

DKVM-8

*Keyboard, Mouse & Monitor
Switch*

User's Manual

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CHAPTER 1.

INTRODUCTION

The DKVM-8 gives you the ultimate in control of 8 PCs from one keyboard, mouse and monitor. To expand control ability, the DB-25 Daisy-Chain allows sixteen DKVM-8 stack up for control 128 PCs from one keyboard, mouse and monitor. OSD (On-Screen Display) menu provides human friendly interface for naming each PCs and selecting one of them.

Feature

- Allows a user to control eight computers from one keyboard, mouse and monitor
- No software required, each channel contains a microprocessor emulation to intelligently manage the boot-up process for all your attached PCs boot-up transparently and simultaneously.
- DB-25 Daisy-Chain ports allows control over as many as 128 computers through 16 banks of DKVM-8 units
- On-Screen Display menu gives the user a visual interface to naming and selecting computers
- On-Screen Display, push button or keyboard "Hot Key" commands switching
- AutoScan mode for even more convenience
- Audible feedback when switching
- Recalls CAPS LOCK, NUM LOCK and SCROLL LOCK keys' status for each computer automatically
- Supports VGA, SVGA and MultiSync monitors
- Up to 1600 x 1200 resolution support
- Integrated mouse conversion technology allows connection of AT type computers that have serial mouse ports while using a PS/2 mouse only at console
- Keyboard and mouse emulation for error-free boot ups
- Microsoft® IntelliMouse® support and emulation
- Supports both AT and PS/2 type keyboards (AT requires AT - PS/2 adapter)
- User inexpensive and commonly found standard cables
- Status LEDs on front panel

1.1 SPECIFICATION

❑ Computer Connections	: 8
❑ Port LEDs	: 8
❑ Bank 7-segment LED	: 1
❑ Port 7-segment LED	: 1
❑ Keyboard	: 6-pin Mini-DIN
❑ Mouse	: 6-pin Mini-DIN
❑ Monitor	: 15-pin HD DB type
❑ Cascade	: 25-pin D-Sub
❑ Cascade Port	: 1
❑ On Screen Display	: Yes
❑ 19" Rack Mount	: Yes
❑ Cascade (Level)	: 16
❑ Max. Access PCs	: 128
❑ Manual Selection	: Push Button
❑ Hot Key	: Yes
❑ Switching Confirmation	: Buzzer
❑ Keyboard state	: Saved and Restored
❑ Keyboard	: PS/2
❑ Mouse	: PS/2
❑ Monitor	: VGA, SVGA, XGA, MultiSync
❑ Display Data Channel	: DDC1, DDC2B, DDC2AB
❑ Resolution	: 1600 x 1200
❑ Bandwidth	: 180M Hz
❑ Enclosure	: Metal
❑ Storage (Celsius)	: 0 ~ 70
❑ Dimension (LxWxH cm)	: 44.1 x 18.45 x 7.25
❑ Weight (g)	: 2950
❑ Power Supply	: 18W, Universal AC input

1.2 PACKING CHECK LIST

Before you begin to install your DKVM-8, please make sure that you received the following materials as listed below:

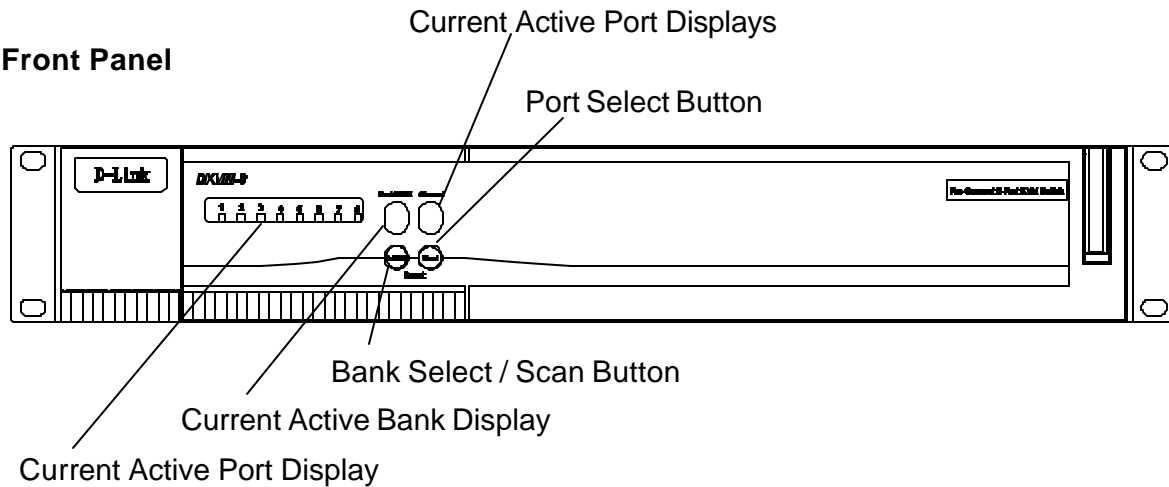
<i>Item</i>	<i>Qty</i>	<i>Remark</i>
DKVM-8	1 pcs.	Keyboard, mouse & monitor switch
Mouse adapter cable	4 pcs.	DB-9 to 6-pin Mini-DIN
Daisy-chain cable	1 pcs.	DB-25 to DB-25
Power cord	1 pcs.	AC inlet power cable
User's Manual	1 pcs.	This manual
Quick Installation Guide	1 pcs.	
Rack mount bracket	2 pcs.	For Rack Mounting
Screw	10 pcs.	M3, fasten rack mount brackets
Rubber foot	4 pcs.	
K/V/M 3 in 1 cable	2 sets	One set of Cable for Keyboard, Mouse, Monitor

CHAPTER 2.

