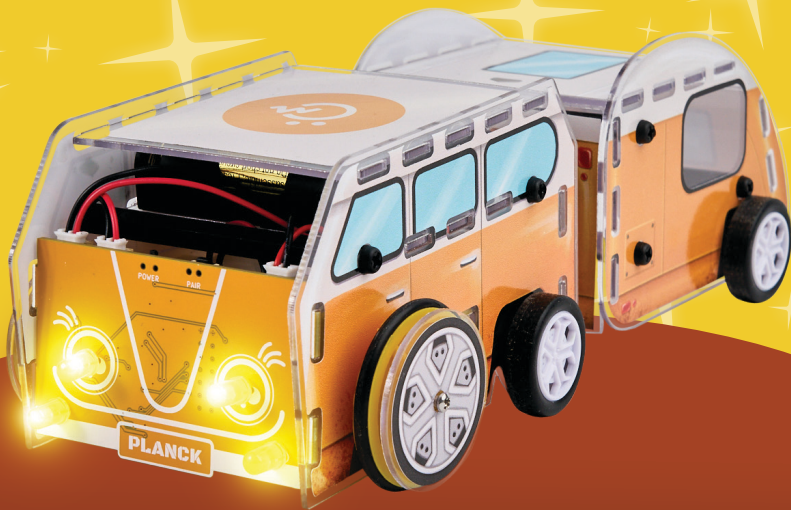


 CircuitMess

# CREATOR'S BOOKLET



# Planck

**WACKY**  
ROBOTS



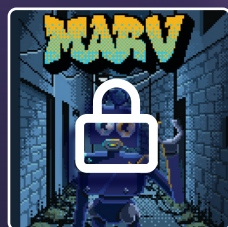
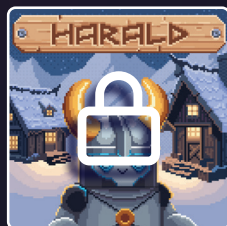
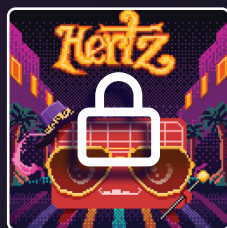
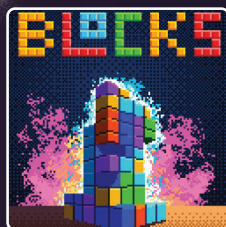
**Scan the QR code for  
instructions in your language**



**Wacky Robots are a quirky group of  
mini-robots that will help you master the  
basics of robotics and electronics.**

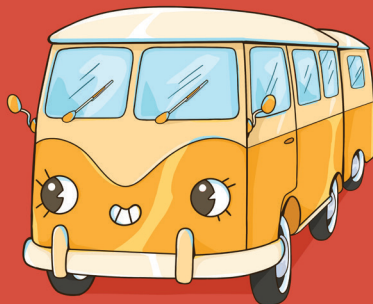


# UNLOCK ALL VIDEO GAMES



## Meet Planck

Introducing Planck, a retro-looking Wacky Robot that's ready for a party! Named after the scientist Max Planck, Planck will teach you all about voltage regulators and Planck's constant while driving around.



## How does it work?



Follow the guides and assemble your Planck



Learn about voltage regulators



Drive it around



## What is CircuitMess?

**CircuitMess** started in 2016 when Albert (our CEO) was 17 years old.

**Albert** loved tinkering with electronics and one of his first projects was a DIY game console.

People really liked the idea so he decided to launch it on **Kickstarter** where it raised \$100,745!

After that, CircuitMess was born. We are a small and fast-growing team of tech lovers who wish to share our love of creating new technology with the rest of the world!

Albert



## Behind the name

# CircuitMess

a reference to  
electronic circuits

what best  
describes our  
workplace

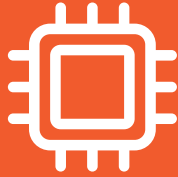
All of our kits are  
designed, manufactured,  
and packed in Croatia!







## The mission



Everybody knows how important technology is, but less than 1% of the population knows **HOW TO MAKE** new technology.



We're here to change that! With our kits, we want to inspire people to be **CREATORS** instead of just consumers.



## What's inside the box?

- |    |                                                                                     |                             |    |                                                                                     |                        |
|----|-------------------------------------------------------------------------------------|-----------------------------|----|-------------------------------------------------------------------------------------|------------------------|
| 1  |    | Long plastic screws         | 15 |    | Token                  |
| 2  |    | Medium sized plastic screws | 16 |    | Tires                  |
| 3  |    | Long metal screws           | 17 |    | Wheels                 |
| 4  |    | Short metal screws          | 18 |    | PCB                    |
| 5  |    | Medium sized spacers        | 19 |    | Plastic wheels         |
| 6  |    | Long spacers                | 20 |    | Electric motors        |
| 7  |    | Batteries                   | 21 |    | Short spacers          |
| 8  |    | Battery holder              | 22 |    | Round head metal screw |
| 9  |    | Rubber                      | 23 |    | Plastic screws         |
| 10 |   | LEDs                        | 24 |    | Button caps            |
| 11 |  | Spacers                     | 25 |  | Antenna                |
| 12 |  | Short plastic screws        | 26 |  | Controller battery     |
| 13 |  | Metal bars                  | 27 |  | Transmitter            |
| 14 |  | Receiver                    | 28 |  | Controller PCB         |

## You'll learn about:



Electronics and different electronic components



Voltage and the development of batteries



Max Planck and the quantum theory





## Quantum Maestro

**Max Planck** was a German physicist who won a Nobel Prize in 1918 and revolutionized the way we think about the building blocks of our universe. He developed **the quantum theory!**

Planck discovered that energy exists in discrete steps of packets.



## What does that mean?

Imagine you are in a coffee shop, and you assume you'll get the sugar dispenser so you can put in however much sugar you want. Instead, you received the sugar cubes or packets. You can add none, one or more packets, but not anything in between.

The amount of energy in a photon is the same. It must be a multiple of a specific value.

That's known as **Planck's constant**. This constant (symbolized with  $h$ ) is a fundamental universal constant of foundational importance in quantum mechanics. The constant value in the SI is  $6.62607015 \times 10^{-34}$  joule-hertz<sup>-1</sup> (or joule-seconds).

This constant is crucial for understanding atomic and subatomic particle motions, and it explains how quantum mechanics and modern electronics work.

### PLANCKS CONSTANT

$$6.62607015 \times 10^{-34} \text{ joule-hertz}^{-1}$$

## The frog experiment

**Alessandro Volta**, a pioneer of electricity and power, is another brilliant scientist we'll learn about.

Volta demonstrated that electricity could be generated chemically rather than just by living beings.





## Here is the story of his discovery

**Luigi Galvani** discovered “**animal electricity**” by connecting two different metals in series with a frog’s leg and to each other. Volta discovered that the frog’s leg functioned as both an electrical conductor (now known as an electrolyte) and an electrical detector. He also noticed that the frog’s legs were irrelevant to the electric current created by the two differing metals. He replaced the frog’s leg with brine-soaked paper. This way, he discovered the electrochemical series.

**Volta was also the inventor of the first battery.** It’s known as the **voltaic pile**, and it generates a steady electric current.

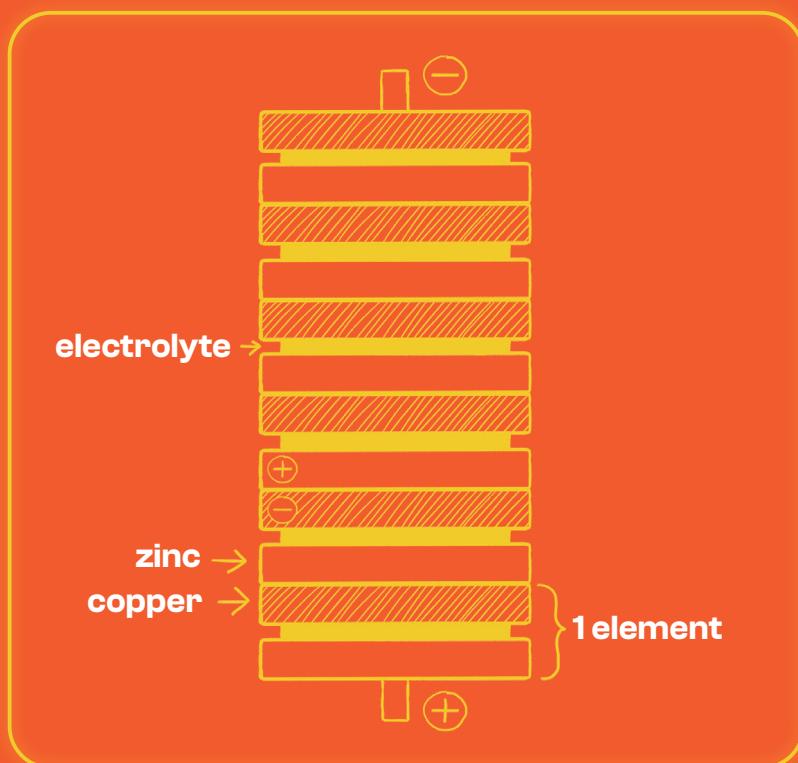
Volta understood that the most efficient pair of dissimilar metals for generating electricity was zinc and copper. He experimented with individual cells in series, each cell being a wine goblet filled with brine into which the two different electrodes were dipped. The voltaic pile replaced the goblets with brine-soaked cardboard.



## How two metals make the current

The voltaic pile is made up of two electrodes — one is made of zinc, and the other of copper. Inside the pile, there is a special liquid called sulfuric acid mixed with water or a form of saltwater brine. This liquid is called an electrolyte.

Zinc metal oxidizes to zinc cations and creates electrons that move to the copper electrode. The protons capture electrons from the copper electrode and form hydrogen gas bubbles. As a result, the zinc rod serves as the negative electrode, while the copper rod serves as the positive electrode. Thus, there are two terminals, and if they are connected, an electric current will flow.



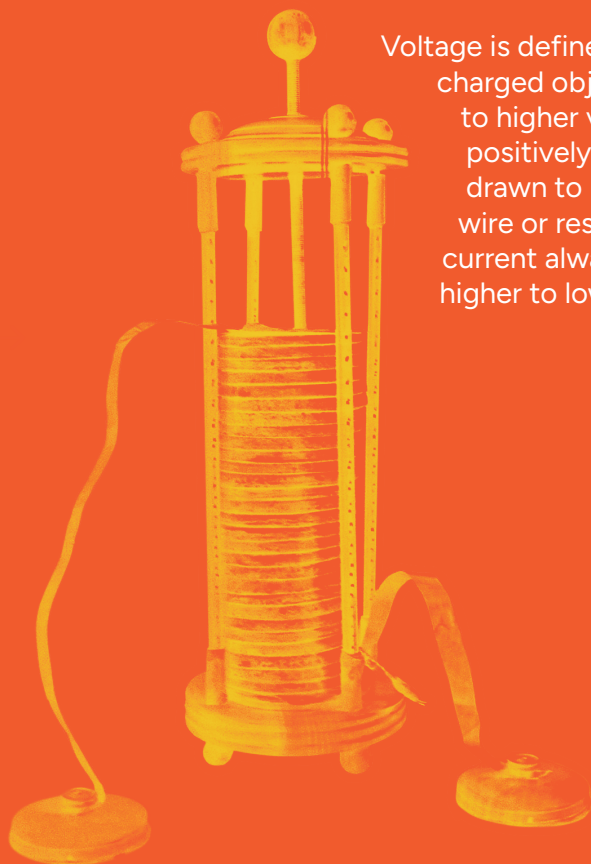
## Power up!

Voltage, current, and resistance are the three fundamental units used to measure electricity. Voltage is the difference in electric potential between two points.

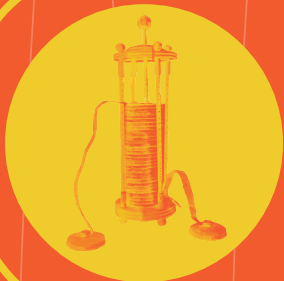
Electric potential is the amount of work energy required to transport an electric charge from a reference point to a specific point in an electric field.

The unit is a volt, and 1 volt equals 1 joule (of work) per 1 coulomb (of charge).

Voltage is defined so that negatively charged objects are drawn to higher voltages, while positively charged objects are drawn to lower voltages. In a wire or resistor, conventional current always flows from higher to lower voltage.



# The history of batteries

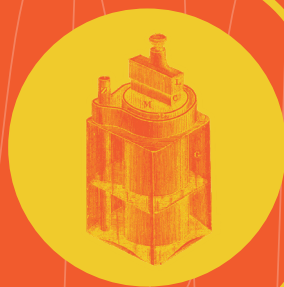


**1800**

Volta invents the battery

**1868**

Leclanché invents the version of today's dry batteries



**1900**

Edison invents nickel-iron storage battery







## 1967

Alkaline batteries  
developed



## 1992

Mercury-free alkaline  
batteries introduced



## 2005

Eneloop nickel-metal hydride  
rechargeable batteries released

## Linear voltage regulators

These are the regulators that keep the voltage stable. These regulators are extremely important since not every electrical component operates at the same voltage.

Take, for instance, the battery on Planck – its voltage is too high for the rest of the components to handle, so it must be regulated.

Linear regulators can be used only if the input voltage is higher than the output voltage. If the regulator has a 5V output voltage, it can only maintain this if the input voltage remains above about 7V.



# The birth of quantum physics

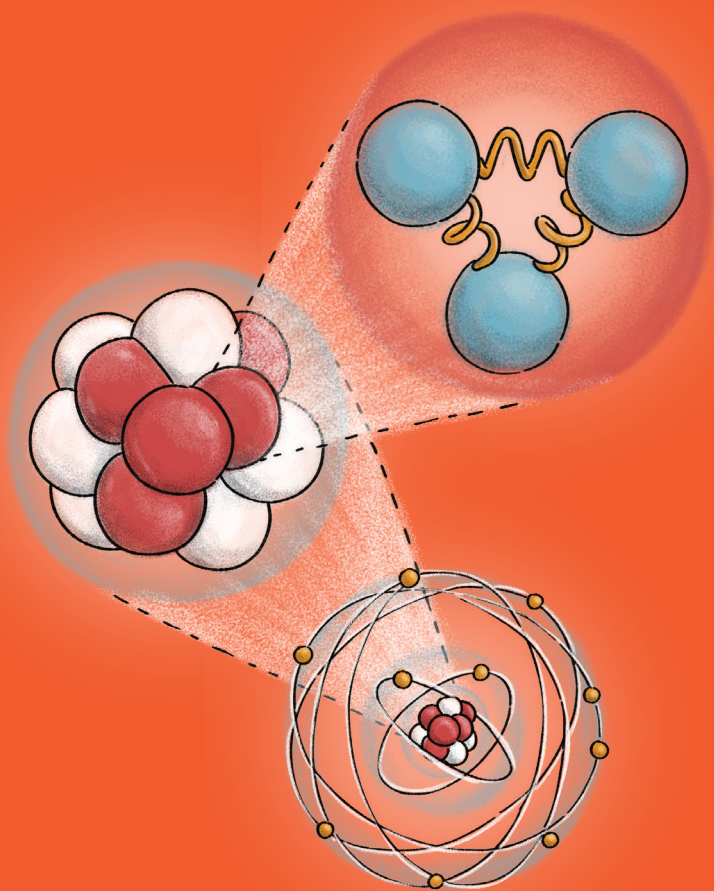
Are you ready to take a big step into science? Now that you learned something about **Max Planck** and his constant, you are prepared to take a look behind the doors of quantum physics.

**Quantum theory** was born out of a revolution in our understanding of the fundamental nature of reality. It all started in the early 20th century when scientists were trying to understand how atoms and light behave.

