DJI Mavic - Mission Planning and Execution

Mission Planning

For the initial planning of a mission, you don´t need to be connected to the drone. You will just need the controller.

Mapping out the area

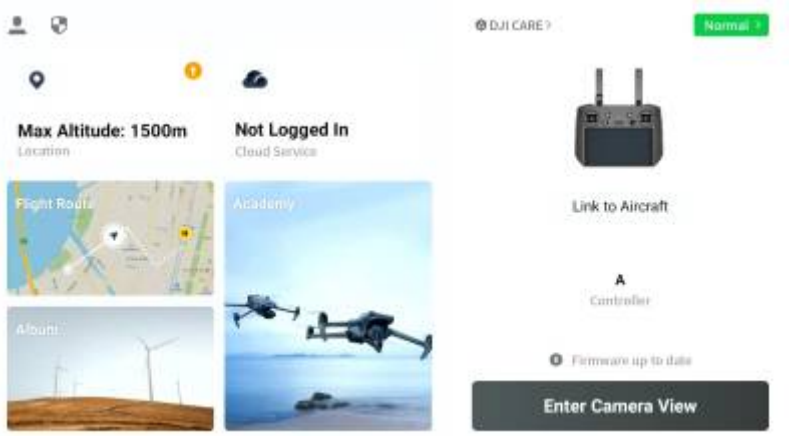
1. 

Fig. 1: Choose "Flight route"

2. 

Fig. 2: Flight route menu

1. Here you will see all the routes you created before
2. You can add new missions by clicking the plus in the top right corner

3. 

Fig. 3: Choose "Create a route"

4. 

Fig. 4: Zoom in to the area you roughly want to map

5. 

Fig. 5: Tap the outline corners of the area that you want to map

1. You can add new corners in between by clicking the small +-Icons on the individual lines
2. Click the checkmark in the top left corner to save your mapped area

Mission setup

1. 

Fig. 6: Select "M3E Series" if flying the DJI Mavic 3M

2. 

Fig. 7: Select "M3M" if flying the DJI Mavic 3M

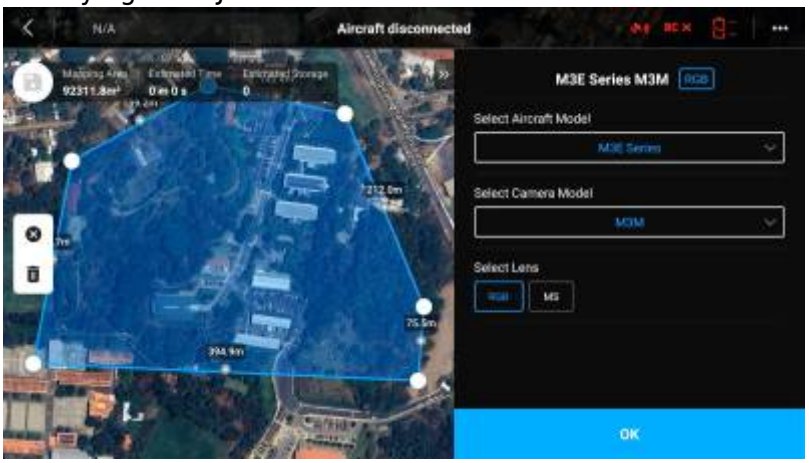
3. 

Fig. 8: Select if you want to also take MS images

4. 

Fig. 9: First part of the settings

1. Give the mission a good name
2. `Ortho Collection` for normal cartography
3. `Oblique Collection` for 3D reconstruction
4. `Ortho GSD` is used to set roughly the resolution in cm/px of the map you want to get in the end. This will automatically adjust the needed height, so you won't need to change that
5. ASL/ALT is the reference that is used to determine the flight height. You can normally leave it at ALT, but you need to make sure that there is no object at the flight height of the drone in the end. For example, you fly at the foot of a 100m tall hill and you set the flight height to 50m relative to your starting position... well that wouldn´t be that helpful.



Fig. 10: Second part of the settings

1. `Route Altitude` does not need to be changed if you set Ortho GSD. Just make sure the altitude is higher than any obstacle that is inside the area to be mapped.
2. `Elevation Optimization` should be activated if the DSM/DTM is important. The drone will just take some additional images at the end of the flight
3. `Safe Takeoff Altitude` only needs to be set if you fly the drone 100% automatically. In our opinion, you should start the drone manually to check for obstacles anyway. Otherwise set to something reasonable.
4. Speed can be set to maximum. Reasons to lower it would be low light conditions or heavy winds.

For reference here also an official video by DJI: How To Start A Mapping Mission And Create 2D Maps- Episode 9

Flying the Mission

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