

## Re: Need help with intermittent circuit failures – JK Flip Flops

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.basics/2006-06/msg00378.html>

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  - *Date:* Wed, 7 Jun 2006 21:14:20 +1000
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[snip]

The circuit works fine most of the time (like 80%), but it's unreliable, and I don't know what I can do to make it work properly every time. Most of the time the relay changes state 1 sec after motor stops (which is correct), but other times it does other wierd things, like the relay would act as if it's connected directly to the 555's output pin. Also, llthough very rare, the JK Flip Flop would even ignore the clock signals it receives and therefore the relay would do nothing – only the motor would stop for the 1 sec. Very annoying, being intermittent faults.

I can forward a circuit schematic, but its too hard to draw in html format (it's a little too complex) to do. I have a proper schematic i could email though as a jpeg.

Anyone have any ideas? I need this thing to be reliable. I may be doing something wrong?

Well, in addition to the bypassing and catch diodes that w2aew mentioned, I'd say, go ahead and post the schematic on [news:alt.binaries.schematics.electronic](mailto:news:alt.binaries.schematics.electronic) ; I notice you're not posting from google, so I'm assuming you have a real newsserver and a real newsreader.

## Re: Need help with intermittent circuit failures – JK Flip Flops

Put something recognizable in the subject line, and call attention to it here, or even copy/paste the message ID.

There are also free places where you can post an image, but you'd have to look them up.

I'd really like to see this circuit, because it sounds like it could be simplified. One question: does this magnet go past some switch, which starts the "turn around" process, the motor coasts to a stop, the motor goes the other way, what happens when the magnet passes the switch again?

Thanks,  
Rich

Hi Rich,

Thanks for the reply.

To answer your question about the magnet switching, the motor (or should I say 'Gearhead Motor', which spins maximum of 36RPM at the shaft) will be spinning slow enough that by the time it fully stops (which doesn't take long at all), the reed switch will still be magnetised. The magnet will be fairly powerful to keep it magnetized, and depends on what type of magnet I use and how. I think it won't be an issue for my project.... but it was a very good question =)

Perhaps I should explain what sort of timer I am using and how the reed switch is connected to it? Well I am using a 555 timer IC configured as a monostable which self-triggers at power on. That is, when the timer circuit is powered up via the reed switch when magnetized, the output of the timer goes high for 1 sec, then goes low until power is reset.

I've had a look at the schematics.electronic newsgroup, but are attachments allowed? I don't see too many of those so I'm a bit reluctant. Can I email it to you directly? It's so much easier to see the circuit rather than describe it right?

Thanks,  
Jason.