

CROSS-CHECK

Captain & Cabin Crew add-on for Microsoft Flight Simulator
User Manual

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Virtual Wings · virtualwingsbycenk.com · Discord: discord.gg/QDbN7ZUv

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PMDG 737 users – do this first

With MSFS closed, open `737NG3_Options.ini` (search the file name in Windows – the folder differs between MSFS 2020 and 2024) and add these two lines at the end:

```
[SDK]
EnableDataBroadcast=1
```

Without them CROSS-CHECK cannot read the PMDG seatbelt sign, doors and lights, and you will receive penalties you did not deserve.

The three golden rules

1. Start MSFS first, then CROSS-CHECK. 2. Seatbelt sign ON whenever passengers move (boarding, taxi, take-off, landing). 3. Never open a door while the slides are ARMED – disarm first.

1. Welcome

You are the captain. CROSS-CHECK gives you a working airline crew from gate to gate: a purser and cabin crew, a First Officer, a ground crew and real passengers who react to the way you fly. Every flight is scored and saved in your career.

CROSS-CHECK was built by a former airline purser with 16 years in airline operations and the cabin. The crew follows real airline procedures – and expects you to do the same.

What is inside

- **Purser and cabin crew:** catering, crew briefing, boarding, doors and slides, safety video, cabin checks, cabin service (single or double service), crew meals, cockpit checks, cabin preparation, deboarding, turnaround.
- **Captain announcements (PA)** with realistic cabin-speaker effect, optional second language (Turkish), delay, holding and go-around PAs.
- **First Officer:** Airbus A320-family checklists, take-off callouts (100 kt, V1, rotate, positive climb), flap and gear callouts, "engine stabilized" calls, fuel checks over SimBrief waypoints, minimums.
- **Ground crew:** APU, ground power, pushback, engine start one engine at a time. Works together with GSX Pro.
- **Offline voice commands** in English – speak like a real captain.
- **Passengers:** live satisfaction with reasons, cabin map with every seat, IFE and Wi-Fi, passenger screen for a second monitor.
- **Score and career:** 50 rules in four categories, penalties with explanations, XP, eight ranks, Line Check, badges, flight log and route map.
- **For streamers:** OBS overlay and a public live map.

2. Requirements

- Windows 10 or 11, 64-bit.
- Microsoft Flight Simulator 2020 or 2024 (Microsoft Store / Xbox app or Steam).
- A free SimBrief account (flight plan, passengers, fuel, schedule).
- Internet once for activation (and for SimBrief and the live map).
- Optional: GSX Pro (CROSS-CHECK follows it automatically), a microphone for voice commands.

Supported aircraft

Aircraft	Support
Fenix A319 / A320 / A321	Full support: every rule, F/O checklists, real switch positions.
PMDG 737	Supported with the SDK lines (see the box on page 2). F/O checklists are Airbus-style and not yet available for the 737.
Other aircraft	Basic support: cabin crew, PAs, scoring. Rules whose data the aircraft does not provide are skipped (not counted). Some aircraft do not write the seatbelt sign or door state to the simulator – then boarding or cabin steps can wait forever (see chapter 17).

3. Installation

1. Close MSFS.
2. Run `CROSS-CHECK_v1.0.0_Setup.exe`. Choose the setup language and accept the licence (EULA).
3. Windows may show *"Windows protected your PC"* (SmartScreen) because the installer is new. Click **More info → Run anyway**.
4. The program installs to `%LOCALAPPDATA%\Programs\Virtual Wings\CROSS-CHECK`. No administrator rights are needed.
5. **In-sim panel:** the setup reads your MSFS settings and lists every Community folder it finds (MSFS 2020 and 2024, Microsoft Store and Steam). Keep the ones you use ticked – the panel `vw-crosscheck-panel` is copied there. If none is found, choose your Community folder yourself or leave it empty and copy `Panel\vw-crosscheck-panel` from the program folder later.
6. Optional desktop shortcut. Start-menu entries: CROSS-CHECK, Read me, Licence, Manuals.
7. PMDG 737 users: add the SDK lines (page 2).

> **Where things live**
>
> Program: `%LOCALAPPDATA%\Programs\Virtual Wings\CROSS-CHECK`
> Your career, licence, settings, reports: `%AppData%\CrossCheck` – never touched by updates or uninstalling.

4. Activation and free trial

Activating with your serial

1. Start CROSS-CHECK. The licence window opens.
2. Enter the serial number from your simMarket order (`VWCC-XXXX-XXXX-XXXX-XXXX`). Copy and paste it to avoid typing mistakes.
3. An internet connection is needed once. A green confirmation appears and the program opens.

