

Manual

SCAN QR CODE FOR FULL-COLOUR MANUAL

LANGUAGES:

English, Deutsch,
Français, Italiano,
Español, Nederlands

AND MANY MORE



or go to: www.kosmos.de/int/Chipz

Chipz

Your intelligent robot

Imprint

0726267 AN 010922-EN / Master_1621001
Manual for „Chipz“, Art.Nr. 7617127

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Design concept for instructions: Atelier Bea Klenk, Berlin

Layout of instructions: Studio Gibler, Stuttgart

Material images: CIC Components Industries Co., Ltd., Taiwan

Comic story: Bianca Meier, Hamburg (Artwork); Murat Kaya, Hamburg (story and text) Instruction photos: picsfive (all pin needles); askaja (all paper clips); Jaimie Duplass (all adhesive strips); Jenson, S. 35 o; VTT Studio; p. 35 u; Andrey_Popov, p. 36 o (all previous ©shutterstock.com); niekverlaan, p. 35 m (pixabay.com);

Design concept for the packaging: Peter Schmidt Group GmbH, Hamburg

Layout of the packaging: Peter Schmidt Group GmbH, Hamburg

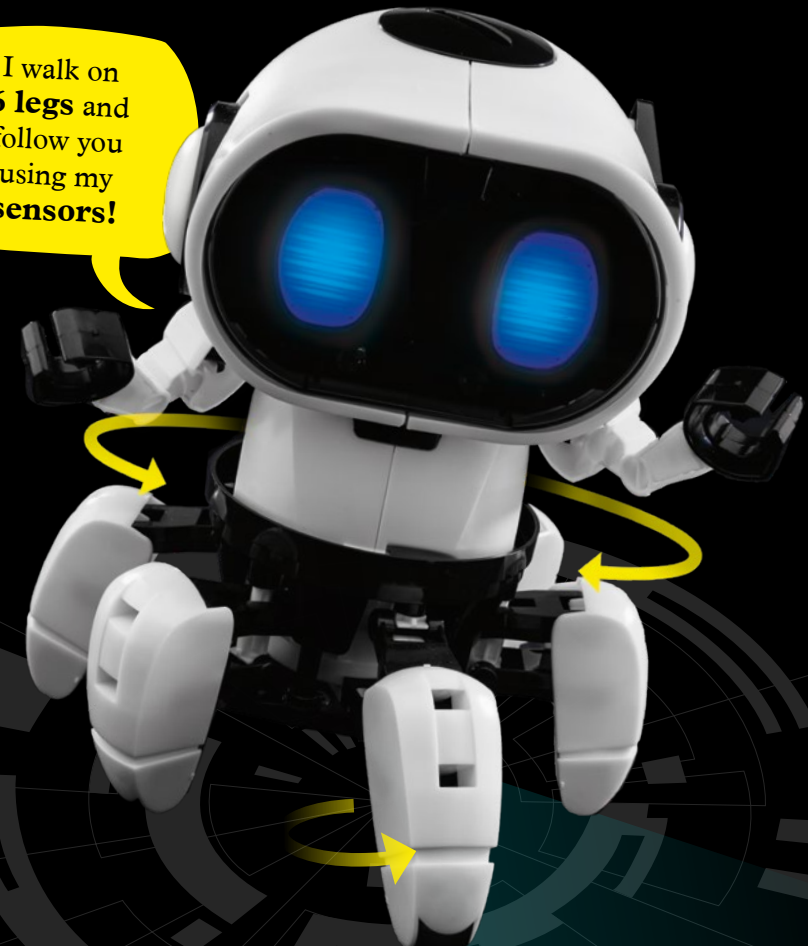
Photos for the packaging: Matthias Kaiser, Stuttgart (cover model); CIC Components Industries Co., Ltd., Taiwan

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Subject to technical changes.

Printed in Taiwan

I walk on
6 legs and
follow you
using my
sensors!



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Do you have
any questions?
Our customer services
will be happy to help you!

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WARNING! Not suitable for children under three years. Small parts. Choking hazard.

WARNING: This toy is only intended for use by children over the age of 8 years, due to accessible electronic components. Instructions for parents or care givers are included and shall be followed.

Keep the packaging and instructions as they contain important information.

May only be operated when fully assembled. Proper assembly must be checked by an adult before use.

NOTES ON DISPOSAL OF ELECTRICAL AND ELECTRONIC COMPONENTS:

The electronic components of this product are recyclable/reusable.

For the sake of the environment, do not throw them into the household trash at the end of their lifespan.

They must be delivered to a collection location for electronic waste, as indicated by the following symbol:



Please contact your local authorities for the appropriate disposal location.

