

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

Manuals.plus /

- › [Elenco](#) /
- › Elenco Teach Tech SolarBot.14 Transforming Solar Robot Kit Instruction Manual

Elenco TTG-615

Elenco Teach Tech SolarBot.14 Transforming Solar Robot Kit Instruction Manual

Model: TTG-615

INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of the Elenco Teach Tech SolarBot.14 Transforming Solar Robot Kit. The SolarBot.14 is an educational kit designed to introduce users to robotics and solar energy through hands-on construction. It allows for the creation of 14 distinct solar-powered robot models, capable of operating on both land and water, without the need for batteries.

The kit encourages STEM (Science, Technology, Engineering, Math) learning by engaging users in mechanical engineering and renewable energy principles.

SAFETY INFORMATION

- **Small Parts Warning:** This kit contains small parts which may pose a choking hazard. Not suitable for children under 3 years.
- **Recommended Age:** This product is recommended for users aged 10 years and up. Adult supervision is advised for younger users during assembly.
- **Solar Panel Care:** Handle the solar panel with care. Avoid direct impact or scratching.
- **Water Use:** Ensure all connections are secure and the robot is properly assembled for water-based models to prevent damage. Do not submerge the solar panel or motor unit unless specifically designed for it in a particular model.

PACKAGE CONTENTS

Before beginning assembly, verify that all components listed below are present in your kit. Refer to the included assembly manual for a detailed parts list and diagrams.

- Assembly Parts (various plastic components, gears, shafts, etc.)
- Instruction Manual (detailed assembly guide)
- Solar Cell (photovoltaic panel)
- Motor and connecting wires



Image: All components of the SolarBot.14 kit, including plastic parts, gears, solar panel, and instruction manual.

SETUP AND ASSEMBLY

The SolarBot.14 kit allows for the construction of 14 different robot models. Each model has specific assembly instructions detailed in the included Instruction Manual. Follow these steps carefully:

1. **Review the Manual:** Before starting, thoroughly read the entire assembly manual to familiarize yourself with the parts and steps.
2. **Identify Parts:** Use the diagrams in the manual to identify and separate the necessary parts for your chosen robot model.
3. **Follow Step-by-Step Instructions:** Assemble the robot by following the numbered steps and corresponding diagrams. Pay close attention to the orientation of parts and secure all connections.
4. **Connect Solar Cell and Motor:** Carefully connect the wires from the solar cell to the motor as indicated in the manual. Ensure a secure and correct polarity connection.
5. **Test Functionality:** Once assembled, proceed to the Operating Instructions section to test your robot.

