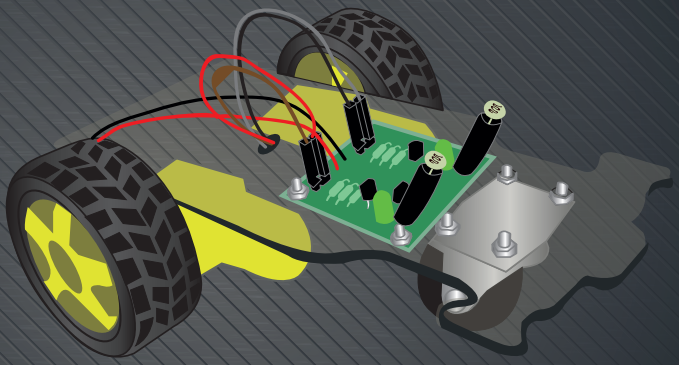
STEREN

K-915

KIT ROBOT SEGUIDOR DE LUZ



0917A

MANUAL DE INSTRUCCIONES

V0.0

Antes de utilizar su nuevo producto Steren, lea este manual para evitar cualquier mal funcionamiento.

La información que se muestra en este manual sirve únicamente como referencia sobre el producto. Debido a actualizaciones pueden existir diferencias. Por favor, consulte nuestra página web www.steren.com para obtener la versión más reciente del manual.

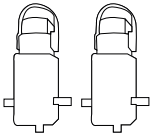
- Este aparato no se destina para utilizarse por personas (incluyendo niños), cuyas capacidades físicas, sensoriales o mentales sean diferentes o estén reducidas, o carezcan de experiencia o conocimiento.

- Los niños deben supervisarse para asegurar que no empleen el aparato como juguete.

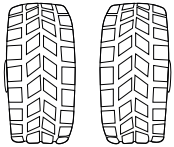
- No use ni almacene el producto en lugares donde existan goteras o salpicaduras.

- No exponga el equipo a temperaturas extremas.

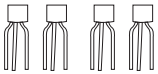
- Limpie con un paño suave y seco.



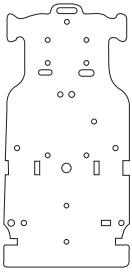
Motorreductores (x2)



Llantas (x2)

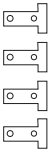


Transistores
(Q1 - Q4)
(x4)

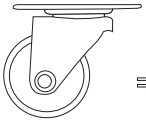


Chasis

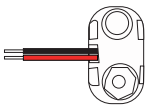
Tuercas
(x10)



Piezas T
(x4)

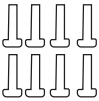


Rueda loca

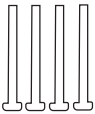


Broche portapila

Fotorresistencia
(LDR1 - LDR2)
(x2)

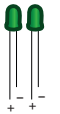


Tornillos chicos
3 x 10 mm (x8)



Tornillos
grandes
3 x 30 mm (x4)

Thermofit
(x2)

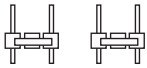


LED
(D1 - D2)
(x2)

Cable dupont
con jumpers
(x2)

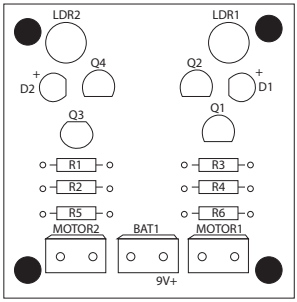
Resistencias (R1 - R4)
(x 4) R1K Ω

Resistencias (R5 - R6)
(x 2) R120K Ω



Headers
(M1 - M2)
(x2)