Dear parents!

Before building and experimenting, read through the instructions together with your child and discuss the safety information. Be ready to help your child with tricky setups and experiments and accompany them through all steps.

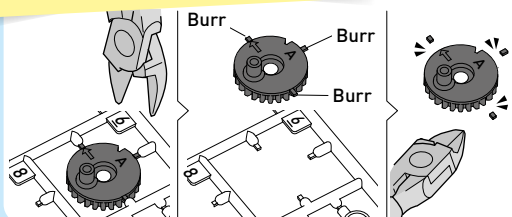
If your child is working at a table, use an underlay to prevent damage to the furniture.

When removing plastic parts using diagonal pliers or scissors, work with particular caution, since this can result in sharp burrs. These can be removed with a file. Provide diagonal pliers or scissors to your child and please supervise them until you see that they can confidently use them.

We hope you and your child have lots of fun with Chipz, the intelligent robot!

TIP!

Only remove the parts when you need them and remove excess material before assembly by using diagonal pliers and a nail file.



MORE EXCITING EXPERIMENTS!



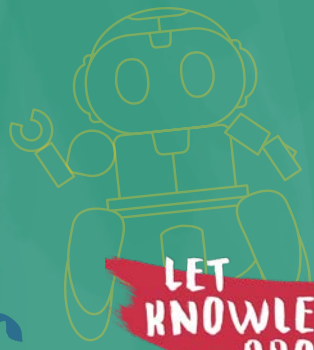
YOUR INTELLIGENT ROBOT



LET THE PLANETS ORBIT AROUND THE SUN



YOUR XXL HYDRAULIC HAND



LET KNOWLEDGE GROW.

>>> CONTENTS

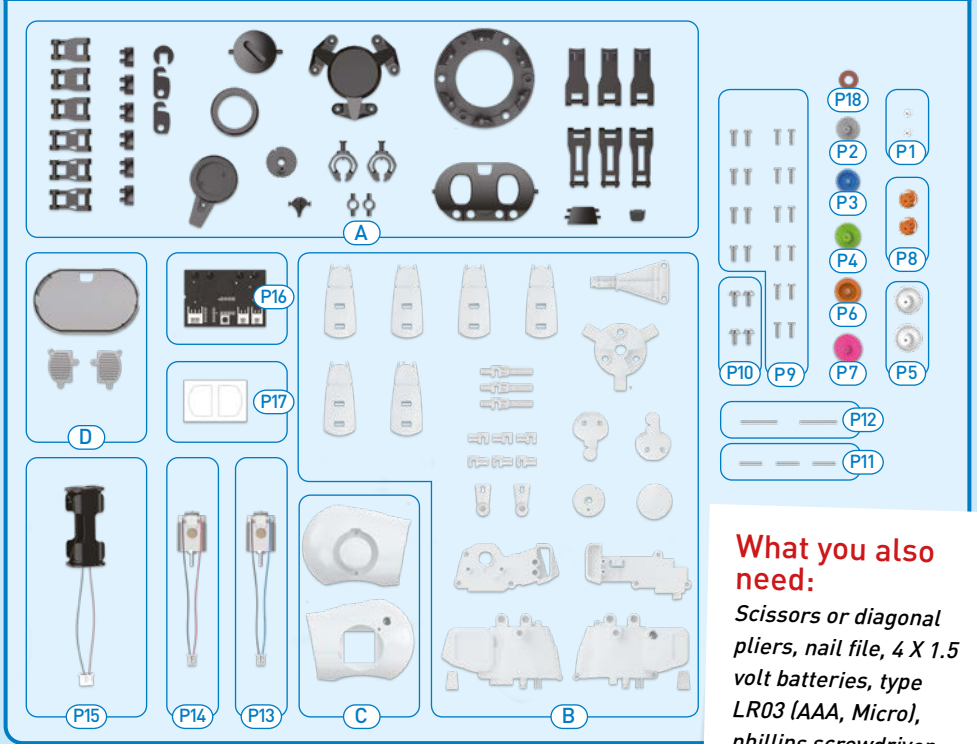
| | |
|--|--------------------|
| Safety information..... | Inside front cover |
| Contents | 1 |
| Equipment | 2 |
| Adventure comic part 1 | 3 |
| Assembly instructions..... | 7 |
| Inserting and changing batteries | 29 |
| Get started..... | 30 |
| Follow-me mode | 31 |
| Explorer mode..... | 32 |
| Adventure comic part 2 | 33 |

TIP!

You can learn more on the
Check It Out pages **35 and 36**.



