

Q220

快速操作手冊 - Quick Guide User Manual



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Important*

Congratulations on purchasing the DTSQ220 Race QUAD. To ensure your continued enjoyment, please take the time to thoroughly read through this operating manual before using.

Important Notes

Radio Control (R/C) multicopters are not toys. R/C multicopters utilize various high-tech components to achieve superior performance. Improper use of this product can result in serious injury or even death. Please read this manual carefully before operating, and make sure to be conscious of your own personal safety and the safety of others nearby when operation all DTS products. Manufacturer and seller assume no liability for the operation or the use of this product. This product is intended for use only by adults with experience flying remote control aircraft at legal flying fields. After the sale of this product we cannot be held liable over its operation or usage.

As the user of this product, you are solely responsible for operating in a manner that does not in danger yourself and others or result in damage to the property of others.

Warning Label Legend



Do not attempt under any circumstances.



Mishandling due to failure to follow these instructions may result in serious damage or injury.

Safety Notes (General)

Fly only in safe areas, away from other people. Do not operate R/C aircraft indoors or within the vicinity of homes or crowds of people. R/C aircraft are prone to accidents, failures, and crashes due to a variety of reasons including: lack of maintenance, pilot error, and radio interference. Pilots are responsible for their actions and damage or injury occurring during the operation or as of a result of R/C aircraft models.

Prior to every flight, carefully check all parts such as blades, screws, frame, arms, etc; ensure they are firmly secured and show no unusual wears, or unforeseen danger may happen.

Safety Notes (Battery Installation)

DTS Q-series has a flexible battery mounting system, and uses an industry-standard XT-60(AMASS) connector. This allows it to use a wide range of different batteries.

Voltage : 3s (11.1V) pack is recommended. Running 4s (14.8V) is an extremely fast race-quad, which can easily get a pilot into trouble.

Capacity : 1000mAh~1500mAh Li-Po battery is recommended.

C Rating : 30C or above Li-Po battery is recommended.

When installing the selected battery, pay attention to the Center of Gravity mark on the bottom.

Safety Note (Intall Compatible RC Receiver)

DTS Q-series is compatible with CPPM (all PPM channels down one single cable) receivers out of the box, and can support S-Bus, or Spektrum receivers with an optional cable. It is also compatible with standard R/C receivers with multiple channels of PWM out (standard servo hookups)

DSM Binding : Plug DSM receiver into correspondence port, and switch all channel switch to top, power on the main control board. Then it will enter the binding mode with alert “Bi~~~” .

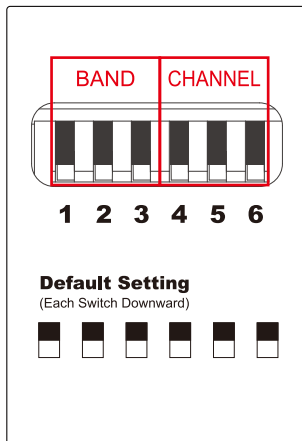
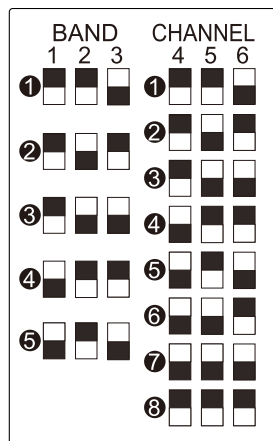


Safety Note (Setup the Video Link)

DTS Q-series are using the following method to switch the channel(Default Channel switcher : All downward) :
(Pilot should follow the ISM channel chart as below to connect **quad and goggles**)

Channel Switch
Diagram:

Default Channel switcher:
All downward



ISM channel chart:

Band \ Channel	1	2	3	4	5	6	7	8	
1	5740	5760	5780	5800	5820	5840	5860	5880	IRC/FS
2	5658	5695	5732	5769	5806	5843	5880	5917	Race
3	5705	5685	5665	5645	5885	5905	5925	5945	Band E
4	5733	5752	5771	5790	5809	5828	5847	5866	Band B
5	5865	5845	5825	5805	5785	5765	5745	5725	Band A

Safety Note (Receiver Setting - CleanFlight)

Select Receiver Signal (PWM,PPM,SBUS,DSM)

- Download CleanFlight into your Computer as

<https://chrome.google.com/webstore/detail/cleanflight-configurator/enacoimjcgeifnnpajinjgmkahmfgb?hl=en-US>

- Download the **Version 1.2.4** and install it as **Extensions** in Goggle Chrome as

https://github.com/cleanflight/cleanflight-configurator/releases/tag/CLFL_v1.2.4

- Connect the Main Control Board to computer by USB Cable

- Enter the Receiver table

- Select the Receiver Brand which you are using -



Clean Flight Setting:

Please read receiver chapter of the documentation. Configure serial port (if required), receiver map, configure channel endpoints/range on TX so that all channels go from ~1000 to ~200 behaviour when TX is off or out of range.
IMPORTANT: Before flying read failsafe chapter of documentation and configure failsafe.

Channel Map	RSSI Channel
AETR1234	Disabled

Enter the Receiver table

Channel Map

- AETR1234
- Default
- Futaba / Hitec
- JR / Spektrum / Graupner

Select the receiver brand which you are using - AETR1234(Futaba/Hitec) or TAER1234(JR/Spektrum/Graupner)

AUX	Value
AUX 3	1500
AUX 4	1500
AUX 5	1500
AUX 6	1500
AUX 7	1500
AUX 8	1500

RC Yaw Expo: 0.00

Refresh Save

Press "Save" after setting.

Safety Note (Receiver Setting - CleanFlight)

PWM Signal

- Download CleanFlight into your Computer as

<https://chrome.google.com/webstore/detail/cleanflight-configurator/enacoimjcgeifnfnnpajinjgmkahmfgb?hl=en-US>

- Download the Version 1.2.4 and install it as Extensions in Goggle Chrome as

https://github.com/cleanflight/cleanflight-configurator/releases/tag/CLFL_v1.2.4

- Plug PWM receiver into correspondence port

(Port Position please refer to P.14- Main Control Board Introduction)

- Power on the Main Control Board

- Connect the Main Control Board to computer by USB Cable



Clean Flight Setting : Enter Ports Table

Ports DOCUMENTATION FOR 1.12.0

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
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 type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾

Enter Configuration or Receiver Table

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
- SUMH
- XBUS_MODE_B
- XBUS_MODE_B_RJ01
- IBUS

Press " Save and Reboot " after each step

Testing : Ensure 6 channel is operating normally at receiver table (After test, power off the quad, then disconnect)

Safety Note (Receiver Setting - CleanFlight)

PPM Signal

- Download CleanFlight into your Computer as

<https://chrome.google.com/webstore/detail/cleanflight-configurator/enacoimjcgeifnnpajinjgmkahmfgb?hl=en-US>

- Download the **Version 1.2.4** and install it as **Extensions** in Goggle Chrome as

https://github.com/cleanflight/cleanflight-configurator/releases/tag/CLFL_v1.2.4

- Plug PPM receiver into correspondence port

(Port Position please refer to P.14- Main Control Board Introduction)

- Power on main control board

- Connect the Main Control Board to computer by USB Cable



Clean Flight Setting : Enter Ports Table

Identifier	Data	Logging	Telemetry	RX	GPS
UART1	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Blackbox 115200	Disabled AUTO	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600
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Safety Note (Receiver Setting - CleanFlight)

SBUS Signal

- Download CleanFlight into your Computer as

<https://chrome.google.com/webstore/detail/cleanflight-configurator/enacoimjcgeifnfnnpajinjgmkahmfgb?hl=en-US>

- Download the Version 1.2.4 and install it as Extensions in Goggle Chrome as

https://github.com/cleanflight/cleanflight-configurator/releases/tag/CLFL_v1.2.4

- Plug PWM receiver into correspondence port

(Port Position please refer to P.14- Main Control Board Introduction)

- Power on main control board

- Connect the Main Control Board to computer by USB Cable



Clean Flight Setting : Enter Ports Table

Ports DOCUMENTATION FOR 1.12.0

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.

