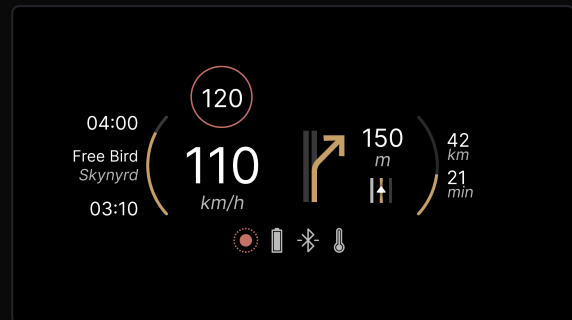


AR EXPERIENCE — TROUBLESHOOTING

When the picture won't sit **still**

Spatial anchoring locks speed, navigation and hazards to the motorcycle. If the picture shakes, jumps or drifts, one of the tracking inputs is disturbed — this guide finds which one, and fixes it.



FIND YOUR SYMPTOM



The picture shakes — a fine, constant tremble, worse with revs, speed or rough tarmac.



VIBRATION — PP.03-04



The picture jumps — no tremble; it snaps to a new position when you move your head.



JUMPS — P.04



The picture drifts — it slides away from where it belongs, and stays off.



DRIFT — P.05

HOW THIS GUIDE WORKS

SPOT — match your symptom above.

TEST — a two-minute check isolates the cause.

FIX — a setting, the mount, or a recalibration.



Every test starts the same way. Sit on the motorcycle in riding position — the check on page 02 — so the helmet can see and feel the bike.

The check: riding position

START EVERY TEST HERE

Tracking rests on two inputs: the helmet's tracking camera **sees** the motorcycle to localize against it, and the phone's motion sensors **feel** it. Both only work when you sit as you ride — so every test in this guide starts from this position.

01

Sit on the motorcycle — riding position, engine off, AR Optics attached.

02

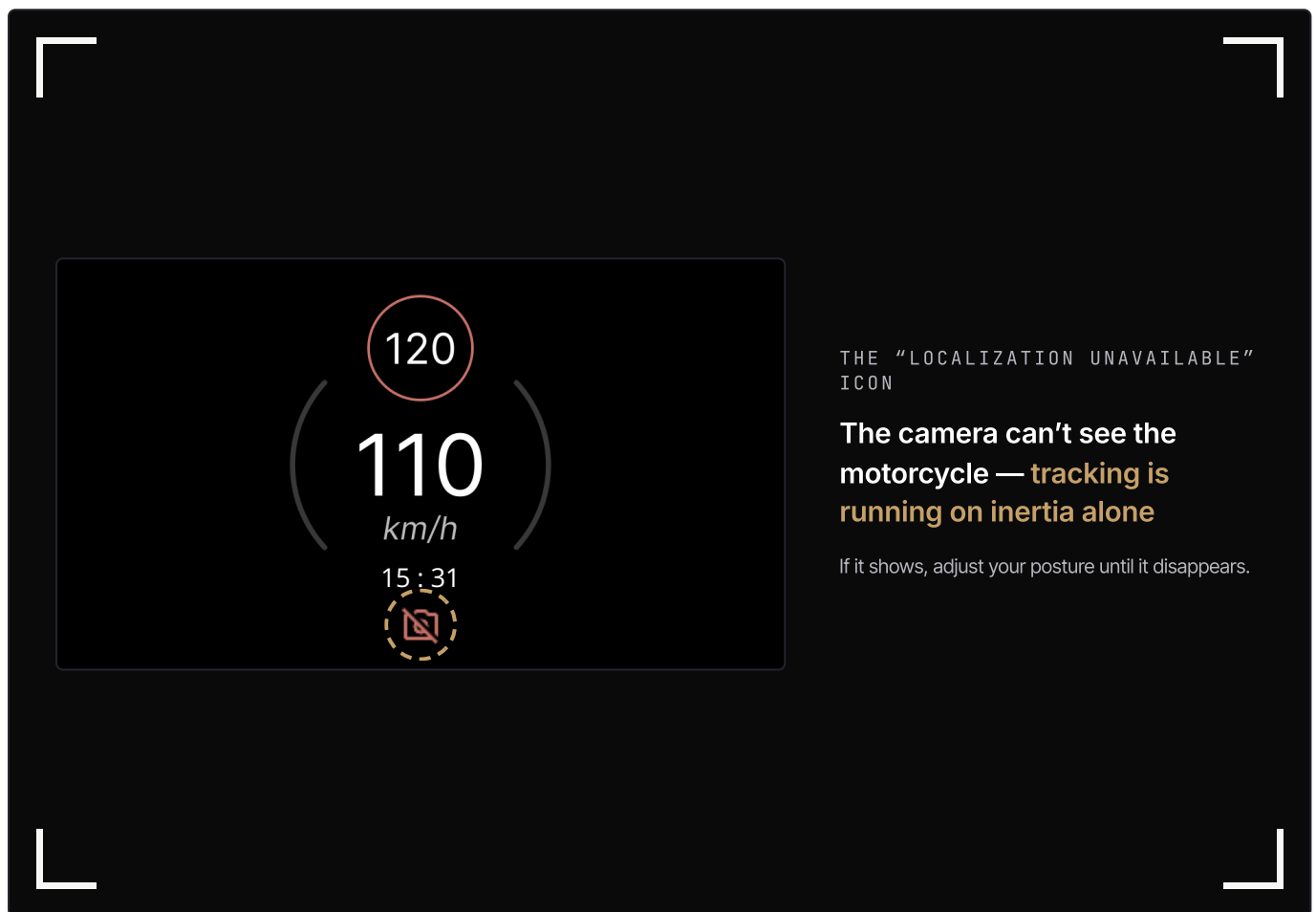
Hands on the handlebars — never on or over the tank: the tracking camera must see the bike.

