USB/PPI Programming Cable Driver Procedure

Setting Guideline

Introduction……2

Functions……3

System requirement……4

The setting of driver procedure……5

The deletion of driver procedure……9

How to change COM setting……10

Setting of Step 7-MicroWin……12

About Long Distance Communication……14

Notes and Troubleshoot……15

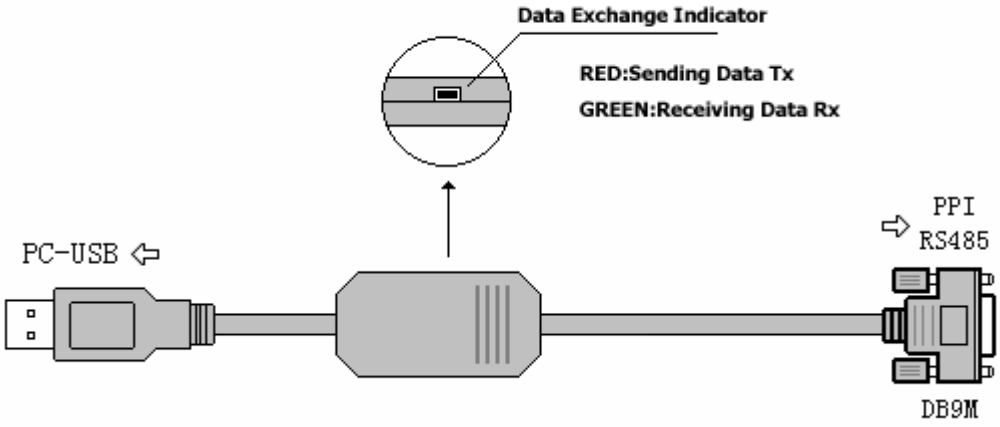
Introduction

USB/PPI programming cable simulates USB port as traditional serial port (usually COM3), which enables existing programming software(**STEP 7-MicroWin**) to communicate through simulated traditional port and PLC devices.

The working power of this cable is from USB port,not provided by the communication port of PLC.The LED of the adapter indicates the sending and receiving status of data.

USB/PPI is applied to Siemens S7-200 PLC,**NOT** support hot plug.For the industry scene of strong interference and easily destroying communication port,pls choose optoelectronic isolated USB/PPI+ programming cable.

USB/PPI principle and figure structure:



PIN	Signal	Description
3	RxD/TxD+	Data signal B(RS485+)
8	RxD/TxD-	Data signal A(RS485-)
5	GND	GND

Pin signal definition

Functions

- Support Windows2000/Windows XP
- Support STEP7 Micro/WIN V3.2 and higher
- Fully compatible with USB V1.1 and USB CDC V1.1
- Power supply by USB main line.current:about 50mA.
- Baud rate: 300bps ～ 1Mbps
- Support long distance communication up to 2000m
- Working temperature -20~+75'C
- Length 3 meters.Color:black
- One pc supports one USB programming cable only

System requirement

Please make sure your PC is IBM PC compatible and has the following system requirements before using the USB programming cable.

- Intel is compatible with 586DX4-100MHz CPU or higher
- A standard USB port (4-pin A plug)
- Operating system is Windows2000 or Windows XP

The setting of driver procedure

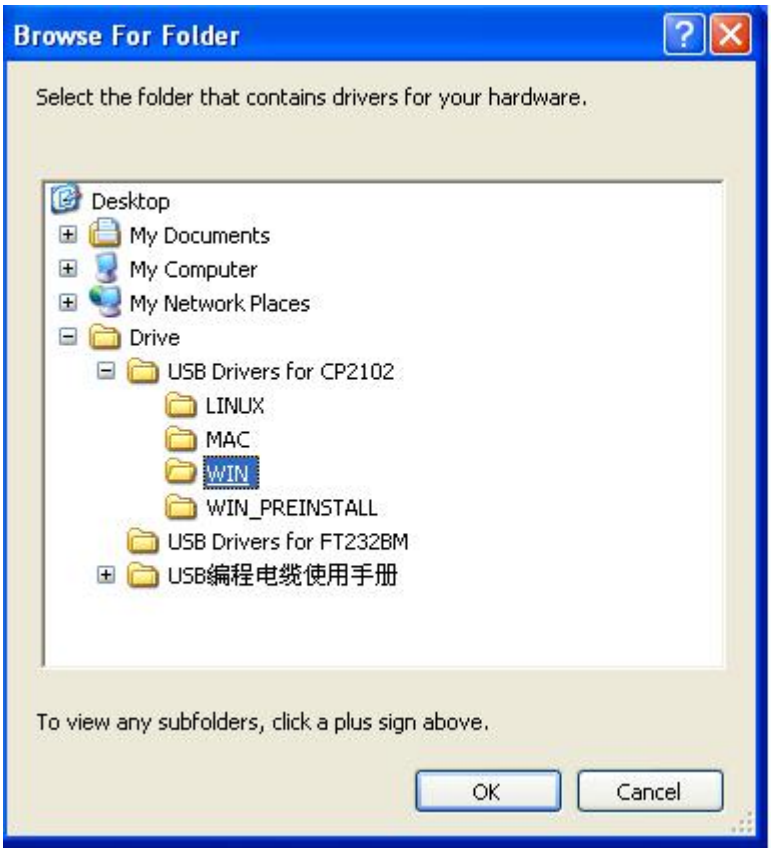
Please set the driver procedure according to the following steps:

1. Turning on PC power that will connect the USB programming cable and make sure the USB port working well.
2. Put the USB programming cable into USB port and Windows will detect the device and help to add new hardware and jump to new device setting. Insert the driver CD and click “next” to continue, or select the driver on the hard disk.

If Windows does not show “find new hardware”, please click “Universal Serial bus controllers” in the hardware list of device manager, and choose the USB device with question mark. Click the right key of mouse and operate to update driver procedure.

If insert the driver CD,you should select the recommended item and click “Next”

If the driver is saved on the hard disk, you should select the second item and click “Next”. You can find the driver on the “WIN” folder.



3. Windows will detect the setting information, and load the driver to

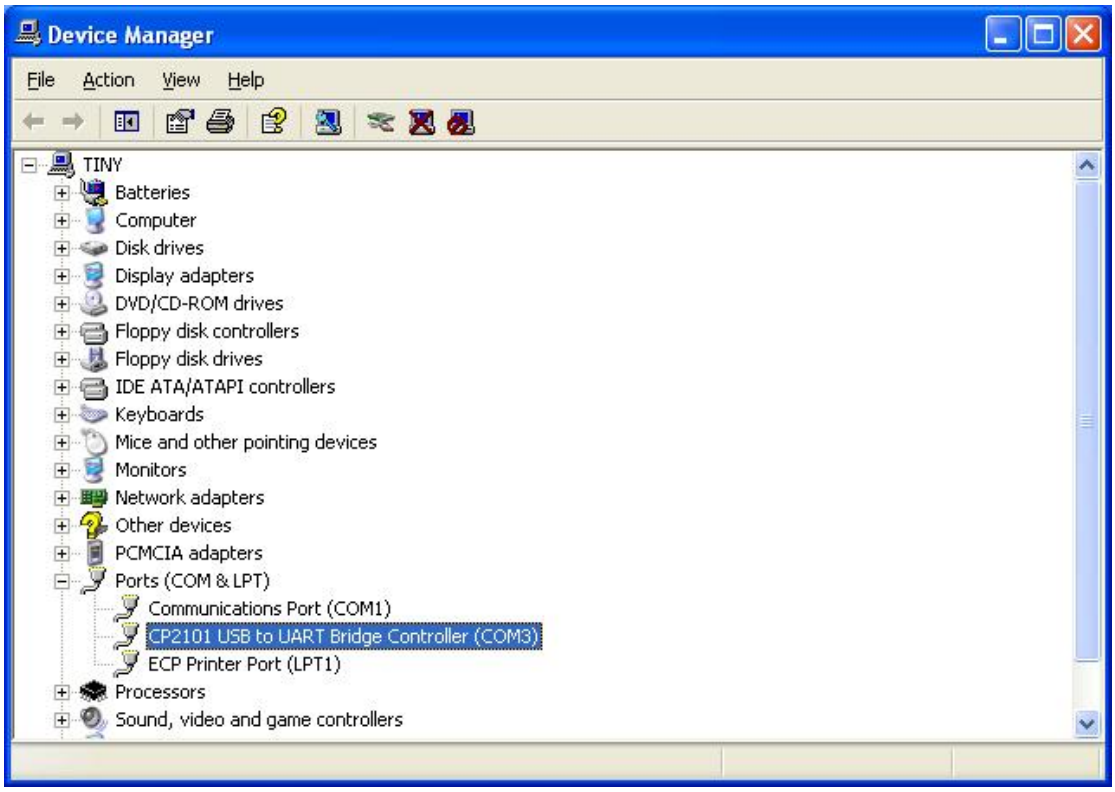
install.