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- Download the **Version 1.2.4** and install it as **Extensions** in Goggle Chrome as
https://github.com/cleanflight/cleanflight-configurator/releases/tag/CLFL_v1.2.4
- Plug DSM receiver into correspondence port
(Port Position please refer to P.14- Main Control Board Introduction)
- Switch all channel switch to bottom
- Power on the main control board. Then it will enter the binding mode with alert “Bi~~~”
- Binding Transmitter and Receiver
- Power off the main control board, then switch all channel switch to top
- Power on the main control board, connect the mainboard to computer by USB

Clean Flight setting: (Enter Ports Table)

Identifier	Data	Logging	Telemetry	RX	GPS
UART1	<input checked="" type="checkbox"/> MSP 115200 ▾	<input type="checkbox"/> Blackbox 115200 ▾	Disabled ▾ AUTO ▾	<input type="checkbox"/> Serial RX	<input type="checkbox"/> 57600 ▾
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- SBUS
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- XBUS_MODE_B
- XBUS_MODE_B_RJ01
- IBUS

Press ” Save and Reboot ” after each step

Testing : Ensure 6 channel is operating normally at receiver table(After test, power off the quad, then disconnect)

Safety Note (Receiver Setting - CleanFlight)

Receiver Channel Range Setting

- Adjust the transmitter parameter (Travel), let Roll, Pitch, Yaw, Throttle
- Lowest value within **1000 - 1096**, and the largest value within **1944 - 1999** in the Receiver Table.
- AUX 1 and 2 are on your transmitter, and there will be have 3 switches.

Channel	Value
Roll	1510
Pitch	1509
Yaw	1510
Throttle	1105
AUX 1	2028
AUX 2	1916
AUX 3	918
AUX 4	1506
AUX 5	1500
AUX 6	1500
AUX 7	1500
AUX 8	1500

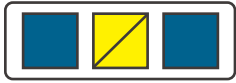
Default mid-point

DSM/PPM - 1500
SBUS/PWM - 1520 .

Safety Note (Pre-flight Check)

Motor Lock Mode

- Throttle channel locked (Middle condition LED flashing in Yellow)



Check the transmitter stick and condition LED is it at the same direction

(MUST process in Motor Lock Mode)

- Push Elevator Stick to Top (Left / Right Condition LED flashing in Yellow)



- Push Aileron Stick to Left (Left Condition LED flashing in Yellow)



- Push Aileron Stick to Right (Right Condition LED flashing in Yellow)



- Push Throttle Stick to Top in Motor Lock Mode (Middle Condition LED solid in Blue and Green)



Motor Unlock Mode

- Throttle channel unlocked (Middle Condition LED solid in Blue and Green)



Safety Note (Racing Instruction)

The current generation of FPV Analog video link brings many advantages. Low-cost, and zero latency being two of the most significant. They do however suffer from less than ideal selectivity, even when using large channel spacing as is the case with RaceBand. If a few simple rules are followed, quad racing can be a lot of fun.



1) NEVER land near another pilot

This is an absolutely golden rule. Landing your quad near another pilot, especially one who is at a significant distance.



2) NEVER walk back to the pilot area with a powered-up quad

This is the most common cause of issues at the race track. When retrieving a model, unplug the battery before walking back to pilot area.



3) POSITION the launch and landing zone as far from the pilot area as possible

This ensures that collisions at race start don't affect other pilots. A distance of at least 10 meters is recommended, more than this is a bonus.



4) ALWAYS warn in-air pilots before powering up a quad, even if you KNOW it is on a different channel

Warn pilots, and be ready to power down IMMEDIATELY if a pilot is affected, and wait until he lands. Remember that it only takes a second or two, when flying race quads at speed, to crash and damage the quad, and whatever (whoever) it hits.

Safety Note (Remove Props)

Mini-quad props can do some serious damage when coming in contact with human skin, risk of deep cuts and lacerations should be avoided at all cost.

So when you are working on a quad with the battery connected, it is highly recommended to REMOVE ALL PROPS, unless you are just about ready to fly.

Safety Note (Li-po Low Voltage Alarm)

DTS Q-series quad included LI-po Low Voltage alarm. Alert "Bi~Bi~" when battery in low voltage to prevent over discharge. This function is compatible with GWY COBRA V, due to it has buzzer function.

Safety Note (General)



Do not fly near buildings , high voltage cables, or tress to ensure the safety of yourself.



Do not attempt to modify the aircraft to alter its intended design. Please use only designated replacement parts listed in the manual to ensure its design structural integrity.



Do not fly your model in inclement weather, such as rain, wind, snow or darkness.



R/C aircraft are made of various forms of plastics, such as carbon fiber and polyethylene. Plastics are very susceptible to damage or deformation from extreme heat and cold climate.



Frequency interference can cause your model, or other models to crash. Then guidance provided by an experienced pilot will be invaluable for the assembly, tuning, trimming, and actual first flight or unforeseen danger may happen.



Operate this unit within your ability. Do not flywhile feeling impaired, as improper operation may result in danger.

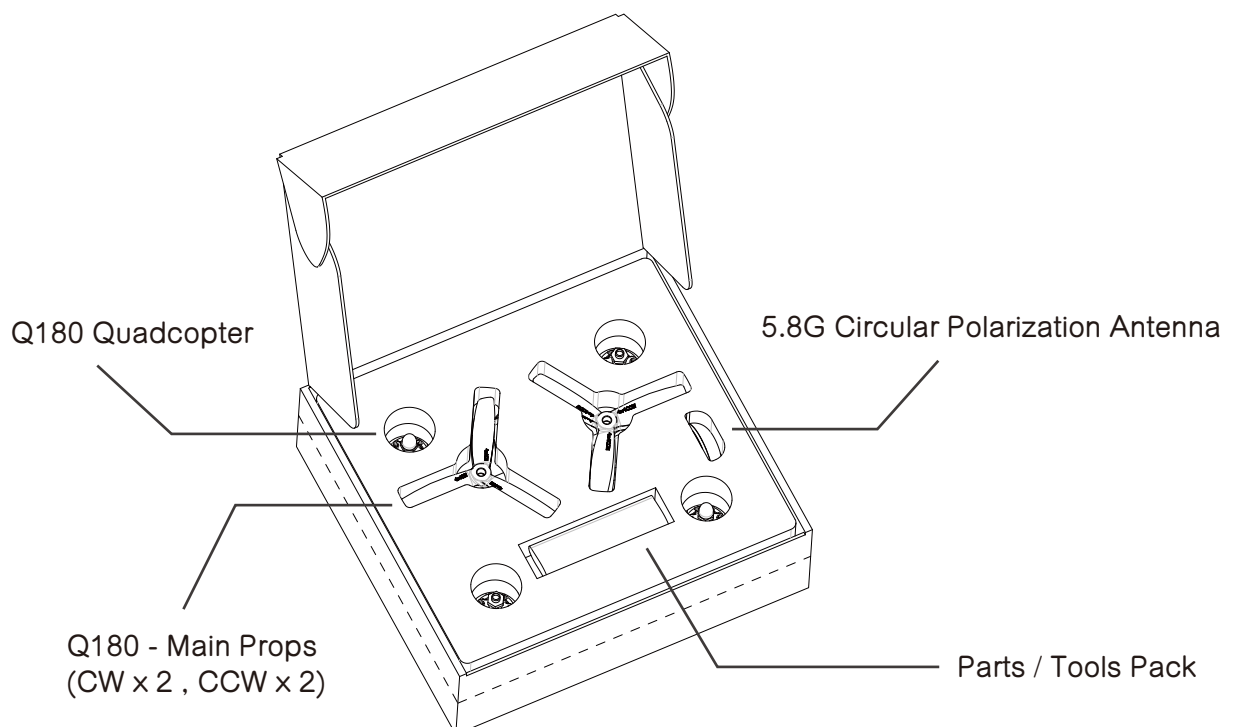


During the operation of the multicopter, the rotor will be spinning at a high rate of speed. The blades are capable of inflicting serious bodily injury and damage to surrounding properties.



