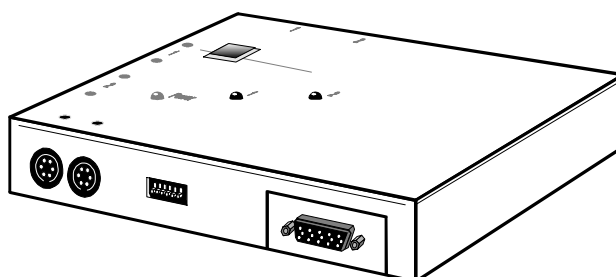




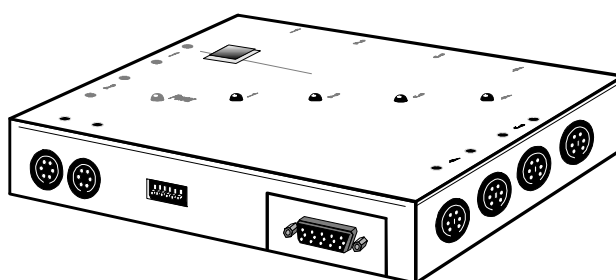
CPU SWITCH



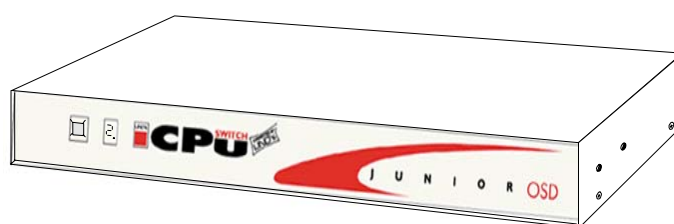
LINDY CPU Switch Junior Range Installation and Use



Part	Model
32 277	LINDY CPU Switch Junior 2



Part	Model
32 278	LINDY CPU Switch Junior 4



Part	Model
32 286	LINDY CPU Switch Junior 4 OSD
32 287	LINDY CPU Switch Junior 8 OSD

CPU Switch Junior - Installation and Use

Third Edition (February 2000)

Part Numbers 32 277, 32 278, 32 286 & 32 287

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About this manual

LINDY CPU Switch Junior - Installation and Use
Third Edition (February 2000)

LINDY CPU Switch Junior 2	Part No. 32 277
LINDY CPU Switch Junior 4	Part No. 32 278
LINDY CPU Switch Junior 4 OSD	Part No. 32 286
LINDY CPU Switch Junior 8 OSD	Part No. 32 287
LINDY CPU Switch Junior PSU	Part No. 32 279
LINDY CPU Switch Junior Rack mount kit	Part No. 32 285
LINDY CPU Switch Remote Control unit	Part No. 32 255

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All rights reserved. Whilst every precaution has been taken in the preparation of this manual, LINDY Electronics Ltd assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. We reserve the right to change the specifications, functions and circuitry of the product without notice. All trademarks acknowledged.

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 power adapter into a socket outlet close to the LINDY CPU Switch Junior.
- 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

LINDY Electronics Ltd warrants that this product shall be free from defects in workmanship and materials for a period of one year from the date of original purchase. If the product should fail to operate correctly in normal use during the warranty period, LINDY will replace or repair it free of charge. No liability can be accepted for damage due to misuse or circumstances outside LINDY's control. Also LINDY will not be responsible for any loss, damage or injury arising directly or indirectly from the use of this product. LINDY'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	
1.1 Key features	4
1.2 Package contents.....	5
1.3 Rack mount kit contents	5
1.4 Remote controller contents	5
1.5 Product information	6
2. Installation	
2.1 What you will need	8
2.2 Mounting the LINDY CPU Switch Junior	9
2.3 Connecting your devices	9
2.4 'Self powered' operation without the optional power adaptor	10
2.5 Configuring your PCs	10
2.6 Other useful installation information	10
2.7 Re-enabling a disconnected PS/2 mouse	11
2.8 Hot plugging the LINDY CPU Switch Junior into running systems and re-enabling disconnected CPU PS/2 mouse connections	11
3. Using the LINDY CPU Switch Junior	
3.1 Power indicator	14
3.2 Front panel key	15
3.3 Channel lights & Status display	15
3.4 Keyboard hotkey control.....	16
3.5 On Screen Display	17
3.6 Mouse control.....	19
3.7 RS232 Control.....	19
3.8 LINDY CPU Switch Remote Control	19
3.9 Cascading LINDY CPU Switches Junior	20
4. Configuring the LINDY CPU Switch Junior	
4.1 Configuring the LINDY CPU Switch Junior.....	21
4.2 Maintenance mode options and functions.....	22
4.3 Resetting the shared keyboard and mouse.....	23
4.4 Resetting the LINDY CPU Switch Junior	23
4.5 Querying the LINDY CPU Switch Junior's firmware version.....	23
5. Configuring the LINDY CPU Switch Junior OSD	
5.1 Configuring the LINDY CPU Switch Junior OSD	24
5.2 Screen Saver time delay	25
5.3 Display appearance options	25
5.4 Autoscan 'lock on' mode and delay time	26
5.5 Mouse mode and mouse switching of channels.....	27
5.6 Keyboard hotkey combination	28
5.7 Firmware functions (version query, mouse restore and reset)	28
5.8 Setting a security password	29
5.9 Cascade query code	29
5.10 Exit configure mode.....	30
Appendices	
A LINDY CPU Switch Junior OSD Configuration Summary.....	31
B Cable and connector specifications.....	33
C Problem solving.....	35

1. Introduction

Thank you for purchasing the LINDY CPU Switch Junior. Your LINDY CPU Switch Junior 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

Key Features of LINDY CPU Junior Switches	Junior 2	Junior 4	Junior 4 OSD	Junior 8 OSD
Control multiple PCs from a single keyboard, monitor and mouse.	Yes	Yes	Yes	Yes
On-screen menu allows computers to be selected by name.	No	No	Yes	Yes
SmartBoot feature automatically boots all machines during power up.	Yes	Yes	Yes	Yes
'Self powered' operation – LINDY CPU Switch Junior draws its power from the connected PCs.	Yes	Yes	Yes	Yes
Mixed AT/PS2 keyboards and PS2/RS232 mice supported as standard.	Yes	Yes	Yes	Yes
Can be cascaded to provide a video switching network.	Yes	Yes	Yes	Yes
Password security prevents unauthorised use.	No	No	Yes	Yes
Remote control module for convenient operation.	No	No	Yes	Yes
Channel switching by on-screen display	No	No	Yes	Yes
Channel switching by front panel key, keyboard hotkey, or button mouse.	Yes	Yes	Yes	Yes
Automatically restores keyboard and mouse states when channel changed.	Yes	Yes	Yes	Yes
Can be controlled remotely via an RS232 serial port.	No	No	Yes	Yes
Supports high bandwidth monitors at resolutions up to 1900 x 1200.	Yes**	Yes**	Yes	Yes
Includes screen saver, auto-scan and variable hotkey options.	No	No	Yes	Yes
Confirmation of selected ports on local and cascaded LINDY CPU Switches.	No	No	Yes	Yes
Supports keyboard modes 1,2 and 3 and mouse prompt and stream modes for maximum compatibility.	Yes	Yes	Yes	Yes
Support for Microsoft® IntelliMouse and other common wheel mice	Yes	Yes	Yes	Yes
Low powered – can be powered from many laptops.	Yes	Yes	No	No
Supports IBM® ThinkPad 'Y' cables.	Yes	Yes	Yes	Yes
Power and activity indication confirm correct operation.	Yes	Yes	Yes	Yes
Standard cable connections make installation easy and inexpensive.	Yes	Yes	Yes	Yes
All ports are active simultaneously – the connected PCs may all be booted at the same time.	Yes	Yes	Yes	Yes
Mouse restoration functions to enable 'hot plugging' of certain systems.	Yes	Yes	Yes	Yes
Robust metal case ensures good shielding and video quality.	Yes	Yes	Yes	Yes
Optional power adaptor can be used for 'video only' or cascade applications.	Yes	Yes	Yes	Yes
Supports RS6000 computers.	Yes	Yes	Yes	Yes
19" rack mount kit available.	No	No	Yes	Yes

** LINDY CPU Junior switches (non OSD models) support a maximum resolution of 1600 x 1280

1.2 Package contents

LINDY Junior 2 Switch	LINDY Junior 4 Switch
LINDY CPU Switch.	LINDY CPU Switch.
This installation guide.	This installation guide.

LINDY Junior 4 OSD Switch	LINDY Junior 8 OSD Switch
LINDY CPU Switch.	LINDY CPU Switch.
This installation guide.	This installation guide.
6 x stick on self-adhesive rubber feet.	6 x stick on self-adhesive rubber feet.

