



Simcon v. 1.6.0 – 05/2016

Introduction

Simcon is a multifunction Software x FSX, X-Plane, P3d and FSX:SE

Simcon is using FSUipc (not registered) + Simconnect.

Tested with all Windows Platforms, XP, W7, W8++, W10. 32 + 64Bit Machines and NetWork connection.

Simconnect can be excluded for systems or simulators that do not accept Simconnect. [Pilot] > [C]-button.

Simcon is including most of all Aircraft features. Autopilot, Lights, Frequency Panel, Rwy-Appr, Landing System.

For FSX the Simconnect connection is opening the Pilot Interface > [Panels] including many direct commands / events.

All Simcon Views and Panels are opening where you left them when closing Simcon !

Simcon and separate Panels are staying ON TOP of the Desktop!

set your Windows Theme (Win 7), appearance to: Windows CLASSIC !

Simcon special features:

- Simcon configuration file "Simcon.cfg".
- A complete **Help-Interface**. [Pilot] > [H]
- Automatic **Rwy-Approach System** x any Rwy, with or without ILS Freq. (2 Mathe functions in paralell)
- Automatic **Descentometer**
- Automatic **Glide-Path Landing System** x all airplanes. (the correct Aircraft asset is your Pilot duty)
- Precision **Radar-System**.
- 6 automatic approach systems. Rwy, Vor, Adf, Intersection/Fix, Virtual Wpt, Virtual Runway.
- Simcon is creating a **virtual wpt** x any Rwy at 20nm distance aligned with any Rwy you can fly-to. Never get lost!
- You can crate a **virtual Rwy** at any world-position on the fly. Just click on the [V] button.
- Own Autopilot **Autothrottle system AP/AT** for any aircraft. (excluded some Add-Ons)
- Automatic **Emergency Apt-Rwy search** system at any Distance. Rwy on same Radial. Max Deviation 10°.
- Fuel System
- A separate 'Approach Panel'. (green) [---] button below the [R] + [W] button.
- **Joystick connection** Editor. 37 connections. Using single Joy-Buttons and Multiple Joy-Buttons combination.
- More then 16.500 airports including most of all minor USA-Apt's.
- Vor, Adf + Intersections/Fix selection at any distance.
- Simcon is not using Frequencies only Mathe Formulas based on real world Coordinates.
- The **ADD-Airports** software (add, change Apt / Rwy Data) can be downloaded as Freeware from "Intrasystem Web-Site".
- The **Mouse-Clicks** Interface. Save Mouse-clicks and execute on Video. (Mouse_Interface.pdf manual)
- The [charts] button is connecting Simcon to a real world Airport-Information Center. Charts, Meteo, Google view.
- There is a '**System Tray**' Menu on the Video Bottom Status Bar. Open with R-click on the Icon.
A Fly to > Example is included > LOWG to LOWW.



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Help System

Simcon has 3 Help Systems.

- 1) The Simcon.pdf Manual
- 2) The Simcon Help Interface you open with the [Pilot] Button > [H]
- 3) The ToolTips on any single Button, Label and smaller signs like "--" or ". ". Mouse Hover x a immediate Help.

Opening Simcon

Open Simcon with Admin privilege.

- Click on the “ **Pilot** “ Button. When the Pilot Interface is opening click on the [**C**] button. You have the choice to exclude “Simconnect” in case your Simulator is not accepting the FSX “Simconnect” connection.
Close the Pilot Panel > R-click.
- Click on the Simcon [**A**] button. (click on the Simcon [**H**] button x a detailed Apt-Search explanation)
There is a “Number Field” and a “Data Field” on the left side below [Pilot]. (Mouse Hover)
Airport search system. Read the ToolTip Help.
The [**H**]elp button is also bypassing the [Pilot] Button.
- Select a Airport, select a Rwy. Other Wpt's, Vor, Adf ecc. not requested at this moment. Virtual Wpt at 20nm Rwy-Aligned is created.
Rwy with ILS-Freq. Freq is copied into Nav1Stby. Transfer to Nav1 using the Freq-Button below the [Pilot] Button or use the Frequency Panel.
The nearest Apt is the location where you are sitting.
- Open the Radar > [R].

