If you are having trouble getting flicker-free graphics, even when it looks like your double buffering code is written correctly.

The problem:

The ST's emulated monitor has a refresh rate of 70Hz. The *actual* PC monitor doesn't. This means that they're out of sync!

Let's say that you've written an experimental program which sets up two screen buffers: one totally black and one totally white. Then, let's say it sets up a VBL ISR which flips between them (the flip should happen 70 times per second, i.e. the screen goes white, then black, 35 times per second).

What do you expect to see when you run the program?

Well, the screen *should* appear gray. The human eye/brain is capable of seeing individual frames of a 35Hz signal, though, so you would probably expect to see an almost gray screen which "shimmered". Besides the slight shimmer, though, the screen should look like a solid gray image.

This is indeed what you would see on a real ST. But, what do you see under STeem?

Because the real monitor is out of sync with the refresh rate of the emulated monitor (i.e. the STeem window contents), you see a somewhat gray screen with flickering black splotches. If you look carefully, an almost-horizontal black splotch will seem to move down the screen repeatedly. This is like the effect you see if you watch the spinning rotor of a helicopter on TV.

How do you fix this on the emulator?

Under STeem, go to the "options" menu (i.e. the wrench icon). Select the "Fullscreen Mode" menu. Under "drawing mode", select "Screen Flip" instead of "Straight Blit". This will tell STeem to refresh the *real* screen image only when the *real* screen is in the middle of a VBL. In other words, the emulator adds a second level of double buffering to sync up the emulated ST monitor with the real monitor's refresh rate.

Unfortunately, this won't look as completely perfect as if you were using a real ST, but it will be pretty good.

NOTE: the screen flipping mode will ONLY work when STeem is in full-screen mode, NOT when you're viewing it as a window within the larger Windows desktop.