Storm Racing Drone (Type A)
with Naza V2 GPS Flight Controller

USER MANUAL

V1.2

DISCLAMIER

Please read this disclaimer carefully before using this product. This product is a hobby with motor but not a toy which is not suitable for people under the age of 18. By using this product, you hereby agree to this disclaimer and signify that you have read them fully. You agreed that you are responsible for your own conduct and content while using this product, and for any consequences thereof.

Before you fly the drone

1) Make sure all connections are good, and keep children and animals away during flying, firmware update, system calibration and parameter setup.

2) Always fly the drone away from unsafe conditions, such as obstacles, crowds, high-voltage lines, etc.

3) Do not use in bad weathers such as rainy day, snow, windy (more than moderate breeze), hail, lighting, tornadoes, hurricanes etc.

4) Check whether the propellers and the motors are installed correctly and firmly before flight. Make sure the rotation direction of each propeller is correct.

5) Check whether all parts of the drone are in good condition before flight. Do not fly with aging or broken parts.

6) Never overcharge LiPo batteries. Do not charge above 4.2V per cell. When the battery is fully charged, disconnect it from the charger. Never leave the battery charger unattended during charging.

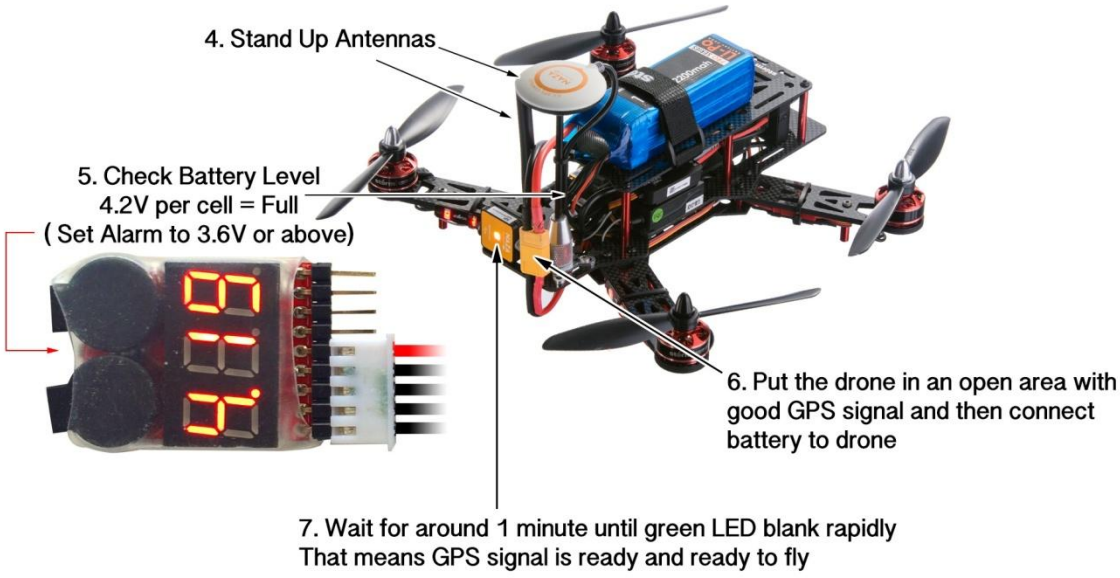
7) Never discharge batteries to below 3.3V per cell

8) Remove batteries when not using the drone.

Package includes:

