Bluetooth LE Bridge Module FAQ

Version 1.0

(for tBLE-720/BLE-USB)

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Q01：Does tBLE-720 and BLE-USB support Bluetooth classic device?

A01： The tBLE-720 and BLE-USB didn't support Bluetooth classic device. The tBLE-720 and BLE-USB only support for Bluetooth 4.0 device.

Q02：How can I check whether the tBLE-720 or BLE-USB is connected to other devices in the connection mode?

A02： The RF link LED will show the connection status. The RF Link LED would blink each 200 ms when the device didn't connect to other device. If the Slave connected to the Master, the RF Link LED would blink in the different pattern as show in following table:

Slave		
LED Indicator	Status	Description
RF Link	Steady Lit	RF signal is good (RSSI is greater than -60 dBm)
	Blink (1 s)	RF signal is normal (RSSI is between -61 and -80 dBm)
	Blink (2 s)	RF signal is bad (RSSI is between t-81 and -100 dBm)
	Blink (200 ms)	Not connect to master

If the Master connected to the Slave, the RF Link LED would blink in the different pattern as show in following table:

Master		
LED Indicator	Status	Description
RF Link	Steady Lit	Connect to all salves
	Blink (1 s)	Connect to slave, but not connect to all slaves
	Blink (200 ms)	Not connect to slave

You also can use the AT command (AT+CL?<CR> or AT+CN?<CR>) to check the connection status.

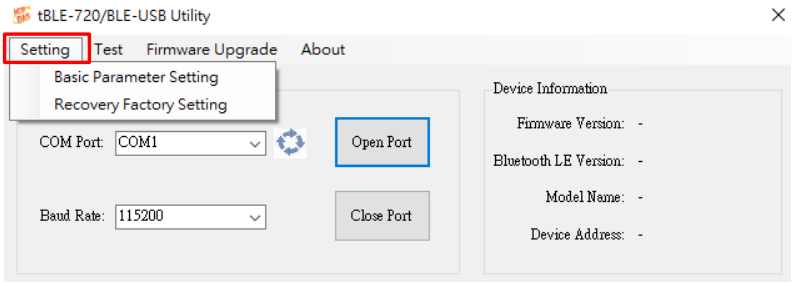
Q03：How does the tBLE-720 or BLE-USB connect to the specified module in the connection mode?

A03： You can set the module to the same group ID (e.g. group ID :99). If the group ID is "0", the module will connect to all group (0~99). If the group ID isn't 0, the tBLE-720 or BLE-USB could connect to the module when the group was same.

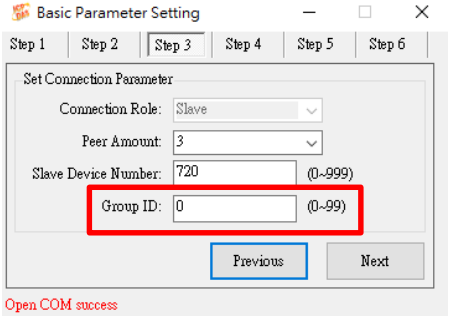
The group ID can modify by utility or AT command (AT+GID=XX<CR>).

1. Open the utility, and click Setting => Basic Parameter Setting.

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2. You can change the group ID in the step3.



Q04 : How do I confirm that the device is sending broadcast packets in the broadcast mode?

A04 : You must be setting the broadcast packet before sending broadcast packet. If the broadcast packet is setting, then you can enable broadcast function.

Then, after the broadcast transmission function is enabled, the module starts transmitting broadcast packets.

1. Setting broadcast packet:
   Send the command +ADV:XXX<CR> to the tBLE-720/BLE-USB. The “XXX” is broadcast packet. The maximal length of broadcast packet is 21 Byte. If the command is correct, the module will response OK<CR><LF>.

2. Enable broadcast function:
   Send command +ADS<CR> to the tBLE-720/BLE-USB. The module starts transmitting broadcast packets.

