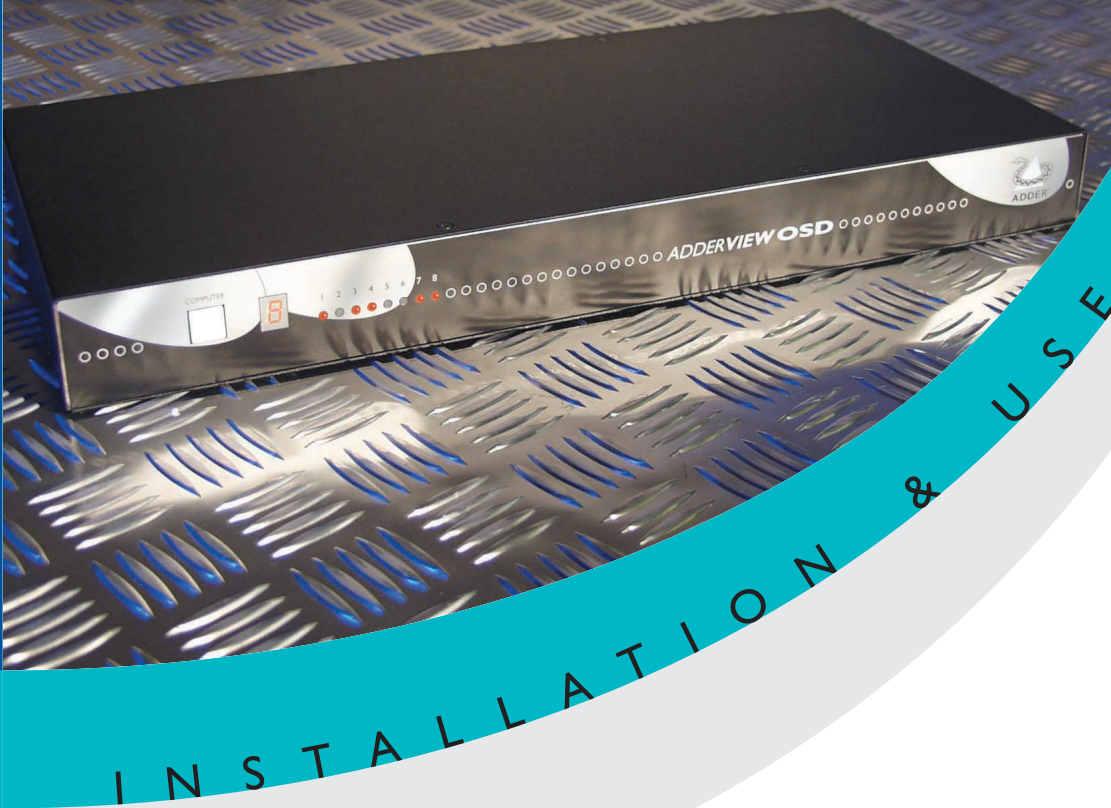


ADDER View OSD



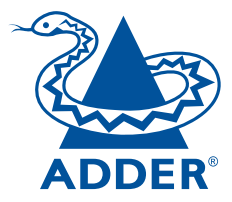
8 Port ADDER View OSD AV8OSD



4 Port ADDER View OSD AV4OSD



Remote Control Pad/Display RC1



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ADDER View OSD

About this manual

AdderView OSD - Installation and Use

Second edition (March 2002)

Part No. ADD0034/2

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Safety information

- For use in dry, oil free indoor environments only.
- Warning - live parts contained within power adapter.
- No user serviceable parts within power adapter - do not dismantle.
- Plug the optional power adapter into a socket outlet close to the AdderView.
- Replace the power adapter with a manufacturer approved type only.
- Do not use power adapter if power adapter case becomes damaged, cracked or broken or if you suspect that it is not operating properly.

Warranty

Adder Technology Ltd warrants that this product shall be free from defects in workmanship and materials for a period of two years from the date of original purchase. If the product should fail to operate correctly in normal use during the warranty period, Adder will replace or repair it free of charge. No liability can be accepted for damage due to misuse or circumstances outside Adder's control. Also Adder will not be responsible for any loss, damage or injury arising directly or indirectly from the use of this product. Adder's total liability under the terms of this warranty shall in all circumstances be limited to the replacement value of this product.

If any difficulty is experienced in the installation or use of this product that you are unable to resolve, please contact your supplier.

Radio Frequency Energy

Shielded cables must be used with this equipment to maintain compliance with radio frequency energy emission regulations and ensure a suitably high level of immunity to electromagnetic disturbances.

European EMC directive 89/336/EEC

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 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 Compliance Statement (United States)

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 communication. 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 against 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.

Canadian Department of Communications RFI statement

This equipment does not exceed the class A limits for radio noise emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le règlement sur le brouillage radioélectriques publié par le ministère des Communications du Canada.

Contents

1. Introduction	5
1.1 Key features	5
1.2 Package contents (models AV4osd and AV8osd)	6
1.3 Rack mount kit contents (part code: AVrmk)	6
1.4 Remote controller contents (part code: AVremote)	6
1.5 Product information	7
2. Installation	9
2.1 What you will need	9
2.2 Mounting the AdderView	10
2.3 Connecting your devices	10
2.4 'Interface powered' operation without the optional power adapter	11
2.5 Configuring your PCs	11
2.6 Configuring the AdderView	11
2.7 Summary of AdderView configuration options	12
2.8 Other useful installation information	14
2.9 Re-enabling a disconnected PS/2 mouse	15
2.10 Hot plugging the AdderView into running systems and re-enabling disconnected PS/2 CPU mouse connections	15
3. Using the AdderView	18
3.1 Power on status	18
3.2 Front panel keys and remote controller	19
3.3 Status display	19
3.4 Keyboard hotkey control	20
3.5 On-screen menu control	22
3.6 Mouse control	24
3.7 RS232 control	24
3.8 Cascading AdderViews	24

4. AdderView configuration options	26
4.1 Screen saver time delay	26
4.2 Autoscan lock on mode and delay time	26
4.3 Mouse mode and mouse switching of channels	27
4.4 Keyboard hotkey combination	28
4.5 Firmware functions (version query, mouse restore and reset)	29
4.6 Display appearance options	29
4.7 Setting a security password	30
4.8 Cascade query code	31
4.9 Exit configure mode	31

Appendices

A - Cable and connector specifications	32
B - Problem solving	34

1. Introduction

Thank you for purchasing the AdderView OSD. Your AdderView is a high performance keyboard, monitor and mouse sharing device which supports a wide range of PC hardware and software platforms.

1.1 Key features

- Control multiple PCs from a single keyboard, monitor and mouse.
- On-screen menu allows computers to be selected by name.
- SmartBoot feature automatically boots all machines during power up.
- 'Interface powered" operation – AdderView draws its power from the connected PCs.
- Mixed AT/PS2 keyboards and PS2/RS232 mice supported as standard.
- Can be cascaded to provide a video switching network.
- Password security prevents unauthorised use.
- Remote control module for convenient operation.
- Channel switching by on-screen display, front panel key, keyboard hotkey, or 3 button mouse.
- Automatically restores keyboard and mouse states when channel changed.
- Can be controlled remotely via an RS232 serial port.
- Supports high bandwidth monitors at resolutions up to 1900 x 1200.
- Supports keyboard modes 1,2 and 3 and mouse prompt and stream modes for maximum compatibility.
- Includes screen saver, auto-scan and variable hotkey options.
- Confirmation of selected ports on local and cascaded AdderViews.
- Supports Microsoft IntelliMouse and other common wheel mice.
- Mouse restoration functions to enable 'hot plugging' of certain systems.

