EACHINE

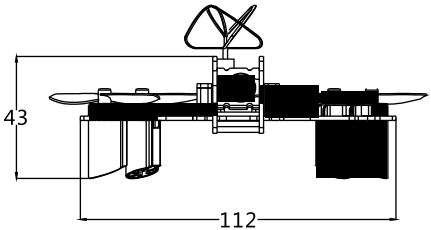
QX105 BAT

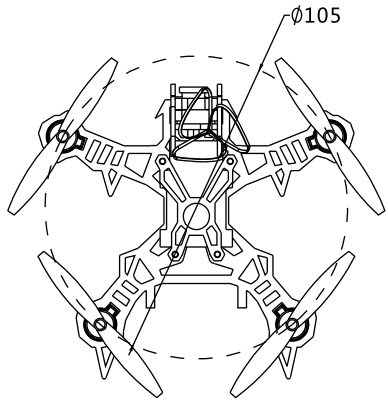
Micro FPV Racing Drones

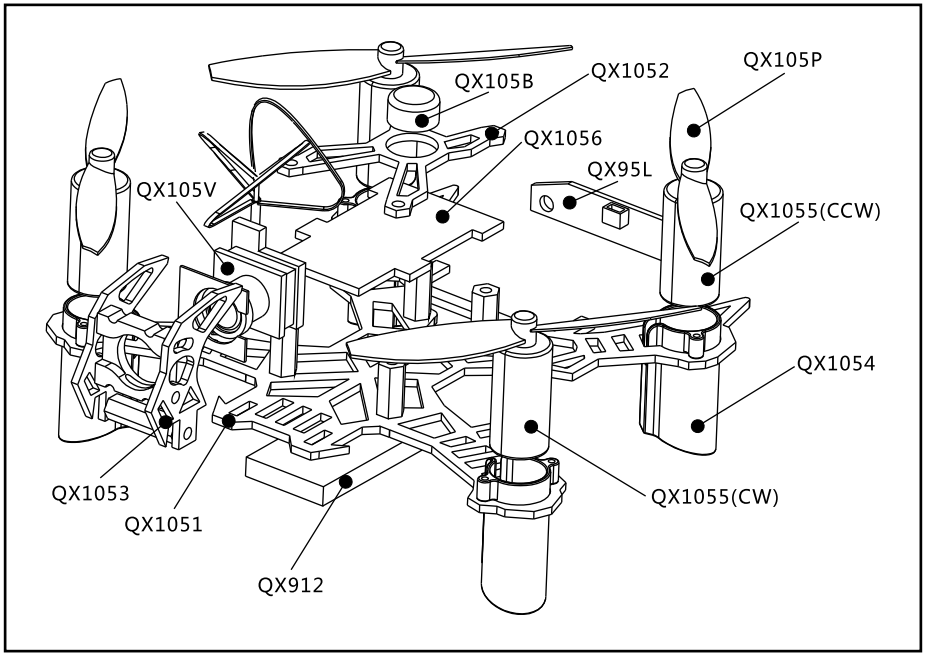
QUICK START GUIDE V1.0

1. Specification

Brand Name: Eachine
Size:112mm*106mm*43mm
Weight: 56.5g (Without battery)
Flight controller: Eachine AIOF3PRO_Brushed built-in OSD
Motor: Coreless 1020 Black Edition CW/CCW
Propeller: 2611 66mm CW/CCW 2-blades propeller
Camera: 600TVL HD CMOS 1/4inch
VTX: 5.8g 25MW 48CH NTSC/PAL Video transmitter
Battery: 3.7V 600mah Lipo battery
OSD: Betaflight OSD
Firmware of Flight controller :Betaflight 3.0.1 (Target:OmnibusF3)
Flight time : 5 minutes (Battery voltage at 2.8v)
Receiver Option:
-Frsky D8 mode SBUS Output 8ch With RSSI output
-Flysky compatible 8ch PPM receiver(AFHDS 2A Mode)
-DSM2/DSMX compatible Receiver



