

# INSTRUCTIONS



## **P-1421** **1080p 6x4 Component Video** **Matrix Switcher**

● CHANNEL VISION™

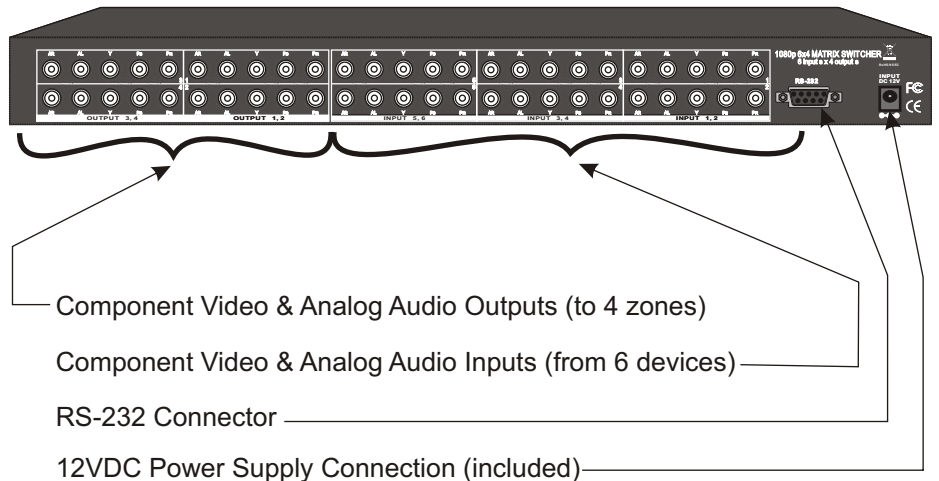
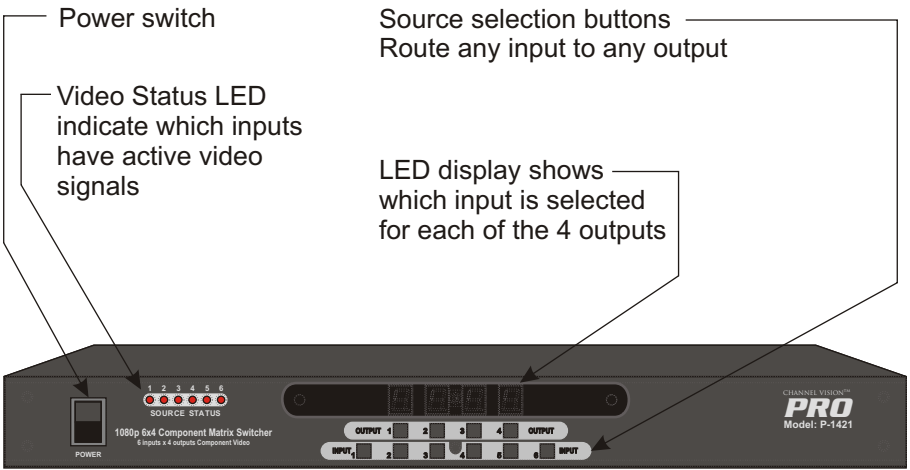
**PRO**

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The **P-1421** is a 1080p 6x4 Matrix Switcher for HDTV video signals that allows 4 different displays to view any of the 6 different sources independently. It can be controlled via the front panel buttons, IR remote control, or RS-232 commands.

**Features:**

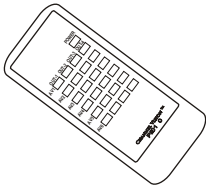
- RS-232 and IR control capabilities
- Audio & Component Video switched simultaneously
- Easy to read LED display



# What is a Matrix Switcher?

Simultaneous access to multiple sources is what differentiates a matrix switcher from a simple switch which would only allow one source to be viewed by multiple zones. A matrix switcher allows multiple users to access signals from multiple source components. This type of switching is ideal for whole-house application. For example, it may be necessary to view the DVD player in the bedroom while, at the same time, viewing the satellite receiver in the home theater. The P-1421 is perfect for this application, as it allows 6 sources to be accessed by 4 different users simultaneously.

## Included Accessories



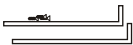
**P-0120 Remote Control ...** The hand held remote can be used to control the P-1421 from the front of the unit or from another room through the use of an IR repeating system. The IR control codes can also be downloaded from [www.channelvision.com](http://www.channelvision.com).



