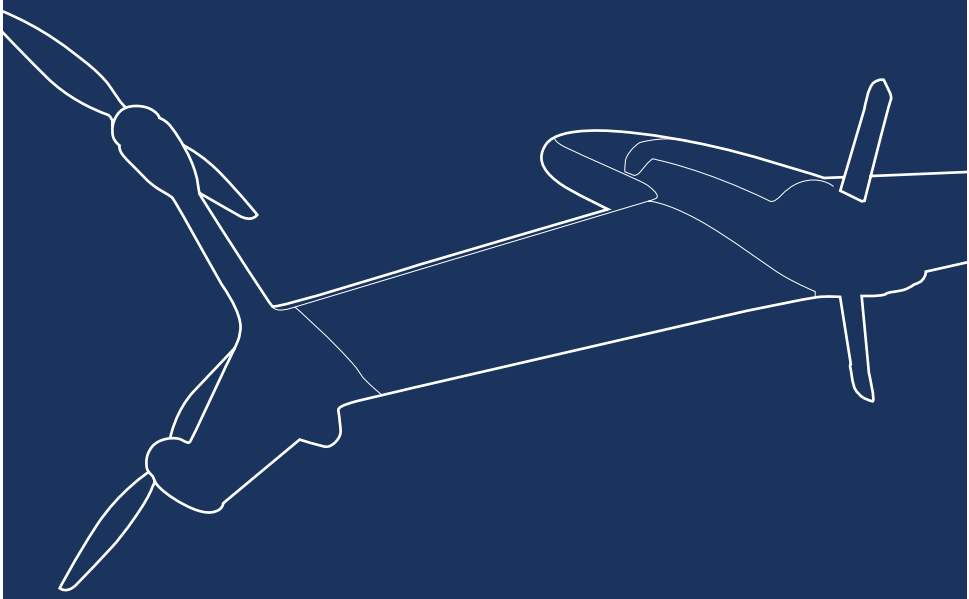
AeroVironment™

PROCEED WITH CERTAINTY



QUANTIX™ MAPPER

Quick Start Guide

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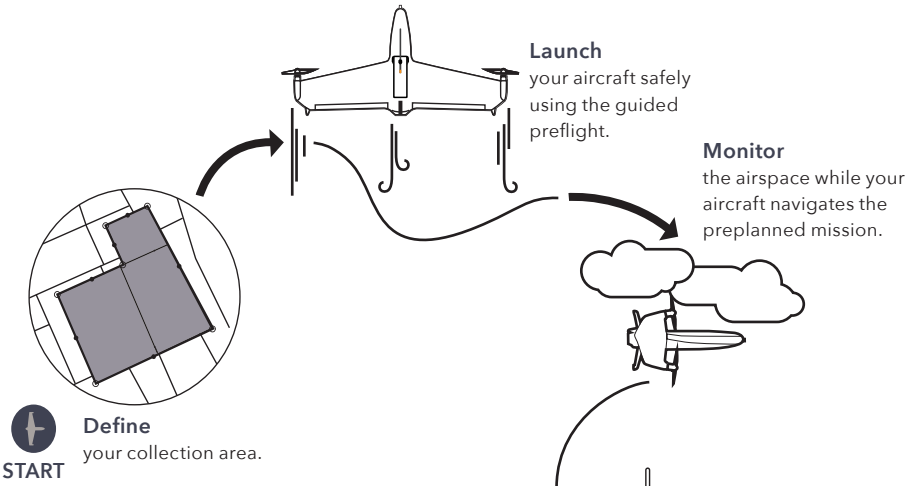
Welcome to Your Quantix™ Mapper Aircraft!

As the operator of your new unmanned aircraft, your primary tasks will be to define the collection area, ensure a safe launch, and monitor the airspace. Quantix™ Mapper will plot the best flight path for you automatically. Plus, the aircraft will automate launch and landing, and navigate the preplanned route, with three levels of override features to emergency-land your aircraft.

On-board processing instantly delivers georeferenced high-resolution imagery on the included operating tablet upon landing - no other devices, Internet or software required. Simply tap anywhere on the Quick-Look™ HD image to view that area in greater detail. Pinch and zoom to adjust the zoom level to centimeter accuracy.