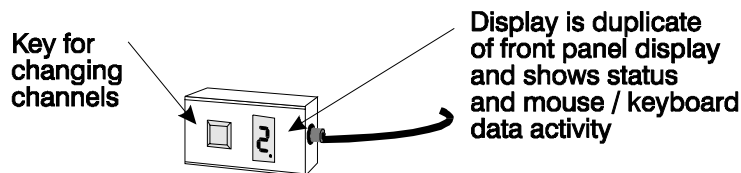
A power adaptor is not included as standard because it is not needed for most installations. The optional power adaptor may be purchased separately, (Part No. 32 279).

1.3 Rack Mount kit contents (Part No. 32 285)

2 x mounting brackets for fixing the unit to a 19" rack.
4 x screws for fixing mounting brackets to the LINDY CPU Junior OSD Switch.

1.4 Remote Controller contents (Part No. 32 255)

Remote control module.
Velcro strip for mounting remote controller.
Cable length is 3m.



Remote control pad / display
(Optional accessory for LINDY CPU Junior OSD 4 or 8 Switches)

1.5 Product information

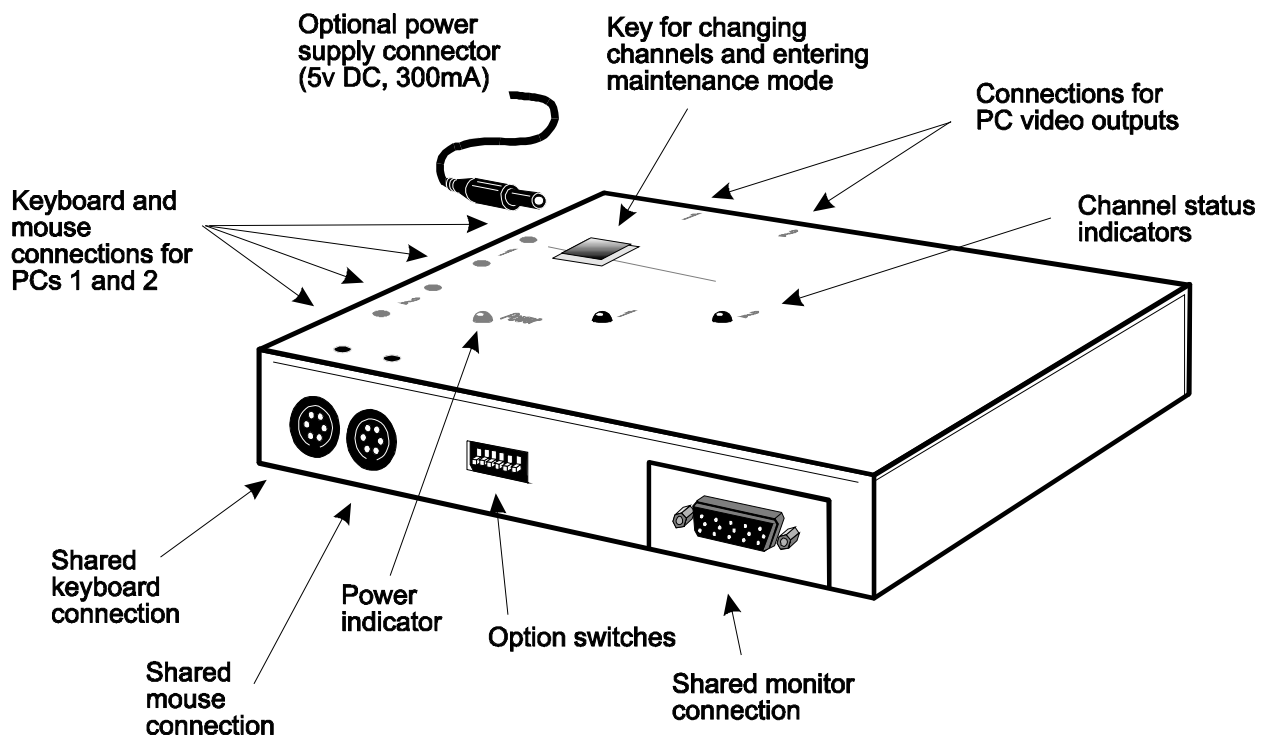


Figure 1 - LINDY CPU Switch Junior 2 (2 port model supporting 2 PCs)

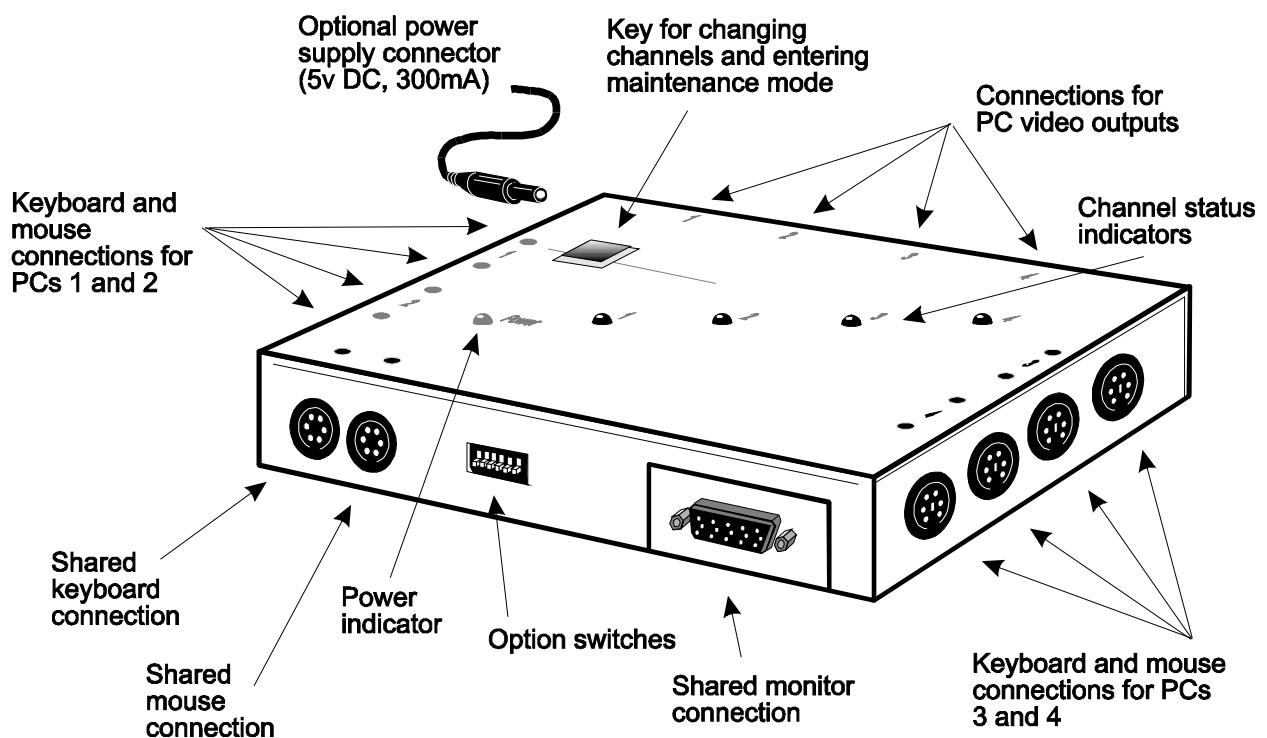


Figure 2 - LINDY CPU Switch Junior 4 (4 port model supporting 4 PCs)

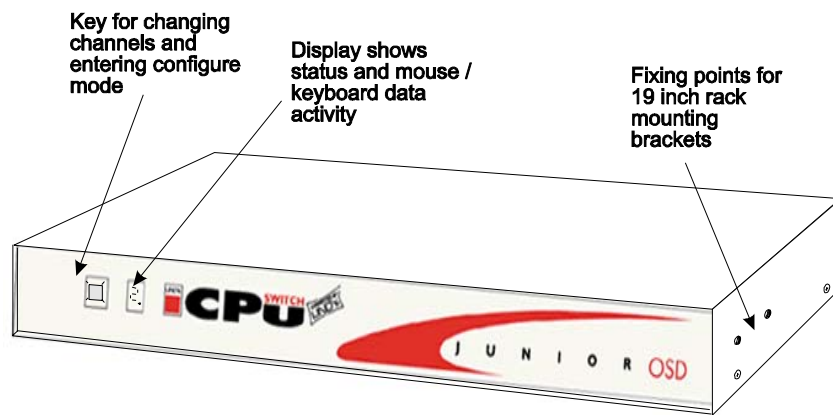


Figure 3 - LINDY CPU Switch Junior 4 & 8 OSD front view (supporting 4 or 8 PCs)

