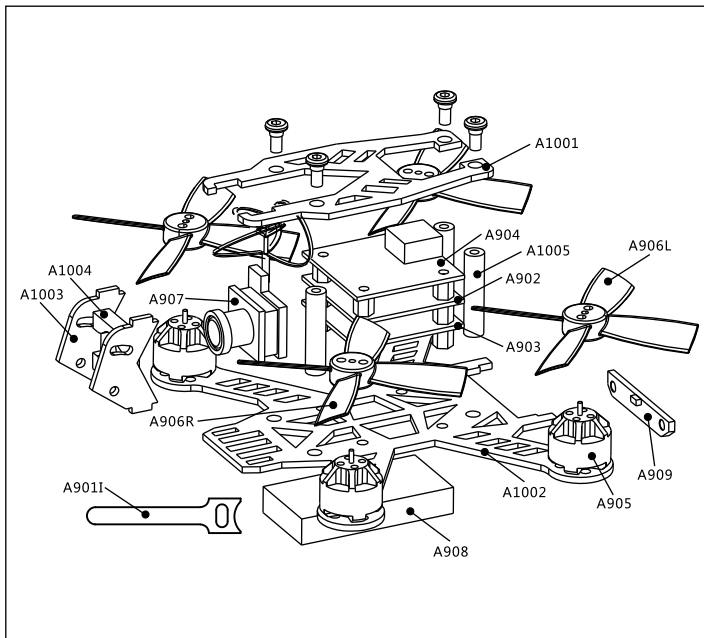




AURORA 100

QUICK START GUIDE V1.0



Item	Qty	Part No.	Option
3K Carbon toppte	1	A1001	
3K Carbon Bottom Plate	1	A1002	
Camera mount	2	A1003	
Camera Supports	1	A1004	
M2 hexagonal Column	4	A1005	
Battery cable ties	1	A901I	
Flight controller	1	A902	
10A 4IN1 ESC	1	A903	
2.4G Receiver	1	A904	A904FR: FRSKY A904FL: FLYSKY A904DX: DXM2/X
1104 KV7500 Motor	4	A905	
2035R 4leaf propeller	4	A906R	
2035L 4leaf propeller	4	A906L	
HC48D VTX&Camera	1	A907	
7.4V 450MAH battery	1	A908	
WS2812 LED board	1	A909	

1. Specification

Size:120mm*120mm*65mm

Weight: 65g(battery not include)

Flight controller: Betaflight F3 Flight controller built-in OSD

Motor: Eachine 1104 KV7500 brushless motor

Propeller: 50mm 4-blades propeller

Camera: 600TVL HD CMOS 1/4inch

VTX: 5.8g 25MW 48CH NTSC/PAL Video transmitter

Battery: 7.4V 450mah 80C lipo battery

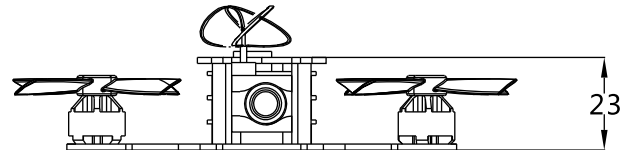
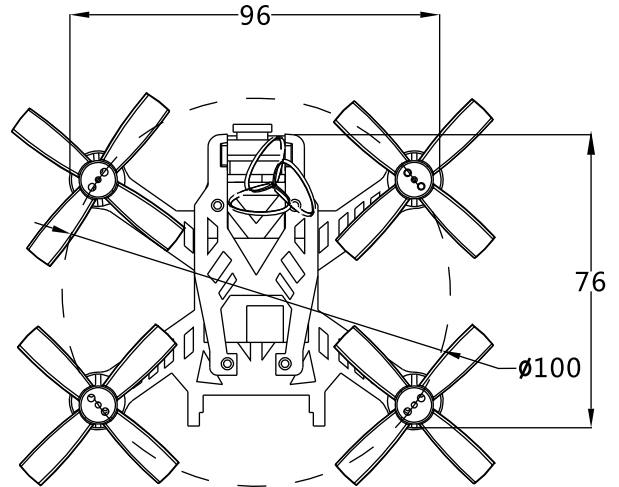
OSD: Betaflight OSD