ILS-Frequencies are for your personal use / Aircraft only. Simcon is never using Freq; only Mathe world coordinates.

- Change the Simcon size. Click on the brown [---] button below the [ALT] button.
- Open the Approach Panel > green [---] button. Close Panel > R-click.
- Open the Emergency Rwy-search system. Click on the [---] button below the [V] button.

Enjoy



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Install Simcon

Version 1.6.0 05/2016



Unzip into a new dedicated Folder. Do not use the Windows "Programs (x86)" folder.
Updates can be unzipped into the existing Simcon-Folder.

The first time you open Simcon a Joystick.ini file is created (if not exist yet) as Default. Answer 'yes' at the Msg-Question!

*** You should not run Simcon together with other CockpitStatus programs ! ***

Make a Desktop connection for fast access for: **SimCon.exe**

Credits

Credits to the work of Ed Williams and his Aviation Page.
Credits to Paul Henty the Author of the FSUipc Client DLL for .Net applications.

If your Autopilot is locking the Ailerons or Heading, just open + re-close the 'ALT' or 'Hdg' Button !

(this has nothing to do with Simcon itself)

Read the Simcon FlyTo Example: LOWG to LOWW (Simcon_LOWG_Example.txt) enclosed with the Simcon.zip File.
Open File with the 'System Tray' Menu. R-Click on the 'Icon' (Bottom of Video/Status Bar)

Download the ADD-AIRPORTS Program. Edit, Change, Add new Airports + Runways to the Simcon Airport-DataBase. (Freeware)

Assistance write a Feedback to: forstmeier@libero.it

Check the Home-Page for updates at: <http://intrasystem.it/FSX/FSX.html>

Simcon is using FSUipc (not registered) + Simconnect.
Tested with all Windows Platforms, XP, W7, W8++, W10. 32 + 64Bit Machines and NetWork connection.
Simconnect can be excluded for systems or simulators that do not accept Simconnect. [Pilot] > [C]-button.

Open Simcon with Admin privilege. Open your Simulator with Admin privilege.



Simcon configuration file

The Simcon Configuration File "Simcon.cfg" is using 6 Parameter:

1) **ApproachDeviationValue=1**

Value 1 is the highest Sensitivity value and the Default value.
Higher you set this value, less is the Approach Sensitivity.
Setting this Parameter it is possible to eventually follow different PC-Configurations.
There might be a difference between a high performance Pc and a older hardware user.
Approach Panel – value is shown at the right bottom side and can be set/changed with:
Left-Click = decrease value Right-Click = increase value
Suggestion: use only parameter value: 1

2) **SimconOpenViewSize=3**

Simcon has 4 Panel-Sizes. Size 3 = opening with the Airport View + FlyToPanel.
You can set the value to: 1,2,3,4

3) **JoystickConnectionOn=0**

With Value 0 Simcon is not connecting to the Joystick when opening.
When you click on the Simcon ' J ' Button the Joystick is connected (red color).
With Value 1 Simcon is connecting to your Joystick on opening Simcon.
As long as you don't create a valid Joystick File even with a Joystick-Connection there would be no response.

Simcon is always opening with the Basic-Joystick-File " Joystick.ini ".

Creating new Joystick-Files the FileName is attributed in automatic. Joystick_1.ini, Joystick_2.ini

4) **FSXTitle=Microsoft Flight Simulator X (Default)**

Simcon is recognizing the following simulators:
> FSX / Microsoft Flight Simulator X
> X-Plane / X-System
> P3D / Lockheed Martin
> FSX:SE / Steam Edition

5) **ExtendRwyApproach=0 (Default)**

x automatic Runway Landing / GlidePath to Rwy when using the [V/S Rwy] System.
A Value of 1 is extending the Rwy by 1nm. (virtual) - Touch down 1nm after Rwy-Start. Meaning you approach at a higher ALT.