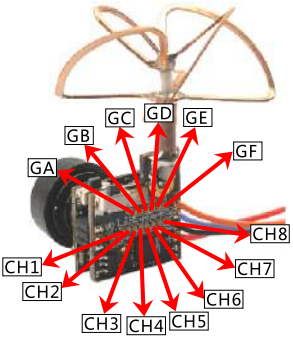



QX105B
QX1052
QX105P
QX1056
QX95L
QX105V
QX1055(CCW)
QX1054
QX1053
QX1051
QX1055(CW)
QX912

2. Components	QTY	FRSKY	FLYSKY	DSM2/DSMX	Part NO.
1.5mm 3K carbon fiber bottom plate	1	Include	Include	Include	QX1051
1.5mm 3K carbon fiber top board	1	Include	Include	Include	QX1052
CNC Aluminum camera mount	1	Include	Include	Include	Qx1053
1020 Motor mounting seat	4	Include	Include	Include	QX1054
Eachine 1020 Coreless motor (CW)	3	Include	Include	Include	QX1055CW
Eachine 1020 Coreless motor (CCW)	3	Include	Include	Include	QX1055CCW
AIOF3PRO_BRUSHED FC built-in Frsky receiver	1	Include			QX1056
AIOF3PRO_BRUSHED FC built-in Flysky receiver	1		Include		
AIOF3PRO_BRUSHED FC built-in DSM2/X receiver	1			Include	
3IN1 5.8G 48CH VTX&600TVL Camera	1	Include	Include	Include	QX105V
2611 66MM Propeller(2pcs CW+2pcs CCW)	2	Include	Include	Include	QX105P
3.7V 600mah Lipo battery	2	Include	Include	Include	QX912
Charger cable	1	Include	Include	Include	QX913
1S USB Charger	1	Include	Include	Include	QX95C
Propeller Disassembly tool	1	Include	Include	Include	QX914
Rear Ws2812 LED Board	1	Include	Include	Include	QX95L
Buzzer	1	Include	Include	Include	QX105B

3. 5.8G VTX channels list

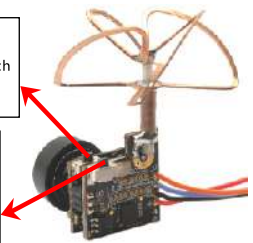
CH \ FR		FR					
		GA	GB	GC	GD	GE	GF
CH	CH1	5740MHz	5705MHz	5865MHz	5658MHz	5733MHz	5362MHz
	CH2	5760MHz	5685MHz	5845MHz	5695MHz	5752MHz	5399MHz
	CH3	5780MHz	5665MHz	5825MHz	5732MHz	5771MHz	5436MHz
	CH4	5800MHz	5645MHz	5805MHz	5769MHz	5790MHz	5473MHz
	CH5	5820MHz	5885MHz	5785MHz	5806MHz	5809MHz	5510MHz
	CH6	5840MHz	5905MHz	5765MHz	5843MHz	5828MHz	5547MHz
	CH7	5860MHz	5925MHz	5745MHz	5880MHz	5847MHz	5584MHz
	CH8	5880MHz	5945MHz	5725MHz	5917MHz	5866MHz	5621MHz



Orange:Camera video signal
Blue:Video out
Red:+5V
Black:GND

NTSC/PAL Switch still touch up 2S; Short touch switch to reverse video display

Frequency group A~F selected still touch up to 2S; Channel ch1~ch8 selected with short touch.

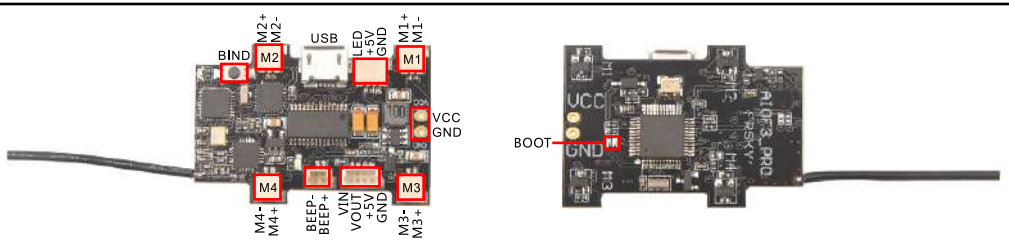


CAUTION: Read and follow all instructions and warnings in the manual prior to setup or use. Failure to operate the product correctly can result in damage to the product, personal property and/or injury. This is a sophisticated hobby product. It must be operated with caution and common- sense and requires some basic mechanical ability.