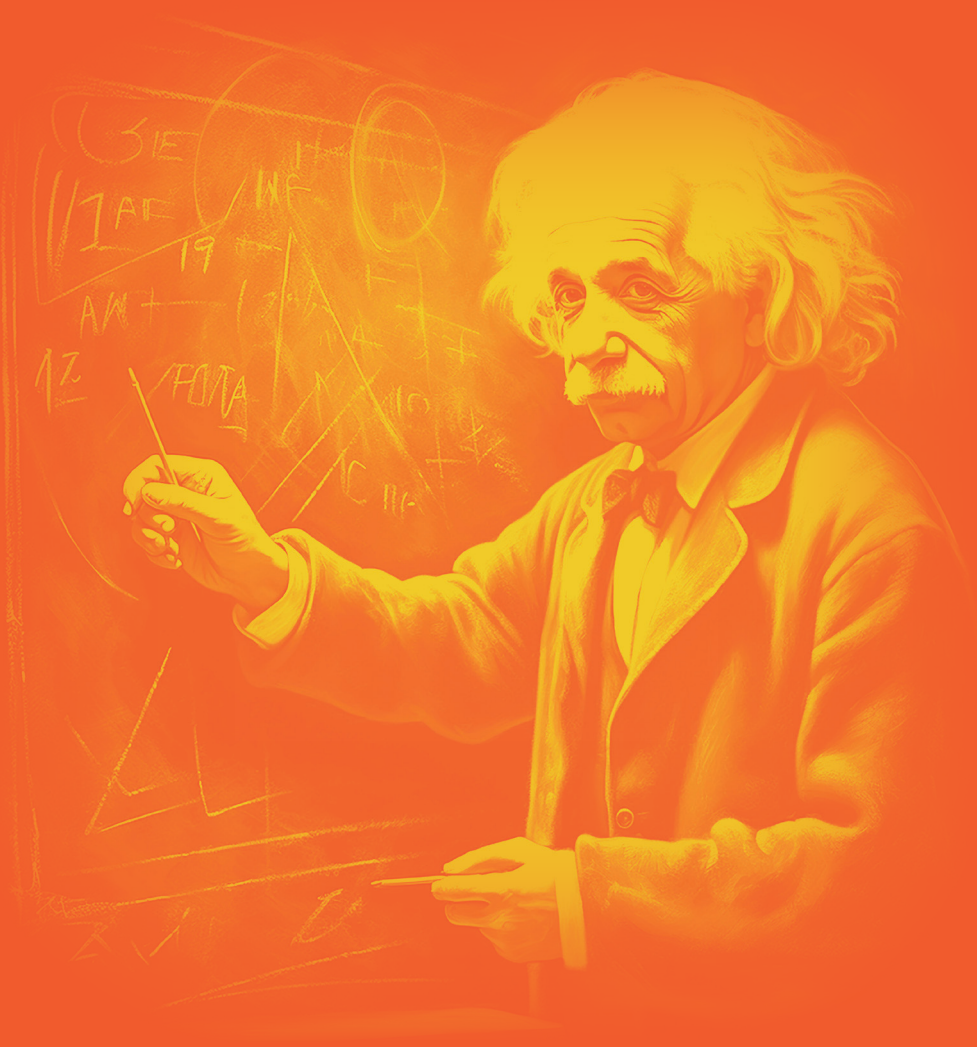


**Max Planck** is what you can call the grandfather of quantum physics. His groundbreaking work laid the foundation for this revolutionary field. Even brilliant minds like **Albert Einstein** built upon Planck's discoveries, using concepts like Planck's constant to unlock the mysteries of the universe.

So, **what exactly is quantum physics**, and why did scientists feel the need to delve into this realm? Quantum physics is the study of the most fundamental particles that make up everything around us. It's like exploring the building blocks of existence itself!



At the heart of quantum physics are **atoms**, the basic units of **matter**. But even atoms are made up of smaller particles like protons, electrons, and neutrons. By peering into the subatomic world, scientists uncovered a universe of incredible complexity.



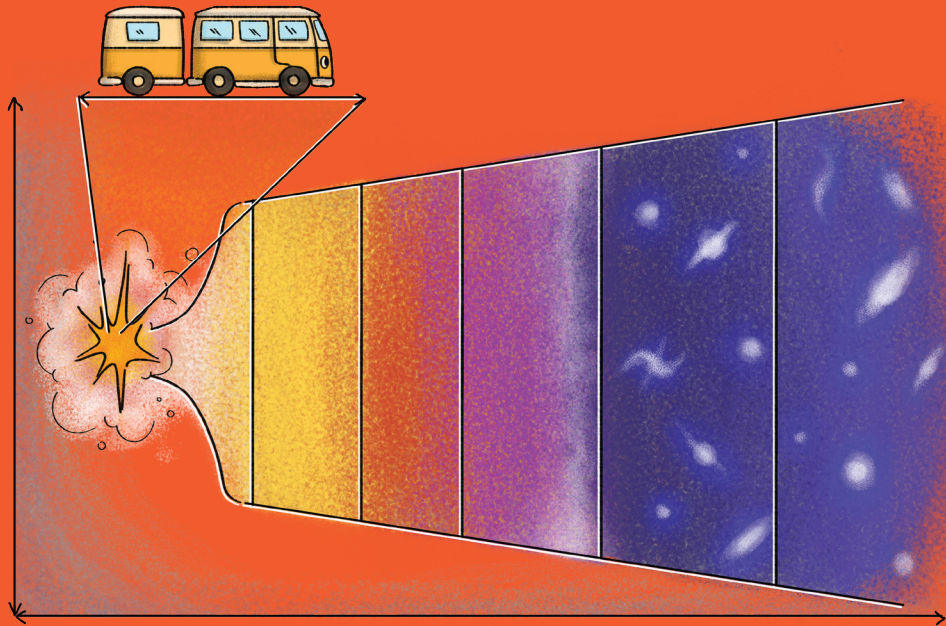
Albert Einstein, one of the greatest scientific minds in history, **revolutionized our understanding of light**. He proposed that light behaves as both a **wave and a particle simultaneously**, introducing the concept of photons. Einstein's groundbreaking ideas, built upon Planck's work, paved the way for the development of quantum theory.



Quantum physics sounds like something straight out of a science fiction movie. To avoid taking up any more of your time describing how quantum physics works, we'll simply go over some of the most **mind-bending theories** derived from atom-related research.

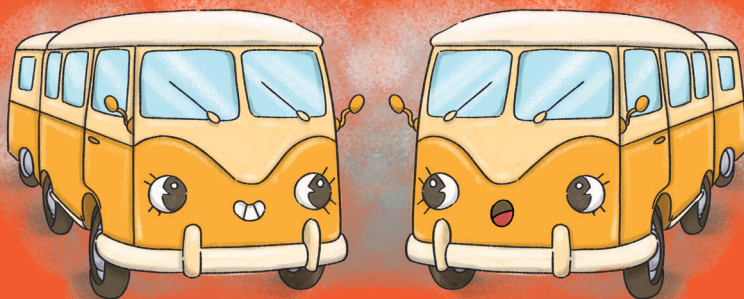
## The Planck Era

Imagine a time before time itself! The Planck Era, occurring 10-43 seconds after the **Big Bang**, was a period of incredible cosmic energy. Scientists believe that during this phase, all the fundamental forces of the universe were unified into a single super-force.



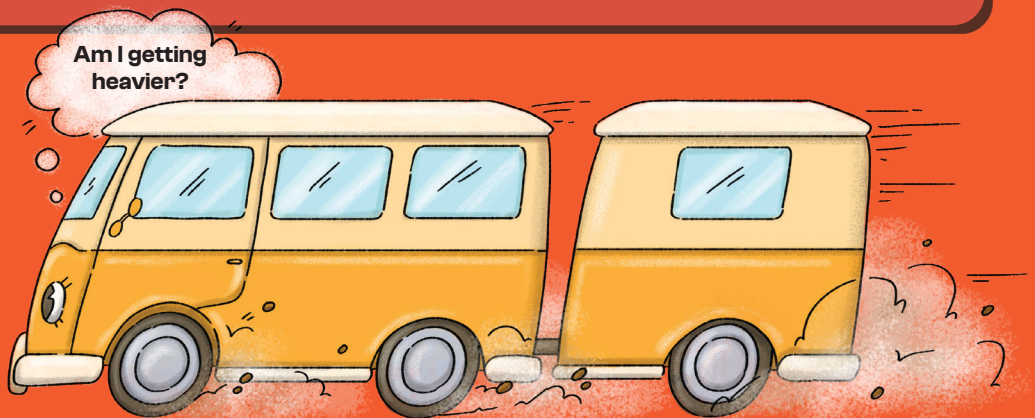
## Objects in Two Places at Once

In the world of quantum physics, things can get a little bizarre. One mind-bending idea suggests that objects can exist in two places simultaneously! It's like being in two places at once, defying the laws of classical physics.



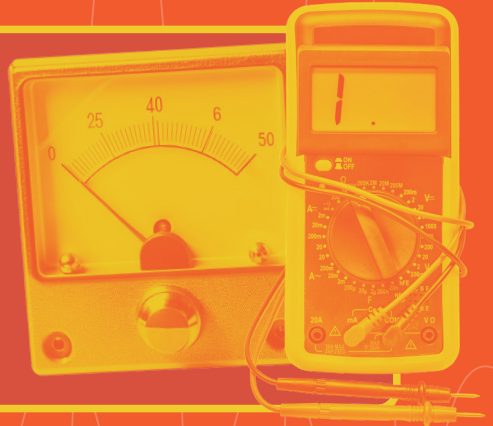
## The Speed Factor

Did you know that the faster you move, the heavier you become? According to the principles of relativity, the greater your speed, the more energy you require to propel forward. While nothing with mass can ever reach the speed of light, the energy around us continues to increase.

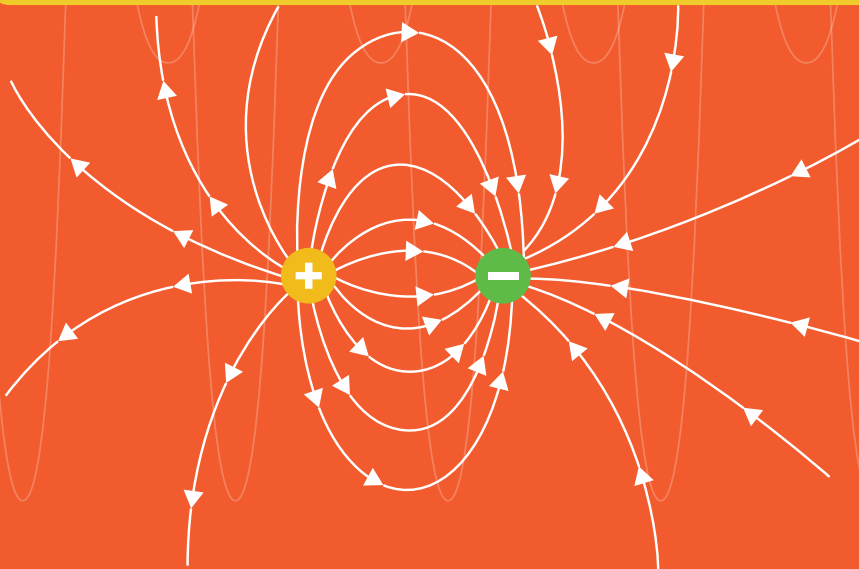


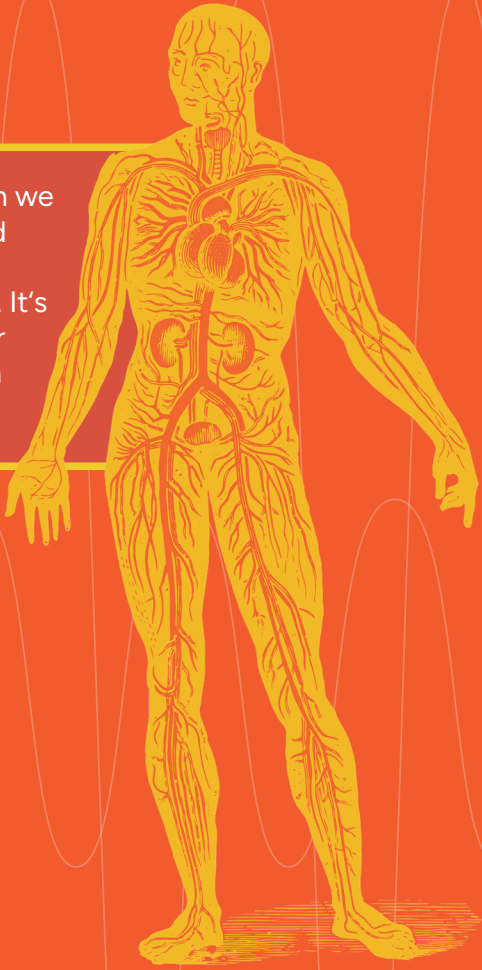
## Voltage fun facts

Voltage is like the electrical pressure that pushes charges through circuits. We measure it using a tool called a **voltmeter**, similar to how we use scales to measure weight. Current, on the other hand, is the flow of electric charges, measured by an **ammeter**.

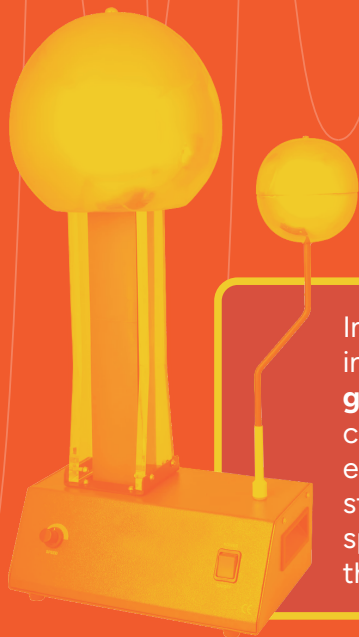


Changing voltage in one circuit can create an **electric field** that influences nearby circuits. This phenomenon forms the basis for various electrical devices, including transformers and induction coils. It's like invisible forces at play in the world of electricity!





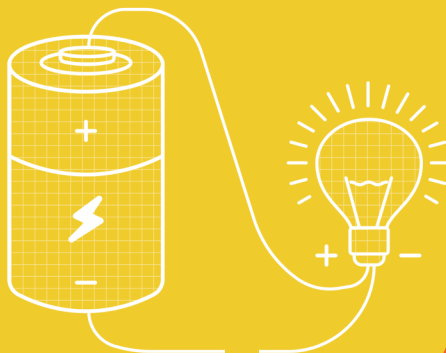
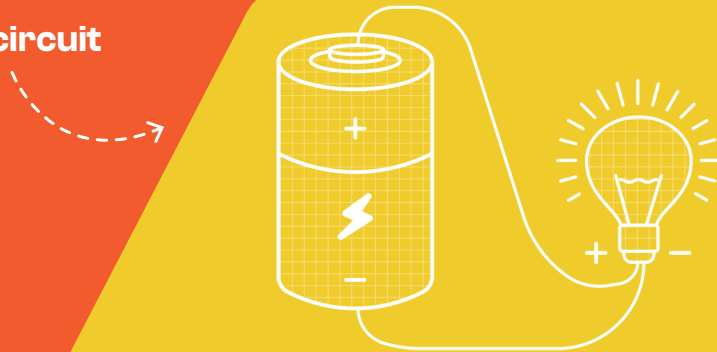
Our **bodies are more electric** than we realize! Nerve signals and charged particles moving within our cells generate small electrical voltages. It's like having our own internal power source, powering everything from our thoughts to our movements.



Imagine a machine that can generate incredibly high voltages! **Van de Graaff generators** are like lightning machines, capable of producing stunning electrical effects. From making hair stand on end to creating mesmerizing sparks, these generators showcase the power of electricity in action.

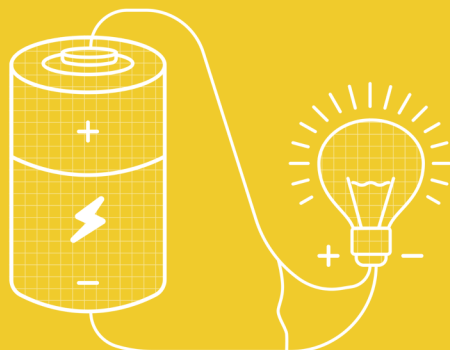
## Types of electric circuits

Close circuit

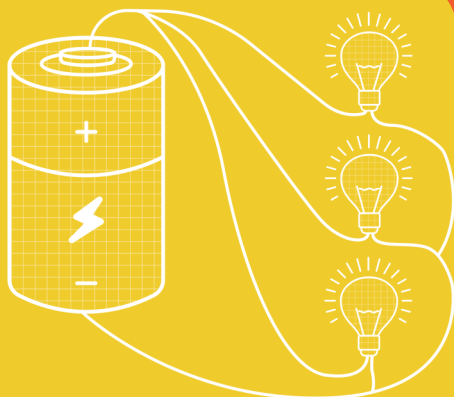


Open circuit

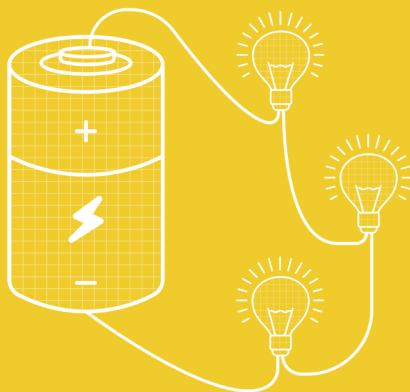
**Short circuit**



**Parallel circuit**



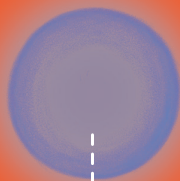
**Series circuit**





# Particle Hierarchy

**Matter**



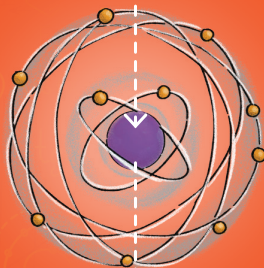
**Molecules**



**Atoms**



**Nucleus with electrons**

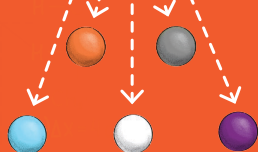


**Sub-Atomic  
Particles**



**Protons and  
Neutrons**

**Elementary  
Particles**



**Fermions, Leptons,  
Quarks, Bosons,  
Gluons, Muons and  
many others**

## Powers of ten

Natural phenomena occur on many scales. The fine details tend not to affect the large-scale workings, making it hard to test quantum theories of gravity such as string theory. But cosmic inflation allows the absurdly small to affect the astronomically big.

