

VNAV Quick Reference

GTN 650 + GFC 507 · Cockpit Refresher kneeboard card

THE 3-STEP PROCEDURE

- 1. Confirm constraints.** Verify against the chart, or set manually.
- 2. Set the altitude selector.** Lowest assigned / FAF altitude / DA-MDA — it's a floor, not a target.
- 3. Arm VNAV.** FD must already be in GPS mode.

VFR — Descent to Pattern Altitude

1. Set an altitude constraint on the airport waypoint (AGL, auto-converts to MSL).
2. Set the altitude selector to pattern altitude.
3. Arm VNAV.

ALONG-TRACK OFFSET

Common variation: instead of bugging the airport itself, drop a temporary waypoint a few miles prior and put the constraint there — gives VNAV room to level off before the pattern.

VNAV DIRECT-TO — TWO USES

- Start descending early, at your discretion (places TOD 1 min ahead)
- Recover after missing the actual TOD

IFR — Descent to the FAF

1. Confirm constraints to the FAF (auto if published, manual if not).
2. Set the altitude selector to the FAF altitude or DA/MDA — either works.
3. Arm VNAV.
4. Arm APR only once VNAV is active and descending — not before.

WITH VERTICAL GUIDANCE (LPV / LNAV+V / ILS)

APR captures the GP/GS automatically at the FAF. After crossing, many pilots reset the bug to the missed approach altitude.

WITHOUT VERTICAL GUIDANCE (VOR / LOC / LNAV)

No glidepath to capture — don't arm APR. NAV mode for lateral; fly the vertical descent manually via VS/IAS/PIT to MDA.

SYMBOLOLOGY

White: reference only

Cyan: active constraint

Pencil: manually edited

X: invalid, can't comply

TOP GOTCHAS

- VNAV is descent-only — climb shows X
- Can't arm VNAV + APR together
- FD must be in GPS mode to arm VNAV
- Nothing past the FAF — stops there
- TOD behind you? Recompute w/ Direct-To
- Jet altitudes on piston procedures — verify