LISTA DE PARTES

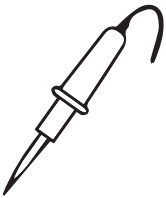


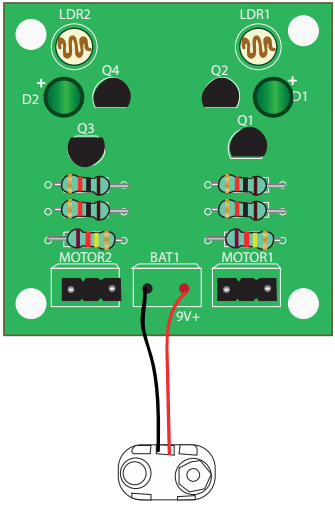
PCB

TARJETA SEGUIDOR DE LUZ		
Cantidad	Nombre	Descripción
1	BAT 1	Broche para pila de 9 V
2	MOTOR 1 - MOTOR 2	Header 1 de2 pines 1 espacio
4	R1 - R4	Resistencia 1K Ω (café, negro, rojo)
2	R5 - R6	Resistencia 120 K Ω(café, rojo, amarillo)
4	Q1 - Q4	Transistor NPN MPS2222A
2	D1- D2	LED verde 5 MM
2	LDR1 - LDR2	Fotorresistencia
1	PCB	Placa

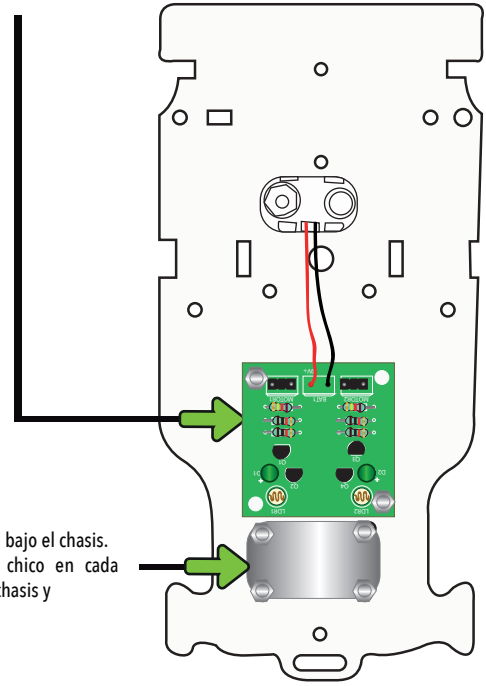
TARJETA SEGUIDOR DE LUZ

Ensamble las piezas como se muestra en la imagen y suelde por la parte de abajo de la tarjeta.



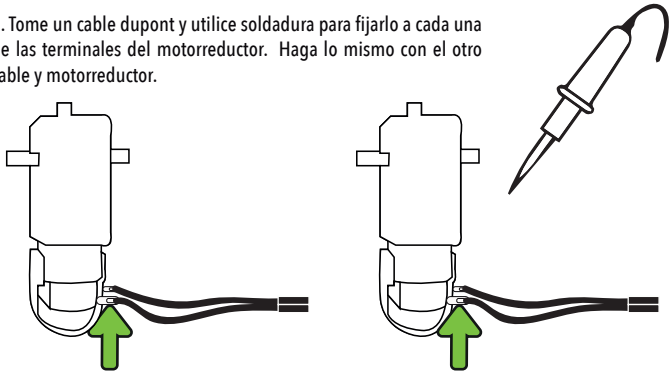


1. Coloque la tarjeta como se muestra en la imagen. Utilice 4 tornillos chicos para fijarla al chasis; páselos de abajo hacia arriba y asegúrelos con tuercas.

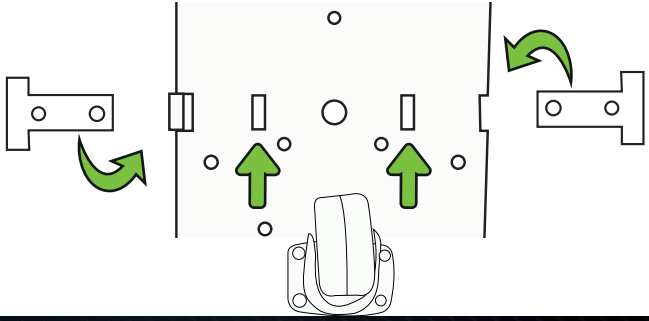


2. Coloque la rueda loca bajo el chasis. Introduzca un tornillo chico en cada orificio por debajo del chasis y asegúrelos con tuercas.

