

RC Toy Robot

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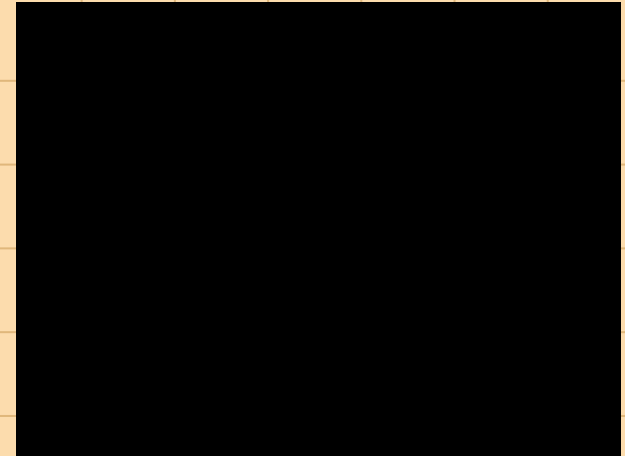
The RC Gilobaby Toy

Features of the toy

- LED lights
- Remote control that allows 360 degree movements
- Music and sounds effects
- Automated demo feature
- Made from abs plastic

Use of the toy and how it works

- The toy is meant as a means of entertaining kids with its simple design and feature
- A remote control allows for user to move forward, from side to side and backwards




[Amazon.com: GILOBABY Remote Control Robot Toys, 2.4GHz RC Robots for Kids with Flexible Head & Arms, Dance Moves, Music and LED Eyes, Birthday Gifts for Children Boys Girls Age 5-7 \(Blue\) : Toys & Games](#)

Market Price and Target Audience


The price of the gilobaby RC toy can range from 25-40 dollars online, with the average price being 35 dollars for the toy.

This toy appeals to children ages 5+, with its purpose being to entertain with its dancing, singing, and remote control abilities.




 **GILOBABY Remote Control Robot Toys, 2.4GHz RC Robots for Kids with Flexible Head & Arms, Dance Moves, Music and LED Eyes, Birthday Gifts for Children Boys Girls Age 5-7 (Blue)**

[Visit the GILOBABY Store](#)


★★★★★  1,138 ratings | 21 answered questions

Amazon's Choice for "gilobaby kids robot toy"

-19% **\$29⁹⁹**

List Price: ~~\$36.99~~ 

 **prime**

FREE Returns 

Coupon: ☐ [Apply 5% coupon](#) [Terms](#) 

Color: **Blue**

Pros of the toy

History of Toy Robot

Robots were first recorded back in 1206, that had tasked like resembling musicians and entertaining royals. The first more complex toy robot was created by Hisashige Tanaka with simple tin toys named Liliput. They began to manufacture the toys after seeing profits made by Germany, proving the economic nature of the toy's history. Once the toy had gained popularity, many engineers over time found ways to add more features and improve the designs.

Why that specific toy to reverse engineer-

(The reproduction of a manufacturer's product following detailed examination of its construction or composition). The RC model of an toy robot allows for more advanced movement while being able to keep costs low with simple, manufacturable parts. Toy Robots in recent times have been considered collectable pieces as older technological toys have been sold for pieces up \$50,000 with its original manufacturing price at \$3.95 in an span of just 40 years. Toy robot only continue to improve with more advancement in technology so investing an simple toy costing around \$20 dollars now can have value that grows exponentially.

