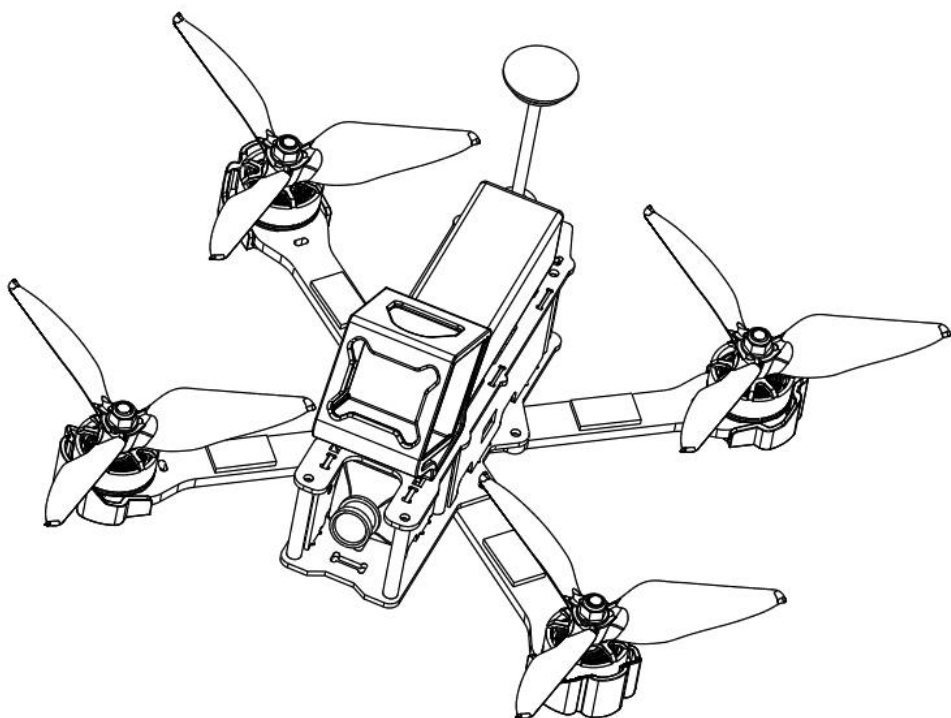


Wizard X220s

QUICK START GUIDE



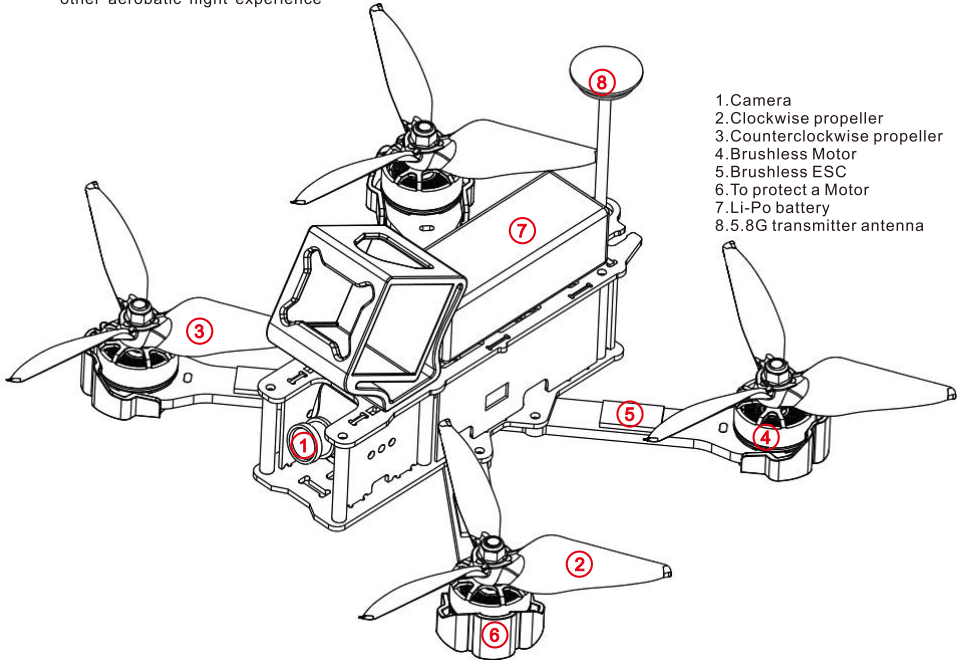
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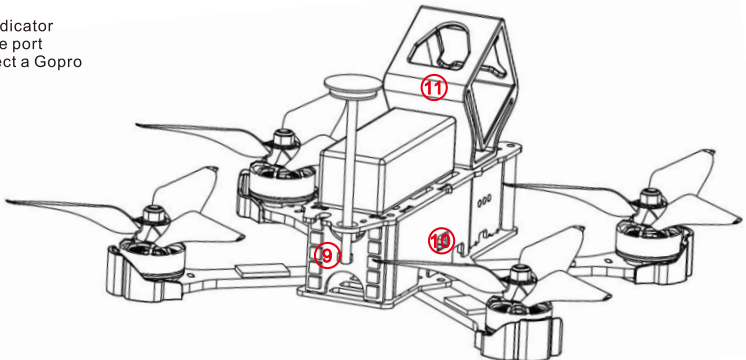


