Flight Simulator X G15 Applet Manual

For Version 1.5.40.445

Content

Introduction

The FSX G15 applet is an application for the Logitech G15 LCD keyboard. It allows you to display different data of your flight (and aircraft). About 100 different things are queried from Flight Simulator X.

This applet only works with Flight Simulator X. Earlier versions are not supported. Future versions may be supported, depending on their use of SimConnect.

Installation and start

This applet doesn't need an installation. It doesn't need to be in a specific directory either. After the start of **fsx_g15.exe** you can see an icon in your system tray which you can use to close or configure this application (right click).
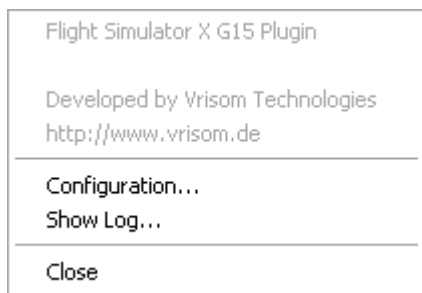
Requirements

Since v1.5 there is no need in running the application as Administrator. The application checks in user-configurable intervals if **fsx.exe** or another definable application is running.

If this doesn't happen, or you are getting errors right from the start, you can check the Log for further info.

Updates of the application may help, too, if available.

Modes

To display the vast amount of data that FSX offers, the four displays of the G15 are not enough. That's why this applet owns four different modes, every capable of displaying three different displays. So you have twelve displays in total.

To change the current mode, just press the LCD-key #4 (the right one)

LCD 1: Speed / Altitude
LCD 2: Engine(s) / Fuel
LCD 3: Flaps / Gear / Light

Mode 1 offers speed and altitude displays on LCD 1, LCD 2 owns engine and fuel displays and the third LCD contains information about flaps, gear and lights.

LCD 1: Heading / GPS
LCD 2: Ambient Temp / Wind
LCD 3: Detailed Fuel

Mode 2 LCD 1shows data relating to navigation and position, while LCD 2 offers data about your ambient temperature or wind speed. LCD 3 displays additional information about how fast you are going out of fuel.

LCD 1: Flight Warn System
LCD 2: Technical Aircraft Data
LCD 3: Takeoff & Landing A.I.O.

The third mode owns the Flight Warn System on LCD 1, a few technical things on LCD 2 and an all-in-one display for takeoff and landing on LCD 3.

LCD 1: Battery Power
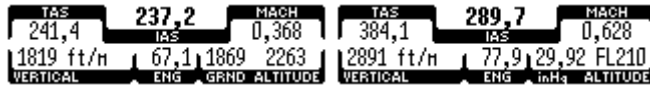**LCD 2:** Electric Buses
LCD 3: Auxiliary Power Unit

The fourth and last mode completely covers the planes electronics. LCD 1 informs you about your battery, LCD 2 about all electric buses and LCD 3 displays the status of the APU.

Precise information for every display below.

Displays

Mode 1

LCD 1 (Speed / Altitude)

ELEMENT	DESCRIPTION
TAS	True Air Speed (speed through the air) in knots
IAS	Indicated Air Speed (speed in the air) in knots
MACH	Air speed in mach
VERTICAL	Vertical Air Speed in feet per minute
ENG	Engine throttle lever position in percent
GRND	Height above ground in feet (shown until 2500, then changes to inHg)
inHg	Altimeter calibration
ALTITUDE	Height above zero in feet (starting at 20000 feet the altitude is shown as a flight level "FLxxx")

LCD 2 (Engines(s) / Fuel)

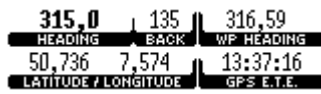| ELEMENT	DESCRIPTION
Upper graphic	Fuel quantity in comparison to maximum quantity
Engine 1 till 4 (text)	N2 (compressor) of according engine in percent
Engine 1 till 4 (graphic)	N1 (fan) of according engine in percent

LCD 3 (Flaps / Gear / Light)

ELEMENT	DESCRIPTION
FLAPS	Current flaps level and display of possible flap levels
GEAR	How far gear is extended in percent (from „DOWN!" to „UP!")
LANDING	Landing lights on? White = no, black = yes.
WING	Wing lights on? White = no, black = yes.
STROBE	Strobe lights on? White = no, black = yes.
RECOG	Recognition lights on? White = no, black = yes.
CABIN	Cabin lights on? White = no, black = yes.
WHL RPM	Revolutions per minute of center wheel (only relevant on ground)
PTT ICE	Pitot icing in percent (pitot is used as speed meter)
STR ICE	Structure icing in percent
GRND SPD	Ground speed in knots