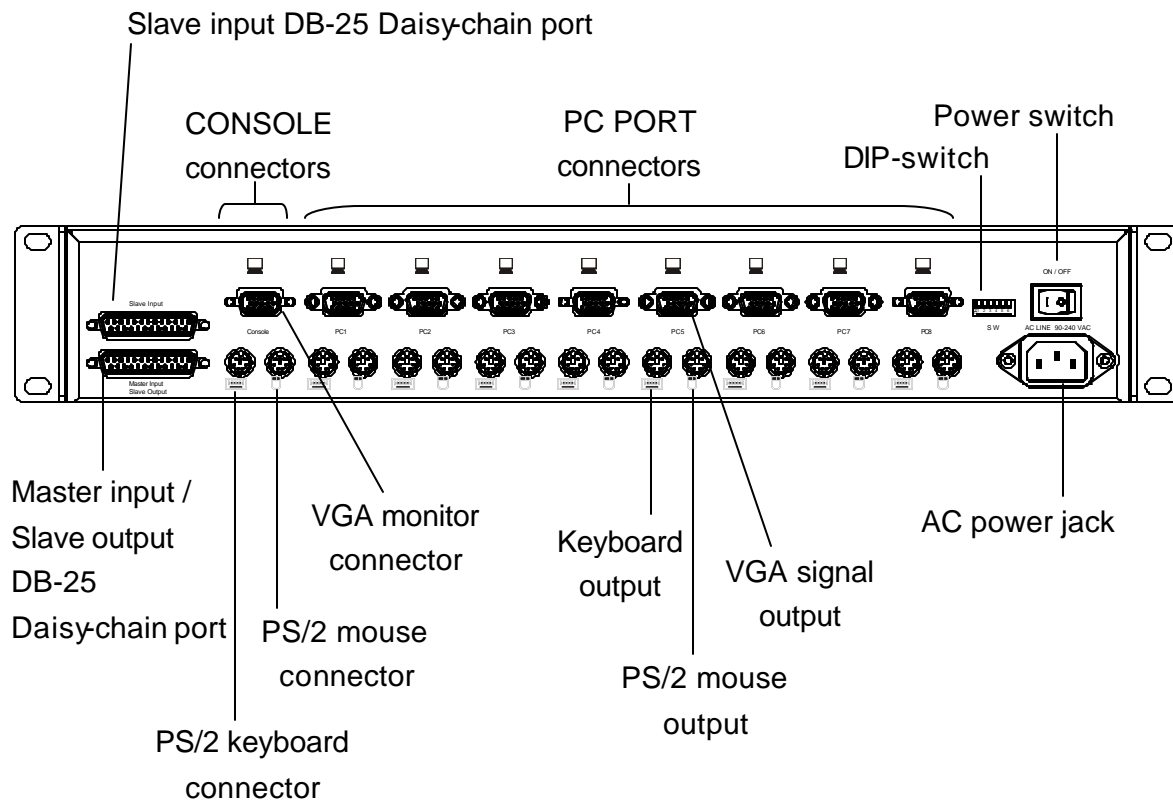
INSTALLATION

2.1 PRODUCT DETAIL

Front Panel



Rear Panel

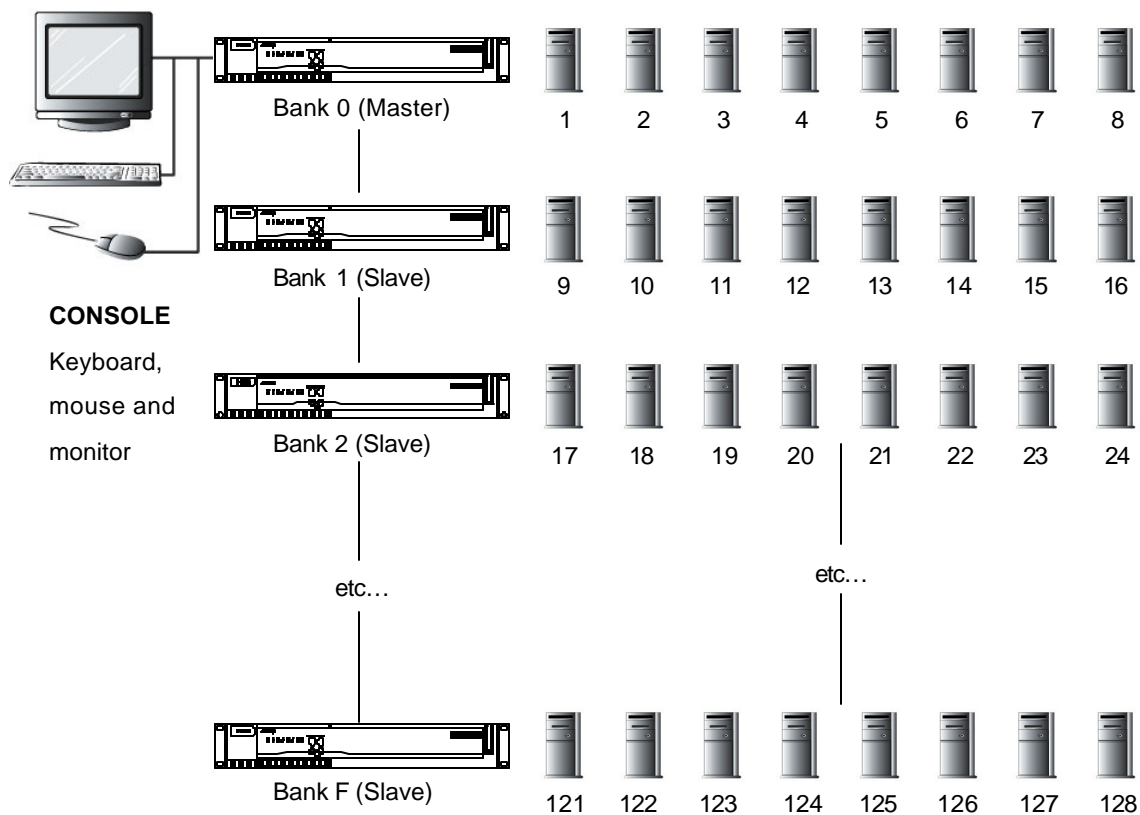


2.2 SINGLE UNIT OR DAISY-CHAIN OPERATION

DKVM-8 has the capability to be Daisy-Chained to 15 more units (for a total of 16), giving the user control over a maximum of 128 computers.

