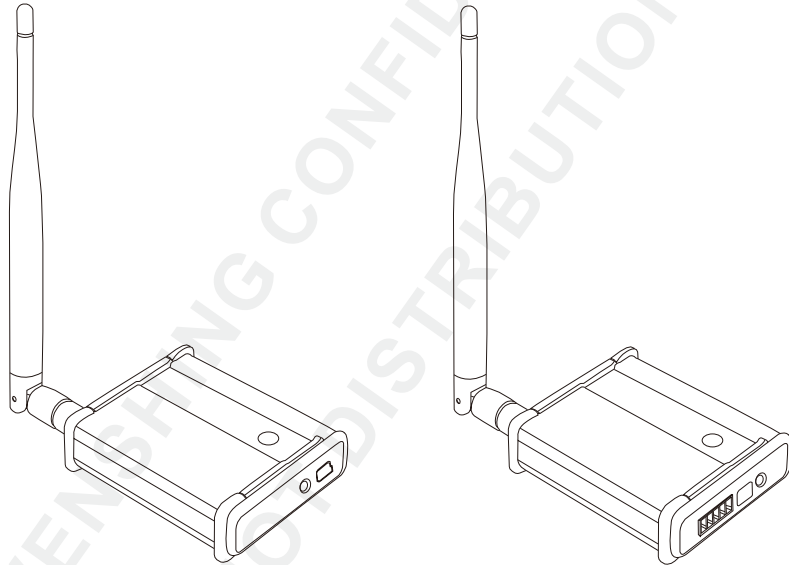# 2.4G Wireless AV Sender2

(IR Output / RS485 Output)

Model: WS-AV2(IR) Sender RX
WS-AV2(IR) Sender TX

Model: WS-AV2(RS485) Sender RX
WS-AV2(RS485) Sender TX

QUICK INSTALLATION GUIDE

Content

Contact Us

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FAX: +886-2-27328813
Website: http://www.wenshing.com.tw
         http://www.rf.net.tw

Important Event

▸ This product is in general use for the equipment on the premise of the development, design, manufacture. Do not use that require high security purposes, such as machinery or medical,aviation equipment, machinery and transport-related deaths are directly or indirectly related to the system.

▸ This product should be in this brochure by the instructions of the types and rated voltage power under the current proper use.If violation of this statement by the safety records of the supply operation, I am afraid our company cannot afford any of the responsibility.

▸ Do not self-decomposition, alteration, repair of the products also will cause fire, electric shock, fault, and dangerous.In addition, their decomposition, alteration, and repair the product, failure is not within the scope of warranty.

▸ The products are not waterproof, so please do not use and touch water. Take off and on also please note. Rain, spray, drinks,steam, sweat may be a failure.

▸ Use of this product, please be sure to use according to the statement recorded by the use of methods to operate.
Please do not violate particular attention to the matter reminded to use.

▸ Please respect this statement recorded by the note. When consumers in contravention of this statement recorded note of the operation, I am afraid our company could not shoulder any responsibility.

▸ Products are defective, the Company will be responsible for free to amend the flaws, or to the same flawless product or its equivalent products in exchange. However, the Company does not assume based on the requirements of the flaw and loss responsibility.

▸ The Company reserves the right to retain without notice to users of the cases, the product of hardware / software (version upgrade) is with the right to edit.

Declaration

This product provides different frequency for user selection to meet different telecommunication regulation and FCC/CE on different countries.

Warranty

The warranty time is within one year from purchased date. The warranty scope are used in normal situation and none vandalism.
(Some function harmful out of warranty scope and Vandalism are Un-warranty).

Un-warranty Scope Description

▸ Because the natural disaster, accident or human factor to cause the bad damage.

▸ Violate the product instruction manual to cause the damage of the products.

▸ The improper assemble causes damage.

▸ The products used the unsanctioned accessory to cause damaged.

▸ Overstep the allowed used environment to cause the products damaged.