03

Launch the AR experience in AR Vision Companion and look ahead.

04

Check the picture — no "Localization unavailable" icon anywhere in view.



WHAT THE CHECK TELLS YOU

No icon in riding position — localization is healthy. Go test your symptom. →

YOUR SYMPTOM — PP.03-05

Icon appears whenever a hand covers the tank area — your posture blocks the view. Keep hands on the bars. →

POSTURE — RE-RUN CHECK

Icon stays on even in correct riding position — the camera rarely finds the motorcycle. →

DRIFT · CAUSE 3 — P.05

Shaking — engine & road

CAUSE 1 OF 2

The phone's motion sensors stream every movement of the motorcycle into tracking. Engine vibration and rough tarmac reach the phone through its mount — and the picture trembles in union.

TEST — ENGINE OFF VS. ENGINE ON

FROM THE RIDING-POSITION CHECK • P.02

1 • ENGINE OFF

Watch the picture — this is your baseline. It should be steady.



2 • ENGINE ON — IN N

Start the engine, gearbox in neutral. Give short, gentle throttle blips and watch again.



VERDICT

Shaking rises and falls with the revs → engine vibration is reaching the phone. Apply the fixes below.

FIX 1 — SET HUD STABILITY TO SMOOTH

HELMET

XR PREFERENCES

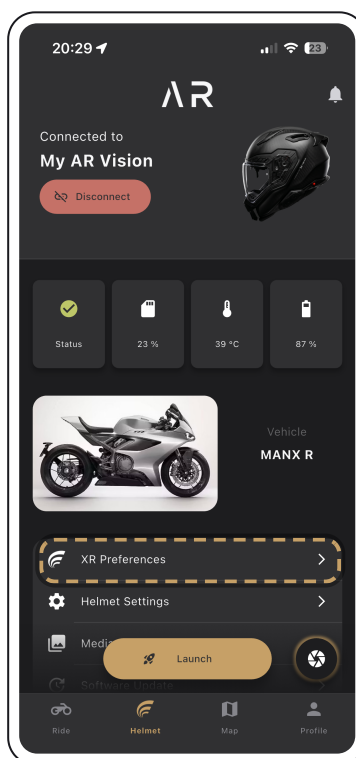
HUD STABILITY

SMOOTH

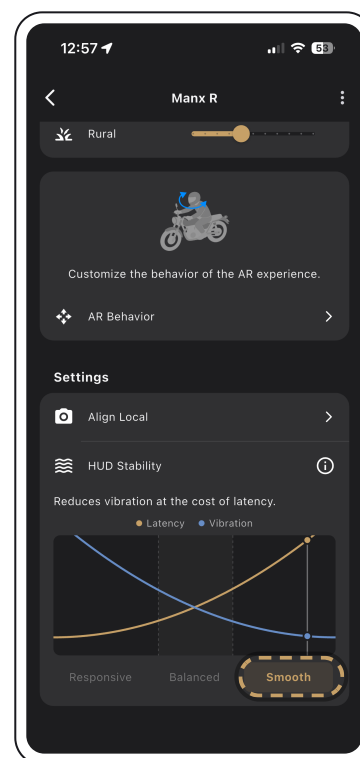
RESPONSIVE  SMOOTH ✓

Select **Smooth** — all the way to the right. It reduces vibration at the cost of a little latency; for a shaky picture that is the right trade.

Two taps from the Helmet tab — takes effect immediately.



Helmet tab → XR Preferences.



HUD Stability — select Smooth.

FIX 2 — RE-ORIENT THE MOUNT'S DAMPENERS

Engine and road shake the motorcycle mostly **vertically**. Remount the cradle so its rubber dampeners flex along that axis — in line with the vibration, not braced against it. Also keep the mount's **lever arm to the handlebar as short as possible** — a long arm amplifies vibration at the phone.



Loop back: after each fix, repeat the engine-off / engine-on test above. Steady through the revs — done.



Shaking — wind buffeting

CAUSE 2 OF 2

At speed, a windshield with turbulent airflow can buffet the helmet itself. The phone feels nothing — but your head, and with it the optics, shake. Typical sign: **steady at standstill with engine running, shaky only while riding**, independent of revs.

