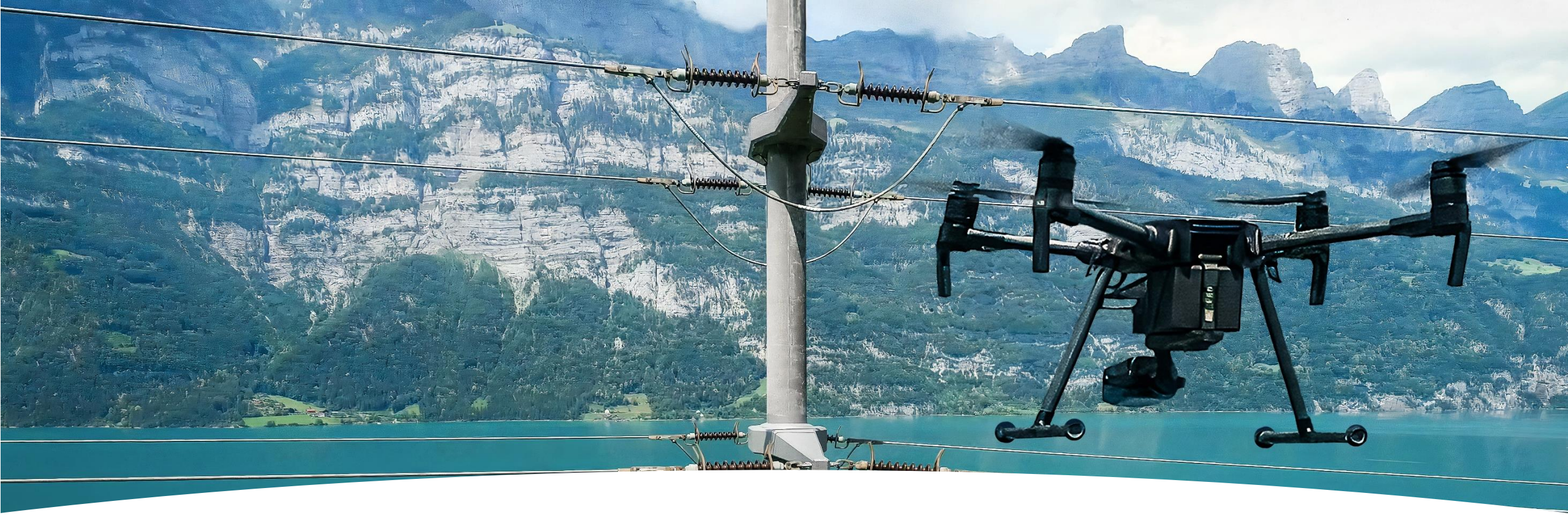

LINIAair Manual

November 2024

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2. Before the Flight
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4. After the Flight
5. Tips & Tricks
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1. First Use

1.1 Download and Install the App on the Controller

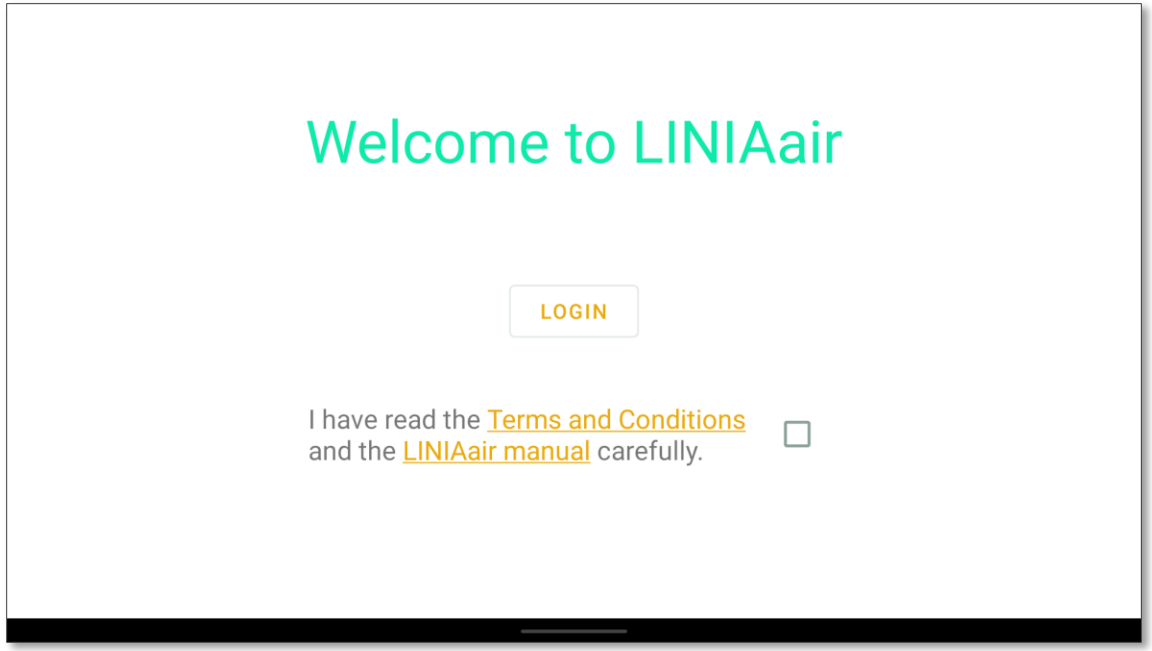
1.2 Login to Your Account

1.1 Download and Install the App on the Controller

- Download the latest version from axpo.com/linia
- Open Application “Files”
- Navigate to “Download”
- Click on LINIAair_x.x.x.apk to install the downloaded version
- If the installation does not work, please check FAQ or Contact Us

1.2 Login to Your Account

- Open the LINIAair application on the controller.
- You'll see the screen below. Please read the two sources carefully, check the box to acknowledge, and then press LOGIN.
- LINIAair uses single-sign-on.
  You need to log in just once initially.
  If you close the app, your login will persist when you open the app next time.



