

# Re: Ambient light detector and lamp controller

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- *From:* default <default@xxxxxxxxxxxxxx>
  - *Date:* Fri, 15 Dec 2006 10:00:11 -0500
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On 15 Dec 2006 04:47:45 -0800, nkuck@xxxxxxxxxxxxxx wrote:

I am trying to devise a light (lamp) controller that will respond to changes in ambient light levels. The idea is to operate a lamp in reverse to the ambient level. In other words, as daylight falls, an incandescent lamp would produce more and more light. I'm thinking a couple of photocells, in some kind of bridge network or comparator circuit, coupled to a readily available light dimmer switch.

You might be able to add a resistor style photocell directly to a lamp dimmer if the dimmer is located where it can "see" the ambient light. Just a small window on the dimmer and connect it to one leg of the pot that adjusts the light – then you'd probably have to fool with it because photo resistors are slow responding and the thing may oscillate.

Plan B comparator looking at room light and comparing bridge voltage to a reference voltage – only one photocell. The comparator tries to raise the light level to keep the bridge balanced against the fixed reference.

Then you have to deal with power line isolation too. Your circuit would run on low voltage and need to interface with a dimmer working at mains voltage? An opto-isolator.

It would be relatively simple to build it into a lamp dimmer so there may already be something on the market.

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