P.S. The module must be setting to the broadcast mode. The Observer role only can receive broadcast packet.

Q05 : Can the tBLE-720/BLE-USB send the iBeacon packet in the broadcast mode?

A05 : The iBeacon packet is define by the Apple. The tBLE-720/BLE-USB didn’t support iBeacon packet.

Q06 : Can tBLE-720/BLE-USB receive packets from other device (non tBLE-720/BLE-USB) in the broadcast mode?

A06 : No. The tBLE-720/BLE-USB didn’t receive the packet from device (non tBLE-720/BLE-USB). Because of the format of packet is different.

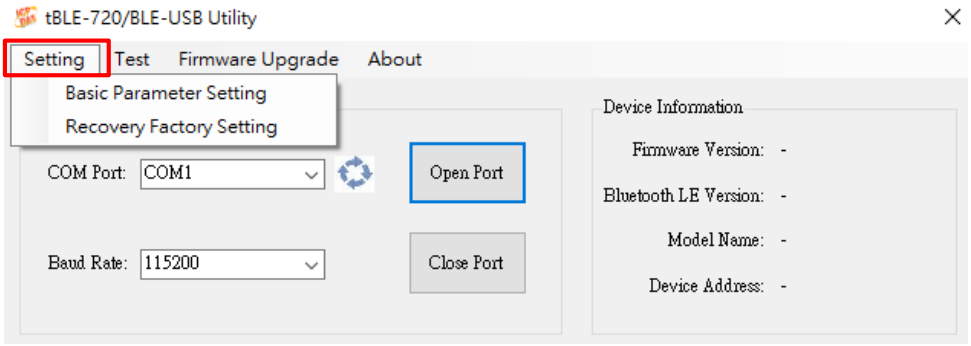
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Q07：How do the tLBE-720/BLE-USB avoid connect to other device (non tBLE-720/BLE-USB)?

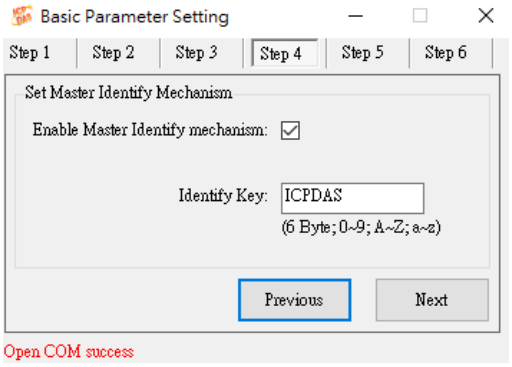
A07： You can enable the master identification mechanism. When the master identification mechanism is enabling, the identification key must be same. If the identification key isn't same in the Slave and Master, the connection will fail.

The master identification mechanism (AT+EKEY=1<CR>) and identification key (AT+SKET=XXXXXX<CR>) can enable by the utility and AT command.

1. Open the utility，click Setting =>Basic Parameter Setting



2. You can set the master identification mechanism in the step 4.



Q08：BLE payload architecture

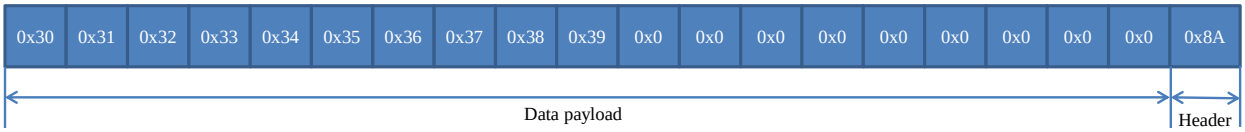
A08：The length of tBLE-720/BLE-USB are 20 Bytes. No 0 to 18 is data payload. The no 19 is Header.



The Header is composed of two elements. The one is length of data payload. The other is packet index. If the payload isn't the last one, the packet index is "0". If the payload is the last one, the packet index is "0x80".

