

# Haiwell PLC

## Connection to PC manual

### Purpose

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This user's guide explains how to connect the haiwell plc with pc via a RS232 port of the PLC. The Desktop or laptop computer should have a serial port of DB9. Or the user have to use the USB to RS232 conversion line for the PC to enable the connection with the PLC.

**Note:** Examples and screen shots are provided in this documentation using Haiwellhappy version 2.2.2. The procedures described hereafter match all versions from 2.2.2, and the operating modes are the same for all versions.

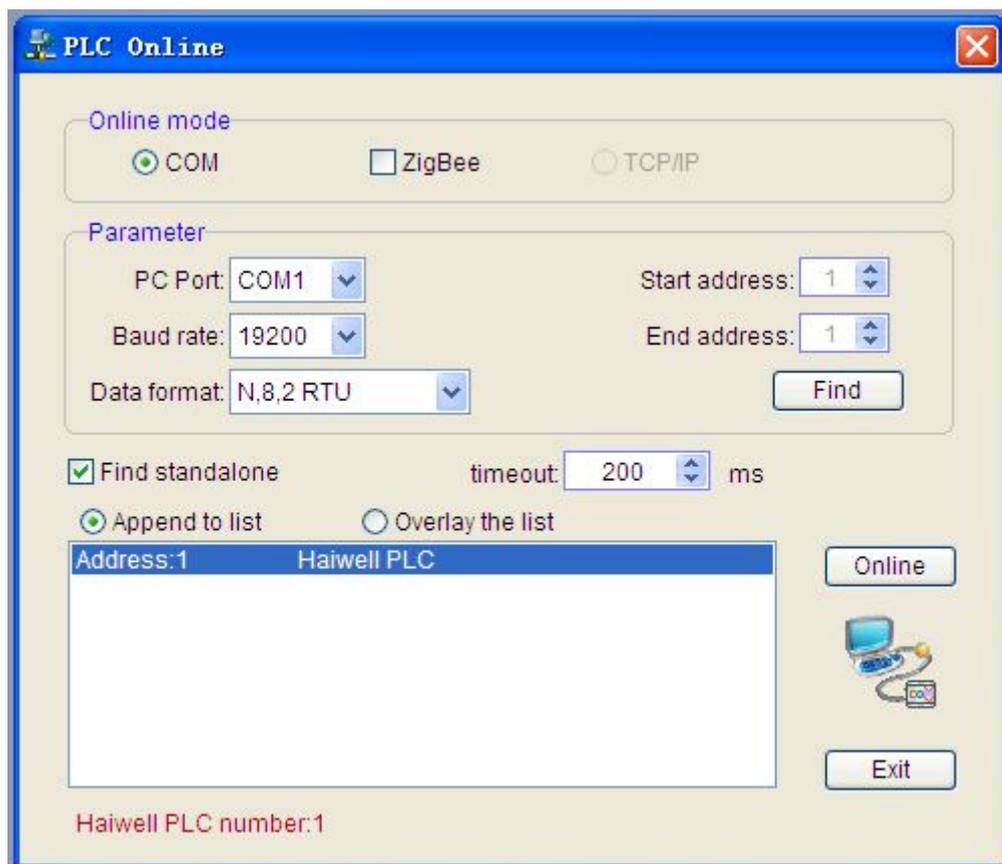
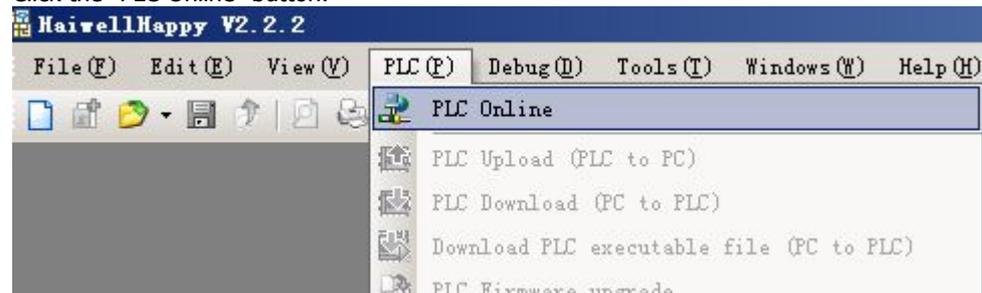
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There are only **two steps** of online procedures for haiwell plc and the PC with DB9 serial port.