Any time found motor is operating abnormal. Turn off the throttle and check the reason immediately. If not, damage will cause motor to be broken.

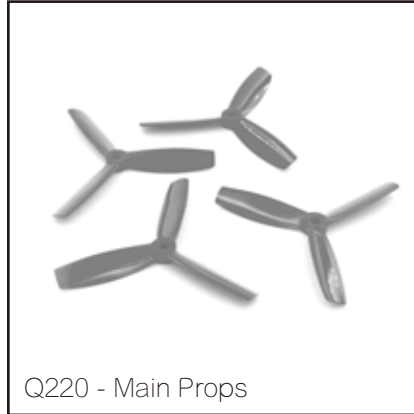
Packing Contents



Details Packing Contents



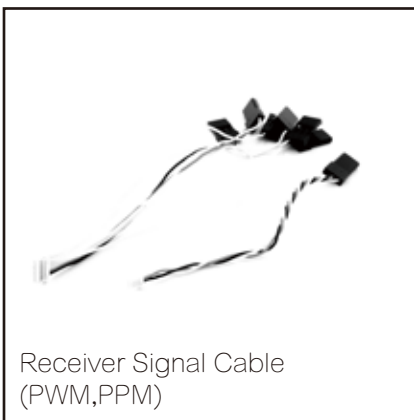
Q220 Quadcopter



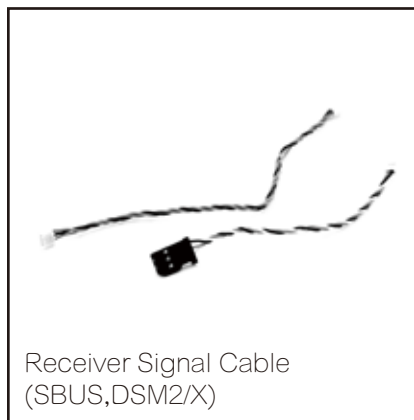
Q220 - Main Props



5.8G Circular
Polarization Antenna



Receiver Signal Cable
(PWM,PPM)



Receiver Signal Cable
(SBUS,DSM2/X)



Landing Skid - Rubber



L Shape Hex Key
M2.5x6mm x 1 / M2.5x6mm x 1



Round Head Socket Screw
M2.5x6mm x 6 / M2x5mm x 6

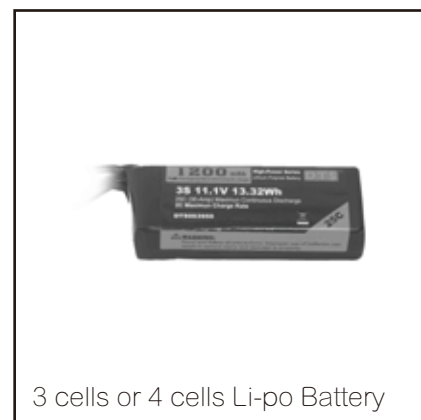
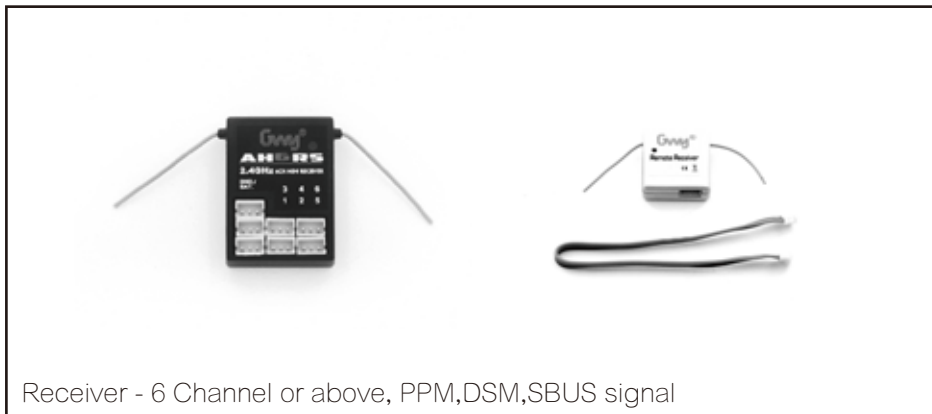


Velcro (Hard x 1 Rough x 1)



Hex Handle (For Main Props)

Equipment Required

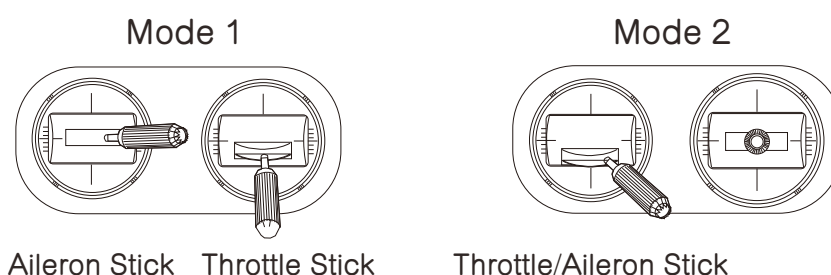


Flight Steps

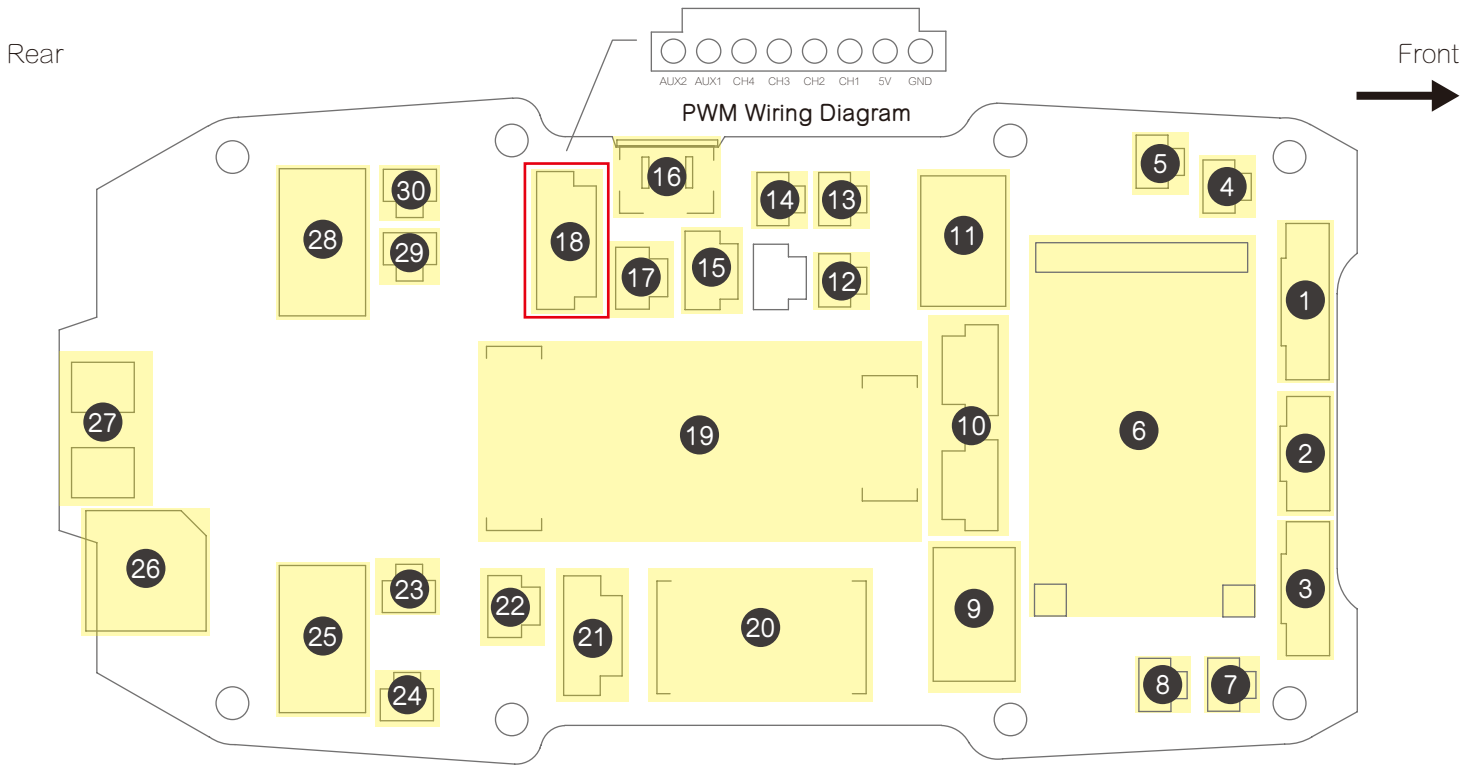
1. Install Receiver (self-provided) (Please refer to P.2 - Intall Compatible RC Receiver) to quad
2. Install Battery (self-provided) (Please refer to P.1 - Battery Installation)
3. After binding (self-provided) Receiver and Transmitter (self-provided), please go to the pre-flight check (Please refer to P.9 - Pre-flight check)
4. Install Props (Please refer to P.19 - Main Blade Assembly Introduction)
5. Motor Unlock (Please refer to P.13 - Motor Unlock)

