



Frequently Asked Questions

AHRS RELATED QUESTIONS

[Can I Calibrate/Cage the AHRS?](#)

[Does the iLevil need to be centerline?](#)

[How accurate is the attitude and can I use this in IMC?](#)

[I set the iLevil down on a flat surface and the AHRS indicates a huge error in pitch and roll.](#)

[Can I get Magnetic Heading or is it just GPS track?](#)

[How far from ferrous metals should I install the iLevil, so as not to interfere with the magnetic heading?](#)

[My Magnetic Heading is completely off, how can I fix it?](#)

[My Magnetic Heading always indicates X deg difference compared to my certified GPS, how can I fix it?](#)

[What happens if I don't connect the pitot-static ports on the iLevil AW?](#)

GPS RELATED QUESTIONS

[My GPS is not working or not obtaining a Fix.](#)

[Why is my GPS Altitude always off by X feet.](#)

[I have heated windows, would this affect GPS operation?](#)

[Why is my GPS WAAS Status always 0 or N/A?](#)

[GPS signal level and # of satellites are N/A on the AHRS Utility App.](#)

WIFI COMMUNICATION RELATED QUESTIONS

[Is your system WiFi or Bluetooth, and how many devices can I connect?](#)

[Can installation of AW be done inside a fiberglass nose cone?](#)

[How far away from the tablet can I install my iLevil?](#)

[Can I run two WiFi devices simultaneously \(i.e iLevil Sport and Skyguard ADS-B\)?](#)

[Can I run two tablets simultaneously connected to the same iLevil?](#)

[Can I have two iLevil's in my cockpit? How would I identify them?](#)

[My tablet is dropping the connection to the iLevil constantly, what can I do?](#)

[I am no longer able to connect to the iLevil WiFi](#)

[My tablet is unable to locate the iLevil-xxxx network. It is not on the "available networks list"](#)

[My tablet recognizes the iLevil network but I get no data when I open my Apps.](#)



ADS-B RELATED QUESTIONS

[Will I see ADS-B traffic even if I don't have an ADS-B Transponder?](#)

[Why do I see a shadow of myself?](#)

[Will I see Mode-C traffic and Mode-S traffic with my iLevil?](#)

[What kind of information do I get outside the US?](#)

[How old is weather obtained using ADS-B?](#)

[Can I obtain weather outside the US?](#)

[Does your iLevil meet the mandate for ADS-B out?](#)

[What type of ADS-B remote antenna can I use with my iLevil?](#)

[The "Loading weather" status on WingX Pro7 keeps spinning during flight, does this mean I'm not receiving weather?](#)

MISCELLANEOUS

[How effective are the solar panels?](#)

[Can I connect the iLevil to my Transponder?](#)

[Can I connect the iLevil to an Autopilot?](#)

[What are the differences between iLevil1 and iLevil2 and iLevil3?](#)

[Can I upgrade my device to the latest version?](#)

[What kind of engine monitor can I use to see the Engine displayed on the iPad?](#)

[Does your system overheat and do I need to cover it from sunshine?](#)

[How can I upgrade the firmware on my iLevil?](#)

[What products can the iLevil series be linked to?](#)

[What Apps are compatible?](#)

[Warranty Information?](#)

AHRS UTILITY APP RELATED QUESTIONS

[Do I need to configure my iLevil using Device Config?](#)

[How do I Adjust the Speed gauge to indicate higher speeds?](#)

[My Speed and Altitude are always Zero or "---"](#)

[My Heading is always "---" or not moving](#)

[Can I enter Altimeter setting in HPa instead of inHg?](#)



AHRS RELATED QUESTIONS

Can I Calibrate/Cage the AHRS?

The BOM and iLevil 3s purchased after August 2018, have caging capabilities that do not require the AHRS to be level.

For earlier models, here are basic guidelines to follow when installing your iLevil:

1. The iLevil needs a surface that will be leveled when the airplane is in the air during level flight.
2. It is ok if such surface is not leveled when on the ground (i.e tail wheel airplane).
3. The iLevil Mount (sold separately) allows you to adjust the level position and facilitates installation
4. If unable to find a level surface, you may use the “cage” or “calibrate” features on your specific App to adjust minor errors. Note: Some Apps don’t offer “calibrating” features, others may have a maximum degree of installation error (i.e 5 deg max pitch)
5. It does NOT have to be on centerline, but the labels must be facing up and the airplane drawing must be facing forward.