- Supports IBM ThinkPad 'Y' cables.
- Power and activity indication confirm correct operation.
- Standard cable connections make installation easy and inexpensive.
- All ports are active simultaneously – all PCs may all be booted at the same time.
- Robust metal case ensures good shielding and video quality.
- 19 inch rack mount kit available.
- Supports RS6000 computers.
- Optional power adapter can be used for 'video only' or cascade applications.

1.2 Package contents (models AV4osd and AV8osd)

- AdderView OSD.
- 4 x stick on self-adhesive rubber feet.
- This installation guide.
- (Please note that a power adapter is NOT required for most applications and so is not included. This may be purchased separately if required).

1.3 Rack mount kit contents (part code: AVrmk)

- 2 x mounting brackets for fixing the unit into a 19 inch rack.
- 4 x screws for fixing mounting brackets to the AdderView OSD.

1.4 Remote controller contents (part code: AVremote)

- Remote control module.
- Velcro strip for mounting remote controller.

1.5 Product information

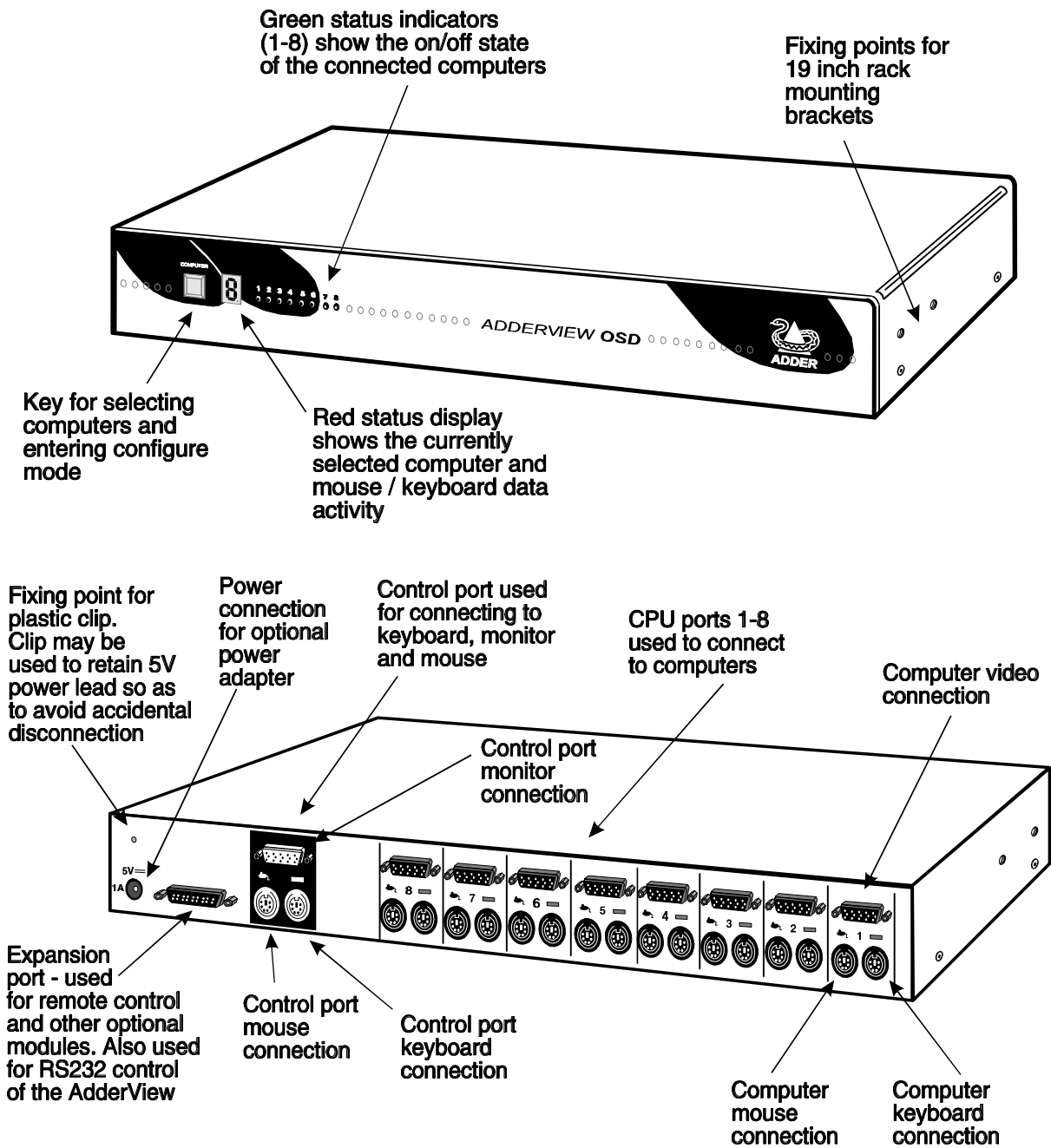


Fig. 1 – AdderView OSD (model AV8osd)

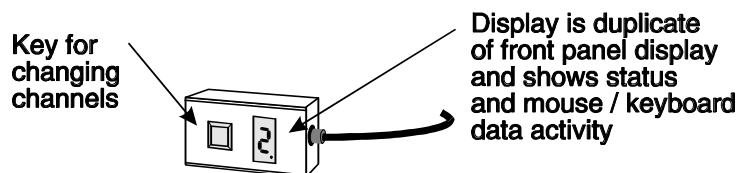


Fig. 2 - Remote control pad / display (optional accessory)