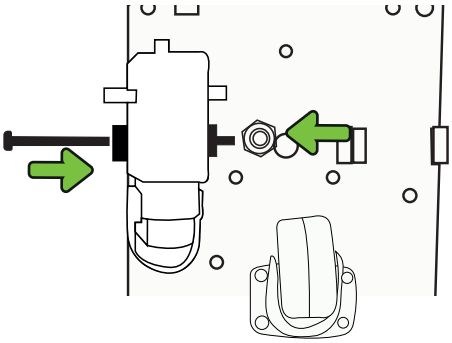
1. Tome un cable dupont y utilice soldadura para fijarlo a cada una de las terminales del motorreductor. Haga lo mismo con el otro cable y motorreductor.



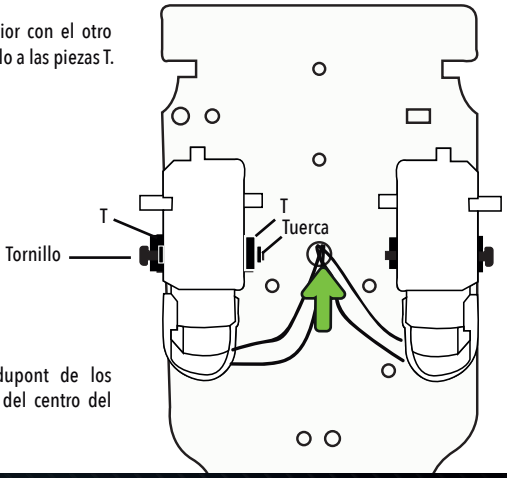
2. Introduzca las piezas T en las ranuras del chasis (señaladas en la imagen), de abajo hacia arriba.



3. Coloque el motorreductor en medio de dos piezas T . Haga coincidir los orificios e introduzca dos tornillos grandes; utilice tuercas para asegurarlos.

