



**~Introduction~**

Thank you for buying this GEM product.

TRB-RGB Transceiver box allows transmission of one component video signal (YPbPr or RGB) to be sent through industrial CAT 5E UTP up to 520 feet for more cost-efficient wiring. The TRB-RGB used in pairs and support 480i/p for transmitting component video signal.

**~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-RGB to your system*

Put on the TRB-RGB on the output unit (ie, Plasma, LCD Screen or Projector etc.) of your system with Component Video Lead and connect the prepared CAT5 cable with RJ45 plug to the TRB-RGB.

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-RGB.

**~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.

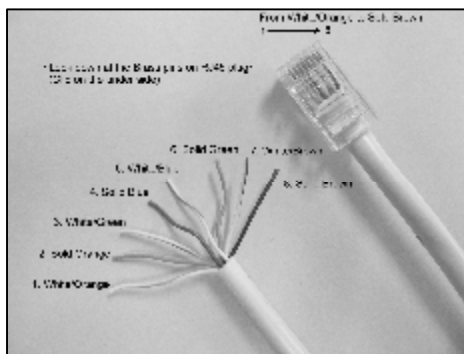


fig.1

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



Part Number: TRB-RGB

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### ~Trouble Shooting~

[No Picture]

1. Video source is not working or not power on. Please make sure the source is working normally.
2. The connection of CAT5 and RJ45 plug is not correct please re-check the connection order to standard.
3. 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.
4. 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. 520 feet is the maximum distance for a TRB-RGB to be functioned with good quality picture.

### ~Specification~

Bandwidth:	Video: DC to 8MHz (480i and 480p only)
Maximum Video Input:	1.1Vp-p.
Insertion Loss:	Max. 2dB over the frequency range from DC to 8MHz
Return Loss:	Min. 15dB over the frequency range from DC to 8MHz
Max. Distance for Color Video:	520ft based on CAT 5 UTP
Pin Configuration:	Red (Pr): Pins 7, 8 Green (Y): Pins 3, 6 Blue (Pb): Pins 1, 2
Impedance:	75 ohm RCA unbalanced
Cable: UTP:	24 gauge or lower solid copper twisted pair wire Impedance: 100 ohm at 1MHz Max. Capacitance: 20 pf/ft Attenuation: 6.6dB/1000ft at 1MHz
Temperature:	Operating: 0 to 55°C, Storage: -20 to 85°C, Humidity: up to 95%
Enclosure:	Fire retardant plastic
Dimensions:	81 x 60 x 24mm
Housing:	Black ABS

### ~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.