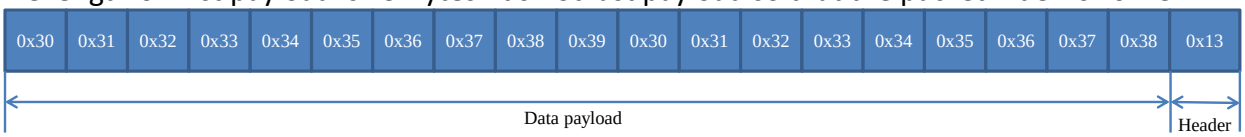
Case1: When the transmitted data is "0123456789". The length of transmitted data is 10 Bytes. It cans send the data by one payload so that the packet index is "0x8A"(Length is "0xA" + Last payload is "0x80") . The following picture shown as payload architecture:

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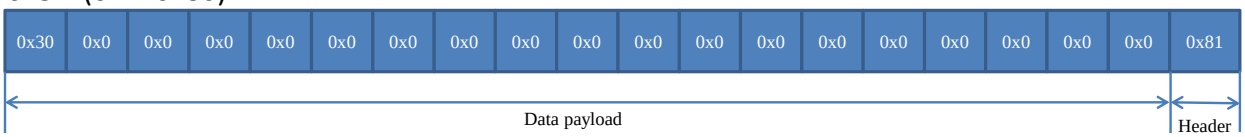


Case2: When the transmitted data is "01234567890123456789". The length of transmitted data is 20 Bytes. It cans send the data by two payloads. The following picture shown as payload architecture:

The length of first payload is 19 Bytes. It's not last payload so that the packet index is "0x13".



The length of second payload is 1 Bytes. It's last payload so that the packet index is "0x81"(0x1+0x80).