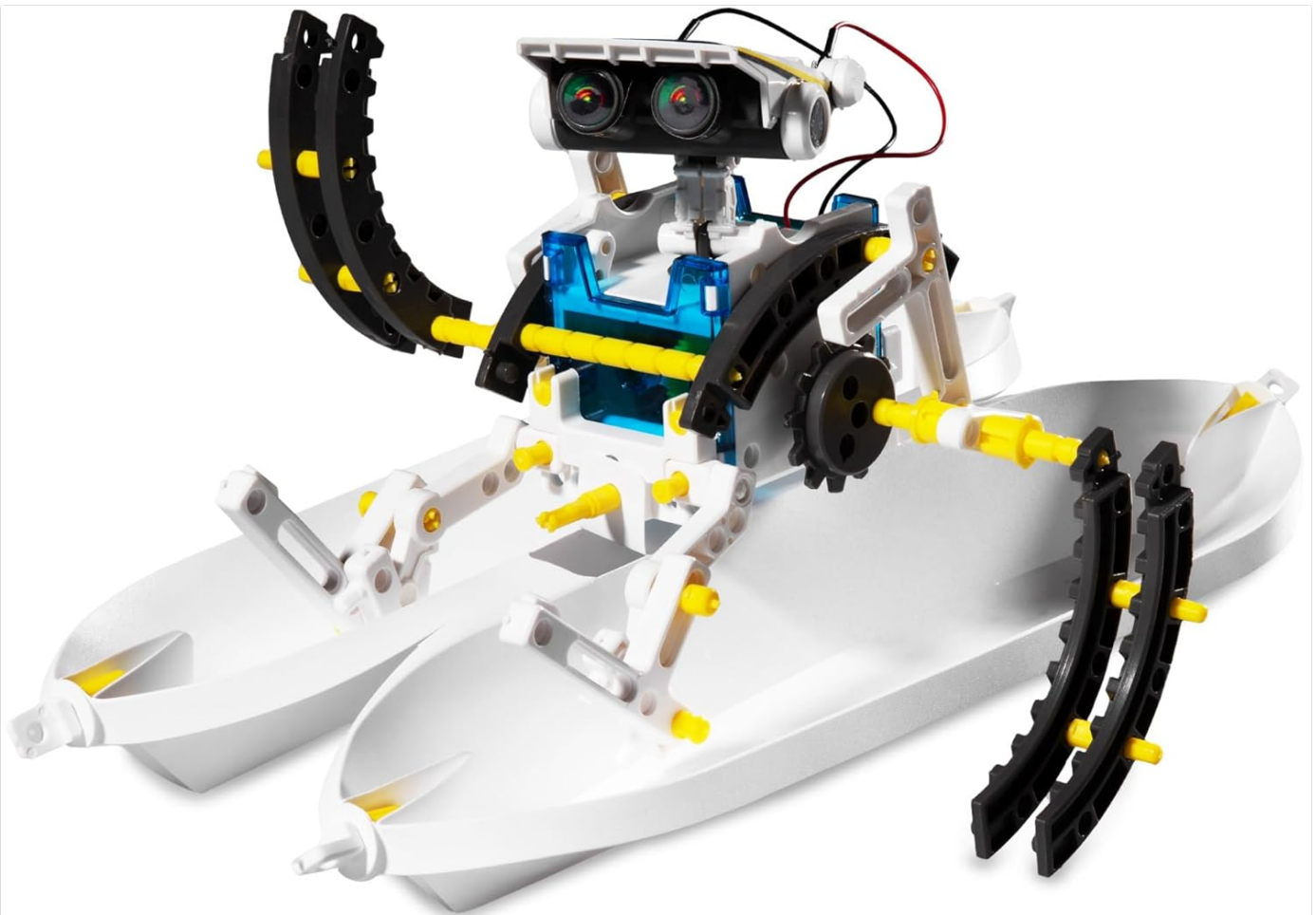


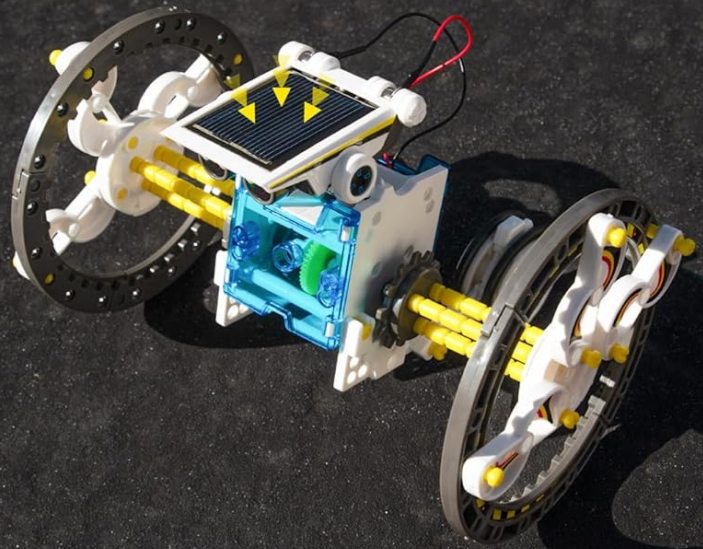
Image: An example of an assembled SolarBot.14 robot, demonstrating its complex structure and solar panel.

OPERATING INSTRUCTIONS

The SolarBot.14 is designed to be powered by solar energy. No batteries are required for its operation under sufficient light conditions.

