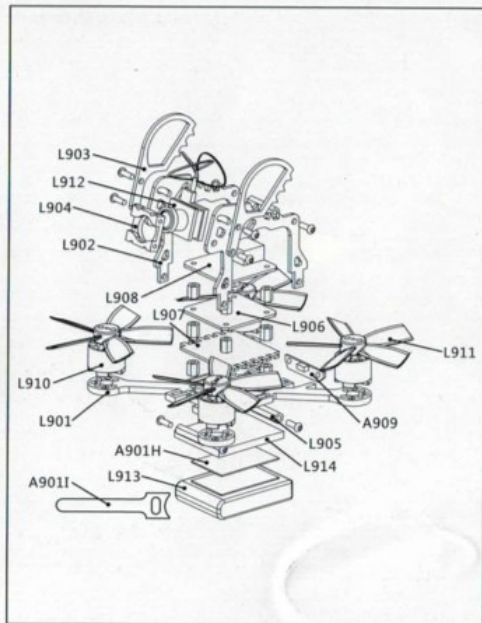


 MACHINE



 **LIZARD 95**  
QUICK START GUIDE V1.0



Item	Qty	Part No.	Option
3K Carbon Bottom plate	1	L901	
Camera Supports	1	L902	
Antenna Protector	1	L903	
Camera mount	1	L904	
M2 Hexgonal column	1	L905	
3M Sided adhesive	1	A901H	
Battery cable ties	1	A901I	
Flight controller	1	L906	
BS410 4IN1 ESC	1	L907	
2.4G Receiver	1	L908	L908FR: FRSKY L908FL: FLSKY L908DX: DXM2/X
1104 KV6000 Motor	4	L910	
2035R 5leaf propeller	4	L911	
HC48DS VTX(25mw/100mw adjustable) &Camera	1	L912	
11.1 V 550MAH 40C Lipo battery	1	L913	
WS2812 LED board	1	A909	
Battery anti-slip adhesive mat	1	L914	

### 1. Specification

Brand Name: Eachine

wheelbase:95mm

Size:115mm\*115mm\*60mm

Weight: 66g( battery not include)

Flight controller: Betaflight F3 Flight controller built-in OSD

Motor: Eachine 1104 KV6000 brushless motor

ESC: 10A BLHELI\_S 16.5 2-3S 4 IN 1Dshot600 ESC

Propeller: 50.8mm 5-blades propeller

Camera: 600TVL HD CMOS 1/4inch

VTX: 5.8g 25MW/100MW Switchable 48CH Video transmitter

OSD: Betaflight OSD

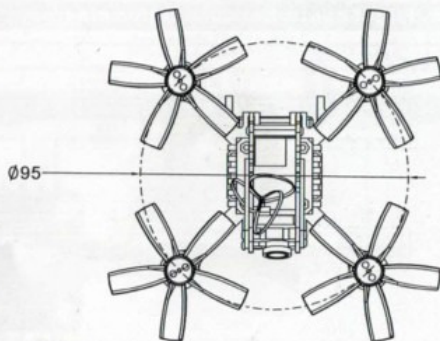
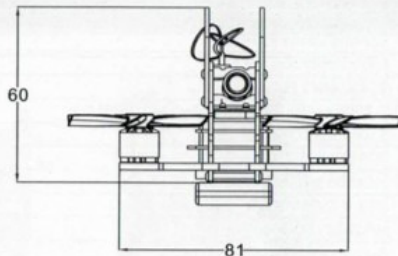
Firmware of Flight controller :Betaflight 3.1

Flight time : 4minutes

Rear LED Ready( LED\_Strip function)

