ONAIR PLAYER HANDBOOK · 2026 EDITION

ONAIR HANDBOOK

How OnAir really works — the formulas, constants and schedules behind every flight and every credit.

Volume	Chapters	Time-base	Currency
I	11	UTC	Cr

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SYSTEMS NOMINAL

About this volume

— VOL I · ONAIR HANDBOOK —

For pilots and managers who want the exact rules — why an airport is Size 3, what an FBO really costs, how your score and your pay are calculated. Open it whenever a number surprises you.

New to OnAir? Start with the OnAir Academy. Looking for a screen or a button? See the OnAir Reference.

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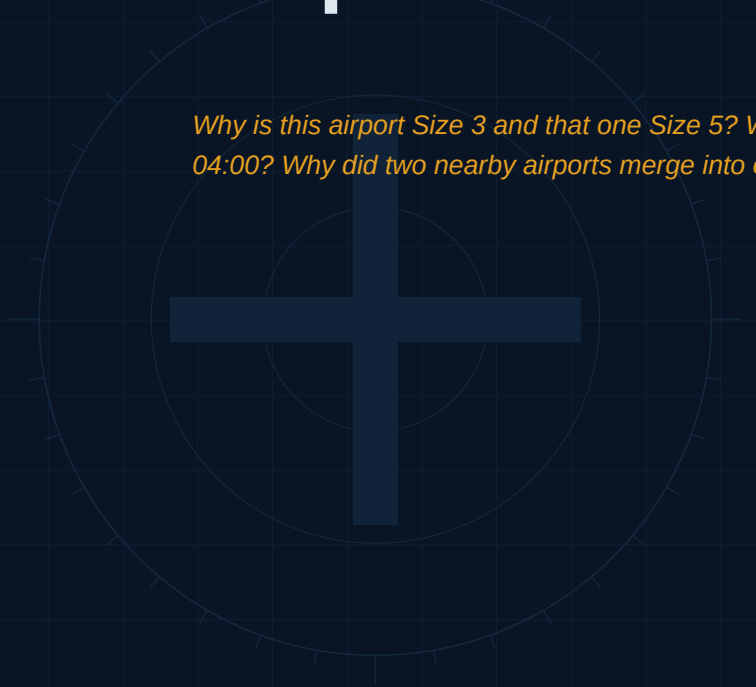
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01

CHAPTER 01 · AIRPORTS

Airports

Why is this airport Size 3 and that one Size 5? Why does one airport open at 06:30 and another at 04:00? Why did two nearby airports merge into one in OnAir?



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1.1 Airport Size (0–5) — how it is calculated



FIG 1.01 — Airport Size derivation, 4 sequential passes

Size is determined by the **longest runway**, with two possible caps on top.

Step 1 — Longest runway decides the base size

LONGEST RUNWAY	BASE SIZE
≥ 10 000 ft	**5**
≥ 7 500 ft	**4**
≥ 6 000 ft	**3**
≥ 4 500 ft	**2**
≥ 2 300 ft	**1**
< 2 300 ft, or no runway	**0**

Step 2 — All-grass cap (max Size 2)

If **every single runway** at the airport is a soft surface (grass, dirt, gravel, sand, etc.), the size is capped at **2** — no matter how long the runway is.

> **Example:** a 12 000 ft grass strip would be Size 5 by length, but is capped to **Size 2**.

Step 3 — All-water cap (max Size 1)

If **every single runway** is a water surface, the size is capped at **1**. Pure seaplane bases ultimately land at **Size 0**.

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Step 4 — Manual overrides

A handful of iconic airports are force-set to a specific size by the development team, overriding the formula.

Heliports

An airport with only helipads and no runway gets **Size 0** and is treated separately from regular airports (it is excluded from merge rules).

1.2 Where your airports are synchronized from

OnAir supports MSFS 2024 and 2020, X-Plane 12 and 11, Prepar3D v4 to v6, and FSX. Airport synchronization uses the source datasets below; this table is not a list of supported simulator versions. When multiple source datasets contain the same airport, MSFS 2020 takes priority.

SOURCE	PRIORITY
MSFS 2020	Highest
Prepar3D v4	2nd
FSX	3rd
X-Plane 11	4th

"Addon required" flags

Every airport carries four independent flags, one per simulator, indicating whether it exists in that simulator's standard install:

FLAG	WHAT IT MEANS
Not in standard MSFS 2020	You need a scenery addon to see this airport in MSFS
Not in standard P3D	Missing from Prepar3D v4 stock
Not in standard FSX	Missing from FSX stock
Not in standard X-Plane	Missing from X-Plane 11 stock

> If you fly MSFS and your destination is marked "not in standard MSFS", you will need the matching scenery addon to land there.

1.3 Runway surface types

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Surfaces that trigger the **all-soft cap (max Size 2):** coral, dirt, grass, gravel, planks, bumpy grass, short grass, long grass, hard turf, forest, sand, shale, and any unknown/undefined surface.

Surfaces that trigger the **all-water cap (max Size 1):** ocean, lake, pond, river, waste water, and water variants.

Standard hard surfaces (concrete, asphalt, tarmac, macadam, etc.) have no cap.

1.4 Parking & ramp types

TYPE	CATEGORY
General Aviation ramps (small / medium / large / extra)	GA
Cargo ramp	Cargo / commercial
Military cargo / combat ramp	Military
Airline gates (small / medium / heavy / extra)	Airline
Seaplane dock	Seaplane
Fuel point	Fuel

> The "extra" GA and airline gate types only appear at airports imported from MSFS 2020.

1.5 Military airports

An airport is flagged as military if:

- Its name ends in "AB", "MIL", "AIR BASE", or contains "AFB", **or**
- Its ICAO code is on a hardcoded list of ~80+ bases (NATO fields, US Army/USAF, several Dutch, Japanese, and Italian military fields).

1.6 The airport data version

The game client caches airport data locally. Every time airport data is updated on the server, the version number increments by 1. When the client detects a new version, it downloads the updated data. You do not need to manage this manually.

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1.7 Basecamp airports

Airports flagged as **basecamps** are permanent community fixtures:

- Never modified by any import cycle.
- Not subject to the proximity merge rules.
- Cannot be overridden by simulator addons.

1.8 How your arrival airport is recorded

When you file a flight you enter up to three airports. OnAir keeps all three, but it does **not** blindly trust your filed destination when it closes the flight — it checks where you *actually* shut the engines down and records the arrival from that position.

FIELD	WHAT IT IS	HOW IT IS USED
Planned destination (intended)	The airport you filed as your destination at dispatch.	Compared against your shutdown position to decide your arrival.
Alternate	The fallback airport you filed at dispatch.	**Informational only** — recorded for your planning, never selected automatically as your arrival.
Actual arrival	The airport OnAir logs once the flight is registered.	This is what appears in your logbook.

The selection runs at registration, in this order:

1. OnAir measures the distance between your engine-shutdown position and your **planned destination**. 2. If that distance is **under 5 NM**, your planned destination is logged as the arrival. 3. Otherwise, OnAir finds the **nearest suitable open airport**: valid, not closed, and meeting the aircraft's minimum airport Size. Heliport-only fields are excluded for fixed-wing aircraft; helicopters may use them. 4. If that suitable open airport is more than 5 NM away, the search also considers closed airports, with the same aircraft-compatibility filters. 5. Only if no suitable airport can be found does the server fall back to the nearest airport without those compatibility filters, so registration can complete.

> **Diversions:** if you land somewhere other than your filed destination, your logbook shows where you really stopped, not where you intended to go. In the Companion, the flight log marks this with a small **DIV** badge and shows your planned destination alongside the actual arrival; the alternate is shown too, with an info tip explaining this exact rule.

Two things worth remembering: the **5 NM radius is measured from where you stop**, not from a runway threshold, and the **alternate is never chosen for you** — it is stored purely as planning information.

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0–5	4 passes	5 NM
AIRPORT SIZE RANGE	SIZE DERIVATION	ARRIVAL SNAP RADIUS

- Size is based on the **longest runway length**, but all-grass → cap 2, all-water → cap 1.
- MSFS 2020 airport data always takes priority over other simulators.
- If your destination doesn't appear in OnAir, check whether it requires a simulator addon.
- Military airports are identified by name suffix or a hardcoded list of ICAO codes.
- Basecamp airports are permanent fixtures — never merged, never overridden.
- Your **arrival** is logged as your planned destination only if you stop **within 5 NM** of it; otherwise OnAir searches for the nearest suitable airport, with the fallback rules in §1.8. The **alternate** is informational and never auto-selected.

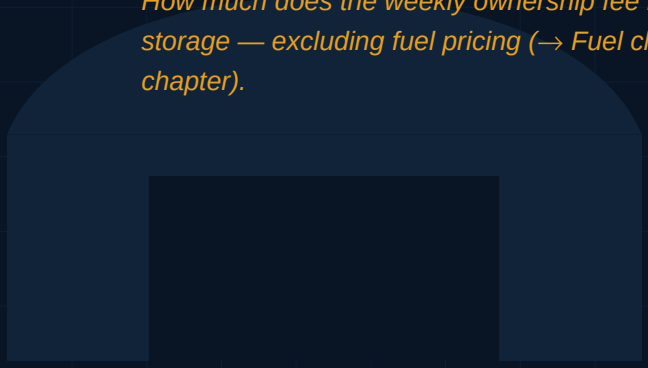


02

CHAPTER 02 · GROUND OPS

FBO & Hangar

How much does it cost to build an FBO at a Size 4 airport? Who pays the hangar storage fees? How much does the weekly ownership fee bite? Everything about FBO economics and hangar storage — excluding fuel pricing (→ Fuel chapter) and maintenance operations (→ Maintenance chapter).



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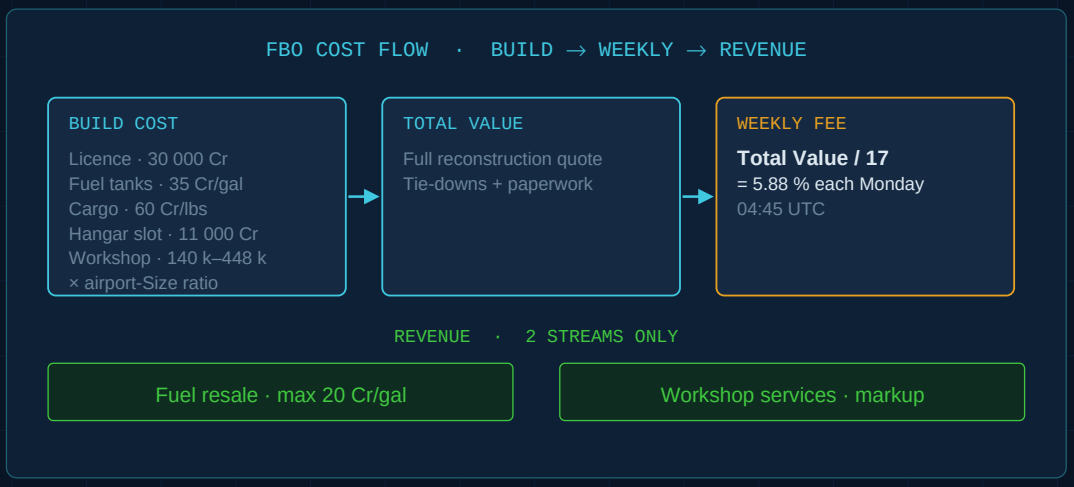


FIG 2.01 — FBO economics, build cost → weekly fee → revenue streams

2.1 Two types of FBO: system and player-owned

- **Every airport** in every world has exactly **one system FBO** (owned by no one). It is always there — you cannot buy it.
- A player can **build** their own FBO from scratch at any open airport.
- A player-owned FBO **coexists** with the system FBO at the same airport. Multiple players can each have their own FBO there.
- **One FBO per airport per company** — you cannot build two at the same airport.
- **Minimum skill required:** FBO Main Agreement, level 1 (see the Skills chapter).

2.2 The golden rule — everything scales with airport Size

Every construction cost is multiplied by an **airport size ratio**:

AIRPORT SIZE	MULTIPLIER
0	**0.10**
1	**0.20**
2	**0.40**
3	**0.60**
4	**0.90**
5	**1.00**

The same hangar slot costs **10× more at Size 5 than at Size 0**.

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> **Reading rule for every table in this chapter:** all prices shown are at **Size 5** (multiplier 1.0). Multiply by the ratio above for your actual cost at a smaller airport.

2.3 What an FBO costs to build

Foundation (one-time, required)

ITEM	BASE COST (AT SIZE 5)
Paperwork & project management	**1 500 Cr**
FBO Exploitation Licence	**30 000 Cr**

> **Example at Size 3** (multiplier 0.6): opening a minimum FBO = (1 500 + 30 000) × 0.6 ≈ **18 900 Cr** before any extension.

Storage & comfort extensions

The quote adds **one paperwork fee × the airport multiplier**, then each extension. For cargo, fuel tanks, rooms and hangar slots, the extension price is **max(unit cost × quantity, 1 000 Cr) × multiplier**: the minimum applies before the airport ratio. Tie-downs use their own linear price.

ITEM	UNIT COST (SIZE 5)	WHAT YOU BUY
Cargo storage	**60 Cr / lbs**	1 lbs of cargo capacity
100LL fuel tank	**35 Cr / gal**	1 gallon of avgas capacity
Jet fuel tank	**35 Cr / gal**	1 gallon of jet fuel capacity
Crew rooms	**2 000 Cr / room**	1 sleeping room
Tie-down spot	**500 Cr / spot**	1 outdoor aircraft parking spot
Aircraft hangar slot	**11 000 Cr / slot**	1 indoor aircraft storage slot

Workshop build cost

AIRCRAFT CLASS	BUILD COST AT SIZE 5
Single-Engine Piston (SEP)	140 000 Cr
Multi-Engine Piston (MEP)	154 000 Cr
TurboProp	238 000 Cr
Jet	294 000 Cr
Heavy Jet	448 000 Cr

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AIRCRAFT CLASS	BUILD COST AT SIZE 5
Helicopter	448 000 Cr

Workshop upgrade cost (Level 1 → Level 2)

AIRCRAFT CLASS	UPGRADE COST AT SIZE 5
SEP	70 000 Cr
MEP	77 000 Cr
TurboProp	119 000 Cr
Jet	147 000 Cr
Heavy Jet	224 000 Cr
Helicopter	224 000 Cr

> Level 1 = repairs & scheduled inspections. Level 2 = annual checkups & full replacements. See the Maintenance chapter for details on what each level unlocks.

All workshop costs are also multiplied by the airport size ratio.

2.4 Construction timers

Different construction categories run **in parallel**. A new order for a category already under construction is added after its existing finish date. The quote shows the work in the new batch; check the resulting finish date for an already queued category.

Per-operation cap: 15 days. Each quoted extension is capped, but successive orders in the same category can leave more than 15 days of work queued.

ITEM	BUILD TIME
Paperwork	**30 min**
FBO Licence	**~2 days**
Cargo storage	~42 h for 10 000 lbs
Fuel tank	~42 h for 10 000 gal
Sleeping room	~1 day per room
Tie-down spot	~1.5 h for 1 spot
Aircraft hangar slot	~3 days for 1 slot; 5 slots = 15 days (cap)
Workshop Level 1 (SEP)	~2 days
Workshop Level 1 (Heavy Jet)	~6.4 days

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ITEM	BUILD TIME
Workshop Level 1 → 2 (SEP)	~1 day
Workshop Level 1 → 2 (Heavy Jet)	~3.2 days

- Construction runs on the server, independent of whether you are online.
- The capacity goes live **once per minute** after the build date has passed.
- **No skill reduces construction timers.**

2.5 What the system FBO already has

System FBOs are pre-seeded with randomized capacities depending on airport Size. This is what you compete against.

Fuel capacities (system FBOs)

Capacity is seeded randomly. At Size 0, 100LL is present with 50% probability and Jet fuel with 20%; at Size 1, the probabilities are 70% and 50%. At Size 2, 100LL is seeded and Jet fuel has an 80% chance. Larger airports seed both types.

The capacity bands grow with airport Size. Jet capacity receives an additional random multiplier between 1.2 and 2.2 and is truncated to hundreds of gallons, so it does not share the simple 100LL ranges. **Read the FBO's actual capacity and current stock** before planning a purchase; seeded values are not a guaranteed present-day supply.

Workshop availability (system FBOs)

SIZE	SEP	MEP	TURBOPROP	JET	HEAVY JET	HELICOPTER
0–1	—	—	—	—	—	—
2	✔	—	—	—	—	—
3	✔	✔	—	—	—	—
4	✔	✔	✔	✔	—	✔
5	✔	✔	✔	✔	✔	✔

Heavy Jet **Level 1** is seeded at Size 5. Its **Level 2 upgrade** has only a **30 % chance** of being seeded. These are creation rules; check the current FBO services.

Level 2 is standard from Size ≥ 4 for SEP/MEP/TurboProp/Helicopter, and Size 5 for Jet.

Workshop markup (system FBOs)

System FBOs charge a random markup of **+10 % to +110 %** over the base maintenance price. A nearby player-owned FBO is almost always cheaper.

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2.6 Cargo storage fees

When you store cargo at an airport, you pay an hourly fee — **unless** the cargo fits inside **your own FBO's** cargo capacity there.

The formula

> **0.06 Credits per lbs per hour** (= Daily charge: weight × 24 × 0.06 Cr)

YOUR SITUATION AT THE AIRPORT	WHAT YOU PAY
You own an FBO with enough cargo capacity	**0 Cr** (free)
You own an FBO but cargo exceeds your capacity	Fee on the **overflow weight** only
You don't own an FBO there	Fee on the **full cargo weight**
Your company is paused	**Exempt** — no billing
The cargo is Food Rations	**Exempt** — always free

> **Important:** the cargo storage fee is paid by the cargo owner — **the FBO owner does not collect it as revenue.** See §2.8 for what FBO owners actually earn.

- **Grace period:** 3 hours free after the cargo is unloaded.
- Fee is charged once per 24 h per airport.

2.7 Aircraft parking fees

Parking is an airport fee, calculated at an hourly rate. **Your own FBO exempts aircraft up to its combined tie-down and hangar capacity**, covering the aircraft with the highest parking charges first. Overflow aircraft remain chargeable. Basecamps and paused companies are exempt. Billing also checks that the aircraft is idle and the elapsed parking time; it is not an unconditional debit every hour.

The formula

> **Fixed part:** `8.75 × (0.5 + Size / 10)` Cr/h **Heavy part:** `0.125 × (0.5 + Size / 10)` Cr per 1 000 lbs / h, **for aircraft MTOW above 200 000 lbs only**

Fees by airport Size

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SIZE	FIXED / H	PER 1 000 LBS ABOVE 200 K LBS / H
0	4.375 Cr	0.0625 Cr
1	5.250 Cr	0.0750 Cr
2	6.125 Cr	0.0875 Cr
3	7.000 Cr	0.1000 Cr
4	7.875 Cr	0.1125 Cr
5	8.750 Cr	0.1250 Cr

> **Example:** without an exemption, skill discount or custom owner tariff, a 500 000 lbs aircraft parked 24 h at Size 5 costs 24 × [8.75 + (500 – 200) × 0.125] = **1 110 Cr/day**.

- Hangar slots and tie-downs both count towards your FBO's free-parking capacity.
- Airport owners can set a lower custom parking tariff. The Parking Fee Reduction skill also reduces the amount charged.

2.8 The weekly ownership fee (Monday 04:45 UTC)

> **Weekly fee = the server's full reconstruction quote ÷ 17**

The quote rebuilds the FBO's current capacities and workshops at that airport's Size ratio. It includes the licence, fuel tanks, cargo storage, rooms, hangars, workshops, **tie-downs and one paperwork fee**. It is not simply the sum of your historical spending, nor just the asset-only portion of the quote.

- The weekly pass charges a fee when no previous payment exists or at least **6.5 days** have passed. That eligibility test does not schedule a separate Sunday payment.
- A **paused** company's fee is skipped.

FBO AT SIZE 5	RECONSTRUCTION QUOTE	WEEKLY FEE
Licence only	31 500 Cr	1 852.94 Cr
Licence + 10 000 gal jet tank	381 500 Cr	22 441.18 Cr
Licence + jet tank + SEP workshop L1	521 500 Cr	30 676.47 Cr

The recurring fee is about **5.88% of that quote**. Use the live quotation when planning an extension.

