# Serial test instructions and troubleshooting

I. Introduction

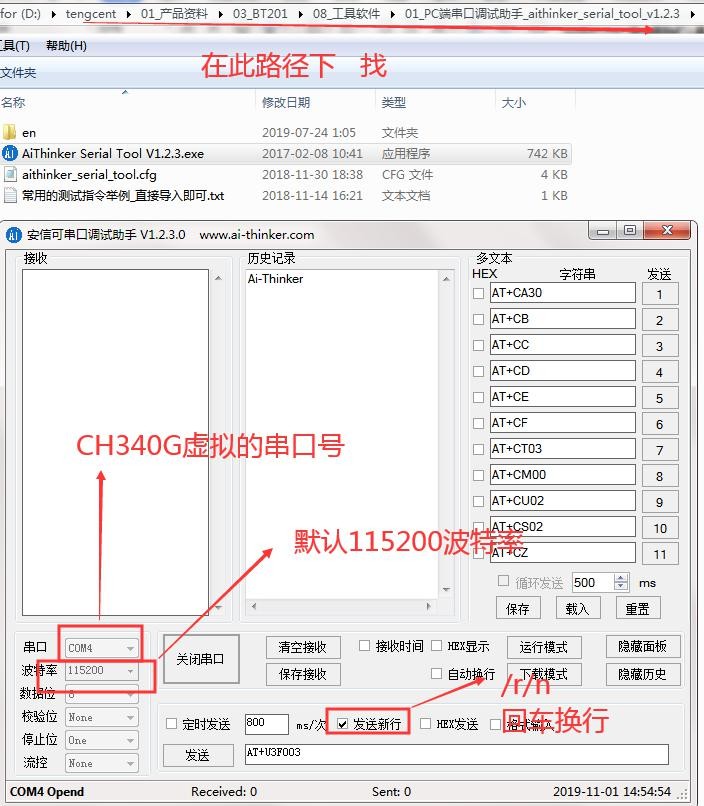
The basic concept of the serial is not described, many online. Serial products are the AT commands, pay attention to non-targets. And other manufacturers of modules is not the same as the factory default baud rate of 115200. Power-on module will automatically return the chip or some parameters, such as the version of Bluetooth name, UUID, and so on parameters

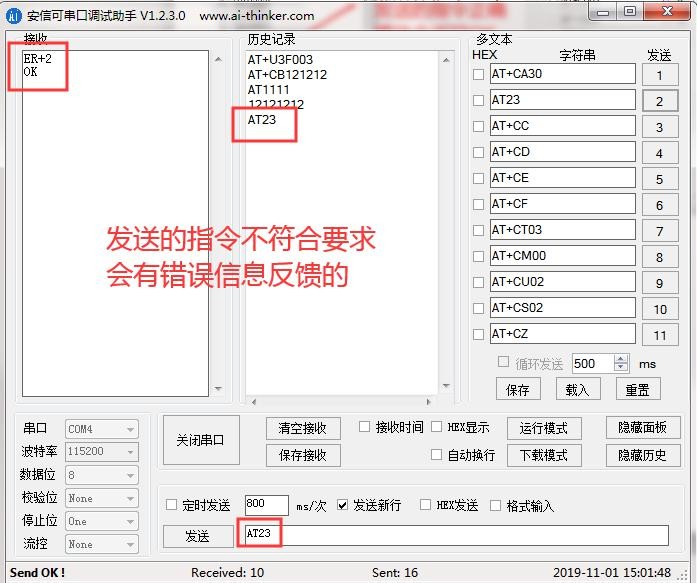
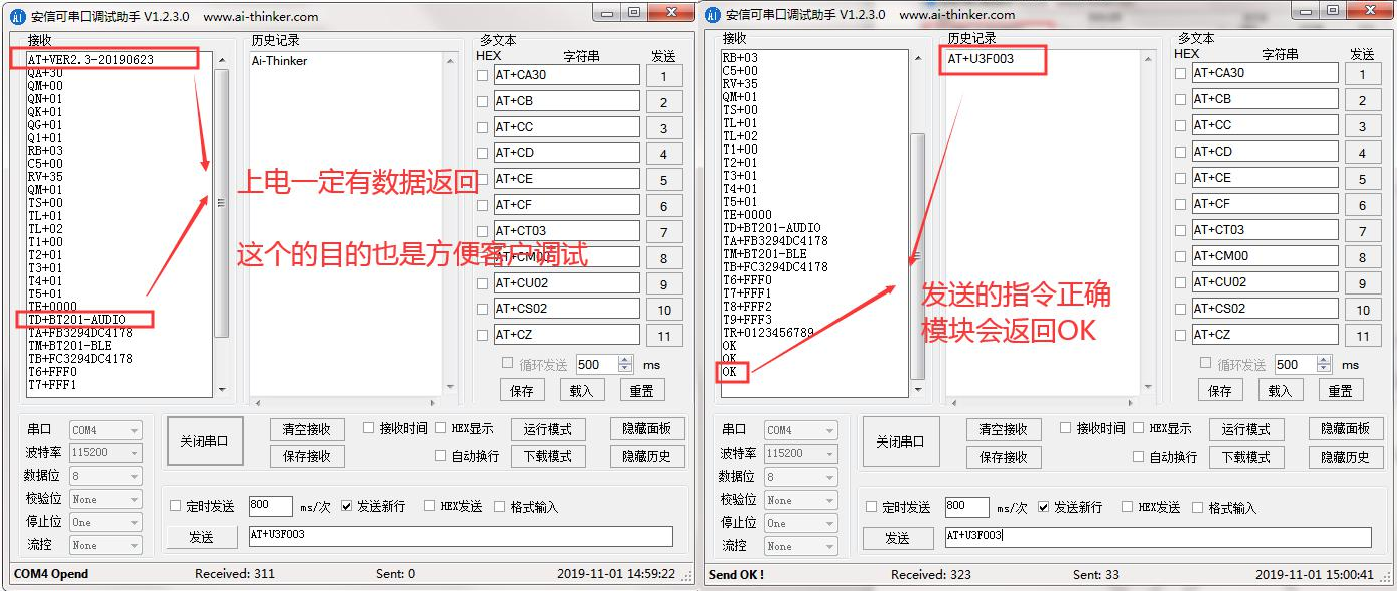
# Second, the problem

