BOM

Quick Installation Guide

BOM ANATOMY

ON/OFF switch & Protector

ⓘ Battery power is activated with vibration ONLY if protective cover is removed

ⓘ Protective covers shuts OFF BOM instantaneously

ⓘ Protective cover MUST stay ON when BOM is not in use. This will prevent battery from constantly draining.

Power Turbine

ⓘ 60+ Kts required

Sensor Suit & Wi-Fi

ⓘ AHRS requires Caging

ⓘ Wi-Fi requires line of sight with the tablet

GPS Antenna

ⓘ Requires clear view to the sky

Pressure Inputs
Static Ports (2)
Pitot Port (1)
AOA Ports (2)

ⓘ AOA Requires calibration

Removable Lid
Remove screw,
Slide towards the nose to open
ⓘ Lid must be closed before flight

ADS-B Antenna

ⓘ Requires clear view to the ground

Mini USB
Charge Battery
ⓘ 2A required
Firmware Updates

Micro SD card
Flight Data Recordings

BOM INSTALLATION

1

Charge your batteries

✓ Open removable lid
✓ Keep Protective covers ON
✓ Connect BOM to 5V 2A outlet until charging LED goes off

ⓘ Follow these steps to enable fast CHARGE MODE:
1. Connect iPad to BOM's Wifi
2. Open AHRS Utility App
3. Go to Device Config menu
4. Select BOM Configuration tab
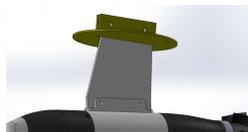5. Scroll down, click CHARGE MODE button.

2

Find Suitable location

✓ Away from propeller wash
✓ Towards the leading edge of the wing
✓ Strong structural fixing points
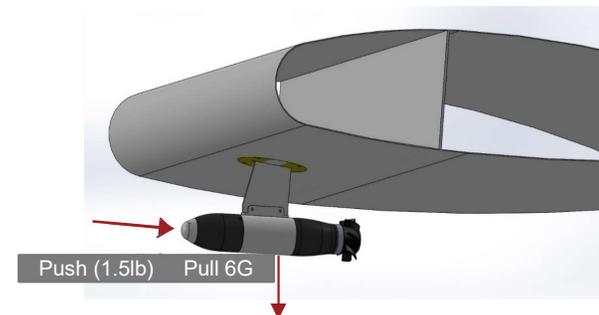✓ Consider using supplied brackets:

Option 1:
Bend to match wing angle

Option 2:
Use existing Maintenance plates

For more details on bracket installation see complete BOM Installation Instruction document

3

Adjust and Test

✓ Align BOM with chord line of the wing
✓ Nose of the BOM should be facing direction of travel
✓ Perform a Push and Pull test to all sides of the BOM and verify a solid installation

Push (1.5lb)   Pull 6G

To adjust roll and pitch to match your actual attitude, follow these steps:

ATTITUDE CALIBRATION

1

Download AHRS Utility App

✓ Go to Apple Store and download AHRS Utility

ⓘ Android ve~~L~~ is now available for some Android devices

2

Cage Horizon

✓ Fly straight and level
✓ Connect iPad to BOM's Wifi
✓ Open AHRS Utility App
✓ Go to Device Config Menu
✓ Select BOM Configuration tab
✓ Click CAGE under Horizon Adjustments
✓ Wait for confirmation

3

Verify and Test

✓ If a Cage successful message was received, go back to PFD view and verify the attitude

ⓘ If no confirmation is received, restart WiFi connection to the BOM, and try step 2 again
ⓘ Use the Test Communication button to verify 2 way communication with your device
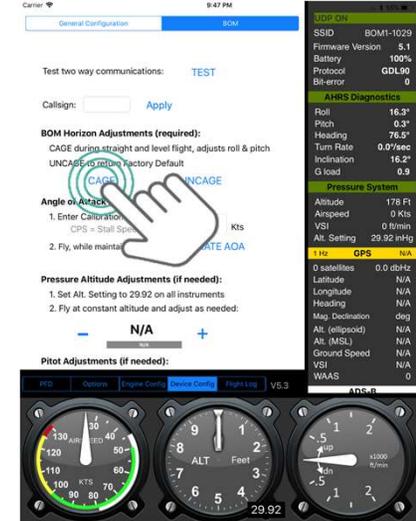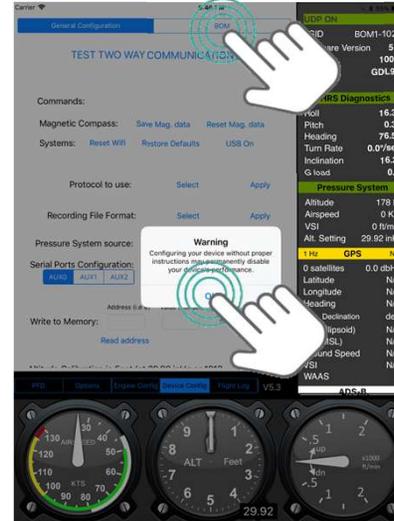
AOA CALIBRATION

1

Establish Calibration Point Speed (CPS)

✓ CPS = Stall Speed * 1.15
✓ Update CPS on AHRS Utility App's BOM configuration tab

ⓘ CPS is given in Kts
ⓘ Stall speed in clean configuration (flaps up)