Part code: AVremote

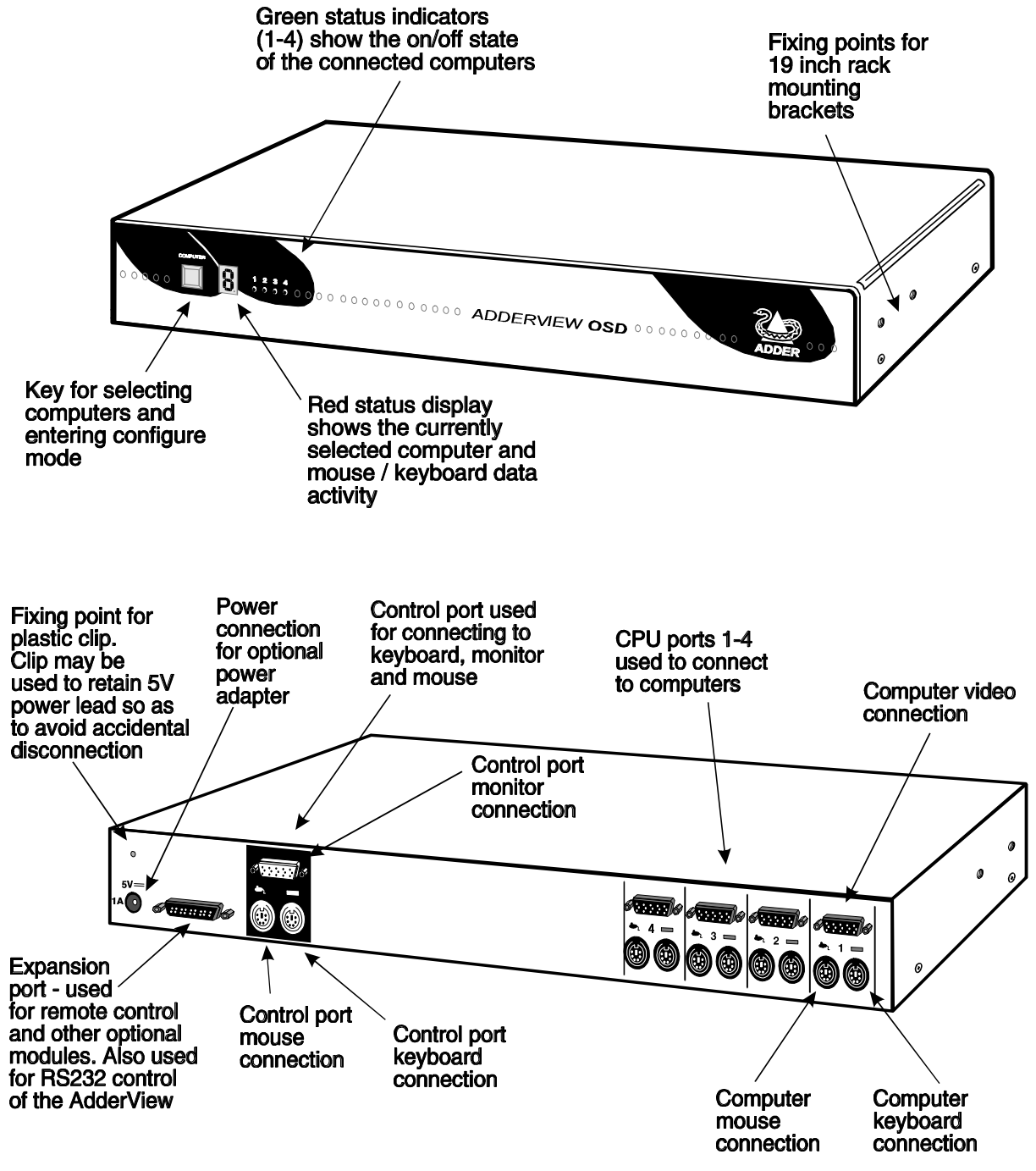


Fig. 3 – AdderView OSD (model AV4osd)

2. Installation

2.1 What you will need

- Cables to connect the AdderView to each of your PC keyboard, video and mouse ports. Cable specifications are given in appendix A. (You do not need to connect a mouse cable if you are not using the mouse).
- A monitor with a standard VGA/SVGA (15 pin) connector that will work when connected directly to each of your PCs. AdderView supports low and high resolution monitors.
- A standard AT or PS/2 style keyboard. If you are using an AT keyboard with a 5 pin connector you may connect this to the AdderView using a standard AT to PS/2 keyboard adapter.
- A PS/2 style two or three button Microsoft or Logitech compatible mouse or a Microsoft IntelliMouse compatible mouse. If you wish to use the mouse to switch the AdderView's channel then you will need a three button mouse or an IntelliMouse.

(The AdderView supports 'Internet Mice' that are compatible with the Microsoft IntelliMouse. These are fitted with a wheel or other scroll control and sometimes have additional buttons. Examples are: Microsoft IntelliMouse, Logitech Pilot Mouse+, Logitech MouseMan+, Genius NetMouse and Genius NetMouse Pro.)

- A suitable mouse driver for your PCs. Supported types are:
 - PS/2 or RS232 two button mouse driver (any manufacturer).
 - Microsoft mouse driver (including IntelliMouse).
 - Logitech mouse driver (including two button, three button and wheel mouse)

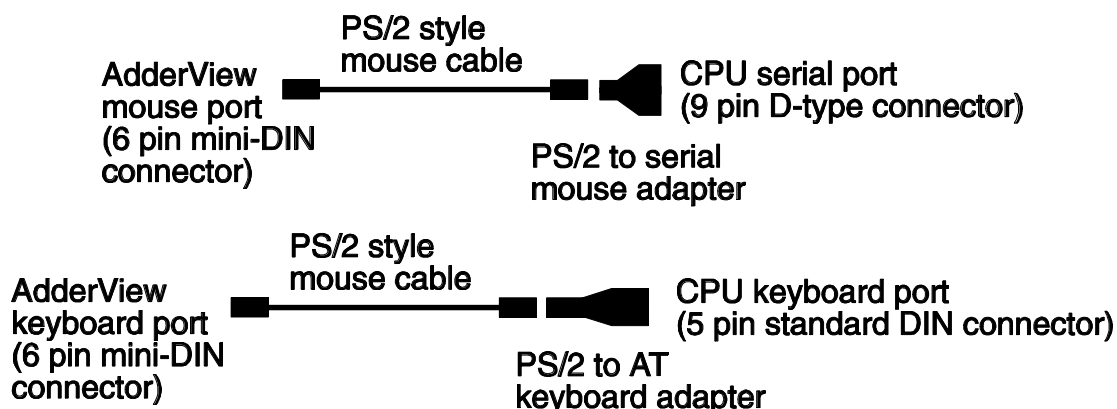
Use of PS/2 and RS232 style mice with the AdderView - All of the mouse connections from AdderView to PCs support either a PS/2 or an RS232 mouse. AdderView automatically converts from the PS/2 mouse commands to RS232 serial mouse commands. Serial mice types are selected by using an adapter as described in Appendix A. The AdderView will operate without a mouse connected if you do not wish to use one.

2.2 Mounting the AdderView

The AdderView has been designed to be used either on a desktop or mounted in a 19 inch rack. If the AdderView is to be used on a desktop then you will need to stick the supplied self-adhesive rubber feet to the underside of the AdderView. If the AdderView is to be mounted in a 19 inch rack then you will need to fit the rack mounting brackets to the side of the AdderView. The 19 inch rack mounting brackets are supplied in the option rack mounting kit (part code: AVrmk)

2.3 Connecting your devices

Ensure that the optional power adapter is disconnected from the AdderView and that all the devices which are to be attached are switch off. Connect the shared keyboard, PS/2 mouse and monitor to the connectors at the rear of the AdderView (see figs 1, 2 and 3). Connect your keyboard monitor and mouse to the control port. Next connect each computer system unit in turn with the keyboard cable, mouse cable and video cable. Any unused computer connections can be left unconnected. To connect computers with serial mouse connections and AT style keyboard connections use the adapters supplied in the cabling pack as shown below. Alternatively, if you have chosen not to purchase the cable pack, refer to appendix A for cable specifications.



The AdderView is now ready for use and will start to operate as soon as one of the attached PCs is powered on. If you are connecting to PCs using cables that are longer than 3 metres or are cascading the AdderView to another AdderView you will need to use the optional power adapter. When using the optional power adapter, ensure that it is connected to the mains and powering the AdderView before you switch on the connected computers. Failure to switch the AdderView and computers on in the correct order can lead to the mouse and/or keyboard not being recognised

by the computers when they are switched on.

2.4 'Interface powered' operation without the optional power adapter

The AdderView draws its power from the connected computers via the keyboard cables. A single keyboard connection is normally sufficient to power the AdderView provided that the cable is no longer than 3 metres. If more than one computer is connected then the power will be intelligently drawn from all computers. Cables longer than 3 metres may be used provided that the AdderView is already powered by another connected computer or the optional power adapter. If you are cascading the AdderView to another AdderView then a power adapter must be connected to all AdderViews.

2.5 Configuring your PCs

Configure your PC in the same way that you would if your keyboard, mouse and monitor were all connected directly to your PC, but bearing in mind the following points:

- AdderView emulates Microsoft compatible serial, IntelliMouse and PS/2 mice, so ensure that your PC software is configured for a Microsoft mouse of the correct type. Refer to the list of supported drivers in section 2.1.
- AdderView supports VGA/SVGA/XGA/XGA2 type monitors, but does not support the automatic detection features available with some 'plug and play' monitors and video cards. If you have this type of video card and monitor, you should select the video mode manually instead of relying upon the automatic detection feature.

2.6 Configuring the AdderView

The AdderView is supplied pre-configured with factory defaults which are suitable for most applications. There are a number of more advanced options which can be set by the user. These are stored in the AdderView's EEPROM memory and are retained when the power is disconnected.