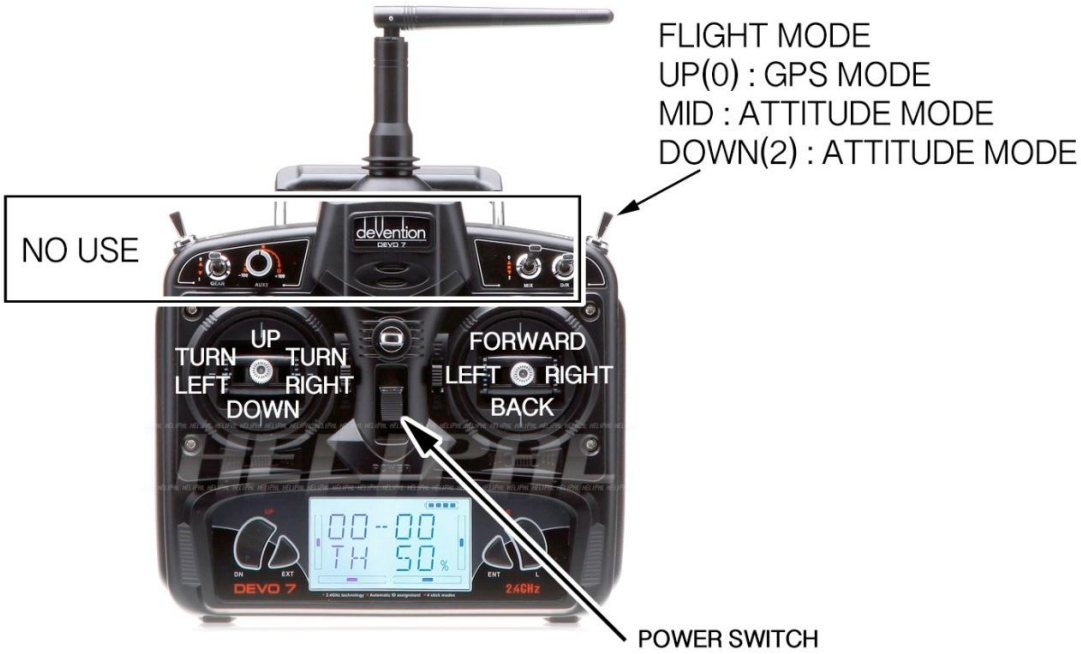
1. Fully Assembled Storm Racing Drone GPS w/ DJI NAZA V2 GPS System
2. Built-in FPV System (Camera and Transmitter)
3. DJI iOSD Mini Module (Overlay flight data information)
4. Walkera DEVO 7 Radio System
5. 14.8V 2200mah 30C Li-Po Battery
6. 6pcs Clockwise 6045 Dual-Blade Propeller (4 of them are spare parts)
7. 6pcs Counter-Clockwise 6045 Dual-Blade Propeller (4 of them are spare parts)
8. SKYRC E4 Battery Charger
9. 1.5 mm Hex Wrench
10. 2.0 mm Hex Wrench
11. 10mm Hex Nut Driver Driver (for motor cap)
12. 5.5mm Hex Nut Cross Wrench (for airframe)
13. Battery Warning Buzzer

Quick Start



8. Unlock the system (Left Stick : Left Bottom , Right Stick : Right Bottom)
9. You can fly it now
10. When the red LED blanks rapidly (it means low battery), land it immediately

