

Re: Synchronizing Inexpensive Digital Camera Shutters

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2007-08/msg02496.html>

- *From:* default <default@xxxxxxxxxxxxxx>
 - *Date:* Sun, 12 Aug 2007 16:42:38 -0400
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On Sun, 12 Aug 2007 12:14:01 -0700, MooseFET <kensmith@xxxxxxxx> wrote:

On Aug 12, 5:42 am, default <defa...@xxxxxxxxxxxxxx> wrote:

On Sat, 11 Aug 2007 20:24:43 -0700, Pooua <po...@xxxxxxx> wrote:

I have not found any stereoscopic cameras that meet my needs, so I would like to assemble something that might. I want to rig two point-and-shoot digital cameras together so they will record a stereoscopic image. The problem is synchronizing the shutters. It should be possible to use one camera for focusing, with the other camera set as a slave. But, I don't know what circuitry would allow for this. Does anyone have any suggestions?

Thank you.

<http://www.laureanno.com/RCNEW/aiptekmod.htm>

I didn't build the RC trigger this guy uses, but I did use his instructions for taking apart the camera and tapping into the shutter control.

Since there is only one control, the shutter, it will almost always just be a SPST switch. This suggests that it really should be quite easy to do. On things with a scanned keyboard, the CD4016 can be used to replace the switch closure.

Re: Synchronizing Inexpensive Digital Camera Shutters

The link refers to a decoder to take a servo drive signal for a remote control camera on his model aircraft.

I was saying that two cameras can be triggered with one switch and two diodes to isolate the signals. Not really sure if it is necessary but am sure it would work – I had a situation where the camera battery was feeding back into the picaxe and used a diode to isolate it – then ditched the diode and used a cap and am running both the picaxe and camera from the same 3 V source.

My goal is a weatherproof time lapse camera, but I've also been toying with the idea of a stereo camera – since my wife is into that. The Aiptek is a nice candidate for that too – they supply a little holder that is designed to make it into a web cam so it will run from the USB power. Two holders and cameras could easily mount to a bar with a single screw, a little effort wiring, to make a fancy stereo camera in about an hour.

The camera turns on when the batteries are connected then it initializes and is ready to take a picture. If you do nothing it goes to sleep in three minutes to conserve the battery – then you have to press another button to wake it up before you can take a shot.

I supply power to the camera via the battery connector under picaxe control. Wake it up take a shot, time it so the shot goes into memory, then remove power from the camera – all takes ~25 seconds. Then the picaxe goes to sleep to conserve power until the next shot. Timing is set via a series of resistors to get ~10:1 range – that range can be easily expanded or doctored in software. My time lapse is currently running 1–10 minutes between pictures.

I'm having way too much fun with this. Parking lots are great for catching candid shots – if I was younger and more callow, a girls locker room . . . or to see when our elected officials get to work or watch traffic, watch plants grow, kite photography, etc..

To calibrate the timing I take an unused pin on the picaxe and send voltage to a quartz analog clock. Load the calibration program in and set the clock to 12 and it takes a picture of the clock then takes another picture of the clock when the "sleep time" is over.

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