

Prepar3D V4.2 / V5 PayloadManagerX



Version 1.00 - 30.04.2020

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Passenger models and SkyDiver avatars: © 2018 Christian Bahr <http://www.bahrometrix.de>

Parachute, AI jumper models and FDE: © 2018 Bruce Fitzgerald

Custom sky diver altimeter gauge: © 2018 Marcel Felde

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1. Overview

The PayloadManagerX (PMX) is a simple addon application for Prepar3D V4.2f and V5 to handle attachment of objects, additional fuel tanks and aerial refueling live at runtime.

You can:

- Add a 3D co-pilot or 3D passengers to your aircraft interior
- Attach any SimObject to payload stations on your aircraft
- Add, edit and remove payload stations
- Manipulate the fuel level in all your tanks
- Use “virtual” external fuel tanks to feed into your fuel system (to extend the range of your aircraft)
- Drop parachute jumpers from your aircraft and follow them yourself
- Dispatch tankers for aerial refueling or use any AI in your sim for that purpose
- Attach fuel probes to your aircraft
- Attach a fuel drogue or flying boom to the tanker
- Attach any SimObject to an AI aircraft in your simulator

PayloadManager X will remember all the objects that you have attached to a particular aircraft, and reload this layout automatically, every time you fly the same aircraft again.

2. Installation

2.1 Distribution

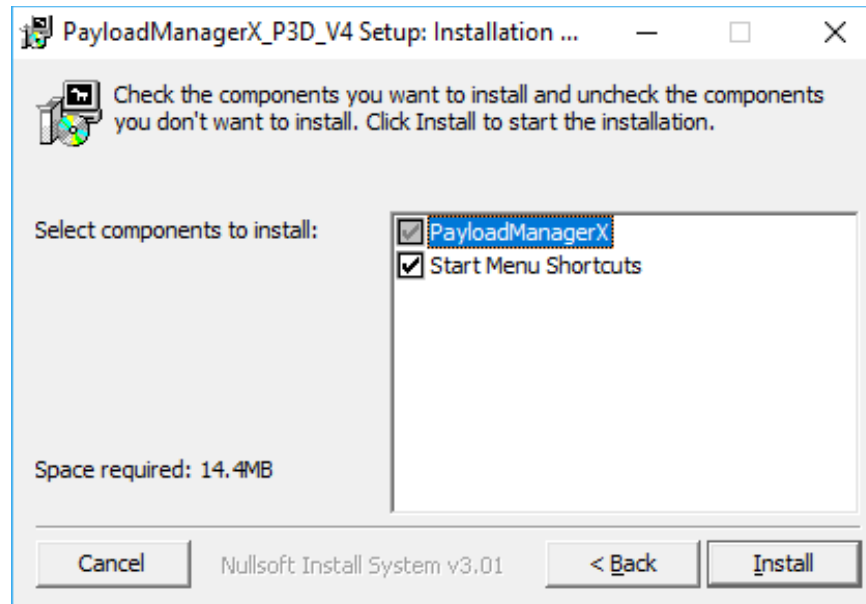
PMX is distributed as a self-extracting installer package:

- Prepar3D V4.2 or later: *PayloadManagerX_Install_P3D_V4.exe*
- Prepar3D V5.x: *PayloadManagerX_Install_P3D_V5.exe*

2.2 Installation

Double click on the installer file. The program will be installed into a subdirectory of the \Documents\Prepar3D Vn Add-ons\ folder.

Running the installer:



On the first page you may select optional installation targets:

- “Start Menu Shortcuts”: PMX will be added to your Start Menu (advised)
- Selecting “Install” will begin the installation

2.3 Microsoft .Net 4.8

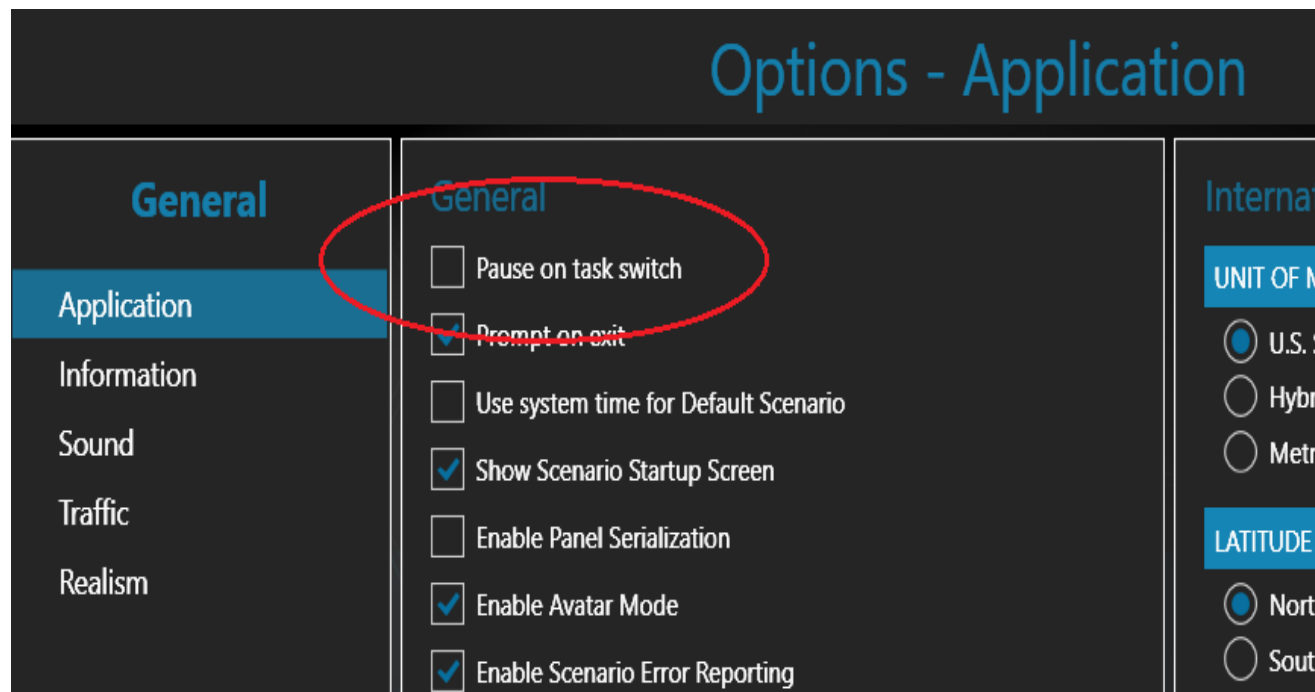
To run PMX it is required that you have at least Microsoft .Net 4.8 installed on your computer:

<https://dotnet.microsoft.com/download/dotnet-framework/net48>

2.4 Pause on task switch

PayloadManager X is a separate application, a task independent from your simulator.

When you want to operate the dialogs in parallel to your simulator, you **MUST** switch the “Pause On Task Switch” option OFF in the General Application Options of P3D.



