

# IN20804 8-Input, 4-Output Video Matrix Switcher



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## FEATURES

- 8 x 4 Matrix Switcher
- 100 MHz Video Bandwidth
- Stereo Audio Inputs / Outputs - Balanced (5-Pin Phoenix) and Unbalanced (RCA) Models Available
- Master Volume Control and Mute
- Unit Stores Unique Input Gain Trim Levels for Each Input
- Audio-Follow-Video Switching or Audio / Video Breakaway
- Vertical Interval Switching with Synchronous Video Sources
- Control From Front Panel or Remotely Via RS-232 Serial Control
- 16 Configuration Memories
- Unit Can Store and Transmit Serial Commands to Control Projectors and Other Serially Controlled Equipment

The IN20804 Video Matrix Switcher offers 8 x 4 video / audio matrix switching capability. Six models are available to match your switching requirements:

Model	Configuration	Signal Compatibility
IN20804-1	Video	Composite Video Only
IN20804-2	Video + Audio	Composite Video + Stereo Audio (Balanced)
IN20804-3	Video + Audio	Composite Video + Stereo Audio (Unbalanced)
IN20804-4	Y/C	Y/C Video or 2 Composite Video Signals
IN20804-5	Y/C + Audio	Y/C Video + Stereo Audio (Balanced)
IN20804-6	Y/C + Audio	Y/C Video + Stereo Audio (Unbalanced)

**Two Switching Modes** - Featuring two switching modes (Direct & Matrix), the IN20804 combines the easy operation and serial control capabilities of a projector switcher with the flexibility and routing capabilities of a matrix switcher.

**Direct Switching Mode** - In Direct Mode, the IN20804 acts as a projector switcher, routing composite, S-Video and stereo audio signals to the appropriate outputs. The user simply presses one of the 8 large input buttons and that input signal is automatically routed to the pre-programmed output or outputs. The IN20804 can also store and transmit commands to a display device which tell the display to switch inputs and/or recall a convergence memory.

In **Matrix Switching Mode** the IN20804 operates as a true 8 x 4 video / audio matrix switcher. Users press an output button followed by an input button and a new patch is immediately executed. The unit features large switching buttons and ample space for installers to affix custom labels specifying input sources and output devices. Matrix Mode is ideal for advanced operations requiring complete flexibility over input / output routing.

**Labelling System** - The IN20804 features attachment posts to securely hold engravable name plates. The optional IN9346 nameplate kit includes two plastic plates that can be engraved to neatly show the names of each input and output device.

## SPECIFICATIONS

### INPUT:

Video Connectors: IN20804-1 / -2 / -3: (8) female BNC  
IN20804-4 / -5 / -6: (8) Sets of 2 female BNC  
Stereo Audio Connectors: IN20804-2 / -5: (8) female 5-Pin Captive Screw  
IN20804-3 / -6: (8) pairs RCA female  
Signal Levels: Video: +/- 3.0 Volts max.  
Audio: +/- 8 Volts max. (high Z), +/- 4 Volts (low Z)  
Impedance: Video / Sync: 75 ohms Audio: 600 ohms

### OUTPUT:

Video Connectors: IN20804-1 / -2 / -3: (4) female BNC  
IN20804-4 / -5 / -6: (4) Sets of 2 female BNC  
Stereo Audio Connectors: IN20804-2 / -5: (4) female 5-Pin Captive Screw  
IN20804-3 / -6: (4) pairs RCA female  
RGB Bandwidth: >100 MHz any channel driving any number of outputs, measured with .7V input signal at -3dB  
Audio S/N Ratio: Greater than 100 dB  
Audio THD: 0.007% - 1 KHz signal at 1V p-p

### GENERAL:

Serial Control Ports: 1200 to 38400 baud, RS-232, RS-422, RS-485  
(2) Serial Ports, 5-Pin Phoenix Brand Connectors  
Power Supply: Internal 90 to 260 VAC, 47 to 90 Hz (universal)  
Product Weight: 10 lbs. / 4.5 kg Shipping Weight: 14 lbs. / 7 kg  
Dimensions: 5.25" x 17" x 12.2" / 13.3cm x 43.2cm x 31cm  
Regulatory Approvals: UL1950, CAN/CSA-22.2 No.950, Third Edition  
CE: EN55022 (1987), EN50081-1 (1991), EN50082-1 (1992 and 1994), EN0950-92

Featuring **16 Configuration Memories**, the **IN20804** can store and recall frequently used configurations for easy recall with a single button. 8 memory settings are available from the front panel and all 16 configuration memories are available via RS-232 serial commands. The memories store all input / output patches as well as the current audio level for each output. The configuration memories make it easy to set up complex switching arrangements ahead of time and then recall them quickly and reliably at the appropriate times during a show or presentation.

**High Resolution Video Switching** - With video bandwidth in excess of 100 MHz, the **IN20804** provides ample performance for composite and s-video signals.

The **Blank Button** temporarily disconnects the current input when it is activated. When the blank button is pressed again (deactivated), the switcher returns to the last selected input.

**Vertical Interval Switching** capability provides glitch-free switches when used with synchronous video sources. The vertical interval switching mode can be engaged using an RS-232 serial command or by pressing specific buttons at power on. The **IN20804** derives timing information from the house sync signal applied to the Genlock In connector. In vertical interval switching mode, the switcher delays the actual switch so that it occurs during the vertical blanking interval. Vertical interval switching mode is compatible with synchronous video signals in the composite or s-video formats.

**Audio Breakaway Switching** - The default operation mode for the **IN20804** is audio-follow-video switching, where audio and video signals switch together. For special applications, users can separate the video and audio switching. A single front panel button allows for quick selection of switching mode: Video + Audio, Video Only, or Audio Only.

**Advanced Audio Switching Capability** - **IN20804** models with audio capability offer very high quality switching and amplification for stereo audio input and output signals. Unique gain trim levels can be adjusted and stored for each input, helping standardize signal levels among various types of audio sources. Each output has a master volume control and mute capability that can be controlled from the front panel or via RS-232 serial commands. Left / Right balance can also be adjusted as required using RS-232 commands. Two types of audio switching boards are available:

#### **Balanced Audio Models**

The **IN20804-2** and **IN20804-5** feature 5-pin captive screw connectors for audio inputs / outputs and are compatible with balanced or unbalanced audio signals. By wiring the inputs and outputs appropriately, unbalanced input signals can be output as balanced audio and vice versa. These models are ideal for permanent installations and other applications requiring balanced / unbalanced signal compatibility and quick input / output termination to bare wires.

#### **Unbalanced Audio Models**

The **IN20804-3** and **IN20804-6** feature female RCA connectors for audio inputs / outputs and are compatible with unbalanced audio signals. These models are ideal for rental, staging and other applications where users must quickly make input / output connections using standard RCA patch cables.

**Projector and Audiovisual Device Control** - The **IN20804** can store and transmit RS-232, RS-422 or RS-485 serial commands to control projectors, inline products or other serially controlled A/V equipment. Serial commands can be automatically triggered when inputs or outputs are selected. Windows™ 95/98/NT compatible software provided with the switcher makes it easy to set up the switcher and store control codes. **All serial control codes are provided by the installing technician.**

**Flexible Capabilities** - Featuring 8 x 4 matrix switching, 100 MHz bandwidth and two switching modes, the **IN20804** is ideal for permanent installations, multi-media production suites, rentals, staging operations and any other audiovisual / display system requiring a high performance matrix switcher with intuitive operation.