AeroVironment Provides a Complete System for Rapid Automated Mapping



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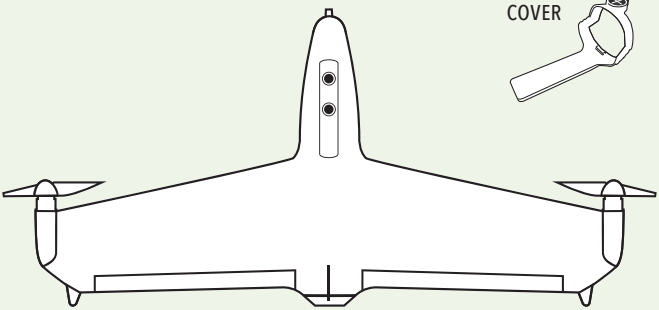
Get to Know Your Quantix™ Mapper!

Quantix Mapper comes ready-to-fly right out of the box and can be deployed within 5 minutes capturing critical information quickly and accurately. With a simple swipe of a button, Quantix Mapper initiates a fully automated takeoff, flight and landing allowing for a completely hands-free data collection. The aircraft's innovative vertical take-off and landing (VTOL) hybrid design has a range of 20 km out and back on a 45-minute single battery flight. With built-in dual 18MP cameras, Quantix Mapper simultaneously captures true color and multispectral imagery.

Let's start with what arrived in your reusable Quantix Mapper shipping case:

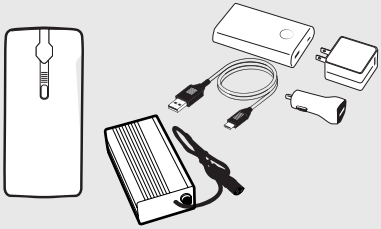
AIRCRAFT



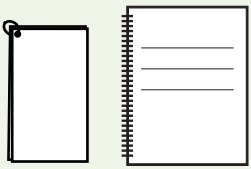
LENS COVER

TABLET

AIRCRAFT BATTERY & CHARGER, TABLET CHARGER



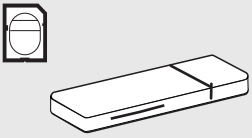
QUICK START GUIDE & USER MANUAL



LENS CLEANING KIT

SPARE PROPS

FLIGHT SD CARD AND CARD READER



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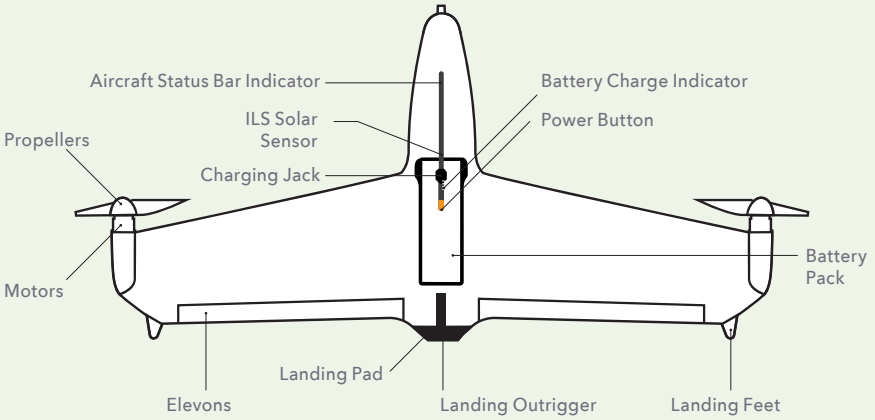
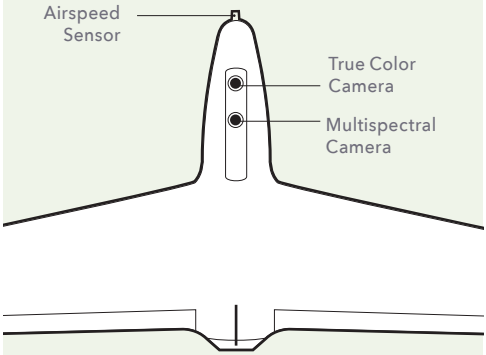
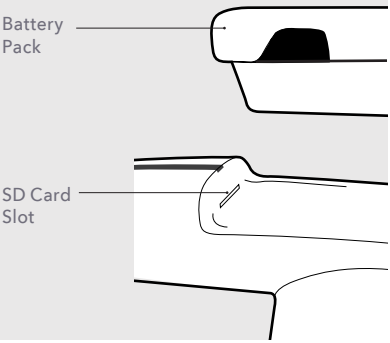
TOP OF AIRCRAFT



