

# Simple Ground Equipment & Services



## License

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software. THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND

Simple Ground Equipment & Services (SGES).....	3
Introduction.....	3
Installation.....	3
Optional user customization.....	3
Operation.....	4
The ramp equipment.....	4
Search & Rescue situations.....	5
The arresting system.....	5
Automatic stairs.....	6
The marshaller.....	7
Ground objects: user customization.....	8
Reversion to X-Plane 11 default vehicles.....	8
Point to custom objects.....	8
Activate or deactivate SGES sounds.....	8
Using optional military assets.....	9
Requirement.....	9
Display the military variants.....	9
How to reference the Chinook?.....	9
Editing aircraft parameters.....	10
Credits.....	10
List of aircraft presets (as of version 51).....	11

# Simple Ground Equipment & Services (SGES)

## Introduction

*Simple Ground Equipment & Services* is very simple. It simply displays or hides static objects around your aircraft on the ground :

- a variety of ramp equipment (bus, GPU, cones, chocks, deicing...)
- moving vehicles: follow-me car, EMS
- a simplified marshaller
- an aircraft arresting system (cable, barrier or EMAS).

## Installation

- 1) Install [FlyWithLua NG](#)
- 2) Drop all files and folders into : [X-Plane 11/Resources/plugins/FlyWithLua/Scripts](#)
- 3) Open the keyboard menu in X-Plane and attribute a key to toggle our menu



- 4) Build a cache of all parking positions and runways for the marshaller and the arresting system:

Go to *Plugin* → *FlyWithLua* → *Macros* → *SGES: refresh cache*

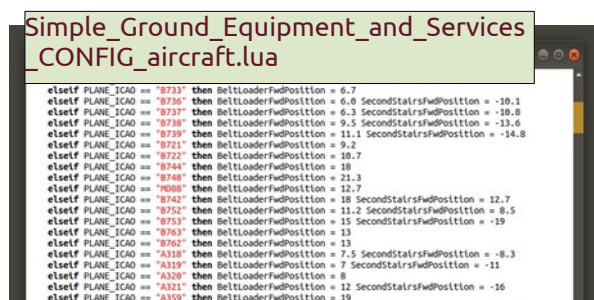
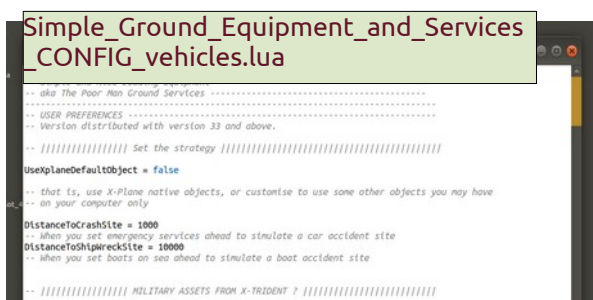
Wait a few seconds while we scan all default and custom sceneries and build our cache.

## Optional user customization

You don't have to make any configuration after installation. However, two separate configuration files still allow some user customization.

You may for instance:

- change our vehicles for specific objects of your choice in the first configuration file
- adjust aircraft ground handling parameters in the second one.

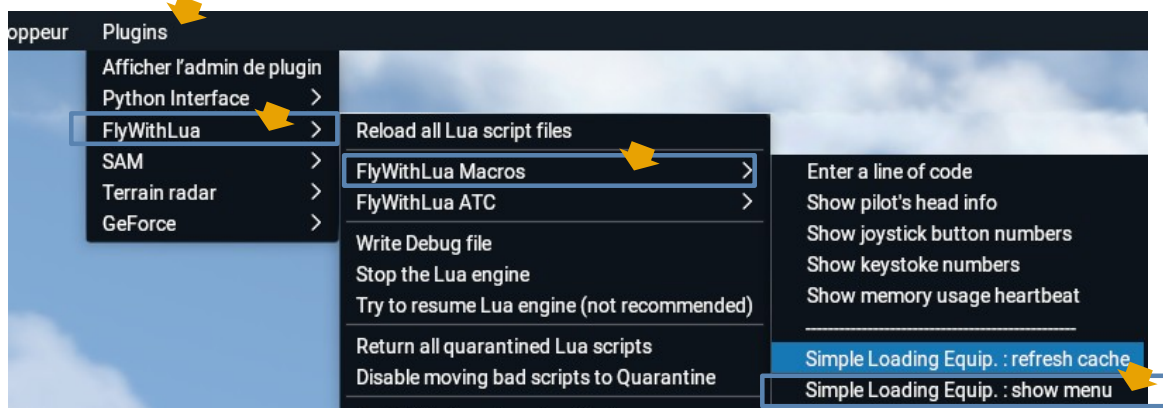


## Operation

When you start X-Plane, your aircraft parked on ground has no ground services.