$10^{26}$  m

Observable  
universe



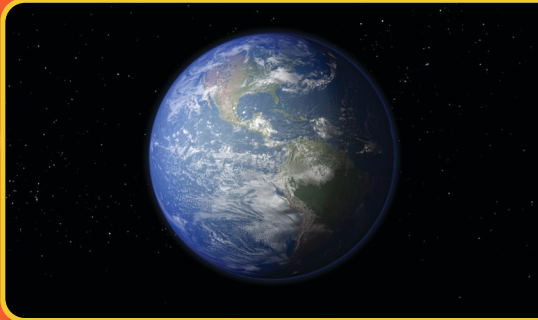
$10^{21}$  m

Milky Way  
galaxy

$10^{13}$  m

Solar system





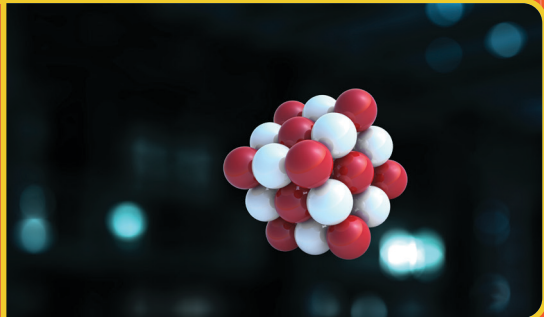
$10^7 \text{ m}$   
Earth

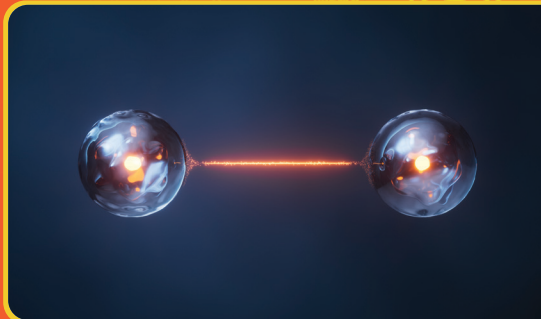
$10^{-2} \text{ m}$   
Insect



$10^{-10} \text{ m}$   
Atom

$10^{-15} \text{ m}$   
Atomic nucleus





$10^{-18}$  m

Smallest distance  
probed by particle  
accelerators

$10^{-18}$  do  $10^{-35}$  m

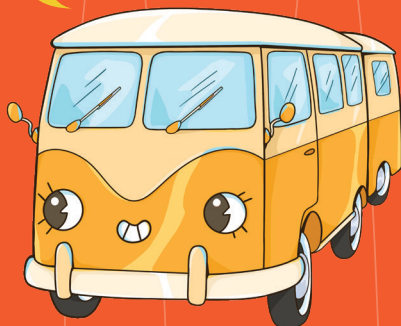
Typical size of  
fundamental  
strings and of  
extra dimensions



$10^{-35}$  m

Minimum  
meaningful  
length in nature

## Quiz time!



We hope you enjoyed reading the text we prepared for you! Now, let's put your knowledge to the test. Don't worry if you can't remember something - you can always go back and refresh your memory in the text.

### TRIVIA:

Who discovered animal electricity?

What's the name of the first battery?

**Can you describe how two metals make current?**



**Is light a wave, or a particle?**



**Tell us the most odd quantum physics theory you've ever heard.**





## Playing games!



Planck's  
token



Now that you know everything about your Planck, **there's one more exciting thing to mention:** along with Planck, you received a **small token**.

*„But what's it for?“* you might wonder.

Well, here's the scoop: you can use that token to **unlock a super cool new game** on our **gaming device called Bit**.

**Please note: Planck and Bit are sold separately.**







## Safety first

Before you start with the assembly, pay attention to the following safety measures:



Handling a screwdriver is not recommended for children under the age of 7!



**Keep the Wacky Robots kit away from young children! This product contains small components that are dangerous to children under the age of 3.**



If you are a minor, assemble Planck strictly with the help of an adult.

**Closely follow all the instructions you received in this kit and those found on our online pages so that no one gets hurt.**

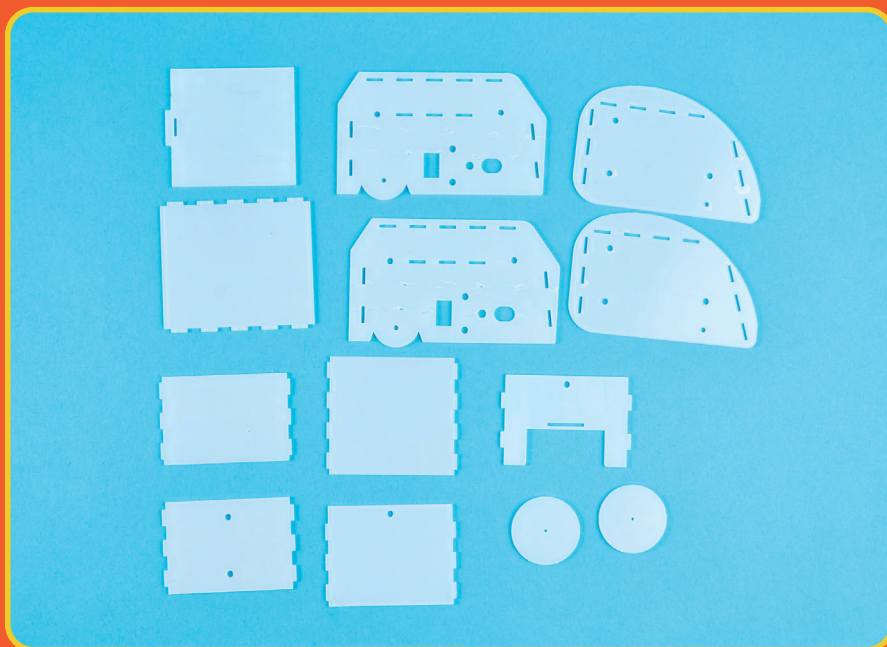
**If you have never used a screwdriver, carefully follow the assembly instructions on our website and, if necessary, ask someone more experienced or older than you to help you.**

**If you are having problems with our kit, contact our customer support via email at [contact@circuitmess.com](mailto:contact@circuitmess.com).**

## PLANCK BUILD GUIDE

Are you ready to assemble your Planck? Follow these fun and easy steps to bring your Planck to life!

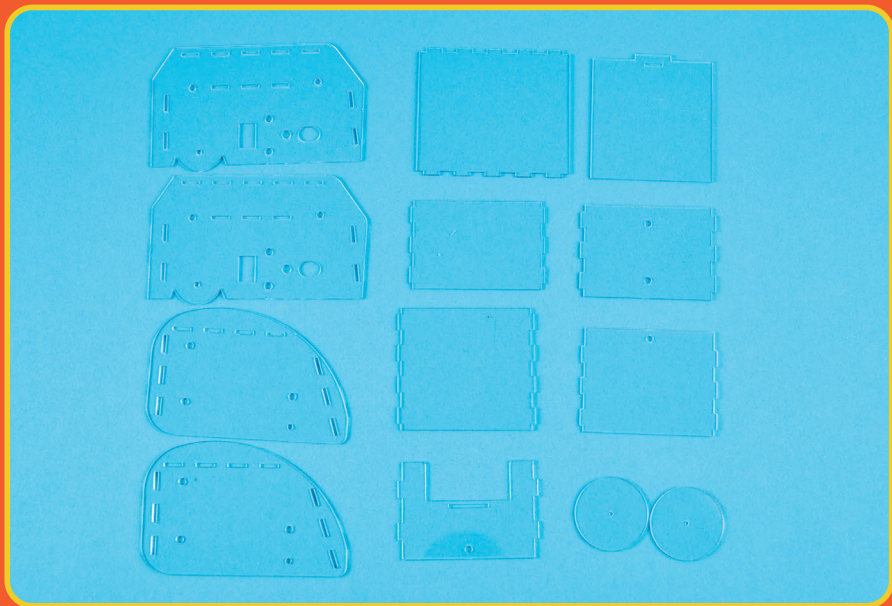
Let's start with the **acrylic casings**:



Carefully remove the protective film from both sides of each piece of acrylic casing until they are clear.







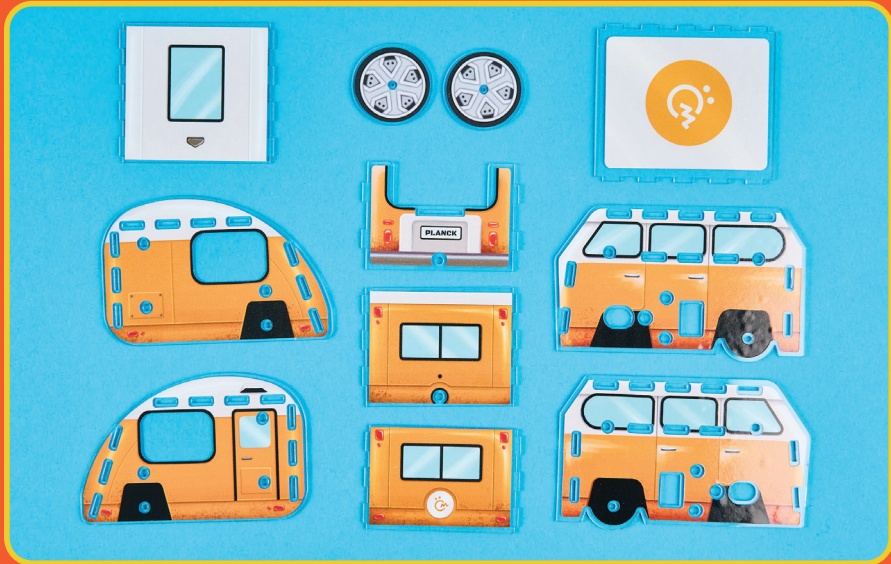
Before we become real engineers, it's time for creativity!

Use the fun **stickers** provided in the box to **decorate Planck's acrylic casings**.





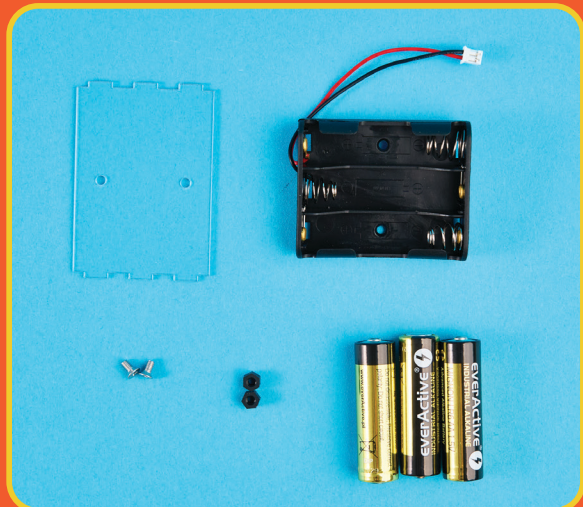
Some stickers are for Planck's **controller**, so leave those aside for now. Let's place the camper stickers on the appropriate casings.



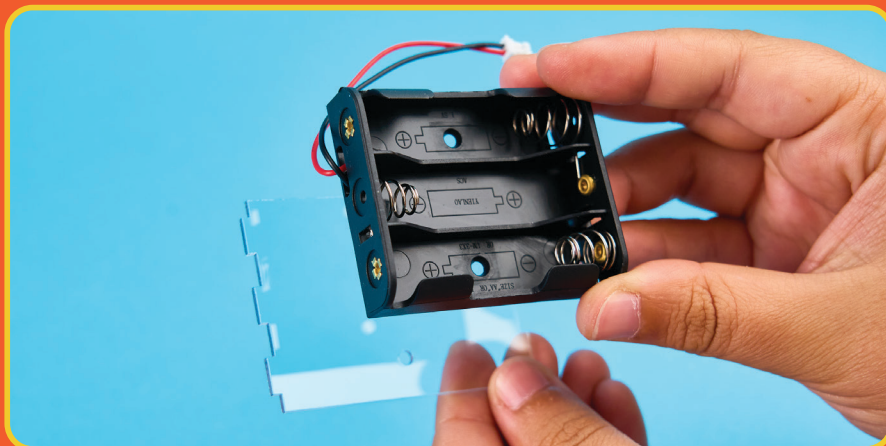
Great! **Now it's time to turn into real engineers.**

First, you need to connect the **battery holder** to the acrylic casing (see photo).

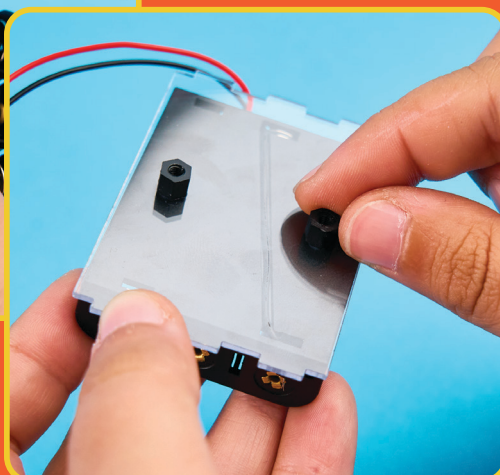
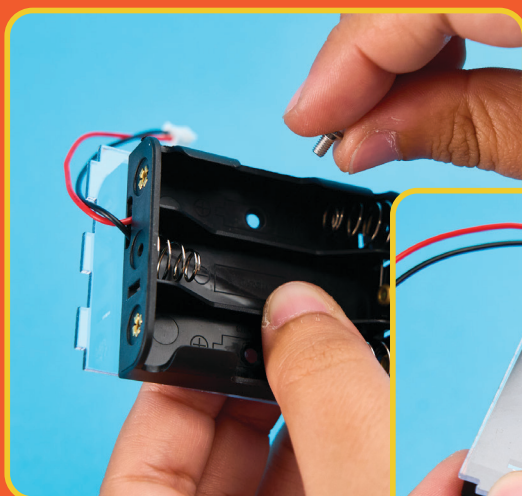
You will need the acrylic casing, battery holder, two metal screws, and two spacers.

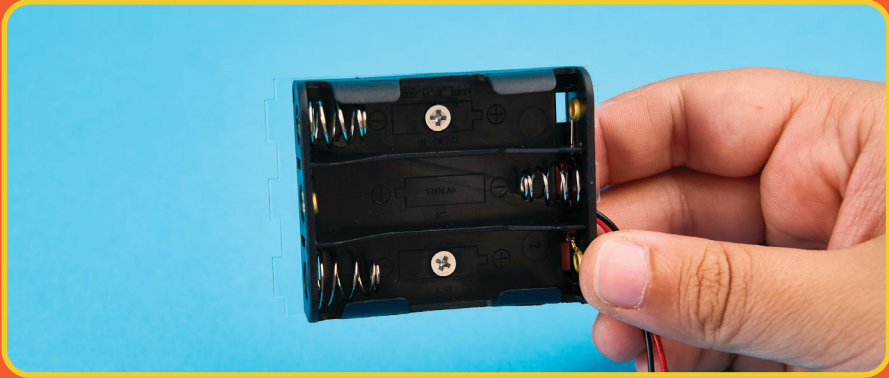


Place the battery holder on the acrylic casing.

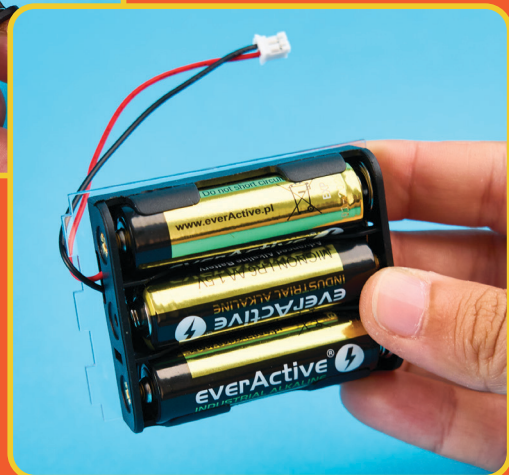
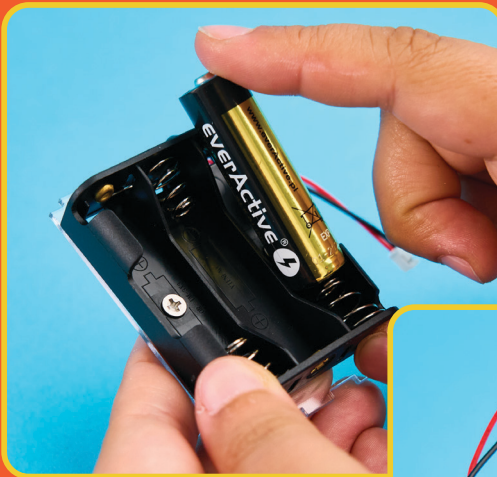


Insert the **metal screw** from the **inside of the battery holder**, then secure it with a **spacer** from the **outside** using only your hands.