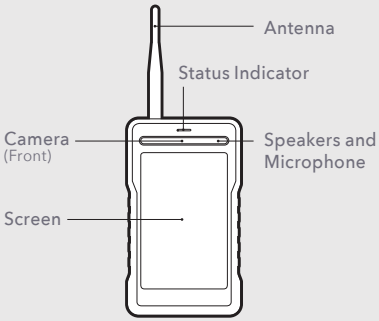
BOTTOM OF AIRCRAFT



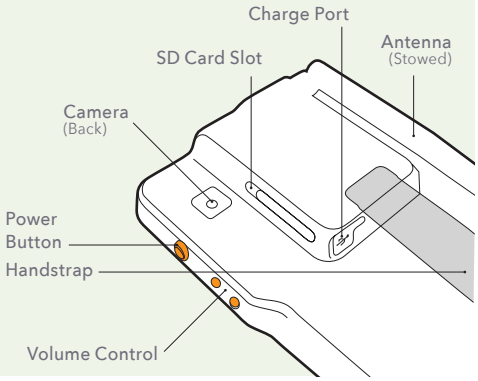
AIRCRAFT BATTERY AND SD CARD



FRONT OF OPERATING TABLET



BACK OF OPERATING TABLET



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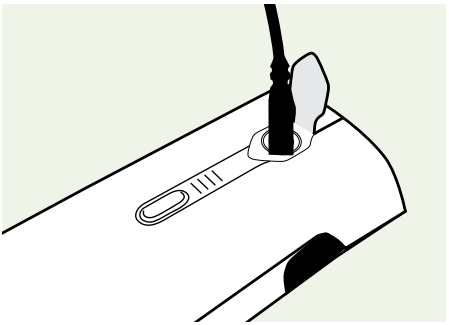
1 Charge the Aircraft Battery

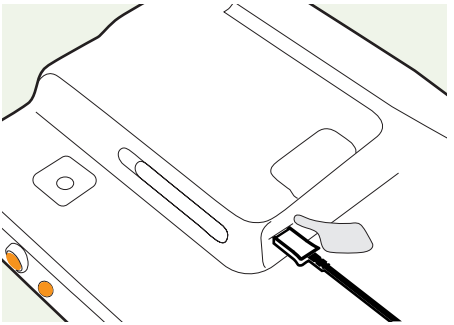
Lift the flap on the charging jack to access the charging port. Connect aircraft battery charger to wall outlet and aircraft battery. The first charge may take up to 4 hours.



Always fully charge the battery before flying.

2 Charge the Tablet Battery

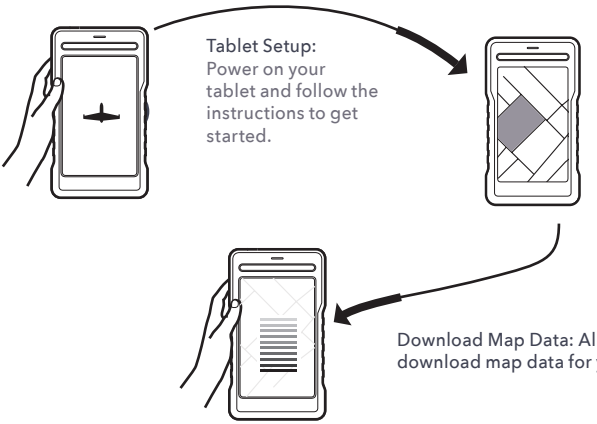
The tablet charging jack is located on the back side of the tablet. The tablet may be charged using the wall, car, or portable chargers included in your charging kit. The first charge may take up to 2 hours.



Charge while tablet is powered off for best charging results.

3 Create New Mission

Your tablet will need to be connected to a wireless network and the Quantix application opened for the initial setup of collection areas. Once you've downloaded the map data for your collection area, you'll be able to complete the rest of the flight offline.



Follow all regulatory requirements at location of operations.