— TEST — MOVE THE HELMET INTO CLEAN AIR

WHILE RIDING • QUIET ROAD

1 If the windshield is adjustable, try a clearly different position — does the shaking change with it?

2 Bring the helmet into laminar flow: change your riding posture, or — **only where your safety, skills, circumstances and regulations permit** — stand up on the pegs for a brief moment.

VERDICT Much steadier the moment the helmet sits in clean airflow → the windshield's turbulent wake is the cause.

✓ **FIX** — keep the windshield in the position that gave laminar flow at your head, and set **HUD Stability to Smooth** (page 03) to absorb what remains.

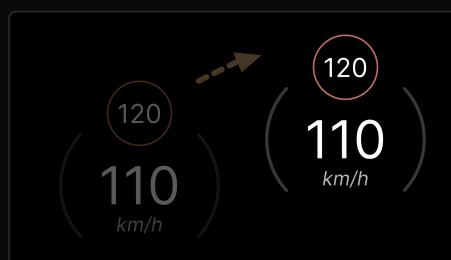


Jumps — not a tremble

DIFFERENT SYMPTOM

If the picture doesn't tremble but **snaps to a new position**, the camera model isn't estimating your helmet's position and orientation consistently. That's not something a setting fixes; we tune it for you.

THE TELL — THE HUD SETTLES OFFSET AFTER A HEAD MOVE



— TEST — 1 MIN

From the riding-position check, **move your head around slowly** — left, right, forward, backward — and watch: does the picture settle in a **new, shifted position** after each move?

— FIX — WE TUNE YOUR MODEL

Open a support ticket at support@aegisrider.com — we adapt the tracking model to you. See page 06 for what to include.



The picture drifts away

4 CAUSES — CHECK IN ORDER

Drift means the picture slides away from the motorcycle and stays off — the helmet's inertial sensing and its camera disagree about where the bike is. Four causes, in the order to check them:



Not drift: the picture leaving your view in curves. The content is anchored in front of the motorcycle — look into the curve and it naturally moves out of view, leaving the road unobstructed. That is by design: your field of view is sacred. If you do want content while looking into the curve, explore **XR Preferences** → **AR Behavior**.

The phone isn't mounted as on the calibration ride

MOUNT = CALIBRATED POSE

1

Sign: drift began after refitting the mount, a new phone case, or a different cradle position.

Fix: redo the calibration: create a **new vehicle** in AR Vision Companion and ride the calibration ride — see the Onboarding Guide, steps 3–4.

The wrong vehicle is selected in the garage

MULTIPLE MOTORCYCLES

2

Sign: you ride more than one calibrated motorcycle — and today's bike isn't the one selected.

Fix: select the correct vehicle in the app before launching the AR experience.

The camera rarely sees the motorcycle

"LOCALIZATION UNAVAILABLE" — P.02

3

Sign: the "Localization unavailable" icon shows for long stretches even in riding position — the tracking camera films you or the road instead of the bike, so localization rarely corrects the drift.

Fix: recalibrate the vehicle: create a new vehicle in AR Vision Companion and ride the calibration ride again.

The helmet hasn't learned its gyro biases yet — last resort

ONE BIAS ENTRY PER °C

4

Sign: new helmet, or first ride at an unusual temperature — heavy drift whenever the camera loses the motorcycle. While powered on and sitting still, the helmet records its gyroscope bias at each temperature; with an empty table it can't compensate.

Fix: set the helmet on a table — not on your head. Attach the AR Optics, launch the AR experience, then **detach the optics and let it run for 30 min**. The AR workload warms the helmet through its temperature range, filling the bias table — detaching the optics prevents display burn-in.

— THE WHOLE GUIDE ON ONE PAGE

SHAKES • REVS	Engine or road vibration reaching the phone	HUD Stability → Smooth • re-orient dampeners	P.03
SHAKES • SPEED	Wind buffeting off the windshield	Windshield position with laminar flow	P.04
JUMPS	Camera model estimating inconsistent poses	Support ticket — we tune the model	P.04
DRIFT • MOUNT	Phone sits differently than when calibrated	New vehicle + calibration ride	P.05
DRIFT • GARAGE	Wrong vehicle selected • camera rarely sees the bike	Select correct vehicle • recalibrate	P.05
DRIFT • NEW	Gyro bias table not populated yet — last resort	AR running on the table — optics off, 30 min	P.05



Still not steady? We tune it for you

Write to support@aegisrider.com — for jumps and stubborn drift we adapt the tracking model to your setup. Include:

VEHICLE PROFILE NAME

PHOTO OF PHONE IN MOUNT

TESTS RUN + WHAT YOU SAW



Good habit: the helmet keeps learning its gyro biases whenever it sits powered on and still. Letting it rest on a shelf now and then — rather than always powering straight down — keeps drift compensation sharp across seasons.



Stay current: tracking improves with software updates — install them when AR Vision Companion offers one (Helmet → Software Update).