6) **VSApproachElevationPlus=200 (Default)**

x automatic Runway Landing / GlidePath to Rwy when using the [V/S Rwy] System.
Valid values: 100 or 200.
On the Radar Panel you can change value with L-click + R-click. Field [+200]. (values in ft)
Reduce (minus) Descent V/S value = increase Rwy GlidePath approach ALT.
Avoid obstacles.

Within the parameter string no empty space is allowed!



ATlas Hold Speed



The ATlasHold System.
A unique Feature x
any Airplane.



Click on the [AT] button.

- las-Hold is only based on a few known flight-data details. This is important to know in order to use it properly. las-Hold is using only the engine-pressure and does not know anything about your aircraft and engine type. Not using v/s or virtual flaps. Do not confuse the AT-Control with a N1-Control!

- The [I] Button. You Fix the Hold-Speed equal to the actual Speed or manually enter the speed.
- The [Lever/Hold] Button can interrupt/disengage the AT and, when closed again, engage the AT at the Actual Speed.
- You can select any speed manually using the speed box.

• **When airborne and at cruise Altitude:**

- Click on [Arm]. (Button change color) – Disengage/Close AT-las, toggle this Button.

Move Back your Throttle Lever to the Default “Null” Position.

Engange/Click the [AT] Button.

The AT-las Hold procedure is starting.

- If you change Altitude the speed will change accordingly as it is with any other Hold-Speed System.
- On Ground AT-lasHold is disengaged.
- The [Lever/Hold] Button can be used in any moment, with or without AT engaged. “Lever/Hold” is holding the actual engine-pressure in place of the Throttle-Lever.
- [Lever/Hold] can be engaged on Ground.
- If you need a real 100% pressure use the Cockpit Throttle or the “F4” key as a Joystick does not keep 100% pressure normally.
- The [las] Bar is indicating the selected speed in relation to your aircraft-cruise-speed.
- The Bar below is indicating your actual speed + engine pressure. Background colors, yellow + white.
- The [Speed Field] is changing color to green when you reach the desired speed. (-/+ 1 Knot)
- You must keep your hand OFF the throttle lever in order to see speed + pressure correctly.

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- **The Pilot Interface is including 5 Main-Features**

- 1) the new HELP System > Button [H]
- 2) the Mouse-Click Files Execution (read the separate Mouse_Interface.pdf Manual)
- 3) the FSX commands execute > Button [Panels] > avoid Keyboard
- 4) the Aircraft Doors with 4 graphic Bars. (click on)
- 5) the Direct change View to [VC] or [2D] > default View. (click on) R-click is closing Simconnect connection.

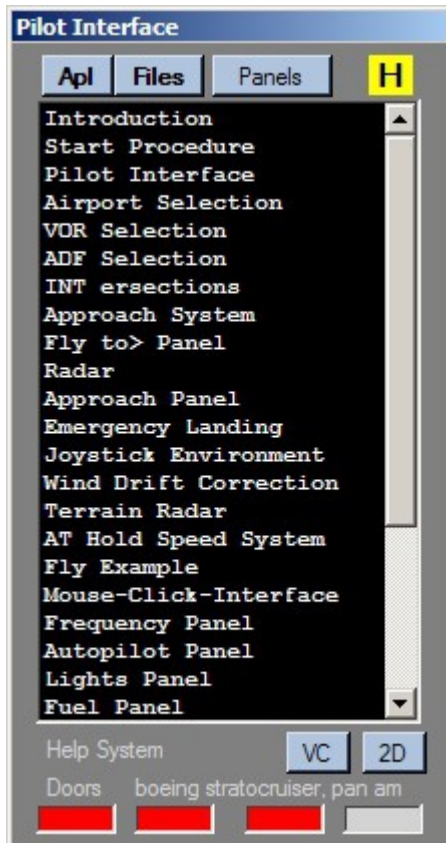
The [C] Button is connecting to Simconnect. You can exclude Simconnect in case your System is returning a "Error". See 1.page "Introduction".
In case you place/move the Pilot Interface on top, or partly, of the mouse-click area you receive a alert-message.

