

TRP-C06H

Dual RS232 to RS422/485 Isolated Converter



User's Manual

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Trycom Technology Co.,Ltd

No.35, Zhongxing Rd., Guishan Township, Taoyuan County 333, Taiwan.

Tel : 886-3-350-3351 Fax: 886-3-350-3352

Web: www.trycom.com.tw

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1. Introduction

The TRP-C06H allows 2 RS232 line signal to be bi-directionally converted to RS422 or RS485 standard and transmit data up to 1.2KM. Featuring automatic data format and baud rate detect function users just need to plug the unit and go without extra configuration efforts. TRP-C06H is equipped with 3000V DC of isolation and internal surge protection to protect the host computer and converter against high voltage spikes, as well as ground potential differences. The industry standard DIN rail and panel mounting design enable user a fast and professional installation.

1-1. Features

- Wide range input DC power supply.
- Automatic data format configuration.
- Auto direction flow control on RS485.
- Auto baud rate switching from 300bps to 115.2Kbps.
- 3000V DC isolated protection.
- Surge protection on RS422/485 data lines.
- Power/TX/RX mode LED indicator
- Support screw terminal and external DC adaptor.
- DIN rail or panel mounts support.

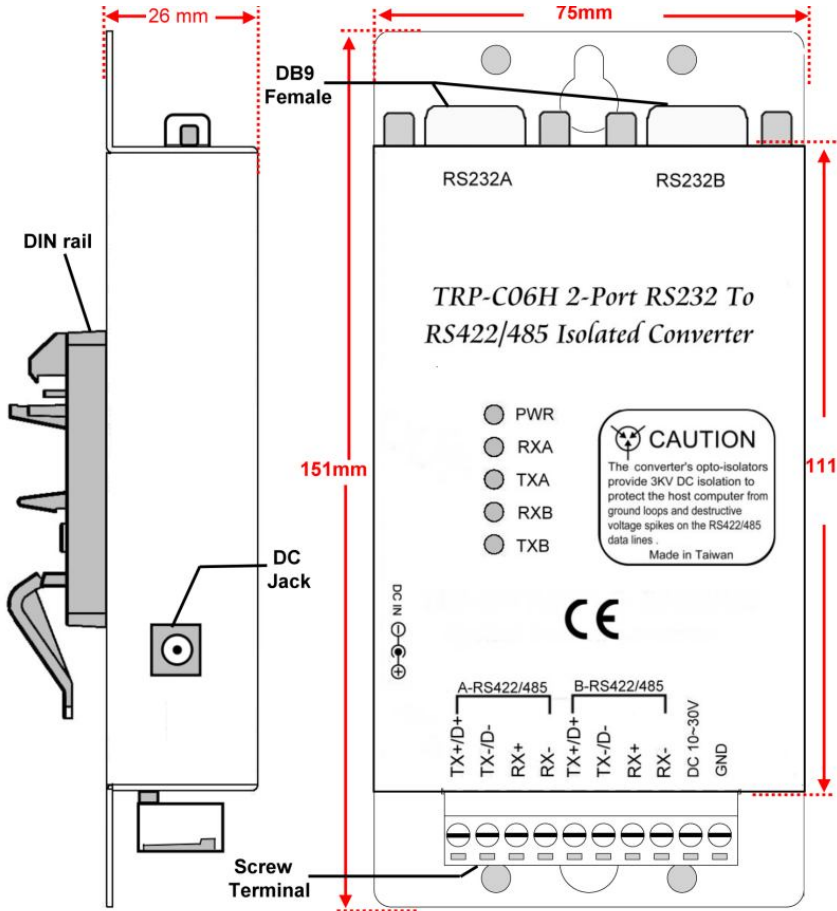
1-2. Specifications

- Power input voltage: DC +10V to +30V.
- Host connection: 2 standard D-Sub 9 pin female connectors.