**Power Supply... 12VDC@2000mA**



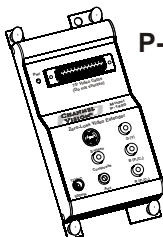
**Serial Control Cable...** Use when connecting the P-1421 to a serial control device.



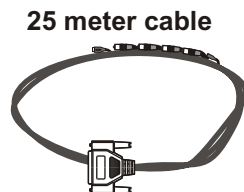
**Rack Ears...** Use when mounting the P-1421 to a 19" rack.

## How do the signals get to other rooms?

We suggest the use of a high quality video distribution system such as Channel Vision's P-1400 zero-loss video distribution system. This unit delivers flawless video signals over a 25 meter pre-made cable. The cable has been precisely constructed to match the pre-amplification provided by the P-1400. The cable must not be shortened or the benefits of the P-1400 will be negated.



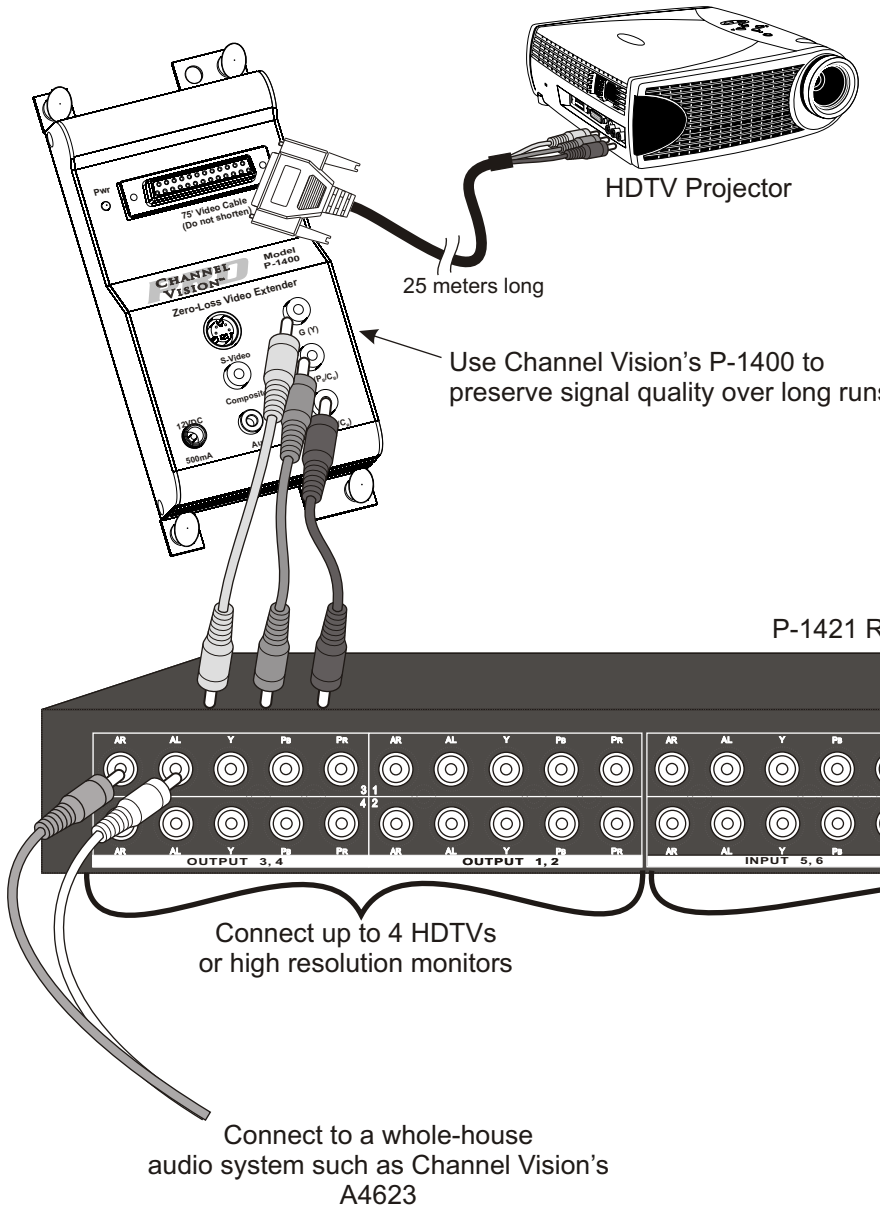
**P-1400**



**25 meter cable**

# Connectio

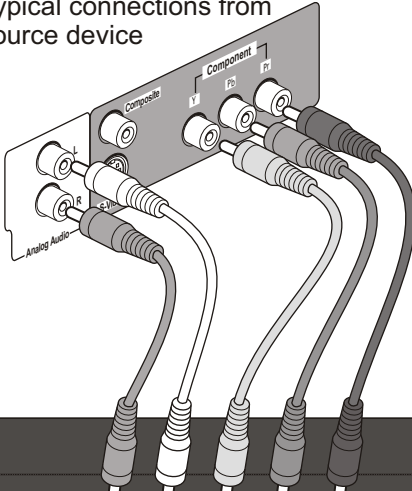
Make all connections



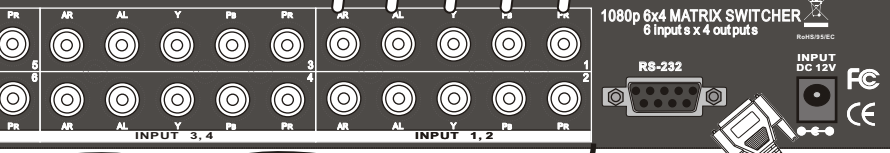
# on Diagram

before applying power.

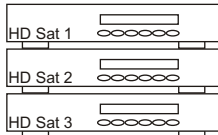
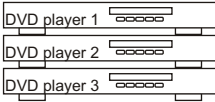
Typical connections from source device



Rear Panel



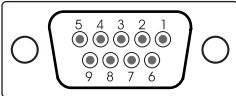
Connect up to 6 source devices here  
For example:



Connect serial data controller  
to the RS-232 port  
(Hex codes on page 7)

