



**RDL**<sup>®</sup>  
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## TWISTED PAIR FORMAT-A



### Models D-TPSL1A, DS-TPSL1A, DB-TPSL1A Active Single-Pair Sender Mini-Jack & Stereo RCA In

- Stereo Audio Input Combined to Mono Output
- Input on Dual RCA Jacks or Mini-Jack
- Switch Selects which RJ45 Pair (A, B or C) is Fed
- Remote Powering through Twisted Pair Cable
- Signal and Power Pair Pass-Through between TP CABLE RJ45 Jacks
- Fused Local Power Feeds all Connected Modules
- Local Power Input on Terminal Block
- Blue LED Indicates Module is Powered
- Daisy-Chain with Single-Pair or Two-Pair Format-A Senders
- Studio-Quality Precision Active Balanced Circuitry

The D SERIES-TPSL1A modules are single pair audio sending modules compatible with RDL Format-A twisted pair products. These modules are designed to be mounted in wall boxes, cabinets or other enclosures that allow users to connect audio sources.

**APPLICATION:** The -TPSL1A modules feature a stereo line input through a mini jack or two RCA phono jacks summed to mono. The unbalanced inputs are designed to receive standard -10 dBV consumer level signals. These modules drive only one cable pair, therefore they accept signals and power from other mic-level or line-level Format-A senders. Two other single-pair senders may be chained with the -TPSL1A, or a single two-pair sender may be connected. If three single-pair senders are connected together, each sender must feed a different pair: A, B or C. The power pair and all three audio pairs are fed through both rear-panel RJ45 jacks.

The -TPSL1A may be powered directly from a 24 Vdc power supply using the rear-panel detachable terminal block. Local power connected to the module is also fed to all connected remote modules. The -TPSL1A may be remotely powered through the twisted pair cable from any other module, signal distributor or RDL power inserter connected to the same twisted pair cable. Module power is indicated by a front-panel LED.

RDL FORMAT-A features superior audio performance that rivals or exceeds shielded wiring. Design simplicity, ease of installation, unsurpassed flexibility, automatic fused power, exceptional hum rejection, low noise, and low distortion provide designers and installers the optimum choice in economical twisted pair products.



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# FORMAT-A TWISTED PAIR

## Models D-TPSL1A, DB-TPSL1A, DS-TPSL1A

### Format-A Single-Pair Senders

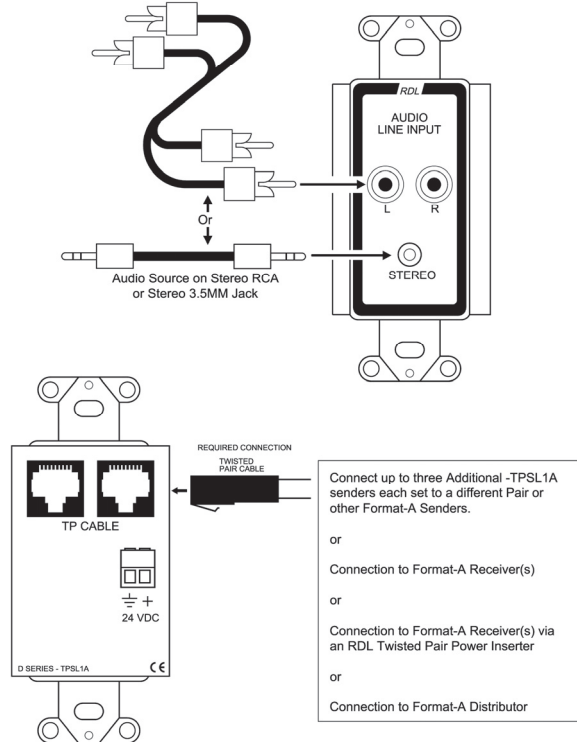
## Installation/Operation

**CE** Declaration of Conformity available from [rdlnet.com](http://rdlnet.com).  
Sole EMC specifications provided on product package.  
Specifications are subject to change without notice.

**STEP 1:** Set the pair selection switch to pair A, B or C to select the pair that will be driven. If three single-pair senders are connected together, each sender must feed a different pair: A, B or C.

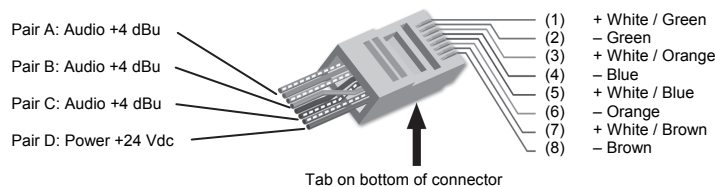
**STEP 2:** Connect 24 Vdc to the power input terminals if this module is not being powered through the twisted pair cable from another module or if this module is located an excessive distance from the next powered module on the cable. Note: The front-panel power LED will be illuminated if this module is powered. If this module is powering other modules through the cable and if there is a wiring short, the short must be cleared then power must be turned off to this module for 10 seconds to reset the internal protection circuit.

**STEP 3:** Connect the twisted pair cable(s) and fasten the module in its mounting box.



NOTE: Connect a 24 Vdc power supply to the module if power is not being supplied through a twisted pair cable from a connected module.

### RJ45 Standard wiring



RJ45 conductor colors shown are for 568A standard. The 568B standard may be used if the connectors at both ends of the cable are wired identically.

### TYPICAL PERFORMANCE

Input: 10 kΩ unbalanced (left and right)  
Input Connection: Mini-jack or dual RCA phono jacks  
Input Level: -10 dBV  
Format-A Signal Pair Used: Switch-selectable A, B, or C  
Format-A Input: RJ45  
Output: RDL TP Format-A  
Output Connection: RJ45  
Frequency Response: 20 Hz to 20 kHz (+/- 0.25 dB)

THD+N: < 0.05% (20 Hz to 20 kHz)  
Noise: < -90 dB  
Headroom: > 18 dB  
Indicator: Power In  
Power Connections (2): Detachable terminal block; RJ45  
Power Requirement: 24 Vdc @ 25 mA plus connected loads  
Dimensions: 1.6" (4.06 cm) W; 4.11" (10.45 cm) H; 1.89" (4.8cm) D  
Mounting Box Minimum Depth: 2.4" (6.1 cm)  
Ambient Operating Environment: 0° C to 50° C

### Radio Design Labs Technical Support Centers

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