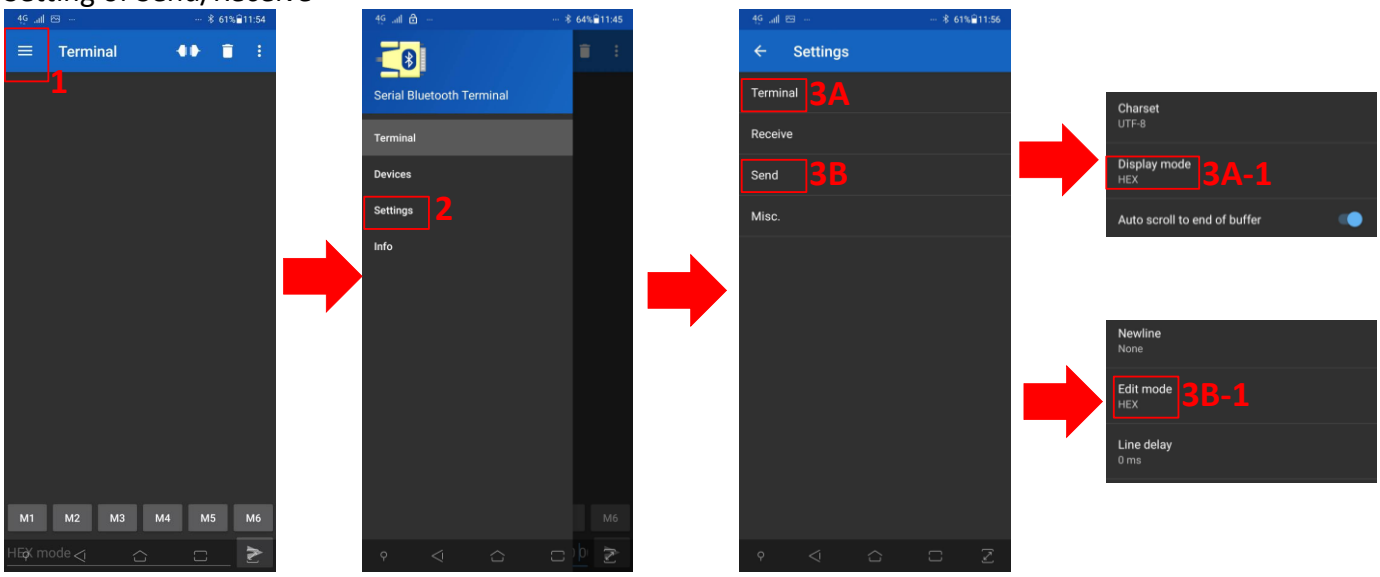


Q09： How to test the tBLE-720/BLE-USB with Android phone?

A09 : Please follow the following step for testing:

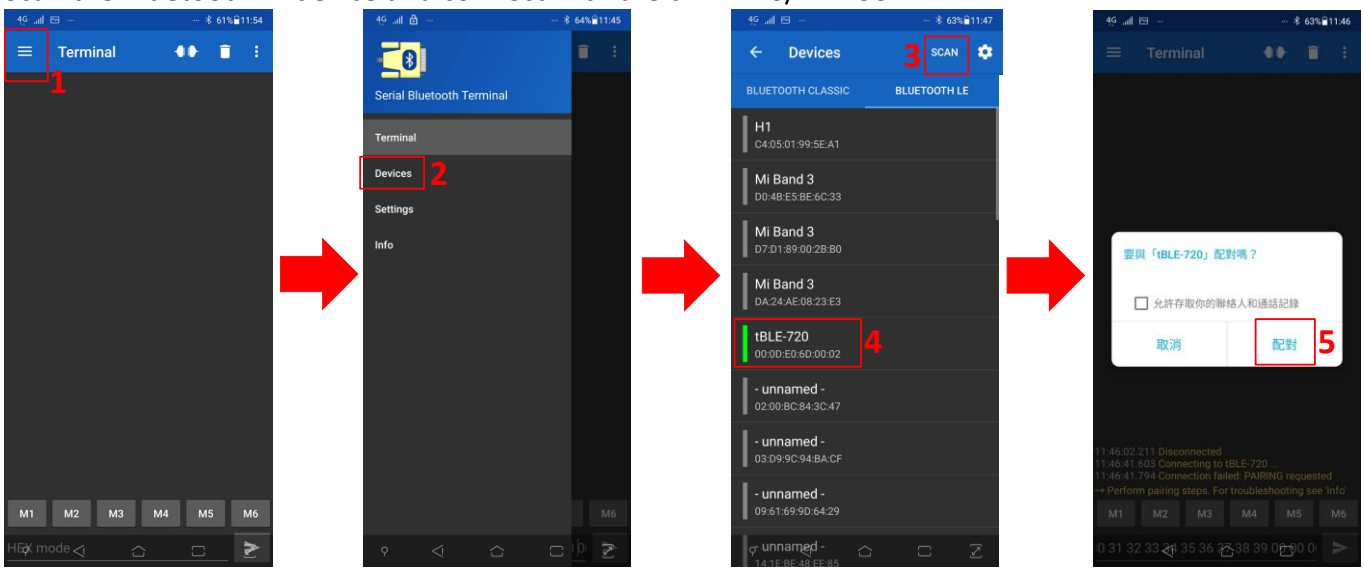
1. Install Android APP
   Serial Bluetooth Terminal APP:
   https://play.google.com/store/apps/details?id=de.kai_morich.serial_bluetooth_terminal