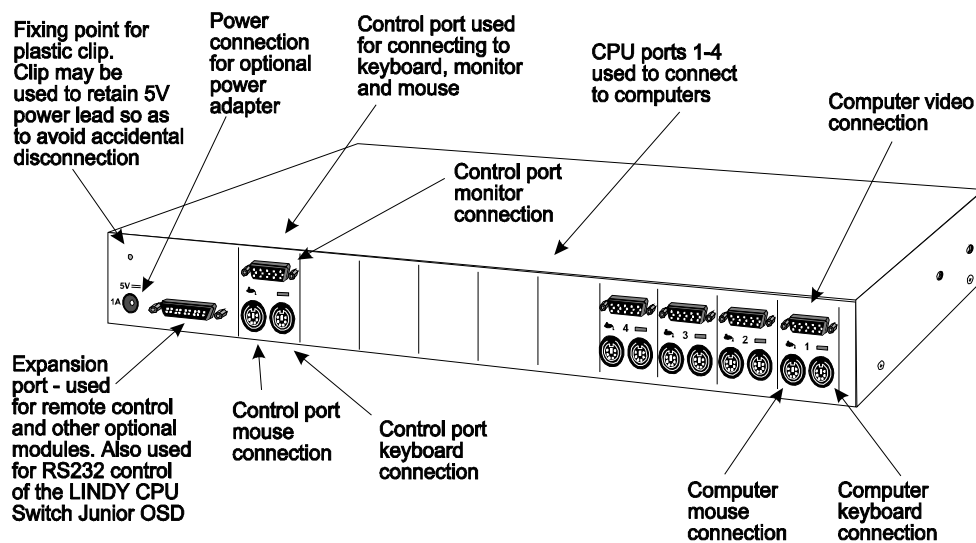


Figure 4 - LINDY CPU Switch Junior 4 OSD rear view (supporting 4 PCs)

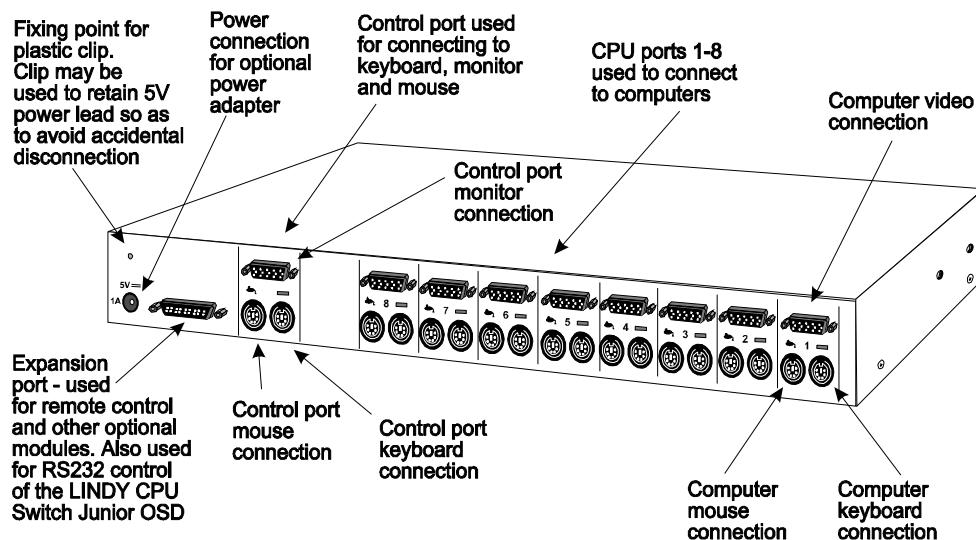


Figure 5 - LINDY CPU Switch Junior 8 OSD rear view (supporting 8 PCs)

2. Installation

2.1 What you will need

- Cables to connect the LINDY CPU Switch Junior to each of your PC keyboard, video and mouse ports. Cable specifications are given in appendix B. (You do not need to connect a mouse cable if you are not using the mouse).
- A monitor with a standard VGA/SVGA (15 HD pin) connector that will work when connected directly to each of your PCs. LINDY CPU Switch Junior 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 LINDY CPU Switch Junior 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 LINDY CPU Switch Junior's channel then you will need a three button mouse or an IntelliMouse.

(The LINDY CPU Switch Junior 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).

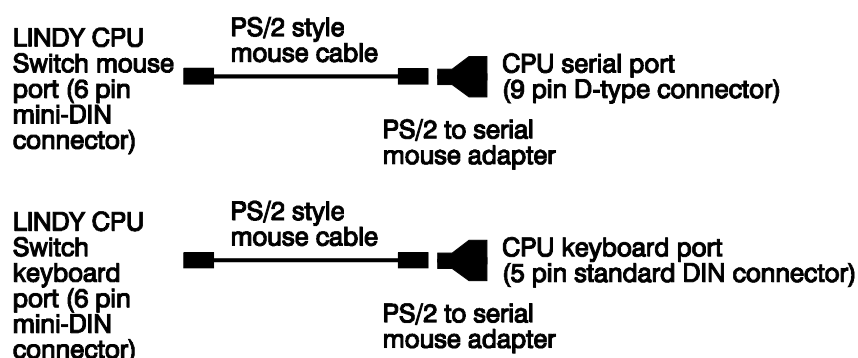
- A suitable mouse driver for your PCs. Supported types are:
 - PS/2 or RS232 two button mouse driver (any manufacturer).
 - Microsoft® mouse driver (including IntelliMouse).
 - Logitech® mouse driver (including two button, three button and wheel mouse).
 - Mouse drivers that use a compatible data format to the Microsoft® IntelliMouse. You may need to try these to assess their compatibility.
- Use of PS/2 and RS232 style mice with the LINDY CPU Switch Junior - All of the mouse connections from LINDY CPU Switch Junior to PCs support either a PS/2 or an RS232 mouse. LINDY CPU Switch Junior 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. This adapter is the same as is shipped with Microsoft® auto-sensing mice. The LINDY CPU Switch Junior will operate without a mouse connected if you do not wish to use one.

2.2 Mounting the LINDY CPU Switch Junior

LINDY CPU Junior 2 & 4 Switches	LINDY CPU Junior 4 OSD & 8 OSD Switches
The LINDY CPU Junior Switch has been designed to be used either on a desktop or mounted close to the computer system boxes which it is serving.	The LINDY CPU Switch has been designed to be used either on a desktop or mounted in a 19 inch rack. If it is to be used on a desktop then you will need to stick the supplied self-adhesive rubber feet to the underside of the LINDY CPU Junior OSD switch. If you wish to mount it in a 19" rack then you will need to fit the rack mounting brackets to the side of the LINDY CPU Junior OSD. The 19" rack mounting brackets are supplied in the optional rack mounting kit (part 32 285).

2.3 Connecting your devices

Ensure that the optional power adaptor is disconnected from the LINDY CPU Switch Junior and that all the devices which are to be attached are switched off. Connect the shared keyboard, PS/2 mouse and monitor to the control port connectors (see figures 1, 2, 4 & 5). 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 to purchase specific cable lengths, refer to appendix A for cable specifications.



The LINDY CPU Switch Junior is now ready for use. It will start to operate as soon as one of the connected CPUs is powered on or the optional power adaptor is connected. The power light (on non-OSD models), confirms that sufficient power is available to operate the LINDY CPU Switch Junior. If you are connecting to PCs using cables that are longer than 3 metres or are cascading the switch to another you will need to use the optional power adaptor. When using the optional power adaptor, ensure that it is connected to the mains and powered on before you switch on any of the connected computers. Failure to switch the LINDY CPU Switch Junior and computer(s) 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 'Self powered' operation without the optional adaptor

The LINDY CPU Switch Junior draws its power from the connected computers via the keyboard cables. A single keyboard connection is normally sufficient to power the LINDY CPU Switch Junior 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 LINDY CPU Switch Junior is already powered by another connected computer or the optional power adaptor. If you are cascading the LINDY CPU Switch Junior to another then a power adaptor must be connected to all LINDY CPU Switch Juniors.

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:

- LINDY CPU Switch Junior 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.
- LINDY CPU Switch Junior 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 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 LINDY CPU Switch Junior 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 LINDY CPU Switch Junior 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 LINDY CPU Switch Junior 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 2.7 for details.