4. Continue to set up, copy the driver procedure files to your hard disk by Windows.

5. When Windows appears “Completing the Found New Hardware Wizard”, click “finish” to end setting up.

6. After setting up, please make sure the "port (COM and LPT)" of "Start \

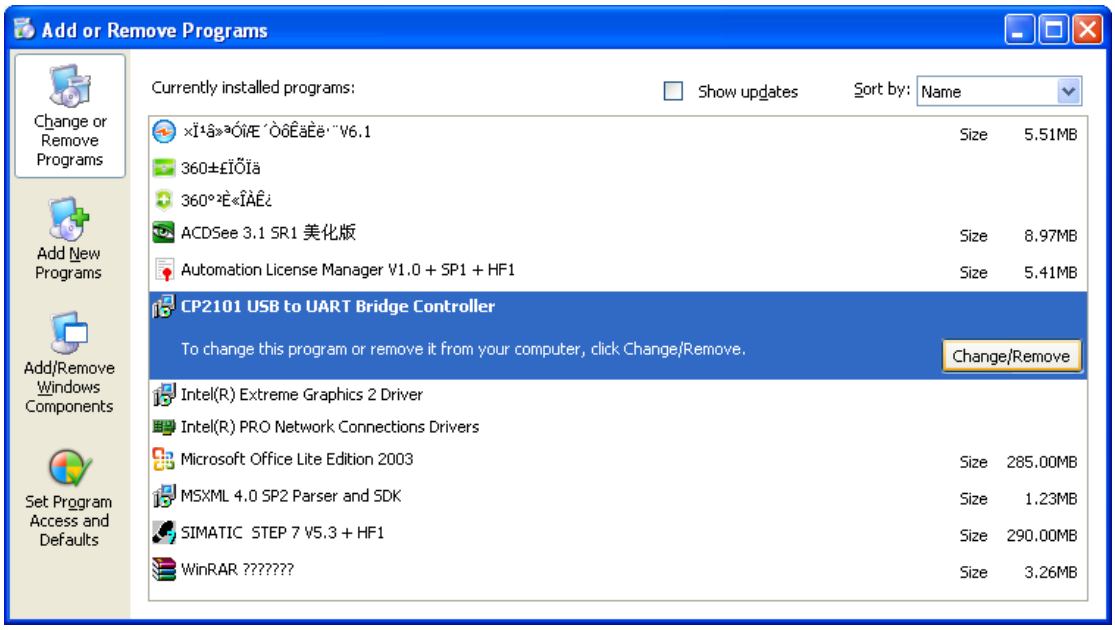
Settings \ Control Panel \ system \ hardware \ Device Manager" appears "CP2101 USB to UART Bridge Controller(COMx)". This COMx is the COM message of the USB programming cable. From then on, as long as you insert the programming cable, the COM port will appear. You just have to choose this COM port in application software such as programming software or communication software.



The deletion of driver procedure

Deleting driver procedure is to discharge source of COM port so that other device can be used. When driver procedure has error, it should be deleted and reset up. Please delete the driver procedure as follows:

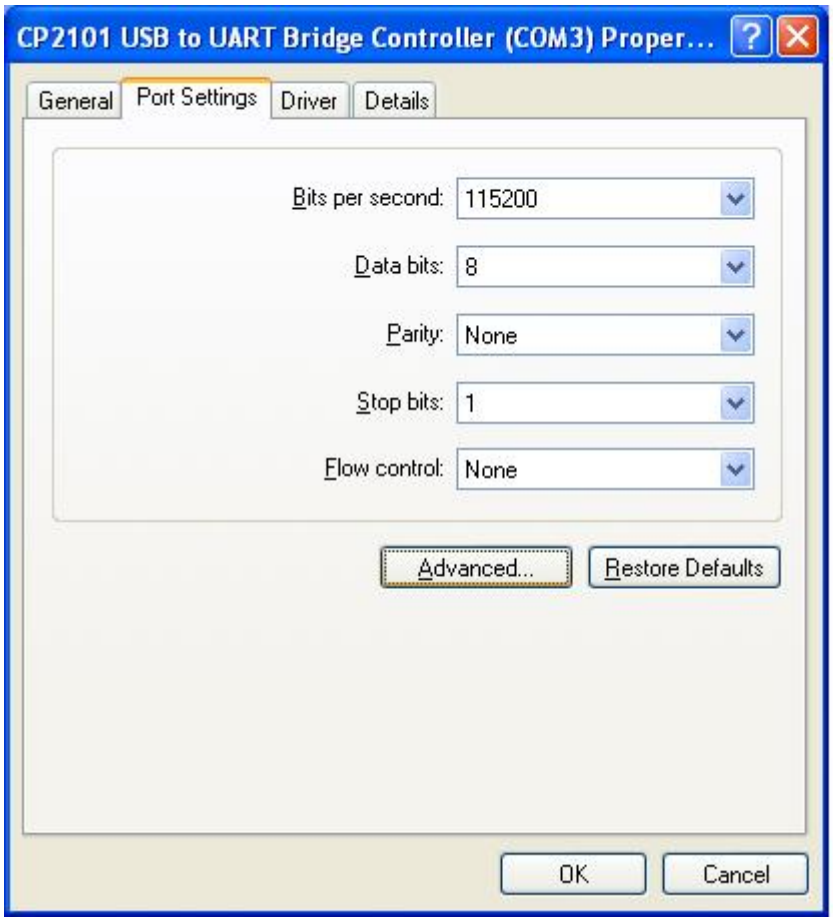
1. Unplug the USB programming cable from you PC.
2. Choose “USB Serial Converter Drivers”from "Add or Delete Programs” in operation panel, and click the “Change/Remove” button.

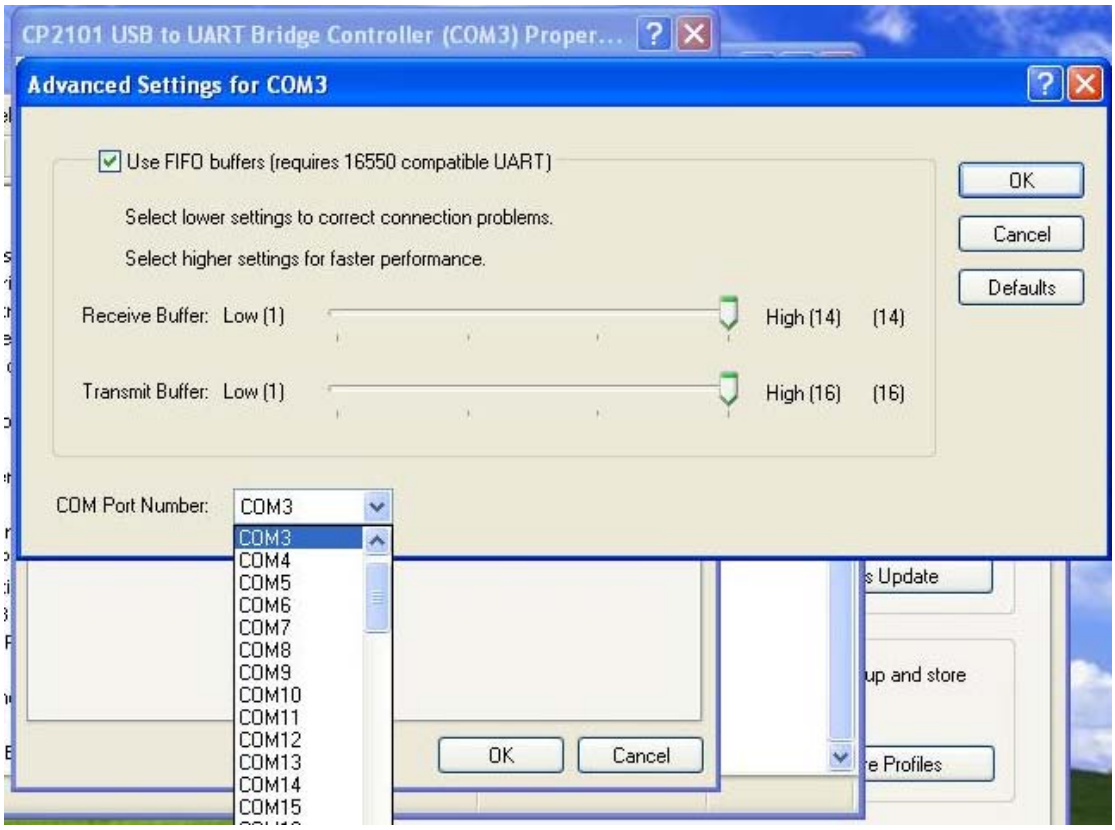


How to change COM setting

1. Delete the driver procedure of all USB to UART products to discharge COM port source, and reset up USB programming cable driver procedure. The device manager will display the cable address **COM3.**