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2. Before the Flight

2.1 Homescreen Overview

2.2 Download Missions

2.3 Homescreen Mission Selection

2.4 Drone Settings

2.5 Accounts

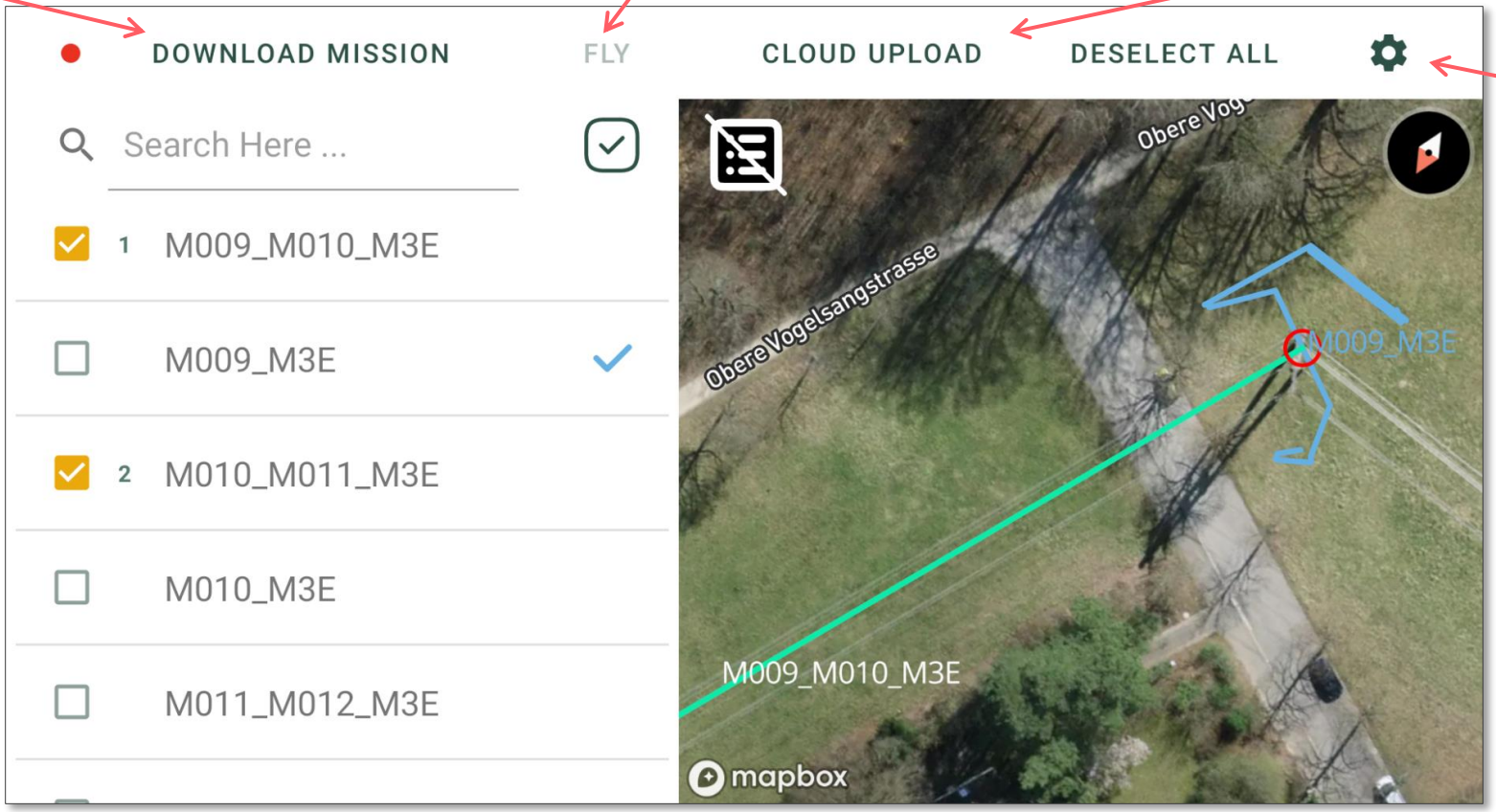
2.1 Homescreen Overview

Download missions

Go to Flight Screen
(Only possible with connected drone)

Upload images from drone to cloud

Settings



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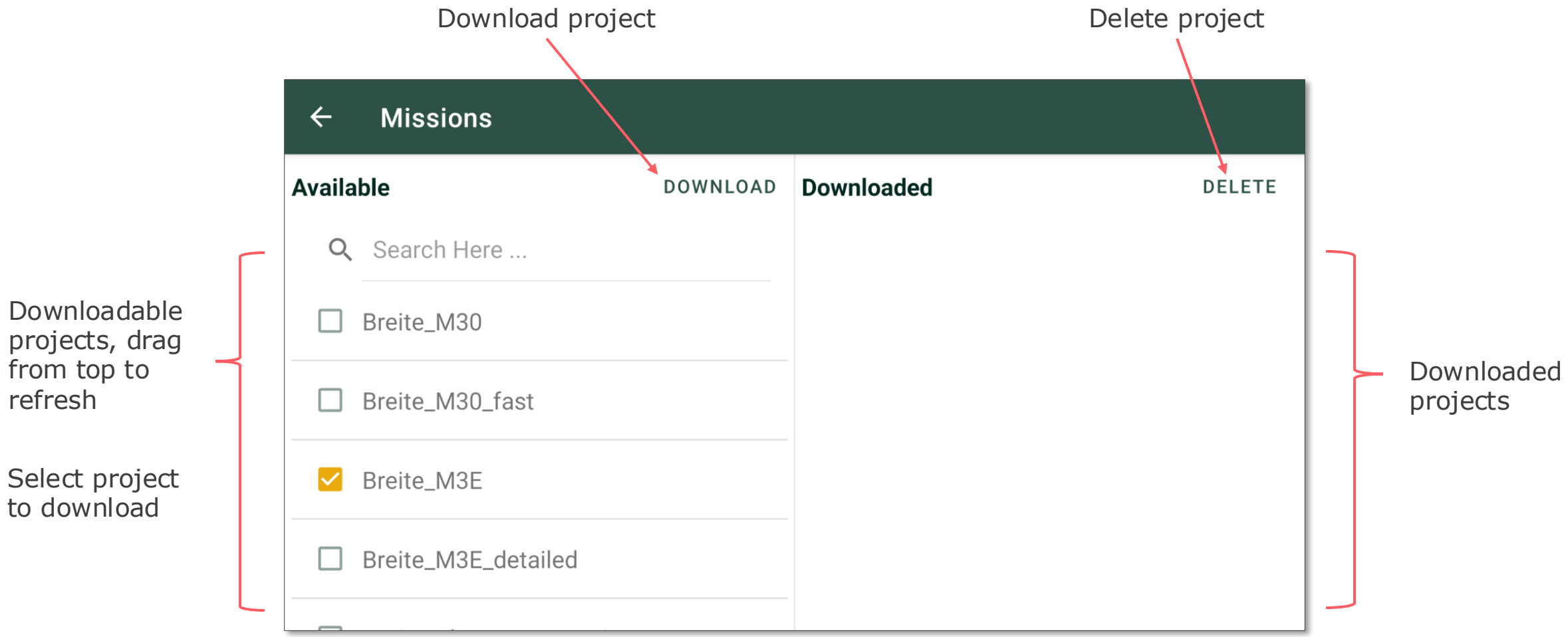
2.2 Download Missions