- Outdoor Operation:** Place the assembled robot in direct sunlight. Ensure the solar panel is facing the sun and is not obstructed by shadows. The robot should begin to move once sufficient light is absorbed by the solar cell.
- Indoor Testing (Optional):** For indoor testing or operation in low light, a strong halogen lamp (50W or higher) may be used as an alternative light source. Position the lamp close to the solar panel. Note that performance may vary compared to direct sunlight.
- Land and Water Models:**
 - Land Models:** Operate on flat, smooth surfaces for best movement.
 - Water Models:** Ensure the robot is placed gently on the water surface. Verify that all water-resistant components are correctly sealed as per the assembly instructions to prevent water ingress to the motor or solar panel.

**POWERED
BY THE
SUN!**



**CHARGE
WITH A
BATTERY!**

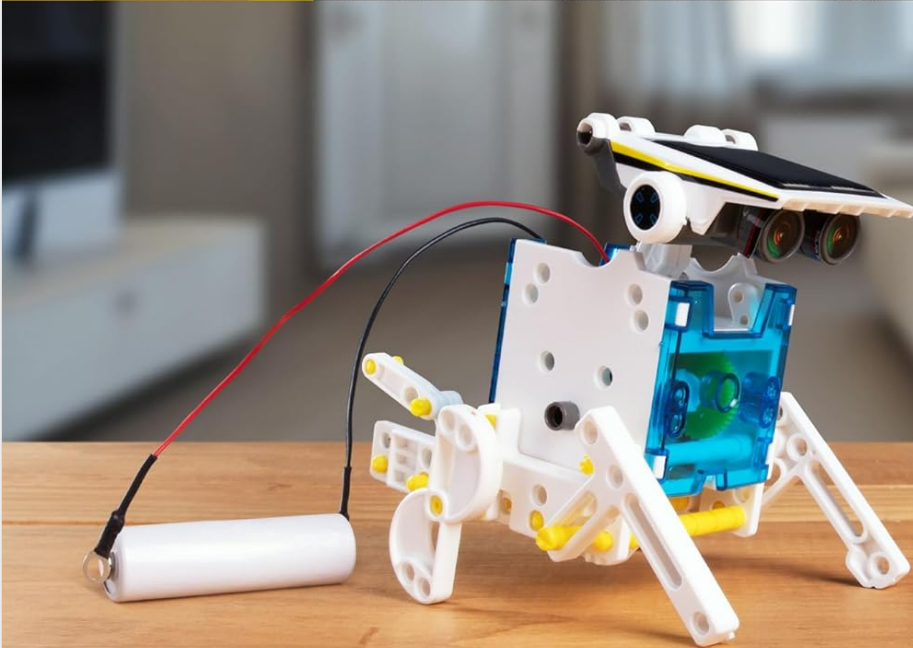
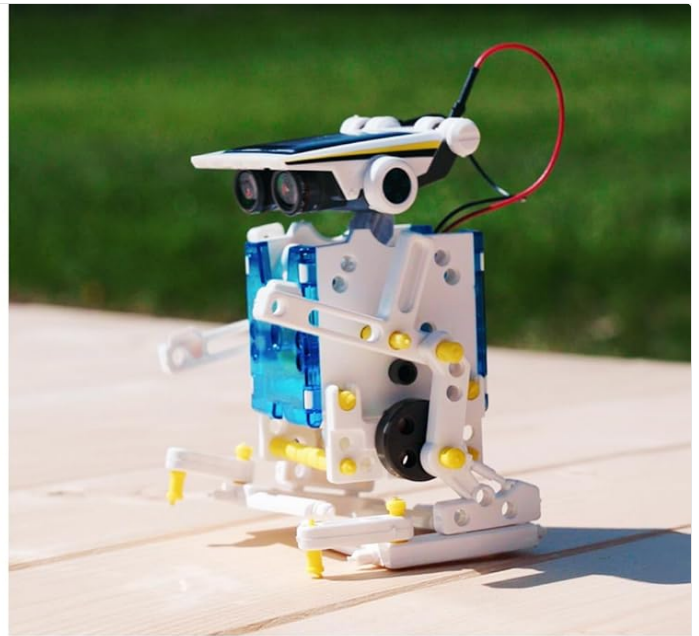


Image: The SolarBot.14 operating under direct sunlight, demonstrating its solar-powered functionality. An additional image shows a robot connected to a battery, indicating an alternative power source for testing purposes (battery not included).



