

GEPRC

SMART16



User Manual & Setup Guide

V1.0

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Overview:

Introducing the new 1.6-inch GEPRC SMART16 mini-quadcopter, currently available in 5 versions: PNP, AC900 and TBS Nano, ELRS 915, ELRS 2.4G

SMART 16 continues the consistent lightweight design concept of the Phantom series. The 1.5mm carbon fiber arm, with a 1mm top plate allows it to be lightweight and tough at the same time. We used 11000Kv 0803 brushless motors paired with 1610 props, so you can easily freestyle in your favorite field or a bando. The quadcopter comes with a 3D printed battery holder and will be powered by two 1S 380mAh batteries, making it weigh as little as 53.0g, and providing you with 4 minutes of flight time.

We pursue lighter weight, better flying experience, and more functionality for all our products!

Specification:

Model: SMART16 Quadcopter

FC: STABLE F411 FC

ESC: STABLE BLheli_S 12A 4IN1 ESC

VTX: STABLE 5.8G 200mW VTX

Camera: Caddx Ant

Antenna: IPEX 5.8G 70mm Antenna

Motor: SPEEDX2 0803-11000KV

Propeller: 1610-2

Frame: GEP-ST16

Motor to Motor: 78mm

Weight: 33.8g (TBS NanoRX Version)

Receiver: PNP / Frsky R-XSR / TBS NanoRX / ELRS 915MHz / ELRS 2.4G

Features:

1. 1.6 inch tiny size + light weight, just 36.0g.
2. With 2S 380mAh battery with plenty of power output.
3. Equipped with 200mW 5.8G VTX, with 6 frequency bands and 8 frequency point selection.
4. Caddx Ant camera with high quality image. Clear and clean!
5. Independent battery compartment design, can be stucked on top or bottom, making it easy and convenient to switch batteries.
6. The latest 0803 motor is matched with 1610-2 propeller proving maximum power and

efficiency.

7. Suitable for both freestyle and racing.

8. Includes a full set of high quality 3D printed parts for superior flying experience.

Warranty Policy:

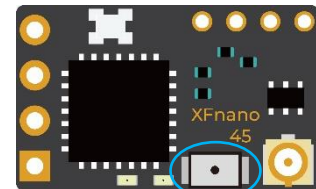
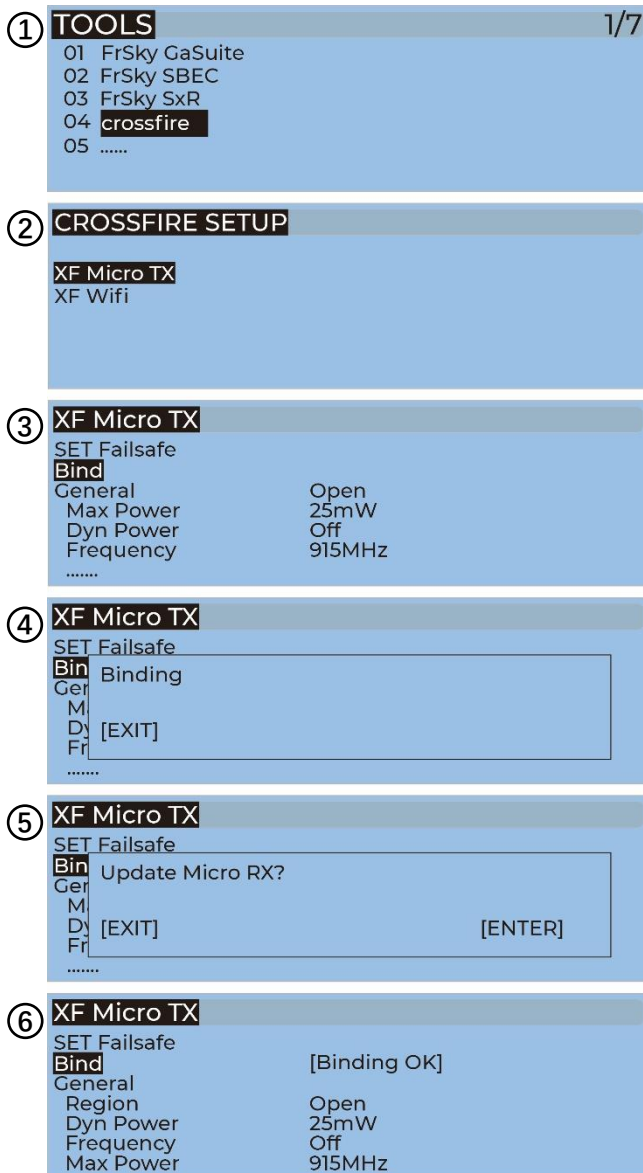
1. If the quadcopter is damaged or is having unknown issues, please contact GEPRC. We'll do our best to get this taken care of as quick as possible.
2. Any impact damage, product liquid damage, high temperature damage, or other artificial damage, not attributable to the quality of the product is not covered by warranty.

