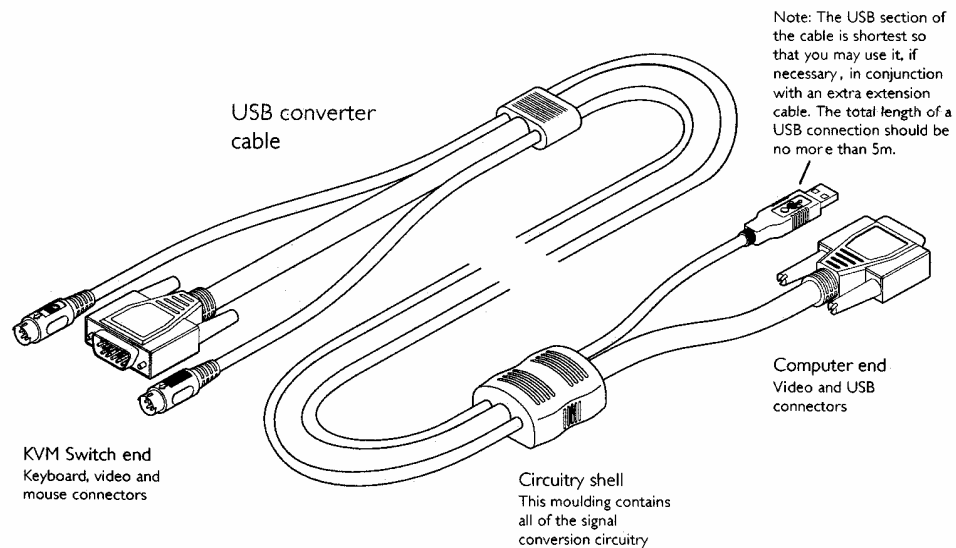# USB Converter Cable plus VGA

EHN428-0006     USB to PS/2 Convertor Cable plus VGA 2m

EHN428-0016     USB to PS/2 Convertor Cable plus VGA 5m

EHN428-0035     USB to PS/2 Convertor Cable plus VGA 10m

## Your USB Converter Package

In addition to this brief guide, your package should contain the converter cabl e:

USB converter cable

Note: The USB section of the cable is shortest so that you may use it, if necessary, in conjunction with an extra extension cable. The total length of a USB connection should be no more than 5m.

Computer end
Video and USB connectors

KVM Switch end
Keyboard, video and mouse connectors

Circuitry shell
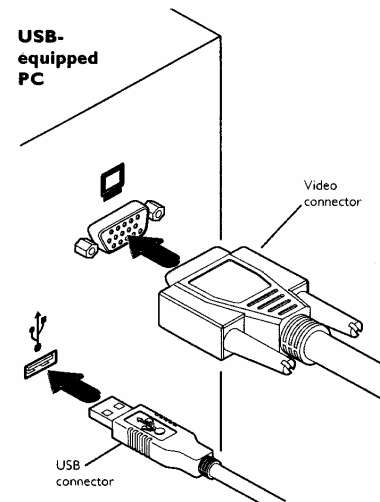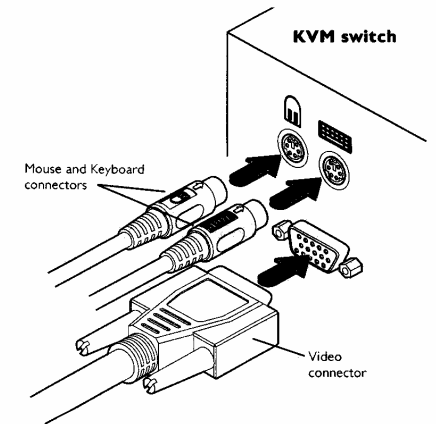This moulding contains all of the signal conversion circuitry

# Connecting your USB converter cable

Your USB converter cable is primarily designed for use with a USB-equipped computer and a traditional Keyboard, Video and Mouse (KVM) switch unit.

*Note: It is technically possible to connect your PS/2-style keyboard, PS/2-style mouse and monitor directly to the converter cable. However, you would first need to purchase separate gender changers for the PS/2 keyboard and mouse connctors and possibly one also for the video connector.*

### To connect your USB converter cable

1   If possible, switch of your computer(s) and KVM switch.

2   At the end of the converter cable that has three plugs, connect the keyboard, mouse and video plugs to the relevant sockets on your KVM switch.