Keyboard and mouse mode switching - The LINDY CPU Switch Junior 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 LINDY CPU Switch Junior channel is switched thus ensuring maximum software compatibility. The <NUM LOCK>, <CAPS LOCK> and <SCROLL LOCK> states are an obvious example of this process.

2.7 Re-enabling a disconnected PS/2 mouse

If you disconnect the shared PS/2 mouse from the LINDY CPU Switch Junior 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 LINDY CPU Switch Junior is fitted with an automatic mouse recovery system.

LINDY CPU Switch Junior 2 & 4	LINDY CPU Switch Junior OSD 4 & 8
With the PS/2 mouse disconnected, change the channel using the keypad or keyboard hotkeys. The LINDY CPU Switch Junior detects that the mouse has been disconnected and triggers the automatic recovery system. Plug in the PS/2 mouse and the LINDY CPU Switch Junior will re-initialise it.	
You may also re-enable a disconnected PS/2 mouse by using the keyboard and mouse reset function (see section 4.3). **	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 LINDY CPU Switch Junior OSD, press the front panel 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.

2.8 Hot plugging the LINDY CPU Switch Junior 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 LINDY CPU Switch Junior before installation. However if this is not possible then most systems can be hot plugged by using the LINDY CPU Switch Junior'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 LINDY CPU Switch Junior 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 LINDY CPU Switch Junior's mouse restoration functions.

IMPORTANT NOTE

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 LINDY CPU Switch Junior. 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	
			Non- OSD	OSD Model
PS/2	PS/2 only	PS/2		
PS/2	IntelliMouse	PS/2		
IntelliMouse / LINDY CPU Switch	PS/2 only	PS/2		
IntelliMouse / LINDY CPU Switch	IntelliMouse	IntelliMouse		

To restore lost mouse movement on a CPU connected to the LINDY CPU Switch Junior:

- 1) Select the CPU that has lost its mouse movement
- 2) Press the select key on the front of the LINDY CPU Switch Junior for 5 seconds until lights 1 and 2 are displayed together (or 'C' appears on OSD models). The LINDY CPU Switch Junior is now in maintenance mode.
- 3) To restore a PS/2 mouse connection press



Or, to restore an IntelliMouse connection press



Note, on the LINDY CPU Switch Junior OSD 4 and 8 port, you must press the <ENTER> key after selecting the option required. For example, to restore a PS/2 mouse connection press



- 4) Test the mouse movement by slowly moving the mouse a short distance. In most cases the mouse should now work and no further action will be necessary
- 5) If the mouse darts uncontrollably around the screen then there are two possible reasons.

Firstly the CPU may be expecting a different mouse data packet format. A PS/2 mouse sends a 3 data character report and an IntelliMouse sends a 4 data character report. If you are in doubt then try setting the other data format (see step 3).

Secondly, the data packet format may be correct but the LINDY CPU Switch Junior and the CPU may not be correctly synchronised. In other words the LINDY CPU Switch Junior may be sending the first data character whilst the CPU is expecting the second data character. Most PC mouse drivers will automatically re-synchronise themselves if no mouse data has been received and so this is not normally a problem. However some mouse drivers do not automatically re-synchronise. The LINDY CPU Switch Junior is fitted with a re-synchronisation function that allows the synchronisation between the LINDY CPU Switch Junior and the CPU to be altered by 1 data character. Using this function the synchronisation between the LINDY CPU Switch Junior and the CPU can be matched.

To attempt to re-synchronise the mouse press the key on the front of the LINDY CPU Switch Junior for 5 seconds until lights 1 and 2 are displayed together. The LINDY CPU Switch Junior is now in maintenance mode.

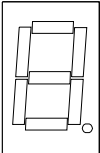
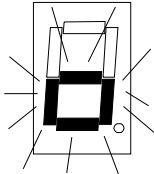
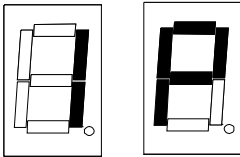
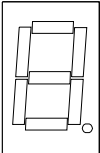
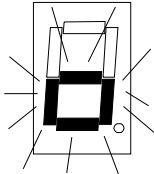
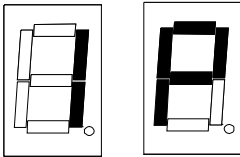
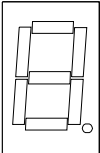
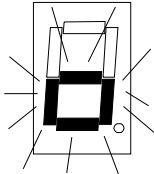
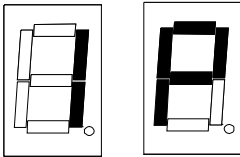
Now press  on the keyboard. Test the mouse function and repeat this procedure up to 3 times until correct mouse operation is restored.

Note, the above option of using  on the keyboard is available on the LINDY CPU Switch Junior (non OSD models) only. The OSD models have an automatic re-synchronise facility

3. Using the LINDY CPU Switch Junior

This section explains the general operation of the LINDY CPU Switch Junior. We recommend that you read this section before starting to use the product.

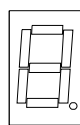
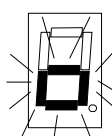
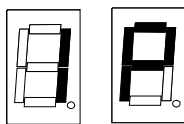
3.1 Power indicator

LINDY CPU Switch Junior 2 & 4	LINDY CPU Switch Junior OSD 4 & 8								
The LINDY CPU Switch Junior draws its power from the attached CPUs via the keyboard cables. The green power light confirms that there is sufficient power available. If the power light flashes or is off continuously then there is not sufficient power available.	At power on the LINDY CPU Switch Junior OSD selects PC number 1 and displays '1'. If a password has been set then 'P' will be displayed and the LINDY CPU Switch Junior OSD will remain locked until a valid password is entered. If there is insufficient power available from the connected computers then the LINDY CPU Switch Junior OSD will indicate the power status as shown in the diagram below. Sufficient power will normally be available if the cables between the LINDY CPU Switch Junior OSD and PCs are 3 metres or less. <table><tr><th>DISPLAY SHOWS</th><th>MEANING</th></tr><tr><td>No display</td><td> No power is available or insufficient power is available from the connected PCs </td></tr><tr><td>Display flashes 'o'</td><td> Power is available from the connected PCs but it is insufficient to power the LINDY CPU Switch Junior OSD </td></tr><tr><td>Channel '1' or 'P' prompt</td><td> LINDY CPU Switch Junior OSD has powered up normally and there is sufficient power available from the connected PCs </td></tr></table>	DISPLAY SHOWS	MEANING	No display	 No power is available or insufficient power is available from the connected PCs	Display flashes 'o'	 Power is available from the connected PCs but it is insufficient to power the LINDY CPU Switch Junior OSD	Channel '1' or 'P' prompt	 LINDY CPU Switch Junior OSD has powered up normally and there is sufficient power available from the connected PCs
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No display	 No power is available or insufficient power is available from the connected PCs								
Display flashes 'o'	 Power is available from the connected PCs but it is insufficient to power the LINDY CPU Switch Junior OSD								
Channel '1' or 'P' prompt	 LINDY CPU Switch Junior OSD has powered up normally and there is sufficient power available from the connected PCs								

3.2 Front panel key

LINDY CPU Junior 2	LINDY CPU Junior 4	LINDY CPU Junior 4 OSD	LINDY CPU Junior 8 OSD
The front panel key is used to select which channel is currently connected to the shared keyboard, mouse and monitor. Pressing the key during normal operation will cause the next channel to be selected.			
Not supported		To enter configuration mode, press and hold down the key for 5 seconds until 'C' appears on the LINDY CPU Switch Junior OSD's front panel display.	
Cycle around ports 1 & 2	Cycle around ports 1, 2, 3 & 4	Cycle around ports 1, 2, 3 & 4	Cycle around ports 1, 2, 3, 4, 5, 6, 7 & 8
Not supported		An optional remote controller is also available which replicates the front panel key and display, but can be located remotely from the LINDY CPU Junior OSD switch. This is particularly useful in applications where the LINDY CPU Junior OSD switch 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 Channel lights & Status display

LINDY CPU Junior 2	LINDY CPU Junior 4	LINDY CPU Junior 4 OSD	LINDY CPU Junior 8 OSD
The channel lights indicate the currently selected channel. The currently illuminated channel light will flash to indicate keyboard and mouse activity. In auto-scan mode the lights alternate between showing the currently selected port and indicating that the LINDY CPU Switch Junior is in auto-scan mode by flashing all the lights. Channel lights 1 and 2 are illuminated together when the LINDY CPU Switch Junior is in maintenance mode.		The 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 the LINDY CPU Switch OSD 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.	
DISPLAY SHOWS  All channel indicators off.  Channel indicator on continuously.  Channel indicator flashes.  Channel indicators 1 and 2 illuminated together.  Channel indicators illuminate in sequence before showing the selected channel. MEANING (when power indicator is on) Channel '0' selected. Video disabled. Channel is selected. There is no keyboard or mouse data activity. Channel is selected. Data is being received from the keyboard or mouse. LINDY CPU Switch Junior is in maintenance mode. LINDY CPU Switch Junior is in auto-scan mode.		DISPLAY SHOWS No display  Display flashes '0'  Channel '1' or 'P' prompt  MEANING No power is available or insufficient power is available from the connected PCs Power is available from the connected PCs but it is insufficient to power the LINDY CPU Junior OSD LINDY CPU Junior OSD has powered up normally and there is sufficient power available from the connected PCs	