3. Operations

3.1 Payload Stations and attachments

PayloadManagerX (0.97 b05) (c) 2017 LORBY-SI

Connect ☐ Connect automatically ☐ Minimize automatically Disconnect

Beech King Air 350 Paint1

Payload stations Built-in fuel tanks Simulated external tanks Aerial refuelling Attach object to AI Passenger Textures

Attached Object	ID	Name	Weight	Offset F/B	Offset L/R	Offset U/D	Lock
	0	"Pilot"	170	5.00	-2.00	0.00	
pilot_female 1	1	"Co-Pilot"	120	4.50	1.30	-0.70	X
Jumper_Blue	2	"Passenger"	180			0.00	X
Jumper_Green	3	"Passenger"	180			0.00	X
Jumper_Red	4	"Passenger"	180			0.00	X
Jumper_Yellow	5	"Passenger"	180			0.00	X

Use mouse wheel or direct edit to change name, position and weight

Total load: 4610

☐ Ignore attachment weight

Orientation

Pitch: 0

Bank: 0

Heading: 0

Randomize Passengers in this aircraft ☐

☒ Bulk drop

blue = active
gray = not active
hollow & left = below deck
hollow & right = above deck

Click into a slot to attach the selected object

Cargo_pod

Object finder Remove Model

☒ My objects ☐ Parachutists

☐ Passengers ☐ Pilots

☐ Follow the jumpers ☒ Solo jump ☐ Bail out ☐ Status window

Add row Delete row

Apply

Units ☒ lb/gal ☐ kg/l

Switch between different types of objects to attach

Click "Apply" to save changes (aircraft will reload)

Close

Elements of the Main Window explained:

- “Connect” / “Disconnect”: connect/disconnect the application to/from your simulator.

“Connect automatically”: enabling this will do two things: PMX will start automatically when you start your sim, and it will connect to the sim as well. The app will be shut down automatically when the simulator is closed.

“Minimize automatically”: will send the application to the task bar, as soon as it loses focus.
- The main list shows all payload stations of your current aircraft
 - Use the mouse wheel or direct edit to change the parameters in the row (also works when the object is already attached)
 - Use the “Orientation” controls to spin the model around its three axis.
Please note that the “Orientation” is bound to the *model*, not the payload station. If the model is changed, Pitch, Bank and Heading go back to 0. To alter existing values you can click anywhere in the row of the payload station to select it, EXCEPT the first column, where the object name is (that would remove it).
 - Use “Add row” to add more payload stations or “Delete row” to remove them
 - **Press “Apply” to save and activate your changes (the aircraft is reloaded in the simulator)**

- To attach an object to the payload station, select the object in the drop down list (bottom left), then click into a slot of the first column. Click on the slot again to remove the model.
- Use the checkbox “Randomize Passengers in this aircraft” to get new passengers every time you reload that aircraft. This works better if you add a few more passenger models.
- To better organize the models you can group them in three different categories:

“My objects” for all normal simobjects

“Passengers” for passenger models (PMX initially has 10 different models to choose from)

“Pilots” for pilot models (PMX initially has 4 different models to choose from)

“Parachutists” for jumper models (PMX has 4 different models to choose from)

Use the radio buttons to switch between them.

Each list can be expanded with your own models by first selecting it, then using the Object Finder dialog.

- Object selection drop down control (bottom left):
 - use the “Object finder” dialog to add objects to the drop down.
 - “Remove Model” removes an object from the drop down list.
- Visual payload station layout on the right: shows where the payload stations are located in relation to the datum reference point of your aircraft

Performance considerations:

Please note that adding high-polygon-count 3D models (like the passengers) into your simulator will have a significant impact on performance.

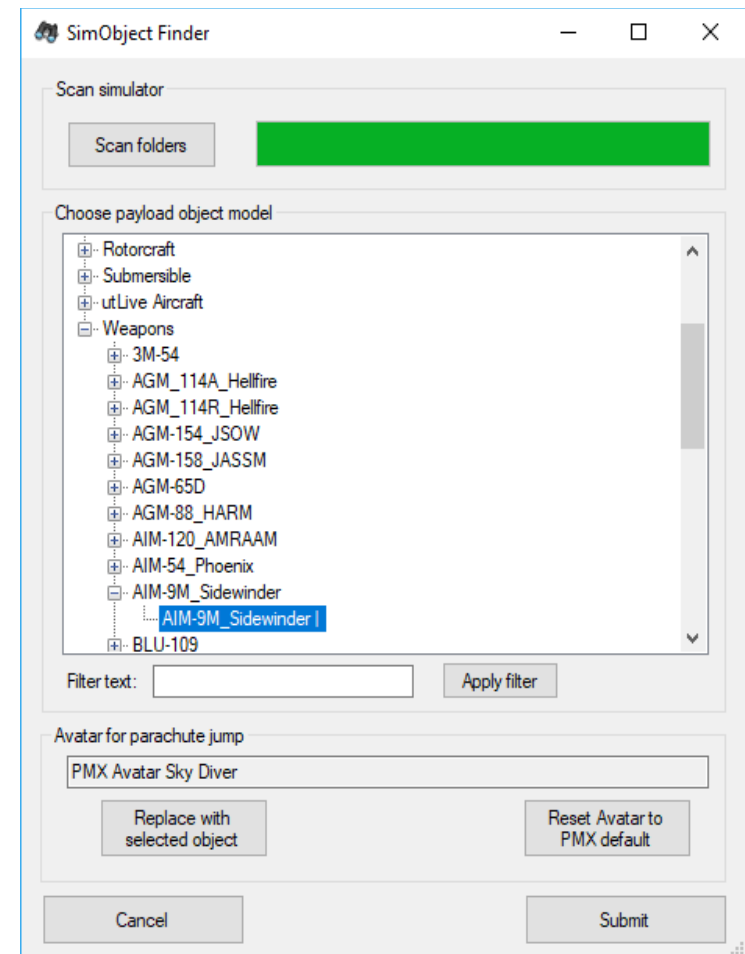
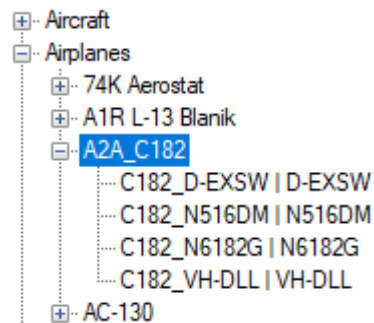
There is not a lot that can be done about this, except using simpler models with less polygons – but that makes especially 3D models of people look really bad.

To help a little bit with sim performance, PMX has a non-animated “static” model for each passenger.

3.2 The Object Finder

Any simobject that your simulator can see, can be added to the drop down lists “My objects”, “Passengers and “Pilots”.

- As soon as you click on the “Object Finder” button, the following dialog opens:
- Press “Scan folders” to scan all the active folders containing simobjects that your simulator can currently see
- Select either a single object, as shown in the screenshot, or the whole object folder, by selecting its header:



- Press “Submit” to save your selection to the database.

