

picoLink Series

SDM-272p

Guide to Installation
and Operation

M155-9900-201

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Specifications may be subject to change.

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S-Video Encoder

SDM-272p

Radio Frequency Interference and Immunity

This unit generates, uses, and can radiate radio frequency energy. If the unit is not properly installed and used in accordance with this guide, it may cause interference with radio communications. Operation with non-certified peripheral devices is likely to result in interference with radio and television reception. This equipment has been tested and complies with the limits in accordance with the specifications in:

FCC Part 15, Subpart B

CE EN50081-1:1992

CE EN50082-1:1992.

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1.0 SDM-272p

1.1 Introduction

The SDM-272p is the industry's smallest S-video encoder. This product automatically detects 525-line and 625-line 4:2:2 signals conforming to the SMPTE 259M-C standard and provides a NTSC, PAL, PAL-M, or PAL-N S-video output signal. An internal test pattern generator provides a color bars test signal. This feature-packed unit delivers ease-of-use, a simplified design, easy installation and operation.

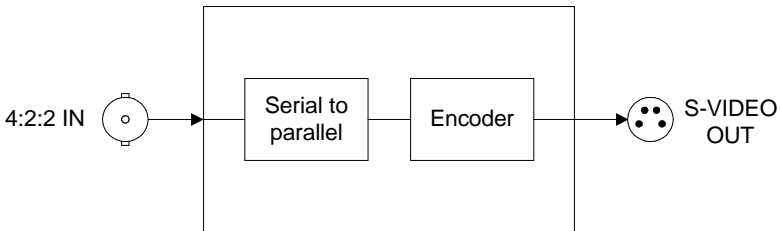


Figure 1: SDM-272p functional block diagram

1.2 Features

- Automatic 525-line and 625-line format input detection
- NTSC or PAL-M S-video output for 525-line input and PAL or PAL-N S-video output for 625-line input
- Y-only (monochrome) output selection
- Output setup selection: 7.5 or 0 IRE
- Color bars generator
- Bi-color LED providing error status on input composite signal
- Very small packaging aluminum extruded body

2.0 Overall View

Figure 2 illustrates the SDM-272p's major parts and their locations. The video source is connected to the 4:2:2 input BNC and the encoded signal is provided by the S-video 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.

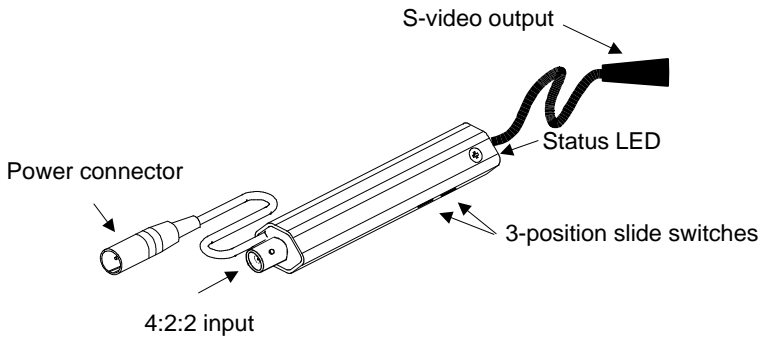


Figure 2: Overall view of the SDM-272p

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 SDM-272p. Each power supply provides a regulated +5 VDC@750 mA power source. The SDM-272p employs a mini XLR-3 connector for its power needs. Figure 3 provides a detailed pinout of the male connector.

(male connector-facing)

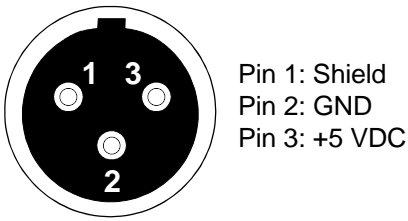


Figure 3: Power connector pinout

3.2 4:2:2 Input

Connect a 4:2:2 serial digital signal to the BNC labeled 4:2:2 IN. The 4:2:2 input signal must conform to the SMPTE 259M-C standard.

3.3 S-Video Output

A S-video signal conforming to the SMPTE 170M or ITU (CCIR) 624-4 standard is provided by the S-VIDEO OUTPUT connector. Figure 4 provides the S-video connector pinout.

(male connector-facing)

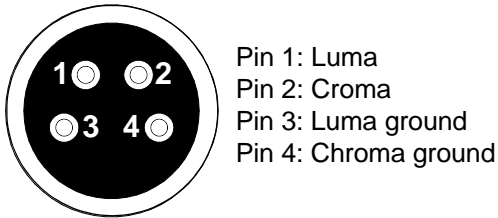


Figure 4: S-video connector pinout

4.0 Operation

4.1 Switch Settings

Figure 5 outlines the slide switch functions.

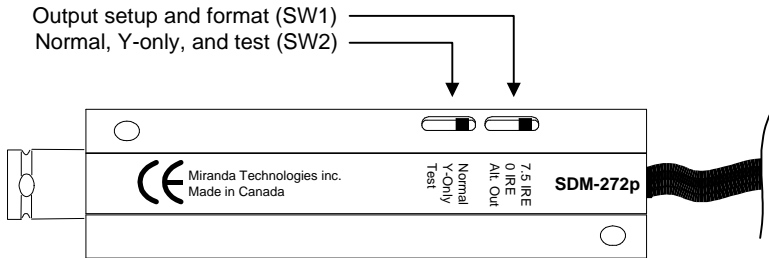


Figure 5: SDM-272p switch settings

Output setup and format switch (SW1)

- 7.5 IRE:** To add a 7.5 IRE setup to the output NTSC S-video signal, set SW2 to this position. There is no setup for PAL, PAL-M, and PAL-N output signals.
- 0 IRE:** For no setup on the output S-video signal, set SW1 to this position.
- Alt. Out:** To enable PAL-M and PAL-N outputs during 525-line and 625-line input formats respectively, set SW1 to this position. Refer to Table 1 for the output format provided during this setting.

4:2:2 input	Output	
	SW1=7.5 IRE or 0 IRE	SW1=Alt. Out
525-lines	NTSC	PAL-M
625-lines	PAL	PAL-N

Table 1: Output format conversion

Normal, Y-only, and test pattern switch (SW2)

- Normal: For normal operation, set SW2 to this position.
- Y-Only: Setting SW2 to this position provides a monochrome output signal by forcing the output chroma to 0.
- Test: Set SW2 to Test in order to enable the test pattern generator. Make sure a valid 4:2:2 input signal is installed. NTSC and PAL-M outputs produce a 75% color bars signal whereas PAL and PAL-N outputs produce a 75% color bars with 100% white bar signal.

4.2 Status LED

The bi-colored status LED, located next to the S-video output cable, is provided to identify any input errors and the selection of the test pattern. The following lists all possible situations.

- Green: Indicates the SDM-272p is powered and has detected a valid 4:2:2 serial digital signal.
- Red: Indicates an error with the input signal has been detected or simply, there is no input signal installed.
- Yellow: The test pattern is selected.

If, during a test pattern selection, an error is detected with the input signal, the status LED will remain red.

5.0 Specifications

Input

Signal: 4:2:2 SMPTE 259M-C (270 Mbps)
Cable length: 250 m (850')
Return loss: > 15 dB up to 270 MHz
Connector : 75 Ω BNC

Output

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

Processing performance

Signal path: 8 bits
Quantization: 10 bits
Sampling: 27 MHz (2X oversampling)
Freq. response: ± 0.5 dB to 5 MHz
Processing delay: 1.5 μ s

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)