Press your keyboard key, for instance « F », to open the ground services menu.

You can also popup our control panel from the FlyWithLua menu.



### The ramp equipment

When the menu is open, tick the boxes as required.

- To avoid interfering with any aircraft systems, **those ground services are purely visual.**
- **Ground services are static** and are displayed in the vicinity of the fuselage, but **not necessarily in contact to it.** The idea is to bring some life to the apron.

**Passenger set :** when unticked, the passenger bus and the catering are replaced by an alternative set of vehicles suited to freighter operations next time you cycle them.

**Chocks :** active chocks that actually retain your aircraft (as demonstrated in the picture), allowing you to release the parking brake as required.

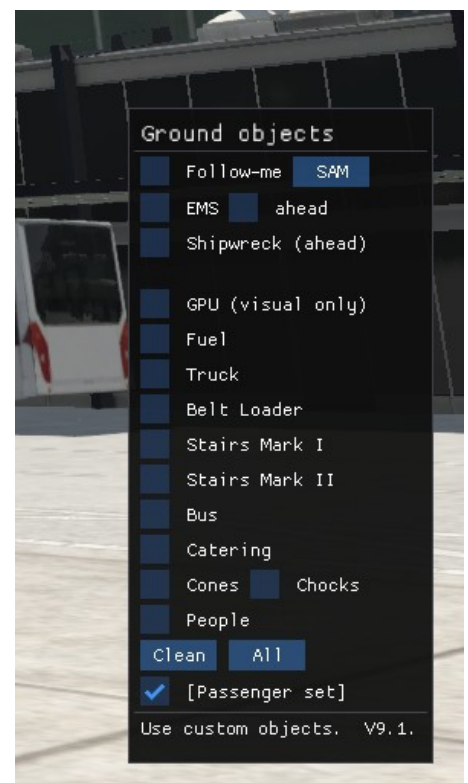
To keep things simple, chocks location cannot be configured by the user.



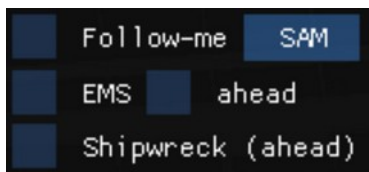
**Active deicing :** This option only appears when the ambient temperature is less than 5°C. **Your aircraft will be actually protected from X-Plane ice for 45 minutes** after the last fluid application.



We use [Paulmort deicing truck](#).







**Follow-me:** you can **select the follow-me** in the menu only when your taxi speed is below 30 kts.

The follow me car is not intelligent. It will turn when you steer your own aircraft nose wheel, so you're actually just pretending following him.

**EMS** (Emergency services): Those services will follow behind the plane.

## Search & Rescue situations

**"ahead":** You can also locate the EMS at a fixed location ahead of your aircraft, to simulate a car accident site.

**Shipwreck:** an emergency situation at sea is created far ahead of your current aircraft.



## The arresting system



Say you intend to land at Boise Intl, Idaho, runway 28R. When in the vicinity of the field, select **"Arrestor"** then **"28R"**.

This will put the arresting system at the end of the runway 28R, near the opposite runway end.

Tick the box **"Cable"** to change the system for a cable.

The cable can only stop terrestrial or naval aircraft equipped with a hook which must be deployed to catch it.

Tick **"E"** (for **EMAS**) for high-energy-absorbing materials in the overrun of the runway, instead of the barrier or the cable. This is the default selection, as this type of system is more commonly installed those days. EMAS captures any aircraft type.

Unselect **"E"** and **"Cable"** to revert to a **net barrier** at the end of the runway. The barrier captures any aircraft type.

## Automatic stairs

You can make the front stair automatically popup when the 1L door is open, and disappear when closed.

There two methods to do so.

- In the menu you can temporary allow or disable the automatic front stairs with the tick box "Auto stairs".
- You may allow or disable it on a more permanent way.

For the second method open the the vehicle configuration file in a text editor and adjust the value of "show\_auto\_stairs".

