the charging base inside the second drawer at the instructor station and clip the microphone to your shirt, about 3 inches below your chin.

2. Unmute the microphone by pressing the side button. *The microphone is ready to use when the top light is green.*

**RETURN THE RECHARGEABLE MICROPHONE TO THE CHARGING BASE AFTER USE.**

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**Wireless Rechargeable Microphone Tips**

<table>
<thead>
<tr>
<th>IF THE MICROPHONE IS NOT WORKING:</th>
<th>MICROPHONE INDICATORS AND ALERTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>First try using the second microphone.</td>
<td>✓ If the microphone leaves the immediate vicinity of the classroom, the unit will turn off and emit an alarm beep to alert you to return the microphone to its charging base.</td>
</tr>
<tr>
<td>✓ If the microphone is not charged, (indicated by a blinking yellow/green light) return it to the charging base and use the second microphone.</td>
<td>✓ The LED indicator light on the top of the microphone will indicate its status:</td>
</tr>
<tr>
<td>✓ If the second microphone is not available, please call the Classroom Support Hotline at 612-625-1086 for assistance</td>
<td>✓ If it is <strong>blinking red</strong>, press the side button to unmute it.</td>
</tr>
<tr>
<td>✓ Please note: the rechargeable microphones do not have volume adjustment.</td>
<td>✓ If it is <strong>green</strong>, the microphone is charged and on.</td>
</tr>
<tr>
<td><strong>Microphone Indicators and Alerts:</strong></td>
<td>✓ If it is <strong>blinking yellow/green</strong>, the battery is low.</td>
</tr>
<tr>
<td>✓ If it is <strong>solid red</strong>, the microphone is usable but not fully charged.</td>
<td>✓ If it is <strong>blinking with any other combination of colors</strong>, there is a problem with the microphone.</td>
</tr>
</tbody>
</table>

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**Using the Hearing Assistance Equipment**

1. Remove a headset from the charging cradle located in the second drawer of the instructor station.

2. Put on the headset. *Please note: For best reception, put the headset in front of your face with the earphones on top and the logo on the bottom, facing outward.*

3. Adjust the volume to desired level using the volume knob.

4. Return the headset to the charging cradle when you are finished using it.

**NOTE: DO NOT** place or store any liquid or metal objects near the hearing assist charging cradle. This will cause possible interference, electrical shorting, or shock.

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**Hearing Assistance Equipment Tips**

| ✓ Any sound that is coming through the classroom system (such as audio from the DVD/VHS player, laptop, and instructor microphone) should be audible on the headsets. | If you experience problems with the hearing assistance equipment or have any other questions, please call the Classroom Support Hotline at 612-625-1086. |
| ✓ If you experience interference or static, try moving to a different location. Also, be sure that you are facing the front of the auditorium. | |

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Using the U of M Network

To connect to the wired network:
Simply connect the Ethernet cord (near 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.

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:
Guests to campus may use the "UofM Guest" network for free.

For more information about obtaining guest access to the U of M network, please visit the following website:
http://www.oit.umn.edu/wireless/guest-access/index.htm

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/

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.

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.

If both lamps are burned out, please call the Classroom Support Hotline at 612-625-1086. We will dispatch a technician to replace the lamp as soon as possible.