2.9 What an FBO owner actually earns

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Revenue comes from only **two** streams — and both require you to enable them and have the right skill:

REVENUE STREAM	SKILL REQUIRED	HOW TO ENABLE
Fuel resale to other players	Fuel Resale skill (level 1)	Enable "Allow fuel selling" in your FBO settings
Workshop services to other players	Workshop Resale skill (level 1)	Enable "Allow workshop services" in your FBO settings

These are NOT revenue streams for FBO owners (common misconceptions):

- ✕ Cargo storage fees — paid by cargo owners, not collected by the FBO.
- ✕ Aircraft parking fees — go to the airport, not to you.
- ✕ Logistic queries — these generate missions **for your company to fly**, not payments from others.

Workshop markup

You set a markup multiplier (e.g., 1.5 = +50 %). The minimum is 1.0 (no discount). Your earnings when another player's aircraft is serviced:

> **Your revenue = total price − (total price ÷ markup)**

> **Example:** a 1 000 Cr repair at markup 1.5 → your revenue = 333 Cr.

Fuel resale constraint

- **Maximum sell price:** 20 Cr/gal (hard cap, both fuel types).
- **Minimum sell price:** cannot go below the world's dealer price.

2.10 Logistic queries — the mission generator

A **logistic query** is a filter you attach to your FBO: range, heading, cargo weight limits, passenger limits, airport size filter. Triggering a query generates a batch of cargo/passenger missions from your FBO — for **your company** to fly.

Queries available by skill level

SKILL LEVEL	TOTAL QUERIES AVAILABLE
1	1
2	3
3	5
4	8
5	**10**

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Cooldown per query slot

Each query has its own independent cooldown:

SLOT	COOLDOWN
1st query	~**5 days**
2nd query	~**2 days**
3rd–10th queries	**23 hours** each

> There is **no global weekly reset**. Each query's cooldown starts from the last time you triggered it. Stagger your triggers to keep a steady flow of missions.

Bonus missions per query — Enhanced Queries skill

Enhanced Queries expands the random generation range. Outside Challenge Mode, level 3 allows **4 to 11 random generation attempts**, instead of 1 to 2 without the skill. Favourites, generation failures and Challenge Mode affect the result; see §5.5. This is not a guarantee of 11 delivered missions.

2.11 Skills that gate FBO features

Full skill tree details are in the Skills chapter. Here is the FBO skill summary:

SKILL	MAX LEVEL	COST / LEVEL	UNLOCKS
FBO Main Agreement	5	1 pt	Build FBOs; logistic query ladder (1 / 3 / 5 / 8 / 10 queries)
Workshops Agreement	2	2 pts	L1 = basic workshop · L2 = annual checkups & replacements
Mechanic Speed	3	2 pts	Listed as a speed skill; its advertised speed bonus is not applied by the current server calculation (§5.5)
Fuel Resale	1	2 pts	Enable selling fuel to other players
Workshop Resale	1	2 pts	Workshop accepts other players' aircraft
Enhanced Queries	3	2 pts	More missions per logistic query trigger

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2.12 Auto-stop, auto-pause, deletion

SITUATION	WHAT HAPPENS
Company **paused**	Weekly fee skipped. FBO hidden from other players. Not deleted.
Insufficient funds	No auto-shutdown. The fee is still debited.
Airport **closed** after you built there	Your FBO is not deleted. You simply cannot build a **new** FBO at a closed airport.
Manual deletion	Only allowed if no maintenance is currently active (or with force). All logistic queries and pending missions are deleted. Aircraft in your hangar stay parked at the airport.

2.13 TL;DR

- You **build** an FBO — you never buy one. System FBOs are permanent fixtures you compete against.
- Every construction cost is **multiplied by the airport Size ratio** (0.10 → 1.00).
- A Heavy Jet workshop at Size 5 costs **448 000 Cr** to build and **224 000 Cr** to upgrade to Level 2.
- **Cargo storage: 0.06 Cr / lbs / hour** after a 3 h grace period. Free inside your own FBO's capacity.
- **Aircraft parking** at Size 5: 8.75 Cr/h + 0.125 Cr per 1 000 lbs above 200 k lbs before exemptions and discounts. Your FBO covers aircraft within its parking capacity.
- **Weekly ownership fee = reconstruction quote ÷ 17**, including tie-downs and paperwork.
- FBO owners earn **nothing** from storage fees or parking fees — only from fuel resale and workshop services.
- Logistic queries: **1 → 10 slots by skill level**, with **5-day / 2-day / 23-hour** cooldowns from slot 1 onward.

02

— END OF CHAPTER —

03

CHAPTER 03 · FUEL

Fuel



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FIG 3.01 — Fuel supply chain from dealer to aircraft

> What does a gallon really cost? How long until my order is delivered? What's the cheapest way to fuel a Heavy Jet? Everything fuel-related — pricing, ordering, delivery, refueling, and weight.

3.1 Only two fuel types exist

TYPE	NAME	USED BY
0	**100LL** (Avgas)	Piston aircraft
1	**Jet-A**	Turbine aircraft (turboprops, jets, turbine helicopters)

There is no MOGAS, no Diesel, no SAF in OnAir. Every aircraft type uses one or the other.

3.2 Two prices that matter

Every FBO has two prices per fuel type:

PRICE	WHO PAYS IT	WHO SETS IT
Dealer price	The FBO owner (when ordering fuel for their stock)	The server — configured per world
Sell price	Any pilot refueling at the FBO	The FBO owner (you, for your own FBO)

The difference is the FBO owner's **margin**.

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3.3 Dealer price — one number per world

The dealer price is **the same at every airport** within a given world. It never varies by location.

Seed values at world creation

WORLD MODE	100LL DEALER PRICE	JET-A DEALER PRICE
Classic	3.30 Cr/gal	2.98 Cr/gal
Survival	3.72 Cr/gal	3.36 Cr/gal

What never changes the dealer price

- The dealer price is a **world setting**, shared by its airports. Normal purchases do not make it fluctuate, but an administrative change to that setting can change it.
- **No seasonal modifier** ever changes fuel prices.



100LL	Jet-A	20 Cr
AVGAS (6.0 LB/GAL)	JET FUEL (6.7 LB/GAL)	MAX FBO RESALE

- **No country tax** affects in-game fuel.

3.4 Sell price — rules and caps

Hard limits

CONSTRAINT	VALUE
Maximum sell price	**20 Cr/gal** (hard cap, both fuel types)
Minimum sell price	Must be ≥ the world's **dealer price**

System FBO sell prices

System FBO prices are randomised when seeded and can be randomised again during a server data-maintenance operation. They are not reset by the Monday/Friday stock top-ups.

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The randomisation uses reference prices **4.13 Cr/gal for 100LL** and **3.73 Cr/gal for Jet**, multiplied by 1.4, an airport factor from 0.7 to 1.3, a fuel-specific factor from 0.9 to 1.1 and the Size ratio below:

AIRPORT SIZE	PRICE RATIO
0	1.00
1	1.05
2	1.10
3	1.20
4	1.30
5	1.40

These are generation inputs, not a promise of the price currently available at an airport. Dealer-floor corrections may also apply. **Use the current FBO sell price for a flight budget.**

3.5 Ordering fuel for your FBO

RULE	VALUE
Price	Dealer price × gallons ordered
Delivery fee	None
Bulk discount	None — linear pricing
Lead time	**+1 day** from order time
Additional order while delivery is pending	Added to the same delivery; its existing due date moves +2 h
Minimum order	None
Maximum order	Limited by your remaining tank capacity
Payment timing	Debited **immediately** at order time

How delivery works

1. You place the order and are charged immediately. 2. The ordered quantity is held in a "pending delivery" state. 3. At the due date, the periodic server pass moves the pending fuel into live stock. The first order sets that date to +24 h; every addition to a pending delivery pushes the **existing date** back two hours for the whole lot. A late addition therefore need not wait a new 24 h from its own purchase.

The overflow guard

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You cannot over-order: the server ensures that your current stock + already pending + new order does not exceed your tank capacity.

No cancellation

There is **no way to cancel a fuel order** once placed. You will wait for delivery.

3.6 Weekly resupply of system FBOs

Two scheduled events restock system FBOs:

- **Monday ~04:45 UTC**
- **Friday ~04:45 UTC** — the same restock again

The refuel formula

For each system FBO, per fuel type:

CURRENT STOCK	WHAT HAPPENS
Below 50 % of capacity	Refilled to a **random level between 50 % and 100 %** of capacity
At or above 50 % of capacity	**Nothing** — the stock is left as it is

Sell prices are **not** reset by these restocks.

Only **system** FBOs are restocked. An FBO run by a player holds what its owner puts in it (§3.5).

> **Planning tip:** the next restock is whichever pass comes first, Monday or Friday, and it only refills an FBO that has fallen below half its capacity by then. A busy system FBO can run low in between. Where your operations depend on fuel, your own FBO or a fuel container is the supply you control.

3.7 Refueling an aircraft at an FBO

RULE	VALUE
Price	FBO sell price × gallons
Handling fee	None
Per visit limit	Limited by aircraft tank capacity and FBO remaining stock
Out of stock	Fails immediately — no queue
Loading time	Approximately 0.02 min per gallon, capped at **2 minutes** total

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Refueling at your own FBO

When you refuel your own aircraft at your own FBO, the server charges you **dealer price × gallons** — not your marked-up sell price. Your markup is only a cost to **other players**, not to yourself.

Third-party refueling

When another player refuels at your FBO, they pay your sell price. You receive the difference between sell price and dealer price as profit.

Automatic fuel purchases for regular routes and work orders

When a regular route flight is flown by your AI crew (not "Fly in Simulator"), or a work order leg starts, the server buys the fuel automatically at the departure airport:

- It only buys from an FBO that holds the **whole amount** in one go. An empty or short FBO is skipped.
- It picks **your own FBO** first, then **your VA's**, otherwise the **cheapest** of the FBOs that can supply it.
- If no FBO can supply the whole amount:

- **Regular route:** nothing is bought. If the fuel already on board can't reach the destination, then the alternate, plus 30 minutes of cruise, the flight doesn't start: it shows as **Not started**, and the flight's journal gives the reason ("Not enough fuel for this flight…"). - **Work order:** the leg doesn't start ("No FBO with enough fuel available at …"). The leg option **No fuel operation at leg departure** lets it start without buying fuel.

For regular routes, fuel purchases are charged to the company operating the aircraft. With **Fly in Simulator**, prepare the fuel yourself through dispatch.

3.8 Fuel weight (for Weight & Balance)

Fuel weight is a fixed constant per type — no temperature or altitude correction:

FUEL TYPE	WEIGHT
100LL (Avgas)	**6.0 lbs/gal**
Jet-A	**6.7 lbs/gal**

3.9 Fuel containers — portable fuel storage

A **fuel container** is a cargo item that lets you transport gallons between airports.

Buying a container

- Price = gallons × FBO sell price (same as refueling).

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- Weight = gallons × fuel density.
- Revenue goes to the FBO owner as a normal fuel sale.
- You specify the number of gallons — there is no fixed container size.

Using a container on an aircraft

- Container must be at the same airport as the aircraft.
- Pumps as much fuel as the aircraft can accept.
- The container is destroyed if fully used; kept (with reduced weight) if partial.

Pouring a container into your FBO tank

- Must be at an airport where you own an FBO.
- Fills your tank up to remaining capacity.
- If the container has more fuel than your tank can hold, the excess **stays in the container** — nothing is wasted.

Supplying an airport that sells no fuel — no FBO required

Remote strips (a fishing-camp factory site, a bush field, a tiny island runway) often sell no fuel at all. You do **not** have to build an FBO there to keep flying:

1. Buy a container at any FBO that sells your fuel type — your own, or a third-party FBO with fuel resale enabled. 2. Haul it to the strip like any other cargo. 3. Refuel on the ramp straight from the container — works at **any** airport, even one with no FBO. Leftover gallons stay in the container for the next visit.

> **(!) Parked containers pay storage.** A container sitting on the ground is ordinary cargo: after the 3 h grace period it is billed the cargo storage fee (§2.6) — 0.06 Cr/lbs/h, ≈ 1.44 Cr/lbs/day — unless it fits inside **your own** FBO's cargo capacity there. Example: a 100-gal avgas container (600 lbs) at an airport with no FBO ≈ **864 Cr/day**. A container riding in an aircraft's cargo hold is never billed — it costs payload instead. Unneeded containers can be deleted from the Airport page (*My Assets* tab); the fuel is lost, no refund.

Rule of thumb: containers are perfect for **bring-your-own-fuel trips and short stays**. For a **permanent** base, build an FBO — any open airport qualifies, whatever its Size — with a fuel tank: dealer delivery in +1 day (§3.5), refueling at dealer price (§3.7), and free cargo storage up to your capacity.

3.10 Industrial fuel supply (background system)

Behind the scenes, fuel factories get paid when fuel is supplied to an FBO near them:

- When you order fuel for your FBO (§3.5), and whenever a system FBO is restocked (§3.6), the server buys fuel tanks from player factories within **250 NM** of that FBO whose fuel output is set to **Local Dealer**, nearest first, and pays their owners the local dealer price. It buys up to the quantity supplied: for a restock, the amount refilled, or 10 % of capacity when the FBO was already at or above half. It works in whole tanks of 5,500 gal.
- Factories farther than 250 NM are not used for this.

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- None of this changes your order or its price.

The per-NM transport cost (10 Cr per tank for every NM beyond 250 NM) belongs to a different mechanic: a factory whose fuel output is set to **FBO Refueling** and pipes fuel into an FBO. That cost is paid **by the factory owner** (see the Industry chapter).

This is an industry economy mechanic; it does not affect what you pay at the pump.

3.11 Skills that affect fuel

SKILL	EFFECT
FBO Main Agreement (≥ 1)	Required to build an FBO and own a fuel tank
Fuel Resale (level 1)	Required to enable fuel selling to other players
AI Fuel Efficiency (levels 1–3)	Reduces fuel burn of **AI-flown aircraft** by –1 / –2 / –4 % (no effect on flights you fly yourself)

No skill changes dealer price, sell price range, ordering lead time, refueling speed, or fuel weight for W&B.

3.12 Edge cases

SCENARIO	WHAT HAPPENS
Tank already full — order excess	Blocked at order time
FBO stock empty — pilot tries to refuel	Fails immediately with an error
Container at airport with no FBO — pour into tank	Blocked — you need an FBO to accept the pour
Container at a non-home airport — use on aircraft	Works — containers are pumpable anywhere on the ground

3.13 TL;DR

- **Dealer price is flat** per world — no regional variation, no fluctuation.

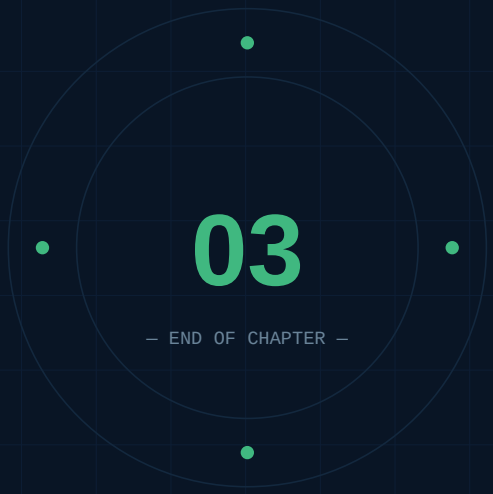
- Classic: **3.30 Cr (100LL) / 2.98 Cr (Jet-A)** per gal - Survival: **3.72 / 3.36** per gal

- **Your sell price caps at 20 Cr/gal** and must be ≥ dealer price.
- **Fuel delivery = +1 day**, no fee, no bulk discount.
- **System FBOs are checked every Monday + Friday at ~04:45 UTC:** only stock below half capacity is refilled; player FBOs are not included.

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- **Refueling at your own FBO only costs you dealer price** — your markup is not self-charged.
- **Fuel weight:** 6.0 lbs/gal (100LL) · 6.7 lbs/gal (Jet-A).
- **Containers pump anywhere** — no FBO needed to refuel at a remote strip; a parked container pays cargo storage fees (§2.6), a container in an aircraft's hold doesn't.
- Only the **AI Fuel Efficiency** skill affects fuel consumption — and only for AI-flown aircraft.



04

CHAPTER 04 · MAINTENANCE

Maintenance & Workshop

When is my engine due for inspection? How much does a 100 h check cost? Why did my aircraft condition drop sharply in just a few flights? Everything about how aircraft wear out and get repaired.

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Maintenance & Workshop

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4.3 Price breakdown
4.4 How long does maintenance take?
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4.9 Damage model — how condition drops
4.10 Maximum condition — the slow, permanent ceiling
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FIG 4.01 — Aircraft condition vs. flight hours (−12 % per 100 h)

4.1 The 8 maintenance operations

There is **no propeller maintenance** — just these eight operations:

OPERATION	WORKSHOP LEVEL	WHAT IT DOES WHEN COMPLETE
Seat reconfiguration	None (paperwork only)	Changes the cabin layout (Eco / Business / First split)
Scheduled inspection	**Level 1**	Resets the inspection countdown
Annual checkup	**Level 2**	Resets the annual due date; the Companion also selects a periodic inspection
Failure repair	**Level 1**	Removes all recorded aircraft failures
Airframe repair	**Level 1**	Sets airframe condition to your chosen target
Airframe replacement	**Level 2**	Airframe → 100 %, hours → 0, maximum condition → restored
Engine repair	**Level 1**	Sets that engine's condition to your chosen target
Engine replacement	**Level 2**	Engine → 100 %, hours → 0, maximum condition → restored

> **Each engine is maintained individually.** A twin-engine aircraft has two separate engine jobs.

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Workshop level rule

- Level 1 required for: engine repair, airframe repair, scheduled inspection, failure repair.
- Level 2 required for: annual checkup, engine replacement, airframe replacement.

If the FBO has no workshop for the required level and class, the job is still accepted but a **truck-call surcharge** applies (see §4.11).

4.2 How maintenance is priced

All costs derive from a single base:

> **Maintenance cost = 70 % of the aircraft's hourly operating cost**

So a Citation costs more to service than a Cessna 152 because its operating cost is higher.

Every quote starts with a **500 Cr paperwork & handling fee** (10 min). If paperwork is the only line item, the fee collapses to zero.

FBO markup

When your aircraft is repaired at a **player-owned FBO that isn't yours**, the owner's markup multiplier is applied to the total price. System FBOs charge a random markup of +10 % to +110 %. Your own aircraft at your own FBO: **no markup applied**.

The markup portion is credited to the FBO owner immediately when the job starts.

4.3 Price breakdown

OPERATION	PRICING FORMULA (SIMPLIFIED)
Scheduled inspection	Hourly cost × inspection interval in hours × 0.02
Annual checkup	Hourly cost × average annual flight hours × 0.007
Engine repair	Hourly cost × condition loss % × a per-engine ratio
Engine replacement	Same as full repair (100 % condition loss), split across engine count
Airframe repair	Hourly cost × condition loss % × an airframe ratio
Airframe replacement	Calculated as a fixed 50 % delta — not a full rebuild
Failure repair (serious)	Equal to a full scheduled inspection cost
Failure repair (minor)	20 % of a scheduled inspection cost
Seat change	50 Cr per seat changed

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Inspection intervals by aircraft class

CLASS	INTERVAL
SEP, MEP, TurboProp, Helicopter	**100 h**
Jet	**400 h**
Heavy Jet	**600 h**

> The inspection interval depends on the aircraft class. The price scales with the interval — a Heavy Jet inspection is expensive because it covers 600 hours of operation.

4.4 How long does maintenance take?

OPERATION	DURATION
Paperwork	10 min
Scheduled inspection	**10 h**
Annual checkup	**30 h**
Engine replacement (per engine)	**10 h** per engine
Engine repair (Δ%)	`Δ × 100 × 12` min (e.g., 40 % repair = 480 min = 8 h)
Airframe repair (Δ%)	`Δ × 100 × 12` min
Airframe replacement	**10 h**
Failure repair — serious (condition ≤ 5 %)	30 h
Failure repair — intermediate (condition 5–50 %)	30 h
Failure repair — minor (condition > 50 %)	2 h
Seat reconfiguration	1 min per seat, max 30 min

> **Example:** repairing an engine from 60 % to 100 % (Δ = 40 %) → 480 min = **8 hours**.