Firmware of Flight controller :Betaflight 3.1

Flight time : 3-4minutes

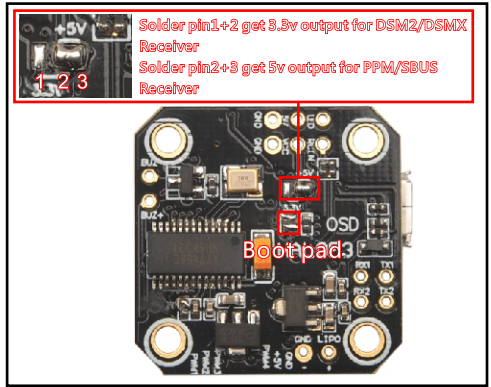
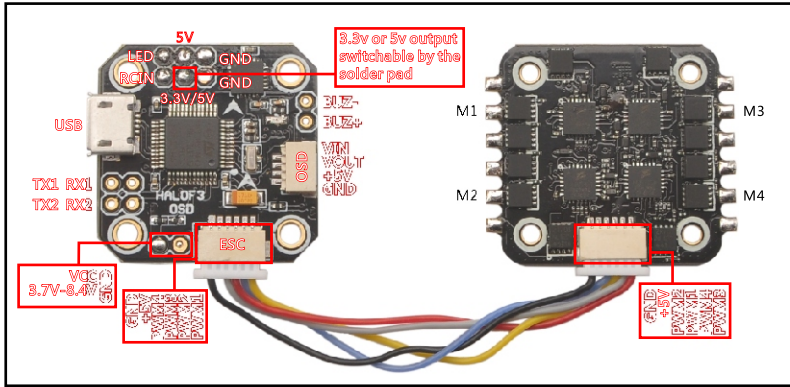
Rear LED Ready(LED_Strip function)

Buzzer Ready

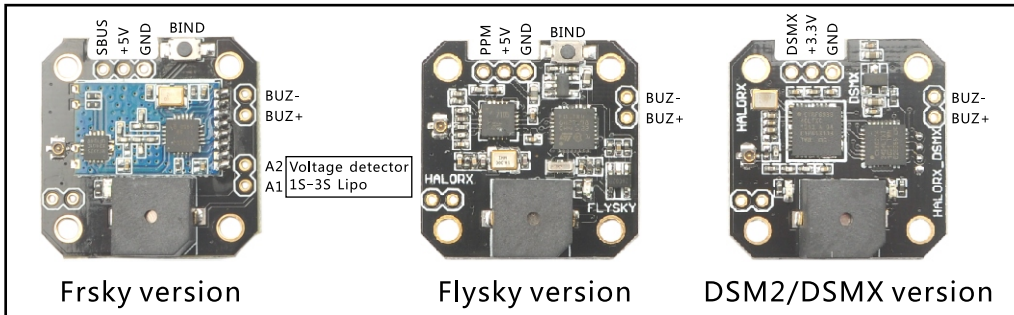


2. Components	QTY	Part NO.
Flight controller	1	A902
10A 4IN1 ESC	1	A903
2.4G Receiver	1	A904
1104 KV7500 Motor	4	A905
2035R 4leaf propeller	4	A906R
2035L 4leaf propeller	4	A906L
HC48D VTX&Camera	1	A907
7.4V 450MAH battery	1	A908
WS2812 LED board	1	A909

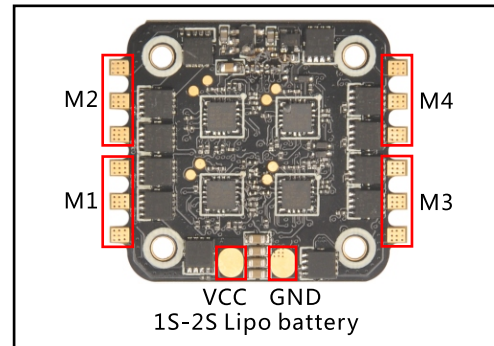
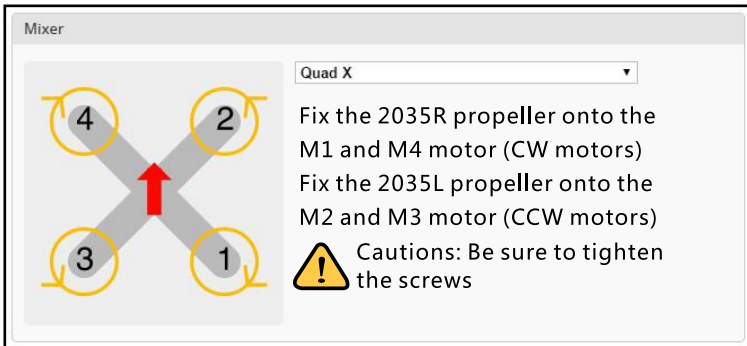
3. Flight controller connection diagram



