User Instructions for
VIP- 802-B Series "SwitchCaster"™
Keyboard, Mouse, and Video Switch/Multicaster

FEDERAL COMMUNICATIONS COMMISSION

This equipment has been tested and found to comply with the limits of a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their expense.

CE

This equipment has been tested and found to conform to the directives and standards for a Class A Information Technology Equipment type and for the Commercial Light Industrial equipment class.

INTRODUCTION

The VIP-802-B "SwitchCaster"™ Keyboard, Mouse, and Video Switch/Multicaster is a KVM Switch with multicast capability. It allows one KVM Peripheral set consisting of a PS/2 Keyboard, a PS/2 Mouse, and video Monitor to control and work with up to two PC's. All SwitchCasters are full function electronic KVM Switches with keyboard control switching and full keyboard and mouse emulation giving error-free boot-up under all conditions and for all platforms.

Note: The SwitchCaster does not come with keyboard, mouse, or VGA extension cables. They may be ordered from Vetra separately.

INSTALLATION

Before making any connections, make sure that all PC's are powered down.

1. Connect KVM Peripherals to SwitchCaster:

a). Connect the keyboard to the 6-pin DIN connector marked "KBD IN".

b). Connect the PS/2 mouse to the 6-pin DIN connector marked "MSE IN".

c). Connect the VGA monitor to the 15-pin HDD connector marked "MONITOR IN".

2. Connect PC's to the SwitchCaster:

a). Connect the keyboard inputs of the PC's to the SwitchCaster using 6-pin PS/2 male/male extension cables, one for each PC. Keyboard port of PC #1 connects to the connector marked "PC1 KBD". Connect PC #2 keyboard port to the connector marked "PC2 KBD".

b). Connect the mouse inputs of the PC's to the SwitchCaster using 6-pin PS/2 male/male extension cables, one for each PC. Mouse port of PC #1 connects to the connector marked "PC1 MSE". Connect PC #2 mouse port to the connector marked "PC2 MSE".

c). Connect the Video outputs of the PC's to the Switch using 15-pin HDD15 male/female extension cables, one for each PC. Although standard VGA cables can be used, for lengths greater than 6 feet (2 m) we recommend the use of high quality, mini-coax video cables, such as the VETRA model number VIP-302-CVGA series of cables, to maintain video quality. Connect the video output port of PC #1 to the connector marked "TO PC1 MON". Connect PC #2

video output to the connector of the SwitchCaster marked "TO PC2 MON".

3. Connect Power to the SwitchCaster:

Normally, the SwitchCaster derives its power from powered up PC's. The power used by the keyboard and mouse varies with the particular type of these peripherals, and the power provided by PC's on their keyboard and mouse connectors varies as well. For this reason, the SwitchCaster may optionally be powered from an external power source, such as the VETRA model VIP-210 regulated power supply. The SwitchCaster does not come with a power supply. You may order the VIP-210 separately from Vetra. **Use of other power supplies without the advance approval of Vetra Systems Corporation may void the warranty.**

OPERATION

1. Power Up Sequence:

There is no separate power control for the SwitchCaster. The SwitchCaster derives its power when either one of the four PC's that are connected to the switch are powered up. The PC's may be powered up in any order, and may be powered down at any time and in any order without affecting the operation of the SwitchCaster or its attached PC's.

A Power Jack marked "+5VDC IN" on the back panel of the SwitchCaster is provided in case an external power supply is needed. A separate power source may be required if the keyboard and PS/2 mouse being used draws more current than can be provided from a single PC source.

> **Note:** Some of the new Internet keyboards on the market can draw as much as 500 ma of current. Also the new Optical PS/2 mice may require as much as 100 ma to operate.

2. PC Selection:

Selection of a PC to operate (the active PC) can be done either by keyboard hot key sequence, available on all models of the SwitchCaster or by the "NEXT PC" button on standard models (non DE version) or via Direct Entry switches on the DE version of the SwitchCaster. In addition to individual selection, the PC's may be accessed automatically, in sequence, by invoking the Auto Scan mode.

a). The NEXT PC Button (available on Standard models only): Pressing the NEXT PC button cycles you through all channels on the SwitchCaster starting from 1 to 2 and then back to 1 again, or starting from the PC that is already selected to the next higher numbered PC. When selection of the PC is complete, the corresponding green "SEL" indicator will be on.

b). Direct Entry (available on DE models only): To select another PC, press the "PC SELECTION" pushbutton for the appropriate PC desired. When selection of the PC is complete, the corresponding green "SEL" indicator will be on.

c). Keyboard "Hot-Key" Selection (available on all models): To select a PC, first hold down the Scroll Lock Key, then pressing and releasing the top row keyboard keys 1 or 2. Then release the Scroll Lock key. The number keys must be released before the Scroll Lock Switching takes place on the **release** of the Scroll Lock Key, which also rearms the keyboard selection mechanism. When selection of the PC is complete, the corresponding green "SEL" indicator will be on.

d). Auto Scan Mode (available on all models):

1) Enable Auto Scan Mode: To enable Auto Scan, first hold down the Scroll Lock Key, then press and release the A key and finally release the Scroll Lock key. Auto Scan starts on the **release** of the Scroll Lock key, which also rearms the keyboard selection mechanism. The first PC selected will be the lowest numbered powered PC. When Scan reaches the highest numbered powered PC it will start from the beginning again with the lowest number powered on PC. Auto Scan will continue to scan all powered on PC's until it is told to stop.