Airport boost

An airport boost can reduce maintenance time:

> **–10 % per boost level** (Level 1 → –10 %, Level 2 → –20 %, etc.)

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4.5 Mechanics — the workforce

Assignment is automatic. You do not pick which mechanic works on which aircraft.

Mechanic speed

Mechanic speed is governed by their **Comfort** and **Punctuality** personal stats (each from 0 to 1):

MECHANIC QUALITY	WORK SPEED
Poor stats (all at 0)	0.90 work-hours per real hour
Average stats (all at 0.5)	1.00 work-hours per real hour
Excellent stats (all at 1.0)	**1.10** work-hours per real hour

How many mechanics can work at once

AIRPORT SIZE	MAX WORKING MECHANICS	MAX SIMULTANEOUS AIRCRAFT
0	2	1
1	4	2
2	6	3
3	8	4
4	10	5
5	12	6

Additional aircraft queue up and wait.

Mechanics must be: assigned as Mechanic category, from your company, currently at the FBO's airport, and not busy transporting, training or relocating.

"Currently at" means physically there, and only Transport moves a mechanic.

Change base rewrites the *home* airport and nothing else — it does not move the employee, so it alone will never make a mechanic count for a workshop. Use

Transport to send him to the FBO's airport; he is in transit, and therefore not counted, until the trip ends.

Pooling your mechanics

All available mechanics' work power is **pooled and split evenly** across the aircraft currently being worked on. Assigning two mechanics to one aircraft cuts the clock time roughly in half.

System FBOs

No mechanics needed. Maintenance time at a system FBO runs in **real time** (1 h real = 1 work-hour, no speedup from extra mechanics).

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4.6 The full maintenance flow

1. **Get a quote** — your aircraft must be idle. If using a player FBO, at least one mechanic must be on-site. 2. **Start the job** — cash check. If balance is sufficient, cargo and passengers on the aircraft are automatically unloaded. Aircraft status changes to **Maintenance**. The full amount is charged immediately. 3. **Maintenance progresses** — driven by the scheduler every **15 minutes**. Idle mechanics are assigned. Remaining work hours decrease based on pooled mechanic power. 4. **Job completes automatically** — all changes (condition resets, etc.) are applied. Aircraft returns to **Idle**. You receive a notification. 5. **Cancel** — you get back the base repair cost, but **the markup already paid to the FBO owner is not refunded**.

4.7 The scheduled inspection

- **Countdown:** decremented by actual flight hours at the end of every registered flight.
- **Due:** when the countdown hits 0, your aircraft is blocked until the inspection is done.
- **Warning:** shown when ≤ 5 hours remain.
- **Intervals:** 100 h (GA/TurboProp/Helicopter) · 400 h (Jet) · 600 h (Heavy Jet).

4.8 The annual checkup

- **Calendar-based**, not flight-hours. Due one year after the last checkup.
- Warning appears **15 days** before the due date.
- Always requires **Level 2 workshop** for the aircraft's class.
- The annual operation **does not restore condition or maximum condition**. It resets the annual date. The Companion also selects the separate periodic inspection, which resets its own countdown. Neither is an airframe replacement.
- The annual line item is **30 work-hours** before modifiers. In the Companion, selecting it also selects the periodic inspection, adding its separate work and cost to the quote; the full order is therefore not always 30 hours.

4.9 Damage model — how condition drops

Condition wears down on **two parts separately**: the airframe (the whole airframe) and **each engine individually**.

Base wear per flight

> –**12 % condition per 100 flight hours** (both airframe and engine, under normal operation)

Below 80 % condition — wear accelerates

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CONDITION	WEAR MULTIPLIER
80 %	×1.0 (normal)
70 %	×1.17
60 %	×1.33
50 %	**×1.50**
40 %	×1.67

> **Practical meaning:** below 80 %, the wear multiplier increases linearly as airframe condition falls; there is no new acceleration threshold at 50 %. At 50 % condition or below, the aircraft is blocked from flying until repaired.

The multiplier is set by the **airframe's** condition, and it applies to the engines' wear as well: an engine wears faster on a tired airframe, whatever its own condition.

Past hightime — wear accelerates further

Each aircraft type has a "hightime" threshold (total airframe hours). Past it, wear is multiplied by **1 + (hours past hightime ÷ hightime)** — ×1.5 at one and a half times the hightime, ×2 at twice it — on top of the below-80 % factor. Because engine wear is derived from the airframe's, the engines wear faster too.

Maximum condition slowly decreases

Each flight also lowers the **maximum possible condition** slightly. Only a Replace restores a ceiling: an Airframe Replace for the airframe, an Engine Replace for that engine. See §4.10.

Engine TBO (Time Between Overhaul)

Once an engine's hours exceed the aircraft type's Time Between Overhaul:

> **That engine wears 3× faster — its condition AND its maximum condition.**

PER ENGINE, BASE RATE	BELOW TBO	PAST TBO
Condition loss	12 points / 100 h	**36 points / 100 h**
Maximum-condition loss	0.4 points / 100 h	**1.2 points / 100 h**

- The **price** of a repair point does **not** change past TBO — it depends on the aircraft type and on the workshop's markup, never on the engine's hours. What triples is the amount of repair each flight hour costs you.
- Only an **Engine Replace** resets the engine hours, and with them the TBO counter. A repair restores condition and leaves the hours where they are.
- At the same workshop, an Engine Replace costs exactly what repairing 100 condition points costs. Past TBO you spend at least 24 extra points per 100 h, so after at most about 420 flight hours past TBO the extra repairs have cost a new engine.

These are base rates: a tired airframe, hard landings and G-force excursions all make them worse (see below).

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Flight events that cause extra damage

EVENT	EXTRA DAMAGE
Hard landing	+0.2 % — airframe **and each engine**
Excessive G-force	Up to **+0.25 %** per event — airframe and each engine
Poor AI pilot stats	Up to +0.05 % per flight — airframe and each engine
Engine failure (sim event)	That engine's condition → random 0–50 %

On an engine past TBO, its share of these losses is tripled like the rest of its wear.

Floor

Airframe condition cannot go below 0 %. An aircraft can reach 0 % and still exist — it just cannot fly until major repairs are completed.

4.10 Maximum condition — the slow, permanent ceiling

> Why does my A350 only show 93 % maximum airframe condition with just 2 500 flying hours, when hightime starts at 52 000 h? Because *maximum* condition wears **independently** from current condition — and a Repair never fixes it.

Two conditions, not one

Each part of your aircraft (the airframe, and **each engine separately**) tracks two values:

- **Current condition** (0–100 %) — what your repair work touches. A new aircraft starts at 100 %; routine flying drops it; an Airframe Repair or Engine Repair brings it back.
- **Maximum condition** (0–100 %) — the **ceiling** the current condition can be repaired to. A new aircraft starts at 100 %; it slowly erodes over the aircraft's life; an Airframe **Repair** does *not* lift it, only an Airframe **Replace** can.

If your max airframe is 93 %, your repaired airframe condition can never exceed 93 % until you replace the airframe.

How the maximum drops

Every completed flight damages the current condition; the maximum drops by **about 1/30th of that same damage**. In practice this means the max wears **roughly 30 times slower** than the current condition.

What feeds the per-flight wear is identical to current-condition wear:

- **Flight hours** — the baseline driver.
- **Hard landings** — each one adds a chunk of extra wear that also bleeds into the maximum.
- **Hightime airframe** — once the airframe crosses its hightime threshold, every subsequent flight inflicts more wear than a fresh airframe; the maximum drops faster too. This is **continuous, not a one-shot drop** at the threshold. Because engine wear is derived from

the airframe's, a hightime airframe also makes its engines' maximum drop faster.

- **Engine past Time-Between-Overhaul** — when an engine exceeds its TBO/SMOH limit, its maximum erodes **about three times faster** than under TBO. This is an engine-specific malus and does not affect the airframe's maximum.

> **Practical heuristic.** A long-lived, well-flown aircraft will gradually drift to the 80–95 % max range from normal wear alone, with no hightime in sight. That's expected. The real maximum-eaters are **hard landings** and **flying engines past TBO**.

What restores the maximum

Only **Replace** operations bring the maximum back to 100 %:

OPERATION	EFFECT ON CURRENT	EFFECT ON MAXIMUM
Airframe Repair	Sets to your chosen target	**No effect**
Engine Repair	Sets to your chosen target	**No effect**
Airframe Replace	→ 100 %	→ **100 %**, hours reset to 0
Engine Replace	→ 100 %	→ **100 %**, engine hours reset to 0

There is no other automatic restoration: nothing scheduled, no daily drift fix, no skill, no airport service that lifts a maximum without a Replace work order.

Per-engine independence

The airframe maximum lives on the aircraft. **Each engine has its own** maximum. Replacing one engine does not touch the others, and does not touch the airframe. A 4-engine aircraft can easily end up with four different engine maxima depending on history.

Aircraft swap (admin / moderation)

When the moderation team performs an aircraft-type swap, the new engines inherit **the average maximum of the engines they replace** (default 80 % if there were none). This is a one-shot administrative operation, not a player tool.

4.11 No workshop at the FBO — the truck call

If the FBO has no workshop for the required level and aircraft class, the job is still possible but with a surcharge:

> **Truck call cost = (sum of other repair items) × 0.5 + 2 000 Cr Truck call time = 60 min extra**

Anything done without a proper workshop is **50 % more expensive**. Always check for a properly equipped FBO nearby before scheduling maintenance.

There is no parts shortage system. Parts are always available. No shipping delays or stock-outs. The surcharge is purely monetary.

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4.12 Condition thresholds — when your aircraft is blocked

Your aircraft is **blocked from flying** when:

TRIGGER	THRESHOLD
Engine or airframe condition	≤ **50 %**
Scheduled inspection overdue	Countdown hits 0
Annual checkup overdue	Calendar date passed
Any recorded failure	At least 1 failure on file

A **warning** (not a block) appears when:

TRIGGER	THRESHOLD
Engine or airframe condition	50 % < condition ≤ **60 %**
Scheduled inspection	≤ 5 hours remaining
Annual checkup	Within 15 days
Engine hours	Past Time Between Overhaul
Airframe hours	Past hightime threshold

4.13 What does NOT exist

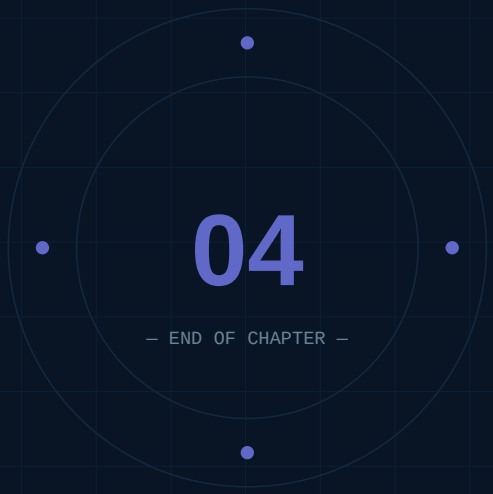
- ✕ No **propeller** maintenance — the model covers airframe + each engine only.
- ✕ No **parts sourcing** delays — parts are always available.
- ✕ No **airport-size price modifier** on maintenance cost itself (only the truck-call surcharge depends on having a workshop).
- ✕ **Cancelling maintenance does not refund the markup** paid to the FBO owner.

4.14 TL;DR

- Base price = **70 % of hourly operating cost** for the aircraft type.
- **Scheduled inspection:** 100/400/600 h intervals depending on class. Price scales with the interval.
- **Annual checkup:** once a year, requires Level 2 workshop. Does **not** repair — compliance reset only.

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- **Condition drops 12 % per 100 flight hours**, accelerating below 80 % and past hightime/TBO.
- **Maximum condition** wears 30× slower than current condition. Only an **Airframe Replace** or **Engine Replace** restores it to 100 % — repairs never lift the ceiling.
- **Cancel refunds the repair cost but not the markup** already paid to the FBO owner.
- **No workshop at the FBO** = +50 % and +2 000 Cr truck-call surcharge.
- Aircraft is **blocked** at condition ≤ 50 % or when inspection/checkup is overdue.
- Mechanic speed range: **0.90–1.10** work-hours per clock-hour (driven by Comfort & Punctuality stats).



05

CHAPTER 05 · SKILLS

Company Skills

How many skill points will I need to max the FBO branch? Is the –10 % landing fee skill worth 3 points? Which skill hides a non-linear bonus? Everything about the 22-skill tree.

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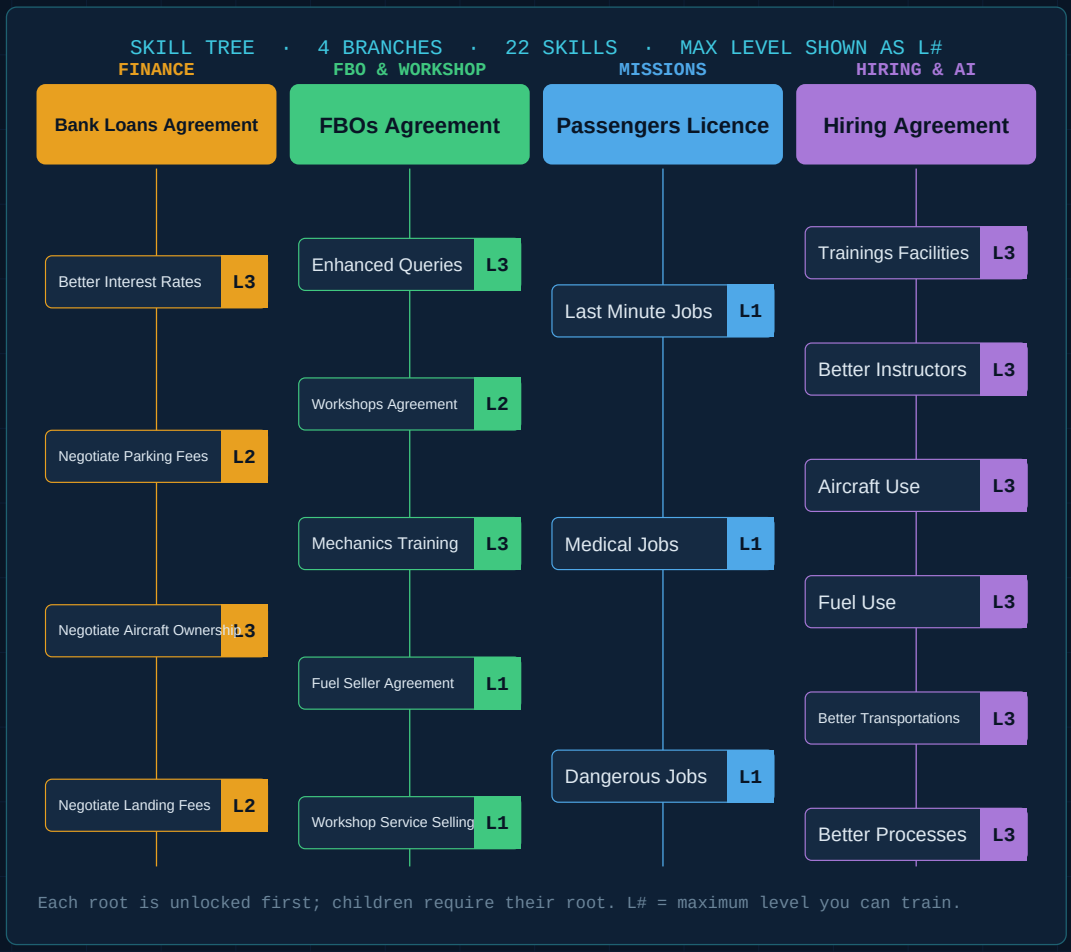


FIG 5.01 — The 4-branch skill tree at a glance

5.1 How you earn skill points

SOURCE	POINTS
Company creation	**+1 pt**
Every company level-up	**+2 pts**
Creating a Virtual Airline	**+5 pts**
Airliner company upgrade (if below level 3)	Catch-up bonus
Main quest milestones	Variable

Company XP formula

> XP to advance from level N to N+1 = **N × 1 000**

Going from level 9 to level 10 costs **9 000 XP**. The cost rises linearly with the current level; it is not the same at every level.

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5.2 The cost model

Every level within the same skill costs the **same** number of points:

> Taking a 2-point-per-level skill to level 3 costs **6 points total** — not 2+4+6.

Root skills (1 point each)

Four branch roots can be unlocked with your creation point:

- **Bank Loans Agreement** — Finance branch
- **FBO Main Agreement** — FBO branch
- **Passengers Licence** — Mission branch
- **Hiring Agreement** — AI/Employees branch

A fresh company with 1 point can pick **exactly one** root.

5.3 Respec — resetting the skill tree

RESPEC	COST
First time, non-negative company value	**Free**
Negative company value, including first reset	**1 000 Cr quoted**
Each subsequent	1 % of company value × reset count (capped at **5 % of company value**)

A respec wipes your current skill allocation. Your **total earned skill points are preserved** — you rebuild from scratch with everything you've accumulated so far.

> **Scenario note:** companies started in certain scenarios have all skills at maximum by default.

5.4 All 22 skills

FINANCE branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
Bank Loans Agreement	1	1 pt	—	Unlocks bank loans

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SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
Loan Interest Reduction	3	2 pts	Bank Loans	**–1 / –2 / –3 %** percentage points off the annual rate; see the live quote (§8.2)
Parking Fee Reduction	2	2 pts	Bank Loans	**–5 / –10 %** parking fees
Weekly Ownership Reduction	3	3 pts	Loan Interest	**–3 / –5 / –10 %** weekly ownership fee (!)
Landing Fee Reduction	2	3 pts	Parking Fee	**–5 / –10 %** landing fees

FBO branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
FBO Main Agreement	5	1 pt	—	Logistic query slots: **1 / 3 / 5 / 8 / 10** (see FBO chapter)
Enhanced Queries	3	2 pts	FBO Main	Random attempts: **2–5 / 3–8 / 4–11** outside Challenge Mode; see §5.5
Workshops Agreement	2	2 pts	FBO Main	L1 = workshop Level 1 · L2 = workshop Level 2
Mechanic Speed	3	2 pts	Workshops	Advertised speed effect is not applied by the current server calculation; see §5.5
Fuel Resale	1	2 pts	FBO Main	Enable fuel selling to other players
Workshop Resale	1	2 pts	Workshops	Workshop accepts other players' aircraft

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MISSION branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT
Passengers Licence	1	1 pt	—	Unlocks passenger missions
Last-Minute Jobs	1	2 pts	Passengers	Unlocks last-minute job market
Medical Transport	1	2 pts	Passengers	Medical transport certification
Dangerous Goods	1	2 pts	Passengers	Hazardous materials certification

AI / EMPLOYEES branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
Hiring Agreement	1	1 pt	—	Unlocks hiring employees and freelancers
Training Efficiency	3	2 pts	Hiring	**+5 / +10 / +20 %** training quality
Training Speed	3	2 pts	Hiring	**+5 / +10 / +20 %** training speed
Aircraft Condition	3	1 pt	Training Efficiency	Advertised wear effect is not applied by the current server calculation; remains an XP-skill prerequisite
AI Fuel Efficiency	3	3 pts	Training Efficiency	**–1 / –2 / –4 %** AI pilot fuel burn
Employee Transport Speed	3	3 pts	Training Speed	**+5 / +10 / +20 %** employee relocation speed
XP Bonus	3	2 pts	Aircraft Condition	**+1 / +2 / +3 %** XP (!) (conditional — see §5.5)

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Total to max everything: 98 points. Starting from 1 point at company creation + 2 per level, you need **level 50** to fully max the tree (without counting VA, quest, or Airliner bonuses).

> **Deleted legacy skills:** three old load-speed skills were removed from the game. They no longer exist and cannot be unlocked.

5.5 The fine print — skills with hidden behaviour

(!) Weekly Ownership Reduction — the non-linear jump

The three levels do not reduce evenly:

LEVEL	REDUCTION
1	–3 %
2	–5 %
3	**–10 %**

The jump from Level 2 to Level 3 is **2.5 times as large** as Level 1 to Level 2. If you only have 6 points to spare, stopping at Level 2 misses half the total benefit. Push to Level 3.

Enhanced Queries — generation attempts and exceptions

Outside Challenge Mode, the server scales both bounds, but the random upper bound is excluded:

SKILL LEVEL	RANDOM GENERATION ATTEMPTS
0	1–2
1	2–5
2	3–8
3	4–11

In Challenge Mode those ranges are **1–2 / 2–3 / 3–4 / 4–5**. Favourites are handled separately, and a generation attempt may fail to produce a usable mission. Do not treat the upper number as a guaranteed batch size.

