picoLink Series

ASD-272p

S-Video Decoder

Guide to Installation
and Operation

M156-9900-202

ASD-272p

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1.0 ASD-272p

1.1 Introduction

The ASD-272p is the industry's smallest S-video decoder. This product automatically detects NTSC, PAL, PAL-M, PAL-N, and SECAM S-video signals and provides a 4:2:2 serial digital signal conforming to the SMPTE 259M-C standard. The supported inputs range from stable, studio-type sources to satellite and VTR-type sources. This feature-packed unit delivers ease-of-use, a simplified design, easy installation and operation.
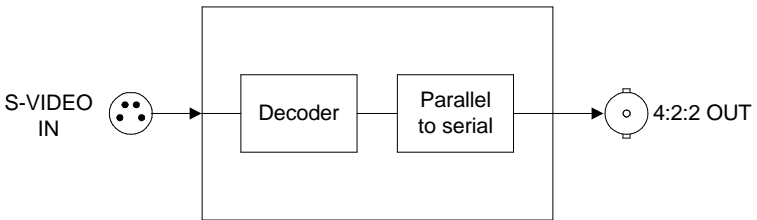

Figure 1: ASD-272p functional block diagram

1.2 Features

- Automatic input detection of NTSC, PAL, PAL-M, PAL-N, and SECAM S-video signals
- 4:2:2 output
- Input setup selection: 7.5 or 0 IRE
- Input signal stability selection: VTR, Tuner (satellite), and Studio
- Bi-color LED providing error status on input composite signal
- Very small packaging aluminum extruded body

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2.0 Overall View

Figure 2 illustrates the ASD-272p's major parts and their locations. The video source is connected to the S-video input BNC and the decoded signal is provided by the 4:2:2 output. Error status is provided by the status LED and mode settings are configured by two 3-position slide switches. Finally, the power source is connected to the power connector.
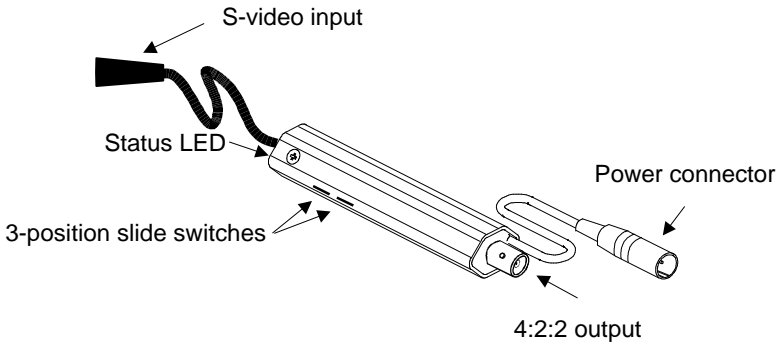

Figure 2: Overall view of the ASD-272p

3.0 Installation

3.1 Power Supply

The power supplies LKS-WSA and LKS-WSE, for 110 V and 220 V operation respectively, are used to power the ASD-272p. Each power supply provides a regulated +5 VDC@750 mA power source. The ASD-272p employs a mini XLR-3 connector for its power needs. Figure 3 provides a detailed pinout of the male connector.
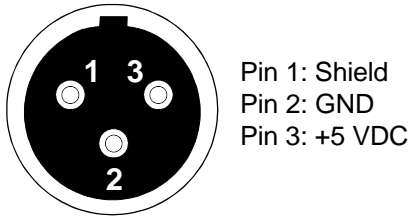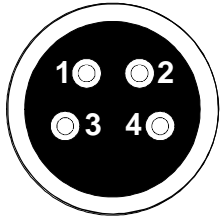
(male connector-facing)

Pin 1: Shield
Pin 2: GND
Pin 3: +5 VDC

Figure 3: Power connector pinout

3.2 Composite Input

Connect a NTSC or PAL, PAL-M, PAL-N, SECAM S-video signal conforming to the SMPTE 170M or ITU (CCIR) 624-4 standard respectively to the BNC labeled S-VIDEO IN.

(male connector-facing)

Pin 1: Luma
Pin 2: Chroma
Pin 3: Luma ground
Pin 4: Chroma ground

Figure 4: S-video connector pinout

3.3 4:2:2 Output

The 4:2:2 serial digital output signal is provided by the BNC labeled 4:2:2 OUT. The 4:2:2 output signal conforms to the SMPTE 259M-C standard.

4.0 Operation

4.1 Switch Settings

Figure 5 outlines the slide switch functions.
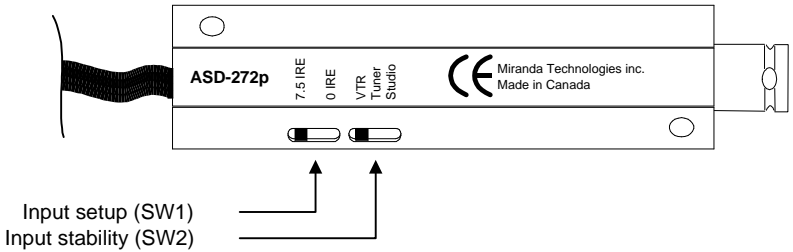

Figure 5: ASD-272p switch settings

Input setup switch (SW1)

7.5 IRE: For S-video sources with 7.5 IRE setup, set
          SW1 to this position.
0 IRE: For S-video sources with 0 IRE setup, set
          SW1 to this position.

Input stability switch (SW2)

VTR: This position should be set for non-time
          based corrected sources.
Tuner: Decoding satellite sources or sources with
          unpredictable voltage levels is improved with
          the Tuner setting.
Studio: Set this position when using stable S-video
          sources.

Note: *NTSC/PAL-M Input Detection*

If switching from an NTSC source to a PAL-M source which are both synchronized, the picoLink units may interpret the PAL-M source as an NTSC source. If so, the unit will not switch to PAL-M. In order to recover from this problem, disconnect the source from the input BNC and reinstall it.

4.2 Status LED

The bi-colored status LED, located next to the S-video input cable, is provided to identify any input errors. The following lists the possible situations.

Green: Indicates the ASD-272p is powered and has detected a valid S-video signal.

Red: Indicates an error with the input signal has been detected or simply, there is no input signal installed.

5.0 Specifications

Input

Signal:	S-video 1 Vpp nominal with sync
Return loss:	> 35 dB up to 5 MHz
Connector :	Cable with male mini-Din 4

Output

Signal:	4:2:2 SMPTE 259M-C (270 Mbps)
Return loss:	> 15 dB up to 270 MHz
Jitter:	< 10 ns p-p
Connector :	75 Ω BNC

Processing performance

Quantization:	8 bits
Freq. response:	±0.5 dB to 5 MHz
Processing delay:	4.5 us

Electrical

Voltage requirement:	+5 VDC
Power consumption:	3 W
Power connector:	Mini XLR-3

Mechanical

Overall size:	102 mm x 25 mm x 18 mm (4" x 1" x 0.7")
Power cable length:	127 mm (5")
Full spec. temp. range:	0° C (32° F) to 30° C (86° F)