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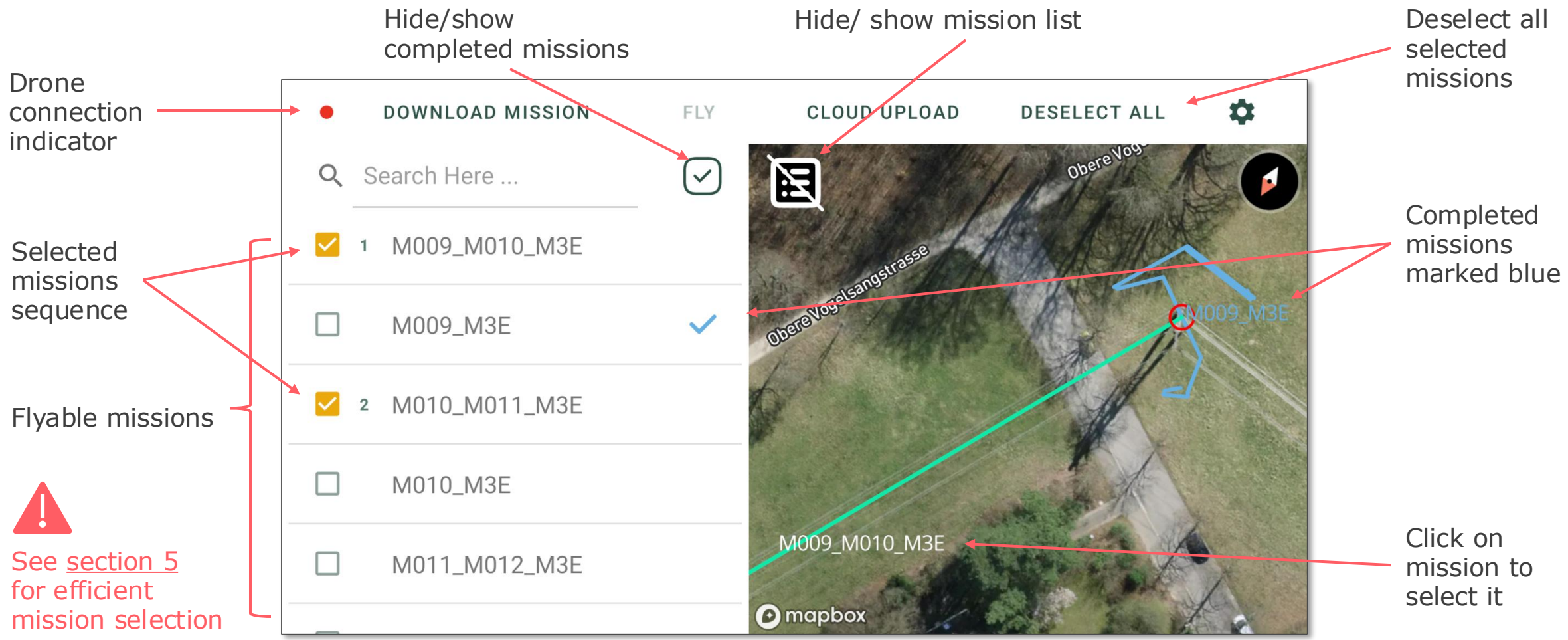
2.3 Homescreen Mission Selection



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2.4 Drone Settings

- Navigate to Settings and then to Drone.
- Update home location automatically always sets the home location of the drone to the location of the controller automatically.
- Max Speed: This setting only limits the speed during the automated flight in a mission
- Finish Mission: Decide wether the drone should Hover or Fly to the Home location once the mission is finished.
- RC Lost: What happens to the drone if the RC signal is lost during a mission, you can choose to either continue the mission, fly to the home location or hover.

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2.5 Accounts

- Navigate to Settings.
- Press on the User accounts to login/logout of them.
- LINIA Account: Please note, if you logout from your LINIA account on the controller, all app-data on the controller will be lost.
- DJI Account: Log in to your DJI account if required. This is needed to fly within DJI No-Flight Zones.

