

AI Radio Communication

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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AI Radio Communication

Radio phraseology practice with a virtual ground controller. Speech recognition, a controller that answers, and scoring of phraseology and readbacks. In beta.



Program overview

Correct phraseology is part of the AVOP exam and part of every airside shift, but trainees cannot practice on a live frequency. AVOPSIM adds a controller they can talk to. The trainee keys a push-to-talk and makes the call. Speech recognition interprets it, a virtual ground controller replies with an instruction or a clearance, and the trainee reads back and drives. Phraseology, completeness of readbacks and response time are scored for the instructor.

Caution

Not an air traffic service. The virtual ground controller is a training aid. Trainees follow the phraseology published by their airport and authority.

Program at a glance

Status	Beta. Early access for AVOPSIM customers
Pricing	Subscription, per airport per year, because of ongoing speech and language processing cost
Hardware	Headset with push-to-talk on any station tier

Works with	Every AVOPSIM program: driver training, ARFF, winter, GSE
Instructor view	Scores and transcripts in the Examiner Console
Customization	Phraseology set to your airport and authority

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**.

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](#).



Taxiway and runway lighting at dusk

Mission types

Position reports

Vehicle identification, position and request.

Crossing requests

Requesting and receiving crossing and hold-short instructions.

Readbacks

Complete and correct readbacks, checked every time.

Clearance discipline

Driving only on a valid clearance. Movements without one are flagged.

Timing and brevity

Sharing a frequency with other traffic.

Local phraseology

Standard calls for your airport and authority.

Emergency calls

ARFF and incident communication.

Accents and pace

Speech recognition tuned for non-native and fast speakers.

Summary

Exercise	What is practiced
Position reports	Vehicle identification, position and request.
Crossing requests	Requesting and receiving crossing and hold-short instructions.
Readbacks	Complete and correct readbacks, checked every time.
Clearance discipline	Driving only on a valid clearance. Movements without one are flagged.
Timing and brevity	Sharing a frequency with other traffic.
Local phraseology	Standard calls for your airport and authority.
Emergency calls	ARFF and incident communication.
Accents and pace	Speech recognition tuned for non-native and fast speakers.

Running a mission

An AI radio communication mission follows the standard AVOPSIM flow: assign, drive, track, score. See [Running a training session](#) for the general session checklist.

1. The trainee keys the push-to-talk and makes the call: identification, position, request.
2. Speech recognition interprets the call. A virtual ground controller replies with an instruction or a clearance, voiced in the simulator.
3. The trainee reads back and drives. Movements without a valid clearance are flagged in the mission result.
4. Phraseology, completeness of readbacks and response time are scored. Transcripts are available to the instructor for debrief.

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.

