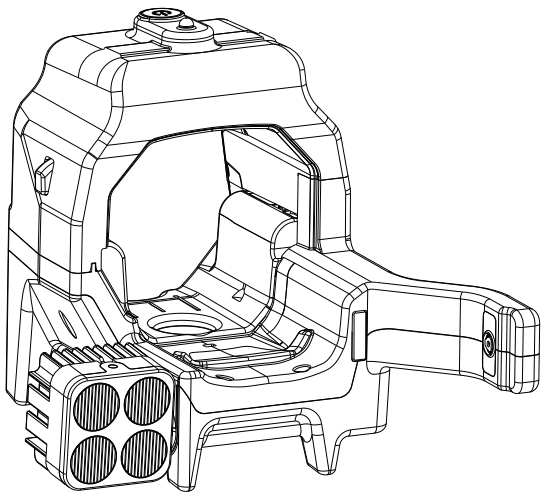# TUNDRA DRONE

AUTOMOVING LIGHT FOR DJI MAVIC 3

USER MANUAL

CONTENTS

USE AND CARE OF THE PRODUCT – CUSTOMER RESPONSIBILITY

The Drone Pilot shall only use the **Tundra Drone Automoving light for DJI Mavic 3** (hereafter product) as described in this manual.

Drones, aircraft, or unmanned aerial vehicles (UAVs) (hereafter aircraft or drone) mounted with the Product from Tundra Drone AS (hereafter Tundra Drone) shall only be used in accordance with the regulations for drone flying in the country in which the Drone Pilot operates. The Drone Pilot must ensure that the drone, where the Product is mounted, is insured at all times with statutory liability insurance if required by national law in the country were operating the aircraft.

⚠️
Important

The Drone Pilot understands that using a Product from Tundra Drone on drones may entail a higher risk because mounting additional drone equipment on the drone may affect the performance of the drone itself, in both the short and long term. It is therefore recommended that the Drone Pilot performs more frequent maintenance of the drone than the drone manufacturer's recommendations, to ensure that performance is not reduced. Furthermore, additional drone equipment mounted to the drone may increase the likelihood that weather and other conditions may affect the drone's flight characteristics. The Drone Pilot understands that these constitute conditions that the Drone Pilot must be especially careful with when flying the drone. The Drone Pilot must read and understand the user manuals for both the drone and the product from **Tundra Drone** before the product is used, and then carry out their own training with these in a calm, delimited, and safe area, before the Drone Pilot takes the product from Tundra Drone into ordinary use.

TUNDRA
DRONE

Negligent use of drones with mounted drone equipment may lead to crashes, accidents or other dangers to the environment and people. If an incident as mentioned causes damage or death to people and animals, or damage to buildings, other physical objects or surroundings, and/or economic loss or damage, the Drone Pilot agrees that the Drone Pilot cannot hold Tundra Drone liable for damages, and the Drone Pilot waives the right to pursue Tundra Drone via legal action in any country. Should claims be made against Tundra Drone as a result of damage or loss that occurs when the Product is used by the Drone Pilot, or for breach of public and private regulations and permits, the Drone Pilot is obliged to indemnify Tundra Drone. This also applies if the damage occurs to a third party.

Warning

IMPORTANT SAFETY INFORMATION

Use with caution:
- The product output is high intensity light. Do not look directly to the product's floodlight when the light is turned on. The product's high intensity light can harm or cause permanent damage to human eyes!

- Do not turn on the light before you have positioned the light away from yourself and other people.

Warning

- Do not use the product in rain, snow or wet weather conditions.

- Do not expose the device for moisture.

- Do not place the device where it can be exposed to excessive heat or a dusty environment.

Important

- When flying with Automoving light, the drone battery will drain at a faster rate. It is recommended to initiate the return to home process with a higher battery level than usual.

Warning | The product is equipped with a rechargeable lithium battery. Lithium batteries may have regulations and limitations for transportation, especially with airplanes.