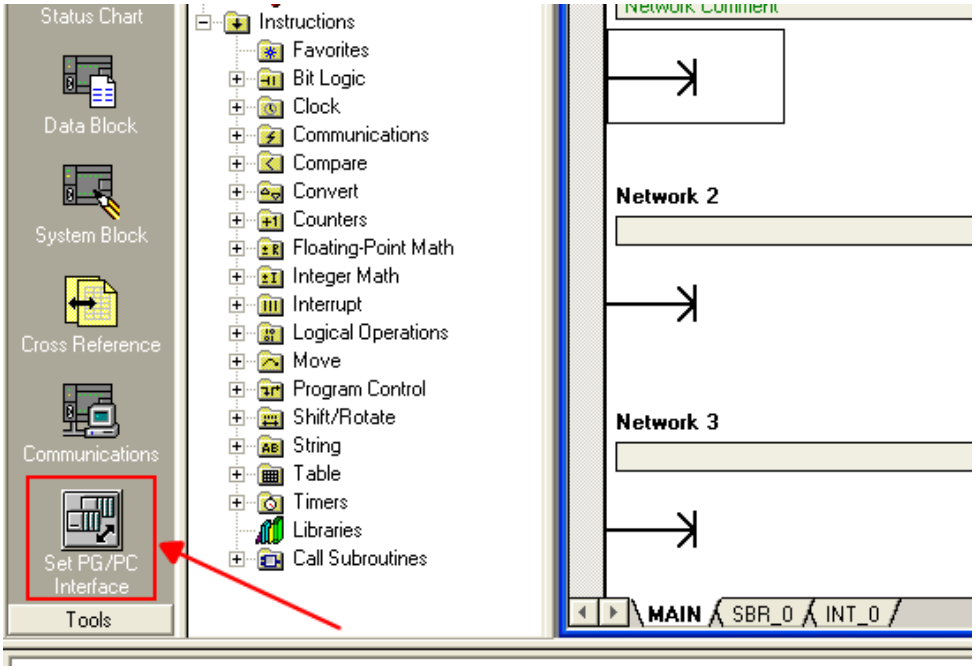
2. In Windows 2000/XP the COM slogan can be changed directly. Please double click COM port device that is need changing in the device manager, and the device attribute information window will appear. Choose “port setting” as the picture shows. Click "Advanced" button, and the advanced setting information window will appear. Set the COM port to the serial number you want and click "OK" button to complete.