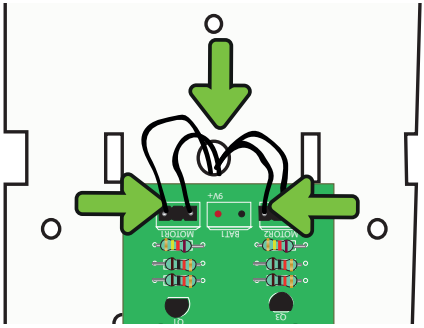


4. Repita el paso anterior con el otro motorreductor para fijarlo a las piezas T.

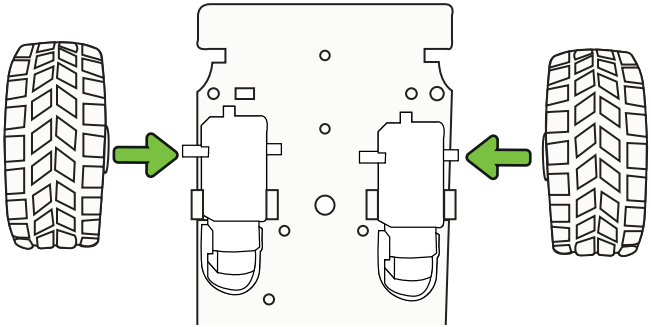


5. Pase los cables dupont de los motores por el orificio del centro del chasis.

6. En la tarjeta ubique los headers (MOTOR1 - MOTOR2), e inserte los jumpers de los cables dupont.

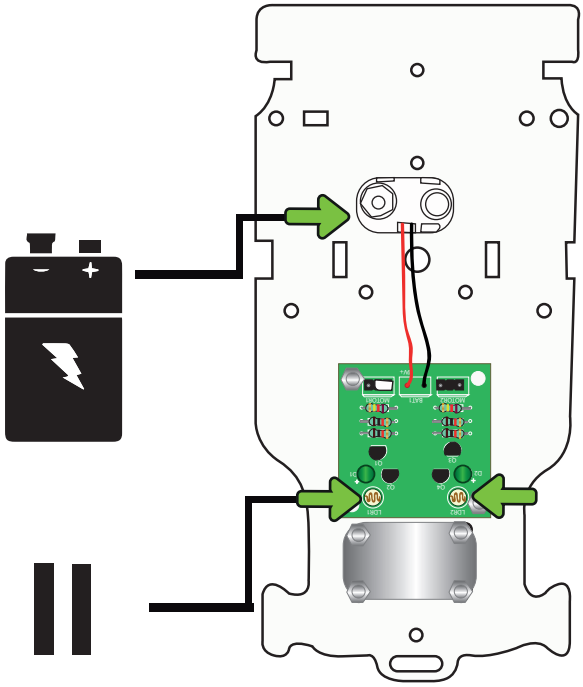


7. Coloque firmemente las llantas, una en cada eje del motor poniendo atención a la forma del eje y la del orificio de la llanta para que embonen perfectamente.

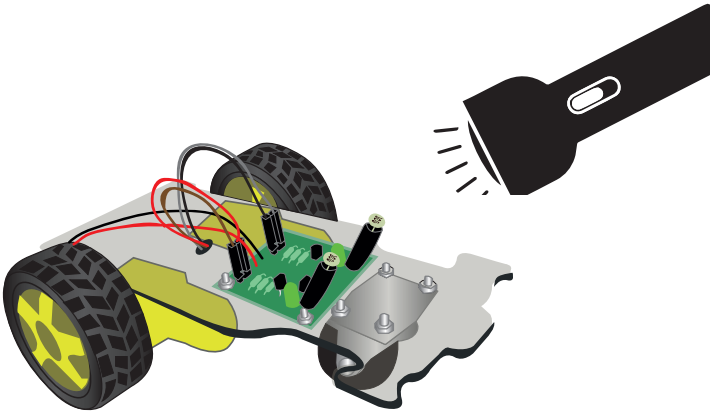


1. Cubra las fotorresistencias LDR (marcadas con una flecha) con thermofit para evitar la luz externa.

2. Conecte la batería en el broche para verificar que las llantas giren correctamente hacia adelante; si giran hacia atrás, invierta la conexión del jumper del motor correspondiente.



3. Ponga el robot en una zona oscura y alúmbrelo con una linterna para que siga el camino que usted le indique.



Para apagarlo retire la batería cuidadosamente.

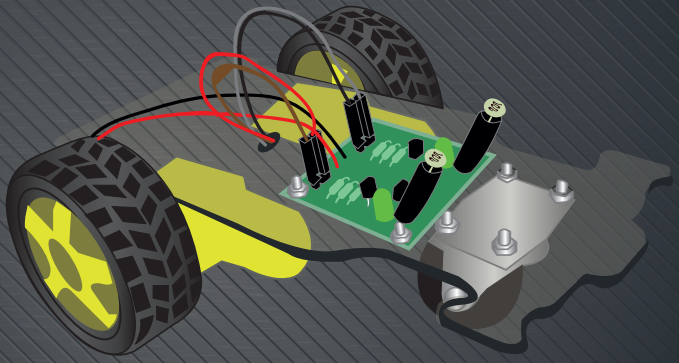
Especificaciones: 9v (Batería cuadrada) No incluida

www.steren.com

STEREN

K-915

LIGHT FOLLOWER ROBOT



0917A INSTRUCTION MANUAL V0.0

Before using your new Steren product, read this manual to avoid any malfunction.

The information shown in this manual is for product reference only. Due to updates there may be differences. Please refer to our website www.steren.com for the latest version of the manual.

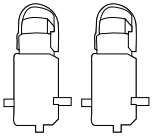
- This kit is not intended for use by persons (including children) whose physical, sensory or mental capabilities are different or reduced, or lack experience or knowledge.

- Children should be supervised to ensure that they do not use the kit as a toy.

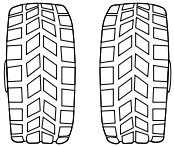
- Do not use or store the product in dripping or splashing places.