Control

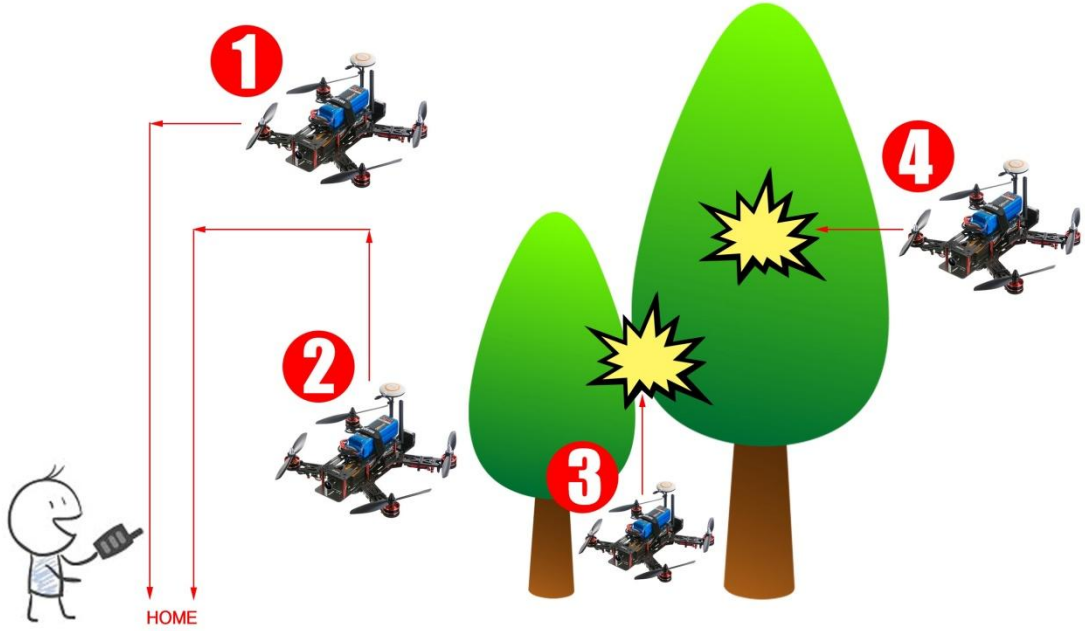


MODE 2 (LEFT THROTTLE)
STANDARD

MODE 1 (RIGHT THROTTLE)

Auto Go Home

If the drone has been started up correctly and the GPS signal is good (with 6 or more satellites are found), the drone can undergo Go-Home features when it lost signal with radio controller



1) If the attitude of the drone more than 20 meters, it will go home horizontally.
2) If the attitude of the drone below 20 meters, it will ascend to 20 meters and go home horizontally.
3) If the attitude of the drone is below 20 meters and behind an object, there is high risk of crash during ascends.
4) If the drone go home path is blocked by object, there is high risk of crash during "auto-go home" process.

Important - How to take over the control again during "Auto Go Home"

When the drone is undergoing auto go home feature, you can take over the control again by performing the following procedures.

If the transmitter is on, push the throttle stick to middle position and then switch the **FMD** Switch **Down(2)** and **Up(0)** and you can control the drone again.

If the transmitter is off, push throttle stick to down position, turn on the transmitter, push throttle to middle, switch the **FMD** switch **Down(2)** and **Up(0)** to take over the control again.

Compass Calibration

Please follow the following procedures to calibrate the compass calibration

1) Switch the FMD switch up and down quickly for 6 to 10 times, The LED indicator on the drone will turn on constantly yellow.

2) (Fig.1) Hold your Multi-rotor horizontal and rotate it around the gravitational force line (about 360^{o}) until the LED on the drone changes to constant green, and then go to the next step.

3) (Fig.2) Hold your Multi-rotor vertically and rotate it (nose down & tail up) around the gravitational force line (about 360 ^{o}) until the LED turns off, meaning the