CHARGING THE AUTOMOVING LIGHT BATTERY

Use the provided battery charger kit to fully charge the Automoving light Battery before first use.
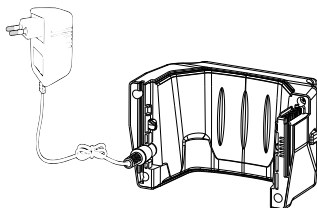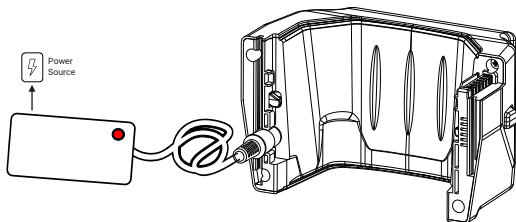Charging time for empty battery is up to 2 hours

AC power adapter

Automoving light Battery

1
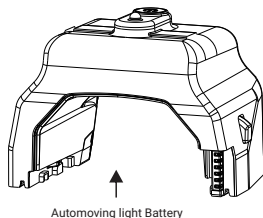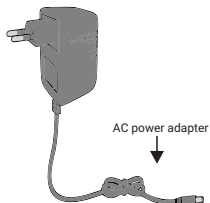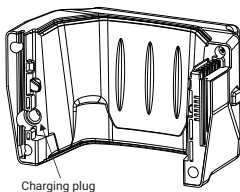
Charging plug

Keep the Battery unit as shown in the image to get the access to the Charging plug on the bottom side.

2

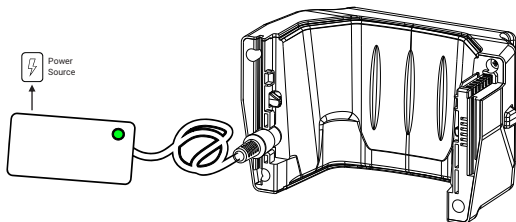Connect the AC power adapter to the Battery charging plug.

3

Power
Source

Connect the AC power adapter to a power source (100-240 V, 50/60 Hz).

The AC power adapter will display a "Red" LED light when charging.

4

Power
Source

The Automoving light battery is fully charged when the "Green" LED light is turned on.

Disconnect the AC power adapter from the power source and disconnect the AC power adapter from the Automoving light battery once the battery is fully charged.

Charging time: 2 hours (empty to 100%)

TUNDRA
DRONE

<table>
<tr>
<td>⚠
Important</td>
<td>- DO NOT charge an Automoving light Battery immediately after the flight as the temperature may be too high. Wait until the battery cools down to room temperature before charging again.
- The ideal charging temperature is about 10ºC to 30ºC (50ºF to 85ºF).
- The Automoving light Battery charger hub (included only in Large operations kit) can charge up to six batteries.</td>
</tr>
</table>

PREPARE THE DJI RC REMOTE CONTROLLER'S DJI FLY APP BEFORE FIRST FLIGHT

1. Power ON the DJI RC Remote controller to enter the home screen of the DJI Fly app
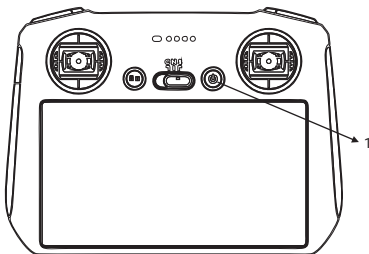
2. Go to "System Settings" by tapping ●●● (The System Settings button)

3. Select Control menu.

4. Set the function of the customizable C2 Button to turn on/off the Recenter/Tilt down gimbal.

5. The light is toggled when the camera goes from horizontal to straight down and back to horizontal within 2 seconds, this is done by clicking the C2 Button two times within 2 seconds.

> ⚠ **Note**
>
> If preferred it is possible to change to activate the floodlight by using the Auxiliary Bottom Light. To do that, choose "Auxiliary Bottom Light" in Step 4 above, instead of "Recenter/Tilt down gimbal". In addition, you need to change the operating mode for the Automoving light activation by the Auxiliary Bottom Light (LDR) instead of the Gimbal tilt (Gesture). This is done by entering to the "Automoving light Web Setup page" (refer page 17) and changing the mode from the Device Setting tab.

> 🚫 **Warning**
>
> Do not turn on the Automoving Light without attaching with the drone. Lack of additional cooling from the aircraft's propellers may cause the Automoving light to overheat and malfunction.