Motor Unlock

After Binding, Place the throttle stick at the bottom and push the aileron stick to the rightmost for at least 3 second . Then release.

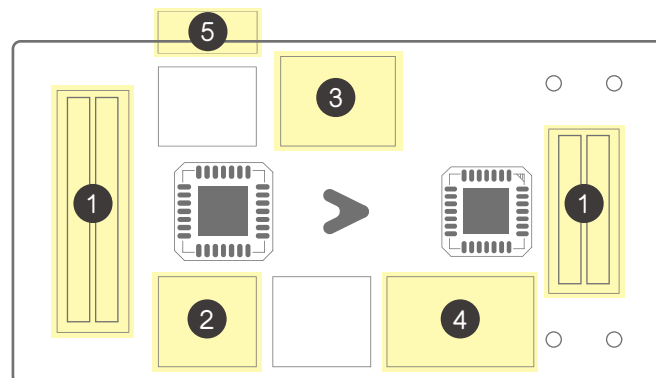


Main Control Board Introduction

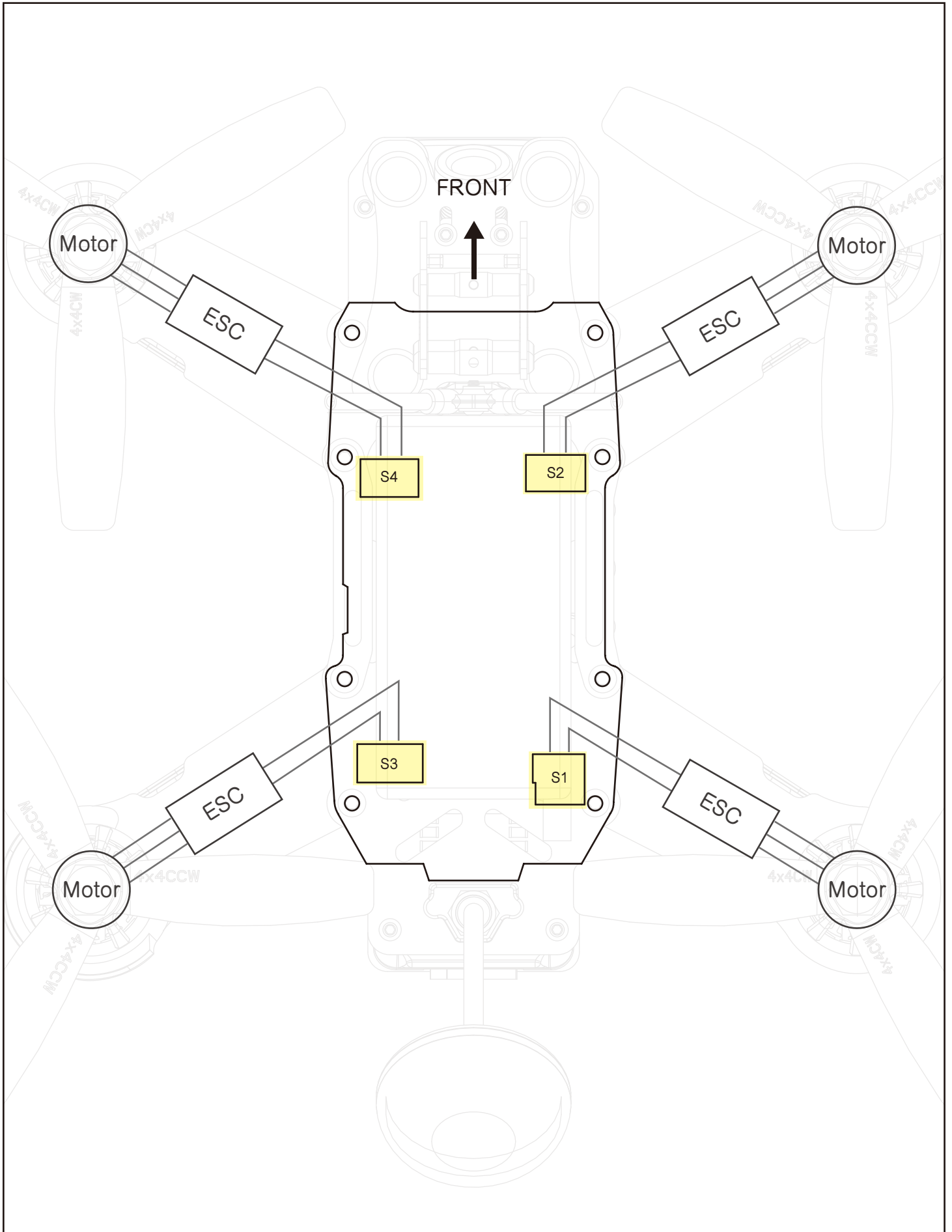


- | | | |
|--|--|--|
| 1. 5V Camera Socket (with VOL-L/R) 5 PIN | 11. B. ECS Power Connector S4 | 21. External Buzzer / Conditional LED Socket |
| 2. 5V Camera Socket 3 PIN | 12. Low V. Alarm Singal Input / Video R channel Socket | 22. PPM Signal Input Socket |
| 3. 12V Camera Socket 4PIN | 13. B. ESC Control Signal Socket S6 | 23. B. ESC Control Signal Socket S1 |
| 4. Green LED Light Socket (Front) | 14. B. ESC Control Signal Socket S5 | 24. Red LED Light Socket (Rear) |
| 5. B. ESC Control Signal Socket S4 | 15. DSM Signal Input Socket | 25. B. ECS Power Connector S1 |
| 6. 5.8G Video Socket | 16. USB Signal Input Socket | 26. Flight Control Buzzer |
| 7. Green LED Light Socket (Front) | 17. SBUS Signal Input Socket | 27. Li-Po Battery Socket |
| 8. B. ESC Control Signal Socket S2 | 18. PWN Signal Input Socket | 28. B. ECS Power Connector S3 |
| 9. B. ECS Power Connector S2 | 19. Flight Control Socket | 29. B. ESC Control Signal Socket S3 |
| 10. OSD Parameter Adjustment Socket | 20. Channel Switcher | 30. Red LED Light Socket (Rear) |

