AR VISION PROBOX — QUICK START

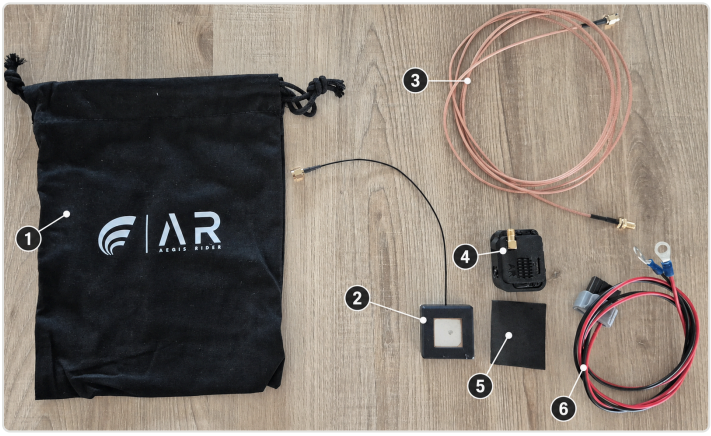
Mounted once, calibrated once, then forgotten

The ProBox is a sensor unit that bolts your motorcycle into the tracking system: its own motion sensors, its own satellite antenna, wired to the bike's battery. Fitted rigidly and calibrated properly, it makes the AR content sit where it belongs.

⚠ **Read the whole guide before you start.** Do not remove any adhesive backing or touch the motorcycle battery until you have planned every position and read the electrical-safety warning on page 03.

WHAT'S INCLUDED

CHECK ALL SIX BEFORE INSTALLATION



1. Component pouch
2. GNSS patch antenna
3. Antenna extension cable
4. **ProBox**
5. Optional foam tape
6. Battery connection cable

The ProBox and the GNSS antenna carry pre-applied double-sided adhesive. Check the protective layer is still intact.

NOT WATERPROOF

The ProBox must sit in a dry, protected place inside the motorcycle.

RIGID ONLY

It must not move relative to the frame — never on the handlebars.

ANTENNA FACES UP

The ceramic face points at the sky, with nothing permanently above it.

THE INSTALLATION, END TO END

Prepare the app, plan the positions

STEPS 1 & 2

Software first, then a dry run of the whole installation. Choose every position and check both cables reach before any adhesive backing comes off.

STEP 1 — APP, HELMET, PRO VEHICLE

1. Install the latest **AR Vision Companion** app from the App Store or Google Play.
2. Connect your phone to the helmet, with the phone on the internet so updates can be found.
3. Install any helmet software update and let the helmet restart.
4. In the app, add a new vehicle, choose **Pro vehicle**, and set it as the active vehicle.
5. Back on the Helmet page, install any further sensor or ProBox updates offered.

ⓘ **One Pro vehicle = one motorcycle + one ProBox installation.** Calibration learns both the bike and the exact orientation of the box.

STEP 2A — WHERE THE PROBOX GOES

Protected and dry — inside the bodywork, typically beneath the rider or passenger seat. It is not waterproof.

Rigid — a part that does not move relative to the frame. Never the handlebars.

Toward the rear, reasonably close to the rear axle, where practical.

With clearance for both connectors and for the seat to close fully.

In cable reach of the battery and the antenna, without strain.

STEP 2B — WHERE THE ANTENNA GOES

Ceramic face upward — the pale square with the dot in its centre must point at the sky.

Clear sky view — no bodywork, luggage or gear permanently above it.

Cable protected — never crushed by the seat, kinked, pinched, pulled or bent sharply at the connector.

Sheltered where possible — avoid needless prolonged exposure to severe weather.

THE ONE-WAY DECISION

The ProBox's position and angle become part of the calibration —

a few degrees of change costs performance

Test-fit everything, then commit. Moving it later means a new Pro vehicle and the full calibration again (page 07).

THE DRY RUN — DO ALL OF THIS BEFORE ANY ADHESIVE COMES OFF

STEP 2C

- **A** **Hold both parts in place** and check the seat closes fully, with the connectors clear.
- **B** **Clean both surfaces** with a product compatible with the motorcycle's materials, then let them dry completely.
- **C** **Lay out both cable runs** and confirm each reaches without tension at either end.
- **D** **Sit on the motorcycle** and work the steering and suspension through their range while everything is still loose.

