

# FRIDGE ROBOT

PLEASE SCAN THE QR CODE FOR VIEWING MULTI-LANGUAGE INSTRUCTIONS.



FR. Veuillez scanner le code QR pour afficher les instructions multilingues pour ce kit. DE. Bitte scannen den QR-Code, um die mehrsprachige Anleitung für dieses Set anzusehen. NL. Scan de QR-code om de instructies voor deze set in verschillende talen te bekijken. IT. Scansiona il codice QR per visualizzare le istruzioni multi-lingue per questo kit. ES. Escanee el código QR para ver instrucciones en varios idiomas para este kit. JA. QRコードをスキャンして、キットの多言語説明書をご覧ください。

**WARNING:**  
CHOKING HAZARD - Small parts  
Not for Children under 3 years.

TO PARENTS: PLEASE READ THROUGH THESE INSTRUCTIONS BEFORE GIVING GUIDANCE TO YOUR CHILDREN.

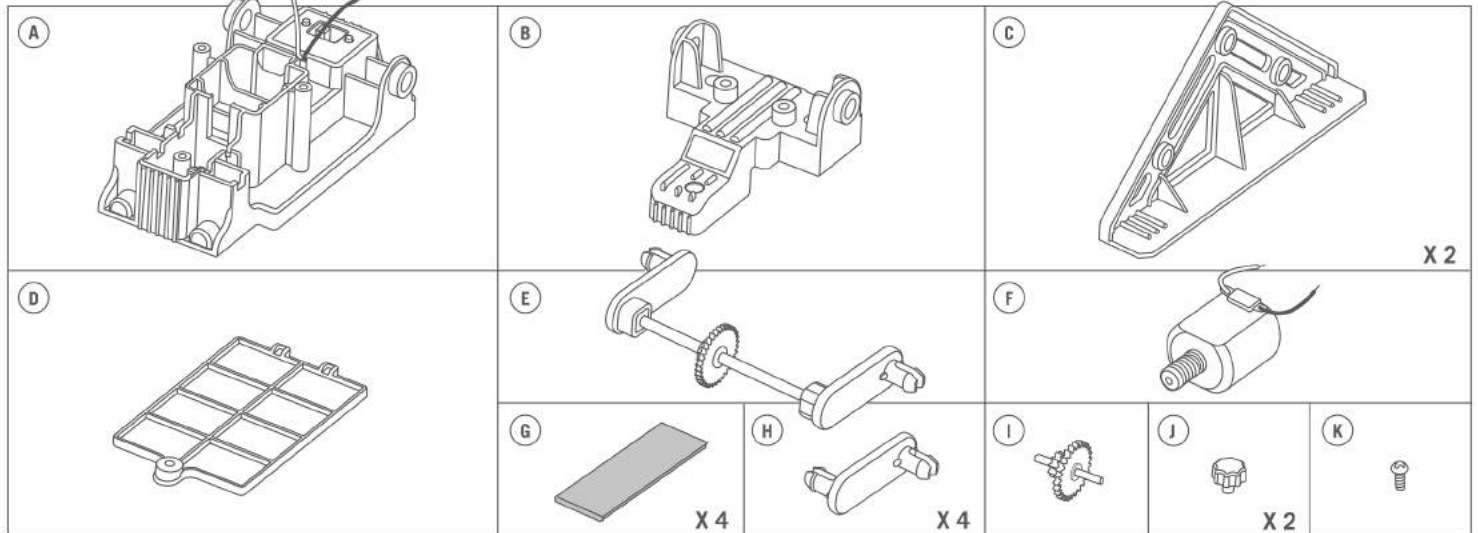
## A. SAFETY MESSAGES

1. Adult supervision and assistance are required at all times. 2. This kit is intended for children over 8 years of age. 3. This kit and its finished product contain small parts which may cause choking if misused. Keep away from children under 3 years old. 4. To prevent possible short circuits, never touch the contacts inside the battery case with any metal objects. 5. Only install batteries after you have assembled the product. Adult supervision is required.

