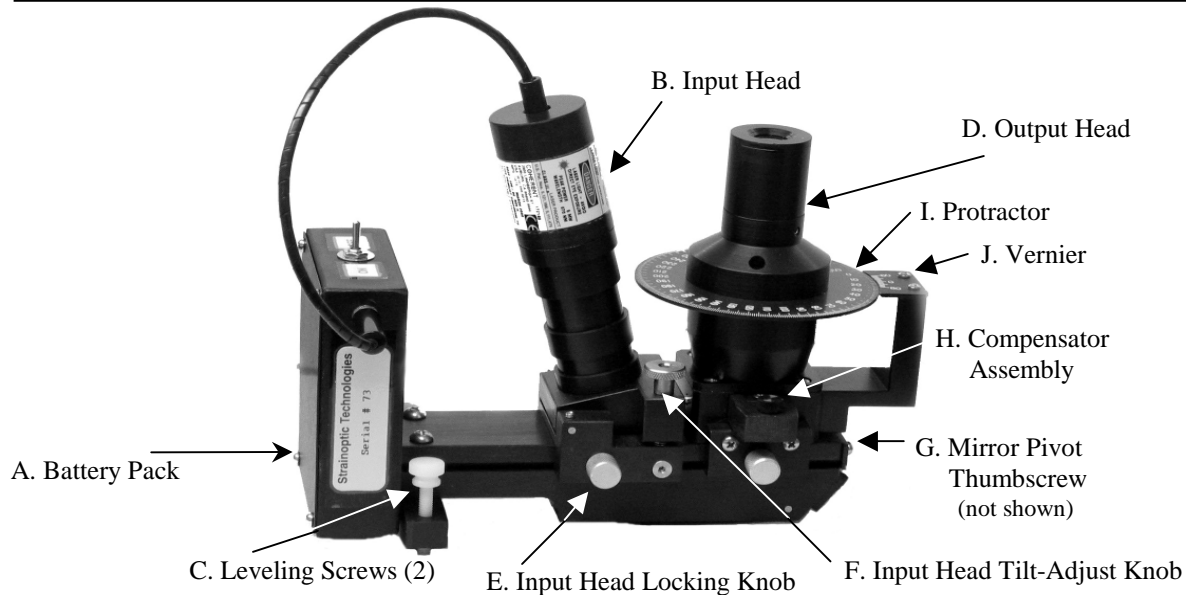


Strainoptics Laser GASP[®]-CS

Quick-Start Guide

Note: These instructions are not meant to replace the full Strainoptics Laser GASP-CS instruction manual supplied with your instrument. If you are not yet familiar with the initial setup, general operation, and maintenance requirements of the Laser GASP-CS, or if questions arise, please refer to the complete manual for further details.

CAUTION: TO AVOID EYE DAMAGE, DO NOT LOOK DIRECTLY AT THE LASER LIGHT.



1. Place your glass sample on a clean, flat, and level surface with the TIN SIDE up. To verify that you are measuring on the tin side of the glass, use a UV lamp (available from Strainoptics, part #UV-STI-4).
2. With the power switch on the battery pack (A) in the OFF position, insert the small silver plug attached to the Input Head (B) into the small jack on the side of the battery pack. Turn the power switch to the ON position. Verify that the laser light is on by lifting the instrument slightly and noticing the red reflection on the surface of the glass or table. Note: When the instrument is not in use, always turn the power switch OFF and unplug the laser to save battery power.
3. For the best viewing image, the intensity of the laser light passing through the sample should be maximized. For reading accuracy, the light path must be directed to travel through the stress layer near the surface of the glass. When using the Laser GASP-CS on curved glass, it can require more fine adjustments to obtain a satisfactory image than when using the instrument on flat glass. It is critical that BOTH prisms make contact with the glass surface at the same time. (See Figure 7a in Laser GASP manual.)

