

KCG KVM

2 port / 4 port **USB** KVM switch

KAG12
KAG14



USB

User's manual

Rextron



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

----- ***Introduction***

Overview

The KAG12 and KAG14, fully compatible with USB specification, are combination of USB KVM (keyboard/Video/mouse) switch and USB peripherals sharing device. With the KAG12 or KAG14, you can easily operate up to 2 or 4 PCs, G3/G4 Macs, or iMacs respectively from 1 USB keyboard, 1 USB mouse, and 1 monitor saving you space, time, equipment and money. Its peripheral sharing function enables you to share more USB peripherals among all computers.

Installation is as easy as connecting USB A-B cables to computers and to the KAG switch. Computer selecting is as easy as front panel button pressing. The built-in USB hub ensures smooth switching from one computer to the other. The KAG switches provide the easiest way to manage multiple computers with USB interface and share USB peripherals among computers. No more tangled cables and messy working environment; let the KAG switch do the computer switching for you.

Features

- Manage 2 or 4 PCs, G3/G4 Macs, or iMacs from one USB keyboard, mouse and monitor with KAG12 and KAG14 respectively.
- 2 or 4 computers share up to 3 or 4 different USB peripherals with KAG12 and KAG14 respectively.
- Front panel push buttons for easy computer selection.
- No drivers needed for keyboard and mouse operation.
- Support keyboard and mouse plug-n-play.
- High VGA resolution: 1920x1440.
- KAG14 can be Linked to a NovaView switch as a slave USB switch.
- Buzzer sound for computer switching confirmation.
- Activate Auto Scan by front buttons pressing.
- Selectable Scan Time interval.
- Support the latest DDC2B VGA monitor.
- Saves time, space, equipment and power.
- USB self-power operation.
- No software required.

----- **System Requirements**

Console side

- One VGA, SVGA or Multisync monitor
- One USB keyboard
- One USB mouse

Computer side

Each USB-enabled computer must be connected to the KAG switch by

- One HDB15 male-to-female VGA cable for monitor.
- One USB A-B cable with Type-A and Type-B plug for USB devices, as shown in figure 1.

Note: An optional HDB-15 to DB-15 VGA adapter is required for Mac computer VGA port.

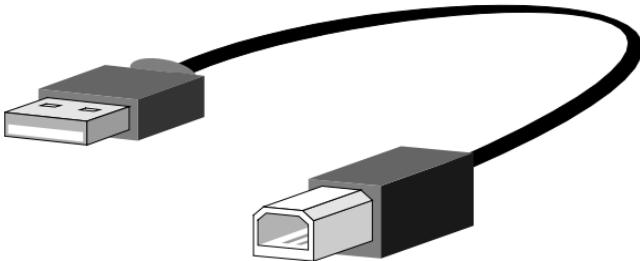


Figure 1. USB A-B cable

----- ***Installation***

PC BIOS Notice

*The following BIOS setup changes are necessary for PC users and **not** necessary for Mac users:*

1. In STANDARD CMOS, set HALT ON ERROR to ALL BUT KEYBOARD.
2. In PNP AND PCI SETUP, set PNP OS INSTALLED to YES and set USB IRQ to ENABLED.

Note: The KAG switch is applicable for USB keyboard and mouse switching from one computer to the other. If you plan to share other peripherals such as a CCD camera, printer or scanner, it is required to shut down the driver of the computer before switching to another computer. Because port switching is equivalent to unplugging the USB cable from one computer and plugging it to another one, some USB drivers check attached USB peripherals all the time and do not accept plug-n-play function.

Console Connection

Before installation, make sure all devices and computers to be connected to the KAG switch have been turned off.

Plug a monitor to the Console's VGA port; plug a USB keyboard and a USB mouse to any two of the Console's USB ports as shown in figure 2.

For KAG14 only: As an option, the Master NovaView is either KNV104 or KNV104D to be linked to the KAG14 with a mini-DIN8 male-to-male cable. The KAG14 can operate as USB-peripheral sharing device.

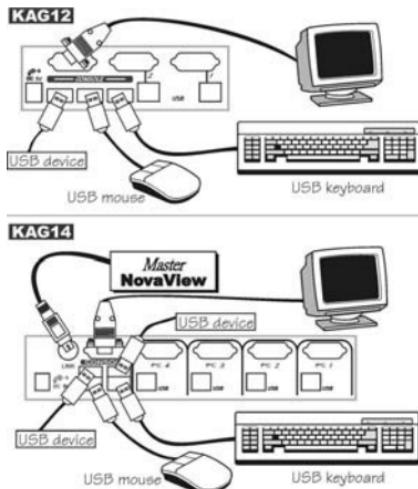


Figure 2. Console Connection

Computers Connection

Use a HDB15 male-to-female cable to connect from a computer's VGA port to KAG's VGA port of **PC** side, as shown in figure 3.