Overview

The AV Transceiver adopts wireless radio frequency technology to transmit audio and video signals. This is fully digitalized and has strong anti-interference capability using digital encryption technology so the data safety is extremely high. This transceiver transmits high quality audio and video signals wirelessly from any players with AV output, such as CATV box, DVD, VCD, DVR, security monitoring system, personal computer, digital TV set top box, multimedia game console, multimedia set top box…, etc., therefore, it is easy to achieve high-quality, wireless, digitalized transmission for both video and audio.

Not only supporting IR extender and RS-485 interface, it reaches ultra-long range up to 800M straight line of sight. The wireless frequency hopping technology minimizes potential interference even in harsh environments; therefore, it ensures the quality and speed of the audio and video transmission. Images and audio received are timely, vivid, sharp and clear. The fastest transmission speed achieves up to 30 frame per second (720x480) at D1 resolution. Easy to get rid of the hassle of physical wires and still achieve enjoy the high-quality audio and video transmission wirelessly.

Suitable for various occasions including home entertainment, large video conferencing, multimedia broadcasting system in educational usage. Simple to operate, plug-and-play and no required for additional software. It is truly a cost saver to replace pricey AV physical wires.
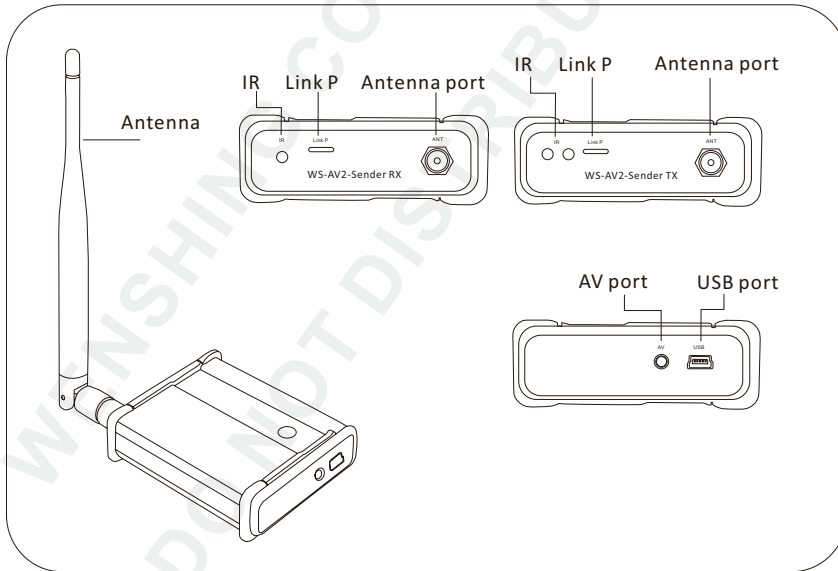
Applications

This AV Transceiver makes a great combination to any devices with AV output, including CATV box, surveillance camera, VCD, DVD, DVR, TV, IPTV, personal computer, satellite STB, digital TV STB, multimedia player, gaming console, HD network media player, and satellite receiver …etc.
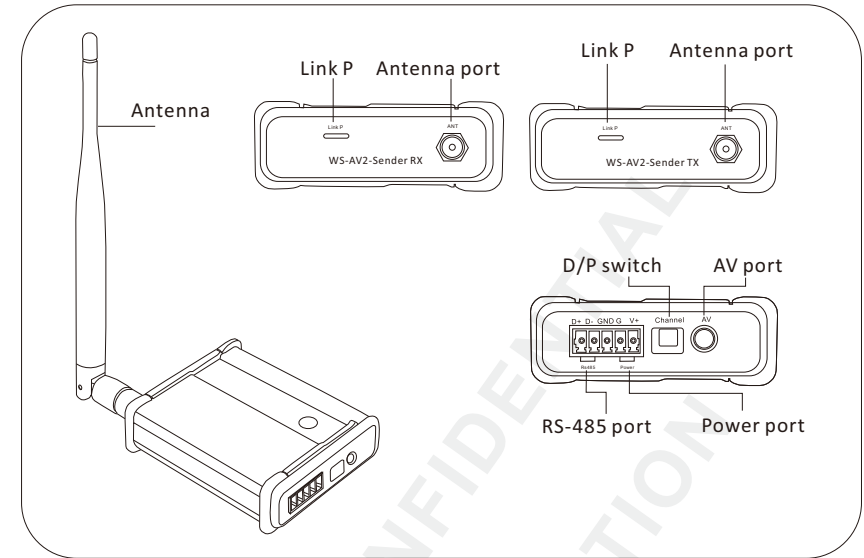
Features