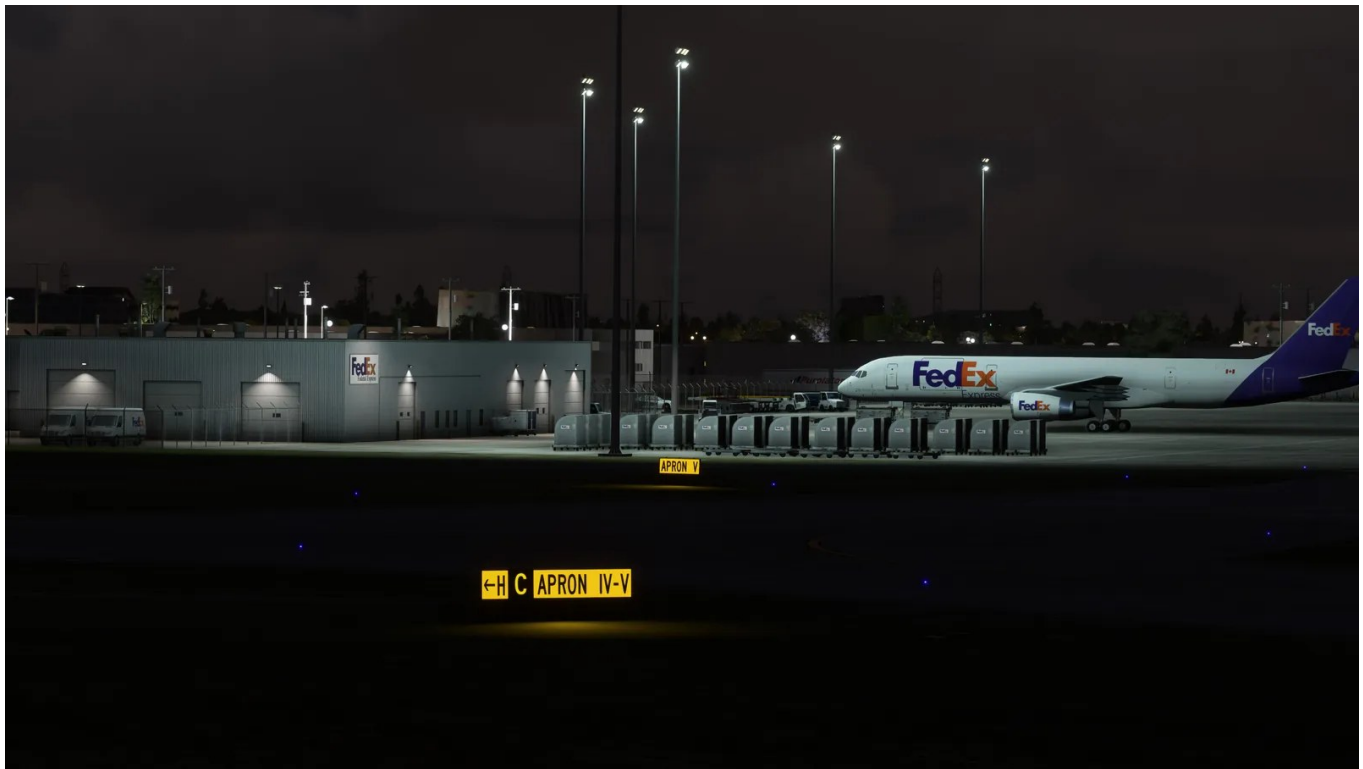
Features and benefits

Feature	Benefit
Practice without a frequency	Hundreds of calls before the first live one.
Objective scoring	Readbacks and clearances are checked the same way every time.
Integrated	Radio is part of the driving mission, not a separate exercise.
Transcripts	Every call and reply available for debrief.
Any station tier	Only a headset with push-to-talk is required.
Not an air traffic service	A training aid. Trainees follow the phraseology published by their airport and authority.

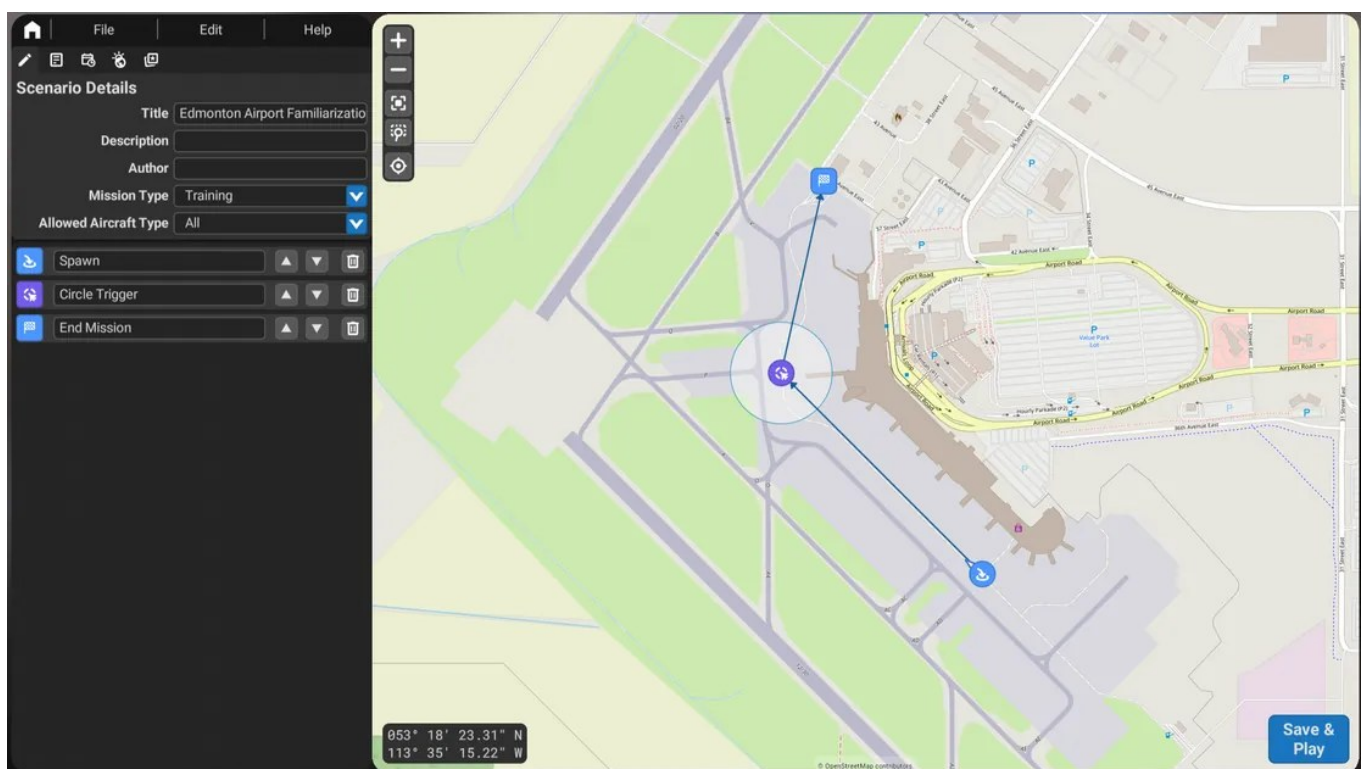
From the digital twin



Taxiway and runway lighting at dusk



Cargo apron at night, Winnipeg



Mission Editor with the airport map

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.