4. 2.4G receiver pins diagram



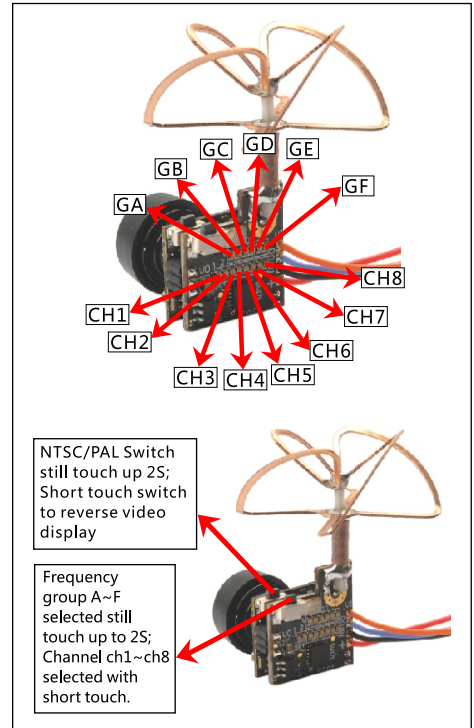
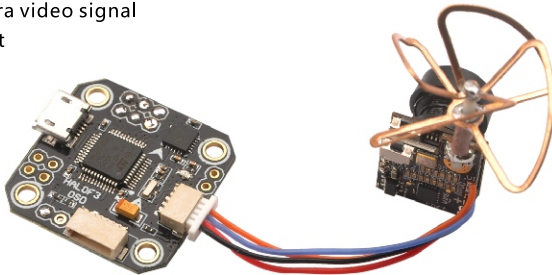
5. Frame type and ESC Connection diagram



6. 5.8G VTX channels list

CH \ FR	FR					
	GA	GB	GC	GD	GE	GF
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

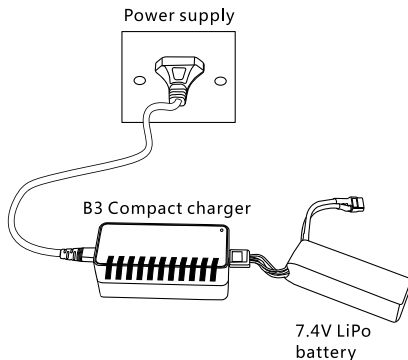
Frequency
 group A~F
 selected still
 touch up to 2S;
 Channel ch1~ch8
 selected with
 short touch.

7. Charge the Battery

- First insert the LiPo battery balance plug into the B3 Compact charger (**Not include, user supplied**)
- Connect the power-cable to the wall-outlet,the B3 Compact charger accept voltage from 110v to 240v. When correctly powered the charger LED will be flashing orange.
- During charging the LED will be solid RED. When charging is completed,the charger will display asolid GREEN LED.

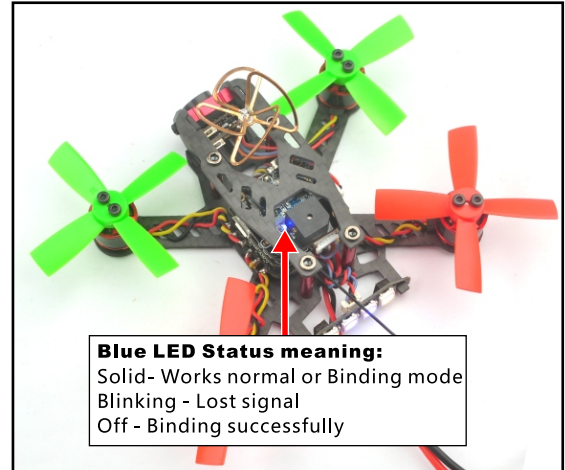
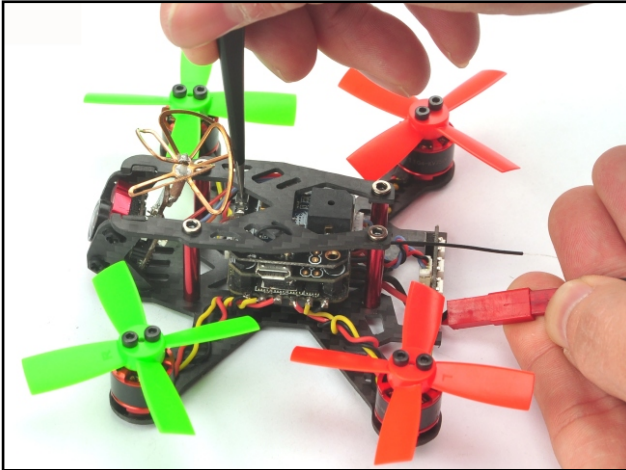
Attention:

- (1).When the Red LED light flashes,there may be something wrong with charger or battery,so please stop charging
- (2). Can **ONLY** be used for charging **2S** and **3S** batteries.NEVER EVER attempt to charge more than **ONE** battery at any time, the charger may get damaged or catch fire
- (3).During charging, the **charger** should be placed in a dry and ventilated place, far away from head sources and faraway from flammable or explosive substances.
- (4).Always allow the battery to cool down before charging, at least **10** minutes.Overheated batteries may swell or catch fire while charging.
- (5).DO NOT charge a dammaged battery, if the battery have cuts, swelling or bend, do NOT charge.

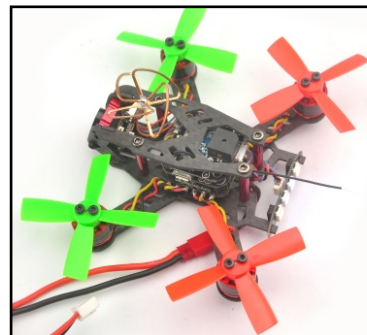


8. Aurora 100 Frsky BNF Version binding procedue

1. Power for the Aurora 100 while holding the Bind button, the blue LED on the receiver will getting to be solid, this means the Aurora 100 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 Aurora 100. The Blue LED on the receiver will turning off, this indicates binding successfully.



3. The default receiver channel map for Aurora 100 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 . .




Roll		1500	Channel Map	TAER1234	RSSI Channel	9
Pitch		1500				
Yaw		1500				
Throttle		885	RC Deadband	0	Yaw Deadband	0
AUX 1		1375				
AUX 2		1500				
AUX 3		1500				
AUX 4		1500				
AUX 5		1500	RC Interpolation	Auto	RC Interpolation	?

9. Arm/Disarm Aurora 100 Frsky BNF

1. The Default Arm/Disarm switch for Aurora 100 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 AUX3(Channel 7) for activate the buzzer which you can customize them too .

Modes WIKI

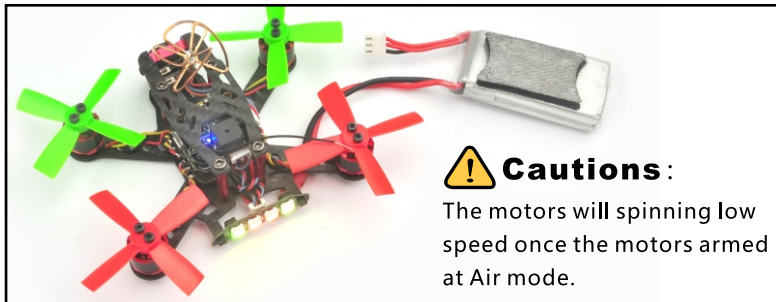
Use ranges to define the switches on your transmitter and corresponding mode assignments. A receiver channel that gives a reading between a range min/max will activate the mode. Remember to save your settings using the Save button.

ARM	AUX 1 ▾		✕
AIR MODE	AUX 2 ▾		✕
ANGLE	AUX 2 ▾		✕

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 2 leds in the middle of the rear leds will changing colour, 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!



10. Aurora 100 Frsky BNF version receiver configuration

We have configured the frsky receiver for the Aurora 100 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.

Identifier	Data	Logging	Telemetry	RX	GPS
USB VCP	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600
UART1	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600
UART2	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600
UART3	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input checked="" type="checkbox"/> Serial RX	<input type="checkbox"/> 57600

Receiver Mode

- RX_PPM PPM RX input
- RX_SERIAL Serial-based receiver (SPEKSAT, SBUS, SUMD)
- RX_PARALLEL_PWM PWM RX input (one wire per channel)
- RX_MSP MSP RX input (control via MSP port)