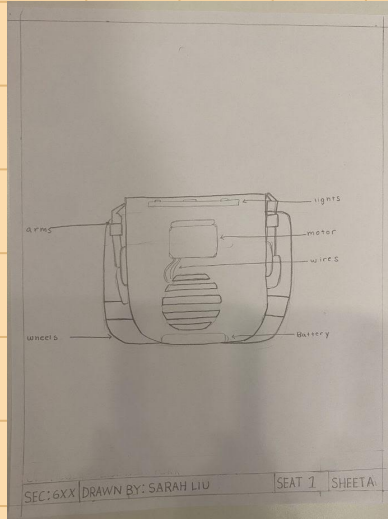


Liliput- first toy robot
created in Japan

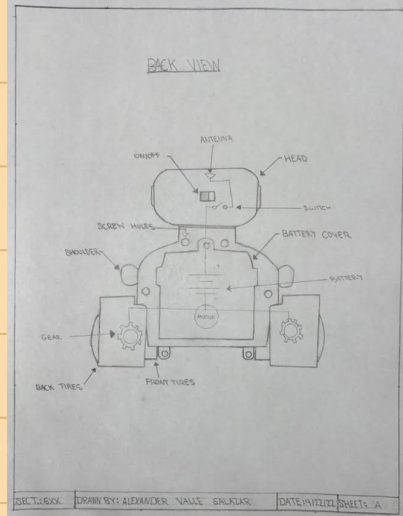


The Atomic Robot Man first
appearance in NYC Sci-fi
convention 1950s

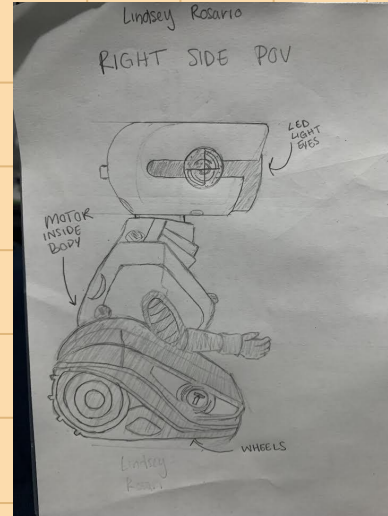
Imagination views



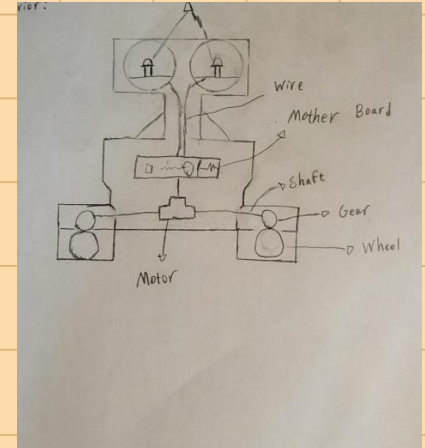
Top View



Back View



Side View



Front View

[illegible]

Hand-drawn PCB layout for a 4050-based LED driver. The diagram shows a central 4050 IC connected to a 100k resistor, a 100uF capacitor, and an LED. Dimensions are provided for the board size (180mm x 180mm) and component placement. Labels include '4050', '100k', '100uF', 'LED', and 'GND'.

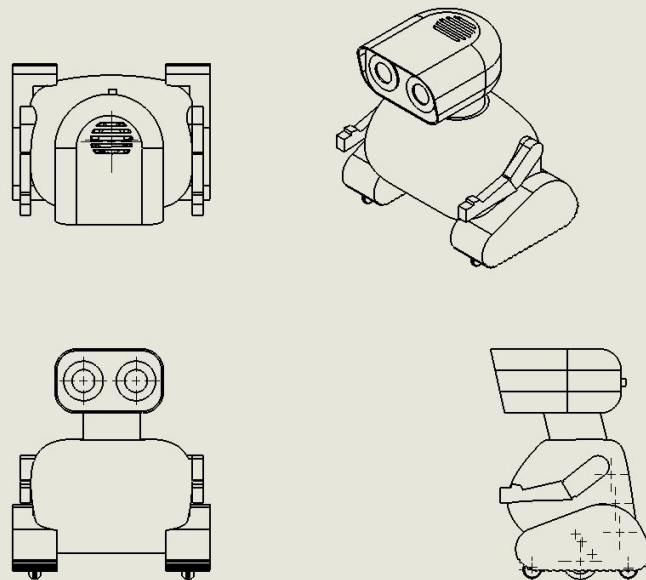
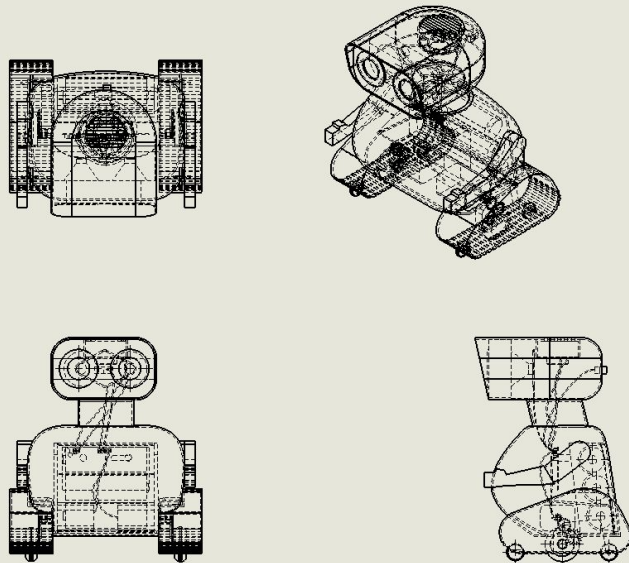
Technical drawing of a car chassis and engine components. The drawing includes a side view of the chassis with dimensions: 6.9 ft (width) and 10.5 ft (length). The engine is shown below the chassis, with dimensions: 1.5 ft (width) and 1.5 ft (height). The drawing is labeled 'CALDWELL ENGINE' and 'LINDSEY ENGINE'.