PS:

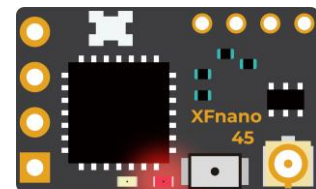
1. All components had been strictly inspected and tested before shipping.
2. If you have any problems, please cooperate with our engineers to figure out solutions. (E-mail: support@geprc.com.)

Bind TBS NanoRX:

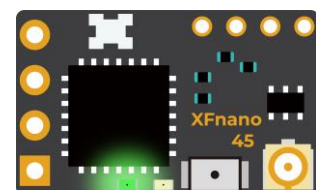
1. For Taranis X9D/X9D Plus/X9E and Taranis QX7, turn on the transmitter, go to the TOOLS – CROSSFIRE SETUP – XF Micro TX, and select Bind.
2. Turn on the receiver while holding the bind button on the receiver, release the button and see if the green light on and flashing. Then hold the button for about 8 second, and release. The green light will turn off and the red light will start flashing, update micro RX? ' will appear on the transmitter screen. Select 'ENTER'.
3. Wait for the update to complete. The green light will be on, indicating that the binding was successful.



Bind Button



Binding

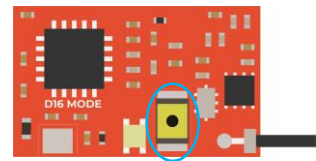
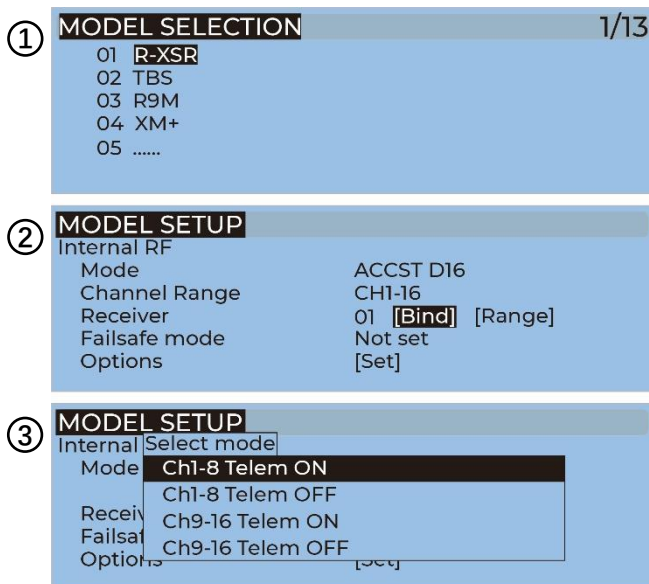


Binding Successful

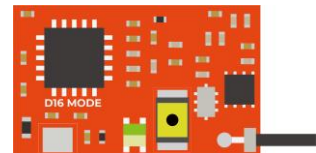
Bind AC900 Receiver:

Before binding, update the firmware of the built-in module of the remote control to v1.1.3 (the built-in module firmware version of the remote controller needs to match with the receiver's firmware version, otherwise the receiver cannot be bound).

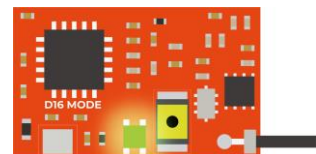
1. Turn on the receiver while holding the bind button on the receiver, release the button and wait for the **green light** flash.
2. For Taranis X9D/X9D Plus/X9E and Taranis QX7, turn on the transmitter, go to the MENU – MODEL SETUP – PAGE 2, choose Internal RF, and select BIND.
3. When the green light is on, it indicates that the binding is successful. Turn off the receiver, and then turn on the receiver. The green light on the receiver must be on, indicating that the link is normal.