Does the iLevil/BOM need to be on centerline?

No. You can mount the iLevil to the sides of your cockpit and get an accurate attitude indication. The BOM is installed on the Wing of the plane.

How accurate is the attitude and can I use this in IMC?

The AHRS inside Levil Aviation’s devices is designed for aviation-grade performance. It is designed and manufactured by Levil, guaranteeing each individual board is calibrated to withstand extreme environmental conditions (turbulence, humidity, high-temperatures etc.). Attitude indication is within +3 deg on normal flights. Although it is not designed to withstand aerobatic maneuvers, our AHRS are known to perform excellent without tumbling or damaging internal components. Using a Levil Aviation instrument for IFR flying is NOT permitted, as they are not certified by the FAA.

I set the iLevil/BOM down on a flat surface and the AHRS indicates a huge error in pitch and roll.

The internal MEMS are rated for 500 deg/sec maximum rotation. It is very easy to exceed this rate when moving the device with your hand, but very unlikely to happen on an airplane (no heavy aerobatics). If the max rotation rate is exceeded, the device needs to be steady for the next 5 seconds. If this is not the case, there could be significant errors in pitch and roll after the 5 seconds. The device will eventually compensate and fix the errors over time. You can exceed the max rate with your hand and set it on a flat surface to recover faster.



Can I get Magnetic Heading or is it just GPS track?

You get both. The iLevil/BOM uses a 3-axis magnetometer to calculate magnetic heading (even when airplane is up-side-down). GPS track is also available. Most Apps use GPS track as the main source of heading, and some Apps let the user choose which one to display (compass or GPS). Magnetic heading is highly sensitive to magnetic deviations inside the airplane so it is recommended to use track. Check your Apps setting for heading source.

How far from ferrous metals should I install the iLevil/BOM, so as not to interfere with the magnetic heading?

Depends on how big the component is and the strength of its magnetic field. Just like a compass, the magnetometer inside the iLevil/BOM is sensitive to ferrous metals, or magnetic fields produced by Landing Lights Wiring etc. Placing the iLevil/BOM close to a magnetic compass is not a good idea, as this would affect the readout on both the magnetic compass and the iLevil/BOM. As a rule of thumb, one foot is recommended. However, this is not always possible, thus, the iLevil/BOM has internal algorithms that “learn” your aircraft configuration as you fly. The heading might be off during initialization, but as soon as the airplane starts turning, the iLevil/BOM starts compensating for any errors. Users can “save” the configuration after their first flight to have a more accurate heading from the beginning on any future flights. For calibrating instructions for your magnetometer, please refer to the In-Flight Magnetic Calibration procedures.

My Magnetic Heading is completely off, how can I fix it?

Just like a compass, the magnetometer inside the iLevil/BOM is sensitive to ferrous metals, or magnetic fields produced by Landing Lights Wiring etc. If you are experiencing mag heading errors, try re-locating the iLevil/BOM. Always check the Magnetic heading during flight, as the iLevil/BOM is constantly learning your aircraft’s configuration and compensating for any errors. To check if your iLevil/BOM’s internal compass is working correctly, you can follow these easy steps:

1. If you have an iLevil/BOM with a pre-saved Magnetic calibration, you can clear the configuration using the AHRS Utility App → Device Config → “Erase Mag data”
2. Grab your iLevil/BOM with one hand and your tablet (running AHRS Utility) with the other.
3. Walk to a place far (at least 50 ft) from buildings, airplanes or anything that may interfere with the compass.
4. Turn ON the iLevil/BOM, point it to a known direction (i.e. North), and make a note of the mag heading indicated (it might be different than North).
5. Start turning to the right until you complete a 360 deg turn around your own axis (in about 20 seconds total).
6. Repeat the same to the opposite side.



7. After turning, remain still until the iLevil/BOM's magnetic heading comes to a stop, make note of the indicated magnetic heading.
8. If the magnetic heading is close to North, your compass is working properly. You may repeat steps 4-6 to fine-tune the magnetic heading indication.

My Magnetic Heading always indicates X deg difference compared to my certified GPS, how can I fix it?

