

Re: guiding relays vs scope controls

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- *From:* Havriliak@xxxxxxx
 - *Date:* 8 Sep 2006 05:15:21 -0700
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This is very interesting and explains some of my observations. With the ST-4 I use a very old Compact laptop (about 15 yrs old) in the DOS mode with CCDTrack. I never had any problems. Ive tried newer laptops in the Windows mode and couldn't get any performance reliability.

Chris L Peterson wrote:

On 07 Sep 2006 23:49:28 GMT, Pierre Vandevenne
<pierre@xxxxxxxxxxxxxxxxxxxx> wrote:

I seem to have problems with the autoguiding relays of my sbig camera. Haven't really objectivated the issue but it shows up with two different mounts using two different cables, so I guess there not much room for doubt.

I have therefore switched my guiding from guider relays to telescope control. Is the performance going to be markedly different? So far, everything is fine, but I am using a very short focal length (540mm) and have had to cut the aggressivness in half, all other things being equal.

There are two ways the guider logic can work. The "bad" way, which is very common, is that the guider software sends a command to start a correction, and then after some amount of time it sends another command

Re: guiding relays vs scope controls

to stop it. The reason this can be bad is because Windows is not a realtime operating system, and the timing between the two commands can end up quite different from what the guide correction duration should actually be. Another problem is that the commands can get fragmented during transmission, creating a timing error. This is particularly possible if the transmission interface is networked: Ethernet or USB (including serial over either of these).

The "good" way of sending guide commands is to send a single command containing the direction and the time. This can't get fragmented, and isn't dependent on Windows for timing. Newer mounts increasingly have this type of guiding built into their interface.

AFAIK, SBIG cameras don't manage guider timing internally. That means that they use the first sort of control, with all its possibilities for error. Whether you will do better using scope control depends on whether your mount supports internally timed guiding. If it does, your performance may be better. Otherwise, it should be pretty much the same either way.

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