## Serial Cable Pin Out

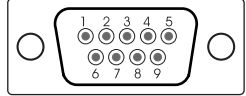
P-1421 RS-232 Pins  
DB-9P, Female



- NC 1 ○
- (TX) 2 ●
- (RX) 3 ●
- NC 4 ○
- (GND) 5 ●
- NC 6 ○
- NC 7 ○
- NC 8 ○
- NC 9 ○

- 1 NC
- 2 (RX)
- 3 (TX)
- 4 NC
- 5 (GND)
- 6 NC
- 7 NC
- 8 NC
- 9 NC

PC RS-232 Pins  
DB-9P, Male



# Control Codes

## Using the Remote:

The model P-0120 remote control comes with the P-1421 Matrix Switcher to allow easy source selection without having to use the buttons on the front the P-1421. The buttons are arranged in 4 columns and 6 rows. There is one column for each output and one row for each source. For example, to select source 6 to be output in zone 4, press the button in the lower right hand corner of the remote.

## Using advanced control systems:

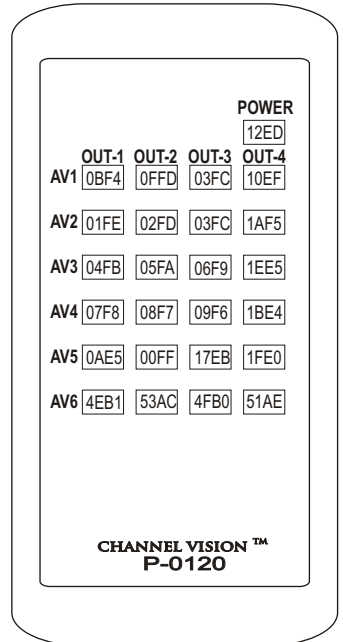
For installations that require more sophistication the P-1421 also supports RS-232 making it well suited for use with Creston, AMX, and other automation systems that support RS-232.

## RS-232 Control Code:

Baud Rate: 9600, No Parity, 8Bit Data, 1 Start bit, 1 Stop bit

Each transmission = 8 ASCII bytes

Note: When the P-1421 receives a command it will respond to the controller with a confirmation code.



