

Laptops and Projectors: How to, Tips and Hints

With the advent of Powerpoint presentation software and the vast resources of the internet, projecting computer images has become an essential teaching tool. This section will help you learn how this takes place and how to make your laptop work with our projectors. Because there are literally thousands of laptop configurations, models, screen sizes and screen resolutions out there, we cannot know exactly how each laptop works.

Please understand that the information presented here is no substitute for testing beforehand or a hands-on training. Spending 30 minutes testing the equipment BEFORE the semester starts can save you lost teaching time.

Attaching laptop to our projectors:

Whether you use the console in a classroom or check out a projector from us, the hookup is the same:

You attach a VGA cable FROM the laptop TO the projector or console.
The cable attaches to your laptop via the EXTERNAL MONITOR port on the back of your laptop:

Important note: Some laptops like the Sony Vaio, the Apple iBook, Powerbooks and MacBookPro do not have standard VGA monitor connectors. Make sure you have any adapters or docking ports with you or you will not be able to connect to our consoles. Please contact reception for a convertor, if your laptop does not have the standard VGA connection pictured below (we have several types, probably not all of them).

This is the monitor out connector on the back panel of standard laptop. The connection on a PC is identical.



This is a standard VGA cable connector.



In general, the **order in which you do things** with computers and projectors is very important:

1. Turn on your computer. (Never rely on your laptop's battery. It will fail you. **Always** bring your AC Adapter.)
2. Login.
3. Connect the VGA cable from the laptop to the projector or VGA distribution unit.
4. Turn on the PROJECTOR, let it warm up.
5. If no picture is projected (in case of laptop) use proper output selection button (described below)
6. Select the proper COMPUTER/PC input using the MODE or INPUT button on the remote control if needed.

This is important because when you turn on your computer, it looks to all the ports and connectors to see what's hooked up to it. So theoretically, the computer will know there is a projector connected and send the image that you see on the screen out to the projector.

If you have powered on the projector and **CONNECTED** it to the laptop **BEFORE** booting up and starting your session, you can get projection working, but no icons are displayed at the projection.

Is such case you can just grab (by mouse of course) the window you plan to present and move it

over (usually) right border of the display – that will show up at the projection.

But (there's always a but) what do you do when it doesn't send the image to the projector? [top](#)

ALWAYS CHECK THIS FIRST: Is the **projector's input** set to **the correct COMPUTER input**? If it is, try the following:

For laptop users: If you get an image on the laptop screen but not on the projector, check the following:

1. On your laptop's keyboard, find the key marked "FUNCTION" or "Fn" (usually on the lower left corner of the keyboard).
2. Then, search for a key that has either the letters "LCD/CRT" or a little monitor icon. Most often, it will be in the top row of keys marked F1 through F12, but not always.
3. When you have both keys located, press the FUNCTION key and then the LCD/CRT key that you located before. It might take a couple of seconds for the computer to react. This should toggle the screen image through a cycle like this: Image on Laptop Screen | Image on Projector | Image on Both

So if you press the "Function Fn" key sequence once, you'll get an image on the projector, but your laptop screen will go black. Press the key sequence again and you'll see the image through the projector and on your laptop. (**This information will be in your laptop's instruction manual.**)

SCREEN RESOLUTIONS:

Screen resolution affects what you see projected and how it looks. This will be important if you use fine, detailed images and text.

The back story: When desktop computers were first introduced, the monitors all had the same resolution: 640 pixels wide by 480 pixels high.

Today, monitors and computers have advanced to the point where many different resolutions are possible from 640x480 up to 1920x1200 pixels. So-called "standard" resolutions are: 640x480, 800x600, 1024x768. Anything else is going to cause problems with a projector.

(Just to confuse you further, some older laptops can only display 800x600 pixels using the laptop's screen, but can output to a video projector a 1024x768 resolution image. Laptops can even split the display so half the desktop is in the laptop's screen, the other half is sent to the video projector. Yikes. See why we recommend testing it first?)

To add to the fun, with some older or less expensive laptops, the electronics that control the display may not be powerful enough to send the computer's image to the laptop screen and to a projector at the same time. This means you will have to shut off the laptop screen to get an image on a projector.

Our projectors can display *up to* 1024x768 (higher resolutions will be compressed down to 1024x768).

So, what does this mean for you?

In a nutshell: If your laptop has a non-standard display, the laptop screen and the projector image may not match. For example, users of the Toshiba 8300 will note that the native resolution on the laptop is 1400x1050. That will cause all sorts of problems with our consoles. When you change the setting to 1028x1024, the laptop screen has black bars on the sides. This is normal. The same thing happens with Apple's G4 15" Powerbooks.

So what should you do? TEST it before you need it. Get into your classroom and try it before your first class.

One more thing... Set your color to 16-bit (Windows users). Some laptops won't mirror if the color is set to 32-bit.

How do you know what resolution you're using?

Windows 95 and above: Start>Control Panels>Display>Settings Tab. On the right, you'll see the current resolution setting and a slider to change it.

Mac OS X: System Preferences -> Displays. Apple iBooks and the 12" G4 Powerbook have three standard display options. Apple 15" & 17" G4 Powerbooks have non-standard display resolutions. You will also need to bring any monitor adapter that came with the laptop with you if you plan to use our projection systems.

INTERNET ACCESS:

More and more teachers are using websites as part of their curriculum. If you need web access, do not rely only on the AAUNI wireless network. **ALWAYS USE AN ETHERNET CABLE** for presentation notebook, if available (green ethernet cable, prepared at the classrooms).

Wireless internet users: Wireless access is available in all AAUNI classrooms, but access points can be overloaded when more than 20 clients are connected at once on one access point. If there is AP dedicated to your classroom (number of the classroom is substring of the AP name. AAUNI-LAZENSKA4-0-002 is dedicated to the room 002).

All stable presentation computers are configured for Internet access using the cables and connection is independent on wifi network.