

UTP PARTNER



INSTRUCTION MANUAL

Summary

The unit is a device that allows the transmission of real-time monochrome or color video over Unshielded Twisted Pair telephone wire. Enabling reactance equally to zero, it transforms the video signal into an identical signal but with opposite polarized magnetic fields. With unparalleled common interferences rejection, the unit can transmit image in high quality even in strong interference environment. It is ideal for a wide variety of applications such as security, surveillance, video conferencing, elevator surveillance, and P/T/Z control signals.

Advantage

1) High quality and long distance transmission.

Employs advanced technology, the video transceiver can compensate the attenuation of video signal and different frequency. Keep up the sharpness and color of original picture. It achieves longer and better signal transmission.

2) Enable cost-effective, point to point transmission appliance.

Normally, there are four pairs unshielded twisted pair (UTP) in UTP cable. However, one pair UTP is necessary for 1ch CCTV video signal transmission, the others can be used for transmitting Audio signal, Control Signal, Power input or 4 channel cctv video signal. The cost are saved about 20%~50%.

3) Outstanding interference rejection. The Video transceiver is highly immune to common mode interference and Multi channel signals in the same cables transmission. Even in Strong interference environment, The unit can transmit image in high quality.

4) Easy installation

5) Transient protection

6) Exceptional interference rejection

Features

- Full motion CCTV video at long distance (Max. 9,000ft/3000M).
- Built-in linearity, Sharpness and Chroma control
- Enable unparalleled common interferences rejection
- Built-in transient Protection.
- Improve the picture definition when connect to DVR or Quad, and reduce noise affects .

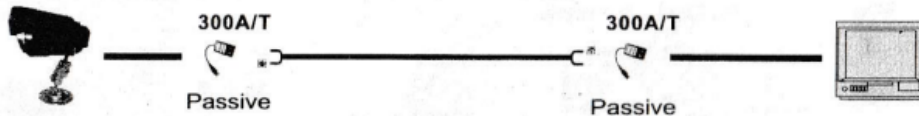
Applications

There are two kinds of video transceivers . One is Active and the other is Passive. According to different transferring distance , Please refer to the system selection chart below:

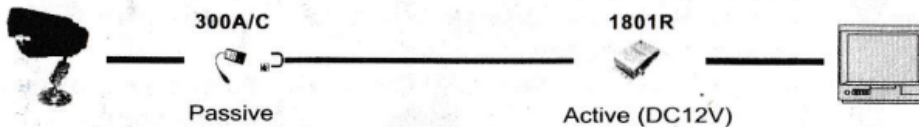
Nos of Can	Max Distance (ft)		Transmitter	Receiver
	BW	Color		
1	1800	1200	300A/C	300A/C
1	7200	5400	300A/C	1801R
1	9000	6900	1801T	1801R
4	7200	5400	300A/C	1804R
4	9000	6900	1801T	1804R

- Use UTP CAT5 24AWG to measure the transferring distance in above chart .

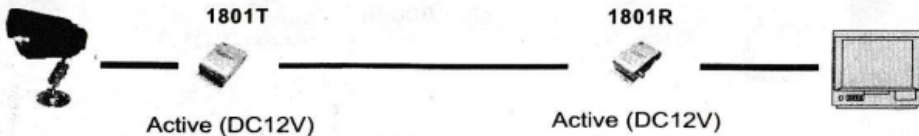
1200ft (Color)/1800ft (BW) UTP video transceiver