- A serial works on **up to 2 computers**.
- Moving to a new PC: on the old PC open **Settings → License → Remove this computer**, then activate on the new one.
- Only the serial, a computer ID and the computer name are sent to our server.

Free trial flight

No serial yet? Press **Free trial flight** in the licence window: one complete flight per computer. If you buy later and activate, the trial flight stays in your career. If the trial flight ends early (for example with a slide crash), the trial is used up.

5. The program window

Tab	What you find there
Top bar	**Live map** (opens the live map on virtualwingsbycenk.com) · **My pilot page** (your public pilot page) · **Begin new flight** · **Flight report** · language, ding sound and volume.
Flight	MSFS connection, SimBrief flight plan, **Begin new flight** / **Load latest plan**, flight phase, aircraft, last announcement, live score and penalties, voice-command status.
Career	Pilot profile (name, callsign, home base, avatar colour or photo, optional airline), rank and progress, badges, score by category, flight log (click a flight for its report), route map.
Settings	SimBrief, voices, First Officer, languages, announcements, speeds, sound, voice commands, stream overlay, passenger screen, licence (chapter 7).
Developer	Values read from the aircraft (✓ = data arriving, n/a = not readable on this aircraft), event log, **Export debug report** for support.

After every completed flight a **flight report** opens: score per category, every penalty with the reason and time, landing data, passenger satisfaction, XP, new badges and rank progress. **Copy report** copies it as text.

6. The in-sim panel

Open the CROSS-CHECK panel from the MSFS toolbar. It is your link to the crew: questions from the purser appear as cards with buttons – every button can also be spoken (chapter 11). A soft call chime means the purser is calling you; a ding means new information.

Panel tab	Contents
FLIGHT	The purser card (what the crew needs from you now), flight phase, catering, last PA, touchdown data.
CAPTAIN	Your commands: captain PAs, cabin crew commands (seats for take-off / landing, prepare for landing, descent in 10/20 minutes, lavatory), ground crew (APU, GPU, pushback, ENG 1 / ENG 2), checklists, take-off speeds (V1, VR), minimums, time and fuel against the plan, delay minutes.
AIRCRAFT	What CROSS-CHECK reads: beacon, taxi, nose T.O., landing and strobe lights, seatbelt sign, doors, parking brake, flaps, gear, altimeter, squawk, fuel card.
CABIN	Passengers and satisfaction (with reasons), cabin map – every seat, the service carts, crew positions; tap a seat to see that passenger.
SETTINGS	Boarding and deboarding speed, F/O fuel check, GSX sync, live map, language, Begin new flight.

The top bar shows APU state, the red **penalty box** (number of penalties – click it to see each one and why), weather and flight data. During a crash the panel shows CRASH.

Ground crew engine boxes (CAPTAIN tab)

Grey = not yet · **Red** = doors closed, engine off · **Orange, blinking** = called / starting · **Green** = stabilized.

7. Settings in detail

Setting	What it does
SimBrief username or Pilot ID	Required. CROSS-CHECK downloads your latest SimBrief plan (route, passengers, fuel, schedule, take-off speeds).
Captain voice	Male or female – your voice in PAs and commands.
First Officer	Daniel Cooper, Henry Wilson, Didem Tarhan, Olivia Collins, Sophia Williams or random each flight.
Language	Program and panel language: English or Türkçe.
Second announcement language	None (English only) or Turkish: passenger PAs are made in English first, then in Turkish. Cockpit commands, interphone and runway callouts stay English.
Turkey special announcements	National-day and domestic-flight PAs in Türkiye.
Which announcements CROSS-CHECK speaks	Captain PAs and commands · cabin crew PAs and safety video · interphone · F/O take-off callouts · F/O flap / gear callouts · runway callouts ("On runway three six" – turn off if you use RAAS). Turn off what your Fenix EFB or a VA sound pack already plays.
F/O checklists (Airbus A320)	Off, or On: you call the checklist from the panel or by voice, the F/O reads.
F/O fuel check in flight	Every 30 minutes over a waypoint · at every waypoint (except SID / STAR) · Off.
Boarding / deboarding speed	Realistic · Normal · Fast · Instant. Also in the panel SETTINGS tab.
Speaker effect	Realistic speaker sound for cabin PA, interphone and headset; cabin PA effect Light / Medium / Strong.
Volumes	Voice, music, cabin ambience.
Cabin sound	Boarding and deboarding music; cabin ambience (passengers, bins, service trolley); **My music folder...** for your own boarding music.
My announcements...	Opens the folder for your own recordings (chapter 16).
Voice commands	Off · Open microphone (always listening) · Push-to-talk (hold a key or joystick button – **Assign...**). Choose the microphone.
My airline (optional, Career tab)	Used in announcements when the SimBrief plan has no airline.
Passenger doors (advanced)	Door numbers for aircraft whose doors are not detected automatically.
Show promotion celebrations	Full-screen celebration when you reach a new rank.
Stream overlay / Passenger screen	Addresses and preview (chapter 16).
License	Shows your licence; **Remove this computer** frees one of your two activations.

