

Subject: Fwd: Grisms and Filter Wheels
Date: Tuesday, December 21, 2021 at 11:45:26 AM Eastern Standard Time
From: Stephen Hope
To: Massimo Robberto
Attachments: 12162_5.png, 12162_5.png, PastedGraphic-5.tiff, ezhr Command_Set.pdf, PastedGraphic-5.tiff

External Email - Use Caution

Regards,

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Begin forwarded message:

From: Stephen Hope <stephen.hope@idg.jhu.edu>

Subject: Grisms and Filter Wheels

Date: August 18, 2021 at 5:40:18 PM EDT

To: Jonathan Hoover <12jonboy12@gmail.com>

Hi Jonathon,

These are the Grism commands I sent to you the other week... And for reference, the EZHR drive controller instructions are attached.

:

Initialization settings for Grism Drives

Notes:

- I set these already, and they only need to be programmed once. However, we need to be able to send these commands in the event a drive is replaced.

~@,9600_8N1T2000,/3s0m23l23h0j4V7000v2500n2f1Z100000000R ; init (A)

~@,9600_8N1T2000,/4s0m23l23h0j4V7000v2500n2f1Z100000000R ; init (B)

~@,9600_8N1T2000,/3s1S12A69000R

; position 1 (A)

~@,9600_8N1T2000,/4s1S12A173000R

; position 1 (B))

~@,9600_8N1T2000,/3s2S12A103300R

; position 2 (A)

~@,9600_8N1T2000,/4s2S12A207300R

; position 2 (B)

~@,9600_8N1T2000,/3s10A0R

; stowed position (A)

~@,9600_8N1T2000,/4s10A0R

; stowed stowed (B)

Commands to execute in your code are as follows:

Notes:

- Homing will happen automatically when the drive is powered up.
- Sled A must be home before sled B can move away from home
- Sled B must be home before sled A can move away from home

~@,9600_8N1T2000,/3e0R
; Initialization/ homing (A)
~@,9600_8N1T2000,/4e0R
; Initialization/ homing (B)

~@,9600_8N1T2000,/3e1R
; position 1(A)
~@,9600_8N1T2000,/4e1R
; position 1(B)

~@,9600_8N1T2000,/3e2R
; position 2 (A)
~@,9600_8N1T2000,/4e2R
; position 2 (B)

~@,9600_8N1T2000,/3e10R
; fast move to home
~@,9600_8N1T2000,/4e10R
; fast move to home

AND NOW FOR SOMETHING NEW....

All commands that you want to send to the EZHR motor controllers must be preceded with:

~@,9600_8N1T2000,

~ is the character that all messages to the PCM start with. @ means push the message to the RS485 bus. 9600_8N1T2000 means use 9600 baud, 8 data bits, no parity, 1 stop bit, with a 2000 millisecond timeout for a response message.

All the commands you send to the EZHR start with a drive number: /1, /2, /3 etc.

When you send a command like ~@,9600_8N1T2000,/3e1R you are asking drive 3 (/3) to execute stored procedure 1 (e1). The R last the end tells it to run the command

Every command returns a response packet. The format of the packet is detailed in the EZHR instructions. See page 23 of the EZHR manual.

You can also query the drive at anytime. Query commands start with a ? and do not need an R at the end. The command to query the current step count is ?0, and the command to query the limit switches

is ?4. For example: ~@,9600_8N1T2000,/3?4... This asks drive 3 (/3) to return the position switch status (?4). Query commands are on page 9 of the manual.

You should query the status of the motor controller to see if it has stopped moving, then query the step count, and the position sensor status, to make sure it went to where you thought it should go to.

With the grisms you must send one drive home, and make sure it is home by checking its status before moving the other drive...

AND FOR SUPPORT...

CALL ME from 8AM to 10PM +1(443) 299 7810

TEXT ME anytime +1(443) 299 7810

FB MESSENGER ME... [Facebook.com/limey.steve.5](https://www.facebook.com/limey.steve.5) ...Use the video or audio chat option - it rings on my cell.

FACETIME ME +1(443)299 7810

OK, I leave for the UK on Saturday for 2 weeks... I will have my cell phone and it should work... I will also have my computer... The UK is 5 hours ahead... I will be available from 10AM to 10PM UK time. This equates to 5AM to 5PM eastern standard time.

Feel free to call anytime... If I can't speak I will tell you, but I won't be offended or annoyed...

REMEMBER... It's the squeaky wheel that get oiled first... Squeak loudly, and don't feel sorry!

Regards,

Stephen C. Hope
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