picoLink Series

SDM-177p

Guide to Installation and Operation
M693-9900-100

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SDI to CAV & Analog Audio Converter

SDM-177p

Warranty

Miranda Technologies warranty on its products may be examined at the Miranda website. Go to www.miranda.com and click on *Support*

**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.

SDM-177p
SDI to CAV and Analog Audio Converter

The SDM-177p is an SDI to GBR or Y/B-Y/R-Y and analog audio converter. The SDM-177p provides monitoring of an SDI video and embedded audio signal. It automatically detects 525 or 625 line formats from incoming SDI signals to provide analog component GBR or Y/B-Y/R-Y signals. This module also provides a built-in color bar generator.

The SDM-177p extractis audio with a 20-bit quality D to A conversion. The SDM-177p can extract either AES pair from any of the 4 embedded audio groups in a SDI video stream. The full-scale output level (0 dBFS) can be set to +12, 15, 16, 18, 20, 22 or 24 dBu, or MUTE. The SDM-177p provides a re-clocked serial digital video output (loop) and is ideal for stand-alone video monitoring and DEMUX applications.
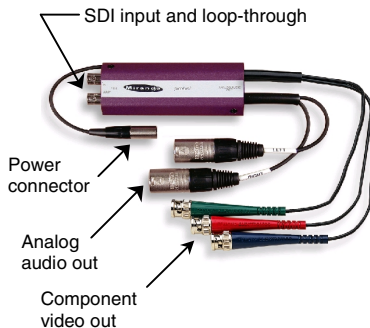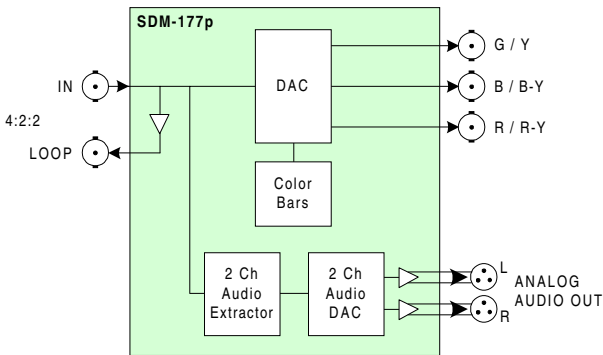
Installation

Connect the Power connector to the power supply. The SDM-177p turns ON automatically when power is connected.

Connect the SDI signal to the SDI IN connector. The SDI LOOP connector is available to send the reclocked SDI signal on to other devices.

Connect the analog video and audio outputs to their destination equipment.

Status LED

The Status LED is located on the end panel of the SDM-177p beside the output connectors. It monitors the status of the incoming SDI signal.

LED Color	Significance
Green	Incoming SDI signal status OK
Red	Incoming SDI signal is in error, or no signal is connected
Yellow	Color bars selected at the output using the pushbutton. *Note: if the status LED is red indicating a faulty input, no output will be produced, and the color bar selection is inhibited..*

User Controls

ROTARY SWITCHES

The rotary switches are adjusted using a screwdriver. The arrow on the switch indicates the selection

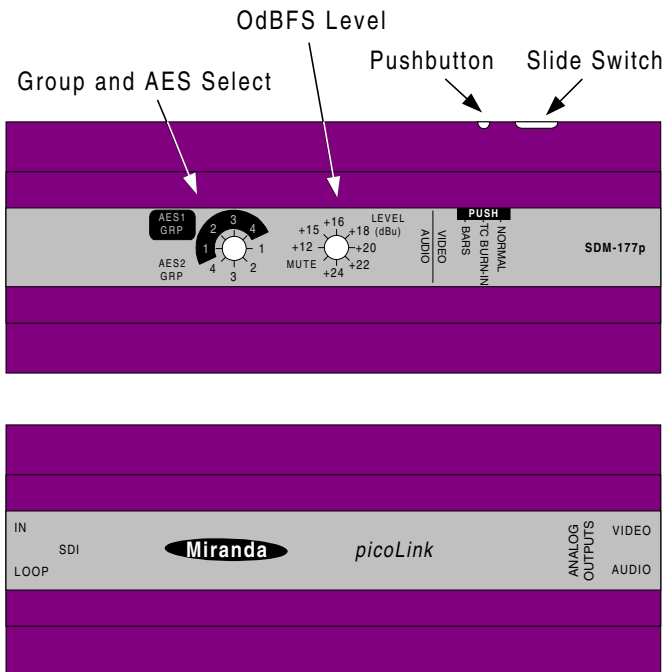|	
AES1 GROUP: 1/2/3/4: AES2 GROUP: 1/2/3/4:	Selects AES pair and audio group to be extracted
+12 / +15 / +16 / +18 / +20 / +22 / +24 dBu / MUTE:	Selects the analog audio output level which corresponds to 0 dBFS in the embedded audio.