- RS232 signal: TXD, RXD, GND.
- RS232 interface: Standard D-Sub 9 pin female connector.
- RS422/485 interface: Industrial plug-in screw terminal.
- RS485 signal: differential 2 half-duplex wires (D+, D-).
- RS422 signal: differential 4 full-duplex wires. (TX+, RX+, TX-, RX-)
- Communication speed: form 300bps to 115.2Kbps auto detecting.
- RS422/485 line protection: Against surge, short circuit, voltage peak.
- Distance: up to 4000ft (1200M).
- Isolation voltage: 3000V DC.
- Plug-in screw terminal wiring: Accepts AWG #12 ~ 30 wires.
- Signal LED: Power on, TXA, RXA, TXB, RXB.
- Power supply: Screw terminal, or external DC adapter.
- Power consumption: 1.3W
- Operating environment: -20 to 65°C.
- Storage temperature: -20 to 65°C.
- Humidity: 10-90% Non-condensing.
- Dimension: 151mm X 75mm X 26mm.
- Weight: 375g.

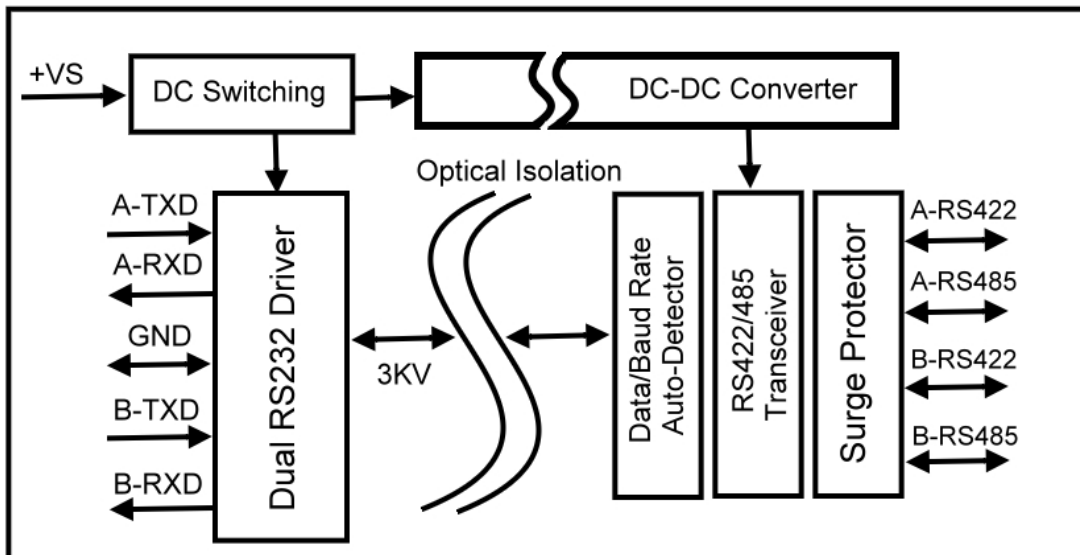
2. Hardware Description

The following information is to give users an understanding of how to connect the TRP-C06H with the serial device and a review of the functionality of the LED's.

2-1. TRP-C06H Panel layout



2-2. TRP-C06H Block Diagram



2-3. LED Indicator

PWR LED: System is ready.

RXA LED: RS232-A Receiving.

TXA LED: RS232-A Transmitting.

RXB LED: RS232-B Receiving.

TXB LED: RS232-B Transmitting.

3. Install TRP-C06H

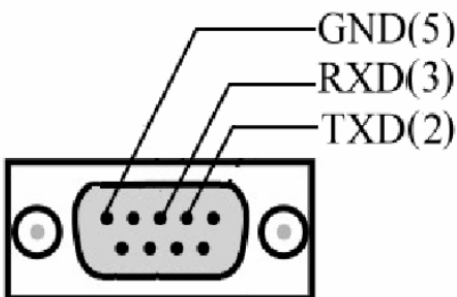
3-1. TRP-C06H to Host Connection

The TRP-C06H has two DB-9 female and 4-wire RS422 and 2-wire 485 connectors.

