

## **Tutorial: Change Tow-Plane in FSX**



### **Preamble**

first let me say that English is not my native language (is German), wherefore I trouble you to be appreciative of my possibly made mistakes in writing or grammar. If you have suggestions for improvement concerning to my phraseology, vocabulary or typing error I would be deeply grateful for giving me notice. In advance thank you for your effort.

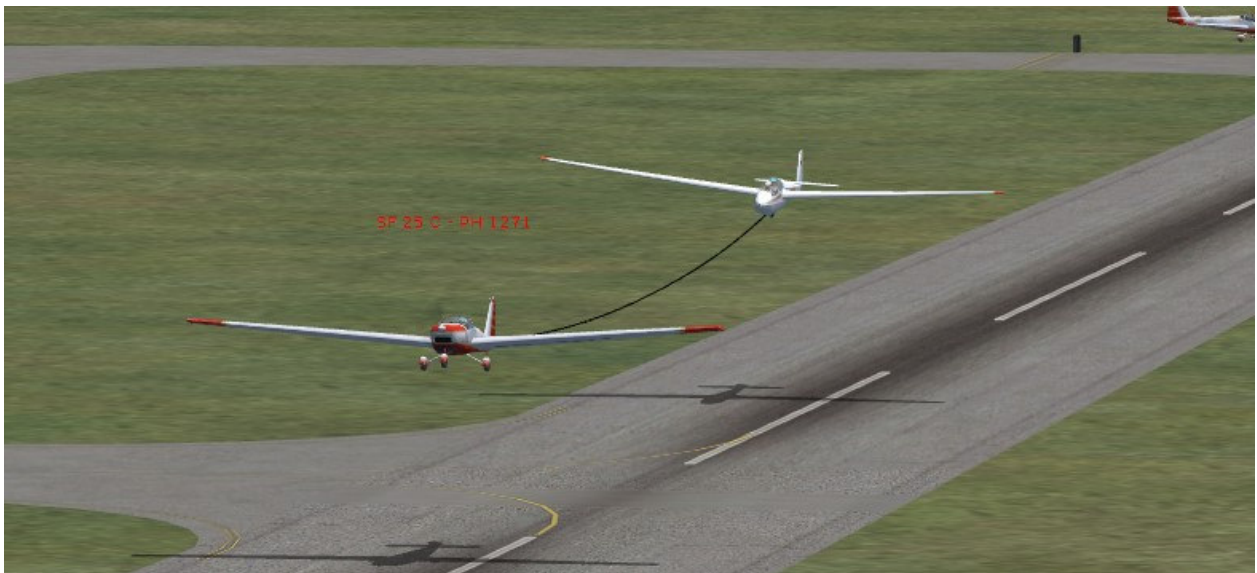
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Since the FSX-distribution it's possible to call for a towplane that will get the glider pilot in the air (hold CTRL and SHIFT and press Y). Although this feature is great a change of the Tow-Plane is not featured with one or two „Button-Clicks“. With this tutorial I will put things right; not with two clicks but it's possible to change the towplane of your choice.

The next not realistic thing is that the towplane is always flying straight ahead and at first view at FSX there is neither possible to stick around the airfield nor to navigate the towplane directly into the thermals or to avoid crashing in an obstacle (e.g. in the mountains). To fix this see my other tutorial „Flying banked turns with Tow-Plane in FSX“ (tut\_twpl.zip).

### **Requirements**

Only needed is MS-Flightsimulator X , tested with „Professional“ respectively „Deluxe“



## **Background**

The towplane is an AI-Plane which follows no AI-flightplan but the given data in the file <sim1.dll> (main path of FSX). There is specified the Towplane, Throttle and Pitch. Opening the file and you will see following data among other things:

0x0C9A0	4D61 756C 6520 4D37 2032 3630 4300 0000	Maule M7 260C...
0x0C9B0	546F 7750 6C61 6E65 5475 726E 4672 6571	TowPlaneTurnFreq
0x0C9C0	7565 6E63 7900 0000 546F 7750 6C61 6E65	uency...TowPlane
0x0C9D0	5475 726E 4465 6C74 6148 6561 6469 6E67	TurnDeltaHeading
0x0C9E0	0000 0000 546F 7750 6C61 6E65 4D69 6E54	....TowPlaneMinT
0x0C9F0	7572 6E41 6C74 6974 7564 6500 546F 7750	urnAltitude.TowP
0x0CA00	6C61 6E65 5469 746C 6500 0000 546F 7750	laneTitle...TowP
0x0CA10	6C61 6E65 436C 696D 6250 6974 6368 0000	laneClimbPitch..
0x0CA20	0000 0000 0000 2E40 CDCC CCCC CCCC 2F40	.....@iiiiii/@
0x0CA30	0000 803F 5469 7275 7274 466F 7262 6572	FSMhustFxxxx

### **Given data:**

Used Tow Plane:	Maule M7 260C
Pitch of Towplane:	- 8 degrees
Throttle:	75 %
Flaps:	done
Heading (TurnDetaHeading):	Heading of glider at start-position

This information should give you a little view behind the scenes but you should not change anything in this file because if you make some mistakes your FSX won't start anymore. So make a backup if you are not able to help doing changes in the <sim1.dll>!!!



