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DJI MAPPING MODE CHECKLIST

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Using this manual

Hovermap is a powerful system that can be used as a Lidar mapping payload but also as an advanced autopilot for drones. It is therefore recommended to read the user manual thoroughly to make use of all its capabilities in a safe and productive way.

Disclaimer and safety guidelines

This product is not a toy and must not be used by any person under the age of 18. It must be operated with caution, common sense, and in accordance with the instructions in the user manual. Failure to operate it in a safe and responsible manner could result in product loss or injury.

By using this product, you hereby agree that you are solely responsible for your own conduct while using it, and for any consequences thereof. You also agree to use this product only for purposes that are in accordance with all applicable laws, rules and regulations.

The use of Remotely Piloted Aircraft Systems (RPAS) may result in serious injury, death, or property damage if operated without proper training and due care. Before using an RPAS, you must ensure that you are suitably qualified, have received all necessary training, and read all relevant instructions, including the user manual. When using an RPAS, you must adopt safe practices and procedures at all times.

Warning

Always be aware of moving objects that may cause serious injury, such as spinning propellers or other components. *Never* approach a drone while the propellers are spinning or attempt to catch an airborne drone.

Hovermap scanning checklist	**Actions/ Indications**
Inspect the LiDAR sensor.	Clean and serviceable
Mount the Hovermap as desired (Handle attachment, vehicle mount, backpack mount or drone).	Secure
Connect the power cable. Place the Hovermap in a stable position where the spinning LiDAR will be unobstructed. **Note:** Test the cable connection by gently tugging on the cable to ensure it is positively retained on the Hovermap. If the cable fails to keep connected during this test, it is recommended to get in touch with Emesent support.	Connected, clear
For HVM100, ensure both Wi-Fi antennas are connected and positioned 90 degrees apart. It is recommended to orient one antenna vertically and the other horizontally for optimal results. **Note:** The Hovermap ST and ST-X have internal antennas.	Offset
All configurations run on an external battery, except when attached to a drone (use the drone-specific power cable). Ensure that the battery has adequate charge for the intended scan. Set a low voltage warning on the battery monitor. **Note:** Never over-drain the battery from use.	Checked, connected

Press the power button on Hovermap. **Note:** • Do not move while Hovermap is booting/ initializing. • If the status LED is not blue after 60 seconds, cycle power to Hovermap.	Flashing red, flashing light blue, flashing orange
Auto-initialization and checks complete. The system is ready	Slow pulsing blue
Begin the scan	
Launch the Emesent Commander application	App landing page
Connect to the Hovermap's Wi-Fi. **Network name:** hvm100_xxxx, ST_xxxx, ST_5xxx **Password:** hovermap	Connected
Select the **Non-autonomous mapping mission** tile in Emesent Commander. Follow the Mission workflow to configure the system and set up your scan mission.	Scan name set
Click **Start Scan** in the **Scan setup** page and keep the payload still for the first 10 seconds. The LiDAR will start spinning. The status LED will start flashing green, then will change to slow pulsing green. Wait for five slow pulses before moving.	Flashing green. LiDAR spinning smoothly.
Allow the system to perform its pre mission checks this may take up to 60 seconds or more. Once passed, the **Continue** button becomes available. Tap to move into the next screen where you will conduct your operation from.	Green tick and **Pre-scan checks passed** indicator
Hovermap will now be collecting scan data and can be moved for scanning the target area.	Slow pulsing green

End the scan	
Once the area of interest has been scanned, tap **Stop Scan** on the Emesent Commander app. Alternatively, press the power button on Hovermap or use the Web UI. The LiDAR will stop spinning after a few seconds and the LED will go back to slow pulse Blue.	Slow pulsing blue
For best mapping results, we recommended that you stop the scan around the same area where it was started.	Close the loop
At this stage, you can either start a new scan and repeat the steps above, or download the raw scan data for processing.	
Download data and shut down Hovermap	
Once the Hovermap scanner has stopped spinning, insert a USB memory drive into Hovermap to download the scan data. The status LED will change to wiping blue bar while the data is transferring to the USB stick. **Note:** All data captured since the last transfer will be copied to the USB stick.	Slow pulsing blue, wiping blue bar, slow pulsing blue
To shut down Hovermap, turn off the drone or disconnect the power supply.	

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