



Thank you for buying 3D Lights Redux

-The Shockwave Productions Team

# 3D Lights Redux

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## RISKS AND SIDE EFFECTS

### ERGONOMIC ADVICE

- 1) Always maintain a distance of at least 45 cm from the screen to avoid straining your eyes.
- 2) Sit upright and adjust the height of your chair so that your legs are at a right angle. The angle between your upper arm and forearm should be larger than 90 degrees.
- 3) The top edge of your screen should be at eye level or below and the monitor should be tilted slightly backwards to prevent strain to your cervical spine.
- 4) Reduce your screen's brightness to lower the contrast and use a flicker-free, low-radiation monitor.
- 5) Make sure the room you play in is well lit.
- 6) Avoid playing when tired or worn out and take a break (every hour) even if it's hard ...

## EPILEPSY WARNING

Some people experience epileptic seizures when viewing flashing lights or patterns in our daily environment. Consult your doctor before playing computer games if you, or someone of your family, have an epileptic condition.

Immediately stop the game, should you experience any of the following symptoms during play: dizziness, altered vision, eye or muscle twitching, mental confusion, loss of awareness of your surroundings, involuntary movements and/or convulsions.

# 3D Lights Redux

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### ADDITIONAL INFORMATION

Check for the latest information at [www.shockwaveproductions.com](http://www.shockwaveproductions.com)

### TECHNICAL SUPPORT

[www.shockwaveproductions.com/forum](http://www.shockwaveproductions.com/forum)

Feel free to register and post on our forums. We watch these forums daily and will try to be very quick to answer any of your questions.

## DESIGNER'S NOTES:

Like so many people, here at Shockwave Productions we share a passion for aircraft. We also always strive to be the best at what we do. Most importantly, thank you, our customer, for choosing a Shockwave product.

In real life, it is always spectacular to watch an aircraft fly at night with all the wonderful lights from strobes, beacons, and landing lights. Now the Shockwave '3D Lights Redux' system brings this authentic experience into Microsoft Flight Simulator X. The development process has taken time and repeated testing to achieve just the right balance, and the result is a more believable nighttime flying experience.

The first release of Shockwave '3D Lights' added 3D landing lights to all FSX aircraft. The new 'Redux' version builds on the 3D landing light effects with all new lights, while enhancing the existing visuals in night time airports. 3D Lights Redux then gives all stock FSX aircraft this entirely new suite of lights and effects.

With 3D Lights Redux, some landing lights have vintage bulbs (Douglas DC3 style), halogens, and even the latest Xenon lights. We added an older style red beacon, smaller 2-pulse strobes, single bright strobes, realistic navigation lights and worked the whole system together into the Microsoft FSX platform. When necessary we built custom lights for aircraft like the Airbus A321 with the quad nose-gear mounted lights. The Boeing 747 has its classic twin headlamps and all the aircraft receive a nice ambiance when these lights are operated.

We truly enjoy this product and are proud to be the makers of 3D Lights Redux.

*The Shockwave Productions Team*

## HOW TO ADD 3D LIGHTS TO 3RD PARTY AIRCRAFT

Open your Microsoft Flight Simulator X game folder and look for the desired aircraft in your SIM OBJECTS folder. Inside the desired aircraft's folder is an aircraft.cfg file and inside the PANEL folder is a panel.cfg file. These are the two files you will need to edit to add lights to the desired aircraft. Use NOTEPAD to open and edit them and be sure to make a backup prior to making changes.

To add 3D Lights to add-on aircraft make the following additions to the aircraft's aircraft.cfg and panel.cfg files:

### PANEL.CFG

Add the following line at the bottom of the [VCockpit01] section changing 'XX' to the next available number

```
gaugeXX=shockwave_lights!SW Lights, 1,1,1,1 //shockwave light
```

or if the landing lights are attached to the UC legs or doors and they go out automatically on the stock lights when the UC is raised then:

```
gaugeXX=shockwave_lights!SW Lights_gear, 1,1,1,1 //shockwave light
```

## **AIRCRAFT.CFG**

Add the following line at the bottom of the [lights] section changing 'XX' to the next available number

```
light.XX = 5, 0.7, -5.7, -2, fx_Shockwave_landing_light // Shockwave light
```

The coordinates above are as follows:

- Light type (must be 5 for landing lights)
- Position fore and aft (- = back, + = forward)
- Position left and right (- = left (in cockpit view) + = right (in cockpit view))
- Position up and down (- = down, + = up)

Numbers have to be adjusted for each aircraft you add lights to and are measured in feet from the model origin point.

If the aircraft has more than one light then set up one first then copy and paste the line for the second one.

For symmetrical lights in the wings you would just need to increment the light # and add or remove the - sign in the 3rd position numbers to switch between port and starboard.