- Do not expose the equipment to extreme temperatures.

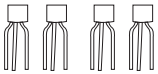
- Clean with a soft, dry cloth.



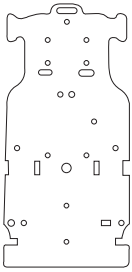
Geared motors (x2)



Tires (x2)

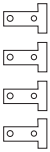


Transistors
(Q1 - Q4)
(x4)

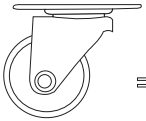


Chassis

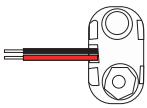
Nuts
(x10)



T pieces
(x4)

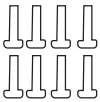


Crazy wheel

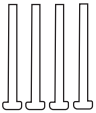


Battery clip

Photoresist
(LDR1 - LDR2)
(x2)

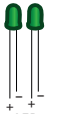


Small screws
3 x 10 mm (x8)



Large screws
3 x 30 mm (x4)

Thermofit
(x2)

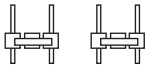


LED
(D1 - D2)
(x2)

Dupont cable
with jumpers
(x2)

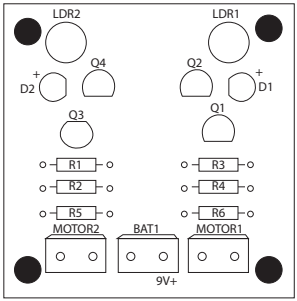
Resistors (R1 - R4)
(x 4) R1KΩ

Resistors (R5 - R6)
(x 2) R120K Ω



Headers
(M1 - M2)
(x2)

PART LIST

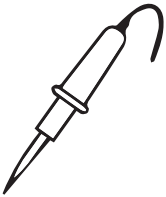


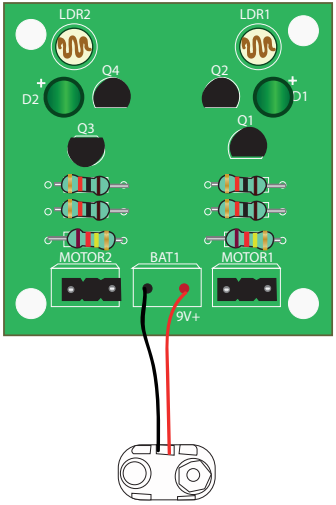
PCB

FOLLOWING LIGHT CARD		
Quantity	Name	Description
1	BAT 1	9 V battery clip
2	Motor 1 - Motor 2	1 of 2 pins 1 space header
4	R1 - R4	1K (brown, black and red) resistance
2	R5 - R6	120K (brown, red and yellow) resistance
4	Q1 - Q4	N2222 transistor
2	D1- D2	Green LED 5 MM
2	LDR1 - LDR2	Photoresist
1	PCB	Plate

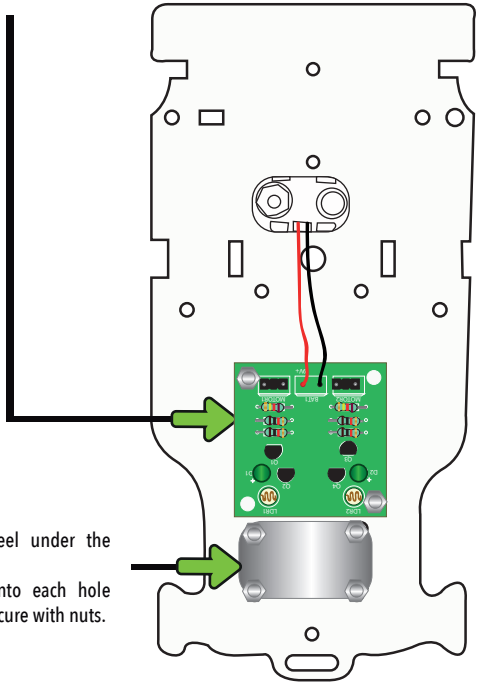
LIGHT FOLLOWER CARD

Assemble the pieces as shown in the picture and weld in the bottom of the card.



