

# Tailor Made Audio Video Routing Switchers

Kramer tailor made routing switchers are the ideal choice for high performance, high bandwidth routing switchers for non standard combinations of inputs, outputs, video and audio formats. With bandwidth of over 200MHz, these switchers are capable of routing any number of CV,S-video, RGB, YUV and RGBHV video signals on BNC's as well as audio signals, mono or stereo, balanced or unbalanced on detachable terminal blocks. Optional modules for Vertical Interval switching, VCA (Voltage Control Amplifier) and output level control, IR control, sync and color bar generation and text generation are available. The switchers are operated by

RS232 or RS422 serial connection and each cross point, whether video, audio or VCA has a unique address controllable via PC or touch panel. Kramer offers a simple and user-friendly software program which has individual window indicators for audio, video and VCA cross points. The status of the switcher appears on its own display. The 19" 1U control Touch Panel has an LCD display, four search buttons and 1 validation "take" button. These machines permit audio-follow-video or audio breakaway switching. The price/performance is perfect for medium and large-sized routing applications.



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VIDEO AND AUDIO SWITCHERS, MATRIX SWITCHERS AND CONTROLLERS

## TECHNICAL SPECIFICATIONS

VIDEO BANDWIDTH:	250MHz. -3dB (typical).
AUDIO BANDWIDTH:	24kHz. -3dB.
IN-OUT DELAY:	35nS.
DIFF. PHASE:	<0.5 Deg.
DIFF GAIN:	<0.5%.
LUMA S/N:	> 70 dB.
VIDEO CROSSTALK:	-60dB adjacent channels, -75dB remote channels (at 4.43 MHz.).
AUDIO CROSSTALK:	-85 dB@20kHz.
THD+ NOISE:	0.05%.
S/N RATIO:	>90dB.
DIMENSIONS:	19" x 14" x 3,6,9, or 12 U (W, D, H).
POWER SOURCE:	230VAC, 50/60Hz, (115VAC U.S.A.)
ACCESSORIES:	Detachable A/C cord.

## TYPICAL APPLICATIONS

- ▣ Presentation and production applications.



## Remote Controller

## VS-1xl

The VS-1xl RS-232 Remote Controller interfaces between any KRAMER RS-232 Controlled switcher or matrix switcher and a remotely located simple switch assembly. By pressing one of the remote switches, a connection command is forwarded to the switcher via the VS-1xl and the RS-232 link. The VS-1xl allows remote control of a KRAMER switcher, without interfering with the local control performed by the built-

in switches and without using a PC. The VS-1xl is part of the Kramer TOOLS family of compact, high quality, and cost-effective solutions for a variety of applications. The VS-1Pxl is an optional 24 switch assembly in a small enclosure, that can be rack mounted and is connected to the VS-1xl via a 25 flat cable equipped with the appropriate connectors.



### TECHNICAL SPECIFICATIONS

INPUTS:	Up to 24 remote momentary switches on a DB25F connector.
OUTPUTS:	DB9 connector for link to a Kramer switcher.
CONTROLS:	Up to 24 remote key switches; 8 Dipswitches for programming.
POWER SOURCE:	12 VDC, 100 mA.
DIMENSIONS:	12 cm x 7.5 cm x 2.5 cm (4.7" x 2.95" x 0.98") W, D, H.
WEIGHT:	0.25 kg (0.6 lbs.) approx.
ACCESSORIES:	Power supply, mounting bracket.
OPTIONS:	19 rack adapters RK-T1, RK-T3 ( see pages 6.24, 6.25 for details).

### TYPICAL APPLICATIONS

- Video production studios.
- Live broadcasting remote control.
- CCTV and remote security applications.

