

AVOPSIM MANUAL

Ground Handling & GSE

4 articles · Complete website edition

Includes all article text, tables and available illustrations. Videos and interactive resources are linked. Printed page numbers restart with each article. Use the clickable contents or PDF bookmarks to navigate.

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Ground Handling and GSE

Ground support equipment at the aircraft. Belt loaders, pushback tractors, tugs, fuel and catering vehicles, positioned precisely at the stand.



Program overview

Most ground damage happens in the last few metres: a belt loader at the hold, a catering truck at the door, a pushback under the nose. AVOPSIM models your ground support equipment with its working functions and puts it on your own stands, with aircraft, ground crew and other vehicles in the way. Operators practice approach, positioning and departure from the aircraft as often as they need before doing it on a live turnaround.

Program at a glance

Status	Available. Included in the AVOPSIM integration
Vehicles	Belt loader, pushback, tug and carts, fuel truck, catering truck, large tractor
Environment	Your stands, service roads and apron markings
Stations	Desk station or driving station
Missions	Stand approach and positioning scenarios in the Mission Editor

Included	Mission Editor and Examiner Console
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In this manual

- **Training exercises:** the mission types instructors can assign, repeat and score.
- **Running a mission:** how a mission is set up, driven and scored.
- **Features and benefits:** what the program adds to your training.

Every program runs on the same **digital twin**, **stations** and **instructor tools**.

Ground Handling and GSE

Training exercises

Each item is a mission type your instructors can assign, repeat and score. All of them run on your own airfield, and all of them can be built or adapted in the [Mission Editor](#).



Ground support equipment staged at the Winnipeg terminal

Mission types

Stand approach

Approach path, speed and stop position at the aircraft.

Belt loader positioning

Belt raise and lower at the hold with clearance to the fuselage.

Pushback and towing

Connection, push and tow with a modeled tractor.

Tug and carts

Handling a train of carts through apron traffic.

Fuel and catering

Positioning large service vehicles at wing and door.

Apron traffic

Ground crew, other GSE and taxiing aircraft.

Equipment functions

Working belts, booms and hitches.

Night turnarounds

Same stands in darkness and rain.

Summary

Exercise	What is practiced
Stand approach	Approach path, speed and stop position at the aircraft.
Belt loader positioning	Belt raise and lower at the hold with clearance to the fuselage.
Pushback and towing	Connection, push and tow with a modeled tractor.
Tug and carts	Handling a train of carts through apron traffic.
Fuel and catering	Positioning large service vehicles at wing and door.
Apron traffic	Ground crew, other GSE and taxiing aircraft.
Equipment functions	Working belts, booms and hitches.
Night turnarounds	Same stands in darkness and rain.

Ground Handling and GSE

Running a mission

A ground handling and GSE mission follows the standard AVOPSIM flow: assign, drive, track, score. See [Running a training session](#) for the general session checklist.

1. The instructor selects the stand, aircraft type and turnaround traffic in the Mission Editor and assigns the mission.
2. The operator drives the modeled unit from the service road to the stand, following apron markings and the equipment restraint area.
3. Approach, final position and equipment operation are performed as on the real aircraft, with clearance to the fuselage tracked.
4. The mission scores approach speed, stop position, clearance and any contact, and records the result.

After the mission

Results are recorded in the [Examiner Console](#). Review the violation log with the trainee and use [scenario replay](#) to repeat any situation that went wrong.

Features and benefits

Feature	Benefit
Your GSE	Units modeled per type with working functions and cabin controls.
Precise positioning	Clearance to the aircraft is measured on every approach.
Apron awareness	Traffic, ground crew and taxiing aircraft in the scenario.
Objective assessment	Contact, stop position and speed scored automatically.
Low cost per unit	From USD 2,000 per modeled vehicle.
Radio ready	Add the AI radio program for apron and ground calls.

From the digital twin



Ground support equipment staged at the Winnipeg terminal



Pushback tractor at the nose of a Boeing 737



Catering truck positioned at the aircraft door

What comes with every program

- **1:1 digital twin.** Your airfield, signage, lighting and buildings, reproduced from real-world data.
- **Microsoft Flight Simulator 2024 engine.** World, weather and physics maintained by Microsoft and Asobo.

- **Modular and scalable.** Add programs, vehicles and stations as you go, from desk station to full cabin.
- **Turn-key delivery.** Hardware, software, installation, instructor training and one year of support.