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3. Flying

3.1 Flightscreen Overview

3.2 Map Overview

3.3 How to Fly Missions

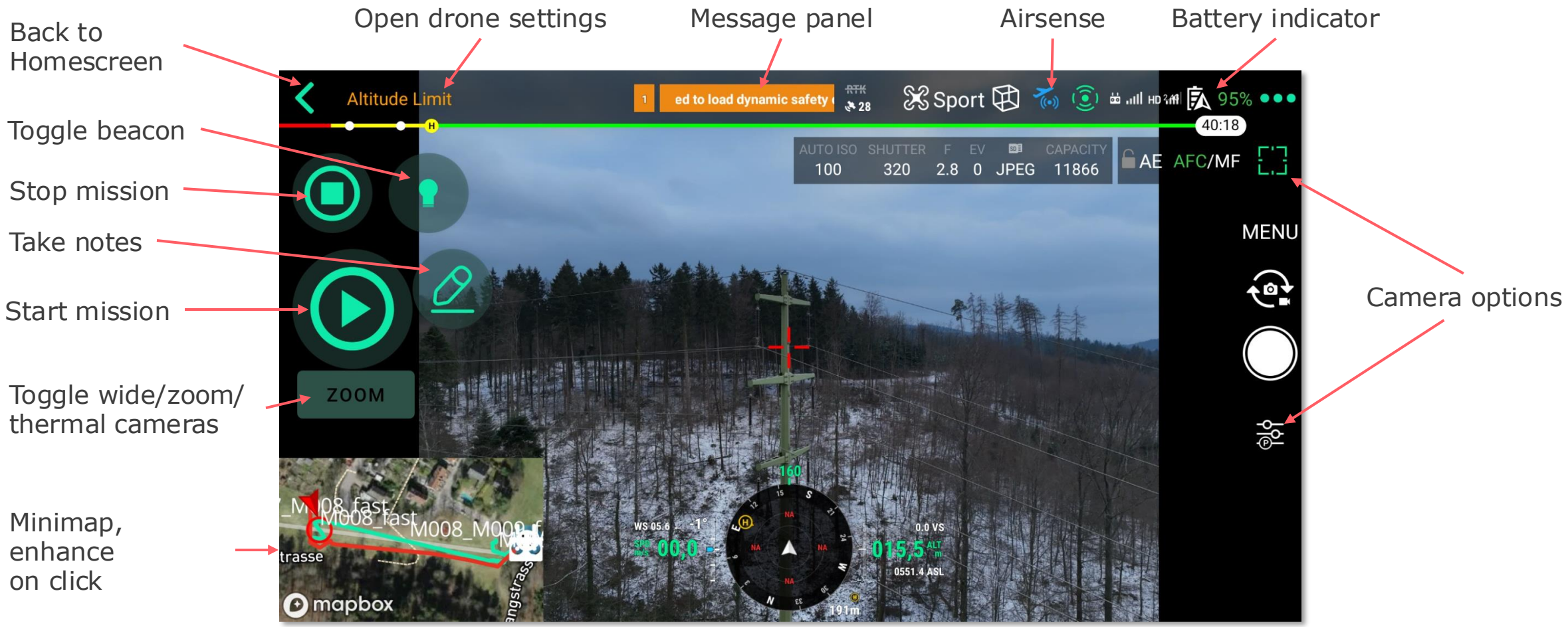
3.4 RTK

3.5 Format Drone SD Card

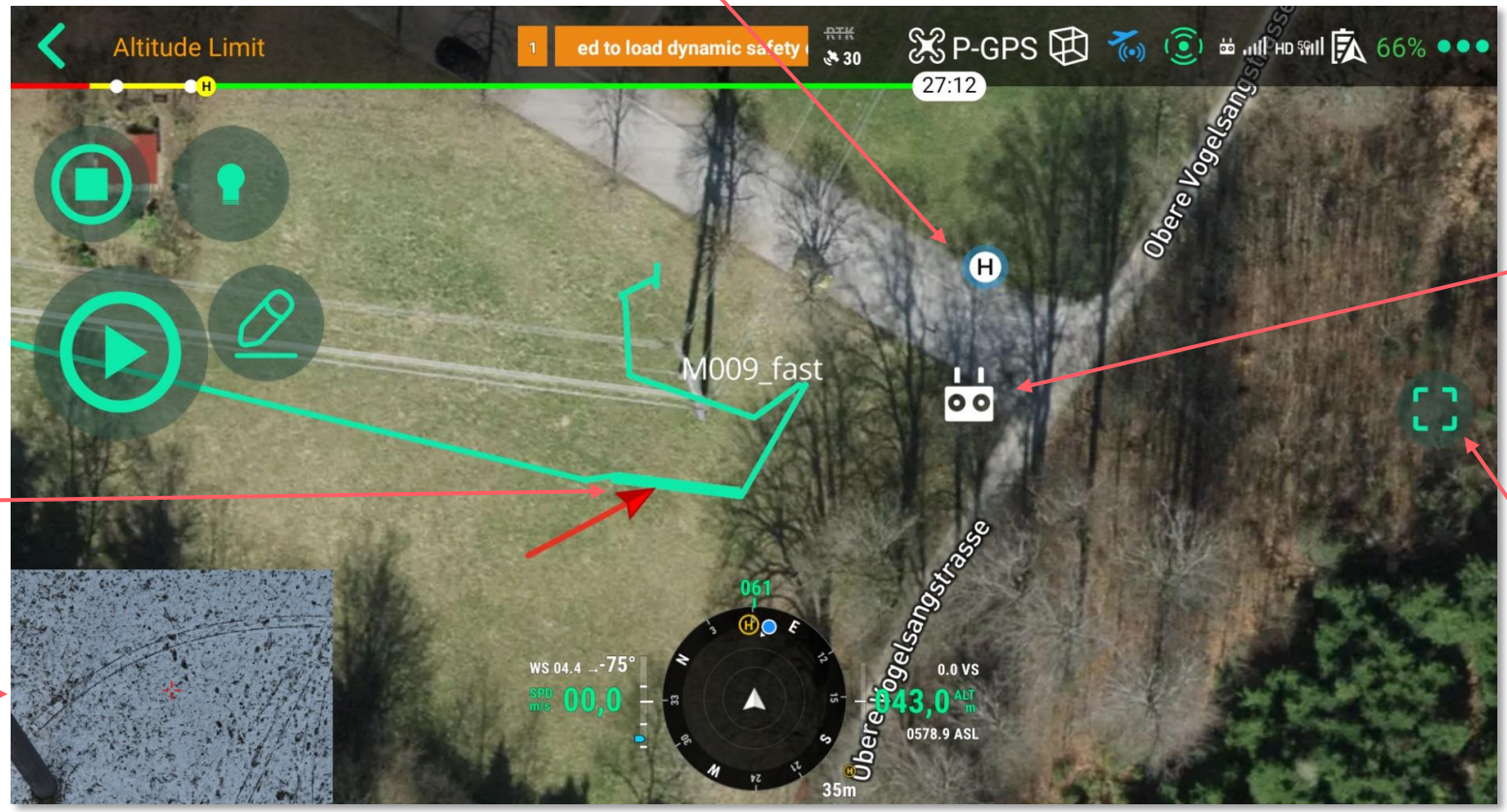
3.6 Camera Settings

3.7 Experimental Focus Feature

3.1 Flightscreen Overview



3.2 Map Overview



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3.3 How to Fly Missions

3.3.1 Select Missions and Start

3.3.2 Altitude Calibration

3.3.3 Lat/Long Calibration

3.3.4 Safety Check

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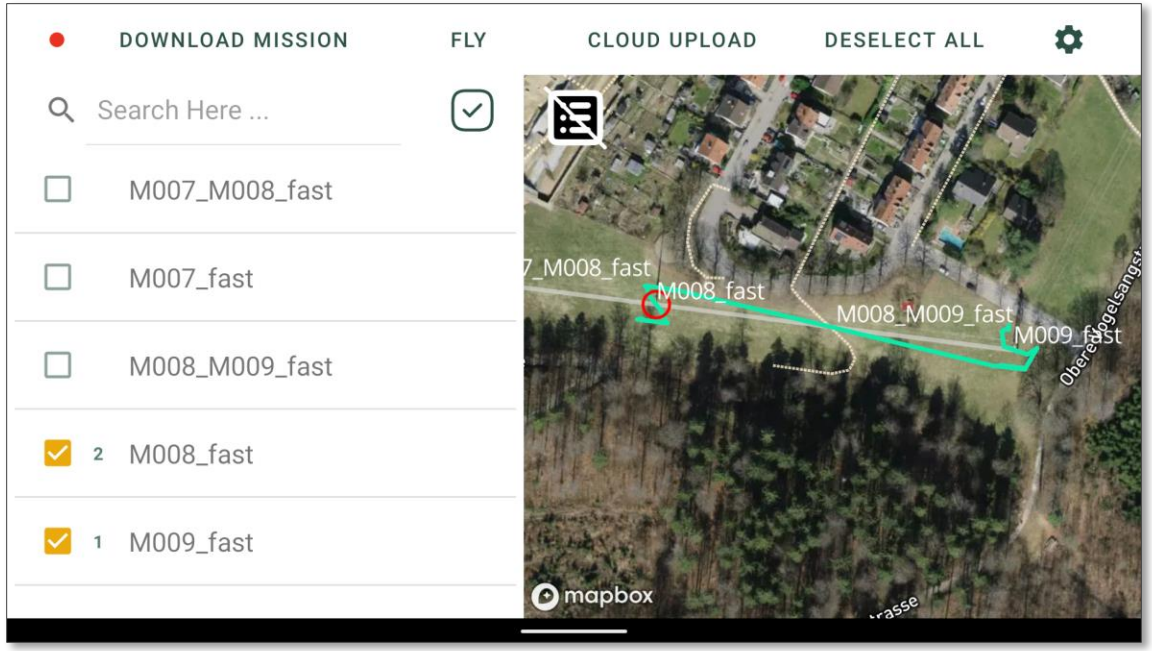
3.3.1 Select Missions and Start

- Click on a mission on the left or select a mission by clicking directly on the map
- Connect the drone and press “FLY”



3.3.2 Altitude Calibration

- Fly the drone to the mast
- Press the start mission button
- Read carefully
- If you rotate the camera, please click on the camera rotation button before aligning the top of the mast in the red cross
- Click on the calibration button to calibrate the altitude

Align camera for calibration

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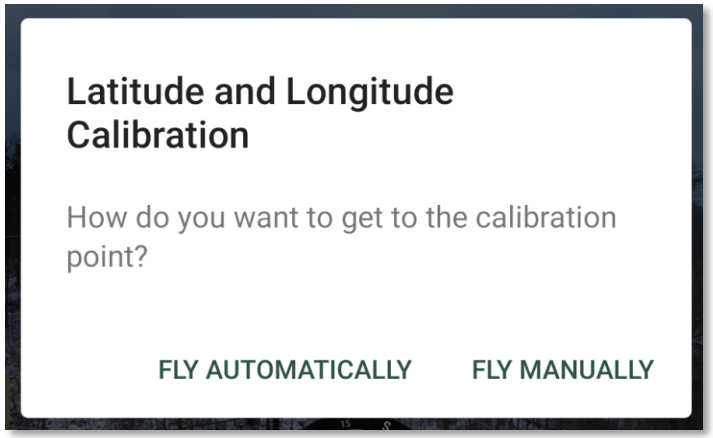
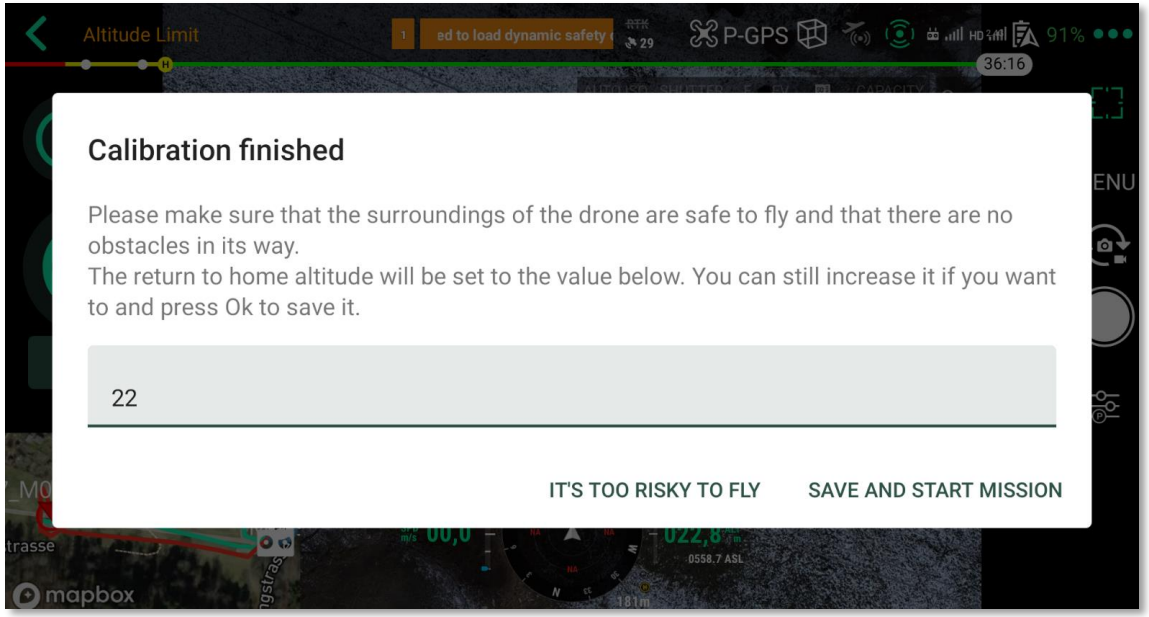
3.3.3 Lat/Long Calibration