Each DKVM-8 unit is defined as a “**BANK**”. See the following diagram for more information. BANK numbers range from 0 to F (Hexadecimal), for a total of 16 banks. BANK 0 is the **MASTER** bank while BANK 1 through F are **SLAVE** banks. The MASTER bank is the unit that connects to the console keyboard, mouse and monitor.

The DIP-switch on the rear panel must be set correctly for proper identification and usage. See the next section for the actual settings. **If you are using DKVM-8 in a single unit configuration, it must be set as the MASTER (BANK 0). If it is to be used as a SLAVE unit, then it must be set to any unused unique bank number from 1 through F.**



2.3 HARDWARE INSTALLATION

WARNING!



Before attempting to connect anything to the DKVM-8 or the computers, make sure everything is powered off. Otherwise, plugging and unplugging cables may cause irreversible damage to your computers and the DKVM-8.

Step 1

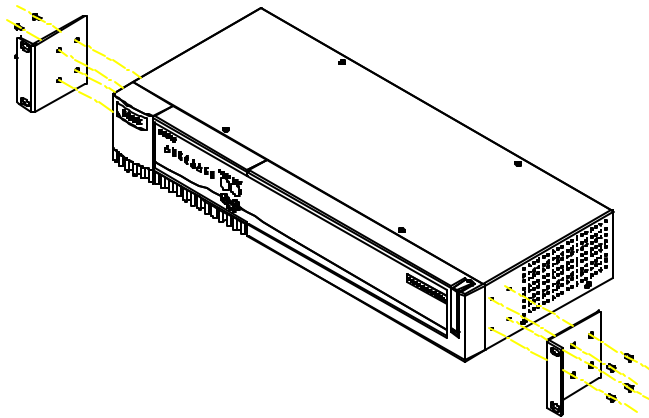
Set the DIP-switch for Auto-scan Interval and BANK Address. If you have only one DKVM-8, use the MASTER bank setting. If the DKVM-8 you are using will be Daisy-Chained off another unit, use a unique slave setting. Please refer to the previous section for more information. (NOTE: DIP-Switch No. 1 and 2 are reserved, default setting is "ON".)

DIP-Switch NO.			BANK Address	
3	4	5		
ON	ON	ON	BANK 0	MASTER
OFF	ON	ON	BANK 1	SLAVE
ON	OFF	ON	BANK 2	SLAVE
OFF	OFF	ON	BANK 3	SLAVE
ON	ON	ON	BANK 4	SLAVE
OFF	ON	ON	BANK 5	SLAVE
ON	OFF	ON	BANK 6	SLAVE
OFF	OFF	ON	BANK 7	SLAVE
ON	ON	OFF	BANK 8	SLAVE
OFF	ON	OFF	BANK 9	SLAVE
ON	OFF	OFF	BANK A	SLAVE
OFF	OFF	OFF	BANK B	SLAVE
ON	ON	OFF	BANK C	SLAVE
OFF	ON	OFF	BANK D	SLAVE
ON	OFF	OFF	BANK E	SLAVE
OFF	OFF	OFF	BANK F	SLAVE

NOTE: "ON" is down

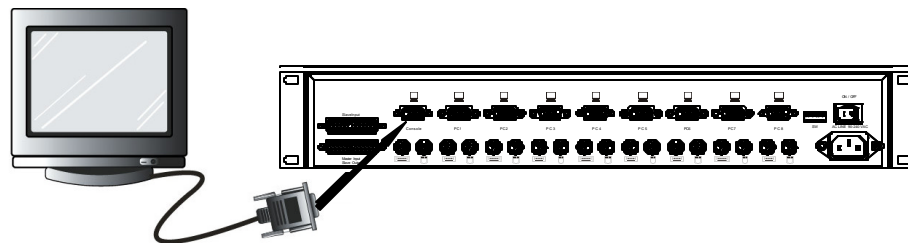
Step 2

Find a convenient place to put your DKVM-8. Its 19" rack mount form factor makes it ideal mountable on 19" rack. When mounting to a rack, attach the included brackets to the sides of the DKVM-8. Take note of the length of your cables so that your computers, DKVM-8, keyboard, mouse and monitor are distanced properly.



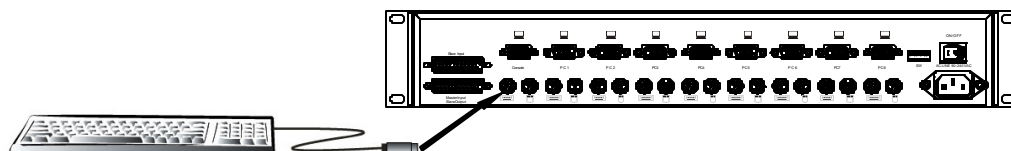
Step 3

Connect the monitor to the DKVM-8. Using the attached cable, or the one included with your monitor, connect it to the HD DB-15 female port on the back of the DKVM-8 labeled with the monitor symbol at the CONSOLE connector.