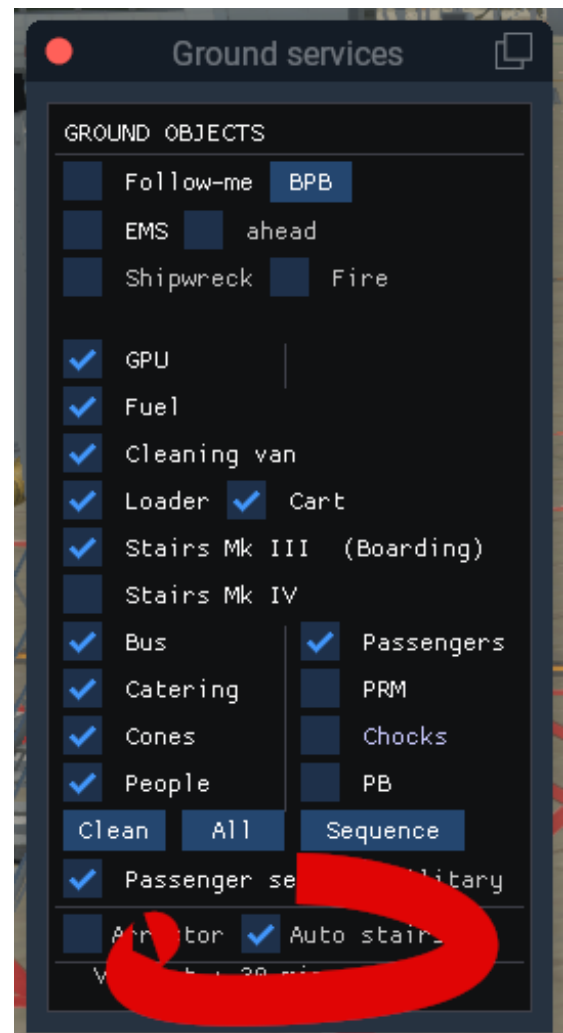
```
show_auto_stairs = true
```

Setting the show\_auto\_stairs value to true will allow the stairs to be shown automatically on door opening and closing.

Setting the show\_auto\_stairs value to false will disable all automatic stairs appearance.

Please note :

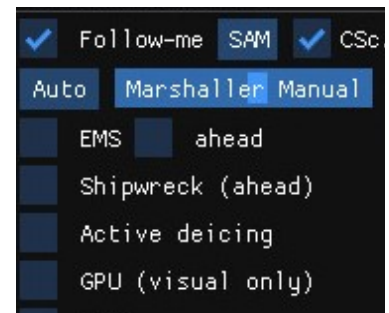
- ◆ You recover the manual control of the front stairs only when the box "Auto stairs" appears unticked (*ie* no "Auto stairs").
- ◆ This will work only with a selection of airplanes, when the 1L door dateref is referenced in the SGES aircraft configuration file.



## The marshaller

Sometimes Autogate or SAM marshallers and docking systems are unavailable. Still we would like to avoid going into an external view to park precisely on the lines. To do so we need to target the intended nose gear position beforehand.

- We do so either:
  - automatically from x-plane airport definitions (not always accurate)
  - or manually, *ie* visually, from our flight deck through the windshield.



1. First step: request the **follow-me**.
2. Capture your intended parking position
  - in automatic mode, press **“Auto”** and get the nearest stand available per X-Plane.  
Misalignment between the airport structure and the texture might happen. The visual capture may be more accurate.
  - in manual mode, capture your stand position visually by pressing **« Marshaller manual »** in the menu. Slide the blue arrow until it is collocated with your target.



3. Continue rolling toward the final parking position. The Follow-me car will stop, a marshaller will step down. [We use Paul Mort 3D Marshaller from “the Org”.](#)
4. Taxi slowly and pay attention to **the vocal “3.... 2... 1... Stop” countdown**.





# Ground objects: user customization

## *Reversion to X-Plane 11 default vehicles*

Open the vehicles configuration file in a text editor to change the line

```
UseXplaneDefaultObject = false
```

to

```
UseXplaneDefaultObject = true
```

■ ■ ■

## *Point to custom objects*

Starting with version 33 of the plugin, we integrated some MisterX library assets directly into our plugin to ease the end-user life. The MisterX Licencing indeed allows that provided credits is given.

**MisterX Library and static aircraft extension 1.61c**

library static aircraft misterx6

You may use your preferred vehicles instead, and further edit the vehicles configuration file.

First step, write the paths to your custom objects folder(s) :

```
-- custom objects folders (you CAN edit)
local Custom_Scenery_root1 = SCRIPT_DIRECTORY .. "../..../Custom Scenery/<my owned scenery>/objects/"
```

Then more accurately define each of your objects, for instance:

```
User_Custom_PrefilledBusobject = Custom_Scenery_root3 .. "Misc/LGKO_old_bus_anim.obj"
```

## *Activate or deactivate SGES sounds*

In the same vehicles configuration file, at the beginning, change

```
SGES_sound = true
```

to

```
SGES_sound = false
```

if you want to avoid our background engine loop.