- Choose to either fly to the top of the mast automatically or manually
- Align the mast center within the red cross carefully
- Make sure the camera is rotated down, align camera if unsure
- Click on the calibration button to calibrate the lat/long



3.3.4 Safety Check

1. Make sure that the drone can operate in a safe environment
2. Adjust the return to home height if needed



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3.4 RTK

3.4.1 Configure & Setup RTK

3.4.2 Check RTK Connection

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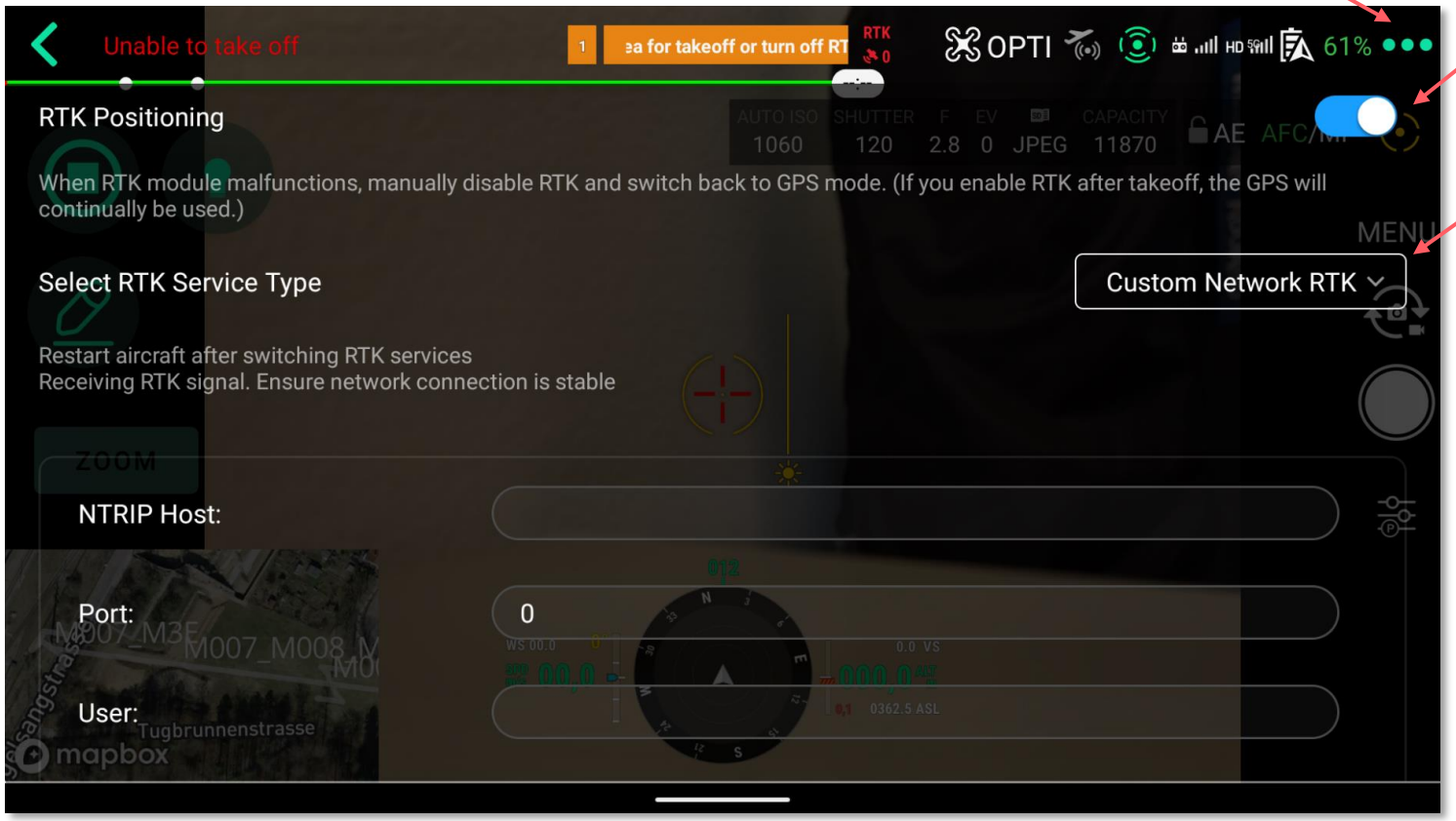
3.4.1 Configure & Setup RTK



