



Engineering Bulletin

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Equipment: Compact Tracking Mount

Application: OTS (Job 1296), CTRADAR (Job 1437)

Subsystem: Encoder

The absolute optical encoders (Model 60/25H) built by Gurley Precision Instruments and installed on the Photo Sonics Compact Tracking Mount have been obsolete. Gurley has a replacement unit which is mechanically identical. The new unit is electrically backward compatible, with the electronics now contained in the optical sensor, doing away with the separate connectorized electronics enclosure. Cables will be supplied which allow the replacement encoder to mate with all of the exiting system encoder cables.

The new unit uses "**Virtual Absolute™ Technology**" (see Web site www.Gurley.com) and therefore must be rotated approximately 0.3 degrees upon power-up in order to find home and determine an absolute position. Once power has been applied to the unit and it has been rotated to find home, it will operate as a normal absolute encoder until power is removed from the unit. The 0.3 degree rotation (initial calibration) can be performed manually by someone pushing on each axis of the pedestal or remotely from the shelter. Performing the initial calibration from the shelter may require a system software change. The change will be based on system testing to determine the best solution. It will most likely involve moving the pedestal over a limited period of time in an open-loop configuration and then performing a "Master Manual" command to zero the error and inhibit any further movement.

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