PC LAPTOP INSTRUCTIONS
FOR USE IN GENERAL PURPOSE CLASSROOMS

The following PC laptop instructions include these important topics:

- Basic connection to the classroom projection system (video and audio connections)
- Common troubleshooting tips
- Additional resources on the OCM website

NOTE: For information on using Apple laptops and devices in general purpose classrooms, see the instructions at: http://www.classroom.umn.edu/support/MacLaptop.html

CONNECTING TO THE CLASSROOM PROJECTION SYSTEM

1. Cables are located in the pocket of the instructor's podium. Connect the VGA (or HDMI if available) cable to the laptop. See the instruction on HDMI for more on that topic: http://www.classroom.umn.edu/support/HDMI.html

2. Connect the audio cord to the headphone jack of your laptop (not the microphone jack) to have audio projected through the system speakers.

3. Press the "Laptop" source button on the control panel. When the button stops blinking, start the laptop.

4. To display material from the Internet either use the wireless network, or connect the wired network cable from the instructor station to the Ethernet port on your computer. NOTE: Register your computer for DHCP Service (Dynamic Host Configuration Protocol) prior to using the Ethernet connection. See http://www.classroom.umn.edu/faq/network.html#connect for more information.
Common Troubleshooting Tips

Topics covered in this section:
Activating external display
Image size and resolution
Audio
Playing videos

Activating external display

• If the laptop image does not appear on the projection screen, activate the external display (this tells your laptop to display the image from its screen onto the projector’s screen). To activate the external display, you must press and hold the Function key (labeled “Fn”) while also pressing the appropriate secondary key (as noted below). The image should appear on the screen. You may need to try this step more than once to adequately activate the external display image.

• If this does not work, the video card in your laptop may not be capable of projecting simultaneously to two outputs (e.g., the laptop’s own screen and the data/video projector). In this case, you may have to choose which output you want to display. Using the function key combinations in the chart, you can cycle between three output options: project to laptop display only, project to external display (projection screen) only, or project to both displays simultaneously.

<table>
<thead>
<tr>
<th>Type of PC Laptop</th>
<th>Keys to Press</th>
</tr>
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<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>
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<tr>
<td>Gateway</td>
<td>Fn+F3</td>
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<tr>
<td>HP or Compaq</td>
<td>Fn+F4</td>
</tr>
<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>
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<tr>
<td>Toshiba</td>
<td>Fn+F5</td>
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</tbody>
</table>

Image size and resolution

• The data/video projector has been designed to operate at a screen resolution of 1024x768 (XGA) or lower. If your laptop display runs at a higher resolution, such as 1600x1200 or 1200x1024, you must adjust your laptop display down to 1024x768 or your laptop’s image may appear distorted or may not display at all. Also, if you have a laptop with a wide screen (16:10) display (often referred to as “WXGA”, “WSXGA”, or “WUXGA” on Windows), you may need to adjust your monitor settings to a 4x3 ratio for the image to properly appear on the projector.

For Windows 7, XP, or Vista:

• Open the “Display” menu in your laptop’s control panel.
  To do this:
  • Click on the Start menu and choose “Control Panel”
  • Select Display
  • Click on Change (or Adjust) resolution
  • Ensure the Screen Resolution is set to 1024 by 768 pixels and click OK. If the setting needs to be changed, drag the slider until a setting of 1024x768 is reached and click Apply.

You may be prompted to restart your computer.

After you set your screen resolution, activate the external display.

• If the image is not filling out the room screen, you may need to adjust the aspect ratio by pressing the Projector Aspect Ratio button (in selected rooms) to display widescreen images. See the instructions on aspect ratio for more information: [http://www.classroom.umn.edu/support/AspectRatio.html](http://www.classroom.umn.edu/support/AspectRatio.html)

If the projector gives an error indicating “Frequency out of range,” follow the instructions above to change the resolution settings.
COMMON TROUBLESHOOTING TIPS, CONT.

Audio
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.

Playing videos
Videos on DVDs using laptop DVD drive:
- In some cases, the video may show up on the laptop’s screen but not on the room projection screen. This is because many laptop computers are not capable of displaying video from a DVD simultaneously on both screens. In order to display the video, you must disable the laptop’s screen while the video is playing. This can be done either in the laptop's Display Settings or by using the laptop’s Function keys (see above).
- Some rooms have an input jack on the installed VCR, which would imply that you could hook up your external DVD player through the VCR input; however we do not recommend this. The copy-protection encoding on many DVD movie discs will cause the picture to be distorted when played back through a VCR. Our recommended method is to play a DVD movie via the laptop hookup. Each of the classrooms is capable of playing DVD video by using a laptop DVD drive.

PowerPoint slide show with embedded videos:
- PowerPoint users wishing to play embedded video should be aware that this will require a lot of computer processing power. Therefore, some computers are not able to display on two screens simultaneously (i.e. the built-in computer display and the classroom projection screen). If you wish to play a PowerPoint slide show with embedded video on the projection system and it does not appear on both screens, you may need to adjust some settings. Here are some things you can do to successfully display embedded video:
  - To successfully display embedded video, you may need to disable the laptop monitor image, try disabling the built-in screen on your laptop. You should be able to do this by using the appropriate Function keys. Press the correct Function key combination (see chart above) until only the projection screen is showing an image.
  - Enable extended desktop mode on the computer:
    - Go to the Display control panel and check the box that says, "Extend My Windows Desktop Onto This Monitor"
    - Click Apply.
    - After the screen switches, drag the window containing the slide or video onto the desktop that's being projected.

Try using PowerPoint in Presenter Mode. The Extended desktop feature must be enabled for this mode to function. To enable Presenter Mode:
- Go to the Slideshow menu and click "Set up show"
- Click on the Presenter Mode or Show Presenter View
- After doing this and starting the slide show, the slide will appear on the second monitor (the projection screen) and the laptop screen will contain the slide controls. The video should also play on the projection screen in this mode.
**ADDITIONAL RESOURCES**

**FAQ**  
There are many more topics covered in the frequently asked questions section of the OCM website:  
http://www.classroom.umn.edu/faq/index.html

**Videos & Feature Instructions**  
There are useful tutorial videos on the OCM website, along with in-depth instructions of specific classroom technology features:  http://www.classroom.umn.edu/instructions/

**Apple devices and laptop instructions**  
Looking for instructions on using Apple devices or laptops in the classroom? See  http://www.classroom.umn.edu/support/MacLaptop.html as well as the FAQ on this topic.

**Still having trouble?**  
After reviewing the information about using laptops in general purpose classrooms, feel free to contact us for 1:1 or group orientation and training or troubleshooting. Call the Classroom Support Hotline to set up a meeting: 612-625-1086 or email ocmhelp@umn.edu