1.0 Knowing your aircraft

- With its body structure made of carbon fiber composite, it features ultra-high tenacity and good resistance to impact.
- Brand-new industrial and modular designs are employed to improve its expandability, ease of installation/maintenance and expandability.
- Equipped with 5.8G real-time video transmission system and OSD system, it brings about a different visual effect.
- It is capable of presenting forward/backward, right/left rollover and racing as well as other aerobatic flight experience





9. Status indicator
 10. Upgrade port
 11. To protect a GoPro

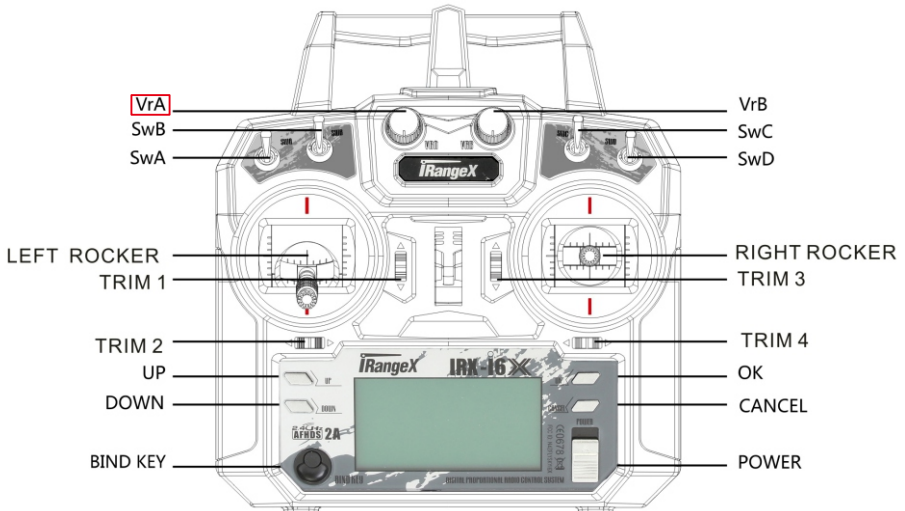


2.0 Knowing your remote controller

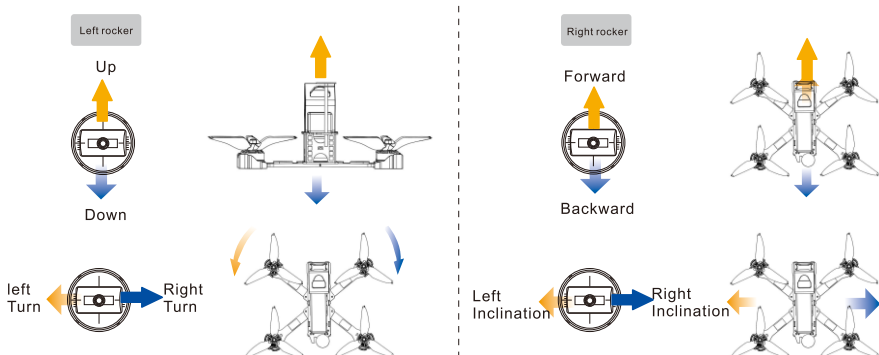
Remote controller is equipped with functional switches of primary flight/high-level flight modes, which are easy to operate. (You may select the flight mode suitable with your flying skill)

- ※ Primary flight mode: the flight control system provided with autostability function can achieve stable operation but not rollover, which is suitable for beginners.
- ※ High-level flight mode: the flight control system provided with the autostability function can achieve highly flexible operation and rollover.

Primary flight mode	High-level flight mode
	
VrA counterclockwise rotation	VrA clockwise rotation



Take "left-hand throttle" as an example. The left rocker controls the aircraft's altitude and leading, while the right rocker controls its forward, backward, left and right movements.



