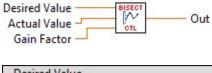
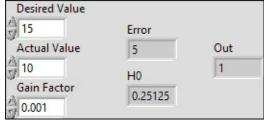
tbh.vi

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Take Back Half (tbh)

This VI is very useful for motor control vice using PID motor control. Only has a single tuning control vice 3.





Desired Value

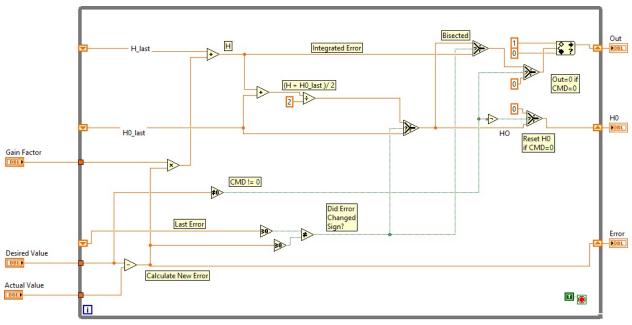
BLI Actual Value

Gain Factor

DBL Out

DBL HO

Error



Out = h_last + gain * error; (integrate the error) if the sign of "New Error" does not equal the sign of "Last Error" the error sign has changed replace H0 with the bisection value:

H0 = h = (h + h0)/2

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Take Back Half (tbh)

This VI is very useful for motor control vice using PID motor control. Only has a single tuning control vice 3.

From Electronic Design, Dec 4, 2000 by W. Stepen Woodward
http://electronicdesign.com/analog/take-back-half-novel-integrating-temperature-control-algorithm

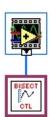
Overview (configured for a temperature sensor but the logic works for motors also):

To do so, variable HO is added and the modified servor run as before, except for what happens when the sampled temperature (T)
passes through setpoint (T = TS). Whenever such a setpoint crossing occurs, both H and HO are replaced by the bisecting value: (H + HO)/2.
As a result, at each setpoint crossing, H and HO are set midway between the values corresponding to the current (H) and previous (HO) crossings.
This action amounts to "taking back half" of the adjustment applied to the heater setting between crossings —hence, TBH.

"tbh.vi History"

Current Revision: 35

Position in Hierarchy



Iconified Cluster Constants