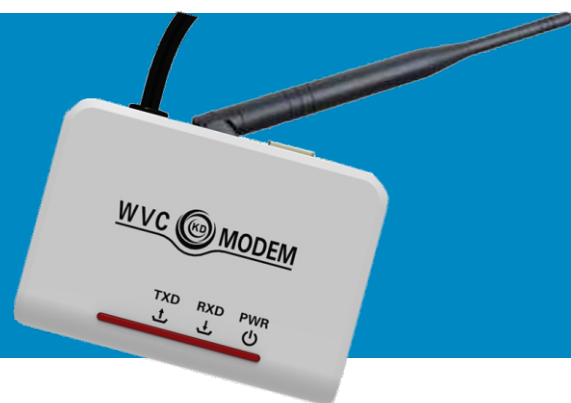


# Wireless 433/462MHz WVC Modem User Manual



2017/3 V3.0

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# 1 Summarize

## 1.1 Background

As a professional solar, wind power generation system providers, with the strong research and development, design, production capacity, we always will meet the maximization and diversification demand of user as our service standards. From 21 century, solar, wind and other renewable clean energy is applied more and more widely, but the existing solar, wind power generation system generally have the difficult to monitor and maintenance, new generation of communication type PV power system came into being and solve this kind of problem perfect. WVC Modem is a important part of communication generation system. The success of research and development of WVC Modem have provided a reliable relay communication data support for centralized and round-the-clock devices monitoring management. And the user can through this manual to understanding the detailed of WVC Modem's use method and attentions.

## 1.2 Application Fields and Range

WVC Modem is a special device for communication type generation system and need to match up to communication Micro inverter and Power Monitoring System for use. It hasn't compatibility for other company products.

## 1.3 Copyright statement

WVC Modem is research and development by us. have the ownership and power of interpretation of its English logo, Chinese label and image identification , and related software intellectual property.

# 2 WVC Modem User Manual

## 2.1 System Comprehensive description

WVC Modem is the important component of communication power generating system. According to the applied characteristics, we design a WVC Modem which can monitoring and manage of 100 pcs micro inverter. 100pcs micro inverter and one WVC Modem make a group. In the same group, micro inverters and WVC Modem must be installed in the same phase circuit, WVC Modem's standard interface is RS232, If there are no RS232 interface on your computer you need to buy the USB To RS232 connector then use the USB port to communicate directly.

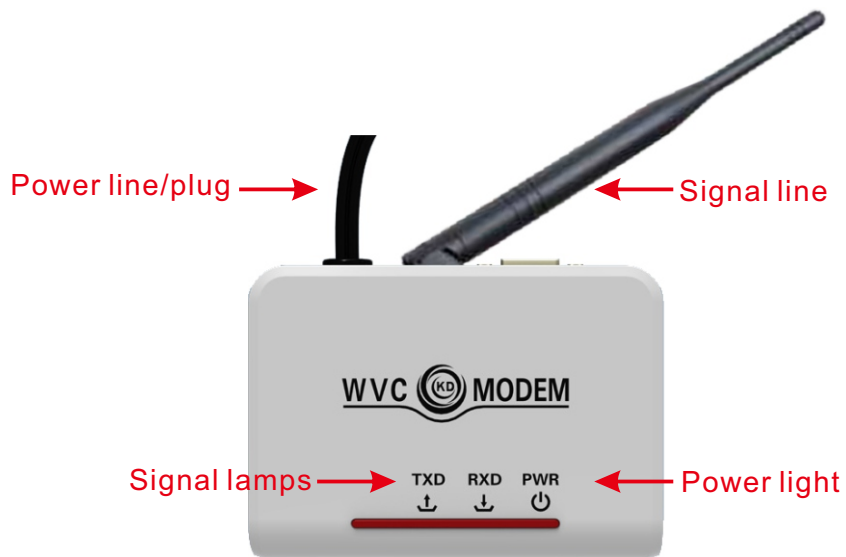
In the whole power system, WVC Modem system simple structure schemes like below: (detailed installation chart please see communication power generation system installation structure guide):



## 2.2 Equipment components

WVC Modem standrd components including:

1.WVC Modem unit.