8. Before your first flight

1. **SimBrief:** enter your username or Pilot ID in Settings. Generate the flight in SimBrief with the right aircraft type, airline, flight number and departure time (STD).
2. **MSFS time LIVE:** set the simulator time to live (or the SimBrief departure time). Delays, the schedule and the on-time rule use the real clock.
3. **Fenix:** switch off the Fenix EFB cabin announcements (or the matching CROSS-CHECK ones), otherwise you hear them twice. The same for VA sound packs. RAAS users: switch off our runway callouts.
4. **Voice commands (optional):** pick the microphone, choose push-to-talk for streams, test with "seats for take-off" once the flight has started.
5. **Career profile:** name, callsign, home base (ICAO) and avatar on the Career tab.
6. Load the aircraft cold and dark or turnaround-ready at a gate, start MSFS first, then CROSS-CHECK.

9. A flight, gate to gate

Generate your flight in SimBrief, load the aircraft at the gate, start CROSS-CHECK and press **Begin new flight** (or **Load latest plan**). The panel always tells you what the crew is waiting for.

9.1 At the gate

- **Crew briefing:** the purser asks for the briefing – expected turbulence (smooth / light / moderate) and IFE type. A briefing before boarding earns points.
- **Catering** arrives; the purser counts and accepts the meals. The meal plan depends on flight time and departure time.
- **Fuel:** refuelling must be finished before boarding. After boarding has started, never add or remove fuel – that is a heavy safety penalty.
- **Jetway / stairs:** with GSX this is detected automatically. Without GSX press **Jetway / stairs connected** on the purser card **before** opening a door.
- **Power:** start the APU before removing ground power (GPU) – otherwise the aircraft loses power at the gate (penalty). Tell the ground crew before the APU start.

9.2 Boarding

The purser offers boarding when **all** of these are true: jetway / stairs connected, catering accepted, refuelling finished, aircraft on the ground and stopped, engines off, at least one passenger door open.

- Switch the **seatbelt sign ON** and keep it on for the whole boarding.
- Press or say **Start boarding** (or **Stand by** to wait). Passengers fill the cabin map; the speed follows your setting.
- Boarding complete → **Close the doors** → the purser arms the doors: *"Cabin crew, arm slides and cross-check."* The safety video starts.

9.3 Pushback and engine start

- Beacon ON before pushback or engine start; nav lights ON; seatbelt sign ON during pushback.
- **Ready for pushback** – the ground crew connects the tow bar ("release parking brake"); with GSX the GSX pushback counts.
- Call the ground crew **before each engine**: *"Starting engine one"* → "clear to start engine one" → F/O: "Engine one stabilized". Then engine two. Starting without the call = penalty.

9.4 Before take-off

- After the safety video the crew secures the cabin (time depends on aircraft and passengers). Purser: **"Cabin ready for take-off"**.
- You: **"Cabin crew, seats for take-off"** → crew seated.
- Squawk set, transponder / TCAS TA/RA when entering the runway, take-off flaps correct, landing and strobe lights ON on the runway (OFF on taxiways), taxi light ON while taxiing, taxi speed ≤ 30 kt, turns ≤ 10 kt.
- Take-off before CABIN READY or before the crew is seated = heavy penalty.

9.5 After take-off – seatbelt sign signals

- Seatbelt sign ON at least for the first 3,000 ft.

- A short OFF→ON of the seatbelt sign (within 6 seconds) is a **signal**: after take-off it means "cabin crew may get up" (galley preparation) while passengers stay seated.
- Seatbelt sign OFF = passengers free, lavatories open, service starts.
- Landing lights OFF above 10,000 ft; altimeter STD above the transition altitude (from SimBrief).

