GEPRC

Quickstart Manual V2.0

2018/03/19

Warning, disclaimer:

CAUTION:This radio controlled RC Quadcopter is not a toy
This product is for a radio controlled (RC) quadcopter. Improper operation,maintenance or assembly can potentially cause a RC quadcopter to pose a danger to persons or objects including but not limited to the possibility of causing serious physical injury an even death

Moving components can present a hazard to opertors,and anyone or anything that could be in the flying area of the RC Quadcopter.

Under no circumstance should a minor be allowed to operate this RC Quadcopter without the approval,monitor and direction of his parent or legal guardian who takes full responsibility for all of the minor's actions.

This product is intended for being operated by experienced mature RC Quadcopter pilots under controlled safaty conditions and on locations properly authorized and setup for safe flying and away from other people.

Do not operate an RC Quadcopter within the vicinity of electrical power lines during inclement weather or near crowds of people

The manufacturer and/or its distributors assume no responsibility or liability whatsoever for any damages including but not limited to ones generated by incidental or consequential damages.

The operator of the RC Quadcopter assumes all responsibility and liability that result from   the correct or incorrect operation of the RC Quadcopter.

GEP RC

Sparrow

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Summary:

GEPRC Sparrow V2 is suitable for 3-inch propeller racing FPV drone. It is assembled and debugged from GEPRC. It adds strength and low wind resistance design advantages. It is more suitable for racing. We offer two versions of PNP (without receiver) and BNF (with frsky recevier).

Specifications:

- Frame: GEPRC GEP-MX3（4mm bottom plate thickness version）

- Motor: GEPRC GEP-GR1408 3750kv

- Propeller: GEPRC GEP-P3042-3

- GEPRC STABLE F4 MiniTower (GEP-F4-BS20A-VTX58200-M)

    - Flight Controller: Betaflight F4 OMNIBUS

    - ESCs: ·20A BLHeli_S/Dshot150/300/600

    - VTX: GEP-VTX58200 48CH Mini FPV Transmitter(OFF/25/100/200mW)

- Camera: RunCam Micro Swift 1/3" 600TVL FPV camera 2.1mm lens CCD

- Receiver: Frsky XM Plus (ONLY BNF INCLUDE)

- Flight time: 4 minutes

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Features:

1. The GEPRC flying team carefully calibrations PID, Binding receiver can fly.

2. Aviation aluminum #7075 high precision fuselage, beautiful and strong.

3. Using STABLE F4 Tower, easy install, stable

4. Using Runcam micro swift camera, make sure clarity

5. Power System using GR1408 3750kv Motor and GEP-P3042 propeller

6. Tested the best speed 170km/h+

Important tip: before commissioning, please remove the propeller

1、 Basic knowledge

- The Sparrow is a 3 inch propeller drone. This is not a toy. If done incorrectly, it can harm the human body.
- Sparrow is using the Betaflight firmware flight control, and the introduction of Betaflight can be referred to the second part.

- The way to type the rudder, as shown below：
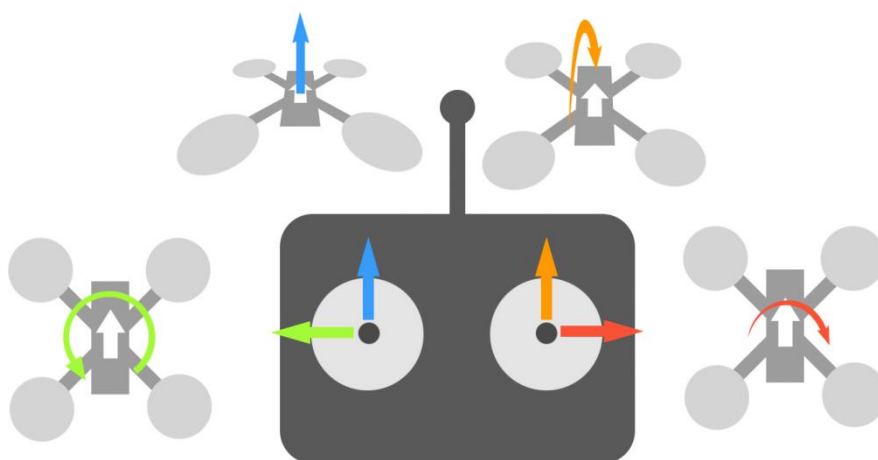
- ■
- The order and direction of the motor:
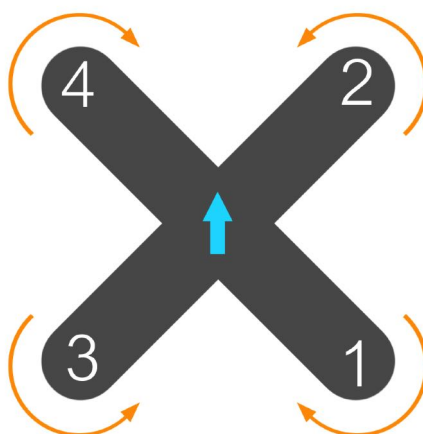
- The manufacturer recommends a 3s 450mAh battery flight, but can also fly with the 2s (500mAh-700mAh).
- Sparrow does not recommend flying in crowded places to avoid hurting people.
- if you want to feel FPV (first person vision), please flying with video glasses.