Command	Function	Description	Response
SBSYSMON	Power on	System power on	SBALONAK
SBSYSMOF	Power off	System power off	SBALOFAK
SBlxxO01	Channel 1 setting	Changes the 1st output signal. xx is the selected source. xx=(01,02, ..., 06).	SBUDxxO1
SBlxxO02	Channel 2 setting	Changes the 2nd output signal. xx is the selected source. xx=(01,02, ..., 06).	SBUDxxO2
SBlxxO03	Channel 3 setting	Changes the 3rd output signal. xx is the selected source. xx=(01,02, ..., 06).	SBUDxxO3
SBlxxO04	Channel 4 setting	Changes the 4th output signal. xx is the selected source. xx=(01,02, ..., 06).	SBUDxxO4
SBSYSMLK	Locked toggle on	When locked on, only RS232 control is enabled (front panel buttons are disabled)	SBSYSLOK
SBSYSMUK	Locked toggle off	When locked off, RS232, IR, and front panel buttons are enabled	SBSYSULK
SBALLRST	reset	Unit is reset and every output comes from the 1st input	SBRSTACK
SBASKSTA	Ask status	Request status information.	SBSTATAK

Note: Some controllers may not accept ASCII strings. The HEX equivalents for each command are listed below.

Function	HEX Command	Description	HEX Response
Power On	53,42,53,59,53,4D,4F,4E	System power on	53,42,41,4C,4F,4E,41,4B
Power Off	53,42,53,59,53,4D,4F,46	System power off	53,42,41,4C,4F,46,41,48
Channel 1 Setting	53,42,49,30,xx,4F,30,31	Changes the 1st output signal. xx is the selected source. xx=(31,32, ..., 36).	53,42,55,44,30,xx.30,31
Channel 2 Setting	53,42,49,30,xx,4F,30,32	Changes the 2nd output signal. xx is the selected source. xx=(31,32, ..., 36).	53,42,55,44,30,xx.30,32
Channel 3 Setting	53,42,49,30,xx,4F,30,33	Changes the 3rd output signal. xx is the selected source. xx=(31,32, ..., 36).	53,42,55,44,30,xx.30,33
Channel 4 Setting	53,42,49,30,xx,4F,30,34	Changes the 4th output signal. xx is the selected source. xx=(31,32, ..., 36).	53,42,55,44,30,xx.30,34
Locked Toggle On	53,42,53,59,53,4D,4C,4B	When locked on, only RS232 control is enabled (disables front panel buttons)	53,42,53,59,53,4C,4F,4B
Locked Toggle Off	53,42,53,59,53,4D,55,4B	When locked off, RS232, IR, and front panel buttons are enabled	53,42,53,59,53,55,4C,4B
Reset	53,4241,4C,4C,52,53,54	Unit is reset and every output comes from the 1st input	53,42,52,53,54,41,43,4B
Ask Status	53,42,41,53,4B,53,54,41	Request status information.	53,42,53,54,41,54,41,4B

**Specifications: (typical)**

- Video Supported:** 480i/p, 720p, & 1080i/p
- Video Bandwidth:** 325MHz (-3dB), 200mVp-p
- Video Crosstalk:** <80dB @ 5MHz
- Audio Supported:** Stereo Audio, 20Hz~20kHz
- Control Method:** RS-232 and hand held remote
- Power Supply:** 12VDC @ 2A
- Power Consumption (max):** 1.2A
- Safety Approvals:** CE, FCC, RoHS(2002/95/EC)
- Dimensions:** 1.73"H x 17.37"W x 7.87"D
- Shipping Weight** 2.15Kgs / 4.74lbs.

Specifications subject to change without notice.

# CHANNEL VISION™

## **1 Year Limited Warranty**

Channel Vision Technology will repair or replace any defect in material or workmanship which occurs during normal use of this product with new or rebuilt parts, free of charge in the USA, for one year from the date of original purchase. This is a no hassle warranty with no mail in warranty card needed. This warranty does not cover damages in shipment, failures caused by other products not supplied by Channel Vision Technology, or failures due to accident, misuse, abuse, or alteration of the equipment. This warranty is extended only to the original purchaser, and a purchase receipt, invoice, or other proof of original purchase date will be required before warranty repairs are provided.

Mail in service can be obtained during the warranty period by calling (800) 840-0288 toll free. A Return Authorization number must be obtained in advance and can be marked on the outside of the shipping carton.

This warranty gives you specific legal rights and you may have other rights (which vary from state to state). If a problem with this product develops during or after the warranty period, please contact Channel Vision Technology, your dealer or any factory-authorized service center.

Channel Vision products are not intended for use in medical, lifesaving, life sustaining or critical environment applications. Channel Vision customers using or selling Channel Vision products for use in such applications do so at their own risk and agree to fully indemnify Channel Vision for any damages resulting from such improper use or sale.

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