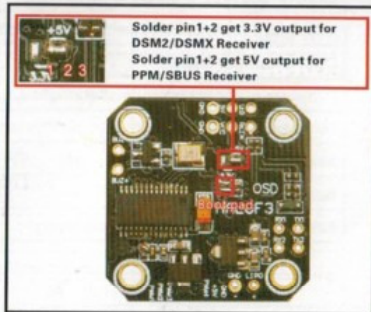
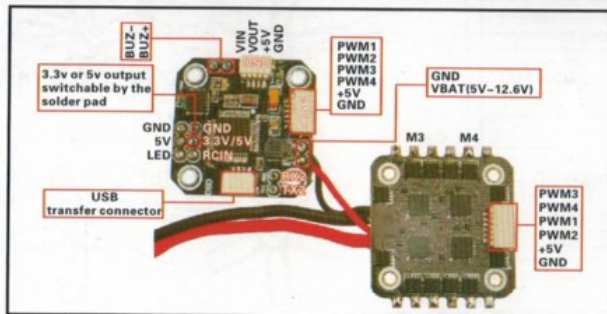
Buzzer Ready

Battery: 11.1V 550mah 40C lipo battery

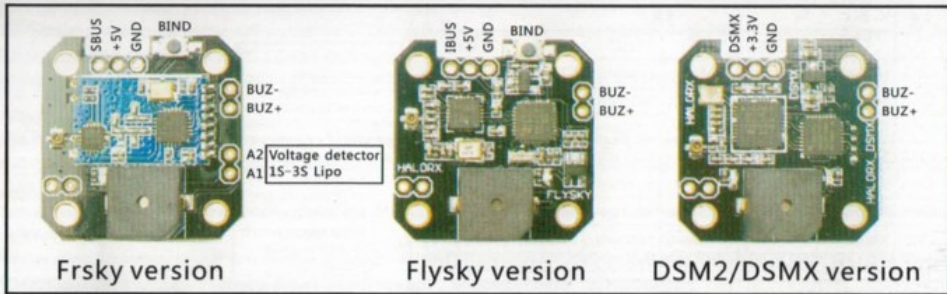


2. Components	QTY	Part NO.
Eachine Lizard 95 Frame	1	L90F
Flight controller	1	L906
BS410 4IN1 ESC	1	L907
2.4G Receiver (Option: Frsky/Flysky/DSMX)	1	L908(FR/FL/DX)
1104 KV6000 Motor	4	L910
2035R 5leaf propeller	4	L911(R/L)
HC48DS VTX	1	L912
11.1 V 550MAH 40C Lipo battery	1	L913
WS2812 LED board	1	A909
Battery anti-slip adhesive mat	1	L914

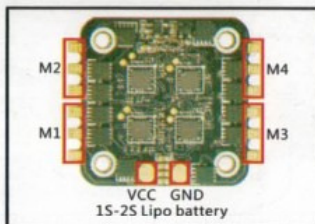
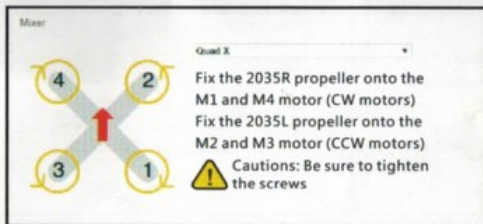
### 3. Flight controller connection diagram



#### 4. 2.4G receiver pins diagram

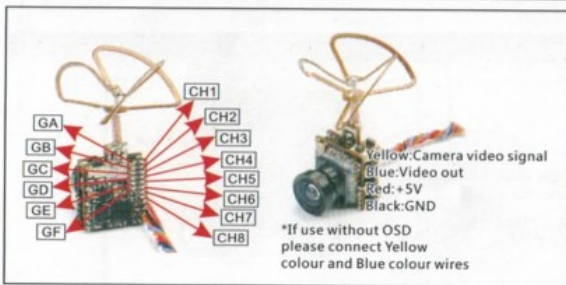


#### 5. Frame type and ESC Connection diagram



## 6. 5.8G VTX channels list

CH	FR	FR					
		GA	GB	GC	GD	GE	GF
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

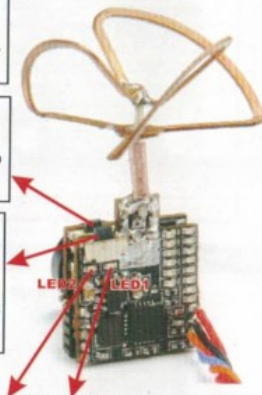


Short both Switch 1 and Switch 2 at the same time for 1 second to change the VTX 25mw/100mw output