HOW TO USE THE DJI REMOTE CONTROLLER WITH THE AUTOMOVING LIGHT

1. Prepare the DJI Mavic 3 Aircraft for flight.

2. Power up the aircraft and make sure that the DJI Fly app connects to the aircraft.

3. Tilt the Drone Camera by pressing the C2 Button horizontal to straight down (90º down) and back within 2 seconds with the DJI Remote controller (the Automoving light will turn ON/OFF in sync with the Aircraft's camera movement once Automoving light is mounted to the drone successfully).
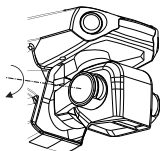
Horizontal to straight down
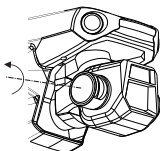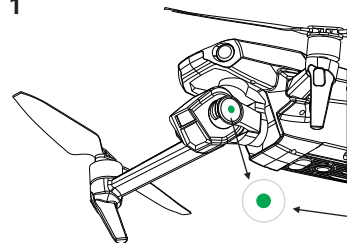
Horizontal position

C2 Button ◄
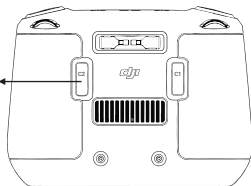
PREPARE THE AUTOMOVING LIGHT AND MOUNT TRACKING MARKS TO THE AIRCRAFT'S CAMERA BEFORE FIRST FLIGHT

⚠️ **Important** Clean the surface on the aircraft's camera before mounting the tracking marks. Avoid using strong detergents as it may cause damage to the aircrafts paint.

1

Mount the Green Tracking (sticker) to the center of the circle on the aircraft's camera.

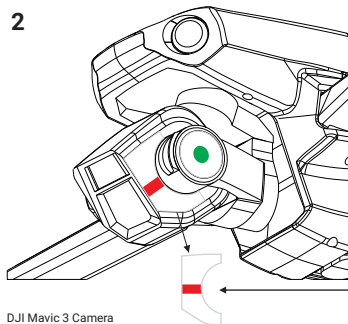Green tracking sticker (mount to the center of the circle)

DJI Mavic 3 Camera

🚫 **Warning** Do not use too much pressure when mounting the tracking marks, adding too much pressure have a chance to damage the aircraft´s camera gimbal mechanism.

2

Mount the Red Tracking Sticker on the aircraft's camera (see illustration).

The red tracking mark should be aligned in parallel with the aircraft camera's direction.

Red tracking sticker (align the sticker with the straight edge of camera and to the center of the circle)

DJI Mavic 3 Camera

TUNDRA
DRONE

MOUNT THE AUTOMOVING LIGHT ON THE AIRCRAFT AND PREPARE FOR TAKEOFF
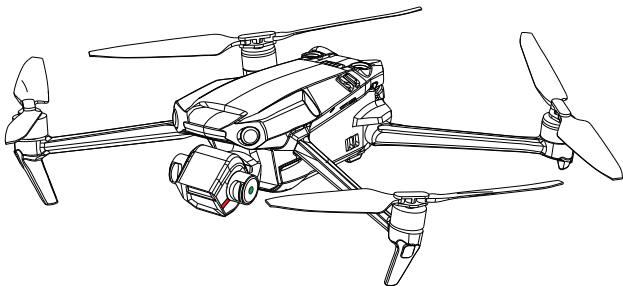
Prepare the aircraft for flight by following the instructions from your Aircraft's user manual

⚠ **Important**   Make sure the Red and Green Tracking Stickers are mounted before you proceed

1

Aircraft (DJI Mavic 3 Drone)

Automoving light's Main unit
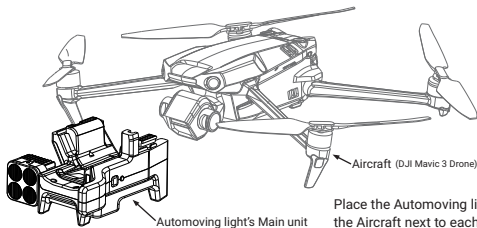
Place the Automoving light's Main unit and the Aircraft next to each other.

2
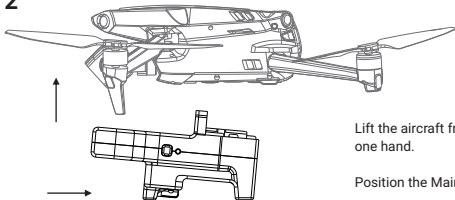
Lift the aircraft from the ground with one hand.

Position the Main unit below the aircraft.

3

Insert the aircraft from above into the
Automoving light Main unit.

4

Correctly mounted.

5

Place the Automoving light Battery above
the Automoving light Main unit.