Serial Receiver Provider

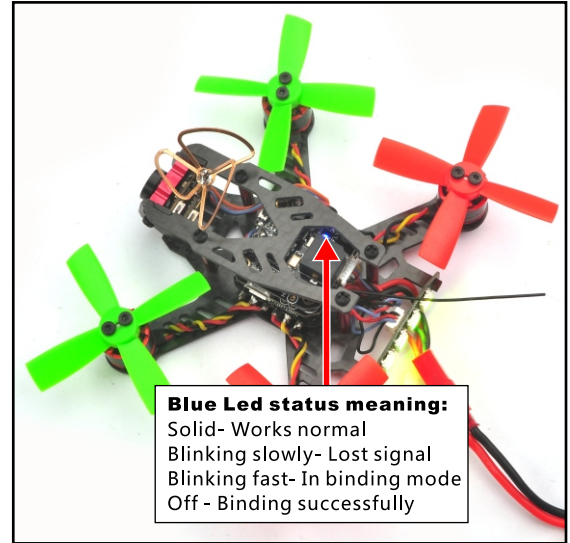
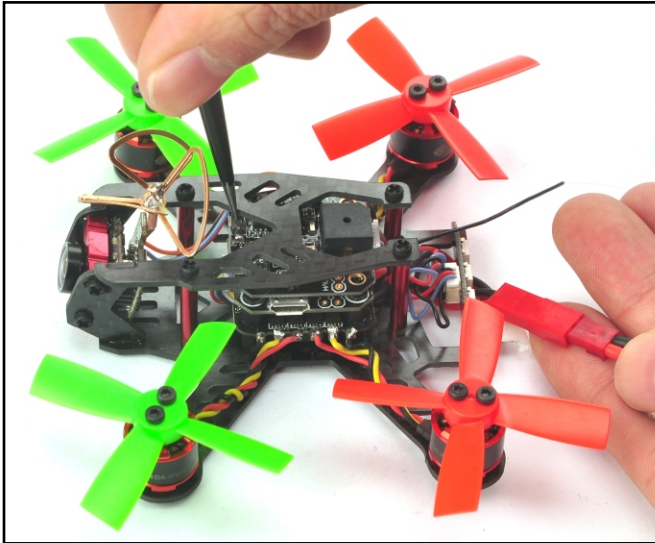
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.

- SPEKTRUM1024
- SPEKTRUM2048
- SBUS**
- SUMD

⚠ Cautions : Because of the Dual way transmission, please keep the Aurora 100 away from the radio more than 50cm, otherwise it will lost telemetry signal.

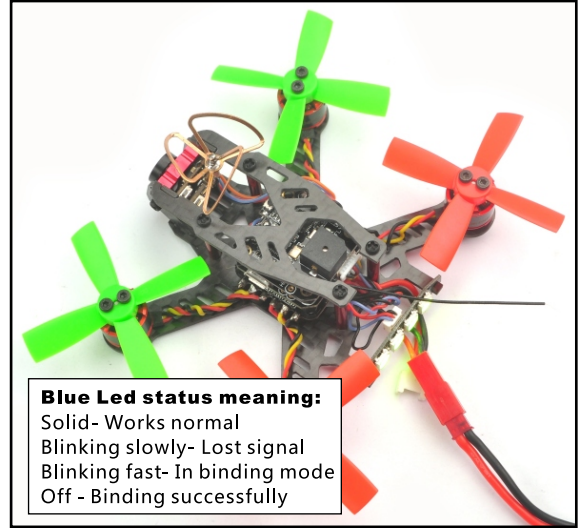
11. Aurora 100 Flysky BNF Version binding procedue

1. Power for the Aurora 100 while holding the Bind button, the blue LED on the receiver will getting to be blinking fast, this means the Aurora 100 is in binding mode, then release the Bind button.

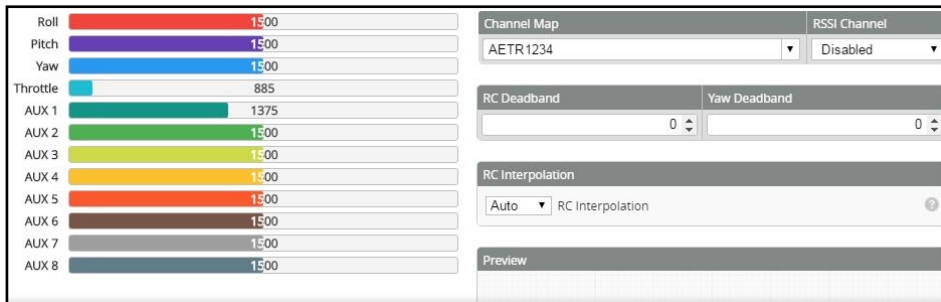


Blue Led status meaning:
Solid- Works normal
Blinking slowly- Lost signal
Blinking fast- In binding mode
Off - Binding successfully

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 Aurora 100. The Blue LED will turning off for a second and then starting to blinking slowly, this indicates binding successfully. The Blue led is Solid when the connection was established between the Aurora 100 and your Flysky radio.

