American Motion Picture Society

home of the world's longest-running non-commercial film festival

Home   Cinema   Student   Film Talk   Tech Talk   Club Talk   Tools/Links   Festivals   About Us

TECH TIP: FireWire / iLink / / Lynx / IEEE1394

Whatever name you use, it is that magical cable connecting your camera and multiple peripherals to your computer with the capability of real time two-way multimedia data transfer at rates up to 800 Mbit/s. There are several variations but the common ones are 4-pin and 6-pin. (The 2 extra pins can supply up to 45 watts of power at up to 30 volts per port to certain low consumption peripherals, eliminating the need for separate power supplies.)

FireWire also supports hot-swapping, but here, there is a word of caution:

Hot-swapping FireWire may not always be such a good idea. There are a number of documented instances in which expensive equipment was destroyed during hot swapping and the reasons have been traced back to two major causes:

1. In 6 pin FireWire cables, accidental shorts at the connection point or inside the cable between the data lines and the power lines may damage the computer port or the peripheral's circuitry, which in the case of video cameras can result in costly repairs.
2. Static electricity may jump from the user to an open plug's data line terminals, damaging the electronics at the end of the cable that is already connected to equipment. This can happen with 6 and 4 pin FireWire connections.

The first cause can be prevented in most instances by taking the following precautions:

- Use only the highest quality FireWire cables
- Be careful how you insert the cable connectors. In some instances they can be inadvertently rotated by 180 degrees and force inserted, effectively connecting power to the data lines.
- Do not wiggle or apply twisting force while inserting the connectors.
- As an added precaution, before connecting 6 to 6 pin or 6 to 4 pin FireWire cables, disconnect all equipment from their power sources.

The second cause (static discharge), although rare, can be prevented by simply grounding yourself (touch the metal case of a computer which is plugged in to its power socket) before making any connections between equipment. This precaution will allow safe "power on" hot swapping of 4 to 4 pin FireWire cables.