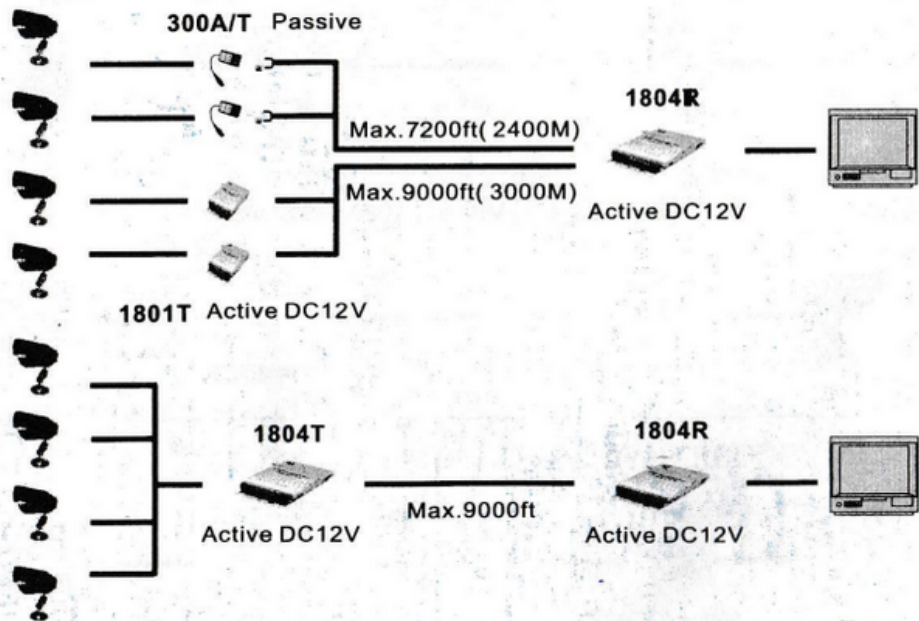
5400ft (Color)/7200ft (BW) UTP video transceiver



6900ft (Color)/9000ft (BW) UTP video transceiver



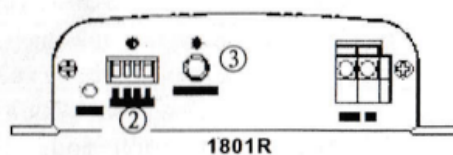
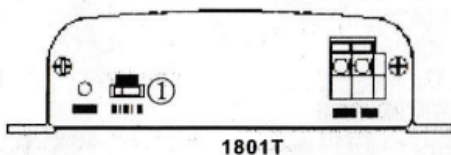
4channels video transceiver



HOW TO SET GAIN

3 kinds of image gain setting according to different distance

LMH	0-4500ft
LMH	4500-6000ft
LMH	>6000ft



Note

- (1) Lever — gain setting switch on active transmitter (**1801T/1804T**), which has three modes as L, M, H. It can be adjusted according to distance and can change signal intensity.
- (2) Sharp — image compensation switch on active receiver (**1801R/1804R**), which has 16 kinds of setting methods according to different distance. It can efficiently improve image definition.
- (3) Bright — brightness adjusting pot on active receiver, which can respectively adjust video signal intensity of every channel.

You should do nothing but set and adjust Lever, Sharp and Bright seriously, so you can achieve the best image effect.

Your initial setting can refer to the chart in P10.

※ Pay attention to the jack connection of **300A/C, 1801T/R**. The line divide into positive and negative.

Specifications

Model	300A/C	1801T/R	1804T/R
Spec	1ch (passive)	1ch (active)	4ch (active)
Video	Frequency response: DC-6MHZ Common-mode/differential-mode rejection: 15HKZ-6MHZ 60dB TYP		
Audio	—		
Wire type	Spec: 24AWG UTP CAT5 Impedance: 100 DC loop resistance: 18/100M Differential Capacitance: 62pf/M (MAX)		
Power	—	DC 12V < 150MA	
Surge Suppression	—	6000V 1.2uS*50uS	
Dimensions	52*30*22MM	90*60*28MM	203*62*45MM
Weight	55g	130g	280g
Impedance	BNC coax: 75 UTP/Connector: 100		

Frequently Asked Question

1) What kind of wire do I need to use with devices?

We recommend to use Unshielded Twisted Pair, Category 2 or better, 16-24AWG, stranded or solid. Using a multi-pair wire (six pairs or more) with an overall shield is OK.

