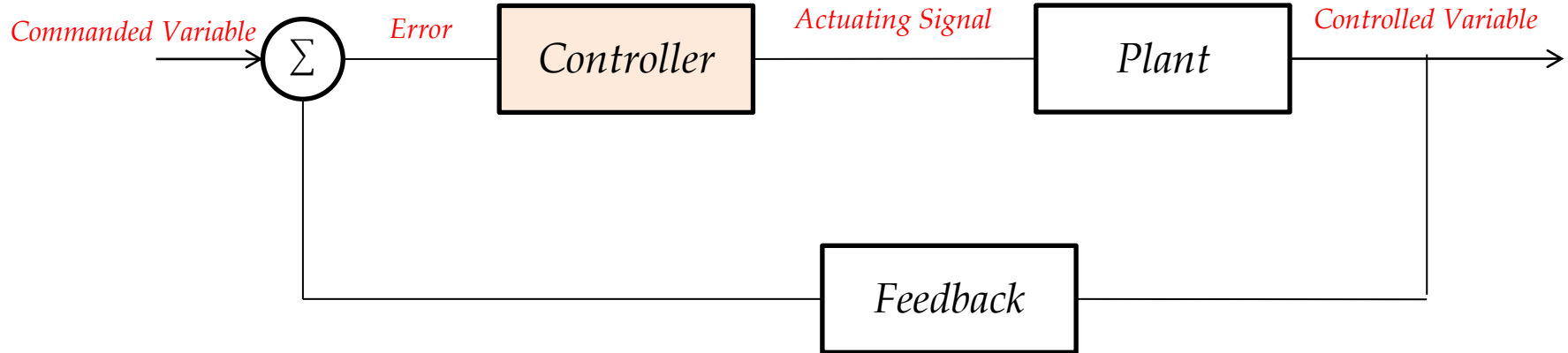
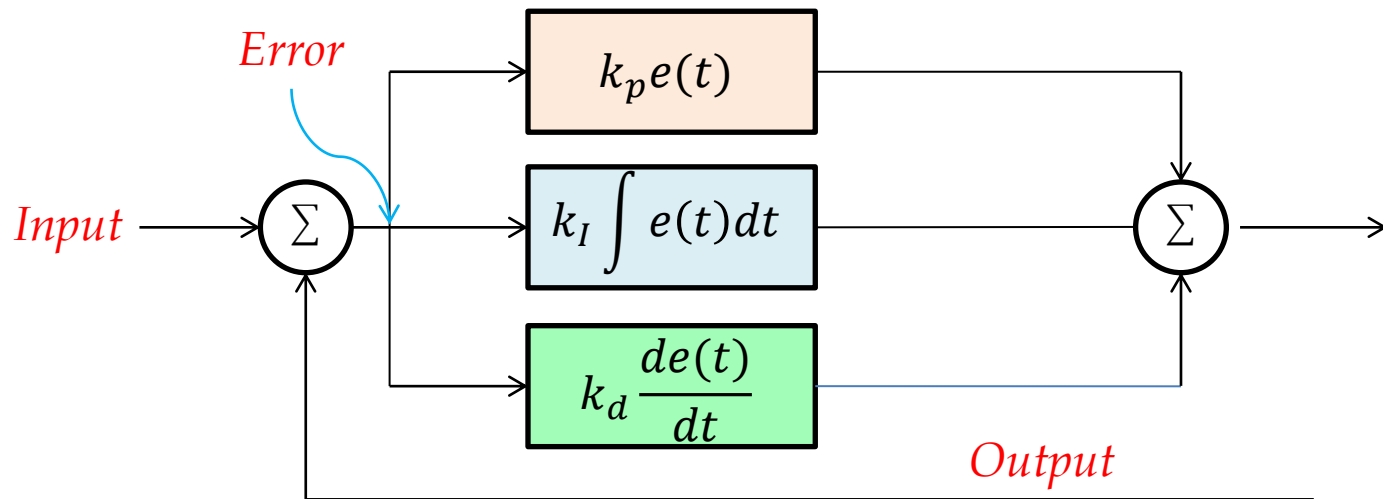


