maxTX™ SERIES TWISTED PAIR
Model TX-TPR1A
Format-A Single-Pair Receiver

- Single -10 dBV Unbalanced or +4 dBu Balanced Output
- Phono Jack and Detachable Terminal Block Outputs
- Switch Selects which Pair (A, B or C) Feeds the Output
- Signal and Power Pair Pass-Through to LOOP OUT Jack
- Powered Locally or Remotely through RJ45 Jack
- Fused Local Power Feeds all Modules Connected to RJ45s
- Local Power Input on Terminal Block or dc Power Jack
- Blue LED Indicates Module is Powered
- Daisy-Chain with Additional Format-A Receivers
- Studio-Quality Precision Active Balanced Circuitry

The TX-TPR1A is a single-pair audio receiving module compatible with RDL Format-A twisted pair products. It is built in the versatile Max-TX series enclosure. The durable adhesives provided with the TX-TPR1A permit permanent or removable mounting. The TX-TPR1A may be rack or surface mounted with optional TX™ series accessories.

APPLICATION: The TX-TPR1A is a single-pair audio receiving module compatible with RDL Format-A twisted pair products. A front-panel switch set during installation determines which of the three FORMAT-A pairs is buffered to feed the module output. The audio signal received from the selected pair of the RJ45 INPUT jack feeds the -10 dBV unbalanced RCA phono jack output and the +4 dBu balanced detachable terminal block output. A studio-quality buffer amplifier feeds the outputs at the correct operating level.

The TX-TPR1A is a single-pair receiver, bridging the input signal from the cable pair set on the front-panel switch during installation. Because this module receives only one cable pair, a LOOP OUT RJ45 jack is provided for connecting additional Format-A receivers. Two other single-pair receivers may be chained to the LOOP OUT jack, or a single two-pair receiver may be connected. In addition to completing the reception of signals from all three FORMAT-A pairs, additional receivers may be connected to the same twisted pair feed. The bridging input circuits used in all FORMAT-A twisted pair receivers allow connection of up to 10 receiver outputs for each cable pair. The possibility of multiple receiver locations adds enormous flexibility in the design of audio routing systems using RDL FORMAT-A products. The power pair and all three audio pairs are fed through from the INPUT jack to the LOOP OUT jack.

The TX-TPR1A may be powered directly from a 24 Vdc power supply using either the power jack or the detachable terminal block. Local power connected to the module is also fed to all modules connected to the INPUT and LOOP OUT RJ45 jacks. The TX-TPR1A 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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Installation/Operation

STEP 1: Connect 24 Vdc to the **POWER** input (terminals or jack) 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.
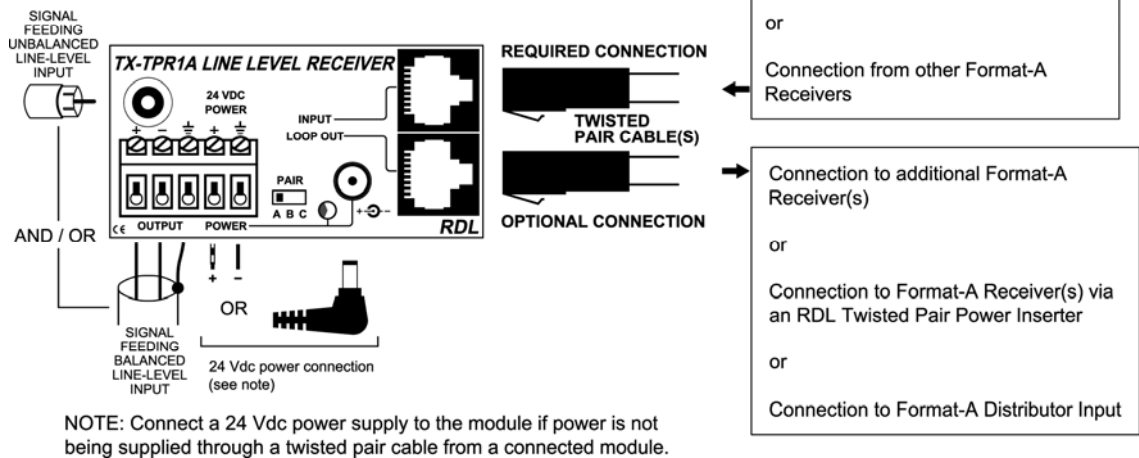
STEP 2: Set the **PAIR** selector so the module is receiving signal from the desired pair A, B or C of the Format-A cable.