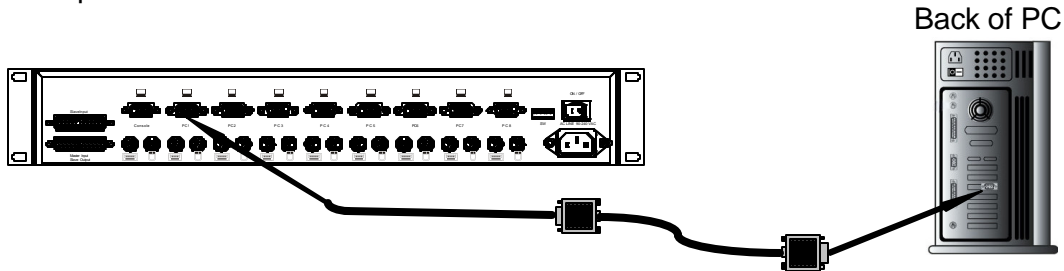
Step 4

Connect the keyboard and mouse to the DKVM-8. If you have an AT type keyboard, you will need an AT to PS/2 adapter.



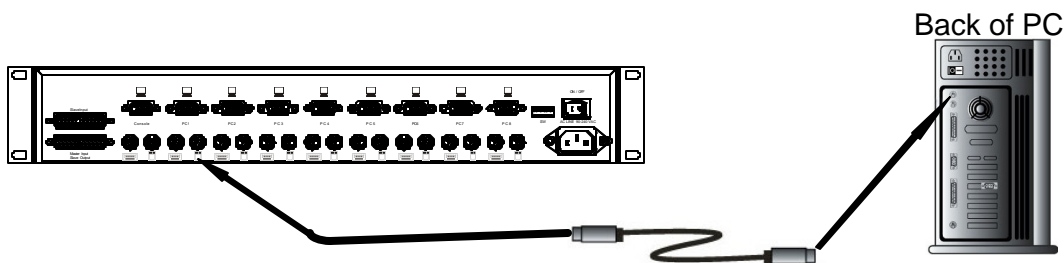
Step 5

Connect the first computer's VGA cable to the DKVM-8. Using the VGA cable connect the male end of the cable to the VGA port on the computer, and the female end on the PC1 VGA port at the back of DKVM-8.



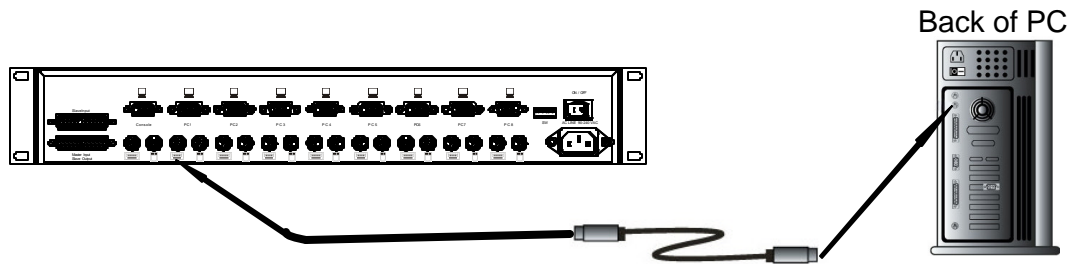
Step 6

Connect the first computer's mouse cable to the DKVM-8. If using a PS/2 cable connect one end to the PS/2 mouse port on the computer, and the other end to the PC1 PS/2 mouse port on the back of DKVM-8. If using a serial mouse cable connect one end to a DB-9 serial port on the computer, and the other end to the PC1 DB-9 serial mouse port on the back of the DKVM-8.



Step 7

Connect the first computer's keyboard cable to the DKVM-8. Using another PS/2 cable connect one end to PS/2 keyboard port on the computer, and the other end to the PC1 keyboard port on the back of DKVM-8. If your computer has an AT type keyboard port, you will need a PS/2 to AT keyboard adapter.



Step 8

Double-check all of the connections. Make sure the keyboard and mouse cables go to the correct ports.

Step 9

Repeat step 5 to 7 for the remainder of the computers.

Step 10

Attach the power supply to the power jack at the back of DKVM-8. Plug this into available AC outlet. Flip the power switch on the front panel. You should see the LED for channel 1 on the front panel blink, and hear a beep. Power up your monitor.

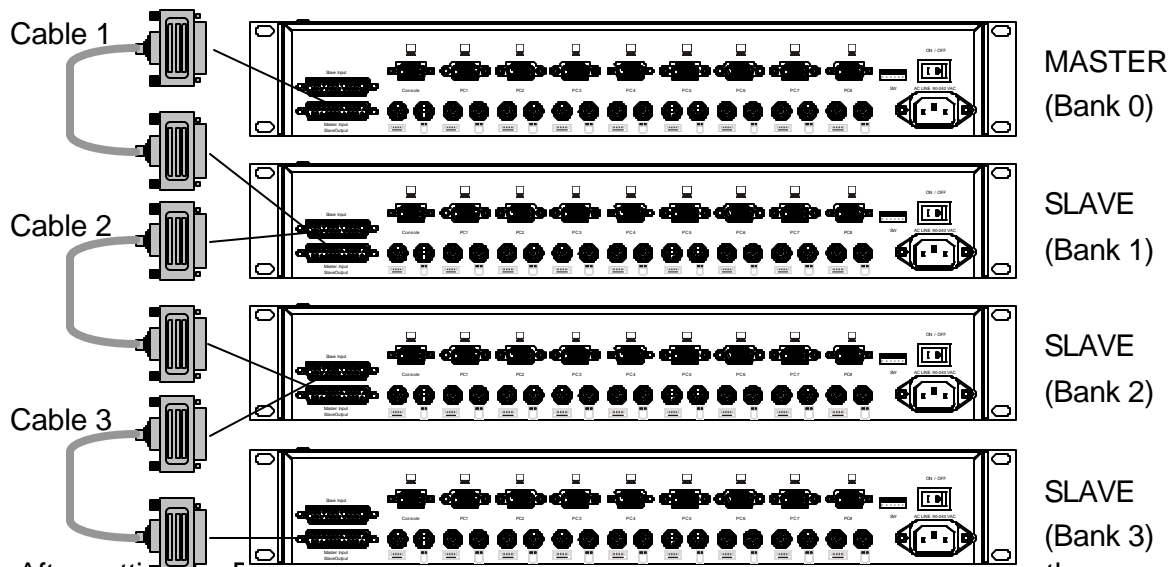
Step 11

You can now power up all your computer simultaneously. The first computer will show up on the monitor. Check to see if the keyboard, mouse and monitor work. If this is okay, press the “Channel” button and check the functionality of the other computers. If you find any errors, double-check all of the cable connections.