# PID Controller

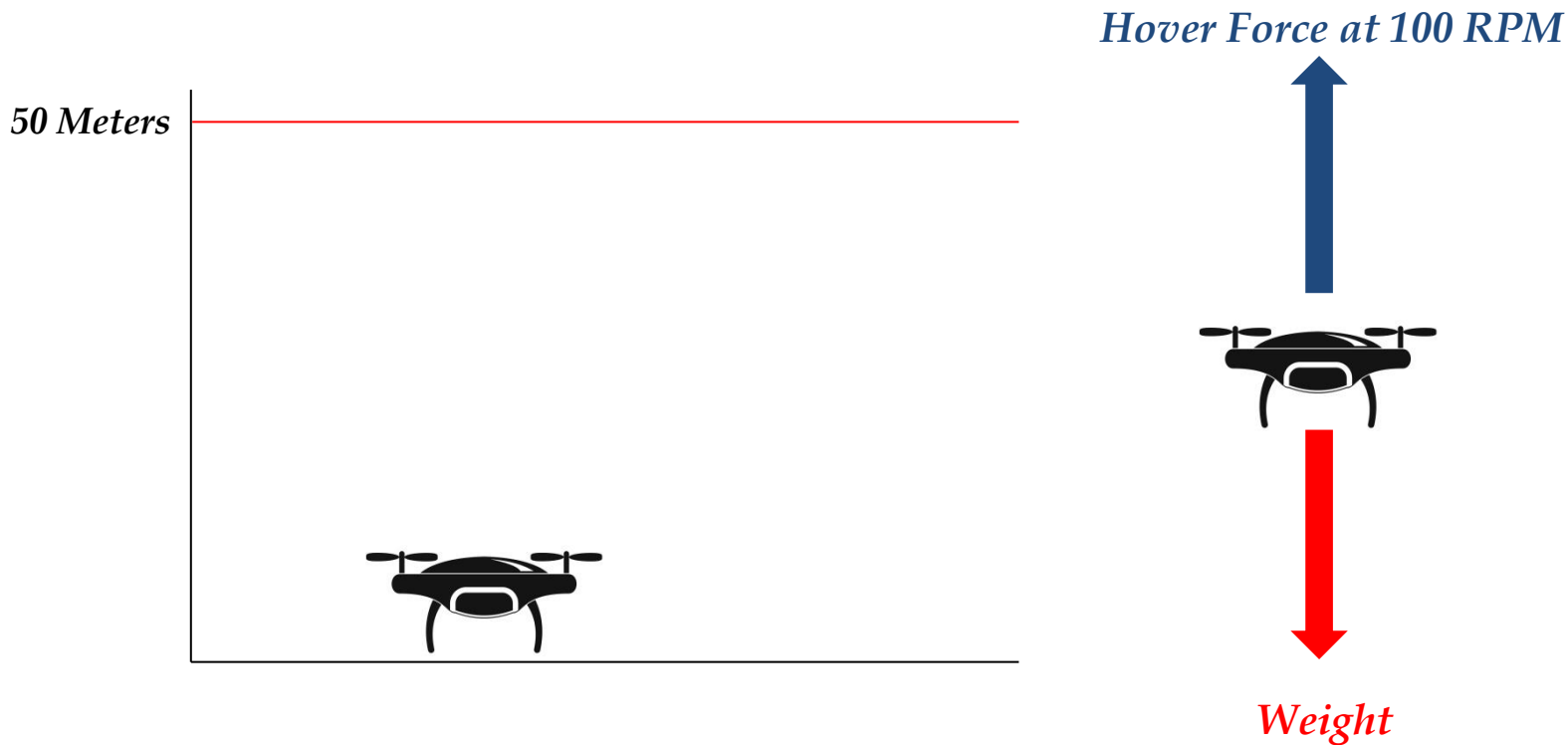
# *Control System*



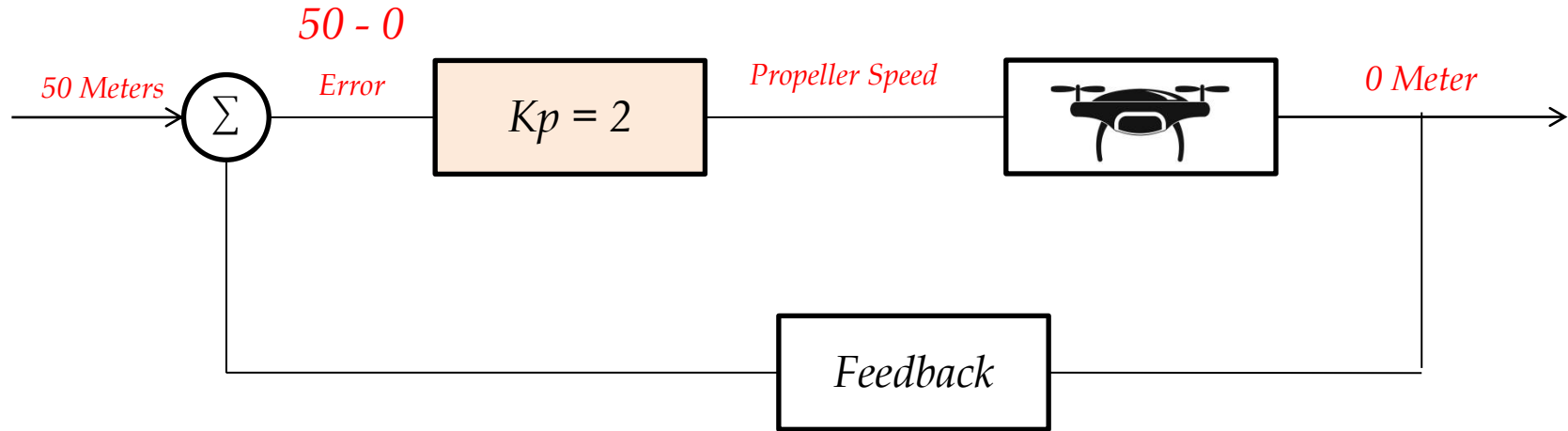
# *PID Controller*



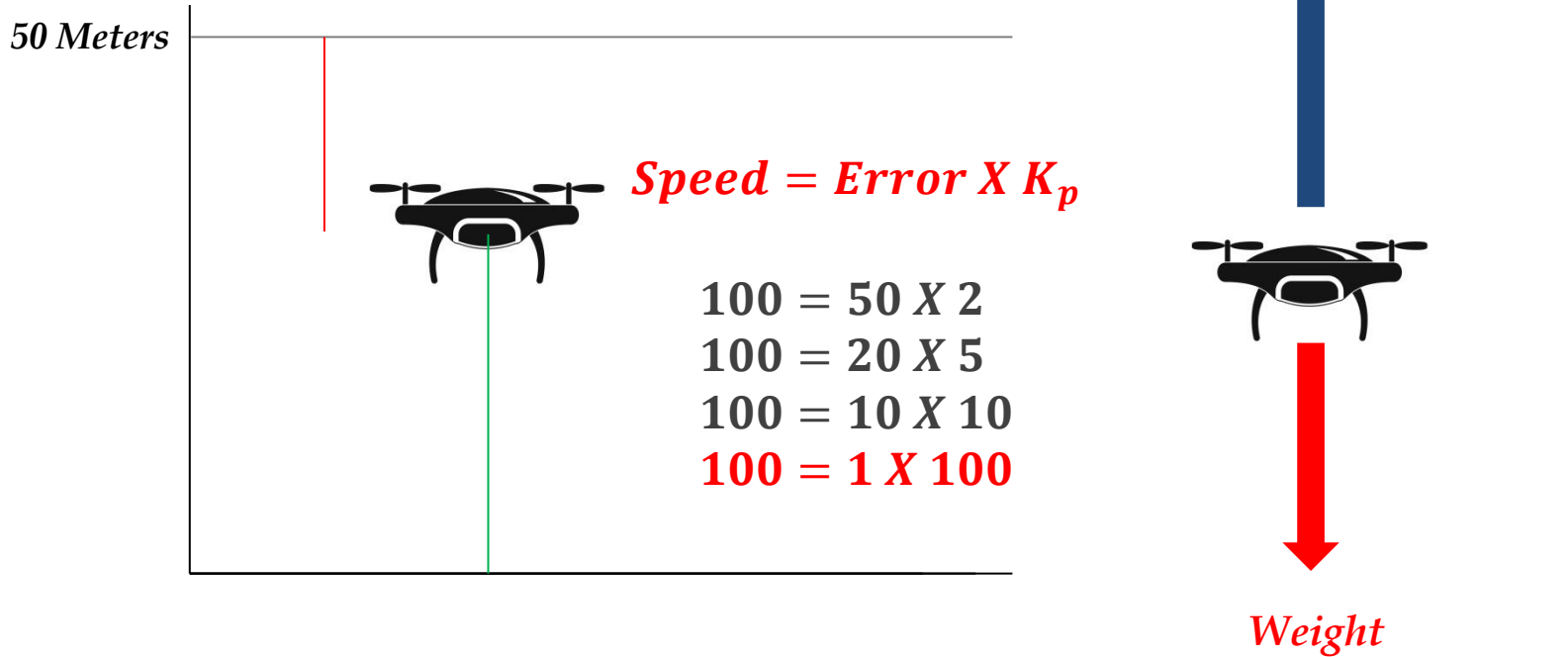
