



Thank you for buying 3D Lights Redux
for
Microsoft Flight Simulator 2004

- The Shockwave Productions Team

3D Lights Redux

for
Microsoft Flight Simulator 2004

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RISKS AND SIDE EFFECTS

ERGONOMIC ADVICE

- 1) Always maintain a distance of at least 45 cm to 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 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 strains 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.

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ADDITIONAL INFORMATION

Check for the latest information at www.shockwaveproductions.com

TECHNICAL SUPPORT

www.shockwaveproductions.com

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, we share a passion for aircraft and here at Shockwave Productions we always strive to be the best at what we do. We always thank you, our customer, for choosing one of our products.

In real life, it is always spectacular to watch an aircraft fly at night with all the wonderful lights from strobes, beacons, landing and navigation lights. Now, the Shockwave '3D Lights Redux' system brings this authentic experience into Microsoft Flight Simulator 2004. The development process taken time and testing, over and over again to create just the right balance to create the most believable night-time flying experience possible.

The first release of Shockwave '3D Lights' added 3D landing lights to all Flight Simulator 2004 aircraft. The new 'Redux' version builds on the 3D landing light effects by adding all new lights, while improving the existing visuals in night time airports. 3D Lights Redux then builds all stock Flight Simulator 2004 aircraft with this entirely new suite of lighting effects.

For example, some landing lights now have older bulbs (Douglas DC3 style), standard 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 Flight Simulator 2004 platform. Aircraft look stunningly real at both distance and close up. When necessary we built custom lights for aircraft like the Boeing 777 with the dual 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 first created 3D Lights for Microsoft Flight Simulator X, but the outpour of requests from FS2004 customers was high. We finally have these great lights in Microsoft's trusted Flight Simulator 9. 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

In your Microsoft Flight Simulator 2004 game folder, and look for the desired aircraft in your AIRCRAFT 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 saving.

To add 3D Lights™ to add-on AC do the following 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)
- X (- = back, + = forward)
- Y (- = left (in cockpit view)+ = right (in cockpit view)
- Z (- = down, + = up)

Numbers have to be adjusted for each AC you add lights to and are from the model origin point.

If the AC 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 pos'n 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 this forum to help out.

The way we added lights is we opened the desired aircraft.cfg file, and then started Microsoft FS2004. We started a flight with the desired aircraft, and then switched FS2004 to Windows Mode by hitting the ALT (right)-ENTER keys. We can then view both the aircraft.cfg file and Microsoft FS2004 at the same time. The process goes like this:

- Edit aircraft.cfg file
- Save aircraft.cfg file
- Reload aircraft in Microsoft FS2004 to see changes.

Once you get the hang of it, you can add lights quite fast. Be aware, however, we experienced crashes in FS2004 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 FS2004 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 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 (reduce the ripple on the fuselages) when a light is placed right next to the fuselage.

`Fx_shockwave_landing_light_l`

Larger beam spread.

Fx_shockwave_beacon

Shockwave beacon, first used on Wings of POWER planes. Beacon light burns 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_ni

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

Fx_shockwave_beacon_lowi

Casts a shorter light. "lowi" 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.

"ni" and "old" variants 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 synch of the standard strobe.

Fx_shockwave_strobe_3

Same as Fx_shockwave_strobe_2, except further out of synch.

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.

Thank you for being our customer.



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