## B. USE OF BATTERIES

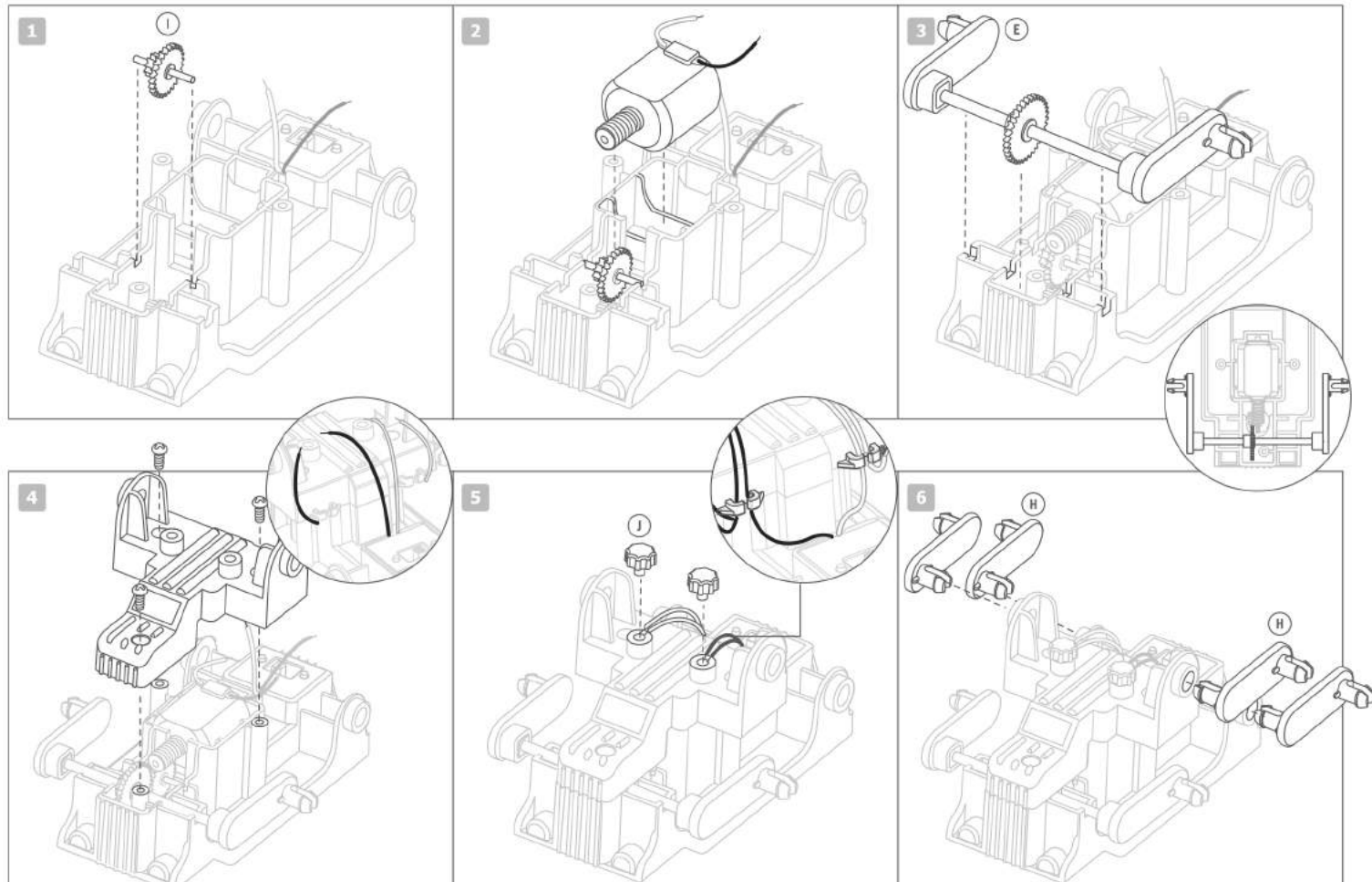
1. Requires two 1.5V AAA batteries (not included). 2. For best results always use fresh batteries. 3. Make sure you insert the batteries with the correct polarities. 4. Remove the batteries from the kit when not in use. 5. Replace exhausted batteries straight away to avoid possible damage to the kit. 6. Rechargeable batteries must be removed from the kit before recharging. 7. Rechargeable batteries should be recharged under adult supervision. 8. Make sure that the supply terminals in the battery case are not short circuited. 9. Do not attempt to recharge non-rechargeable batteries. 10. Do not mix old and new batteries. 11. Do not mix alkaline, standard (carbon-zinc), or rechargeable batteries.