Be conscious that this is magnetic heading and there will always be a magnetic deviation (declination) to true north that varies according to your latitude and longitude. If you are comparing the heading output on the iLevil/BOM to a GPS source, take into consideration that GPS may be reporting "True Track". You can add/subtract the corresponding magnetic deviation at your current location to obtain True Heading.

What happens if I don't connect the pitot-static ports on the iLevil AW?

The iLevil AW can be used as a portable device as well. If you don't connect the AW to the static and dynamic lines, all AHRS GPS and ADS-B functions will remain unaltered. If you are using an App to display indicated airspeed, the App will indicate 0 Kts for speed. In this case, you can switch your App to display "GPS Groundspeed". The pressure altitude will now be "cabin pressure altitude". You can also switch to GPS Altitude if desired.

GPS RELATED QUESTIONS

My GPS is not working or not obtaining a Fix.

Below are some troubleshooting steps. If you are not able to obtain a fix after following the steps below, contact us for further troubleshooting.

iLevil Sport, SW and BOM:

- The GPS antenna is embedded inside. For the iLevil, it is located right underneath the domed label with the product name. For the BOM, it is located on top of the front part. Make sure there is no obstruction there, no Velcro, mounts brackets, or anything blocking a signal
- Make sure your iLevil/BOM has clear view to the sky.
- Turn on your iLevil/BOM and, with a clear view to the sky, wait between 45 and 60 seconds for the it to get a GPS fix.

iLevil AW:

- AW uses an external active GPS antenna. Make sure it is installed on the "GPS" port (not the ADS-B port) and is properly tightened.
- There have been cases where users exchanged ADS-B and GPS antennas by mistake. In most cases this will not damage the GPS unless a working ADS-B out transmitter was close to the antenna. If this is the case, please contact a Levil representative to request an RMA number for repair.



- Make sure the GPS antenna has a clear view to the sky and is facing the sky (grey metallic sticker facing down)

*** You can check the GPS using the diagnostics section for GPS on the AHRS Utility App. Make a note of how many satellites are locked and the strength of the signal. Nominal values for good GPS reception vary from 30.0 to 40 db.

Why is my GPS Altitude always off by X feet.

This is one of the most common questions. When first developing the iLevil/BOM series, we opted for using standard GDL90 protocol (ADS-B protocol), which uses Geo Altitude (versus MSL altitude) for altitude output. The accuracy of GPS height measurements depends on several factors but the most crucial one is the "imperfection" of the earth's shape. Height can be measured in two ways. The GPS uses height above the reference ellipsoid that approximates the earth's surface. The traditional, MSL altitude is the height above an imaginary surface called the geoid, which is determined by the earth's gravity and approximated by MSL. Geo Altitude may differ from MSL altitude by as much as +/- 100 ft. After the introduction of the iLevil2 we introduced a new message on our protocol to be able to output MSL altitude as well. Although the information is there, not all the Apps may integrate the new message that contains MSL Altitude. Therefore, depending on your location you may see a difference in altitude when comparing to a source providing MSL. NOTE: Traffic Information from ADS-B targets shown on the screen output Geo Altitude as well.

I have heated windows, would this affect GPS operation?

Yes. Heated windshields or windows are known to block the GPS frequency as well as the ADS-B frequency. If you have access to an external GPS antenna, it is recommended to use that instead. It may help to acquire the signal at the cockpit side window and then place the iLevil back on the panel.

Why is my GPS WAAS Status always 0 or N/A?

Although your iLevil has a WAAS enabled GPS, a WAAS status flag was not available for the original iLevil protocol. We incorporated it with the release of the iLevil2, thus we released firmware version 3.3 (iLevil1) and version 4.2 (iLevil2) containing a WAAS indication, as well as satellite data and signal levels. If you have older firmware, there is no way for the AHRS Utility App (for iPad) to determine the status of the WAAS feature. If you have the newer firmware version, you can check the WAAS status on the AHRS Utility's GPS diagnostics view. No other App is able to show WAAS status for the iLevil until third-party Apps integrate the new protocol. NOTE: WingX Pro7 will always show 0 for WAAS because the current version does not integrate the new iLevil messages yet. Note: WASS signal is acquired approximately 60 seconds after the GPS fix is acquired.



GPS signal level and # of satellites are N/A on the AHRS Utility App.