* 1. Serial format specification

|  |  |
| --- | --- |
| Supporting asynchronous serial communication mode, receiving command communication standard sent by PC through serial port: data bit:8115200 BPS - Users can set instructions through serial ports as detailed in 4.2.2  Stop bit: 1 check bit: none flow control: none  Note: All instructions are designed regularly, not randomly divided, you can find the rules below. | |
|
|
|
| Control Instruction Format: AT+<CMD>[<param>]rn - - All characters, not hexadecimal numbers      Data feedback format: <IND>[<param>]rn | |
| Data feedback format: <IND>[<param>]rn | |
| Data characteristics | Detailed description |
| AT+ | The control command is the control command given to BT201 by the control host, starting with "AT+" |
| <CMD> | It is followed by < CMD > control, usually two characters.  instructions |
| [<param>] | If there are parameters behind the CMD, follow closely[<param>] |
| \r\n | Finally, end with "r\n", character type is newline, windows is the return key.Hexadecimal is 0x0D, 0x0A |
| <IND> | 1. Data Feedback < IND > as the BeginningIt's Bluetooth that feeds back state and data information to the host."IND" means feedback.  The < param > parameters are transmitted immediately after < IND >. |
| 2The parameters returned by BT201 are followed by |

* 1. Serial testing tool Description



* 1. Serial debugging normal phenomenon as follows:

Just send the correct data to the module, the module will definitely return OK or ER + x, etc. information, see note

* 1. Serial testing encounter problems how to do

If the debugging process encountered a problem. Do not worry, the temerity to doubt it, doubt it. Because the problem is to go step by step to resolve.We do all kinds of guests after-sales experience, in fact, the ultimate solution, the basic is as follows: None Other

1, the first use of "computer end" of the serial debugging assistant, the USB to TTL tools TX and RX short, spontaneous self-close look at whether it is normal

2, check the Bluetooth module, the active power returned serial information whether there is received.

3, in the case of transfer barrier, be sure to use the computer end of the serial debugging assistant try, recommended that we provide.

4, and then send it "AT" command to see if the module will return to "ER + x" information. If the return on all normal

5, also check tool USB to TTL, we repeatedly stated, it is recommended to use CH340G chip board. Because our chip is weak drive, other USB to TTL module, can be problematic.

6. If you have asked yourself, it is likely to last module itself is bad. But this probability is very low, just one case of [2 years]