

Level 2

Before steering a whole fleet of drones, take some time to practice. In this level, you'll have to **get your drones airborne, make them simultaneously hover between 20 and 40 meters above the ground for at least 10 seconds without interruption, and land all of them safely afterwards.**

Hint: You can send multiple commands for multiple drones before a TICK command.

Model in the Simulator

1. Drone
 - a. ID (integer)
 - b. Position (3D, floating point)
 - c. Velocity (3D, floating point)
 - d. Thrust direction (3D, floating point)

Initial Input Lines sent by the Simulator

$xmin$ $xmax$ $ymin$ $ymax$	constrained area
N	the number of drones available

New Commands

To land a drone safely, make sure that ...

1. the distance from your drone to the ground is less than 0.3m,
2. the throttle of your drone is set to 0,
3. the drone's velocity (magnitude of the velocity vector) is smaller than 5m/s, and
4. the absolute value of the velocity parallel to the z axis is less than 0.5m/s.

A drone must not touch the ground except as effect of the LAND command.

Remark: given the constraints are fulfilled, the drone's velocity and z position are set to 0.

request	response	description
LAND N		where N is the ID of a drone
	OK	