Click to open RTK menu

Enable RTK

Select Custom Network RTK

Enter NTRIP Host, Port, User, Password and Mountpoint and click Save

Please note: RTK can take up to several minutes to connect

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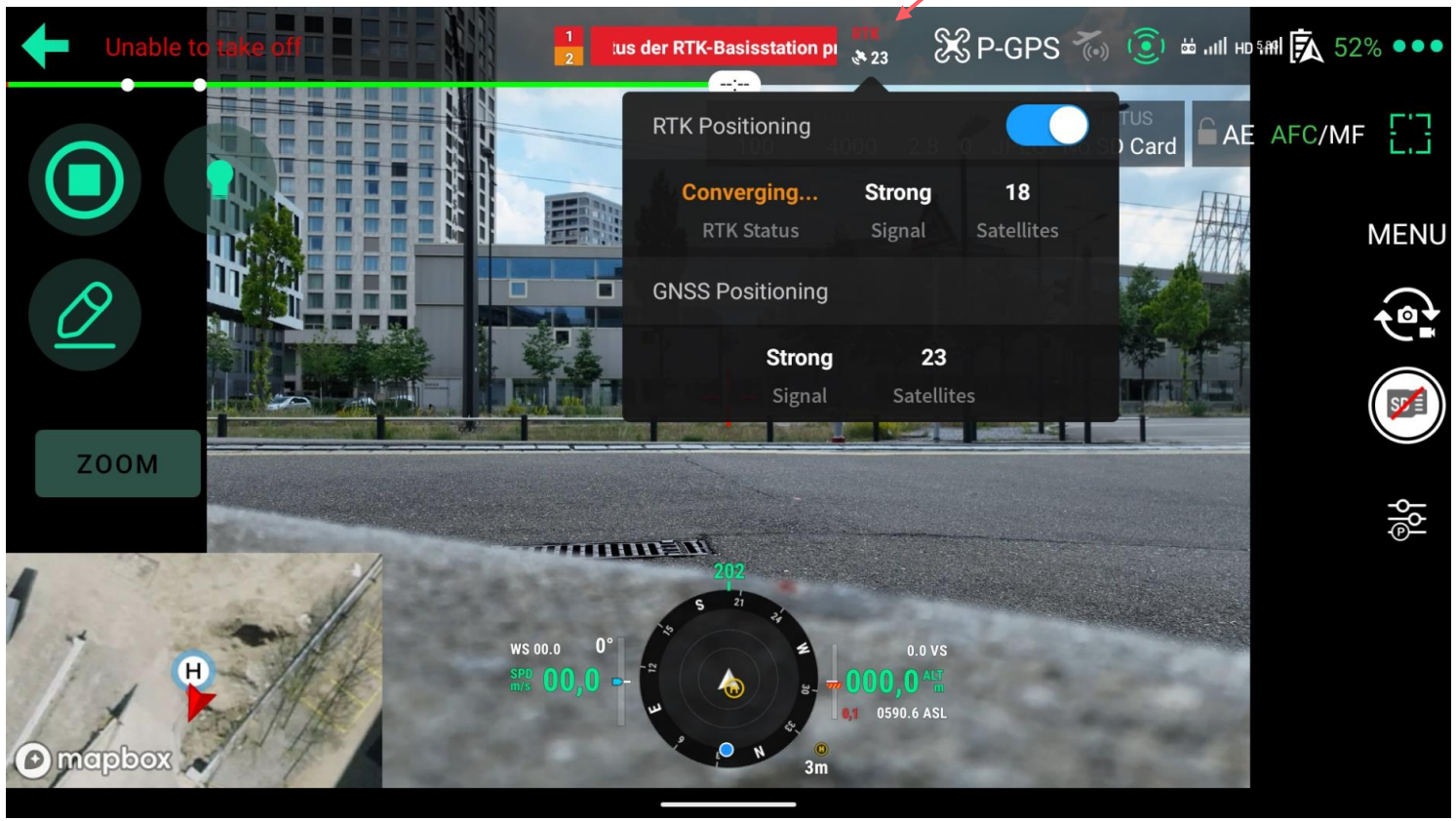
3.4.2 Check RTK Connection

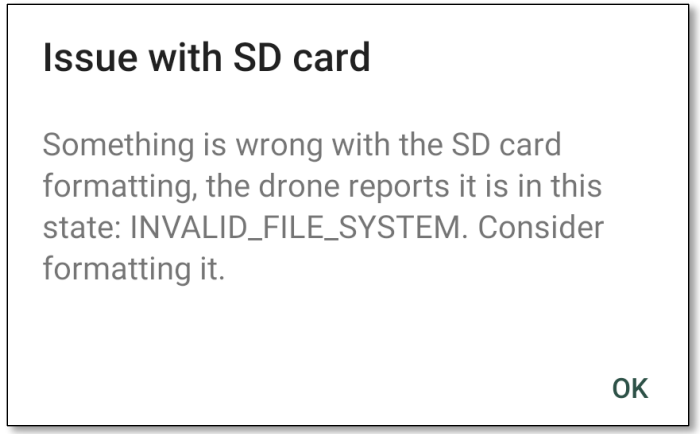
Click to check & toggle RTK connection



3.5 Format Drone SD Card

When the SD card is not formatted correctly, the app will show a pop-up warning you about this.

- Make sure to have all important data on the SD card backed up because reformatting it will erase its content
- In the Flight screen, open the drone settings (see 3.1)
- Next to the SD card information, there is a “Format” button



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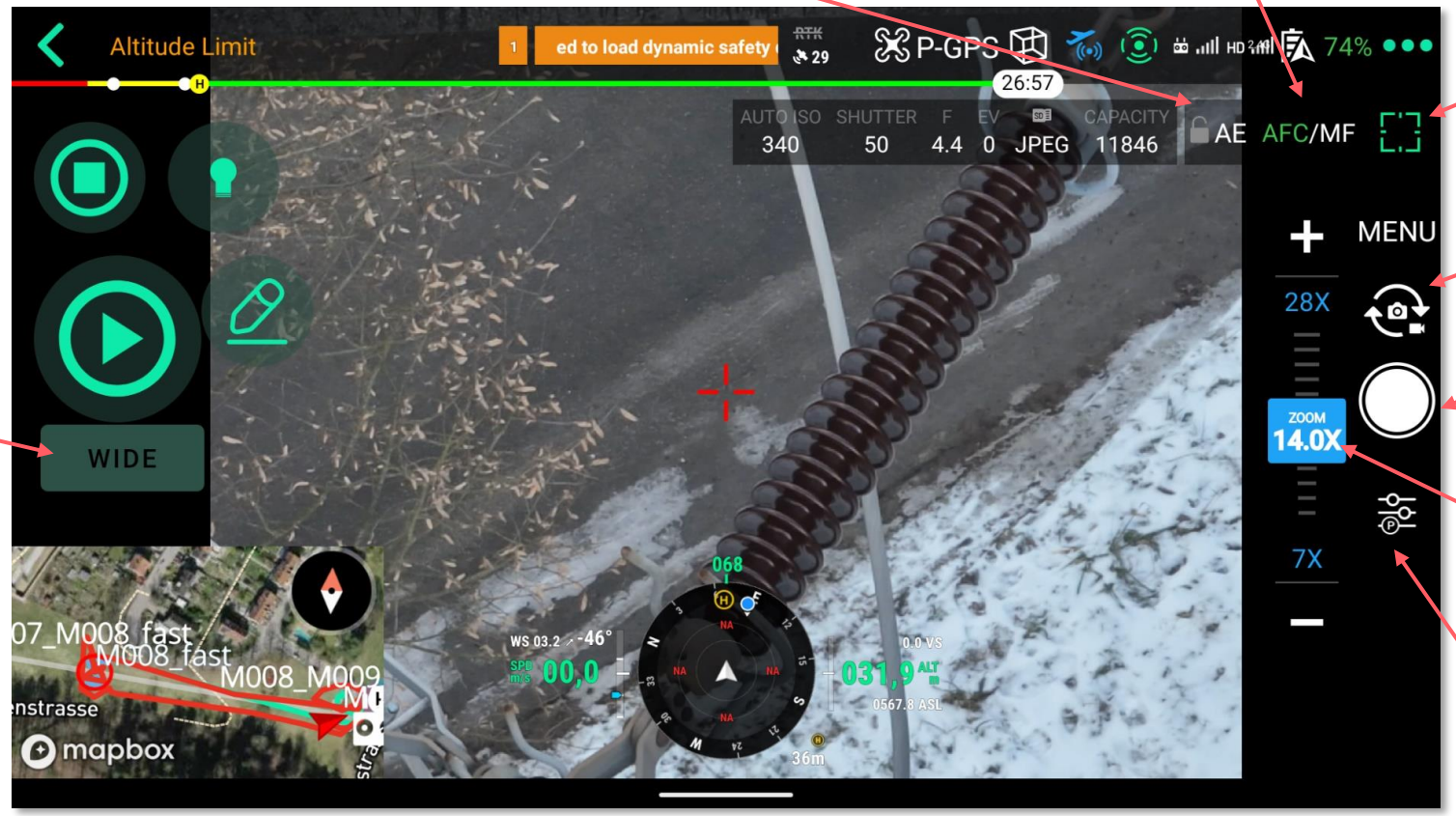
3.6 Camera Settings



3.7 Experimental Focus Feature

We developed an experimental feature that sets the focus distance without autofocus. This can improve image quality in certain conditions.

