# Long-range Bluetooth serial adapter Manual

# YF-B01U-GRT
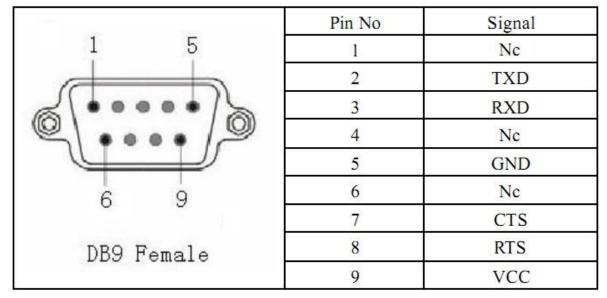
# Version: 1.0



Function switch button

YuanFang MyAid-Tech (Beijing) Co., Ltd.

# 1、 Interface Description



| Pin No | Signal |
|--------|--------|
| 1 | Nc |
| 2 | TXD |
| 3 | RXD |
| 4 | Nc |
| 5 | GND |
| 6 | Nc |
| 7 | CTS |
| 8 | RTS |
| 9 | VCC |

VCC power supply output, the input range DC 7 to 32 V, 200mA.

1、 Interface Description

## 2、 Use Instructions



Long-range Bluetooth serial port adapter consists of master and slave, A master device and one or more slave devices supporting the use of. When the serial port adapter hardware circuit is connected correctly and power up, Master and slave devices will automatically establish a connection and identification with the memory of the other party equipment, after the user's device using a serial cable using the serial port adapter.

■ RS232 Default is to use 2-wire (UART_TX, UART_RX), baud rate 9600, stop bits, no parity, and no flow control.

■ Bluetooth default PIN: 1234

## YF-B01U-GRT-SL Slave adapter

Automatic power-on boot, the blue LED is lit, the Slave adapter can Master adapter search and connect automatically. Connection is successful, the blue light and red light is lit. The adapter will Bluetooth receiver to send data to the serial port, serial port to receive the data sent to Bluetooth. Completely transparent alternative to cable transmission.

## YF-B01U-GRT-MS Master adapter

Automatic power-on boot, blue and red indicator lights up, the Master adapter

automatically search from the Slave adapter, and connect automatically.

Connection is successful, the blue light and red light is lit. The adapter will Bluetooth receiver to send data to the serial port, serial port to receive the data sent to Bluetooth. Completely transparent alternative to cable transmission.

## ■ Characteristics

Bluetooth combination of the data received within 100ms sent through the serial port to ensure data continuity.

## 3、 LED Instructions

The adapter lights are on or off, indicate that the adapter status. Details are as follows:

| The blue indicator | The red indicator | Status |
|:---:|:---:|:---:|
| OFF | OFF | Shutdown |
| OFF | ON | Boot (configuration mode) |
| ON | OFF | Boot (operating mode) and is not connected |
| ON | ON | Boot (operating mode) and connected |

## 4、 Function switch button Instructions

Work mode, keep the button is pressed for 2 seconds, the light changed, enter configuration mode.

Configuration mode, keep the button is pressed for 2 seconds; the light is changed into work mode.

## 5、 Mode Instructions

Operating modes: always maintain the reliability of Bluetooth connectivity, attempt to repair the loss of Bluetooth connectivity. Serial input data output to a Bluetooth, Bluetooth input to output data to the serial port.

Configuration mode: maintain the existing Bluetooth connection, Bluetooth connection and stop the ongoing or are being repaired. You can use the wireless configuration to AT commands. Methods of operation are as follows:

1、 Master adapter and Slave adapter connect success.

2、 The operation must be configured parameters of the adapter to enter configuration mode and connect successfully.

3、 the operation did not enter the configuration mode of the adapter to send AT commands。

# 6、    AT Instruction Set

● Configuration parameters use the baud rate of 9600, stop bits, no parity. Serial port configuration parameters are valid only in the work mode.

● Only when the work from the device in the configuration mode, only allowed executing the parameter setting command. Parameters are modified, you should restart the device, so that the parameter settings to take effect.

● All instruction data in ASCII format to send to return.

● Carriage return, line feed (\ r \ n), two bytes (ASCII code 0x0D, 0x0A) as the end of the sign, otherwise the command is not recognized.

● Each command must be outside of the parameters in the following table "<>" brackets for easy reading and joined without actual instruction "<>".

## 1. Test instructions

| Instruction | Reply | Parameter |
|---|---|---|
| AT\r\n | \r\nOK\r\n | - |

## 2. Software reset

| Instruction | Reply | Parameter |
|---|---|---|
| AT+RESET\r\n | \r\nOK\r\n | - |

## 3. Version

| Instruction | Reply | Parameter |
|---|---|---|
| AT+VER\r\n | \r\nOK\r\n<br><br>\r\n+VER:<Version>\r\n | < Version >:Program<br><br>Version |

## 4. Set / query the PIN

| Instruction | Reply | Parameter |
|---|---|---|
| AT+PIN=<Pin>\r\n | \r\nOK\r\n | <Pin>:PIN Code |
| AT+PIN\r\n | \r\nOK\r\n<br><br>\r\n+PIN:<Pin>\r\n | (Must be four digits, and<br><br>the range of 0000-9999)<br><br>Default:1234 |

## 5. Set / query the master-slave role

| Instruction | Reply | Parameter |
|---|---|---|
| AT+ROLE=<Role>\r\n | \r\nOK\r\n | <Role>:Role |
| AT+ROLE\r\n | \r\nOK\r\n<br><br>\r\n+ROLE:<Role>\r\n | M: Master<br><br>S: Slave<br><br>Default: M |

## 6. Serial port configuration

| Instruction | Reply | Parameter |
|---|---|---|
| AT+UART=<Rate>,<Stopbit>,<Paritybit>\r\n | \r\nOK\r\n | <Rate>: Baud rate<br><br>0：9600、1：19200<br><br>2：38400、3：57600<br><br>4：115200、5：230400<br><br>6：460800、7：921600<br><br>8：1382400<br><br><Stopbit>: Stop bit<br><br>0:1 bit<br><br>1:2 bits<br><br><Paritybit>: Parity bit<br><br>0: No parity<br><br>1: Odd parity<br><br>2: Even parity<br><br>Default:<br><br>0,0,0 |
| AT+UART\r\n | \r\nOK\r\n<br><br>\r\n+UART:<Rate>,<Stopbit>,<Paritybit>\r\n | |

## 7. Local Bluetooth address

| Instruction | Reply | Parameter |
|---|---|---|
| AT+LADDR\r\n | \r\n OK\r\n<br><br>\r\n+LADDR:<Addr>\r\n | <Addr>: Bluetooth address |

## 8. Delete the Bluetooth authentication record

| Instruction | Reply | Parameter |
|---|---|---|
| AT+CLEARADDR\r\n | \r\n OK\r\n | - |

Note: To use the old password to modify the PIN code, matching equipment failure, use the instructions. Use this command; all devices need to be re-paired.

## 9. Statement and Declaration

**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.

To assure continued compliance, any changes or modifications not expressly approved by the party Responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

**RF warning statement:**

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

**Declaration of Conformity**

Hereby, Growatt New Energy Co., Ltd. declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.