- [Apl] is opening and listing all Mouse-Click Files for single Airplanes you created. [Apl] yellow Color.
- [Apl] Select one Aircraft > green color > is listing all single Mouse-Click. Click on = execute Mouse-Clicks in automatic.
- [Files] is Listing all single Mouse-Click Files not belonging to any specific Aircraft. (Created without Aircraft Name)
- [Panels] is Listing all single FSX commands. Click on > execute.
- [H] is Listing the complete Help Selection. Click on a Item. Listing order is considering priorities.
The Help can be opened without connecting to FSX. Click on the [H] Label top of Simcon View.
- [Doors] click on the 4 graphic fields. Open/Close Doors.

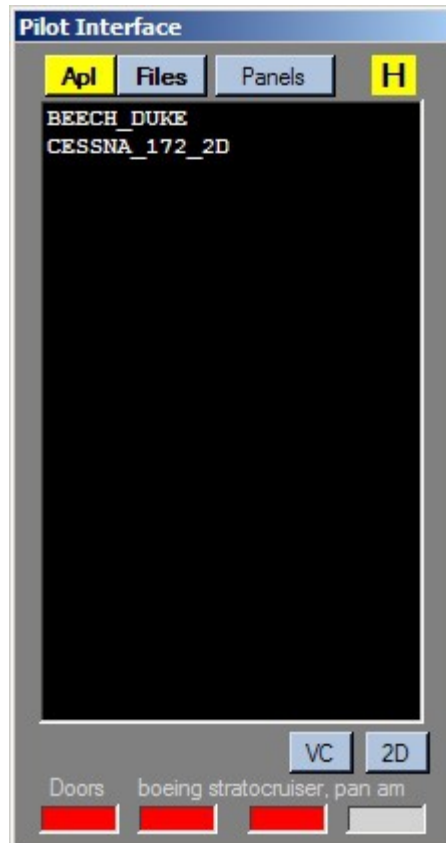
NOZZLE LOW + NOZZLE HI
is moving the Harrier-Nozzles or similar
step by step.

You should not use it with
Prop Engines as it is using the
PROP-Pitch; but you can use it.

Help System



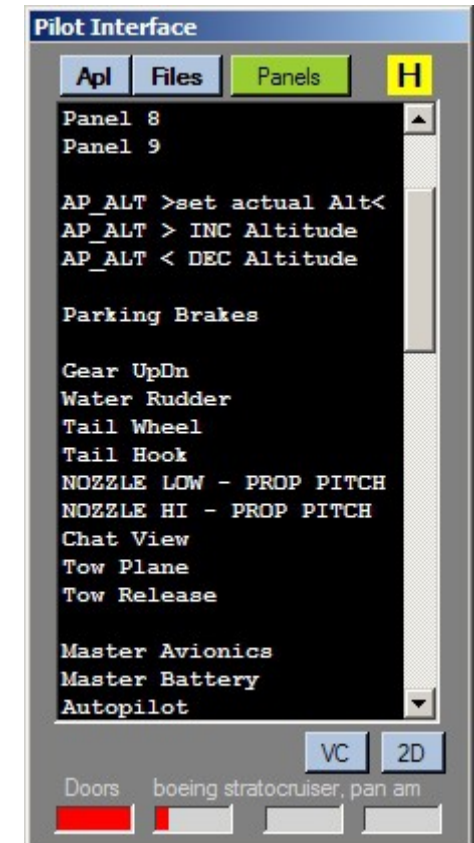
[Apl] List all Airplanes – Select



[Files] List all generic Click-Files



Special FSX commands.



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Near the Runway at 0.1 nm



When using the Simcon automatic Rwy-Approach system:

When you are near the Rwy DO NOT USE the Ailerons with your Joystick.

The [R] Rwy-Approach is closing the 'Autopilot' at 0,1 nm distance from Rwy.

"The moment of inertia".

When the AP is closing (at 0,1 nm) maybe you must "counter-act" by steering "slightly" to the left or right!

This is usual for any real Pilot.