STP(Shield Twisted Pair) may degrade the transmission distance due to interference susceptibility. When you need to prolong UTP, you can use special UY box or jointing to make connection. Video can be sent through a dozen of these connections without significant degradation.

2) Can I use RJ11 wire with devices?

It is feasible. It can cut the wire cost but will disturb image signal and degrade transmission distance and performance.

3) Can I use CAT 6 wire with devices?

Yes. CAT 6 wire is better interference rejection than CAT 5.

4) Can I bind UTP with other kinds of wire when installation?

UTP can bind with RJ11 wire, internet wire(CAT5) and coaxial cable, but the power line easily arise interference.

5) Can I utilize existing internet wire(CAT5) to transmit image signal?

You can transmit image signal through on of unused a pair of twisted-pair. Generally, a PC uses the first and the second twisted-pair to link to internet. Thus you can utilize the third and the fourth unused twisted-pair to transmit image signal, but these twisted-pairs should not pass through HUB.

6) Can I transmit more than multi-channels of video signal in a multi-pair wire bundle?

Yes.transceivers can transmits 4ch video signal in the same wire bundle without any interference.

Solve different image interference problem on application

1) Tilted veins interference and high frequency interference appear on the image

Please firstly check-up if the camera, housing, monitor and DVR creepage, In addition, make the surface of Video Transceiver connected with terra; And then, check-up if the wire joint points connect well.

2) The image become BW form color or the color is too light

If adopt passive+active transferring project, please adjust Video Transceiver SHARPS four DIP switch of receiver. If it is not solved, please change active+active transferring project.

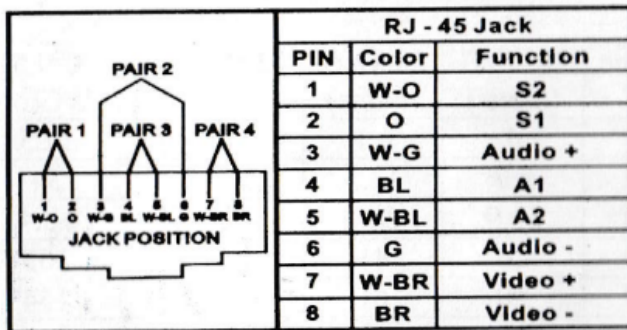
3) What is the cause about image twist and wobble when 1ch Video Transceiver transfer ?

If this phenomenon exists during using Video Transceiver to transfer 1ch image, the cause should be line and nip reversal. The method of getting rid of this phenomenon is that exchange twisted-pair in any extremity.

4) When transmitting 4ch image in the same bundle CAT5, there is 1ch image norm others image exist a string of image. What should I do?

The unbalance image signal may cause by mistake jack connection.

Please be sure to connect the jack as following instructions.



5) Using multi-active twisted-pair transceiver, the image is too bright and twisted, even there are much much snowflake. What is the cause?

The cause is that signal intensity of every channel is different after use Video Transceiver products. According to user manual, please select passive+passive, passive+active or active+active collocation in the light of actual installation distance. Video Transceiver has multi-segments style compensation and gain inching switch in transmission and receive extremities, so that adapt different transferring distance and adjust image gain and compensation of every channel. If image gain is over great, compensation is over strong, which will cause too bright and twisty image, even included snowflake.

Conductor DC Resistance (Two Line)

Distance (ft)	18AWG (ohms)	20AWG (ohms)	22AWG (ohms)	Cat 5 24AWG (ohms)
500	4	6.7	10.7	17.5
700	8.7	13.3	21.3	34
1500	16.9	26.7	42.7	68.4
2000	26	41	65	103
3000	38	61	97	154
4000	51	81	129	205
5000	64	102	161	257
6000	77	122	194	308
7000	89	142	226	359
8000	102	162	258	411
9000	115	183	291	462
11000	134	213	339	539
12000	153	244	387	616