- ▸ 2.4GHz wireless frequency hopping spread spectrum (FHSS), strong anti-interference capability.
- ▸ Support up to 4 sets of transceiver (4T and 4R) working simultaneously.
- ▸ Support IR extender or RS-485 interface.
- ▸ Digital encrypted function ensures safety and reliability.
- ▸ Synchronizing for both audio and video transmission.
- ▸ Long range transmission, up to 800 meters line of sight.
- ▸ Frame per second reaches up to 30 at (720*480) D1 resolution.
- ▸ Supports video transmission of PAL/NTSC system.
- ▸ Fully digitalized, crystal clear video resolution, stable signals that penetrate walls, doors, ceilings and floors.
- ▸ Plug and play, easy set up requires to software.
- ▸ High-gain omnidirectional antenna provides stable signal transmission and reliability.

Appearance and Function

IR Output

Antenna

IR   Link P   Antenna port

WS-AV2-Sender RX

IR   Link P   Antenna port

WS-AV2-Sender TX

AV port   USB port

AV   USB

RS485 Output

Antenna

Link P   Antenna port

WS-AV2-Sender RX

Link P   Antenna port

WS-AV2-Sender TX

D/P switch   AV port

D+ D- GND G V+   Channel   AV

Rs485   Power

RS-485 port   Power port

Transceiver SPEC

Size:87 * 72.5 * 26mm (W * D * H)
Video input connector: 3.5mm Phone jack
Audio input connector: 3.5mm Phone jack(RS-485 function not have audio)
Antenna connector: SMA
Consumption current: IR Function= 5V 1A
　　　　　　　　　　RS-485 Function = 12V 500mA
Power supply: IR Function 90~264Vac/5Vdc 1A
　　　　　　　RS-485 Function 90~264Vac/12Vdc 1A
Button: Pairing button,Group switch(RS-485 Function only)
Interface: IR LED or RS-485
LED Indicator: Power and connecting
Video input Resolution: NTSC or PAL

Receiver SPEC

Size:87 * 72.5 * 26mm (W * D * H)
Video output connector: 3.5mm Phone jack
Audio output connector: 3.5mm Phone jack
                        (RS-485 function not have audio)
Antenna connector: SMA
Consumption current: IR Function= 5V 1A
                     RS-485 Function = 12V 500mA
Power supply: IR Function 90~264Vac/5Vdc 1A
              RS-485 Function 90~264Vac/12Vdc 1A
Button: Pairing button,Group switch(RS-485 Function only)
Interface: IR receiver or RS-485
LED Indicator: Power and connecting
Video output Resolution: Maximum 30 frames at D1 resolution
                         (720 x 480),25 frames at 720 x 576
Video output Level: 1±0.3V p-p 75 ohm
Latency: 300ms normal

