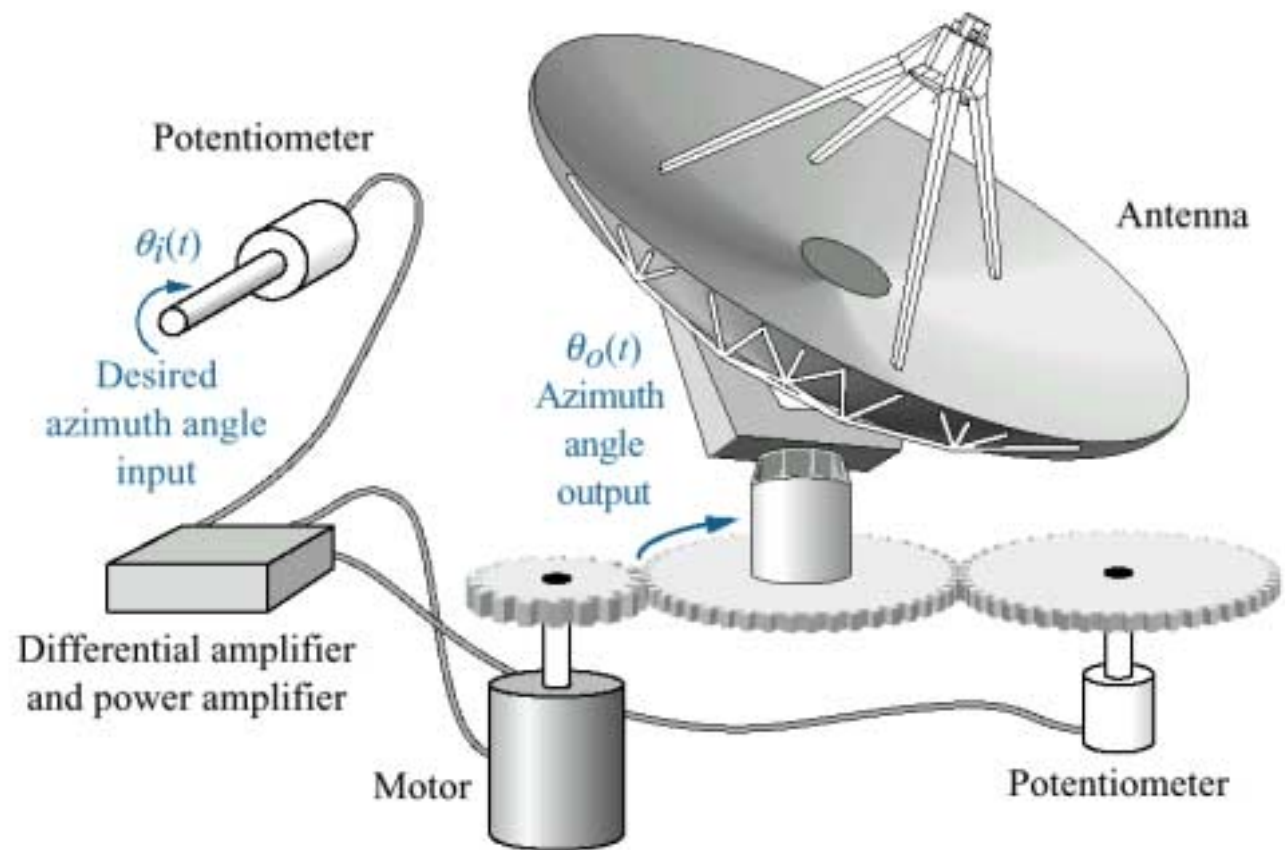
