

### Welcome!

We greatly appreciate your purchase of the TP115-120/121 Compact Video Twisted Pair Transmitter. We are sure you will find it reliable and simple to use. Superior performance for the right price, backed by solid technical and customer support is what ALTINEX® has to offer.

We are committed to providing our customers with Signal Management Solutions® to the most demanding audiovisual installations at competitive pricing and we welcome you to join the ranks of our many satisfied customers throughout the world.

### 1. Precautions and Safety Warnings

Please read this manual carefully before using your TP115-120/121. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your TP115-120/121 and to prevent fire and shock hazards. Please read them carefully and heed all warnings.

#### 1.1 General

- Qualified ALTINEX service personnel or their authorized representatives must perform all service.

#### 1.2 Installation Precautions

- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the TP115-120/121 in direct sunlight, near heaters or heat-radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Handle the TP115-120/121 carefully. Dropping or jarring can cause damage.
- Do not pull any cables that are attached to the TP115-120/121.

### 2. Installation Procedures

- Step 1. Make sure the Video Equalization knob on the TP115-121 receiver is set to minimum, full CCW.
- Step 2. Apply power to the TP115-120 and TP115-121 using the power adapters provided.  
The Power/Signal Present LEDs on both units should be on and red.
- Step 3. Connect the video output of the computer (or other device) to the video input on the TP115-120 Transmitter.  
The Power/Signal Present LED on the transmitter should be on and green if a video signal is present.
- Step 4. Connect a CAT-5 cable between the TP output connector on the TP115-120 to the TP input connector of the TP115-121.
- Step 5. Check the LED on the TP115-121 receiver. The LED should be on and green if a signal is present.  
Note: The LED on the TP115-121 is only GREEN if there is a computer (RGBHV) video signal present.  
The LED on the TP115-121 will remain RED if a component (YPbPr) video signal is present.
- Step 6. The TP115-120/121 is now operational.
- Step 7. Verify the picture quality on the receiving monitor is equivalent to the quality as displayed on the local monitor. Depending on the cable quality length, cable quality, and monitor type, the image may be poor or non-existent until the video equalization is adjusted.  
If necessary adjust the Video Equalization knob on the TP115-121 receiver to fine tune the video signal when the CAT-5 cable is more than 50 ft (15 m). Adjust the video equalization in small increments and give the monitor time to respond to the signal changes. Depending on the monitor, it may take several seconds for the monitor to respond.

### 3. Limited Warranty/Return Policies

Please see the ALTINEX website at [www.altinex.com](http://www.altinex.com) for details on warranty and return policies.

#### 1.3 Cleaning

- Clean only with a dry cloth. Never use strong detergents or solvents such as alcohol or thinner. Do not use a wet cloth or water to clean the unit. Do not open the unit to clean.

#### 1.4 FCC Notice

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions found herein, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Any changes or modifications to the unit not expressly approved by ALTINEX, Inc. could void the user's authority to operate the equipment.

### 4. Technical Specifications

Specifications are subject to change. See [www.altinex.com](http://www.altinex.com) for up-to-date information.

Features/Description	TP115-120
Inputs	
RGBHV or YPbPr	15-pin HD F (1)
Power +9VDC	2.5 mm F (1)
Outputs	
Twisted Pair	RJ-45 F (1)
Compatibility	
Signal Types	ALTINEX Standard for TP
Video Signal Resolutions	VGA-UXGA and 480i-1080p
Altinex TP Receivers*	DA103-121, DA1931CT, DS801-111, MT103-123, MT115-111, TP115-111, TP115-121, DS801-113
Accessories Included	
Power Adapter	+9VDC, 1.1 A
Optional Accessories	
Mounting Bracket	AC402-101

Table 1. TP115-120 General

Electrical	TP115-120
Input Video Signal	
Analog Signal Level	1.2 Vp-p max
Impedance	75 ohms
H & V SYNC	TTL
Impedance	10 kohms
Output Signals	
CAT-5/6 Twisted Pair	ALTINEX TP Standard
Power Consumption	
External Adapter: 9 VDC	110 mA (1.0 W)

Table 2. TP115-120 Electrical

Recommended Max Cable Lengths	TP115-120 and TP115-121
Resolution	
VGA 640x480 @ 60Hz	800 ft (244 m)
XGA 1024x768 @ 60Hz	600 ft (183 m)
SXGA 1280x1024 @ 60Hz	550 ft (168 m)
UXGA 1600x1200 @ 60Hz	500 ft (152 m)