Binding Button



Binding

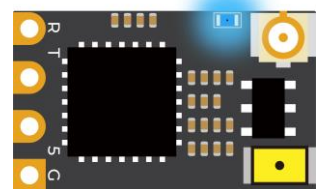
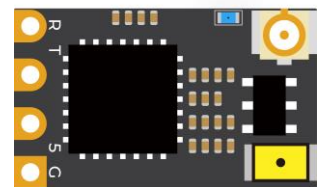
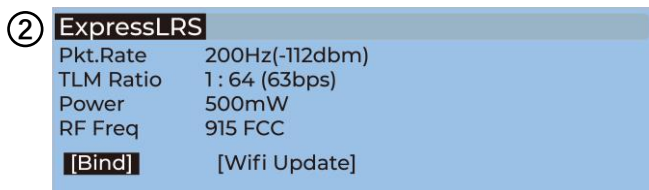
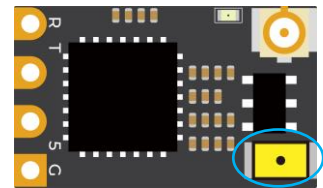
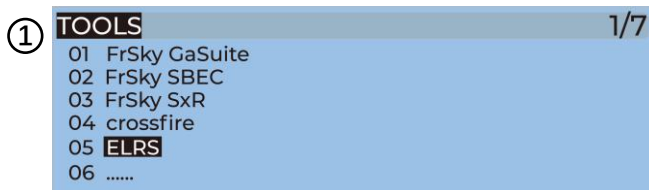


Binding Successful

Bind ELRS Receiver:

The binding methods for GEPRC ELRS 868mhz, ELRS 915MHz and ELRS 2.4G receivers are exactly the same.

1. Turn the receiver on and off for three times (with an interval of 1 second), you'll be able to see continuous blue light double flashes on the receiver, indicating that the receiver has entered the binding mode.
2. For the X9D / X9D Plus / X9E and Taranis QX7 remote controller, turn on the remote controller, long press the menu key to enter tools – ELRS, and select [Bind].
3. Wait until the blue light on the receiver changes from continuous double flashing to constant on, indicating that the binding is successful. Turn the receiver off and turn it on again. The blue light must be always on, indicating that the connection between the receiver and the remote control is established.



Install Betaflight:

Although your quadcopter comes from the factory nearly completely ready to fly, you still need to install Betaflight to facilitate your subsequent use of Betaflight for debugging.

Installation package download link:

<https://github.com/betaflight/betaflight-configurator/releases>

Open the web page, pull to the bottom, and select the appropriate installation package to download. File extensions for different OS. .exe - Windows system, .dmg - MacOS system, .rpm / .deb - Linux system, .apk - Android system.

Install Drivers:

If you are on windows, you must install the drivers manually.

CP210x Drivers:

<https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers>

STM USB VCP Drivers:

<http://www.st.com/en/development-tools/stsw-stm32102.html>

Zadig:

<http://zadig.akeo.ie/>

OpenTX Transmitter:

The transmitter of OpenTX system needs to check the AUX channel. For Taranis X9D/X9D Plus/X9E and Taranis QX7, turn on the transmitter, go to the MENU – MIXES and view the current AUX channel settings.

MIXES		5/13
CH1	100 I Ail	
CH2	100 I Ele	
CH3	100 I Thr	
CH4	100 I Rud	
CH5	100 ↓ SF	
CH6	100 ↓ SG	
CH7	100 ↓ SA	

CH1-CH4 corresponds to four channels of rocker

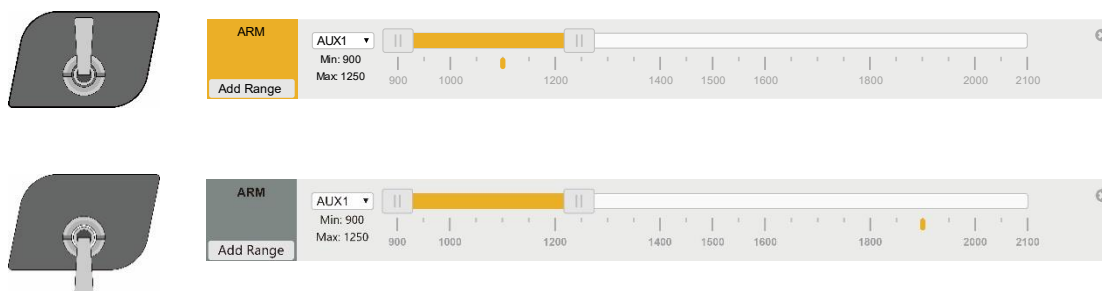
CH5 (SF) →AUX1 (ARM)

CH6 (SG) →AUX2 (MODES)

CH7 (SA) →AUX3 (BEEPER)

CH8 (Vacancy) →AUX4 (Vacancy)

FrSky X9D transmitter SF toggle switch are two sections. If you move the Yellow cursor of the corresponding aux channel of the switch, the corresponding function will be turned on when you move to the set range.