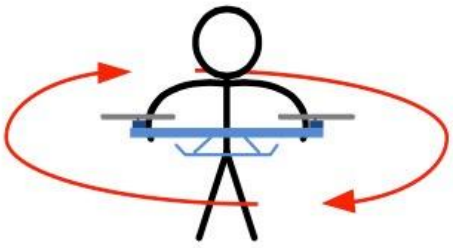


Fig.1

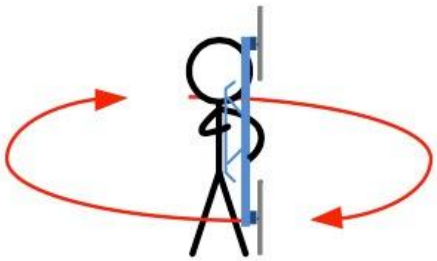


Fig.2

calibration is finished

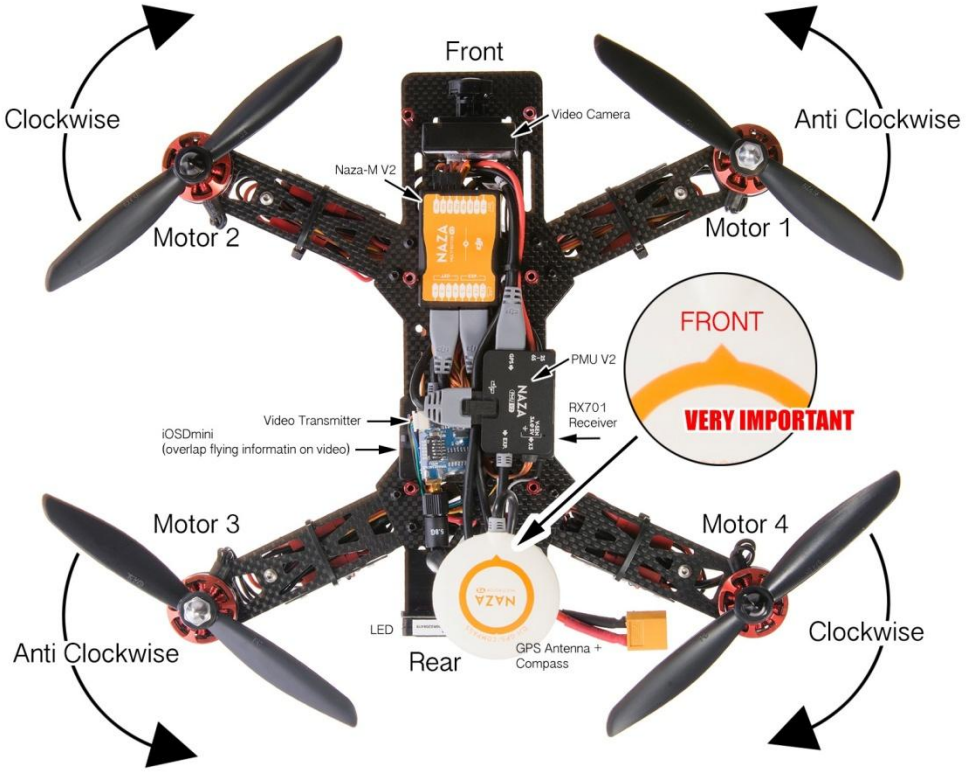
4) If the calibration was successful, calibration mode will exit automatically.

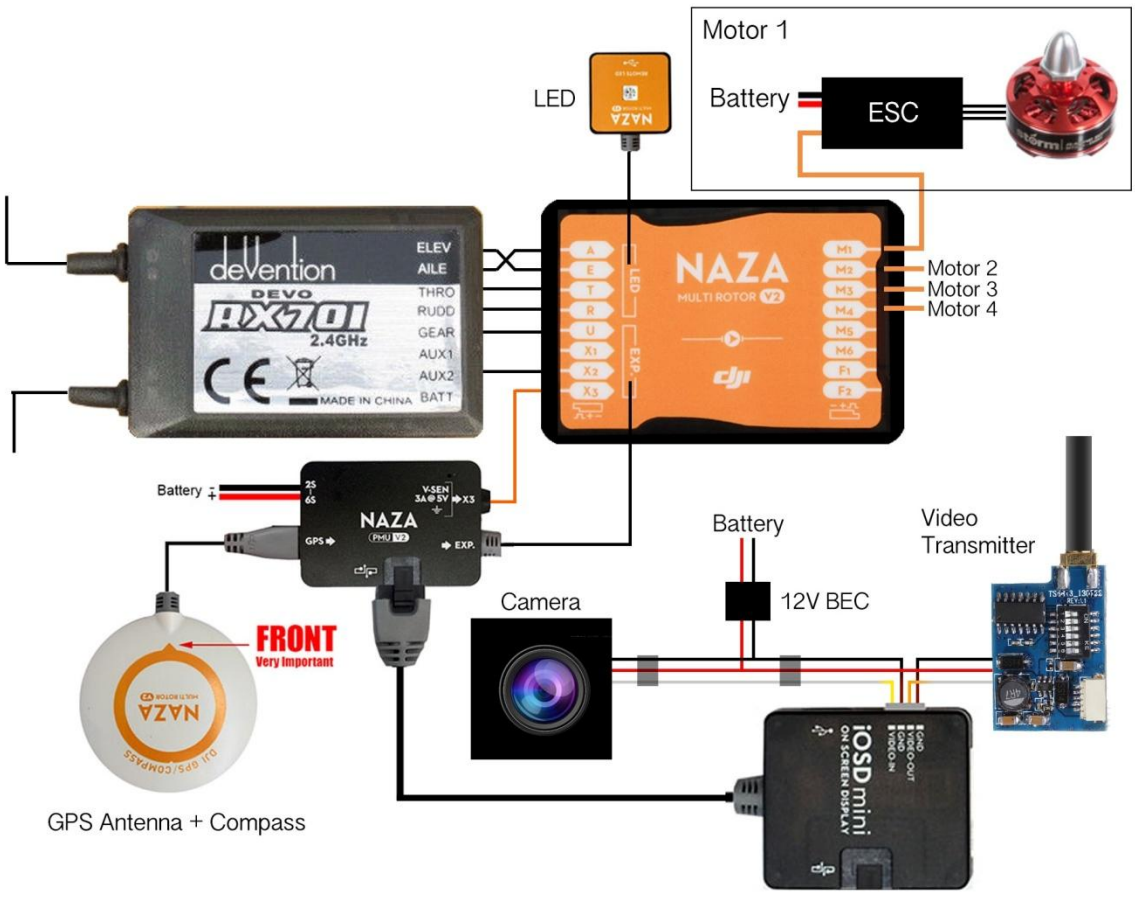
5) If the LED keeps flashing quickly Red, the calibration has failed. Switch the control mode switch one time to cancel the calibration, and then re-start from step 2.