Table 3. TP115-120 and TP115-121 Cable Lengths

Features/Description	TP115-121
Inputs	
Twisted Pair	RJ-45 F (1)
Power +9VDC	2.5 mm F (1)
Outputs	
RGBHV or YPbPr	15-pin HD F (1)
Compatibility	
Signal Types	ALTINEX Standard for TP
Video Signal Resolutions	VGA-UXGA and 480i-1080p
Altinex TP Transmitters*	DA103-120, DA1930CT, DS801-110, MT103-122, MT115-110, TP115-110, TP115-120, DS801-112
Accessories Included	
Power Adapter	+9VDC, 1.1 A
Optional Accessories	
Mounting Bracket	AC402-101

Table 4. TP115-121 General

Electrical	TP115-121
Input Video Signal	
CAT-5/6 Twisted Pair	ALTINEX TP Standard
Output Signals	
Analog Signal Level	1.2 Vp-p max
Impedance	75 ohms
H & V SYNC	TTL
Impedance	10 kohms
Power Consumption	
External Adapter: 9 VDC	185 mA (1.7 W)

Table 5. TP115-121 Electrical

Mechanical	TP115-120 and TP115-121
Material/color	0.091 in Aluminum, black
Height	0.91 in (23 mm)
Width	2.79 in (71 mm)
Depth	1.73 in (44 mm)
Weight	0.20 lb (0.091 kg)
T° Operating (T° Max)	10°C-35°C (50°C)
Humidity	90% non-condensing
MTBF (calculations)	40,000 hrs

Table 6. TP115-120 and TP115-121 Mechanical

\* Some of the receivers listed are capable of receiving audio, but the TP115-120 and TP115-121 are video only.

### 5. About Your TP115-120/121

- Compatible with VGA resolutions
- Compatible with HDTV signals
- Can be used with shielded or unshielded cable
- Can be used with CAT5 or CAT6
- Built in EDID emulator
- Signal Detect LED
- Equalization control
- Small size

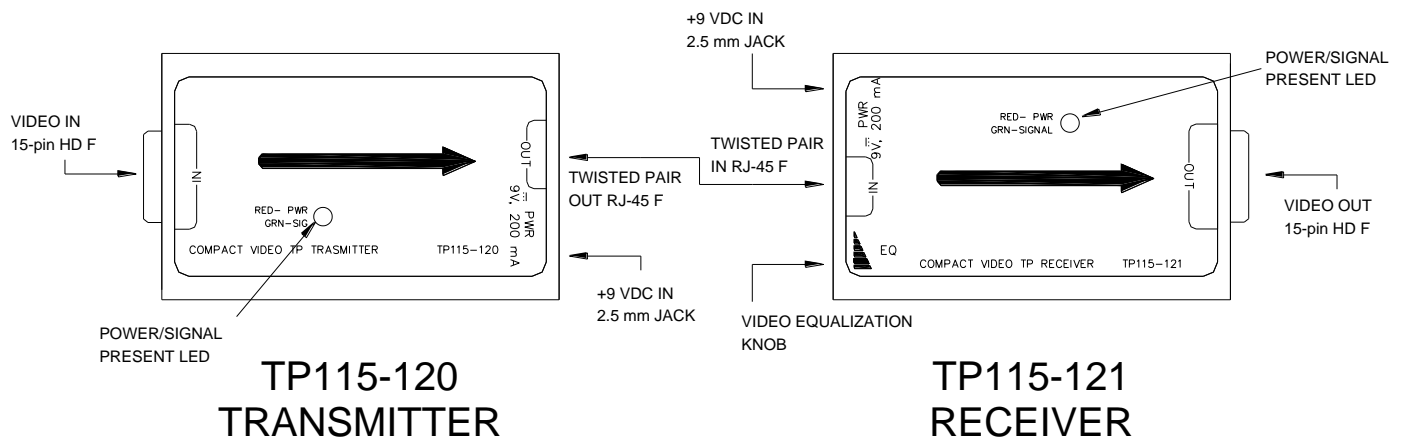
The TP115-120 and TP115-121 pair provides a means of transmitting computer or component video signals over twisted pair type (CAT-5) cable. The TP115-120 Transmitter can be used with other compatible ALTINEX Twisted Pair Video Receivers, such as the DA103-121, DA1931CT, or the TP115-111. Likewise, the TP115-121 Receiver can be used with compatible ALTINEX Twisted Pair Video Transmitters, such as the DA103-120, DA1930CT, or the TP115-110.