KEEP EVERY CABLE AWAY FROM

SHARP EDGES · HEAT SOURCES · FUEL COMPONENTS · STEERING · SUSPENSION · CHAINS & BELTS · WHEELS · SEAT LATCHES

Next: connect the battery, then mount both parts → page 03

Connect power, then mount

STEPS 3 & 4

ELECTRICAL SAFETY

A motorcycle battery can deliver enormous current. Battery work can cause short circuits, sparks, fire, injury and damage. **Follow your motorcycle manufacturer's battery-service instructions.** If you are not trained and confident, have a qualified motorcycle installer make the connection. This guide deliberately does not give a universal terminal sequence — requirements differ by motorcycle.

STEP 3 — BATTERY POWER

1. Switch the motorcycle off and follow the manufacturer's procedure for reaching and working on the battery.
2. Route the supplied battery cable from the battery to the planned ProBox position.
3. Connect the red and black leads to the correct terminals, per the manufacturer's instructions and the cable markings.
4. Secure the cable clear of sharp edges, heat, steering and suspension movement, and anything that could crush it.
5. Push the grey power connector into the ProBox and confirm it is fully seated.

Releasing the grey connector: press the latch on its underside — the side marked with the AR symbol — and pull the connector body straight out. Never pull the wires.

STEP 4 — MOUNT BOTH PARTS

1. Clean both mounting surfaces with a product compatible with the motorcycle's materials, and let them dry completely.
2. Test-fit the ProBox, antenna, connectors, cable routing **and the seat** before exposing any adhesive.
3. Peel the protective layer and press the ProBox firmly onto the rigid surface. Add the optional foam tape only if extra vibration damping is needed.
4. Mount the antenna ceramic-face-up with its sky view clear.
5. Connect the antenna directly or through the extension cable — hand-seat the connectors, never twist or force them.
6. Secure all cables and refit the seat carefully.

FINAL MOUNTING CHECK

BEFORE YOU GO FURTHER

- ✓ The ProBox is rigid, dry and immovable.
- ✓ Nothing is crushed, kinked, loose or hot.
- ✓ The antenna cable leaves its connector smoothly.
- ✓ Nothing can foul steering, suspension or the seat latch.

WHEN TO CALL AN INSTALLER

You are not confident working on a live battery, or your motorcycle's battery is awkward to reach.

Your motorcycle's manual calls for a specific terminal or fuse arrangement you cannot verify.

Any doubt at all about polarity, fusing or cable protection. A qualified motorcycle installer will do this in minutes.

ABOUT THE OPTIONAL FOAM TAPE

It is there to damp **excessive** vibration — not as a standard mounting layer.

Fit it only if a bike is unusually harsh, or if support advises it after a diagnosis.

Adding or removing it changes the ProBox's height and angle, so it means a **full recalibration** (page 07).

Next: pair the ProBox with the helmet → page 04

Pair the ProBox

STEP 5

A new ProBox normally wakes straight into pairing mode, shown by rapidly blinking LEDs. If it is not in pairing mode, put it there with the button — then connect from the app.

5A — ENTER PAIRING MODE

1 · POWERED, LEDS ON
Confirm the ProBox has power and its LEDs are lit.

→

2 · HOLD 3 SECONDS +
Press and hold the button. The LED bar fills progressively.

→

3 · ALL FIVE GREEN → RELEASE
Release the button and wait for the reboot.

Pairing mode starts only after you release the button. Do not press it again while the ProBox reboots.

5B — CONNECT FROM THE APP

1. Bring the helmet close to the motorcycle and open **AR Vision Companion**.
2. Select the **Pro vehicle**, set it active, and open **Vehicle Setup**.
3. Choose **Connect to ProBox**, then pick your ProBox from the nearby devices listed.
4. Follow the app. The LEDs blink rapid blue while configuring, then flicker rapid green on success.
5. Wait for the reboot and confirm the app reports the ProBox as **connected** before going on.

WHAT THE LEDS ARE TELLING YOU DURING PAIRING

	**Rapid blue blinking** — pairing and configuration in progress.	Keep phone, helmet and ProBox close.
	Rapid green flicker — configuration succeeded.	Wait for the automatic reboot.
	Slow moving green pattern — powered and connected.	Ready. Full reference on page 08.

IF YOUR PROBOX DOES NOT APPEAR IN THE LIST

THREE THINGS, IN ORDER

1 · CHECK THE BASICS
Helmet nearby, the right **Pro vehicle** active, and every update installed.