The options may be changed whilst the AdderView is in configure mode. You may enter configure mode at initial power on or whilst the AdderView is running:

To enter configure mode at power on:




Switch off all the attached PCs and the AdderView. Hold down the front panel key whilst powering on the AdderView. Remember that the AdderView draws its power from any attached PC via the keyboard cable and so will power itself on when the attached PC is switched on or when the optional power adapter is connected. Do not release the key until the AdderView displays 'C' to show that it has entered configure mode.


To enter configure mode whilst the AdderView is running:

Hold down the front panel key for 5 seconds until the front panel display shows 'C'.

In configure mode, options are entered by typing a letter followed by a number followed by (return). Use ESC to abort the entry of an option. The AdderView will remain in configure mode until you type 'E' (return).

For example: to set hotkey option 2 type the following at the 'C' prompt

(at AdderView 'C' prompt)   

To exit configure mode type:  

2.7 Summary of AdderView configuration options

Full details of each of the configuration options and their uses are given in section 4.

- B1** - screen saver disabled (default)
- B2** - Blank screen after 1 minute of inactivity
- B3** - Blank screen after 2 minutes of inactivity
- B4** - Blank screen after 4 minutes of inactivity
- B5** - Blank screen after 8 minutes of inactivity
- B6** - Blank screen after 12 minutes of inactivity
- B7** - Blank screen after 16 minutes of inactivity
- B8** - Blank screen after 20 minutes of inactivity

- D1** - Menu appears with magenta / blue background and green highlight (default)
- D2** - Menu appears with red / blue background and green highlight
- D3** - Menu appears with blue / black background and light blue highlight
- D4** - Confirmation message remains on screen for standard time period (default)
- D5** - Confirmation message remains on screen for short time period
- D6** - Confirmation message remains on screen for extended time period

- L1** - AdderView locks on to active ports only during autoscanning (default)
- L2** - AdderView locks on to every port during autoscanning
- L3** - AdderView powers on in autoscan mode and locks on to active ports only
- L4** - AdderView powers on in autoscan mode and locks on to all ports

- L7** - SmartView cascade query code = AD (default)
- L8** - SmartView cascade query code = EF

- T1** - 2 seconds autoscan delay time before switching to next port (default)
- T2** - 5 seconds autoscan delay time before switching to next port
- T3** - 7 seconds autoscan delay time before switching to next port
- T4** - 10 seconds autoscan delay time before switching to next port
- T5** - 15 seconds autoscan delay time before switching to next port
- T6** - 20 seconds autoscan delay time before switching to next port
- T7** - 30 seconds autoscan delay time before switching to next port
- T8** - 60 seconds autoscan delay time before switching to next port

- U1** - AdderView channels are switchable using a 3 button mouse or IntelliMouse (default)
(AdderView reports 2 button mouse mode to PCs)
- U2** - AdderView channels are not switchable using 3 button mouse or IntelliMouse
(AdderView reports 2 button mouse mode to PCs)
- U3** - AdderView channels are not switchable using 3 button mouse or IntelliMouse
(AdderView reports 3 button mouse mode to PCs)
- U4** - AdderView channels are switchable using 3 button mouse or IntelliMouse
(AdderView reports IntelliMouse mode to PCs)
- U5** - AdderView channels are not switchable using 3 button mouse or IntelliMouse
(AdderView reports IntelliMouse mode to PCs)

H1 - Hotkey combination is CTRL + ALT + command key (default)
H2 - Hotkey combination is CTRL + SHIFT + command key
H3 - Hotkey combination is ALT + SHIFT + command key
H4 - Hotkey combination is RIGHT ALT + command key
H5 - Hotkey combination is LEFT ALT + RIGHT ALT + command key
H6 - Hotkey combination is LEFT CTRL + LEFT ALT + command key
H7 - Hotkey combination is RIGHT CTRL + RIGHT ALT + command key
H8 - No hotkey combination enabled

F1 - Display firmware first digit
F2 - Display firmware second digit
F3 - Display firmware third digit
F5 - Restore PS/2 mouse function
F6 - Restore IntelliMouse function
F8 - RESET all configurations to default settings. (Display confirms with 'r').

P - Sets password - see section 4.8 for instructions.

E - Exits configure mode and returns the AdderView to normal operation mode.

2.8 Other useful installation information

PC boot up sequence - When your PCs are powered on they communicate with any attached keyboards and mice and setup parameters required by the particular operating system. It is necessary for the AdderView to be attached and powered on during this sequence so that it can give the required responses and keep track of all the modes and settings requested by each of the connected PCs.

Mouse characteristics - do not unplug a PS/2 mouse connection from a PC whilst the PC is on. Due to the design of PS/2 mice communications the mouse function on the PC will be lost and you will have to re-boot the PC to regain normal operation. Unplugging the mouse from the AdderView will also cause it to stop operating when it is plugged back in. RS232 mice can usually be unplugged and plugged back in provided that a mouse was connected when the operating system initially booted. The AdderView is fitted with a PS/2 mouse recovery system which allows you to disconnect and re-connect the shared mouse without powering down the system

(although this is generally not advisable) - see section 2.9 for details.

Keyboard and mouse mode switching - The AdderView keeps a log of the keyboard and mouse mode and resolution settings requested by each of the connected PCs. These settings are automatically restored to the shared keyboard and mouse when the AdderView channel is switched thus ensuring maximum software compatibility. The keyboard num, caps and scroll lock states are an obvious example of this process.

2.9 Re-enabling a disconnected PS/2 mouse

If you disconnect the shared PS/2 mouse from the AdderView by accident during operation then the mouse operation will be lost when the mouse is plugged back in. To avoid having to reboot the entire system in this situation the AdderView is fitted with an automatic mouse recovery system.

With the PS/2 mouse disconnected, change the channel using the keypad or keyboard hotkeys. The AdderView detects that the mouse has been disconnected and triggers the automatic recovery system. Plug in the PS/2 mouse and the AdderView will re-initialise it.

Alternatively you can reset the keyboards and mice by holding down the front panel key for 5 seconds. When the character 'C' is displayed on the front of the AdderView, press the front panel key again. A complete power off reset of the connected keyboards and mice will then be performed. This function only resets the shared keyboard and mice that are plugged into the control port. It does not affect the status of any of the other ports on the switch or the CPU connections.

2.10 Hot plugging the AdderView into running systems and re-enabling disconnected CPU PS/2 mouse connections

It is advisable to switch off the systems that are going to be connected to the AdderView before installation. However if this is not possible then most systems can be hot plugged by using the AdderView's mouse restoration functions. The keyboard connection will normally restore itself automatically.

On many PCs, mouse movement will be lost if the PS/2 mouse is unplugged and

plugged back in whilst the PC is running. Mouse movement can then only be restored by rebooting the PC. This is because the mouse drivers only setup and enable the mouse when the PC is initially booted.

If you have switched off your AdderView or you are attempting to 'hot plug' it into a system that is already running, you may be able to restore lost mouse movement using the AdderView's mouse restoration functions.

Mouse restoration functions should be used with care as unpredictable results may occur if the wrong mouse type is selected. If in doubt restore the mouse by powering down the PC normally.

Standard PS/2 mouse data uses a different data format to IntelliMouse data and so two reset functions are provided on the AdderView. The type of data format expected by the PC depends upon the driver and the type of mouse that was connected when the driver was booted. The following table may be used as a guide. Note that the mouse reset functions predict the likely mouse resolution settings but may not restore the speed or sensitivity of the mouse exactly as they were when the PC originally booted.

Type of mouse / system Connected at bootup	Driver type	Likely expected data format	Suggested restoration
PS/2	PS/2 only	PS/2	F5
PS/2	IntelliMouse	PS/2	F5
IntelliMouse / AdderView	PS/2 only	PS/2	F5
IntelliMouse / AdderView	IntelliMouse	IntelliMouse	F6

To restore lost mouse movement on a CPU connected to the AdderView:

- 1) Select the CPU that has lost its mouse movement.
- 2) Press the select key on the front of the AdderView for 5 seconds until 'C' is displayed. You are now in configure mode.

