

NVH Source Locator — Quick Reference

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A one-page refresher. For full details, see `user-guide.md`.

Core flow (2-Sensor, free)

- Pick a material — Materials tab → tap your material
- Enter calibration on the 2-Sensor tab: - Sensor spacing (d) - Calibration time delay (t_{Cal}) — auto-filled from material
- Enter event — `tEvent` and First sensor (A or B)
- Read result — distance from sensor A

[Screenshot: 2-Sensor tab — see HTML version]

All tabs

Tab	Output	Pro fields?
2-Sensor	Distance along line	No (fully free)
3-Sensor	X, Y on a surface	Yes
3-Sen+	X, Y with LSQ over 3 pairs	Yes
4-Sensor	X, Y from two pairs (A-B + C-D)	Yes
4-Sen+	X, Y from 4 sensors, any position	Yes
3D	X, Y, Z from 4 sensors	Yes
3D+	X, Y, Z from up to 6 sensors	Yes
Materials	Speed-of-sound picker	No
Help	Tutorials	No

Settings is the ⚙ icon (top-right), not a tab.

Temperature compensation

Settings → Reference temperature, range -40 to +200 °C.

- 14 metals have built-in compensation (aluminium, steels, copper, brass, bronze, titanium, magnesium, lead, zinc, nickel, tungsten, iron, iron cast)
- Materials without compensation show "ref only"

- Resets to 20 °C on every app launch (default-safe-start)
- Replaying a history entry restores its original temperature

Shortcuts

- Tap a material → auto-fills all `tCa1` fields across all tabs
- Hold +/- on number fields → fast increment
- Drag horizontally on a number field → scrub values
- Empty/negative/garbage input → snaps to 0 on blur (temp input clamps to -40/200)
- Star a material → moves to top of picker

Pro model

Feature-locked freemium (\$19.99):

- Free: 2-Sensor tab fully functional, no limits
- Pro: Other tabs accessible but have gold-padlock fields that show paywall on tap

Pro unlocks: 3-Sensor through 3D+, custom materials, backup/restore, PDF reports, photo annotation.

[Screenshot: Paywall — see HTML version]

Reports & Backup

Print result button on any result screen → PDF with header, inputs, result, visualization, photo (if taken), and temperature footer (when compensation active).

Customize header in Settings → Report header.

Backup: Settings → Backup → share to cloud/email.

Restore: Settings → Restore → pick backup file.

Restore Pro on a new device

Same Google account (Android) or Apple ID (iOS) you bought with → Settings → Restore purchase → unlocks within seconds.

Auto-restore happens silently when you return to the app after redeeming a promo code externally.

Quick troubleshooting

- Result outside range? Check `tEvent` sign / First sensor / sensor spacing

- Closest material wrong? Reference temperature probably accidentally set — check Settings
- Restore purchase fails? Verify same store account; reinstall if it persists
- Field snapped to 0? Empty/negative inputs auto-snap on blur — re-enter the value
- Stepper buttons gone? They appear next to fields with `data-step` — restart app if missing
- Stale temperature warning? It resets to 20 every launch — set again for this session

Contact support@evdiag.net — include device model, app version (Settings → bottom), and a description of what you tried.