

TWO PORT KVM SWITCH



USER MANUAL

CS-72E

Read this guide thoroughly and follow the installation and operation procedures carefully in order to prevent any damage to the unit and/or any devices that connect to it.

This package contains:

- 1 CS-72E Two Port KVM Switch
- 2 CS Custom KVM Cables
- 1 Console Connector Cable
- 1 User Manual

If anything is damaged or missing, contact your dealer.

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Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ◆ Reorient or relocate the receiving antenna;
- ◆ Increase the separation between the equipment and receiver;
- ◆ Connect the equipment into an outlet on a circuit different from that which the receiver is connected;
- ◆ Consult the dealer or an experienced radio/television technician for help.



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OVERVIEW

The CS-72E KVM (Keyboard, Video, Mouse), Switch is a control unit that allows access to two computers from a single console (keyboard, monitor, and mouse). With its custom designed connectors, the CS-72E reduces the number of ports required for a 2 Port KVM switch from 9 (6 PS/2 and 3 HDB) to only 3 (2 custom designed SPDB-15 female connectors for the computer attachments, and a single, integrated, custom designed SPDB-15 male connector for the keyboard, video, and mouse).

The special connector design provides several advantages over standard KVM switch implementations: 1) increased reliability; 2) a handsome, space-saving, vertical-standing, modern appearance; and 3) neater, more efficient, cabling that eliminates the usual tangled cable mess.

Setup is fast and easy; plugging cables into their appropriate ports is all that is entailed. There is no software to configure; no need to get involved in complex installation routines; and no need to be concerned with incompatibility problems. Since the CS-72E intercepts keyboard and mouse input directly, it works on any hardware platform and with all operating systems.

The CS-72E provides two convenient computer access methods: 1) toggling the KVM focus from one to the other by pressing the push button port selection switches located on the unit's front panel; and switching directly to the target computer by entering hotkey combinations from the keyboard.

There is no better way to save time and money than with a CS-72E installation. By allowing a single console to manage both computers, the CS-72E eliminates the expense of purchasing a separate keyboard, monitor, and mouse for each one. Additionally, it saves the extra space and energy costs that they would require, and eliminates the inconvenience and wasted effort involved in constantly having to move from one computer to the other.

FEATURES

- ◆ Compact vertical-standing design
- ◆ Custom connector layout requires only 3 ports - 2 SPDB-15 female connectors for connecting to the computers - plus a single, integrated, SPDB-15 male connector for the keyboard, video, and mouse console
- ◆ Easy to install - no software required - connecting cables to the computers is all it takes
- ◆ Easy to operate - computer selection via selection switches or hotkeys
- ◆ Power on detection - automatically switches to the first powered on port
- ◆ Auto scan function to monitor computer operation
- ◆ LED display for easy status monitoring
- ◆ Hot pluggable - add or remove computers without powering down the switch
- ◆ Caps Lock, Num Lock, and Scroll Lock states are saved and restored when switching
- ◆ Keyboard and mouse emulation for error free computer booting
- ◆ Supports Microsoft IntelliMouse and the scrolling wheel on most mice
- ◆ Superior video quality - up to 2048 x 1536; DDC2B
- ◆ Non-powered
- ◆ Saves time, space, power, and equipment costs

SYSTEM REQUIREMENTS

CONSOLE

- ◆ A VGA, SVGA, or Multisync monitor capable of the highest resolution that you will be using on any computer in the installation
- ◆ A PS/2 style keyboard
- ◆ A PS/2 style mouse

COMPUTERS

The following equipment must be installed on each computer that is to be connected to the system:

- ◆ A VGA, SVGA or Multisync port.
- ◆ A PS/2 Style keyboard port.
- ◆ A PS/2 Style mouse port.

CABLES

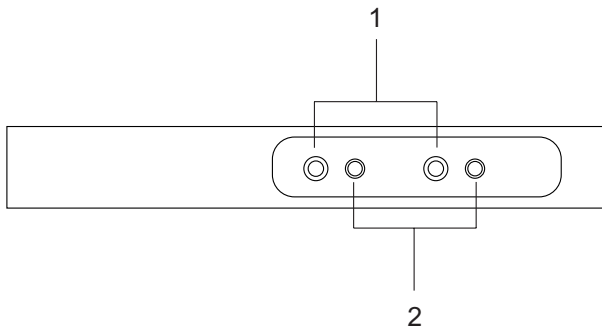
Only CS Custom cable sets specifically designed to work with this switch may be used. One Console Connector Cable and two 1.2 m KVM cable sets are provided with this package.

KVM cable sets are available in 1.2, 1.8, 3, and 6 meter lengths. If you need additional cables, contact your dealer.