Flight Control Introduction

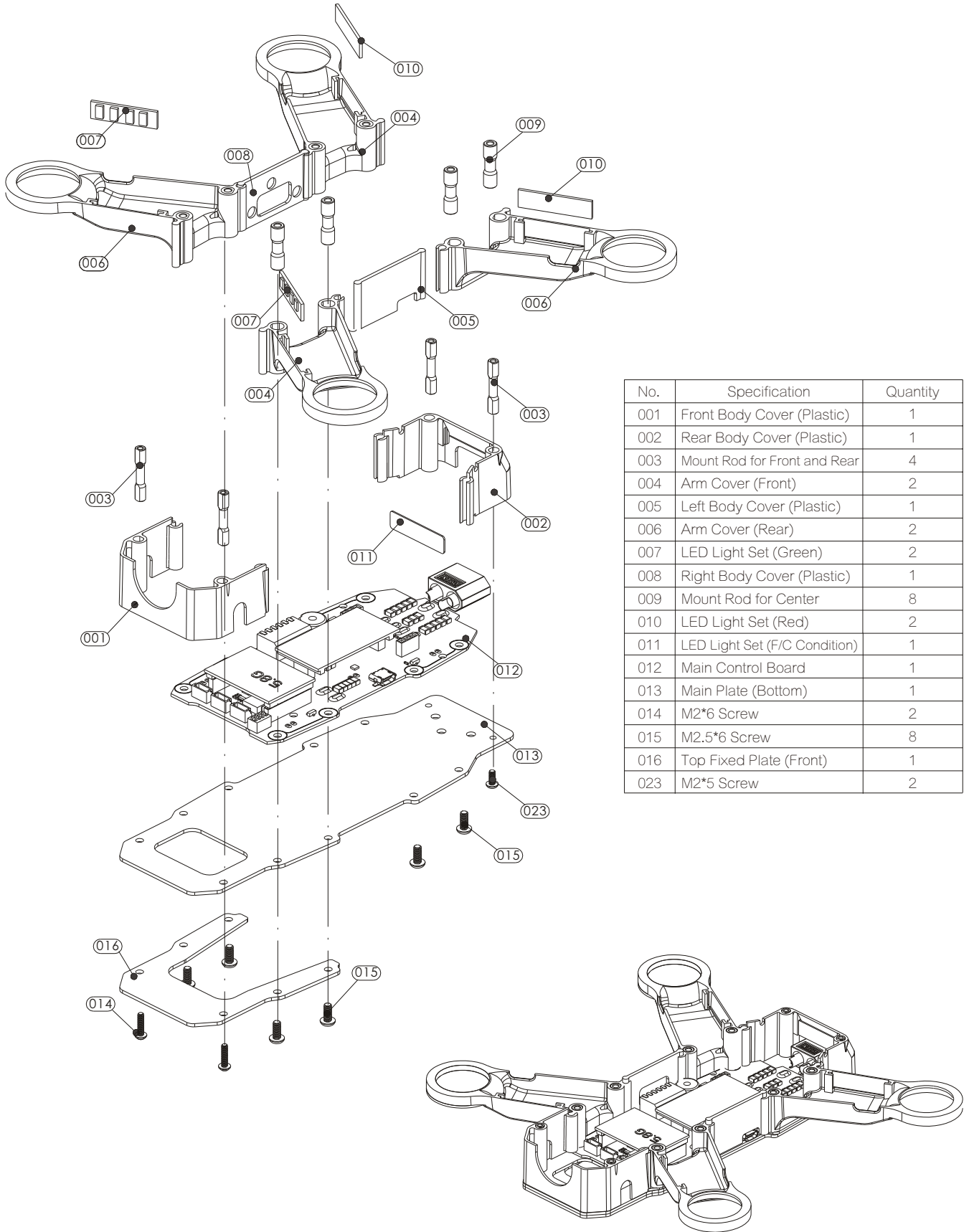


- | | | |
|---|-----------------------|--|
| 1. Flight Control Socket | 2. GPS or DATA Socket | 3. Geomagnetic sensor and Barometer socket |
| 4. Sonar sensors and Signal strength input socket | 5. BOOT Switch | |



Assembly Introduction

(Before Assembly, Ensure Motor and ESC has been welding on the Main Control Board)

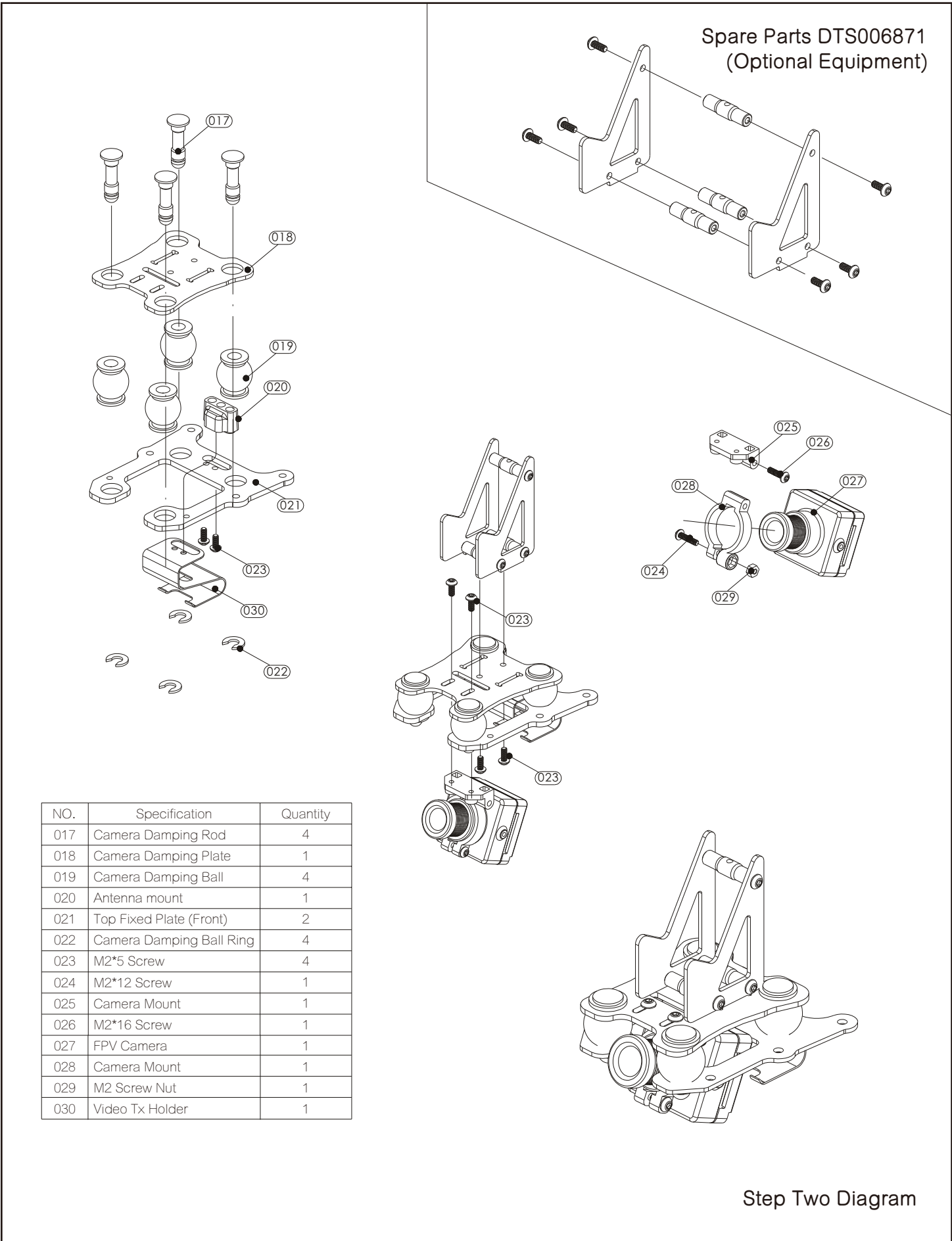


No.	Specification	Quantity
001	Front Body Cover (Plastic)	1
002	Rear Body Cover (Plastic)	1
003	Mount Rod for Front and Rear	4
004	Arm Cover (Front)	2
005	Left Body Cover (Plastic)	1
006	Arm Cover (Rear)	2
007	LED Light Set (Green)	2
008	Right Body Cover (Plastic)	1
009	Mount Rod for Center	8
010	LED Light Set (Red)	2
011	LED Light Set (F/C Condition)	1
012	Main Control Board	1
013	Main Plate (Bottom)	1
014	M2*6 Screw	2
015	M2.5*6 Screw	8
016	Top Fixed Plate (Front)	1
023	M2*5 Screw	2