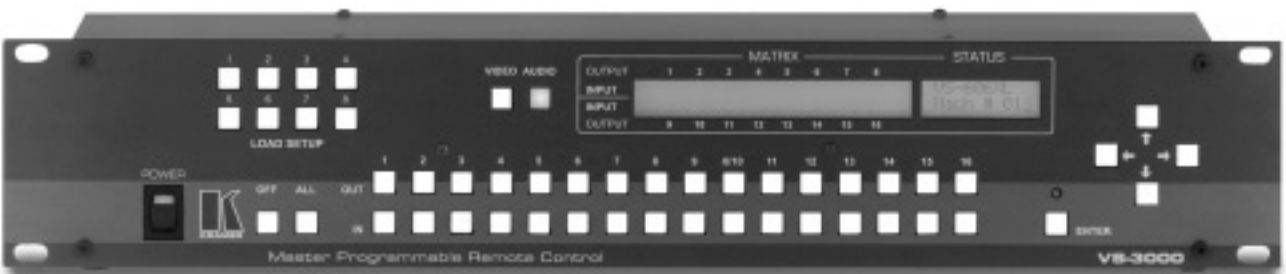


# Master Programmable Remote Control VS-3000

The Kramer VS-3000 is a master programmable remote control system, designed for broadcast and industrial studio applications. It can control the Kramer switchers and can be easily upgraded to be used with future Kramer switchers.

The VS-3000 can create, using the built-in RS-232 and RS-485 interfaces, any configuration consisting of one PC, up to 15 remote controllers and up to 15 switchers. It can control a stand-alone switcher or can be a part of a system, controlling and reflecting the status of all connected devices. The VS-3000 itself may be

activated, or an internal pre-set recalled, using dry contact-closure control. It can control up to 128 inputs/outputs combinations. The VS-3000 can address the individual functions of the connected devices, such as crosspoint connections, audio follow video or breakaway, etc. It can internally store and recall various setups for convenient and instant studio control. The unit may be rack or desktop mounted due to its shallow-profile and 19 inch design. It is operated by a 12VDC power source, qualifying it for field operation.



VIDEO AND AUDIO SWITCHERS, MATRIX SWITCHERS AND CONTROLLERS

## TECHNICAL SPECIFICATIONS

INPUTS/OUTPUTS:	2x RS-232 DB-9 in / out connectors. 1x RS-485 connector on detachable terminal blocks. 9 pole, remote dry-contact connector on detachable terminal blocks. 18 pole, keyboard extension connector on detachable terminal blocks.
SETTING MEMORY:	8 immediate setups for fast access and retrieval.
CONTROL:	Front panel keys, RS-232, RS-485, contact closure switches, external keyboard.
DIMENSIONS:	19 inch (W), 2 inch (D), 2U (H) rack mountable.
POWER SOURCE:	12 VDC, 800 mA.
WEIGHT:	1.7 kg. (3.8 lbs.) approx.
ACCESSORIES:	Windows 95/98 control software.

## TYPICAL APPLICATIONS

- Video production and duplication studios.
- Live broadcasting and editing.