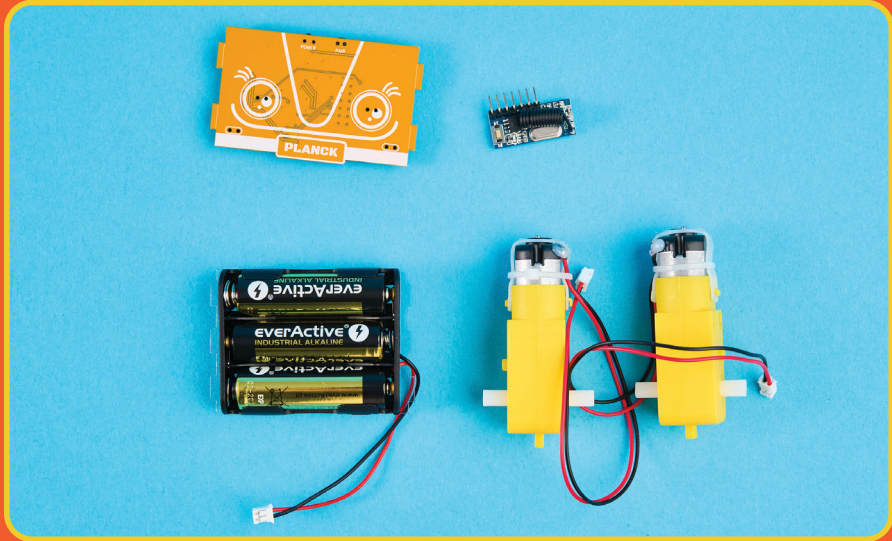
Next, you need to **insert the batteries into the holder**. Make sure to place the batteries **correctly**. Inside the battery holder, there are **+ and - signs** indicating **polarity**. The same + and - signs are also on each battery.



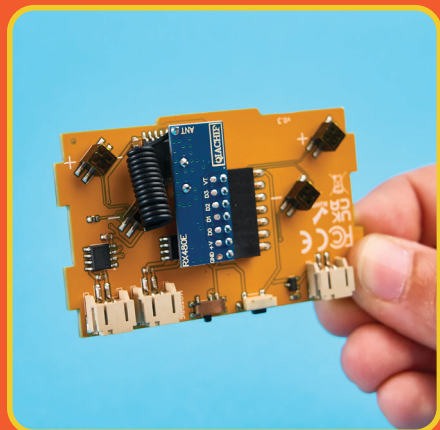


## Now we need your full attention!

We need to correctly **connect the motors** so that Planck can drive. For this, you will need the following components: battery holder, PCB, receiver, and two motors.

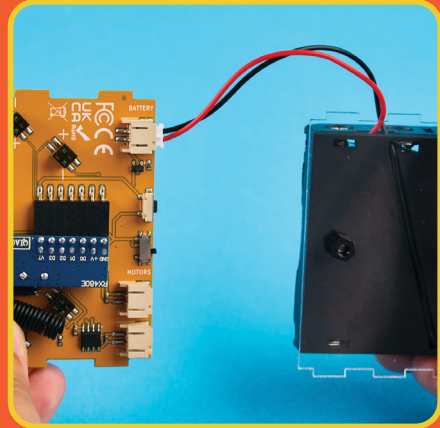
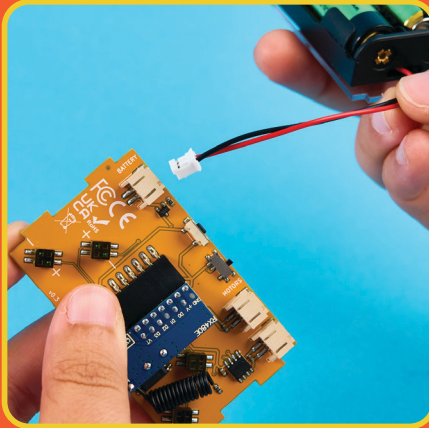


Turn over the PCB and connect the **receiver**. You may need to **adjust the antenna** on the receiver a bit, but don't worry, it won't break when moved.



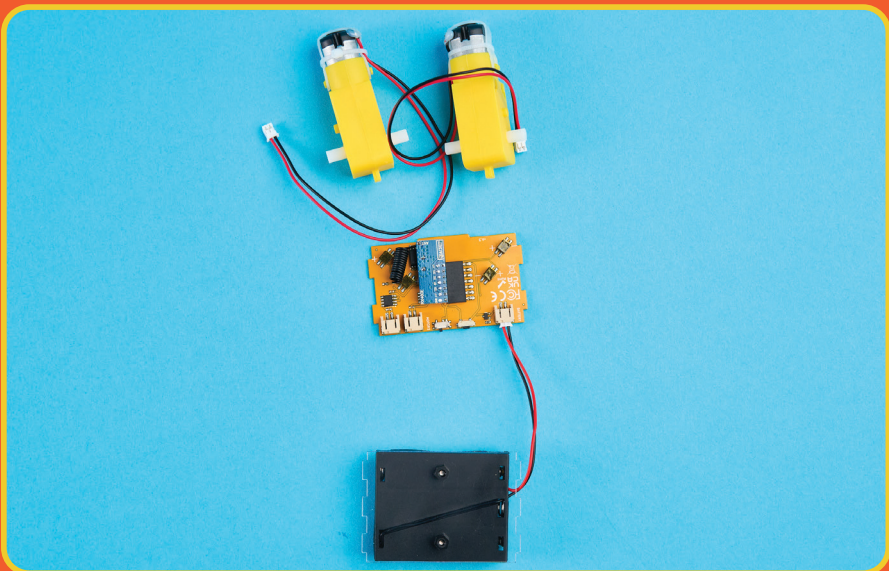
Connect the battery holder to the PCB as shown in the photo.

Next to each **connector** on the PCB, we have written which component connects where to make assembly easier.



Now it's time to **connect the motors**.

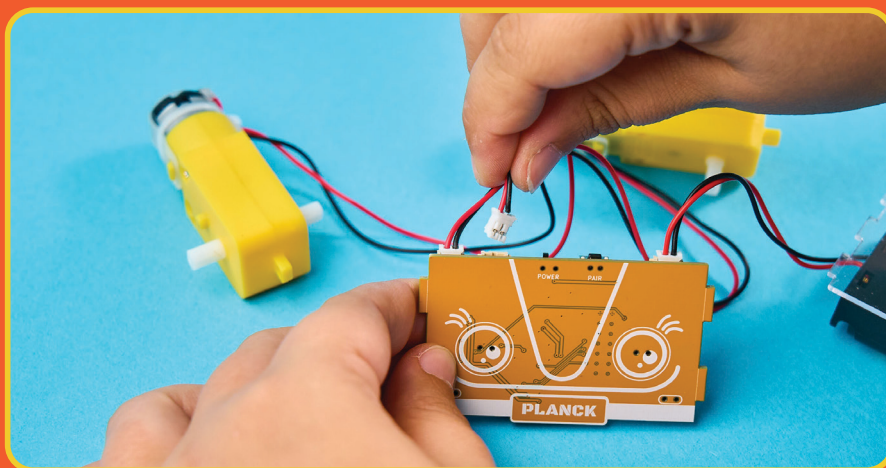
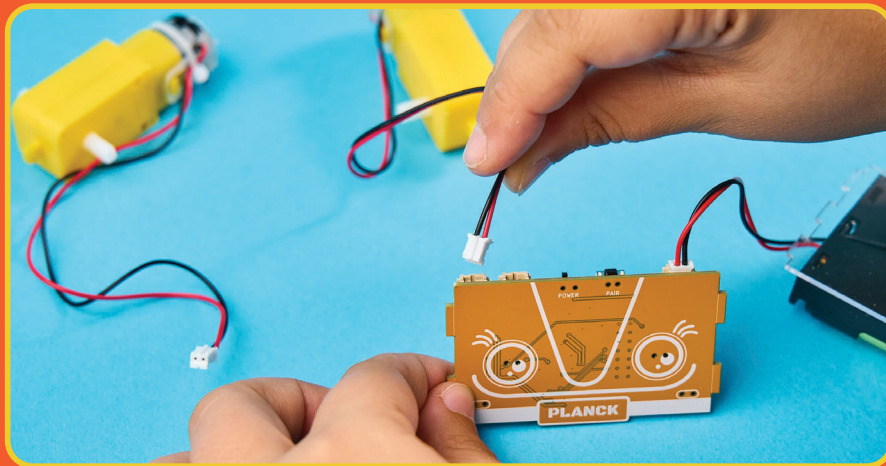
Arrange everything on the work surface as shown in the photo to make the connection process easier.



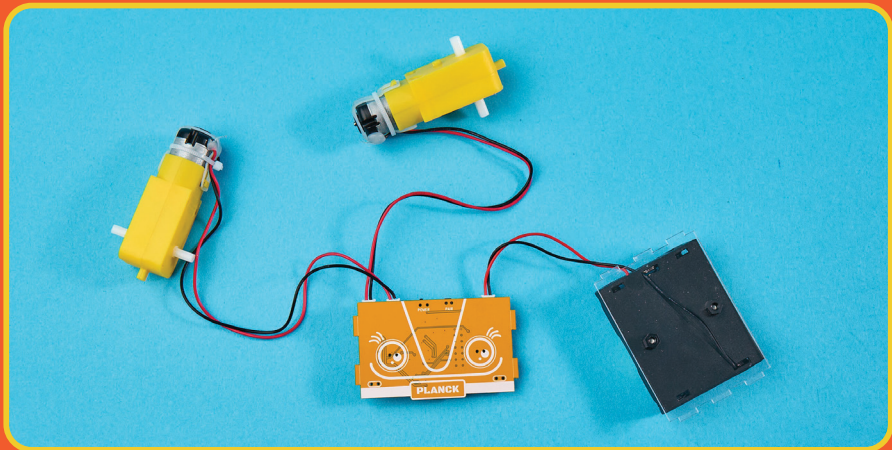


**Both motors** should have the **wires facing inward**.

Connect the motor on your right side to the left connector on the board, and the motor on your left side to the middle connector on the board.

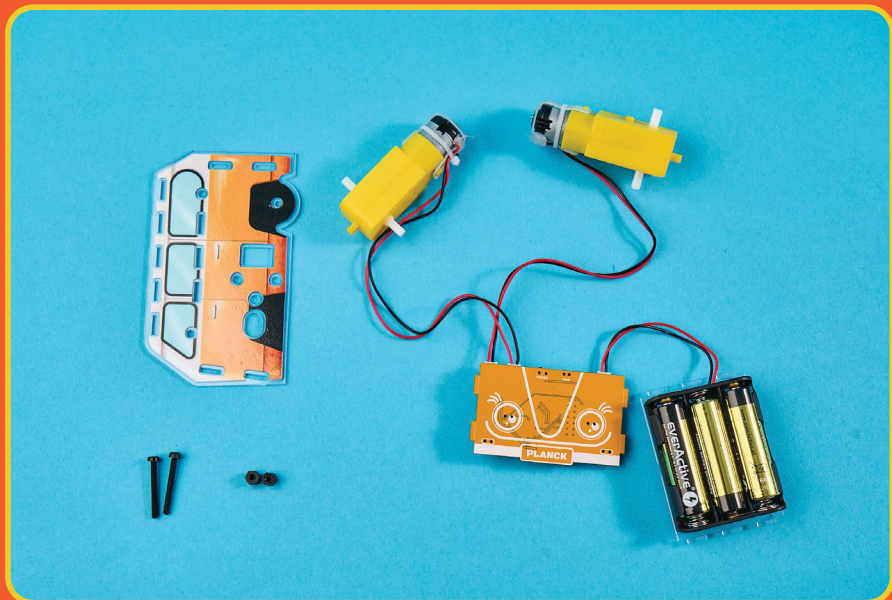


Check if your Planck looks like the photo:

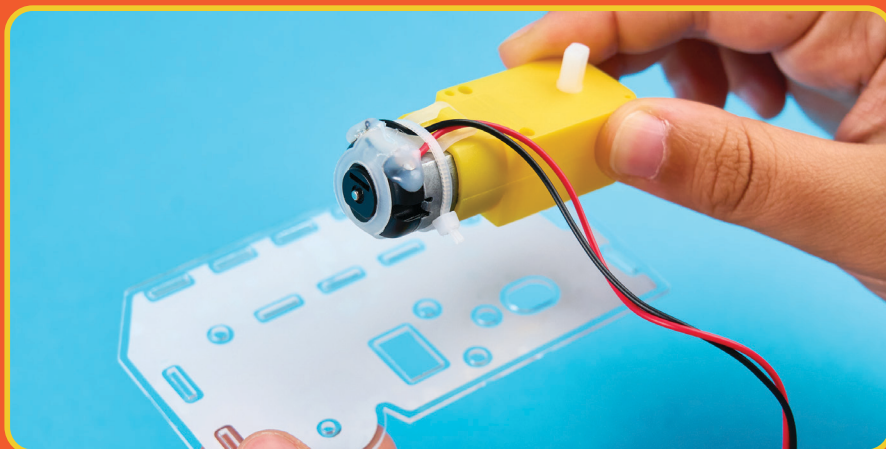


We continue with **connecting the motors and the side acrylic casing**.

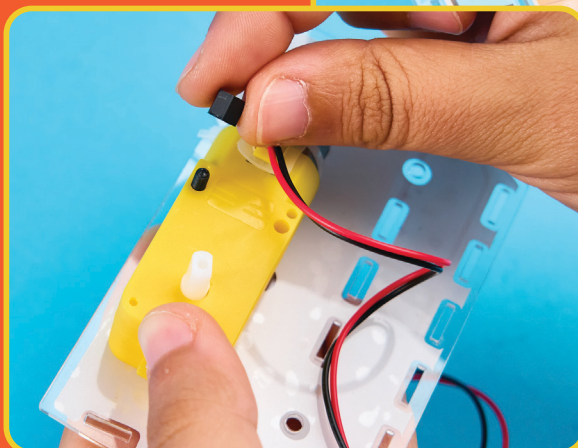
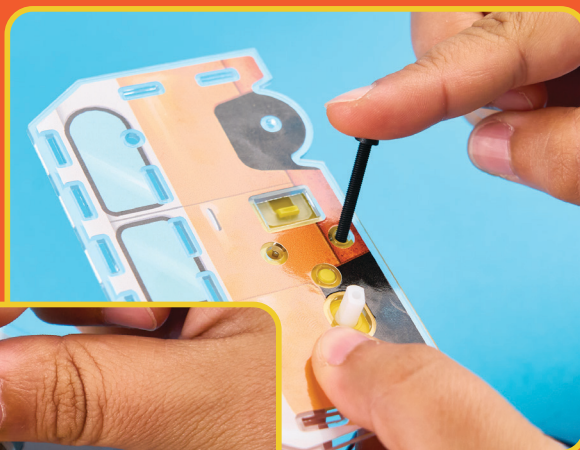
For this, we will need one side acrylic casing (see photo), two long screws, two spacers, and the part you just assembled with the motor and PCB.



Place the motor as shown in the photo. You will notice how the **motor fits perfectly with the acrylic casing** if you position it correctly.



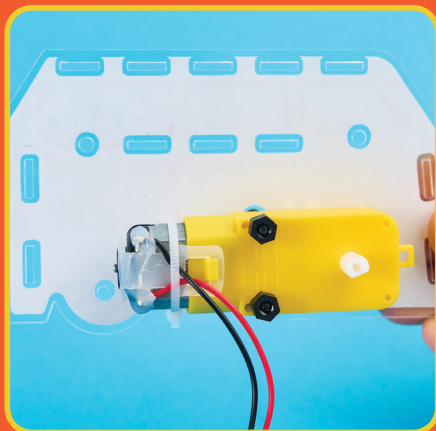
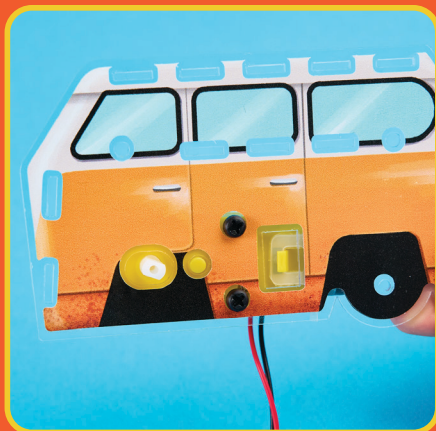
Next, we will insert the **long screw** from the **front** and **pass it through the motor**.