Side View

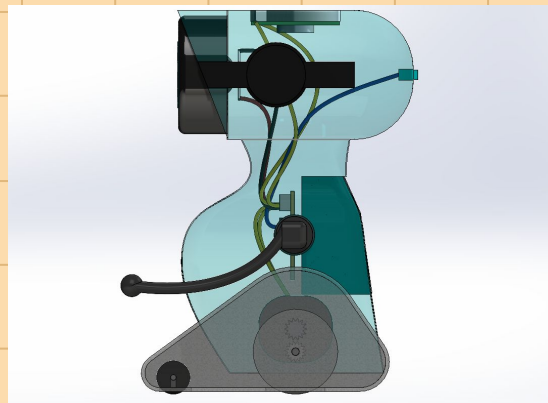
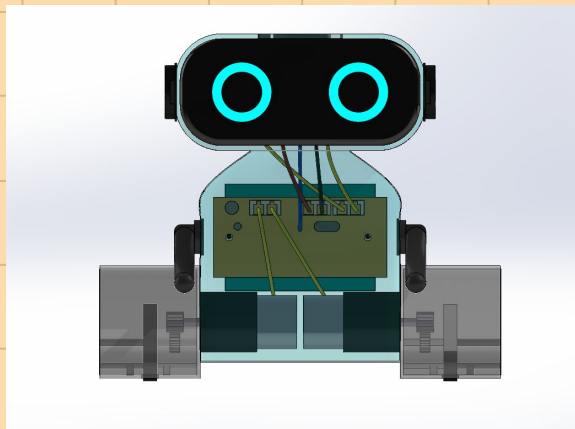
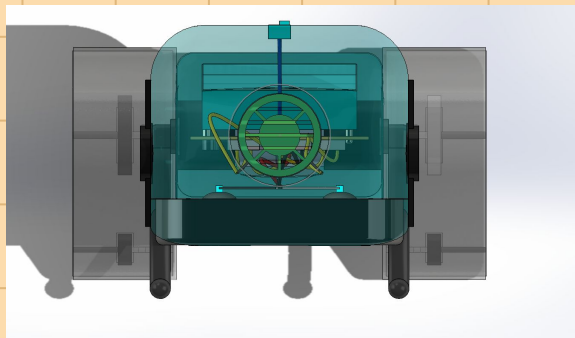
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Front View

Complete SW Drawing



3d model of the toy



Improvement points

Flaws:

- Hard to control at high speeds
- Accelerates too quickly
- Insufficient grip and power for textured surfaces, e.g., rugs
- Cannot drive past obstacles or ledges

Areas of improvement: Making the main and supporting tires wider (4mm to 8mm and 2mm to 8mm) and changing the material of the tires to neoprene foam. Adding grooves, tread to main tire

Advantages of wider tires:

- Larger surface area, increasing the power output, and speed
- Controllable acceleration
- Improves handling and feel
- Tighter turning angles
- Improves cornering speeds
- Brakes to a complete stop in less time

