Storm

LOKI X16

with BetaFlight Controller

USER MANUAL V1.0
DISCLAIMER

Please read this disclaimer carefully before using this product. This product is a hobby with motors 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.
Quick Start - Radiolink AT9 Radio Controller

1. Switch G : Up for Angle mode
(Only affect in Rate mode)

2. Switch E : Up for Low Speed

3. Throttle Down
Mode 2 : Left Stick

4. Power On

5. Connect battery

Always check for battery cable clearance, DON’T let propellers cut the battery cable.

6. Place drone on flat surface for 10 seconds to let it initialize.
7. Unlock the system
   Mode 2 (default): Left Stick: Right Bottom
   Mode 1: Left Stick: Right; Right Stick: Bottom

8. You can fly now

9. After flying and land the drone,
   Please LOCK the propellers IMMEDIATELY
Quick Start - Spektrum DX8 MD2 (Gen 2) Radio Controller

1. Switch G : Up for Angle mode

2. Switch B : Up for Low Speed (Only affect in Rate mode)

3. Throttle Down Mode 2 : Left Stick

4. Power On

5. Connect battery

Always check for battery cable clearance, DON'T let propellers cut the battery cable.

6. Place drone on flat surface for 10 seconds to let it initialize.
7. Unlock the system
   Mode 2 (default) : Left Stick : Right Bottom
   Mode 1 : Left Stick : Right; Right Stick: Bottom

8. You can fly now

9. After flying and land the drone,
   Please LOCK the propellers IMMEDIATELY
Quick Start - FrSky Taranis X9D Plus Radio Controller

1. Switch G: Up for Angle mode

2. Switch E: Up for Low Speed (Only affect in Rate mode)

3. Throttle Down Mode 2: Left Stick

4. Power On

5. Connect battery

Always check for battery cable clearance, DON'T let propellers cut the battery cable.

6. Place drone on flat surface for 10 seconds to let it initialize.
7. Unlock the system
   Mode 2 (default) : Left Stick : Right Bottom
   Mode 1 : Left Stick : Right; Right Stick: Bottom

8. You can fly now

9. After flying and land the drone, Please LOCK the propellers IMMEDIATELY
How to Control - Radiolink AT9 Radio Controller

Switch H
- Flip it once to Reset timer

Switch E
- (only affect in Rate mode)
  - Up is Low Speed
  - Middle is Medium Speed
  - Down is High Speed

Power Switch

Switch G
- Up is Angle Mode
  - Middle is Horizon Mode
  - Down is Rate Mode

Switch C
- Up is Buzzer OFF
  - Middle is Buzzer ON
  - Down is Buzzer ON

MODE 2 (LEFT THROTTLE)
- Standard

MODE 1 (RIGHT THROTTLE)
How to Control - Spektrum DX8 MD2 (Gen 2) Radio Controller

Switch A
0 is Buzzer OFF
1 is Buzzer ON

Switch B
(only affect in Rate mode)
0 is Low speed
1 is Medium Speed
2 is High speed

Switch G
0 is Angle Mode
1 is Horizon Mode
2 is Rate Mode

Power Switch

MODE 2 (LEFT THROTTLE)
Standard

Switch A
0 is Buzzer OFF
1 is Buzzer ON

Switch B
(only affect in Rate mode)
0 is Low speed
1 is Medium Speed
2 is High speed

Switch G
0 is Angle Mode
1 is Horizon Mode
2 is Rate Mode

Power Switch

MODE 1 (RIGHT THROTTLE)
How to Control - FrSky Taranis X9D Plus Radio Controller

**MODE 2 (LEFT THROTTLE)**

**Standard**

**MODE 1 (RIGHT THROTTLE)**
Motors and propellers rotation

Nose

M4: Clockwise

M2: Counter Clockwise

M3: Counter Clockwise

M1: Clockwise
FPV System

We have two different Cam + VTX built for the Loki-X2, they have different method of changing frequency, please see the correct one for your drone.