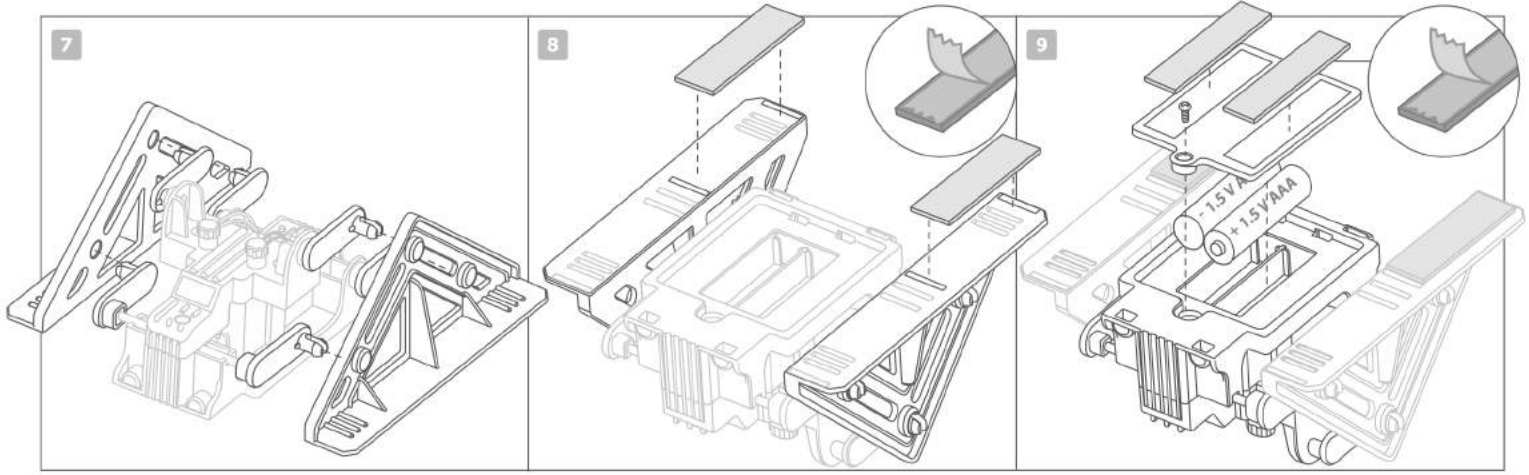
## C. CONTENTS



Part A: Robot body x 1, Part B: Motor cover x 1, Part C: Foot x 2, Part D: Battery cover x 1, Part E: Long axle with crank x 1, Part F: Motor x 1, Part G: Magnetic strip x 4, Part H: Crank x 4, Part I: Short axle x 1, Part J: Terminal cap x 2, Part K: Screws. Also required, but not included in the kit: a small cross-head screwdriver, 2 x 1.5V AAA batteries.