4. General Product Safety Precautions

- As the user of this product, you are responsible for operating it safely, not endangering yourself and others,or damaging the product or the property of others.
- Operate your product in open spaces away from people and property.
- Never operate your product with damaged electrical components.
- Keep the transmitter powered on while model is powered on.
- Let parts cool after use before touching, motors will get hot in use.
- Remove batteries after use, as applicable.
- Keep all batteries, chemicals, small parts and anything electrical out of the reach of children.
- Avoid water exposure to this product. Keep parts dry.
- Keep moving parts clean.

5. Flight controller connection diagram



6. Charge the Flight Battery

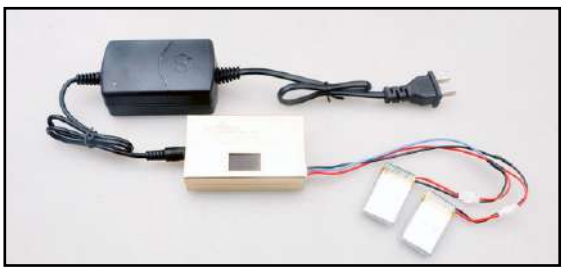
NOTICE: Inspect the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured. Charge only batteries that are cool to the touch and are not damaged.

Charging with Balance Charger

Connect the 2 batteries and the charge cable ,then connect the cable to 2S Balance charge (Not include) like B3PRO, 3S10D,4S15D, Charsoon DC-4S ,etc.

⚠CAUTION: Only use 2 batteries together to charging

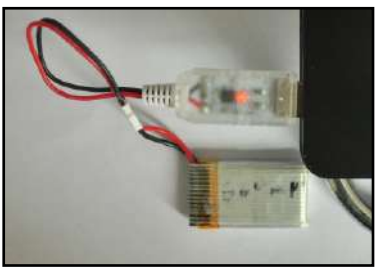
⚠CAUTION: Once charging is complete, immediately remove the battery. Never leave a battery connected to the charger.



Charging with USB Li-Po Charger

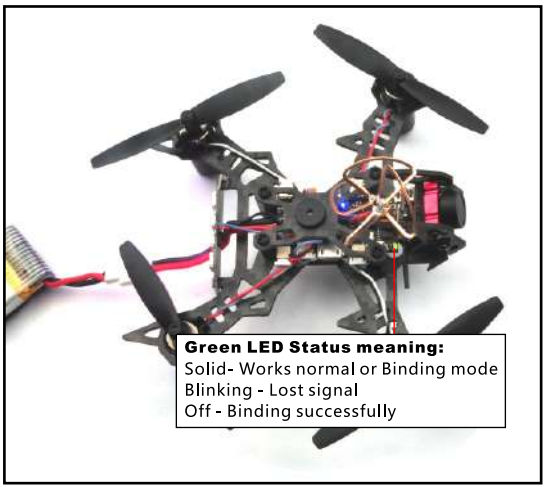
Connect the battery to the USB Li-Po Charger,
then plug into the USB port of your computer

LED STATUS:
Solid Red LED --Charging
Solid Blue LED --Charge Complete



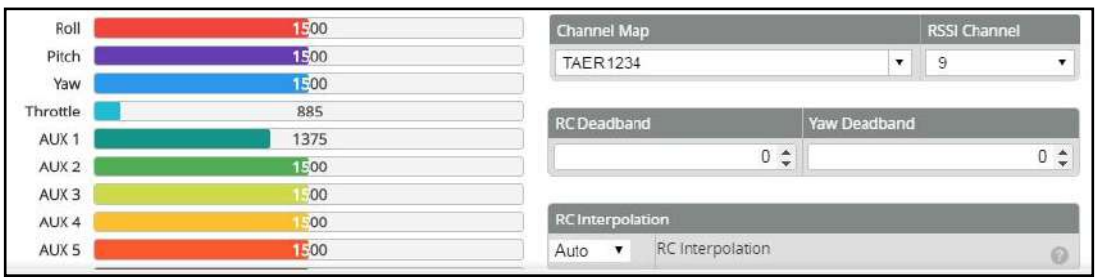
7. QX105 Frsky BNF Version binding procedue

1. Power for the QX105 while holding the Bind button, the Green LED on the receiver will getting to be solid, this means the QX105 is in binding mode, then release the Bind button.