Note: Avoid pressing any keys on the keyboard or moving the mouse as the currently selected computer is in the process of booting up. This may cause the computer to not detect or initialize the keyboard or mouse drivers properly.

2.4 DAISY-CHAIN

The DKVM-8 can be daisy-chained with additional DKVM-8 units through the DB-25 daisy-chain ports. The daisy-chain cable is required (not included) for proper operation. Please refer to the example below. Here, four DKVM-8 units are cascaded together for control over 32 computers. Recall that a maximum of 16 DKVM-8 units can be cascaded together for control over 128 computers. Recall that the DIP-switch on the MASTER unit must be set to BANK 0, and the SLAVE units set to a unique BANK (any from 1 through F). See the beginning of this section for more information on the DIP-switch settings.



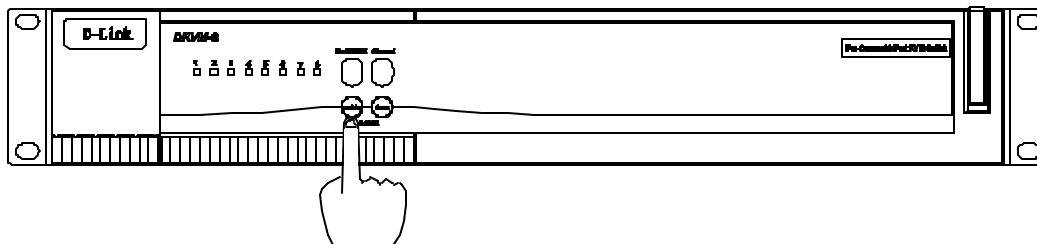
- After setting the DIP-switch on the SLAVE unit, connect the computers using the same procedure outlined in step 5 to 9 in the previous section. **DO NOT POWER UP THE COMPUTER YET.**
- Using the daisy-chain cable, connect one end to the "Master Input / Slave Output" port of the unit. Refer to the diagram above.
 - If the previous unit is the MASTER, then the other end of the cable connects to the "Master Input / Slave Output" port of the MASTER (such as cable 1 in the diagram above)
 - If the previous unit is a slave, then the other end goes to the "Slave Input" port of the previous slave unit (such as cable 2 and 3 in the diagram above)
- Upon connecting the daisy-chain cable to the previous unit, it should automatically power up if the previous unit is powered up. However, it is still recommended that the power supply be used with the slave unit. You will see the LED display on the front panel show the units bank address setting.

- RESET the MASTER unit by pressing the Bank/SCAN and Channel buttons simultaneously. This is necessary for the MASTER unit to detect the newly added slave unit.
- Verify that the MASTER unit has detected the new slave by pressing the Bank/SCAN button. If it detected the new slave properly, the LED display on the MASTER will register the slave unit's bank address. If you have many slave units, you may have to press the Bank/SCAN button many times to cycle through all of the preexisting slave units before reaching the newly added unit.
- Now you can power up the computers connected to the newly added slave unit. After all the computers have booted up, you may need to RESET the MASTER unit again to detect the presence of powered computers on the new slave unit.

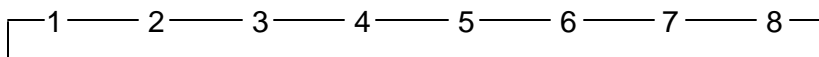
CHAPTER 3.

OPERATION

Selecting which computer to operate can be done either by On-Screen Display, the select button, or through keyboard “Hot Key” commands. You will notice that after the DKVM-8 switches to another computer, the mouse will be inoperative for about 1-2 seconds. This is normal operation and ensures that proper mouse synchronization is established.



Pressing the “Channel” button cycles you through all the ports, including inactive ports.



Keyboard “Hot Key” Commands

You can also conveniently command the DKVM-8 to switch ports (channel) through simple keyboard key sequences. To send commands to the DKVM-8, the SCROLL LOCK key must be pressed twice within 2 seconds. You will hear a beep for confirmation. Below are the different commands.



Switch to Previous Active port
(On the same BANK)



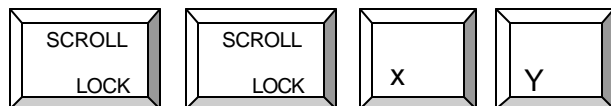
Switch to Next Active port
(On the same BANK)



Switch to Previous BANK
(By default, selects first active port on BANK)