2 · REPEAT THE BUTTON
Hold 3 s or more, release on all five green, wait for the reboot.

3 · CLEAR THE AIR
Move away from any other ProBox in pairing mode, then search again.

Next: the vehicle calibration ride and model training → page 05

Vehicle calibration ride

STEPS 6 & 7 · 5–10 MIN + ~2 H

Two calibrations follow, and they are not the same thing. This one teaches the system **your motorcycle and the exact orientation of the ProBox**: a short ride, then cloud training that builds a model for your bike.

STEP 6 — THE RIDE

5–10 MINUTES

1. Move the motorcycle outdoors, to a safe area with a clear view of the sky.
2. Confirm in the app that the ProBox is **awake and connected**. If it has gone to sleep, normal motorcycle vibration wakes it — let the two-second boot finish.
3. In **Vehicle Setup**, start the calibration ride for the active Pro vehicle.
4. Ride 5–10 minutes, performing the varied dynamic maneuvers the app asks for. Obey traffic law and ride safely first.
5. Finish the ride, download the recorded data from the helmet, and upload it for training as the app directs.

⚠ **Connection is required.** The calibration cannot use the ProBox unless it is awake and connected **before** the ride begins.

STEP 7 — TRAIN AND INSTALL THE MODEL

UP TO ~2 HOURS

1. Wait for training to finish — it can take up to about two hours. You do not need to stay with the motorcycle.
2. When notified, download the completed vehicle model.
3. Install the model on the helmet as the app directs.
4. The next time the helmet connects, it configures the ProBox for its calibrated mounting orientation. **Let the ProBox reboot completely.**
5. Once it is back and reconnected, go on to the initial sensor calibration ride.

2 RIDES

Why two. The vehicle calibration ride learns the geometry — where the ProBox sits on this particular motorcycle. The initial sensor calibration ride, on page 06, lets the sensors themselves settle into their operating state. Both are needed, and in this order.

WHAT HAPPENS, AND HOW LONG EACH PART TAKES

MOSTLY WAITING

5–10 MIN	→	MINUTES	→	UP TO ~2 H	→	MINUTES	→	~2 S
You ride the maneuvers the app asks for.		Data downloads from the helmet and uploads for training.		The model trains in the cloud. Walk away — you are not needed.		You download the model and install it on the helmet.		The helmet configures the ProBox, which reboots.

Next: the initial sensor calibration ride, and the shutdown that saves it → page 06

Sensor calibration ride

STEPS 8 & 9 · 10–30+ MIN

This ride lets the sensor system learn its own operating state and biases. Good satellite reception, varied normal motion and a few stationary pauses are what it needs — and a proper shutdown afterwards is what saves the result.

STEP 8 — THE RIDE

10–30 MINUTES OR LONGER

1. Start **outdoors under open sky** — not beneath a roof, dense tree cover or tall buildings, where you have the choice.
2. Let the ProBox initialize before you move off, then **start gently**.
3. Ride normally for at least 10–30 minutes. A longer ride can improve the calibration.
4. Include smooth acceleration, braking, cornering and varied normal riding. Avoid unusually aggressive inputs on this first ride.
5. Include occasional stationary stops of **about 30 seconds or longer**, where safe and legal.

STEP 9 — DO NOT UNPLUG IMMEDIATELY

The ProBox refines its internal sensor parameters continuously and writes those learned values to long-term memory during a **controlled shutdown**. After the ride, switch off and leave the motorcycle undisturbed — **wait 5–10 minutes before disconnecting ProBox power**. Cutting power too soon loses the values and can reduce performance on your next ride.

Every ride from now on

THE 15-SECOND ROUTINE

BEFORE

Where practical, park with a clear view of the sky. Wake or start the motorcycle and check in the app that the ProBox is **on and connected**.

INITIALIZE — ~15 S

Allow about 15 seconds before riding; up to 30 in poorer conditions. Putting on helmet and gloves fills the time nicely.

AFTER

Ride normally. When you stop, let the ProBox complete its normal shutdown before any power is disconnected.

WHY THE 15 SECONDS MATTER

On power-up the ProBox has to find satellites and settle its sensors before it can report motion accurately. Riding off during that window means the first part of your ride runs on an unsettled state. Fifteen seconds parked is the cheapest accuracy you will ever buy — **up to 30 seconds** when the sky view is poor or the bike has been stored.

