Sierra PRO™ Series Routers

8x4, 8x8, 12x4, 12x8, 16x8, 16x16, 32x16, 32x32

The Sierra PRO routers are a full featured series of high bandwidth routers for RGBHV, RGBS, component video (RGB/YUV) and s-Video(Y/C) signals. Each frame size can be ordered as a 5-channel (RGBHV), 4-channel (RGBS), 3-channel (RGB/YUV) or 2-channel s-Video (Y/C) system, with or without balanced stereo audio. Each frame size can also be ordered with high bandwidth video boards in place of the H and V or composite sync boards so video can be input into all channels (or levels) of the router.

WARRANTY - 7 Years.

VIDEO FEATURES - R/G/B Video Boards.

- **High Bandwidth** - 400MHz (- 3dB) fully loaded.
- **Very Low Crosstalk** - 80dB @ 1MHz, 47dB @ 100MHz, - 30dB @150MHz.
- **Matrix Mapping™ Universal Breakaway Switching** - A unique and valuable benefit of Sierra PRO routers. This feature allows the switching of every level of every input of the router independently. Switch a single level or any combination of levels of the R, G, B, H, V, left audio and right audio levels of any input. For example, input a composite video signal on the R level of input one and an s-Video (Y/C) signal on the G and B levels of input one and switch only the composite video signal on the R level, switch only the s-Video Y and C signals on the G and B levels, or switch all three levels together.
- **Room Grouping Capability** - Several inputs may be grouped and operated independently of other input groups on the routers. This allows one router to be used for multiple "rooms" where the control system for each room will address only the inputs and outputs assigned to that room.
- **Video Follow Sync™ Switching** - The H and V channels of an RGBHV signal are switched in advance of the RGB video channels of the signal to provide clean, glitch-free switching between most non-synchronous sources.
- **Qwik Adjust Knob™ Rotary Control interface** - This user intuitive knob along with the 80 character LCD display provides quick and convenient setup, adjustment and signal switching.
- **Video Mute Capability.**
- **Output Disconnect Feature.**

SYNC FEATURES - H/V Sync Boards.

- **Sync Reporting** - Through the G.R.I.P.™ control software, RS-232, or the front panel, the router can capture and report the input sync rates for each input signal.
- **Input Detection** - 200mv. Re-shapes and re-squares sync to output correct TTL level.
- **Selectable Termination** - 510 or 75 Ohm (each input).
- **Genlock Input** - Looping internal sync input for vertical interval switching.

AUDIO FEATURES

- **Audio Type** - Balanced or un-balanced stereo on terminal blocks.
- **Input (Level) Adjustment Capability (-10dB to +15dB)** - Each input via RS-232, front panel, and G.R.I.P software.
- **Output (Volume) Adjustment Capability (Mute, -59.5dB to +15dB)** - Each input via RS-232, front panel, and G.R.I.P software.
- **No Zipper Effect** - Sierra PRO routers employ zero crossover chip technology which eliminates the annoying "zipper sound effect" associated with digital volume controls.
- **Audio Mute Capability.**
- **Crosstalk** - Series 8 & 12: 80dB @ 1kHz, Series 16 & 32: 80dB @ 15kHz.
- **S/N Ratio (20 to 20kHz)** - Series 8 & 12: 90dB, Series 16 & 32: 110dB.

OTHER FEATURES

- **Firmware Updates** - Downloadable.
- **Control** - Local front panel control with 80 character LCD readout.
  RS-232/422.
  RS-485 for optional control panels.
  IP (Ethernet) control & Web page serving - PC only (Optional).
  G.R.I.P: Windows® - based router setup/diagnostic software.
- **Redundant Power Supplies** - Optional (Standard on all 32 x 32 and 32 x 16 models).
- **Approvals** - UL & CE.
- **Control Panels (Optional)** - Programmable, Single Bus and XY.
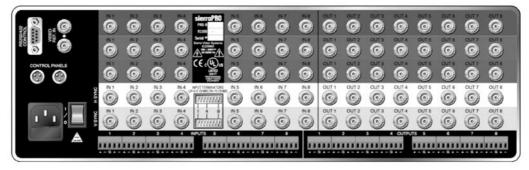
KRAMER ELECTRONICS, Ltd

Sierra PRO™ 8 Series Routers

8x4 & 8x8 RGBHV, RGBS, RGB, & Y/C Routers with Balanced Audio

The **Sierra Pro 8** series are high bandwidth routers for RGBHV, RGBS, RGB and s-Video (Y/C) signals. These units come in a compact 3U (5.25") frame and can route any or all inputs to any or all outputs. They can be ordered in 5-channel (RGBHV), 4-channel (RGBS), 3-channel (RGB/YUV) or 2-channel (Y/C) configurations, each with or without balanced stereo audio.