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2、 Install Betaflight

- Betaflight is an open source flight control procedures, specific introduction can refer to website: https://github.com/betaflight
- for the firmware required by Sparrow, please click the following link to download the firmware name: **betaflight_3.2.1_OMNIBUSF4SD.hex**
    - Latest version of firmware download website:https://github.com/betaflight/betaflight/releases
    - Be sure to download the **betaflight_3.2.1_OMNIBUSF4SD.hex** version.
- Install driver and ground station Betaflight
    - https://github.com/betaflight/betaflight/wiki/Installing-Betaflight
    - Ground station Betaflight - Configurator download address (you need to install Chrome browser) :
        - https://chrome.google.com/webstore/detail/betaflight-configurator/kdaghagfopacdngbohiknlhcocjccjao/reviews
- For more information, see the Stable F4 MiniTower manual.
    http://geprc.com/download/en/GEPRC-STABLE-MANUALS-EN-V1_0.pdf

3、 Install the Receiver

- If you choose the BNF version, you can Bind use the frequency and do not need to install the receiver again.

- if you choose the PNP version, you will need to install the receiver on your own, Please click the following steps to connect (such as the Frsky r-xsr receiver) :
    - note:must dismantle propeller for debugging.
    - Open the screws of the Sparrow, open the top vtx board, and you can see the flight control board on the second floor.
    - The flight control board will have three welding locations: 5V,GND,S.Bus, Welding in the corresponding position
    - Finally, fix the receiver and lock the corresponding screw
   - As shown in the picture below:

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5V(BUZZER+)
LED STRIP
BUZZER−
GND

