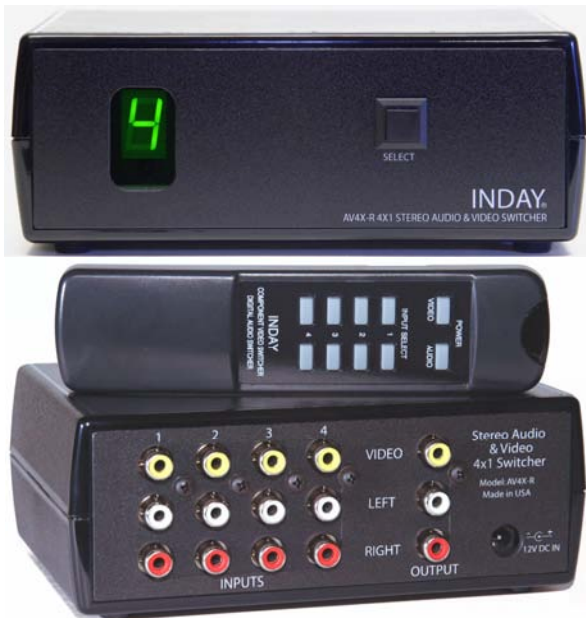# Inday

Multimedia Accessories
www.inday.com

AV4X-R

Stereo Audio
Composite Video
4X1 Switcher
With IR Remote Control
& RS-232 Serial Port Option

Overview And Uses

The **AV4X-R** is a 4-Input to 1-Output, 3 channel switcher. Two channels for Stereo Analog Audio and the third channel for Video or Coax Digital Audio.

The circuitry inside the AV4X-R uses only the best components for ZERO degradation of audio and video signals. The IC's used for each signal path are specifically designed for the type is signal being switched. The result is a very low noise/distortion and flat frequency response output for both Audio and Video.

Typical applications include combining 4 different A/V sources such as VCR's, DVD's and Camcorders to one common output.

Although the AV4X-R is primarily used for switching Stereo Audio and Video, the video channel can be used to switch Coax Digital Audio. This arrangement would allow both types of audio (Analog and Digital) to be switched at the same time. Perfect as a 4 input expansion for any Hi-End Audio System.

Control of your AV4X-R is provided through a front panel switch which cycles through the inputs. It is also used to program the Remote Control characteristics.

The AV4X-R also comes with a Remote-Control to directly access any of the 4 inputs. If you have a Universal Remote such as the Philips Pronto, please visit www.inday.com for Configuration Files to simplify programming this device into a system.

For advanced integration, the AV4X-R also has an RS-232 Serial Control Port. This allows the unit to connect to any Computer for direct control and status. See "RS-232 Control" section for further information.

Setup

Connect your sources, such as VCR's, DVD Players, Camcorders to the inputs of the AV4X-R. Connect the output to your TV or Recording Device.

Typical Color codes for Audio Video components are as follows:

VIDEO Yellow
COAX Orange (Digital Audio)
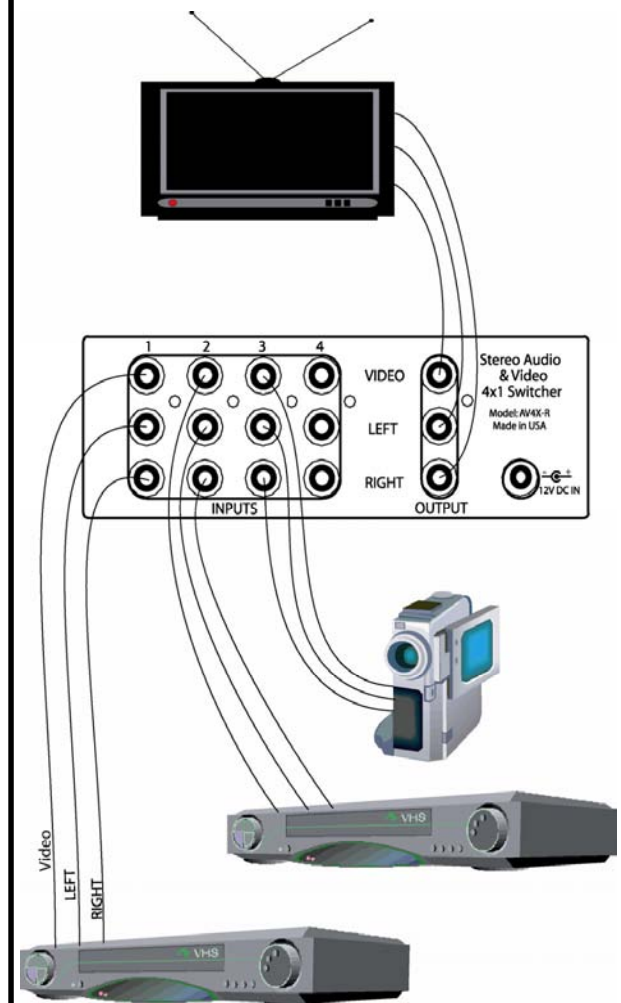L White or Black (Left channel Audio)
R Red (Right channel Audio)