3.3 Built-in fuel tanks

PayloadManagerX (0.80 b14) (c) 2017 LORBY-SI

Connect Disconnect

Beech King Air 350 Paint1

Payload stations Built-in fuel tanks Simulated external tanks Aerial refuelling Attach object to AI

External 1	Left tip	Left aux	Left main	Center 1	Center 2	Center 3	Right main	Right aux	Right tip	External 2
0 %	0 %	94 %	93 %	0 %	0 %	0 %	97 %	94 %	0 %	0 %
0.0 lb	0.0 lb	500.82 lb	1253.69 lb	0.0 lb	0.0 lb	0.0 lb	1237.68 lb	500.82 lb	0.0 lb	0.0 lb
0.0 gal	0.0 gal	74.75 gal	187.12 gal	0.0 gal	0.0 gal	0.0 gal	184.73 gal	74.75 gal	0.0 gal	0.0 gal

Slide up or down to change fuel level

Total capacity: 539 gal Total quantity: 521 gal Total weight: 3493 lb

Units
☒ lb/gal ☐ kg/l

Close

On this dialog you can control the fuel load of your aircraft, by pulling the sliders up or down. Please note that this dialog can only influence the fuel tank logic of the simulator itself, it will not be able to adjust fuel levels of addon aircraft that are using their own fuel logic.

3.4 Simulated external tanks

PayloadManagerX (0.80 b14) (c) 2017 LORBY-SI

Connect *Beech King Air 350 Paint1* Disconnect

Payload stations Built-in fuel tanks **Simulated external tanks** Aerial refuelling Attach object to AI

Use as fuel tank	ID	Name	Attached Object	Capacity	Weight
	0	"Pilot"		25	170
	1	"Co-Pilot"		25	170
		"Pilot"		25	170
		"Pilot"		25	170
X		"Pilot"		25	170
X	5	"Passenger"		25	170

Click to select/deselect as fuel tank

Total capacity: 51 gal
Total quantity: 50 gal
Total weight: 337 lb

Units
☒ lb/gal ☐ kg/l

Close

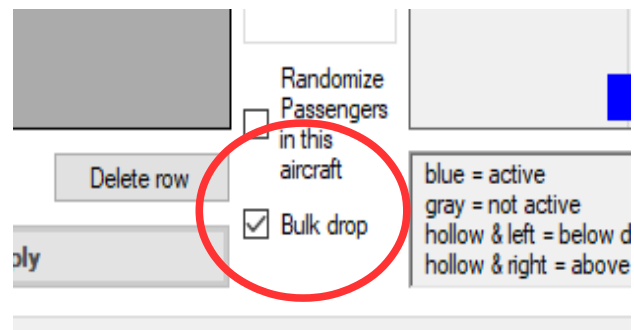
Any payload station can be assigned to pose as an additional fuel tank, that will feed into the fuel system of your aircraft.

3.5 Dropping attached objects

Objects attached to payload stations can be dropped using the “RELEASE DROPPABLE OBJECTS” event of the simulator (Shift&D). Passengers and Pilots cannot be dropped.

Default operation is a single object drop per event – every time you press “Shift&D” an object is dropped.

You can elect to drop all objects at once with a single button press by activating the “Bulk drop” option:



3.6 Parachute jumpers

You can attach parachutists to your aircraft and drop them with the aforementioned method. Please note that the jumper models in PMX are all “standing up”, so you may want to change the pitch of the model when you attach them to make them lie down (otherwise their feet will stick out of the plane)

Attached Object	ID	Name	Weight	Offset
	0	"Pilot"	170	5
pilot_female1	1	"Co-Pilot"	170	4
Jumper_Blue	2	"Passenger"	170	-2
Jumper_Green	3	"Passenger"	170	-2
Jumper_Red	4	"Passenger"	170	-5
Jumper_Yellow	5	"Passenger"	170	-5

After being dropped, the jumpers will free fall down to 5000 feet, where they will deploy their parachutes and float to the ground. When they reach the ground, they are removed.

3.7 Sky diving

With PMX you have two options to jump from your aircraft with a parachute. You can jump solo, or follow the other jumpers that you have added to your aircraft.

☐ Parachutists

☐ Follow the jumpers

☒ Solo jump ☐ Bail out

☐ Status window

In “**Solo jump**” you will exit the aircraft like a parachute jumper. Your aircraft will continue flying under AI control.

“**Bail out**” is like activating an ejection seat, you are shot upwards from the aircraft – and your aircraft will crash.

“**Solo jump**” and “**Bail out**” are triggered by the simulator event “**tow plane release**” (Shift&Y)

If you activate the “**Follow the jumpers**” checkbox, you will automatically leave your aircraft when the last jumper has exited (triggered by Shift&D). You have to attach at least one jumper for this option to work. When you are dropping AI jumpers, you can show the position of the first three of them in a **status window** in P3D.

When falling from the airplane you are transferred into a special object carrying an Avatar of your choice. The Avatar model can be changed on the Object finder dialog. The PMX default Avatar has special animations for the parachute jump, any other Avatar will just display the “DefaultIdle” stance.

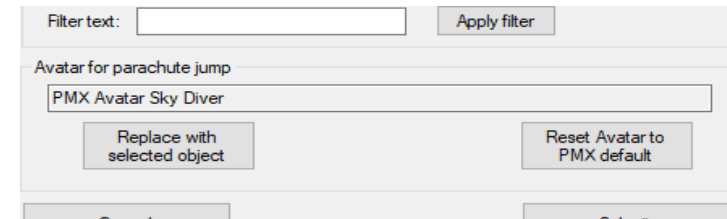
You can change the avatar model on the “Object Finder” dialog:

Once jumped from the aircraft you have limited control over your fall with the normal flight controls.

- The chute is deployed by fully extending the flaps (F8).
- You can turn on a strobing light with (L) and a smoke trail with (I)

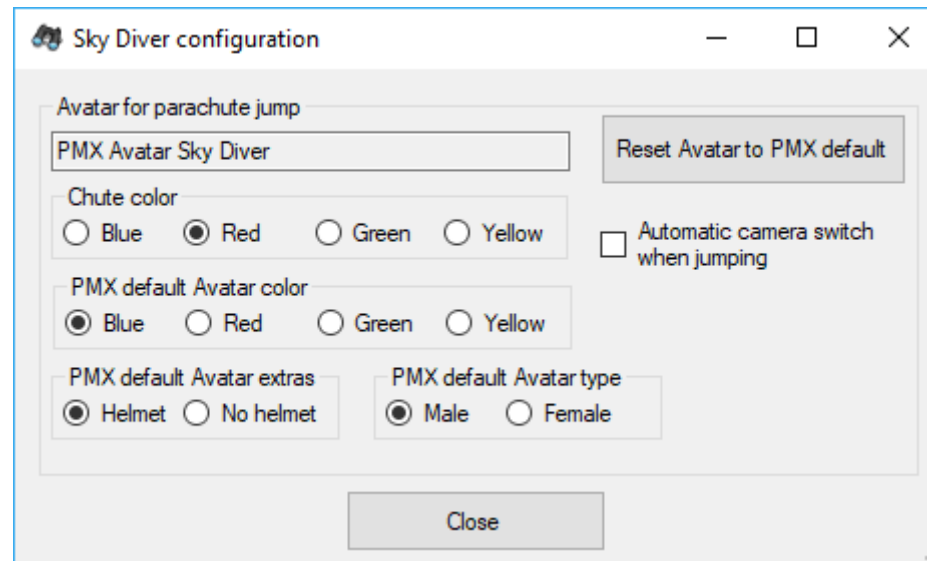
Notes about “Bail out”:

- as ejection seats are only available in military aircraft, your Avatar for the jump will always be a military pilot.
- The parachute used when bailing out is not steerable.