NAZA V2 Manual

It is important to learn more about the NAZA-M V2 GPS Controller. You can download the manual here:
http://download.dji-innovations.com/downloads/nazam-v2/en/NAZA-M-V2_Quick_Start_Guide_en.pdf

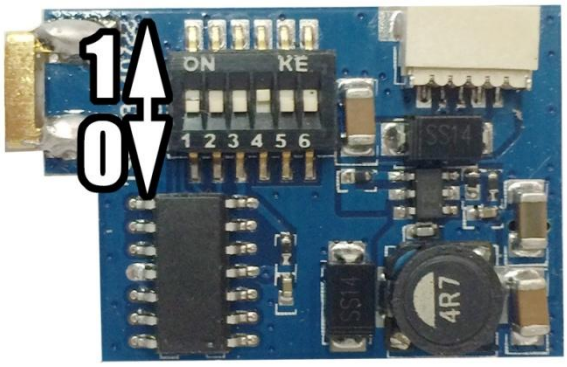
Circuit Diagram





FPV System

Our TS5823 video transmitter has up to **32** different video channels available to avoid interference with other channels.



If two or more drones are flying at the same time, try to select different video frequency to avoid video interference. The bigger different in video frequency between drones, the less interference generated.

Default Setting is channel **5665M**.

Always check the supported channels of you FPV reception devices such as monitor, goggle

Frequency Table

Frequency	Switch (123456)	Frequency	Switch (123456)
5645MHz	001100	5805MHz	001110
5665MHz	101100 **(Default Channel)**	5809MHz	110010
5685MHz	011100	5820MHz	110000
5705MHz	111100	5825MHz	101110
5725MHz	000110	5828MHz	010010
5733MHz	111010	5840MHz	010000
5740MHz	111000	5845MHz	011110
5745MHz	100110	5847MHz	100010
5752MHz	011010	5860MHz	100000
5760MHz	011000	5865MHz	111110
5765MHz	010110	5866MHz	000010
5771MHz	101010	5880MHz	000000
5780MHz	101000	5885MHz	110100
5785MHz	110110	5905MHz	010100
5790MHz	001010	5925MHz	100100
5800MHz	001000	5945MHz	000100

FAQ

Lost connection with radio controller

If the drone cannot connect with transmitter (Red LED inside the RX701 receiver blink rapidly), that means the radio system is not bind successfully. You need to do this re-binding step below:

1) Make sure you have NOTHING plugged into BATT port on the RX701 receiver.
2) On the transmitter, select MODEL > FIXED ID, press ENT, if it is showing the code, then press ENT again, press one more time till it is showing RUN, press "R" to choose NO, press ENT again, it's showing FIXID, press "R" again to choose OFF, then press EXT, and turn off transmitter.
3) Plug the bind plug into Batt port on the RX701 receiver, with this plug still in BATT port and power up the drone, you will see receiver flashing red slowly, then means old code has been erased, unplug drone battery and remove this bind plug.
4) Now you need to activate the Fixed ID function. Turn on transmitter, and then make sure Throttle Stick is all the way down, all trimming is neutral, both corner FMOD switch and Throttle Switch is off (pointing backward) and all switches on the transmitter pointing upward then turn off transmitter.
5) Connect drone battery; the receiver will start flashing, place drone on flat surface.
6) Turn on transmitter, you should see black box running on the transmitter screen, do not touch anything or you will break the searching mode.
7) Do not touch anything (around 7-10 seconds) until transmitter stop flashing and you will see the RX701 receiver have solid light that means binding has completed.
8) On the transmitter, go to MODEL > FIXED ID, turn it ON, then press DN button to confirm the code, then press ENT, and press ENT again to confirm, it will ask you to RUN, choose YES and press ENT. From now on your receiver is bound to this memory on your DEVO 7.

Radio Controller Parameters

If you reset your radio controller (Devo 7) setting, you can apply the setting below:

1. [MODEL] > [TYPE] > AERO

2. [MODEL] > [INPUT] > FM SW = FMD
   [MODEL] > [INPUT] > FM TRM = COMM
   [MODEL] > [INPUT] > HLDSW = HOLD

3. [MODEL] > [OUTPUT] > GEAR = FMD and ACT
   [MODEL] > [OUTPUT] > FLAP = MIX and ACT
   [MODEL] > [OUTPUT] > AUX2 = AUX2 and ACT

4. [MODEL] > [AMPLI] > +20

5. [FUNCTION] > [REVSW] > ELEV = NORM
   [FUNCTION] > [REVSW] > AILE = NORM
   [FUNCTION] > [REVSW] > THRO = NORM
   [FUNCTION] > [REVSW] > RUDD = NORM
   [FUNCTION] > [REVSW] > GEAR = REV
   [FUNCTION] > [REVSW] > FLAP = REV
   [FUNCTION] > [REVSW] > AUX2 = REV

6. [FUNCTION] > [SUBTR] > ELEV = 0%
   [FUNCTION] > [SUBTR] > AILE = 0%
   [FUNCTION] > [SUBTR] > THRO = 0%
   [FUNCTION] > [SUBTR] > RUDD = 0%
   [FUNCTION] > [SUBTR] > GEAR = -5.5%
   [FUNCTION] > [SUBTR] > FLAP = D5.0%
   [FUNCTION] > [SUBTR] > GYRO = 0%
   [FUNCTION] > [SUBTR] > AUX2 = 0%

7. [FUNCTION] > [TRVAD] > ELEV = U100% / D100%
   [FUNCTION] > [TRVAD] > AILE = L100% / R100%
   [FUNCTION] > [TRVAD] > THRO = H100% / L100%
   [FUNCTION] > [TRVAD] > RUDD = L100% / R100%
   [FUNCTION] > [TRVAD] > GEAR = +83.0% / -83.5%
   [FUNCTION] > [TRVAD] > FLAP = U88% / D88%
   [FUNCTION] > [TRVAD] > AUX2 = +100% / -100%

8. [FUNCTION] > [SAFE] > ELEV = HOLD
   [FUNCTION] > [SAFE] > AILE = HOLD
   [FUNCTION] > [SAFE] > THRO = SAFE/L100%
   [FUNCTION] > [SAFE] > RUDD = HOLD
   [FUNCTION] > [SAFE] > GEAR = SAFE/+40%
   [FUNCTION] > [SAFE] > FLAP = HOLD
   [FUNCTION] > [SAFE] > GYRO = HOLD