Step One Diagram

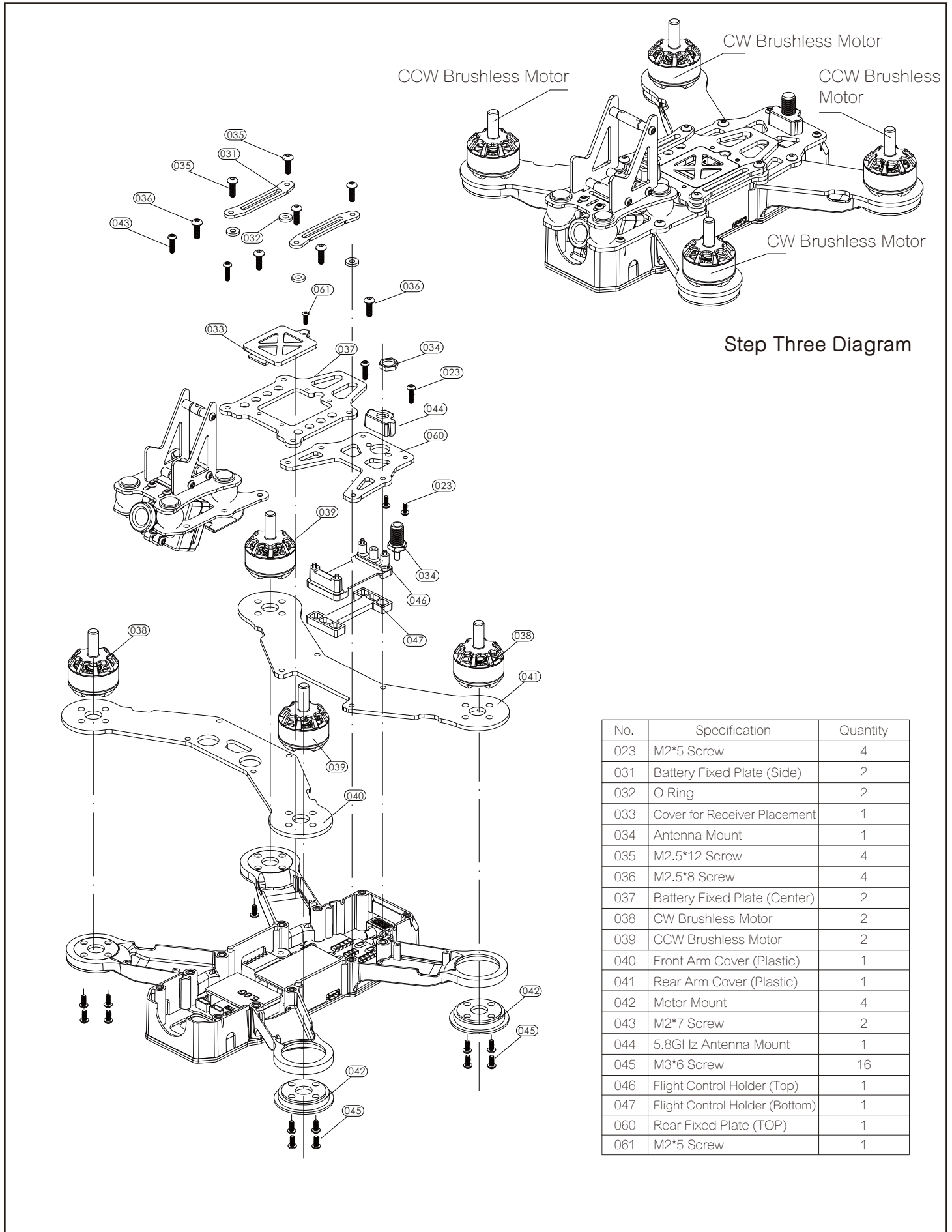
Assembly Introduction

(Before Assembly, Ensure Motor and ESC has been welding on the Main Control Board)



Assembly Introduction

(Before Assembly, Ensure Motor and ESC has been welding on the Main Control Board)

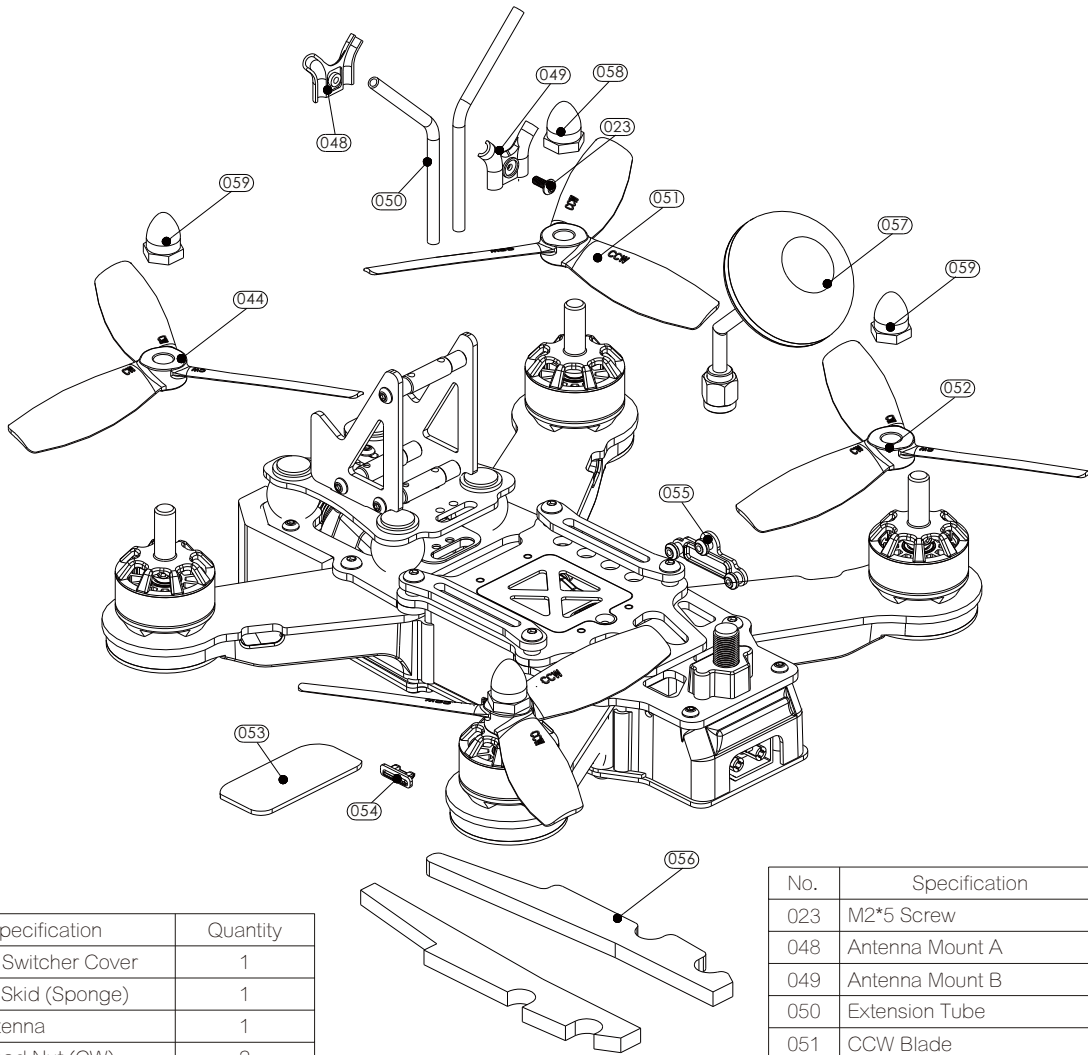


Step Three Diagram

No.	Specification	Quantity
023	M2*5 Screw	4
031	Battery Fixed Plate (Side)	2
032	O Ring	2
033	Cover for Receiver Placement	1
034	Antenna Mount	1
035	M2.5*12 Screw	4
036	M2.5*8 Screw	4
037	Battery Fixed Plate (Center)	2
038	CW Brushless Motor	2
039	CCW Brushless Motor	2
040	Front Arm Cover (Plastic)	1
041	Rear Arm Cover (Plastic)	1
042	Motor Mount	4
043	M2*7 Screw	2
044	5.8GHz Antenna Mount	1
045	M3*6 Screw	16
046	Flight Control Holder (Top)	1
047	Flight Control Holder (Bottom)	1
060	Rear Fixed Plate (TOP)	1
061	M2*5 Screw	1