6

Press IN

Press IN
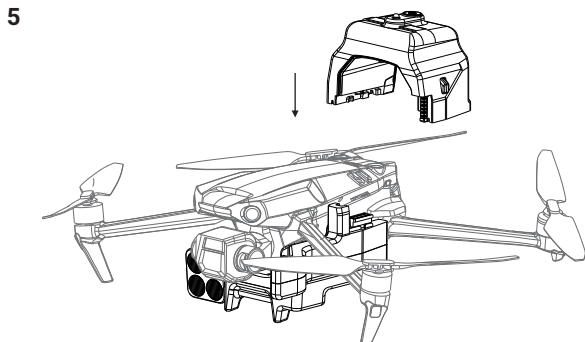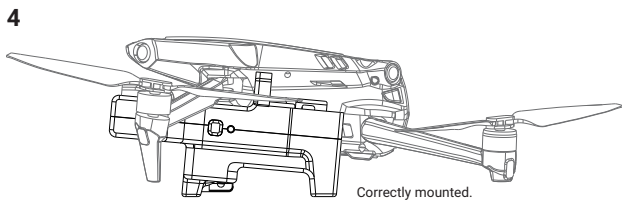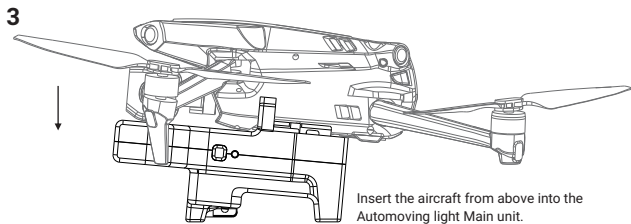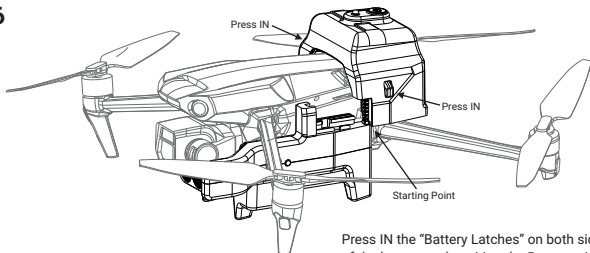
Starting Point

Press IN the "Battery Latches" on both sides
of the battery and position the Battery with
the Main unit battery slots starting point

7
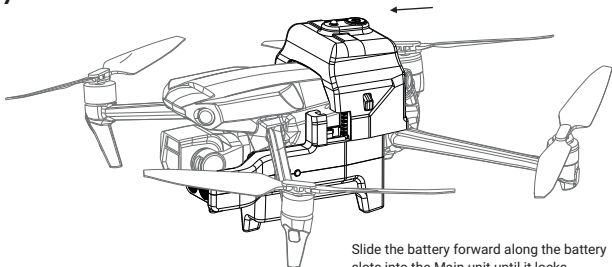
Slide the battery forward along the battery
slots into the Main unit until it locks.

8
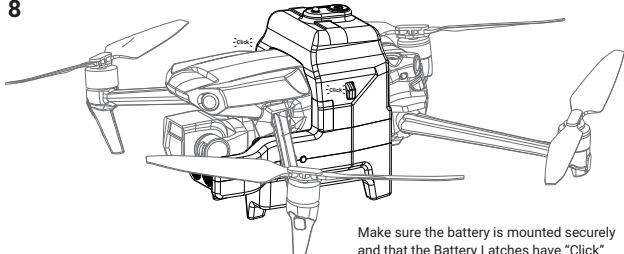
Click

Click

Make sure the battery is mounted securely
and that the Battery Latches have "Click"
into place on both sides.

9

No Gap

The image on the illustration shows correctly mounted battery.

When correctly mounted, there should be "No Gap" between the Battery and the Main unit as shown in the illustration.
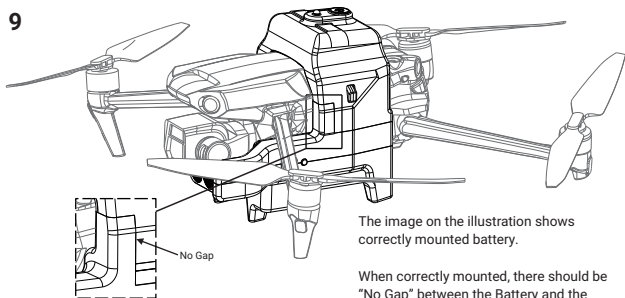
⚠️ Important

The Automoving light's Battery is also used to securely mount and lock the Automoving light unit to the aircraft.

10

The Automoving light is now completely and securely mounted on the aircraft.

