

# Reducing flicker for stop-motion animation

## ***What is flicker?***

Its the common problem of inconsistent lighting or luminance variation between consecutive pictures taken on the same camera, with the same lens and settings.

There are many causes of flicker:

1. Auto camera settings;
2. High aperture settings, too fast shutter speeds, Av stepping, Tv stepping;
3. The type of lens used;
4. Fluctuating electricity;
5. Animator's clothing worn, and the materials that are being photographed.

## ***Disable auto settings (except auto-focus)***

Make sure that all auto settings on the camera body and lens are turned off and set to manual. Any auto settings, such as auto-exposure, auto white balance, and light optimizer may cause luminance variations from shot to shot.

*Note, you still need auto-focus is you wish to be able to use the Canon zoom feature (x5, x10). Using auto-focus will not cause flicker, but it may cause differences in the focal plane depending on the depth of field and movement within the shot.*

## ***Use a slower shutter speed***

Fast shutter speeds are another common cause of flicker because most DSLRs cannot be consistent from frame to frame when shooting at fast shutter speeds. Keep the exposures to 1/30th of a second or greater.

## ***Use a manual aperture lens to avoid flicker***

With a digital lens, the aperture will close down to slightly different positions for each shot. That's why it is strongly recommended using a manual aperture lens (such as a Nikon lens) with a Canon body. This is not a problem for still photography, but for stop motion it creates flicker. For Canon cameras, it is good to use a Nikon manual aperture lens with a Nikon to Canon lens adapter.

*Note, a manual aperture lens has a physical ring for controlling the aperture. Do not get a 'G' series lens, which has no aperture ring.*

*Any lens with a manual aperture ring should solve the problem, by keeping the iris blades in the same position for the entire duration of the stop-motion shot.*

## ***Electricity levels***

Electricity fluctuations may affect your lighting set up over the course of the shot or throughout the day. In this case, a variac transformer is your friend.

## ***Clothing***

Wear dark clothing while shooting to reduce the risk of light reflecting off the clothes. This is a very common cause of stop-motion flicker.

## ***Your sets and objects***

Watch out for highly specular materials that might be lying around or hanging on the walls of the shooting space. Mirrors, metallic objects may be the cause of the flicker.

## ***Looking for some more info regarding flicker?***

Check out this blog post at [Adobe Blogs](#).