

Robot Arm Commands - Quick Reference

⚠ **Safety:** Never put hands between robot claws when arm is moving!

Basic Commands

Pick Up Objects	Put Down Objects	Movement Control
"pick up object in front"	"put it down in front"	"turn left" (AI sends +angle)
"grab something to your left"	"place it to your left"	"rotate right" (AI sends -angle)
"pick up object underneath"	"drop it" (opens gripper)	"raise arm up" / "lower arm down"

Precision & Special Actions

Movement Size	Speed Control	Special Actions
Small: "slightly", "a bit"	"slowly turn left"	"hunt for object"
Medium: "some", "more"	"quickly close gripper"	"show what you're holding"
Large: "a lot", "much more"	"smoothly sweep right"	"throw it forward"
Maximum: "all the way", "extreme"		"grip tighter"

Joint Ranges: Base -125° to +125° (250°) • Shoulder -90° to +120° (210°) • Gripper -60° to +120° (180°)

Multi-Step Commands & Challenge

Combine Actions: "walk forward, pick up object, turn right, put it down" • "turn left, grab red ball, walk back, place it here"

Mission: Find object → Navigate → Pick up → Move → Put down **Pro Goal:** Do it all with ONE complex prompt!

Advanced Examples & Troubleshooting

Extreme Positions	Complex Sequences	Troubleshooting
"arm straight up above head"	"scan room left to right slowly"	No response? Check "Robot Arm DETECTED"
"rotate all the way left"	"victory dance with arm"	Wrong object? Try lighter items
"maximum grip strength"	"test full range of motion"	Still stuck? Say "calibrate gripper"
"sweep entire area"	"carefully approach from above"	