From the **inside**, we will secure everything with a **spacer**.

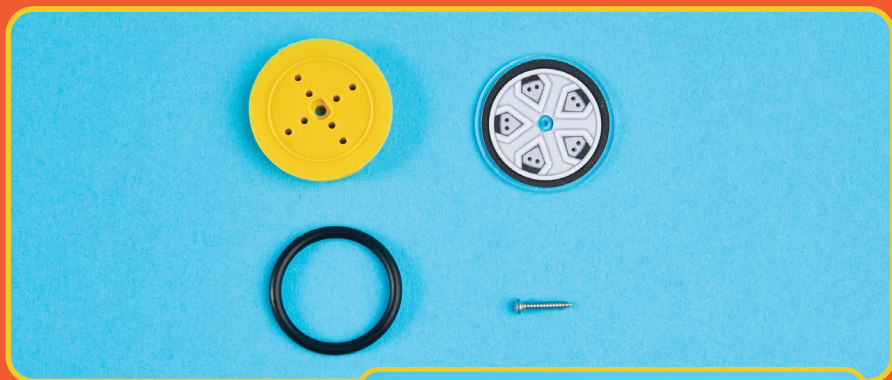


Repeat this step for the second screw and spacer.



### It's time to assemble Planck's wheels!

Take the following components:



First, we will slide the **rubber** part over the yellow part of the wheel.



If you look closely, **one side of the wheel has an opening that looks like one part of the motor.** This is the part you will connect to the motor.



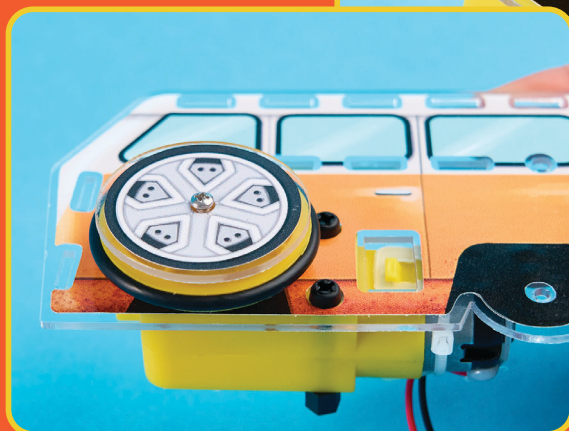
Now take the **wheel part with the sticker** and place it on the wheel to make it look better.



In the middle of the acrylic casing, we will place the metal screw.



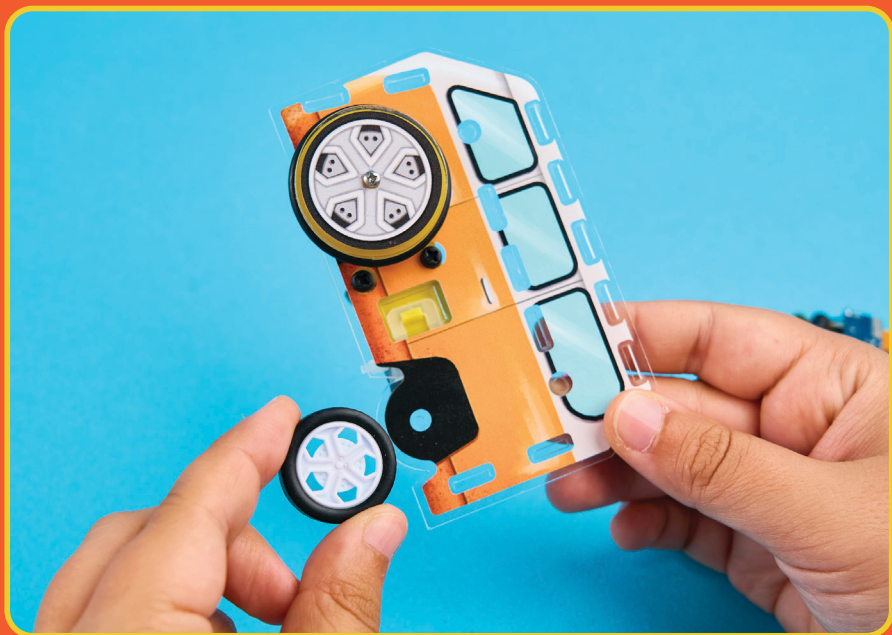
This time you will need a **screwdriver** to insert the screw through the wheel.



This is how it should look when you successfully complete this step.

Now it's time to add the **smaller wheel** to this part. These are the components you need for this step:

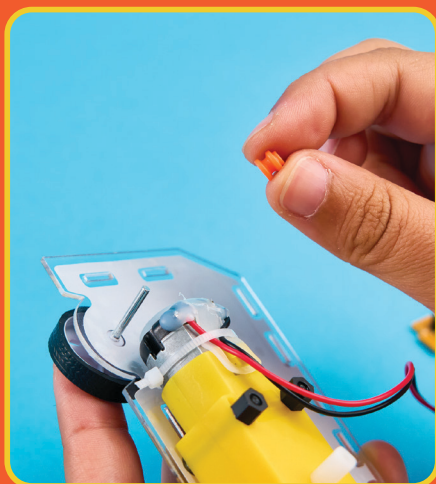




Insert the **metal rod** into the wheel opening and make sure nothing falls out.



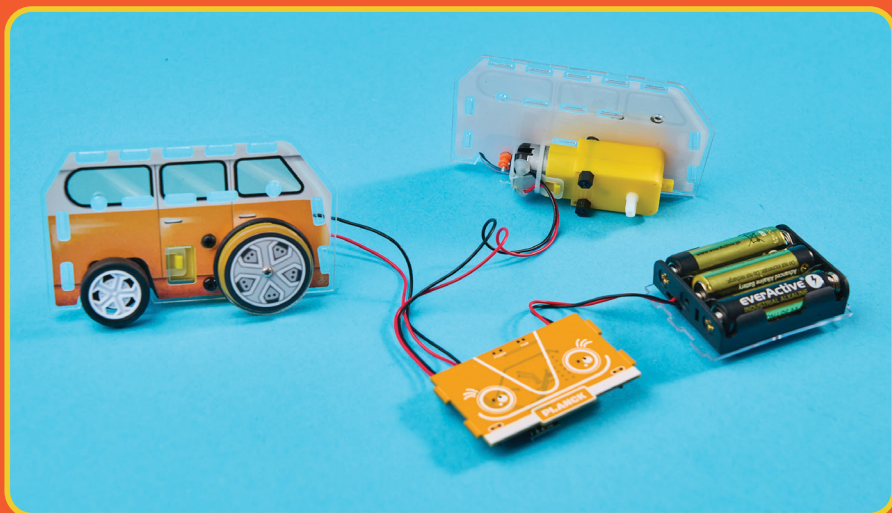
To secure everything from the inside, **we will add small orange rubber parts to the rod.**



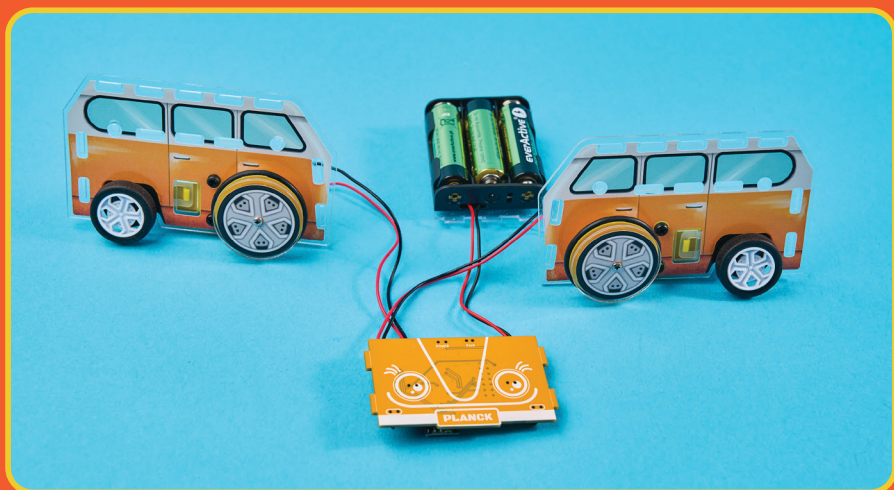
**And we're done!**

Repeat these steps for the opposite side of Planck.

**This is how Planck should look at this point:**

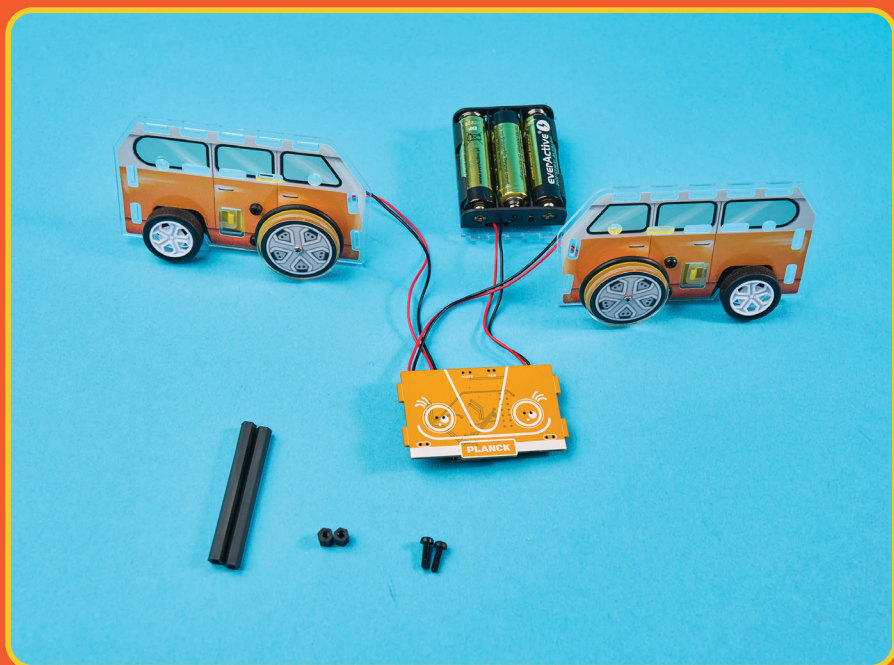






**But, this is not the end!**

Take two smaller spacers, two longer ones,  
and two medium-sized screws.





Take one side of Planck and insert the screw through one opening from the outside.



From the inside, we will first secure everything with a smaller spacer.

Add the longer spacer after the smaller one.

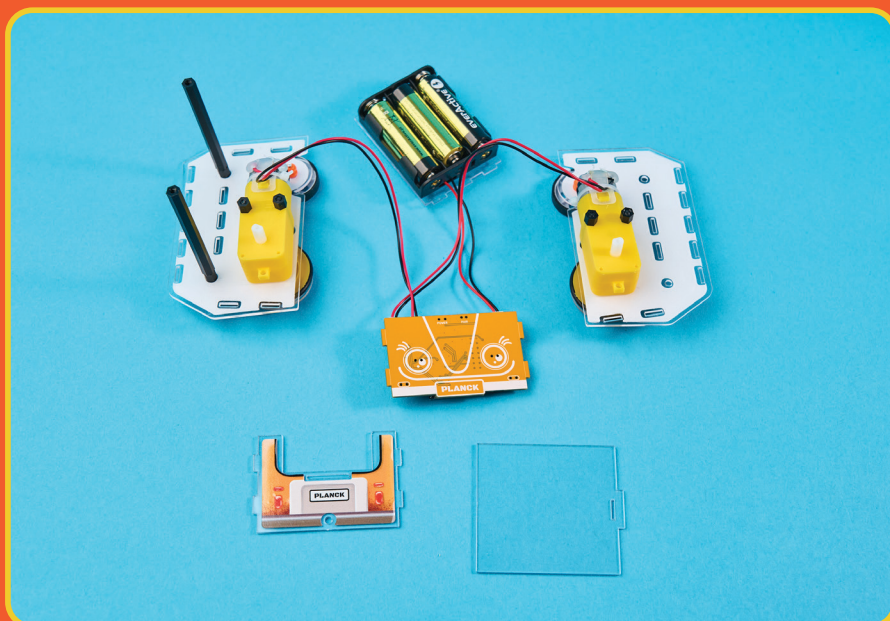


Repeat this step for the second screw and spacer.

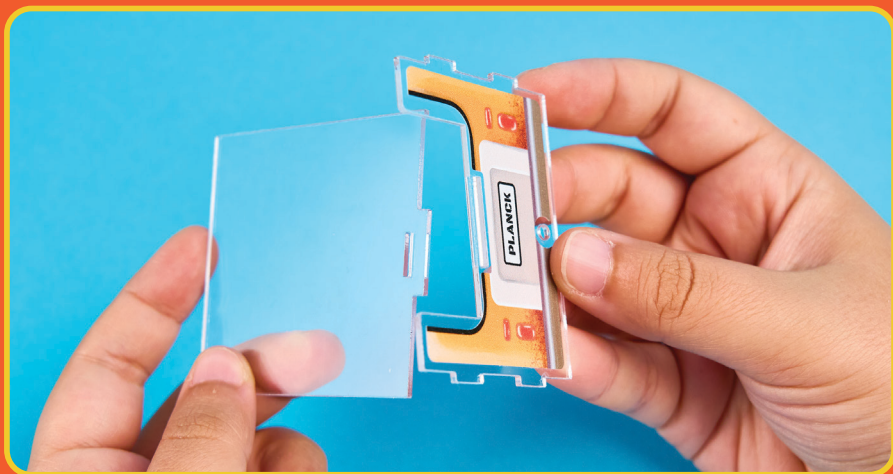


Great! We are approaching the end of the assembly and the moment when **Planck** will take the shape of a **real camper van**.

Take these components:



The first step is to **connect these two acrylic casings** as shown in the photo.

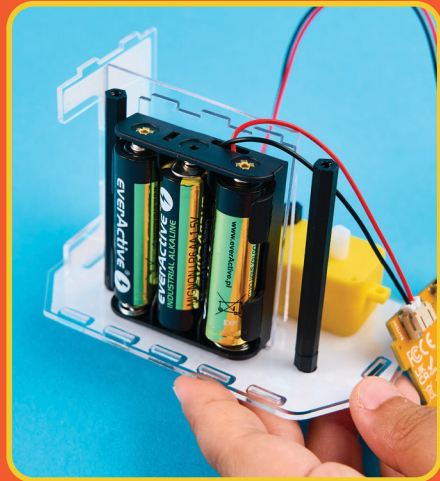
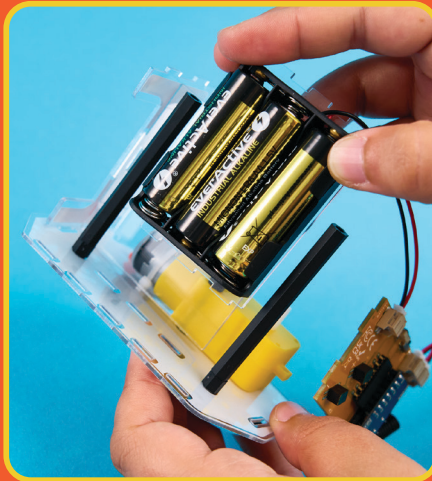


Add this part to the rest of Planck, ensuring the **clear acrylic casing** is **between the motors and the long spacers**.

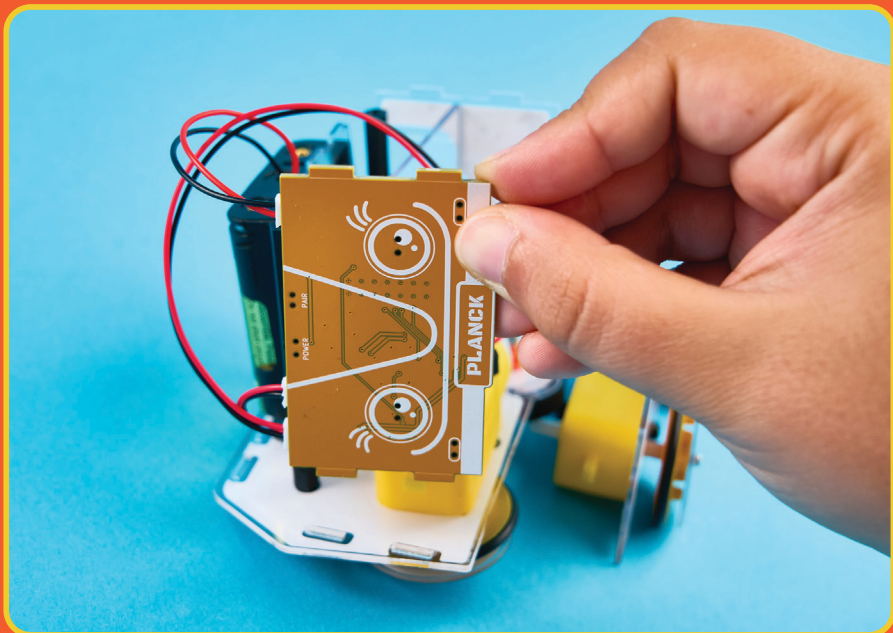




The battery holder will be placed above, connecting three openings on the acrylic casing.