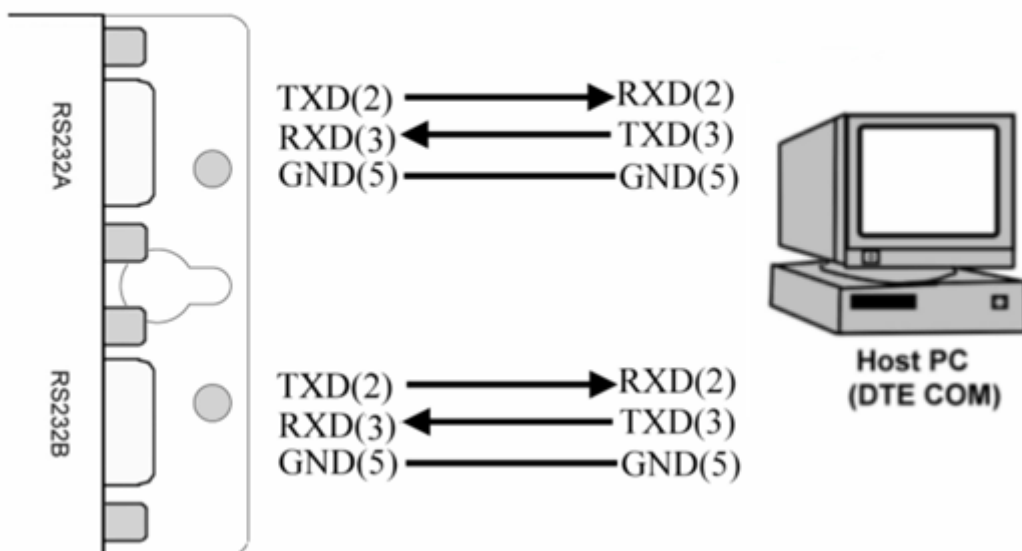
3-2. Power Connection

The TRP-C06H has a two pins terminal block and power jack. Power can be supplied from terminal block or external power adapter and supports wide input range from + 10~30V. When power is correctly supplied the PWR LED will lighting and indicates the system is up. It is highly recommended use the power jack specification 5.5*2.1*12mm if the power supply is from external DC plug.

3-3. RS232 Female Pin Configuration (COMA and COMB)