**Step 1:** PLC programming cable (HW - ACA20) round side connected with the PLC, square side DB9 connected to the computer serial port;

Click the "PLC Online" button.



**Step 2.** Click "online" button (use the default parameters), the connected plcs will be automatically added to the list, set the parameter correctly as follows:

**Com port:** Choose the right one, the software will automatically find out and display all the available COM serial ports connected to the PC;

**Baud rate:** choose communication baud rate, the system default value is 19200;

**Data format:** the system default value is "N 8 2 RTU";

**Starting address, ending address:** if there is only one plc connected with the PC, then we can use "find standalone", if there are more than one PLC connected to the PC, then the user should input the value in the "starting address" and input the value in the "end address".

**Timeout:** set the PLC connection timeout. As to RS232 and RS485 with cable connection way, usually the corresponding default timeout is 200 ms, while wireless way of connection online (e.g., GPRS) should be set as 5000ms based on the fact that wireless communication time delay will be longer.

**Standalone lookup:** if there is only a single PLC online, choose the "Find standalone" option, if there are more than one PLC online, you must cancel "find stand-alone search", and set the starting address and ending address accordingly.

Then click "online" after finish setting the parameters.

If online connection is not successful, it may be caused by the following reasons:

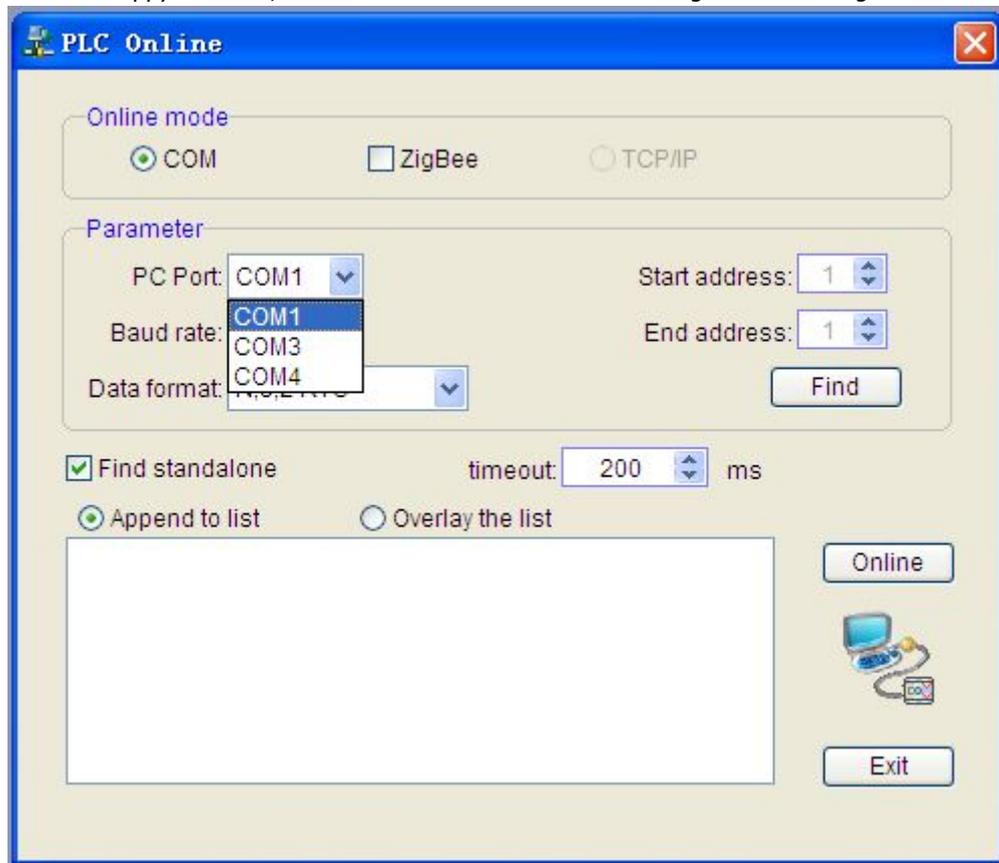
- A. choose the wrong PC port
- B. the communications parameters is not the same as the target PLC communication parameters
- C. the target PLC is without power supply
- D. communication cable connection error or not connect well
- E. use the "USB to RS232 serial port cable" without installing the driver

Use the USB to RS232 conversion line if the PC only have USB port.(10 small steps)