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The Simcon Panels



The Simcon View has 3 Aircraft Panels:

- Frequency Panel
- Autopilot Panel
- Lights Panel with additional Data + the Fuel connection.





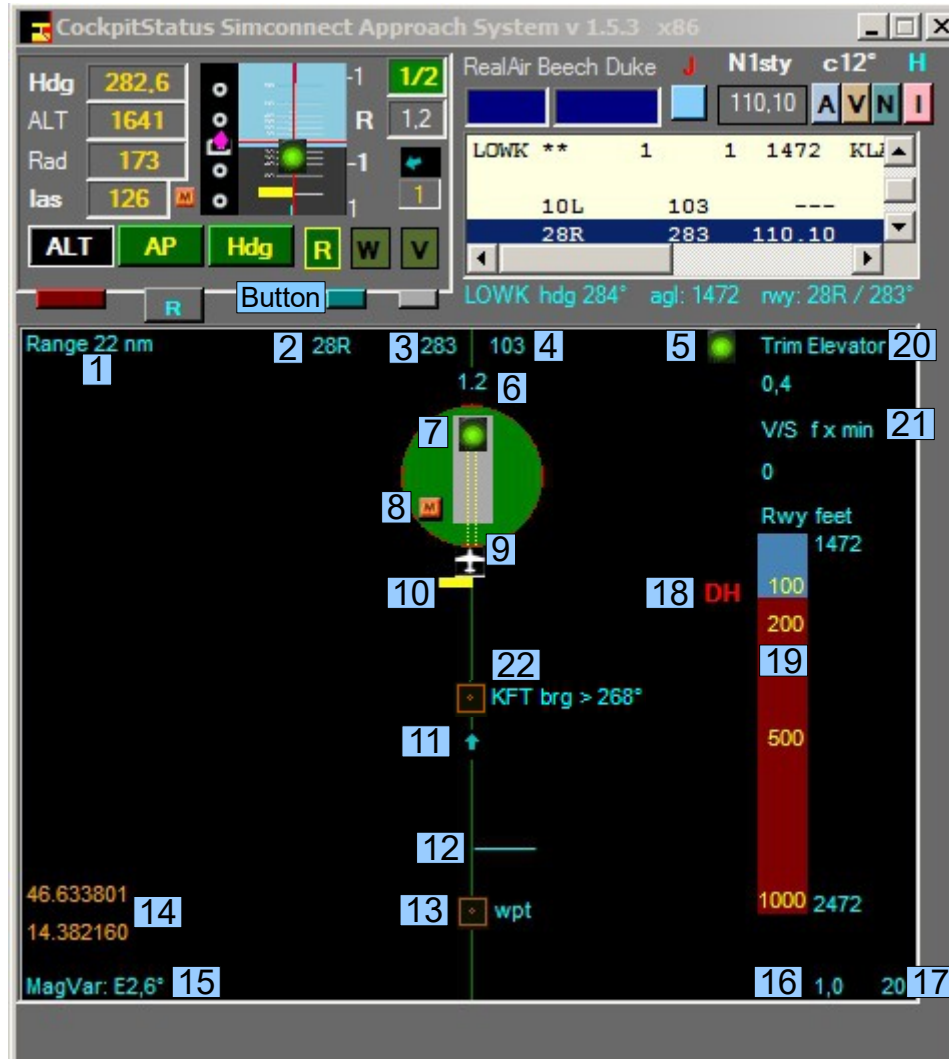
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Simcon Approach Panel