GPS status information was not available until the release of the iLevil2. If you own an iLevil1 and have firmware V3.0 and below, you will not have access to how many satellites are being followed, WAAS status, or average signal level for the satellites.

WIFI COMMUNICATION RELATED QUESTIONS

Is your system Wi-Fi or Bluetooth, and how many devices can I connect?

The iLevil/BOM has an internal Wi-Fi transceiver that acts as an access point. You may connect as many as 7 devices simultaneously regardless of the operating system (iOS or Android). Note: You do NOT need an Internet or Cellular connection in the air for your iLevil/BOM to work.

Can installation of AW be done inside a fiberglass nose cone?

Yes. As long as the Wi-Fi signal can propagate to the tablet display, I don't see a problem with this setup.

How far away from the tablet can I install my iLevil/BOM?

We have tested communications up to 100ft in an open field. Wi-Fi usually provides significantly more range than Bluetooth. However, enclosing the iLevil in an aluminum box is not a good idea, as metal layers can block the signal. The iLevil does not have to have a clear path to the tablet, but the signal needs to be able to propagate. The iLevil2 and 3 have the Wi-Fi antenna embedded on the opposite side of the ON/OFF switch and LEDs. Make sure you don't block the signal. The iLevil1 has the Wi-Fi antenna on the right hand side, middle section of the box. The BOMs Wi-Fi antenna is located in the bottom front of the device.

Can I run two Wi-Fi devices simultaneously (i.e. iLevil Sport and Skyguard ADS-B)?

You can have two Wi-Fi devices turned ON without interfering with each other. However, the tablets can only connect to one Wi-Fi network at a time. Thus, if you have two devices using Wi-Fi communications, you would have to switch networks back and forth to be able to access each device temporarily. The iLevil series has serial inputs and is able to channel data from other devices to avoid the Wi-Fi conflict. Learn more on this video: <http://www.youtube.com/watch?v=yzn2OPismzw>

Can I run two tablets simultaneously connected to the same iLevil/BOM?

YES! Starting with the iLevil series we introduced a feature called "UDP communication", which allows you to access the data from as many as 7 devices simultaneously. Most Apps use UDP exclusively, some Apps allow the customer to choose between TCP (one device) and UDP (many devices). If your App offers the



option, make sure you select UDP on all devices to be able to connect simultaneously to all.

Can I have two iLevil's in my cockpit? How would I identify them?

Yes. Every iLevil is differentiated by its serial number. The Wi-Fi SSID will be iLevil-XXXX, where XXXX is a 4-digit serial number. If you have two devices in the cockpit, your tablet will recognize two different Wi-Fi networks and you can choose which one you'd like to use.

My tablet is dropping the connection to the iLevil/BOM constantly, what can I do?

If you are having communication problems, the following troubleshooting guide might be able to help:

1. Make sure the iLevil/BOM is not blocked or encased inside a metal container. Test connections with a clear path between tablet and iLevil/BOM first to remove environmental variables.
2. Make sure you are not inside a building crowded with Internet routers and networks. (i.e. airshows with many exhibitors using Wi-Fi devices simultaneously create interference)
3. Clear ALL Apps running on the background on your tablet. Sometimes having too many Apps open can slow down your tablet's operating system and thus Wi-Fi communications. To close Apps running on the background, follow these steps:
 - a. For Apple devices: http://ipad.about.com/od/iPad_Guide/ss/How-To-Close-An-iPad-App.htm
 - b. For Android devices: <http://blog.laptopmag.com/how-to-close-android-apps>
4. Reset Wi-Fi. A simple OFF/ON cycle of the Wi-Fi on your tablet may resolve any issues.
5. Reset Wi-Fi configuration. Sometimes your tablet saves the "iLevil/BOM-xxxx" network for future use. To reset, click on the network name for more options and click "Forget this network". Then do a power cycle to the iLevil/BOM.
6. On Apple devices, If you recently upgraded the operating system to your tablet and started to have communication problems, it is recommended to reset network settings:

Settings->General->Reset->Reset Network Settings.
7. Restart your tablet. A clean boot up can sometimes fix issues that are hard to detect.
8. If using an App that does not use UDP communication by default, make sure UDP is selected as standard protocol.
9. Update the iLevil firmware. If you have an iLevil1 with firmware version 2.8 and lower, you can improve data transfer of GPS data by upgrading your firmware. This step is recommended ONLY if your device is dropping GPS information on a continuous basis.



