

**picoLink Series**

# SDA-172p

Guide to Installation  
and Operation  
M410-9900-101

Reclocked  
Digital Video  
Distribution  
Amplifier

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# SDA-172p

## Warranty Policies

### Warranty Statement

Miranda Technologies Inc. warrants that the equipment it manufactures shall be free from defects in material and workmanship for a period of two (2) years from the date of shipment from the factory. If equipment fails due to such defects, Miranda Technologies Inc. will, at its option, repair or provide a replacement for the defective part or product. Equipment that fails after the warranty period, has been operated or installed in a manner other than that specified by Miranda, or has been subjected to abuse or modification, will be repaired for time and material charges at the Buyer's expense.

All out-of-warranty repairs are warranted for a period of ninety (90) days from the date of shipment from the factory.

Miranda Technologies Inc. makes no other warranties, expressed or implied, of merchantability, fitness for a particular purpose or otherwise. Miranda's liability for any cause, including breach of contract, breach of warranty, or negligence, with respect to products sold by it, is limited to repair or replacement by Miranda, at its sole discretion. In no event shall Miranda Technologies Inc. be liable for any incidental or consequential damages, including loss of profits.

Effective January 1, 2002

### Warranty Exchange Policies

Miranda Technologies Inc. warrants that the equipment it manufactures shall be free from defects in materials and workmanship for a period of two (2) years from the date of shipment from the factory. If equipment fails due to such defects, Miranda will provide repair of the failed unit under the terms of the Miranda warranty.

If the equipment has been proven to be defective on arrival, Miranda will ship a new product in exchange, usually within 36 hours of factory notification.

If the equipment to be repaired is essential and the customer so requests, Miranda will, at its option, provide a service replacement or loaner part or product, usually within 36 hours of factory notification, weekends and holidays excluded.

All warranty exchange or loaner parts or products shall be shipped to the Buyer with a packing list clearly describing the items and stating the date of shipment. Repaired parts or products will be shipped to the Buyer with a similar packing list. In the case of exchange, the defective products or parts must be returned to Miranda within fifteen (15) days from receipt by the customer of the exchange product. In the case of a loaner, the loaned products or parts must be returned to Miranda within fifteen (15) days from receipt by the customer of the repaired equipment.

If the equipment is not returned within fifteen (15) days, as described for either exchanges or loans, A Rental Invoice will be generated. Rental terms will be fifteen (15) percent of the current list price of the products or parts per month or a fraction thereof. Before returning the equipment to Miranda Technologies Inc., for any reason, the Buyer must first obtain a Return Authorization Number from Miranda Technologies Inc. Miranda Technologies Inc will pay freight and insurance charges

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for the delivery of the loaner or exchange products or parts. Freight and insurance charges for the return of the defective product or part will also be paid by Miranda Technologies.

### **Out-Of-Warranty Repair Policy**

Miranda will repair equipment which is out of Warranty. The current pricing structure for this service is available from the Miranda web site at [www.miranda.com](http://www.miranda.com) or from Miranda Technical Support Services at (514) 333-1772. All out-of-warranty repairs are warranted for a period of 90 days from the date of shipment from the factory. Before returning the equipment to Miranda Technologies Inc., for any reason, the Buyer must first obtain a Return Authorization Number from Miranda Technologies Inc. In the case of a product deemed by Miranda to be beyond repair, the customer must purchase a new product at current retail prices.

The Buyer will pay freight and insurance charges for the return of the defective product or part to the manufacturer for repair. Miranda Technologies will pay freight and insurance charges for the return of the repaired product or part to the Buyer.

### **Out-Of Warranty Equipment Updates and Spare Parts Policy**

Miranda Technologies' current pricing structure for out-of-warranty equipment updates, or the sale of spare parts, is available from Miranda Technical Support Services at (514) 333-1772.

## **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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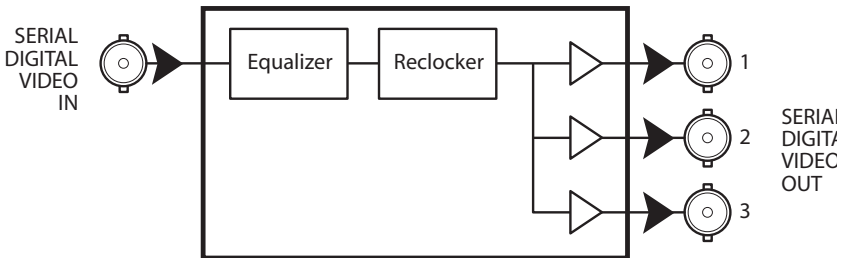


## 1 SDA-172p Reclocked Digital Video Distribution Amplifier

### 1.1 Introduction

The SDA-172p is a miniature, 3-output, 10-bit relocked serial digital video distribution amplifier providing automatic equalization for up to 250 meters of cable and full regeneration of the signal. The SDA-172p supports all serial digital video formats, at 143, 177, 270, 360 and 540 Mbps. The SDA-172p also supports DVB-ASI compressed bit streams at 270 Mbps.