9.6 Cruise

- **Information PA:** opens at cruise altitude and locks 5 minutes later – make it in time.
- **Wi-Fi:** switch it on above 10,000 ft (panel or "Wi-Fi on"); the purser announces it in the cabin. IFE on.
- **Cabin service:** on international flights of 3.5 hours or more there is a double service (snacks, aperitif and drinks, then the meal service and collection – the order depends on the departure time) and a tea and coffee round.
- **Crew meals:** the purser asks when you and the F/O want to eat (now / after the other pilot / after landing / no meal). Captain and F/O never get the same meal.
- **Cockpit checks:** the purser checks on the cockpit and offers coffee, tea or water – answer her.
- **Lavatory:** "Captain to the lavatory" / "First Officer to the lavatory" – the cabin crew follows the cockpit-door procedure.
- **Turbulence:** seatbelt sign ON; the purser asks: stop the service / continue with care / wait a few minutes. Make a turbulence PA.
- **Fuel checks:** the F/O compares fuel with the SimBrief plan (chapter 12).
- **Intercom:** tell the cabin "descent in 20 / 10 minutes".

9.7 Descent and landing

- Seatbelt sign ON → descent PA, passengers to their seats.
- **You must give "Cabin crew, prepare for landing"** – by seatbelt sign OFF→ON, the CAPTAIN tab button, or by voice. The crew does **not** start on its own. The panel shows the time left (about 2:30 to 6:00, depending on aircraft and passengers). Give it in time!
- Purser: "Cabin ready for landing" → you: **"Cabin crew, seats for landing"** → "CABIN CREW SEATED".
- Gear down and landing flaps (Airbus FULL, 737 30/40) while the cabin is not ready or the crew is not seated = penalty. Landing before CABIN READY or before the crew is seated = heavy penalty.
- 250 kt below 10,000 ft, landing lights ON below 10,000 ft, QNH set in the descent, gear down below 220 kt, landing configuration by 1,000 ft, nose light T.O. after gear down.
- Minimums: the F/O calls them; you decide.

9.8 After landing and at the gate

- Reversers stowed by 60 kt; flaps up in the after-landing flow; landing / strobe OFF on the taxiway.
- Seatbelt sign ON until the engines are shut down; beacon ON until the engines are off.
- Engines off → switch the **beacon OFF** and the **seatbelt sign OFF**. Only then does the purser call **"Disarm slides and cross-check"** – never before. Then wait for the jetway / stairs → open the door.

> **Slide deployed = CRASH**
> Opening a door while it is ARMED deploys the slide. The flight ends with no XP and restarts from the gate. Always disarm first.

- Deboarding (speed per setting). Then choose **Turnaround – next flight** (load the next SimBrief plan) or **Duty finished**.

- The flight report opens and the flight is saved in your career when the passengers have left the aircraft.

9.9 Delays, holding and go-around

- Late at the gate: on the CAPTAIN tab set the delay minutes and make a delay PA (ground traffic or slot).
- Holding or go-around: use the holding and go-around PAs.
- On time = SimBrief STD / STA. Arrival delay lowers passenger satisfaction and costs points.

10. Captain announcements and crew communication

Captain PAs are on the CAPTAIN tab and by voice: welcome, information (cruise), turbulence, descent, delay (ground traffic, slot), holding, go-around. A PA that "opens" and then locks without being made lowers passenger satisfaction ("information").

Interphone calls between purser and cockpit play with headset effect. Cabin crew PAs (boarding, safety, Wi-Fi, landing, farewell) are made by the purser. With Turkish as second language, passenger PAs are repeated in Turkish.

Turn off any announcement that your aircraft or a sound pack already plays (Settings → Which announcements CROSS-CHECK speaks).

11. Voice commands

Offline speech recognition – no internet, English only. A short double "tick" means the command was understood. Every card button can also be spoken by its own name (for example a meal name, "tea", "start boarding").

Say	Result
jetway connected / stairs connected	Jetway or stairs confirmed (without GSX)
start boarding · stand by	Start or delay boarding
close the doors · open the doors	Doors
smooth flight · light / moderate turbulence	Briefing: turbulence forecast
seat back screens · overhead screens · no IFE	Briefing: IFE type
starting APU · remove GPU · ready for pushback	Ground crew
starting engine one / two	Ground crew clearance for each engine
cabin crew, seats for take-off	Crew sits down for take-off
Wi-Fi on / off · IFE on / off	Cabin systems
stop the service · continue with care · continue the service · wait a few more minutes	Service in turbulence
now is fine · after the first officer · after landing · no meal	Crew meals
all good thanks · coffee please · tea please · water please	Cockpit check
checked thank you · plenty for a holding · keep an eye on it	F/O fuel check
captain / first officer to the lavatory	Lavatory procedure
descent in ten / twenty minutes	Intercom to the cabin
welcome / information / turbulence / descent / delay / holding / go around announcement · ground traffic delay · slot delay	Captain PAs
cabin crew, prepare for landing	Cabin preparation for landing
cabin crew, seats for landing	Crew sits down for landing
before start / after start / taxi / before takeoff / after takeoff / approach / landing / after landing / parking checklist	F/O reads the checklist
on · set · checked … · skip item	Checklist answers
turnaround / next flight · duty finished	After deboarding
roger	Acknowledges a card with one option