WHAT A GOOD SKY VIEW LOOKS LIKE

- ✓ Open forecourt, driveway or street with sky overhead.
- ✗ Underground or multi-storey car parks, and closed garages.
- ✗ Under dense tree cover, or hemmed in by tall buildings.

Next: storage, transport, and moving the ProBox → page 07

Storage, transport, and changes

WHEN LIFE INTERRUPTS

Motion that is unlike normal riding — a trailer, a van, months in the garage — can unsettle the sensor state. None of it is damage; it just needs the right routine to come back.

LONG-TERM STORAGE

Wait the normal 5–10 minutes after the last ride, then disconnect the grey power connector if you want to rule out any battery drain.

Store the motorcycle and components dry, and keep the ProBox away from water.

On the first ride after storage: reconnect power, find a clear sky view, and allow a longer initialization.

Expect the first **10–30 minutes** of smooth, varied riding — with a few safe stops — to restore the best state.

TRANSPORT — TRAILER, VAN, RAIL

Transport exposes the ProBox to motion nothing like riding, and vibration may wake it en route.

Where practical, wait for the normal shutdown and disconnect ProBox power before transport.

Afterwards, reconnect and give it a careful open-sky initialization before you ride.

Begin gently; expect performance to settle over the first 10–30 minutes of varied normal riding.

MOVING OR REINSTALLING — RECALIBRATION REQUIRED

Moving, rotating, loosening or remounting the ProBox invalidates its learned mounting orientation — **even when the change looks small**.

STARTING OVER, IN ORDER

1 · REMOUNT
Fix the ProBox rigidly in its final new position.

→

2 · NEW PRO VEHICLE
Create one for the new installation and set it active.

→

3 · PAIR AGAIN
Page 04, from the start.

→

4 · BOTH RIDES
Vehicle calibration, model, then sensor calibration.

The antenna is the exception. It may be relocated without recalibration, as long as the ProBox itself does not move, the ceramic face stays upward, the sky view stays clear and the cable stays protected.

IT WON'T CONNECT BEFORE A RIDE

It is probably asleep — normal motorcycle vibration wakes it.

Wait for the boot sequence, then look for the slow moving green pattern and the app's connected status.

Check the **intended Pro vehicle** is the active one.

THE LEDS ARE COMPLETELY DARK

Deep sleep is the usual cause. Apply normal vibration and allow a few seconds to boot.

If it stays dark, **do not dismantle the unit** — have the power connection checked per the manufacturer's guidance.

Power present but still unresponsive? Contact support.

Next: LED reference, troubleshooting, and the safety summary → page 08

LED reference & what to do

FIVE LEDS, SEVEN STATES

Green sweep, left to right and back	Boot sequence, about 2 seconds	Wait for boot to finish.
Rapid blinking	Pairing mode	Open Vehicle Setup and connect.
Rapid blue blinking	Pairing / configuration in progress	Keep phone, helmet and ProBox close.
Rapid green flicker	Configuration successful	Wait for the automatic reboot.
Slow moving white pattern	Powered but not connected	Bring the active helmet near; check the app.
Slow moving green pattern	Connected — ready for setup or riding	Nothing to do.
No LEDs at all	Deep sleep, no power, or a fault	Try normal wake-up vibration; if still dark, check power and contact support.

LED patterns can be brief during automatic restarts. Treat the app's connection status as the primary confirmation.

IT WON'T APPEAR WHEN PAIRING

Check the helmet is nearby, the right Pro vehicle is active, and all updates are installed.

Repeat the button procedure: hold 3 s+, release on all five green, wait for the reboot.

Move away from any other ProBox in pairing mode and search again.

SPEED OR MOTION JUMPS AFTER BUMPS

Stop relying on those values for riding decisions and **contact support**.

Check the ProBox is still rigidly attached and has not changed orientation.

If advised, fit the optional foam tape, secure it in its final orientation, and repeat the complete calibration.

Before every ride, and always

The ProBox is secure and dry · the antenna faces upward, unobstructed · cables and connectors are undamaged · the seat closes without pinching · the app shows the right Pro vehicle, connected. **Never operate the app or inspect LEDs while riding** — stop safely first. Do not open, drill, cut, splice or repair any part of the kit, and never treat ProBox data as a substitute for your own judgement.

Contacting support: tell us the app status, the LED pattern, your motorcycle model, and whether the ProBox was recently moved, stored or transported — **support@aegisrider.com**.