WORKS ON LAND OR SEA!



Image: Various SolarBot.14 models demonstrating operation on both land and water surfaces.

ROBOT MODELS

The SolarBot.14 kit offers 14 unique robot designs, categorized into two skill levels:

Level One Models (Beginner)

- **Tortoise BOT:** A slow-moving, stable robot.
- **Bug BOT:** A multi-legged insect-like robot.
- **Four BOT:** A four-wheeled vehicle.
- **Paddle BOT:** A water-based robot using paddles for propulsion.
- **Walker-BOT:** A bipedal or multi-legged walking robot.
- **K9BOT:** A dog-like robot.
- **Big Wheeler BOT:** A robot with large wheels for varied terrain.

Level Two Models (Advanced)

- **Tumbler BOAT:** A watercraft designed for tumbling motion.
- **Car BOAT:** A hybrid land/water vehicle.
- **Slinker BOAT:** A sleek, fast water robot.
- **Surface BOAT:** A general-purpose surface watercraft.
- **Monster BOAT:** A larger, more robust water robot.
- **Crabby BOAT:** A crab-like water robot.
- **Rowing BOAT:** A water robot simulating rowing motion.

14-IN-1 SOLAR ROBOT KIT

LEVEL 1

LEVEL 2

Walker-BOT

TortoiseBOT

SlinkerBOT

MonsterBOT

FourBOT

K9BOT

CrabbyBOT

TumblerBOT

BugBOT

PaddleBOT

SurferBOT

CarBOT

Big Wheeler BOT

RowingBOT

Image: Visual representation of all 14 distinct robot models, including both land and water configurations, available for assembly with the SolarBot.14 kit.

MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the robot and solar panel. For water models, rinse with fresh water after use

and allow to dry completely before storage.

- **Storage:** Store the kit and assembled robots in a cool, dry place away from direct sunlight when not in use. Keep small parts in a designated container to prevent loss.
- **Inspection:** Periodically check for loose connections or damaged parts. Replace any broken components if possible, or contact support for assistance.

TROUBLESHOOTING

If your SolarBot.14 robot is not functioning as expected, consider the following common issues:

- **Robot does not move:**
 - Ensure the solar panel is receiving direct, strong sunlight or adequate artificial light.
 - Check all wire connections between the solar panel and the motor for proper contact and polarity.
 - Verify that gears are correctly aligned and not jammed. Ensure no parts are creating excessive friction.
 - Confirm the motor is functioning. If possible, test the motor with a small battery (not included) to isolate the issue.
- **Parts do not fit or assembly is difficult:**
 - Refer back to the specific step in the instruction manual. Ensure you are using the correct parts and orientation.
 - Some parts may require gentle force to snap into place. Avoid excessive force to prevent breakage.
- **Water models are not stable or leak:**
 - Double-check all seals and connections for water-based components as per the manual.
 - Ensure the robot is balanced when placed on water.

For more detailed troubleshooting steps, consult the comprehensive instruction manual included with your kit.

SPECIFICATIONS

Feature	Detail
Model Number	TTG-615
Product Dimensions	12.5 x 7.5 x 3.25 inches
Item Weight	0.01 ounces
Power Source	Solar (photovoltaic cell)
Recommended Age	10 years and up
Manufacturer	Elenco Electronics LLC
ASIN	B07NVCYM1Y

WARRANTY INFORMATION

Specific warranty details for the Elenco Teach Tech SolarBot.14 kit are typically provided within the product packaging or can be obtained directly from the manufacturer. Please refer to the documentation included with your purchase for comprehensive warranty terms and conditions.

CUSTOMER SUPPORT

For further assistance, missing parts, or technical inquiries regarding your SolarBot.14 kit, please contact Elenco Electronics LLC customer support. Contact information can usually be found on the product packaging or their official website.

Manufacturer: Elenco Electronics LLC

For additional resources and product information, visit the [Elenco Store on Amazon](#).