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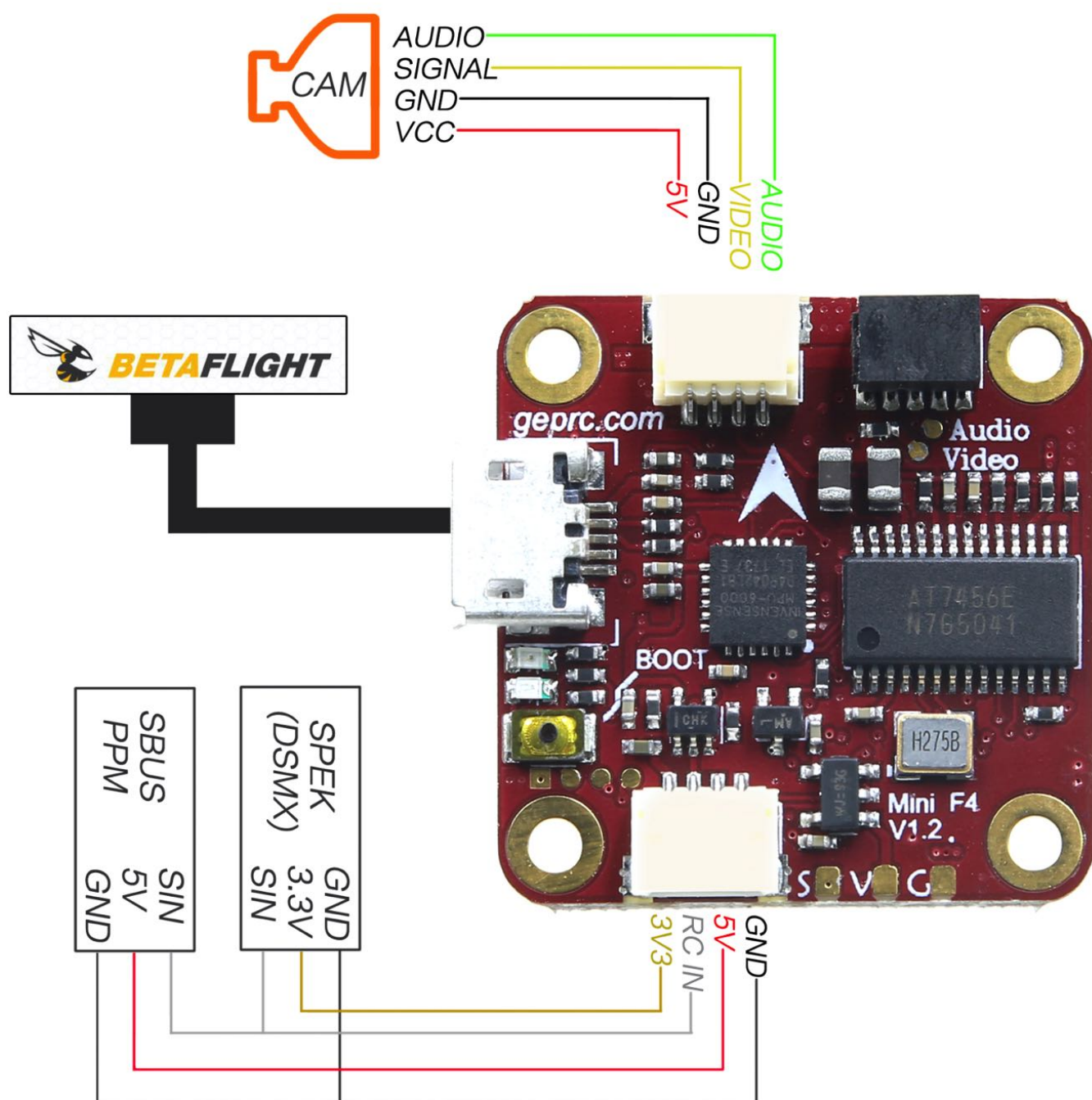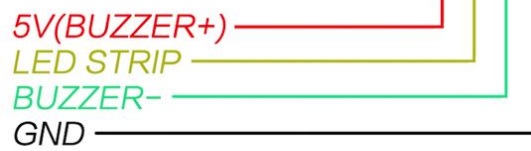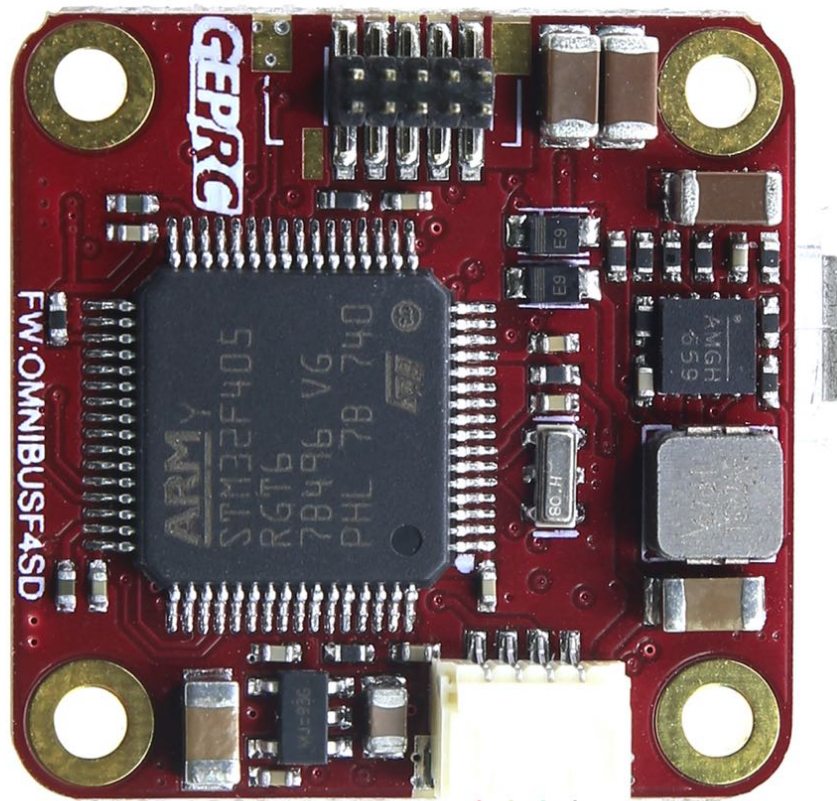
4、 Bind the Recevier

- Each manufacturer's receiver is not identical to the frequency, now take the r-xsr receiver of Frsky as an example. Other manufacturers' receivers please refer to the corresponding manufacturer's frequency information.