## Procedure (this is you have to do)

As you can see from the <sim1.dll> the Tow-Plane is associated (linked) to the Standard Maule in FSX. Responsible for recognition of the towplane is defined by the synonym/identification „**Maule M7 260C**“. That's the reason of the following data in the <aircraft.cfg> of the default „Maule“ (foldername is „Maule\_M7\_260C“):

```
[fltsim.5]
title=Maule M7 260C
sim=Maule_M7_260C
model=""
panel=""
sound=""
texture=""
kb_checklists=MauleM7260C_check
kb_reference=MauleM7260C_ref
atc_id=EC-527
ui_manufacturer=Maule
ui_type=Orion
ui_variation=" Weiß"
ui_typerole=Einmotoriges Propellerflugzeug
ui_createdby=Microsoft Corporation
description=...blablabla .....
```

1. After you copied the <aircraft.cfg> of the default „Maule“ as backup delete all data shown above in the used <aircraft.cfg> (from [fltsim.5] until *description*). Now the „Maule“ isn't a tow-plane anymore.
2. You have to decide which of your planes you will make to a tow-plane. Copy the plane of your choice and name it like „Towplane DR400“ or „Towplane Piper PA-18“...See also item 5.
3. Open the copied <aircraft.cfg> of your new tow-plane (in our example is „Towplane DR400“) und change the „**title**“ below [fltsim.0] in „**Maule M7 260C**“ (without quotes, like this:

Before:

```
[fltsim.0]
title=DR400-180
```

After:

```
[fltsim.0]
;title=DR400-180 //the semicolon deactivates this line
title= Maule M7 260C
```

4. Ready, start FSX and call your new tow-plane (CTRL+SHIFT+Y)



5. Does the behaviour of the tow-plane not follow realistic things you have to be glad that you copied the folder of your chosen tow-plane and renamed it (see item 2.). Because you are able to edit especially the <aircraft.cfg> or <.air>-file of the copied plane without necessity to change the flight-dynamics of the original plane (which should be flyable in FSX with original behaviour)  
Mostly a change of the flight-dynamics is necessary if the tow-plane is an aircraft without flaps. In this case the given 75 % throttle (defined in <sim1.dll>) will make the tow-plane too fast and you have to reduce the horse-power or something like this to make the things realistic as possible.

### **Tip:**

If you store copies of different tow-planes in a separately directory (out of FSX) you can quickly switch your tow-plane to be compatible with the used glider-model by deleting the current used tow-plane in the Airplanes-Folder and replacing it by copying the plane of your decision (out of your pool of precised tow-planes, e.g. with adapted horse power) and restarting FSX.

So it is possible to tow a SG-38 with an Ultralight (e.g. Savannah) with realistic 65-70 km/h, a Duo-Discus or ASK-21 with a Robin DR400 Regent with 130-140 km/h and a KA-8 or Lerche (KA-4) with a Scheibe SF25 Rotax motorglider and 110 km/h (see screenshots to the different tow-planes).

### **Reset the done settings:**

Delete the copied Tow-Plane out of the Airplanes-folder in FSX and restore the original <aircraft.cfg> of the default Maule (see item 1.).



### **Disclaimer**

Although the procedures are tested in-depth I assume no liability for any loss, damage or inconvenience arising as a consequence for any use of this tutorial.

## Last but not least

Have lot's of fun with realistic soaring in FSX.

If you want to fly turns behind your tow-plane, see my „Flying banked turns with Tow-Plane in FSX“ (tut\_twpl.zip).

It would give me great pleasure if you have helpful suggestions to the theme or if you send me your feedback !

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## Screenshots:

The used planes from the screenshots over „Zell am See“ in Austria are:

- SG-38, Duo Discus, Lerche and ASK-13 from Wolfgang Piper (he has designed lot's of realistic gliders and motor-gliders)
- as Tow Plane the „Robin DR400 Regent“ from Yannick Lavigne, Fred Banting, Rob Young and Christian Daboudet with textures (repaint) „D-EGVZ“ from Mike Formatschek.
- as Tow Plane the Scheibe SF-25 Rotax-Falke from Wolfgang Piper
- as Tow Plane the Savannah (UL) from Massimo Taccoli, Mike Hambly and Dennis Seeley
- as Tow Plane the well done Piper PA-18 from J.E.Narcizo

Thanks to all this designers, I have the highest respect for their ability !