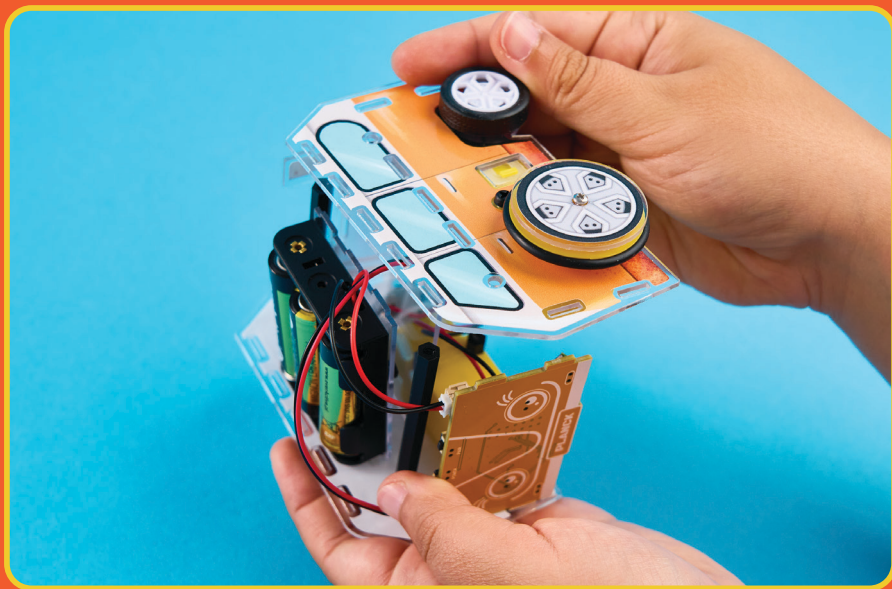


Immediately next to that, you will place the **PCB**.





Then you will add the other side of Planck.



Make sure everything is secure and nothing falls out.



Take **two medium-sized screws** and use them to secure Planck with the long spacers to prevent any parts from falling out.

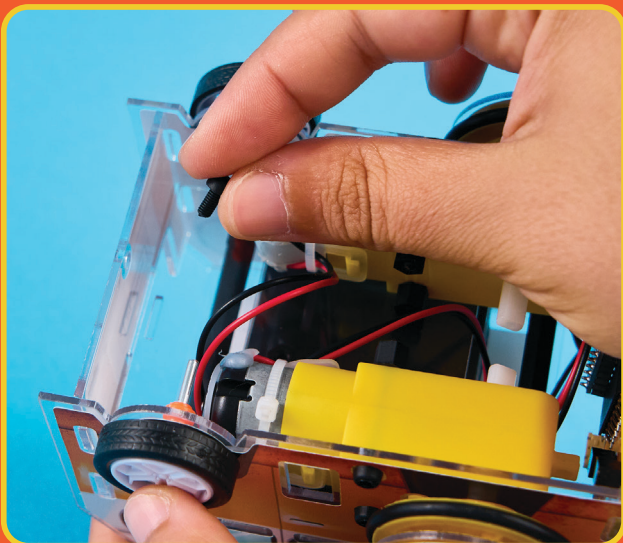


Place the acrylic casing with the CircuitMess logo on top of Planck, as the roof.



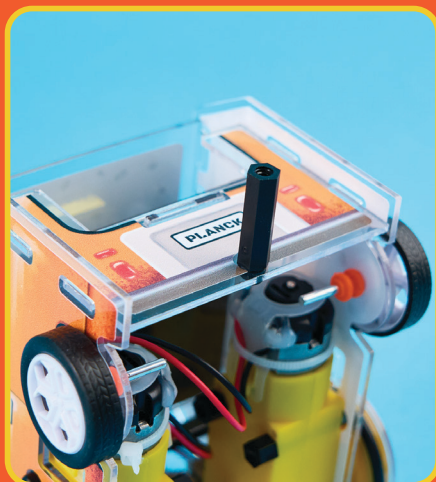
Now that you have assembled the main part of the camper, it's time to add the **trailer**.

First, take a smaller screw and a medium-sized spacer. Insert the screw from the inside.





Secure it from the outside with a medium-sized spacer.



**Let's move on to assembling the trailer.**  
Here are the parts you will need next:





Insert a medium-sized screw through the side of the trailer:



Secure it from inside with a smaller spacer, then add a long spacer on top.



Repeat this step for the remaining three screws and spacers until your trailer looks like this:



Now it's time to add the wheels so we can drive the trailer. You have already done this part, so you will know the procedure.



Repeat the process for the other side of the trailer.



Secure the back and connect everything as shown:



Take three screws and a screwdriver, and secure all parts!

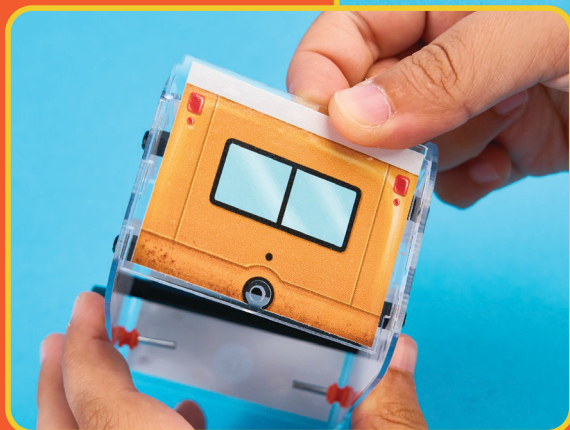
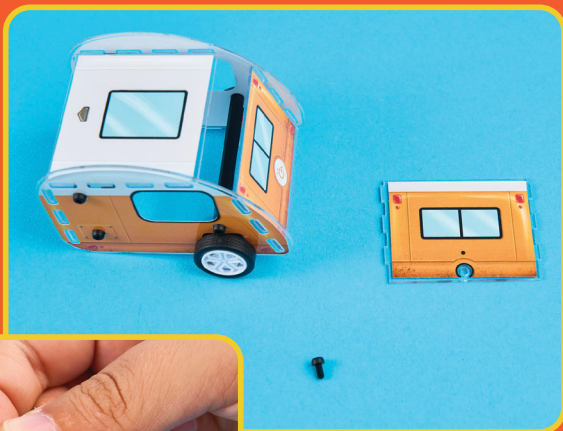




Add the roof to the top of the trailer.

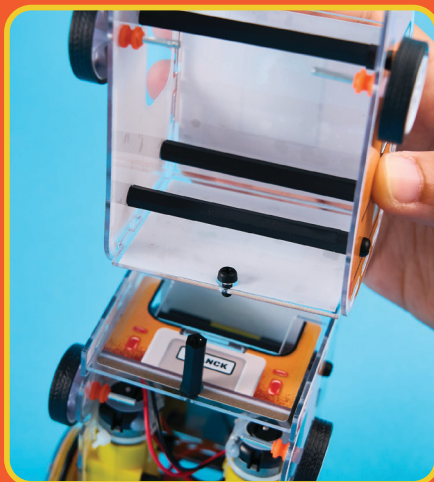


Finally, add this part and connect it to the main part of Planck.



The acrylic casing should be placed exactly as shown in the photo.

Insert the **screw from the inside of the trailer** to connect it to the spacer on the camper.



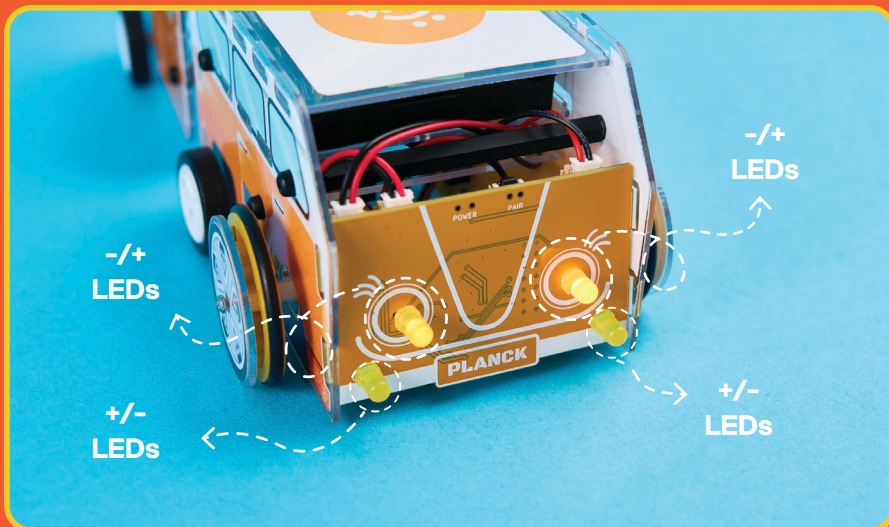
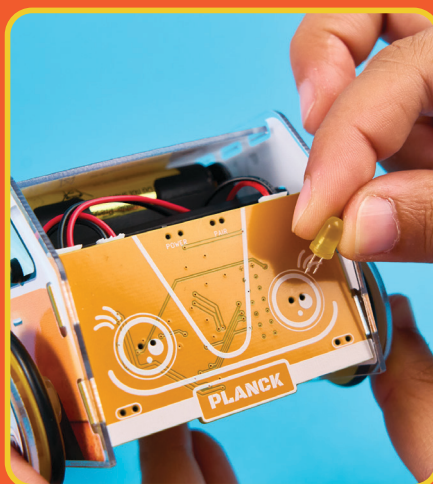
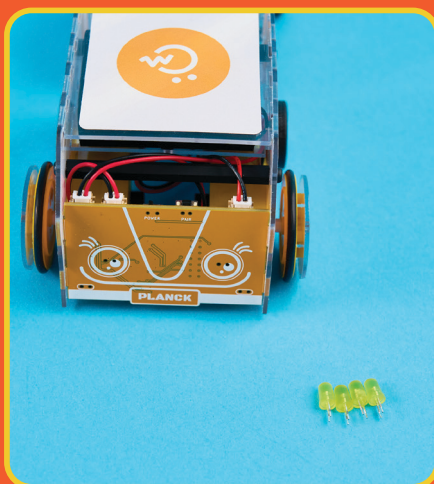
Planck should look like this:



The job is not done yet! We still need to add the LEDs as Planck's eyes and under the eyes as front lights.

The notched side of the LED light is the negative side (-). Make sure to place the LEDs on the correct side. Look at the back of the PCB to see where the + and - sides of the LEDs go.

The lower LEDs will only light up during driving.





With Planck, you also received a **token** that you can use to unlock a **new, secret game on Bit** (Bit is sold separately). When not using the token, you can place it here.

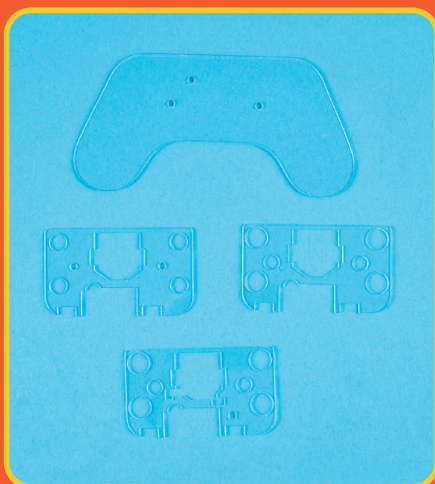




## It's time to assemble the remote controller!

We know you are excited to drive Planck, so we have also prepared a controller that will help you navigate Planck in your room or yard.

The first step is to take all the **acrylic casings** you need and **remove the protective film from both sides** until they are **clear**.

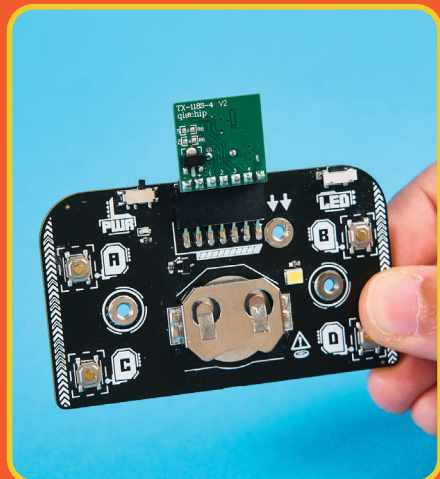
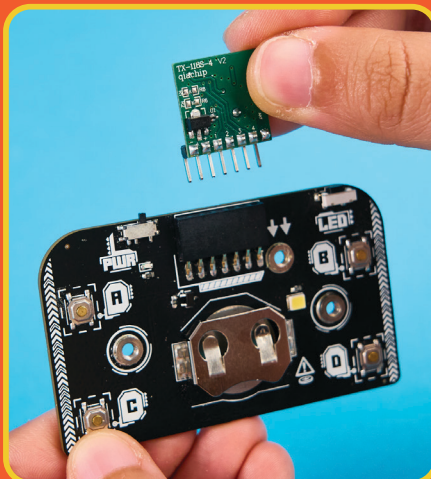


Next, the fun part with stickers!  
You can choose any design you like.

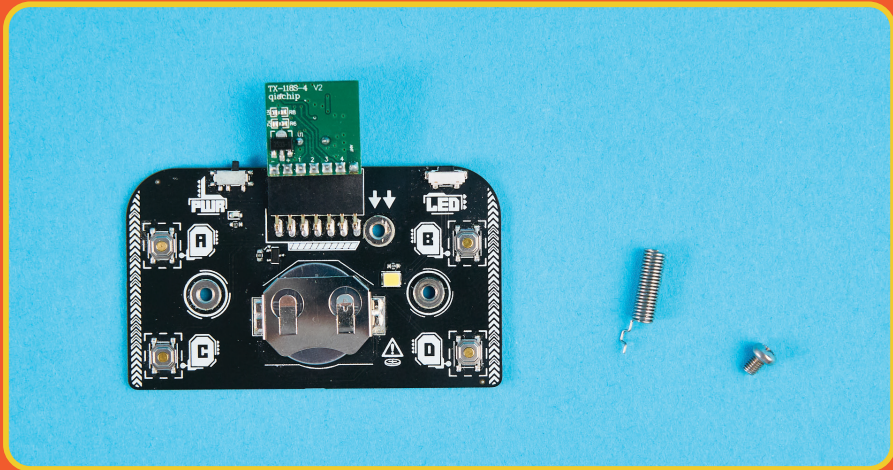


To allow the **controller to communicate with Planck**, we need a component that can send signals. On Planck's PCB, we have a **receiver** that **receives signals** from your controller and controls Planck accordingly.

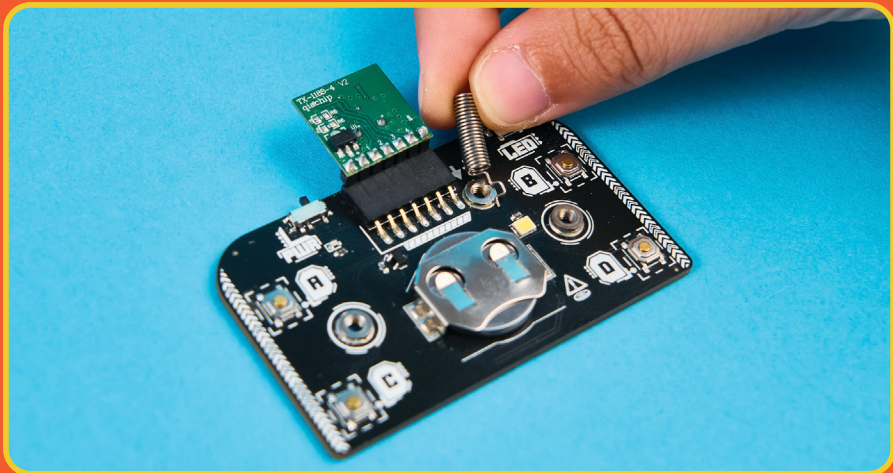
Now, on the controller, we need a **transmitter** (green part) and a PCB. Connect the transmitter to the PCB as shown in the photo.



Another important component we need is the **antenna**. To securely attach it to the PCB, you will also need a **metal screw**.