3) To restore a PS/2 mouse connection press



Or, to restore an IntelliMouse connection press



4) Exit from configure mode by typing



5) Test the mouse movement by moving the mouse a short distance.

F5 - Restore PS/2 mouse function

F6 - Restore IntelliMouse function

3. Using the AdderView

This section explains the general operation of the AdderView. We recommend that you read this section before starting to use the product.

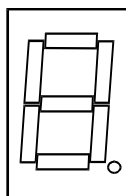
3.1 Power on status

At power on the AdderView selects PC number 1 and displays '1'. If a password has been set then 'P' will be displayed and the AdderView will remain locked until a valid password is entered.

If there is insufficient power available from the connected computers then the AdderView will indicate the power status as shown in the diagram below. Sufficient power will normally be available if the cables between the AdderView and PCs are 3 metres or less.

DISPLAY SHOWS

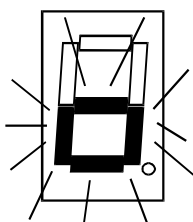
No display



MEANING

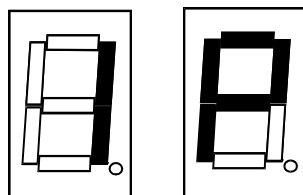
No power is available or insufficient power is available from the connected PCs

Display flashes '0'



Power is available from the connected PCs but it is insufficient to power the AdderView

Channel '1' or 'P' prompt



AdderView has powered up normally and there is sufficient power available from the connected PCs

3.2 Front panel key and remote controller

The front panel key is used to select which channel is currently controlled by the shared keyboard, mouse and monitor ports. Pressing the key during normal operation will cause the next channel to be selected.

The key can also be used to access the AdderView's configuration mode (see section 2.6). To do this press the key and hold it down for 5 seconds until 'C' appears on the AdderView's front panel display.

An optional remote controller is also available which replicates the front panel key and display, but can be located remotely from the AdderView. This is particularly useful in applications where the AdderView is located away from the desktop. The remote controller can be conveniently attached to your keyboard with a couple of Velcro strips to give instant channel information and key control.

3.3 Status display

The red status display usually shows the currently selected port. If autoscan mode is selected, the segments will illuminate in sequence in a clockwise direction interspersed with a display of the currently selected channel. If AdderView has been locked, 'P' will be displayed until a valid password has been typed to unlock the unit. Data flow from the mouse or keyboard causes the dot to flash.

The green front panel status indicators (1-8) that show the on/off status of the connected computers.

DISPLAY SHOWS	MEANING
Channel number displayed and dot in lower right hand corner flashes (0 indicates AdderView is disabled)	Activity on keyboard or mouse
Illuminated segment shifts clockwise with port number shown after each scan round	Auto-scan mode - scanning from channel to channel at rate as programmed by user
'P' prompt	Locked mode waiting for password to be entered
Display flashes port number	AdderView is in screen save mode - keyboard, mouse or keypad activity will re-enable the video

3.4 Keyboard hotkey control

AdderView can be conveniently controlled by selecting channel, autoscan mode or security locking from the keyboard. All of the hotkey control commands are invoked by holding down the two hotkeys and then pressing a command key. By default, the two hotkeys are 'CTRL' and 'ALT', although other combinations can be selected by reconfiguring the hotkeys (see section 4.4). Once the hotkey command has been activated you will need to release the hotkeys and the command key before a new hotkey command is accepted by the AdderView. HOTKEYS + TAB is an exception and this allows you to 'tab through' the ports by holding down the hotkeys and repeatedly pressing TAB.

The hotkey command are summarised below (note that the numbers on the numeric keypad do not form part of a valid hotkey) :

- 'HOTKEYs' and '1' - selects channel 1
- 'HOTKEYs' and '2' - selects channel 2
- 'HOTKEYs' and '3' - selects channel 3
- 'HOTKEYs' and '4' - selects channel 4
- 'HOTKEYs' and '5' - selects channel 5 (model AV8osd only)
- 'HOTKEYs' and '6' - selects channel 6 (model AV8osd only)
- 'HOTKEYs' and '7' - selects channel 7 (model AV8osd only)
- 'HOTKEYs' and '8' - selects channel 8 (model AV8osd only)

'HOTKEYs' and 'TAB' - selects the next channel

'HOTKEYs' and 'M' - displays the on-screen menu for selecting computers by name

'HOTKEYs' and 'A' - selects autoscan mode where each channel is displayed for the selected time (see section 4.2). To cancel autoscan mode simply select any fixed channel either by hotkey or using the AdderView button.

'HOTKEYs' and '0' – switches off the video signal and displays 0. This will cause some monitors to go into standby mode or switch off. The video signal can be re-enabled by selecting a channel.

'HOTKEYs' and 'L' - disables the AdderView's shared keyboard and mouse and displays 0. The video signal is switched off. If a password has not been set then the AdderView can be re-enabled by selecting a channel. If a password has been set then the AdderView displays 'P' to indicate that a valid password must be entered to unlock the switch. Simply type the same key combination as was set during configuration (see section 4.7) followed by the (return) key. Note - if anyone has typed at the keyboard whilst in secure mode, it will be necessary to type (return) first to clear the invalid password, then type the valid password followed by (return) again.

Examples of common hotkey sequences (assuming CTRL + ALT hotkey option):

To select channel 2:


press    release   

To 'tab through' channels:

press    release  press 

release  press  release   

To activate the on-screen menu

press    release   

3.5 On-screen menu control

AdderView can conveniently select a computer using the integral on-screen menu control. The menu is called up by pressing the two 'HOTKEYS' and 'M'. When the menu is first called up, there will be no named computers listed. You must first enter the names and port numbers for computers which are to be selected from the menu.

ADDERVIEW MENU	
Computer	Port
NT Server A	355
NT Server B	356
Local IBM PC	1
Local Compaq PC	2 <<
Web Browser	4
Comms Server A	5
Comms Server B	6
Fred's PC	7

Arrow shows currently selected computer

On-Screen Menu

Adding a computer to the menu list

With the menu visible on the screen, press the INSERT key. This will cause a new *Computer* entry field to be inserted on the menu. This is highlighted in red with a cursor to indicate the text entry position. Type in a name up to 16 characters long. You can use upper/lower case, special and space characters. When completed press the RETURN key. The red highlighted area now moves into the *Port* entry field and you can enter the port number for the named Computer. If you are using cascaded AdderView units, the cascade routing will need to be entered (see section 3.9 for more details). To specify port 5 on a AdderView that is cascaded off port 3 you would enter port number 35. Units can be cascaded three levels deep.

Now press RETURN again to complete the entry and store it in the menu memory.

Note that you can add another Computer to the menu list at any time. If you just use the INSERT key, the entry will be placed after the current line. To place an entry before the current line use SHIFT and INSERT together, then edit the new name as already described.

Deleting a computer from the menu list

With the menu visible on the screen, highlight the computer to be deleted and press the DELETE key. To confirm deletion press RETURN. To abandon deletion press ESC.

Editing a computer on the menu list

With the menu visible on the screen, highlight the computer to be edited and press the SHIFT and DELETE keys together. Type in the new Computer name and port then press RETURN. To abandon editing press ESC.

Selecting a computer on the menu list

With the menu visible on the screen, highlight the computer to be selected using the cursor up/down or page up/down keys as required. Press the RETURN key to switch to the highlighted computer. AdderView has an advanced 'connection confirmation' facility which is particularly useful in systems where many computers are displaying the same or very similar video. The selected computer name and port number will briefly flash up on the screen to confirm the selection has been made. If it is not possible to make the connection, perhaps because a cascaded unit is not switched on or is in use locally, the menu will flash 'computer unavailable' until the ESC key is pressed.