3.0 Specification

Item	Specification																																																																																										
Eachine Wizard X220S	Wheelbase: 220mm Frame arm: 4mm light material Weigh: 356g (without battery and camera mount) Take off weigh: 561g Use light composite material. 4mm thickness and 15mm width frame arms, the width is 10mm less than Eachine Wizard X220 Frame kit with camera angle scale and 30° camera mount for Runcam 3 Gopro session. Anti-vibration sponges to protect the racer from crashing.																																																																																										
Eachine MN2206 2300KV motor	KV: 2300 Max thrust: 1100G Length: 35MM NO OF cell: 3-5S Diameter: 28MM Framework: 12N14P Shaft: 3MM Propeller: 5 inch Weight: 28g																																																																																										
Eachine 30A BLHELI_S 4 in 1 ESC	Con. current: 30A Peak current (10S): 35A Input voltage: 2-5S BEC: 5V output Programming: YES Firmware: biheli_s Weight: 28g Size: 36*36MM																																																																																										
Eachine 1179 800TVL CCD camera	Color: purple Sensor: CCD Resolution(horizontal center): 800TVL Shell size: 25mm*25mm Weight: 11g Resolution: PAL: 1980H*1080 (2MP) Format: PAL Video output: 1.0Vp-p/75Ω Automatic gain control: 0.25/0.50/0.75/1.00 adjustable, up to 55dB. AWB: ON/OFF Exposure mode: electron exposure Electronic shutter: 1/50(1/60) - 1/1000000 S Gamma correction: 0.45/1.0 Synchronization method: internal synchronization Lens: standard 2.8mm lens Working voltage: DC12V (Wide Voltage, measured that can be work in 5-13V) Workig current: 70mA (low power consumption) Workig temperature: -20℃--60℃ Humidity: 0%~98% Strong backlighting effect																																																																																										
5.8G 72CH 25MW 200mw 600MW switchable transmitter	Video Format : NTSC/PAL Channel: 72CH Operating Temperature : -10~85℃ Connector: RP-SMA Female Antenna connector: RP-SMA Male <table><tr><th>Band</th><th>CH1</th><th>CH2</th><th>CH3</th><th>CH4</th><th>CH5</th><th>CH6</th><th>CH7</th><th>CH8</th></tr><tr><td>Band-A</td><td>5865</td><td>5845</td><td>5825</td><td>5805</td><td>5785</td><td>5765</td><td>5745</td><td>5725</td></tr><tr><td>Band-b</td><td>5733</td><td>5752</td><td>5771</td><td>5790</td><td>5809</td><td>5828</td><td>5847</td><td>5866</td></tr><tr><td>Band-E</td><td>5705</td><td>5685</td><td>5665</td><td>5645</td><td>5685</td><td>5905</td><td>5925</td><td>5945</td></tr><tr><td>Band-F</td><td>5740</td><td>5760</td><td>5780</td><td>5800</td><td>5820</td><td>5840</td><td>5860</td><td>5880</td></tr><tr><td>Band-r</td><td>5658</td><td>5695</td><td>5732</td><td>5769</td><td>5806</td><td>5843</td><td>5880</td><td>5917</td></tr><tr><td>Band-U</td><td>5325</td><td>5348</td><td>5366</td><td>5384</td><td>5402</td><td>5420</td><td>5438</td><td>5456</td></tr><tr><td>Band-o</td><td>5474</td><td>5492</td><td>5510</td><td>5528</td><td>5546</td><td>5564</td><td>5582</td><td>5600</td></tr><tr><td>Band-L</td><td>5333</td><td>5373</td><td>5413</td><td>5453</td><td>5493</td><td>5533</td><td>5573</td><td>5613</td></tr><tr><td>Band-H</td><td>5653</td><td>5693</td><td>5733</td><td>5773</td><td>5813</td><td>5853</td><td>5893</td><td>5933</td></tr></table>	Band	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	5685	5905	5925	5945	Band-F	5740	5760	5780	5800	5820	5840	5860	5880	Band-r	5658	5695	5732	5769	5806	5843	5880	5917	Band-U	5325	5348	5366	5384	5402	5420	5438	5456	Band-o	5474	5492	5510	5528	5546	5564	5582	5600	Band-L	5333	5373	5413	5453	5493	5533	5573	5613	Band-H	5653	5693	5733	5773	5813	5853	5893	5933
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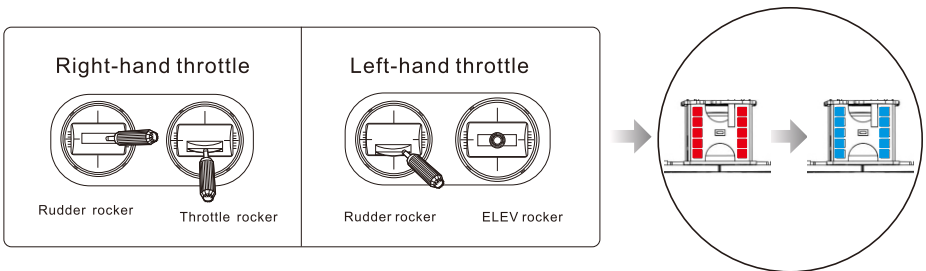
3.0 Specification