Approach Panel View

- 1) Range upto Rwy 22 nm
Starting at 20nm from Rwy.
- 2) Runway ID
- 3) Rwy Heading °
- 4) Rwy Back-Course °
- 5) Gear-Down + Brakes
- 6) Distance to Rwy
- 7) GlidePath Center Light. Within Limit.
- 8) Marker I, O, M
- 9) Airplane Position
- 10) ILS deviation. Not used by Simcon.
Yellow = within Limit. Red = Out
- 11) Simcon Deviation – Fly-To Hdg.
Indicating HSI [view 1, nr. 9](#)
Simcon is calculating the angle from your pos to the Rwy which is different how ILS is acting (lateral alignment).
- 12) The 15 nm Mark
- 13) The Simcon Virtual Wpt at 20 nm.
- 14) Latitude + Longitude
- 15) MagVariation
- 16) The basic Simcon Deviation value.
(only a internal value for tests)
- 17) The Simcon Approach Sensitivity value. Can be set with the new Simcon.cfg File. Should be " 1 ".
Left-Click = decrease value
Right-Click = increase value
([read the Simcon Configuration page](#))
- 18) Decision Height – 200 feet
- 19) Below 1000 feet Height/Ground-Level (Rad) the graphic-bar is opening.



- 20) Left-Click select Trim Elevators
Right-Click select / toggle:
- Trim Elevator – show value
- Trim AP Elevator – show value
([read View 4 nr. 2](#))
- 21) Left-Click select V/S feet x min
- 22) Vor, Adf, Intersection/Fixes
If selected with [View 3, nr. 1](#) then the Brg-Hdg is indicated but only for the one selected.

When this Panel is open the Radar-Panel is closed and viceversa!



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Simcon Fuel View

1) click on and change values.

2) click on – actual Measure.

Gallons, Lbs, Kg

Max / actual Fuel quantity in Gallons only.

3) Add Fuel

Fuel 50% fuel of total Cpty. Default.

Change Fuel Q.ty:
Input a percentage % into the “Number Field” on top.

Same Function is available on the “Lights Panel”.

4) Dump Fuel

Excluded with new Simcon.

5) Close the Fuel-Panel

Gallons	Max / Fuel	Fuel 88.4%	Left %
L Wing	116/114.9	99.0	99.0
R Wing	116/114.9	99.0	99.0
Center	0/0.0	0.0	0.0
Center 2	0/0.0	0.0	0.0
L Aux	0/0.0	0.0	0.0
R Aux	0/0.0	0.0	0.0
Extern 1	0/0.0	0.0	0.0
Extern 2	0/0.0	0.0	0.0

If your aircraft does not use the **Fuel-Dump** you can change the Aircraft.cfg file.

Under the [fuel] section add:
fuel_dump_rate = 0.00685

(the % of max Qty dump x sec)

Fuel Alert on HSI
less 10 % of Total Fuel.

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Terrain Radar



Simcon Terrain Radar



No Terrain Radar is showing the real Terrain type. To know what kind of terrain is around you just use the default FS GPS


- Left Click on this Button – open the Wind Drift correction-
- **Right Click** on this Button – Terrain Radar is opening. (for closing right-click again)
- Terrain Radar is reading Terrain Height below the aircraft. All Tests are positive without any crash!
This Radar is:
 - registering Terrain differences.
- **Usage:**
 - **DH Button:** Change Decision Height – Left Click = increase – Right Click = decrease
 - Decision Height is your security height – if you know nothing about the Terrain/Mountains ahead increase value. 1000 feet is a good value for most of all obstacles you could encounter ahead.
 - **TE:** is indicating highest Terrain Height + actual Terrain Height
 - when you click on this Label the Terrain Height = equal to the actual Terrain Height.
 - **you should not do that while flying over mountains** but when Terrain is changing from Mountain to Flat Land.
 - **Below:** For sure you must keep UP until the **Above** indication is appearing.
 - **Above:** When above is indicated the Progressbar is indicating 3 situations with 3 different colours:
 - **Cyan:** OK - **Yellow:** Attention - **Red:** Danger

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Wind Drift Correction



- Click on the Button  open/close - when open the Button color is red and the Wind Drift Box is visible.
- On Ground the Wind Drift is closing.
- Use the small arrows up/down
- Wind Drift correction from -20° upto 20° - from left to 0 from 0 to 20° right correction.
- When opening or closing, the Wind Drift Value is always 0 (default).
- For a initial Drift Value use the general Wind Drift Correction rule with Simcon:
Wind speed Knots: $15 \div 5 = 3$ (if to left use -3 – to right use 3)
Wind speed Knots: $43 \div 5 = 8$ (could be between 8 and 10)
- Use this feature mainly for a Runway Approach starting at a reasonable distance.
- You center the Rwy !