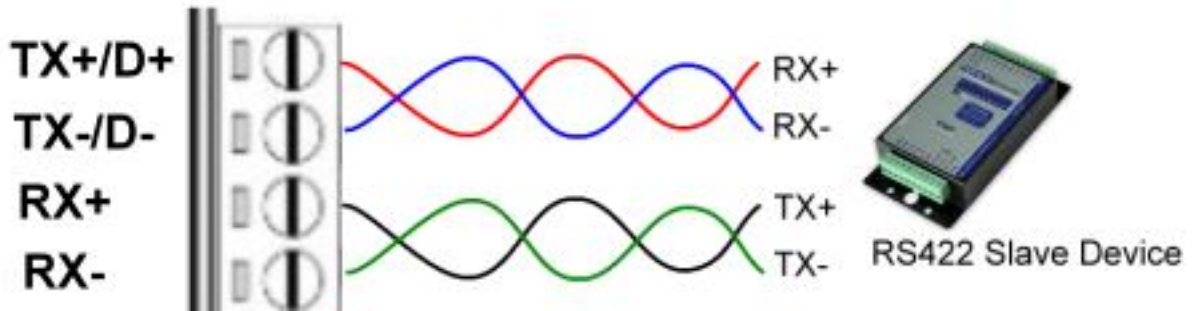


3-4. RS232 wire connection



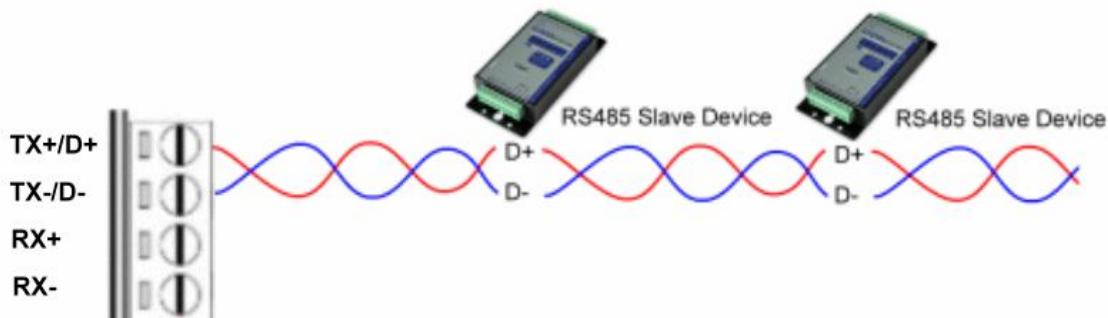
3-5. RS422 wire connection

The TRP-C06H RS422 mode supports 4 channels with full duplex operation for receive, transmit, and the data lines are in differential pairs. The wire connection is shown as

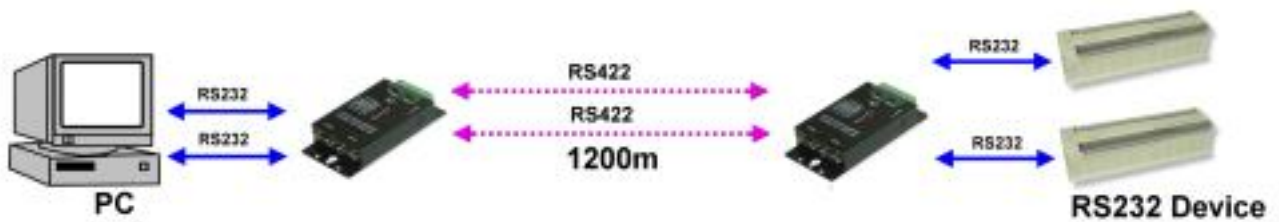


3-6. RS485 wire connection

The TRP-C06H RS485 mode supports transmit and receive channels by using 2-wire half-duplex operation. The wire connection is shown as



3-7. PC to RS232 device by RS422 wire connection

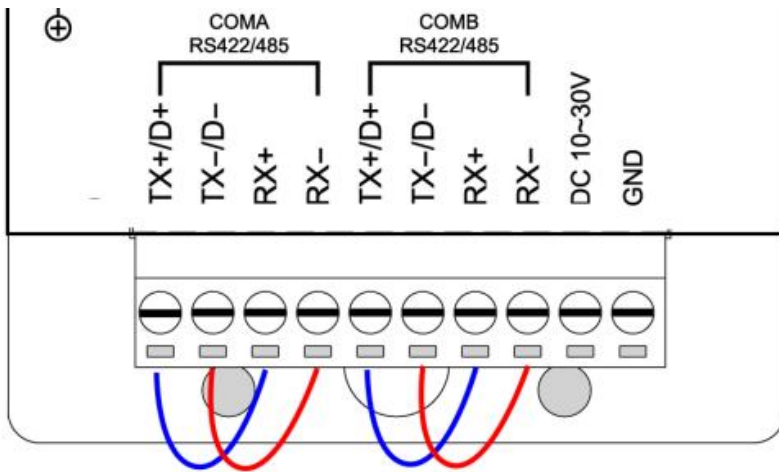


4. How to test TRP-C06H

Trycom Technology Co.,Ltd offers test utility, this is utilities may help user to demo and test TRP-C06H fast and easily. User may find the utilities in Trycom support CD or download from Trycom web www.trycom.com.tw , Please copy to the hard disk, direct to perform TRPCOM.exe from the directory.