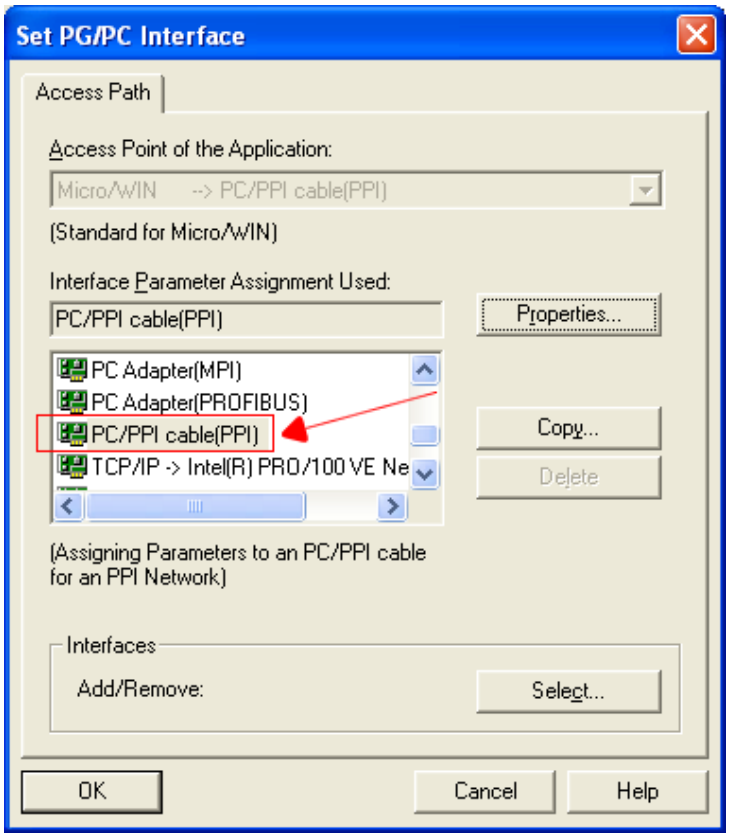

CP2101 USB to UART Bridge Controller (COM3) Proper...
Advanced Settings for COM3
Use FIFO buffers (requires 16550 compatible UART)
Select lower settings to correct connection problems.
Select higher settings for faster performance.
Receive Buffer: Low (1) High (14) (14)
Transmit Buffer: Low (1) High (16) (16)
OK
Cancel
Defaults
COM Port Number: COM3
COM3
COM4
COM5
COM6
COM7
COM8
COM9
COM10
COM11
COM12
COM13
COM14
COM15
OK
Cancel
s Update
up and store
e Profiles

Setting of Step 7-MicroWin

Open the main windows form(Step7-MicroWin)， click “Set PG/PC Interface” of the left view and will appear PG/PC setting window.

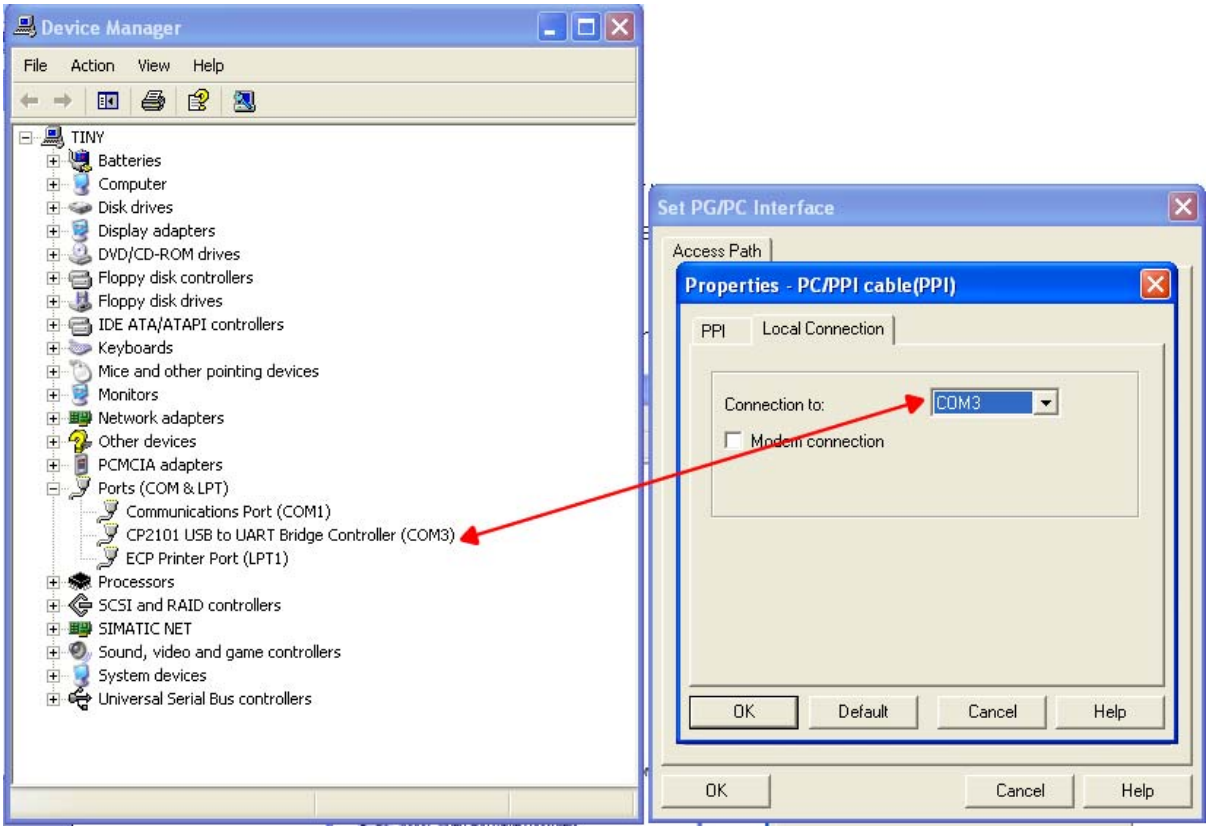


1.Double click “PC/PPI cable(PPI) ” to open COM port and PPI port parameter setting dialog box.