Tips

Speak after the F/O has finished. Use push-to-talk on streams. On a Turkish Windows the English speech pack helps. If Windows blocks the microphone: Windows Settings → Privacy → Microphone → allow desktop apps.

12. First Officer: checklists, callouts, fuel

Checklists (Airbus A320 family)

Call a checklist from the CAPTAIN tab or by voice; the F/O reads each item and waits for your answer ("on", "set", "checked"...). Items CROSS-CHECK can verify are checked against the aircraft. Checklists completed on time earn points (rule "F/O checklists completed on time"). Before start, after start, taxi, before take-off, after take-off / climb, approach, landing, after landing, parking.

Take-off callouts

"Thrust set" (≥ 40 kt) · "One hundred knots" (737: "Eighty knots") · "V1" · "Rotate" · "Positive climb" → you: "Gear up". V1 and rotate need take-off speeds – from SimBrief performance or set on the CAPTAIN tab; without them they are skipped. After a rejected take-off the remaining calls stop.

Flap and gear callouts, engines

The F/O confirms flap and gear selections ("Flaps two", "Gear down") and "Engine one / two stabilized" after each start.

Fuel checks

On the ground after boarding the F/O compares the fuel on board with the planned block fuel. In flight, at SimBrief waypoints (not SID / STAR, at least 2 minutes apart) or every 30 minutes, the F/O compares fuel with the planned fuel and minimum; a card shows on board / plan / difference / minimum. Answer "checked", "plenty for a holding" or "keep an eye on it". No answer within 90 seconds: the card closes (no penalty).

Minimums

Set your minimums on the CAPTAIN tab (−100 / −10 / +10 / +100). The F/O calls minimums on the approach; you decide.

13. Passengers, cabin service and satisfaction

Passenger satisfaction is shown live on the CABIN tab, with a green or red arrow and the reason for every change. Six factors, each starting at 100%:

Factor	Goes down when ...
Comfort	turbulence, steep bank (more than 30°); recovers in calm flight
Confidence	hard landing, steep dive, turbulence with the seatbelt sign off
Meal	no service 30 minutes after take-off; recovers as the service progresses
Entertainment	no IFE / Wi-Fi in cruise; switching IFE off on an IFE aircraft
Information	a captain PA that was due but never made (−15 each)
Punctuality	arrival delay (−3 per minute after 5 minutes)

Satisfaction is shown in the report but is not part of the score. The cabin map shows every seat coloured by that passenger's mood, the carts during service and a few passengers with a story – a nervous flyer, a connecting passenger, a family with a baby, a CIP, special meals. All names are fictional.

14. Scoring and penalties

Every rule has a maximum number of points. Mistakes cost part of the points, depending on how long or how badly the rule was broken. A **safety rule** broken counts as minus its full value (for example the slide rule: −50). Rules that cannot be judged on this flight or aircraft (data not readable, phase not reached) are left out. **Flight score = points earned ÷ points possible × 100** (never below 0).

Click the red penalty box in the panel to see each penalty with time and reason. The flight report shows every rule, per phase.

