2 port / 4 port PS/2 KVM switch

DVI-Interface

DNV-102
DNV-104

User's manual

▓ The complete DNV-102 contains:

2–Port KVM Switch (DNV–102)	x 1
User's manual	x 1
Rubber foot pad	x 1 set

▓ The complete DNV-104 contains:

4–Port KVM Switch (DNV–104)	x 1
User's manual	x 1
Rubber foot pad	x 1 set

Table of Content

Please read this manual thoroughly and follow the **Installation** procedures to prevent any damage to the KVM Switch or any connecting device.

Overview

The KVM Switch DNV-102/DNV-104 is a computer switch that allows access to two/four IBM compatible computers from one keyboard, mouse and monitor. Switching between computers is as easy as pressing the push button or entering hot-key commands from your keyboard without installing any interface card and software. The powerful KVM Switch is independent of the computer operating system, allowing the attached computers to run different applications. The space-saving design enables you to connect all the cables to the back of the DNV-102/DNV-104 taking the least amount of space on your desk. It is a valuable tool for your computer management. Yet, for DNV-104, the user can press "FUNC" button combining with the other pushbuttons to adjust the optimal video signal strength corresponding to the length or quality of DVI cable.

Automatic Mouse Conversion

This technology enables you to connect computers with PS/2 mouse ports to the KVM Switch, and control both computers from one PS/2 mouse. The KVM Switch automatically identifies the mouse and switches to proper mouse protocol.

Features

- Cascade configuration expands system capability
- Auto scan automatically selects computers sequentially
- Supports Microsoft IntelliMouse (Pro), IntelliTrackball
- Hot-key functions allow easy computer access
- Front panel "FUNC" button for easily adjusting the video signal strength. (for DNV-104 only)
- Built-in buzzer for hot-key command confirmation
- Keyboard states automatically saved and restored when switching computers
- Operating system independent, transparent to all applications
- True plug and play system configuration
- Keyboard and mouse can be hot plugged at any time
- DVI interface
- DDC2B compatible
- Power-free operation

Console Connection

Turn your computers off.   Connect a PS/2 keyboard and a PS/2 mouse to the mini-DIN-6 ports of the **C** (CONSOLE) marked with **K** and **M** respectively. Then connect your DVI-I monitor cable directly to the DVI-I port of **C** as shown in figure 1.
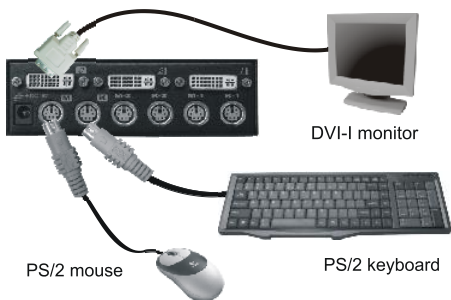

DVI-I monitor

PS/2 mouse

PS/2 keyboard

Figure 1: C (CONSOLE) Connection

The monitor connected to the DVI-I port of the **C** must be capable of synchronizing with the computer's video signal.   If you are uncertain about the monitor type, please consult the monitor user's manual.

The KVM Switch consumes negligible power and is designed to run reliably without external power adapter.

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Computers Connection

Now you have two computers to connect to the KVM Switch. Use a male-to-male Mini-DIN-6 cable to connect from the first PC's keyboard port to the corresponding **K1** port; and, use another male-to-male Mini-DIN-6 cable from the PC's mouse port to the **M1** port. Connect your computer's DVI-I port to the DVI-I port of the KVM Switch as shown in figure 2. Follow the same procedures for the second computer using **K2** and **M2** port.
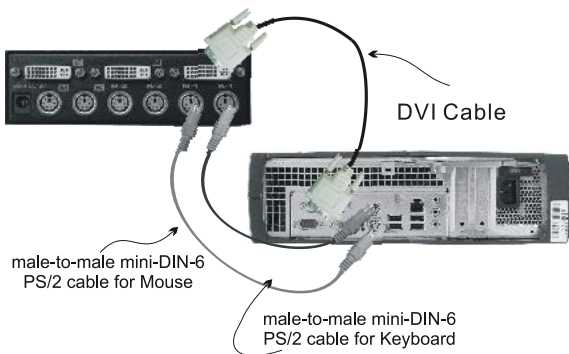

Figure 2: COMPUTER Connection

Initial Power-up

Make sure all computers and KVM Switch are powered down during installation. After connection, you just power up the computers; the KVM Switch will get enough power to operate from the computers. This procedure ensures the KVM Switch receive computer settings correctly when computer boots. Therefore, the KVM Switch generates correct responses and allows both computers to boot successfully without user intervention.

Front Panel operation

You may switch to a different computer by pressing the front panel push-button directly or by issuing hot-key commands. The front-panel red indicator changes to reflect the computer port selected. The indicator flashes while in either Auto Scan or Manual Scan mode.

"FUNC" Button (for DNV-104 only)
To adjust the optimal video signal strength corresponding to the length or quality of DVI cable, the user can press "FUNC" button combining with the other pushbuttons.

Step 1. Press "FUNC" button three times, the LED of "FUNC" will flash one time per second.