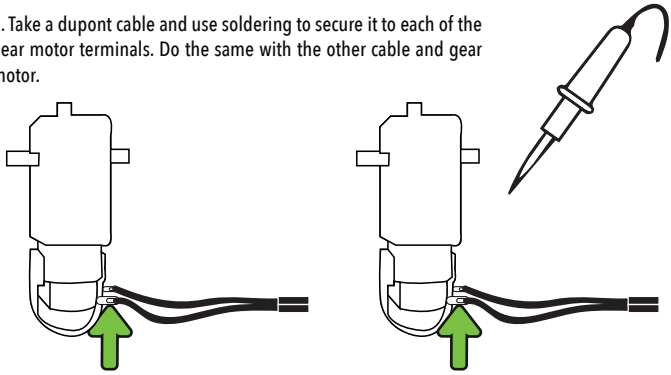


1. Insert the card as shown in the picture. Use 4 small screws to attach to the chassis; pass them from bottom to top and secure with nuts.

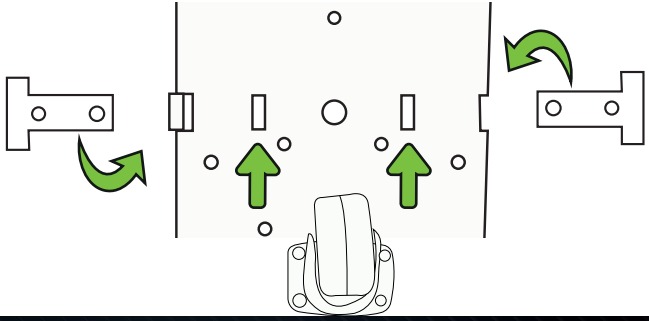


2. Place the crazy wheel under the chassis.
Insert a small screw into each hole below the chassis and secure with nuts.

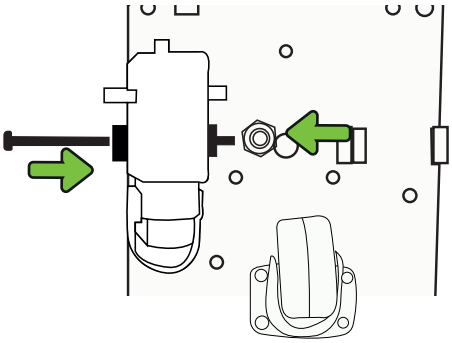
1. Take a dupont cable and use soldering to secure it to each of the gear motor terminals. Do the same with the other cable and gear motor.



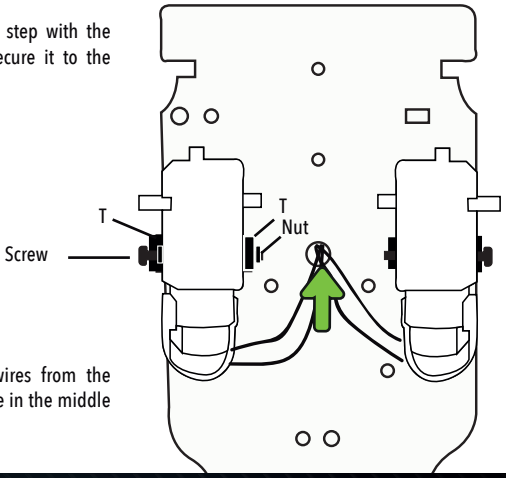
2. Insert the T-pieces into the chassis slots (marked on the picture) from bottom to top.



3. Place the gear motor in the middle of two T-pieces. Match the holes and insert two large screws; use nuts to secure them.