**Switch 1**  
 NTSC/PAL Switch still touch up 2S; Short touch switch to reverse video display

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

LED 1 on, LED 2 on 100mw  
 LED 1 on, LED 2 off 25mw

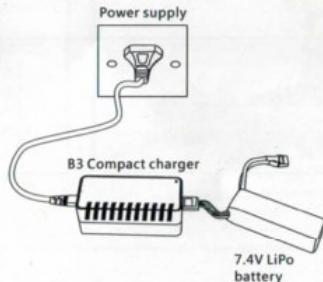


## 7. Charge the Battery

- 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 volage from 110v to 240v. When correctly powred 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.

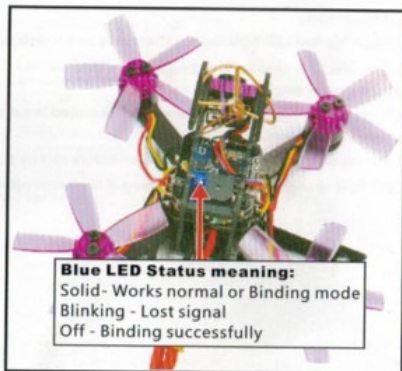
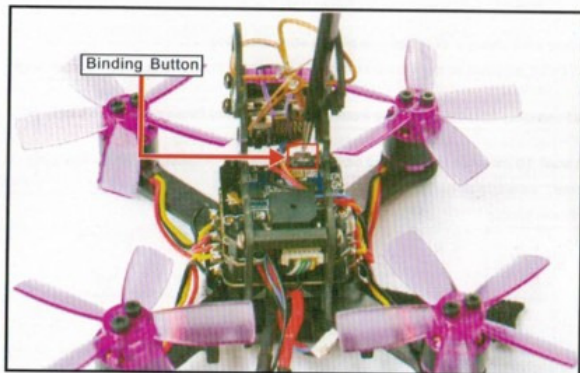
### ⚠ Attention:

- (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.



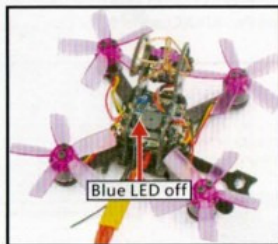
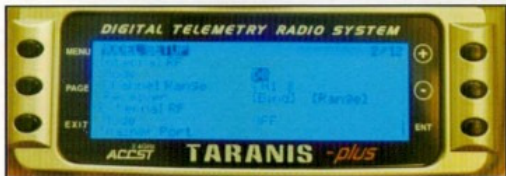
## 8. Eachine Lizard 95 Frsky BNF Version binding procedue

1. Power for the Eachine Lizard 95 while holding the Bind button, the blue LED on the receiver will getting to be solid, this means the Eachine Lizard 95 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 Eachine Lizard 95. The Blue LED on the receiver will turning off, this indicates binding successfully.



3. The default receiver channel map for Eachine Lizard 95 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		1:00	Channel Map	TAER1234	RSSI Channel	9
Pitch		1:00				
Yaw		1:00				
Throttle		885	RC Deadband	0	Yaw Deadband	0
AUX 1		1375				
AUX 2		1:00	RC Interpolation	Auto	RC Interpolation	
AUX 3		1:00				
AUX 4		1:00				
AUX 5		1:00				

## 9. Arm/Disarm Eachine Lizard 95 Frsky BNF

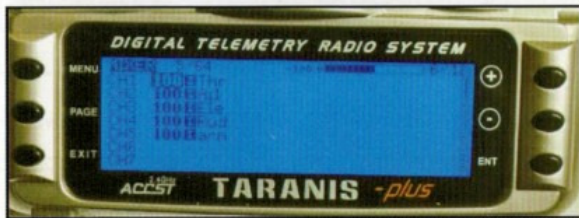
1. The Default Arm/Disarm switch for Eachine Lizard 95 is AUX1(Channel 5),and you can also customize it with Betaflight Configurator. We also set the AUX2(Channel 6) for change flight mode and AU3(Channel 7) for activate the buzzer which you can customize them too.