■ 1：Power on X9D —— Short press MENU —— Press PAGE turn to second page(such as below picture)
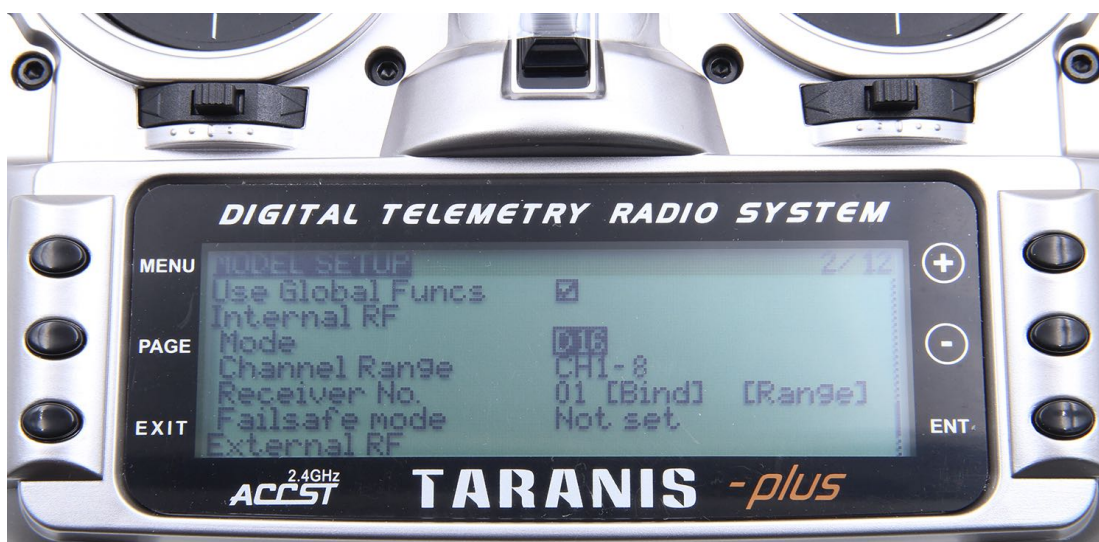
■ 2：Move the cursor to the "Mode" option，"Mode" option the working mode of XJT can be switched. There are three types of D16, D8, and LR12 respectively. Please select according to your receiver:
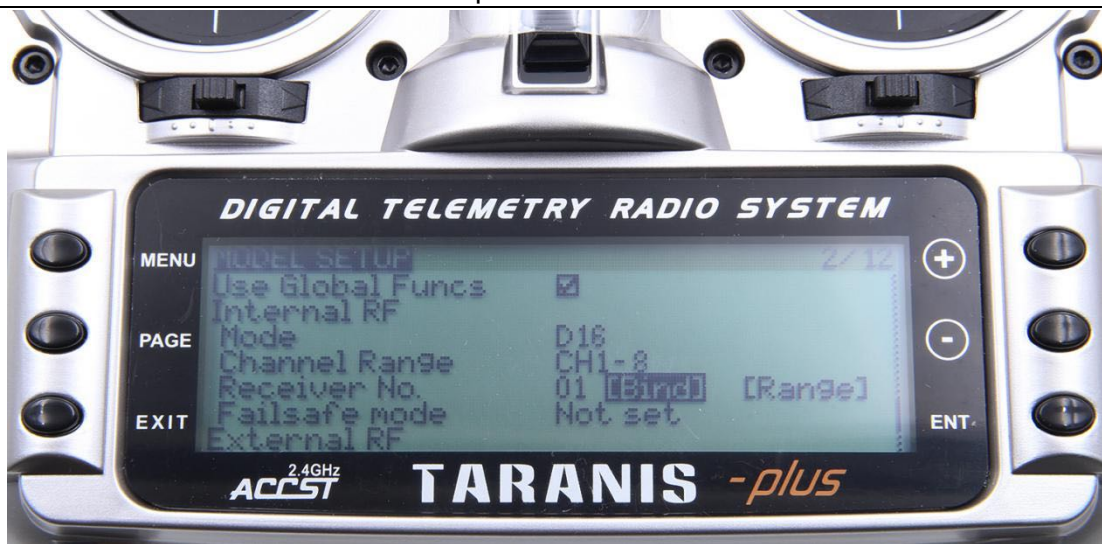
System ：Compatible receiver

D16 ：X8R, X6R, X4R, XSR and other X series receivers

D8 ：D8R, D4R and other D series receiver, V series ii receiver and X8R, X6R D8 mode

LR12 ：L9R receiver

■ 3：Move the cursor to the "Bind" option, and click ENTER. "Bind" is in a scintillating state and is entering the bind the receiver state

Bind order：

Press F/S button(The Receiver) —— Put through power supply —— The light of the receiver green, red light flash——Press ENTER at Frsky X9D "Bind"—— Unplug the power and rewire (he light of the receiver green, red light flash, That's ok)。

5、 Set the Radio

- You need to set the radio so that you can control the Drone.