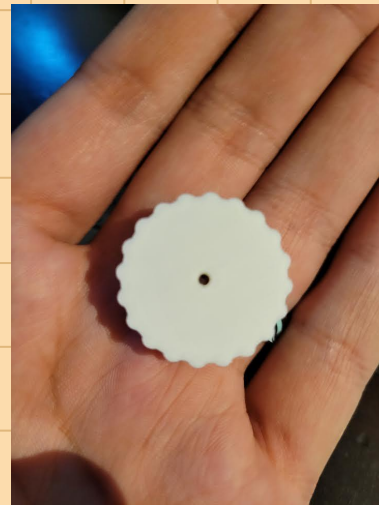
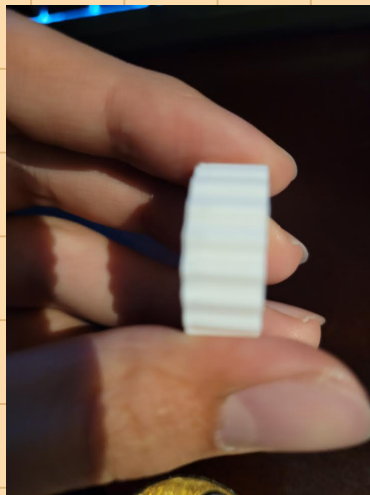
Advantages of neoprene foam material:

- Lighter
- Durability increases
- Improves stability
- Improves traction

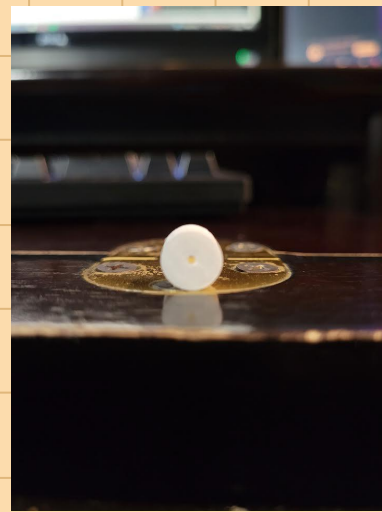
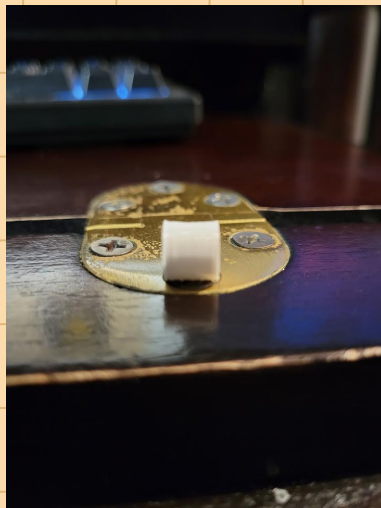
Advantages of threaded tire:

- Better traction
- Provides the ability to drive over ledges
- Increase stability


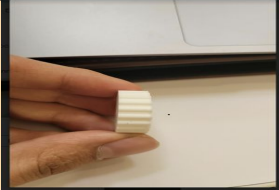
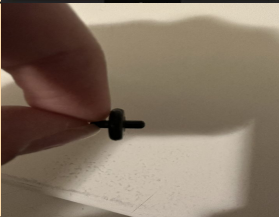

Side By Side Comparison: Main Wheel



Side By Side Comparison: Small Wheel



Costs of the Toy

Pic of part	Part name	Part cost (manufacture cost)	Amount * cost
	Main Wheel (Original) 4mm	\$0.02/pc. \$20 for 1000 pcs.	We bought for \$24 Price now: \$30 Market value of wheel: \$24/1000
	Main Wheel (Improved) 8mm, grooves	\$0.10/ pc. \$100 for 1000 pcs.	Using price now: \$30 Market value: \$0.12/pc, \$120/1000
	Small Wheel (Original) 2mm	\$0.01/ pc. \$10 for 1000 pcs.	Market value: \$12 per 1000 pcs
	Small Wheel (Improved) 8mm	\$0.04/ pc. \$40 for 1000 pcs.	Market value: \$48 per 1000pcs Total market value increase with price now: \$34, \$4 increase.

Thank You For Your Time

Questions?