- Enable the feature in the drone settings, at the bottom
- The camera will be switched to Manual Focus by the app before taking a photo
- This feature is still being developed

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4. After The Flight

4.1 Upload the Images

4.1 Upload Images

There are two possible workflows for uploading images:

A. For a few images, you can download them from the drone to the controller and then upload them to the cloud.
B. Bigger amounts of images can be uploaded by inserting the SD card of the drone directly into the controller and uploading them.

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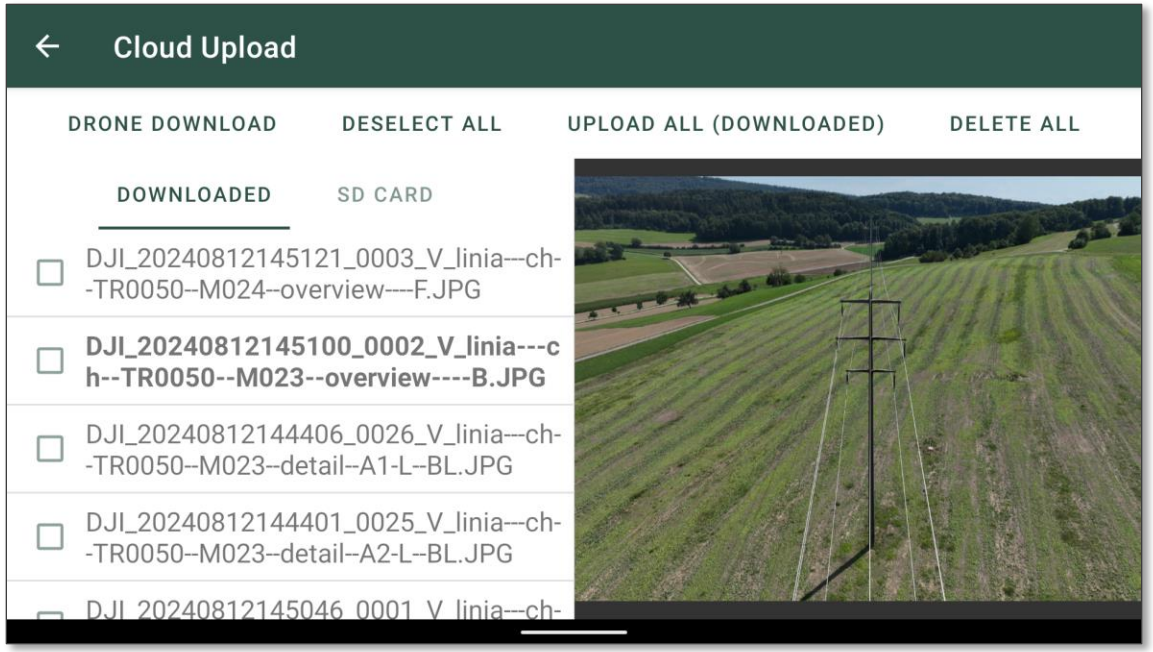
4.1 Upload Images

Workflow A: Download from drone, then upload

In the “Downloaded" tab:

- Click on “DRONE DOWNLOAD”.
- The controller should now download the images
- Click on them to preview
- Click “UPLOAD ALL” to upload them to the cloud



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4.1 Upload images

Workflow B: Insert SD, then upload

In the "SD card" tab:

- Insert the SD card from the drone into the controller
- Click on them to have a preview
- Select folders and click "UPLOAD", or click "UPLOAD ALL" to upload them to the cloud

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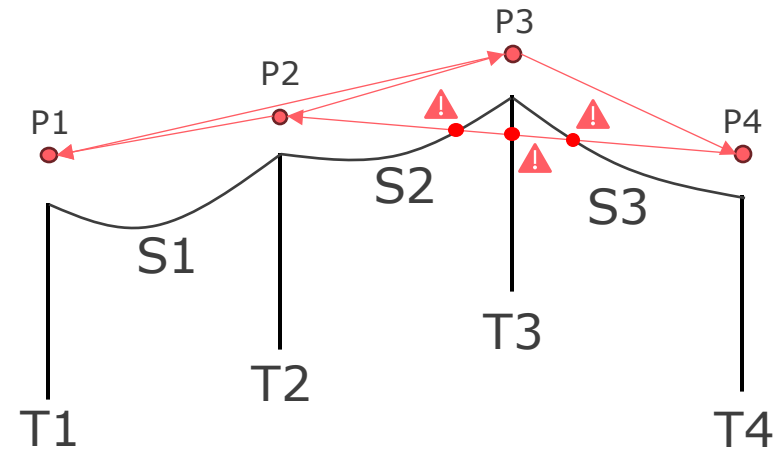
5. Tips & Tricks

Flight Route Selection

- WARNING ⚠
- Start and Landing at Same Location (middle/start/end of section)
- Start and Landing at Different Locations
- Junction

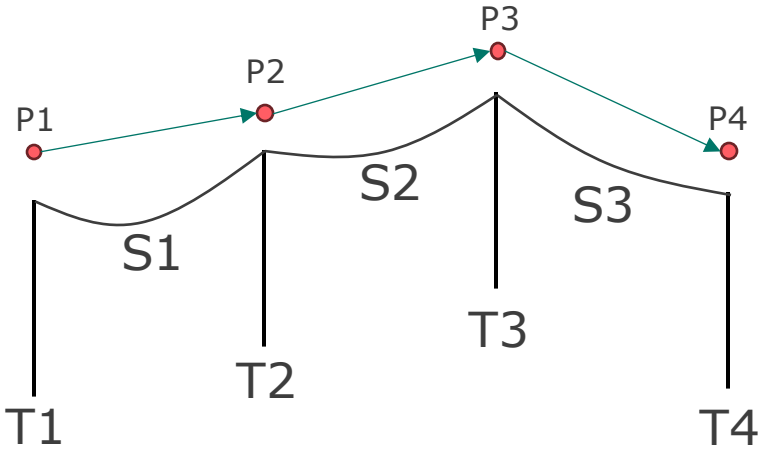
WARNING ⚠



Never select spans in a descending sequence, such as S3;S2;S1

This will lead to the following waypoint-mission: P3;P4;P2;P3;P1;P2

Eventually, it might lead to a drone crash or to inefficient flights, at least.