Omnibus F4 V3 flight controller	<p>Size: 36x36mm Mount holes: 30.5x30.5mm STM32 F405 MCU, Runs Betaflight 3.0.1 firmware, could run faster loop time. Using F4 MCU controls OSD over SPI bus in DMA mode. OSD Configuration has been included in Betaflight GUI. SBUS/PPM input (Pinheaders) 6PWM output (1-4Pinheaders and Sh1.0 Plug, 5-6 as Pinheaders) NO BARO SPI Sensor MPU6000 Included 128Mbit Flash, please always use BEC for the FC. Supported by BETAFLIGHT and dRonin</p>
iRangeX iRX-i6X 2.4GHz 10CH remote control	<p>Channel: 6-10 (Default 6) Model Type: Fixed-Wing/Glider/Helicopter RF Range: 2.408-2.475GHz RF Power: < 20dBm RF Channel: 135 Bandwidth: 500KHz 2.4GHz System: AFHDS 2A / AFDHS Modulation Type: GFSK Stick Resolution 4096 Low Voltage Warning: < 4.2V DSC port: PS/2 Port PPM Chargeable: No Antenna Length: 26mm (Dual Antenna) Weight: 392g Power: 6V DC 1.5AA*4 Display: STNTransflective Display, LCD 128x64 Lattice, VA 73x39mm, LCD with white backlight Size: 174x89x190mm On-line Update: Yes Color: Black Certificate: CE0678, FCC ID: N4ZFLYKYI6X</p>
iRangeX iR-A8S receiver	<p>Channels: PPM 8CH Model type: Multi-rotor Frequency range: 2.408-2.475GHz Band width: 500KHz Band number: 135 RX Sensitivity: -92 dBm 2.4GHz system: AFHDS 2A Modulation type: GFSK DSC port: PPM Transfer method: FHSS Data output: 1.5mm*3 Pin PPM Antenna length: 26mm (Not including brass contacts) Input power supply: 4.0-8.4V Display method: LED No ground interference (Transmitting and receiving 1 m from the ground): >300m Working current: 40mA Each channel data: depend on the transmitter Channel delay: <15mS Size: 20*14*5.3mm Weight: 1.2g Certificate: CE0678, FCCID: N45ZA8S00</p>
1500mAh 4S 14.8V 75C battery	<p>Capacity(mAh) : 1500 Cells (s): 4 Weight (g): 177 Length(mm): 80</p>

4.0 Motor Unlock/Lock

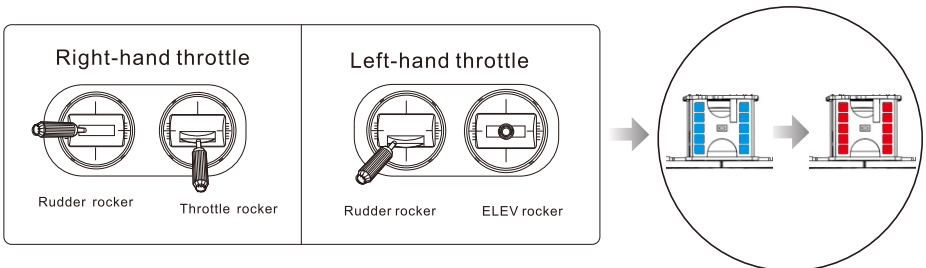
Motor Unlock

Place the throttle lever at the lowest point, set the rudder rocker to the right and hold for more than two seconds, the red state indicator turns blue and the buzzer gives the "BB" sound to unlock the motor.



Motor Lock

Put the throttle rocker at bottom and the rudder a handle to the left and status indicator light blue to red and "BB" from the buzzer sound when the lock for motor, the push up the throttle rocker motor won't turn.



5.0 Notes for flight

- 1) It is intended for pilots aged 14 or above with model hobby experience.
 - 2) Only fly it in dry weather with low wind, please do not fly in rain, snow or heavy foggy conditions.
 - 3) An open field lawfully permitted must be selected for flying in line with your mental condition and flying skill.
 - 4) Always keep a certain distance from aircraft and keep it from high-speed rotating parts, such as propellers or brushless motors.
 - 5) Do not fly around high-voltage power lines, cellphone basestation or radio towers, as they are likely to interrupt your communication.
 - 6) Always check local laws before flying, never fly an illegal flight
-

6.0 Charging

- ① Power adapter is connected to mains power (100~240V 50/60HZ), When its output terminal is connected to charger, the charger's green LED light flashes.
 - ② Plug the charging terminal of battery into charger.
 - ③ Red LED light remains on during battery charging, and green LED light remains on when charging is completed.
-

7.0 Additional instructions

- 1) Default s.bus for flight control receiver agreement
- 2) i-BUS/S.BUS mode switching:
Switch output mode in normal communication between transmitter and receiver, Each time the long press of the key to keep the 2s can switch between i-bus/s.b-us output mode.

*The indicator light first dies in a second and then flashes twice, indicating the successful switch to i-bus output mode.

*The indicator light flashes twice and dies 1 second, indicating the successful switch to S.BUS.