STEP 3: Connect the **UNBAL OUT** jack to a -10 dBV equipment input, and/or connect the **BAL OUT** terminals to a +4 dBu equipment input.

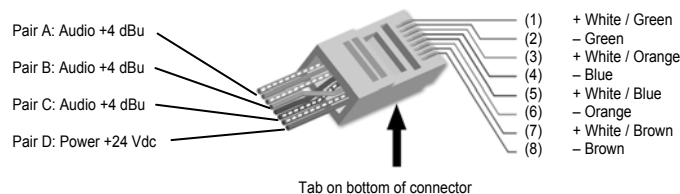**STEP 4:** Connect the **INPUT** twisted pair cable coming from Format-A senders or distributors.

STEP 5: Connect the **LOOP OUT** twisted pair cable feeding additional Format-A receiver(s), if any, and mount the module.

NOTE: Both audio outputs may be used simultaneously. Each output, balanced and unbalanced, is fed from the selected Format-A pair.

Connection from Single-Pair, Two-Pair or Three-Pair Senders (direct, or via an RDL Twisted Pair Power Inserter)

or

Connection from Format-A Distributor

or

Connection from other Format-A Receivers

REQUIRED CONNECTION

TWISTED PAIR CABLE(S)

OPTIONAL CONNECTION

Connection to additional Format-A Receiver(s)

or

Connection to Format-A Receiver(s) via an RDL Twisted Pair Power Inserter

or

Connection to Format-A Distributor Input

SIGNAL FEEDING UNBALANCED LINE-LEVEL INPUT

TX-TPR1A LINE LEVEL RECEIVER

24 VDC POWER
INPUT
LOOP OUT
PAIR
A B C
OUTPUT POWER
RDL

AND / OR

SIGNAL FEEDING BALANCED LINE-LEVEL INPUT

OR

24 Vdc power connection (see note)

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

Pair A: Audio +4 dBu	(1) + White / Green
	(2) – Green
Pair B: Audio +4 dBu	(3) + White / Orange
	(4) – Blue
Pair C: Audio +4 dBu	(5) + White / Blue
	(6) – Orange
Pair D: Power +24 Vdc	(7) + White / Brown
	(8) – Brown

Tab on bottom of connector

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:	RDL TP Format-A
Input Connection:	RJ45
Format-A Signal Pair Used:	Switch-selectable A, B, or C
Format-A Output:	RJ45 LOOP OUT
Outputs (2):	150 Ω Balanced; 1 kΩ Unbalanced
Output Connection:	Detachable Terminal Block (Bal); RCA (Unbal)
Output Level:	+4 dBu Bal., +22 dBu Max; -10 dBV Unbal
Frequency Response:	10 Hz to 50 kHz (+/- 0.1 dB).
THD+N:	< 0.005%

Noise below +4 dBu:	< 90 dB
Headroom above +4 dBu:	> 18 dB
CMRR:	> 80 dB (50 Hz to 150 Hz)
Indicator:	Power In
Power Connections (3):	Power Jack; Detachable Terminal Block; RJ45
Power Requirement:	24 Vdc @ 35 mA plus connected loads
Maximum Load Current:	165 mA
Dimensions:	3.0" (7.6 cm) W; 1.6" (4.08 cm) H; 2.09" (5.3 cm) D