

BINDING HC-05 BT MODULE AND CROSSFIRE

In order to configure your HC-05 you need to switch it into AT command mode and run the commands listed below.

First you need to connect your Bluetooth module in one of these ways:

- Using a USB-TTL/FTDI adapter.
- Using an Arduino (e.g. Arduino Uno).

In both cases you have to use a serial com terminal (e.g: Arduino Serial Monitor tool, Hércules, ...).

Using a USB-TTL/FTDI is fine, but depending on firmware version of the module you might not get anything back from INQM or INQ AT commands (but INQ will cause it to auto connect to Crossfire BT), thus we recommend to use the Arduino option.

In order to connect the components and load the necessary sketch on your Arduino, please follow this link:

<http://www.techbitar.com/modify-the-hc-05-bluetooth-module-defaults-using-at-commands.html>

Once the HC-05 is ready to receive AT commands follow these steps:

AT+RMAAD Clear any paired devices.

AT+ROLE=1 Set mode to Master.

AT+RESET After changing role, reset is required.

AT+CMODE=0 Allow connection to any address.

AT+INQM=0,5,5 Inquire mode - Standard, stop after 5 devices found or after 5 seconds.

AT+PSWD=1234 Set PIN.

AT+INIT Start Serial Port Profile (SPP) (If Error(17) returned - ignore as profile already loaded).

AT+INQ Start searching for devices.

A list of devices found will be displayed, one of which is the slave module. The format of the output is:

+INQ:address,type,signal

The address of the module is what we need and is in the format:

4:3E:9A440B

NOTE: We need to replace the colons with commas when we use the address with the following commands.

If you get more than one device listed and don't know which one is the slave module Crossfire, you can query the module for its name using:

AT+RNAME?

e.g. (don't forget to change the colons to commas)

```
AT+RNAME? 4,3E,9A440B  
> CROSSFIRE XXXX
```

Once we are happy we have the correct slave address, we need to pair with it, so carry on with the next set of commands:

AT+PAIR=4,3E,9A440B,10 The timeout is in seconds and if you need to type in the pin on the slave device you need to give enough time to do this.

AT+BIND=4,3E,9A440B Set bind address to the slave address

AT+LINK=4,3E,9A440B Connect to slave.

I will post a link to the arduino directions in the next post. Mr. Ortega I think it would be a huge help if you could add these directions to github.

Im currently using a 57600 baudrate. 9600 baudrate seemed to drop telemetry repeatedly. I didnt try any other baudrates. I know the crossfire is made to run at 57600 for mavlink so thats what I used.