3.4 Keyboard hotkey control

LINDY CPU Switch Junior can be conveniently controlled by selecting channel, autoscan mode or auto-scan mode 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. 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 LINDY CPU Switch Junior. 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 commands are summarised below
(note that the numbers on the numeric keypad do not form part of a valid hotkey) :

Hotkey Sequence	LINDY CPU Junior OSD 8	LINDY CPU Junior OSD 4	LINDY CPU Junior 4	LINDY CPU Junior 2
'HOTKEYS' & 	Select channel 1	Select channel 1	Select channel 1	Select channel 1
'HOTKEYS' & 	Select channel 2	Select channel 2	Select channel 2	Select channel 2
'HOTKEYS' & 	Select channel 3	Select channel 3	Select channel 3	-
'HOTKEYS' & 	Select channel 4	Select channel 4	Select channel 4	-
'HOTKEYS' & 	Select channel 5	-	-	-
'HOTKEYS' & 	Select channel 6	-	-	-
'HOTKEYS' & 	Select channel 7	-	-	-
'HOTKEYS' & 	Select channel 8	-	-	-
'HOTKEYS' & 	Selects the next channel, now supports only active ports or all ports (see section 5.5)		Selects the next channel	
'HOTKEYS' & 	Selects auto-scan mode where each channel is displayed in turn for a selected time. To cancel auto-scan mode simply select any fixed channel either by using the hotkeys or the LINDY CPU Switch Junior's button			
'HOTKEYS' & 	Switches off the video signal and display 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		Disables the LINDY CPU Switch Junior's shared video and switches all the channel lights off. The video can be re-enabled by selecting a channel	
'HOTKEYS' & 	Displays the on screen menu for selecting computers by name		Not supported	
'HOTKEYS' & 	Disables the LINDY CPU Switch 's shared keyboard and mouse and displays 0. The video signal is switched off. If a password has not been set then the LINDY CPU Switch Junior can be re-enabled by selecting a channel. If a password has been set then the LINDY CPU Switch Junior 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 5.8) then press the <ENTER> key. Note - if anyone has typed at the keyboard whilst in secure mode, it will be necessary to press the <ENTER> key first to clear the invalid password, then type the valid password followed by pressing <ENTER> again.			
SUPPORTED ON OSD MODELS ONLY				

Examples of common hotkey sequences (assuming **Ctrl** + **Alt** hotkey option):

To select channel 2: press **Ctrl** **Alt** **2** release **2** **Ctrl** **Alt**

To 'tab through' channels: press **Ctrl** **Alt** **Tab** release **Tab** press **Tab**

Release **Tab** press **Tab** release **Tab** **Ctrl** **Alt**

3.5 On Screen Menu control

IMPORTANT NOTE

This next section dealing with the On Screen Menu control is a feature only supported on the LINDY CPU Junior 4 OSD & 8 OSD models.

LINDY CPU SWITCH	
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

LINDY CPU Junior Switch 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.

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 flashing 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 <ENTER> 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 LINDY CPU Junior Switches, the cascade routing will need to be entered (see section 3.9 for more details). To specify port 5 on a LINDY CPU Junior Switch that is cascaded off port 3 you would enter port number 35. Units can be cascaded three levels deep. Now press <ENTER> 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 <ENTER>. 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 <ENTER>. 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  /  or <PAGEUP> / <PAGEDOWN> keys as required. Press the <ENTER> key to switch to the highlighted computer. LINDY CPU Junior Switch 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 system and their function	
Key	Function
HOTKEYs' and 	Calls the menu up onto the screen (even if no PC video exists)
<INSERT>	Adds a computer entry AFTER the currently selected line
<SHIFT> & <INSERT>	Adds a computer entry BEFORE the currently selected line
<DELETE>	Deletes the currently selected computer
<SHIFT> & <DELETE>	Edits the currently selected computer
<ENTER>	Confirms an entry or selects a computer
<ESC>	Quits from editing a line or quits from the menu
	Moves up the menu by one line
	Moves down the menu by one line
<PAGEUP>	Moves to the top of page or up 8 lines if more than 8 present
<PAGEDOWN>	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 LINDY CPU Switch Junior by using a three button mouse. In order to switch to the next channel simply hold down the central mouse button (the wheel mouse button on an IntelliMouse) and click on the left hand mouse button. The channel will then change.

Mouse switching may be enabled or disabled using the option switches (on non-OSD models) or using the 'U' configuration options (on OSD models), see sections 4 & 5. When mouse switching is disabled the third button or wheel button state is 'passed through' the LINDY CPU Switch Junior and seen by the application software.

3.7 RS232 Control

IMPORTANT NOTE

RS232 control is supported on the LINDY CPU Switch Junior OSDs only

The LINDY CPU Switch Junior OSD 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 LINDY CPU Switch Junior OSD. 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 LINDY CPU Switch Remote control

IMPORTANT NOTE

RS232 control is supported on the LINDY CPU Switch Junior OSDs only

This small remote control device (see Section 1.4) duplicates the LED and SELECT key off the front of the LINDY CPU Switch to provide a remote means of switching channels. The status display shows the channel selected and mouse / keyboard and data activity.

3.9 Cascading LINDY CPU Switch Juniors

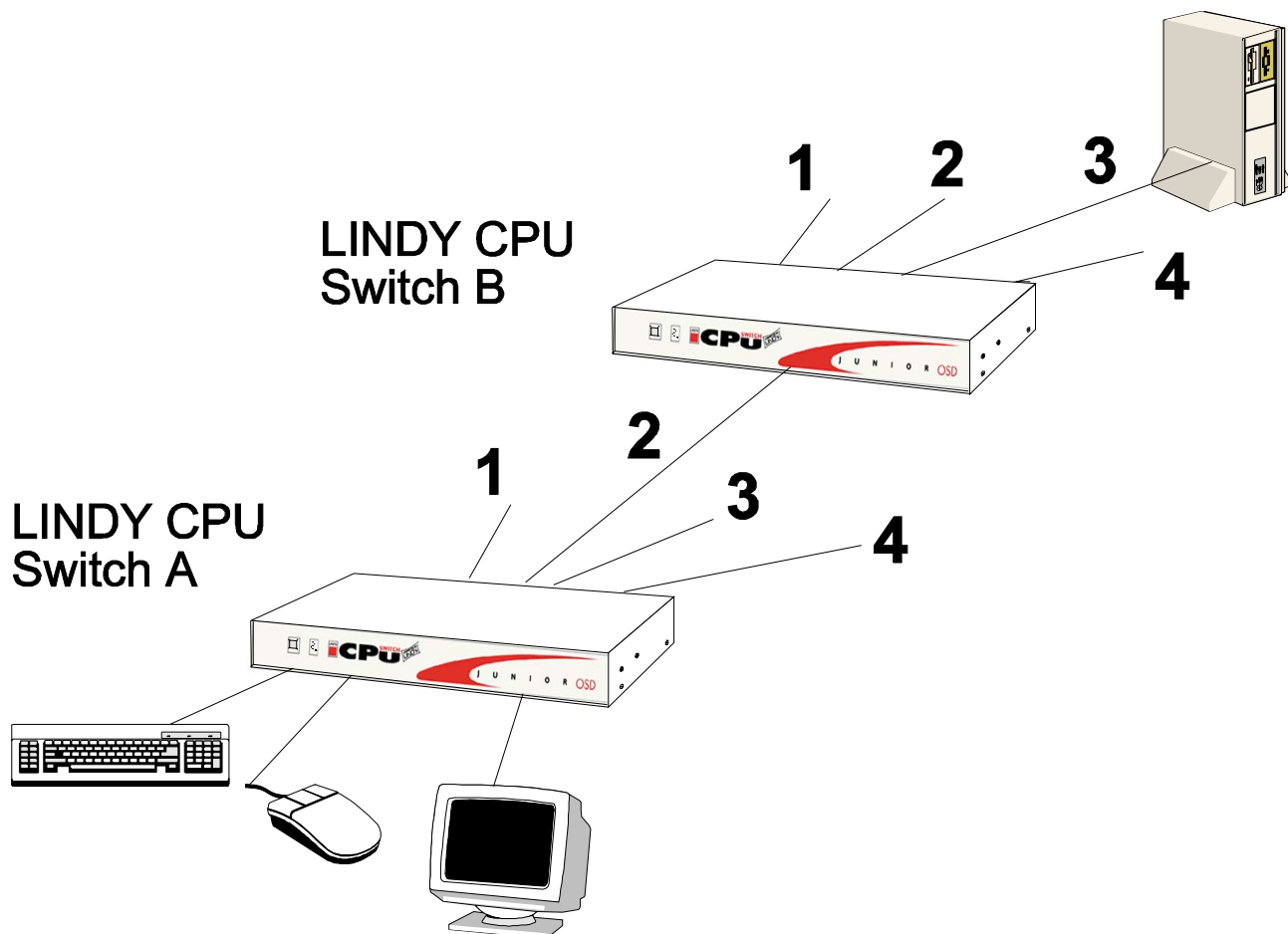
Any number of LINDY CPU Switch Junior switches can be connected together to expand the total number of connected computers. When LINDY CPU Switch Junior units are cascaded an external power adapter must be connected to each of the LINDY CPU Switch Junior units. This avoids trying to draw power for multiple LINDY CPU Switch Juniors from a connected CPU. The channels on the cascaded LINDY CPU Switch Junior units can be selected using an extension of the HOTKEY control function.