Always select spans in an ascending sequence, such as S1;S2;S3

This will lead to the following waypoint-mission: P1;P2;P3;P4

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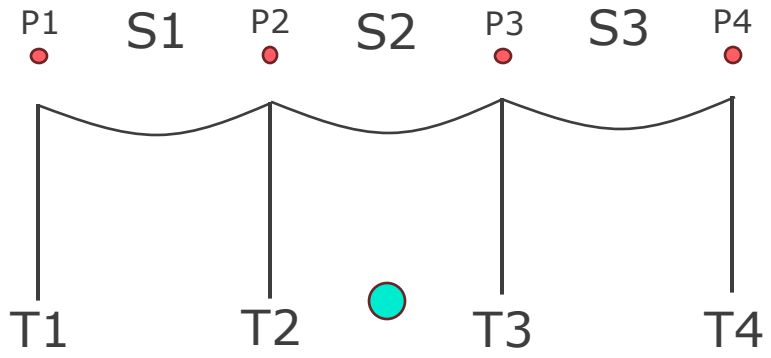
Start/Landing at Same Location; Middle of Section



Efficient mission selection:
T2;T1;S1;S2;S3;T4;T3

Start and landing location

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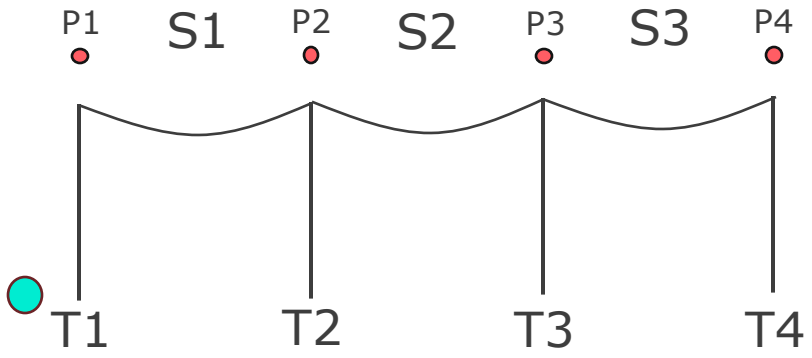
Start/Landing at Same Location; Begin of Section



Efficient mission selection:
S1;S2;S3;T4;T3;T2;T1

Start and landing location

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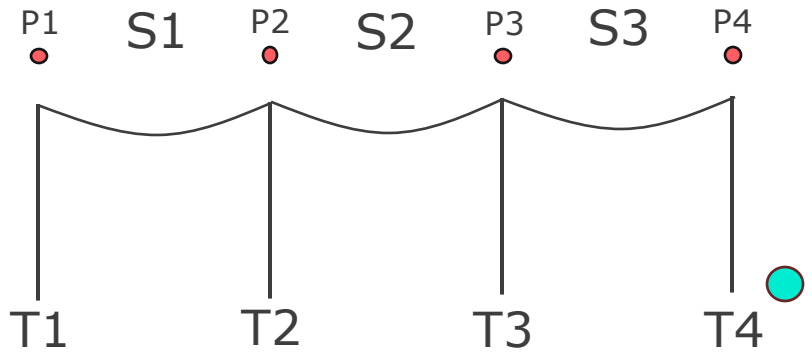
Start/Landing at Same Location; End of Section



Efficient mission selection:
T4;T3;T2;T1;S1;S2;S3

Start and landing location

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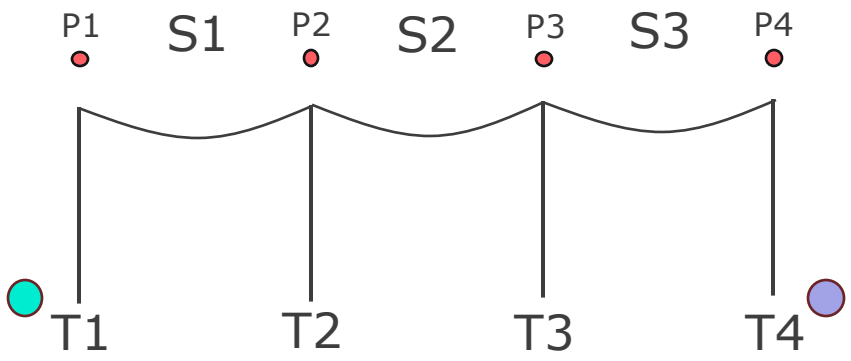
Start/Landing at Different Locations



Start

Landing

Efficient mission selection:
T1;S1;T2;S2;T3;S3;T4

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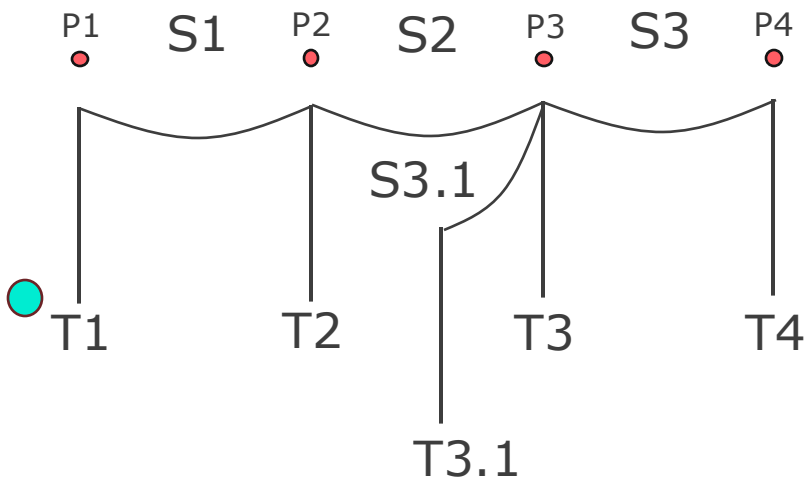
Junction



Start and landing location

Efficient mission selection:
S1;S2;S3.1;T3.1;S3;T4;T3;T2;T1

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6. Release Notes

Version 3.0	Use the same login for LINIApower and LINIAair
Version 3.2	Experimental Focus Feature (see manual: 3.5), many bug fixes and improvements
Version 3.2.3	SD card upload, SD card formatting in-app, bug fixes and improvements
Version 4.0.1	Initial (experimental) MAVLink support, bug fixes
Version 4.1.0	This release cuts down the flight time in half for flights with the Phase One P3, in some situations. It needs the latest firmware by Phase One, which will presumably be called 1.8 (not yet public by time of writing).

7. Supported Drones / FW

Drone / Camera	Drone / Camera FW	RC FW
DJI M3E with Smart Controller	v09.00.05.05	v02.01.02.02
DJI M30 with RC Plus	v09.01.00.06	v03.02.09.07
DJI M300 with Smart Controller	v09.00.05.03	v09.00.05.01
DJI M300 with RC Plus	v59.01.00.01	v03.02.09.07
DJI M350 with RC Plus	v09.00.05.03	v02.02.08.03
DJI P1	v07.00.01.10	
DJI H20	v07.00.01.05	
Phase One P3	For LINIAair ≤ 4.0.1: v1.7 or 1.7.1 For LINIAair ≥ 4.1.0: v1.7.1	

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8. FAQ

- The images look misaligned, not the whole asset is captured.
  → Stop the mission, start it again from a new calibration.

- There are no missions in the Upload Screen after a flight
  → Did you format the sd-card in the pilot app before the flight?

- The app is not installed.
  → Allow installing apps from all sources in the settings
  → Uninstall the old version of LINIAair if there is one installed

- The mission paused on its own
  → Most likely due to collision avoidance. Check it is safe to resume and press the play button. Collision avoidance can be triggered by the sun when it is low, e.g. in winter months.

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9. Contact us

Write us a mail to support@linia.ch.

Please include following information:

- What happened?
- Where in the app did it happen?
- Date & time
- LINIAair Version (can be found at the bottom of the Settings)

Useful Links:

- Manual: https://liniaair.axpo.com/assets/manual/LINIAair_manual.pdf
- Terms: https://liniaair.axpo.com/assets/LINIA_Terms.pdf

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