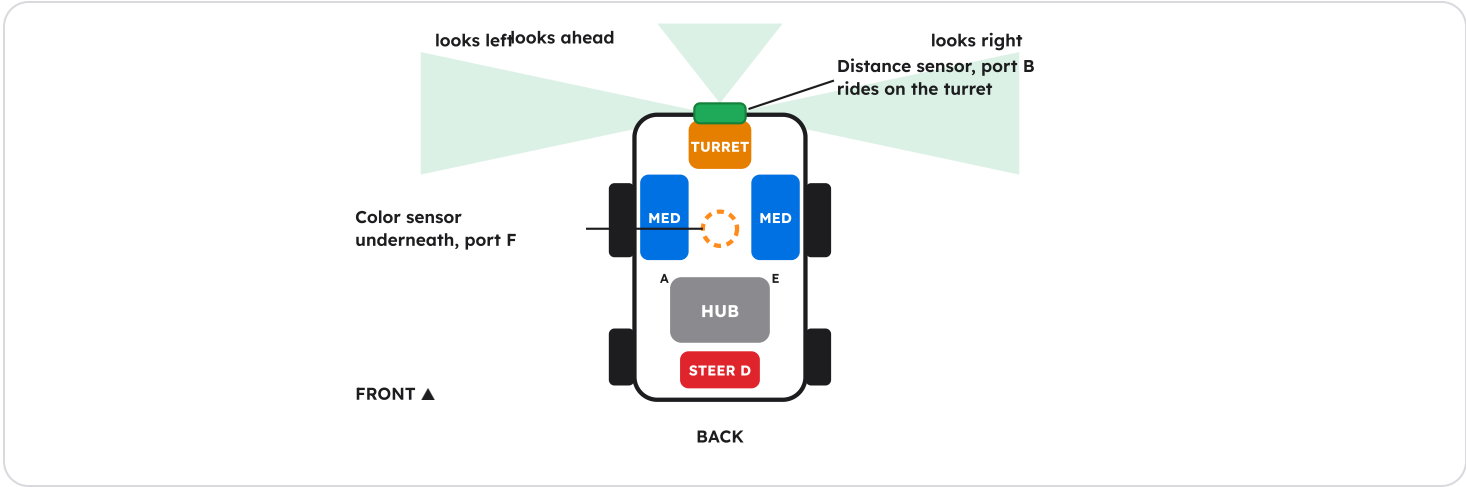


Build the Maze Car

Start from the Delivery Cart you already built. Add a spinning “head” for the distance sensor and a color sensor underneath.

THE CAR

Delivery Cart + turret + belly sensor



- **Wheels:** the two medium motors drive the left and right wheels (ports **A** and **E**).
- **Steering:** a large motor turns the back wheels (port **D**). Line it up so position **O** is straight ahead.
- **Turret:** a second large motor (port **C**) at the front, its shaft pointing up. Fix a beam to the shaft and the **distance sensor** (port **B**) to the beam, eyes facing outward. Line it up so position **O** looks straight ahead.
- **Color sensor** under the front of the car, pointing at the floor, about **1 cm** above it (port **F**).

Cable tip: the turret only needs to swing 90° each way. Leave slack in the sensor cable so it never wraps around the motor.

PLUG IT IN

Port plan

Port	Part	Job
A	Medium motor	left wheel
E	Medium motor	right wheel
D	Large motor	steering (back)
C	Large motor	turret: swings the distance sensor

B	Distance sensor	looks where the turret points
F	Color sensor	reads the floor: green, black, white

All six ports are used. Missions 1, 2 and 6 do not need the turret — just leave it centred, facing forward.

TEST

Check and measure first

Open the SPIKE App's device view. Write these down — you will use them in your code.

- **Turret positions:** 0 = ahead, about 90 = right, about -90 = left. Does it look where you expect? If your gearing is different, note the numbers that work.
- **Wall reading:** car centred in a lane, distance to a side wall (mm).
- **Open reading:** point the sensor at open room. Your *OPEN* limit sits between the wall reading and this — about one lane width.
- **Floor colors:** white floor, green tile, black tape (reflected light %).

Keep going: All missions → [index.pdf](#) | Playbook → [playbook.pdf](#)

The same content is in the matching .html files.