3.7.1. PMX Sky Diver Avatar configuration

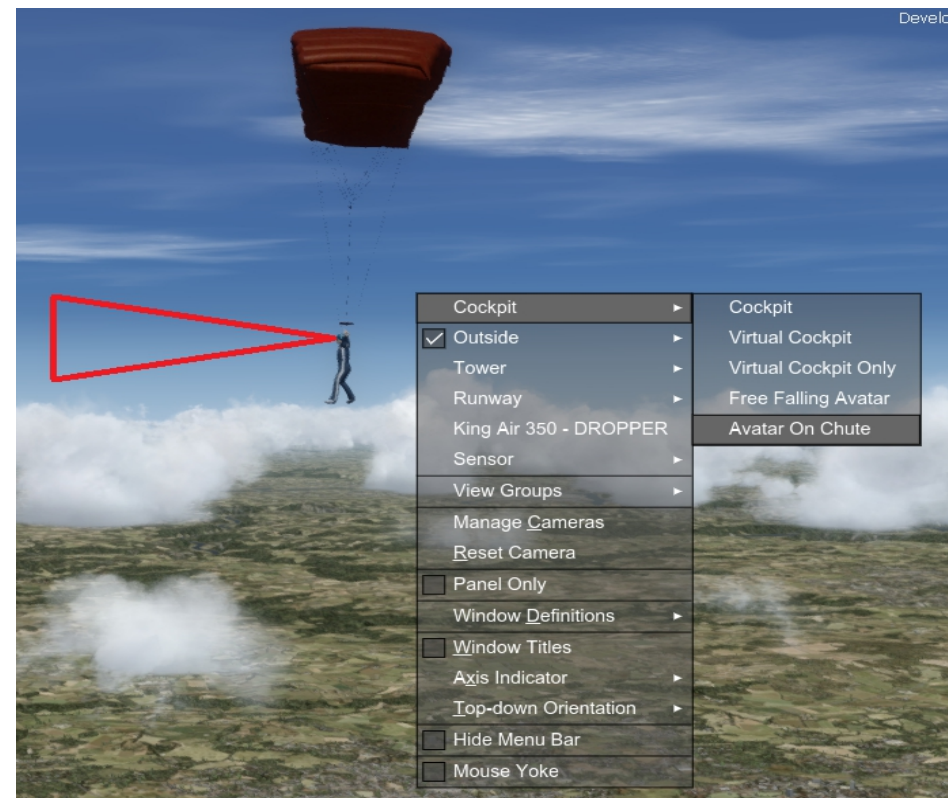
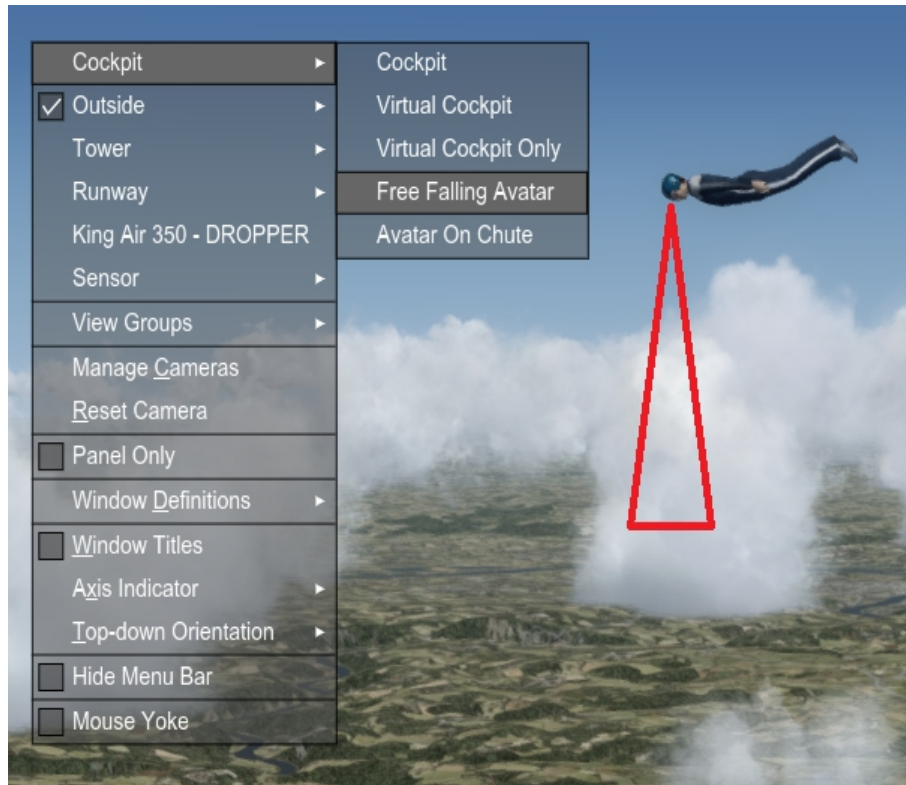
You can change various aspects of the default Sky Diver avatar on the “Sky Diver configuration” dialog. Please note that any changes you make on that dialog will only take effect the next time you use this avatar – things will not change right away.



On this dialog you can select the color of the chute and of the suit that the avatar is wearing. You can make him wear a helmet and you can select the automatic camera switch. When the automatic switch is enabled, PMX will select the correct camera for the first person view (“through the avatar's eyes”) for the current stance.

3.7.2. PMX Sky Diver Avatar Camera views

The Sky Diver avatar has two special camera definitions to account for the horizontal stance of the avatar, called “Free Falling Avatar” and “Avatar On Chute”.



As soon as the chute has opened, it is recommended to switch to the “Avatar On Chute“ or the “Virtual Cockpit” view.

You can elect to have PMX activate these camera positions automatically on the Sky Diver Configuration dialog.