11

Power Button

Top Strobe

Floodlight LED
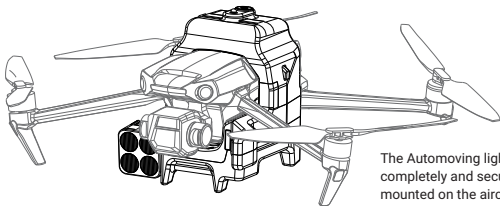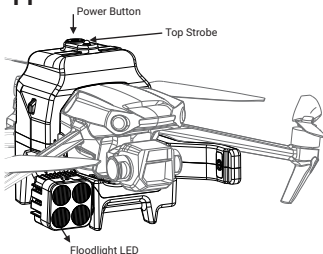
To start up the Automoving light hold the Power Button on the battery down for about 3 seconds. The battery will start with indicating charge level in four steps where 1 flash is empty and 4 flashes is full. After 5 seconds the Top Strobe will start to flash continuously in 1Hz, in sync with the Bottom strobe.

The Floodlight LED will flash once on startup and once more when ready for use. Boot-up time is about 30 seconds.

12
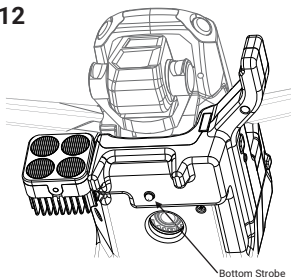
Bottom Strobe

Bottom strobe will flash in sync with the
Top Strobe attached with the Battery.

13
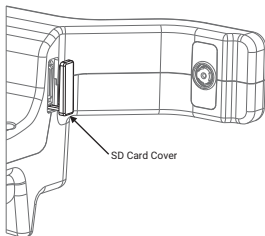
SD Card Cover

SD Card Cover must always be secured during
flight to prevent dust and moisture to enter
the device.

14
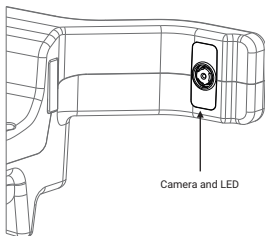
Camera and LED

Camera and the LED plays the main role
in the working of Automoving light.

** Please make sure the Camera and the LED
on the Automoving light is not covered or
blocked while in use.

TUNDRA
DRONE

15
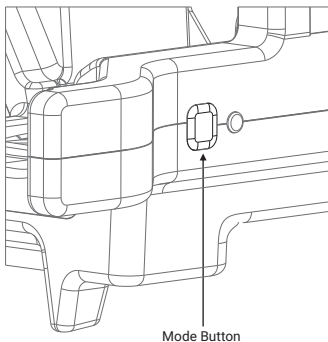
Mode Button is used for activating the Wifi hotspot in Automoving light so that you can connect to Automoving light with a computer, phone or tablet.

Once the Automoving light is booted up, within 3 second Press and hold Mode button for 7 seconds to activate the Wifi hotspot in the Automoving light.

Mode Button

⚠ Note

If the Software version on the device is " v1.2.5 " or above, by pressing the Mode Button once, the WiFi Hotspot will be activated. The "Camera LED" will keep flashing while WiFi Hotspot is activated. Press the mode button one more time to deactivate WiFi Hotspot.

16
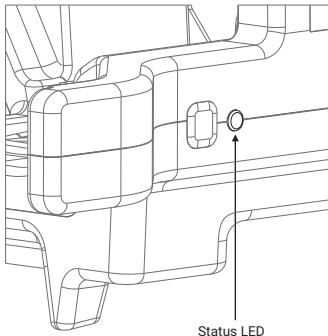
The Status LED is green when the unit is powered ON

Status LED

17
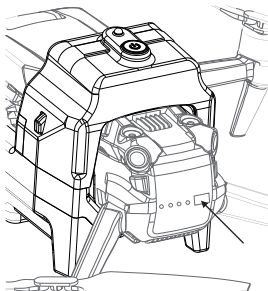
Power up the aircraft.

18
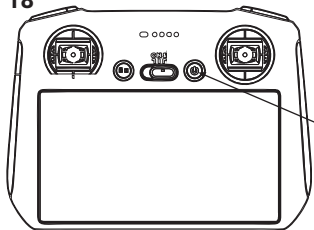
Turn on the aircraft's Remote Controller and make sure it is connected to the aircraft.

⚠️ Important   Before taking off, make sure the Aircraft Status bar in DJI Fly app displays **Ready to Go**.

19
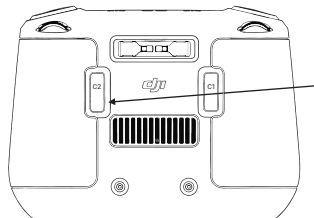
Tilt the Camera by pressing the "C2 button" from horizontal to straight down (90° down) and back within 2 seconds with the DJI Remote controller to turn on Floodlight.