Length	CS Part Number
1.2 m	2L-5201P
1.8 m	2L-5202P
3.0 m	2L-5203P
6.0 m	2L-5206P

COMPONENTS

FRONT VIEW:



1. Port Selection Switches

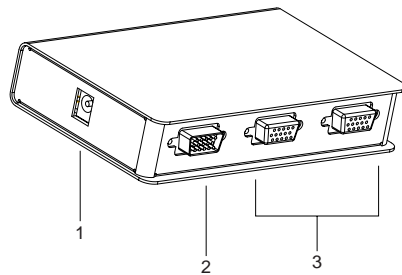
- ◆ Press a switch to give the KVM focus to the system attached to its corresponding port.
- ◆ Pressing Buttons 1 and 2 simultaneously for 3 seconds starts *Auto Scan Mode* (see p. 10).
- ◆ While in *Auto Scan Mode*, pressing either button exits *Auto Scan Mode* and switches the KVM focus to its corresponding port.

2. Port LEDs

The Port LEDs are built into the Port Selection Switches. A lit LED indicates that its corresponding Port is the one that has the KVM focus.

Depending on the Port's status, the LED may flash according to a specific pattern (see the table on p. 11 for details).

REAR



1. Power Jack

The power adapter cable plugs in here.

Note: The CS-72E does not require external power. Use of a power adapter is optional, and requires a separate purchase.

2. Console Port Connector*

The Console Adapter Cable plugs in here.

3. CPU Port Connectors*

The KVM cables that connect the unit to the mouse, keyboard, and video ports on the computers you are connecting up can plug into any available port.

* The shape of the 15-pin CPU and Console port connectors has been specifically modified so that only cables designed to work with this switch can plug in (see the *Cables* section on p. 3 for details).

INSTALLATION



1. Make sure that power to all the devices you will be connecting up have been turned off. You must unplug the power cords of any computers that have the *Keyboard Power On* function.
2. To prevent damage to your installation due to ground potential difference, make sure that all devices on the installation are properly grounded.

Refer to the diagrams on pages 7 and 8 as you do the following:

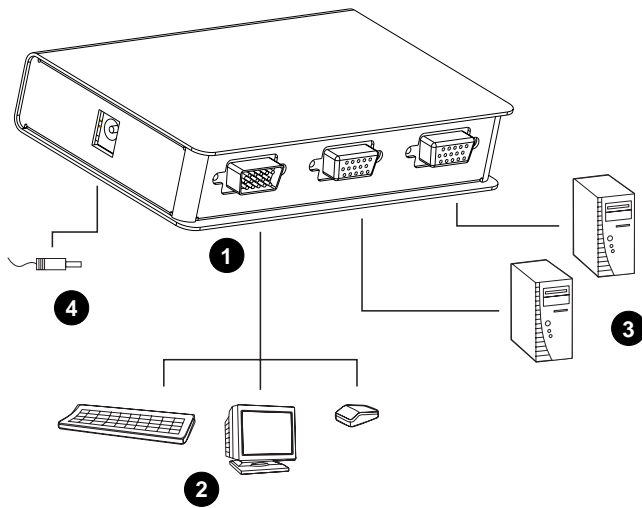
1. Plug the Console Adapter Cable into the Console Port Connector on the rear panel of the CS-72E.
2. Plug your keyboard, monitor and mouse into their respective connectors on the Console Adapter Cable. Each connector is marked with an appropriate icon to indicate itself.
3. Use the custom KVM cables (described in the *Cables* section on p. 3), to connect the CS-72E CPU Ports to the monitor, keyboard and mouse ports of the computers you are installing.
4. If you choose to use external power, plug the power adapter into an AC power source, then plug the power adapter cable into the unit's Power Jack.

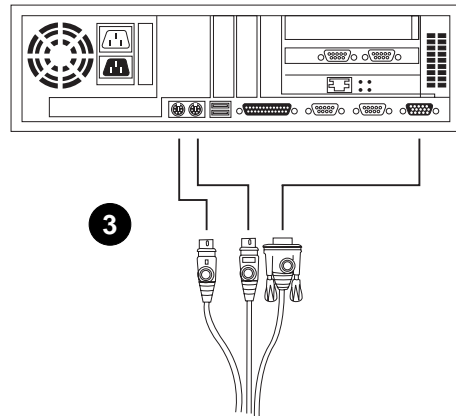
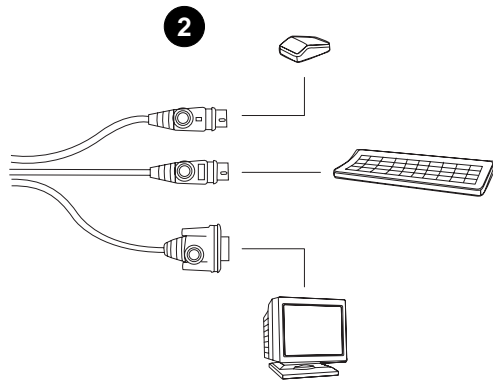
Note: The power adapter should be DC9V with the inside positive and the outside negative:



5. Turn on the power to the computers.

Note: The CS-72E's default is to link to the first computer you turn on.