3.8 Aerial refueling

PayloadManagerX (0.94 b06) (c) 2017 LORBY-SI

Connect ☐ Connect automatically ☐ Minimize automatically Disconnect

Robinson R22

Payload stations Built-in fuel tanks Simulated external tanks **Aerial refuelling** Attach object to AI Passenger Textures

Create tanker

Select model Commercial Airliner Paint2 Aircraft finder Remove Model Load from template Save as template

Position ☒ relative ☐ absolute Create at 40 Bearing 0

Flying a ☒ left ☐ right pattern, 30 by 10 nm, in direction of 250 knots, 25000 feet

Reset

Attach probe to my aircraft ☒ None ☐ Attach a fuel probe to your own aircraft F/B: 0,0 P: 0,00 Auto hide

☐ Random movement while latched

Active tankers

ATC-ID	Distance	Bearing	Altitude	Speed	Heading
Tanker-0	41 nm	360°	24974 ft	244 kn	356°
Tanker-1	40		24949 ft	244 kn	357°
Tanker-2	40		24974 ft	242 kn	357°

Select for edit or rename

Status info format (P3D 3.x, 4.x only) ☐ None ☒ Text bar ☐ Message window Load tankers from Database

Units ☒ lb/gal ☐ kg/l

Edit selected tanker

Tanker-1

Refuelling zone (feet from aircraft model center!)

Offset F/B: -47,5 Offset L/R: 0,0

Offset U/D: 20

Flow rate: Edit tanker parameters, refueling zone and attached visual model

Attach fuel sys: ☐ None ☒ Flying Boom ☐ Probe-And-Drogue

Remove Save to database Latch on Auto latch Release

Latching on

Close

3.8.1. Creating an AI tanker

Use the “Aircraft Finder” dialog to select your desired tanker aircraft. This aircraft doesn't have to have a drogue or flying boom, you can attach one with PMX at runtime. An air tanker is flying in a rectangular pattern until you delete it.

- Select a position “relative” to your own, or “absolute” lat/lon coordinates.
- Select a pattern orientation, size of the rectangle, speed and altitude for the tanker (make sure that the aircraft you are selecting can actually fly at that speed and altitude)
- Press “Create”
- After the tanker has been created, it will show up in the “Active tankers” list

Alternatively you can assign an AI aircraft to be a tanker on the tab “Attach objects to AI”. Click on “Request AI aircraft” to get a list of all AI in the sim, highlight the desired aircraft in the list, and click “Use AI as tanker”

3.8.2. Editing an AI tanker

- Click on the row header (the column “ATC-ID”) of the tanker that you want to edit
- The parameters of the tanker will appear in the “Edit selected tanker” box
- Now you can:
 - Adjust the refueling zone size and position
 - Attach a visual fuel system (flying boom or drogue)
 - Changing the “Offset” parameters changes the position of the fuel system model
 - The button “Remove” will delete the tanker from the simulator

3.8.3. Attaching a fuel probe to your own aircraft

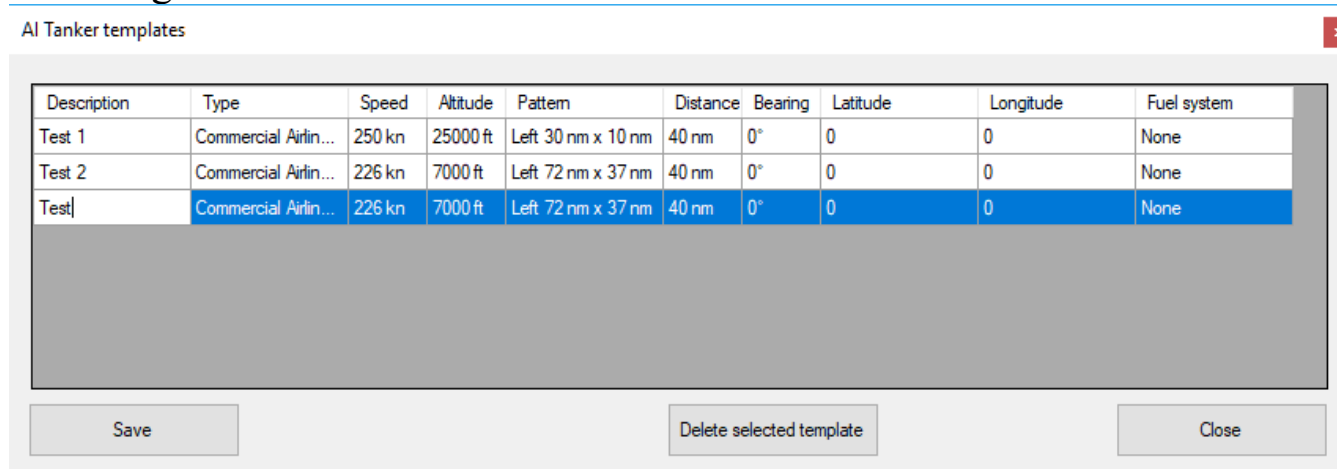
Use the controls in the “Attach probe to my aircraft” box to attach and reposition one of the two probes to your own aircraft.

“**Auto Hide**” will automatically display the probe only when you are closer than 3000 ft to the tanker. When you are outside of this range, the probe is hidden. This may be useful for aircraft that in the real world have retractable probes.

3.8.4. Saving and reloading templates

You can save the tanker parameters as templates and recall them before you create new tankers.

To save your current tanker route and parameters, use the “**Save as template**” button. This will open the template management dialog:



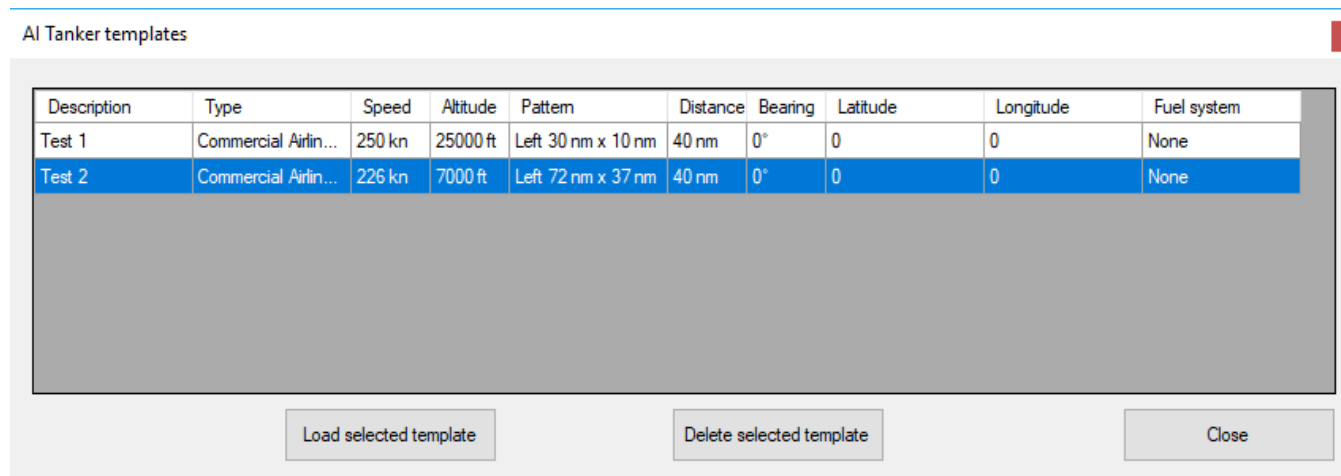
Description	Type	Speed	Altitude	Pattern	Distance	Bearing	Latitude	Longitude	Fuel system
Test 1	Commercial Airlin...	250 kn	25000 ft	Left 30 nm x 10 nm	40 nm	0°	0	0	None
Test 2	Commercial Airlin...	226 kn	7000 ft	Left 72 nm x 37 nm	40 nm	0°	0	0	None
Test	Commercial Airlin...	226 kn	7000 ft	Left 72 nm x 37 nm	40 nm	0°	0	0	None

Save Delete selected template Close

Your current parameters will be added as a new line below the existing templates. You can enter a description by doubleclicking into the first cell of the new row and entering a text

“Save” will commit the new template to the database.

