Motor Reference Guide

Learn how to control motors on your Spike robot!

Import the Library

```
from spike import Motor, MotorPair
```

Single Motor Basics

Connect to a Motor

```
my_motor = Motor('A')  # Motor plugged into port A
```

Run the Motor

```
# Run forward
my_motor.run_for_degrees(360)  # Turn 1 full rotation

# Run at a speed (0-100)
my_motor.start(50)  # Run at 50% speed

# Stop the motor
my_motor.stop()
```

Motor Direction

```
# Run forward
my_motor.run_for_degrees(360)

# Run backward (use negative)
my_motor.run_for_degrees(-360)
```

Check Motor Position

```
# Get current position
position = my_motor.get_position()
print(position)
```

Motor Pair (Two Motors Together)

Perfect for driving robots with two wheels!

Connect Motor Pair

```
wheels = MotorPair('A', 'B')  # Left motor in A, Right motor in B
```

Drive Forward/Backward

```
# Move forward
wheels.move(10, 'cm')  # Move 10 centimeters

# Move backward (negative)
wheels.move(-10, 'cm')
```

Turn the Robot

```
# Turn right
wheels.move(5, 'cm', steering=100)

# Turn left
wheels.move(5, 'cm', steering=-100)

# Gentle curve (steering 0-100)
wheels.move(10, 'cm', steering=50)
```

Start/Stop Motor Pair

```
# Start moving
wheels.start(speed=50)

# Stop moving
wheels.stop()
```

Quick Examples

Example 1: Make Motor Spin

```
from spike import Motor

motor = Motor('A')
motor.run_for_degrees(360)  # One full turn
```

Example 2: Drive Forward and Back

```
from spike import MotorPair

wheels = MotorPair('A', 'B')
wheels.move(20, 'cm')   # Forward
wheels.move(-20, 'cm')  # Backward
```

Example 3: Square Drive Pattern

```
from spike import MotorPair

wheels = MotorPair('A', 'B')

for i in range(4):
    wheels.move(10, 'cm')              # Forward
    wheels.move(5, 'cm', steering=100) # Turn right
```

Happy Building! 🎉