- This is use MODE2

  ■ Create a new MODE2 model
  ■ Then open the necessary channels to the remote control (please see picture below)

Channel	Function	operation
Channel 5(2 switch)	Unlock	0 unlock , 1 lock
Channel 6(3 switch)	Control Drone posture	0 Rate , 1 Angle , 2 Horizon
Channel 7(2 switch)	Control Buzzer	0 Buzzer on , 1 Buzzer off

Set up as picture below:

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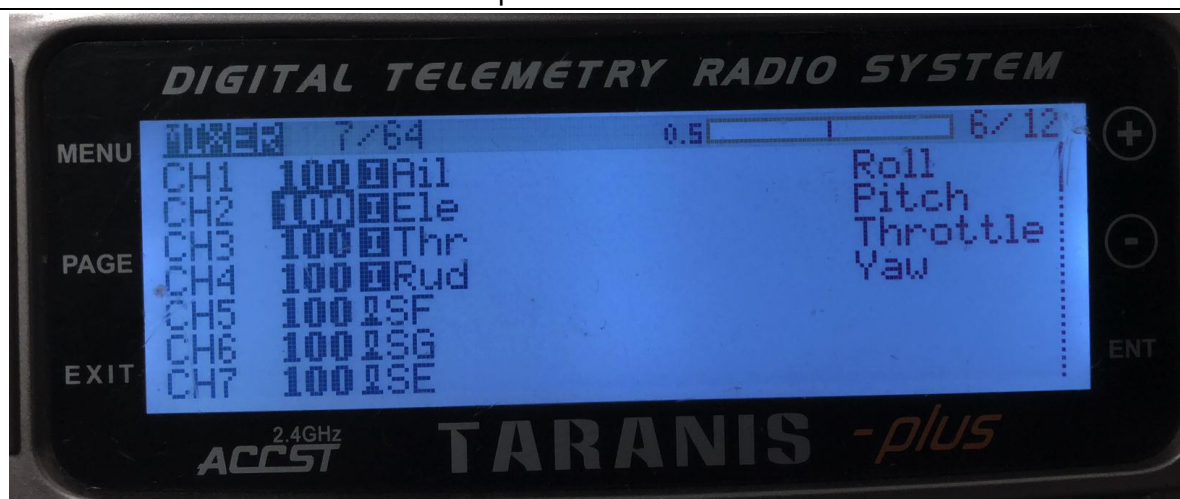
6、 How to unlock

Note: when the test motor turns, the propeller must be unloaded

- Unlock type

    ■ The throttle to the minimum
    ■ Knock down 5 channels to unlock

7、 Set up the VTX

1. Set the Channel. In standby mode, press and hold the key for 3 seconds, the blue LED flashes, short press, change the channel value.Every time 1 press will change the CH, followed by 1CH to 8CH cycles.

2. Set the Band. In the channel setting mode, press and hold the key for 3 seconds, the green LED flashes, briefly presses, changes the frequency group value.Every time 1 press will change the band, and then the A band to F band loop.

3. Set the Power.In the band setting mode, press and hold the key for 3 seconds, the red LED flashes, short press, change the output power value.Every time 1 press will change the power, followed by 25mW / 100mW / 200mW cycle.