Summary of keys used by the menu and their function

'HOTKEYS' and 'M' - calls the menu up onto the screen (even if no PC video exists)
'INSERT' - adds a computer entry AFTER the currently selected line
'SHIFT' and 'INSERT' - adds a computer entry BEFORE the currently selected line
'DELETE' - deletes the currently selected computer
'SHIFT' and 'DELETE' - edits the currently selected computer
'RETURN' - confirms an entry or selects a computer
'ESC' - quits from editing a line or quits from the menu
'up arrow' - moves up the menu by one line
'down arrow' - moves down the menu by one line
'page up' - moves to the top of the menu page, or up 8 lines if more than 8 present
'page down' - moves to bottom of page or down 8 lines if more than 8 present

3.6 Mouse control

The channels can conveniently be changed on AdderView by using a three button mouse or IntelliMouse. In order to switch to the next channel simply hold down the central mouse button or wheel button and click on the left hand mouse button. The channel will then change.

3.7 RS232 control

AdderView can be controlled by a remote RS232 device. To select a channel the data rate of the sending device must be set to 1200 baud, 8 bits, no parity and 1 stop bit. No handshaking is used by the AdderView. Simply send the character for the channel which needs to be selected, for example ASCII '1' (hex code 31) will select channel 1, ASCII '2' (hex code 32) will select channel 2 and so on.



3.8 Cascading AdderViews

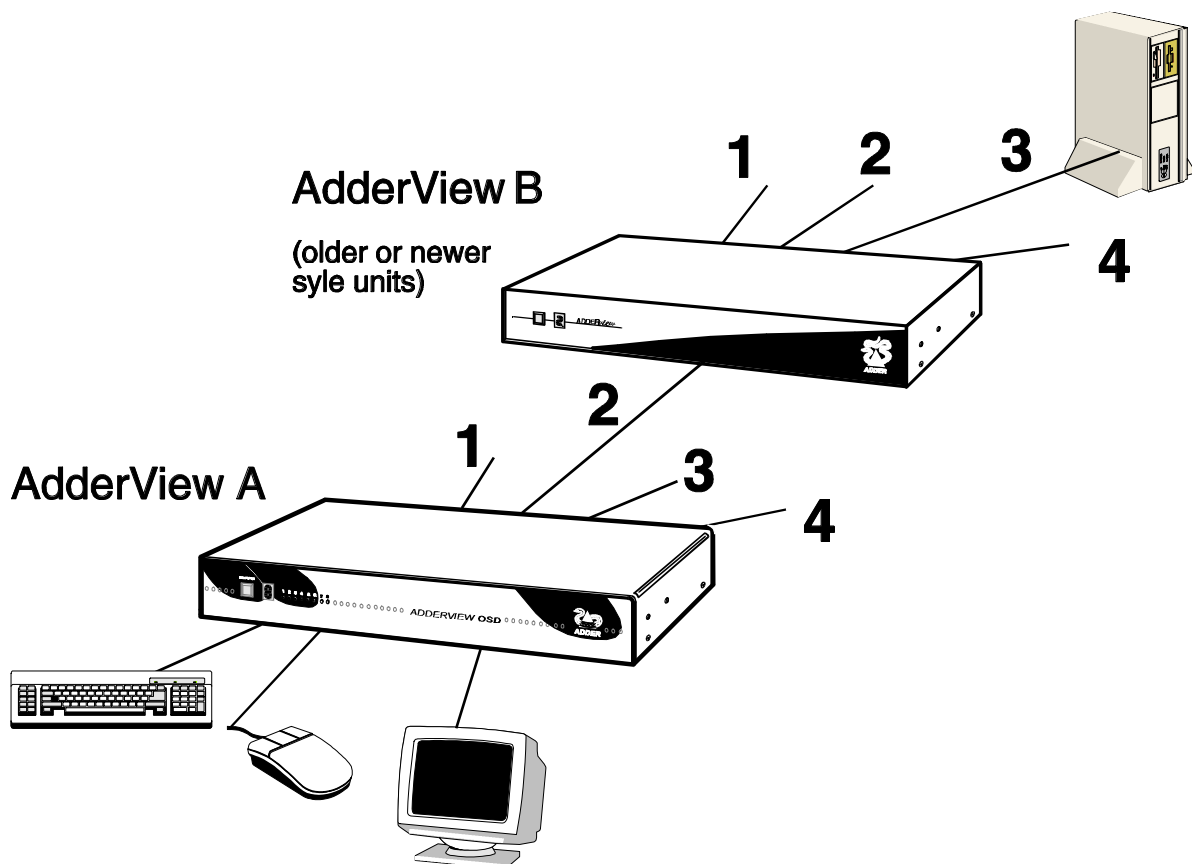
AdderView switches can be connected together to expand the number of connected computers. When cascading AdderViews a power adapter (AVpsu) must be connected to each AdderView. AdderViews can be connected in a cascaded tree structure with up to three levels. This can be particularly useful where clusters of computers are located some distance from each other because each unit acts as data booster and can each be up to 30 metres away from the next AdderView. The channel can be selected on remote AdderView units using an extension of the HOTKEY control function or using the on-screen menu which will store over 300 names. The on-screen menu is recommended for selecting computers on cascaded

AdderViews as this avoids the need to use long hotkey sequences that may be hard to remember. Older style AdderView OSD (blue / white) front panels may be cascaded together with your new style AdderView OSD (black / silver front panel).

For example, consider a situation where two AdderView units are connected together as shown below. To connect to the computer attached to port 3 on AdderView B the user would hold down the hotkey keys then press '2' followed by '3', whilst keeping the hotkey keys pressed. This will have the effect of connecting to port '3' of the AdderView which is connected into port '2' of the first AdderView unit A. For example to connect to port 3 on the AdderView cascaded off port 2 of your first AdderView use:

press    release 

press  release   



A typical cascade of two AdderViews

4. AdderView configuration options

All the options described in this section are entered in AdderView configure mode - see section 2.6 for instructions on entering configure mode.

4.1 Screen saver time delay

AdderView contains a programmable screen saver which will blank the display after the set time delay with no keyboard or mouse activity. Simply typing at the keyboard or moving the mouse will re-enable the display. The display will flash whilst the AdderView is in screen save mode.

B1 - screen saver disabled (default)

B2 - Blank screen after 1 minute of inactivity

B3 - Blank screen after 2 minutes of inactivity

B4 - Blank screen after 4 minutes of inactivity

B5 - Blank screen after 8 minutes of inactivity

B6 - Blank screen after 12 minutes of inactivity

B7 - Blank screen after 16 minutes of inactivity

B8 - Blank screen after 20 minutes of inactivity

4.2 Autoscan 'lock on' mode and delay time

AdderView can be set to select each channel in turn for a period of time set by the Autoscan delay time. Autoscan mode is entered by typing the hotkey keys together with 'A'. By default, only those channels which have a powered up computer connected to them will be scanned. Sometimes it may be desirable to scan all channels, even if the attached computer is switched off (this will simply show a blank screen when it is selected). All the AdderView's ports will be scanned if option L2 is selected. Some applications may also require the AdderView to power on in autoscan mode. This feature can be selected using the L3 or L4 options.