Use the transmitter wheel to move the cursor to select the AUX channel, and then press and hold the wheel key to edit the channel.

MIXES 5/13

CH1 100 Edit

CH2 100 Insert Before

CH3 100 Insert After

CH4 100 Copy

CH5 100 Move

CH6 100 Delete

CH7 100 SA

You can name the aux channel, or set the toggle switches you want, exit and save it.

MIXES CH5

Mix name

Source SF

Weight -100

Offset 0

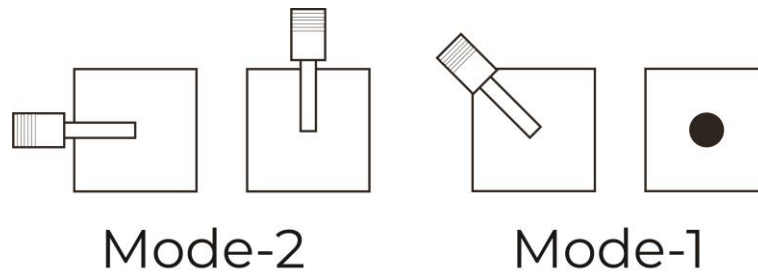
Trim

Curve Diff 0

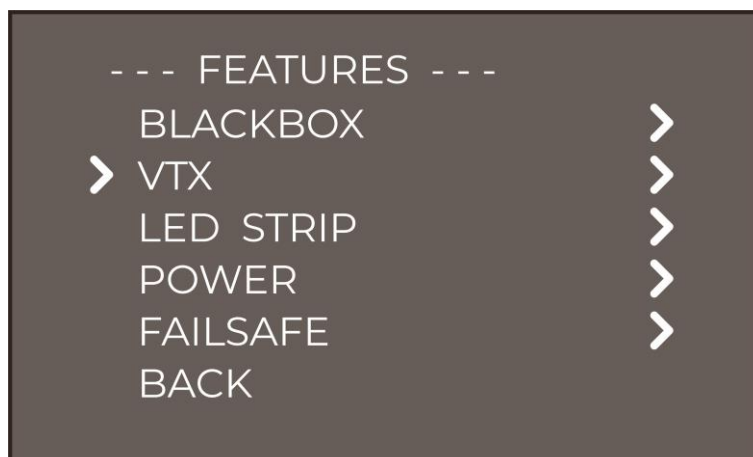
Modes 0 1 2 3 4 5 6 7 8

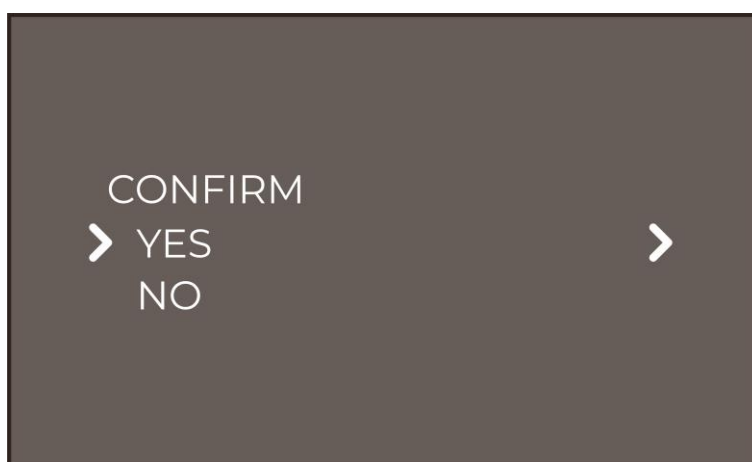
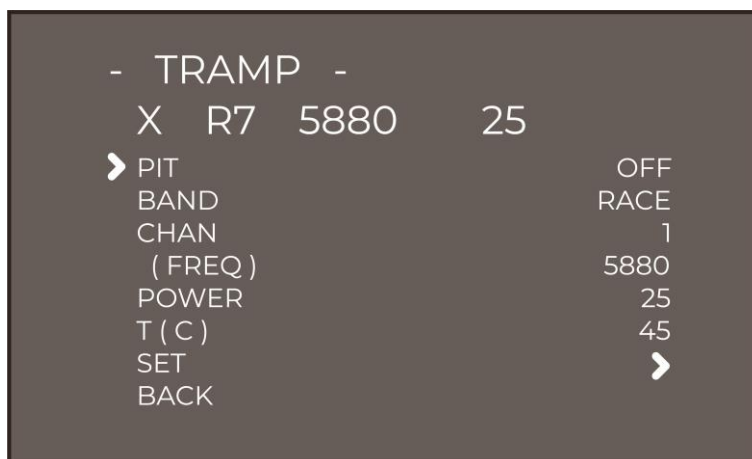
IRC Tramp (Analog):