Sierra Pro 88 Series

Sierra Pro 8 x 8 Configurations with 400MHz (- 3dB) Video Channels

OPTIONAL CONFIGURATIONS:

Sierra PRO 88V5S	8 x 8 5-channel (3 video and 2 sync channels) with stereo audio.
Sierra PRO 88V4S	8 x 8 4-channel (3 video and 1 sync channels) with stereo audio.
Sierra PRO 88V3S	8 x 8 3-channel (3 video channels) with stereo audio.
Sierra PRO 88V2S	8 x 8 2 channel (2 video channels) with stereo audio.
Sierra PRO 88V5	8 x 8 5-channel (3 video and 2 sync channels).
Sierra PRO 88V4	8 x 8 4-channel (3 video and 1 sync channels).
Sierra PRO 88V3	8 x 8 3-channel (3 video channels).
Sierra PRO 88V2	8 x 8 2 channel (2 video channels).

Sierra Pro 84 Series

Sierra Pro 8 x 4 Configurations with 400MHz (- 3dB) Video Channels

OPTIONAL CONFIGURATIONS:

Sierra PRO 84V5S	8 x 4 5-channel (3 video and 2 sync channels) with stereo audio.
Sierra PRO 84V4S	8 x 4 4-channel (3 video and 1 sync channels) with stereo audio.
Sierra PRO 84V3S	8 x 4 3-channel (3 video channels) with stereo audio.
Sierra PRO 84V2S	8 x 4 2 channel (2 video channels) with stereo audio.
Sierra PRO 84V5	8 x 4 5-channel (3 video and 2 sync channels).
Sierra PRO 84V4	8 x 4 4-channel (3 video and 1 sync channels).
Sierra PRO 84V3	8 x 4 3-channel (3 video channels).
Sierra PRO 84V2	8 x 4 2 channel (2 video channels).

▪ Custom 4-channel (V4V) and 5-channel (V5V) models contain all 400MHz video channels.

Sierra PRO™ Router Performance Specifications

VIDEO

Input impedance 75Ω 1%
Input connector type .... BNC
Video input level .... 300mV to 2.5V P-P
Pulse input level .... 0.2V to 5V P-P
Video bandwidth .... 400MHz @ - 3dB
Pulse rate .... up to 200kHz
Crosstalk .... - 80dB @ 1MHz
- 47dB @ 100MHz
- 30dB @ 150MHz

1 input to many outputs .... All electrical specifications remain the same
Video gain .... Unity
Video output level .... 200mV to 2.5V P-P
Pulse output level .... > 2V P-P into 75Ω
Output impedance 75Ω
Output connector type .... BNC
Operating temperature range .... 0 to 40 deg. C
Storage temperature range .... - 10 to + 60 deg. C
Performance temperature range .... 10 to 30 deg. C
Humidity .... 0 to 100% RH non-condensing
Passband Response .... +/- 1dB DC - 300MHz
Pulse Rise Time .... 1-10 nanoseconds

AUDIO

Maximum source output level .... + 24dBu balanced
18dBu un-balanced
Input impedance .... > 20kΩ
Output impedance
  Series 8 and Series 12 .... 50Ω unbalanced, 100Ω balanced
  Series 16 and Series 32 .... 150Ω, balanced
Voltage gain
  Series 8 and Series 12 .... Unity +/- 0.5 dB (driving high-Z balanced output)
  Series 16 and Series 32 .... Unity +/- 0.1dB (driving high-Z balanced output)
Frequency response .... 20 to 20kHz +/- 0.1 dB, - 3dB @ 100kHz
S/N Ratio (20 to 20kHz)
  Series 8 and Series 12 ....> 90dB, output 21dBu, balanced
  Series 16 and Series 32 .... 110dB ref. to + 24dBm
Crosstalk (all inputs hostile)
  Series 8 and Series 12 ....> 80dB @ 1kHz
  Series 16 and Series 32 .... 80dB @ 15kHz
IM & THD (20 to 20kHz) .... 0.05% to + 24dBm
Audio Connectors .... Removable captive screw terminals