SLIDE SWITCH

The SDM-177p will auto-select between BETA (Y / B-Y / R-Y at 525 / 59.94) and EBU-format (GBR at 625 / 50) component output based on the incoming SDI signal. The user can also force the 525/59.94 signal to be GBR with set-up, or GBR without set-up.

Switch Position	Output Standard
BETA / EBU:	Auto-selects between:
	• BETA (Y / B-Y / R-Y at 525 / 59.94) • EBU (GBR at 625 / 50).
GBR 7.5:	Forces the output to GBR with 7.5 IRE set-up for 525/59.94 signals
GBR:	Forces the output to GBR with no set-up for 525/59.94 signals

PUSHBUTTON

The pushbutton selects the output format. Successive pushes cycle through the following options:

Option	Output Format
NORMAL:	Component video.
TC BURN-IN:	Component video with time code (extracted from the SDI input) burned into the image
BARS:	75% color bars with 100% white *Note: status LED is yellow when BARS is selected.*

OdBFS Level

Pushbutton   Slide Switch

Group and AES Select

AES1 GRP
AES2 GRP

3
2   4
1   1
4   2
3

+16   LEVEL
+15   +18 (dBu)
+12   +20
MUTE   +22
+24

PUSH
NORMAL
TC BURN-IN
BARS

VIDEO
AUDIO

SDM-177p

IN
SDI
LOOP

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ANALOG
OUTPUTS

VIDEO
AUDIO

Technical Specifications

INPUT

VIDEO SIGNAL:	4:2:2 SMPTE 259M-C (270 Mbps) with active loop-through embedded audio: SMPTE 272M-AD
CABLE LENGTH:	200 m (640') (Belden 8281)
RETURN LOSS:	> 15 dB up to 270 MHz
CONNECTOR:	75 Ω BNC (2)

OUTPUT

VIDEO SIGNAL:	G/Y, B/B-Y, R/R-Y: 0.7 V p-p nominal
SYNC LEVEL:	280 mV
CONNECTOR:	Cables with male BNC (3)
RETURN LOSS:	> 20 dB up to 5 MHz
AUDIO SIGNAL:	1 stereo/2 monaural balanced audio
IMPEDANCE:	< 50 Ω
O dBFS LEVEL:	+12, +15, +16, +18, +20, +22, +24 dBu, MUTE, selectable
CONNECTOR:	XLR (2)

PROCESSING PERFORMANCE

VIDEO

V-BIT HANDLING	
QUANTIZATION:	8 bits
SAMPLING:	27 MHz (2X oversampling)
FREQ. RESPONSE:	±0.5 dB to 4.2 MHz
PROCESSING DELAY:	1.5 µs
TEST SIGNAL:	75% color bars with 100% white

AUDIO

QUANTIZATION:	20 bits
SAMPLING:	48 kHz
SNR:	> 90 dB (A weighting)
DISTORTION:	< -80 dB
CROSSTALK:	< -80 dB

FREQ. RESPONSE: ±0.3 dB (20 Hz to 20 kHz)
PROCESSING DELAY: < 450 µs

POWER: 3 W

Ordering Information

SDM-177p   SDI To CAV and Analog Audio Converter
LKS-WSA   Wall Plug-In Power Supply For 110 V
LKS-WSE   Wall Plug-In Power Supply For 220 V
LKS-CPS   Centralized Power Supply For Up To 10 units