Use a USB A-B Cable to connect from the KAG's **USB** port (B connector, square connector) to the USB port on the corresponding computer (A connector, flat connector), as shown in figure 3.

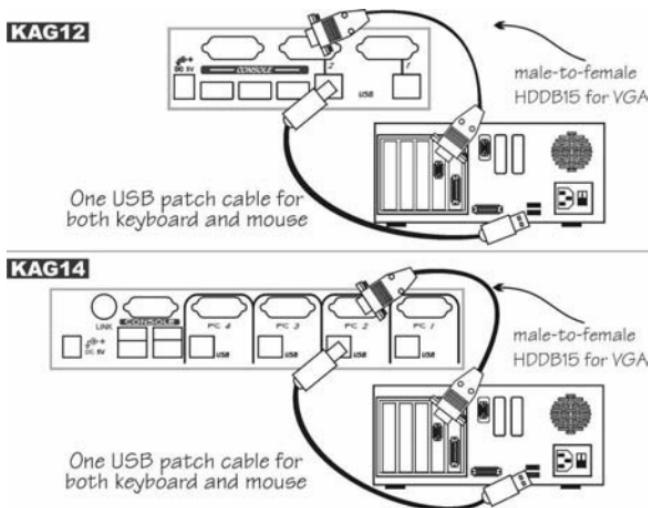


Figure. 3 Computer Connection

Now, you can turn on all devices and computers.

----- *Operations*

Front Panel

1. On-line LED & Selected LED

When the LED turns green, the connected computer is powered-on. When a computer is selected, its corresponding red LED illuminates.

2. Pushbuttons

Each computer has a button associated with it on the front panel for selection.

Auto Scan

Auto Scan automatically scan through computers one by one in a fixed interval (see *Scan Time* below).

Note: keyboard and mouse are not operable during Auto Scan.

Scan Time

It sets the scan interval for *Auto Scan*. The Scan Time options are 3, 8, 15 and 30 seconds.

Note: Scan Time is automatically set to the default of 3 seconds when the KAG switch loses power.

For KAG12

To activate the *Auto Scan*, press and hold the pushbutton down for 2 seconds till you hear a long beep followed by a short beep. To exit from it tap the pushbutton again.

To change the *Scan Time* internal, press and hold the pushbutton for 4 seconds till you hear two long beeps. Then by tapping the pushbutton each time, the KAG12 responds with 1, 2, 3 or 4 beeps corresponding to 3, 8, 15 or 30 seconds respectively. Once set, leave the KAG12 as it is and it will automatically return for normal operation.

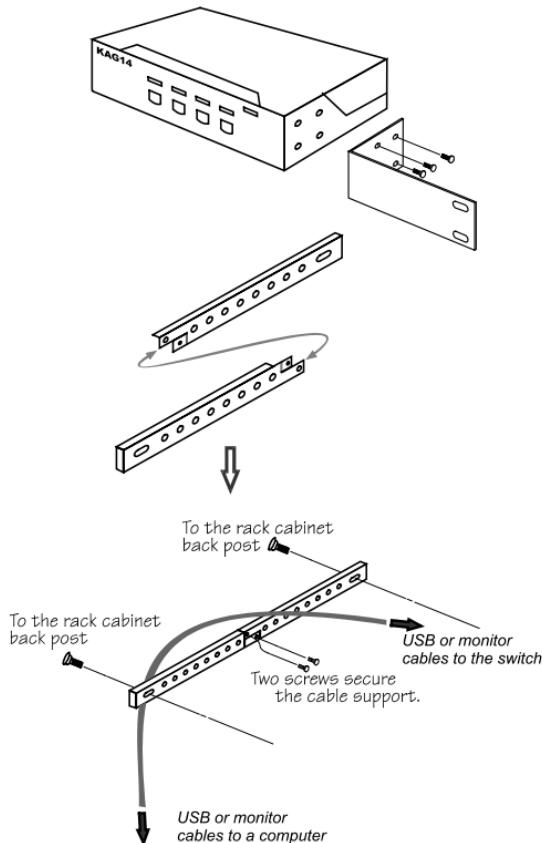
For KAG14

To activate *Auto Scan*, press down front panel push buttons "3" and "4" simultaneously. The port LED flashes during *Auto Scan*. *Auto Scan* is effective for powered-on computers only. To exit the *Auto Scan* mode, just tap any one of the pushbuttons.