⊘ Warning	Do not turn ON the Flood light of Automoving Light if the aircraft's propellers are not rotating. Lack of additional cooling from the aircraft's propellers may cause the Automoving light to overheat and malfunction.

20

You are now ready for take-off !
Fly safely !
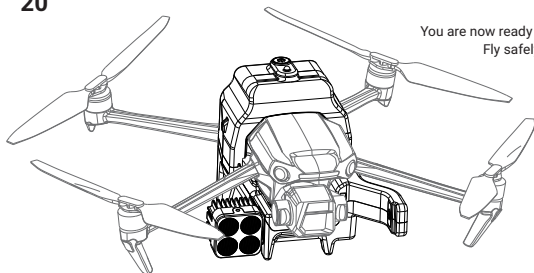
⊘ Warning	Do not look directly at the floodlight LED outlet when the light is turned on. It can harm or cause permanent damage to human eyes! Please use with caution

⊘ Warning	Do not turn on the Automoving Light without attaching with the aircraft. Lack of additional cooling from the aircraft's propellers may cause the Automoving light to overheat and malfunction.

⊘ Warning	The Flood light should be quickly turned OFF after landing to avoid burning or damaging the Electronics, LED's, Ground or the Landing pad.

21
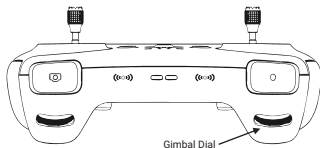
Gimbal Dial

Controlling the aircraft's camera tilt with the Gimbal Dial, the Automoving light automatically follows the Aircraft's Camera tilt angle, for optimal illumination.

⚠ Important	Do not use the Gimbal Dial when the aircraft is on the ground and also during the Takeoff and Landing.

AUTOMOVING LIGHT LENS KIT CHANGING

Automoving light is compatible with different type of Lens Kits to have better user experience to the customer. The Lens Kit's are add-ons which can be purchased separately from the Tundra Drone website.

Floodlight Lens Kit

60° 30°
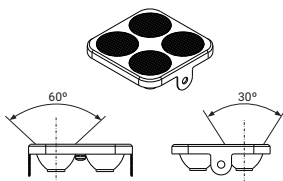
Spotlight Lens Kit

5° 5°
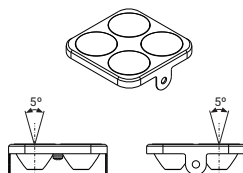
Detaching and Attaching of Lens Kit

1
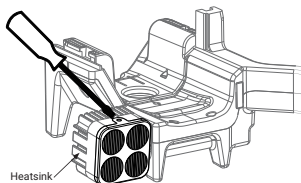
Heatsink

Use a flat Screw Driver to pop out the lens locking given on both top and bottom side for the Heatsink

2
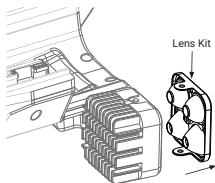
Lens Kit

Hold the Lens Kit with the hand and pull out once unlocked.

3

Align the edge
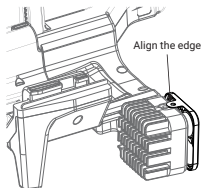
To attach the Lens Kit, align both the flanges (top and bottom flanges) of the Lens Kit to the Heatsink and push towards Heatsink to lock the.

** Make sure both Top & Bottom lock is engaged before use.

Warning

Before attaching the Lens Kit to Heatsink, make sure the Lens Kit is cleaned with a Dry Clean Cloth. If there is water/ moisture present inside the Lens Kit it can cause LED or Electronics malfunction.

AUTOMOVING LIGHT WEB SETUP PAGE

Web Setup Page is a platform which can be used for Updating the Automoving light Software, Calibrating the Flood light, change the Activation of Flood light and more.

> ⚠️ **Important**
> - Depending on the Software Version the connectivity to the Wifi Hotspot can vary.
> - To know about the current Software Version running in the Automoving light you can clock the boot up time. If the boot time is about 1 minute then the device must be running with a software version which needs to be updated first.
> - If the Boot time is about 30 seconds then you have the newer software version and you can use the mode button to turn on the Hotspot in the Automoving light to connect to the "Web Setup Page". .

How to activate the hotspot and login to Web setup page?

