To turn on the system:

**Press any presentation source button on the touch screen control panel.**

When a presentation source button is blinking, the system is warming up.*

When the 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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**General Purpose Classroom Equipment Instructions**

**Carlson School of Management, Room 2-213**

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**To switch between sources:**

Press the Presentation Source button of the item you wish to display.

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

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**Program Volume:**

Use these buttons to adjust the volume up or down.

**Video & Audio Mutes:**

Press “Video Mute” to black-out the image and mute the sound. Press “Audio Mute” to mute only the sound.

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

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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.

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The University of Minnesota is an equal opportunity educator and employer. This publication is available in alternative formats upon request. Direct requests to ocmhelp@umn.edu. Printed on recycled and recyclable paper with at least 10 percent postconsumer material.
The computer in the instructor station is provided and supported by the Carlson School IT Department. This classroom is also capable of projecting items from a user-provided laptop. Instructions for connecting your laptop to the projection system are included below.

**CONNECTING A LAPTOP**
The standard cables are located in the pocket 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 in classrooms.

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

3. Press the “VGA LAPTOP” or “HDMI LAPTOP” source button on the touch panel (depending on which cable you use).

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

**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 projection 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 Program Volume controls on the touch screen control panel.

- If you cannot hear any audio, verify that the "Audio Mute" (accessible from the Program Volume menu) is not on. When Audio Mute is on, 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 DVD/VHS Player
1. Press the button marked “DVD/VHS Player” on the main touch screen control panel (located at the instructor station).

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

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

4. Press the “DVD/VHS Controls” button (on the main touch screen) to access the standard controls (play, stop, fast forward, scan, etc.).

5. From the “DVD/VHS Controls” screen, press the appropriate source button (“Select VHS” or “Select DVD”), based on the type of media you are presenting.

6. Use the Transport Controls on the touch screen to control the player. For additional DVD navigation options, use the DVD Navigation controls (on the right side of the touch screen).

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

Using 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 DVD/VHS player input jacks. 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 DVD/VHS player.

2. Use the channel up/down buttons on the front of the DVD/VHS player to set it to “Line Input.” The DVD/VHS player display should read “F-1” or “L-1.”

3. Press the “DVD/VHS Player” button on the touch screen (located at the instructor station). The image from the device should appear on the projector screen.

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 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 “Projector Aspect Ratio Controls” on the main touch screen (located on the instructor station).
- 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 the Escape button to return to the main screen.
- More information is available in the Widescreen Aspect Ratio guide at: http://www.classroom.umn.edu/support/AspectRatioControlsGuide.pdf
**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 system 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.”

**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.
- **White Balance:** Place a white piece of paper in the viewing area and press the “Auto-Correction” button. Colors will adjust based on the color of the white paper.

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**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/

**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

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.