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› 4M /

› 4M KidzRobotix Tin Can Cable Car: Educational Science Construction Kit Instruction Manual

4M 403358

4M KidzRobotix Tin Can Cable Car Instruction Manual

Model: 403358

INTRODUCTION

The 4M KidzRobotix Tin Can Cable Car kit provides an engaging way to learn about mechanical science and robotics. This kit allows you to recycle a standard tin can and transform it into a functional cable car that can travel along a string. It is designed to stimulate learning and an interest in STEM (Science, Technology, Engineering, and Mathematics) principles through hands-on construction.

This manual contains all necessary instructions for assembly, operation, and basic maintenance of your Tin Can Cable Car.

SAFETY INFORMATION

- **Age Recommendation:** This product is recommended for ages 8 and above. Adult supervision is advised for younger users.
- **Choking Hazard:** Contains small parts. Not suitable for children under 3 years.
- Keep all components away from small children and pets.
- Exercise caution when handling the tin can, as edges can be sharp.
- Ensure batteries are inserted correctly according to polarity markings. Do not mix old and new batteries, or different types of batteries.

PACKAGE CONTENTS

Carefully unpack the kit and ensure all components listed below are present. If any parts are missing or damaged, please contact customer support.

- 1 Battery Cover
- 1 String
- Elastic Bands
- 1 Large Wheel Lock
- 1 Medium Wheel Spindle
- 1 Motor Pulley Wheel
- 1 Motor
- 1 Can Spindle
- 2 Side Wheel Locks
- 2 Side Wheels
- 1 Swivel Joint Lock
- 4 Terminal Clips
- 4 Screws
- 1 Can Sticker

MATERIALS REQUIRED (NOT INCLUDED)

To complete the assembly and operate your cable car, you will need the following items:

- 2 x 1.5V AAA batteries
- 1 small crosshead screwdriver
- 1 used drink can (a wider can is recommended for better fit and stability)

SETUP AND ASSEMBLY INSTRUCTIONS

Follow these steps carefully to assemble your Tin Can Cable Car. Refer to the images for visual guidance.



Image: The main cable car mechanism assembled, prior to attaching the tin can.



Image: The complete Tin Can Cable Car with a recycled can.

1. **Prepare the Motor Housing:** Attach the motor to the motor housing using the provided screws. Ensure the motor's terminals are accessible.
2. **Connect Wires:** Connect the terminal clips to the motor's terminals. These clips will later connect to the battery compartment.
3. **Assemble the Pulley System:** Mount the medium and large pulley wheels onto their respective spindles. Attach the motor pulley wheel to the motor shaft.

4. **Integrate Wheel Support:** Secure the wheel support to the main cable car frame. This frame will hold the pulleys and the motor housing.
5. **Install Batteries:** Open the battery compartment (battery cover) and insert 2 x 1.5V AAA batteries, observing the correct polarity. Close the battery cover securely.
6. **Attach Battery Compartment:** Secure the battery compartment to the main frame. Connect the wires from the motor to the battery compartment terminals.
7. **Prepare the Tin Can:** Ensure your chosen tin can is clean and dry. Apply the provided can sticker to decorate it, if desired.
8. **Attach Can Spindle:** Insert the can spindle through the top of the tin can. This spindle will connect the can to the cable car mechanism.
9. **Secure the Tin Can:** Attach the tin can, via its spindle, to the main cable car mechanism. Use the side wheel locks and swivel joint lock to secure it firmly.
10. **Install Cable Stop Valves:** Place the cable stop valves at the ends of the cable car's upper structure. These help guide the string.
11. **Thread the String:** Carefully thread the long string through the pulley system and the cable stop valves. Ensure it runs smoothly.
12. **Final Checks:** Before operation, double-check all connections and ensure all screws are tightened. The cable car should move freely when pushed manually.

OPERATING INSTRUCTIONS

Once assembled, your Tin Can Cable Car is ready for operation.