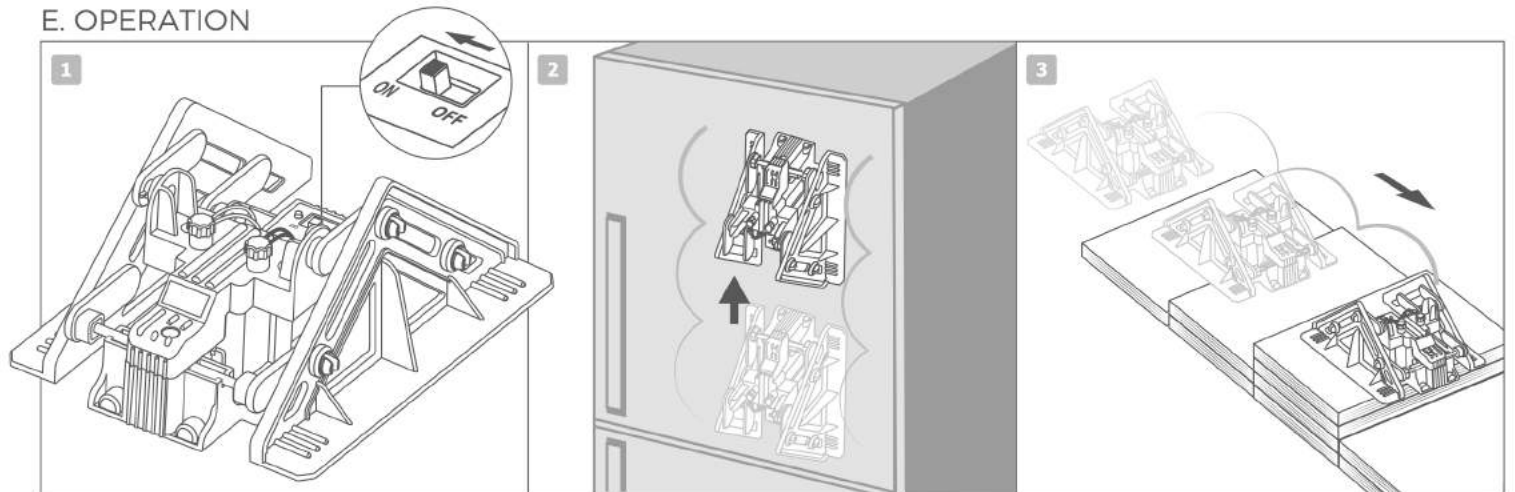
## D. ASSEMBLY





1. Place the robot body on a tabletop in the position shown in the diagram. Slot the short axle into the gearbox with the larger of the two gear wheels closest to you.
2. Slot the motor into the gearbox with the wires at the top. The worm gear on the motor must interlock with the large gear on the short axle.
3. Slot the long metal axle with cranks into the gearbox so that its gear interlocks with the small gear on the short axle, and the axle itself sits in the slots in the sides of the gearbox.
4. Add the gearbox cover, making sure that you don't trap the wires from the motor or battery compartment. Secure the cover with three screws.
5. Put the bare ends of the black wire from the motor and the black wire from the battery compartment into one of the terminals. Push in a terminal cap to secure the wires in place. Repeat with the red wire from the motor and the red wire from the battery case in the other terminal.
6. Clip the four cranks into the four holes in the robot body.
7. Clip the feet onto the cranks. All three cranks on each side of the robot must clip into the foot on that side. You might need a little help with this step as lining up all the clips is tricky.
8. Peel the backing paper from one of the magnetic strips and stick the strip onto the base of the one of the feet. Repeat with another strip on the other foot.
9. Insert two 1.5V AAA batteries into the battery compartment, with the flat end of the battery against the coiled spring inside the compartment. Put on the battery cover and secure it with a screw. Fix two magnetic strips to the battery cover.

## E. OPERATION



1. Push the switch to ON, and check that the robot's feet are rotating properly.
2. Place the robot at the bottom of your fridge door or metal rack. It should stick on, and then walk slowly upwards. Remove the robot from the door when it approaches an edge, or it could fall off and be damaged.
3. The robot can walk over other obstacles too. Try making a set of steps from books for it to clamber up.

## F. HOW IT WORKS

- The worm gear and small gears in the gearbox reduce the speed of movement between the motor and the cranks on the side of the gearbox, making the cranks turn slowly. The cranks cause circular movement between the robot's body and feet.
- Magnets are attracted to certain metals, and if the attraction is strong enough they can hold on even when upside down.
- When the body sticks to the fridge door, the motor lifts the feet off, and when the feet stick to the door, the motor lifts the body off.

## G. FUN FACTS

- Fridge magnets were invented in the early 1970s, when in America, William Zimmerman patented the idea of cartoon character fridge magnets.
- A magnetic material is a material that can be made into a magnet, or that is attracted to a magnet. Very few materials are magnetic — the most common are the metals iron, cobalt and nickel, which are known as ferromagnetic metals.
- Bendy magnets like ones on the Fridge Robot are made from powdered magnetic material mixed with polymer resin. The mixture is warmed and then rolled into sheets, magnetized using powerful magnets, cooled and cut into shapes.
- Magnetism is caused by tiny, tiny particles called electrons, which are part of atoms. The magnetism happens because of the way that the electrons spin.
- The strongest type of magnets are powerful electromagnets. These are magnets made by sending a large electric current through a coil of wire.

## H. QUESTIONS & COMMENTS

We value you as a customer and your satisfaction with this product is important to us. If you have comments or questions, or you find any part of this kit missing or defective, please do not hesitate to contact our distributor in your country. You will find the address printed on the package. You are also welcome to contact our Marketing Support Team: Email: [infodesk@4m-ind.com](mailto:infodesk@4m-ind.com), Fax (852) 25911566, Tel: (852) 28936241, Web site: [WWW.4M-IND.COM](http://WWW.4M-IND.COM)