



RobotShop Ultimate Challenge - Domestic Vacuum Robots

Robot: QQ-2 Plus



Infinuvo CleanMate QQ2 Plus



Time to Clean a Room	5	Black Carpet	-10
Vacuuming Debris	0	High Pile Carpet	-5
Noise level	0	Scheduling	50
Ability to "See" Obstacles	7	Battery Performance	0
Ability to Climb Obstacles	5	Communication	-8
Cliff Sensor	10	Maintenance Time	30
Docking	25	Ultimate Labyrinth	-20
Stay on Dock	0	Total Score	89

Challenge 1: Time to Clean a Room

Time: 30 minutes done

Total Points: 5

Challenge 2: Vacuuming Debris

Debris type 1: Paper

Hard Floor

Total weight of debris: 20g

Weight of debris picked up: 4g

% of Debris Vacuumed: 0.2

Points: 0

Carpet

Total weight of debris: 20g

Weight of debris picked up: 3g

% of Debris Vacuumed: 0.15

Points: 0

Debris type 2: Nuts and Screws

Hard Floor

Total weight of debris: 140 pieces

Weight of debris picked up: 0

% of Debris Vacuumed: 0

Points: 0

Carpet

Total weight of debris: 140 pieces

Weight of debris picked up: 0

% of Debris Vacuumed: 0

Points: 0

Debris type 3: Hair and Dirt

Hard Floor

Total weight of debris: 20g

Weight of debris picked up: 12g

% of Debris Vacuumed: 0.5

Points: 0

Carpet

Total weight of debris: 20g

Weight of debris picked up: 4g

% of Debris Vacuumed: 0.2

Points: 0

Total Points: 0

Challenge 3: Noise Level

Hard Floor

Peak decibel level: 74.2

Points: 0

Carpet

Peak decibel level: 71.6

Points: 0

Total Points: 0

Challenge 4: Ability to 'See' Obstacles:

Touch/Bump Test (#)

Avoids wall: 0
Soft touch: 8
Hard bump: 29
Points: -13

Curtain Test (check one)

Gets stuck:
Doesn't get stuck: Y
Gets stuck and frees itself:
Points: 10

Electrical Wires (check one)

Gets stuck:
Doesn't get stuck: Y
Gets stuck and frees itself:
Points: 10

Total Points: 7

Challenge 5: Ability to Climb Obstacles

Cliff height: 0.5cm

Climbs: Y
Doesn't climb:
Gets stuck:
Points: 5

Total Points: 5

Cliff height: 1.0cm

Climbs:
Doesn't climb: Y
Gets stuck:
Points: 0

Cliff height: 2cm

Climbs:
Doesn't climb: Y
Gets stuck:
Points: 0

Challenge 6: Cliff Sensors

Doesn't fall: Y
Gets stuck:
Falls:

Total Points: 10

Challenge 7: Time/tries to return to Dock

Time:
of failed docking attempts: 1 min 13 secs
of Attempts: 1
Total Points: 25

Challenge 8: Stay on Dock

Distance: 2"

Docks in one try:
Docks in multiple tries:
Robot is lost: Y
Points: 0

Distance: 12"

Docks in one try:
Docks in multiple tries:
Robot is lost: Y
Points: 0

Distance: 36"

Docks in one try:
Docks in multiple tries:
Robot is lost: Y
Points: 0

Total Points: 0

Challenge 9: Black Carpet

Cleans w/o problem:
Cleans and gets error:
Doesn't start: Y

Total Points: -10

Challenge 10: High Pile Carpet

Cleans w/o problem:
Cleans and gets error:
Doesn't move properly: Y
Brushes stop turning:

Total Points: -5

Challenge 11: Scheduling

Scheduling (Y/N): Y

Time: 39 secs

Scheduled time to program: mon, wed, fri 2pm
Points: 30

Points: 20

Total Points: 50

Challenge 12: Battery

Total run time: 96 min 54 secs
Time to Clean Room: 30 min
Optimal Cleaning Ratio: 3.23

Total Points: 0

Challenge 13: Communicating State and Errors*Jammed Brushes*

No communication: Y
Beeps:

Displays:

Speaks:

Points: -5

Jammed Wheel

No communication: Y
Beeps:

Displays:

Speaks:

Points: -5

Obstructed Cliff Sensors

No communication:
Beeps: Y
Displays:
Speaks:
Points: 2

Particle Bin Full

No communication: Y
Beeps:
Displays:
Speaks:
Points: -5

Battery Dead

No communication:
Beeps:
Displays: Y
Speaks:
Points: 5

Communicates via internet (Y/N): N

Conserves Error with action: N
Conserves error without action: N
Points: 0

Total Points: -8

Challenge 14: Maintenance Time

Time to clean brushes, filter, dustbin: 2 min 39 secs

Total Points: 30

Challenge 15: Ultimate Labyrinth

Completed labyrinth A (Y/N): N

Time:

Points: -10

Total Points: -20

Completed labyrinth B (Y/N): N

Time:

Points: -10

Grand Total:**89**