# Using optional military assets

## Requirement

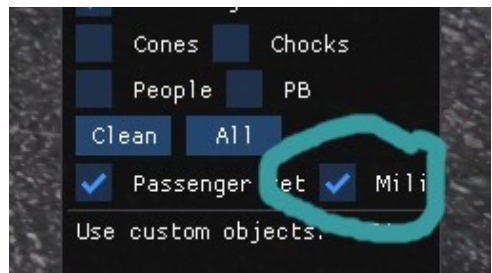
Please note that the military vehicles are not provided in our archive (because they are not our files). Instead **you must buy the X-Trident Chinook to get them.**

When the Chinook is installed, we will reference the files and reuse them, from where they already are on your hard disk. We are not allowed to copy and/or share this X-Trident intellectual property.

- ◆ The fuel truck is replaced by a HEMTT M978 vehicle.
- ◆ The catering, and the passenger bus are replaced by a HMMWV M998 vehicle.

## Display the military variants

Only when the Chinook folder is referenced in the user configuration file the "Mili" option will appear in the menu.



## How to reference the Chinook?

We declare the Chinook location.

Open in a text editor the user vehicle configuration file located in X-Plane 11/Resources/plugins/FlyWithLua/Scripts/.

Search the line :

```
XTrident_Chinook_Directory = nil
```

Change "nil" by the actual path to your CH47-D Chinook main folder. For instance :

```
XTrident_Chinook_Directory = SCRIPT_DIRECTORY .. "../..../Aircraft/CH47-D Chinook v1.0 for x-plane 11.50+"
```



## Editing aircraft parameters

In general, you shouldn't have to edit the ground handling set. The table next page shows that we already ship a comprehensive compatibility with X-Plane models.

A main parameter (called *BeltLoaderFwdPosition*) is used to refine the location of the ground equipment around the aircraft. To get an idea of the current aircraft size, we use the location of the forward cargo door in relation to the aircraft fuselage.

As such, to visually adjust the ground equipment to a new aircraft type, you may enforce the belt loader position to be next to the actual forward cargo hold. Then, the belt loader is not the only object to exploit the aircraft size for a better positioning.

Open the user aircraft configuration file, fill your plane ICAO code and get ready to change the factor *BeltLoaderFwdPosition*.



Increasing the value pushes the truck forward, toward the nose of the aircraft.

Adjust by trial and error the factor (reload FlyWithLua at each edit, and display the belt loader).

```
if PLANE_ICAO == "B732" then BeltLoaderFwdPosition = 6.1
elseif PLANE_ICAO == "B738" then BeltLoaderFwdPosition = 9.5
elseif PLANE_ICAO == "MD88" then BeltLoaderFwdPosition = 12.7
```

## Credits

From the X-Plane.org we used:

- MisterX library assets
- Paul Mort deicing truck and Marshaller

To activate the military option, our backbone also supports X-Trident Chinook vehicles (but we don't distribute them).

## List of aircraft presets (as of version 51)

	ICAO code	Adjusted location of belt loader ( <i>can be changed by the end-user in the aircraft config file</i> )	Manually adjusted location of chocks ( <i>cannot be changed by the end-user</i> )
Airliners	B732	✓	✓
	B733	✓	✓
	B703	✓	✗
	B721	✓	✓
	B722	✓	✓
	B736	✓	✗
	B737	✓	✗
	B738	✓	✓
	B739	✓	✗
	B742	✓	✓
	B744	✓	✓
	B748	✓	✓
	B752	✓	✓
	B753	✓	✓
	B763	✓	✓
	B762	✓	✓
	B777X	✓	✗
	B788	✓	✗
	B789	✓	✗
	MD88	✓	✓
	MD11	✓	✗
	A306F	✓	✓
	A3ST Beluga	✓	✓
	A310	✓	✗
	A318	✓	✗
	A319	✓	✓
	A320	✓ (revised in v50.1)	✗
	A321	✓	✓
	A321 P-to-F	✓	✓
	A332	✓	✗
	A333	✓	✗
	A346	✓	✓
	IL-96	✓	✗
	E170/175	✓	✓
	E190/195	✓	✓
	BAe 146	✓	✓
	A359	✓	✗
	Concorde	✓	✗
	Saab 340	✓	✗
	Q400	✓	✗
	Q300	✓	✗
	CRJ700	✓	✗
	Metroliner	✓	✓
	L410	✓	✓
BizJet	CL30, CL60	✓	✓
Military	C130, VULC, AV8B, Tornado, T-2, F4, F16, F15, HAWK	✓	
General Aviation	P28A	✓	✓
	P28R	✓	✓
	PA38	✓	✓
	BN2	✓	✓
	B350	✓	✓
	BE9L	✓	✓
	C172	✓	✓
	C152	✓	✓
	C140	✓	✓
	DR40	✓	✓
Helicopters	EV55	✓	✗
	L5	✓	✓
	S76, Bell 412, EC35/45, SA34 Gazelle, CH47	✓	