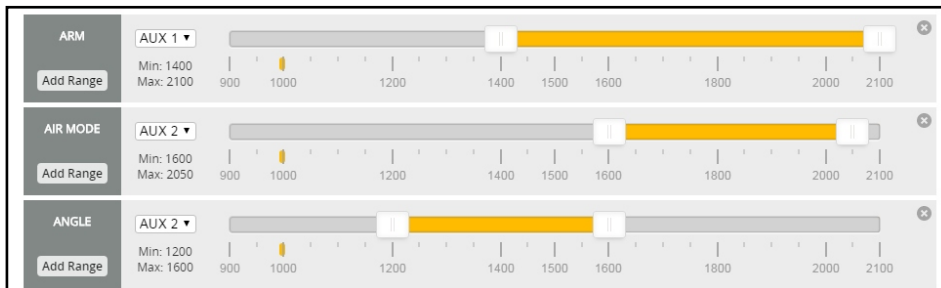


3. The default receiver channel map for Aurora 100 Flysky version is AETR1234, please ensure your transmitter is matched with it, otherwise it can't be armed.



12. Arm/Disarm Aurora 100 Flysky BNF Version

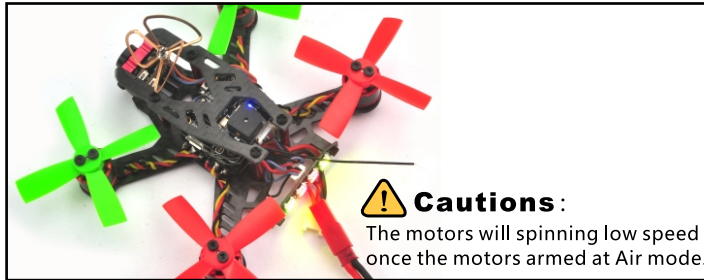
1. The Default Arm/Disarm switch for Aurora 100 is AUX1(Channel 5), and you can also customize it with Betaflight Configurator. We also set the AUX2(Channel 6) for change flight mode and AUX3(Channel 7) for activate the buzzer which you can customize them too.



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 2 leds in the middle of the rear leds will changing colour, 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!



⚠ Cautions:

The motors will spinning low speed once the motors armed at Air mode.

13. Aurora 100 Flysky version receiver configuration

We have configured the flysky receiver for the Aurora 100 before shipping. If you flashed the firmware ,Please setup as the following steps: Select RX_PPM from the RECEIVER Mode.

Ports
WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.

Note: Do **NOT** disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Identifier	Data	Logging	Telemetry	RX	GPS
USB VCP	<input checked="" type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾
UART1	<input checked="" type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾
UART2	<input type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾

Receiver Mode

- RX_PPM PPM RX input
- RX_SERIAL Serial-based receiver (SPEKSAT, SBUS, SUMD)
- RX_PARALLEL_PWM PWM RX input (one wire per channel)
- RX_MSP MSP RX input (control via MSP port)

Serial Receiver Provider

Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.

SPEKTRUM1024

SPEKTRUM2048

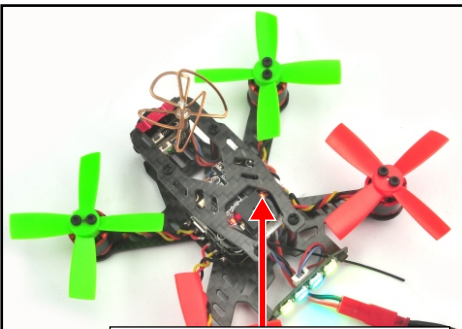
SBUS

SUMD

14. Aurora 100 DSM2/DSMX BNF Version binding procedure and Satellite receiver setup

1. The Aurora 100 DSM2/DSMX BNF Version is integrate a DSM2/DSMX compatible Satellite receiver. The binding procedure is like following:

- (1) Connect Aurora 100 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 Aurora 100 is repowered again.



Orange LED Status meaning:
 Solid- Works normal
 Blinking fast - Binding mode
 Off - Lost signal

Entering CLI Mode, type 'exit' to return, or 'help'

```
# Set spektrum_sat_bind=9
spektrum_sat_bind set to 9
# save
```

For DSMX

Entering CLI Mode, type 'exit' to return, or 'help'

```
# Set spektrum_sat_bind=5
spektrum_sat_bind set to 5
# save
```

For DSM2

Entering CLI Mode, type 'exit' to return, or 'help'