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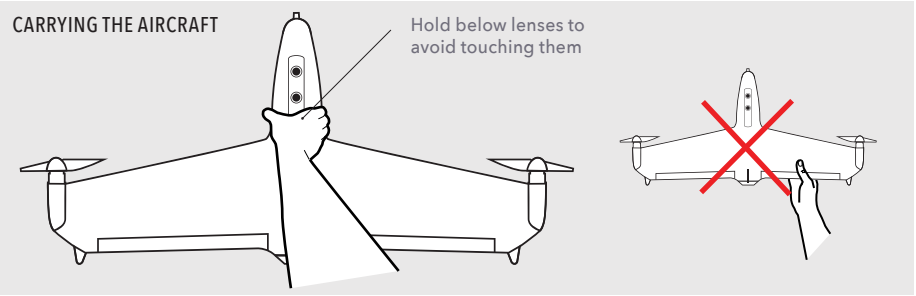
Handling the Aircraft

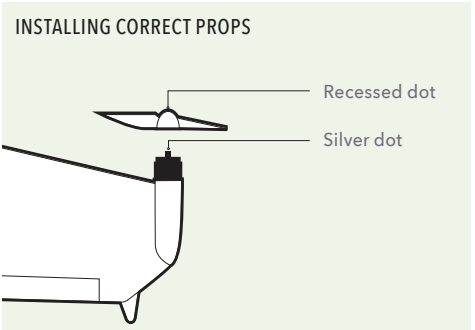
Always carry the aircraft by the fuselage (nose of the aircraft). Never try to carry it by the wings, propellers, or elevons. Improper handling may damage the aircraft.

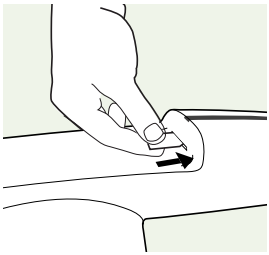


Install the Props

Install each prop by turning it in the direction indicated by arrows on the prop until firmly seated against motor.

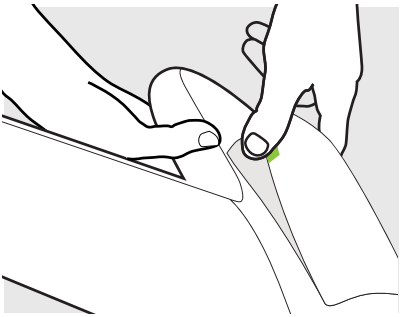
Install the props with recessed dots onto the shaft of the motors with silver dots.





Install the Flight SD Card

Install the SD Card by inserting into the aircraft SD slot.



Install the Battery

Install the battery pack by placing it into the cavity located on top of the aircraft. Press down and listen for a “click” sound to ensure it’s locked in place.

Find additional details on aircraft maintenance in the maintenance section of the User Manual.

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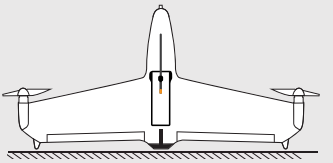
1 Launch/Land Location

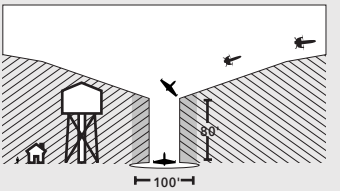
Place aircraft in an upright position near collection area. This will be the launch/land location and must have a minimum of 15 feet clearance around aircraft with a suggested safety buffer of 50 feet in every direction. This area must remain clear the entire duration of flight. The aircraft will launch vertically from this location to an elevation of 100 feet before switching to forward flight mode.

- Ensure all objects are at least 50 feet away from aircraft
- Ensure all objects that are over 80 feet tall are at least 100 feet away from the launch/land location
- Remove orange lens cover before flight

