RF Wireless Remote Receiver &Transmitter Model (S1PX-AC220 & CWB-2)

Feature:

It can be used in industry automation, agriculture automation and home automation, such as factory, house, farm, pasture, vehicle, ship, offshore operation, aerial vehicle, field call, etc. It can remote control equipments on land, water and air, such as remote control lights, sirens, locks, motors, fans, winches, blinds, linear actuators, doors, windows, electric solenoid valves, security alarm, business signs and various devices.

Wireless control, easy to install.

Waterproof: The receiver has waterproof case and waterproof connector, it can be installed outdoors.

Universal input: Support voltage of AC110V (100V~120V), widely used in US, Canada... and voltage of AC220V (200V~240V), used in UK, France...

AC Power Output: It can control AC equipment with voltage 110V / 120V / 220V / 240V AC.

High Power: Each channel can work at maximum current 30A, such as 3000W/110V, 6000W/220V.

With wired control terminals: You can connect sensors, limit switches, manual switches or external devices to control the receiver.

Use microcontroller model of EM78P156, an 8-bit microprocessor designed and developed with low-power and high-speed CMOS technology.

You can turn on/ off the receiver with transmitter (remote control) from any place within a reliable distance.

Wireless RF signal can pass through walls, floors, doors or windows.

With reverse power protection and over current protection.

Reliable control: The receiver only works with the transmitter which use same code.

One/several transmitters can control one/several receivers simultaneously.

You can use two or more units in the same place.

Receiver:

Model No.: S1PX-A220
Power Supply (Operating Voltage): AC100~240V (110V/120V/220V/240V)
Output: AC100~240V (110V/120V/220V/240V)
Working Frequency: 315MHz
Channel: 1CH
Control Modes: Toggle, Momentary, Latched
Static Current: ≤6mA
Maximum Working Current: 30A
PCB size: 90mm x 59mm x 18mm
Case size: 100mm x 68mm x 50mm
Work with Fixed code transmitters or Learning code transmitters.

The receiver can work with different transmitters, such as model C-1 / C-2 (100M), CWB-1 / CWB-2 (50M, waterproof), CP-1 / CP-2/CV-2 (500M), or CB-1 / CB-2 (1000M), CBW-1/CBW-2 (1000M, waterproof) etc.

When you set the receiver in toggle or momentary mode, it should work with single button transmitter, such as model C-1 (100M), CWB-1 (50M, waterproof), CP-1 (500M), or CB-1 (1000M), CBW-1 (1000M, waterproof) etc. When you set the receiver in latched mode, it should work with two buttons transmitter, such as model C-2 (100M), CWB-2 (50M, waterproof), CP-2 (500M), CV-2 (500M), CB-2 (1000M), or CBW-2 (1000M, waterproof) etc.

If you want to have a further working range, you can install an external antenna to the receiver, such as magnetic mount antenna (model 0020910(1.5m),0020913(5m),0020916(10m),0020917(10m)), which working range is three times as much as it used to be. Or telescopic antenna (model 0020918), which working range is twice as much as it used to be.

Transmitter:

Model No.: 0021093 (CWB-2)
Waterproof
Shell Color: Black
Channel/Button: 2
Button Symbol: A, B
Operating Voltage: 6V (2 x CR2016 -3V button cell batteries,, can be used for 12 months)
Operating Current: 5mA
Operating Frequency: 315Mhz
Encoding Chip: LX2260
Encoding Type: Fixed code by soldering, up to 6561 codes
Transmitting Distance: 50m / 150ft (theoretically)

The distance of 50m is a theoretical data, it shall be operated in an open ground, no barriers, no any interference. But in the practice, it will be hindered by trees, walls or other constructions, and will be exposed to some interference by other signals. Therefore, the actual distance may or may not reach 50m.

Modulation Mode: ASK
Operating Temperature: -20 ° C to +70 ° C
Unit Size: 56mm x 32mm x 12mm
Weight: 20g
Uses: garage doors, motorcycles, car alarm products, home security products, wireless remote control products, industrial control products.

How to set up the 8-bits code of the transmitter:
1. Open the transmitter shell, then you will see the circuit board. There are two rows pads and one row of chip feet on the back side.
2. The upper row of pads is "H" side, and the lower row of pads is "L" side.
3. If solder the middle row of chip feet to the "L" side, it is code 1. If solder the middle row of chip feet to the "H" side, it is code 2. Don't solder to any side, it is code 0.
4. The 8-bits code order is from right to left (from D1 to D8).
5. Here is an example, the 8-bits code in the picture is 00001020, solder as the following way:
6. Code 0: don't solder any side, like D1, D2, D3, D4, D6, D8.
7. Code 1: solder to the "L" side, like D5.
8. Code 2: solder to the "H" side, like D7.