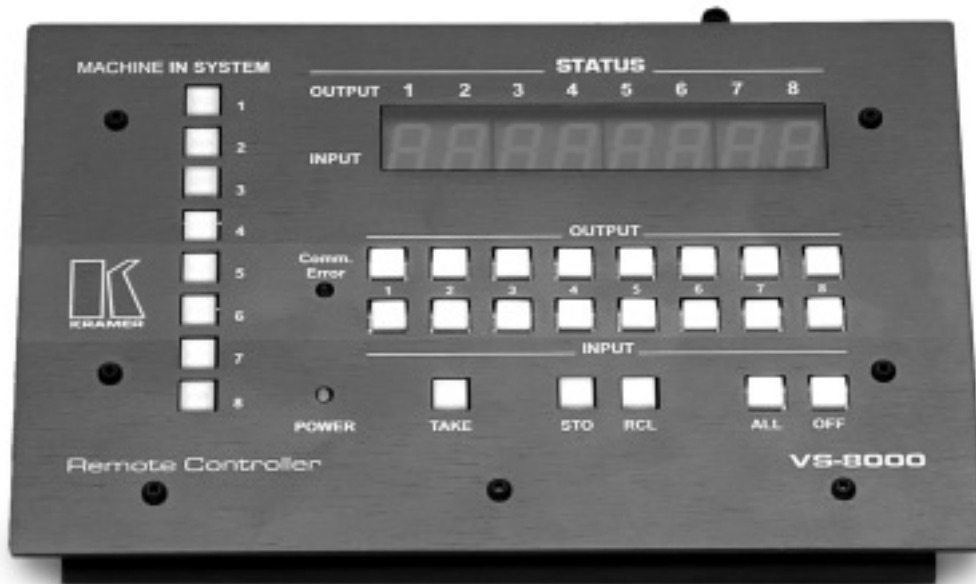


## Master Remote Controller

## VS-8000

The KRAMER VS-8000 is a master remote control unit, designed for broadcast and industrial studio applications. The VS-8000 allows access and control of all Kramer "88"-series matrix switchers - the VS-88A, VS-88V, SD-7588A, SD-7588V and the VS-4228. Using the built-in RS-485 interface, the VS-8000 allows the creation of any configuration consisting of one PC, an unlimited number of remote controllers, and up to eight "88"-series matrix switchers. The VS-8000 can activate all the functions of the connected devices, individually or

grouped. Eight illuminated push buttons allow easy configuration of each matrix switcher or make it part of the "In System" group. Eight bright LED displays show the status of any stand-alone or "In System" matrix switcher. The status of the connecting RS-485 line is continuously monitored by the controller. The machine may be desktop mounted or built into a controlling table, thanks to its shallow-profile design. The machine is fed from a 12V DC source, making it ideal for field operation.



### TECHNICAL SPECIFICATIONS

INPUTS/OUTPUTS:	1x RS-485 connector on detachable terminal blocks.
CONTROL:	8 illuminated pushbuttons each assigned to a different controlled unit address 8 out / 8 in / 5 operational push buttons similar to the "88" matrix switcher series.
DIMENSIONS:	21.6 cm x 3.8 cm x 14 cm (8.5" x 1.5" x 5.5"), W, D, H.
POWER SOURCE:	12V DC, 200 mA.
WEIGHT:	0.4 kg (0.9 lbs.) approx.
ACCESSORIES:	Power supply, mounting bracket.

### TYPICAL APPLICATIONS

- Video production and duplication studios.
- Live broadcasting and editing.



## Bluetooth® Remote Controller

### BT-1

The Kramer BT-1 is a high performance remote controller for all Kramer RS-232 controlled devices. The BT-1 uses Bluetooth® technology to transfer RS-232 commands, by wireless transmission, from a PC or other controller, to any Kramer RS-232 controlled device (switcher, matrix switcher, etc.) There are two operation ranges for the BT-1: 10 meters and 100 meters. Several controlled devices may be operated

simultaneously, even through a wall from one room to the other, eliminating the wiring and the operation distance limitations of wired RS-232. The device will also be available as a USB device in the near future. The transmitter and receiver sets are identical "dongle" type devices, and may be easily multiplied in a big studio for multi-control.



#### FEATURES

- ☐ Bluetooth Baseband core.
- ☐ Integrated ARC3 RISC processor up to 100 MIPS. Fully compliant and qualified for Bluetooth Specifications 1.1
- ☐ 128 KB integrated SRAM for protocol stack and application support.
- ☐ Programmable RF interface, compliant with BlueRF Power management for RF and internal block.

#### PHYSICAL CHARACTERISTICS

- ☐ 2.5V core, 3.3V I/O (0.25u CMOS)
- ☐ Dongle type device with external power supply.

#### TYPICAL APPLICATIONS

- ☐ Video / audio wireless studio control.
- ☐ Presentation applications for remote control of RS-232 devices.



## Infra-Red Remote Control

## IR-1

The Kramer IR-1 is a high performance remote control device for all Kramer RS-232 controlled switchers. The system is comprised of a hand held remote transmitter and a remote receiver, connected to the RS-232 port of any Kramer RS-232 controlled switcher and matrix switcher. The transmitter includes the protocols of the

Kramer devices, and by a simple setup procedure, the hand held unit may be programmed to control any Kramer machine. Built-in non-volatile memory retains the last setting, even when power is momentarily interrupted.



### TYPICAL APPLICATIONS

- ☐ Video-audio studio remote control applications.
- ☐ Remote control of presentation applications using Kramer switchers and matrices.

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WEB: [www.kramerelectronics.com](http://www.kramerelectronics.com)

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