Turn on the transmitter, THR middle, YAW left, PITCH up, enter the OSD menu.



The PITCH moves the cursor up and down, and the ELE right to enter the next item. Now, save and exit.



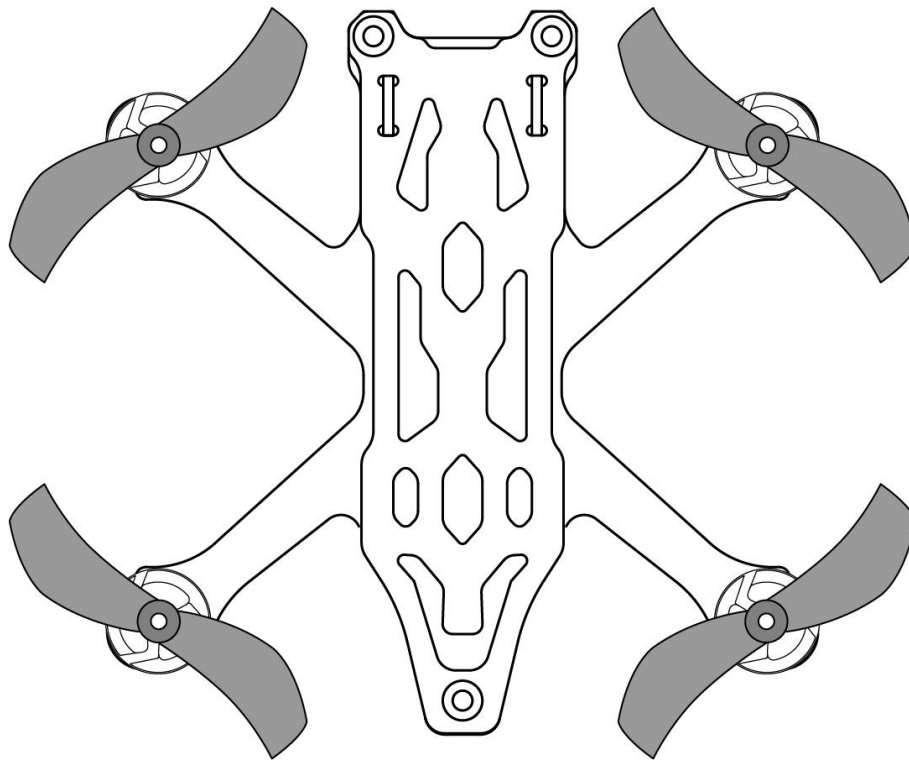


Frequency table:

Universal frequency table (BAND)	CH							
	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
1, A (BOSCAM)	5865Mhz	5845M	5825M	5805M	5785M	5765M	5745M	5725M
2, B (BOSCAM)	5733Mhz	5752M	5771M	5790M	5809M	5828M	5847M	5866M
3, E (BOSCAM)	5705Mhz	5685M	5665M	5645M	5885M	5905M	5925M	5945M
4, F (FATSHARK)	5740Mhz	5760M	5780M	5800M	5820M	5840M	5860M	5880M
5, R (RACEBAND)	5658Mhz	5695M	5732M	5769M	5806M	5843M	5880M	5917M

