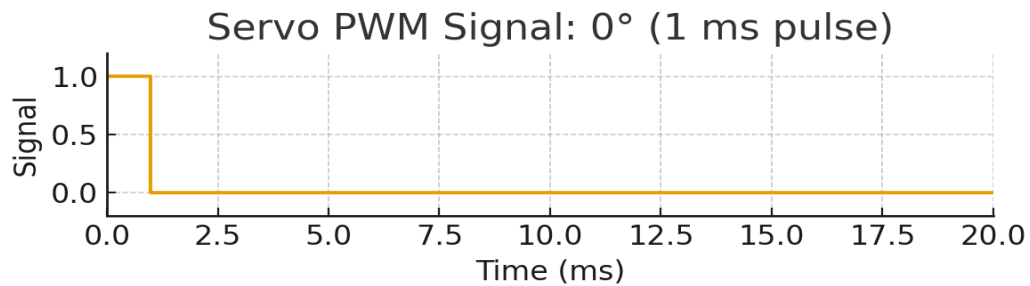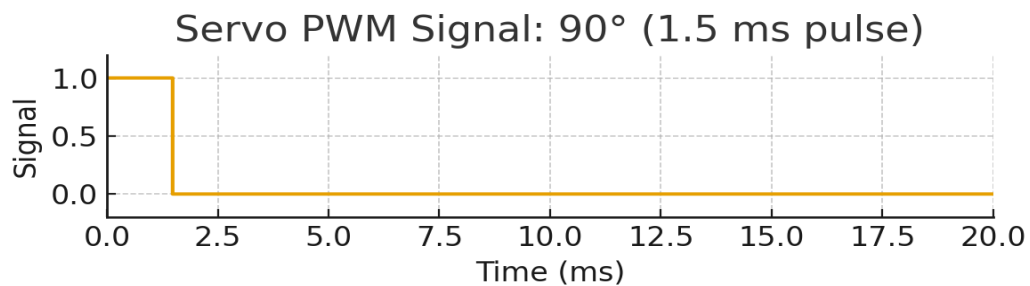# Servo PWM Explained with Diagrams

This guide explains how PWM signals control servo motors, shown only through diagrams. Each cycle is 20 ms (50 Hz). The servo angle depends on how long the signal stays HIGH within that cycle.
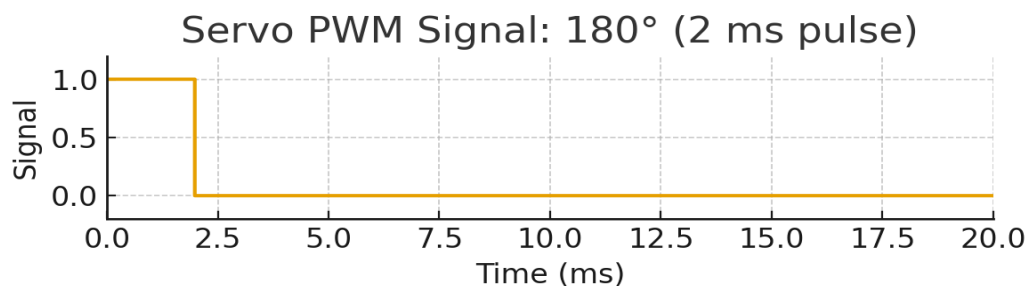
0° Position → 1 ms HIGH pulse (~5% duty cycle)

90° Position → 1.5 ms HIGH pulse (~7.5% duty cycle)

180° Position → 2 ms HIGH pulse (~10% duty cycle)

Key Idea:
- Frequency is fixed at 50 Hz (20 ms cycle).
- Servo angle is controlled by pulse width (1 ms → 0°, 1.5 ms → 90°, 2 ms → 180°).