Other SPEC

Frequency: ISM 2400~2483MHz Hopping
Transmission power: Minimum 100mW
Modulation: QPSK
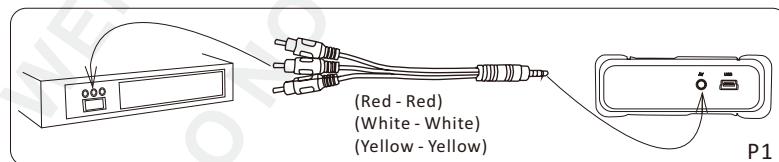Maximum distance: Open space up to 2400ft
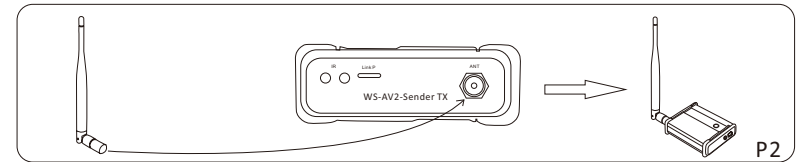Image processor: H.263 encode/decode
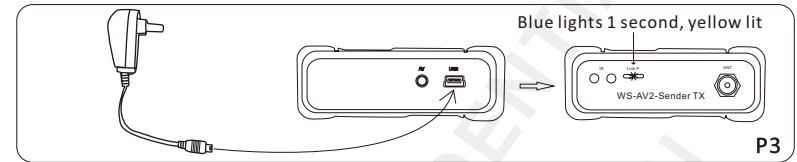
AV2-IR Operation Guide

Installation

▸ Transmitter

1.Connect yellow terminal from signal cable to video port, plug red terminal into right audio port while plug white terminal into left audio port.Link signal cable to 3.5mm terminal from female connector at Transmitter.(P1)

(Red - Red)
(White - White)
(Yellow - Yellow)

P1

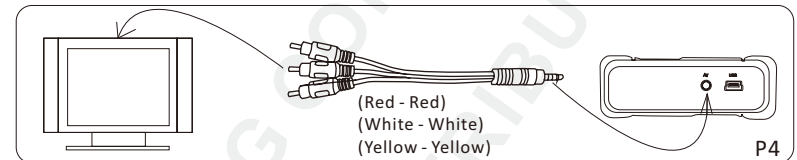2.Put antenna into the antenna terminal at Transmitter.(P2)

WS-AV2-Sender TX

P2

3.Connect the attached adaptor, the LED blinks steady in yellow and the same time another LED blinks in blue for 1 second and goes off showing the device is functioning well.(P3)
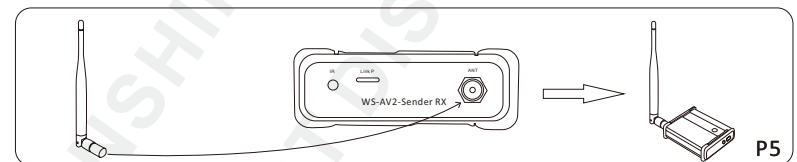

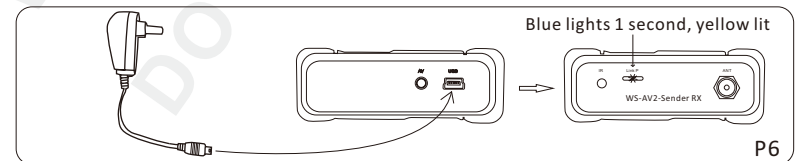Blue lights 1 second, yellow lit

WS-AV2-Sender TX

P3

▸ Receiver

1.Connect yellow terminal from signal cable to video port, plug red terminal into right audio port while plug white terminal into left audio port.Link signal cable to 3.5mm terminal from female connector at Receiver.(P4)

(Red - Red)
(White - White)
(Yellow - Yellow)

P4

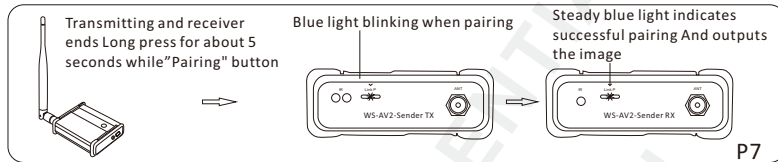2.Put antenna into the antenna terminal at Receiver. (P5)

WS-AV2-Sender RX

P5

3.Connect the attached adaptor, the LED blinks steady in yellow and the same time another LED blinks in blue for 1 second and went off showing the device is functioning well.(P6)