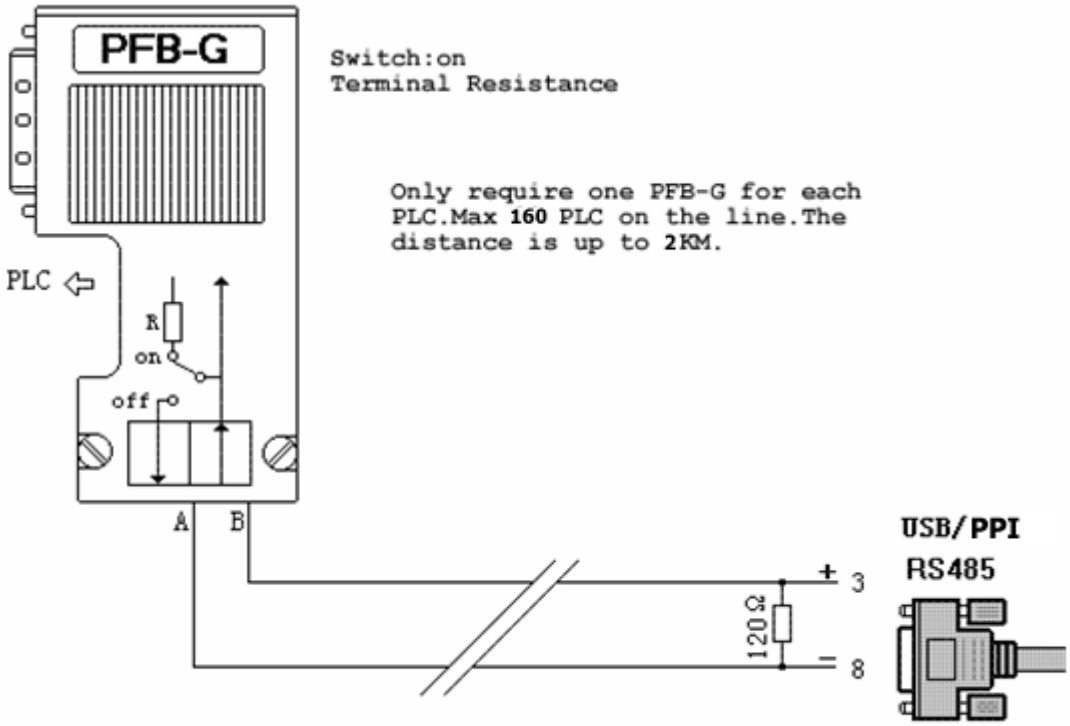
2.Click “Local Connection” to set COM port parameter, choose correctly

COM port in the device manager after install the driver, and set the transmission rate as 9600bps or 19200bps,which is both OK, then the USB/PPI will adapt the baud rate automatic.



About Long Distance Communication

For USB/PPI, the largest communication distance is up to 2000m at the communication speed of 9600bps. It needs to splice 120ohm terminal resistance between 3 and 8 pin on the RS485 port(DB9 Male) to eliminate signal reflection. But requires one PFB-G for each PLC.



Notes and Troubleshoot

1. If the USB programming cable could not be detected when opening the PC, or some other outstanding issues occur, please replug it again.

2.USB to UART is plug and play USB device. When data are being transmitted, please don’t disconnect it.

3. Sometimes when Windows System failures or outstanding issues when plug or unplug the USB cable occur, please restart the computer and PLC.

4. USB/PPI cable don’t support “USB” interface in the Step7-MicroWin,so you should choose “COM” port.

5. If the COM port with “*” symbol in the software,such as “*COM3”,it indicates this COM port is at fault,pls exit programming software and then replug the USB port or reinstall the USB driver.

6. It doesn’t support 187.5Kbps baud rate.

Rejection provision

This document is to provide information, and the contents will not be noticed when revising. Because of the direct or indirect loss or errors caused by revised document, will not be the responsibility of the manufacturer.