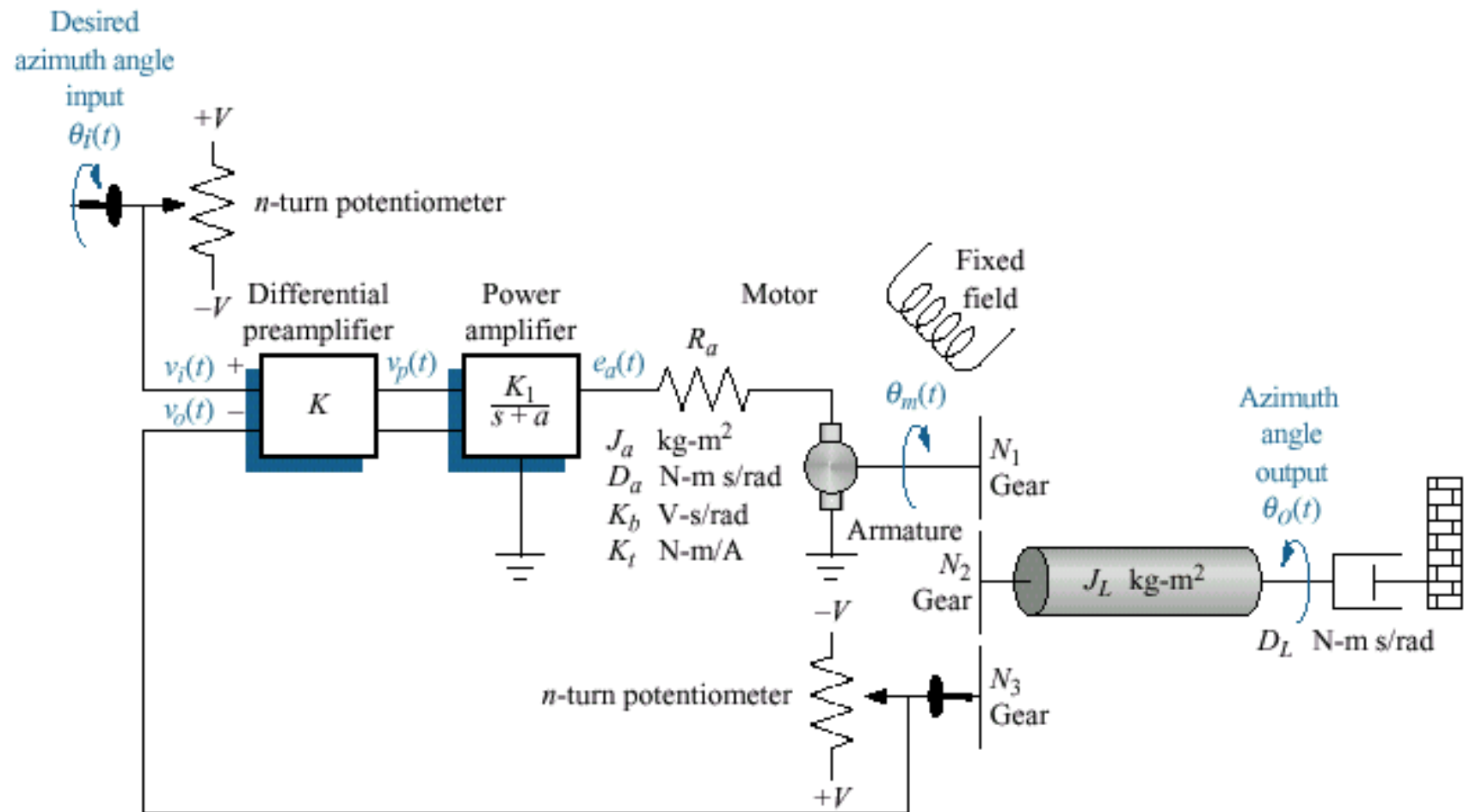