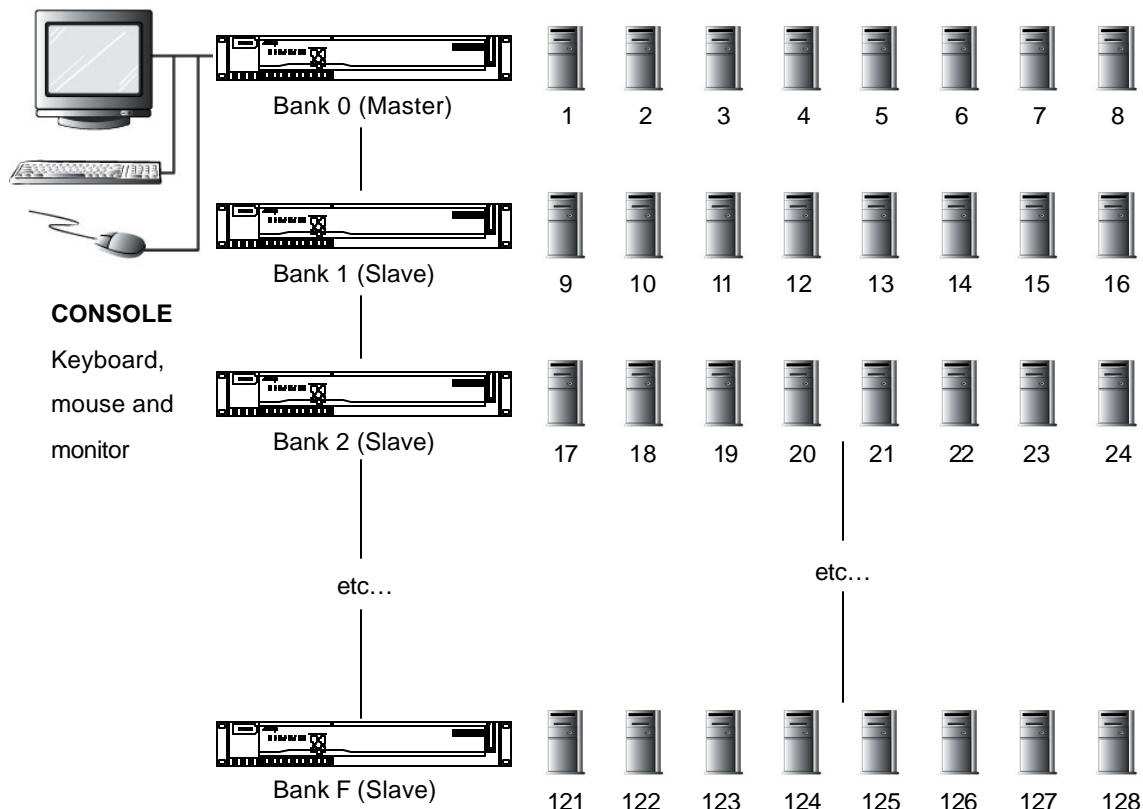


Switch to Next BANK
(By default, selects first active port on that BANK)

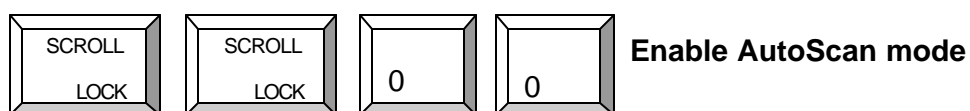


Directly switches to port Y on BANK X
X=0 to F (Hexadecimal), Y=1 to 8

You can switch directly to any channel by giving the DKVM-8 the BANK and Channel numbers. For instance, if you press SCROLL LOCK, SCROLL LOCK, 2, 5, the computer on channel 5 of DKVM-8 set to BANK 2 will be selected. In the following diagram, that is PC 21. Hence, if you only have one DKVM-8, the first key (X) must be "0".



AutoScan Mode

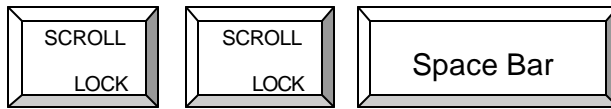


In AutoScan mode, DKVM-8 remains on one channel for a number of seconds, before switching to the next. This time interval is set in the On-Screen Display menu.

Note: There is no mouse or keyboard control in this mode. This is necessary to prevent errors. Otherwise, if the user is moving the mouse or using the keyboard when DKVM-8 switches to the next channel, data flow is interrupted and will cause erratic mouse movement and / or the wrong characters to show up when using the keyboard.

To get out of AutoScan mode, press the SPACE BAR.

On-Screen Display Menu Control



Enable On-Screen Display Menu

To get into the On-Screen Display (OSD) menu, press SCROLL LOCK, SCROLL LOCK, SPACE BAR. Immediately, the OSD overlay screen appears. This screen is generated by the DKVM-8, and does not affect your computers or running software in any way.

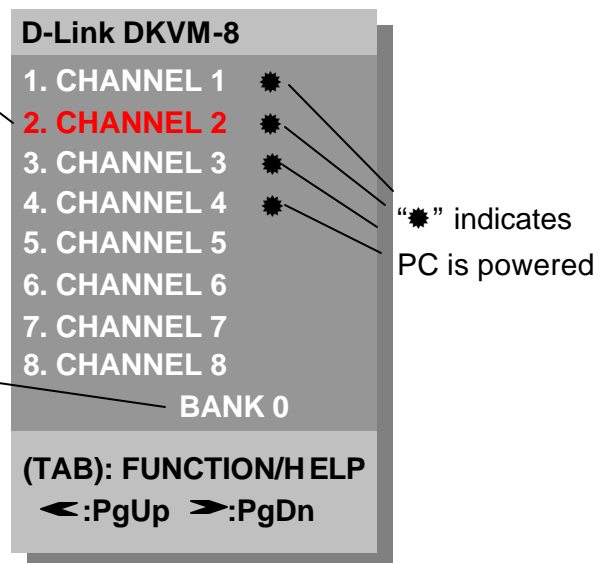
The main OSD screen menu is shown on the right. It shows the currently selected BANK. If you have only one DKVM-8, it will say "BANK 0".

The current selected port is shown in RED.

A "✱" indicates that the computer connected to that port is powered up.

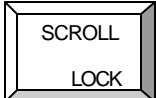
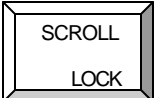
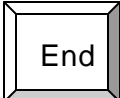
Currently selected Port is in Red

Currently selected Bank Address



You can navigate through the active ports by using the arrow keys. The OSD menu will only allow you to move to active ports.