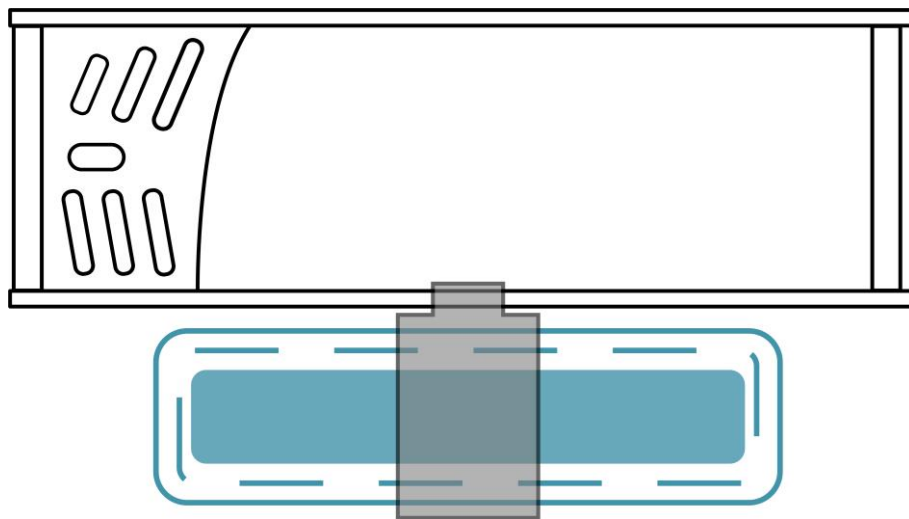
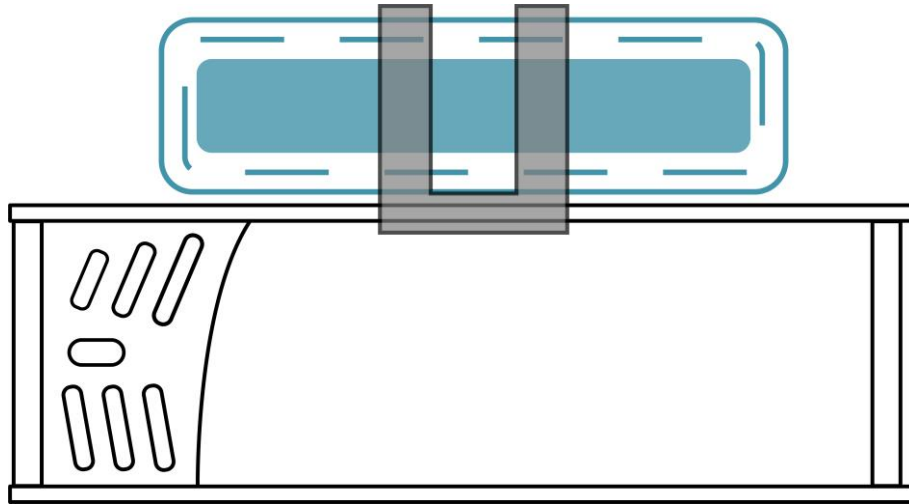
Install Propellers:

Although the propellers of SMART16 had already been installed in the factory, we strongly advise, that the direction of the propellers are checked before taking off.



Install Battery:

SMART16 uses 3D printed battery holders that can allow you to mount the batteries on top and below.



Pre-flight check:

In many cases, the cause of a crash is a lack of pre-flight check. For the sake of everyone's safety, we suggest that you conduct a thorough check before every flight. The steps are as follows:

1. Turn on the transmitter and select the correct mode. Please confirm that the arming switch on the transmitter is in the "disarmed" position and the throttle is all the way down;
2. Please perform a physical inspection of the quadcopter for any visible damage. If there is damage, please fix it first;
3. Please confirm the propeller is in the right direction and the propeller nut is locked tight, otherwise there is a risk of crash;
4. Check LiPo battery voltage. A fully-charged LiPo should be about 4.2 volts per cell, or about 12.6 volts for a 3S, or 16.8 volts for a 4S;
5. Please confirm the battery is securely attached to the aircraft by the strap. And secure the balance lead to eliminate a possibility of it being struck by the props;
6. Please check the flight area for any safety issues that might be present, such as people, animals or other objects;
7. Verify that you have clean, strong video in your FPV goggles or screen. If you see interference or you see another pilot's feed, resolve this issue before flying;
8. Arm the quadcopter. Listen for the props, make sure they aren't cutting into anything and spinning freely;
9. At this stage, take off and enjoy flying.

Note: if you choose to fly close to water, please pay attention to the flight safety. It is difficult and even dangerous to salvage a quadcopter when it falls into the water, and liquid damage is not covered by the warranty.

Include:

- 1 x SMART16 Quadcopter
- 2 x 1610-2 propellers (pairs)
- 2 x Battery strap M12x120mm
- 2 x Battery Silicone Pads
- 1 x Upper battery holder
- 1 x Lower battery holder
- 1 x Set of screws
- 1 x Screwdriver

Contact:

Website: <https://geprc.com/>



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Manual



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