To change the *Scan Time* interval, press both front panel buttons "1" and "2" simultaneously. The KAG14 beeps 1, 2, 3 or 4 times for *Scan Time* of 3, 8, 15 or 30 seconds respectively.

----- Rack Mount Kit for KAG14(option)

The figure below shows how to attach optional mounting brackets and cable support (RMK04) to the KAG14 for standard 19-inch rack cabinet.



----- Appendices

Specifications

Specification	KAG14	KAG12
No. of computers supported	4	2
Front panel push button	4	1
Hot plug-and-play	Yes	
Automatic scan interval	3, 8, 15, 30 seconds	
Cable Length (Max)	30M(100ft) for VGA 5M(15ft) for USB	
Computer ON-LINE LED	4	2
Computer selected LED	4	2
VGA	1920 X 1440, DDC2B	
Computer peripheral connector	USB Type B x 4	USB Type B x 2
Monitor	HDB-15 male x 4	HDB-15 male x 2
Console peripheral connector	USB Type A x 4	USB Type A x 3
monitor	HDB-15 female x 1	HDB-15 female x 1
Weight (g) (oz.)	900 31.74	420 14.8
H x W x D (mm) (in.)	44x220x130 1.7x8.7x5.1	40x124x70 1.6x4.9x2.7
size	Compact	Micro

----- Troubleshooting

Ensure that all cables are well seated. Label the cable for each computer to avoid confusion when connected to the KAG switch.

The KAG switch has built-in power protection that works automatically when needed. When it works, USB communication halts and the only way to restart the KAG switch properly is to remove all power sources (USB patch cables and power adapter), wait a few seconds, apply power sources and start again.

Symptom	Causes	Solutions
Keyboard or mouse does not work	<ul style="list-style-type: none">■ In Auto Scan, keyboard and mouse are not operable.■ Too many keyboard or mouse drivers installed.	<ul style="list-style-type: none">■ Press any front button to select a computer, then use the keyboard and mouse.■ Remove ALL unnecessary keyboard and mouse drivers.
Newly installed USB device does not work.	<ul style="list-style-type: none">■ Improper device driver.■ Device consumes too much power.■ Device consumes too much power instantaneously.	<ul style="list-style-type: none">■ Re-install device driver.■ The device should be self-powered, add a power adapter to the device.■ If the device does not provide power jack, add a power adapter with DC5V of less than

	<ul style="list-style-type: none"> ■ Improper device initialization. ■ When KAG switch works under self-power, i.e., no power supply added, it supports max of 100mA as per USB spec. 	<ul style="list-style-type: none"> ■ 1A current rating to the KAG switch. ■ Be sure the USB cable is well seated to ensure communication. ■ Remove all power sources to the KAG by unplugging all USB A-B cables and the power adapter; then start all over again. ■ Select the computer by pushbutton, restart the computer and try again.
Computer hangs up while switching computer.	<ul style="list-style-type: none"> ■ Device initialization takes too much time. 	<ul style="list-style-type: none"> ■ Wait at least 5 seconds before computer switching to ensure proper USB communication. ■ Turn off device driver (not keyboard nor mouse) before computer switching.
Auto Scan does not switch PC automatically and NovaView beeps	<ul style="list-style-type: none"> ■ All PCs are off or only one PC is turned on. Scan mode works for power-on computers only. 	<ul style="list-style-type: none"> ■ Turn computers on.

----- Other PS/2 KVM Switches

Other high-performance NovaView KVM switches for PS/2 interface.

One-console-to-multiple-computer			
	No OSD	OSD model	Rack-mount kit
2-computer	KNV102		
4- computer	KNV104	KNV104D	RMK04
8- computer	KNV108	KNV108D	RMK08
16- computer		KNV116D	RMK16

Two-console-to-multiple-computer		
	OSD model	Rack-mount kit
8- computer	KNV2108D	RMK08
16- computer	KNV2116D	RMK16

-OSD: advanced On-Screen Display interface enabling you to assign PC names, access PCs by the names. Other features include programmable scan pattern, password security, etc.

-Rack-mount: industry-standard 19-inch rack-mount kit.

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