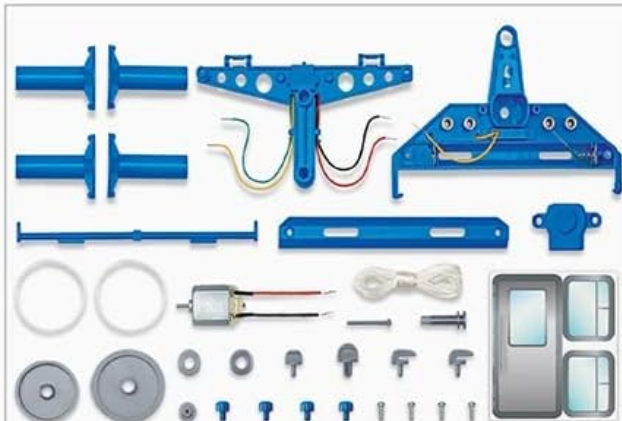


Image: Children watching the cable car in action indoors.

KidzRobotix™

TIN CAN CABLE CAR

Recycle a drink can to make a unique cable car. Install it in your bedroom and watch it run to and fro, up and down. It's a cool mechanical science project.



Contents as illustrated. Fully illustrated instructions included. For instructions in other languages, please scan the QR code included. Also required but not included in the kit: 2 x 1.5V AAA batteries and a small crosshead screwdriver. From home, please ask an adult for assistance. You need to recycle a used soda can to complete the project.



Ride along the string...

FR-CONTENU ILLUSTRÉ. DES INSTRUCTIONS ENTièrement ILLUSTRÉES SONT INCLUSES. POUR OBTENIR LES INSTRUCTIONS DANS D'AUTRES LANGUES, VEUILLEZ SCANNER LE CODE QR INCLUS. MATÉRIEL ÉGALEMENT REQUIS, MAIS NON INCLUS DANS CE KIT: 2 PILES 'AAA' 1.5 V. PETIT TOURNEVIS CRUCIFORME ET UNE CANETTE MÉTALLIQUE USAGÉE ET PROPRE. ATTENTION: CONVIENT À PARTIR DE L'ÂGE DE 8 ANS. NE CONVIENT PAS AUX ENFANTS DE MOINS DE 3 ANS À CAUSE DE PETITES PIÈCES DÉTACHABLES PRÉSENTANT UN RISQUE D'INGESTION. LA SUPERVISION D'UN ADULTE EST RECOMMANDÉ. LISEZ LES INSTRUCTIONS AVANT L'UTILISATION. LES COULEURS ET LE CONTENU PEUVENT ÊTRE DIFFÉRENTS DES ILLUSTRATIONS. FABRIQUÉ EN CHINE. CONSERVEZ TOUTES LES INFORMATIONS ET L'ADRESSE.

DE-INHALT WIE ABGEBILDET. INKLUSIVE DURCHGÄNGIG ILLUSTRIRTER ANLEITUNG. UM ANLEITUNGEN IN ANDEREN SPRACHEN ZU ERHALTEN, SCANNEN SIE BITTE DEN ENTHALTENEN QR-CODE. EBENFALLS ERFORDERLICH, JEDOCHE NICHT ENTHALTEN. 2 X 1.5V AAA BATTERIEN, KLEINER KREUZSCHLITZ-SCHRAUBENZIEHER UND EINE RECYCLTE GETRÄNKEDOSE. ACHTUNG! NICHT GEEIGNET FÜR KINDER UNTER 3 JAHREN. ENTHÄLT VERSCHLUCKBARE KLEINTEILE. ERSTICKUNGSGEFAHR, EMPFOHLEN FÜR KINDER AB 8 JAHREN, DIE AUFSICHT EINES ERWACHSENEN WIRD EMPFOHLEN. LESEN SIE DIE ANLEITUNG VOR GEBRAUCH. FARBE UND INHALT KÖNNEN VON DEN ABBILDUNGEN AUF DER VERPACKUNG ABWEICHEN. HERGESTELLT IN CHINA. BITTE ALLE INFORMATIONEN UND ADRESSE AUFBEWAHREN.