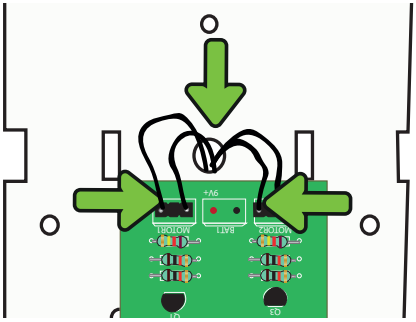


4. Repeat the previous step with the other gear motor to secure it to the T-pieces.

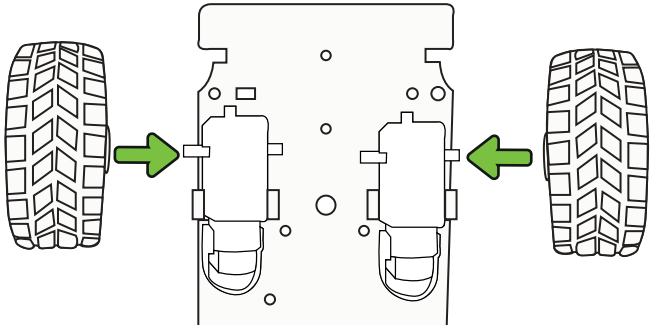


5. Place the dupont wires from the motors through the hole in the middle of the chassis.

6. On the card, locate the headers (MOTOR1 - MOTOR2), and insert the jumpers of the dupont cables.

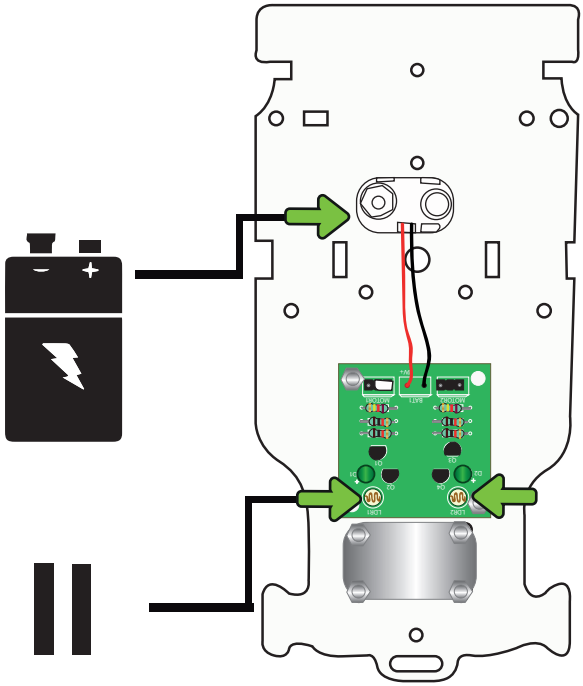


7. Place the tires tightly, one on each shaft of the engine paying attention to the shape of the shaft and the hole in the wheel so that they fit perfectly.

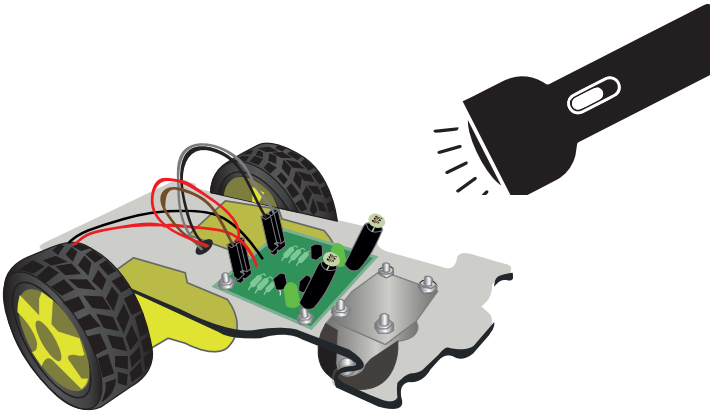


1. Cover the LDR (marked with an arrow) photoresist with thermofit to avoid external light.

2. Connect the battery to the clip to verify that the tires rotate correctly; if they rotate back, reverse the jumper connection.



3. Place the robot in a dark area and flash it with a flashlight to follow the path you are instructing.



To switch off, remove the battery carefully.

Specifications: 9v (Square battery) Not included

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