UPRIGHT AIRCRAFT FOR TAKEOFF



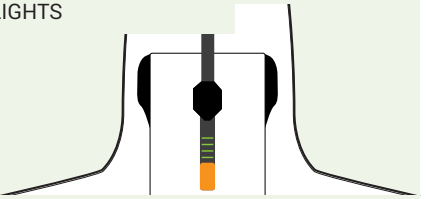
OBSTACLE CLEARANCE ZONE



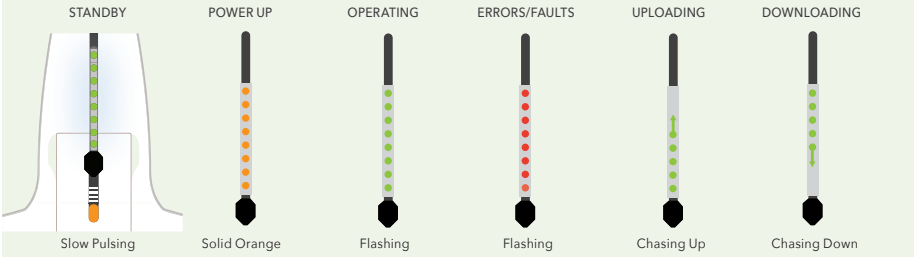
2 Power Up

Press and hold the power button to power on the aircraft. Wait for the aircraft status indicator to illuminate orange.

BATTERY INDICATOR LIGHTS



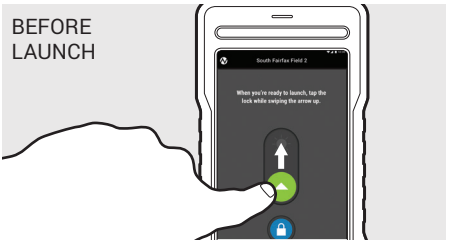
Aircraft Status Indicator



3 Conduct a Preflight Check

Open the Quantix Mapper application, login, and tap "Fly Now" for the desired collection area to start preflight check. The Quantix Mapper application will guide you through a preflight check and launch procedure, including a final confirmation swipe commanding the aircraft to launch.

BEFORE LAUNCH



During Airspeed Sensor Check – Ensure thumb completely covers and seals sensor port on nose of aircraft.

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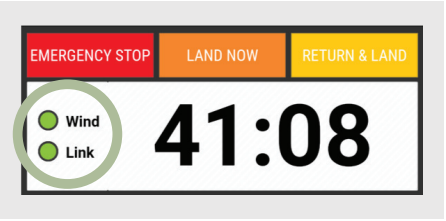
Stop Lights

Your Quantix Mapper will update you on the status of the wind speed and the link from its current location and altitude.

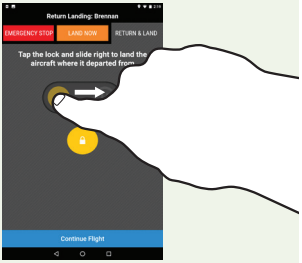


- Green: Conditions are good.
- Yellow: Conditions are less than ideal, but manageable.
- Red: Conditions are bad. Consider overriding your flight.

Three Ways to Override Your Flight

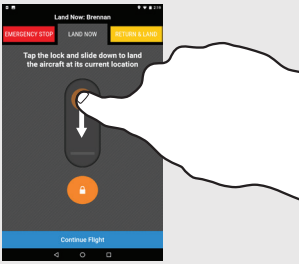
Return and Land

To cancel current flight, use 'Return & Land' option. It will cancel current flight and return aircraft to the landing location and land.



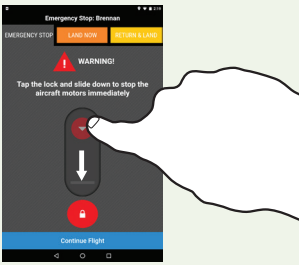
Land Now

The immediate maneuver for landing is the 'Land Now' option, which will land the aircraft at its current location.



Emergency Stop

As a last resort option, 'Emergency Stop' may be selected. The aircraft motors will immediately stop functioning, and the aircraft will free-fall from the sky.