Mode 2

LCD 1 (Heading / GPS)

ELEMENT	DESCRIPTION
HEADING	(Magnetic) course in degrees
BACK	According opposite course in degrees
WP HEADING	(Magnetic) course of waypoint in degrees
LATITUDE / LONGITUDE	Latitude and longitude
GPS E.T.E.	Estimated time en route to destination (destination needs to be programmed in GPS)

LCD 2 (Ambient Temp / Wind)

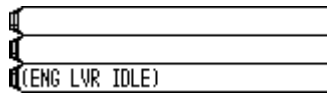| ELEMENT	DESCRIPTION
TEMP	Ambient temperature in °C
WIND SPEED	Ambient wind speed in knots
PRESSURE	Ambient pressure (inHg) – this one is used, together with the altimeter calibration, to know your altitude.
RWY TAKEOFF	Recommended runway length for takeoff at current altitude (this display may change in future versions)
WIND DIRECTION	Graphical display of wind direction. The arrow shows the direction. An arrow coming from the bottom and going to the center symbolizes wind from behind (in the shown example, the wind comes from front left).
RWY LANDING	Recommended runway length for landing at current altitude (this display may change in future versions)

LCD 3 (Detailed Fuel)

ELEMENT	DESCRIPTION
QUANTITY	Quantity of fuel in gallons
RUNS OUT IN	Fuel is going to be empty in the displayed time (if fuel flow stays the same)
FLOW GPH	Fuel flow of all engines in gallons per hour.
MILES TO GO (GND-BASED)	Estimated distance you may be able to travel - based on your current ground speed and fuel flow.

Mode 3

LCD 1 (Flight Warn System)

```
[
[
[(ENG LVR IDLE)
```

ELEMENT	DESCRIPTION
CRITICAL (!!)	Critical problems with your aircraft (level 3 errors)
WARN (!)	Important problems (level 2 errors)
INFO (i)	Information, nothing really important (here: throttle lever position is at idle, meaning below 10%) (level 1 errors)

LCD 2 (Technical Aircraft Data)

```
T/G Weight: 18159 20450 pounds
VS0/VS1/VC: 102 112 464 ft/s
Red AirSpd: 330 knots (89,5 %)
```

| ELEMENT	DESCRIPTION
T/G Weight	Current total weight and maximum weight in pounds
VS0/VS1/VC	VS0: minimum speed for landing
	VS1: minimum speed where the aircraft is still controllable
	VC: optimal cruising speed
	NOTE: the data is read from FSX as "feet per second" but seems to be delivered in knots. The unit "ft/s" would be wrong in that case.
Red AirSpd	(IAS) maximum air speed in knots

LCD 3 (Takeoff & Landing A.I.O.)

```
FLAPS  GEAR  GRND  W-SPD  W-DIR
0/3    UP!   5782   20    271

19k    60%   311   284    112
WEIGHT THR LVR IAS HEADING VS1
```

Display of different (and already mentioned) values important especially for takeoff and landing. Notice that when talking about wind direction (W-DIR), it is normal to say where the wind comes from and not where it goes. Therefore, close W-DIR and HEADING values (like the ones in the example) represent headwind!

Mode 4

LCD 1 (Battery Power)
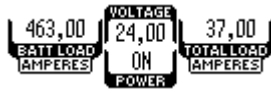
ELEMENT	BESCHREIBUNG
BATT LOAD	(Dis-)charge current of main battery. Positive values tell you that the battery is loading, negative that it is discharging.
VOLTAGE	Voltage of main battery. Too low voltages may cause all your electric systems to fail.
TOTAL LOAD	Total load generated by the plane, for example by lights.
POWER	ON when master battery switch is on, OFF otherwise.

LCD 2 (Electric Buses)
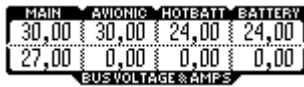
| ELEMENT	BESCHREIBUNG
Upper row	Voltage of the according bus system (not completely used on all planes)
Lower row	Current of the according bus system (not completely used on all planes)

LCD 3 (Auxiliary Power Unit)

ELEMENT	BESCHREIBUNG
ACTIVE	Is APU running and functioning?
STR RPM	APU starter RPM
VOLTAGE	Voltage delivered by APU
IN USE	Is APU electrically connected?
APU RPM	RPM of actual APU
ON FIRE	Is APU on fire?

