

To: File C:\hagen\wpfiles\vertexdoc\encoders.wpd
From Jon Hagen
Date: 10-327-03
Subject: Vertex Encoders

Vertex used the same model encoder in all four locations (CH, GREG, AZ1, AZ2)

Brand: TR Electronic, Inc. (German)
Model No.: CE-65-M
TR Part No. 110-00161/185/V001
(one repaired unit has PN 110-00161)

These encoders use the Synchronous Serial Interface (SSI). They receive a differential clock signal and respond with a differential data signal. Between encoder readings, the clock remains HI. Presumably, the first down-going transition of the clock triggers the encoder to latch the data at that instant.

After the data is read, the clock must remain high for at least 30 microseconds in order that the next burst of clock pulses captures new data. If the delay is less than 20 microseconds, the old data will be read out again, etc.