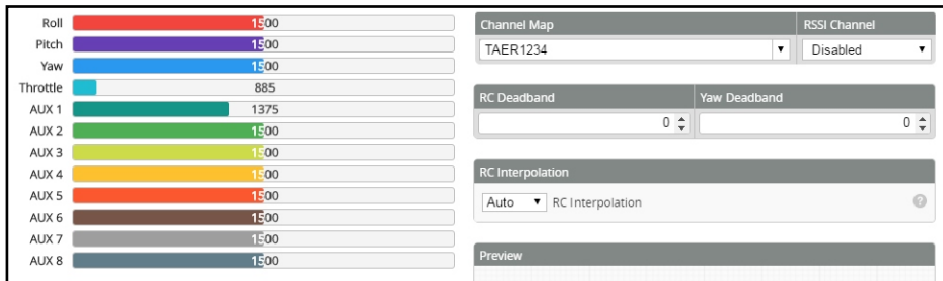
```
# Set spektrum_sat_bind=0
spektrum_sat_bind set to 0
# save
```

Close Binding

Cautions:

The orange LED is blinking slowly after binding successfully for some DSM2 Radio

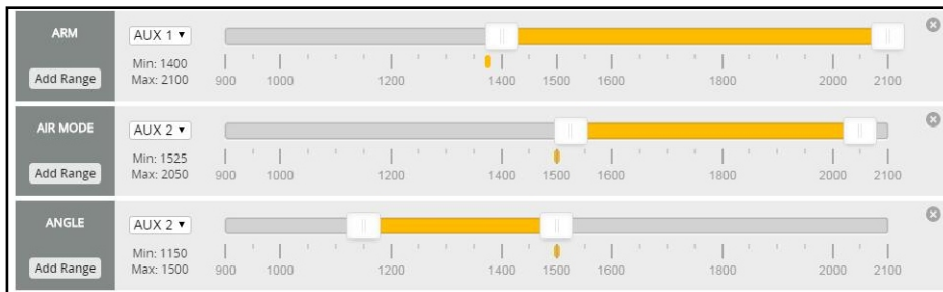
2. The default receiver channel map for Aurora 100 DSM2/DSMX Version is TAER1234, please ensure your transmitter is matched with it, otherwise it can't be armed.



The screenshot shows the Betaflight configurator interface for channel mapping. On the left, a list of channels is shown with their corresponding values: Roll (1500), Pitch (1500), Yaw (1500), Throttle (885), AUX 1 (1375), AUX 2 (1500), AUX 3 (1500), AUX 4 (1500), AUX 5 (1500), AUX 6 (1500), AUX 7 (1500), and AUX 8 (1500). On the right, the 'Channel Map' is set to 'TAER1234' and the 'RSSI Channel' is 'Disabled'. Below this, the 'RC Deadband' and 'Yaw Deadband' are both set to 0. The 'RC Interpolation' is set to 'Auto'. A 'Preview' section is visible at the bottom.

15. Arm/Disarm Aurora 100 DSM2/DSMX BNF version

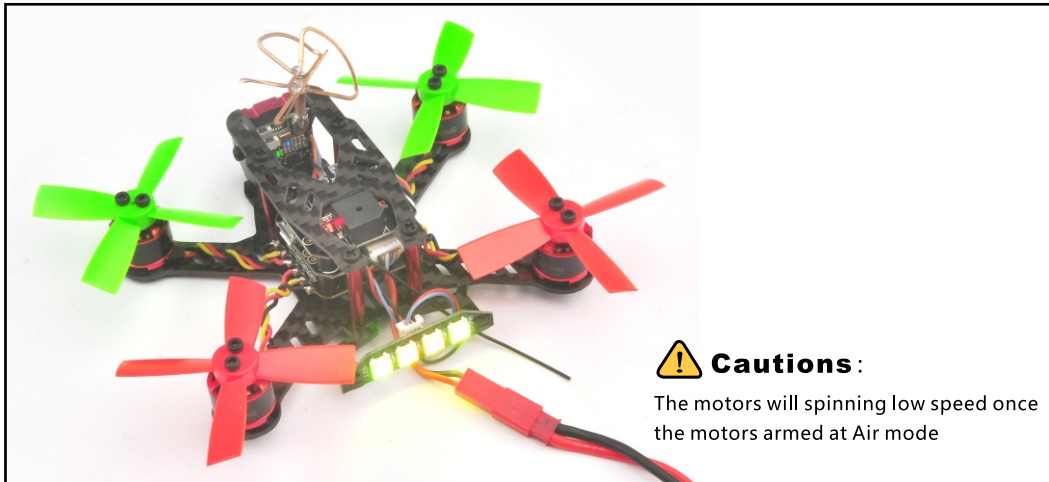
1. The Default Arm/Disarm switch for Aurora 100 DSM2/DSMX BNF Version is AUX1(Channel 5), for most of Spektrum radio the default channel 5 is Gear switch and you can also customize it with Betaflight Configurator. We also set the AUX2(Channel 6) for change flight mode and AU3(Channel 7) for activate the buzzer which you can customize them too . Suggest use a 3-steps switch to change flight mode.