- L1 - AdderView only locks on to active ports during autoscanning (default)
- L2 - AdderView locks on to every port in turn during autoscanning
- L3 - AdderView powers on in autoscan mode and locks on to active ports only
- L4 - AdderView powers on in autoscan mode and locks on to all ports

- T1 - 2 seconds autoscan delay time before switching to next port (default)
- T2 - 5 seconds autoscan delay time before switching to next port
- T3 - 7 seconds autoscan delay time before switching to next port
- T4 - 10 seconds autoscan delay time before switching to next port
- T5 - 15 seconds autoscan delay time before switching to next port
- T6 - 20 seconds autoscan delay time before switching to next port
- T7 - 30 seconds autoscan delay time before switching to next port
- T8 - 60 seconds autoscan delay time before switching to next port

note: Autoscan mode is ended simply by selecting a fixed channel using the on-screen menu, the keypad, the keyboard hotkeys or the mouse.

Many modern monitors are fitted with automatic power save relays and will switch off after a few seconds if connected to an inactive PC. If you are using such a monitor you must not use the L2 feature. Constant switching on and off of your monitor's relay will eventually damage your monitor.

4.3 Mouse mode and mouse switching of channels

A three button PS/2 mouse or an IntelliMouse can be used to switch channels on the AdderView by default. To switch to the next channel, the user simply holds down the central button or wheel button and presses the left hand button to change channel. If the user does not wish to take advantage of this feature, it can be disabled by selecting U2, U3 or U5. If the third button is being used to switch the AdderView then it is not available for use with PC software although the function of an IntelliMouse wheel is not affected. Consequently in modes U1, U2 and U4 the AdderView reports to the PCs that a 2 button mouse is connected. If you wish to use the full function of a 3 button mouse or IntelliMouse for your PC software then you should select options U3 or U5.

The AdderView supports 'Internet Mice' that are compatible with the Microsoft IntelliMouse. These are fitted with a wheel or other scroll control and sometimes have additional buttons. Examples are:

Microsoft IntelliMouse
Logitech Pilot Mouse +
Logitech MouseMan+
Genius NetMouse
Genius NetMouse Pro

Standard PS/2 and IntelliMouse compatible mice can be connected to the control port. You may configure your CPUs using Microsoft PS/2 or IntelliMouse drivers in any combination as required. The IntelliMouse features are supported on both PS/2 and RS232 CPU connections. When using PS/2 CPU connections, the AdderView will automatically configure itself to the type of mouse requested by the driver. If you are using RS232 CPU connections then you will need to select mouse options U4 or U5 to enable the IntelliMouse features.

- U1** - AdderView channels are switchable using a 3 button mouse or IntelliMouse (default)
(AdderView reports 2 button mouse mode to PCs)
- U2** - AdderView channels are not switchable using 3 button mouse or IntelliMouse
(AdderView reports 2 button mouse mode to PCs)
- U3** - AdderView channels are not switchable using 3 button mouse or IntelliMouse
(AdderView reports 3 button mouse mode to PCs)
- U4** - AdderView channels are switchable using 3 button mouse or IntelliMouse
(AdderView reports IntelliMouse mode to PCs)
- U5** - AdderView channels are not switchable using 3 button mouse or IntelliMouse
(AdderView reports IntelliMouse mode to PCs)

4.4 Keyboard hotkey combination

The keyboard hotkey combination is used to change a channel, set autoscan mode or secure the product (so that the password needs to be typed before it can be used again). The following keyboard hotkey combinations can be selected. These hotkey combinations are used together with the command keys to trigger the required

AdderView function. The left and right shift key combination is particularly suitable for extended keyboards where additional keys can be programmed to act as a combination of other keys. Such keyboards are supplied with many Gateway 2000 computers. Programming spare keys to trigger the hotkey combination allows channels to be selected via a single key stroke.

H1 - 'CTRL' and 'ALT' keys together (left or right hand keys operate) (default)

H2 - 'CTRL' and 'SHIFT' keys together (left or right hand keys operate)

H3 - 'ALT' and 'SHIFT' keys together (left or right hand keys operate)

H4 - 'RIGHT ALT' key

H5 - 'LEFT ALT' and 'RIGHT ALT' keys together

H6 - 'LEFT CTRL' and 'LEFT ALT' keys together

H7 - 'RIGHT CTRL' and 'RIGHT ALT' keys together

H8 - No hotkey enabled

4.5 Firmware functions (version query, mouse restore and reset)

For technical support purposes, it may be necessary to find the firmware release version for the control software in your AdderView. For example, if the release version is v1.02 the response shown to F1(return) will be a brief display of the digit '1', then F2(return) will be a brief display of the digit '0', then F3(return) will be a brief display of the digit '2'. You can reset all of the configured options back to the factory default states by typing F8. Use options F5 and F6 to restore mouse function on disconnected PS/2 CPU mouse connections. See section 2.9 for full details.

F1 - Display firmware first digit

F2 - Display firmware second digit

F3 - Display firmware third digit

F5 - Restore PS/2 mouse function to the currently selected CPU's mouse port

F6 - Restore IntelliMouse function to the currently selected CPU's mouse port

F8 - Reset all configurations to factory default settings. An 'r' will show briefly on the display to confirm that the reset has been completed.

4.6 Display appearance options

Options are available to change the colour scheme of the On-Screen Display and the time that the confirmation message remains on the screen after a channel has been selected.

- D1** - Menu appears with magenta / blue background and green highlight (default)
- D2 - Menu appears with red / blue background and green highlight
- D3 - Menu appears with blue / black background and light blue highlight
- D4** - Confirmation message remains on screen for standard time period (default)
- D5 - Confirmation message remains on screen for short time period
- D6 - Confirmation message remains on screen for extended time period

4.7 Setting a security password

There are many situations where unrestricted access to corporate file servers or sensitive information needs to be controlled. In such circumstances, the AdderView can be locked away in a room or secure cabinet and controlled remotely. In this mode typing the keyboard hotkeys together with 0 will blank the screen, disconnect the keyboard and mouse from all of the computers and display 'P' on the AdderView display. Control can only be regained by typing the correct password on the keyboard.

To set the password in configure mode, first type 'P' then (return). The display on AdderView will change to show '=' and you can then type your password. The password is not case sensitive and can be any combination of key strokes, including the function keys, but excluding the (ctrl), (alt), (shift) and (return) keys. When you have typed in your password type (return) to register it in the stored memory. Do not worry if you type the password incorrectly, you can always re-enter configure mode and set the password again. If you have lost the password and the AdderView is locked, the unit may be unlocked by powering down the AdderView, entering configure mode at power on (see section 2.6), and performing a complete reset using the F8 function.

NOTE - The password consists of a combination of key strokes rather like the code to a safe. The key strokes are not case sensitive and can include all the keys on the keyboard (except ctrl, alt, shift and enter). Consequently the following 'password' would be valid:



4.8 Cascade query code

The AdderViews use a special 'query code' to detect whether or not they are connected to another AdderView. By default your AdderView uses query code AD. SmartView (another range of keyboard / mouse / video switches from Adder Technology) units with firmware versions less than 1.09 used query code EF. This was found to conflict with a small number of other (rare) devices that used the same query code so an alternative query code was provided to ensure compatibility. Either query code may be used but you should make sure that all cascaded AdderView and SmartView units are set to use the same query code. If any of the cascaded SmartViews have firmware versions less than 1.09 then the cascade query code for all the AdderViews and SmartViews should be set to EF.

L7 – Cascade query code = AD (default)

L8 – Cascade query code = EF

4.9 Exit configure mode

When you have finished configuring any special options, simply type 'E' followed by (return) to exit configure mode and return to normal operation mode. The attached computers can now be switched on.

Appendix A. Cable and connector specifications

IMPORTANT NOTE

The maximum cable lengths supported vary widely between devices and cables. It may be possible to use cables that are longer than those specified below with certain PCs and peripherals but this cannot be guaranteed. If you experience problems try using shorter cables.

A1. Keyboard, monitor and mouse to AdderView

All of the shared devices plug directly into the relevant ports at the rear of the AdderView. If you use an AT style keyboard you will need an AT (5 pin DIN female) to PS/2 (6 pin mini-DIN male) converter.