2

Maintain CPS and Calibrate

✓ Use an alternate airspeed indicator (different from the BOM's) for this maneuver
✓ Maneuver aircraft speed to CPS and maintain
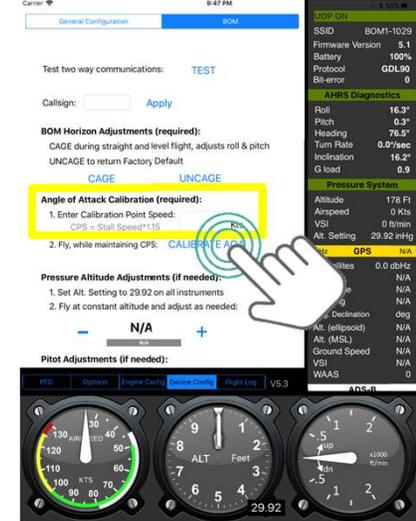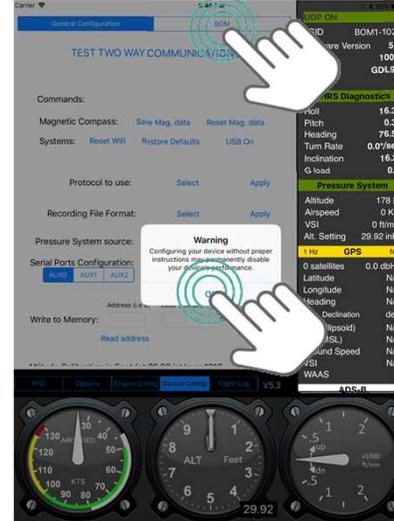✓ Click CALIBRATE AOA
✓ Wait for confirmation

3

Verify and Test

✓ If a Calibration successful message was received, the AOA gauge on the bottom right corner will be enabled.

ⓘ If no confirmation is received, restart WiFi connection to the BOM, and try step 2 again
ⓘ Use the Test Communication button to verify 2 way communication with your device

IF NEEDED, adjust pressure altitude & indicated speed while cruising, following the steps below:

ALT/SPEED ADJUSTMENTS

1

Fly straight and level

✓ Verify you have done the AOA calibration prior to any adjustment (step 2 or 3)
✓ Trim aircraft to cruising speed
✓ Fly at constant altitude

2

For Altitude Adjustments:

✓ Adjust altimeter setting to 29.92 inHg:
✓ On AHRS Utility App
✓ On reference Altimeter
✓ Use the + and – buttons under the *"Pressure Altitude Adjustments"* section on the app, to match the BOM altitude to the reference altitude

3

For Speed Adjustments:

✓ Verify the reference AI is using KNOTS for calibrating purposes
✓ Use the + and – buttons under the *"Pitot Adjustments"* section on the app, to match the BOM speed to the reference speed indicator

ⓘ Repeat this process **AFTER** calibrating the Angle of Attack. Calibrating AOA resets any altitude or speed adjustments.
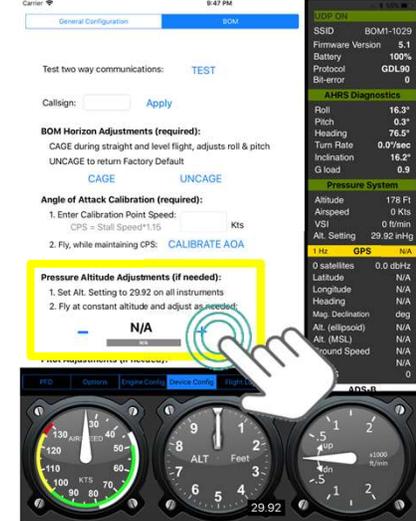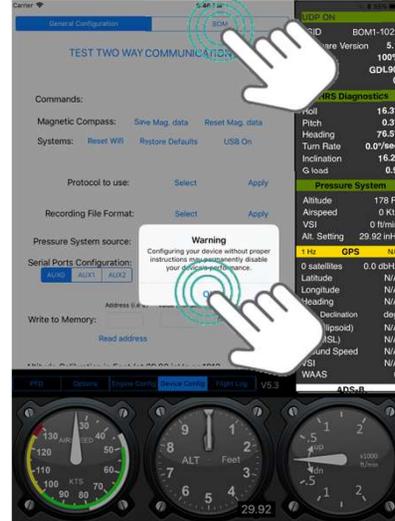
NAVIGATING WITH THE BOM

1

Download Nav. App

✓ Download and subscribe (if needed) to a compatible navigation App.
✓ Download applicable charts and terrain for your area

ⓘ   Third party Navigation Apps are not included with the BOM
ⓘ   Go to our website for a list of compatible Apps and displays

2

Fly and Navigate

✓ Connect tablet to BOM's Wi-Fi
✓ Open Navigation App of choice
✓ If app requires, select Levil device as source of data for GPS and ADS-B

ⓘ   Check tutorials with individual Apps on how to connect external devices
ⓘ   Not all Apps support ALL the features of the BOM

3

Using multiple Apps

✓ Use up to 6 tablets connected to the same BOM network and run different Apps simultaneously.
✓ It is recommended to use one App per tablet. Close Apps running on the background for faster performance

ⓘ   Some Apps, like ForeFlight, remain connected to the BOM even if running on the background, preventing the active App from accessing the BOM data.

FAQS

Is the BOM's battery charged when I receive it?

The BOM will have at least a 30% battery charge when shipped out, but should be charged to 100% before being installed in the aircraft.

Initially, why does my altitude or speed differ from my panel instruments ?

There could be high or low pressures pockets under the wing depending on aircraft design. This may affect the sensor readout on the BOM, thus (sometimes) is necessary to adjust pitot-static data by software.

Is it necessary to keep the red cover ON when the BOM is not in use?

Yes! It is very important that the Red cover is always placed on the BOM when it is not in use. This prevents the internal battery of the BOM from constantly draining, which could permanently damage the battery.