Category	Rule	Max points
Cabin management	Seatbelt sign ON during boarding	20
Cabin management	Seatbelt sign ON for take-off (3,000 ft), descent below 10,000 ft and landing	30
Cabin management	Waited for CABIN READY (take-off and landing) **(safety rule)**	30
Cabin management	Crew seated for take-off and landing	20
Cabin management	Seatbelt sign stayed ON until engines were shut down	20
Airline SOP	F/O checklists completed on time	40
Cabin management	Crew briefing before boarding	10
Cabin management	Turbulence forecast in the briefing	10
Cabin management	Answered the purser's cockpit checks	10
Cabin management	Captain announcements at the right time (information PA in cruise)	15
Cabin management	Cabin told the time to descent (intercom)	10
Cabin management	Door opened only after the jetway / stairs arrived	10
Cabin management	Seatbelt sign ON during pushback	15
Cabin management	No door opened while armed **(safety rule)**	50
Airline SOP	Beacon ON before pushback / engine start, until engines shut down	20
Airline SOP	Nav lights ON from pushback / engine start until engines shut down	10
Airline SOP	Taxi light ON before moving and while taxiing	10
Airline SOP	Landing / strobe OFF on taxiways, ON on the runway	20
Airline SOP	Landing lights OFF above / ON below 10,000 ft	20
Airline SOP	Nose light T.O. after gear down	10
Airline SOP	250 kt below 10,000 ft	30
Airline SOP	Landing configuration by 1,000 ft (gear down, landing flaps)	30
Airline SOP	Take-off flaps set **(safety rule)**	30
Airline SOP	No overspeed	30
Airline SOP	Gear down only below 220 kt	20
Airline SOP	Taxi speed within 30 kt	20
Airline SOP	Turns on the ground within 10 kt	10
Airline SOP	Reversers stowed by 60 kt after landing	10

Category	Rule	Max points
Airline SOP	Flaps retracted in the after-landing flow	10
Airline SOP	Altimeter: STD above transition altitude, QNH in the descent	20
Airline SOP	Ground crew told before APU start	5
Airline SOP	Pushback coordinated with the ground crew	5
Airline SOP	Ground crew clearance before engine start	10
Airline SOP	No power loss at the gate (APU before GPU off)	15
Airline SOP	Squawk code set before take-off	10
Airline SOP	Transponder / TCAS set to TA/RA when entering the runway	15
Airline SOP	No fuel added or removed after boarding started **(safety rule)**	50
Airmanship	Bank angle within 33° (45° never)	10
Airmanship	Pitch within +20° / −10°	10
Airmanship	Roll rate within 13°/s	10
Airmanship	Vertical speed within limits	10
Airmanship	Stayed on taxiways and runways	10
Airmanship	Touchdown rate	50
Airmanship	Touchdown G	20
Passenger comfort	G force between +0.5 and +1.5	20
Passenger comfort	Smooth turns on the ground (≤ 15°/s)	10
Passenger comfort	No steep dives that scare passengers	15
Passenger comfort	Cabin service completed	20
Passenger comfort	No rough flying during service	10
Passenger comfort	On-time departure and arrival (SimBrief STD / STA)	20

15. Career: XP, ranks, Line Check, badges

XP

- Base XP = 60 + 40 per block hour, multiplied by your score (85 points = ×0.85).
- A safety violation halves the XP of that flight.
- +25 XP for every new country.
- Interrupted or crashed flight: no XP.

Ranks

You are promoted when you have the XP **and** the other requirements.

Rank	XP	Other requirements
Cadet	0	–
Second Officer	2,500	10 block hours, average of last 10 flights ≥ 60%
First Officer	6,000	25 block hours, average of last 10 flights ≥ 70%
Senior First Officer	14,000	75 block hours, average of last 10 flights ≥ 75%
Captain	30,000	200 block hours, average of last 10 flights ≥ 85%, no safety violation in the last 10 flights, Line Check passed
Senior Captain	60,000	500 block hours, average of last 10 flights ≥ 85%, no safety violation in the last 10 flights
Training Captain	100,000	1,000 block hours, average of last 10 flights ≥ 88%, no safety violation in the last 10 flights
Chief Pilot	160,000	1,500 block hours, average of last 10 flights ≥ 90%, no safety violation in the last 10 flights

Line Check

Before Captain you fly a Line Check: when you meet every other requirement, your **next flight** is the Line Check. You pass with a score of at least 90, no safety violation and a touchdown below 300 fpm. If you fail, you can try again after 3 flights.

Badges

Badge	How to earn it
Butter	Touchdown below 60 fpm
Greaser Streak	5 landings in a row below 150 fpm
Full Service	Service finished for every passenger before landing preparation
On Time	Doors closed at or before STD
Swiss Watch	10 on-time departures in a row
Clean Sheet	A flight without any penalty
By the Book	10 flights in a row without a penalty

Cross-Check Master	25 flights without a door or slide mistake
First Stamp	Your first flight
Traveller	10 countries
Globetrotter	25 countries
Ambassador	50 countries
Six Continents	Landings on 6 continents
Long Haul	A flight longer than 8 hours
Ultra Long Haul	A flight longer than 12 hours
Home Base	10 landings at the same airport
100 Hours	100 block hours in total
1000 Hours	1,000 block hours in total
Oops!	Opened an armed door and deployed the slide (a badge of shame)
Ding-Ding	Switched the seatbelt sign on and off 10 times in one flight

Flight log and route map

Every completed flight is in the flight log (click it for the full report) and on your route map. Countries and continents count from your departure and arrival airports.