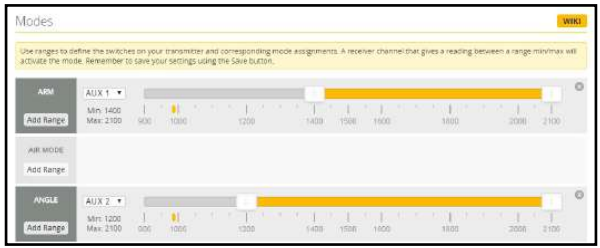
2. Turn on your Radio and select D8 mode for the Receiver. Then Go to the Receiver [Bind] option, and ENT to Binding with the QX105. The Green LED on the receiver will turning off, this indicates binding successfully.

3. The default receiver channel map for QX105 Frsky version is TAER1234, please ensure your transmitter is matched with it, otherwise it can't be armed. And the RSSI output was set CH9 . .



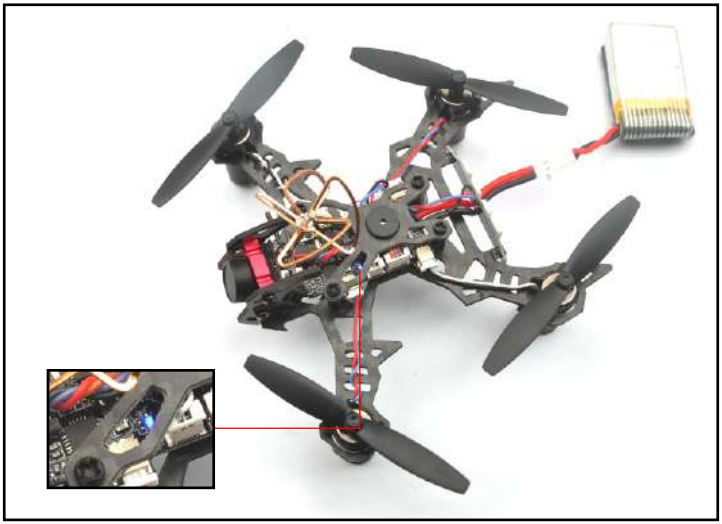
8. Arm/Disarm QX105 Frsky BNF

1. The Default Arm/Disarm switch for QX105 is AUX1(Channel 5),and you can also customize it with Betaflight Configurator. We also set the AUX2(Channel 6) for change flight mode and AU3(Channel 7) for activate the buzzer which you can customize them too .



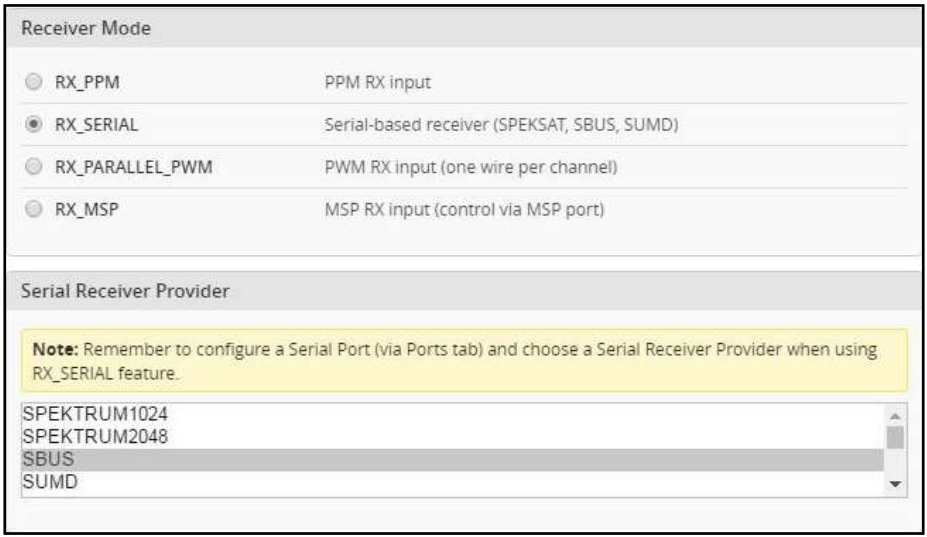
2. Set Arm/Disarm switch for your TARANIS X9D: Move to the MIXER interface, Set “SA” or “SB” switch etc. for Ch5 to ARM/DISARM the motor. Suggest use a 3-steps switch to change flight mode.