2) Stop Auto Scan Mode: Auto Scan mode can be stopped by using the keyboard to select a PC ("Hot-Key" selection available on all models), using the "NEXT PC" button (on standard models), the "PC SLECTION" button (on DE models) or by the Stop Auto Scan keyboard sequence (available on all models) below:

To stop Auto Scan via keyboard sequence, first hold down the Scroll Lock Key, then press and release the S key and finally release the Scroll Lock key. Auto Scan stops on the **release** of the Scroll Lock key, which also rearms the keyboard selection mechanism.

e). New KVM Features

1) **Scroll-Lock N:** Finds and selects the Next powered channel.

2) **Scroll Lock 0 (zero):** Deselects all channels. This can be used if you want to, say, multicast keyboard only, but first make sure that the mouse is not connected to any channel.

3) **Selection of unpowered channels is now possible:** Typing Scroll-Lock 1 or 2 or using direct entry keys will select unpowered channels (Auto Scan and Scroll Lock N still skip unpowered channels).

f). Broadcasting Features

1) **Scroll Lock B:** Selects multicasting. All PC channels receive keyboard and mouse multicasted input.

2) **Scroll Lock K:** Selects keyboard only multicasting. All PC channels receive keyboard multicasted input. Mouse is connected only to one PC channel, the one currently selected.

3) **Scroll Lock M:** Selects mouse only multicasting. All PC channels receive mouse multicasted inputs. Keyboard is connected only to one PC channel, the one currently selected.

Any valid scroll-lock command will override all previous commands. For example, scroll-lock 1 will select PC channel 1 and cancel all multicasting. Pressing next button or direct entry buttons, changes the selected channel but does not cancel multicasting.

4) **Scroll Lock I:** Enables inversion multicasting. The currently selected channel is blocked from receiving multicasts. Works with keyboard, mouse, and combined multicast. Inversion can only be cancelled by typing scroll-lock O.

5) **Scroll Lock O:** Turns off inversion multicasting. All channels receive multicast when multicasting is on.

Note, typing scroll-lock I or O does not actually start or stop multicasting. It only toggles the inversion on or off. Inversion can be turned on or off at any time whether multicasting is on or off.

Some Useful Examples:

In inversion multicasting, the currently selected channel is blocked from receiving multicasts. This means that when selecting keyboard-only multicasting, for example, the keyboard is locked out, but the mouse is not. The user can use the mouse control the selected channel and simultaneously use the keyboard to control the other multicast channels (you can control your lead character with the mouse, and you backup army with the keyboard, at the same time).

Scroll lock S stops Auto Scan and cancels multicasting without changing channels.

Scroll lock anything (except I and O) cancels multicasting. Generally, selecting multicasting does not affect anything else. For example, selecting multicasting does not affect selected channel. It does not cancel Auto Scan.

Backlink is fully functional, but only provide link to the selected channel.
SPECIFICATIONS

Mechanical Dimensions

Model #	Height	Width	Depth	Weight
VIP-802-KM-B	2.63" (6.68 cm)	6.06" (15.39 cm)	6.32" (16.05 cm)	1 lb. 1 oz.
VIP-802-KMV-B	2.63" (6.68 cm)	6.06" (15.39 cm)	6.32" (16.05 cm)	1 lb. 4 oz.
VIP-802-KM-B-DE	3.38" (8.59 cm)	6.06" (15.39 cm)	6.32" (16.05 cm)	1 lb.4 oz.
VIP-802-KMV-B-DE	3.38" (8.59 cm)	6.06" (15.39 cm)	6.32" (16.05 cm)	1 lb. 7 oz.

Environmental   Operating Temp: 5 to 104 deg. F (-15 - 40 deg. C)
                          Storage Temp: -4 to 122 deg. F (-20 - 50 deg. C)

Supported Hardware   Computer: IBM PC/AT, PS/2 and 100% compatibles
                          Video Monitors: VGA, SVGA
                          Maximum Resolution: up to 1600 x 1200 to 75 Hz
                          Peripherals: AT and PS/2 keyboards, PS/2 mouse, IntelliMouse (PS/2 only)