16. Extras

Passenger screen

A seat-back moving map for a browser or a second monitor: `http://localhost:47812/pax` (Turkish: `?lang=tr`). CROSS-CHECK must be running.

Stream overlay (OBS)

Add `http://localhost:47812/overlay` in OBS as a **Browser source** with your canvas size (for example 2560 × 1440). A thin bar with your flight data appears at the top; add `?pos=bottom` for the bottom.

Live map

While a flight is running, CROSS-CHECK shows your flight on the public live map at virtualwingsbycenk.com (your display name from the career profile and your flight data, every 30 seconds). Open it with **Live map** in the program's top bar; **My pilot page** opens your own public page. It is on by default; switch it off in the panel SETTINGS tab → LIVE MAP. No e-mail or other personal data is sent.

Your own voice and music

Settings → **My announcements…** opens a folder: put your own recordings there with the same file names as ours, and CROSS-CHECK plays yours. **My music folder…** is for your own boarding music.

GSX

With GSX sync ON (panel SETTINGS) CROSS-CHECK follows GSX: jetway / stairs, boarding, pushback. Set it OFF if you do these steps manually.

17. Troubleshooting – every step

First check: Developer tab → **Values read**. A value marked **n/a** cannot be read on your aircraft; rules depending on it are skipped, steps depending on it may wait.

Installation

Problem	Solution
"Windows protected your PC"	More info → Run anyway. The installer is new and not yet known to SmartScreen.
Antivirus blocks or deletes the setup / program	Allow CROSS-CHECK in your antivirus, download again from your simMarket account.
Setup found no Community folder	Choose it yourself (MSFS → Options → General → Data, or the InstalledPackagesPath in UserCfg.opt + `\Community`), or copy `Panel\vw-crosscheck-panel` from the program folder later.
Panel not in the MSFS toolbar	The folder must be `Community\vw-crosscheck-panel` with `manifest.json` directly inside – not in a sub-folder. MSFS 2020 and 2024 have separate Community folders. Restart MSFS.
"SimConnect.dll missing"	Run the setup again (repair); do not move files out of the program folder.

Activation

Problem	Solution
Serial not accepted	Copy and paste it from your simMarket order (VWCC-XXXX-XXXX-XXXX-XXXX).
No connection to the licence server	Check the internet; allow CROSS-CHECK in your firewall; try again in a few minutes.
"Serial already on 2 PCs"	On the old PC: Settings → License → Remove this computer. Old PC no longer available: write to us with your serial.
No trial button	The trial (one flight per computer) has been used – also if it ended in a crash.
Serial asked again after reinstall	An update or reinstall never asks again. It only asks if `%AppData%\CrossCheck` was deleted or on a new PC – enter your serial again.

Connection and flight plan

Problem	Solution
"Not connected"	Start MSFS first and load a flight, then CROSS-CHECK. Restart CROSS-CHECK if MSFS was restarted.
Panel stays empty or shows "waiting"	CROSS-CHECK must be running; press Begin new flight / Load latest plan. The panel talks to the program on `localhost:47812` – allow it in your firewall and close programs that use the same port.
SimBrief plan not found / old plan loaded	Check the username or Pilot ID; generate the plan in SimBrief first, then Load latest plan.

Wrong airline name in PAs	Set the airline in SimBrief, or "My airline" on the Career tab.
Delay, schedule or on-time wrong	MSFS time is not LIVE (or not the SimBrief departure time).

Gate, catering, boarding

Problem	Solution
Boarding is never offered	Check every condition: jetway / stairs (GSX or the "Jetway / stairs connected" button), catering accepted, refuelling finished, on the ground, stopped, engines off, a passenger door open.
"Waiting for the jetway / stairs"	Without GSX press "Jetway / stairs connected" before opening the door. With GSX check that GSX sync is ON.
Door open but not detected	Developer → Values read: doors n/a? PMDG: SDK lines. Other aircraft: Settings → Passenger doors (advanced).
Penalty for the seatbelt sign during boarding	The sign must be ON from the start of boarding to the end. PMDG: without SDK lines it is never read.
Heavy penalty "fuel added / removed"	Do not refuel or defuel after boarding started (GSX refuel must be finished first).
Power lost at the gate	APU running before removing ground power.