3. Toggle the AUX1 Switch, The buzzer starts beeps one time and the Blue LED on the Flight controller will first turning off and get to be solid soon, this indicate the motor was armed. And also you can found "ARMED" shows on your FPV Goggles or the FPV Monitor. Be careful and enjoy your flight now!



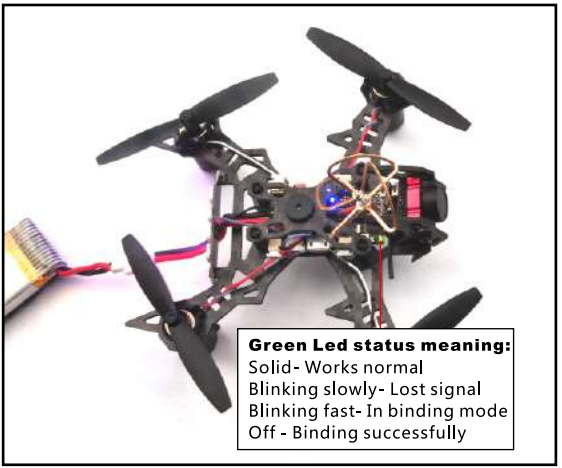
9. QX105 Frsky BNF version receiver configuration

We have configured the frsky receiver for the QX105 before shipping. If you flashed the firmware ,Please setup as the following steps: Enable Serial_RX for UART3, then select RX_SERIAL from the RECEIVER Mode and set the Serial Receiver Provider to be SBUS in Betaflight Configurator.

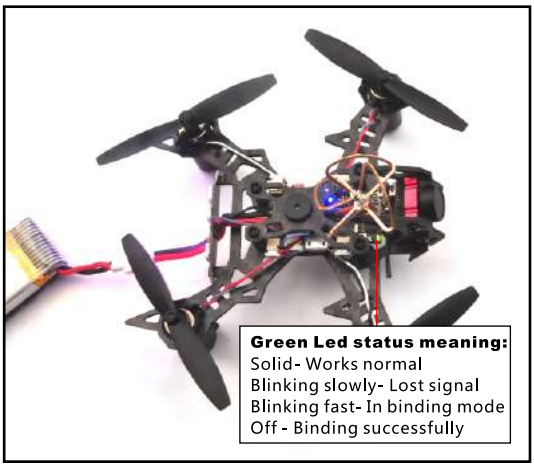


10. QX105 Flysky BNF Version binding procedue

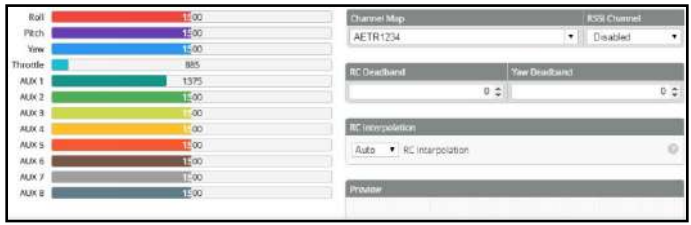
1. Power for the QX105 while holding the Bind button, the Green LED on the receiver will getting to be blinking fast, this means the QX105 is in binding mode, then release the Bind button.



2. Please Ensure the RX setup of your Flysky Radio is in AFHDS 2A Mode. Then Turn on your radio while holding the binding button to Binding with the QX105. The Green LED will turning off for a second and then starting to blinking slowly, this indicates binding successfully. The Green LED is Solid when the connection was established between the QX105 and your Flysky radio.