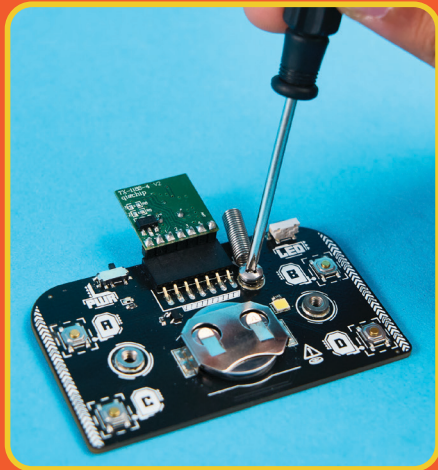
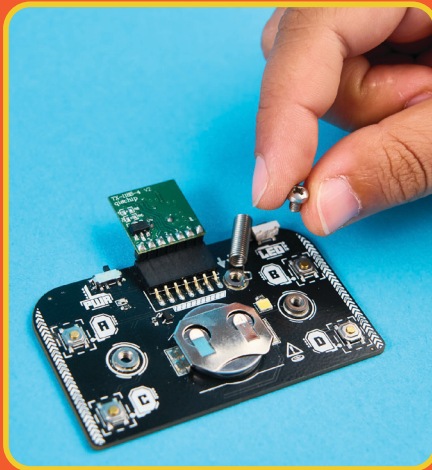


You need to attach the antenna to the PCB in this way:



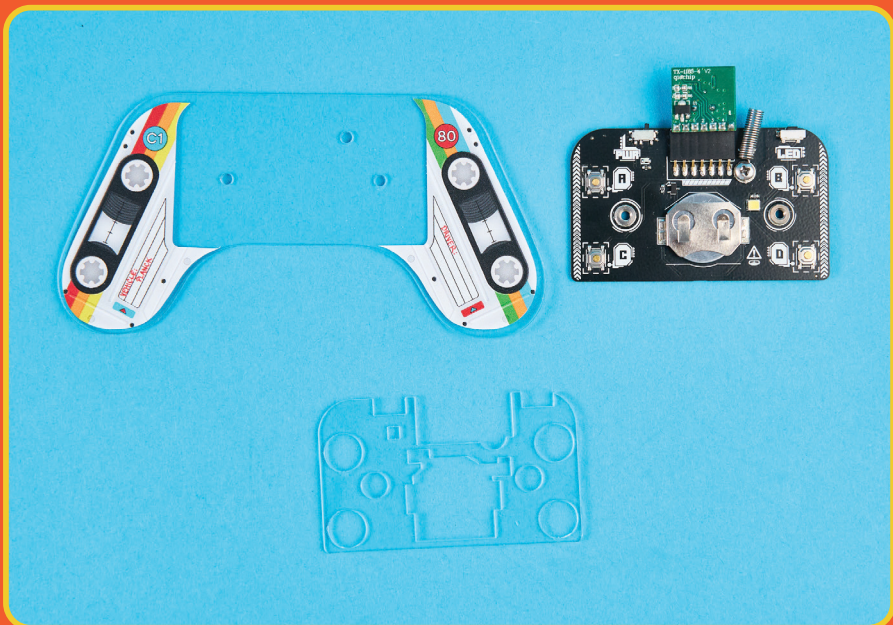


To secure it and prevent it from falling out, we will add a **metal screw** to it. This way, the antenna will stay firmly in place.



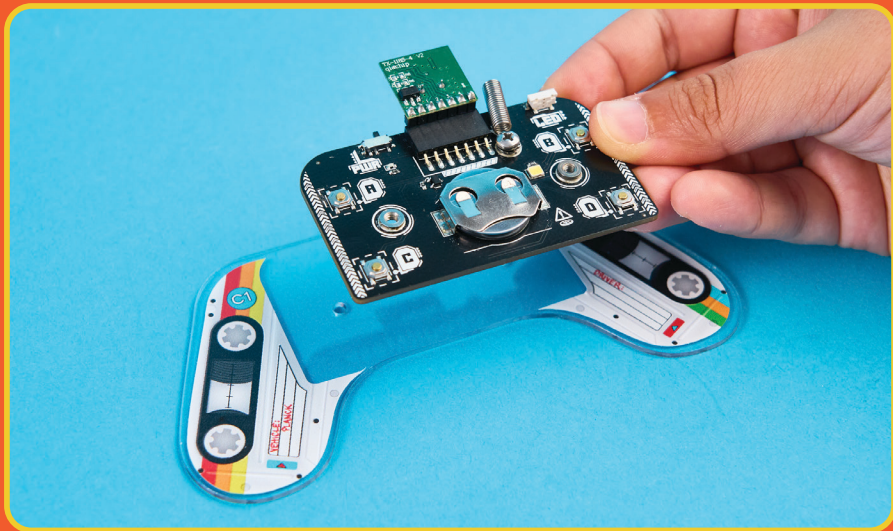
Now we need to add the acrylic casing!

Take the acrylic casings and the PCB.

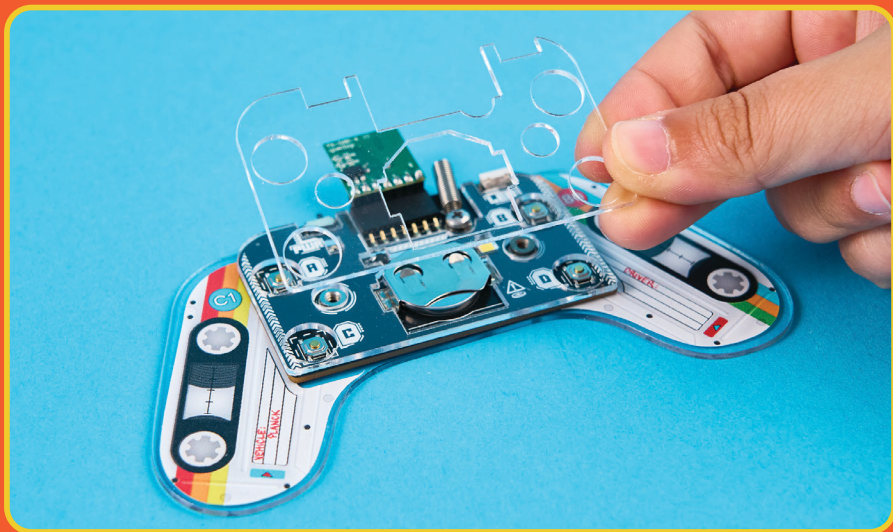




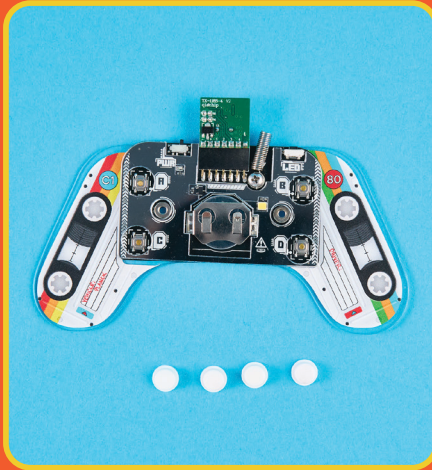
Place the **PCB** on the **acrylic casing** with the **stickers**.



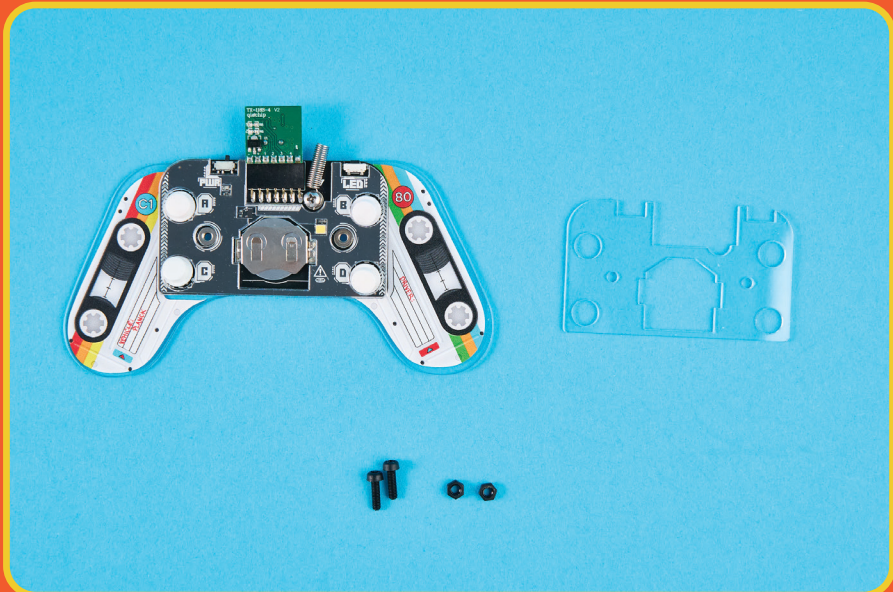
Then we will add a **smaller acrylic casing** to the **PCB** as shown in the photo.



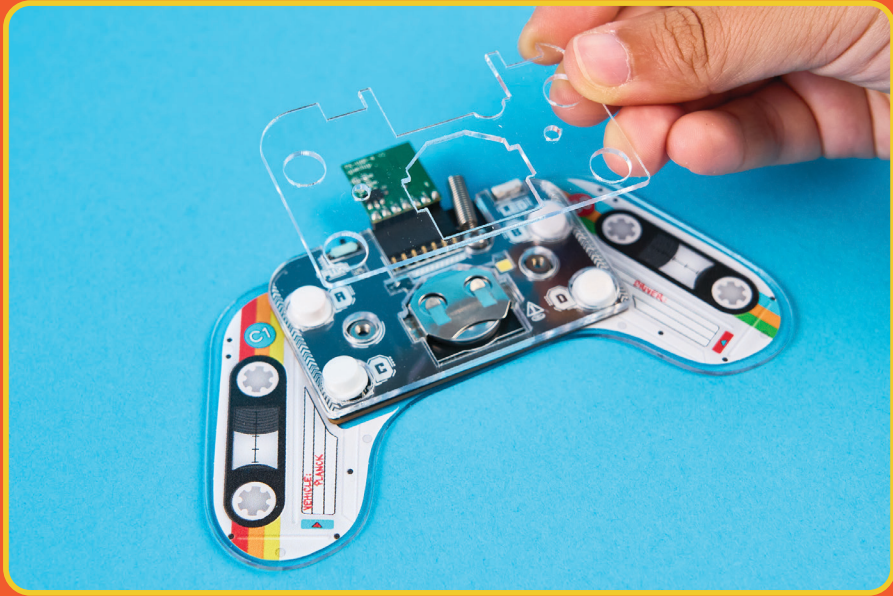
To use the controller and drive Planck, we need to add **button caps**. The **mechanical part of the buttons** is already on the PCB, and now we need to add the caps so everything works.



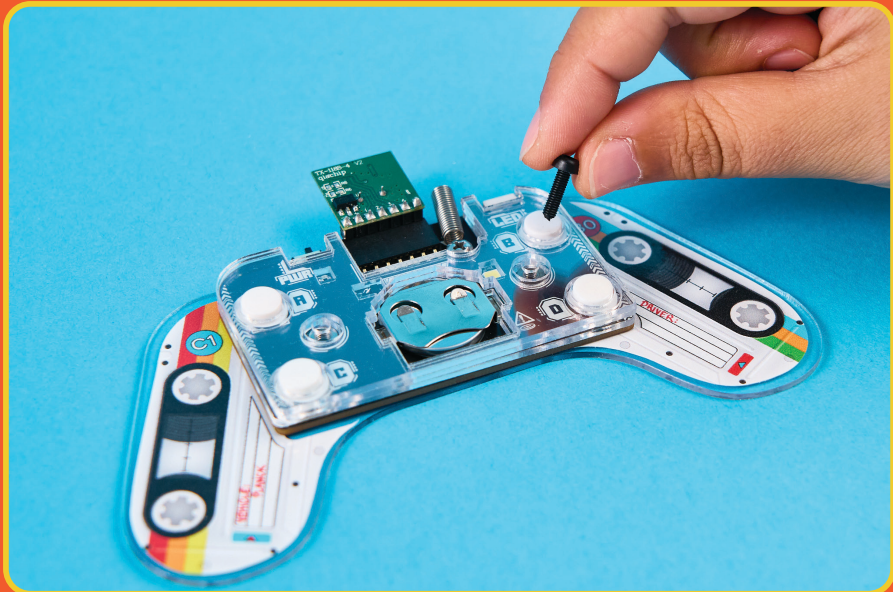
Next, we will add another acrylic casing to keep the buttons in place. Now you are ready to secure everything with screws to ensure nothing falls out.

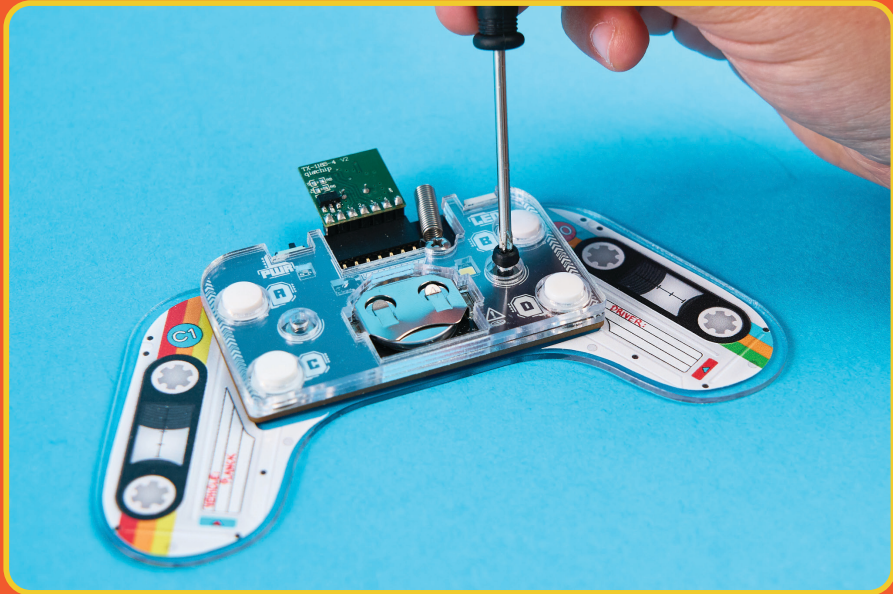






As always, we will add screws from the front, while the spacers go on the back.





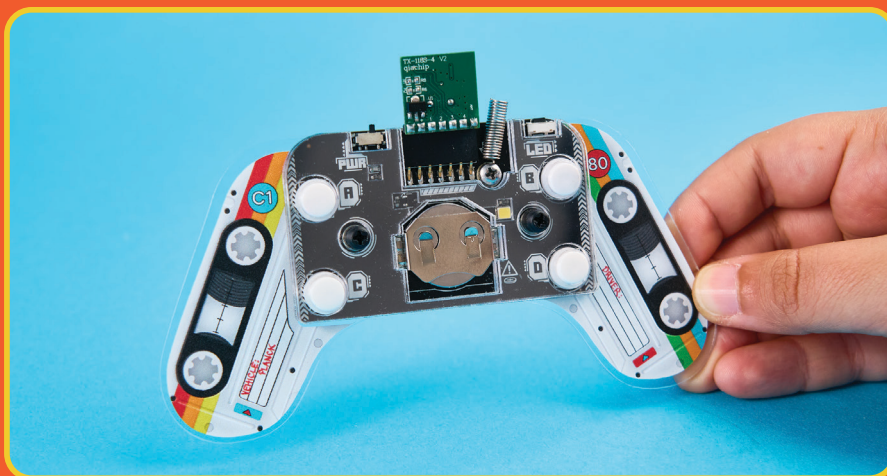
Since the **screws** need to **pass through the acrylic casing and the PCB**, make sure to insert them completely before adding the spacer.

Now you can add spacers to the back.



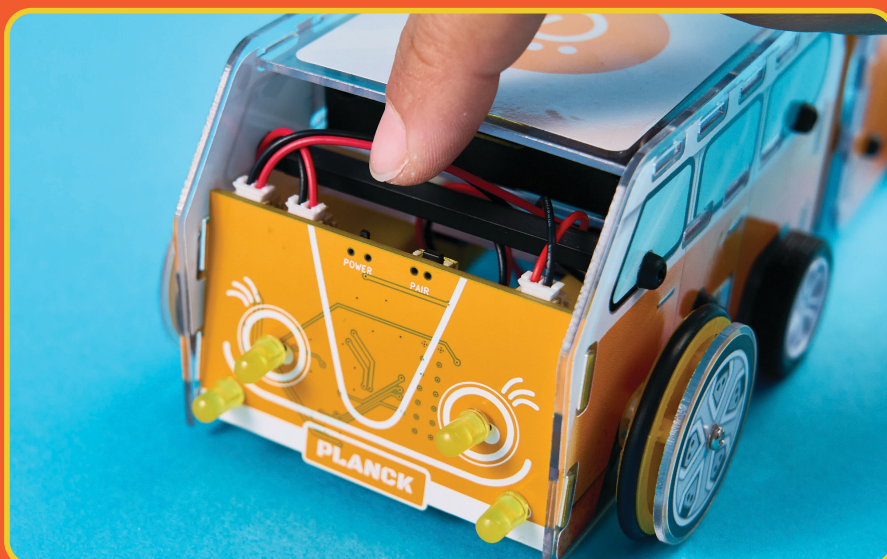


Repeat this step for the second screw and spacer, and your controller will be complete and ready for use.