The screenshot shows the Betaflight configurator interface for custom range settings. It displays three rows of settings, each with a dropdown menu, a range slider, and a range label:

- ARM:** Set to AUX 1. Range: Min: 1400, Max: 2100. The slider shows a range from approximately 1400 to 2100.
- AIR MODE:** Set to AUX 2. Range: Min: 1525, Max: 2050. The slider shows a range from approximately 1525 to 2050.
- ANGLE:** Set to AUX 2. Range: Min: 1150, Max: 1500. The slider shows a range from approximately 1150 to 1500.

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 2 leds in the middle of the rear leds will changing colour, 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!



16. Aurora 100 DSM2/DSMX BNF version receiver configuration

We have configured the satellite receiver for the Aurora 100 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.

Ports WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
Note: Do NOT disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Identifier	Data	Logging	Telemetry	RX	GPS
USB_VCP	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	57600
UART1	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	57600
UART2	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	57600
UART3	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input checked="" type="checkbox"/> Serial RX	57600

Receiver Mode

- RX_PPM PPM RX input
- RX_SERIAL Serial-based receiver (SPEKSAT, SBUS, SUMD)
- RX_PARALLEL_PWM PWM RX input (one wire per channel)
- RX_MSP MSP RX input (control via MSP port)

Serial Receiver Provider

Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX_SERIAL feature.

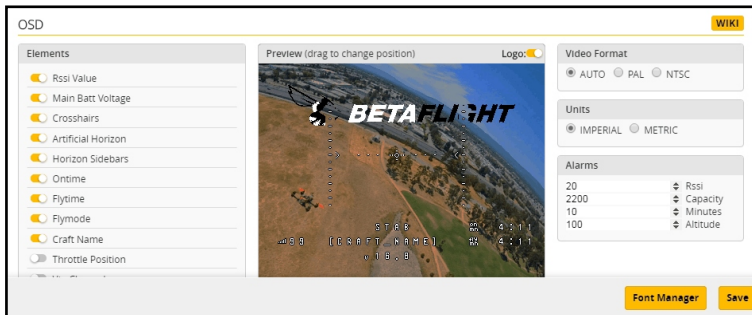
- SPEKTRUM1024
- SPEKTRUM2048
- SBUS
- SUMD

For DSM2 Radio

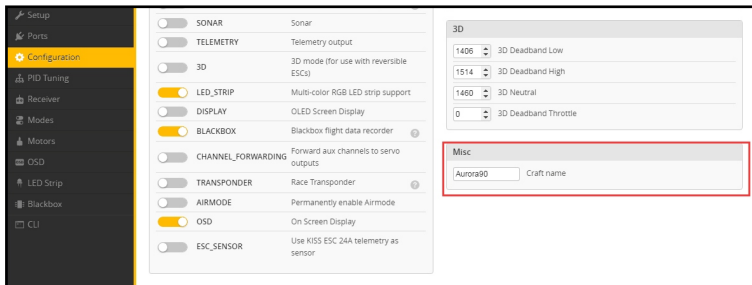
For DSMX Radio

17. OSD configuration

1. Connect the Aurora 100 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



18. LED Strip function

The flight controller of Aurora 100 can control colors and effects of individual LEDs on a strip. The default setup is like this, you can also customize by yourself effects.

LED Strip WIKI

The flight controller can control colors and effects of individual LEDs on a strip. Configure LEDs on the grid, configure wiring order then attach LEDs on your aircraft according to grid positions. LEDs without wire ordering number will not be saved. Double-click on a color to edit the HSV values.

Clear selected Clear ALL 28
Remaining

LED Functions

Function: None ▾

Overlay

Warnings

Indicator

LED Orientation and Color

N

0

1

2

3

W

E

U

4

5

6

7

S

D

8

9

10

11

12

13

14

15

19. LED Strip status

	Disarmed
	Armed
 4 LEDs Blinking Fast	Brake
 2 LEDs Blinking Fast	Throttle
 2 LEDs Blinking Fast	Roll left
 2 LEDs Blinking Fast	Roll right

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*User manual is subject to change without prior notice.