For example, consider a situation where two LINDY CPU Switch Junior 4 port units are connected together as shown below. To connect to the computer attached to port 3 on LINDY CPU Switch Junior 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 LINDY CPU Switch Junior which is connected into port '2' of the first LINDY CPU Switch Junior unit A.

For example to connect to port 3 on the LINDY CPU Switch Junior cascaded off port 2 of your first LINDY CPU Switch Junior use:

press **Ctrl** **Alt** **2** release **2**

press **3** release **3** **Ctrl** **Alt**



A typical cascade of two LINDY CPU Switch Junior OSD 4 port units

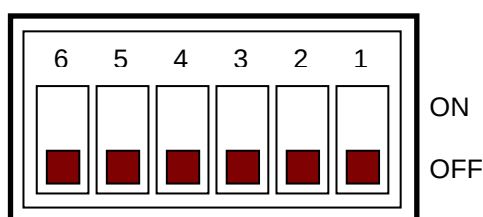
4 LINDY CPU Switch Junior Configuration Options

4.1 Configuring the LINDY CPU Switch Junior

IMPORTANT NOTE

This next section is for configuration of the LINDY CPU Switch Junior 2 and 4 ports (non OSD models)
For configuration of OSD models please refer to section 5.

The toggle switches on the side of the LINDY CPU Switch Junior are used to select operating options. The switches are continuously read by the LINDY CPU Switch Junior and may be changed whilst the unit is powered on. The default setting (all switches OFF) is suitable for most installations. The switches have the following functions.



Switch	Function
1	Selects the hotkey combination that can be used to switch the LINDY CPU Switch Junior's channel (see Section 3.4)
	OFF Hotkeys = CTRL + ALT (default)
	ON Hotkeys = CTRL + SHIFT
2	Sets the LINDY CPU Switch Junior to scan all the ports or just the active ports whilst it is auto-scanning.
	OFF Auto scan active ports only (default)
	ON Auto scan all ports
3	Sets the time that each channel will be displayed for during auto-scan. The options are 2 or 5 seconds.
	OFF Auto scan time = 2 seconds (default)
	ON Auto scan time = 5 seconds
4	Selects whether the mouse can be used to switch the LINDY CPU Switch Junior's channel (see section 3.6). If the mouse is being used to switch the LINDY CPU Switch Junior then the third button or wheel button will not be available to the application software.
	OFF Enable mouse switching of channels (default)
	ON Disable mouse switching of channels
5	Option switch 5 is used to reset the LINDY CPU Switch Junior (see section 4.4. For normal operation set this switch to the OFF position.
	OFF Enable operation (default)
	ON Disable operation and perform full hardware reset
6	Option switch 6 is reserved and must be set to the OFF position.
	OFF Reserved – set OFF
	ON -

NOTE: Many modern monitors are fitted with automatic power save relays and will switch off after a few seconds if connected to an in-active PC. If you are using such a monitor you must not allow the LINDY CPU Switch Junior to auto-scan all ports. Constant switching on and off of your monitor's relay will eventually damage your monitor.

4.2 Maintenance mode options and functions

A number of useful functions are provided via the LINDY CPU Switch Junior's maintenance mode. The LINDY CPU Switch Junior continues to provide full emulation on all ports whilst within maintenance mode to avoid errors occurring on the attached CPUs. The maintenance mode functions provided are:

- Restore CPU PS/2 mouse connection.
- Restore CPU IntelliMouse mouse connection.
- Query the LINDY CPU Switch Junior firmware version.
- Synchronise a CPU PS/2 mouse connection
- Reset the shared keyboard and mouse.

To enter maintenance mode

Hold down the front panel key for 5 seconds until the lights on channels 1 and 2 are illuminated together.

Whilst within maintenance mode

Press keys **1** , **2** , **3** or **4** on the main keyboard (not the numeric keypad) or the key on the front of the LINDY CPU Switch Junior as follows:

KEY	CONFIGURATION DESCRIPTION
1	This will reset the PS/2 mouse connection on the port that was selected when maintenance mode was entered (this port's video is displayed on the monitor). After pressing the key the LINDY CPU Switch Junior will automatically return to normal operation mode. (see section 2.8 for information on using this function)
2	Reset the IntelliMouse mouse connection on the port that was selected when maintenance mode was entered (this port's video is displayed on the monitor). After pressing the key the LINDY CPU Switch Junior will automatically return to normal operation mode. (see section 2.8 for information on using this function)
3	Causes the LINDY CPU Switch Junior to report its version number to the port that was selected when maintenance mode was entered (this port's video is displayed on the monitor). The CPU attached to this port must be running a text editor or word processor that is ready to accept keyboard input. After pressing the key the LINDY CPU Switch Junior will automatically return to normal operation mode.
4	Attempts to synchronise the mouse connection on the port that was selected when maintenance mode was entered (this port's video is displayed on the monitor). After pressing the key the LINDY CPU Switch Junior will automatically return to normal operation mode. (see section 2.8 for information on using this function)
Front Panel	Pressing the LINDY CPU Switch Junior's front panel key causes the shared keyboard and mouse to be reset. The reset function removes the power to the keyboard and mouse for a few seconds and then re-powers them. The front panel power light will go off to indicated that the power has been removed. Once the keyboard and mouse have been reset the LINDY CPU Switch Junior will automatically return to normal operation. The other functions of the LINDY CPU Switch Junior that deal with the CPU connections are fully maintained during this process.

4.3 Resetting the shared keyboard and mouse

The LINDY CPU Switch Junior is fitted with a keyboard and mouse reset function. This function powers down the devices for a couple of seconds and resets them. The rest of the LINDY CPU Switch Junior continues to work normally and the connections to the CPUs are unaffected. This function is useful if the mouse has become disconnected or is to be changed for another type. It is also useful if there is an error that has caused the keyboard or mouse to operate incorrectly.

To reset the shared keyboard and mouse, enter maintenance mode (see section 4.2). Whilst within maintenance mode press the front panel key. The power light will go off for a few seconds and then come on again when the keyboard and mouse have been reset. The LINDY CPU Switch Junior will then be operating normally.

4.4 Resetting the LINDY CPU Switch Junior

The LINDY CPU Switch Junior is fitted with a hardware reset function that does not require the power to be disconnected. The reset function is accessed using option switch 5 (see section 4.1). This option switch is connected to the microprocessor within the LINDY CPU Switch Junior. When switch 5 is in the ON position the LINDY CPU Switch Junior's processor will halt all operations.

To perform a complete reset of the LINDY CPU Switch Junior, move switch 5 from the OFF position to the ON position and then back to the OFF position. This action is equivalent to disconnecting all the power from the LINDY CPU Switch Junior and then powering it on again as it performs a complete microprocessor hardware reset.

4.5 Querying the LINDY CPU Switch Junior's firmware version

For technical support purposes it is sometimes useful to know the firmware version of the LINDY CPU Switch Junior. The LINDY CPU Switch Junior can report its firmware version using a maintenance mode function.