To load a route and set of parameters in order to create a similar tanker use the “**Load from template**” button:



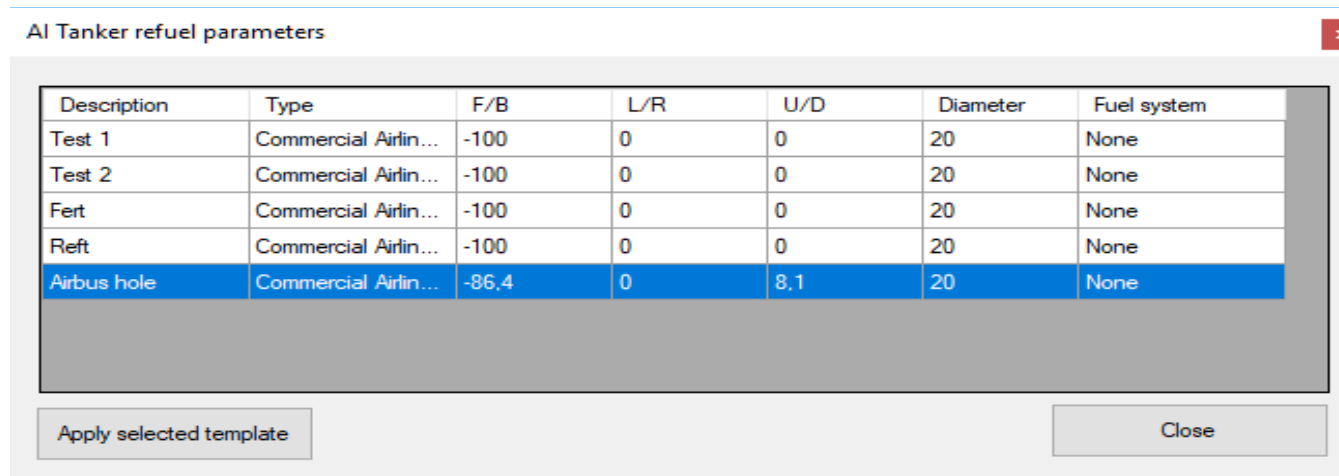
Description	Type	Speed	Altitude	Pattern	Distance	Bearing	Latitude	Longitude	Fuel system
Test 1	Commercial Airlin...	250 kn	25000 ft	Left 30 nm x 10 nm	40 nm	0°	0	0	None
Test 2	Commercial Airlin...	226 kn	7000 ft	Left 72 nm x 37 nm	40 nm	0°	0	0	None

Load selected template Delete selected template Close

To select a template there are two options:

- doubleclicking a row will load the template and close the dialog immediately
- Selecting a row and then clicking on “Load selected template” will load the template to the main window but it keeps the template dialog open.

To load only a set of refueling parameters (excluding the route) to be applied to an existing tanker use the “Apply template” button when you have selected the tanker for editing. Please note that the list will only show templates for the aircraft model of the tanker that you have selected.



AI Tanker refuel parameters

Description	Type	F/B	L/R	U/D	Diameter	Fuel system
Test 1	Commercial Airlin...	-100	0	0	20	None
Test 2	Commercial Airlin...	-100	0	0	20	None
Fert	Commercial Airlin...	-100	0	0	20	None
Reft	Commercial Airlin...	-100	0	0	20	None
Airbus hole	Commercial Airlin...	-86,4	0	8,1	20	None

Apply selected template Close

To select a template there are two options:

- doubleclicking a row
- Select a row and then click on “Apply selected template”

Both actions will load this set of refueling parameters and apply them to the tanker. The selection dialog will be closed.

3.8.5. Saving and reloading tankers

The tankers that you create can be committed to an internal database with pressing “Save to database” when a tanker is selected to editing, and called up any time later with “Load tankers from Database”

3.8.6. Aerial refueling procedure and “latching”

- After having created a tanker, a status window will be displayed in your simulator where that tanker is in relation to you. The status window will always show the tanker that is closest to you:



- When you get closer to the tanker, the display becomes more accurate, until it shows the position of the refueling zone in relation to you (offsets in feet)
- Once inside the refueling zone you have three options:
 1. Try and hold your aircraft in the zone manually (very hard to do)
 2. Latch onto the tanker manually using “Shift & F” or the buttons on the dialog
 3. If the “Auto-Latch” parameter is checked, your aircraft will latch on automatically
- While you are latched to the tanker, pressing “Shift & F” again will release your aircraft.

And what does “Latch on” mean?

Your aircraft will be attached physically to the AI tanker and you can take your hands off your controls while your tanks are refilled. It will stay attached until you “Unlatch” again.

If you establish a visual fueling system on the tanker and use a probe on your own aircraft, that is where you will be connected to the tanker.

Random movement when “latched”

To make the “latch” less static, small random movements can be added while you are attached to the tanker.

To activate this, enable the checkbox “Random movement”. With the “Parameters” dialog you can control how pronounced these movements are, both in maximum movement range and movement speed. Please note that the “heading” values are only valid when you are not using a PMX built-in refueling system on the tanker.

3.9 Attaching objects to AI

Connect

Beech King Air 350 Paint1

Disconnect

Payload stations Built-in fuel tanks Simulated external tanks Aerial refuelling Attach object to AI

ID	Name	Type	Attached Object
121	Tanker-0	BVA_A320_X	
465	EI-DHO	Boeing 738 NyPaint77	
466	I-BIKU	A320 MyPaint25	
467	EC-JBE	Emb120-MyPaint37	
468	TS-IML	A320 MyPaint67	
469	G-EZIN	A319 MyPaint64	
470	I-MLHT	Fokker 27 MyPaint19	
471	TC-JRJ	A321 MyPaint47	
475	I-BIKU	A320 MyPaint25	