KVM switch

Mouse and Keyboard connectors

Video connector

USB-equipped PC

Video connector

USB connector

3   At the other end of the converter cable (with two plugs), connect the video and USB plugs to the relevant sockets on your computer.

4   Switch on your computer(s) and KVM switch, and operate in the usual manner.

*Note: If you are connecting to a Sun computer then it is necessary to report a keyboard country code to the system before correct operation may occur. Please see the section 'Flash upgrades and country code changes' for more information.*

Your USB converter cable emulates the presence of a keyboard and mouse (via the USB connector) to the computer at all times. This means that there will be no delay in response when switching to this channel.

## Connector/port icons & colours

| | | |
|---|---|---|
| Monitor (video) | | Dark blue |
| Keyboard | | Purple |
| Mouse | or | Mid green |
| USB | | Black |

## Important information

For use in dry, oil free indoor environments only

Your USB converter cable contains no user-serviceable parts.

For connection only to the following standard computer system and KVM switch connectors:
PS/2 style keyboard and mouse, SVGA analogue video connections and USB ports.

# Software upgrades and keyboard emulations

Your USB converter cable can be upgraded to take advantage of feature improvements and operation changes that may become available in the future. Additionally, it can also be made to emulate particular USB keyboard styles so that extra keys may be reported. When used with Sun® workstations, the converter cable can also be induced to report a country code to the host computer.

The necessary upgrade and keyboard files are made available within the Software Updates section of the Black Box website - **www.blackbox.com**. Full instructions for performing an upgrade/keyboard emulation are included with the files from the website.

## Keypress equivalents

The tables below provide equivalent keypresses on a standard PC (PS/2-style) keyboard that emulate special keys found on Apple®, Microsoft® or Sun® keyboards. *Note: To use the Sun® equivalents you must first download the relevant files from the Software Updates section of the Black Box website (www.blackbox.com).*

| PS/2 keyboard | Apple keyboard |
|---|---|
| Left Ctrl | Left Control |
| Left Win Start (⊞) | Left Command (⌘) |
| Left Alt | Left Option (alt) |
| Right Alt or Alt Graph | Right Option (alt) |
| Right Win Start (⊞) | Right Command (⌘) |
| Right Ctrl | Right Control |
| Windows Application key | No equivalent |
| No equivalent | On / off key |

*\* Certain PS/2 keyboards have a power key which will be mapped to perform the same function for a Sun system.*

| PS/2 keyboard | Sun keyboard |
|---|---|
| Right-[Ctrl] [F1] | Stop |
| Right-[Ctrl] [F2] | Again |
| Right-[Ctrl] [F3] | Props |
| Right-[Ctrl] [F4] | Undo |
| Right-[Ctrl] [F5] | Front |
| Right-[Ctrl] [F6] | Copy |
| Right-[Ctrl] [F7] | Open |
| Right-[Ctrl] [F8] | Paste |
| Right-[Ctrl] [F9] | Find |
| Right-[Ctrl] [F10] | Cut |
| Right-[Ctrl] [1] | Mute |
| Right-[Ctrl] [2] | Volume - |
| Right-[Ctrl] [3] | Volume + |
| Right-[Ctrl] [4] | Power* |
| Right-[Ctrl] [H] | Help |

# Regulatory Information

European EMC directive 89/336/EEC

CE This equipment has been tested and found to comply with the limits for a class B computing device in accordance with the specifications in the European standard EN55022. These limits are designed to provide reasonable protection against harmful interference. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions may cause harmful interference to radio or television reception. However, there is no guarantee that harmful interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to correct the interference with one or the cable is shortest so more of the following measures: (a) Reorient or relocate the receiving antenna. (b) Increase the separation between the equipment and the receiver. (c) Connect the equipment to an outlet on a circuit different from that to which the receiver is connected. (d) Consult the supplier or an experienced radio/TV technician for help.

FCC statement

This equipment generates, uses and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of part 15 of FCC rules, which are designed to provide reasonable protection such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area may cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.