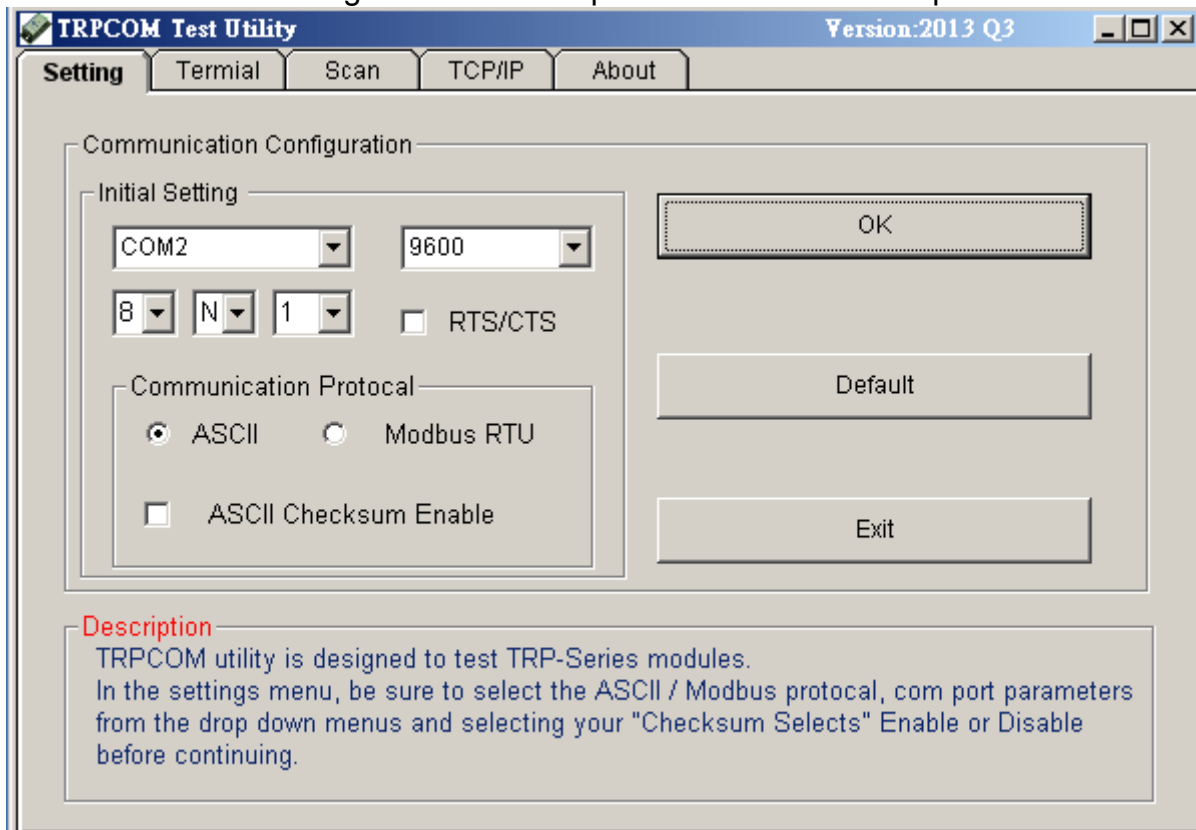
4-1. RS422 loop back test

Refer to wire connection as below



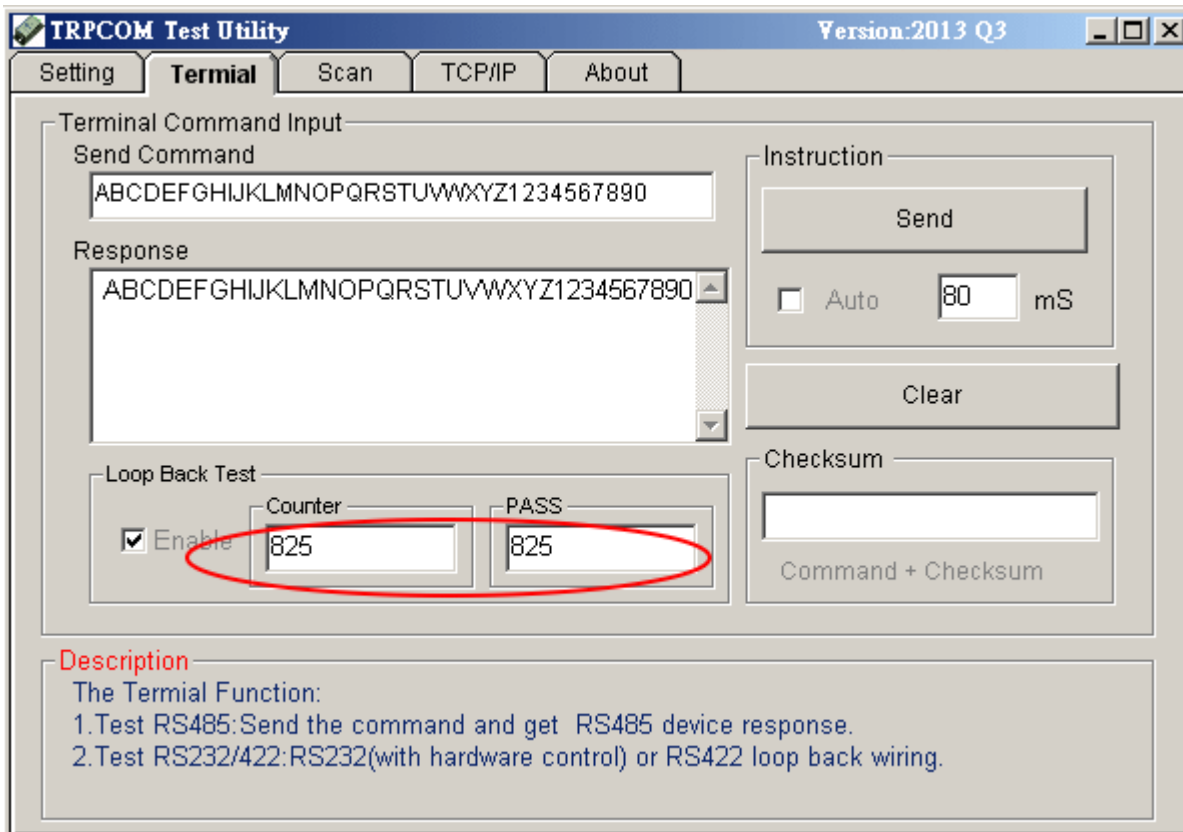
STEP1: Run “TRPCOM.EXE” utility.