Here is an example of the *Cessna 172 aircraft.cfg* file with the 3D Lights installed:

```
[LIGHTS]
//Types: 1=beacon, 2=strobe, 3=navigation, 4=cockpit
light.0 = 3, -2.76, -18.11, 2.97, fx_navred
light.1 = 3, -2.78, 18.11, 2.95, fx_navgre
light.2 = 2, -3.13, -18.31, 2.95, fx_strobe
light.3 = 2, -3.11, 18.31, 2.95, fx_strobe
light.4 = 1, -20.51, 0.00, 6.20, fx_beacon
light.5 = 4, -2.27, 0.00, 1.45, fx_vclight
light.6 = 5, -2.0, -9.2, 2.5, fx_Shockwave_landing_light // Shockwave light
```

Getting the light to be exactly where you want it will take some trial and error, but it's pretty straightforward. We'll be watching the forums to help out if you need it.

The way we added lights is we opened the desired *aircraft.cfg* file, and then started Microsoft FSX. We started a flight with the desired aircraft, and then switched FSX to Windows Mode by hitting the ALT (right)-ENTER keys. We can then view both the *aircraft.cfg* file and Microsoft FSX at the same time. The process goes like this:

- Edit *aircraft.cfg* file.
- Save *aircraft.cfg* file.
- Reload aircraft in Microsoft FSX to see changes. (You can set up a reload key function to reload just the aircraft by assigning keys to the unused 'Reload Aircraft' command in the settings window - CTRL+SHIFT+R works well).

Once you get the hang of it you can add lights quite quickly. Be aware, however, we experienced crashes in FSX from time to time when exiting the game after messing with the ALT-ENTER mode. This is not related to the 3D Lights but Microsoft FSX itself.

For AI aircraft, do the same as above except you don't make the *PANEL.CFG* changes.

## Lights Overview

`Fx_shockwave_landing_light`

Standard landing halogen light - this is our standard landing light and should be tried first.

`Fx_shockwave_landing_light_old`

Older bulbs with less brightness and with a touch of yellow.

`Fx_shockwave_landing_light_small_xenon`

Latest technology in lighting and quite bright, if not blinding. You have undoubtedly seen cars at night with that bright light with a hint of blue. We put these in the Mooney. They look best on smaller, luxury, aircraft.

`Fx_shockwave_landing_light_light`

This is an actual ambient light we place below and forward of the aircraft. This lights up the front lower part, representing the reflections and light that slips out of the side of the bright landing lights and results in the lighting up of the actual aircraft. Placing this ambient light just right takes a lot of trial and error to look right. This technique is new for Redux.

`Fx_shockwave_landing_light_short`

Shorter beam - we placed these in the Lear to improve the smoothness of the beam (reduce the ripples on the fuselage) when close and below the aircraft.

`Fx_shockwave_landing_light_narrow`

Narrow beam that works well when a light is placed right next to the fuselage (reduces the ripple on the fuselage).

`Fx_shockwave_landing_light_l`

Larger beam spread.



Fx\_shockwave\_beacon

Shockwave beacon, first used on Wings of POWER planes. Beacon light fades down after lighting up.

Fx\_shockwave\_beacon\_b

Used when below the fuselage, "b" stands for "below".

Fx\_shockwave\_beacon\_h

Used when above the fuselage, "h" stands for "high".

Fx\_shockwave\_beacon\_l

Large beacon, "l" stands for "large".

Fx\_shockwave\_beacon\_nl

Doesn't cast any red ambient light, "nl" stands for "no light".

Fx\_shockwave\_beacon\_lowl

Casts a shorter light, "lowl" stands for "low light".

Fx\_shockwave\_beacon\_rotating\_red

Simulated rotating beacon, nice for older aircraft. This light swells, pulses, then diminishes with every flash.

Fx\_shockwave\_navgre

Shockwave green nav light. First used on Wings of POWER planes.

Fx\_shockwave\_navred

Shockwave red nav light. First used on Wings of POWER planes.

"nl" and "old" variants of the lights also exist.

Fx\_shockwave\_strobe

New strobe effect - modeled after what the eye actually sees when viewing a real strobe. Light flashes fast twice.

Fx\_shockwave\_strobe\_2

Slightly longer timing - allows the light to slightly drift out of sync with the standard strobe.

Fx\_shockwave\_strobe\_3

Same as Fx\_shockwave\_strobe\_2, except further out of sync.

Fx\_shockwave\_strobe\_l

New strobe effect - modeled after what the eye actually sees when viewing a real strobe. Large, single flash. Good for airliners.

Fx\_shockwave\_strobe\_nl

Strobe flashes but does not cast light.

Fx\_shockwave\_vclight

Standard cockpit lighting. Aircraft VC light positions were slightly altered for better results.

Fx\_shockwave\_vclight\_l

Large cockpit lighting.

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