The TP115-120 and TP115-121 are compact and easy to use. The TP115-120 offers a female 15-pin HD input with the native Plug & Play compatibility and a female RJ-45 output connector provides the differential drive to twisted pair cables. The TP115-121 offers a female 15-pin HD video output connector and a female RJ-45 input connector for the twisted pair input.

The TP115-120 and TP115-121 receive power from external +9V adapters provided with each unit.

The latest generation of Twisted Pair devices uses an innovative, patented technology\* developed by ALTINEX. The new signal processing technology allows transmitting and receiving fully equalized computer video signals, stereo, and audio signals over long distances.

\* US Patent 7,065,190



### 6. Application Diagrams

Diagram 1: Typical Setup

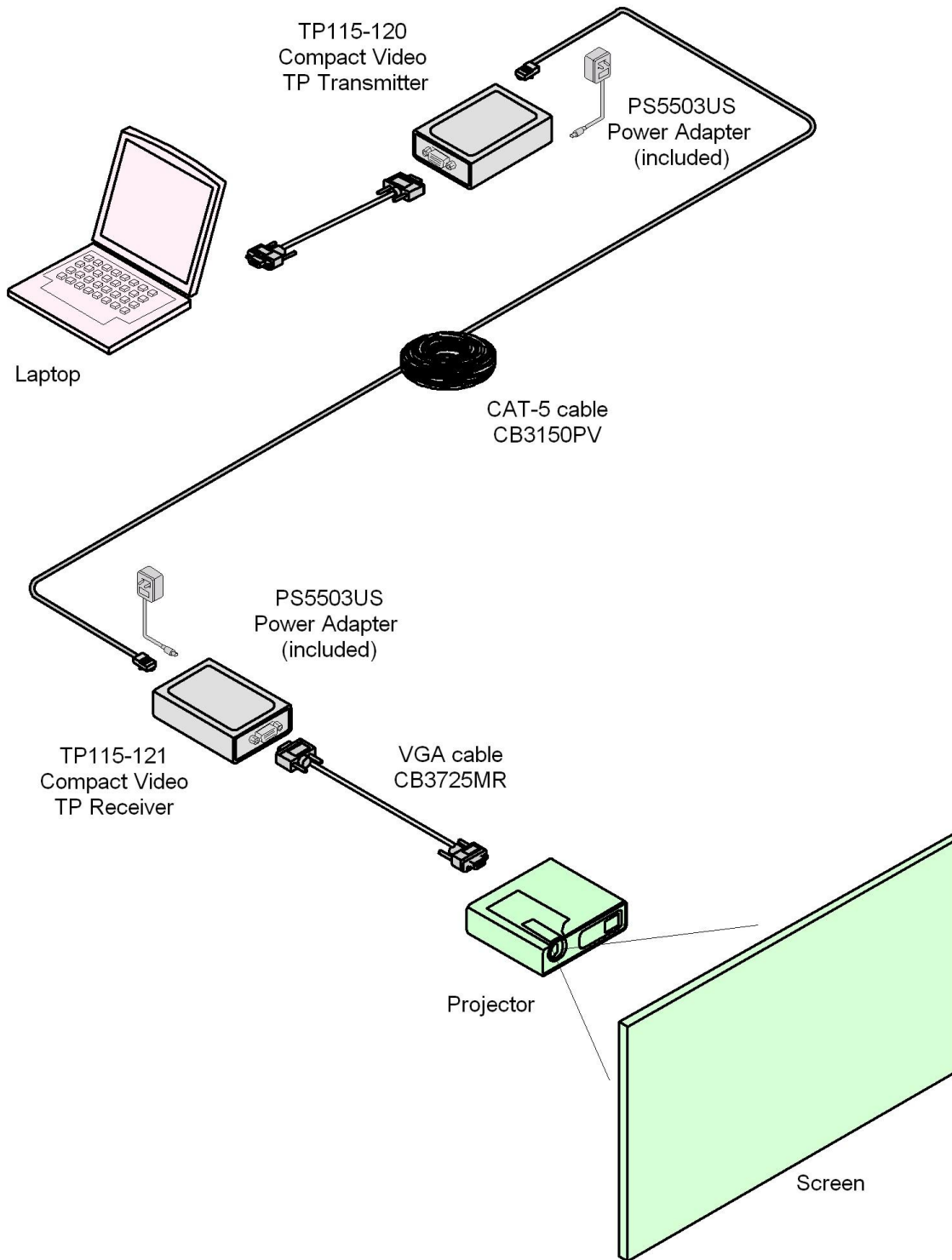


Diagram 2: Internal View

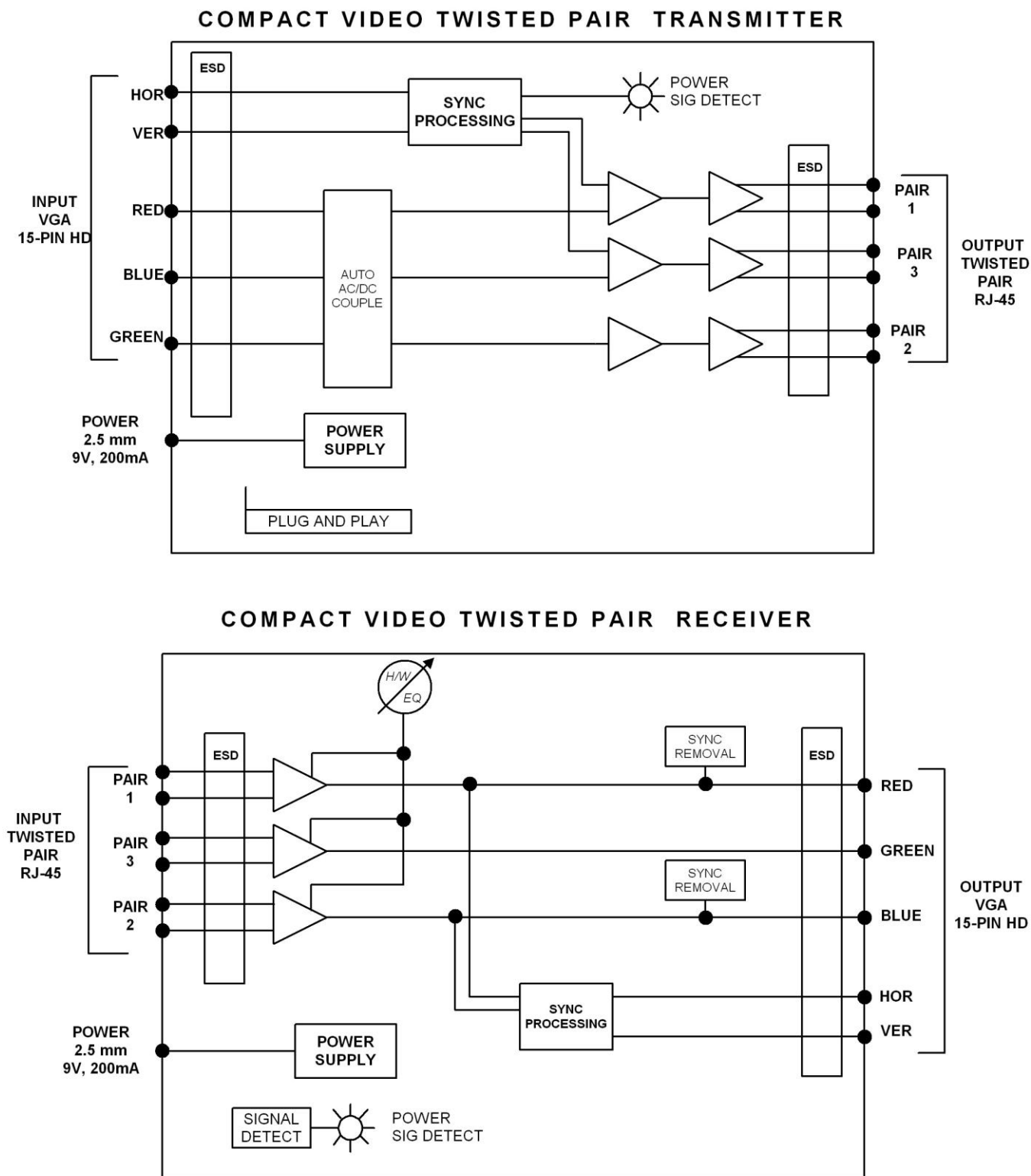
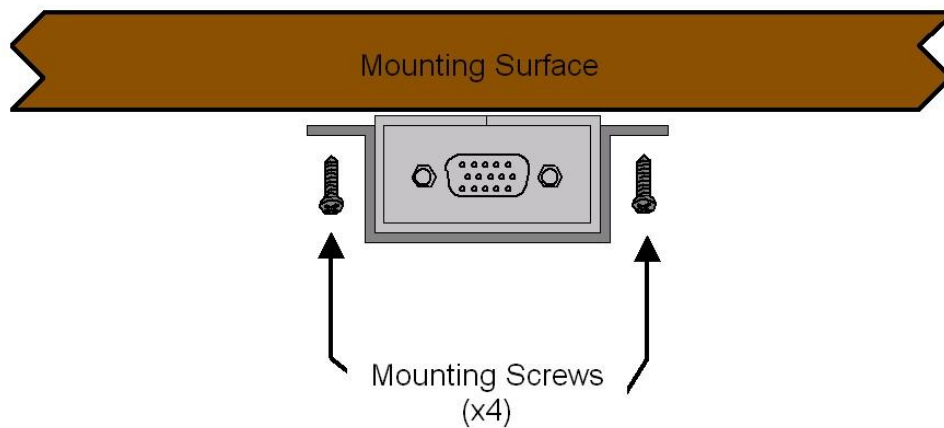
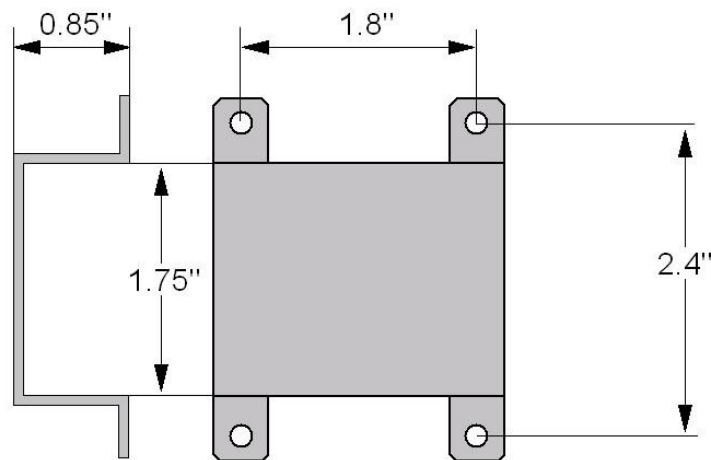