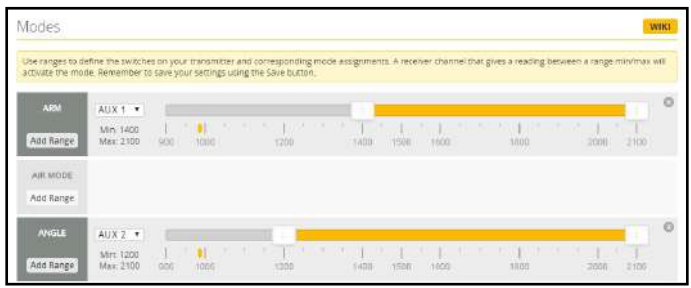


3. The default receiver channel map for QX105 Flysky version is AETR1234, please ensure your transmitter is matched with it, otherwise it can't be armed.



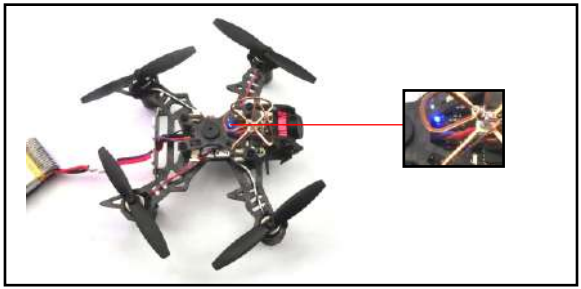
11. Arm/Disarm QX105 Flysky BNF Version

1. The Default Arm/Disarm switch for QX105 is AUX1(Channel 5),and you can also customize it with Betaflight Configurator. We also set the AUX2(Channel 6) for change flight mode and AU3(Channel 7) for activate the buzzer which you can customize them too .



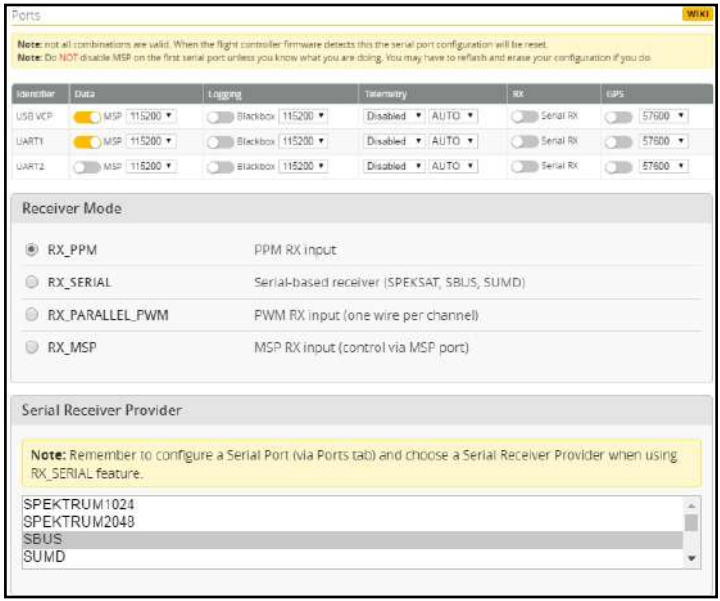
2. Set Arm/Disarm switch for your Flysky Radio: Move to the Aux.channels interface, Set "SWA" or "SWB" or "SWC" switch etc. for Ch5 to ARM/DISARM the motor. Suggest use a 3-steps switch (like "SWC" of the Flysky I6) to change flight mode .

3. Toggle the AUX1 Switch, The buzzer starts beeps one time and the Blue LED on the Flight controller will first turning off and get to be solid soon, this indicate the motor was armed. And also you can found "ARMED" shows on your FPV Goggles or the FPV Monitor. Be careful and enjoy your flight now!