1) Once the Automoving light is booted up, within 3 second press and hold mode button for 7 seconds to activate the Wifi Hotspot in the Automoving light and connect to the Wifi **"tundradrone"** with the password "tundradrone" with a computer, phone or tablet.

2) Open a web browser and type http://192.168.0.5:5000 on the address bar and press enter.
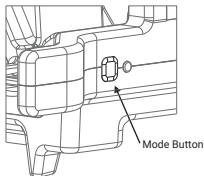
Mode Button

> ⚠️ **Note**
> If the Software version on the device is **" v1.2.5 "** or above, by pressing the Mode Button once, the WiFi Hotspot will be activated. The "Camera LED" will keep flashing while WiFi Hotspot is activated. Press the mode button one more time to deactivate WiFi Hotspot.

1
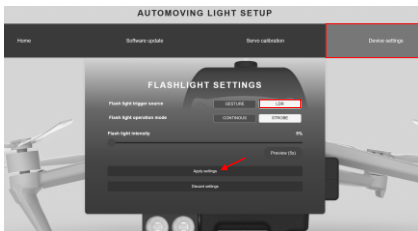
Activate Flood light using Auxiliary Bottom Light

On the Automoving light web setup page, select the 4th tab "Device Settings" to activate the Flood light by turning ON/OFF the drone Auxiliary Bottom Light.

- To change the activation of the flood light select the option "LDR" as marked in the image.
- Then click on Apply settings.

TUNDRA
DRONE

2
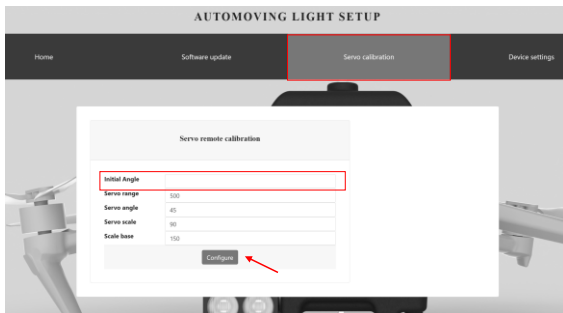
Calibration of Flood Light

On the Automoving light web setup page, select the 3rd tab "Servo calibration" to calibrate the Flood light with the drone camera.

(Do the calibration only when it is needed, the unit is calibrated with the aircraft camera by default)

- To calibrate the flood light change only the value on Initial Angle column.
- Values entered should be between -15 to -85.
- Then click on Configure.

⊘ Warning	Do not look directly to the product's floodlight when the light is turned on. The product's high intensity light can harm or cause permanent damage to human eyes!

AUTOMOVING LIGHT SOFTWARE UPDATE

Update the software on your Automoving light for better experience.
Software of Automoving light can be updated in two different ways as shown below:
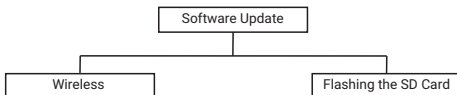
⚠ Important	If you have received your unit before "March 2023" then you will have to Flash the SD Card in your Automoving light. After the update you will be able to update your device wirelessly also.

TUNDRA
DRONE

1
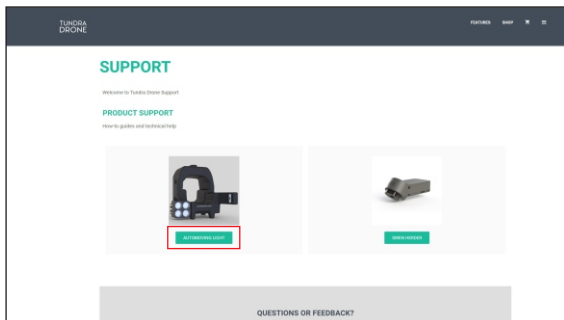
Use any web browser and type https://tundradrone.com/support/ to open the Tundra Drone web support page and select "Automoving Light".

2
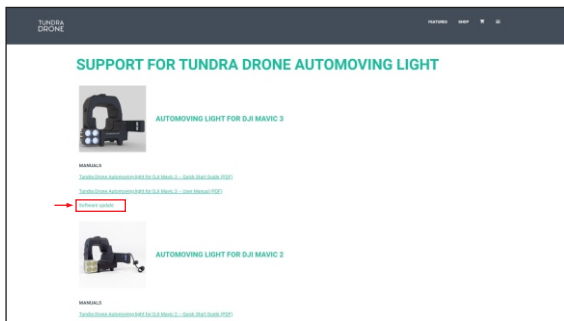
Select the "Software update" link shown below for the type of Automoving light which you want to do the update.
(Above image shows how the "Automoving Light for DJI MAVIC 3" software update link is selected)

3

This is the page where you can find more details about each software updates we have released for Automoving Light.
Select the "Download latest software" link for getting the latest update files.
(Above image shows the "Automoving Light for DJI MAVIC 3" software update page)

<u>UPDATE THE SOFTWARE WIRELESSLY</u>

Click and download all three latest files listed below "Update files".