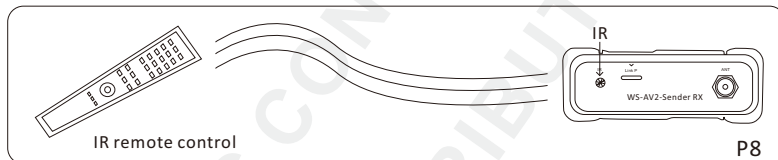Blue lights 1 second, yellow lit

WS-AV2-Sender RX

P6

Pairing Methods

Press the pairing key for 5 seconds from Transmitter and Receiver until the LED blinks in blue.In the pairing mode, if it were not pairing successfully in 30 seconds, the system exits this mode automatically.If pairing is done successfully, both LED blinks steady from both Transmitter and Receiver suggesting they are connecting, the Receiver shows video output from the screen.(P7)

Transmitting and receiver ends Long press for about 5 seconds while"Pairing" button

Blue light blinking when pairing

Steady blue light indicates successful pairing And outputs the image
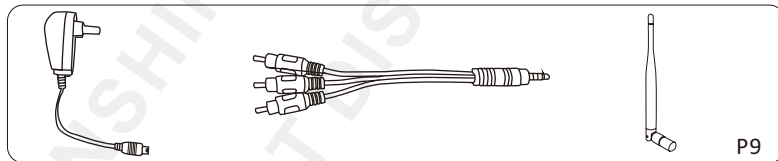
P7

Remote Controller

This AV transceiver supports IR transferring; it works well when the remote controller focuses on the IR receptor to control other devices remotely.(P8)

IR

IR remote control

P8

Accessories

▸ Adapter*2   ▸ Signal conversion line*2   ▸ Antenna*2(P9)
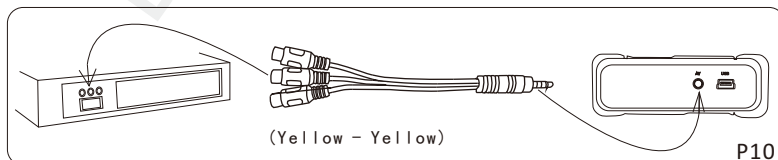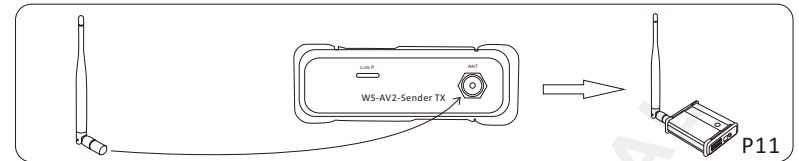
P9

AV2-RS485 Operation Guide

Installation

▸ Transmitter
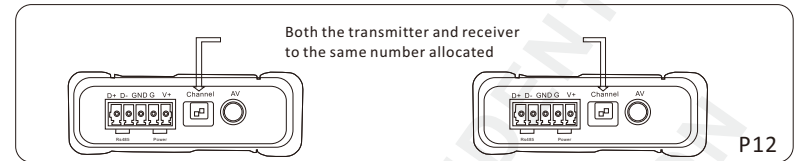
1.Connect yellow terminal from signal cable to video port.Link signal cable to 3.5mm terminal from female connector at Transmitter.(P10)
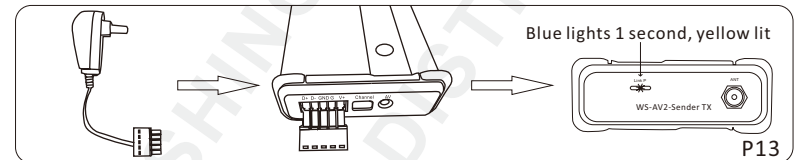
(Yellow — Yellow)

P10

2.Put antenna into the antenna terminal at Transmitter.(P11)

WS-AV2-Sender TX

P11

3.Positioned the dip switch to the desired group.(P12)

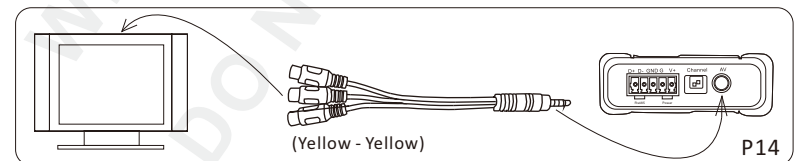Both the transmitter and receiver to the same number allocated

