AutoCam Worksheet

# Carriage Movement Only

Work on getting the stepper driver working and get the proper logic into the stepper motor code so when you call each function, you can figure it out intuitively.

1. Activate **Home Carriage** function [works]
   1. Direction [works]
   2. Stop when carriage hits limit switch [works]
2. Activate **Steps function** to move for predetermined steps [works]
   1. Direction [works]
   2. Distance [works]
3. Make sure **Limit switches** work to stop the carriage from moving [works]
4. **Disable Motor** Function [works]

# Camera Shots Only

Camera Shots without Carriage movement should work with the following variables:

1. Take Shot Function
2. **CamCont** function should work with the following variables:
   1. **NOF (# of Frames)**
      1. (eg. 1000 Frames)
   2. **SSC (Shutter speed** **Compensation)**
      1. **SSC\_MS**
      2. (eg. 6 Second shutters)
   3. **TBF (Time between frames)**
      1. This variable is dependent on the following variables:
         1. Shutter speed compensation (eg. Δt = 0, if Δt < Shutter speed OR Δt = 0)
         2. Time set by the user
            1. eg. 10 seconds between shots, therefore Δt = 10 – 6 (shutter speed) = 4 seconds)

# Camera Shot with Carriage Movement

Take picture, wait (if needed), move, take picture

Should have ramp up curves so it isn’t a bang bang controller… ?

Camera Shots with Carriage movement

1. **CamCarrCont** function should work with the following variables:
   1. **NOFT (# of Frames Total)**
   2. **NOFP (# of Frames Per Position)**
   3. **SSC (Shutter speed compensation**)
   4. **TBF (Time between frames)**
      1. This variable is dependent the following variables:
         1. Distance between frames (mandatory)
            1. Calculate time with theoretical speed and distance
         2. Shutter speed compensation time
         3. Time set by the user
   5. **DBF (Distance between frames)**
      1. Set by user
      2. Auto Mode, dependent on the following:
         1. Equal division with **NOF**
      3. Watch when hitting limit switch

# Rotary Encoder Only

# LCD Monitor Only

# Integrate with Serial Monitor for changing Variables

# Integrate with LCD to with Serial Monitor

# Integrate with LCD with Rotary Encoder for menu navigation