Use AI as tanker

Use the selected AI as tanker

Request AI aircraft

Click here to request the active AI from the simulator

Attach this object

AIM-120_AMRAAM

Offset L/R: 0 Pitch: 0

Offset U/D: 0 Bank: 0

Offset F/B: 0 Heading: 0

☐ Rigid

Submit

Attach the selected object to the AI

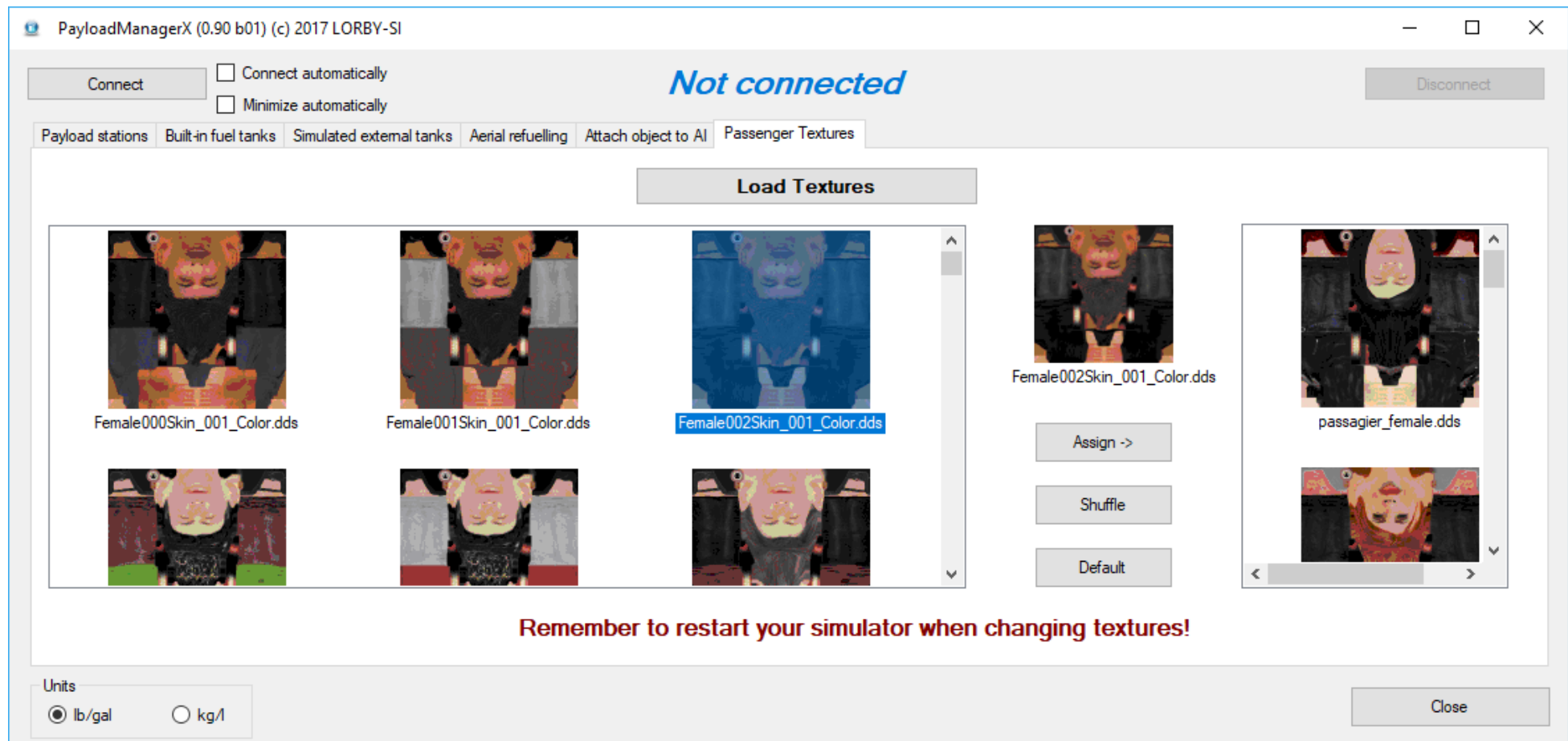
Units

☒ lb/gal ☐ kg/l

Close

- Click on “Request AI aircraft” to populate the list with all the AI that are currently active in your sim
- Adjust the position of the object by editing the Offset parameters (rigid means that the object will not “swing” when the AI is flying a curve). Use “Submit” to attach the selected object to the AI

3.10 Changing passenger textures



On this dialog, you can assign different textures to the passenger models.

It is advisable to use this dialog only when the simulator is NOT running. The sim must be restarted anyway when the textures have been changed.

1. To load the textures click on the button “Load Textures”
2. Click on a texture in the left window to select it for assignment – it will be shown between the two lists
3. Click on a target model texture in the right list to select it for replacement
4. Click on “Assign →” to replace the selected texture

The button “**Shuffle**” will assign random textures to the passenger models.

The button “**Default**” will restore the default textures for the passengers.

NOTE: Not every texture fits every model. Especially long vs. short shirt sleeves are noticeable and differences in general body build can lead to unexpected results.

You can add your own textures to this list by creating a 1024x1024 DXT1 .dds file and saving it to the folder

```
"Documents\Prepar3D v(4/5) Add-ons\Lorby-SI PayloadManager X  
  \Content\SimObjects\PMX_Passengers\texturepool"
```

The dialog described above will load all .dds files in that directory and display them in the left hand window. That way you can assign them to the existing models (female/male 1-5) as described above.

3.11 Interoperability

3.11.1. Aerial refueling

It is possible to inject tankers into PayloadManagerX. This can be utilized by other applications that want to make use of the aerial refueling features of PMX.

The interop interface is designed to process XML files.

- The interop folder is “C:\Users\...\Documents\PayloadManagerX Files\Interop\”
- The files must be called “TankerInterop*.xml” (you can use any string to replace the *, there can be multiple files in the folder too).
- The files must be in UTF-8 encoding

To create a tanker:

- Create the file with a different name, copy it into the interop folder
- Then rename your file to “TankerInterop*.xml”
→ this avoids PMX trying to read the file while it is still being copied
- PMX will read the file, create the tanker and delete the file

To remove a tanker:

- Drop the same file into the interop folder again
- Key parameter to identify a tanker is the GUID in the tanker dataset

File format:

To get the file format right, it is recommended to first create the tanker in PMX, attach a probe system as desired, then add it to the PMX database. After that the data can be extracted from

“C:\Users\...\Documents\PayloadManagerX Files\Pmx_Tanker_DB_P3D_Vn.xml”

Example of a tanker file without an additional probe system:

This creates the default Airbus to the north of LIEO, flying a racetrack pattern with 250kn at 25000ft. The refueling point is 100 feet behind the datum reference point of the model, the refueling zone has a diameter of 20 feet, and fuel will flow with 6500 lb/min.

```
<?xml version="1.0" encoding="utf-8"?>
<AiTankerDatabase xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <aiTankers>
    <AiTankerDataset>
      <guid>42da081d-7435-43a6-bedc-1e954f5d5084</guid>
      <nameId>Tanker-0</nameId>
      <aircraftTitle>Commercial Airliner Paint2</aircraftTitle>
      <refPosFB>-100</refPosFB>
      <refPosUD>0</refPosUD>
      <refPosLR>0</refPosLR>
      <probeDiameter>20</probeDiameter>
      <flowRate>6500</flowRate>
      <startPoint>
        <latitude>41.572582051737065</latitude>
        <longitude>9.5060928837446532</longitude>
        <altitude>24968.814842341213</altitude>
        <speed>250</speed>
      </startPoint>
    </AiTankerDataset>
  </aiTankers>
</AiTankerDatabase>
```



```
</startPoint>
<route>
  <AiTankerWaypoint>
    <latitude>42.058555901961185</latitude>
    <longitude>9.5061512117099</longitude>
    <altitude>25000</altitude>
    <speed>250</speed>
  </AiTankerWaypoint>
  <AiTankerWaypoint>
    <latitude>42.05833747581547</latitude>
    <longitude>9.2818199559057728</longitude>
    <altitude>25000</altitude>
    <speed>250</speed>
  </AiTankerWaypoint>
  <AiTankerWaypoint>
    <latitude>41.558664980061849</latitude>
    <longitude>9.2818199559057728</longitude>
    <altitude>25000</altitude>
    <speed>250</speed>
  </AiTankerWaypoint>
  <AiTankerWaypoint>
    <latitude>41.558450355675475</latitude>
    <longitude>9.5044075243721853</longitude>
    <altitude>25000</altitude>
    <speed>250</speed>
  </AiTankerWaypoint>
</route>
</AiTankerDataset>
</aiTankers>
</AiTankerDatabase>
```

3.11.2. Attachments

You can also inject attachments into PayloadManagerX and change the loadout of a plane. This can be utilized by other applications that want to make use of the attachment features of PMX.

The file handling works the same way as for the tankers, described in the previous chapter. The filename for attachment plans is “AttachmentInterop*.xml”

File format:

To get the file format right, it is recommended to first evaluate the configuration database of PMX, “C:\Users\...\Documents\PayloadManagerX Files\Pmx_Aircraft_Config_DB_P3D_Vn.xml”

Example of an attachment file that adds a couple of passengers to the Carenado Turbo Commander

```
<?xml version="1.0" encoding="utf-8"?>
<AircraftConfigDatabase xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <configs>
    <AircraftConfig>
      <activePayloadStations>
        <PayloadStation>
          <capacity>0</capacity>
          <attachedObject>
            <title>pilot_female1</title>
            <weight>120</weight>
            <isJumper>>false</isJumper>
            <isDroppable>>false</isDroppable>
          </attachedObject>
        </PayloadStation>
      </activePayloadStations>
    </AircraftConfig>
  </configs>
</AircraftConfigDatabase>
```

```
<rigid>true</rigid>
<shiftX>0.36576000000000003</shiftX>
<shiftY>-1.34112</shiftY>
<shiftZ>2.92608000000000002</shiftZ>
<shiftP>-0.05235987755982989</shiftP>
<shiftB>0</shiftB>
<shiftH>0</shiftH>
<lengthFeet>0</lengthFeet>
</attachedObject>
<xOffset>9.6</xOffset>
<yOffset>1.2</yOffset>
<zOffset>-4.4</zOffset>
<id>1</id>
<name>"copilot"</name>
</PayloadStation>
<PayloadStation>
  <capacity>0</capacity>
  <attachedObject>
    <title>passenger_male1</title>
    <weight>150</weight>
    <isJumper>false</isJumper>
    <isDroppable>false</isDroppable>
    <rigid>true</rigid>
    <shiftX>0.48768000000000006</shiftX>
    <shiftY>-1.37160000000000002</shiftY>
    <shiftZ>1.88976</shiftZ>
    <shiftP>0</shiftP>
    <shiftB>0</shiftB>
    <shiftH>0</shiftH>
    <lengthFeet>0</lengthFeet>
```

```
</attachedObject>
<xOffset>6.2</xOffset>
<yOffset>1.6</yOffset>
<zOffset>-4.5</zOffset>
<id>2</id>
<name>"1st rowR"</name>
</PayloadStation>
<PayloadStation>
  <capacity>0</capacity>
  <attachedObject>
    <title>passenger_male5</title>
    <weight>150</weight>
    <isJumper>false</isJumper>
    <isDroppable>false</isDroppable>
    <rigid>true</rigid>
    <shiftX>0.39624000000000004</shiftX>
    <shiftY>-1.43256</shiftY>
    <shiftZ>0</shiftZ>
    <shiftP>0</shiftP>
    <shiftB>0</shiftB>
    <shiftH>0</shiftH>
    <lengthFeet>0</lengthFeet>
  </attachedObject>
  <xOffset>0</xOffset>
  <yOffset>1.3</yOffset>
  <zOffset>-4.7</zOffset>
  <id>3</id>
  <name>"2nd rowL"</name>
</PayloadStation>
<PayloadStation>
```

```
<capacity>0</capacity>
<attachedObject>
  <title>passenger_male4</title>
  <weight>150</weight>
  <isJumper>false</isJumper>
  <isDroppable>false</isDroppable>
  <rigid>true</rigid>
  <shiftX>-0.42672</shiftX>
  <shiftY>-1.31064</shiftY>
  <shiftZ>0.1524</shiftZ>
  <shiftP>0</shiftP>
  <shiftB>0</shiftB>
  <shiftH>0</shiftH>
  <lengthFeet>0</lengthFeet>
</attachedObject>
<xOffset>0.5</xOffset>
<yOffset>-1.4</yOffset>
<zOffset>-4.3</zOffset>
<id>4</id>
<name>"2nd rowR"</name>
</PayloadStation>
<PayloadStation>
  <capacity>0</capacity>
  <attachedObject>
    <title>passenger_male3</title>
    <weight>150</weight>
    <isJumper>false</isJumper>
    <isDroppable>false</isDroppable>
    <rigid>true</rigid>
    <shiftX>0.39624000000000004</shiftX>
```

```
<shiftY>-1.34112</shiftY>
<shiftZ>1.24968</shiftZ>
<shiftP>0</shiftP>
<shiftB>0</shiftB>
<shiftH>0</shiftH>
<lengthFeet>0</lengthFeet>
</attachedObject>
<xOffset>4.1</xOffset>
<yOffset>1.3</yOffset>
<zOffset>-4.4</zOffset>
<id>5</id>
<name>"3rd rowL"</name>
</PayloadStation>
</activePayloadStations>
<activeFuelTanks />
<probeObject>
  <objectId>0</objectId>
  <title>None</title>
  <length>3.5</length>
  <height>2.4</height>
  <refPosFB>0</refPosFB>
  <refPosUD>0</refPosUD>
  <refPosLR>0</refPosLR>
  <refPosPitch>0</refPosPitch>
  <refPosBank>0</refPosBank>
  <refPosHeading>0</refPosHeading>
  <autoHide>>false</autoHide>
</probeObject>
<randomPassengers>>true</randomPassengers>
<randomMovement>>false</randomMovement>
```

```
<JumpAfterChutes>false</JumpAfterChutes>
<BulkDrop>false</BulkDrop>
<SoloJump>true</SoloJump>
<title>Carenado 690B Turbo Commander N410VB</title>
</AircraftConfig>
</configs>
</AircraftConfigDatabase>
```

4. Disclaimer

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Project Management - Development - Consulting

lorby-si@outlook.de

<http://www.lorby-si.com>