Assembly Introduction

(Before Assembly, Ensure Motor and ESC has been welding on the Main Control Board)



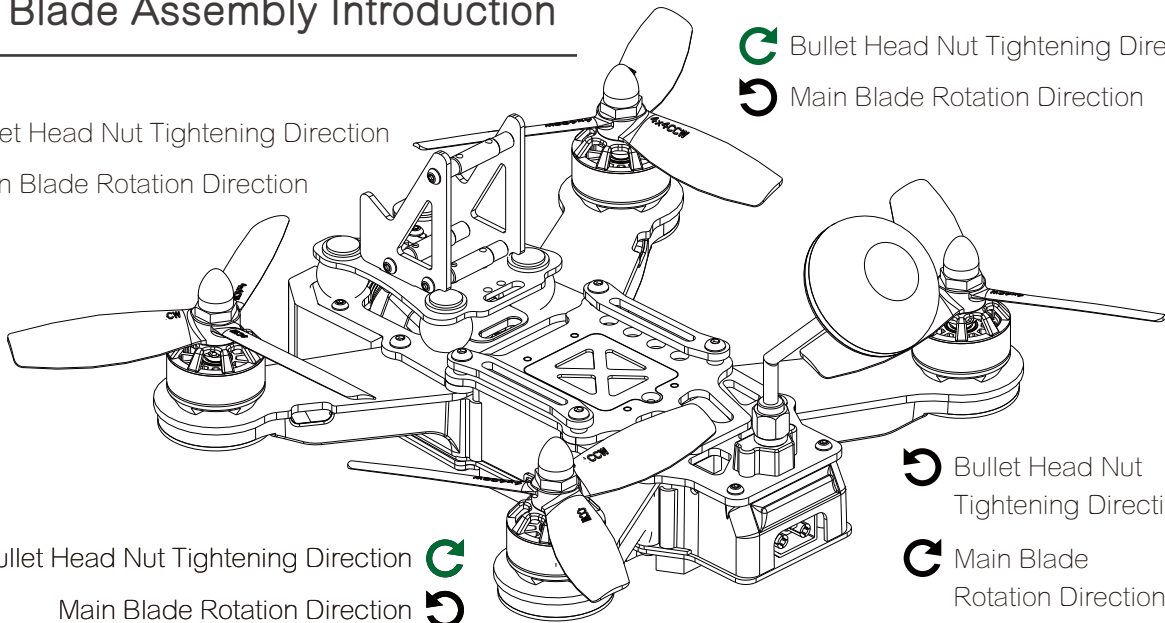
No.	Specification	Quantity
055	Channel Switcher Cover	1
056	Landing Skid (Sponge)	1
057	5.8G Antenna	1
058	Bullet Head Nut (CW)	2
059	Bullet Head Nut (CCW)	2

No.	Specification	Quantity
023	M2*5 Screw	1
048	Antenna Mount A	1
049	Antenna Mount B	1
050	Extension Tube	2
051	CCW Blade	2
052	CW Blade	2
053	Landing Skid (Sponge)	1
054	USB socket Cover	1

Main Blade Assembly Introduction

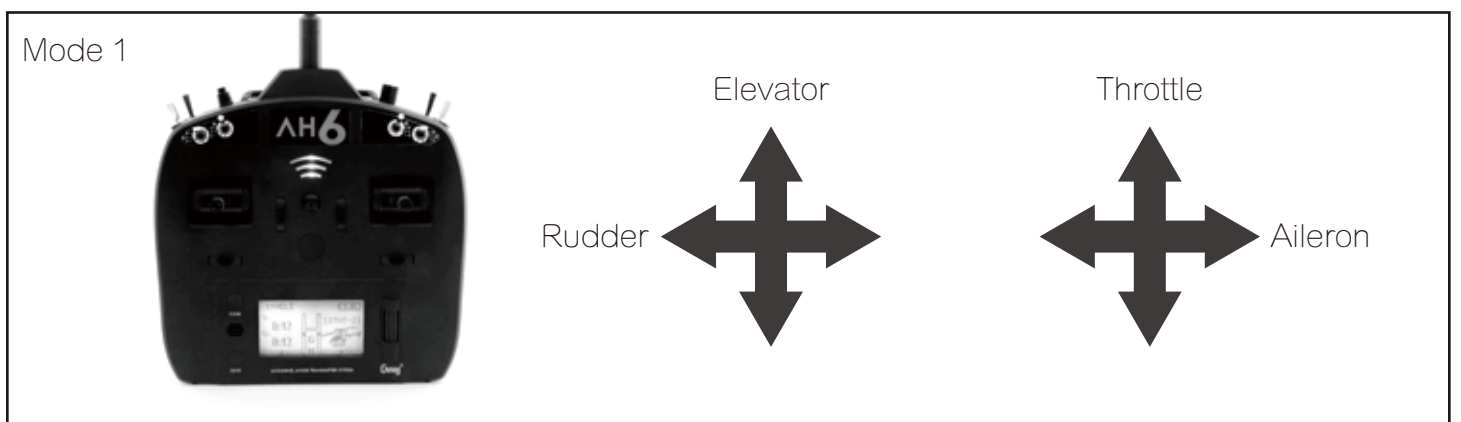
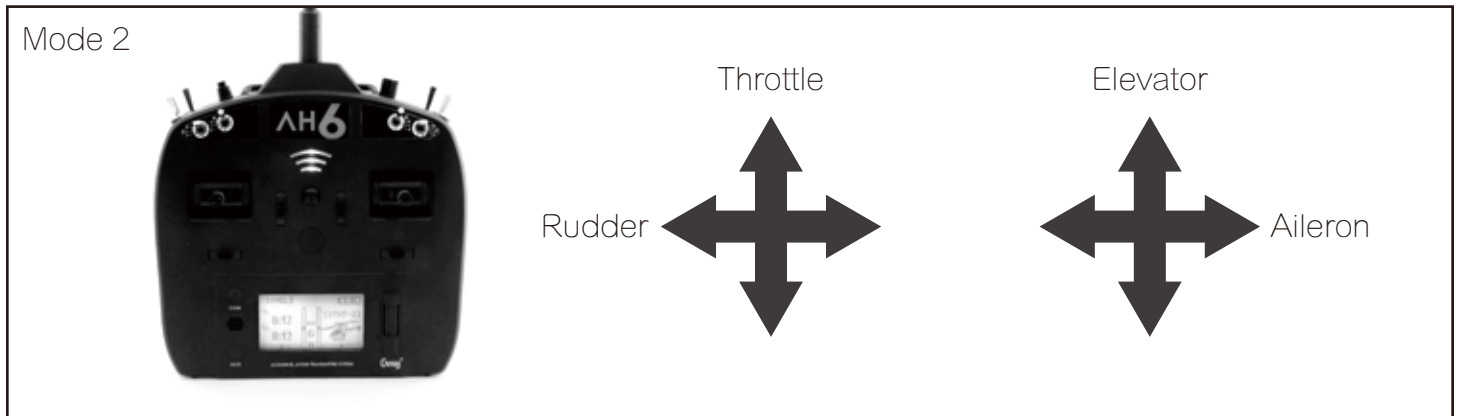
Bullet Head Nut Tightening Direction
 Main Blade Rotation Direction

Bullet Head Nut Tightening Direction
 Main Blade Rotation Direction



Bullet Head Nut Tightening Direction
 Main Blade Rotation Direction

Bullet Head Nut Tightening Direction
 Main Blade Rotation Direction



Mode 2 is the most common mode in USA, always use on RC Helicopter and Multicopter. To identify Mode 2, we can find where is the throttle stick, if the left stick push to the top and it wasn't bounce back to middle, it should be Mode 2.