P12

4.Connect the attached adapter to the corresponding position from the green terminal bracket to make sure it's being tightly screwed by using flat-blade screwdriver.Have D+ and D- from RS-485 tightly screwed to the corresponding position from the green terminal bracket as shown from figure below by using flat-blade screwdriver (only if it's necessary).Link the green terminal bracket to female connector from Transmitter, the LED blinks steady in yellow and the same time another LED blinks in blue for 1 second and goes off showing the device is functioning well.(P13)

Blue lights 1 second, yellow lit

WS-AV2-Sender TX

P13

▸ Receiver

1.Connect yellow terminal from signal cable to video port.Link signal cable to 3.5mm terminal from female connector at Receiver.(P14)

(Yellow - Yellow)

P14

2.Put antenna into the antenna terminal at Receiver.(P15)

Link P
ANT
WS-AV2-Sender RX

P15

3.Positioned the dip switch to the desired group.(P16)

Both the transmitter and receiver to the same number allocated

D+ D- GND G V+   Channel   AV
Rs485   Power

D+ D- GND G V+   Channel   AV
Rs485   Power

P16

4.Connect the attached adapter to the corresponding position from the green terminal bracket to make sure it's being tightly screwed by using flat-blade screwdriver.Have D+ and D- from RS-485 tightly screwed to the corresponding position from the green terminal bracket as shown from figure below by using flat-blade screwdriver (only if it's necessary).Link the green terminal bracket to female connector from Transmitter, the LED blinks steady in yellow and the same time another LED blinks in blue for 1 second and goes off showing the device is functioning well.(P17)
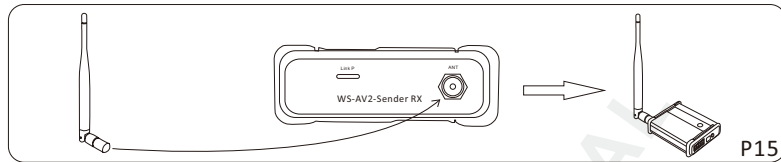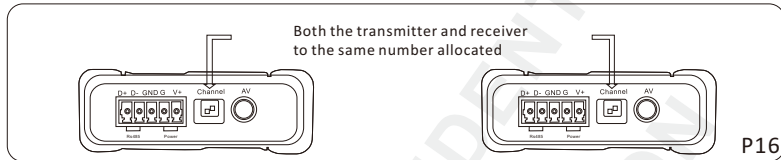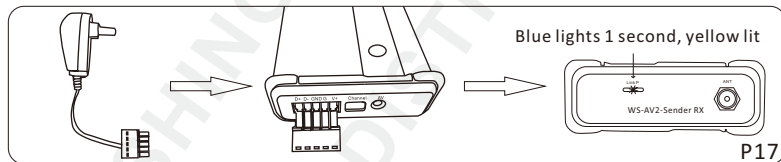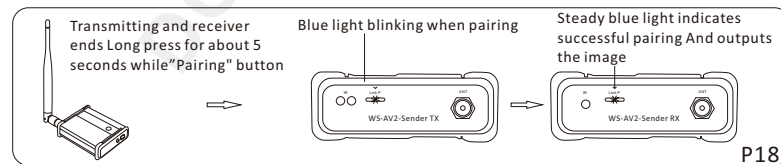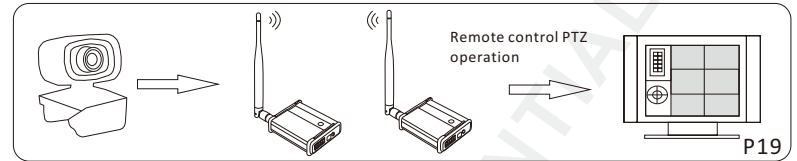