# Antenna Azimuth Position Control System

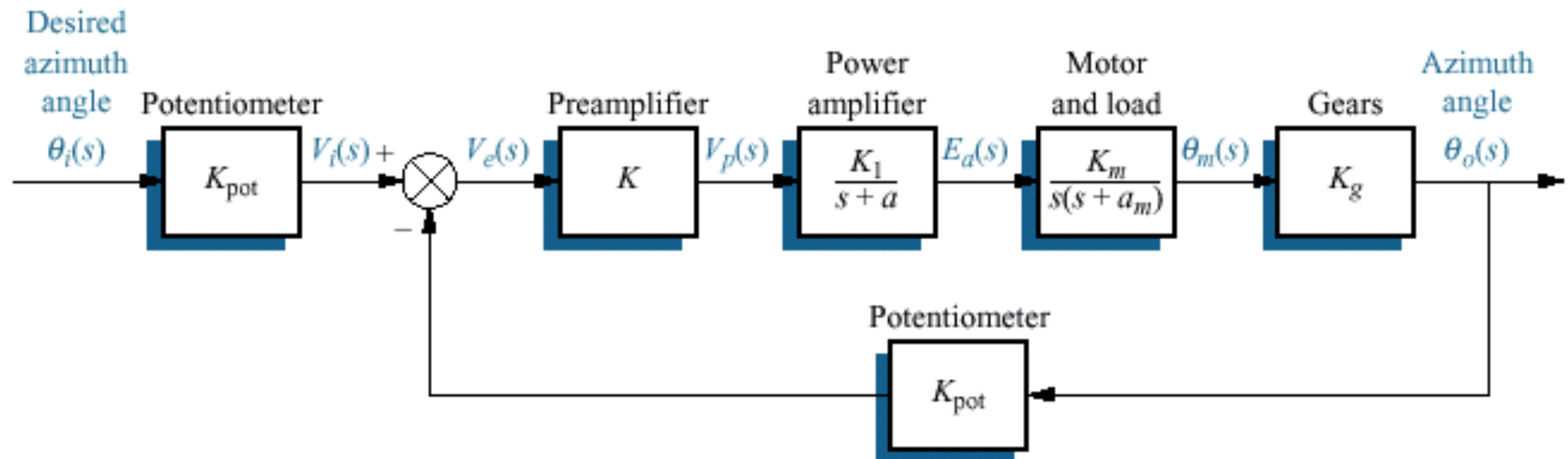
## Layout



## Schematic



## Block Diagram



## Schematic Parameters

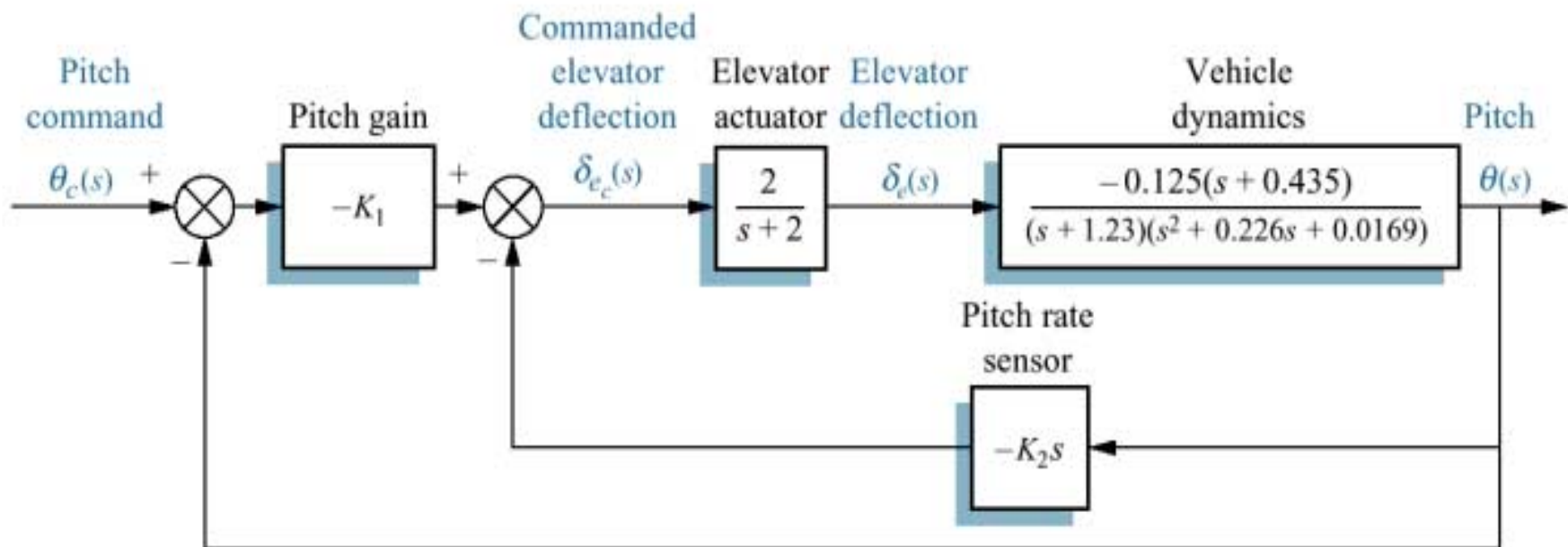
Parameter	Configuration 1	Configuration 2	Configuration 3
$V$	10	10	10
$n$	10	1	1
$K$	—	—	—
$K_1$	100	150	100
$a$	100	150	100
$R_a$	8	5	5
$J_a$	0.02	0.05	0.05
$D_a$	0.01	0.01	0.01
$K_b$	0.5	1	1
$K_t$	0.5	1	1
$N_1$	25	50	50
$N_2$	250	250	250
$N_3$	250	250	250
$J_L$	1	5	5
$D_L$	1	3	3

## Block Diagram Parameters

Parameter	Configuration 1	Configuration 2	Configuration 3
$K_{\text{pot}}$	0.318		
$K$	—		
$K_1$	100		
$a$	100		
$K_m$	2.083		
$a_m$	1.71		
$K_g$	0.1		

# Unmanned Free-Swimming Submersible Vehicle

## Pitch Control System



## Heading Control System