Configuration

You can configure the applet in two ways. The first on is the recommended way for normal users. It can be reached by right-clicking on the system tray icon and clicking on **Configuration**. Professional users may change the settings direct within the **fsxg.ini** file which is delivered with English comments.
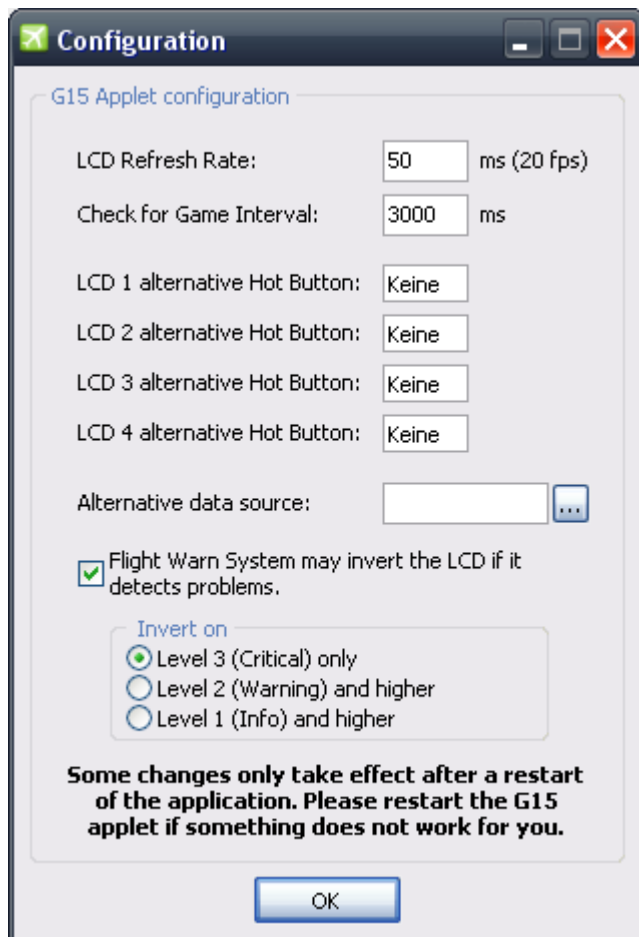
LCD Refresh Rate

Defines the time interval which is used to update the LCD. Your entered time will be shown in a FPS format, too. If the FPS value is larger than your average game FPS, you should think about raising the refresh rate interval as too high speeds may eat up resources. Input is in milliseconds.

Check for Game Interval

Defines the timer interval in which the application checks if FSX or your alternative data source is running. This value can be pretty high. Values up to 30 seconds (30000 ms) may be suitable. Standard is 3 seconds (3000 ms).

LCD [x] alternative Hot Button

Allows you to define other hot keys to change the LCD modes in addition to the LCD buttons. This can be handy if you find it hard to reach the LCD buttons or if you want to access them through a gamepad or joystick. By default, no hot buttons are set ("keine").

Alternative data source

Modders may have their own start files for FSX. This application can't work with those files because it does not accept them as a data provider by default. You may enter your application file name here

(or search it with a **file open** dialog) to tell my applet that your application provides a normal SimConnect data interface. This function can also be used to support future SimConnect-compatible titles (maybe Flight Simulator 11) without the need for a new applet.

## Flight Warn System may invert the LCD if it detects problems

If the integrated Flight Warn System encounters warnings or even critical errors, it is able to invert the G15 LC display. Thus the user is warned about problems even if he uses another display mode or screen. "Problems" with informational character (like engine lever position) do not lead to display-inversion by default.

Invert on

Defines in which cases the G15 display is inverted. The higher the selected error level, the more critical errors need to be in order to invert the display. The selection of smaller levels automatically includes the higher ones (Level 2 inverts on Level 2 and 3 errors, for example). Although possible, selecting Level 1 is not recommended as every little piece of information may already invert the LCD.