NOTE: If a computer is connected and is powered up, but the OSD menu does not display a "✱", you will have to RESET the DKVM-8 to re-detected the powered computers. This is done by simultaneously pressing the Bank/SCAN and Channel buttons on the front panel.

Note: Pressing    reset the keyboard ports.

Pressing the INSERT key allows you to rename the port. Press ENTER to complete.

NOTE: Inadvertently pressing the SCROLL LOCK, SCROLL LOCK, DELETE keys will erase any given names on the OSD menu.

Pressing the ESC key exits the current screen.

To view a different BANK, pressing the PAGE UP key goes to a previous BANK, while the PAGE DOWN key brings you to the next BANK.

Once you have selected a computer on the menu, press ENTER to switch to that port.

Pressing the TAB key opens up the Function menu. In this menu, you can select the SCAN TIME and DISPLAY TIME.

SCAN TIME:

Amount of time the DKVM-8 stays one port before switching to the next port when in Scan Mode

DISPLAY TIME:

Amount of time the OSD Menu or Port Name remains displayed on-screen after making a port selection

SCAN TIME:

☒ 7sec ☐ 15sec ☐ 30sec ☐ 60sec

DISPLAY TIME:

☐ 7sec ☐ 15sec ☐ 30sec ☐ 60sec

[]: SELECT

(INS): RENAME

(Enter): COMPLETE

(Esc): Exit

NOTE: If there are slave units present, the SCAN TIME and DISPLAY TIME settings are set on the MASTER unit only, and need not be set on the slave units.

The Bank/SCAN Button:

Pressing the Bank/SCAN button cycles you through all the active BANKs (if there are slave units present) and then puts the unit in AutoScan mode. If the unit is a single MASTER unit, pressing the button immediately invokes AutoScan mode. This is evident by a long beep, followed by two short beeps.

CHAPTER 4.

TROUBLE SHOOTING

General Problems

Q : The OSD menu does not display a “*” on a channel where a computer is connected and powered up. What do I do?

A : ¶Reset the DKVM-8 by simultaneously pressing the Bank/SCAN and Channel buttons on the front panel. Access the OSD menu again and it should have re-detected all the active channels.

Q : When cascading, the MASTER unit does not see the slave unit(s).

A : ¶Refer to the Installation section for information on how to properly connect the daisy-chain cable.

¶Make sure that the daisy-chain cable that you are using is right. Using any other cable will not guarantee proper operation or video quality.

¶Reset the MASTER DKVM-8

¶Although a power supply is not necessary to make the slave unit work, try adding a power supply.

Monitor / Video Problems

Q : I am getting ghosting shadowing or fuzzy images on my monitor. What do I do?

A : ¶Check the cables and make sure they are inserted properly.

¶Your resolution and / or refresh rate is extremely high, or your cable is too long. Replace your VGA cables with coaxial, double-shielded cables.

¶Check to make sure that the power adapter is plugged in and is working properly. It must be 12V DC, 1000mA minimum. Make sure the power switch is on.

¶Lower your refresh rate and / or screen resolution settings.

Keyboard Problems

Q : The keyboard is not detected, or a keyboard error is reported during boot-up.

A : ¶Check the cables and make sure they are inserted properly in the correct channels.

¶Check to make sure that the power adapter is plugged in and is working properly. It must be 12V DC, 1000MA minimum. Make sure the power switch is on.

¶Reset the DKVM-8 by simultaneously pressing the Bank/SCAN and Channel buttons on the front panel. Access the OSD menu again and it should have re-detected all the active channels.

¶Do not press any keys on the keyboard while the selected computer is booting up. This is true for any PC, whether stand-alone or connected to a DKVM-8.

Q : The computers boot up fine, but the keyboard does not work.

- A :** ?Check the cables and make sure they are inserted properly in the correct ports.
- ?Make sure the keyboard works when directly plugged into the computers.
 - ?Try a different keyboard, but use only 101, 102 or 104-key keyboards.
 - ?Make sure that the keyboard driver is for 101, 102 or 104-key keyboards, and not old XT keyboards.
 - ?Check to make sure that the power adapter is plugged in and is working properly. It must be 12V DC, 1000mA minimum. Make sure the power switch is on.
 - ?Reset the DKVM-8 by simultaneously pressing the Bank/SCAN and Channel buttons on the front panel. Access the OSD menu again and it should have re-detected all the active ports.

PS/2 Mouse Problems at the console or computers**Q : The mouse is not detected during boot-up.**

- A :** ?Check the cables and make sure they are inserted properly in the correct ports.
- ?Check your computer / motherboard documentation making sure that the PS/2 mouse port (or IRQ) is enabled.
 - ?Make sure the mouse is directly plugged into the computer. Rebooting is necessary when trying this. You should never remove or replace a PS/2 device without turning the computer off. If the computer still does not detect the mouse, then your computer's PS/2 mouse port has a problem.
 - ?Reset the DKVM-8 by simultaneously pressing the Back/SCAN and Channel buttons on the front panel. Access the OSD menu again and it should have re-detected all the active ports.

Q : The computer boots up fine, but the mouse does not work.

- A :** ?Check the cables and make sure they are inserted properly in the correct ports.
- ?Make sure the mouse works when plugged into the computer. Rebooting is necessary when trying this. You should never remove or replace a PS/2 device without turning the computer off. If the mouse pointer still does not move, then either your PS/2 mouse port or the mouse itself has a problem.
 - ?Try a different mouse.
 - ?Make sure the mouse is a true PS/2 mouse. A combo mouse will work as long as it is set for PS/2 mode with the correct adapter. A serial-only mouse with a combo mouse adapter WILL NOT work.
 - ?Check to make sure that the power adapter is plugged in and is working properly. It must be 12V DC, 1000mA minimum. Make sure the power switch is on.
 - ?Reset the DKVM-8 by simultaneously pressing the Bank/SCAN and Channel buttons

on the front panel. Access the OSD menu again and it should have re-detected all the active ports.