What's in your experiment kit:



What you also need:

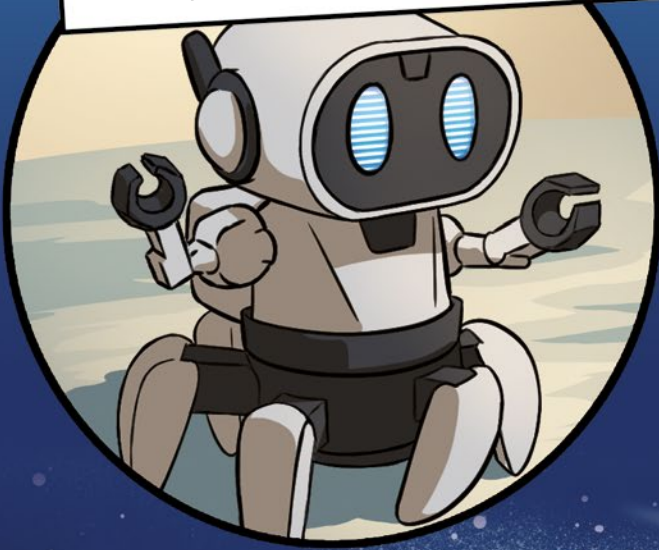
Scissors or diagonal pliers, nail file, 4 X 1.5 volt batteries, type LR03 (AAA, Micro), phillips screwdriver

Checklist: Search – view – check off

| ✓ No. | Description | Quantity | ✓ No. | Description | Quantity |
|-------|---------------------------|----------|-------|--|----------|
| ○ P1 | Small pinion - white | 2 | ○ P13 | Motor with connection cables | 1 |
| ○ P2 | Gear wheel 32/10T - grey | 1 | ○ P14 | Motor with connection cables | 1 |
| ○ P3 | Gear wheel 32T - blue | 1 | ○ P15 | Battery compartment with connection cables | 1 |
| ○ P4 | Gear wheel 36/14T - green | 1 | ○ P16 | Printed circuit board | 1 |
| ○ P5 | Gear wheel 36/14T - white | 2 | ○ P17 | Stickers | 1 |
| ○ P6 | Gear wheel 36T - orange | 1 | ○ P18 | Washer | 1 |
| ○ P7 | Gear wheel 40/10T - pink | 1 | ○ A | Sprue A (parts A1 – A19) | 1 |
| ○ P8 | Gear wheel 10T - orange | 2 | ○ B | Sprue B (parts B1 – B15) | 1 |
| ○ P9 | Screw | 20 | ○ C | Sprue C (parts C1 – C2) | 1 |
| ○ P10 | Screw with broad head | 4 | ○ D | Sprue D (parts D1 – D3) | 1 |
| ○ P11 | Short metal rod | 3 | | | |
| ○ P12 | Long metal rod | 2 | | | |

CHIPZ!

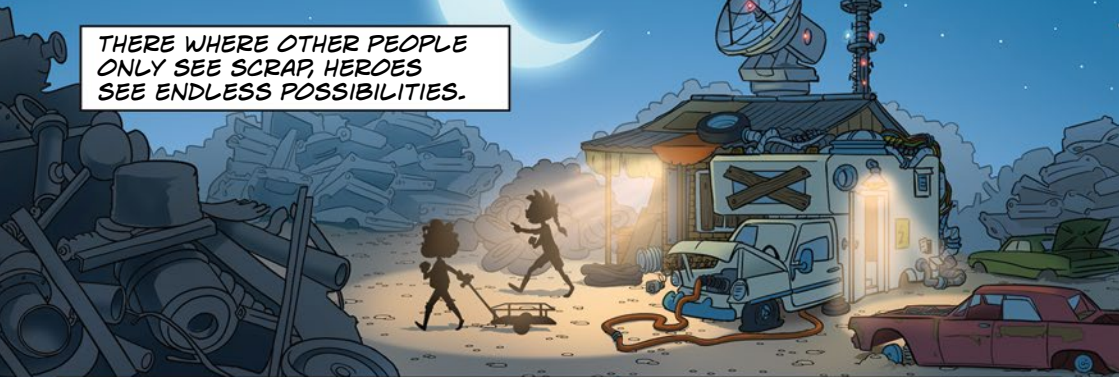
... AND THE LABYRINTH
OF THE MINOTAUR



TOM & IZZY

WHILE THE OTHERS GO TO BED, TOM AND IZZY ARE STILL BUSY.

THERE WHERE OTHER PEOPLE ONLY SEE SCRAP, HEROES SEE ENDLESS POSSIBILITIES.