We strongly recommend following the instructions in Steps 4-9 using the supplied practice sample until you are completely comfortable with the techniques described before attempting to use the instrument on your curved glass specimens.

4. To minimize the possibility of damage to the Laser GASP-CS prisms, be sure that the point of measurement is free of abrasives. Place a few drops of index matching fluid (approximately 1/2-inch diameter) on the sample where the measurement is to take place. Carefully lower the Laser GASP-CS body onto the glass so that the pool of fluid completely covers the prism faces on the bottom of the instrument and BOTH prisms are in contact with the glass surface.

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Quick-Start Guide, Continued

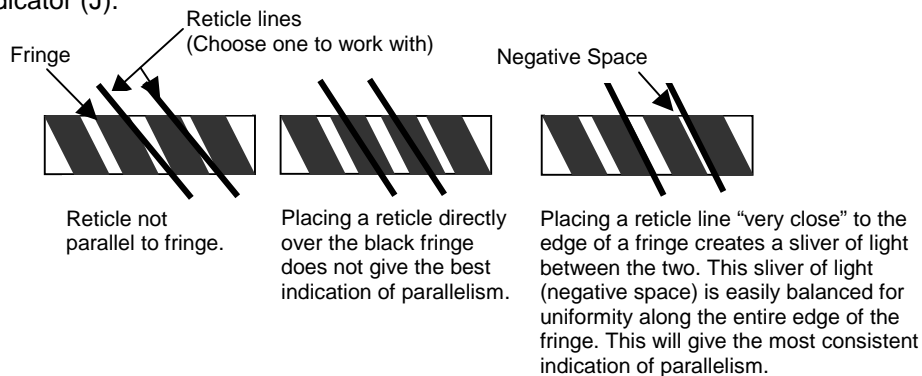
TIP: When measuring curved glass, wherever possible, position the Laser GASP-CS perpendicular to the curvature of the glass. This will help maximize the contact between the prisms and the glass surface.

- To maximize light intensity, loosen the input head locking knob (E) and, while observing the light intensity through the eyepiece, slowly move the input head (B) backward or forward until maximum light intensity is seen. Tighten the input head locking knob.
- Raise the two white leveling screws (C) so that you can easily rock the instrument slowly back and forth (lengthwise) while looking through the eyepiece and observing the quality of the image. (When the instrument is set up correctly on heat-strengthened or tempered glass, you should observe inclined black lines (stress fringes) on a red background through the eyepiece.) Lower the leveling screws to stabilize the instrument.
- Image quality may be improved by slowly turning the mirror pivot thumbscrew (G).

IMPORTANT: On heat-treated glass, straight or absent fringes are indications that the prisms are not in proper contact with the glass. No image, or a very dim image, indicates that adjustments to the light path are necessary.

To optimize the light path, slowly turn the input head tilt-adjust knob (F) while observing the image through the eyepiece, without losing light intensity. If you still cannot obtain a satisfactory image, repeat Steps 4 and 6 to ensure adequate optical coupling between the prisms and the glass surface.

- If the image appears cut off at either end, slowly slide the wedge compensator assembly (H) left or right to center the image and maximize the viewing area.
- Once a good image is obtained, rotate the protractor dial (I) until the reticle lines in the eyepiece are aligned parallel to the black fringe lines in the image. **NOTE:** The reticle lines do not have to be placed over the fringe lines. To ensure parallelism, position the reticle lines slightly offset from the fringe lines and use the "negative space" between the fringe line and the reticle lines to arrive at the proper position (refer to illustration). Note the angle of the protractor scale at the zero point of the vernier indicator (J).



- To convert the angle reading to a stress value, use the angle vs. stress table that came with your instrument. This conversion chart was calibrated specifically for your Laser GASP-CS and is not interchangeable with any other instrument.
- If you are having difficulty using the Laser GASP-CS, and cannot solve the problem by referring to the complete instruction manual, please contact a Strainoptics Technical Support Representative.