Step 2.
■ Press pushbutton "1" one or two times for adjusting the equalization of selected port input video strength with one beep (normal) or two beeps (enhance) respectively.

or

■ Press pushbutton "3" one or two times for adjusting the output current of selected port with one beep (normal) or two beeps (enhance) respectively.

or

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■ Press pushbutton "4" one, two, three, or four times for adjusting the output emphasis of selected port with one beep (no pre-emphasis), two beeps (low pre-emphasis), three beeps (medium pre-emphasis), or four beeps (high pre-emphasis).

Step 3. Once the setting is finished, press "FUNC" button one time to exit the setting.

Hot-key commands

The Hot-key command is a short keyboard sequence to select a computer, to activate computer scan, etc. KVM Switch interprets keystrokes for hot-keys all the time. A hot-key sequence starts with two left **Ctrl** keystrokes followed by one or two more keystrokes. A built-in buzzer generates a high-pitch beep for correct hot-key command; otherwise, one low-pitch beep for error and the bad key sequence will not be forwarded to the selected computer.

● To select a computer:
  left **Ctrl** + *left* **Ctrl** + **1**
Selects the computer at port 1.
  left **Ctrl** + *left* **Ctrl** + **2**
Selects the computer at port 2

Do not use the keypad at the right of the keyboard.

- To start *Auto Scan*, automatically scan power- on computers one by one at a fixed interval:

    left **Ctrl** + *left* **Ctrl** + **F1**

    To abort the *Auto Scan* mode, press the left **Ctrl** key twice. When *Auto Scan* detects any keyboard or mouse activity, it suspends the scanning till the activity stops; it then resumes with the next computer in sequence. The length of the *Auto Scan* interval (*Scan Rate)* is adjustable, see below.

- *Manual Scan* enables you to manually switch back and forth between power-on computers.

    left **Ctrl** + *left* **Ctrl** + **F2**

    Press ↑ or ↓ to select the previous or the next computer in sequence. And, press any other key to abort the *Manual Scan*.

- To adjust Scan Rate, this sets the duration before switching to the next computer in Auto Scan:

    left **Ctrl** + *left* **Ctrl** + **F3**

    The KVM Switch generates 1 to 4 beeps indicating scan interval of *3*, *8*, *15* and *30* seconds respectively.

● To adjust keyboard typematic rate (characters/sec), this setting over-rides that of BIOS and any operating system:

left **Ctrl** + *left* **Ctrl** + **F4**

The KVM Switch generates 1 to 4 beeps corresponding to **10**, **15**, **20** and **30** characters/sec respectively.

----------------- *Appendices*

Specifications	DNV-102	DNV-104
Computer port number	2	4
Cascade control PC number	Up to 4	Up to 16
Front panel button control	1	5*
Hot plug-and-play	Yes	Yes
Hot-key control	Yes	Yes
Automatic scan interval	3, 8, 15, 30 seconds	3, 8, 15, 30 seconds
Cable Length (Max)	3M(10ft) at CONSOLE 3M(10ft) at PC	3M(10ft) at CONSOLE 3M(10ft) at PC
Monitor Type	*DVI*	*DVI*
Computer keyboard connector Mouse monitor	PS/2 PS/2 *DVI-I female*	PS/2 PS/2 *DVI-I female*
Console keyboard connector Mouse monitor	PS/2 PS/2 *DVI-I female*	PS/2 PS/2 *DVI-I female*
H x W x D (mm) (in.) size	40 x 124 x 70 1.6 x 4.9 x 2.7 Micro	44 x 220 x 130 1.7 x 8.7 x 5.1 Compact
weight	440g	1030g
Power supply (min.)	Optional (DC 9V,500mA)	9VDC,500mA

* Four buttons for port switching PLUS one extra "FUNC" button for adjusting the DVI signal strength, please see page 6 for more details.

Troubleshooting

Ensure that all cables are well seated. Check that keyboard/mouse cables are not swapped. Label and bundle the cables for each computer to avoid confusion when connected to the KVM Switch.

Symptom	*Causes*	*Solutions*
Keyboard or mouse does not work	Improper power-up sequence. Keyboard or mouse not properly initialized.	Press and hold down the push button for 3 seconds, the KVM Switch will re-initialize the keyboard and mouse. If problem persists, unplug the keyboard or mouse, wait for a few seconds then plug it back.
Keyboard error on boot	Loose keyboard connection.	Make sure keyboard cables are well seated.
Keyboard strokes shifted	The computer was in shifted state when last switched	Press both SHIFT keys.
Auto Scan does not switch PC automatically and KVM Switch beeps	All PCs are off or only one PC is turned on. Scan mode works for power-on computers only.	Turn computers on. Press left **Ctrl** key twice to abort Auto Scan mode.

The ↑ and ↓ keys do not work in Manual Scan	All PCs are off or only one PC is turned on. Scan mode works for power-on computers only.	Turn computers on. Press any other key to abort Manual Scan mode.
The KVM Switch fails to function occasionally.	Computers do not supply enough power.	Add a power adapter with minimum of DC 9V 500mA output rating to the SPARE power jack.
Not functional in cascade configuration.	In master/slave configuration, the master unit must have equal or more PC ports than that of slaves. If DNV-102 is a slave, its master can only be DNV-102.	DNV-102 can be a slave of DNV-102, DNV-104. If DNV-102 is a master, then DNV-104 can't be its slave.

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