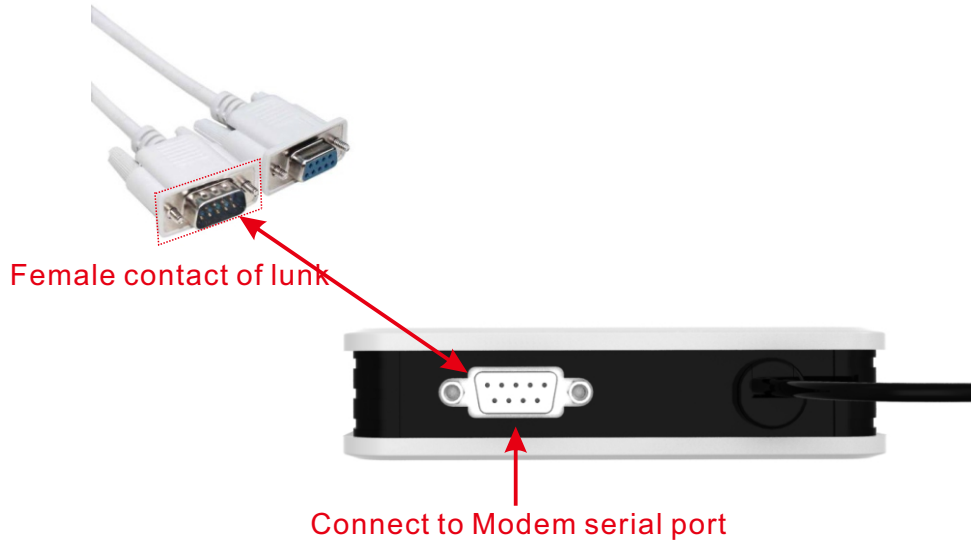
2. One RS232 serial connections



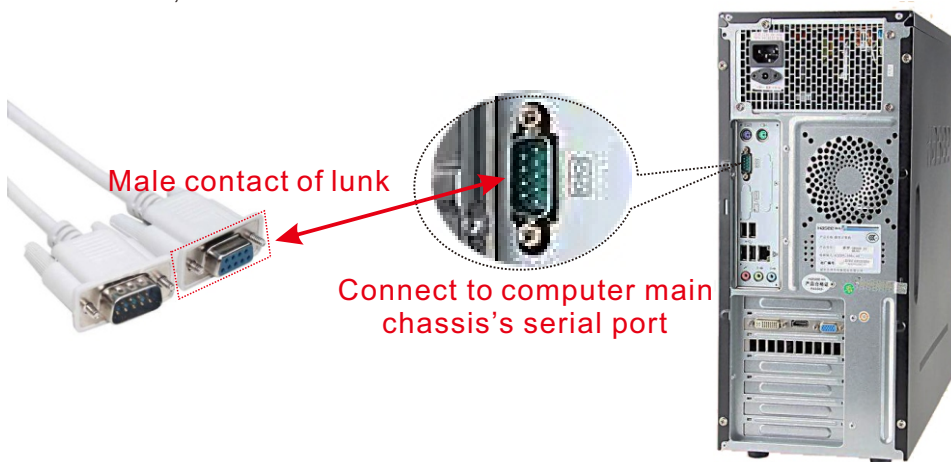
## 2.3 WVC Modem Installation

When the micro inverters is less than or equal to 100pcs in generation system, we only need to install one WVC Modem. The installation is very simple, just need using the serial port to connect the WVC Modem and computer, then plugged in power. Of course, the first premise is your computer needs a serial port(If there are no RS232 interface on your computer you need to buy the USB To RS232 connector then use the USB port to communicate directly.). And the details installation like below:

1. Connect the serial port of the female contact of lunk to WVC Modem serial port and tighten the screw on both ends of the connections, show likes below:



2. Connect the serial port of the male contact of lunk to computer main chassis's serial port and tighten the screw on both ends of the connections, show likes below:



3. Connect the power;



4. Finish installation of WVC Modem;

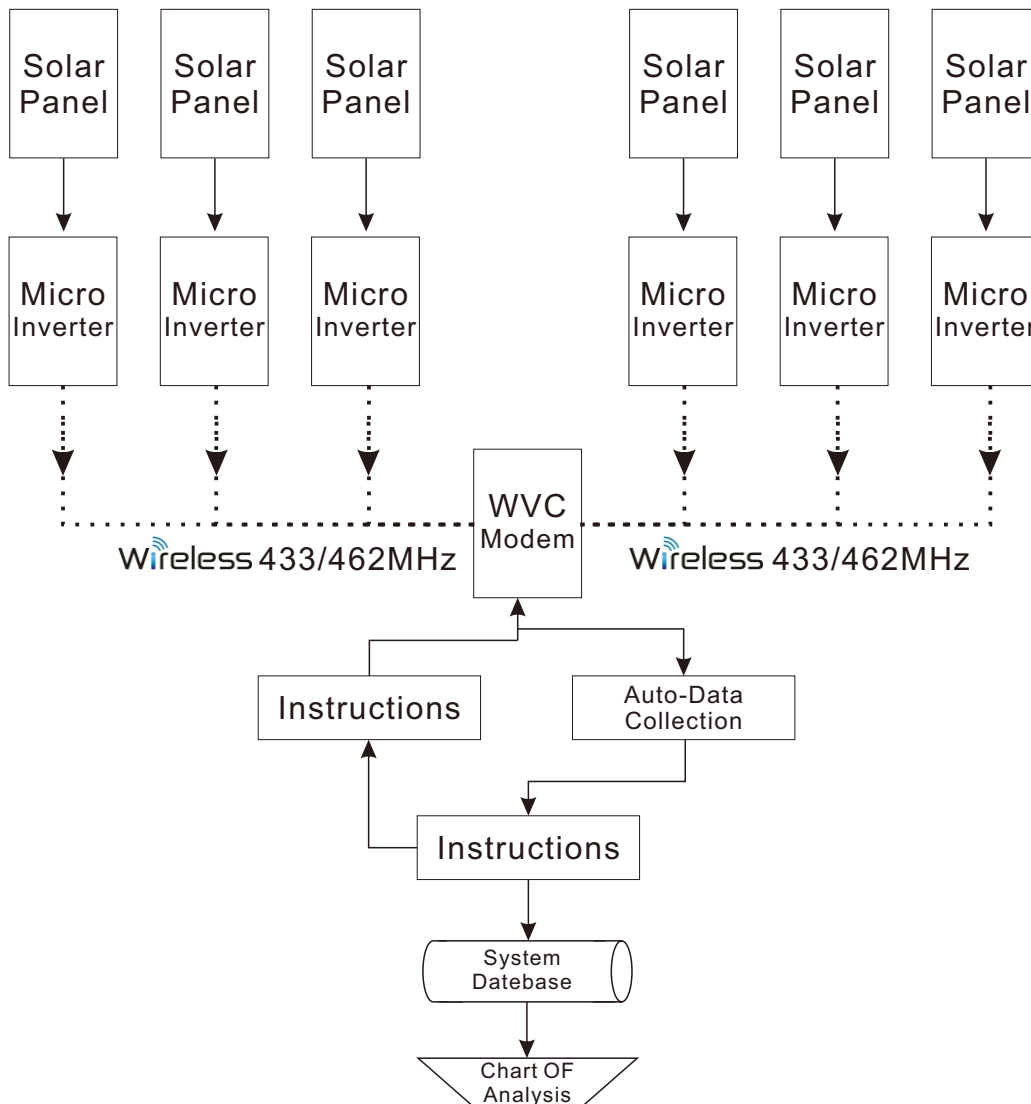
## 2.4 WVC-Modem Instructions

WVC Modem will start to work after power on. WVC Modem is a communication and data trunking. There is no function keys on the Modem, we just need to keep it continuous power supply. Parts of operation order will automatically complete by WVC Modem and Monitoring System will manually or automatically complete the rest instructions. (Referring to Monitoring System Instructions)

The sequence of devices start and operation is the most important in Generation System, and details of the sequence please refer to section 4.x of the manual.

## 2.5 System communication control flow chart

The devices of the new communicational PV generate system is like an organic whole that each related closely, we have designed a WVC Modem-based communicational PV generate system and reliable working process of data transmission. And here is the system communication control flow chart as follows:



## 2.6 Equipment reboot

It is simple to reboot WVC Modem: Turn WVC Modem power off, then wait for seconds to restore power supply;

## 2.7 Disconnect sequence

According to WVC Modem' serial port connection, please DO NOT disconnect or install WVC Modem to keep the hardware safe when power on. Please refer to the following steps to disconnect:

1. Disconnect WVC Modem power plug;

First you need to disconnect the power of Modem



2. Disconnect WVC Modem with serial port line;
3. Disconnect PC with serial port line;
4. WVC Modem disconnected complete;

# 3. Operational environment & fault handling

## 3.1 Natural environment

WVC Modem is an ordinary communicational trucking device, and it would not work in good condition, or even be damaged in a very bad environment. Please note that no high temperature, no high humidity and no ultra-low temperature working environment. waterproof boxes needed for outdoor working environment, no direct sunlight exposure and no extremely cold environment without heat preservation devices.

## 3.2 Errors handling

### ◆ How to deal with failing to connect devices and monitoring system online?

There are reasons about failure to connect as the following below, please kindly check:

1. Check the device driver if set up correctly. If use USB TO RS232 it needs to set up the drivers correctly. If not, it will not work;
2. Check the condition of WVC Modem and confirm the gird power is steady;
3. Check the temperture of the WVC-Modem . If the temperature is higher ,please shutdown the power and restart after heat dissipation;
4. All above checked and system online failure still exists, please contact us and we will supply you the professional tsting to your equipment.

### ◆ How to deal with one WVC Modem failing to communicate correctly in normal monitoring processing?

WVC Modem is design for 24-hour work and long time with thousands times of testing. However, WVC Modem may not communicate correctly all the time in the bad condition below: high temperature, moisture, signal interference of wireless and other factors. When it occur to the bad situation, please cut the modem power off and wait a few minutes and then connect the power, the problem can be solved generally. Or call our local after-service branch for support and help after trying several times.

# 4. Thank you

Thanks for choosing our products and the service! Meeting our customers' maximize needs is the final goal to pursue. Thank you very much for reading this manual, and hope it would be helpful to your work and life! Thank you!