Modes WIKI

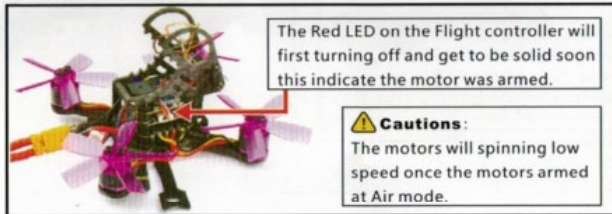
Use ranges to define the switches on your transmitter and corresponding mode assignments. A receiver channel that gives a reading between a range min/max will activate the mode. Remember to save your settings using the Save button.

ARM	AUX 1 ▾	
Add Range	Min: 1400 Max: 2100	
AIR MODE	AUX 2 ▾	
Add Range	Min: 1525 Max: 2100	
ANGLE	AUX 2 ▾	
Add Range	Min: 1175 Max: 1500	

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 Red 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!



## 10. Eachine Lizard 95 Frsky BNF version receiver configuration

We have configured the frsky receiver for the Eachine Lizard 95 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.



### Cautions:

Because of the Dual way transmission, please keep the Eachine Lizard 95 away from the radio more than 50cm, otherwise it will lost telemetry signal

#### 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)

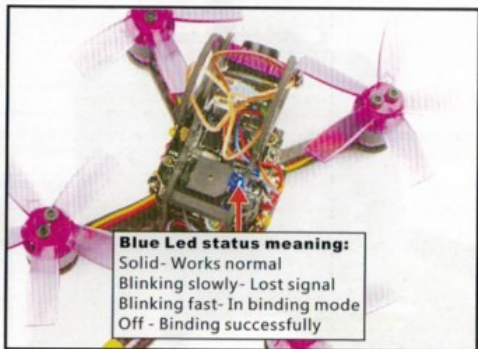
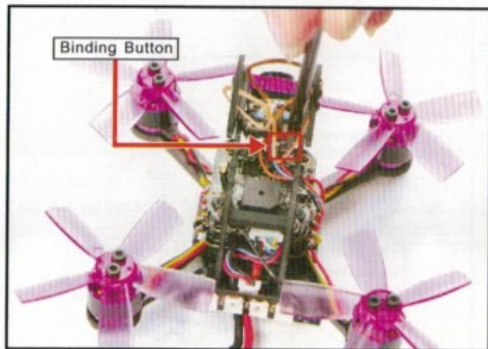
#### Serial Receiver Provider

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

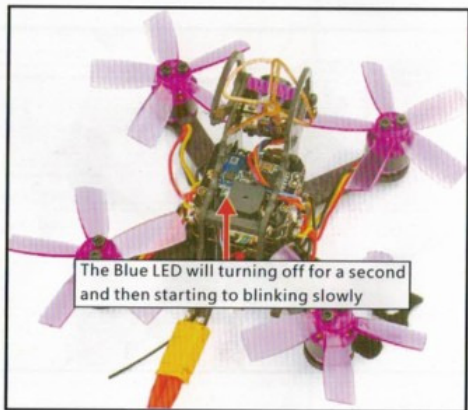
SPEKTRUM1024  
SPEKTRUM2048  
SBUS  
SUMD

## 11. Eachine Lizard 95 Flysky BNF Version binding procedue

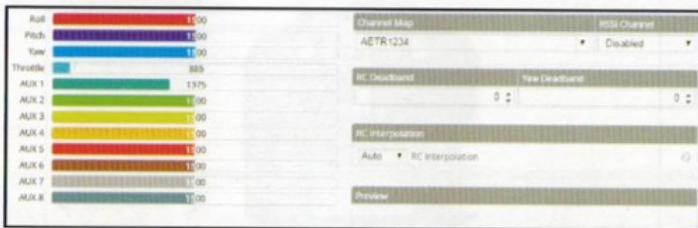
1. Power for the Eachine Lizard 95 while holding the Bind button, the blue LED on the receiver will getting to be blinking fast, this means the Eachine Lizard 95 is in binding mode, then release the Bind button.



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 Eachine Lizard 95. 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 Eachine Lizard 95 and your Flysky radio.

