



**~Introduction~**

Thank you for buying this GEM product.

The TRB-RGBPTDA allows transmission of one component video (YPbPr or RGB) signal and one Digital Audio signal via one UTP (unshielded twisted pair) cable for more versatile cabling. The TRB-RGBPTDA is used in pairs to allow you to eliminate more expensive coaxial cable. The TRB-RGBPTDA applies for the 480i/p, 720p and 1080i/p video formats for hi-definition (HDTV) video. All GEM Baluns are 100% test for reliability and durability to guarantee your signal integrity

**~Installation~**

*[Step 1] Cable preparation*

Run the CAT5 cable between your video signal source and the output unit with proper length.

Assemble the RJ45 plug on CAT5 cable. Please refer to the following diagram (fig. 1) of standard connection order carefully. Mistakes are easy to make at this point. Please make sure that the cores slide into the RJ45 plug with correct order and all cores go to the end of the plug before crimping. The crimp tool will press the brass pins in to the individual cores and lock the plug on to the cable.

*[Step 2] Connect TRB-RGBPTDA to your system*

Turn off power of equipments prior to installation. Put on the TRB-RGBPTDA on the output unit (ie, Plasma, LCD Screen or Projector etc.) of your system with the pigtails with RCA plugs and connect the prepared CAT5 cable with RJ45 plug to the TRB-RGBPTDA.

Connect the video source (ie, DVD player or Digital TV Set Top Box etc.) with Component Video Lead and connect the prepared CAT5 cable with RJ45 plug to the TRB-RGBPTDA.

**~Important Notice for Installation~**

1. The fig.2 shows the connection order for standard CAT5 cable with RJ45 plug.
2. Strip the cable with proper length (10mm) will make the connection stronger and the CAT5 cable will be locked by the RJ45 plug.

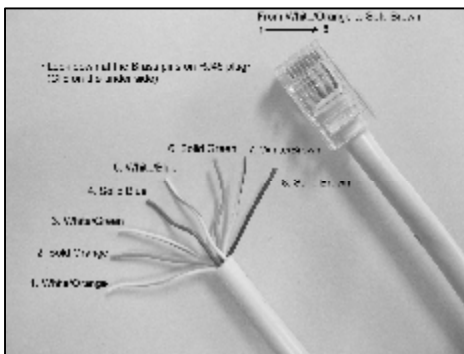


fig.1

Looking down at the brass pins on the RJ45 plug  
From Left to right:

Pin	Color of Core
1 (Left)	White/Orange
2	Solid Orange
3	White/Green
4	Solid Blue
5	White/Blue
6	Solid Green
7	White/Brown
8 (Right)	Solid Brown

fig.2

**~Trouble Shooting~**

*[No Picture]*

1. Video source is not working or not power on. Please make sure the source is working normally.
2. Check all the connections of RCA connectors.
3. The connection of CAT5 and RJ45 plug is not correct please re-check the connection order to standard.
4. The RJ45 plug has not been put on correctly, either with incorrect connection order or the cores are not far enough into the plug and not been crimped properly. Cut off the end again and re-crimp.
5. The cable is damaged or there is a short or open circuit on the wire, please replace the wire.



[Poor Picture]

1. Video source is not working properly. Please make sure the source is working normally and sending good quality picture.
2. The RJ45 plug has not been put on correctly, either with incorrect connection order or the cores are not far enough into the plug and not been crimped properly. Cut off the end again and re-crimp.
3. Polarity incorrect with one balun being wired opposite to the other one, please re-wire.
4. Cable run too long. The picture will deteriorate if the CAT5 cable run too long. 500 feet is the maximum distance for a TRB-RGBPTDA to be functioned with good quality picture.
5. Check if qualified UTP cable is used.
6. Keep cables away from strong power source.

**Specification:**

Bandwidth	Video: DC to 60 MHz(3dB roll off) Digital Audio: 25 MHz(1dB roll off)
Insertion Loss	Video: -2.5 dB over the frequency range Audio: -1 dB over the frequency range
Return loss	Video: -15 dB typical over the frequency range Audio: -15 dB typical over the frequency range
Common Mode Rejection	Video: -55 dB Audio: -55 dB
Impedance	75 ohms
Environment	Component analogue RGB/YPbPr video with synchronous signals on one of the color signals (i.e. synch-on-green)
Devices	DVD players, projectors, monitors, amplifiers, switches, plasma displays, home theater and other equipment supporting HDTV component video and digital audio
Maximum Video Input	1.0Vp-p
Connectors	Three RCA Male with 6" cable (Red, Green, Blue) One RCA Female (Black) for Digital Audio One RJ45 Shielded Jack
Cable-UTP	Cat.5 or better, Wires impedance 100ohm at 1MHz Maximum capacitance: 20 pf/foot. Attenuation: 6.6 dB/1000 ft at 1 MHz
Max. distance Cat 5 UTP or better	Video: 480i/p: 1000 ft.(305M) 720p and 1080i: 500 ft (152M) Digital Audio: 600 ft (182M)
Pin Configuration	Red (Pr): Pins 7+ & 8- Green (Y): Pins 6+ & 3- Blue (Pb): Pins 2+ & 1- Digital Audio: Pins 5+ & 4-
Environment required	Operating: 0 to 55 C. Storage:-20 to 85 C. Humidity: up to 95%
Dimension	81x60x24 in mm

**~Limited Lifetime Warranty~**

Gem Electronics warrants that this product is to be free from defect in materials and workmanship, for the life of the product. The warranty given by Gem is in lieu of any other warranties, express or implied. This warranty does not apply to units abused through misuse or subjected to improper and/or excessive voltage, beyond our control. Gem assumes no responsibility for damages or penalties incurred resulting from the use of this product. Gem's liability under any warranties shall be discharged by replacing or repairing, at our option, the defective product. Gem's liability for any product shall not exceed a refund of the purchase price. The warranty listed here is intended only as a summary of your full and complete warranty. For a full and complete warranty of this product contact Gem Electronics.