

file: vertexdoc\servoquestions.wpd jbh 8-30-01

1.

Torque commands are sent to the 8 az amplifiers from op amps on 15A1 and 16A1 cards in az dcs. The speed controller card, 12A1 produces two speed commands:

One speed command is used for motors M11, M12, M51, and M52. The other speed command is used for motors M41, M42, M81, and M82.

But one would have expected one speed command to be used for all the inboard motors, Mx1, and the other speed command to have used for all the outboard motors, Mx2. since the outboard motors, at a larger radius from the az arm center, must turn faster than the inboard motors.
?????????

2. Torque bias is applied across the az track rather than across the az arm, e.g. the same bias is applied to M11 and M41 and the negative of this bias is applied to M12 and M42. ??? Why this choice?

3. The azimuth dcs is fed by the analog speed command and one other analog signal. This other signal is labeled "Bending Compensation" on schem. page PLC 60. But the AZ Drive Concept drawing from Vertex shows the speed command and one other analog signal: torque bias. Which is it? Torque bias or bending compensation? Maybe bias is applied with pots inside the az dcs, since bending compensation has to be supplied by the PLC.

PLC listing refers to Biassed Mode (PB150 - 15) F57.2 = biassed mode