



Notes:

posCmd = Current height/angle requested. AMP, INTAKE, TRAP, Etc.
Comes in from driver or autonomous

Each value of posCmd will have an associated elevator height and singer rotation that (eventually) need to be achieved.

This logic is how we get from wherever we're at to the posCmd.

At Target = the profile has finished running -
velocity is back to zero, and commanded position is
wherever we were trying to go to.

Safe Height = calibrated elevator height at which singer can freely rotate
The threshold for needing to use the safe height to rotate is 3 degrees, hardcoded)

AutoAlign is latched on each transition into HOLD -
this was somewhat hacky, due to the fact we were getting
spurious motion of the singer as we entered and exited auto align.
In sim it looks god, but I'm not convinced it's the right answer overall