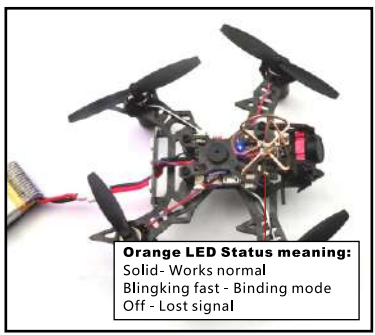
12. QX105 Flysky version receiver configuration

We have configured the flysky receiver for the QX105 before shipping. If you flashed the firmware ,Please setup as the following steps: Select RX_PPM from the RECEIVER Mode.

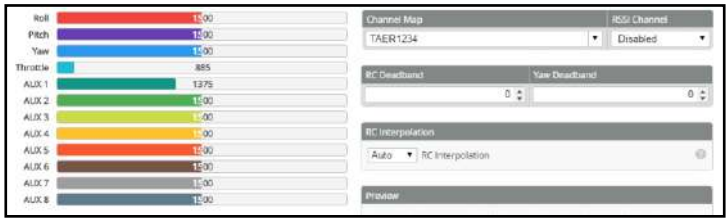


13. QX105 DSM2/DSMX BNF Version binding procedure and Satellite receiver setup

1.The QX105 DSM2/DSMX BNF Version is integrate a DSM2/DSMX compatible Satellite receiver. The binding procedure is like
following:
(1)Connect QX105 DSM2/DSMX BNF Version to computer and open Betaflight configurator, From CLI tab type: "set spektrum_sat_bind = 9" for DSMX radio or "set spektrum_sat_bind = 5" for DSM2 radio
(2)Type "save" and after Flight controller reboot remove USB cable (=Power off the board)
(3)Wait a second and reconnect the USB cable. After cold start satellite led(Orange color LED) should start blinking and transmitter should be turned on while pressing the bind button
(4)After binding satellite led should be solid. Connect Betaflight and use receiver tab to test that satellite is working correctly.
(5)Final step is to go to CLI tab and type "set spektrum_sat_bind = 0" and then type "save". This must be done so that satellite doesn't go back to binding mode when the QX105 is repowered again.

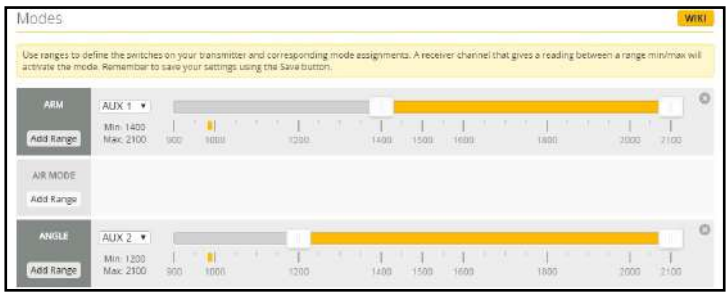


2. The default receiver channel map for QX105 DSM2/DSMX Version is TAER1234, please ensure your transmitter is matched with it, otherwise it can't be armed.



14. Arm/Disarm QX105 DSM2/DSMX BNF version

1. The Default Arm/Disarm switch for QX105 DSM2/DSMX BNF Version is AUX1(Channel 5), for most of Spektrum radio the default channel 5 is Gear switch and you can also customize it with Betaflight Configurator. We also set the AUX2 (Channel 6) for change flight mode and AU3(Channel 7) for activate the buzzer which you can customize them too . Suggest use a 3-steps switch to change flight mode.

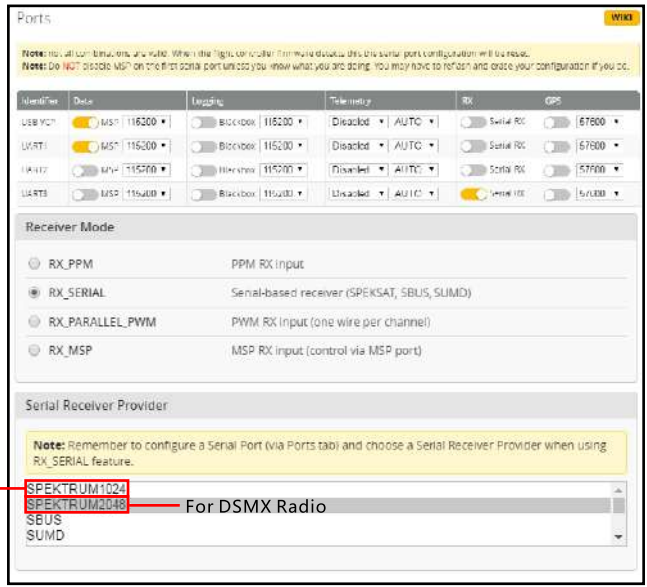


2. Turn on the transmitter and set a switch for CH5 to ARM/DISARM the motor, some transmitter like SPECKTRUM DX6/DX6I, the default CH5 is GEAR Switch.