XP Bonus — when the multiplier applies

The skill multiplies base XP and its percentage bonuses by **1.01 / 1.02 / 1.03** when the server's XP-impact list contains an entry. This is not strictly a test for a positive bonus: explanatory entries with 0% also count. Flat XP, such as a qualifying medical diversion, is added afterwards.

Realistic Sim Procedures enable the procedure and score bonuses, but **are not required for all XP effects**. Sim-failure, equipment and airport bonuses are processed separately (§6.8).

Mechanic Speed and Aircraft Condition — current limitation

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These skills remain in the tree, with advertised speed and wear improvements. **The current server calculations do not apply those advertised improvements**: mechanic work power uses personal stats and elapsed time, while base wear returns the common wear constant. Do not budget a saving from these two effects. Aircraft Condition still gates the XP Bonus skill.

Training Efficiency and Training Speed

These skills use a doubling progression:

LEVEL	EFFICIENCY BONUS	SPEED BONUS
1	+5 %	–5 % training time
2	+10 %	–10 % training time
3	**+20 %**	**–20 % training time**

5.6 Branch diagrams

FINANCE branch

```
Bank Loans Agreement (1 pt)
  |-- Loan Interest Reduction (2 pts/lvl, 3 lvl) --- Weekly Ownership Reduc
tion (3 pts/lvl, 3 lvl)
  +-- Parking Fee Reduction (2 pts/lvl, 2 lvl) ----- Landing Fee Reduction
(3 pts/lvl, 2 lvl)
```

Cost to max: 1 + 6 + 9 + 4 + 6 = **26 pts**

FBO branch

```
FBO Main Agreement (1 pt/lvl, 5 lvl)
  |-- Enhanced Queries (2 pts/lvl, 3 lvl)
  |-- Fuel Resale (2 pts, 1 lvl)
  +-- Workshops Agreement (2 pts/lvl, 2 lvl)
        |-- Mechanic Speed (2 pts/lvl, 3 lvl)
        +-- Workshop Resale (2 pts, 1 lvl)
```

Cost to max: 5 + 6 + 2 + 4 + 6 + 2 = **25 pts**

MISSION branch

```
Passengers Licence (1 pt)
  |-- Last-Minute Jobs (2 pts)
  |-- Medical Transport (2 pts)
  +-- Dangerous Goods (2 pts)
```

Cost to max: 1 + 2 + 2 + 2 = **7 pts**

AI / EMPLOYEES branch

```
Hiring Agreement (1 pt)
  |-- Training Efficiency (2 pts/lvl, 3 lvl)
  |     |-- Aircraft Condition (1 pt/lvl, 3 lvl)
  |     |     +-- XP Bonus (2 pts/lvl, 3 lvl)
```

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```
|     +-- AI Fuel Efficiency (3 pts/lvl, 3 lvl)
+-- Training Speed (2 pts/lvl, 3 lvl)
      +-- Employee Transport Speed (3 pts/lvl, 3 lvl)
```

Cost to max: 1 + 6 + 3 + 6 + 9 + 6 + 9 = **40 pts**

5.7 Hidden rules worth knowing

- **No rank gate** — the only gates are the prerequisite skill and having enough points. Nothing like "requires Company Rank 5".
- **Binary vs. graduated skills** — some skills simply unlock a feature (present/absent), others scale per level.
- **XP Bonus** depends on the XP-impact calculation (§5.5); Realistic Sim Procedures are not its only possible trigger.
- **Enhanced Queries** expands generation attempts; favourites and Challenge Mode need separate treatment.
- **Weekly Ownership Reduction Level 3** is where most of the value lives — don't stop at Level 2.

5.8 Recommended starter builds

The FBO magnate (25 pts)

Max the FBO branch. Enable fuel and workshop resale. Max logistic queries and enhanced queries. Sell services to everyone.

The cost-cutter (16 pts)

`Bank Loans` → `Loan Interest L3` → `Weekly Ownership L3`. The 16-point total includes the root. Reduce interest and recurring ownership costs.

The XP grinder (16 pts)

`Hiring` → `Training Efficiency L3` → `Aircraft Condition L3` → `XP Bonus L3`. The XP multiplier follows §5.5; the intermediate Aircraft Condition skill does not currently reduce wear.

The passenger operator (4 pts)

`Hiring + Passengers Licence + one of Last-Minute / Medical / Dangerous`. A low-cost path to specialized job markets.

5.9 TL;DR

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- **22 skills, four branches, 98 points** to max the tree: level 50 from the initial point plus level-ups alone.
- First respec is free at non-negative company value; a negative value produces a 1 000 Cr quote.
- Enhanced Queries expands random attempts; see the exclusive upper bounds and Challenge Mode ranges in §5.5.
- Weekly Ownership L3 reduces fees by 10%, compared with 5% at L2.
- The XP skill multiplier uses the server's XP-impact list, not a blanket Realistic Sim Procedures requirement.
- Advertised mechanic-speed and aircraft-wear skill savings are not applied in the current server calculations.

05

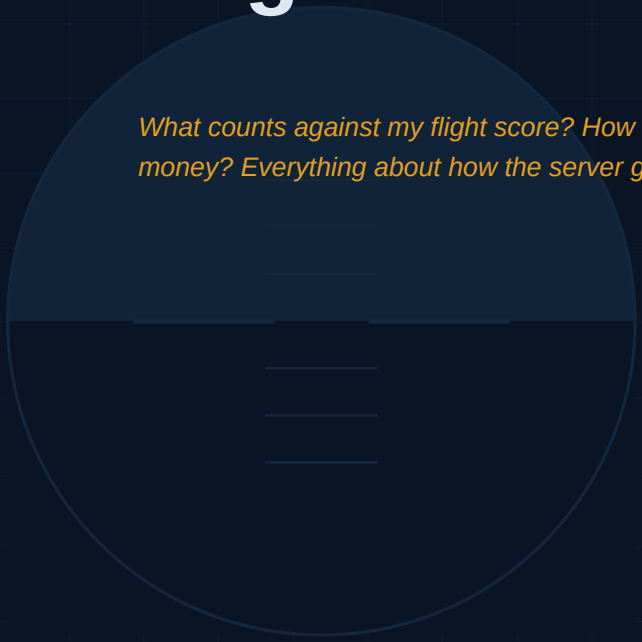
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06

CHAPTER 06 · FLIGHT OPS

Flight Scoring

What counts against my flight score? How do I land an "A"? Does a 98 % score pay me more money? Everything about how the server grades each flight.



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FIG 6.01 — Eight main stages of a tracked flight; the tracker also distinguishes preparation and shutdown

6.1 The overall formula

> **Score % = total points earned ÷ total points possible**

- No phase weighting — a point earned during taxi counts the same as a point during cruise or landing.
- The maximum possible points depend on which trackers apply to your aircraft class and company settings.
- A typical jet flight has a maximum of around 80–90 points.
- Score is stored as a number from 0 to 1. The interface displays it as a percentage.

6.2 Flight phases — when each starts and what to fly

The engine moves through these phases automatically, based on your aircraft's state. The table below is your phase-by-phase checklist: when each phase begins, and the lighting and procedures OnAir expects while you are in it. The point value of each check is broken down in §6.4 (always-on) and §6.5 (per-phase).

PHASE	WHEN IT STARTS	LIGHTING & PROCEDURES TO FLY
Aircraft Preparation	Before engines are running	Start tracking **before** the engines — engines already running at tracking start costs 3 points, unrecoverable. Beacon (or strobe) ON.
Engine On	Engines running, not yet moving	Taxi ON, Nav ON, Landing OFF.
Departure Taxi	Any ground movement	Taxi ON, Nav ON, Landing OFF. Taxi speed below 40 kts.

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PHASE	WHEN IT STARTS	LIGHTING & PROCEDURES TO FLY
Takeoff	Accelerating on the ground, above 40 kts	When you start the take-off roll: Taxi OFF, **Landing ON**. Jets: flaps set for take-off.
Initial Climb	First 3 min after liftoff, or IAS > 240 kts (jets)	Landing ON — keep them on through the initial climb. Taxi OFF within 60 s. Gear up.
Enroute — Climb / Level / Descent	Sustained climb, level or descent (beyond ±200 ft/min for 30 s)	Landing OFF above FL180 / ON below. Nav ON, Taxi OFF. Flaps up until short final. Speed ≤ 250 kts below 10 000 ft.
Approach	Near the destination (30 NM for jets, else 2 + airport-size × 2 NM) and below the altitude gate	Landing ON. Nav ON. Extend gear and flaps on schedule — mind the max extension speeds.
Landing	On the ground, decelerating below 40 kts	Rated once at touchdown (vertical speed, G-force, airspeed). Gear down, flaps deployed, no bounce.
Arrival Taxi	After touchdown	When you vacate the runway: Taxi ON, Landing OFF. Nav ON. Flaps up. Taxi speed below 40 kts.
Engine Off	All engines shut down	Landing OFF, all lights off except beacon/strobe until the engines stop. Fuel reserve ≥ 30 min of cruise flow.

Always-on limits. Some checks run in *every* phase, not just the one you are in: the bank, pitch and G-force envelopes, the 250 kt limit below 10 000 ft, stall and overspeed warnings, flap and gear overspeed, beacon-or-strobe while any engine runs, and taxi-light discipline (on while rolling, off once airborne). Their point values are in §6.4 and the exact thresholds in §6.7.

Aircraft-type exceptions. Gliders skip the G-force, pitch, bank, engines-off-at-start and fuel-reserve checks. Fighters skip pitch, bank and the 250 kt limit. Helicopters skip every flap check. Only jets are graded on take-off flaps. Everything else follows the table above.

Live guidance in the Companion. During tracking, the **Score** tab walks you through this table live. The phase you are in expands automatically and shows the exact instruction for that moment (for example, *"When accelerating for take-off: Taxi OFF, Landing ON"*). When a light check is being missed, a red countdown shows how many seconds remain before the point is actually lost, and your current bank, pitch, G-force and speed are displayed next to each check as you fly.

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> *This phase guide is intentionally generic — it covers every aircraft type OnAir tracks, from GA and ultralights up to heavy jets, and is limited to lighting and the items OnAir actually scores. For everything else, follow your aircraft's own normal procedures.*

6.3 How scoring works

- Each tracker starts at full points.
- Each violation removes a fixed number of points.
- A minimum delay between penalties prevents you from being docked twice for a single brief event.
- Some trackers give you a grace period to correct before the first point is removed.
- Score floor = 0 — trackers cannot go negative.

6.4 General trackers (active throughout the entire flight)

TRACKER	MAX PTS	POINTS LOST / VIOLATION	NOTES
Max G-force	3	1	G < –1.0 or G > 2.5
Max Pitch	3	1	Pitch below –25° or above +25°
Max Bank angle	3	1	Above 35° (jets) or 45° (all others)
Beacon + Strobe lights	3	1	Both lights off while engines are running
Speed below FL100	3	1	Above 265 kts below 10 000 ft (20 s grace)
Overspeed (VNE)	**6**	**2**	Simulator overspeed warning active
Stall warning	**6**	**2**	Stall warning active above 150 ft AGL
Flap overspeed	**6**	**2**	Flaps extended above maximum flap speed
Gear overspeed	**6**	**2**	Gear extended above maximum gear speed
Taxi lights	3	1	Taxi lights off on the ground or on in flight, at ≥7 kts with engines running; 60 s warning

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> **Bank angle is a single threshold — not tiered.** There are no partial penalties at 30° or 40°. Once you exceed 35° (jets) or 45° (others), the tracker fires.

6.5 Per-phase trackers

Aircraft Preparation

TRACKER	MAX PTS	NOTES
Engines already running at tracking start	3	All 3 points lost immediately — no recovery

Departure Taxi

TRACKER	MAX PTS	NOTES
Landing lights off during taxi (optional)	1	180 s grace
Nav lights on (optional)	1	—
Ground speed below 40 kts	1	Taxi overspeed penalty

Takeoff

TRACKER	MAX PTS	NOTES
Flaps deployed (jets only)	1	Flaps at 0 at rotation

Initial Climb

TRACKER	MAX PTS	NOTES
Landing lights on (optional)	1	—
Nav lights on (optional)	1	—

Landing (up to 35 points)

TRACKER	MAX PTS	POINTS LOST / STEP	HOW IT IS SCORED
Vertical speed rating	**10**	2	Based on V/S at touchdown (see §6.6)
G-force rating	**10**	2	Based on G at touchdown

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TRACKER	MAX PTS	POINTS LOST / STEP	HOW IT IS SCORED
Airspeed rating	**10**	2	Based on speed above reference speed
Bounces	3	1 per bounce	Each time airborne > 0.3 s after first touchdown
Flaps deployed (non-helicopter)	1	1	Flaps at 0 at touchdown
Landing gear down	1	1	Gear up at touchdown

> Landing score is **set once at touchdown** and does not update afterward.

Arrival Taxi

TRACKER	MAX PTS
Landing lights off (optional)	1
Nav lights on (optional)	1
Ground speed below 40 kts	1
Flaps retracted (non-helicopter)	1

Engine Off

TRACKER	MAX PTS
Landing lights off (optional)	1
Fuel reserve ≥ 30 min	**5**

> Running low on fuel at shutdown is one of the biggest single-point losses available.

6.6 Landing ratings — the A/B/C/D/E scale

Three independent ratings, each producing a letter and a score. The **worst of the three** is your displayed landing grade.

Vertical speed at touchdown

GRADE	V/S
A Very smooth	below 200 fpm

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GRADE	V/S
B Smooth	200–299 fpm
C Regular	300–399 fpm
D Hard	400–499 fpm
E Very hard	500 fpm or above

G-force at touchdown

GRADE	G
A	below 1.1 G
B	1.1–1.19 G
C	1.2–1.39 G
D	1.4–1.69 G
E	1.7 G or above

Airspeed at touchdown

Reference speed = maximum(stall speed, 25 kts) × 1.3

GRADE	SPEED ABOVE REFERENCE
A	Less than +10 kts
B	+10–19 kts
C	+20–29 kts
D	+30–39 kts
E	+40 kts or above

Points per grade

GRADE	LANDING POINTS (EACH OF THE 3 RATINGS)
A	10
B	8
C	6
D	**4** — also triggers a Hard Landing event
E	**2** — also triggers a Hard Landing event

An A or B grade triggers a Soft Landing event, which unlocks an XP bonus (see §6.9).

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6.7 Key thresholds — quick lookup

MEASURE	LIMIT
G-force envelope	–1.0 G / +2.5 G
Bank angle (jets)	±35°
Bank angle (all others)	±45°
Pitch	±25°
Speed restriction below FL100	265 kts
Stall warning trigger	Armed only above 150 ft AGL
Soft landing bonus	A or B landing event; not determined by vertical speed alone
Hard landing (V/S)	400 fpm or above
Fuel reserve minimum	≥ 30 min of cruise fuel flow
Bounce threshold	Airborne > 0.3 s after first touchdown
Taxi speed limit	40 kts

6.8 What your score actually changes in the economy

✕ Cash payout

The flight score has zero effect on your cash earnings. Mission reward is fixed at dispatch. A 100 % score pays the same as a 40 % score.

✔ XP bonuses

XP bonuses are **additive percentages** added on top of base XP (base XP is capped at 500 NM / 2 h of flight).

Procedure and score bonuses below require **Realistic Sim Procedures**:

XP BONUS	AMOUNT	CONDITION
Comfort	+5 %	No bank, G-force or pitch violations
Safety	+10 %	No tracked safety/procedure violations
Aircraft handling	+5 %	No tracked handling violations or hard landing

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XP BONUS	AMOUNT	CONDITION
Soft landing	+5 %	A or B landing event
Night landing	+3 %	Night-landing event
Crosswind landing	+5 %	Qualifying crosswind event
Short runway	+5 %	Actual arrival at Size 0
IMC approach	+5 %	Qualifying IMC/visibility condition
Score **>98 %**	+10 %	Exclusive with the next row
Score **>95 %**, up to 98 %	+5 %	Exactly 95 % earns neither score bonus
Lights scoring enabled	+5 %	Company lights-scoring setting

The +10% and +5% score bonuses **do not stack**. These listed procedure/score bonuses total at most **53%**.

Other bonuses are processed **outside** the Realistic Sim Procedures condition:

XP EFFECT	AMOUNT
Sim failures enabled	+3 %
Equipment/autopilot difficulty	+50 / +80 / +100 % for equipment levels 1 / 2 / 3; level 0 gives none
Airport XP boost	+10 / +20 / +30 % by boost level
Qualifying medical emergency diversion	A separate flat XP award, added after percentage calculations

There is **no overall +61% cap**. The server adds the applicable percentage bonuses, then applies the XP skill multiplier when its XP-impact list contains an entry (including a zero-percent explanation). Flat XP is added last. An entry's presence is not the same as earning a positive bonus.

✔ Reputation

For flights with Realistic Sim Procedures enabled, your score affects reputation gain:

SCORE	REPUTATION RESULT
100 %	Double the base reputation gain
50 %	Normal base gain only
0 %	Zero gain (never negative)

Without Realistic Sim Procedures, your score has **no reputation effect**.

Checkride flights

Checkrides use a separate evaluation. The flight scoring still runs, but:

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- No reputation gain or loss.
- Passing sets **base XP to 100**; applicable bonuses are processed afterwards, so the total need not equal 100.

AI-flown flights

- **No XP earned at all.**
- Reputation is based on crew stats, not flight score.

6.9 Flying without Realistic Sim Procedures

The procedure and score bonuses in §6.8 are inactive, and score-based reputation is disabled. Sim-failure, equipment, airport and qualifying flat XP effects can still apply, as can the XP skill multiplier under its own condition. Choose the setting for the procedure rules you want to fly, not as a supposed requirement for every XP bonus.

6.10 Top 5 score killers

1. **Landing ratings** (up to 30 points total). A single D-rated landing costs 6 points on that rating alone. 2. **Fuel reserve below 30 min at shutdown** — 5 points lost, plus the Safety bonus is blocked. 3. **Stall, overspeed, flap/gear overspeed** — 2 points per violation on each affected tracker, up to 6 total per tracker after repeats. 4. **Starting with engines already running** — 3 points lost immediately, no way to recover. 5. **Bank angle above threshold** — 1 point per violation, up to 3 total; a violation also blocks the Comfort XP bonus.

6.11 TL;DR

- **Score = total points earned ÷ total points possible.** No phase weighting.
- **Score does NOT affect cash** — only XP bonuses and reputation.
- **Landing is worth up to 30 points**, rated via 3 independent checks (V/S, G, speed). The worst grade is displayed.
- **Fuel reserve below 30 min = 5 pts lost + Safety bonus blocked.**
- Procedure/score bonuses require Realistic Sim Procedures; equipment, airport, sim-failure and qualifying flat XP effects are separate. There is no +61% global cap.
- The **XP Bonus** skill uses the server's XP-impact list (§5.5); an entry need not carry a positive percentage.

07

CHAPTER 07 · MISSIONS

Freelance & Missions

Why does a 20-minute hop pay more per NM than a long-haul? What's the real formula behind freelance charter fares? Which multipliers stack? Everything about missions, freelance, regular routes, and the money they produce.

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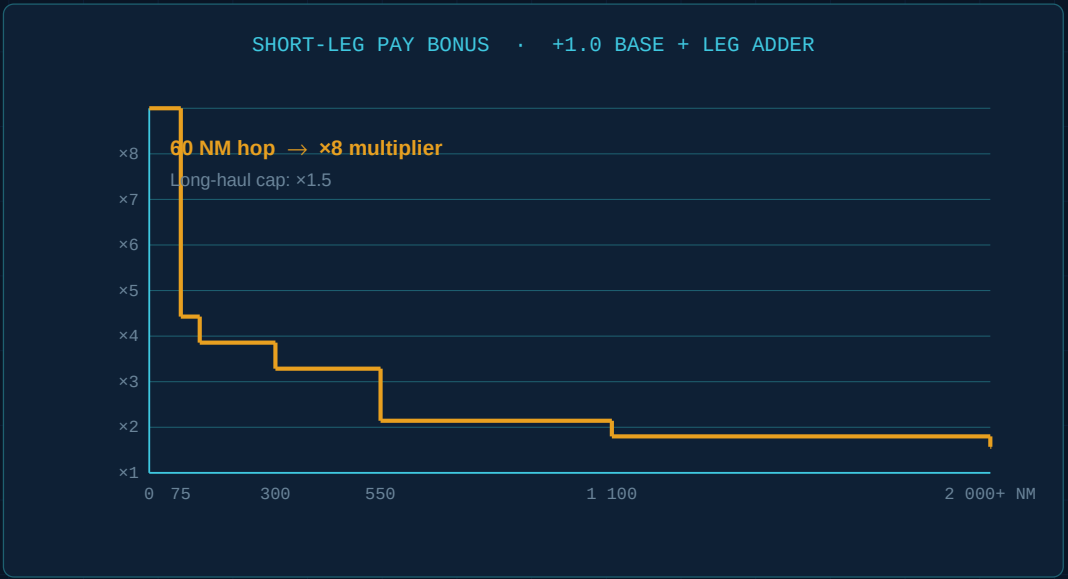


FIG 7.01 — Pay multiplier vs. longest-leg distance (short legs win)



FIG 7.02 — Mission type grid

7.1 The 21 mission types

Missions have two classifications — a **type** (what kind of job it is) and a **category** (where it comes from).

Mission types

MISSION TYPE	NOTES
Standard cargo / PAX	The default — covers most job board missions
Perishable	Time-constrained cargo with expiry bonus
Medical	Requires the Medical Transport skill
Bus trip	Passenger bus route

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MISSION TYPE	NOTES
Event	Special event missions
Dangerous goods	Requires the Dangerous Goods skill
Executive PAX	High-value passengers
Fragile cargo	Carries a maximum G-force constraint
Sightseeing	POI-based tour
Fighter tour	Round-trip tour for fighter aircraft
Race	Racing mission
Regular route	Weekly scheduled route (see §7.6)
Rescue	Search-and-rescue with uncertain location
Undercover	Hidden destination missions
Glider free flight	Glider missions
Glider sightseeing	Glider POI tour
Aerosoft DLC missions	Special DLC content

Mission categories

CATEGORY	WHERE IT COMES FROM
Grind	Job board, logistic center, regular routes
Main quest	Story missions
Side quest	Side story missions
Event	World event
Freelance	Freelance charters (5-job cap)
Work group relief	Ground operations relief

7.2 Two completely different pay engines

OnAir uses **two separate pay logics** depending on whether the job is freelance or grind. Understanding the difference is essential.

Engine A — Grind (job board, logistic center, regular routes)

Grind pay is **freight-style**: you are paid for **what you carry** and **how far you carry it**. Cargo weight and passenger count both contribute, with passengers worth more per pound than cargo and premium classes (Business, First) worth more than Economy.

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A series of bonuses then stack on top — short legs, special mission types, time-pressure cargo, multi-leg routes. A small random variation is added, a flat minimum is guaranteed, and the result is rounded.

> The **shorter the leg**, the higher the per-mile rate. A 60 NM hop earns far more per mile than a 2 000 NM long-haul (see §7.3 for the full bonus ladder).

Engine B — Freelance charter

In freelance mode you fly for the employer, which provides the aircraft and crew. The aircraft is created when you accept the contract, with 20-40% fuel on handover, and removed when all its missions are complete. Refuelling at an external supplier is not charged to your company; no aircraft rental, landing or parking fees are charged, and mandatory maintenance does not apply. If you use your own FBO, its fuel stock is consumed and the stock cost is recorded in its accounts, without a cash purchase. Fuel is provided, but you still need to prepare enough for the flight.

Freelance pay is **time-based**, like an executive charter quote: the customer pays for the **estimated flight time** at an hourly rate, plus a fixed dispatch fee.

Two things drive your rate:

- **The provided aircraft's speed** — faster cruise speed reduces estimated flight time, but the hourly rate is generous enough that even slow aircraft are paid fairly.
- **Your company reputation** — higher reputation means a higher hourly rate. Reputation directly grows your freelance income.

A freelance charter is priced like a **time-and-materials contract**, not a per-lb-per-mile job.

> **Practical takeaway:** grind missions reward picking the right cargo for the right route. Freelance rewards building a reputation and flying steadily. Both can be profitable — they just optimize for different play styles.

7.3 The grind pay formula — block by block

Base rates

Base rates come from the reference economy (anchored to a Cessna 172 equivalent). Passenger missions pay roughly **33 % more** per lb per NM than cargo.

A world-level "pay bonus" setting can increase these rates — different worlds may pay different amounts.

Seat class factors

How much each passenger class multiplies the base rate:

CLASS	FACTOR (UNDER 130 SEATS)	FACTOR (130+ SEATS)
Economy	1.0	1.0
Business	**1.3**	**2.0**

CLASS	FACTOR (UNDER 130 SEATS)	FACTOR (130+ SEATS)
First	**1.5**	**3.0**

In practice, the server evaluates at a high seat count, so Business always pays ×2.0 and First always pays ×3.0.

The bonus factor ladder — what really drives your pay

The base freight rate is multiplied by a **bonus factor** that stacks several conditions together. The exact numbers are kept under the hood — what matters is the shape of the curve and which factors push it up.

> **Short legs win — by a wide margin.** Trips under ~75 NM earn dramatically more per mile than long-haul flights. The bonus tapers as distance grows, flattening out for transcontinental routes (see *FIG 7.01* for the trend).

Things that nudge your bonus upward:

- **Distance** — the single biggest lever. A 60-mile hop pays *several times* more per mile than a 2 000 NM trip.
- **Special mission types** — rescue (especially when the location is unknown), fighter tours, sightseeing, and medical/dangerous-goods runs all carry meaningful premiums.
- **Time-constrained cargo** — perishables and rush jobs pay noticeably better, but miss the deadline and the penalty bites just as hard.
- **Human-only cargo or passengers** — a small but reliable bump.
- **Multi-leg routes** — each extra airport in the route adds a small bonus (capped at five legs).

Things that barely move the needle:

- Dangerous goods and fragile cargo only add a marginal premium on top of the certification gate.
- Adding more legs is a minor optimisation — useful but not transformative.

> **Practical heuristic.** When you're hunting for high-value missions, scan the board for **short routes**, **rescue/medical jobs**, and **time-pressured cargo** before anything else. Distance is by far the most powerful factor — the curve is steep at the short end and gentle at the long end.

Finalisation

