

Abstract Submitted  
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**Automation of the Telescope in the Observatory at Texas State University-San Marcos** CARY SMITH, Texas State University-San Marcos — The telescope in the Observatory at Texas State University - San Marcos is automated by means of off the shelf parts with a budget of \$300.00. This telescope retrofit is to replace obsolete and malfunctioning hardware and update software. The telescope upgrade entailed the removal of all of the timeworn hardware and thorough testing of the motors and encoders to insure proper functionality. From a less expensive telescope a new motor control board is acquired that is capable of performing tasks beyond the capabilities of the old board. A Schmitt Trigger and a set of four capacitors in series are used to lessen the noise produced by the older model motors and encoders. All of the retrofitted hardware is tested to insure proper functionality for the final product before installation into the telescope. After final installation a problem with the communication between software and hardware was found and remedied.

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