2. Setting of Send/Receive

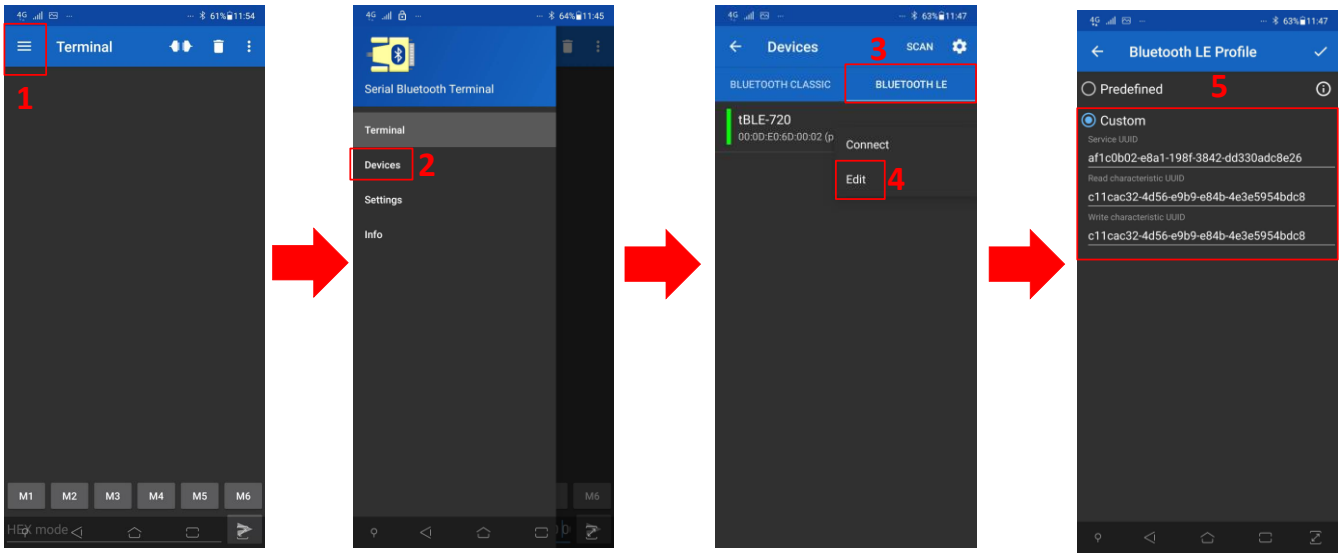


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3. Scan the Bluetooth LE device and connect with the tBLE-720/BLE-USB

