

Glowing Panels

your plasma screens, your oven doors and your aquariums.

The principle of the glowing panel is related to the neon solution, but presents challenges in precisely directing light energy to glow while keeping believable plasma panel detail.

Assembling the Scene

When our New Zealand colleague Paul King challenged me to create a glowing plasma screen, I immediately thought of that sad, blue light that flickers in picture windows on winter nights. Passive, entranced masses stare with longing, entertained by shiny, dancing figures dodging bullets with super human premonition and circus-like agility. I felt superior. At least I work a keyboard while I watch.

The Room

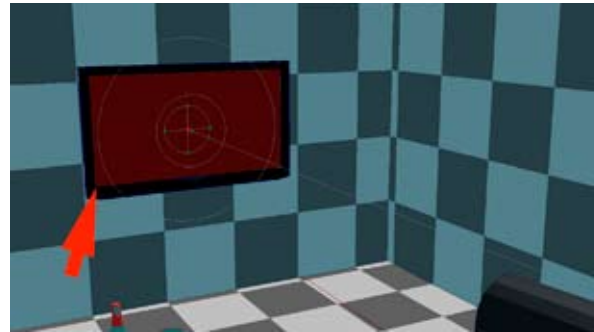
Its our standard test room, with calibrated grey checkerboard matte walls, except that in this case, there is absolutely no ambient or other fill light to mitigate the televised glow.

The Plasma Television Object

In this scene, it is just a prop because the LightWorks rendering engine seems unable to recognize the screen content assigned in the object dialog as expected.

The Screen - Workaround

A workaround is to create a thin wall element in front of the television object and surface it with a material using the screen image as a picture map. The

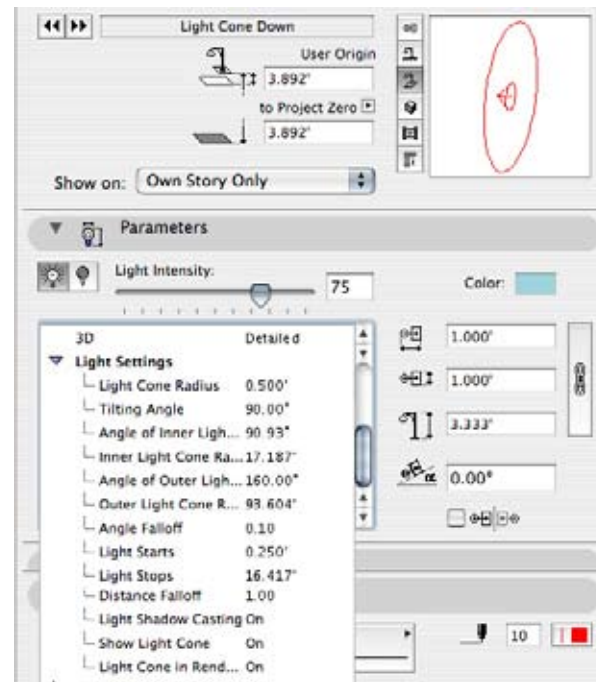


The set-up: a picture-mapped red wall attached to the front of the plasma screen prop with a light cone set soft and wide, positioned dead centre, shining laterally into the room

set-up diagram shows a large red arrow indicating the material origin re-alignment point to correctly position the screen image exactly on the screen.

The Screen Image

The output color levels of the screen image have been altered to emulate an overexposed glowing panel. The mid-tones of the image have been skewed



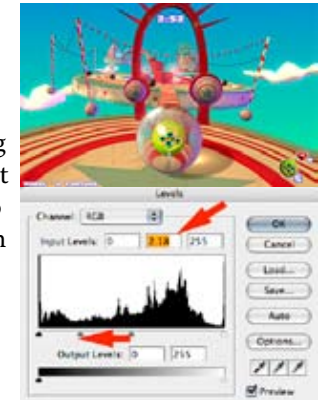
Light Cone Down settings - note that this versatile light should be set to the widest angle (160°) to yield the most sophisticated light - to emulate flat screen glow, set generous distance falloff and stingy angle falloff

by moving the middle slider to the left toward black using a photo-editor. This lightens mid-tones, yielding the glaring result we need. We do not alter uppermost values to maintain image definition rather than just glaring the whole thing out.

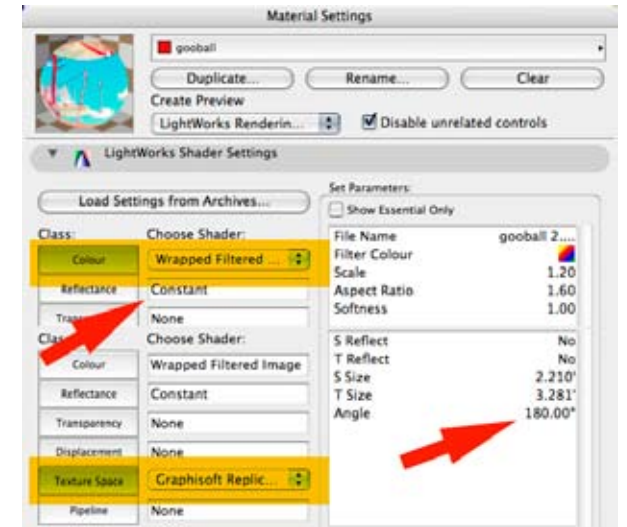
The Glow

The projected glow originates from a Light Cone Down lamp object rotated 90 degrees to shine laterally into the room. The settings shown in the light settings diagram are not critical, but blue at a power of 75 is pivotal, as is setting a wide angle for the light cone.

The passive glow of the screen is derived from assigning the value "Constant" to the material reflectance as shown in the material dialog below.



Before and after mid-level values shift in order to fake plasma screen glare



The picture map is assigned to the material, and is scaled to match the screen, but it also must rotate 180 degrees to orient correctly [bug workaround - might get fixed]