10. Upgrade your iLevil to the latest Wi-Fi chipset. If none of the steps above helped, you can contact Levil Aviation support to have your iLevil upgraded to a new Wi-Fi chipset (iLevil1 users).

I am no longer able to connect to the iLevil/BOM Wi-Fi

If you are trying to connect to the iLevil-xxxx network and you get an “Unable to join” message, turn off the iLevil. Cycle OFF/ON the Wi-Fi on your tablet and try again.

My tablet is unable to locate the iLevil/BOM-xxxx network. It is not on the “available networks list”

If you are trying to connect to the iLevil/BOM-xxxx network and you can’t find it listed:

1. Turn OFF the iLevil/BOM
2. Cycle OFF the Wi-Fi feature on your tablet
3. Turn ON iLevil/BOM and make sure it is charged (LED ON). Otherwise, use USB cable to apply external power (5V)
4. Cycle ON the Wi-Fi feature on your tablet
5. Wait for the network to show. If the steps above don’t work, contact Levil support for further troubleshooting.

My tablet recognizes the iLevil/BOM network but I get no data when I open my Apps.

For AHRS-G mini users (iLevil users skip this section):

1. Download the AHRS Utility App
2. Connect to AHRS-G mini’s WiFi network
3. Open Utility App and go to Options-> Connect Using -> Select TCP and click connect.
4. Go back to PFD. If the App is now connected to the G-mini, then everything is ok. There is a configuration that you must enable to make it compatible with the latest versions of other Apps:
 - a. On the AHRS Utility, go to Device Config -> Enable Configuration -> AHRS-G mini tab
 - b. Click “Enable UDP broadcast” once. If the WiFi is working properly, you will see a stream of data until it says “Configuration done”. If nothing appears on the textbox, you may restart the App and repeat steps 1-5 above.
 - c. Cycle power to the AHRS-G mini.
5. If AHRS never connects, contact Levil support for further troubleshooting.

For iLevil/BOM users:

You can verify if your iLevil/BOM’s internal systems are working properly by using a PC utility software provided by Levil. The iLevilConfig.exe tool can communicate



with your iLevil/BOM via USB and verify that all systems are working correctly and reset the WiFi parameters. To use our tool, contact the tech support team at aviationsupport@levil.com.

ADS-B RELATED QUESTIONS

Why do I not see traffic?

ADS-B is not supported everywhere in the US. It is estimated that by 2020 ADS-B will be fully operational and every aircraft will have an ADS-B out transponder. Until this date, ADS-B traffic may not always be there. If you or somebody close to you is equipped with ADS-B out, your chances of seeing the traffic is greatly improved. For traffic outside the US, only models after the iLevil2 are equipped with a dual band ADS-B receiver. The second band is able to detect Mode-S transponders with the extended squitter (mostly airliners and jets that fly above 18,000 ft). Here are some basic guidelines:

1. Make sure your App is capable of displaying traffic information from an iLevil/BOM receiver.
2. If you'd like to see traffic that is far away and not necessarily relevant, make sure you don't have any filters turned ON that may filter out traffic far away from your current location and altitude.
3. Some Apps don't show traffic unless a "traffic Layer" is turned ON.
4. When flying in the US, traffic sent by the ADS-B towers is only available if your aircraft or a near-by aircraft is equipped with an ADS-B out transmitter. Otherwise only air-to-air traffic is available from those with ADS-B out (978 MHz) and Mode-ES (1090 MHz) transponders.
5. Make sure the tablet is connected to the iLevil/BOM network and the ADS-B antenna is properly installed with a clear view to ground towers.
6. ADS-B signal from towers is not available on the ground. Thus, you may need to gain some altitude (sometimes at least 2000ft) to start receiving weather and traffic information from ground towers.
7. When on the ground, you may receive traffic information from aircraft equipped with Mode-ES (1090 MHz) transponders ONLY if the iLevil/BOM has a GPS fix.

Why do I see a shadow of myself?

The iLevil/BOM will pick up your own transponder signal, either directly from your ADS-B transponder (if equipped with one), or a ground transmission from ADS-B towers that are broadcasting traffic in the area. Some Navigation Apps allow you to input your ICAO address so that your shadow can be filtered.