Blue lights 1 second, yellow lit

D+ D- GND G V+   Channel

Link P
ANT
WS-AV2-Sender RX

P17

Pairing Methods

Press the pairing key for 5 seconds from Transmitter and Receiver until the LED blinks in blue.In the pairing mode, if it were not pairing successfully in 30 seconds, the system exits this mode automatically.If pairing is done successfully, both LED blinks steady from both Transmitter and Receiver suggesting they are connecting, the Receiver shows video output from the screen.(P18)
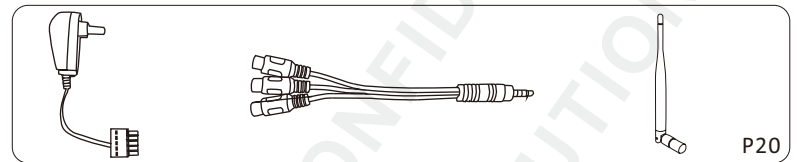

Transmitting and receiver ends Long press for about 5 seconds while"Pairing" button

Blue light blinking when pairing

Steady blue light indicates successful pairing And outputs the image

IR Link P
ANT
WS-AV2-Sender TX

IR Link P
ANT
WS-AV2-Sender RX

P18

Remote Controller

This AV transceiver supports RS-485 interface transferring.Firstly, to set the RS-485 data rate at 2400bps from speed dome and controller; Secondly, to connect both Transmitter and Receiver, it then works well to remotely control the device for various functions.(P19)

Remote control PTZ operation

P19

Accessories

► Adapter*2   ► Signal conversion line*2   ► Antenna*2(P20)

P20

WS-AV2 WS-AV2
9 10

CE Caution Note (European Union)

Symbol of $C\epsilon$ it accords with EMC regulation (89/336 / EEC) to represent this device, and the low-voltage regulation of European Union (73/23/EEC).
It represents to follow the following standard regulations of European Union (The bracket is a reciprocal international standard reciprocal international standard and regulation).

▸ EN 60950/A11: 1997/(IEC 60950/A4: 1996),The ones that includes information science and technology of apparatus of e-commerce safe.

▸ EN 55024: 1998 (IEC 1000-4-2, 1000-4-3, 1000-4-4, 1000-4-5, 1000-4-6, 1000-4-8, 1000-4-11) -' scientific and technological apparatus of information - The characteristic of interfere avoided - Restrain and test method

▸ Chapter 2 -Static release (ESD) Demand

▸ Chapter 3 -Radiate the static field demand

▸ Chapter 4 -The electron is transmitted / produced and washed (EFT) fast Demand.

▸ Chapter 5 -surge demand

▸ Chapter 6 -Resistance demand caused in field of wireless frequency.

▸ Chapter 8 -Magnetic field demand of electric frequency.

▸ Chapter 11 –Shortly cut off the demand of making a variation with the voltage transiently under the voltage.

EN 55022:1998/(CISPR 22:1997) ,Class B, ' "To assess information scientific and technological apparatus wireless restriction and way of interfering with the characteristic."

FCC Consistent Declaration (U.S.A. Only)

Attention: FCC rule regulation, modified and changed must allowed by WENSHING Electronics company, otherwise that would make you operate this apparatus invalid. This apparatus adopted test, according to chapter 15 that FCC regulation, accord with Class B digital restrictions of device. These limits are designed to provide reasonable protection, avoid to having harmful interference at home's environment.
This device may have radiated wireless frequency energy. If don't allow the instruction manual, then may will interfere wireless communication. However, there is no any way to guarantee, it will not be interfered in particular installed.
If this device really causes harmful interference,
(It could be confirmed by turning on or off this device.)
Advise you to try to use the following ways modifying the interference situation.

▸ Relocation receiving antenna or altering its direction.

▸ Increase the distance between device and receiver.

▸ Please connect this device to the outlet in the circuit different from the receiver.

▸ The following manuals is published by Federal Communications Commission, they must be helpful to all users.

▸ How to Identify and Resolve Radio-TV Interference Problems. (This manual can be obtained by relevant departments of publication of the U.S. Government.)

▸ Government Printing Office, Washington D.C., 20402. Stock No. 004-00398-5