Doors, pushback, engines, taxi

Problem	Solution
Doors will not close / arm step does not come	Boarding must be complete; close the doors in the aircraft (Fenix EFB / MCDU, PMDG CDU), then the purser arms them.
Penalty "ground crew clearance before engine start"	Call the ground crew before **each** engine ("starting engine one", then "two").
Pushback not counted	Use "Ready for pushback" or the GSX pushback with GSX sync ON.
Beacon / nav / taxi light penalties	Beacon ON before pushback or engine start until shutdown; nav ON from pushback; taxi light ON before moving.
Taxi speed or turn penalties	Max 30 kt straight, 10 kt in turns.

Take-off and climb

Problem	Solution
Heavy penalty "cabin ready"	Wait for "Cabin ready for take-off", then "seats for take-off" and "crew seated" before take-off.
No V1 / Rotate call	No take-off speeds: set V1 / VR on the CAPTAIN tab or generate SimBrief performance.
Penalty "take-off flaps"	Set the flaps from the SimBrief take-off data before take-off.
Penalty "transponder / TCAS"	Squawk set before take-off; TA/RA when entering the runway.
Altimeter penalty	STD above the transition altitude (from SimBrief), QNH in the descent.

Cruise and service

Problem	Solution
Service does not start	Seatbelt sign must go OFF after take-off. With the sign ON the cabin stays seated.
Service stopped	Turbulence or seatbelt sign ON – answer the purser (continue with care / continue).
Information PA penalty	Make the information PA within 5 minutes after reaching cruise.
Satisfaction drops for "entertainment"	Wi-Fi and IFE on in cruise.
Fuel card every few minutes	Choose "Every 30 minutes" or "Off" in Settings → F/O fuel check.

Descent and landing

Problem	Solution
Crew does not prepare the cabin	You must give "Cabin crew, prepare for landing" (seatbelt OFF→ON, button or voice).
Cabin not ready at landing	Give the command earlier – preparation takes about 2:30–6:00.
Penalty at gear down / landing flaps	Cabin ready and crew seated before final configuration.
250 kt, landing lights, stable approach penalties	250 kt and landing lights ON below 10,000 ft; gear down and landing flaps by 1,000 ft; gear only below 220 kt.

Arrival

Problem	Solution
CRASH – slide deployed	A door was opened while ARMED. Next time: "Disarm slides and cross-check" first. The flight restarts from the gate.
No "disarm slides" PA at the gate	Engines off, then beacon OFF and seatbelt sign OFF – the purser disarms only after both.
Purser waits for the jetway	Without GSX press "Jetway / stairs connected".
Flight not in the career	Flights are saved when all passengers have left. An interrupted flight gives no XP.

Sound and voice

Problem	Solution
No sound at all	Voice volume and announcements on? Windows output device correct?
Announcements twice	Switch off the Fenix EFB / VA pack / RAAS PAs, or the matching CROSS-CHECK ones.
Voice not understood	Right microphone, Windows microphone permission for desktop apps, speak after the F/O, try push-to-talk, English speech pack on Turkish Windows.
Commands trigger by themselves	Use push-to-talk instead of open microphone (streams, TV in the room).

Score and career

Problem	Solution
A penalty looks wrong	Developer → Export debug report; send the file with a screenshot to info@virtualwingsbycenk.com or #cc-support on Discord.
Rule missing in the report	Its data is not readable on this aircraft – it is skipped, not counted against you.
Not promoted although XP is enough	Check the other requirements on the Career tab (hours, average, Line Check).

Extras

Problem	Solution
Overlay / passenger screen blank	CROSS-CHECK must be running; exact address; OBS browser source with your canvas size.
Not on the live map	Live map ON in the panel, a flight started, internet available. Updates every 30 seconds.

18. Updating, backing up, uninstalling

- **Update:** run the new setup over the old one. Career, licence and settings are kept.
- **Backup:** copy the folder `%AppData%\CrossCheck` (career, licence, settings, reports).
- **Uninstall:** Windows Settings → Apps → CROSS-CHECK. The program and the panel copies are removed; your career and licence stay. To remove everything, also delete `%AppData%\CrossCheck`.
- **New PC:** Remove this computer on the old PC, install and activate on the new one. To take your career with you, write to us.

19. Support and legal

- Discord: **discord.gg/QDbN7ZUv** – #cc-support (questions and bugs), #cc-ideas, announcements and changelog.
- E-mail: **info@virtualwingsbycenk.com** – please attach the debug report (Developer → Export) and a screenshot.
- Website: **virtualwingsbycenk.com**

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