To find the firmware version of your LINDY CPU Switch Junior, switch to a CPU that is showing the DOS prompt or is running a text editor or word processor package. It doesn't matter what package this is provided that the characters typed in at the keyboard are displayed on the screen. Enter maintenance mode and type **3** at the keyboard (see section 4.2 for more details). The version number will be reported on the CPU screen as three numbers. For example, if the LINDY CPU Switch Junior reports 118 then the firmware version is 1.18.

5 LINDY CPU Switch Junior OSD Configuration Options

IMPORTANT NOTE

This next section is for configuration of the LINDY CPU Switch Junior OSD 4 and 8 ports
For configuration of non-OSD models please refer to section 4.

5.1 Configuring the LINDY CPU Switch Junior OSD

The LINDY CPU Switch Junior OSD 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 LINDY CPU Switch Junior OSD's EEPROM memory and are retained when the power is disconnected.

The options may be changed whilst the LINDY CPU Switch Junior OSD is in configure mode. You may enter configure mode at initial power on or whilst the LINDY CPU Switch Junior OSD is running.

To enter configure mode at power on, switch off all the attached PCs and the LINDY CPU Switch. Hold down the front panel key whilst powering on the LINDY CPU Switch. Remember that the LINDY CPU Switch Junior 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 adaptor is connected. Do not release the key until the LINDY CPU Switch displays 'C' to show that it has entered configure mode.

To enter configure mode whilst the LINDY CPU Switch is running, hold down the front panel key for 5 seconds until the front panel display shows 'C'.

Options are entered by typing a letter followed by a number followed by <ENTER>. Use <ESC> to abort the entry of an option. The LINDY CPU Switch will remain in configure mode until you type  <ENTER>.

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

(at LINDY CPU Switch 'C' prompt)   <ENTER>

To exit configure mode type:  <ENTER>

5.2 Screen saver time delay

LINDY CPU Switch 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 LINDY CPU Switch is in screen save mode.

KEYS	CONFIGURATION DESCRIPTION
	Screen saver disabled (default)
	Blank screen after 1 minute of inactivity
	Blank screen after 2 minutes of inactivity
	Blank screen after 4 minutes of inactivity
	Blank screen after 8 minutes of inactivity
	Blank screen after 12 minutes of inactivity
	Blank screen after 16 minutes of inactivity
	Blank screen after 20 minutes of inactivity

5.3 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.

KEYS	CONFIGURATION DESCRIPTION
	Menu appears with magenta / blue background and green highlight (default)
	Menu appears with red / blue background and green highlight
	Menu appears with blue / black background and light blue highlight
	Confirmation message remains on screen for standard time period (default)
	Confirmation message remains on screen for short time period
	Confirmation message remains on screen for extended time period

5.4 Autoscan 'lock on' mode and delay time

LINDY CPU Switch Junior OSD 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 LINDY CPU Switch Junior OSD's ports will be scanned if option **[L][2]** is selected. Some applications may also require the LINDY CPU Switch to power on in autoscan mode. This feature can be selected using the **[L][3]** or **[L][4]** options.

KEYS	CONFIGURATION DESCRIPTION
[L][1]	LINDY CPU Switch locks on to active ports only during autoscanning (default)
[L][2]	LINDY CPU Switch locks on to every port during autoscanning
[L][3]	LINDY CPU Switch powers on in autoscan mode & locks on to active ports only
[L][4]	LINDY CPU Switch powers on in autoscan mode and locks on to all ports
[T][1]	2 seconds autoscan delay time before switching to next port (default)
[T][2]	5 seconds autoscan delay time before switching to next port
[T][3]	7 seconds autoscan delay time before switching to next port
[T][4]	10 seconds autoscan delay time before switching to next port
[T][5]	15 seconds autoscan delay time before switching to next port
[T][6]	20 seconds autoscan delay time before switching to next port
[T][7]	30 seconds autoscan delay time before switching to next port
[T][8]	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 **[L][2]** feature. Constant switching on and off of your monitor's relay will eventually damage your monitor.

5.5 Mouse mode and mouse switching of channels

A three button PS/2 mouse can be used to switch channels on the LINDY CPU Switch Junior 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 LINDY CPU Switch Junior 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 LINDY CPU Switch Junior 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 option **U3** or **U5**.

The LINDY CPU Switch 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 LINDY CPU Switch Junior 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.

KEYS	CONFIGURATION DESCRIPTION
U1	LINDY CPU Switch channels are switchable using a 3 button mouse or IntelliMouse (default) (LINDY CPU Switch reports 2 button mouse mode to PCs)
U2	LINDY CPU Switch channels are not switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports 2 button mouse mode to PCs)
U3	LINDY CPU Switch channels are not switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports 3 button mouse mode to PCs)
U4	LINDY CPU Switch channels are switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports IntelliMouse mode to PCs)
U5	LINDY CPU Switch channels are not switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports IntelliMouse mode to PCs)
U7	Cycle between active ports only when switching with 'hotkeys + Tab ' or 3 button mouse (default)
U8	Cycle between all ports only when switching with 'hotkeys + Tab ' or 3 button mouse (default)

5.6 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 LINDY CPU Switch Junior 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.

KEYS	CONFIGURATION DESCRIPTION
 	 and  keys together (left or right hand keys operate) (default)
 	 and  keys together (left or right hand keys operate)
 	 and  keys together (left or right hand keys operate)
 	RIGHT  key
 	LEFT  and RIGHT  keys together
 	LEFT  and LEFT  keys together
 	RIGHT  and RIGHT  keys together
 	No hotkey enabled

5.7 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 LINDY CPU Switch Junior. For example, if the release version is v1.02 the response shown to   <ENTER> will be a brief display of the digit '1', then   <ENTER> will be a brief display of the digit '0', then   <ENTER> 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  . Use options   and   to restore mouse function on disconnected PS/2 CPU mouse connections. See section 2.8 for full details

KEYS	CONFIGURATION DESCRIPTION
 	Display firmware first digit
 	Display firmware second digit
 	Display firmware third digit
 	Restore PS/2 mouse function to the currently selected CPU's mouse port
 	Restore IntelliMouse function to the currently selected CPU's mouse port
 	RESET all configurations to factory default settings. An 'r' will show briefly on the display to confirm that the reset has been completed

5.8 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 LINDY CPU Switch 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 LINDY CPU Switch 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 <ENTER>. The display on the LINDY CPU Switch 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 <ENTER> keys. When you have typed in your password type <ENTER> 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 LINDY CPU Switch Junior is locked, the unit may be unlocked by powering down the LINDY CPU Switch Junior, entering configure mode at power on (see section 5.1) 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:



5.9 Cascade query code

The LINDY CPU Switch Junior OSD use a special 'query code' to detect whether or not they are connected to another LINDY CPU Switch Junior. By default your LINDY CPU Switch Junior OSD uses query code AD. Another range of switches, LINDY CPU Switch Pro 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 LINDY CPU Switches are set to use the same query code. If any of the cascaded LINDY CPU Switch Pros have firmware versions less than 1.09 then the cascade query code for all the LINDY CPU Switch Juniors and LINDY CPU Switch Pros should be set to EF.

KEYS	CONFIGURATION DESCRIPTION
L7	Cascade query code set to AD (default)
L8	Cascade query code set to EF

5.10 Exit configure mode

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

Appendix A. LINDY CPU Switch Junior OSD Configuration Summary

KEYS	CONFIGURATION DESCRIPTION
 	Screen saver disabled (default)
 	Blank screen after 1 minute of inactivity
 	Blank screen after 2 minutes of inactivity
 	Blank screen after 4 minutes of inactivity
 	Blank screen after 8 minutes of inactivity
 	Blank screen after 12 minutes of inactivity
 	Blank screen after 16 minutes of inactivity
 	Blank screen after 20 minutes of inactivity
 	Menu appears with magenta / blue background and green highlight (default)
 	Menu appears with red / blue background and green highlight
 	Menu appears with blue / black background and light blue highlight
 	Confirmation message remains on screen for standard time period (default)
 	Confirmation message remains on screen for short time period
 	Confirmation message remains on screen for extended time period
 	Display firmware first digit
 	Display firmware second digit
 	Display firmware third digit
 	Restore PS/2 mouse function to the currently selected CPU's mouse port
 	Restore IntelliMouse function to the currently selected CPU's mouse port
 	RESET all configurations to factory default settings. An 'r' will show briefly on the display to confirm that the reset has been completed
 	 and  keys together (left or right hand keys operate) (default)
 	 and  keys together (left or right hand keys operate)
 	 and  keys together (left or right hand keys operate)
 	RIGHT  key
 	LEFT  and RIGHT  keys together
 	LEFT  and LEFT  keys together
 	RIGHT  and RIGHT  keys together
 	No hotkey enabled
 	LINDY CPU Switch locks on to active ports only during autoscanning (default)
 	LINDY CPU Switch locks on to every port during autoscanning
 	LINDY CPU Switch powers on in autoscan mode & locks on to active ports only
 	LINDY CPU Switch powers on in autoscan mode and locks on to all ports
 	Cacade query code set to AD (default)
 	Cascade query code set to EF

