Subs Setting

1.How to connect gimbal serial port to computer by using USB-to-TTL cable. (All tests should be performed while the gimbal is powered on.)

Steps:

1) Find a USB-to-TTL cable, connect USB port to computer, the device manager will recognize the port number.设备管理器上有识别出刚连上的端口号

2) TTL end(Red 5V, Black GND, White RXD, Green TXD), RX, TX, GND port are needed while connecting to the gimbal with the TTL end.

3) Connection Method:

Wire GND————Gimbal GND

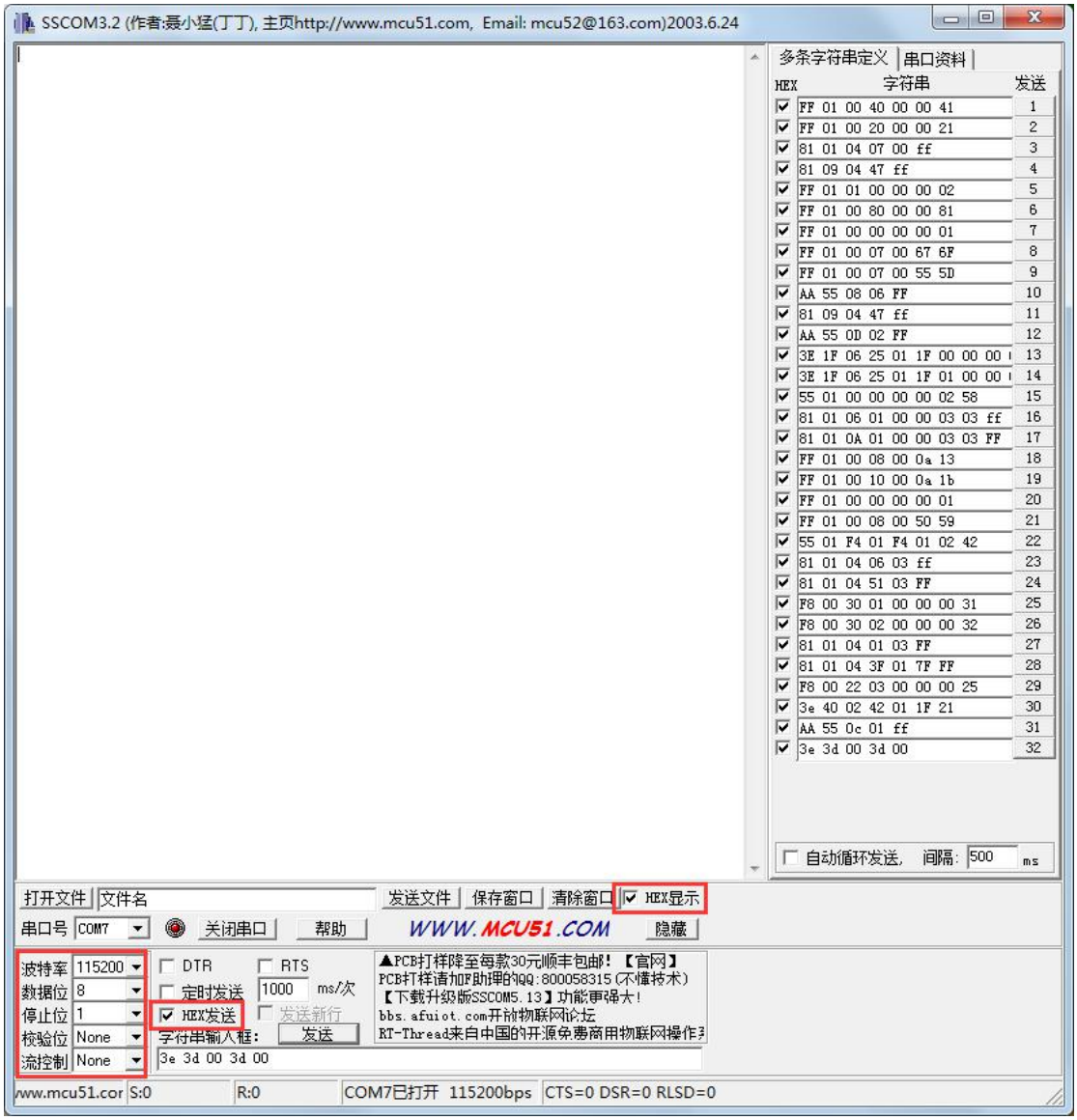
Wire TX———— TX on Gimbal control box

Wire RX———— RX on Gimbal control box

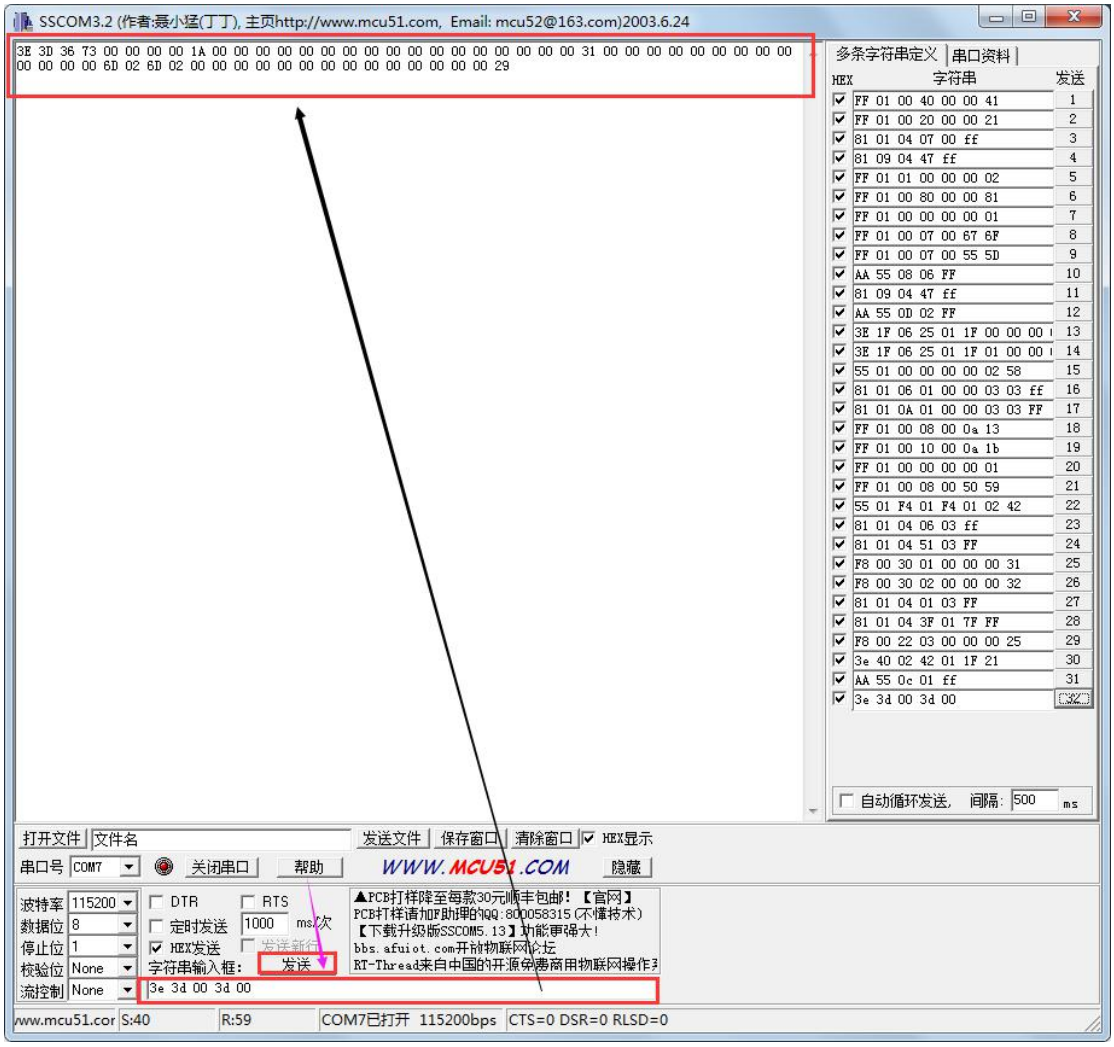
Diagram:

2.Software setting test:

1）Baud rate 115200 (very few older version gimbals have a baud rate of 9600)，Data bit 8，stop bit 1，no calibration，HEX send，HEX display；



2) Send under normal conditions: 3e 3d 00 3d 00, the feedback is a 59-byte command with “3E 3D 36 73” as the frame header, as shown below, that indicates the serial communication is connected.



3）Change the gimbal baud rate

Step1：For the gimbals shipped after 20190501, you need to operate the first step, otherwise skip directly to the second step)

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instructions: Sbus and mavlink channel setting

instructions. For channels not used, set to 0.

YA------yaw Range：0x01---0x14 （默认 1）

PI-----pitch Range： 0x01---0x14 （默认 2）

MO-----mode Range： 0x01---0x14 （默认 3）

ZO-----ZOOM Range： 0x01---0x14 （默认 4）

FO-----FOCUS Manual focus/dual light PIP/thermal color plate/infrared supplementary light

Range: 0x01---0x14 （默认 5）

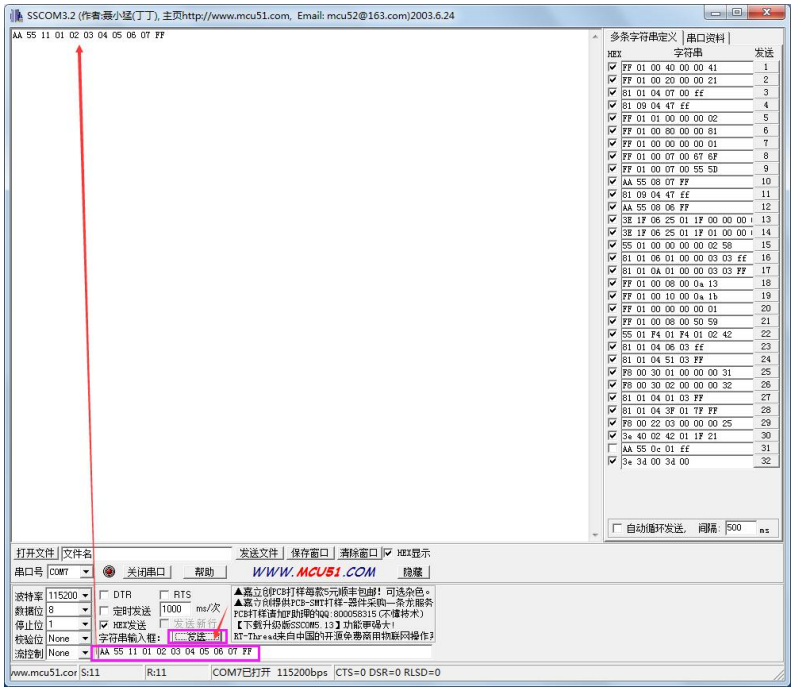
PR-----PIC&REC Range: 0x01---0x14 （默认 6）

MU-----MULTI Tracking,night vision Range:0x01---0x14

（默认 7）

example： Use the 9 ~ 15 channels to control the above channels, and send the following commands: Note that they are hexadecimal numbers. Channel 10 set as follow: 0A AA 55 11 09 0A 0B 0C 0D 0E 0F FF