4. frequency table：

|	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Band A	**5865**	**5845**	**5825**	**5805**	**5785**	**5765**	**5745**	**5725**
Band B	**5733**	**5752**	**5771**	**5790**	**5809**	**5828**	**5847**	**5866**
Band E	**5705**	**5685**	**5665**	**5645**	**5885**	**5905**	**5925**	**5945**
Band F	**5740**	**5760**	**5780**	**5800**	**5820**	**5840**	**5860**	**5880**
Band H	**5362**	**5400**	**5436**	**5473**	**5510**	**5547**	**5584**	**5620**
Band R	**5658**	**5695**	**5732**	**5769**	**5806**	**5843**	**5880**	**5917**

5. VTX LED display

    5.1. BLUE: Frequency channel display, the time of flash represents 1 to 8 channels, 1 = CH1,2 = CH2, … 8 = CH8.

    5.2. GREE: Frequency Band display, the number of flashes represents the frequency group from A to R, 1=A, 2=B……6=R

    5.3. RED: Power output display, 1 = 25mW, 2 = 100mW, 3 = 200mW.

How to turn VTX on or off: In the working state, quickly double-click the set button, RED / GREEN / BLUE sync

flash, VTX can be turned off, and also quickly double-click of the key to turn on the VTX output.

How to use VTX?
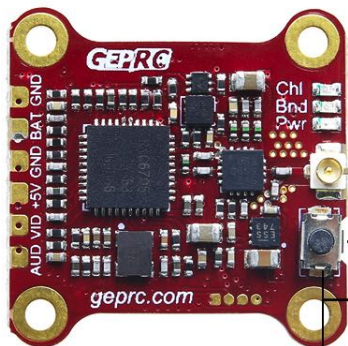
Channel LED
Band LED
Power LED

Set Button of two

SET VTX

Press and hold the key for 3 seconds

Set the Channel

BLUE: Frequency channel display, the time of flash represents 1 to 8 channels, 1 = CH1,2 = CH2, … 8 = CH8.

Press and hold the key for 3 seconds

Set the Band

GREEN: Frequency Band display, the number of flashes represents the frequency group from A to R, 1=A, 2=B……6=R
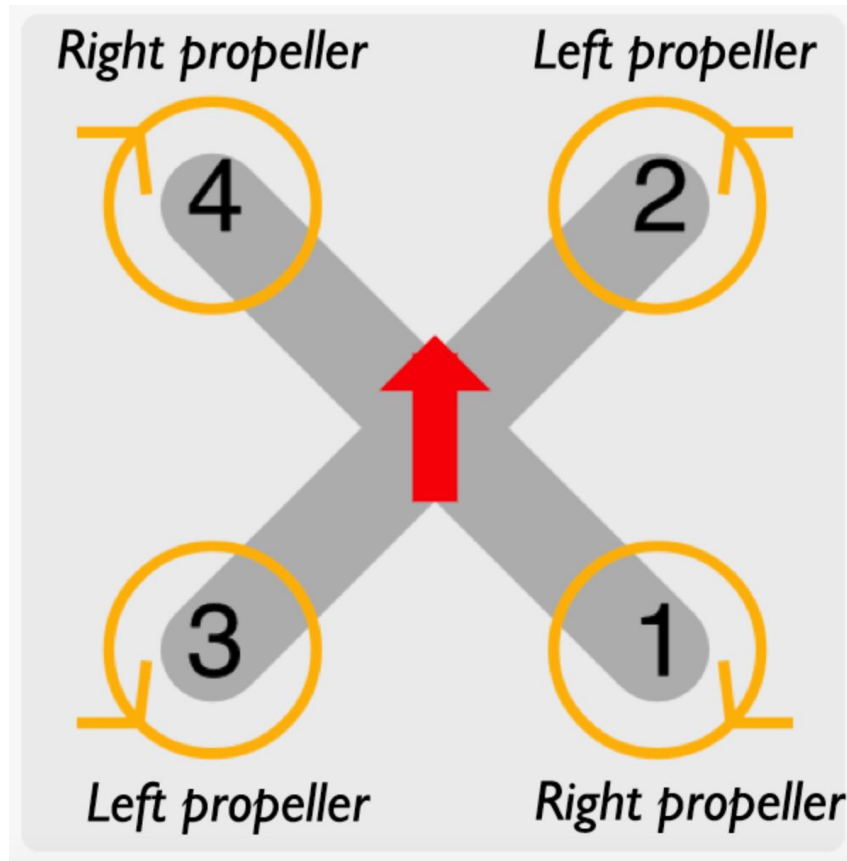
Press and hold the key for 3 seconds

Set the Power

RED: Power output display, 1 = 25mW, 2 = 100mW, 3 = 200mW.

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8、 Install Propeller

- The propeller is divided into two types: Left and Right.

- Install as shown. Notice the positive and negative directions

9、 Contact us

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Email:info@geprc.com
Facebook page: https://www.facebook.com/geprc/
Facebook Group: https://www.facebook.com/groups/566794893526546/
Instagram: https://www.instagram.com/geprc/

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