# *Drone Controlling Problem*



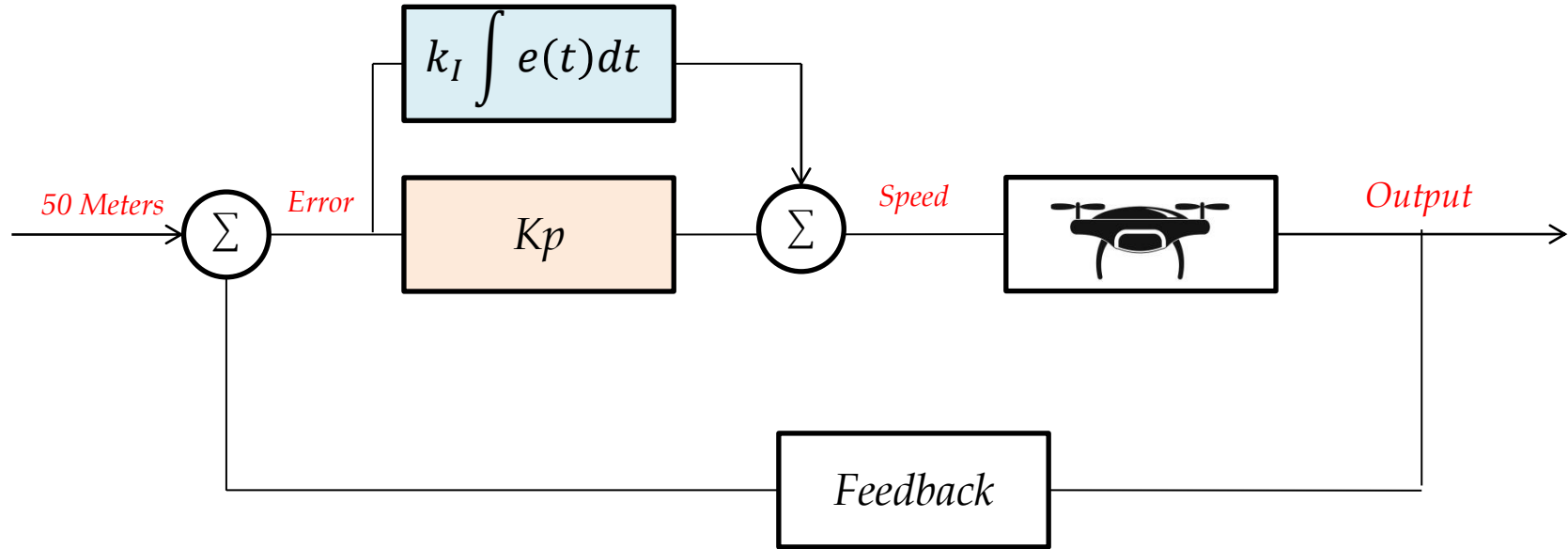
# *Proportional Controller (Present)*



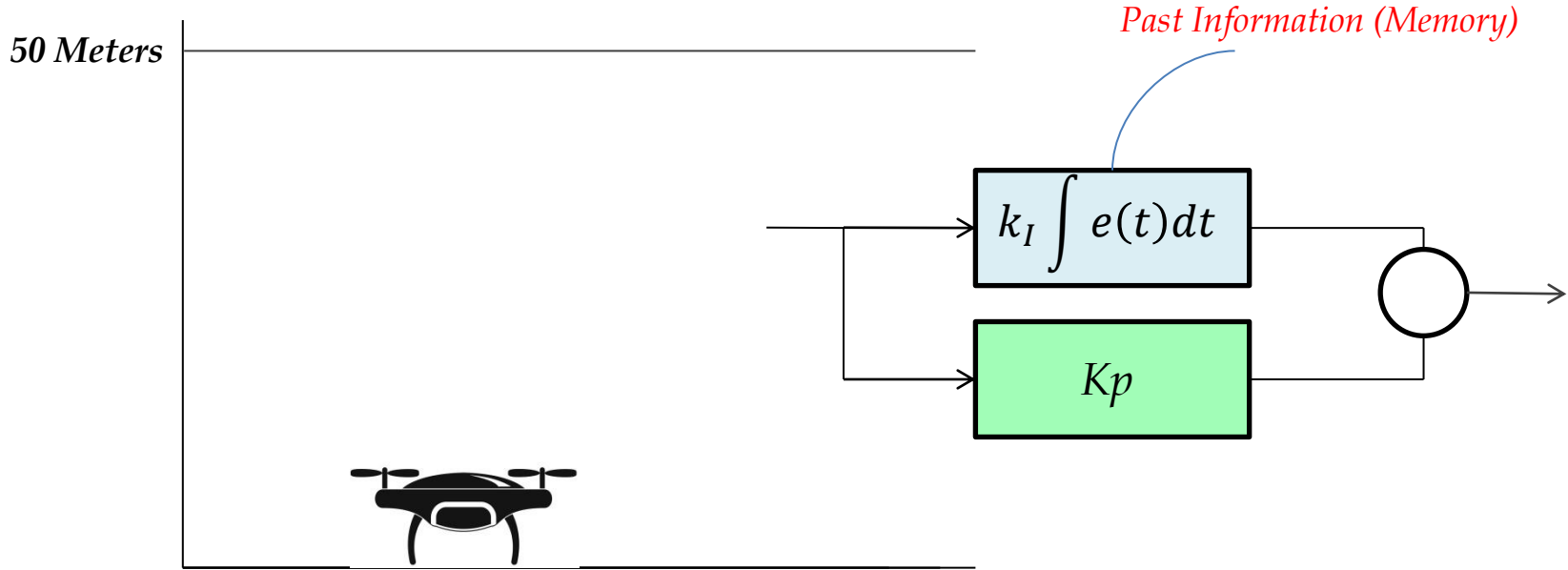
# *Drone Controlling Problem*



# *Integral + Proportional (Future)*

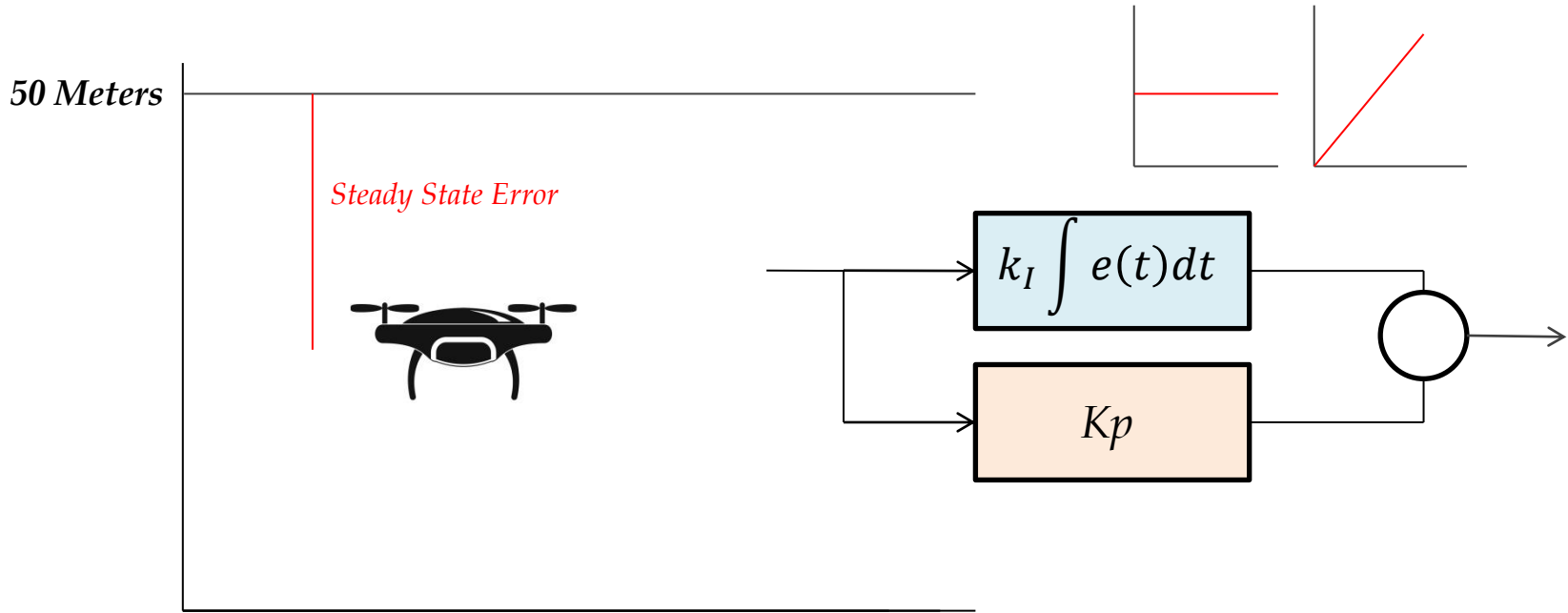


# *Integral + Proportional (Future)*

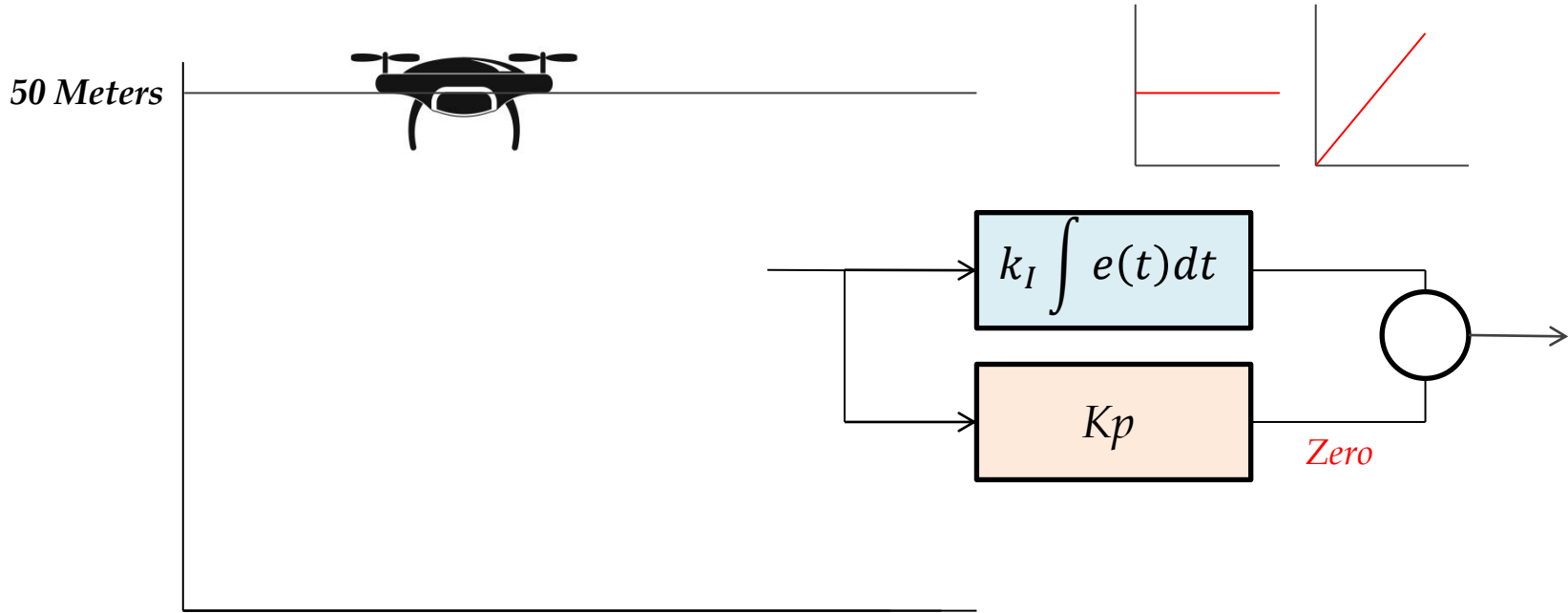




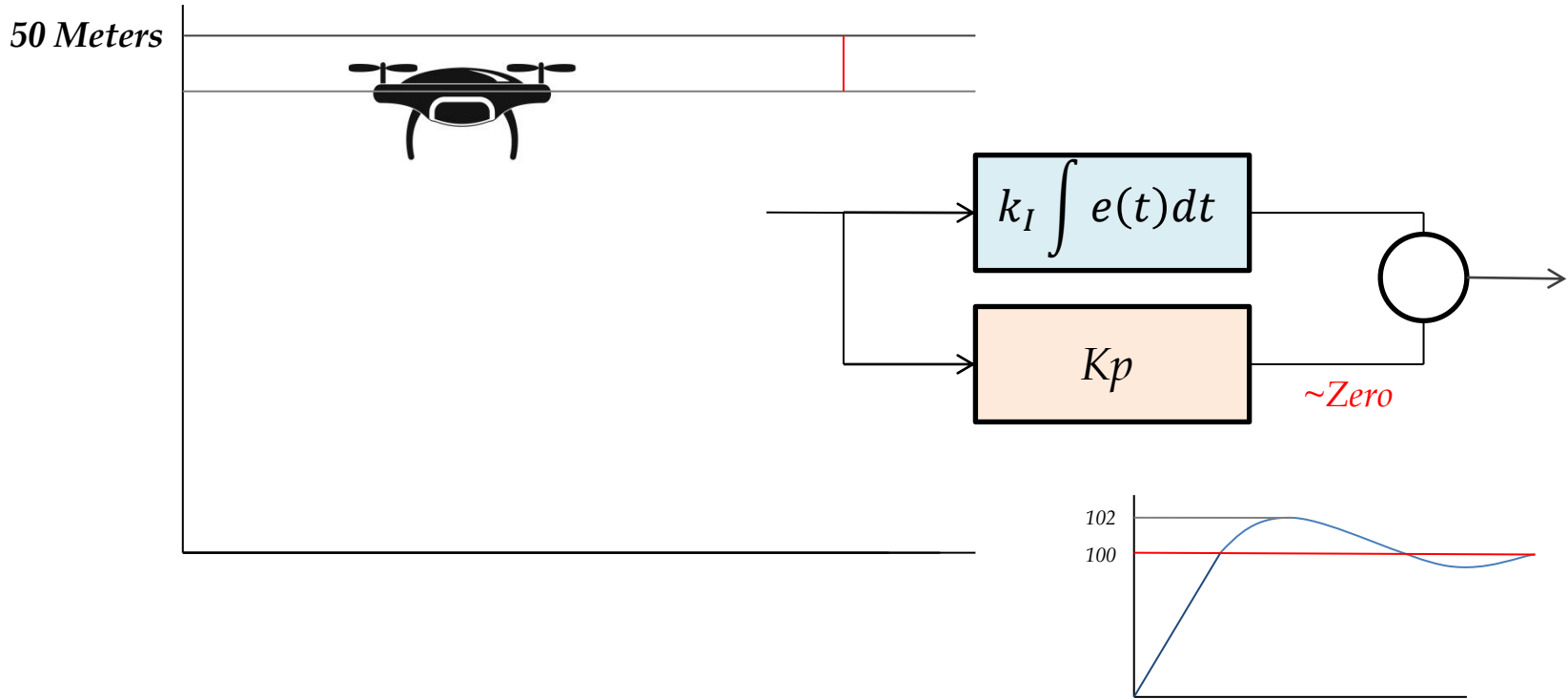