Log-Window

The Log tells how the applet works – or probably why it does not.
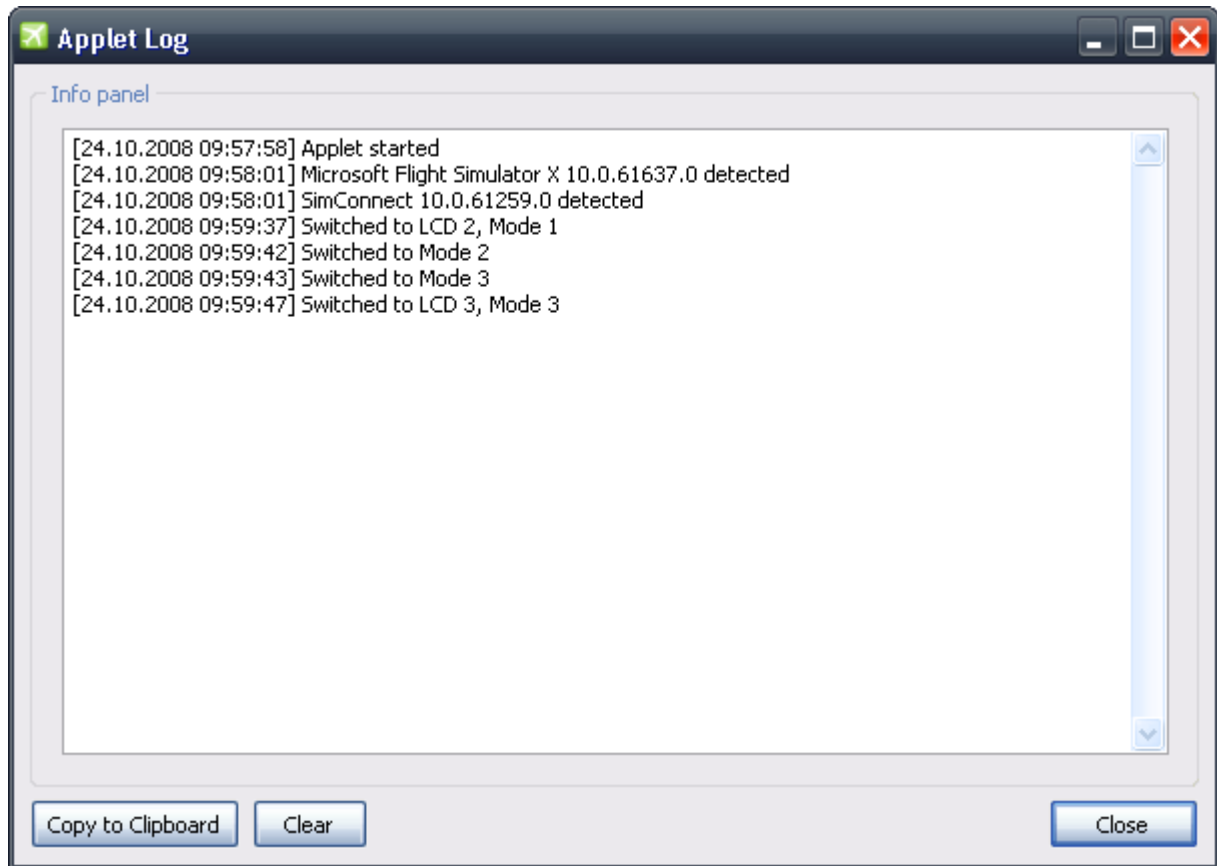
If the application was recognized and the connection through the SimConnect-Interface was successful you can read this here ("xyz detected"). If there is no such line of text, the title is not supported.

Encountered errors are also displayed in the log (and not shown to the user). So if something does not work for you, take a look. If it's not a one-time-thing or if it is reproducible you should copy the messages to the clipboard using the provided button send it to me.

Maybe an upgrade of the SimConnect.dll can help if you are having troubles. This file is copied on your computer every time you install a SimConnect title on your PC (\Windows\WinSxS\... for example). The file may have version information in its file name. Copy the newest file you can find (Windows search) to the applet directory and rename it to "simconnect.dll" and try again.

Troubleshooting

There are some things you can do to eliminate problems. The following list is ordered by severity, beginning with the easy stuff and ending with strong meat.

- Download the newest version of this applet. New versions often eliminate bugs and add features.
- Start the applet with administrator rights.
- Make sure the executable of Flight Simulator X is called **fsx.exe** (why someone should rename it is something you may ask them, not me)
- Re-install the NET Framework and all of its updates by using the installer on the FSX installation medium. This might require you to completely remove it, first.
- Re-install Flight Simulator X.
- Drop me a line on www.vrisom.de or by mail (AndrewPoison@vrisom.de) and include the log in your error report.

This applet has been successfully tested with Windows XP (32 bit), Windows Vista (32/64 bit) and Windows 7 (32/64 bit). Based on that, it should work with XP (64 bit), too. This depends on SimConnect.

Additional information

Newest version of the software and manual can be found at http://www.vrisom.de.

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