```
pay × bonus factor
pay × random jitter (±3 %)
pay + 300 Cr flat floor
pay rounded up to nearest 10 Cr
```

Penalty is calculated through the same pipeline.

Company & airport boost on top

EXTRA	VALUE
Company pay bonus	Applied to all grind missions (except logistic-center missions)

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EXTRA	VALUE
Logistic Center boost	+2 % to +30 % depending on airport Size and boost level
Freelance Route boost	+50 % / +100 % / +150 % by level

Logistic-center boost by level and airport Size

BOOST LEVEL	SIZE 0	SIZE 1	SIZE 2	SIZE 3	SIZE 4	SIZE 5
1	+10 %	+10 %	+5 %	+4 %	+3 %	+2 %
2	+20 %	+15 %	+10 %	+7 %	+4 %	+3 %
3	+30 %	+20 %	+15 %	+10 %	+5 %	+4 %

Small airports get the most aggressive boosts.

Last-minute bonus

When a mission is within 2 days of expiry:

> Up to **+15 %** bonus (reaches max ~24 h after the ramp begins)

Requires the **Last-Minute Jobs** skill to accept these missions.

7.4 How freelance charters are priced

Base pay

A freelance charter is quoted like a private-jet contract: the customer pays a **dispatch fee** plus an **hourly rate** for the planned flight time. Two factors set what you actually earn:

- **Aircraft cruise speed** — the planned time is estimated from your aircraft's published cruise speed, with a comfortable margin to absorb taxi, climb and descent. Faster jets bill fewer hours; slower aircraft compensate via the hourly rate.
- **Company reputation** — your hourly rate scales with your reputation. A well-regarded operator commands a noticeably higher rate than a new company. Reputation is the single biggest lever on freelance income.

A small fixed bonus is added for fighter aircraft, reflecting their specialised nature.

Fare boosts on top of the base quote:

- A multi-leg route that **passes through your home base** roughly **doubles** the pay — the engine intentionally rewards using your base airport as a hub.
- A charter tied to an **incident at an unknown location** carries a meaningful premium for the risk.

> **No penalty.** Freelance charters never charge you a penalty if you cancel or fail. Worst case, the contract simply expires.

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Reputation and XP from a freelance charter

Each freelance charter pays out **reputation** based on the route — a base reward plus a small bump per airport visited along the way. **Pilot certification roughly doubles** both reputation and XP gains.

XP scales with the **distance flown**, with the same certification bonus.

Hard cap

Server maximum: 5 concurrent freelance charters per company. A 6th is refused. The **Companion workflow allows one active charter** and redirects a second acceptance to the existing job. This interface limit is distinct from the server ceiling.

7.5 Logistic-center missions (FBO queries)

Missions generated from your FBO's logistic queries behave as standard grind missions with these specifics:

- Range comes from your configured query parameters.
- **Airport boost is baked in** at generation (not added when you accept).
- **Company pay bonus is NOT applied** to logistic-center missions.
- Passenger seat split: pure-class if fewer than 14 passengers (all economy, or all business, or all first); mixed split otherwise.

7.6 Regular routes — weekly recurring

What Regular Routes are

Regular Routes are your company's recurring scheduled services, operated with company aircraft and assigned crew. You set the ticket and cargo prices and manage the schedule, capacity and reliability. They are separate from **Freelance Routes**.

Your company pays operating costs, including fuel. For AI-flown regular routes, the server buys fuel at departure and charges the company operating the aircraft. It requires one FBO with enough stock for the whole purchase, preferring your own FBO, then your VA's, then the cheapest eligible supplier. If none can supply it, no fuel is bought. The flight can only start if its onboard fuel covers the destination, alternate and 30 minutes of cruise; otherwise it shows **Not started**, with the reason in the flight journal. See §3.7 for the full rules and the different work-order behavior.

For **Fly in Simulator** routes, prepare fuel yourself through dispatch; the automatic route purchase does not run.

The calendar

- Routes are rebuilt every **Sunday at 00:00 UTC**.

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- One mission is spawned per route flight.
- **Mission expires:** 7 days after creation.

Reliability mechanic

EVENT	CHANGE TO RELIABILITY
New route	0.50 (default)
Completed on time	+0.05
Skipped	–0.05
Completed late	–0.01

How a route is priced

A regular route is paid like a scheduled airline service: each filled **economy, business or first-class seat** earns its own ticket price, plus a per-pound rate for cargo on board. **You set the prices yourself when you create the route**, and the system tracks how many of those seats are actually filled at departure time.

Skipping or cancelling a flight on a regular route triggers a fixed penalty proportional to the route's expected revenue.

Fill rates fluctuate with **time of day** and **day of week** — peak hours and weekday demand patterns mean a 7 am Monday departure usually books closer to capacity than a 2 am Sunday one.

Slot fees (at arrival and departure)

RULE	FEE
Airport Size 0 or 1	**Free**
You own the airport	**Free**
All other cases	`max(50 Cr, route max pay × 2.5 %)` per hour slot

Route rank levels

XP EARNED	LEVEL
0	0
200	1
500	2
1 000	3
2 000	4

There is no hard cap on how many regular routes a company can hold.

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7.7 Expiration, decline, and penalties

Unclaimed missions (on the board)

- About **3 %** of generated missions are "last-minute" (100 min to ~2 days to expiry).
- Otherwise, normal expiry: 2 days to several days depending on type.
- Expired unclaimed missions are deleted automatically every 5 minutes (up to 500 at a time).

After you accept

MOMENT	PENALTY
First 15 min after acceptance	**No penalty**
Before expiration	Penalty × elapsed proportion
Past expiration	Full penalty (capped at 95 % of pay)

Daily auto-decline

Missions that are more than **15 days past their expiry date** and not yet paid are automatically declined at **05:45 UTC** each day, with the computed penalty charged.

Voluntary decline

IMPACT	VALUE
Reputation	–**0.1 %** per decline (if a penalty applies)
Cash	Penalty charged (capped at 95 % of pay)

7.8 Skill requirements for missions

SKILL	REQUIREMENT
Passengers Licence	Required to accept PAX charters (except tours and freelance)
Last-Minute Jobs	Required to accept last-minute missions
Medical Transport	Required for medical missions
Dangerous Goods	Required for dangerous-goods missions

Enhanced Queries changes the random generation range for FBO missions (§5.5); mission licences unlock particular job types. Other revenue boosts come from: world pay

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bonus, airport boosts, company pay bonus, and (for freelance) reputation.

7.9 Cargo categories (14 types)

CATEGORY	COMMON USE
Standard goods	Default cargo
Medical	Medical missions
Time-constrained	Perishables
Dangerous goods	Hazmat missions
Quest items	Story missions
Containers	Fuel containers (100LL and Jet-A — see the Fuel chapter)
Special	Events, tours
Fragile	Max G-force tracked
Secret	Undercover missions
Racing	Race missions
Scheduled route	Regular route cargo
Rescue	Rescue operations
Undercover	Hidden-location missions
Glider	Glider missions

> **Food Rations** are an industry merchandise type, not a cargo type — they are used by factory workers and weigh 3 lbs per unit.

7.10 Concurrent mission caps

SCOPE	CAP
Freelance charters, server	**5**
Freelance charters, Companion workflow	**1 active**
Total missions (solo company)	**100 + Company Level × 5**
Total missions (VA)	**Members × 50**

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- **Two pay engines:** Grind (per-lb-per-NM) and Freelance (per-hour with reputation multiplier).
- **Short legs pay far more:** legs under 75 NM → **×7 bonus factor** on top of base rate.
- **PAX class matters significantly:** Business = ×2.0 pay, First = ×3.0 pay.
- **Logistic-center boost** favors small airports (up to +30 % at Size 0, Level 3 boost).
- **Freelance server cap = 5**; the Companion allows **one active charter** in its acceptance workflow.
- **Default mission cap = 100 + Level × 5** total.
- **Auto-decline** at 05:45 UTC for missions more than 15 days past expiry.

07

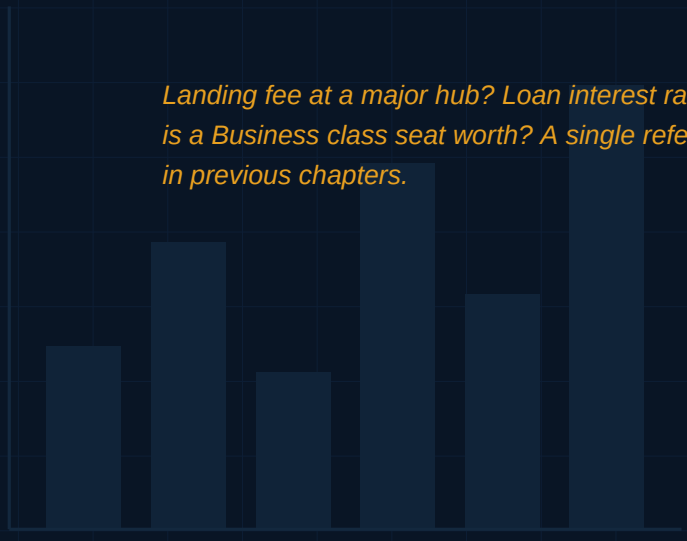
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08

CHAPTER 08 · ECONOMY

Economy & Global Constants

Landing fee at a major hub? Loan interest rates? When does my company auto-pause? How much is a Business class seat worth? A single reference chapter for every recurring number not covered in previous chapters.



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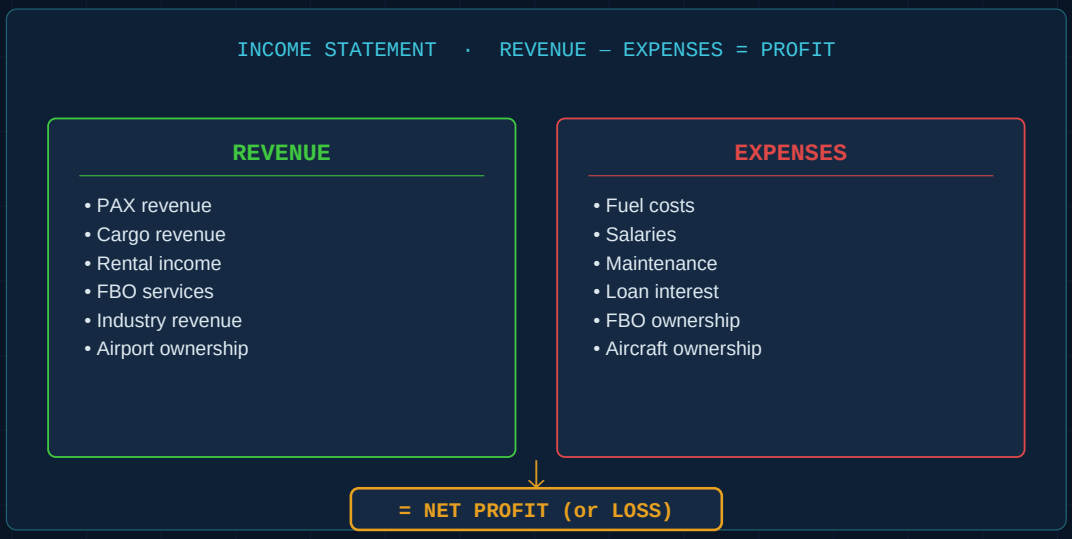


FIG 8.01 — Income statement: revenue, expenses, net result

10%	7Cr/klb	7d	05:00
EARLY LOAN PAYOFF FEE	LANDING FEE	AUTO-PAUSE	SALARIES UTC

8.1 Landing & parking fees

Landing fee

> **7 Cr × aircraft MTOW ÷ 1 000 lbs**

- Flat constant — **no airport-size modifier**, no time-of-day, no season.
- Charged when a flight is registered.
- Airport owners can set a **lower** custom rate — never higher than the default.
- **No takeoff fee**, no ATC fee, no handling fee.

> **Example:** a 500 000 lbs widebody landing anywhere = **3 500 Cr** landing fee.

Parking fee (hourly)

Same formula as the FBO & Hangar chapter — reproduced here for convenience:

AIRPORT SIZE	FIXED / H	PER 1 000 LBS ABOVE 200 K LBS / H
0	4.375 Cr	0.0625 Cr
1	5.250 Cr	0.0750 Cr
2	6.125 Cr	0.0875 Cr

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AIRPORT SIZE	FIXED / H	PER 1 000 LBS ABOVE 200 K LBS / H
3	7.000 Cr	0.1000 Cr
4	7.875 Cr	0.1125 Cr
5	8.750 Cr	0.1250 Cr

Your own FBO covers aircraft within its combined hangar/tie-down capacity, most expensive first. Overflow is chargeable. Basecamps and paused companies are exempt; skills and custom airport-owner tariffs can reduce the charge (§2.7).

8.2 Bank loans

Access requirement: Bank Loans Agreement. Loan Interest Reduction improves the rate but is not needed to unlock borrowing.

How much you can borrow