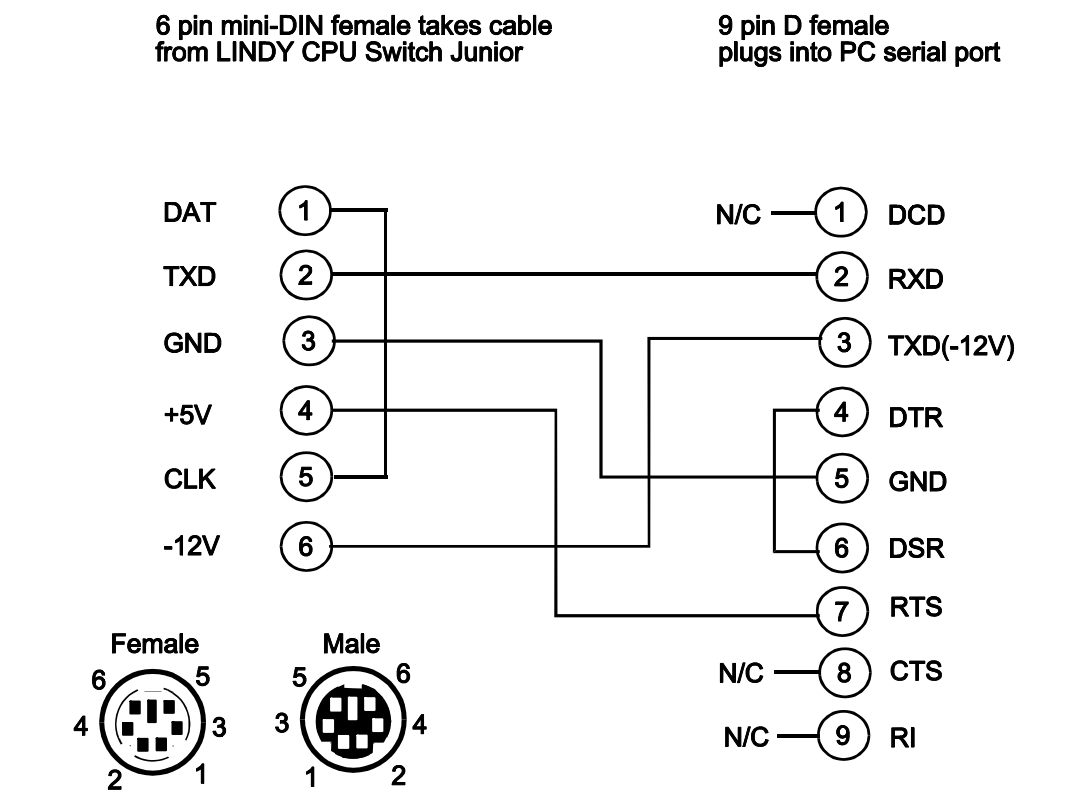
KEYS	CONFIGURATION DESCRIPTION
	2 seconds autoscan delay time before switching to next port (default)
	5 seconds autoscan delay time before switching to next port
	7 seconds autoscan delay time before switching to next port
	10 seconds autoscan delay time before switching to next port
	15 seconds autoscan delay time before switching to next port
	20 seconds autoscan delay time before switching to next port
	30 seconds autoscan delay time before switching to next port
	60 seconds autoscan delay time before switching to next port
	LINDY CPU Switch channels are switchable using a 3 button mouse or IntelliMouse (default) (LINDY CPU Switch reports 2 button mouse mode to PCs)
	LINDY CPU Switch channels are not switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports 2 button mouse mode to PCs)
	LINDY CPU Switch channels are not switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports 3 button mouse mode to PCs)
	LINDY CPU Switch channels are switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports IntelliMouse mode to PCs)
	LINDY CPU Switch channels are not switchable using 3 button mouse or IntelliMouse (LINDY CPU Switch reports IntelliMouse mode to PCs)
	Cycle between active ports only when switching with 'hotkeys +  or 3 button mouse (default)
	Cycle between all ports only when switching with 'hotkeys +  or 3 button mouse (default)
	Sets password – see section 5.8 for instructions.
	Exits configure mode & returns the LINDY CPU Switch to normal operation mode.

Appendix B. 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.

CABLE CONNECTION	CABLE SPECIFICATION	
	LINDY CPU Junior	LINDY CPU Junior OSD
Keyboard, monitor and mouse to LINDY CPU Switch Junior	All of the shared devices plug directly into the relevant ports at the front of the LINDY CPU Switch. 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. Self-Powered operation Keyboard, monitor and mouse extension cables should be no longer than 2 metres. Powered by optional adaptor Keyboard, monitor and mouse extension cables can be used to increase the distance from the LINDY CPU Switch Junior up to 10m. Most keyboards and mice will also operate at distances of 20m.	
	LINDY CPU Junior	LINDY CPU Junior OSD
LINDY CPU Switch Junior to PCs 1 to 8 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.	
	Video cable may be run at distances up to 10m with little loss of video quality	Video cable may be run at distances up to 30m with little loss of video quality
	LINDY CPU Junior	LINDY CPU Junior OSD
LINDY CPU Switch Junior to PCs 1 to 8 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). Cables should be no longer than 3 metres for operation without the optional power supply (see section 2.4 for more details).	
	If the optional power supply is used then cables may be up to 10 metres long.	If the optional power supply is used then cables may be up to 30 metres long.

CABLE CONNECTION	CABLE SPECIFICATION LINDY CPU Junior	LINDY CPU Junior OSD
LINDY CPU Switch Junior to PCs 1 to 8 RS232 serial mice	These require a special converter to connect the RS232 lines present on the LINDY CPU Switch Junior mouse ports to the RS232 port on a PC. The wiring is identical to that used by Microsoft for their autosensing mouse adapter and is shown below: 6 pin mini-DIN female takes cable from LINDY CPU Switch Junior  9 pin D female plugs into PC serial port	Cables should be no longer than 10 metres or 30 metres on the OSD models
Expansion port pin assignments	LINDY CPU Junior OSD only Cables should be no longer The 15 way D connector located on the back of the LINDY CPU Switch Junior OSD provides connections for the remote control module and allows an external RS232 device to control the LINDY CPU Switch Junior. Pin 9 = GND Pin 11 = RxD Other pins to be left unconnected.	

Appendix C. Problem Solving

PROBLEM	ACTION
Poor video quality with smearing fuzziness or ripple.	Use screened coaxial video cables to connect your devices to the LINDY CPU Switch Junior.
Mouse does not move cursor on screen	Ensure that the mouse and computer are both connected to the LINDY CPU Switch Junior before power is connected and ensure that your software is configured to accept a Microsoft compatible mouse of the type that you have connected (PS/2 or RS232). OSD models If you move the mouse and the activity indicator (dot on 7 segment display) does not flash then the LINDY CPU Switch Junior OSD is not receiving data from the mouse. Check the mouse connection to the LINDY CPU Switch Junior OSD, try resetting the mouse using the reset function (section 2.7) or re-powering the LINDY CPU Switch Junior. If you are attempting to connect the LINDY CPU Switch Junior 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 Junior F6 (see section 2.8)
Keyboard does not function or functions intermittently. Num lock light does not always come on when the num lock key is pressed.	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.
Mouse consistently fails to boot when using a Compaq integrated keyboard / mouse model MX11800 with the LINDY CPU Switch Junior, Windows NT 4.0 and a PS/2 connection to some types of PCs.	There are three possible solutions to this problem: • Use a different mouse. • Connect the LINDY CPU Switch Junior mouse connection to a serial port on the NT 4.0 unit rather than the PS/2 port. • 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.
Mouse causes channel to change.	Some cheaper mice are not fully compatible with the LINDY CPU Switch Junior 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 LINDY CPU Switch Junior. If you have unplugged and re-connected a mouse to the LINDY CPU Switch Junior then ensure that you reset it using the mouse reset function (see section 2.8).
Mouse jumps around the screen after disconnecting the mouse cable or powering down the LINDY CPU Switch Junior.	If you have disconnected and re-connected a CPU mouse cable or you have reset the LINDY CPU Switch Junior 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 or re-power the CPU.
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.	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 LINDY 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.