NOZZLE LOW + NOZZLE HI is moving the Harrier-Nozzles or similar step by step.

You should not use it with Prop Engines as it is using the PROP-Pitch; but you can use it.

There are 38 Items you can select and connect.

If you are using already a Joystick.ini File just click on [Save Joystick] and all new Items are added automatically.

When you DeSelect a item the value is saved on Top and can be Re-Inserted or Re-used.

Assign a value to 1 Item

Click on the Item until the Field-Value is copied into the Field 'Actual Item Value'.

Then Clear the Input-Value!

Nota:

when you release a Joy-Button or Multiple key-combination the Value is saved on Top. "Joystick Button Value".

On the Simcon Main-View all Items are listed with the actual Joystick Button Values + the Shift value if used as Reference.- The Shift Value [Shift] is static.

2 complete Joystick.ini Files are included for the Saitek X52 and Pro Yoke as example.

You can set the Simcon Joystick Connection with the Simcon.cfg File, see 'Configuration'.

The [Search Rwy] selection is connected to the Simcon "Emergency" Button below the [V] Button.

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The new Joystick Editor

Simcon Joystick Environment



- When creating a new File the actual File-Data is saved into this new file.
- Just De-Select items you don't need and add other's.
- FileName assignment is Automatic! Joystick_1.ini ... "Joystick.ini" is the Basic-Joystick File on start-up.

When using a Button + a 'Shift' Lever: Joystick usage:

- 1. Shift, 2. Button
- release buttons:**
- 1. the Button
- 2. the Shift Lever

The 3 Joystick Default Buttons are most often already connecting without assigning any Key-Value. Here the Gear is connected due to a Saitek Random problem.

Multiple Key-Combinations must be released all together!

The total Value is then available in the "Joystick Button Value"

The "Joystick Button Value" can be assigned to any Item. Check the "CheckBox" or Uncheck.



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Add a Autopilot to your Aircraft - FSX



- Your aircraft must have a Autopilot – Hold [ALT] + Heading Gauge [Hdg] installed.
- The aircraft.cfg file must include the following AP parameter / section

[autopilot]

```
autopilot_available=1
flight_director_available=1
```

- If you have to install a AP gauge you can use the Default AP from the Cessna 172 – in **Panel.cfg** file add:

//On Top under [Window Titles] write ' Window??=AP '

```
[Window??] //in place of '??' in [Window??] use your own Window sequential Nr.
Background_color=2,2,2
size_mm=156,48
window_size_ratio=1.000
position=8
visible=0
ident=RADIO_STACK_PANEL
zorder=3
gauge00=Bendix_King_Radio!Bendix-King Radio AP, 0,0,156,48
```

Free the Ailerons when approaching!

If your Autopilot is locking the Ailerons just open + re-close the 'ALT' Button ! Same with Hdg.