```
Available capacity = (min(10 000 000 Cr, share capital × 3 + company value) − outstanding principals) × (1 + reputation) × difficulty factor
```

Reputation is a fraction (50% = 0.5). The 10 M ceiling applies before the reputation and difficulty multipliers, so it is not a final loan cap. Existing unpaid principal reduces capacity first.

Difficulty modifier on capacity:

DIFFICULTY	CAPACITY MULTIPLIER
Easy	×1.5
Classic	×1.0
Realistic	×0.7

Annual interest rate

COMPANY CAPACITY BRACKET	ANNUAL RATE
Above 20 M Cr	**6 %**
Above 10 M Cr	7 %
Above 3 M Cr	8 %
Above 1 M Cr	10 %
1 M Cr or below	**12 %**

Your interest rate is then adjusted:

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- Divided by `(1 + reputation ÷ 10)` → higher reputation, lower rate.
- Reduced by `Loan Interest Reduction level × 1 %`.
- **Read the quoted rate:** the current calculation only substitutes 5% if the adjusted rate is negative. A non-negative rate below 5% is retained; there is no general 5% floor.

Loan terms offered

- **Durations:** 48 / 96 / 144 / 192 weeks (12 / 24 / 36 / 48 periods of four weeks).
- **Rate multipliers by duration:** ×1.0 / ×1.5 / ×1.9 / ×2.0.
- Up to 17 proposals across six amount fractions and selected durations; non-positive amounts are filtered out. Read the actual list rather than assuming a complete rectangular set of offers.

Repayment

- Deducted **automatically every 7 days** during the daily finance check at 04:45 UTC.
- **Early repayment penalty:** 10 % of the remaining principal.

8.3 Weekly management fee — Challenge Mode only

> (!) This fee (charged every Wednesday at 06:00 UTC) applies **only** to companies in **Challenge Mode**. Standard career companies **never pay** this fee.

Fleet portion (if you own or rent more than 5 aircraft)

The fee increases with fleet size, up to a cap:

FLEET SIZE	FEE RATE PER AIRCRAFT
6 aircraft	~0.02 % of base price
20 aircraft	~0.29 % of base price
35+ aircraft	**~0.585 % of base price (cap)**

FBO portion (if you own more than 3 FBOs)

A surcharge is added on top of your regular FBO weekly fees based on how many FBOs you own beyond 3.

8.4 Company auto-pause

Trigger: no login for **7 consecutive days**.

VAs are excluded. Already-paused or deleted companies are excluded.

What changes when paused

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SYSTEM	BEHAVIOUR WHEN PAUSED
Loan deductions	Skipped
Salaries	Skipped
Management fee (Challenge Mode)	Skipped
Your FBO visibility to others	Hidden

How to unpause

The server resumes an eligible company when you return to it; **there is no need to wait for the next daily cycle**. Freelance mode has separate rules and does not itself resume Advanced company management. Individual scheduled activities still follow their next processing pass.

8.5 Employee salaries

Paid every day at **05:00 UTC**. A salary fires when 7 or more days have passed since the last payment.

Eligible employees: non-player characters, not on a freelance contract, and from a company that has been active in the past 15 days.

Pay formula

Regular employees:

```
salary = max(weekly guaranteed salary × days_elapsed ÷ 7, hourly rate × hours_flown)
```

The guaranteed minimum is prorated if fewer than 7 days have elapsed.

Freelance employees:

```
salary = max(3 hours of wages, hours_flown × hourly rate)
```

Guaranteed minimum = 3 hours of wages per payment (not a weekly prorated amount).

8.6 Account codes — your financial statements

Understanding these codes helps you read your company's income statement and balance sheet.

Revenue

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ACCOUNT	WHAT IT TRACKS
PAX revenue	Passenger transport earnings
Cargo revenue	Cargo transport earnings
Rental income	Renting your aircraft to others
FBO services	Workshop markup earned from other players
FBO fuel sales	Fuel resold at your FBO
Scenario revenue	Campaign/story mission rewards
VA revenue	Virtual Airline related income
Financial adjustments	Refunds and asset adjustments
Industry revenue	Factory production sales
Airport ownership	Landing/parking fee income as airport owner

Expenses

ACCOUNT	WHAT IT TRACKS
Fuel costs	Fuel burned on your flights
Staff salaries	Regular employee wages
Freelance salaries	Freelance employee wages
Outsourcing	Costs of outsourced jobs
Landing & parking	Fees you pay at other airports
Maintenance	Aircraft maintenance and inspections
Rental costs	Cost of renting aircraft from the market
Financial costs	Loan interest + weekly management fees
Training	Employee training expenses
FBO ownership	Weekly FBO ownership fees
Penalties	Mission penalty charges
Cargo storage	Hangar storage fees
Aircraft ownership	Weekly aircraft ownership fees
Industry expenses	Factory operating costs

> **FBO fuel stock is an asset, not an operating expense.** When you buy fuel for your FBO tank, that money becomes the value of your fuel inventory. It is shown on the balance sheet under assets — not as a cost in your income statement.

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The three statements — what each one answers

OnAir keeps a real chart of accounts with the same four categories real accountants use (Revenues, Expenses, Assets, Liabilities), and derives three complementary reports from it. Each answers a different question:

STATEMENT	TIME BASIS	QUESTION IT ANSWERS	AN AIRCRAFT PURCHASE...
Balance Sheet	Snapshot (a date)	What is my company worth right now?	**Shows** — cash down, fleet assets up
Income Statement	Flow (a period)	Did my operations make a profit?	**Never shows** — it is not an expense
Cash Flow	Flow (a period)	Where did my cash physically go?	**Shows** — a large investing outflow

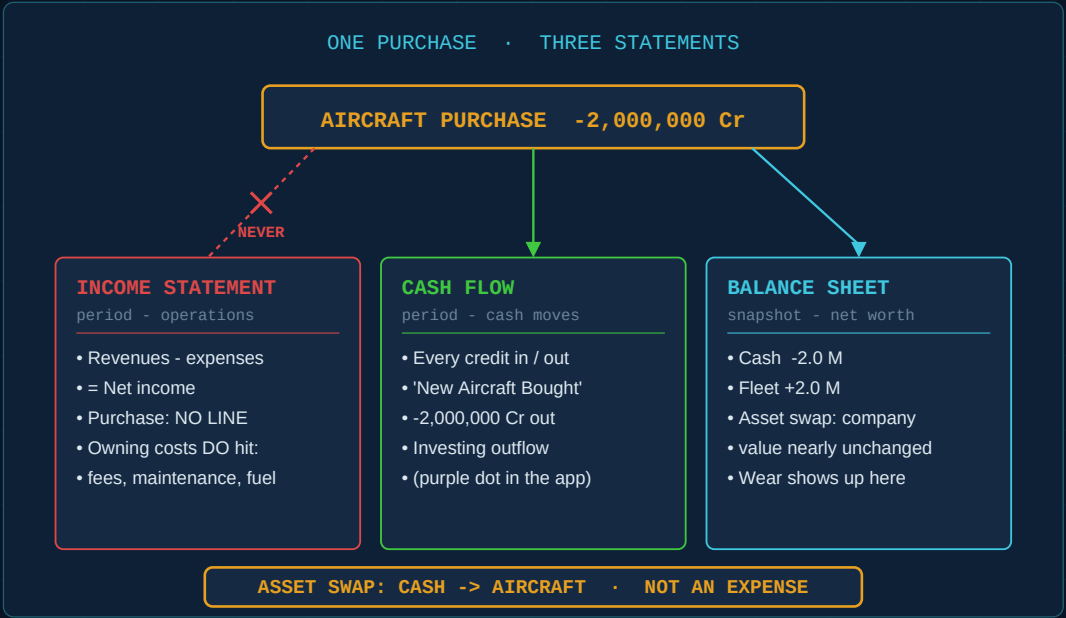


FIG 8.02 — One purchase, three statements

Why buying an aircraft never appears on the Income Statement

Buying an aircraft is an **asset swap**: cash becomes a flyable asset you still own. Nothing was *consumed*, so nothing is *expensed* — the Income Statement keeps measuring pure operating performance (revenues earned minus costs consumed). Real-world accounting works exactly the same way: a capital purchase is *capitalised* on the balance sheet (IAS 16), and the cash paid out is classified as an *investing* activity on the cash flow statement (IAS 7). A real airline's income statement has no "bought 15 aircraft" line either.

Worked example — you earn 300 000 Cr from charters this week, spend 80 000 Cr on fuel, fees and wages, and buy a light jet for 2 000 000 Cr:

EVENT	INCOME STATEMENT	CASH FLOW	BALANCE SHEET
Charter revenue	+300 000	+300 000 in	Cash +300 000
Fuel, fees, wages	–80 000	–80 000 out	Cash –80 000

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EVENT	INCOME STATEMENT	CASH FLOW	BALANCE SHEET
Aircraft purchase	—	**–2 000 000 out**	Cash –2 000 000 · Fleet +≈2 000 000
Bottom line	**Net income +220 000**	**Net cash –1 780 000**	**Company value ≈ +220 000**

You were **profitable** that week even though your **cash collapsed** — profitability and cash position are different questions, which is exactly why separate statements exist. What *does* hit the Income Statement is the cost of owning and operating the aircraft: weekly ownership fees, maintenance, fuel, crew, landing fees. The wear itself reaches your books through the Balance Sheet, whose fleet line tracks each airframe's market value (§9.3) — OnAir's equivalent of depreciation.

> **Paid above book value?** A brand-new aircraft costs 1.2 × base price but enters your assets at market value — Company Value dips by the premium at purchase, like a new car losing value as it leaves the dealership.

Official references:

- **SEC — Beginners' Guide to Financial Statements** — `sec.gov/about/reports-publications/beginners-guide-financial-statements`
- **IAS 1** (Presentation of Financial Statements), **IAS 7** (Statement of Cash Flows), **IAS 16** (Property, Plant and Equipment) — `ifrs.org/issued-standards/list-of-standards/`

8.7 Company level

- **XP to level up:** `level × 1 000` (linear — not exponential).
- **On level up:** +2 skill points granted.

Level-gated features

FEATURE	FORMULA
Max simultaneous missions	100 + level × 5
Max pilots (standard company)	2 + 2 × level × reputation
Max pilots (VA)	20 + 5 × level × reputation
Max airport ownerships	3 + level
Max AI routes	20 + level
Max basecamps	level × 2
Max factories	Base count + level

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8.8 Passenger class economics

CLASS	FACTOR (UNDER 130 SEATS)	FACTOR (130+ SEATS)
Economy	1.0	1.0
Business	1.3	**2.0**
First	1.5	**3.0**

Standard passenger weight: **190 lbs**. Seat weight: **63 lbs**.

8.9 Rescue mission ranges

DETAIL	VALUE
Maximum search range	**100 NM**
Range tiers available	5 / 10 / 25 / 100 NM
Locations per tier	10

8.10 Starting bonus — Advanced Management unlock

When you upgrade from Freelance (Onboarding) mode to Advanced Career:

DIFFICULTY	WORLD TYPE	STARTING BONUS
Easy	Any	**470 000 Cr**
Classic	Any	170 000 Cr
Realistic	Survival world	10 000 Cr
Realistic	Standard world	70 000 Cr

Your existing freelance cash is also **doubled** at unlock.

> There is no creation fee when starting a company from scratch.

What the difficulty level sets. On Cumulus you choose Easy, Classic or Realistic when you create a company. Stratus and Thunder companies are created as Realistic, with no choice. It sets the starting equity above, the starting reputation (70 % / 50 % / 30 %, which then evolves with your flights) and a loan capacity multiplier (×1.5 / ×1.0 / ×0.7) that stays for the life of the company. A lower reputation also lowers the hourly rate used for freelance job pay (700 + 500 × reputation, in Cr per hour), and a lower capacity or reputation can raise loan interest rates.

It does not decide whether you can use AI pilots: AI flights depend on the world, and Thunder forbids them. It is also separate from the Challenge Mode economy, which the world sets when

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the company is created and which can be changed afterwards.

8.11 Aircraft wear constants

CONSTANT	VALUE
Condition loss per 100 flight hours	**–12 %**

> **No idle condition decay.** Your aircraft's condition only drops from flight hours and specific events — not from sitting on the ramp.

8.12 Flight duty caps

LIMIT	VALUE
Maximum flight duty period	**14 hours**
Maximum single flight duration	**14 hours**
Mandatory rest after a duty period	**8 hours**
Relocation (Change base)	**instant** — and it moves the *home* airport only, not the employee

8.13 Leasing vs. owning

DETAIL	VALUE
Weekly leasing cost	Base weekly ownership fee × 1.2, then the selected term adjustment; three weeks paid upfront
Owned aircraft efficiency advantage	**2 %** cheaper per hour vs. rented

> Accounting view: lease and rental payments are **operating expenses** — they hit your Income Statement every week. A purchase is an **investment** and never does (see §8.6).

8.14 Industry fuel supply

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DETAIL	VALUE
Fuel per factory shipment	**5 500 gallons**
FBO Refueling: free transport range	**250 NM** from the FBO
FBO Refueling: factory owner's transport cost	**10 Cr per tank per NM beyond 250 NM**
Auto-sell to system discount	–**40 %** (you receive 60 % of base price)
System supply suppression range	200 NM around a player factory

Local Dealer is separate from FBO Refueling: eligible player factories within 250 NM sell whole fuel tanks to the server, nearest first, at the local dealer price when an FBO orders fuel or system restocking runs. There is no Local Dealer purchase outside that radius and no change to the FBO customer's order price. See §3.10.

8.15 Airport ownership

DETAIL	VALUE
Maximum airport Size that can be owned	**5**
Maximum missed weekly payments	1
Advance payment required	2 weeks upfront
Free kits at acquisition	**10**
Maximum ownerships per company	**3 + company level**

Weekly kit cost by airport Size

SIZE	KITS NEEDED PER WEEK
0	1
1	2
2	3
3	5
4	**25**
5	**50**
Basecamp	0 (free)

Revenue per flight as airport owner

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SIZE	PER HUMAN FLIGHT	PER AI FLIGHT
0	1 000 Cr	50 Cr
1	1 200 Cr	60 Cr
2	1 400 Cr	70 Cr
3	1 600 Cr	80 Cr
4	1 800 Cr	90 Cr
5	**2 000 Cr**	100 Cr

- Human-only world: human-flight payout is doubled.
- AI flights earn 1/20th of the human rate.

> (!) **The kits must be sitting at that airport on the due date.** Kits held in another warehouse, or still flying toward the field, do not count — the payment simply fails as if you had none. Plan the delivery, not just the production.

Falling behind. One missed week is tolerated: the airport is flagged

At risk and the arrears roll into the next bill. Miss a second time and the airport is taken back. Flying the kits in before that second deadline costs you nothing but the trip.

What the traffic actually pays. Only *flights* pay the subsidy. The passengers and cargo that transited are counted and displayed, but they are worth nothing — they are there to tell you how busy the field is, not to earn. Every counter resets at each payout.

8.16 Airport boosts

Owning an airport unlocks a **Boosts** tab on it. A boost is a renewable benefit attached to *that field*, and it applies to everyone's activity there — including yours. There are **six**, each with **three levels**:

BOOST	WHAT IT MULTIPLIES	LEVEL 1	LEVEL 2	LEVEL 3
Company Jobs	pay on generated FBO jobs; depends on airport Size	+2 to +10 %	+3 to +20 %	+4 to +30 %
XP Boost	XP earned on flights there	+10 %	+20 %	+30 %
Company Routes	Regular Route pay	+10 %	+20 %	+30 %
Freelance Boost	freelance route pay	**+50 %**	**+100 %**	**+150 %**

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BOOST	WHAT IT MULTIPLIES	LEVEL 1	LEVEL 2	LEVEL 3
Industry Boost	points added to positive global machine efficiency	+10 pts	+20 pts	+30 pts
FBO Workshop	quoted maintenance work-time reduction (§4.4)	–10 %	–20 %	–30 %

What a boost costs

The price is **not in credits**. A boost costs **its own level in Airport Ownership Kits, every week** — level 1 costs 1 kit a week, level 2 costs 2, level 3 costs 3. All six types cost the same; only the level moves the number.

The same rule as the rent applies, and it is the one that catches people:

> (!) **The kits must be sitting at that airport.** Kits in another warehouse, or in transit, do not count. The first week is debited the moment you buy, and again every seven days for as long as auto-renew is on.

And the constraint that decides whether any of this is reachable at all:

> (!) **Kits are not sold by the system.** No amount of money buys one. They come from another player on the Trading Hall, or from your own **Airport Ownership Kit Facility** (§10.4). A boost you cannot feed simply lapses.

Reading the value

Three of the six pay you back in credits (Company Jobs, Company Routes, Freelance), one pays in progression (XP), one in goods (Industry) and one in time (FBO Workshop). The Freelance credit boost reaches +150% at level 3. Company Jobs instead uses the airport-Size table in §7.3.6. Industry adds efficiency points before the production-time formula; it does not promise the same percentage of extra goods, and does not shorten an already minimum-length cycle.

Remember the boost helps **every** pilot who flies there, not only you. On a field other companies use, you are subsidising their queries and their XP as well as your own.

8.17 Internal balance constants (for reference)

CONSTANT	VALUE	PURPOSE
Standard pilot cost	80 Cr/h	Economy baseline
Repositioning pilot (no crew)	**120 Cr/h**	Rental return without assigned crew

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CONSTANT	VALUE	PURPOSE
Weekly ownership amortisation	24 weekly payments	How long a new aircraft is expected to pay itself off
Rental return missing-fuel penalty	**×2.0** on missing gallons' value	
Lease return condition shortfall penalty	**×1.25** on repair cost delta	

8.18 TL;DR

- **Landing fee:** MTOW × 0.007 Cr/lb. No airport-size variation.
- **Loans:** Bank Loans Agreement unlocks access; read the adjusted quote, which can be below 5%. Early repayment adds 10% to remaining principal.
- **Weekly management fee: Challenge Mode only** — standard companies never pay it.
- **Auto-pause:** after **7 days** of inactivity. Unpause by simply logging in.
- **Salaries:** paid every 7 days at 05:00 UTC; higher of guaranteed minimum or hours × rate.
- **Airport ownership** scales steeply with size — Size 5 costs 50 kits/week but earns 2 000 Cr per human flight.
- **Starting bonus** at Advanced Management unlock: 470 k Cr (Easy) → 10 k Cr (Realistic, survival world).
- **Aircraft purchases** never hit the Income Statement — they are asset swaps (cash → fleet), visible on the Cash Flow and Balance Sheet only (§8.6).



09

CHAPTER 09 · FLEET

Fleet & Aircraft

How much is my 10-year-old Caravan worth today? What's the penalty for returning a rental with half-empty tanks? How does aircraft pricing actually work? Everything about aircraft lifecycle, pricing, rental, and leasing.

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FIG 9.01 — Three ways to operate an aircraft, side-by-side comparison

×1.2	24 wk	4–48 wk	–17%
NEW-AIRCRAFT SURCHARGE	AMORTISATION PERIOD	LEASE TERMS	SYSTEM SELL HAIRCUT

9.1 Three ways to have an aircraft

MODE	UPFRONT COST	RECURRING COST	WHEN IT ENDS	MAINTENANCE
Buy new	Base price × 1.2	Weekly ownership fee	Never	You pay
Buy used (market)	Roughly market value (with small random jitter)	Weekly ownership fee	Never	You pay
Rent	Security bond (10 × hourly rate)	Hourly on flight time + daily if below minimum hours	Auto-terminated (see §9.5)	Depends on system/player ownership; see §9.5
Lease	Three weeks of the quoted rent	Weekly payment adjusted for the selected term	After 4–48 weeks, as selected	You pay (not included)

9.2 How aircraft are priced

The base price formula

The server calculates each aircraft type's price from scratch using its real performance data:

1. **Total workload** = how much the aircraft can carry at cruise speed — combining cargo capacity, seat count, and cruise speed. 2. **Hourly operating cost** = derived from workload using a smooth curve anchored between a Cessna 172 (baseline) and a B747 (high end). 3. **Weekly ownership fee** = hourly operating cost minus fuel and pilot, multiplied by expected weekly hours:

AIRCRAFT CLASS	EXPECTED HOURS PER WEEK
SEP, MEP, TurboProp, Helicopter	14 h
Glider	7 h
Jet	21 h
Heavy Jet	**28 h**

4. **Base price** = weekly ownership fee × 24 (amortized over 24 weeks), rounded down to nearest 100 Cr.

New aircraft surcharge

> **Default new-aircraft multiplier: Base price × 1.2** (+20%). This is a configurable server setting; use the purchase quote for the active price.

When prices are recalculated

- After any aircraft-type update by the moderation team.
- Every Monday around 05:15 UTC as part of the weekly maintenance cycle.

The 10 % update threshold

If a price recalculation would change an existing aircraft's value by less than **10 %**, the update is skipped. If the change is 10 % or more, existing aircraft owners receive a credit or debit for the difference, and the aircraft's "for rent" and "for sale" flags are reset.

9.3 Market value and how it depreciates

How value is calculated