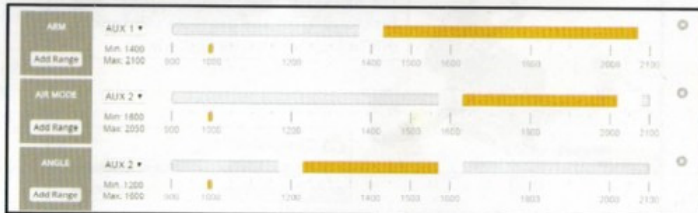


3. The default receiver channel map for Eachine Lizard 95 Flysky version is AETR1234, please ensure your transmitter is matched with it, otherwise it can't be armed.



## 12. Arm/Disarm Eachine Lizard 95 Flysky BNF Version

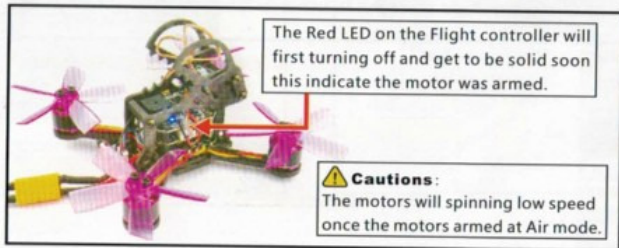
1. The Default Arm/Disarm switch for Eachine Lizard 95 is AUX1(Channel 5), and you can also customize it with Betaflight Configurator. We also set the AUX2(Channel 6) for change flight mode and AUX3(Channel 7) for activate the buzzer which you can customize them too.



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 Red 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!





### 13. Eachine Lizard 95 Flysky version receiver configuration

We have configured the Flysky receiver for the Eachine Lizard 95 before shipping. If you flashed the firmware, Please setup as the following steps: Enable Serial\_RX for UART3 and set the Serial Receiver Provider to be IBUS in Betaflight Configurator.

Betaflight

**Ports**

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.

Port Identifier	Configuration	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial Rx	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART1	<input checked="" type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial Rx	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART2	<input type="checkbox"/> MSP 115200 ▼	<input type="checkbox"/> Serial Rx	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART3	<input type="checkbox"/> MSP 115200 ▼	<input checked="" type="checkbox"/> Serial Rx	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼

**Receiver**

Serial-based receiver (SPEKSAT, S ▼) Receiver Mode

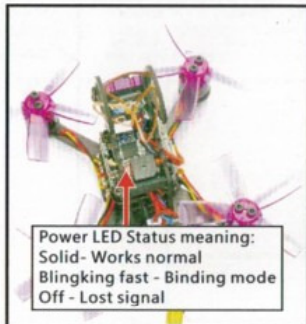
Note: Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

IBUS ▼ Serial Receiver Provider

## 14. Eachine Lizard 95 DSM2/DSMX BNF Version binding procedure and Satellite receiver setup

1. The Eachine Lizard 95 DSM2/DSMX BNF Version is integrate a DSM2/DSMX compatible Satellite receiver. The binding procedure is like following:

- (1) Connect Eachine Lizard 95 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 Eachine Lizard 95 is repowered again.



```

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'

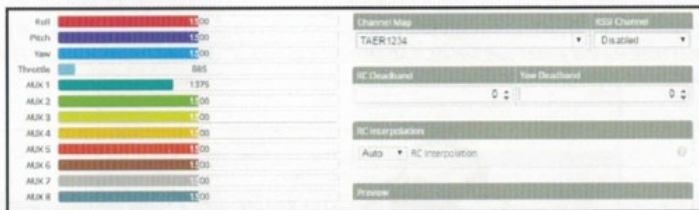
# Set spektrum_sat_bind=0
spektrum_sat_bind set to 0
# save
Close Binding
  
```



### Cautions :

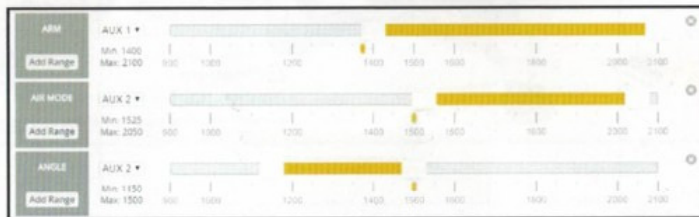
The orange LED is blinking slowly after binding successfully for some DSM2 Radio

2. The default receiver channel map for Eachine Lizard 95 DSM2/DSMX Version is TAER1234, please ensure your transmitter is matched with it, otherwise it can't be armed.