3. Toggle the AUX1 Switch, The buzzer starts beeps one time and the Blue LED on the flight controller will first turning off and get be solid soon, this indicate the motor was armed. And also you can found "ARMED" shows on your FPV Goggles or the FPV Monitor. Be careful and enjoy your flight now

15. QX105 DSM2/DSMX BNF version receiver configuration

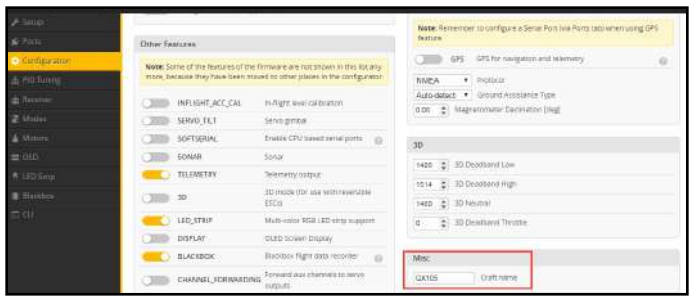
We have configured the satellite receiver for the QX105 before shipping. If you flashed the firmware ,Please setup as the following steps: Enable Serial_RX for UART3 and Set Receiver mode RX_SERIAL ,Select SPEKTRUM1024 for DSM2 Radio and Select SPEKTRUM2048 for DSMX Radio in Betaflight Configurator.



16. OSD configuration

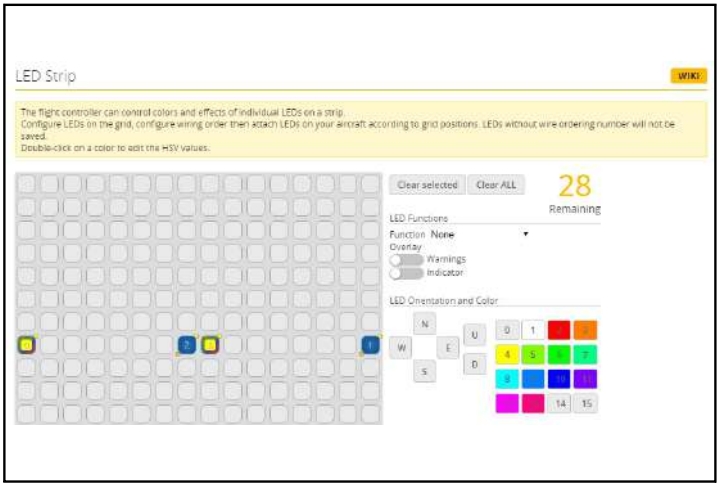
1. Connect the QX105 to the computer , open Betaflight Configurator , move to the OSD option, then you can configure the layout of the OSD.

2. Craft Name set is in configuration option

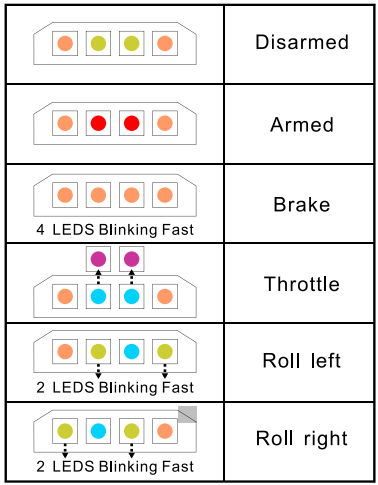


17. LED Strip function

The flight controller of QX105 can control colors an effects of individual LEDS on a strip. The default setup is like this, you can also customize by yourself effects.



18. LED Strip status



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*User manual is subject to change without prior notice.