Q : When I switch from one port to another, mouse movement is completely erratic. What do I do?

A : ¶Reset the DKVM-8 by simultaneously pressing the Bank/SCAN and Channel buttons on the front panel. Access the OSD menu again and it should have re-detected all the active ports.

¶Make sure you do not have more than one mouse driver. Make sure that driver is either for a Standard PS/2 or Microsoft® compatible PS/2 mouse. Try to obtain the latest version from your hardware manufacturer.

¶If you are using a specialized mouse such as a cordless mouse, scrolling mouse or mice with more than 2 operational buttons, use generic PS/2 mouse drivers. Non-standard mice often use non-PS/2 proprietary mouse protocol.

¶Make sure you do not have any mouse drivers loaded in your config.sys or autoexec.bat files.

¶Avoid moving the mouse or pressing the mouse buttons when switching ports.

¶Reset the mouse to resume proper mouse movement simply by unplugging the mouse from the front of the DKVM-8 for about 2-3 seconds, and plugging it in again.

Problems with computers using the serial mouse output

Note: The DKVM-8 has integrated mouse conversion technology. This technology converts the PS/2 mouse signals at the console to serial mouse signals. Windows® 9x Control Panel System applet may not display that it has detected a mouse, but the Modem applet will show a serial mouse at a certain serial port.

Q : The computers boot up fine, but the mouse does not work

A : ¶Check the cables and make sure they are inserted properly in the correct ports.

¶Check the cables and make sure that it is a straight-through DB-9 male / female cable.

¶Check your computer / motherboard documentation to make sure that the serial ports are enabled, and that there are no IRQ or base address conflicts with other serial ports or modems.

¶Plug in a serial mouse directly to your computer, and reboot. If the mouse pointer still does not move, then there may be no serial mouse drivers installed, or the serial port on your computer may have other conflicts or problems.

¶Try a different PS/2 mouse at the console.

¶Make sure the mouse (at the console) is a true PS/2 mouse. A combo mouse will

work as long as it is set for PS/2 mode with the correct adapter. A serial-only mouse with a combo mouse adapter WILL NOT work.

?Check to make sure that the power adapter is plugged in and its working properly. It must be 12V DC, 1000mA minimum. Make sure the power switch is on.

?Reset the DKVM-8 by simultaneously pressing the Bank/SCAN and Channel buttons on the front panel. Access the OSD menu again and it should have re-detected all the active ports.

Q : When I switch from one port to another, mouse movement is completely erratic. What do I do?

A : ?Reset the DKVM-8 by simultaneously pressing the Bank/SCAN and Channel buttons on the front panel. Access the OSD menu again and it should have re-detected all the active ports.

?Make sure you do not have more than one mouse driver. Make sure that driver is either for a Standard PS/2 or Microsoft® compatible PS/2 mouse.

?Avoid using a specialized mouse at the console such as a cordless mouse, scrolling mouse or mice with more than 2 operation buttons. Non-standard mice often use non-PS/2 proprietary mouse protocol.

?Make sure you do not have any mouse drivers loaded in your config.sys or autoexec.bat files.

?Avoid moving the mouse or pressing the mouse buttons when switching ports.

?Reset the mouse to resume proper mouse movement simply by unplugging the mouse from the front of the DKVM-8 for about 2-3 seconds, and plugging it in again.

Q : The wheel on the IntelliMouse® does not work on my computer. Why?

A : ?The integrated mouse conversion technology converts only the standard PS/2 signals which are the buttons and the x and y coordinate movement, but not the wheel movement or wheel button. This is because the wheel button data use non-PS/2 protocol.

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CANADA D-LINK CANADA

2180 Winston Park Drive, Oakville, Ontario L6H 5W1 Canada
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URL: www.dlink.de BBS: 49-(0)6192-971199 (Analog) 49-(0)6192-971198 (ISDN)
INFO LINE: 00800-7250-0000 (toll free) HELP LINE: 00800-7250-4000 (toll free)
REPAIR LINE: 00800-7250-8000

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URL: www.dlink.co.uk E-MAIL: info@dlink.co.uk

U.S.A. D-LINK U.S.A.

53 Discovery Drive, Irvine, CA 92618 USA
TEL: 1-949-788-0805 FAX: 1-949-753-7033 INFO LINE: 1-800-326-1688
BBS: 1-949-455-1779, 1-949-455-9616
URL: www.dlink.com EMAIL: tech@dlink.com, support@dlink.com,



Contacting Technical Support

You can find software updates and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product.

U.S. and Canadian customers can contact D-Link technical support through our web site, or by phone.

Tech Support for customers within the United States:

D-Link Technical Support over the Telephone:

(877) 453-5465

24 hours/ 7 days a week

D-Link Technical Support over the Internet:

<http://support.dlink.com>

email: support@dlink.com

Tech Support for customers within Canada:

D-Link Technical Support over the Telephone:

(800) 361-5265

Monday to Friday 7:30am to 12:00am EST

D-Link Technical Support over the Internet:

<http://support.dlink.ca>

email: support@dlink.ca

When contacting technical support, please provide the following information:

- *Serial number of the unit*
- *Model number or product name*
- *Software type and version number*

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty: D-Link warrants that the hardware portion of the D-Link product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty: D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Software Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty: The Limited Warranty provided hereunder for Hardware and Software portions of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim: The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to **D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer.

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered: The Limited Warranty provided herein by D-Link does not cover: Products that, in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

Disclaimer of Other Warranties: EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability: TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NON-CONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Governing Law: This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

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CE Mark Warning: This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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

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

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

Registration



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

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