```
Market value = Base price − cost of all deferred repairs
```

"Deferred repairs" includes: airframe condition shortfall + each engine condition shortfall + overdue scheduled inspection + overdue annual checkup.

> **There is no age-based depreciation.** An aircraft does not lose value just from being old. Value drops only as condition drops — age matters only because more hours mean more wear.

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Hightime impact

Hightime increases subsequent wear, indirectly increasing deferred repair costs. **The current market-value calculation adds no separate hightime percentage discount.** After subtracting deferred repairs, the result is truncated to hundreds of Credits and floored at 1 000 Cr.

Selling to the system

> Market value × 0.83 (–17 % haircut)

> **Where this value lives in your books:** the fleet line of your **Balance Sheet** tracks this market value. Buying an aircraft never touches the Income Statement — it is an asset swap, cash for aircraft (see §8.6) — and wear reaches your books as declining fleet value here.

9.4 Used aircraft from the market

When a used aircraft is generated for the market:

FIELD	RANGE
Airframe hours	0 to 1.5× hightime threshold
Engine hours	0 to just below Time Between Overhaul
Price jitter	×0.98 to ×1.08

Time Between Overhaul defaults (before any moderation)

CLASS	DEFAULT TBO
SEP	1 200 h
MEP	3 000 h
Helicopter	1 000 h
Jet	2 200 h
Heavy Jet	2 500 h

Freshly spawned new aircraft

A new aircraft has 1–5 flight hours (near zero), 100 % condition on all parts, and full performance specs.

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9.5 Rental mechanics

Hourly rate

The rental rate is calculated from the aircraft's maintenance cost portion plus a margin above operating cost. There is a **floor of 50 Cr/h**.

Security bond

```
Bond = hourly rate × 10
```

Charged when you sign the rental agreement. Returned (minus penalties) when you return the aircraft.

Daily minimum flight hours

Rentals require a minimum number of hours flown per day:

CLASS	MIN HOURS PER DAY (REALISTIC SETTING)
SEP, MEP, TurboProp, Helicopter, Glider	1 h
Jet	2 h
Heavy Jet	**4 h**
Human-only world	**0 h (no minimum)**

Your rental intensity setting reduces this requirement:

SETTING	HOURS REQUIRED
Realistic	Full minimum
Medium	50 % of minimum
Low	25 % of minimum

If you fall short of the daily minimum, the shortfall is charged at 05:15 UTC each day.

Auto-termination

A rental is automatically cancelled if:

- **7 days pass** without a registered flight.
- The aircraft requires mandatory maintenance.

Maintenance during a rental

System rentals and rentals from another player do not have identical maintenance permissions. The server can refuse configuration of an aircraft while a player-to-player rental is active. An accepted maintenance order is charged to the company placing it; do not assume that all rental maintenance is free or always available to the renter. Leasing separately makes maintenance your responsibility. Read the workshop or return quotation for the aircraft concerned.

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Rental return penalties

INFRACTION	PENALTY
Missing fuel	Missing gallons × local max fuel price × **2.0**
Returned at wrong airport	Round-trip rent fee + fuel + pilot cost + **+10 % paperwork**

9.6 Lease mechanics

- **Terms offered: 4, 8, 12, 24, 36 or 48 weeks**.
- **Upfront:** three weeks of the selected weekly rent. Later weekly deductions begin after that prepaid period.
- **Base weekly rent:** weekly ownership fee × 1.2. The longer terms divide that base by 1.05 / 1.10 / 1.15 / 1.20 for 12 / 24 / 36 / 48 weeks. The resulting reductions are approximately 4.76 / 9.09 / 13.04 / 16.67%; 4 and 8 weeks use the base rate.
- **Maintenance:** not included — you pay separately.
- Payments are deducted automatically each week. On expiry the aircraft returns to its owner.
- After the lease ends, the aircraft is cleaned up automatically within 15 days.

Early termination

> **25 % of the unused contractual weeks**, with any unused prepaid whole weeks refunded separately. The started week counts as consumed; the live return quote shows both amounts.

End-of-lease condition penalty

If the aircraft is returned in worse condition than when you received it:

```
Penalty = condition shortfall × full repair cost × 1.25
```

Applied to both airframe and each engine.

9.7 Test-flight onboarding (player addon certification)

If you own a third-party aircraft addon that isn't yet in the OnAir database, you can submit it through a test-flight process.

What your simulator provides automatically

Cruise speed, stall speeds, empty weight, max takeoff weight, fuel capacity, fuel type, engine type, cruise fuel flow, seat count, max payload, display name, and a unique addon hash.

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What you can optionally supply

FIELD	RULE
Addon download URL	Must be a valid `http(s)://` URL or the word "default"
Data sheet URL	Optional
Proposed seat count	Used if you supply a number greater than 0
Proposed max payload	Used if you supply a number greater than 0

Test-flight aircraft conditions

The test aircraft is generated with 1–5 hours on the airframe, 100 % condition everywhere, and 50 % fuel.

Fly at least **20 minutes airborne** and include a **detected cruise phase** before registering. Gliders are exempt from the cruise-phase condition, but still need twenty minutes. No separate minimum distance is imposed by this test.

After the test flight

Once you complete the test flight, your addon enters the moderation queue. A moderator reviews it and either approves it, marks it banned (with a reason), or asks you to redo the test flight.

9.8 Aircraft cargo capacity

For every aircraft type, the server calculates how much payload is realistically available:

> Maximum payload = aircraft total capacity minus half-fuel weight, minus standard pilot weight, minus copilot weight if applicable.

Fighters have slightly different rules — their cargo limit is calculated directly from the max takeoff weight.

Short-range aircraft

Short-range aircraft (under ~500 NM) are limited to using only **60 %** of their theoretical maximum payload. This scales up toward ~97 % for longer-range aircraft. It is a balance design decision.

9.9 Parking — no condition impact

> **Your aircraft's condition does not decay while parked.** Indoor hangar, outdoor tie-down, or apron — it makes no difference.

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Condition only changes from flight hours and specific in-flight events. A grounded aircraft stays at exactly the same condition indefinitely.

9.10 Reference constants

CONSTANT	VALUE
Standard passenger weight	190 lbs
Standard seat weight	63 lbs
New aircraft price multiplier	×1.2
Weekly ownership amortisation	24 payments
System sell haircut	–17 %
Rental bond	10 × hourly rate
Rental floor rate	50 Cr/h
Owned vs rented cost advantage	2 % per hour
Rental missing-fuel penalty	×2.0 on gallons' value
Lease weekly premium	×1.2 over ownership
Lease early termination penalty	25 % of remaining payments
Lease condition shortfall multiplier	×1.25

9.11 TL;DR

- **New aircraft = Base price × 1.2.** Used aircraft start lower depending on condition and hours.
- **No age-based depreciation** — value = base price minus accumulated repair backlog.
- **Hightime** affects future wear; the current market-value calculation has no separate –25% discount.
- **Rental bond = 10 × hourly rate.** Return with missing fuel → **×2.0 penalty** on the missing gallons' value.
- **Lease = 4–48 weeks**, with **three weeks paid upfront** and a term-dependent weekly quote. Early return fees and unused advance refunds are itemised in the quote.
- **No condition penalty** for parking — not indoors, not outdoors, not at any airport.
- A test flight requires **20 minutes airborne** and a detected cruise phase (cruise exempt for gliders).

10

CHAPTER 10 · INDUSTRY

Industries

How do I turn an airport into a production hub? Why is my hunting camp underperforming? When can I drill for crude oil? Everything about factories, machines, production, supply & demand, and the Industry Points economy.

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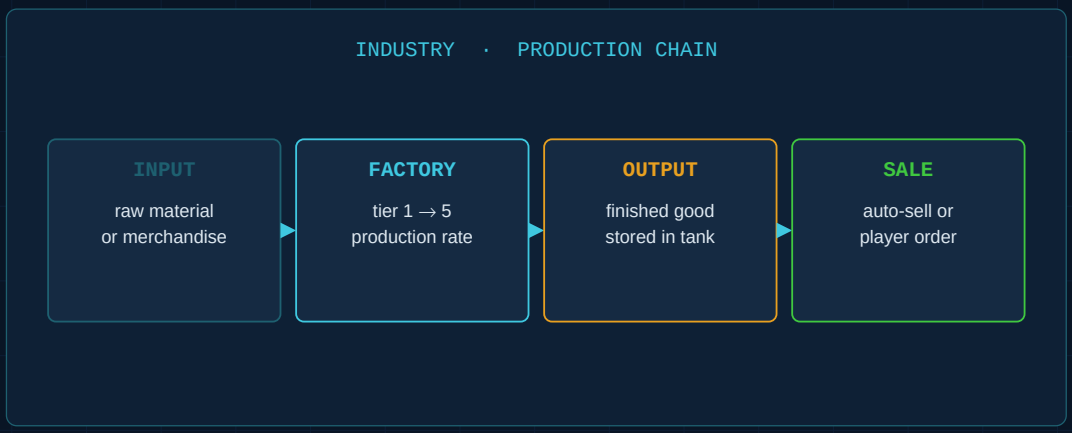


FIG 10.01 — The industrial production chain at a glance

10.1 What industries are

OnAir Industries is a **production sub-game** layered on top of running an airline. You build a **factory** at an airport, place **machines** on a grid, connect input and output storage, hire **work teams**, and run **recipes**. What your factory produces can go to:

- Your own storage
- Your FBO's fuel tanks
- The **Trading Hall** (global marketplace)
- Other factories via truck transport
- Contracts signed against existing demand

Two separate economies run in parallel:

- **Credits (Cr.)** — the main game currency.
- **Industry Points (IP)** — a soft currency earned and spent only inside the industry system. No cash equivalent, no accounting line.

The airport ownership connection

The most important link between industries and the rest of the game: **Airport Ownership Kits** can only be produced by factories. You receive 10 free kits when you acquire an airport, but every weekly maintenance payment requires more — and only factories can make them. See the Economy chapter for airport ownership costs.

10.2 Building a factory

What unlocks factories

No skill tree investment required. Access is based purely on your **company level**.

- Maximum factories per company: **20 + company level**.
- Maximum factories per airport: **max(1, airport Size)**, so Size 0 and 1 each allow one, and Size 5 allows five. Basecamps allow five. This limit is shared by the non-archived factories

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of all companies in that world at that airport.

- You cannot build at someone else's basecamp.

Cost

Zero credits to create an empty factory. All costs come as you build, paid in IP and materials per machine and storage container.

Factory tiers and grid size

The tier determines how large your production floor is:

TIER	GRID SIZE	UPGRADE COST	WEEKLY MAINTENANCE
1	12 × 6 tiles	—	Free
2	13 × 7 tiles	**10 Factory Extension Kits**	1 kit / week
3	14 × 8 tiles	**35 kits**	2 kits / week
4	15 × 9 tiles	**100 kits**	**3 kits / week**

> **Tier 4 is the maximum.** A Tier 5 tier does not exist.

Tier upgrades require **Factory Extension Kits** — a merchandise item that your own factories can produce (see §10.4). If you run out of kits, your Tier 2+ factory is frozen and all production stops.

Surface type restrictions

Each machine type requires a specific terrain: land, water, or forest. If your airport's surface doesn't match a machine's requirement, that machine is not available in the build menu.

10.3 Five factory categories

CATEGORY	TERRAIN	WHAT IT SPECIALIZES IN
Wilderness	Forest	Hunting, fishing, fish processing — raw nature outputs
Mining	Land	Ore extraction (results depend on location — see §10.10)
Food	Land	Meat, fish, canning, mixed food, food rations
Manufactured Goods	Land	Plastics, electronics, batteries, kits

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CATEGORY	TERRAIN	WHAT IT SPECIALIZES IN
Dispatch Hub	Land	**Special** — wider input/output capacity, no production, pure logistics throughput. No tier upgrades, no worker teams.

> The **Dispatch Hub** is the warehouse pattern: route large volumes of goods through a central point. Use it to consolidate production from multiple remote factories before sending to the Trading Hall or other destinations.

10.4 The 28 machine types

MACHINE	CATEGORY	NOTES
Hunting Camp	Wilderness	Output depends on how remote the location is (see §10.10)
Large Hunting Camp	Wilderness	Higher output, same location rules
Fishing Camp	Wilderness	Location-sensitive
Logging Camp	Wilderness	Forest only — produces logs
Meat Smoker	Food	Raw meat → smoked meat
Tannery	Food	Fur → leather / pelt
Fish Smoker	Food	Fish → smoked fish
Fish Oil Extractor	Food	Fish → fish oil
Food Mixer	Food	Ingredients → mixed food / rations
Canning Platform	Food	Preserved / canned outputs
Mining Facility	Mining	Location-sensitive (ore deposits)
Small Mining Facility	Mining	Lower output, easier to start
Oil Well	Mining	**Restricted to 18 geographic zones only** (see §10.10)
Small Oil Well	Mining	Same zone restriction
Sawmill	Manufactured Goods	Logs → lumber
Ore Refinery	Manufactured Goods	Ore → bars / plates
Blast Furnace	Manufactured Goods	Iron ore → iron bars

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MACHINE	CATEGORY	NOTES
Oil Refinery	Manufactured Goods	Crude oil → 100LL / Jet-A / asphalt
Metal Cutting Machinery	Manufactured Goods	Metal plates → parts
Electronics Facility	Manufactured Goods	Electronic components
Batteries Facility	Manufactured Goods	Lithium parts → batteries
Optics Facility	Manufactured Goods	Glass → optical components
Gear Facility	Manufactured Goods	Hunting / mining / fishing / oil-well gear
Training Center	Manufactured Goods	Trainers + training gear for worker upgrades
Travel Tokens Facility	Manufactured Goods	Crew transport currency
Factory Extension Facility	Manufactured Goods	Produces the kits needed to upgrade and maintain Tier 2+ factories
Airport Ownership Kit Facility	Manufactured Goods	Produces the kits required for airport ownership

10.5 Six ways production can leave your factory

When a container is an output container, you choose where its goods go:

MODE	WHAT HAPPENS	YOU CONFIGURE
Storage	Goods stay in the container. Production stalls when it's full.	Nothing — goods wait
Transport	Auto-sends a truck when the container reaches a threshold.	Threshold + destination airport
Trading Hall	Listed on the global market at your set price. Can auto-sell to the system at 60 % of base price.	Price + auto-sell toggle
Internal Transport	Routes goods to another factory you own.	Destination factory
FBO Refueling	Pipes fuel directly into one of your FBO tanks.	Target FBO
Local Dealer	Publishes fuel into the airport's dealer supply at your price.	Price per gallon

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> Changing a container's merchandise type at any time moves the existing stock to your goods inventory — nothing is destroyed.

Container creation cost

CONTAINER LEVEL	IP COST
Standard	**Free**
Large container	**70 IP**

Deleting a container refunds its IP cost.

10.6 The production cycle

When your factory ticks

The server processes factories every **3 minutes**. A factory gets a processing tick if:

- A machine just finished construction or production, **or**
- It has been more than **6 hours** since the last tick.

Up to 10 ticks happen per factory per processing pass.

When a machine starts producing

An idle machine starts a new cycle only after the following checks pass:

1. **Every machine input buffer is full.** Stock elsewhere in the chain must first reach those inputs. 2. **Every machine output buffer is empty.** Clear the previous batch before expecting the next to start; these are the machine's buffers, not every connected warehouse. 3. Work groups are present, and **at least one has efficiency of 20% or more**. 4. **At least one work group is nourished.** This is a separate check from the efficiency check. 5. **Enough Industry Points** are available if the recipe spends IP.

How global efficiency affects production time

The server multiplies location efficiency by weighted staff efficiency, then adds any Industry boost to a positive result. This **global efficiency**, not staff efficiency alone, controls cycle duration:

GLOBAL EFFICIENCY	PRODUCTION TIME MULTIPLIER
80 % or above	×1.0 (normal speed)
60 %	×1.5
40 %	×2.0
20 %	×2.5
0 %	**×3.0 (3× as slow)**

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> The duration formula reaches normal speed at 80% global efficiency. An Industry boost adds 10/20/30 efficiency points; it is not a direct goods multiplier. Zero-efficiency duration is a formula reference, not a promise that an unstaffed, unfed or fully exhausted machine can start.

What happens when a cycle completes

- Output merchandise is added to the connected output containers.
- Industry Points are credited if the recipe generates them.
- Each work team's efficiency drops slightly based on how long the cycle took.

10.7 Work teams and food rations

A "work team" is one staffing slot on a machine. Each machine type has specific required team types (hunters, miners, fishermen, builders, etc.).

Eight worker types

> Worker · Hunter · Builder · Foreman · Trainer · Lumberjack · Fisherman · Miner

The daily food ration cycle

Every day, each work team consumes **food rations** equal to the team size. If there aren't enough rations at the airport:

- The team is not fed → production **halts** for that team's machines.
- The client alerts you when you have **less than 3 days** of rations remaining.

> **Food rations are produced by your own factories** (via the Food Mixer or Canning Platform) or can be purchased as cargo from the market.

Efficiency vs. being fed — two different states

STATE	WHAT IT AFFECTS
Fed / Not fed	Fed → can produce. Not fed → halt.
Fatigue (0–100 %)	High → production is slower. 100% → production is 3× slower.

A work team can be fed but exhausted (produces slowly), or rested but starving (produces nothing).

Replacing tired work teams

When a team's efficiency drops below ~60 %, the client alerts you. You can replace them with fresh workers drawn from the airport's worker supply. If none are available locally, the system can arrange a bus or boat transfer from a nearby airport — costed in Credits and IP.

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The "Bulk Relieve" feature lets you replace all teams below a threshold at once.

10.8 Industry Points — the soft currency

ACTION	EFFECT ON IP
Recipe that generates IP (on cycle complete)	**+IP**
Recipe that costs IP (on cycle start)	**–IP**
Creating a large container	**–70 IP**
Worker bus/boat transfer	–IP (varies by distance)
Deleting a container	**+IP refund**
Deleting a factory	**+IP refund** for all machines and containers

IP is shown in the interface as a colored pill — orange when positive, red when negative.

IP is **not** tracked in your financial accounts. It does not appear anywhere on your income statement or balance sheet. It is exclusively an industry resource.

10.9 Trading Hall — market, supply, and contracts

System supplies

The server automatically generates supply listings on the Trading Hall to ensure goods are available before players have factories. Key behaviors:

- System supplies last 7 to 22 days.
- Price varies ±30 % from the base price for each merchandise type.
- If you have a player factory selling the same merchandise within **200 NM** of a system supply, the system supply is automatically disabled in that area. **The system gets out of your way when you set up shop.**
- Some common goods have unlimited supply available at any airport of sufficient size at base price.

Demand listings (buy orders)

Both the system and other players can post demand listings. Player demands are paid upfront at creation; the system refunds any unfilled portion if cancelled.

Contracts

You can sign a contract against an existing demand listing. Rules:

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RULE	VALUE
Contract duration	**7 days** from signing
Auto-fulfillment	When matching merchandise arrives at the demand airport, stock transfers and Credits are credited automatically
Self-signing	**Not allowed** — you cannot fulfill your own demand

Auto-sell to the system

If you enable auto-sell on an output container set to Trading Hall mode:

> **You receive 60 % of the merchandise's base price** (40 % discount).

The benefit: zero market management, guaranteed income. The cost: you leave 40 % of potential revenue on the table.

10.10 Geography — where location matters

Some machines are **location-sensitive**. What's under the ground affects what they can produce.

Ore deposits

Each ore type has a "hotspot" radius. Smaller radius = rarer, you need to scout. Larger radius = easier to find a working location.

ORE	HOTSPOT SIZE
Lithium	Smallest (very narrow deposits)
Copper	Small
Bauxite / Graphite / Iron	Medium
Coal / Limestone / Crude Oil	**Largest (most forgiving)**

> **Practical:** if you're not near an ore deposit, your Mining Facility produces nothing useful. Check the in-game map tools before committing to a location.

Crude oil — 18 geographic zones only



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FIG 10.02 — World distribution of the 18 Oil Well-eligible zones

Oil Wells only function inside one of **18 hardcoded geographic rectangles**. Key regions include:

ZONE	REAL-WORLD EQUIVALENT
Alaska / Canada / US East Coast	North America west and east
Texas / Gulf of Mexico / Caribbean	Southern North America
Venezuela / Colombia	Northern South America
Brazil	Eastern South America
Arctic Russia / Norwegian Sea	High north
North Sea (UK and Norwegian sides)	Northwestern Europe
North Africa / Sahara	Africa north
West Africa (Nigeria area)	Africa west
Southwest Africa (Angola)	Africa southwest
Siberia	Russia interior
Caspian / Kazakhstan	Central Asia
Middle East (Saudi Arabia, Iraq, Iran)	Middle East
India / Bangladesh	South Asia
Northeast China	East Asia
Indonesia / Southeast Asia	Southeast Asia
Australia	Oceania

> If your airport falls outside all 18 zones, an Oil Well has **0 efficiency** — it produces nothing. Plan before building.

Hunting camps — the proximity penalty

Hunting Camps and Large Hunting Camps are penalized by **nearby airports**. Civilization scares the wildlife:

- Every airport within **30 NM** applies a penalty weighted by its Size.
- Your **home airport itself** also applies a penalty.

> **Practical:** hunting works best at remote basecamps deep in wilderness. A Hunting Camp at a large hub airport loses most of its efficiency before you even start.

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10.11 Truck transport — moving goods between airports

When a container set to Transport mode reaches its threshold, an automatic truck delivery fires.

Travel time