# *Integral + Proportional (Future)*



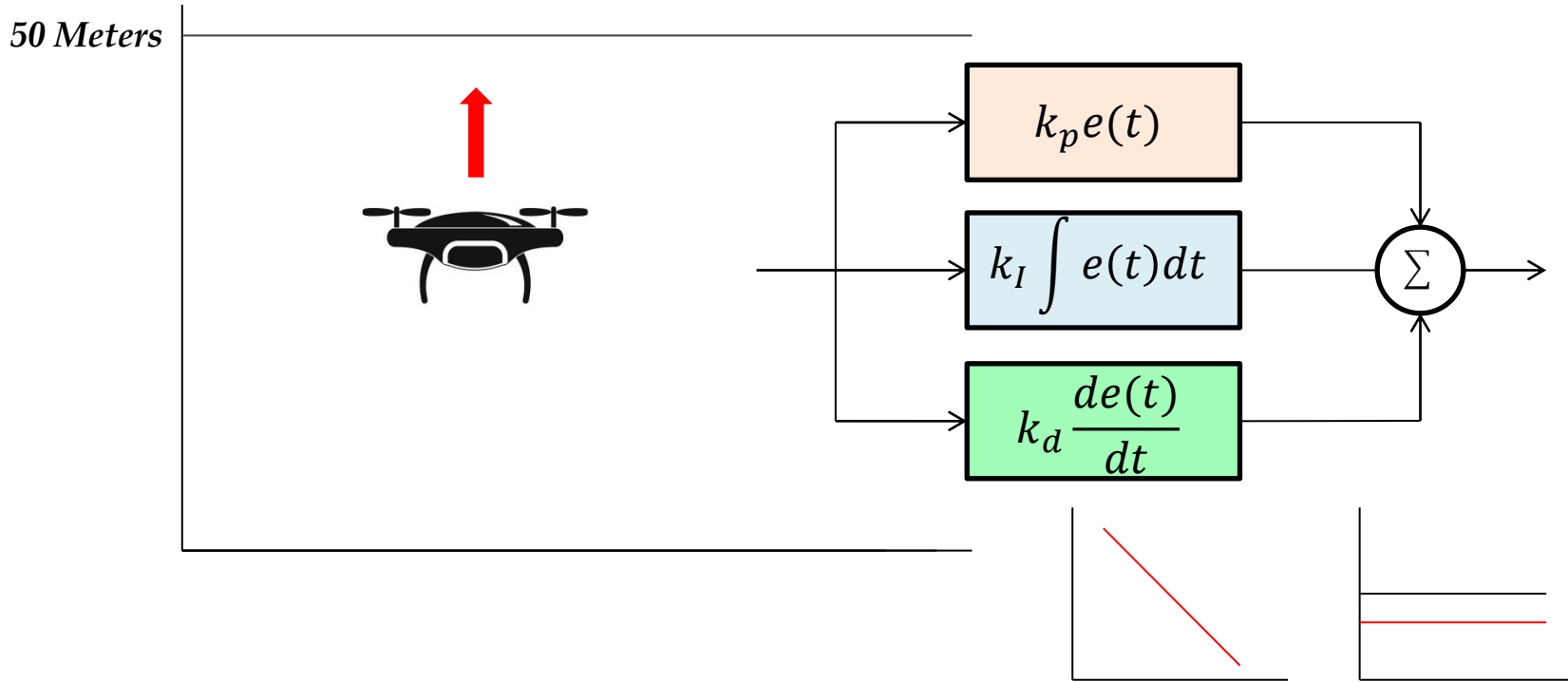
# *Integral + Proportional (Future)*



# *Integral + Proportional (Future)*



# *Derivative Controller (Future)*



# *Proportional Controller*

1. Doesn't Eliminate the Steady State Error.
2. Added with Other Controllers.
3. High Values Reduce the Steady State Error but Lead to System Oscillations.

# *Integral + Proportional*

1. Integrates the Error Signal.
2. Eliminate the Steady State Error.
3. Adds Overshoot
4. Can Lead to System Instability.

# *Derivative + Proportional*

1. High Sensitivity.
2. Provides Significant Correction before the error becomes too large.
3. Doesn't Affect the Steady State Error Directly.
4. Adds Damping to the system .
5. Helps to remove Overshoot