Operating a projector classroom

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Abstract

Operator's guide for projector-equipped classrooms.

This publication is available in Web form¹ and also as a PDF document². Please forward any comments to tcc-doc@nmt.edu.

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1. Introduction

This document describes the operation of Tech's projector-equipped classrooms. Using these classrooms, you can:

• Show the display of your laptop on the projection screen.
• Show the display of the built-in instructor workstation on the projection screen.
• Show DVDs or VHS videotapes on the projection screen.
• Project documents and other flat copy onto the projection screen.
• Amplify your voice.

¹ http://www.nmt.edu/tcc/help/pubs/projectors/
2. Configuration

Here is an overall block diagram of the projection desk:

![Block Diagram]

The remote control for the projector selects whether you are using the DVD/VHS player (video input) or the other equipment (computer input).

The KVM (Keyboard-Video-Mouse Switch) can switch between three different inputs—the built-in desktop workstation, your laptop, or, in some labs, an ELMO document camera (see Section 8, “ELMO document cameras” (p. 6)).

Here are the controls for a typical instructor station; colors and configuration vary, but they all have the same components.
Not all of the instructor stations are the same model. In particular, you may encounter three different models of KVM, and two different projector remotes. For the controls you will need most often, see Section 4, “Keyboard-video-mouse switch (KVM) control panels” (p. 3) and Section 3, “Remote controls for the projector” (p. 3).

3. Remote controls for the projector

3.1. Projector remote model I

The Power button is at the top right corner.
To select input from the DVD/VHS player, press the Input 3 button.
To select input from a computer display, press the Input 1/2 button.
There is a built-in laser pointer; use the yellow button just below center.
Do not use the blank button: this button blanks the screen, but does not actually turn off the bulb. Also, if the screen is blanked with the blank button, the next user may not realize that they have to press the blank button again to unblank it.
Make sure the lock button on the left side of the remote is set to on. If it is set to all off, none of the other controls will function.

3.2. Projector remote model III

The Power button is at the top left corner.
To select input from the DVD/VHS player, press the video button.
To select input from a computer display, press the computer button.

4. Keyboard-video-mouse switch (KVM) control panels

The purpose of the KVM is to select whether you are projecting your laptop or the built-in instructor workstation onto the projection screen. You may encounter several different KVM control panels; see the photos below.
4.1. Four-channel KVMs

These KVMs switch the projector among up to four different sources:

- Channel 1 selects the built-in workstation.
- Channel 2 selects the laptop cables.
- Channel 3 is the ELMO camera, where present.

With the panel below, press the Channel button until the red light lines up with the correct source number. For example, to select the built-in workstation, click this button until lamp #1 is lit.

4.2. Two-channel KVM

With the KVM panel shown below, press 01 to select the built-in workstation, 02 to select the laptop.

5. Projecting the built-in desktop workstation

To project the display of the built-in instructor workstation onto the big screen, follow this procedure.

1. If the projector is not already on, press the Power button on the remote.
2. If the display does not light up, it may be because the KVM is set to display the laptop. Use the controls on the KVM panel to switch the input to the built-in workstation: see Section 4, “Keyboard-video-mouse switch (KVM) control panels” (p. 3).
3. The projected image will take a minute or so to appear. You will know that the projector has responded because the red lamp indicator will go out when the projector is turned on. This indicator is lit when the projector is in standby mode.
4. If the projector shows the workstation screen, you’re ready to lecture. Otherwise, the projector’s input may have the DVD/VCR selected. Use the projector remote to select Computer; see Section 3, “Remote controls for the projector” (p. 3).

5. When you are done, turn off the projector with the power button on the remote. When you press it once, a small Power off? menu appears on the screen; press the Power button again to confirm power-off.

6. **Projecting your laptop**

   1. If the projector is not already on, press the Power button on the projector remote.
   2. Connect your laptop’s video port to the appropriate cable among the several connectors on a rear corner of the instructor’s desk.

   ![Image of Ethernet and Video connections]

   **Note**
   
   You must enable the video output connector on your laptop. Before planning your presentation, be sure to read your laptop’s instructions for enabling the video output.
   