NL-INHOUD ZOALS AFGEBEELD. VOLLEDIGE GEBRUIKSAANWIJZING MET AFBEELDINGEN MEEGELEVERD. VOOR DE GEBRUIKSAANWIJZING IN EEN ANDERE TAAL, SCAN DE MEEGELEVERDE QR-CODE. OVERIGE BENODIGDHEDEN, NIET MEEGELEVERD: 2 'AAA'-BATTERIJEN VAN 1.5 VOLT, KLEINE KRUISKOPSCHROEVENDRAAIER EN EEN GEBRUIKT, GEREINIGD BLIKJE. WAARSCHUWING: NIET GESCHIKT VOOR KINDEREN JONGER DAN 8 JAAR. GEBRUIKEN ONDER TOEZICHT VAN VOLWASSENEN. LEES DE GEBRUIKSAANWIJZING VOOR HET GEBRUIK. DE KLEUREN EN DE INHOUD KUNNEN AFWIJKEN VAN DE AFBEELDINGEN. GEFABRICIEERD IN CHINA. ALLE INFORMATIE EN ADRES BEWAAREN.

IT-IL CONTENUTO CORRISPONDE ALLE IMMAGINI. ISTRUZIONI ILLUSTRATE INCLUSE. PER LE ISTRUZIONI IN ALTRE LINGUE, SCANSIONARE IL CODICE QR INCLUSO. MATERIALE NECESSARIO MA NON IN DOTAZIONE: 2 BATTERIE 'AAA' DA 1.5 VOLT, UN PICCOLO CACCIAVITE A CROCE, UNA LATTINA VUOTA, PULITA, ATTENZIONE: DESTINATO A BAMBINI DI ETÀ SUPERIORE AGLI 8 ANNI. NON ADATTO PER BAMBINI AL DI SOTTO DEI 3 ANNI, A CAUSA DI PICCOLE PARTI CHE POSSONO CAUSARE SOFFOCAMENTO SE UTILIZZATE IN MODO NON APPROPRIATO. È CONSIGLIATA L'ASSISTENZA DI UN ADULTO. LEGGERE LE ISTRUZIONI PRIMA DELL'USO. I COLORI E I CONTENUTI POSSONO DIFFERIRE DA QUELLI ILLUSTRATI. FABBRICATO IN CINA. CONSERVARE LE ISTRUZIONI PER CONSULTAZIONE FUTURA.

ES-CONTENIDO COMO EL ILUSTRADO. INSTRUCCIONES COMPLETAS INCLUIDAS. PARA CONSULTAR INSTRUCCIONES EN OTROS IDIOMAS, ESCANEE EL CÓDIGO QR INCLUIDO. ASIMISMO, NECESITARÁS LOS SIGUIENTES ELEMENTOS NO INCLUIDOS EN EL KIT DE MONTAJE: DOS PILAS 'AAA', DE 1.5V, UN DESTORNILLADOR DE ESTRÍAS PEQUEÑO Y UNA LATA USADA Y LIMPIA. ADVERTENCIA: PARA NIÑOS MAYORES DE 8 AÑOS; NO SE RECOMIENDA PARA NIÑOS MENORES DE 3 AÑOS, YA QUE LAS PARTES PEQUEÑAS PUEDEN CAUSAR ASFIXIA SI SE USAN INDEBIDAMENTE. SE RECOMIENDA LA SUPERVISIÓN DE ADULTOS. LEA LAS INSTRUCCIONES ANTES DE USAR EL JUEGO. EL COLOR Y EL CONTENIDO PUEDEN SER DIFERENTES A LOS QUE SE MUESTRAN EN LA ILUSTRACIÓN. HECHO EN CHINA. CONSERVE ESTA INFORMACIÓN HASTA EL FIN DE SU USO.