STEP2: Click the “Setting” to set the com port and baud rate then press OK .



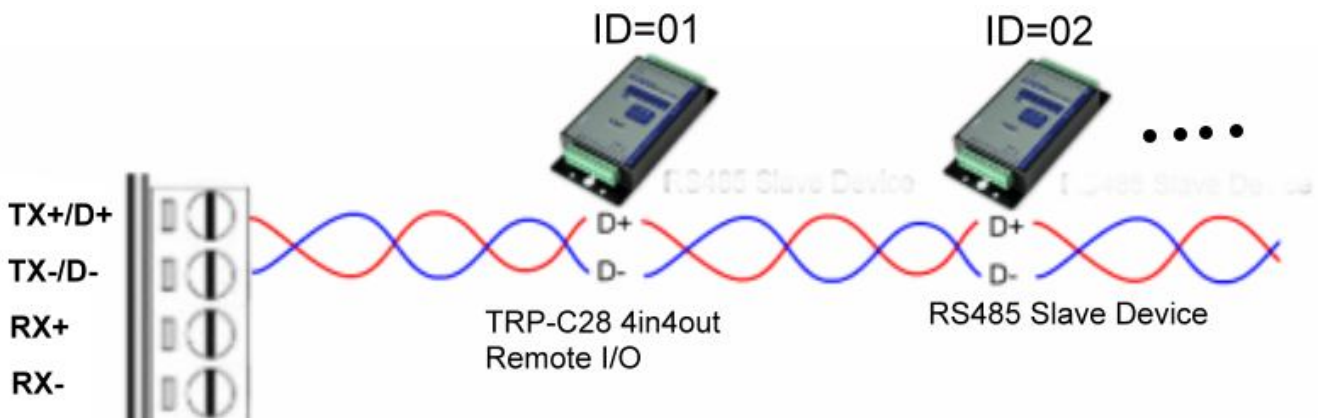
*Please note: “COM2” is an example of COM port number; the real COM number is assigned by user PC.