   On many laptop computers, pressing the Fn key simultaneously with the 4 key enables the video output connector.

   3. Use the KVM control panel to select laptop input: see Section 4, “Keyboard-video-mouse switch (KVM) control panels” (p. 3).
   4. Use the projector remote to ensure that the projector is switched to the computer; see Section 3, “Remote controls for the projector” (p. 3).
   5. If you need Internet access from your laptop, use the Ethernet cable shown above. Refer to your operating system documentation for configuration instructions. The IP addresses of the laptop port, primary and second DNS servers, and gateway are printed on labels near the laptop cables.
   6. When you are done, turn off the projector with the power button on the remote. When you press it once, a small Power off? menu appears on the screen; press again to confirm power off.

7. **Playing a DVD or videotape**

   1. To play a DVD or VHS videotape, you must first select the VCR input on the projector, using the projector remote. See Section 3, “Remote controls for the projector” (p. 3).
   2. Use the power button on the DVD/VCR player to turn on the unit.
3. Use the \textit{VCR/DVD select} button on the player to select either the VCR slot on the left or the DVD drawer on the right.

4. Load the media. For a VHS tape, push it into the slot on the left until it grabs the tape.
   For a DVD, press the \textit{Open/Close} button on the right to open the drawer, place the DVD in the drawer, and press \textit{Open/Close} again to close the drawer.

5. Press the \textit{Play} button to start playback.

\begin{quote}
\textbf{Note}

If you are playing a VHS tape and see no picture, make sure the DVD/VCR player is set to channel L1. Press the buttons on the left side, labeled \textit{“∧”} and \textit{“∨”}, to move the selected channel number up or down. Pressing the \textit{“∧”} button cycles the channel selection through L1, L2, C001, C002, …, C125, and back to L1.
\end{quote}

6. Press the \textit{Stop} button when you are done.

7. To eject a VHS tape, press the \textit{Eject VHS} button on the left side.
   To eject a DVD, press the \textit{Open/Close} button on the right side.

8. To adjust the volume, use the volume control, a plain black knob located near the KVM.

9. When you are done, turn off the projector with the gold power button on the remote. When you press it once, a small \textit{Power off?} menu appears on the screen; press again to confirm power off.

\section*{8. ELMO document cameras}

Some classrooms are equipped with ELMO cameras so you can project paper documents and other flat copy through the room’s projector. Here is the procedure for projecting copy.

1. On the KVM panel in the desk pedestal, select source #3. This connects the ELMO camera to the projector. See Section 4, “Keyboard-video-mouse switch (KVM) control panels” (p. 3).

2. To open the unit, move the latch to the left (as it is oriented in the photo).

3. To turn the unit on, slide the power switch up and set the PC/Camera switch to \textit{Camera}.  

\begin{figure}
\centering
\includegraphics[width=\textwidth]{elmo-camera}
\caption{Pull latch this way to open ELMO document camera.}
\end{figure}
4. Place your copy on the base and turn on the lamp switch. Your document will appear on the projection screen.

5. To show more of your document, move the lamp head up (away from the base). To show a smaller part of the document, move the lamp head down (toward the base).

You can also zoom the image digitally using these buttons located on the side of the lamp head:

- Brighter
- Dimmer
- Digital zoom in
- Digital zoom out

If the image appears too white (colors are washed out), press the Dimmer button a few times or hold it down. If the image is too dark, press the Brighter button a few times, or hold it down.

9. **Sound amplification**

Speakers in the classroom can provide audio playback from your workstation or laptop. They can also amplify your voice.

9.1. **Volume control**

The volume control for the loudspeakers is a plain black knob located near the KVM, between the computer and the DVD/VCR.
9.2. Public address microphone

If you would like to amplify your voice, stop by the Help Desk in Speare 5 and check out the correct public address microphone for the room you’ll be using it in. Clip it on and slide the on/off switch until the pilot light comes on. See the photo below for the location of this switch.

To adjust the volume, see Section 9.1, “Volume control” (p. 7). You can also change the volume by moving the microphone further away or closer to your mouth.

Sometimes the audio system will emit pops and clicks or other noises. This may be caused by low batteries in the wireless microphone unit. Turning the microphone off will fix the problem.