```
Hours = (distance in NM × 1.5) ÷ 27 kts
```

DISTANCE	APPROXIMATE TIME
50 NM	~2.8 h
100 NM	~5.6 h
250 NM	~14 h
500 NM	~28 h
1 000 NM	~56 h

The 1.5× multiplier accounts for roads not being straight lines.

Cost (Credits)

```
500 Cr (fixed) + 2 × base rate × distance × total weight
```

Fuel output set to **FBO Refueling** has no transport charge within 250 NM; beyond that, the **factory owner pays 10 Cr per tank per NM beyond 250 NM**. This is separate from **Local Dealer** sales: the server buys whole 5,500-gal tanks from eligible player factories within 250 NM of an FBO, nearest first, when fuel is ordered or system restocking runs. Factories outside that radius are not used for Local Dealer purchases. See §3.10.

Cost (IP)

1 IP per unit shipped (free if the destination is the same airport).

On arrival

The transport delivers to the destination, attempts to fulfill any matching contracts automatically, and triggers worker replacement if the delivery included staff.

> **Industry goods can also be shipped as regular cargo missions.** Workers travel as charter passengers; raw and refined goods travel as cargo. Your factory creates demand on the job board for nearby pilots.

10.12 Fees and factory lifecycle

Weekly maintenance fees (Tier 2+ only)

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TIER	KITS REQUIRED PER WEEK
1	0 (free)
2	1 Factory Extension Kit
3	2 kits
4	**3 kits**

If kits are not available at the factory's airport when fees are due:

- Factory enters **Frozen** state — all production stops.
- Retry happens automatically after 1 day.

> **The implication:** a Tier 4 factory burns 3 kits per week — 156 per year. You need a dedicated Factory Extension Kit production line, or a reliable import contract, to keep high-tier factories running.

Inactivity archiving

A factory that has had **no activity for 6 months** is automatically archived:

- All IP spent on machines and containers is **refunded**.
- Construction materials are **not refunded** — they are lost.
- The archive is **permanent**. Unlike a paused-company archive (below), a factory archived for inactivity is never brought back — you rebuild from scratch.

The 6-month window is counted **per factory, not per machine**. Any activity anywhere inside the factory resets the clock for the whole site: a machine starting a production cycle, a machine completing one, a machine finishing construction, or goods moving from one container to the next.

> **The implication:** a single machine still producing keeps the entire factory alive, idle machines included. Conversely, a factory where nothing at all happens ages as one block — there is no per-machine countdown to watch.

Paused company

If your company is paused (see the Economy chapter), all your factories are also archived. They can be revived when the company unpauses.

Manual deletion

Deleting a factory refunds all IP but **does not refund construction materials**.

10.13 How industries connect to the rest of the game

→ FBO fuel supply

A factory producing fuel (100LL or Jet-A) with output mode set to FBO Refueling pipes fuel directly into your FBO's tank. This is the only way to have fuel in your FBO that is cheaper than

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the world dealer price — and the only practical path to undercutting prices in Survival mode.

→ Airport ownership

Airport Ownership Kits are produced **only** by the Airport Ownership Kit Facility. The weekly kit consumption ramps steeply with airport size (up to 50 kits per week at Size 5). Without an industry production line, owning a large airport is unsustainable long-term.

→ Cargo and charter missions

Industry workers and goods use the same mission system as regular jobs:

- Workers and specialized staff → travel as **charter passengers**.
- All raw and refined goods → shipped as **cargo**.

Every time you expand a remote factory, you generate a wave of cargo and charter demand for nearby pilots.

10.14 The merchandise catalog

Staff (travel as charter passengers)

Worker · Hunter · Builder · Foreman · Trainer · Lumberjack · Fisherman · Miner

Food chain

Raw Meat · Smoked Meat · Fur · Pelt · Leather · Fish · Smoked Fish · Fish Oil · Mixed Food · Vegetables · **Food Rations**

Mining & metals

Copper Ore · Lithium Ore · Iron Ore · Bauxite · Graphite Ore · Coal · Limestone Copper Plate · Lithium Bar · Iron Bar · Aluminium Plate · Graphite Block Copper Part · Lithium Part · Aluminium Part · Graphite Part

Energy / Oil

Crude Oil Tank · Oil Well Gear · Asphalt · **100LL Fuel Tank (5 500 gal)** · **Jet-A Fuel Tank (5 500 gal)**

Manufactured goods

Plastic · Glass · Electronic Component · Battery · Opticals · Luxury Products · Steel Bar · Lumber · Log

Gear

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Hunting Gear · Fishing Gear · Mining Gear · Logging Gear · Training Gear · Ore Detector · Sulfuric Acid

Strategic outputs

ITEM	WHY IT MATTERS
Factory Extension Kit	Required to **upgrade** and **maintain** every Tier 2+ factory. Without this, your upgrade path stops.
Airport Ownership Kit	The only way to sustain long-term ownership of large airports.
Construction Kit	Used to install a basecamp at a new location.

10.15 Strategic patterns

Self-sustaining Tier 2+ factories

Above Tier 1, every factory needs Extension Kits weekly. Build a **Factory Extension Facility early** to produce your own, or maintain a steady contract supply from another player. Going Tier 3 or 4 without a kit pipeline is how factories freeze.

The remote wilderness pattern

Hunting and ore-mining machines reward isolation. A **basecamp deep in forest with no nearby airports** is the best location for a Hunting Camp. Every airport within 30 NM drains efficiency. A large hub is the worst possible spot for a Hunting Camp.

The spoke-and-wheel pattern with a Dispatch Hub

Build a Dispatch Hub at a large airport (Size 4–5) and raw extraction facilities at remote basecamps. The basecamps feed the hub via truck transport. The hub routes to the Trading Hall, FBOs, or refinement factories.

Auto-sell vs. Trading Hall trade-off

STRATEGY	PROS	CONS
Auto-sell to system (60 % of base)	Zero management, predictable cash flow	**40 % revenue loss** on every unit
Trading Hall pricing	Full margin potential	Requires managing demand; inventory piles up if demand is slow

For high-demand goods (Food Rations, Lumber), the Trading Hall pays. For slow-moving specialty items, auto-sell is safer.

The airport ownership pipeline

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If you target Size 4–5 airport ownership, plan a dedicated production line:

> Iron / Copper / Lithium ore → refined plates → parts → Electronics → Airport Ownership Kits

For example, **50 human flights × 2 000 Cr = 100 000 Cr** at a Size 5 airport, before the human-only-world doubling. That revenue depends on traffic, not a guaranteed boost-level income. Kit production must still cover the 50 kits/week ownership cost and any active boosts.

10.16 What industries are NOT

- ✕ **No skill tree required** — only company level gates access.
- ✕ **No upfront credit cost** to create a factory — only IP and materials as you build.
- ✕ **No system-owned factories** — all factories are player-owned. The system only posts supply and demand listings.
- ✕ **No condition decay on idle machines** — machines do not degrade from sitting unused.

10.17 TL;DR

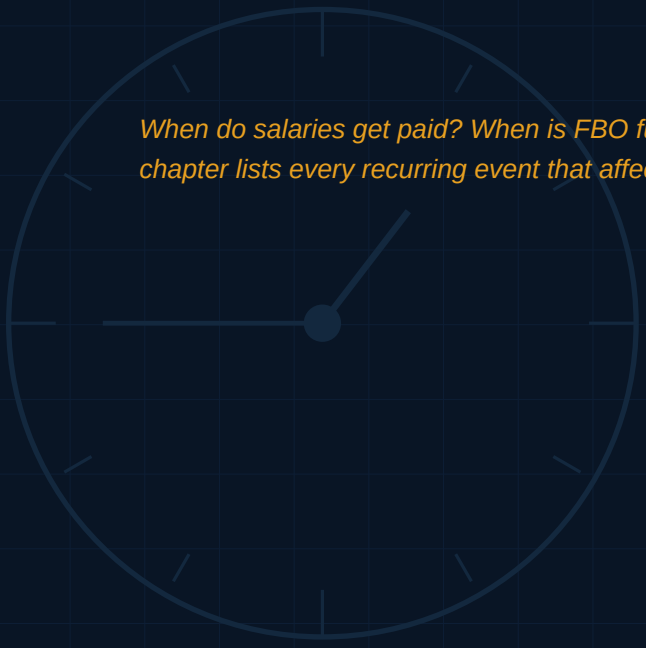
- **Factories cost zero Credits to create** — only IP and materials as you build.
- **Tiers 1–4:** grids 12×6 to 15×9. Upgrade cost: 10 / 35 / 100 kits. Maintenance: 0 / 1 / 2 / 3 kits per week.
- **Production time uses global efficiency**, including location and boosts. Starting a cycle also requires full inputs, empty outputs and eligible staff.
- **Workers need Food Rations daily.** No food → no production.
- **Six output modes:** Storage, Transport, Trading Hall, Internal Transport, FBO Refueling, Local Dealer.
- **Auto-sell to system = 60 % of base price** — a 40 % discount for zero management.
- **System supplies pause within 200 NM** of a player factory selling the same merchandise.
- **Crude oil works only in 18 hardcoded zones** (Texas, North Sea, Middle East, Indonesia, Australia, etc.).
- **Hunting Camps are penalized by every airport within 30 NM** — go remote.
- **Factory Extension Kits are your Tier 2+ lifeline** — produce them or import them.
- **Airport Ownership Kits** can only come from factories — there is no other source.
- **Inactive factory = archived after 6 months** (IP refunded, materials lost) — counted **per factory**, so one producing machine keeps the whole site alive.

11

CHAPTER 11 · SCHEDULES

Server Clock & Schedules

When do salaries get paid? When is FBO fuel restocked? When are weekly fees charged? This chapter lists every recurring event that affects your company, in plain language.



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All times in this chapter are **UTC**. The OnAir server always runs on UTC.

> **Converting to your local time:** New York (winter, UTC–5) → subtract 5 h · Paris (winter, UTC+1) → add 1 h · Sydney (summer, UTC+11) → add 11 h

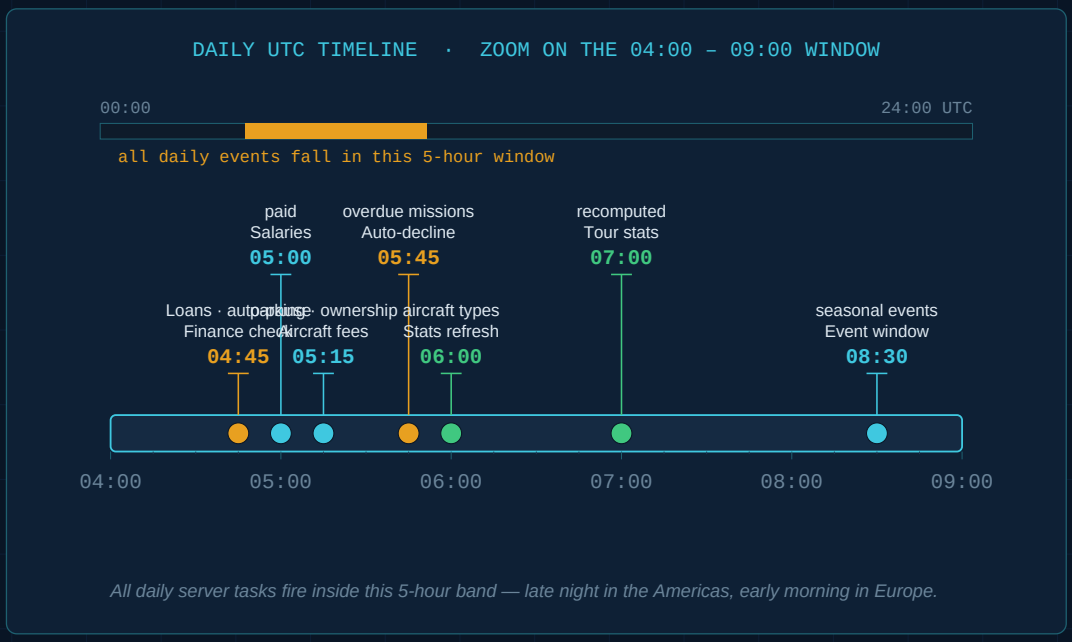


FIG 11.01 — Daily UTC timeline of key recurring server events

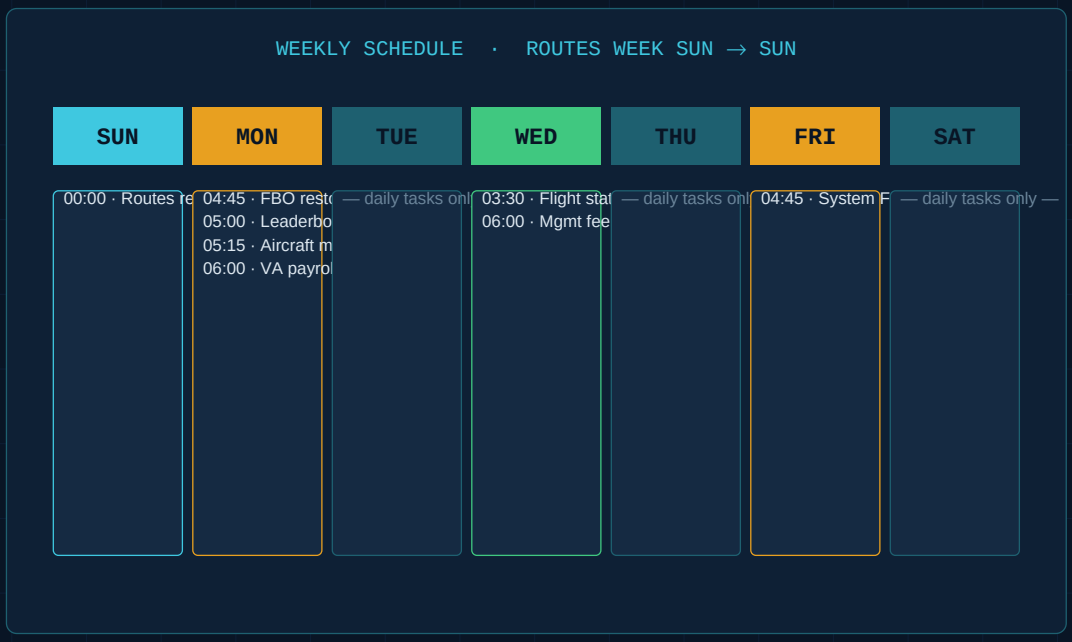


FIG 11.02 — Weekly schedule, Sunday-to-Sunday cycle

11.1 How the scheduler works

The server runs automated tasks continuously in the background. Two types exist:

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TYPE	HOW IT FIRES	EXAMPLE
Recurring	Every few minutes or hours, non-stop	"Maintenance progresses every 15 min"
Scheduled	Once a day or once a week at a fixed UTC time	"Salaries paid every day at 05:00 UTC"

These tasks run regardless of whether you are online.

11.2 The 5 questions players ask most

QUESTION	ANSWER
When are salaries paid?	**Every day at 05:00 UTC**
When are aircraft ownership & parking fees charged?	**Every day at 05:15 UTC**
When are FBOs restocked and FBO ownership fees charged?	**Monday at 04:45 UTC** (same restock **Friday at 04:45 UTC**)
When are loans checked for missed payments?	**Every day at 04:45 UTC**
When are overdue missions auto-declined?	**Every day at 05:45 UTC**

11.3 Short-interval tasks (minutes)

These run throughout the day. After any of these intervals, a page refresh will show updated results.

EVERY…	WHAT YOU SEE CHANGE
1 min	Aircraft in transit, warp or tarmac work progress. Warped flights get registered.
1 min	Outsourced cargo/charters you missed are marked expired.
1 min	FBO constructions finish; fuel orders are delivered.
1 min	Expired outsource listings are removed from the market.
1 min	Old completed missions are purged from your history.
2 min	One pending aircraft-type moderation request is processed.

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EVERY…	WHAT YOU SEE CHANGE
3 min	Employee and mechanic states update (training done, fatigue recovered, freelance availability).
3 min	Factories produce goods; inactive factories are archived.
5 min	Pending work orders execute; expired ones are deleted.
5 min	The multiplayer map refreshes.
5 min	Expired unclaimed missions are deleted.
5 min	Recurring hangar storage fees are charged.
5 min	Airport ownership rankings refresh; expired boosts are removed.
5 min	Industry merchandise transports arrive at destination.
10 min	Stuck flights are automatically repaired.
10 min	Rolling 1-month company reports are regenerated.
10 min	Weekly factory maintenance fees are calculated.
15 min	**Maintenance progresses** — mechanics advance on aircraft in the workshop.
20 min	Weather (METAR) refreshes for all airports.
60 min	Aircraft lease payments are processed.
60 min	Industry supply & demand levels are recalculated; stale contracts expire.

> **Maintenance note:** Mechanics advance every **15 minutes**. If your mechanic appears to be working but nothing has changed, wait 15 min before worrying.

11.4 Daily tasks (UTC)

All daily tasks fire in the 04:45–07:00 UTC window — late night in the Americas, early morning in Europe.

TIME (UTC)	WHAT HAPPENS
04:45	Loans are checked for missed payments; inactive companies are auto-paused.
05:00	**Eligible employee salaries are checked and paid** when their payment interval is due (§8.5).

TIME (UTC)	WHAT HAPPENS
05:15	**Aircraft ownership fees, parking fees** are charged; overdue rentals are terminated.
05:45	Unpaid missions more than **15 days past expiry** are automatically declined.
06:00	Aircraft-type statistics are regenerated.
07:00	Tour completion stats are recomputed.

> **Budget tip.** The three fee tasks fire back-to-back: 04:45 → 05:00 → 05:15 UTC. Make sure your cash balance at 04:45 UTC can absorb *loan check + salaries + aircraft fees* within a 30-minute window.

11.5 Weekly tasks (UTC)

DAY	TIME (UTC)	WHAT HAPPENS
Sunday	00:00	Next week's Regular Route block is scheduled. This is the start of the "routes week".
Monday	04:45	System FBOs are restocked with fuel; **FBO owners are charged the weekly ownership fee**.
Monday	05:00	All leaderboards are rebuilt.
Monday	05:15	System aircraft go to maintenance; aircraft asset values refresh.
Monday	06:00	VA member salary distribution is paid.
Wednesday	03:30	Historical flight data is consolidated onto each aircraft (stats refresh).
Wednesday	04:30	VA shareholder asset values are updated.
Wednesday	06:00	**Weekly company management fee is charged** (Challenge Mode only — see the Economy chapter).
Friday	04:45	Same system-FBO restock as Monday: stock below half capacity is refilled to 50-100 %; other stock is unchanged.

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> **Monday schedule.** These tasks have staggered start times. That timetable does not guarantee that one has finished before the next starts; check the relevant account or page for completion.

> **Routes week = Sunday → Sunday.** If you edit a Regular Route, the change takes effect the following Sunday at 00:00 UTC when the weekly block is rebuilt.

11.6 Network ports — technical reference

The server is three separate processes that communicate with each other. Useful if you are troubleshooting a connectivity issue.

SERVICE	PROTOCOL	PORT	ROLE
World (real-time)	TCP	**11000**	Live broadcasts (aircraft positions, chat, etc.)
World (sim bridge)	WebSocket	**11001**	Live SimConnect data channel

In production, game server and auth use HTTPS on `server1.onair.company` and `auth.onair.company` — no raw port is exposed.

11.7 TL;DR — the dates to remember

- **Every day at 05:00 UTC** → salaries checked; eligible payments are made when due.
- **Every day at 05:15 UTC** → aircraft ownership & parking fees.
- **Monday 04:45 UTC** → FBO weekly fee + fuel restock.
- **Wednesday 06:00 UTC** → company weekly management fee (Challenge Mode only).
- **Friday 04:45 UTC** → system FBO fuel restock (below half capacity only).
- **Sunday 00:00 UTC** → regular routes rebuilt for the coming week.
- **Maintenance progresses every 15 min** — not instantly.