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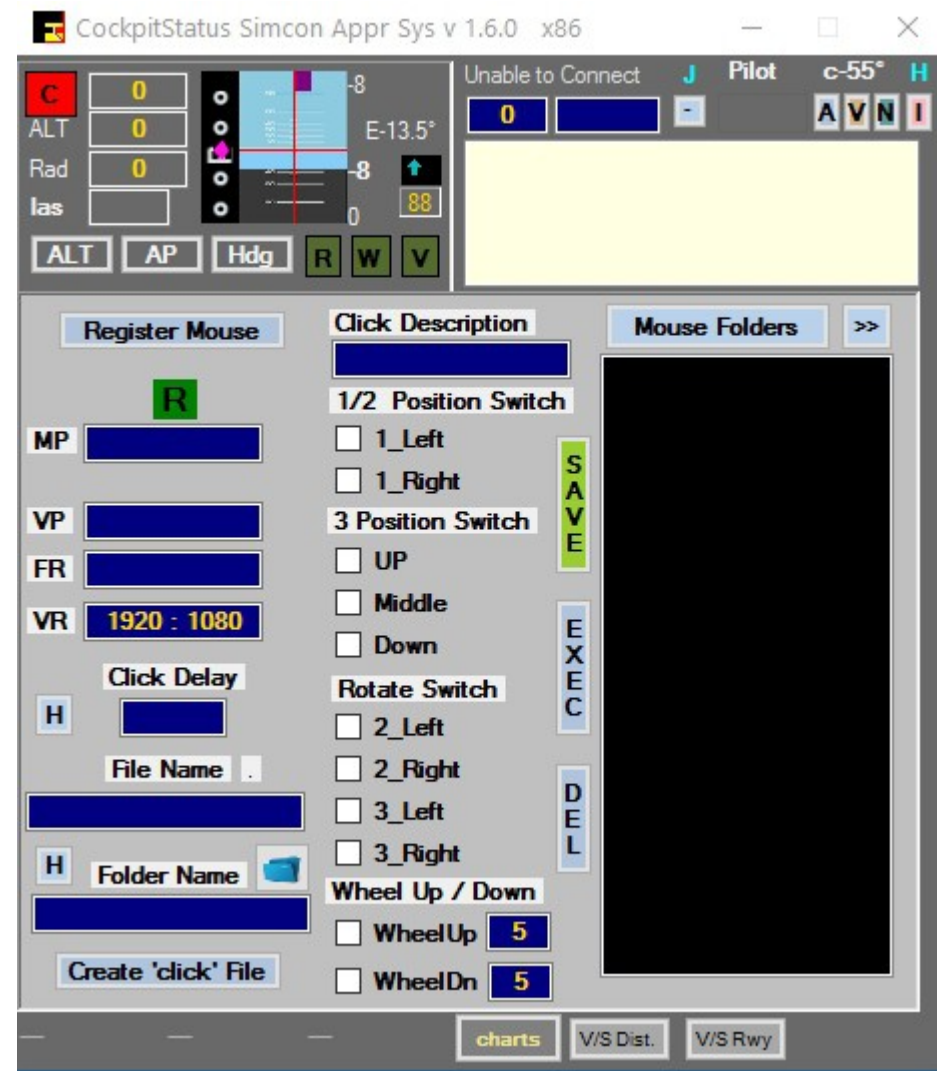
MouseClicks

The MouseClick Interface is a special feature useful for any kind of application.

Pls. Read the Manual: ([Mouse_Interface.pdf manual](#))

MouseClicks saved are executed in automatic.
With or without Simcon.

There is a separate MouseClicks Software (freeware).
You can get this program at request here: forstmeier@libero.it
Subject must be: " MouseClicks " .





Simcon



ADD Airports/change Data

Download the new ADDAirports program 09 / 2012 - Freeware
Now with a complete Data Editor

Add Airports (© Raimund Forstmeier) x86

FS Version: FSX Icao: **13054**

Buttons: Exit Edit, Rwy Up, Rwy Dn, Create New 'apts' File (Sorted)

Help

Airport Editor-List		Course	Freq	Elev (ft)
Icao	Airport / Rwy			
LOWG	GRAZ	167	---	1120
	17C			47.

Buttons: Load Apt's, 13054

Airport List

- 09R
- 27
- 27L
- 27R
- LOWG** ???? (selected)
- 17C
- 35C
- LOWI INNSB
- 08

Left Panel:

Hdg: **346**

ALT: **1120**

AGL: **1112**

LAT: **46.978391**

LON: **15.443115**

Apt's deleted: **LOWG GRAZ**

Icao	Airport Name	Elevation	Latitude (6 dec)	Longitude (6 dec)
LOWG	GRAZ	1120	46.993056	15.439167

Rwy - ID: **35C** Course: **347** Frequency: **110.90**

Latitude (6 dec): **46.978128** Longitude (6 dec): **15.443187**

Buttons: Delete Rwy, Clear Editor, Copy to Editor, Add/Save Apt to Airport List

Test Distance: (1) [nm], (2) [nm], (3) [km]

Dest Icao: **EDDB** Help

Buttons: 332 nm, 614 km, Distance, nm, km