Diagram 3: Mounting Bracket (OPTIONAL)

### Optional Mounting Bracket Part No. AC402-101





### 7. Operation

#### TP115-120 Transmitter

The TP115-120 requires no adjustments for operation. Once connected, the TP115-120 will work trouble free without user intervention.

#### TP115-120 Receiver

The TP115-121 Receiver requires only video equalization for optimal performance. Once adjusted for best image quality, the TP115-121 will work trouble-free without user intervention.

Long cable lengths require video equalization. Set the video equalization knob to minimum and adjust until the image quality is good. Note that some displays take several seconds to respond to input signal changes. For best results, adjust the video equalization knob in small increments and wait 2-3 seconds for the display to respond

### 8. Troubleshooting Guide

We have carefully tested and have found no problems in the supplied TP115-120/121. However, we would like to offer suggestions for the following:

Switcher	
Symptom	Resolution
LEDs Are OFF	<ol style="list-style-type: none"> <li>1. Make sure the unit is plugged into a working AC outlet and the DC plug is inserted all the way into the switcher.</li> <li>2. Use only the power adapter provided.</li> </ol>
No Display	<ol style="list-style-type: none"> <li>1. Check the source and make sure there is a signal present.</li> <li>2. If a signal is present, make sure the Power/Signal Present on the TP115-120 Transmitter is ON and GREEN and that the Power/Signal Present LED on the TP115-121 Receiver is ON and GREEN.  Note: If the source is Component Video (YPbPr) the LED is RED on the TP115-121 Receiver.</li> <li>3. Make sure the display has power and is turned on.</li> <li>4. The cable length may require video equalization at the receiver. Set the video equalization knob to minimum on the receiver and adjust until the image quality is good. Note that some displays take several seconds to respond to input signal changes. For best results, adjust the video equalization knob in small increments and wait 2-3 seconds for the display to respond.</li> </ol>
Poor Output Image	<ol style="list-style-type: none"> <li>1. The cable length may require video equalization at the receiver. Set the video equalization knob to minimum on the receiver and adjust until the image quality is good. Note that some displays take several seconds to respond to input signal changes. For best results, adjust the video equalization knob in small increments and wait 2-3 seconds for the display to respond.</li> <li>2. The source resolution may not be compatible with the projector or other display device. Try other resolutions from the source.</li> <li>3. The source and display may not be compatible. Connect the source directly to the input of the projector or other display device. If the image is poor the devices may be incompatible.</li> </ol>