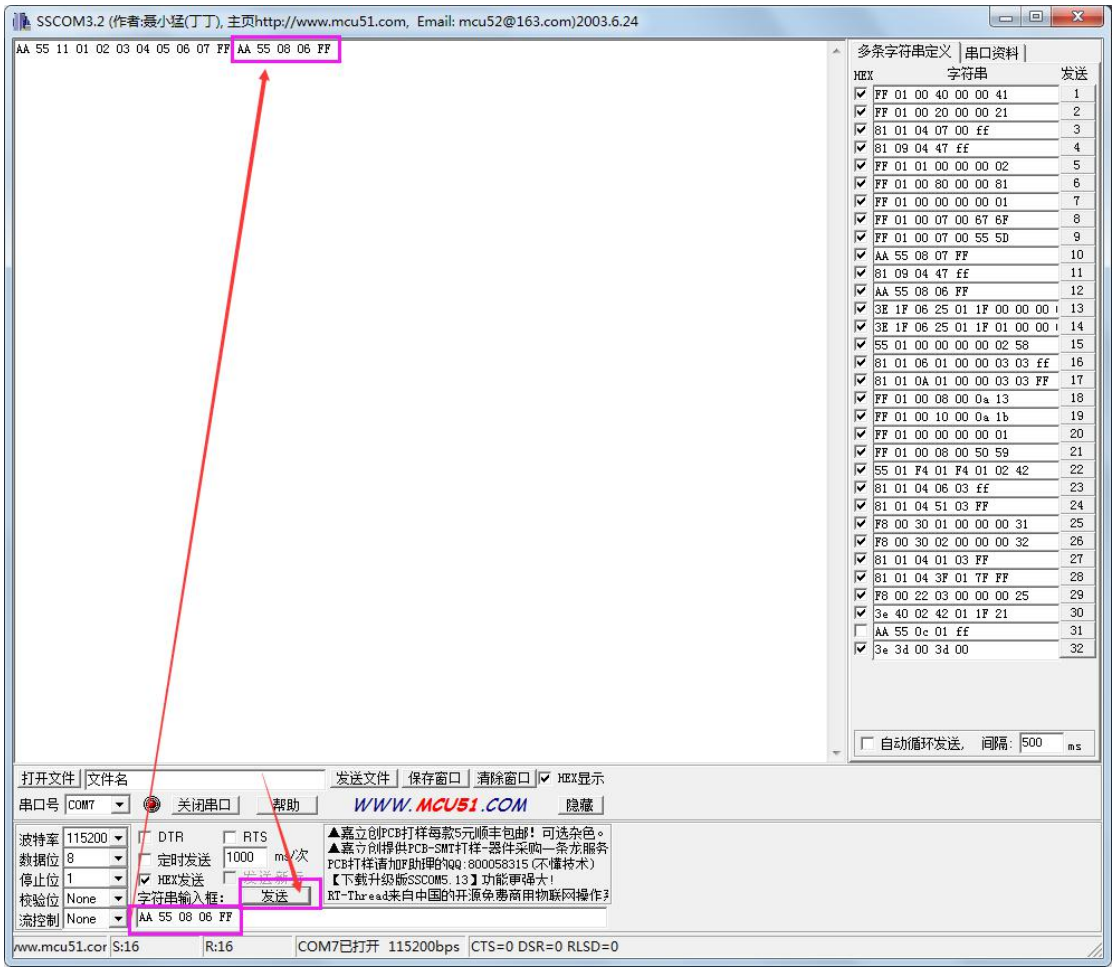
for example,if send：AA 55 11 01 02 03 04 05 06 07 FF，the feedback is AA 55 11 01 02 03 04 05 06 07 FF，indicates thatit sent successfully.The gimbl sbus channel is set to 1-7 channels;



Step 2：

Send：AA 55 08 07 FF ，The serial port will give feedback:

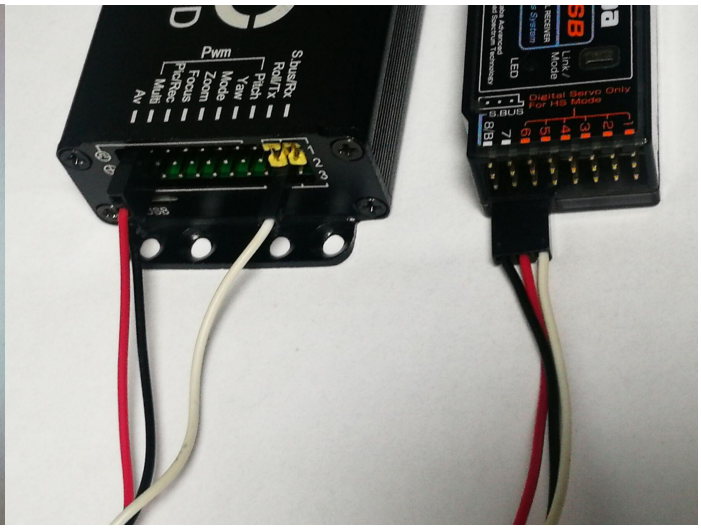
AA 55 08 07 FF， sbus setting finished.(Serial software has no feedback if the gimbal is shipped before 20190501)

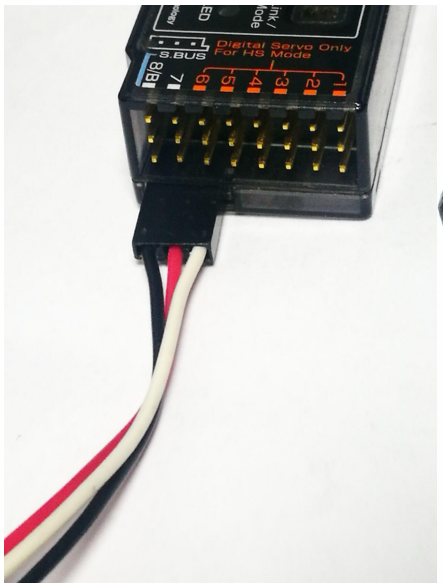


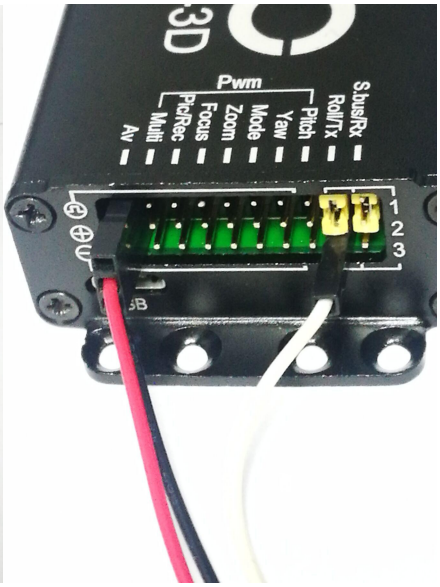
4）After the operation, restart the gimbal, and then repeat the steps: send 3e 3d 00 3d 00,without feedback, indicating that the Sbus setting was successful;

3. Sbus wiring diagram

Find a 3PIN DuPont cable, connect the Sbus position of the gimbal control box and remote control receiver (take Futaba receiver as an example , the connection method is as follow:





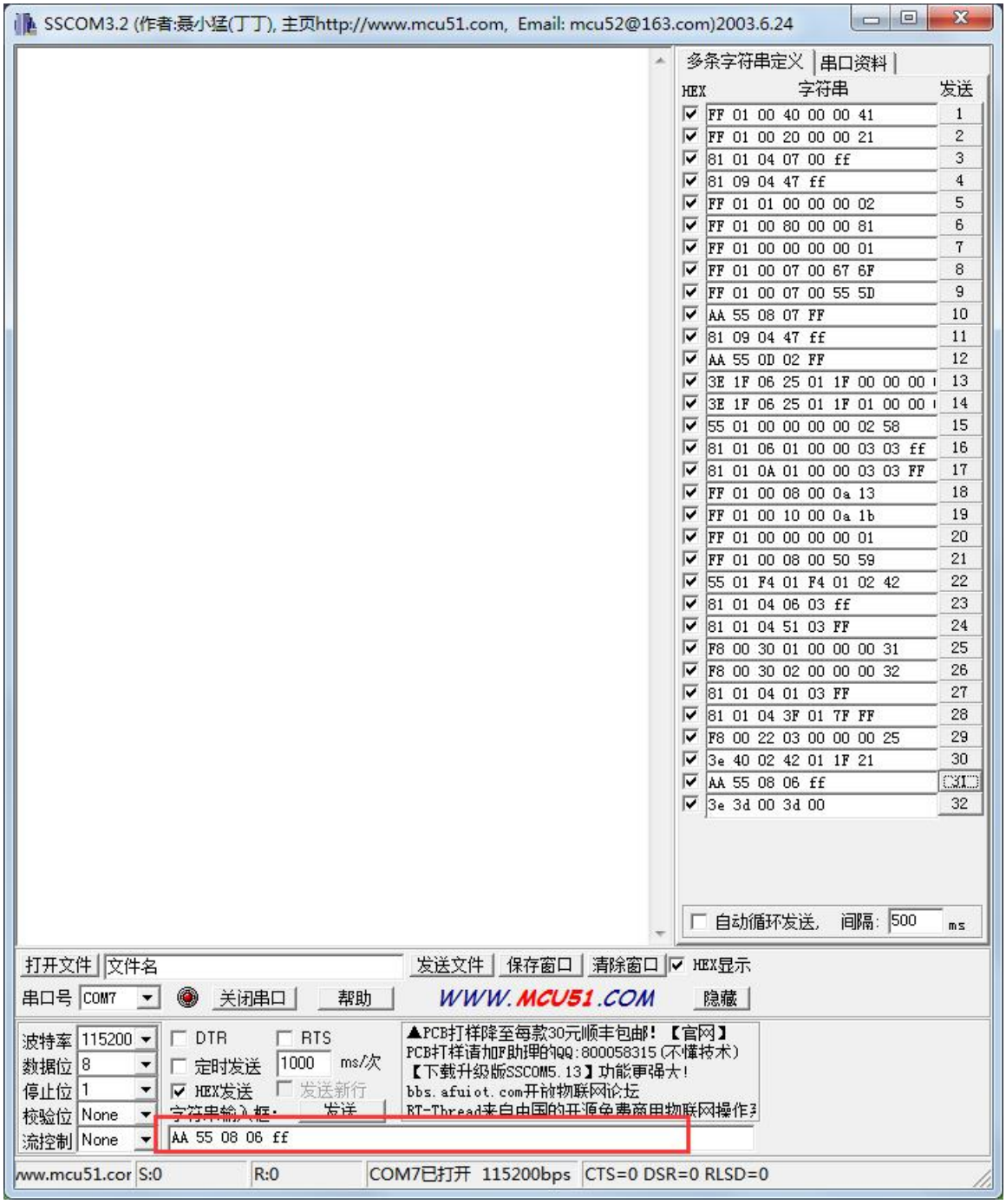


4.Cancel Sbus control and resume serial control

1）When the gimbal is under SBUS control at this time, if sending a gimbal query command: 3e 3d 00 3d 00, no feedback command is displayed;

2）Remove a yellow jumper cap as shown bellow;

4）Power on the gimbal again, after about 20 seconds, reconnect the yellow jumper cap; select baud rate 115200，Software settings are the same as above, then click to send: AA 55 08 06 ff ，as shown below:



4）Power off the gimbal, then restart the gimbal, and send commands to query feedback. If there is feedback, the gimbal serial port is normal. Send: 3e 3d 00 3d 00, the feedback is as shown as bellow, which shows that the serial communication is connected;