⚠️ Important	Make sure to download all three files before proceeding to next step.

1   How to activate the hotspot and login to Web setup page?
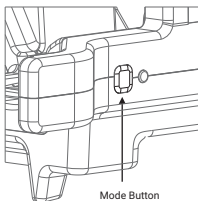
- Once the Automoving light is booted up, within 3 second Press and hold mode button for 7 seconds to activate the Wifi hotspot in the Automoving light and connect to the Wifi **"tundradrone"** with the password "tundradrone" with a computer, phone or tablet.

- Open any web browser and type http://192.168.0.5:5000 on the address bar and press enter.

Mode Button

> ⚠ **Note**
> If the Software version on the device is " **v1.2.5** " or above, by pressing the Mode Button once, the WiFi Hotspot will be activated. The "Camera LED" will keep flashing while WiFi Hotspot is activated. Press the mode button one more time to deactivate WiFi Hotspot.

2   How to update the software using Web setup page?

Version: UiX-V 1.2.6 GP-V 1.2.5   Software version
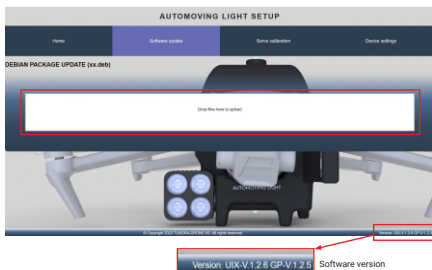
_ Select "Software update" tab from the Web Setup page.

_ Drag and drop the latest "tundra_uix_server_xx.xx.xx.dbe" file and let it finish updating.

_ Drag and drop the latest "tundra_hotspot_xx.xx.xx.dbe" file and let it finish updating.

_ After that update is done drag and drop the latest "tundra_green_app_xx.xx.xx.dbe" and let the unit install and reboot.

_ After the reboot is finished, restart the unit by turning OFF & ON to repeat the steps above for connecting to hotspot and open Web Setup page.

_ Check bottom of the Web Setup page to validate the current software version running on your device.
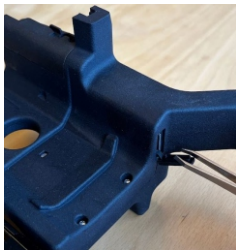
UPDATE THE SOFTWARE BY FLASHING SD CARD

Click and download the latest files listed below "Image files".

⚠️ **Important**

Make sure to download "Image file for Automoving light xx.xx.xx (update release date)" file before proceeding to next step.

1

Use tweezers or other suitable tool to pull out the SD card without damaging it

2

Insert the SD card to the SD card slot on your computer

🚫 **Warning**

Do not damage the SD Card while removing or reinstalling from the Automoving light

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3   Download and install "balena Etcher" software from internet to your PC.
link for download: https://etcher.balena.io/

4   Flashing the SD card with the downloaded "Image file".
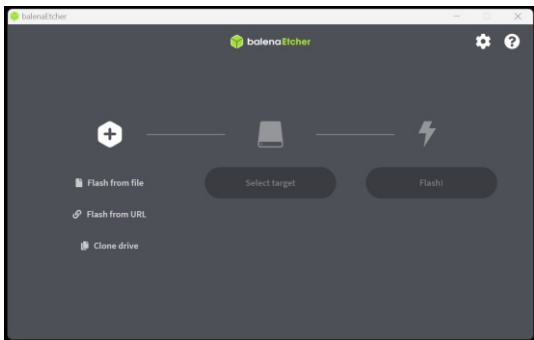
- Select "Flash from file" and select the downloaded Image file from website.

- Select the "Target device (SD Cad)" and proceed forward by clicking "Flash button".

- After the flashing is done the software will be validated by "balenaEtcher", once the validating is done close "balenaEtcher" software and safe remove the SD Card from your PC.

5   Reinstall the SD card to Automoving light and secure the SD Card by closing the Rubber Part.

SUPPORT

For technical support please contact us
https://tundradrone.com/support

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