STEP3: Click the "Terminal" then select Loop back enable, the counter value and pass value will be synchronized counts.



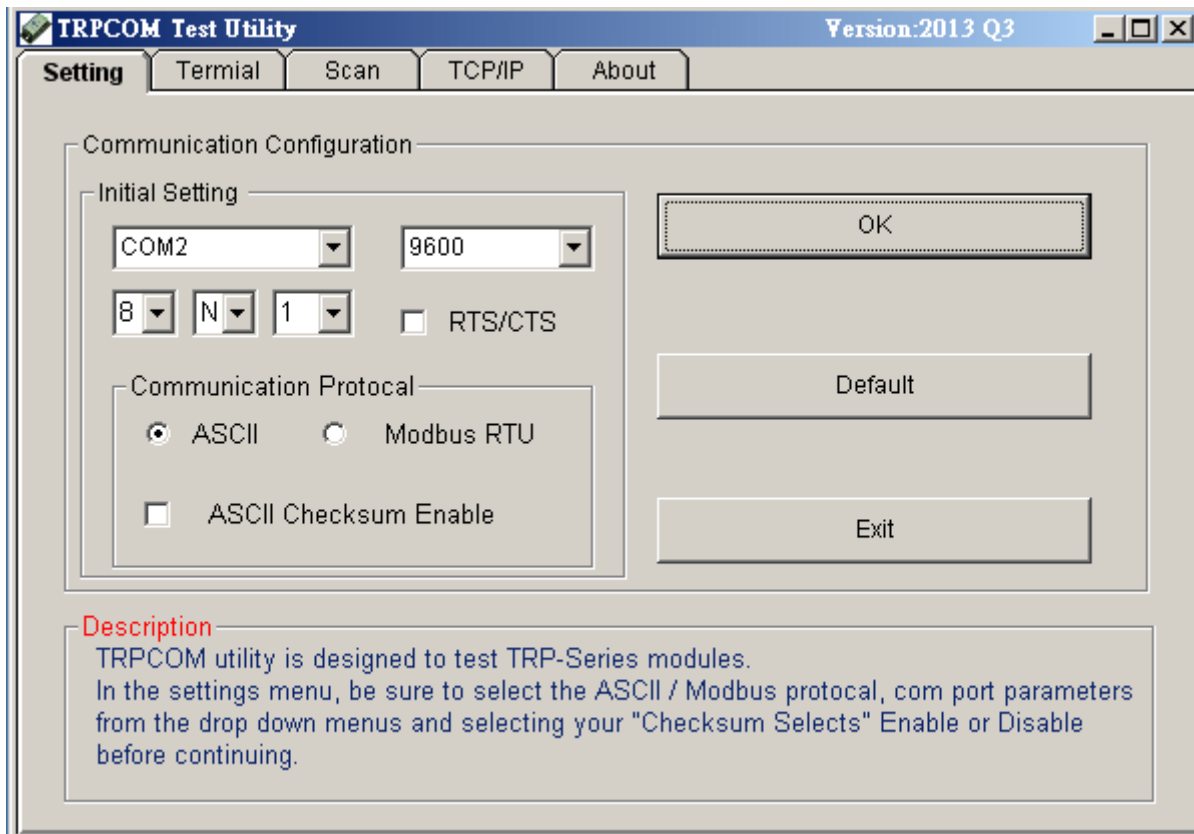
4-2. RS485 test

RS485 test mode, it can be connected to RS485 Device, such as connecting TRP-C28, send "\$01M" instruction from the client side, when the TRP-C28 received command that will response "!01TRPC28" indicates execution completed.



