Pre-Recording Checklist for MMS Scans

☐ Mounting the Payload

- Mount the RESEPI unit securely using the vehicle mount adapter.
    - Ensure it is fully seated in the mount and locked into place to prevent vibration or slippage during travel.
    - Mount orientation should be known and stable
    - Avoid loose brackets or makeshift adapters.

☐ Connect GNSS Antennas

- Connect all GNSS antennas to their correct ports.
    - If using a dual antenna setup, confirm correct configuration of primary and secondary.
    - Verify each antenna has a clear sky view.

☐ Base Station Setup (if applicable)

- Place the base station in an open area with clear sky view.
- It should record all available GNSS constellations (GPS, GLONASS, Galileo, BeiDou, QZSS, Navic).
- Confirm that it records in a PCMasterPro-compatible format.
- If using a public base station, ensure it is within 40 km of the flight area (preferably closer).
- **Important:** Ensure correct PPK or RTK configurations.
    - Methods are comparable to PPK Step-by-Step and RTK Step-by-Step.

☐ Power Connection

- Connect RESEPI to power via one of the following:
    - XT60
    - Skyport/Other
    - Binder Connector
    - Ethernet (GEN-II only)
- Ensure power supply is 9–36VDC (up to 45V max) with 24–28W available.

☐ Web Interface Access

- Connect to the RESEPI's Wi-Fi.

- SSID is printed on the unit label.
- Password: LidarAndINS
- Access the Web GUI at 192.168.12.1 using a laptop or mobile device.

☐ **Data Management**

- Offload all data and flights from the USB drive and/or SSD to ensure adequate space.

☐ **USB / SSD Storage Check**

- Use only the provided RESEPI-certified USB drive.
- Confirm that the USB is securely inserted into a supported port.
- Avoid using ports reserved for other onboard components (e.g., camera).

☐ **Firmware Check**

- Ensure the RESEPI is running the latest firmware version.
- You can find the firmware version in the top right corner of the GUI.

☐ **Enable Secondary Antenna Logging (if applicable)**

- Enable recording from the secondary GNSS antenna.
  - Navigate to: Settings > INS Service
  - Toggle “Record Secondary Antenna data” → On
  - Click Save.
  - Go to the Status page to confirm the secondary antenna is detected and observing satellites.

☐ **Vehicle to IMU Rotation**

- Go to Settings > Geometry > Vehicle to IMU Rotation.
- Ensure the rotation offsets reflect the RESEPI’s mounted orientation on the aircraft.
- Incorrect values can likely cause post-processing alignment errors.
- Click Save after confirming or adjusting the values.

☐ **Antenna Lever Arm Offsets (REQUIRED)**

- Go to Settings > Geometry > IMU to Antenna Offset.
- Enter the accurate lever arm values (X, Y, Z) in meters.

☐ **GNSS Time Fix (REQUIRED)**

- Connect the GNSS antenna to RESEPI securely.
- Power the unit outdoors in a GNSS-visible area before flight.
- In the GUI, confirm the INS status shows:
    - Current date and time
    - Message: “Ready to log”
        - Do not begin data capture without this message.

☐ **Camera Trigger Configuration (Optional)**

- Set the trigger interval for the onboard camera, if used.
- Adjust the trigger period based on planned speed:
    - Example: 5 m/s → 5 seconds
    - Faster speeds → shorter intervals (e.g., 10 m/s → 2.5 seconds)
        - Avoid high trigger rates at slow speeds to prevent blurry or redundant images.
        - Confirm trigger settings are applied via the GUI.

☐ **Final System Check**

- Ensure all cables are secure (power, antenna, USB, trigger, etc.).
- Ensure RESEPI payload is secure on the respective mobile mount.
- Confirm that the LiDAR sensor is unobstructed by props or mounting hardware.
- Recheck USB/SSD/RTK modem status in the GUI.