

Step 0: Determine Tuning Sequence



OK - with the terminology cleared up - let's get busy with the tuning.

Tuning your PID loop.

Step 0: If there are multiple loops - decide on tuning sequence.

(If you are tuning a single PID loop in isolation go directly to Step 1)

1. Tune the fastest acting loops first. (i.e the fastest loops are the ones where the PV changes fastest in response to a SP change or Disturbance)
2. With cascade loops: tune the inner loop first, then the outer loop (don't know what a cascade loop is? - see box below)

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Cascade Loops:

A cascade loop is a fairly common "advanced PID strategy" so I'll mention it here so that you will recognize it if your loop is part of a cascade pair.

Cascade control is when the controller output provides the setpoint of another controller instead of an actuator. The block diagram of a cascade loop is shown below:

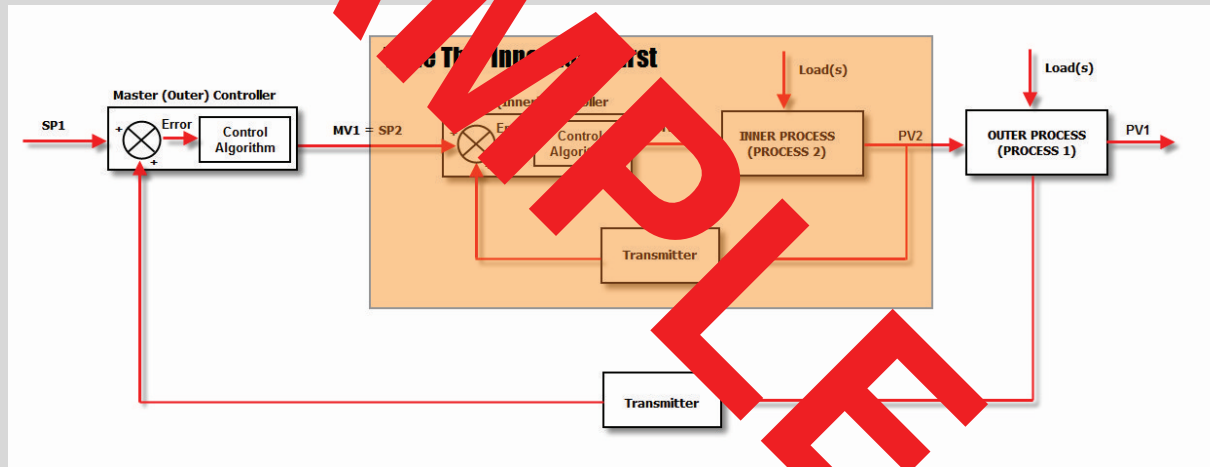


Figure 2 - Two PID loops in cascade: Orange blocks = inner loop, White blocks = outer loop