**Figure 1** Functional Block Diagram



### 1.2 Features

- Serial 4fsc or 4:2:2 input
- 3 relocked serial outputs
- Supports 525/625-line formats
- DVB-ASI compatible
- Bit rates up to 540 Mbps
- 200 m automatic cable equalization





## 2 Overall view

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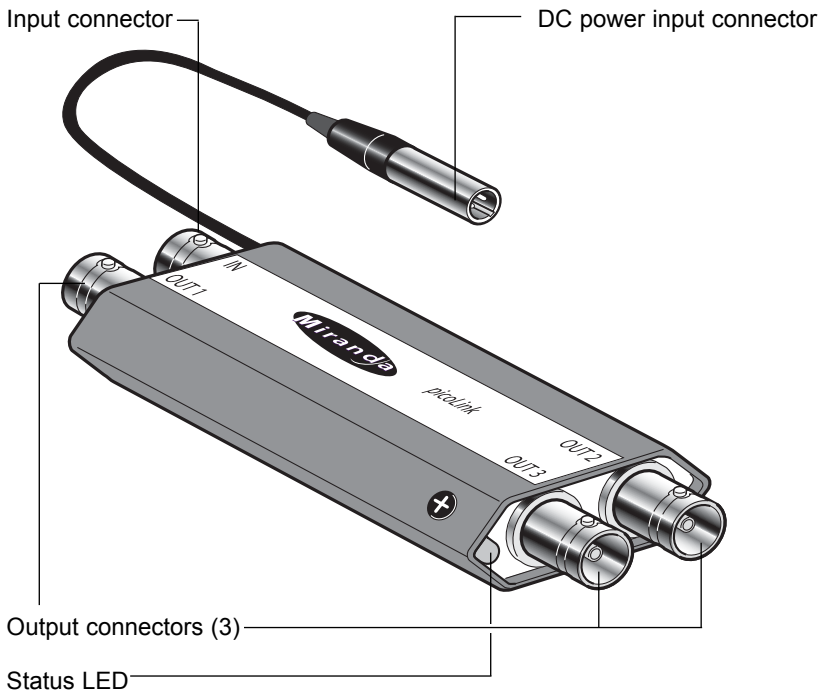
The figures below represents the SDA-172p. The digital video source is connected to the BNC input connector.

A multicolor LED provides module statuses.

Three reclocked outputs are provided by 3 BNC connectors.

Power supply is connected to a mini-XLR type connector.

**Figure 2.1** SDA-172p Components





### 3 Installation

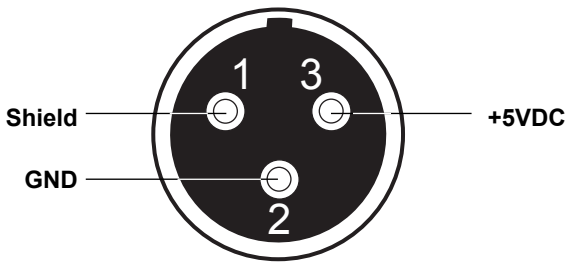
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#### 3.1 Power Supply

The power supplies LKS-WSA and LKS-WSE, for 110V and 220V operation respectively, are used to power the SDA-172p. Each power supply provides a regulated +5VDC@1A power source.

Plug the power supply into a wall or power bar outlet. The SDA-172p uses a mini XLR-3 connector for its power needs; figure 3.1 provides a detailed pinout of the male connector.

**Figure 3.1** Power connector pinout



#### 3.2 Serial Digital Video Input

Connect a serial digital signal to the BNC labeled IN. The serial digital input signal must conform to the SMPTE 259M-ABCD standard or the proposed EN50 083-9 DVB-ASI (270 Mbps).

Make sure that the input signal cable has a maximum length of 250 m (850') for a 270 Mbps input signal or 170 m (560') for a 540 Mbps input signal. Also ensure that all serial digital video equipment are connected point-to-point. For instance, there must be a point-to-point connection between the IN BNC and the source equipment. If a T-connector is used to connect other equipment, the maximum specified cable length is no longer valid.

### ***3.3 Serial Digital Video Output***

The three serial digital output signals are provided by the BNC labeled OUT 1, OUT 2 and OUT 3. The serial digital output signal conforms to the SMPTE 259M-ABCD standard or the proposed EN50 083-9 DVB-ASI (270 Mbps).

## **4 Operation**

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### **4.1 Status LED**

A bicolored LED, located beside the OUT 3 connector, indicates the status of the module.

**Green:** The SDA-172p is powered and has detected a valid audio signal.

**Red:** Invalid or signal absence on input.



## 5 Specifications

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### INPUT

Signal:	SMPTE 259M-ABCD (143, 177, 270, 360 Mbps) Supports proposed 540 Mbps standard EN50 083-9 DVB-ASI (270 Mbps)
Cable length:	250 m (850') up to 270 Mbps 170 m (560') at 540 Mbps (Belden 8281)
Return loss:	> 15 dB up to 540 MHz
Connector:	75 $\Omega$ BNC

### OUTPUT

Signal (3):	SMPTE 259M-ABCD (143, 177, 270, 360 Mbps) Supports proposed 540 Mbps standard EN50 083-9 DVB-ASI (270 Mbps)
Return loss:	> 15 dB up to 540 MHz
Connector:	75 $\Omega$ BNC
Jitter (wideband):	< 0.2 UI p-p

### PROCESSING PERFORMANCE

Signal path:	10 bits
Processing delay:	20 ns
Power:	2 Watts





## **6 Schematic Diagrams**

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