OPERATION

Controlling the computers in your CS-72E installation from a single console could not be easier. Two port selection methods that provide instant access to the computers are available:

- ◆ Manual Port Selection
- ◆ Hotkey Port Selection

MANUAL PORT SELECTION

With Manual Port Selection you simply press the appropriate Port Selection switch on the unit's front panel to give the KVM focus to its corresponding port. The Port LED lights to indicate that its port has the KVM focus.

HOTKEY PORT SELECTION

Hotkey selection allows you to toggle the KVM focus between the computers from the keyboard, instead of having to manually switch with the Port Selection buttons.

To hotkey toggle the ports:

1. Press and hold down the **Num Lock** key
2. Press and release the **asterisk** key or the **minus** key
3. Release the **Num Lock** key:

[Num Lock] + [*]

or:

[Num Lock] + [-]

Note: The asterisk or minus key must be released within one half second, otherwise the hotkey operation is canceled.

Auto Scan Mode:

The CS-72E's Auto Scan feature automatically switches between the two ports at regular 5 seconds intervals so that you can monitor the computer activity without having to take the trouble of switching yourself. To invoke Auto Scan Mode hold down both Port Selection buttons for 3 seconds (see p. 4).

Once scanning begins, it continues until you exit Auto Scan Mode by pressing either Port Selection switch or the keyboard Spacebar.

- ◆ If you exit by pressing a Port Selection switch, the KVM focus switches to its corresponding port.
- ◆ If you exit by pressing the Spacebar, the port that had the focus when the scanning stopped keeps the focus.

Note: While Auto Scan Mode is in effect, ordinary keyboard and mouse functions are suspended. You must exit Auto Scan Mode to regain normal control of their use.

SPECIFICATIONS

Function		Specification
CPU Ports		2
Port Selection		Push Button Switches; Hotkeys
Connectors	CPU	2 x SPDB-15 F (Yellow)
	Console	1 x SPDB-15 M (Yellow)
LEDs		2 Selected Port (Green)
Emulation	Keyboard	PS/2
	Mouse	PS/2
Scan Interval		5 secs.
Operating Temperature		0 - 50° C
Storage Temperature		-20 - 60° C
Humidity		0 - 80% RH, Noncondensing
Housing		Metal
Weight		0.33 Kg
Dimensions (L x W x H)		12.5 x 8 x 2.5 cm

SELECTED LED DISPLAY

Activity	Meaning
Off	Port is not selected.
On (Steady)	The computer attached to the LED's corresponding port has the KVM focus.
Flashing (On and Off equal)	The computer attached to the LED's corresponding port has the KVM focus and is being accessed in Auto Scan mode.

TROUBLESHOOTING

Symptom	Cause	Action
Keyboard ¹ and/or Mouse ² Not Responding	Loose cables.	Check all cable connections to make sure they are completely seated in their sockets.
	Switch is in Auto Scan Mode.	Press either Port Selection switch or the Spacebar to exit Auto Scan Mode.
	Keyboard / Mouse needs to be reset.	Unplug the keyboard / mouse from the Console Keyboard Port, then plug it back in.
	Mouse set to Serial Mode.	Some mice can be set to act as either a PS/2 or serial mouse. Make sure the mouse is set to PS/2 mode.
	Incorrect Mouse Driver.	Check your Device Manager to be sure that the correct driver for your mouse (obtained from the manufacturer, or supplied by the operating system), has been installed. Because of the wide variety of mouse driver standards for the modern series of mice (the ones with the extra buttons and wheels), this unit only supports all of the extra features of the Microsoft Intellimouse. It supports the scroll wheel function of most other mice.
	Switch needs to be reset.	Turn off the computers; wait 5 seconds; turn the computers back on.
Video Problems	Loose cables.	Check all cable connections to make sure they are completely seated in their sockets.
	Resolution and/or Bandwidth set too high.	This unit supports VGA, SVGA, Multisync, and XGA (interlaced), with resolutions of up to 2048x1536.

Troubleshooting Notes:

1. The unit is designed to work with PS/2 keyboards and mice. XT (84 key) and AT keyboards will not work. Serial mice will not work.
2. Some Notebooks, notably the IBM Thinkpad and Toshiba Tecra, have trouble when their mouse and keyboard ports are used simultaneously. To avoid this, only connect the mouse port or the keyboard port. If you connect the mouse port, you will need to use the notebook's keyboard when the notebook becomes the active computer.

LIMITED WARRANTY

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION.

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