

Re: Will IR Illuminator work with any CCD Camera?

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Simplest way to find out if a particular camera is IR sensitive: look at the lcd or evf while someone holds a TV remote and punches a few buttons for you – see if you can see the signal.

"Shuckey" wrote ...

How is the remote's infrared light changed (modulated?) into visible light?

It isn't actually converted. just slightly "mis" displayed.

IR is a color, just past red in the spectrum. The red filters on the sensor chip let it pass through.

Video cameras don't actually see individual colors. They let three wide bands of colors through and calculate the color by the proportion of the colors through each filter.

Many "unexpected" things happen in our recognition of color. Our eyes can see a pure frequency of the spectrum (lasers are the most common ones we see) or with the brain can process multiple colors into one equivalent.

If the camera sees a 510nm orange light both the Red and Green filters will pass it to the chip and it displays bits of red (~650nm) and green (~530nm) because the display does not have an orange material. Your brain sees the two colors next to each other and lies to you that it sees one color.

If the red or green filters had a 510nm notch in it's transmission, the picture from the camera of the spectrum would show a smooth spectrum except it would have the pure other color replacing that section.

In the case of IR, the camera sees light that only comes in through the red filters and very correctly says it is seeing red. If the red filter was made with a limit that mimicked a typical human eye's sensitivity, it would block the color frequencies from remotes.

Some color cameras have IR filters so that an IR rich light source will not swamp the red pixels and mess up the picture.

Re: Will IR Illuminator work with any CCD Camera?

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Bill Fuhrmann

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