**FXT FX805A 5.8Ghz 600TVL Camera + VTX**

*(on Lumenier Spec)*
Airy VM275T 5.8Ghz 520TVL Camera + VTX
(on Storm Spec)

Long press 2 secs
Change frequency group (A-F)

Short press
Change channel (Ch. 1-8)

<table>
<thead>
<tr>
<th>FR-A</th>
<th>Ch1:5740MHz</th>
<th>Ch2:5760MHz</th>
<th>Ch3:5780MHz</th>
<th>Ch4:5800MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ch5:5820MHz</td>
<td>Ch6:5840MHz</td>
<td>Ch7:5860MHz</td>
<td>Ch8:5880MHz</td>
</tr>
<tr>
<td>FR-B</td>
<td>Ch1:5705MHz</td>
<td>Ch2:5685MHz</td>
<td>Ch3:5665MHz</td>
<td>Ch4:5645MHz</td>
</tr>
<tr>
<td></td>
<td>Ch5:5850MHz</td>
<td>Ch6:5905MHz</td>
<td>Ch7:5925MHz</td>
<td>Ch8:5945MHz</td>
</tr>
<tr>
<td>FR-C</td>
<td>Ch1:5865MHz</td>
<td>Ch2:5845MHz</td>
<td>Ch3:5825MHz</td>
<td>Ch4:5805MHz</td>
</tr>
<tr>
<td></td>
<td>Ch5:5750MHz</td>
<td>Ch6:5765MHz</td>
<td>Ch7:5745MHz</td>
<td>Ch8:5725MHz</td>
</tr>
<tr>
<td>FR-D</td>
<td>Ch1:5658MHz</td>
<td>Ch2:5695MHz</td>
<td>Ch3:5732MHz</td>
<td>Ch4:5769MHz</td>
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<tr>
<td></td>
<td>Ch5:5806MHz</td>
<td>Ch6:5843MHz</td>
<td>Ch7:5880MHz</td>
<td>Ch8:5917MHz</td>
</tr>
<tr>
<td>FR-E</td>
<td>Ch1:5733MHz</td>
<td>Ch2:5752MHz</td>
<td>Ch3:5771MHz</td>
<td>Ch4:5790MHz</td>
</tr>
<tr>
<td></td>
<td>Ch5:5809MHz</td>
<td>Ch6:5828MHz</td>
<td>Ch7:5847MHz</td>
<td>Ch8:5866MHz</td>
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<tr>
<td>FR-F</td>
<td>Ch1:5362MHz</td>
<td>Ch2:5399MHz</td>
<td>Ch3:5436MHz</td>
<td>Ch4:5473MHz</td>
</tr>
<tr>
<td></td>
<td>Ch5:5510MHz</td>
<td>Ch6:5547MHz</td>
<td>Ch7:5584MHz</td>
<td>Ch8:5621MHz</td>
</tr>
</tbody>
</table>
Binding with Radiolink AT9 Transmitter

If your drone cannot respond to the radio controller, the connection between radio controller and receiver may lost and you can try to re-bind them by following the procedure.

*(Skip Step One if it is already Purple light)*

1. Power on the aircraft, then Press and Hold the very small black button on the side of the receiver, until the LED goes flashing, then release the button.

2. After a few seconds it will automatically bind with the transmitter, it’s that simple.
If you reset your radio controller (AT9) setting, you can apply the setting below:

1) Press and Hold the controller wheel (With wordings “PUSH”) to unlock the manual. Press and Hold Mode Button to go into basic menu page

2) \[\text{STK-MODE} = 2\] (Stick Mode)  
\[\text{LockScreen} = 30\text{s}\] (Time to lock screen)

3) \([\text{TYPE}] = \text{AIRCRAFT}\)

4) \([\text{SELECT}] = 02\)  
\([\text{NAME}] = \text{CLEANFL}\) (Any name you want)

5) Go to \([\text{AUX-CH}] \rightarrow \text{ATTITUDE}\), apply the setting below:  
\[\text{[CH]} = \text{CH5}\]  
\[\text{[SW3]} = \text{SwG}\]  
\[\text{[SW2]} = \text{NUL}\]  
\[\text{[STABL.] = 0\%}\]  
\[\text{[STABL.] = 50\%}\]  
\[\text{[ARCO.] = 100\%}\]

6) \([\text{CH5}] = \text{-----}\)  
\([\text{CH6}] = \text{SwE}\]  
\([\text{CH7}] = \text{VrA}\]  
\([\text{CH8}] = \text{SwC}\]  
\([\text{CH9}] = \text{SwF}\]  
\([\text{CH10}] = \text{SwA}\]
7) [TIME] = 10:00
   [MODE] = UP
   [ON][1] = ST-THK (Using Throttle Stick to start the timer)
   [ON][2] = 15% (Move the indicator over the value, set throttle stick to about 15%, Press and hold “Push” button to recognize the throttle value and move the wheel to change the arrow sign)
   [RESET][1] = SwH (Using Switch H to responsible for the reset timer action)
   [RESET][2] = DOWN (Using Switch H's down action to reset the timer)