JA-内容は図のとおりです。詳しい説明入りの取扱説明書が含まれます。他の言語による取扱説明書は、付属のQRコードをスキャンしてください。別途必要なもの: 1.5Vの単4乾電池2本、プラスの小型ドライバー、よく洗った空き缶1個。対象年齢8歳以上。3歳以下のお子様には決して与えないでください。小さな部品がありますので、誤って飲み込まないようにご注意ください。窒息などの危険があります。保護者の監督の元で遊びましょう。使用前に説明書をお読みください。色や内容物は、イラストと異なることがあります。中国製。説明書は、大切に保管してください。

Cautions! For ages over 8. Not for children under 3 years due to small parts. Adult guidance recommended. Read the instructions before use. Follow and keep them as reference. Colours and contents may vary from those illustrated. Made in China. To parents: Read all instructions before providing guidance to your children.



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Image: Children watching the cable car in action outdoors.

- 1. Set Up the Cable Line:** Securely tie the ends of the long string to two fixed points. These points should be at a suitable distance and height to allow the cable car to travel freely. Ensure the string is taut.
- 2. Position the Cable Car:** Place the assembled cable car onto the taut string, ensuring the string is correctly seated in the pulley grooves.
- 3. Activate the Motor:** Locate the ON/OFF switch on the cable car's motor housing. Flip the switch to

the 'ON' position. The motor will start, and the cable car will begin to move along the string.

4. **Observe Movement:** Watch as the cable car travels back and forth, or up and down, depending on the incline of your string.
5. **Deactivate:** To stop the cable car, flip the switch to the 'OFF' position.

MAINTENANCE

To ensure the longevity and optimal performance of your Tin Can Cable Car, follow these simple maintenance guidelines:

- **Cleaning:** Wipe down the plastic components with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.
- **Battery Care:** Remove batteries if the cable car will not be used for an extended period to prevent leakage.
- **Storage:** Store the kit in a cool, dry place away from direct sunlight and extreme temperatures.
- **String Inspection:** Periodically check the string for fraying or damage. Replace if necessary to ensure safe operation.

TROUBLESHOOTING

If you encounter issues with your Tin Can Cable Car, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Cable car does not move.	<ul style="list-style-type: none">• Batteries are dead or incorrectly inserted.• Wires are disconnected.• Switch is in 'OFF' position.• String is too loose or obstructed.	<ul style="list-style-type: none">• Replace batteries and check polarity.• Ensure all wire connections are secure.• Flip switch to 'ON'.• Tighten the string and clear any obstructions.
Cable car moves slowly or inconsistently.	<ul style="list-style-type: none">• Low battery power.• Friction in the pulley system.• String is not taut enough.	<ul style="list-style-type: none">• Replace batteries.• Check that pulleys spin freely and are not obstructed.• Ensure the string is pulled taut between anchor points.
Cable car falls off the string.	<ul style="list-style-type: none">• String is not properly seated in pulley grooves.• Cable stop valves are not correctly installed.• Excessive vibration or movement.	<ul style="list-style-type: none">• Re-seat the string in all pulley grooves.• Ensure cable stop valves are securely in place.• Check for stable anchor points for the string.

SPECIFICATIONS

Feature	Detail
Brand	4M
Model Number	403358
Recommended Age	8 years and above
Educational Objectives	Learning, Robotics
Materials	Paper, Plastic
Assembly Required	Yes
Battery Requirement	2 x 1.5V AAA batteries (not included)
Product Dimensions	24 x 16.5 x 6 cm (Box); 10 g (Product weight)
EAN	0098751436582, 4893156033581

WARRANTY AND SUPPORT

For information regarding product warranty, returns, or technical support, please refer to the retailer's policy where the product was purchased or visit the official 4M website. Keep your proof of purchase for any warranty claims.

For additional information or assistance, you may visit the manufacturer's website: www.4m-ind.com.