

**CBT-300 SPP Protocol**

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| --- | --- | --- | --- |
| **Date** | **Rev** | **Changes** | **By** |
| Aug 17, 2015 | 1.00 | Initial(Based on EXP-1000) | KChen |
| Sep 29,2015 | 1.01 | Add serial Number and Counter | KChen |
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1. **Summarize**

This document describes the protocol which allows a slave (CBT-300 tester) to control the Android Tablet or PC base (master) using a serial communication link. This link normally would be over a Bluetooth radio connection, but other connections are possible.

## Running Mode

When the tester operates for a battery test as a slave, the user controls the tester in most time, and will require the serial number from Tablet or PC, after test is done, it automatically sends out the test result to Tablet or PC once. They are mainly communication is single from tester to Tablet or PC.

## Communication link setup

When the tester is connected via the remote interface (Bluetooth) the communication link operates at a baud rate of 115200. The other settings are 8 bits, even parity, 1 stop bit and no flow control.

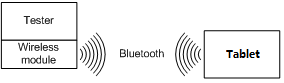


图 1 – SPP connection

1. **Module diagram**
   1. ***Single Transfer***

OPTION: Tester (Slave) PC/Tablet (Master)

PC/Tablet Bluetooth Name should be define: CBT-300-XXXXXXXXXX

Send data: Only one time

CBT-300 (Slave) PC/Tablet (Master)

*TEST DATA*

……

Connecting

Testing….

Test is done, send result

(Only send one success)

Receive data

1. **Packet Descriptions.**

This chapter describes the content of the **start** and **end**. The packet header and footer are now shown in this chapter.

* 1. ***Send Out Test Result***

The tester will send out the test result packet after test is done.

Please refer to the following examples for transferring detail:

Tester send Bluetooth device (tablet/PC) send data frame define:

| **Transferring Items** | **Range/Options** | **Example** | **Note** |
| --- | --- | --- | --- |
| START | 0X55,0xAA | 0X55, 0xAA | 2字节 |
| Data length | 0-255（total） | 26 | 1字节 |
| Version | 100（1.00） | 1.00 | 1字节 |
| Battery Type: | REGULAR--0  AGM---1  SPRIL---2  GEL ----3 | 1(AGM) | 1字节 |
| Rating CCA: | Battery CCA value | 650(CCA) | 2字节 |
| Measure Voltage: | 0 ~ 1800 | 1238(12.38V) | 2字节 |
| Measure CCA: | 0 ~ 2000 | 402(CCA) | 2字节 |
| Battery Result: | GOOD BATTERY --0  GOOD RECHARGE --1  CHARGE & RETEST --2  REPLACE BATTERY --3  BAD CELL-REPLACE --4 | 3 (REPLACE BATTERY) | 1字节 |
| **Serial Number** | **10Digtal（ASCII）** | **0123456789** | **10字节** |
| **Battery Counter** | **0-65535** | **0x00,0x02(2,MSB)** | **2字节** |
| End | 0X55,0xBB | 0X55,0xBB | 2字节 |

**Note: 2Byte data, send high byte first and then send low Byte.**

1. **Bluetooth Select Wireless Device.**
2. Tool should be connected on testing battery.
3. Tablet will scan for available testers using discovery command.
4. Connect to the tester founded by Tablet. It only supports one tester and one tablet.
5. Wait for the connection.
6. Tester will show the connection successful message once the connection is established.
7. Now you can send data to and from the Tablet.
8. Tester sends one successful message to tablet only one time.
   1. ***Test Data Transfer***
      1. **Tester-> Tablet**

**Tester data example**

|  |
| --- |
| START:0X55,0XAA |
| Data length：0x1A |
| Version: 0x64 |
| Battery type:0x01 (AGM) |
| Rating CCA:0x02,0x8A(650) |
| Measure voltage:0X05,0X0C(1292) (12.92V) |
| Measure CCA:0X01,0X92 (402CCA) |
| Test result: 0x03(REPLACE BATTERY) |
| Serial Number：0123456789 |
| Tester Coulter：0x00,0x02 |

END: 0X55, 0XBB

Send data are：total 26Byte

0x55,0xAA,0x0E,0X64,0x01,0x02,0x8A,0x05,0x0C,0x01,0x92,0x03,0x30,0x31,0x32,0x33,0x34,0x35,0x36,0x37,0x38,0x39,0x00,0x02,0x55,0xBB