Will I see Mode-C traffic and Mode-S traffic with my iLevil/BOM?

Yes (in the US). If the ADS-B tower is sending traffic information, they send ALL the traffic, including Mode-C transponders through the 978MHz channel. Outside the US, only air-to-air traffic is available from ADS-B out transponders and Mode-ES transponders.

What kind of information do I get outside the US?

Outside the US, only air-to-air traffic is available from ADS-B out transponders and Mode-ES transponders when using an iLevil 2/3 SW, iLevil 2/3 AW or BOM. Not every airplane is equipped with Mode-ES transponders, so be mindful that not all the traffic is shown. GPS and Primary Flight information from AHRS is available as well. Weather information is not available outside the US because there are no ADS-B ground towers installed providing the weather broadcast. If you have a TCAS (Zaon) or FLARM device, you can also see the traffic information from these devices when you connect them to an iLevil1, 2 or 3 via RS-232. Learn more about this here: <http://www.youtube.com/watch?v=yzn2OPIsmzw>

How old is weather obtained using ADS-B?

Local weather could be 2 minutes old (up to 200 miles coverage). National radar up to 15 minutes old.

Can I obtain weather outside the US?

No. You may update your App with Internet weather before your flight, but the iLevil/BOM will not be able to obtain in-flight weather unless receiving this information from an ADS-B ground station.

Does your iLevil/BOM meet the mandate for ADS-B out?

No. The iLevil/BOM is a receiver (ADS-B in). To be compliant, you need the transmitter only (ADS-B out), which is sold separately. You can buy a stand-alone ADS-B out transmitter, or upgrade your current transponder to be compliant for 2020.

What type of ADS-B remote antenna can I use with my iLevil?

A standard Mode-C transponder antenna could be used for ADS-B applications. The frequencies are very close. An ADS-B antenna that could be remotely mounted also works. These are some of the components you may use for this type of setup:

Antenna:

<https://www.aircraftspruce.com/catalog/avpages/artexcoaxcable.php?clickkey=9975>

Cable:

https://www.aircraftspruce.com/catalog/avpages/av74_ant.php?clickkey=4083



BNC to SMA adapter

<https://www.aircraftspruce.com/catalog/avpages/vertexadapter.php?clickkey=253378>

The “Loading weather” status on WingX Pro7 keeps spinning during flight, does this mean I’m not receiving weather?

No. The “loading weather” and weather animation controls are only for Internet weather using Baron Services. The iLevil/BOM weather status is indicated by a green “ADS-B” status on the bottom of the moving map (on top of the menu bar). If the status is flashing orange, then no weather has been received; otherwise it will be solid green.

MISCELLANEOUS

How effective are the solar panels?

Solar panels on the iLevil Sport and iLevil SW are always charging your batteries when exposed to light. On the iLevil Sport, the solar panels will significantly extend the battery life (up to 2 hours). On the iLevil SW, the solar panels help extend the battery life (up to 30 minutes) because of the higher power consumption by the internal ADS-B receiver. When iLevil is OFF and exposed to sunlight, the solar panels will NOT recharge the internal Li-ion battery.

Can I connect the iLevil to my Transponder?

Some transponders may require a GPS input to function as Mode-ES or be ADS-B out compliant. The iLevil can output GPS data over the serial port when the Auxiliary port (AUX0 for Sport and SW) is configured for “NMEA out” using the AHRS Utility App. However, the internal GPS on the iLevil is NOT certified and will NOT meet the requirements for 2020.

Can I connect the iLevil to an Autopilot?

If your Autopilot requires GPS input to follow a track, the iLevil’s Auxiliary serial port can be configured to output NMEA GPS data and provide track information to your AP. Autopilot integration is currently under development and the firmware that supports this feature is a BETA version. In order to follow a flight plan, the Apps have to be able to send the waypoint information to an iLevil, to then be transferred to the AP. As more Apps integrate the feature, AP guidance will become a standard feature.

Can I upgrade my device to the latest models?

Yes! There is a trade-in program available to upgrade. Contact aviationsupport@levil.com for more info or visit our support page for more information.

What kind of engine monitor can I use to see the Engine displayed on the iPad?