How to pair the transmitter to the receiver:
1) Press the button of receiver; signal LED on the receiver keeps shining. The receiver enters into status of LEARNING.
2) Press any one button on remote control. If signal LED flashes quickly 15 times and turns off, it means learning is successful.
3) When receiver is in the status of LEARNING, press again the button of receiver, signal LED turns off, learning process will be discontinued.
4) The receiver can learn several remote controls with different codes.

Delete all transmitters:
We have learned remote control to the receiver. If you don't want the receiver to work with the remote control, you can delete all codes of remote controls, which are stored in the receiver.
Operation: Press and hold the button of receiver until signal LED flashes slowly; release the button, LED keeps slow flash. That means all stored codes have been deleted successfully.

Wiring:
If you want to control an AC 220V lamp, do as following:
1) Connect the live wire of AC power supply to terminal "L / +" of INPUT, and connect the neutral wire of AC power supply to terminal "N / -" of INPUT.
2) Connect the live pole of lamp to terminal "L / +" of OUTPUT, and connect the neutral pole of lamp to terminal "N / -" of OUTPUT.

Setting different control modes：
Setting different control modes (We have set the receiver as Toggle control mode before delivery. If you want to use other control modes, do as following operation):
Setting control mode Toggle: Only connect Jumper-2.
Control mode Toggle (with transmitter CWB-2): Press -> On; Press again -> Off.
Press button A of the transmitter: Output terminal outputs AC power, the lamp is on.
Press button A again: Output terminal stops outputting, the lamp is off.

Setting control mode Momentary: Only connect Jumper-1.
Control mode Momentary (with transmitter CWB-2): Press and hold -> On; Release -> Off.
Press and hold button A of the transmitter: Output terminal outputs AC power, the lamp is on.
Release button A of the transmitter: Output terminal stops outputting, the lamp is off.

Setting control mode Latched: Do not connect Jumper-1 and Jumper-2.
Control mode Latched (with transmitter CWB-2): Press -> On, Press another button -> Off.
Press button A of the transmitter: Output terminal outputs AC power, the lamp is on.
Press button B of the transmitter: Output terminal stops outputting, the lamp is off.

Wired control terminals:
The receiver has manual control terminals, you can connect external devices, sensors, or manual switches to control the receiver.
1) Signal input:
You can connect external devices (with low level output signal) to manual terminals 1 (Signal -) and terminal 2 (Signal +), then the external device's output signal can control the receiver.
When the external device outputs low level signal to manual terminal 1 and terminal 2, turn on the relay. Output terminal outputs AC power, the lamp is on.
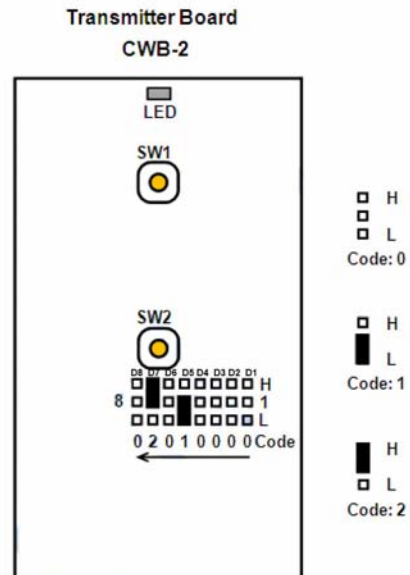When the external device stops to output signal, turn off the relay. Output terminal stops outputting, the lamp is off.

2) The manual switches:
You can connect manual switch to terminals 1 and 2, and then you can use this manual switch to control the receiver.
When connect terminals 1 and 2, turn on the relay. Output terminal outputs AC power, the lamp is on.
And when disconnect terminals 1 and 2, turn off the relay. Output terminal stops outputting, the lamp is off.

Transmitter Board
CWB-2

LED

SW1

SW2

D8 D7 D6 D5 D4 D3 D2 D1

8

0 2 0 1 0 0 0 0 Code

Code: 0

Code: 1

Code: 2

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

FCC Statement

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.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.