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MULTIPURPOSE

FireWire Apple Computer coined the name FireWire for the IEEE 1394 digital interface standard, and it has now been widely adopted, though Sony calls it i.Link and some jacks might use different names, such as DTV Link. Using a tiny rectangular, four-pin jack and plug, FireWire is a very high-speed (400 megabits per second, or Mbps), bidirectional, serial interface for digital devices: computers with hard-disk drives, video and audio editing systems with computers, DV camcorders with computers — or HDTV or satellite tuners with HDTVs. (A larger, six-pin connector found on computer equipment carries power as well as data.) Until the development of the HDCP (High-bandwidth Digital Content Protection) copy-protection scheme, the movie studios largely blocked it from being used for interconnecting HDTV components, but it is widely used for digital camcorder connections.

USB With rectangular or squarish plugs and jacks, the USB (Universal Serial Bus) has all but replaced old-fashioned nine-pin serial ports on personal computers and is fast becoming familiar to home-entertainment enthusiasts, too. The rectangular (or Type A) jacks shown are typically found on computers or other "hosts," while the squarish (or Type B) jacks are found on peripherals. Among other uses, USB connections can transfer data between PCs, music servers, and portable MP3 players, and they're used for audio and video input/output to computer recording/editing systems.

Ethernet (RJ-45) The RJ-45 network connector looks like an overweight modular telephone jack and works the same way (insert and click to plug in, press down on tab and pull out to unplug). Ethernet ports are becoming more common on components as network abilities migrate from computers to home-entertainment gear like receivers, hard-disk video recorders, and digital music servers. Almost any computer or electronics superstore will have network cables in lengths from a few feet to 50 feet with plugs already attached to the ends. If you're handy, you could install room-to-room network wiring using bulk CAT-5 cabling yourself, but you'll need special tools for attaching the wiring to jacks and plugs.

RS-232 This nine-pin serial connector is found on some A/V components in the form of a DB-9 female jack. It is most commonly used to connect the component to a PC for control and communication, or to interface with home-automation systems such as touchscreen controllers.

F-type (antenna) The F-type coaxial connector, found on most receivers and preamp/tuners for hooking up an FM antenna, is engineered to transfer the minuscule radio-frequency (RF) electrical signals produced by antennas. It accepts either a push-on or a screw-on matching plug — the latter is what you'll find on the end of cable-TV wiring or an indoor antenna system. An F-type plug is usually supplied with a receiver or preamp's accessories, either fixed to an indoor FM antenna or in the form of an adapter for a T-shaped dipole antenna.

Telcom (RJ-11) You'll find modular telephone (RJ-11) jacks on certain components, primarily satellite tuners and hard-disk video recorders, whose internal modems make dial-up network connections to transmit billing or program-guide data. You connect the RJ-11 jack on the component to a standard telephone wall jack (or to an extra jack on a phone) just as you would a telephone or answering machine.

Mini-phone Many A/V receivers or preamps have one or more ⅛-inch mini-phone jacks on the back. With only two wires (signal and ground) instead of three for stereo audio, these are most often used for 12-volt "trigger" inputs/outputs that turn other components on or off. But they can also be used for IR-repeater inputs/outputs that transfer remote-control codes to and from components hidden inside furniture or in remote locations and for inter-component-communications systems (like JVC's A/V CompuLink or Sony's S-Link) that enable one-brand systems to be operated by a single remote control aimed at a single component.

PHOTO COURTESY OF MOLEX

HDMI The High-Definition Multimedia Interface, or HDMI, hasn't arrived on any products yet, but it could become the standard connector of the future. For digital video, it's essentially identical to DVI, on which it's based, but it also carries both stereo and multichannel digital audio as well as signals for integrated remote control and infrared (IR) repeater functions — all on a single cable. The 19-pin HDMI connector is significantly smaller than a DVI connector, looking something like a USB jack and plug. HDMI-equipped HDTV monitors and source components (tuners and DVD players first) will probably begin to appear early next year. HDMI gear will be backward-compatible with DVI-equipped components through cable adapters, though these arrangements won't deliver the digital audio and control capabilities of all-HDMI hookups. S&V