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VAR long cur_pos 'Real Position long set_pos 'Set Point long K 'PID Gain long cur_error 'Current
Error long pre_error 'Previous Error long output 'PID Output long stack[30] 'COG Stack byte cog 'cog
number long dt 'Integral Time PUB Start(Current_Addr, Set_Addr, Gain, Integral_Time,
Output_Addr) "Starts PID controller. Starts a new cog to run in. "Current_Addr = Address of Long
Variable holding actual position "Set_Addr = Address of Long Variable holding set point "Gain = PID
Algorithm Gain, ie: large gain = large changes faster, though less precise overall "Integral_Time =
PID Algorithm Integral_Time "Output_Addr = Address of Long Variable wich holds output of PID
algorithm cur_pos := Current_Addr set_pos := Set_Addr K := Gain dt := Integral_Time output :=
Output_Addr pre_error := 0 cur_error := 0 cog := cognew(Loop, @stack) PUB Stop "Stops the Cog
and the PID controller cogstop(cog) PRI Loop | e, P, I, D repeat long[cur_error] := long[set_pos] -
long[cur_pos] P := K * long[cur_error] I := I + K * long[cur_error] * dt e := long[cur_error] - long
[pre_error] D := K * e / dt long[pre_error] := long[cur_error] long[output] := P + I + D waitcnt
(clkfreq / 1000 * dt + cnt) {{ Copyright (c) 2008 Craig Weber Permission is hereby granted, free of
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