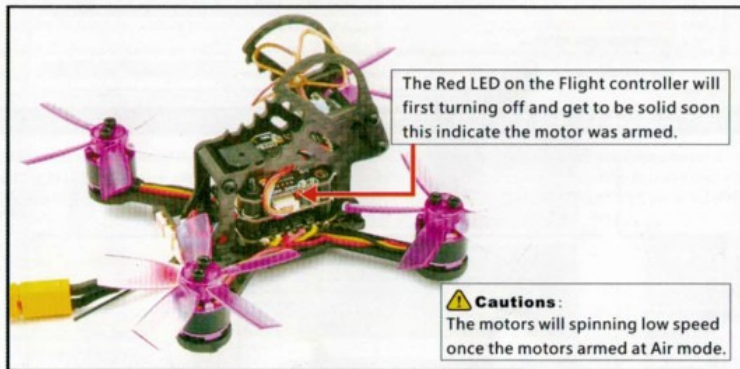


## 15. Arm/Disarm Eachine Lizard 95 DSM2/DSMX BNF version

1. The Default Arm/Disarm switch for Eachine Lizard 95 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 Red 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!



## 16. Eachine Lizard 95 DSM2/DSMX BNF version receiver configuration

We have configured the satellite receiver for the Eachine Lizard 95 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 SEND

Note: not all combinations are valid, when the flight controller firmware defaults into the serial port configuration will be reset.  
Note: Do NOT enable MSP on the first serial port unless you know what you are doing. You may have to refresh and save your configuration if you do.

Identifier	Data	Logging	telemetry	RC	GPS
JOB_VCP	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Disabled 115200	Disabled	AUTO	<input type="checkbox"/> Serial Rx <input type="checkbox"/> GNSS
UART1	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Disabled 115200	Disabled	AUTO	<input type="checkbox"/> Serial Rx <input type="checkbox"/> GNSS
UART2	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Disabled 115200	Disabled	AUTO	<input type="checkbox"/> Serial Rx <input type="checkbox"/> GNSS
UART3	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Disabled 115200	Enabled	ALL IN 1	<input checked="" type="checkbox"/> Serial Rx <input type="checkbox"/> NAVX

**Receiver Mode**

RX\_PPM PPM Rx input

RX\_SERIAL Serial-based receiver (SPEKTRUM, 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 For DSMX Radio  
 SBUS  
 SUMD

For DSM2 Radio

SPEKTRUM1024

For DSMX Radio

## 17. OSD configuration

1. Connect the Eachine Lizard 95 to the computer , open Betaflight Configurator , move to the OSD option, then you can configure the layout of the OSD.

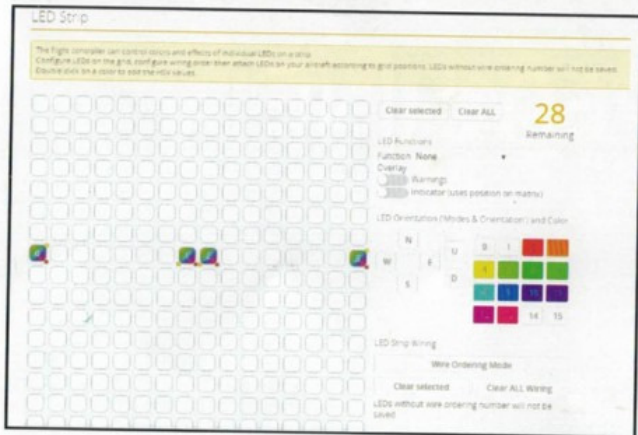


2. Craft Name set is in configuration option



## 18. LED Strip function

The flight controller of Eachine Lizard 95 can control colors and effects of individual LEDs on a strip. The default setup is like this, you can also customize by yourself effects.



## 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.