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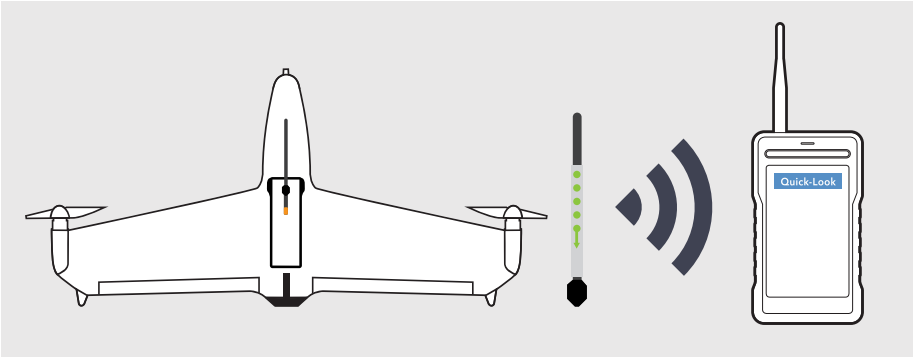
Taking a Quick Look

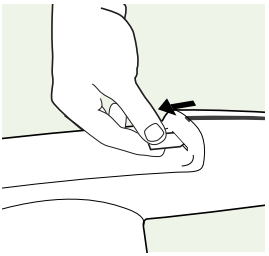
Wait for the Quick-Look bar to turn blue after the aircraft lands. Tap Quick-Look to view the low resolution imagery.



Note:

Do not power off the aircraft until the "See Quick Look" bar appears, indicating that transfer of the low resolution Quick-Look to the tablet is complete.

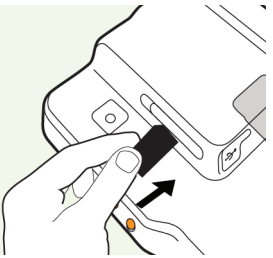
Viewing High-Resolution Imagery



Move SD Card to Tablet

Push in to release the Flight SD Card from the aircraft SD slot.

Remove the Flight SD card and insert into the tablet SD slot.



Quick-Look HD

View your high-resolution georeferenced imagery on the tablet's Quick-Look HD App. No other devices, Internet or software required.

The time to process the Quick-Look will vary depending on the size of your collection area.

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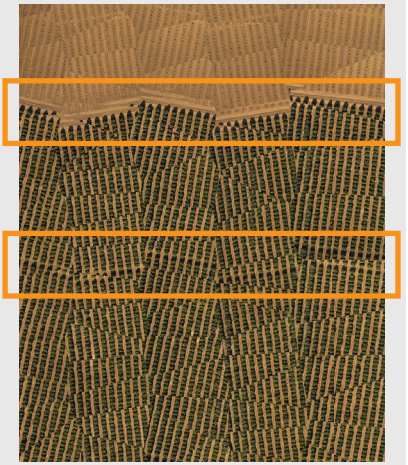
Recognizing a Bad Magnetometer

Your Quantix Mapper aircraft magnetometer (mag) may occasionally require calibration. This could be due to environmental factors or a location change.

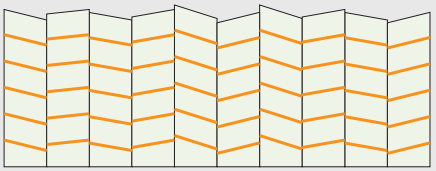
Your aircraft will require mag calibration when your Quick-Look images display the map tiles in a herringbone pattern.

Note: This may be less obvious with other mission types.

HERRINGBONE IMAGE – QUICK-LOOK



HERRINGBONE IMAGE – GRAPHIC REPRESENTATION



Mag Calibration

Ensure the following good practices are observed prior to calibration:

- Do not perform calibration indoors or within 10 feet of a building.
- Do not perform calibration within 15 feet of a vehicle.
- Empty your pockets of all electronics (phones, watches, etc.), large metallic objects (multi-tool, knives, etc.), and magnetic objects.
  - Keys and metal objects of similar size are okay if kept away from the aircraft.
  - Be sure to place removed items at least 5–10 feet away from the calibration location.

Watch the Mag Calibration instructional video prior to calibration. To access the video, open the Quantix Mapper application on your tablet, login, select Settings in the Menu button, and select Mag Calibration. Tap the Play button on the video at the top of the screen to start the video. After watching the video, tap the Continue button and follow the instructions to complete calibration.

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AeroVironment™

AeroVironment (NASDAQ: AVAV) is a technology solutions provider at the intersection of future-defining capabilities that include robotics, sensors, software analytics and connectivity.

The company pioneered and is a leader in the markets for small Unmanned Aircraft Systems (UAS), Tactical Missile Systems (TMS), High-Altitude Pseudo-Satellites (HAPS) and Commercial Information Solutions (CIS). For more information visit **www.avinc.com.**

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