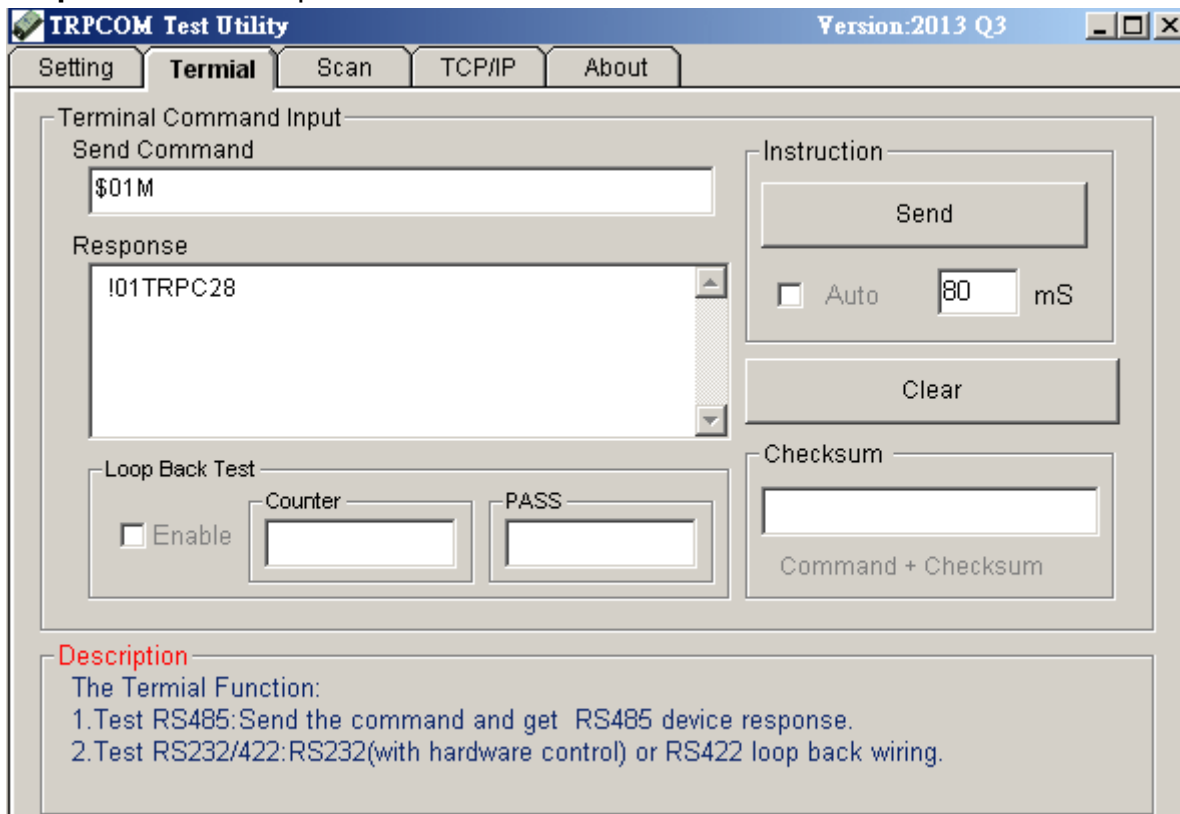
Step1. Run TRPCOM utility.

Step2. Click the "Setting" to set the com port and baud rate then press OK.



Step3.Send command “\$01M” and press “Send” button.

Step4. TRP-C28 response received.



5. TRP-C06H Application.

