TO TURN ON THE SYSTEM:

**PRESS ANY PROJECTION SOURCE BUTTON ON THE TOUCH SCREEN CONTROL PANEL.**

*When a Projection Source button is blinking, the system is warming up.*

When a Projection Source 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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**IMAGE & AUDIO MUTES:**
Press IMAGE MUTE to black-out the image. Press AUDIO MUTE to mute the sound.

To un-mute the image or sound, simply press the respective button again.

---

**PROGRAM VOLUME:**
Use these buttons to adjust the volume up or down.

---

**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.

---

**TO SWITCH BETWEEN SOURCES:**
Press the Projection Source button of the item you wish to display.

When the button stops blinking, the source is ready to use.

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

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KELLER HALL, ROOM 2-260

CONNECTING A LAPTOP (AT THE INSTRUCTOR STATION)
The standard cables are located in the pocket of the instructor station.

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.

   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 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 in classrooms.

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 touch screen 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.
**Connecting a Laptop (at a Student Table)**
The standard cable is located in each pocket of the student tables.

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.

   *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 an adapter, you can purchase one at the U of M Bookstore. OCM does not supply adapters in classrooms.

2. Press the 1, 2, or 3 button on the student table control panel to select the laptop connection you have used. Each laptop connector is labeled.

3. If the image does not appear on the monitor, activate the external display (see previous page).

**Projecting a Student Laptop (on the Projector)**

1. From the instructor station main menu, press the “Student Table” button for the desired projector.

2. Select a table number to send the student display from that table to the projector.

3. To return to the main menu, press “Escape.”

**Room-Wide Table Sharing (on the Student Monitors)**

1. From the instructor station main menu, press the “Student Monitor Controls” button.

2. To send the image from one student table monitor to all of the student table monitors, press the student station button of the table from which you want to project.

3. To return to the original setting (where each student table displays the image from that student table), press the “Individual Table Presentation” button.

4. To turn on/off the student monitors, use the “Monitor Power” buttons.

*For laptop troubleshooting help, please see the “Laptop Tips” section on the previous page.*
**Using the VHS Player**
1. Press the button marked “VHS” on the control panel (located on the instructor station).
2. When the button stops blinking, the source 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 an External Display**
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 either the input jacks on the front of the VHS player or the jacks on the equipment rack.
2. If using the jacks on the VCR: 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.” Select the VHS source.
3. If using the jacks on the equipment rack: Select the “Auxiliary Video” source.

**Using the DVD Player**
1. Press the button marked “DVD” on the control panel (located on the instructor station).
2. When the button stops blinking, the source 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.

**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 DOCUMENT CAMERA**

1. If the camera head (containing the lens) and lamps are folded, you will first need to unfold these items using the camera’s release catch, located at the base of the arm. **While holding the catch open, unfold the camera head and lamps.**

2. The arm should move freely once the catch has been released. Be sure that the top of the camera head is aimed directly down.

3. Press the “Document Camera” button on the touch screen. When the button stops blinking, the source is ready for use.

4. Press the “Document Camera Controls” button (on the main touch screen) to access the standard document camera controls.

5. Place the object you wish to display on the document camera.

6. To return to the main touch screen menu, press “Escape.”

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**DOCUMENT CAMERA TIPS**

- **Zoom:** Use “Wide” to reduce or “Tele” to enlarge the image size.
- **Focus:** Use the “Auto-Focus” button to automatically focus the image.
- **Iris:** Use to adjust the image brightness. Use the “Auto Iris” button to automatically adjust the brightness.
- **Detail:** Use to control image sharpness. Text usually benefits from a detail setting of “High.” Pictures/images may appear distorted when using the “High” setting.
- **Auto-White Balance:** Place a white piece of paper in the viewing area and press the “Auto-White Balance” button. Colors will adjust based on the color of the white paper.
- **Zoom:** Use “Wide” to reduce or “Tele” to enlarge the image size.
- **Focus:** Use the “Auto-Focus” button to automatically focus the image.
- **Iris:** Use to adjust the image brightness. Use the “Auto Iris” button to automatically adjust the brightness.

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**USING THE WIRELESS MICROPHONE**

1. Clip the microphone mouthpiece to your shirt, about 3 inches directly below your chin.

2. Turn on the microphone transmitter. **The ON/OFF switch will be on either the top or the front of the transmitter (depending on the model).**

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**PLEASE REMEMBER TO TURN OFF THE WIRELESS MICROPHONE AFTER USE.**

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**WIRELESS MICROPHONE TIPS**

**IF THE MICROPHONE IS NOT WORKING:**
- First try changing the batteries.
  - Spare batteries are kept in either the drawer with the microphone, or in the pocket of the instructor’s podium.
  - If you use the last set of spare batteries, or if changing the batteries does not solve the issue, please call the Classroom Support Hotline at 612-625-1086.

**IF THE VOLUME IS TOO LOW/HIGH:**
- Adjust the placement of the mouthpiece on your shirt.
  - The microphone volume is optimized for the classroom and is not user adjustable.
  - The “AUDIO MUTE” button will not mute audio from the microphone. To mute the microphone audio, simply turn the microphone off.
**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.

**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.

**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/

**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

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.

For additional assistance, call or email the Classroom Support Hotline:
612-625-1086 or ocmhelp@umn.edu