Mode 1 we can find it in Euro usually.

To identify Mode 1, we can find where is the throttle stick, if the right stick push to the top and it wasn't bounce back to middle, it should be Mode 1.

Otherwise, Mode 3 and Mode 4 is a very special control mode, we won't use these mode if you are beginner, either you very understand these mode already, so we won't explain it over here.

(AUX1) Flight Mode Switch

Three flight modes are configured by the Clear Flight, and are mapped by default to channel 5 (AUX1) of the R/C Tx.

These modes are as follows :

Angle (Pos 1)

Angle mode is the easiest to learn. When the sticks are centered, the flight controller is always working to level the quad.

Horiz (Pos 2)

Horiz mode is a bit of a hybrid mode. It does auto-level, but also allows flips and rolls.

Acro (Pos 3)

This mode is the preferred mode for the more advanced mini-quad pilot. In many ways it is the simplest mode, but also the hardest mode to learn.

In Acro mode, the accelerometer part of the IMU is not used, only the Gyro.

Because of this, the quad will not self-level, explaining the steep learning curve for this mode.

To learn this mode, it is recommended to start flying the quad FPV, in Level mode, get some altitude, and switch into Acro mode.

Landings in Acro mode can be a bit challenging for the beginner, so switching to Level mode before landing is a reasonable way to deal with this.

Acro mode is the ideal mode to have fun with flips and rolls.

(AUX2) OnScreenDisplay and Beeper Switch

OSD and Beeper Switch are configured by the Clear Flight, and are mapped by default to channel 6 (AUX2) of the R/C Tx. These functions are as follows :

Display OSD on your Goggles or Monitor (Pos 1)

Do not show OSD on your Goggles or Monitor (Pos 2)

Switch on Beeper on your Quad (Pos 3)

Compatible Open Source

The development of the DTS, flight control firmware has referenced from the popular open source(F3), it would not have been possible without the effort of a large team of individuals who invested in the open source flight controller software that running on the DTS.

The variant of the open source flight controller firmware that we chose to power the DTS is Cleanflight, mainly due to it is solid support of the OneShot ESC control protocol.

Since the OSD firmware needs an intimate knowledge of the flight controller API, care must be taken when installing updated Cleanflight builds.

DTS team may not have support for Beta, and recently released Cleanflight builds the day they are released, but we are committed to keep up with changes.

Check the DTS product page for compatibility information.

Clean Flight Configurator Connection





















To hook up the Cleanflight Configurator, hook up a Personal Computer via a standard Micro-USB cable, to the connector on DTS Q-series.

Be aware that making certain changes via the configurator may make operate abnormal. Please backup for resetting factory settings Before making any changes.

Spare Parts

<p>DTS006881 Body Cover (Four Sides)</p>	<p>DTS006882 Arm Cover (Plastic)</p>	<p>GWY006883 LED Light Set (Front / Rear)</p>	<p>DTS006885 Motor Mount Set</p>
<p>DTS007091 3S 11.1V 1350mAh 40C Li-Po Battery</p>	<p>DTS006887 Brushless Motor (CCW)</p>	<p>DTS006888 Brushless Motor (CW)</p>	<p>DTS006889 Main Plate (Bottom)</p>
<p>DTS006890 Main Fixed Plate (Front/Rear)</p>	<p>DTS006891 Top Fixed Plate (Front)</p>	<p>DTS006892 Damping Ball Set (4PCS)</p>	<p>DTS006893 Top Fixed Plate (Center/ Rear)</p>
<p>DTS006855 Mount Rod (Long) for Front / Rear</p>	<p>DTS006856 Mount Rod (Short) for Center</p>	<p>GWY006858 LED Light Set (F/C Condition)</p>	<p>DTS006859 Camera Mount Set</p>
<p>DTS006861 Antenna Mount Set</p>	<p>DTS006866 Bullet Head Nut CW/CCW</p>	<p>DTS006871 Camera fixed Mount for Action Camera</p>	<p>DTS006933 Landing Skid (Plastic)</p>

Spare Parts

 <p>GWY006894 Main Control Board With 20A 25mW PAL</p>	 <p>GWY007087 Main Control Board With 30A 25mW PAL</p>	 <p>GWY007084 Main Control Board With 20A 25mW NTSC</p>	 <p>GWY007088 Main Control Board With 30A 25mW NTSC</p>
 <p>GWY007085 Main Control Board With 20A 200mW NTSC</p>	 <p>GWY007089 Main Control Board With 30A 200mW NTSC</p>	 <p>GWY007086 Main Control Board With 20A 600mW NTSC</p>	 <p>GWY007090 Main Control Board With 30A 600mW NTSC</p>
 <p>GWY006875 F3 Flight control</p>	 <p>(RHCP) (LHCP) GWY006899 / GWY006900 Antenna Set Circular Polarized Antenna</p>	 <p>DTS006936 Battery Fixed Plate (Size)</p>	 <p>GWY006940 Receiver Connecting Cable</p>
 <p>DTS006929 Main Blade Set (Green)</p>	 <p>DTS006928 Main Blade Set (Orange)</p>	 <p>DTS006886 Main Blade Set (Black)</p>	 <p>DTS007057 Motor Cover (Orange)</p>
 <p>DTS007058 Motor Cover (Green)</p>	 <p>DTS007056 Motor cover (Black)</p>	 <p>GWY006878 ESC - 20A</p>	 <p>GWY006934 ESC - 30A</p>

Spare Parts

 <p>GWY006831 Long Lens - NTSC</p>	 <p>GWY006952 Short Lens - NTSC</p>	 <p>GWY006954 Long Lens - PAL</p>	 <p>GWY006955 Short Lens - PAL</p>
 <p>GWY00xxxx 720P/60F Storage Camera</p>	 <p>GWY007083 DSM Signal Output Receiver</p>	 <p>GWY007082 SBUS Signal Output Receiver</p>	 <p>GWY006939 Aluminium Box</p>
 <p>GWY006227 AH6T Transmitter (Mode 2)</p>	 <p>GWY007092 AH6T Transmitter (Mode 1)</p>		

Q220 Quadcopter

Main Blade : 5 x 4 x 3
Wheelbase : 220mm
Length x Width : ~170mm x ~200mm
Height : ~65mm (Not included Antenna)
Weight : 405g (Not included Battery)

ESC

Input Voltage : 7V ~ 16.8V
Operating Temperature : -20°C ~ 65°C
Max Continuous Current : 30A

Brushless Motor

Input Voltage : 11.1V ~ 14.8V
Stator Arms : 12
Max Continuous Current(3mins) : 18A
Max continuous Power(3mins) : 198W
Magnet Poles : 14
Dimension : $\varnothing 5 \times \varnothing 27.7 \times 30.7$ cm
Weight : 28.4g

5.8G Video Transmitter

Input Voltage : 5V
Operating Current : 350mA
Operating Frequency : 5.8GHz
Antenna Interface : SMA
Transmitting Power : 25mW, 200mW, 600mW (Selectable)
Dimension : 30 x 21mm
Weight : 3g

Circular Polarized Antenna Transmitter

Operating Frequency : 5.8GHz
Antenna Gain : 1 dBi
Operating Temperature : -20°C ~ 80°C
Impedance : 50 OHM(Ω)
Antenna Interface : SMA
Colverleaf : 3 Pieces
Dimension : $\varnothing 35 \times \varnothing 5 \times 60$ mm
Weight : 10.1g

Camera

Input Voltage : 5V
FOV : Horizontal 90°
Interface : CVBS
Video Output Format : Selectable PAL、NTSC
Aspect Ratio : 16:9

Flight Control

Input Voltage : 7V ~ 16.8V
Operating Frequency : 1000Hz
Operating Temperature : -20°C ~ 65°C
Maximum Tilting Angle : 80°
Maximum Angular Speed : 2000°/ Sec

FPV
RACING

DTS