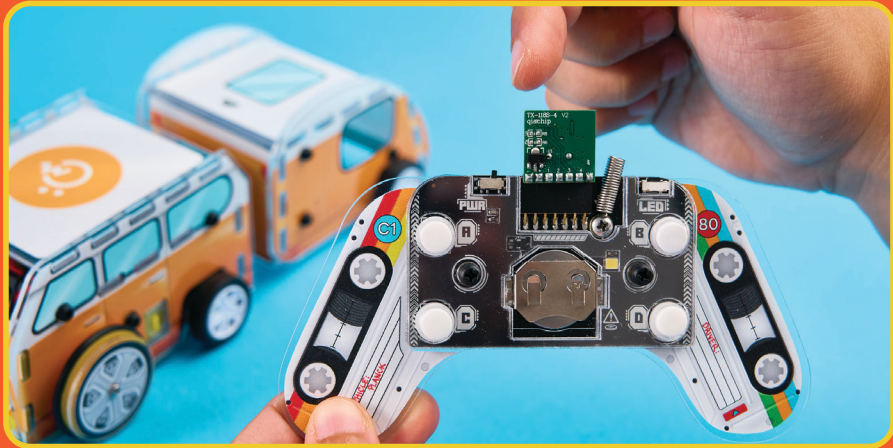


Turn it on and try it out.

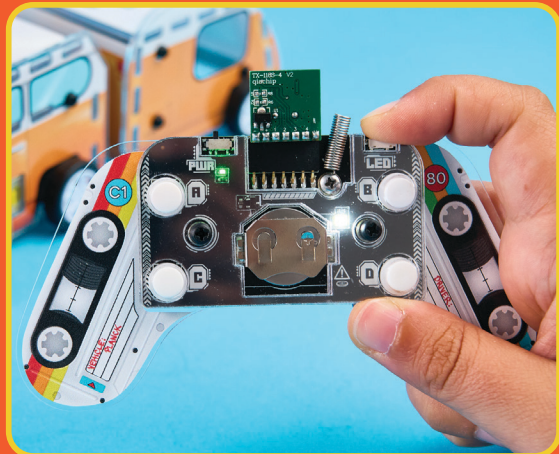
If you look closely at Planck's PCB, you will notice an **on/off switch** and a **pairing button**.



On the left side of the controller is the **on/off switch**. When you turn on the controller, you can also turn on Planck. **Hold down the pairing button on Planck to connect it to the controller.** Once paired, you can use the **A to D buttons** to navigate Planck.



Press and hold the **LED button on the controller** to turn the **LEDs** on and off.



**And that brings us to the end of the build guide!** We hope you had fun with the assembly and that you are ready to drive Planck.

If you have any questions, feel free to contact us via email at [contact@circuitmess.com](mailto:contact@circuitmess.com).





## **Thank you for purchasing CircuitMess Wacky Robots Educational kits**

For more information and detailed instructions on assembling and using your device, visit our official website: [circuitmess.com/resources/guides](http://circuitmess.com/resources/guides)

### **Important safety information for CircuitMess Wacky Robots**

Read all safety information before using the device.

**WARNING:** Failure to follow these safety instructions could result in fire, electric shock, injury, and damage to your device or other objects. Read all safety information before assembling and using this device.

This product is a do-it-yourself device, and for it to work properly, you must assemble it according to the instructions you'll find on our website.

If you are a minor, assemble it only under an adult's supervision to avoid potential risks.

CircuitMess Wacky Robots kit contains sensitive electronic components. CircuitMess Wacky Robots or its components may be damaged if dropped, burned, punctured, crushed, or in contact with liquid. If you suspect that any part of your CircuitMess Wacky Robots kit (especially the batteries) is damaged, stop using the device. Using a damaged device may cause injury.

Use only authorized accessories compatible with your device and/or the supplied tools.

The device's operating temperature ranges from 0 °C ~ 40 °C.

Using this device in conditions outside this temperature range may damage the device.

Please turn off CircuitMess Wacky Robots after use and store it in a safe and dry location.

The included battery must be recycled appropriately and/or disposed of separately from household waste.

Improper handling of batteries can cause a fire or explosion. Dispose of or recycle

your device, battery, and accessories according to local regulations.

### **The included battery is NOT rechargeable.**

- Do not short-circuit the battery
- Improper use of the battery can cause overheating, burns, or other injuries.
- Do not leave the battery directly exposed to intense sunlight.
- Do not use the device or the battery in high-temperature conditions. Overheating may cause an explosion.
- Do not disassemble or damage the battery to avoid battery leakage, overheating, or explosion.
- In the case of deformation, stop using the battery immediately and dispose of it properly.

If you are not sure whether your device or the included battery is safe to use, turn off the device, put it in a safe place, and contact our customer support via email at [contact@circuitmess.com](mailto:contact@circuitmess.com).



Keep the device dry.

Do not attempt to repair the device by yourself.

If any part of the device does not work correctly, contact our customer support (contact@circuitmess.com) or take your device to a certified repair shop.

Connect other devices according to their operating instructions. Do not connect incompatible devices to this device.

### **Precautions**

During prolonged use, Wacky Robots may rarely overheat.

Keep CircuitMess Wacky Robots in a ventilated room during the use and assembly. Pay special attention to this if you suffer from a physical condition that affects your ability to detect heat on your body.

Assembling or using CircuitMess Wacky Robots in an area with a potentially explosive atmosphere, such as areas where the air contains high levels of flammable chemicals, vapors, or particles (such as dust or metal powder), can be dangerous.

Exposure of CircuitMess Wacky Robots to environments with high concentrations of industrial chemicals, including liquefied gases that evaporate, such as helium, can damage the functionality of CircuitMess Wacky Robots.

Do not use CircuitMess Wacky Robots in hospital operating rooms or intensive care units.

Contact your doctor or our customer support (contact@circuitmess.com) to determine if the device's operation may compromise the work of medical devices.

To avoid possible interference with a pacemaker, maintain a minimum distance of 15 cm between the CircuitMess Wacky Robots and the pacemaker. To achieve this, do not carry the included device in your pockets.

Do not use CircuitMess Wacky Robots near hearing aids or similar medical aids and equipment to avoid interference with medical equipment.

Check aircraft safety regulations and turn off CircuitMess Wacky Robots on the aircraft if necessary.

Do not use CircuitMess Wacky Robots while driving.

To avoid lightning strikes, do not use CircuitMess Wacky Robots outdoors during storms.

Do not use the CircuitMess Wacky Robots in high-humidity environments such as bathrooms. Failure to do so may result in electric shock, injury, fire, and damage to the product, electronic components, power adapter, or other parts of this electronic educational kit.

Follow all the rules that limit the use of portable electronic devices in some situations and conditions.

The individual parts and components in the CircuitMess Wacky Robots can pose a choking risk to children under 36 months. Keep all components, tools, and parts of this product away from small children before and after assembling the device.

### **Additional Recommendations and Precautions for Parents, Guardians, and Teachers Buying CircuitMess Wacky Robots for Children**

1. Carefully follow the instructions for adequately assembling CircuitMess Wacky Robots. Keep these and all other instructions that came with the products in a safe place.
2. Supervise your child while assembling and using the CircuitMess Wacky Robots. Your responsibility is to ensure that the child uses the CircuitMess Wacky Robots correctly and that the CircuitMess Wacky Robots are suitable for the child's age and abilities.
3. Check from time to time if CircuitMess Wacky Robots are damaged or worn out in any way to prevent possible injuries and risks to the child's health and safety. If CircuitMess Wacky Robots is damaged, remove it immediately.
4. Remove any unnecessary packaging, but keep the instructions. Take care that children do not play with any plastic packaging as there are suffocation risks.
5. Teach children to always store CircuitMess Wacky Robots and other parts of the CircuitMess Wacky Robots educational kit appropriately to prevent accidents. Do not leave CircuitMess Wacky Robots on stairs or on the floor in your home or classroom where someone can step on them.
6. Always report a product security issue to our customer support (contact@circuitmess.com)

### **Declaration of Conformity**

CircuitMess d.o.o. declares that these DIY educational kits CircuitMess Wacky Robots model complies with the essential requirements and all other relevant provisions of Directive 2014/53 / EU. The full text of the EU declaration of conformity is available at the following Internet address: [circuitmess.com/certification](http://circuitmess.com/certification).

### **Legal Information**

These devices can be used in all EU Member States. Check all the national and local regulations about using the device. These devices may be restricted for use, depending on local laws.

Manufacturer:

CircuitMess d.o.o.

Ulica dr. Luje Naletilića 85,  
10256 Botinec,  
Zagreb,  
Croatia

OIB: 50943449035

### **Proper disposal of this product**

WEEE markings on the product indicate that this product may not be disposed of with the rest of your household waste in the EU. To prevent possible damage to the environment or human health from uncontrolled waste disposal, recycle the product responsibly. Recycling promotes the sustainable reuse of resources. For more information on the disposal of electrical and electronic equipment, don't hesitate to contact your local household waste disposal service, the store where you purchased the kit, or our customer support (contact@circuitmess.com).

## **IMPORTANT! Warranty conditions:**

The warranty is valid only if the original invoice is attached to the product as proof of purchase during the complaint. If the customer sends the product for repair for any reason not covered by the warranty, the customer may be charged for inspection and testing and delivery costs.

## **WARRANTY STATEMENT**

CircuitMess d.o.o., with its registered office in Zagreb, Croatia, Ulica dr. Luje Naletilića 85, guarantees the quality and proper functionality of the components that come in the CircuitMess Wacky Robots DIY educational kits for a duration of 24 months from the date of purchase.

If the assembled device does not work correctly due to defects in supplied parts or electronic components supplied in the CircuitMess Wacky Robots DIY educational kits, CircuitMess d.o.o. will repair the product or send an equivalent replacement product at their own expense.

In case you are experiencing assembly or functionality difficulties with your device, please contact us via email ([contact@circuitmess.com](mailto:contact@circuitmess.com)).

Please include a detailed description of the problem.

If you are sending the product to a repair shop, it is recommended to deliver the product in the original packaging to protect it from potential damage during transportation.

## **WARRANTY CONDITIONS**

The warranty period begins on the day of sale indicated on the invoice.

The warranty is valid upon presentation of the original invoice.

If the defect is not remedied within a reasonable period after receiving the product for repair, CircuitMess d.o.o. will replace it with a new product.

The repair shop does not take responsibility for storing and/or losing personal data while repairing the device.

## **WARRANTY DOES NOT COVER**

Upgrades, alterations, modifications to hardware and/or software without the written consent of CircuitMess d.o.o.

Malfunctions due to improper handling, faults due to wear of the device and/or its parts (in you need help with assembly or if you have difficulty using the device after assembling it, please contact us at [contact@circuitmess.com](mailto:contact@circuitmess.com)).

Defects caused by external particles (including, but not limited to: staples, waste, dust, food) and external factors (including, but not limited to: moisture, water, thermal damage).

Mechanical damage and/or failures caused by mechanical damage.

Use of the product for a purpose for which it is not intended.

Requirements for the appearance, technical functionalities, and/or capabilities of the product outside the manufacturer's specifications and/or standards.

Damages to personal data, other tangible and/or intangible assets of the buyer and/or third parties, indirect damages, lost profits caused by the use of the product, and/or its failure.

Repairs in an unauthorized repair shop and/or installation of non-original spare parts.

Damage caused during transportation caused by improper packaging.

The rights under this warranty are the exclusive and final rights of the customer unless otherwise provided by national law.

CircuitMess d.o.o. as the warranty provider and/or its authorized partners will not be liable for any defect, damage, loss, direct or indirect cost, or connection with the delivered products outside the warranty conditions written here.

This warranty does not affect other rights of the customer belonging to him on other legal grounds.

#### **FCC STATEMENT:**

This device complies with Part 15 of the FCC rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for Class B digital devices pursuant to Part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference to radio communications. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication.

However, there is no guarantee that interference will not occur in a particular installation. If this toy does cause interference to radio or television reception, you can check this by turning the toy off and on while listening for the interference), one or more of the following measures may be useful. • Reorient or relocate the receiving antenna • Increase the separation between the toy and the radio or the TV • Consult the dealer or an experienced TV-radio technician for help.

NOTE: Changes, adjustments or modifications to this unit, including but not limited to the replacement of any transmitter component (crystal, semiconductor, etc), could result in a violation of FCC rules under part 15 and/or 95 and must be expressly approved by CircuitMess d.o.o. or they could void the user's authority to operate the equipment.

#### **Photosensitivity / epilepsy warning:**

A very small percentage of individuals may experience epileptic seizures when exposed to certain light patterns or flashing lights. Exposure to certain patterns may induce an epileptic seizure in these individuals. Certain conditions may induce previously undetected epileptic symptoms even in persons who have no history of



prior seizures or epilepsy. If you, or anyone in your family, have an epileptic condition, consult your physician before playing. If you experience any of the following symptoms while using the product - dizziness, altered vision, eye or muscle twitches,

loss of awareness, disorientation, any involuntary movement, or convulsions - immediately discontinue use and consult your physician before resuming play.

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

**WARNING:**  
This toy produces flashes  
that may trigger epilepsy in  
sensitised individuals.

## WARNING

**THIS PRODUCT CONTAINS  
OR USES A BUTTON CELL BATTERY**

If swallowed, a lithium battery can  
cause severe or fatal injuries within 2 hours.

Keep batteries out of reach of children.

If you think batteries may have been  
swallowed or placed inside any part of the  
body, seek immediate medical attention.



## WARRANTY SHEET

|                                                                   |                                                                   |
|-------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Product name:</b>                                              | CircuitMess Wacky Robots<br>do-it-yourself educational solder kit |
| <b>Warranty on components and parts contained in this set is:</b> | 24 months                                                         |
| <b>Date of purchase:</b>                                          |                                                                   |
| <b>Seller and point of sale stamp:</b>                            |                                                                   |
| <b>Invoice number:</b>                                            |                                                                   |

Information on interventions during warranty period is entered by a repair shop technician at an authorized repair shop.

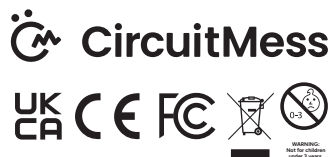
| Received on | Issued on | Fault description | Warranty extension |
|-------------|-----------|-------------------|--------------------|
|             |           |                   |                    |

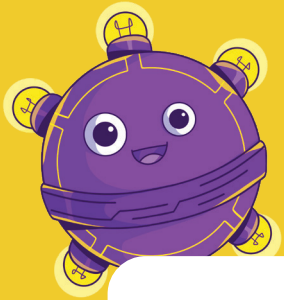
**Manufacturer:**

CircuitMess d.o.o.  
Ulica dr. Luje Naletilića 85  
10256 Botinec,  
Zagreb,  
Croatia  
Country of origin: Croatia  
[www.circuitmess.com](http://www.circuitmess.com)

**Authorized repair shop:**

CircuitMess d.o.o.  
Ulica dr. Luje Naletilića 85  
10256 Botinec,  
Zagreb,  
Croatia  
Country of origin: Croatia  
[www.circuitmess.com](http://www.circuitmess.com)

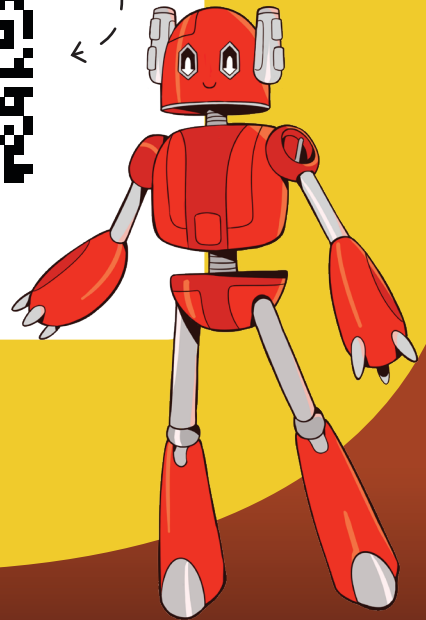
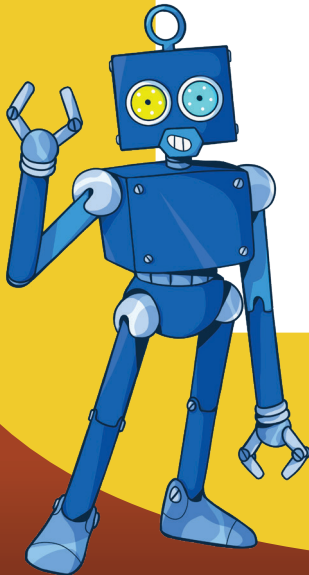




**WACKY**  
ROBOTS



**Scan for more fun:**



 **CircuitMess**

