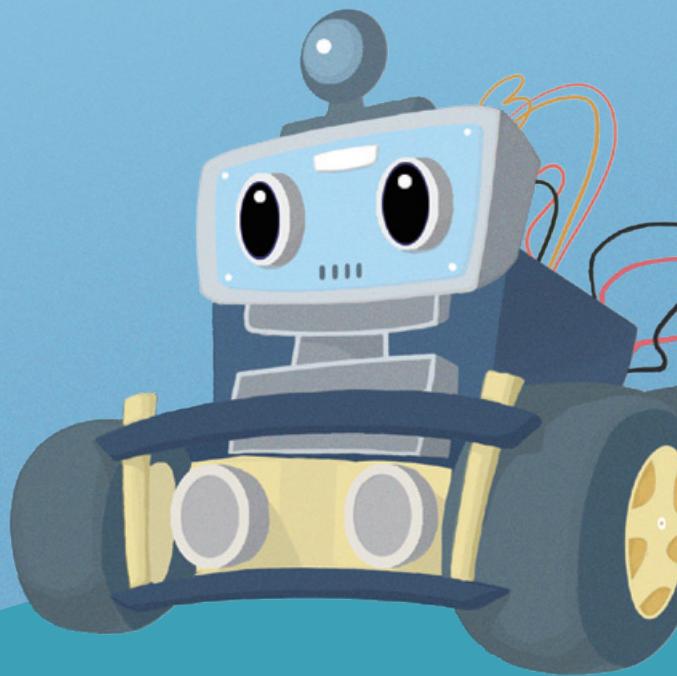
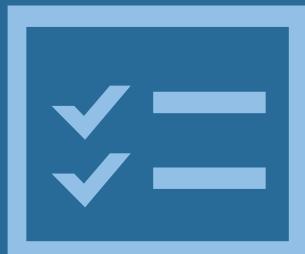


R

# SMART ROBOT CAR V4.0 WITH CAMERA



Communication  
protocol





# Motor

<b>Command</b>	{ "H": ID , "N":1 , "D1": parameter 1 , "D2": parameter 2 , "D3": parameter 3 }
<b>Function</b>	Select the motor to set the rotation direction and speed.
<b>Return</b>	{ ID_ok }
<b>Parameter Description</b>	<p>Parameter 1 ( select the corresponding motor )            0 : All motors            1 : Left motor            2 : Right motor</p> <p>Parameter 2 ( the rotation speed value of the selected motor )            The range of speed value: 0~ 255</p> <p>Parameter 3 ( select the rotation direction of the selected motor)            1 : Clockwise            2 : Counterclockwise</p>

<b>Command</b>	{ "H": ID , "N":3 , "D1": parameter 1 , "D2": parameter 2 }
<b>Function</b>	Set the direction and speed of the car.
<b>Return</b>	{ ID_ok }
<b>Parameter Description</b>	<p>Parameter 1 ( the rotation direction of the selected motor )            1 : Turn left            2 : Turn right            3 : Go forward            4 : Back</p> <p>Parameter 2 ( the rotation speed value of the selected motor )            The range of speed value: 0~ 255</p>

<b>Command</b>	{ "H": ID , "N":4 , "D1": parameter 1 , "D2": parameter 2 }
<b>Function</b>	Set the speed of the left and right motors separately.
<b>Return</b>	{ ID_ok }
<b>Parameter Description</b>	<p>Parameter 1 ( the speed of left wheel )            The range of speed value: 0~ 255</p> <p>Parameter 2 ( the speed of right wheel )            The range of speed value: 0~ 255</p>



## Servo motor

Command	{ "H": ID , "N": 5 , "D1": parameter 1 , "D2" : parameter 2 }
Function	Select the rotation angle of the servo motor.
Return	{ ID_ok}
Parameter Description	Parameter 1 ( select the servo motor ) 1 Servo motor that can turn left and right 2 Servo motor that can turn up and down Parameter 2 ( the rotation angle of the servo motor: 0-180 )



## Joystick clear mode

Command	{ "N":100 }
Function	Clear all functions being executed.
Return	No return



## Command for remotely switching the car mode

Command	{ "N" : 101 , "D1" : Parameter 1 }
Function	Switch the car mode.
Return	No return
Parameter Description	Parameter 1 1 : Tracking mode 2 :Obstacle-avoidance mode 3 :Follow mode



## Joystick movement command

Command	{ "N": 102 , "D1": parameter 1 , "D2": parameter 2 }	
Function	Make the car move in a certain direction at the default maximum speed.	
Return	No return	
Parameter Description	Parameter 1 1 : Go forward 2 : Back 3 : Turn left 4 : Turn right 5 : Left front 6 : Rear left 7 : Right front 8 : Rear Right	Parameter 2 : Speed value



## Remote control - Threshold adjustment

Command	{ "N": 104 , "D1": Parameter 1 }
Function	Adjust the tracking sensitivity of the car.
Return	No return
Parameter Description	Parameter 1: 50-1000



## Camera rotation

Command	{ "N": 106 , "D1": Parameter 1 }
Function	Set the rotation direction of the camera.
Return	No return
Parameter Description	Parameter 1 1 : Turn up 2 : Turn down 3 : Turn left 4 : Turn right



## Ultrasonic module

Command	{ "H": ID , "N": 21, "D1": parameter 1 }
Function	Check whether an obstacle is detected.
Return	{ ID_false } : No obstacles detected { ID_true } : Obstacles detected  { Ultrasonic value }
Parameter Description	1 : Check whether an obstacle is detected. 2 : Check the value of the ultrasonic sensor.



## Infrared module

Command	{ "H":ID , "N": 22,"D1":0 }
Function	Check the value of the infrared sensor.
Return	{ ID_Infrared sensor value }
Parameter Description	Parameter D 1 0 : The value of the L infrared sensor 1 : The value of the M infrared sensor 2 : The value of the R infrared sensor

Command	{ "H":ID , "N": 23 }
Function	Check if the car leaves the ground
Return	{ ID_false} : the car does not leave the ground { ID_true } : the car leaves the ground



# Programming mode clears all states

Command	{ "H":ID , "N":110 }
Function	Clear all the functions being executed, and do not enter the standby mode.
Return	{ID_ok}

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