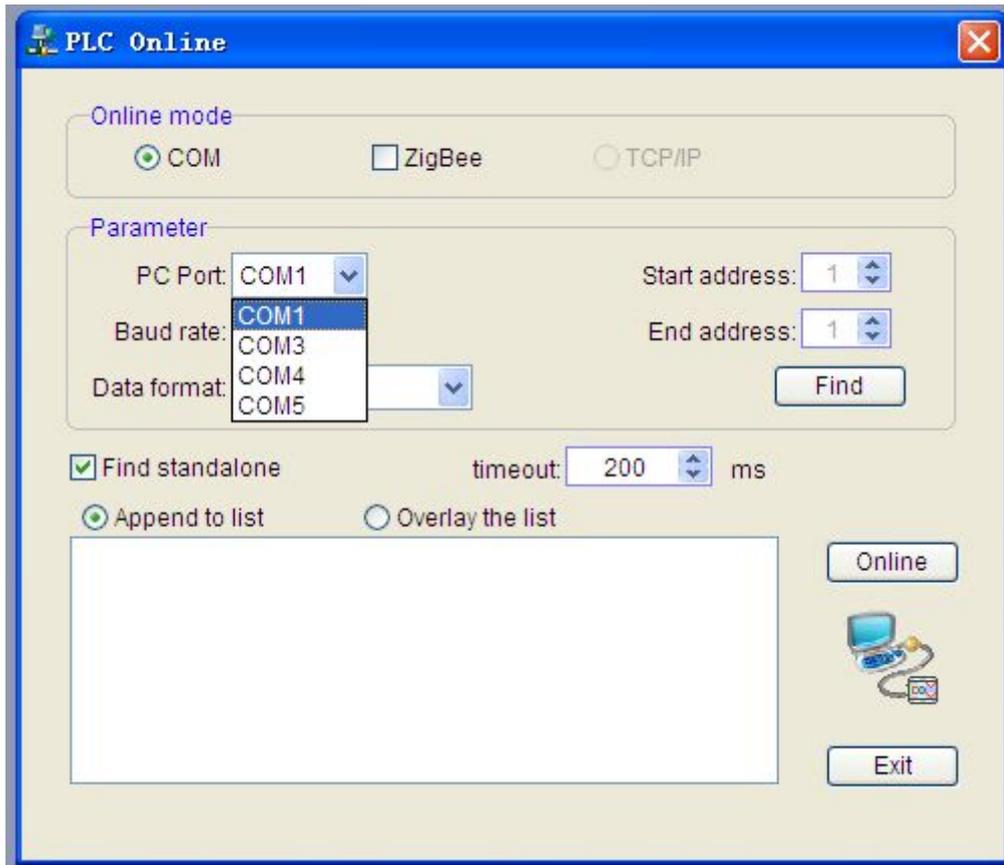
First the "USB to 232 driver" should be installed correctly.

How the plc connect to the laptop and desktop computer by "USB to RS232 conversion line"?

1. Install "USB to RS232 serial interface conversionc cable" driver correctly.
2. Do not insert the "USB to RS232 cable" to the computer's USB port before running the haiwellhappy.
3. Run Haiwellhappy software, click "online" button and the user will get the following screen:



4. press "exit" button to close the window of PLC online
5. insert the "USB to RS232 serial interface conversion cable" to the computer's USB port.
6. reclick the "PLC online" button to open the window of PLC online.
7. click on the "PC port" drop-down list again, now check again how many serial ports are connected, and find out the newly added serial port(here is com5)



8. the new com port shown in the software is the corresponding "USB to RS232 serial interface conversion cable" , only by this serial port can the plc connect to the PC.

9. Then click "online" button to be online.

10. press "exit" button to close the window of PLC online

## Other Advice:

Besides the plc connection way of RS232 ,haiwell plc can also use " 232 to 485 conversion cable" and "USB to 485 cable" with the "485A to A+ of the plc" and 485B to B- of the plc". Haiwell extension module can also be connected to the haiwellhappy directly,and it can also be used for downloading programs, monitoring ect, the online connection method is the same.

Note:

1.If a haiwell PLC hardware has been put a communication program inside, then when the PLC is in the running status,it will automatically send data to the communication port of the plc, in this case it will be unable to be online connection with the haiwellhappy at this moment, so in this case the user need to switch the operation mood of the PLC to "STOP".