8) [AILE] = NOR
   [ELEV] = REV
   [THRO] = REV
   [RUDD] = NOR
   [ATTI] = NOR
   [AUX1] = NOR
   [AUX2] = NOR
   [AUX3] = REV

9) [AILE] = 100/100
   [ELEV] = 100/100
   [THRO] = 100/100
   [RUDD] = 100/100
   [ATTI] = 100/100
   [AUX1] = 100/100
   [AUX2] = 56/56
   [AUX3] = 100/100

10) Go to [F/S], apply the setting below:
    [AILE] = NOR
    [ELEV] = NOR
    [THRO] = 15%
    [RUDD] = -70%
    [ATTI] = NOR
    [AUX1] = NOR
    [AUX2] = NOR
    [AUX3] = NOR
Binding with Spektrum DX8 MD2 (Gen 2) Transmitter

1. **REMOVE ALL Propellers** first (for safety reason).

2. **Press and hold** the bind button on the RX and connect drone battery, it will be flashing orange LED rapidly, that means it has entered Bind mode.

3. **Press and hold** the bind button on your DX8 TX and turn it on, you may get two results:

   A. DX8 tells you “Bind Fail” and you have **NO LED** on the receiver, that means it has erased old bind code on the receiver, then go back to Step 2 and start the whole process again.

   B. DX8 tells you it has found a DSMX 22ms device, and you have **solid orange LED** on the receiver, that means it has successfully bound with your DX8 TX.

4. Sometimes the receiver has old code and need to repeat the binding process.
Spektrum DX8 MD2 (Gen 2) Transmitter Parameters

Please make sure your Spektrum DX8 MD2 (Gen 2) transmitter have the following parameters.

1) Press and Hold the roller while turn on transmitter, goto [Model select] and add a new model for the drone, rename it as you like. (e.g. Storm)

2) In [Model Type], choose Plane

3) Goto [Channel Assign], make GEAR : Gear and AUX1 : AUX1

4) Same page, lower right corner, goto NEXT page

5) In the [Channel Input Config] page, make Gear : G switch, Aux 1 : B switch, Aux 2 : A switch

6) Press Back button on transmitter panel until you exit system menu, goto [Servo Setup] page

7) In [Travel] menu, make sure you have those six channels (THR, AIL, ELE, RUD, GER and AX1) to have 150 for travel like this picture, otherwise the drone will not start.

1) Goto [Reverse] menu, make sure AIL, RUD, GER and AX1 channel are reversed.
Binding with FrSky Taranis X9D Plus Transmitter

1. Turn on your Taranis X9D Plus transmitter, goto "Model Setup" (Press MENU and PAGE button once). In the "Internal RF" section, choose Mode = D16, Channel Range = CH1-16, Receiver No. 01, and then click "Bind", the transmitter will start beeping.

2. Power up the R-XSR receiver (Connect battery to the drone) while holding the Bind button. The RED LED on the receiver will start flashing, which means binding has completed.

3. Power off Transmitter and Receiver.

4. Turn on the transmitter and power on the Receiver; you should see a Green LED on the receiver, which means it has bound with your FrSky transmitter.

Radio Controller Parameters - FrSky Taranis X9D Plus Transmitter

For FrSky TARANIS Plus user, you can use the latest OpenTX program to backup/restore your setting or our own profile. You can find the procedures below:


3. Turn on your radio by **holding both lower trims towards the center** and turn on transmitter at the same time, you will enter BootLoader mode.
4. Connect your FrSky Taranis X9D Plus transmitter to your PC / Mac via USB cable and the controller screen will show “USB Connected”.

5. Click ✨ to read your radio controller profile

6. Your radio controller profile will be loaded on the screen, always click ✨ to save your existing profile before you make any changes, in case thing goes wrong.

7. Click 📂 to open our profile, drag the correct drone memory to your own transmitter.

Remember to click ✨ to write the profile back to your radio.

8. Unplug USB cable, switch off transmitter and switch on again.