Figure 2 - Typical Setup

Remote Programming

The AV4X-R uses the same remote as our RGB4X-R component video switcher. If this causes a conflict in your system, please contact the factory for other code options.

The Remote Control has 10 buttons. Only 5 of which are active at one time. The unit comes programmed to respond to the left side column of buttons. You can program the unit to switch using the right side buttons, if desired. This facilitates using two AV4X-R's in a system and having independent control over both.

Perform the following to reprogram the AV4X-R:

1-Remove power from the unit by unplugging the 12VDC Connector
2-Press and hold the front panel button
3-Apply power to the unit.
4-Release the front panel button after the display stops blinking.

Each time you perform this operation you are alternating the button group used on the IR remote.

Questions

Q: Can I switch Coax Digital Audio using the video channel.
A: Yes. Coax digital Audio is just AES/EBU digital audio that is designed to run over Coax cable just like video and therefore can be switched the same way

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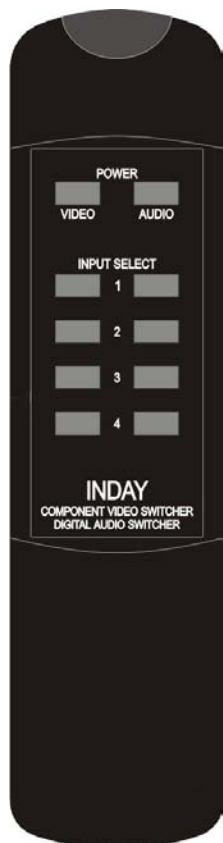
RS-232 Control

RS-232 serial control is provided through a 3.5mm stereo jack on the rear panel. A 3.5mm to DB9 crossover cable is provided. Any Terminal communications program such as Windows "HyperTerminal" will work for control.

Communications parameters are: 9600,N,8,1. See specifications for wiring information.

Once connected, pressing the Enter key will cause the AV4X-R to respond with its help message:
> "AV4X-R Online! Type "S" for Status, Numbers 1-4 for control."

For current status, type the character "S" followed by the "Enter" key. The current input is returned.

To switch inputs, type numbers 1, 2, 3 or 4 then "Enter" . The unit will switch inputs and return a status message.

All other characters will return the help message.

If the AV4X-R is in a powered-off mode via the IR remote control, any Serial port activity will restore power.

Troubleshooting

Problem: I now have noise or interference in the picture that was not there before.
Fix#1: The problem may be "cheap" cables. The RGB4X is extremely wideband. The switching IC's are rated at 700MHz. That's is 166 times the normal bandwidth of composite video (NTSC). If you use marginal cables with poor shielding, external RF interference will penetrate the cables and may cause this interference. Consider your cables to be like your water plumbing. If they leak, you have a problem! You can fix this problem by using a quality coax cable, such as type RG59.
Fix#2: Ground Loops can also cause noise and hum bars. Try lifting the ground leads of your equipment by using a "cheater plug". This is a 2 prong AC adapter without the ground prong, available at most hardware stores.

Specifications

Audio Specifications:
> Color Coded: White, Red
> Unbalanced Stereo Audio
> Distortion: 0.01%
> Noise: -88dB
> Nominal Signal should be –10dB
> Clipping +12dB.

Video Specifications:
> Color Coded: Yellow
> Impedance 75 ohms
> Noise > 60dB below 1Vp-p
> Frequency Response DC-140 Mhz +/-3dB

RS-232 SERIAL INTERFACE:
> 3.5mm Stereo Jack
> Tip: Tx, Ring: Rx, Sleeve: Gnd

POWER:
> 12VDC-Unregulated(18VDCMax)
> @ 150ma Max.
> Wall Transformer supplied

DIMENSION:
> 4"W x 6"L x 2"H

TEMPERATURE
> 0 TO 50 DEGREES C

HUMIDITY
> 0 TO 90% (non-condensing)

Disclaimer

This manual has been checked for accuracy. Inday assumes no liability for damages incurred directly or indirectly from errors or omissions or from the use and suitability of this product for a particular application.

Revision: Preliminary 10/1/2004

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