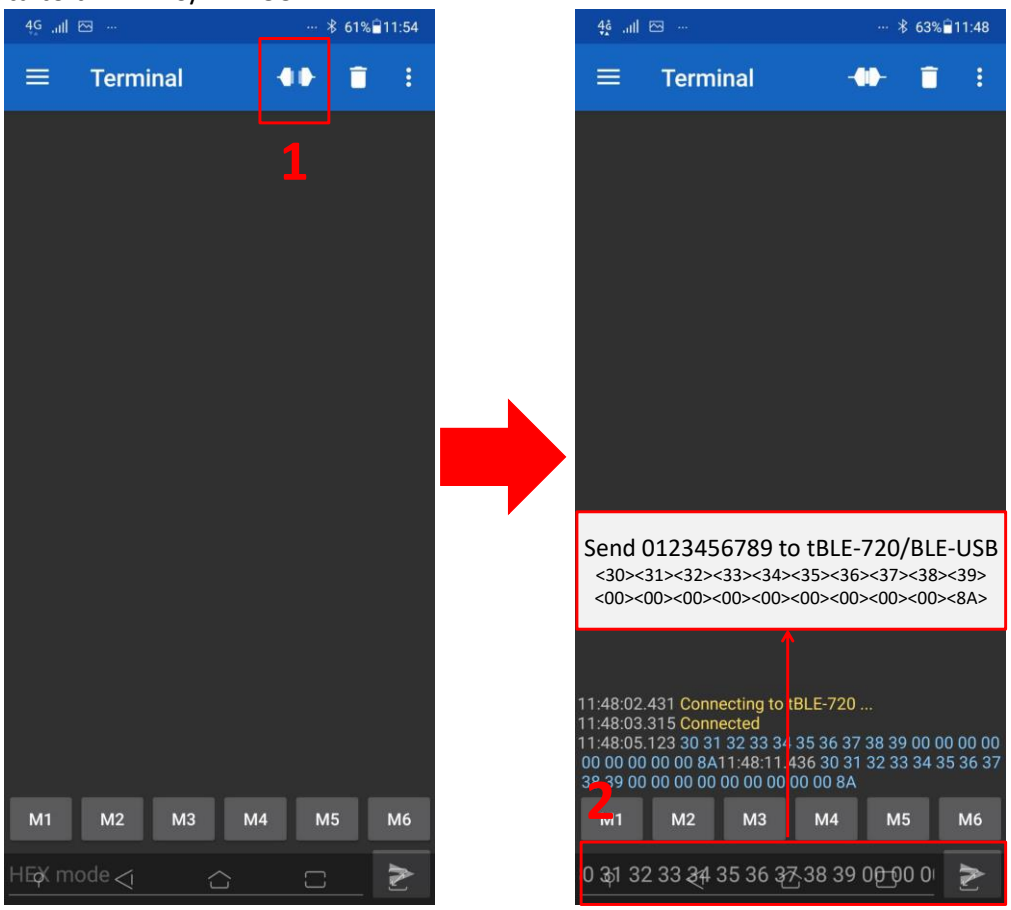


4. Customize Profile



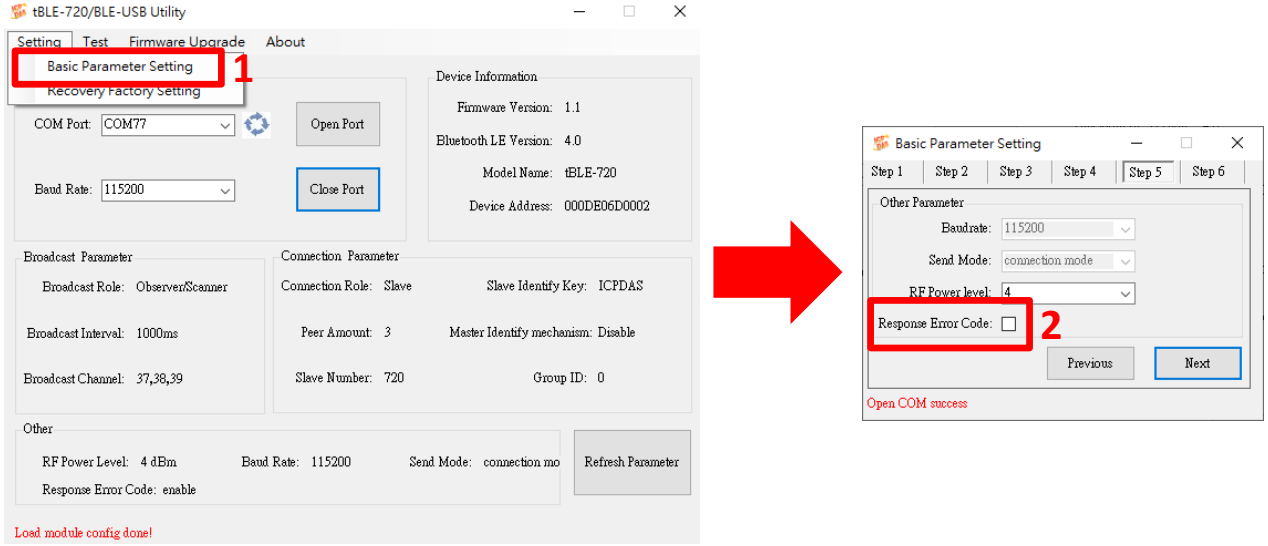
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5. Send data to tBLE-720/BLE-USB



Q10： How to disable the prompt message?

A10: The new firmware (V1.10) has new AT command. The prompt can disable by AT+ERP. The other way can use utility. The detail message can refer to the user manual (Chapter 3.1.17).



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