Currently we integrate the Grand Rapids EIS 2000 (Compatible with iLevil 3 only), 4000 and 6000 series. The GRT EIS is a complete engine analyzer solution installed in many



airplanes today that gathers sensor data and outputs digital information through an RS-232 serial pin (Pin 11). To be able to see the data on your iPad you need to:

1. Connect serial output on GRT (Pin 11) to any of the serial inputs on the iLevil (AUX0, AUX1 or AUX2 RX).
2. Connect Ground on GRT to Ground on iLevil.
3. Configure iLevil's Auxiliary port to "GRT EIS" using the AHRS Utility App for iPad:
Device Config -> Enable Configuration-> Select AUX port -> Select GRT EIS -> Apply -> Cycle Power to iLevil
4. Enable/Disable gauges and set minimum and maximum limits on your App respectively (AHRS Utility -> Engine Config)

Does your system overheat and do I need to cover it from sunshine?

The iLevil SW is designed to get light from the sun and power your batteries. The iLevil series is designed to withstand cold and heat and is calibrated to operate properly in such conditions. With the addition of the dual-band ADS-B, the iLevil2 SW and 2AW operates at higher temps than the iLevil1. It is still designed to operate in extreme conditions; however, the new box design with Aluminum casing absorbs more heat than the previous plastic enclosures. It is recommended to exercise caution when grabbing the iLevil with your hands after being exposed to the sun for long periods (either ON or OFF). As with any other portable device, it is better to store them at room temperatures to improve the lifetime of the internal components.

How can I upgrade the firmware on my iLevil/BOM?

Firmware updates may include integration with other hardware or internal software enhancements. Please refer to the Firmware update documents in our support page, for step by step instructions on how to perform the firmware update.

What products can the iLevil series be linked to?

1. Panel mounted displays that accept ADS-B data through a serial port or USB port
2. Portable displays that are WiFi enabled (iPad, iPod Touch, iPhone, Android Tablet and Android Phone)
3. Portable iFLY GPS systems by Adventure Pilot
4. Zaon XRX for TCAS traffic
5. Engine Analyzers with serial output (GRT EIS, Advanced Flight Systems)
6. Navworx ADS600-B (ADS-B in and out)
7. Auto-pilots that accepts NMEA input

What Apps are compatible? Is ForeFlight one of them?

We offer more compatibility than any other product, and your iLevil will always be open to new and exciting developments in the future. There are some incredible Apps out there that offer amazing safety features when combined with your iLevil and you can try them



all! Only the iLevil 3 offers compatibility with ForeFlight. To see a complete list of compatible Apps visit our websites.

Warranty Information?

Levil Aviation Corp. warrants this product to the original purchaser to be free from defects in material and workmanship for a period of one year from the date of the original purchase. For more warranty information visit our website.

AHRS UTILITY APP RELATED QUESTIONS

Do I need to configure my iLevil using Device Config?

The iLevil comes ready to use out of the box. There is no need to configure your iLevil unless it will perform specific functions (i.e drive Autopilot, transponder or Engine analyzers). The Device config page can render your iLevil useless if you are not following steps carefully. DO NOT use the Device Config functions if not required by an iLevil agent or instruction manual.

How do I Adjust the Speed gauge to indicate higher speeds?

The default Max speed is 135 Kts. You can customize it in Options-> VSpeeds. By setting the normal Vspeeds for your type of aircraft, the Speed gauge will adjust accordingly.

My Speed and Altitude are always Zero or “---“

Go to Options and check the selected setting for “Air Data source”. When using an iLevil Sport or SW, pressure data is NOT available, so make sure “GPS” is selected. When using iLevil AW, you can choose “Pressure data” or “Both”. If using GPS data, make sure your GPS has acquired a FIX, otherwise there is no altitude or airspeed data available to display.

My Heading is always “---“ or not moving

Go to Options and check the selected setting for “Heading Source”. If GPS track is selected, you will need a GPS FIX and to be in a moving target to see the Track change. If you’d like to see the compass heading, select “Magnetic” for heading source and the heading displayed will move when the iLevil rotates.

Can I enter Altimeter setting in HPa instead of inHg?

Yes. Just enter your Altimeter setting in HPa and the App will automatically update the units to HPa.(Millibars, mb)