Cable specification (self-powered operation):

Keyboard, monitor and mouse cables should be no longer than 2 metres.

Cable specification (with optional power adapter):

Keyboard, monitor and mouse extension cables can be used to increase the distance from AdderView up to 10m. Most keyboards and mice will also operate at distances of 20 metres.

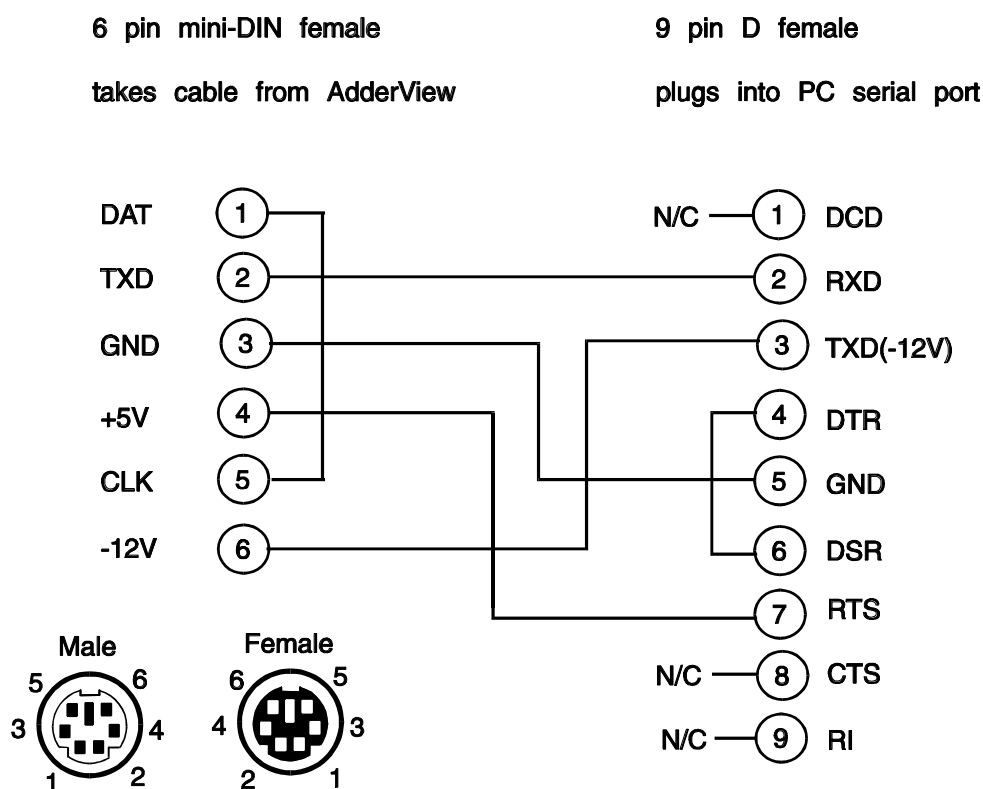
A2. AdderView to PCs 1 to 8

Cable specifications:

Video - 15 pin high density male D connector to 15 pin high density male D connector wired as a standard VGA PC to monitor cable. There are two types commonly available. The best type cables which will give excellent quality are constructed with coaxial cable cores. Cheaper 'data' cables are often used, but can degrade video quality if used over longer distances. Avoid using 'data' cables longer than 2 metres unless the video quality is not important. Good quality coaxial video cables may be run at distances up to 30 metres with little loss of video quality.

Keyboard and PS/2 mice - 6 pin mini-DIN male connector to 6 pin mini-DIN male connector with all lines connected straight through (1-1,2-2 etc.). If the PC has a 5-pin DIN AT style keyboard connector you will need a PS/2 to AT keyboard adapter 6-pin mini-DIN female to 5-pin DIN male (readily available). For 'self powered' operation without the optional power adapter the cables should be no longer than 3 metres (see section 2.4 for more details). For operation with the power adapter, cables should be no longer than 30 metres.

RS232 serial mice - these require a special converter to connect the RS232 lines present on the AdderView mouse ports to the RS232 port on a PC.



Cables should be no longer than 30 metres.

A3. Expansion port pin assignments

The 15 way D connector located on the back of the AdderView provides connections for the remote control module and allows an external RS232 device to control the AdderView. See section 3.5 for more details.

Pin 9 = GND

Pin 11 = RXD

Other pins to be left unconnected

Appendix B. Problem Solving

Problem:

Poor video quality with smearing fuzziness or ripple.

Action:

Use screened coaxial video cables to connect your devices to the AdderView.

Problem:

Mouse does not move cursor on screen.

Action:

Ensure that the mouse and computer are both connected to AdderView before power is connected and ensure that the AdderView is powered on before the attached computer. Ensure that your software is configured to accept a Microsoft compatible mouse of the type that you have connected (PS/2 or RS232). If you move the mouse and the activity indicator (dot on 7 segment display) does not flash then the AdderView is not receiving data from the mouse. Check the mouse connection to the AdderView, try resetting the mouse using the reset function (section 3.3) or re-powering the AdderView. If you are attempting to connect the AdderView to a CPU with a PS/2 mouse connection that has not been powered down then you will need to use the mouse restoration functions F5 or F6 (see section 2.9).

Problem:

Keyboard does not function or functions intermittently. Num lock light does not always come on when the num lock key is pressed.

Action:

Some older keyboards were designed for use with specific computers and are not truly AT or PS/2 compatible. These are not common but if you experience problems try another keyboard.

Problem:

Mouse causes channel to change.

Action:

Some cheaper mice are not fully compatible with the AdderView and can lose data causing the channel to be changed (if mouse switching of channels is enabled). If you experience this problem then change the mouse and use a Microsoft, Logitech, IBM, Compaq or Hewlett-Packard type. Ensure that you are using a Microsoft compatible mouse driver on your PC. Some other manufacturers' drivers may switch

the mouse to use a proprietary mouse data format not supported by the AdderView. If you have unplugged and re-connected a mouse to the AdderView then ensure that you reset it using the mouse reset function (see section 3.3).

Problem:

Mouse jumps around the screen after disconnecting the mouse cable or powering down the AdderView.

Action:

If you have disconnected and re-connected a CPU mouse cable or you have powered down the AdderView then the mouse data format may be out of synchronisation with that required by the PC (PS/2 or Intellimouse). Try the 'restore Intellimouse' function (F6) to resolve the problem or re-power the CPU.

Problem:

Video appears to be lost after a PC has gone into auto power down mode. Moving the mouse and typing at the keyboard does not wake it up.

Action:

Some computers tested output an incomplete video signal in auto power down mode. The on-screen menu cannot 'lock on' to this signal and so cannot be displayed under these conditions. If the Adder menu is left on the screen and this type of auto power down occurs then the screen becomes blank. Keyboard and mouse data is captured by the menu process and so is not sent to the computer to cause it to wake up. The operation therefore appears to 'hang'. To restore the video under these conditions press escape, return or change the channel using HOTKEYs + channel number. Alternatively, you may wish to avoid leaving the menu on the screen if you have a PC that exhibits this anomaly.

Problem:

Mouse consistently fails to boot when using a Compaq integrated keyboard / mouse model MX11800 with the AdderView, Windows NT 4.0 and a PS/2 connection to some types of PCs.

Action:

There are three possible solutions to this problem: 1) Use a different mouse. 2) Connect the AdderView mouse connection to a serial port on the NT 4.0 unit rather than the PS/2 port. 3) Select channel 0 or a port that is not connected to an NT 4.0 box whilst NT is booting. Use the system normally once the logon screen appears.

Notes

Notes

ADDER *View* OSD

INSTALLATION & USE



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