THE THRUST NEEDS TO BE INCREASED BY A FACTOR OF 10.

I FOUND SOMETHING!

WE WERE MISSING THIS PART STILL!

WE NEED MORE BOOST...

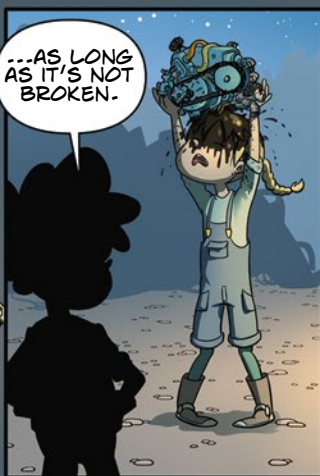
...TO OVERCOME GRAVITY.

HMM... THAT COULD WORK!

...AS LONG AS IT'S NOT BROKEN.

DON'T WORRY! THE LITTLE LEAK IS EASY TO PLUG.

SO, LET'S GET TO WORK!



IZZY CAN REPAIR ANYTHING AND IS A MASTER OF MECHANICS.

TOM, ON THE OTHER HAND, IS A SCIENTIST THROUGH AND THROUGH...

THEY CAN BUILD ANYTHING TOGETHER!



...BUT HE CAN ALSO LEND A HAND.

WE DID IT!

NOTHING CAN STOP US NOW!

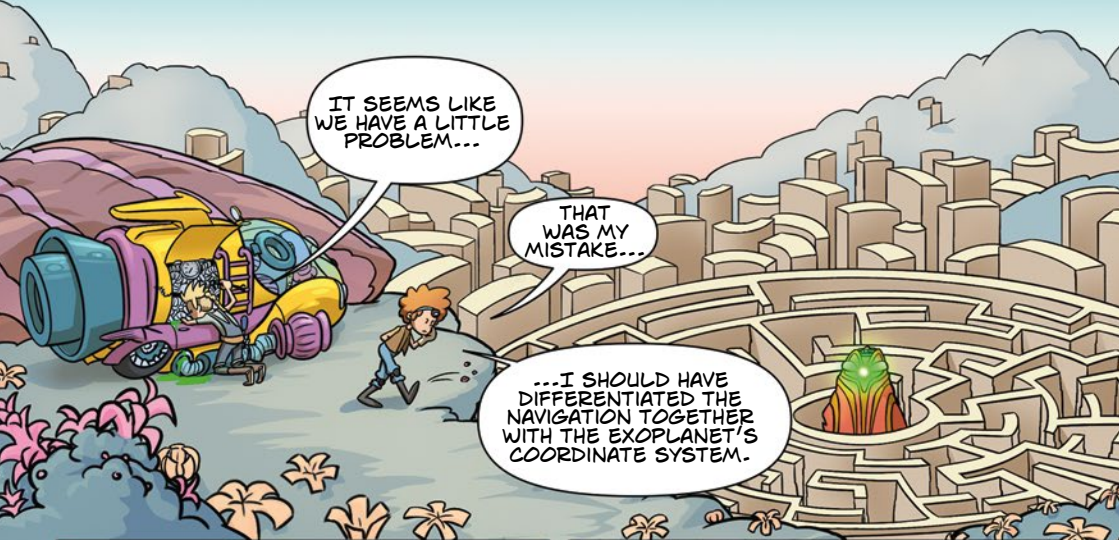


WHERE SHOULD WE FLY FIRST?

WHEREVER WE WANT!

THERE'S NO LIMITS FOR US!

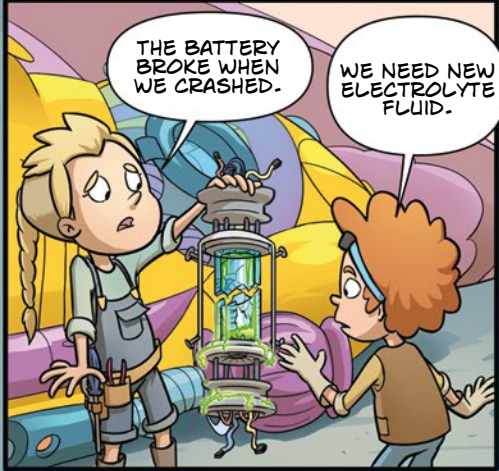




IT SEEMS LIKE WE HAVE A LITTLE PROBLEM...

THAT WAS MY MISTAKE...

...I SHOULD HAVE DIFFERENTIATED THE NAVIGATION TOGETHER WITH THE EXOPLANET'S COORDINATE SYSTEM.



THE BATTERY BROKE WHEN WE CRASHED.

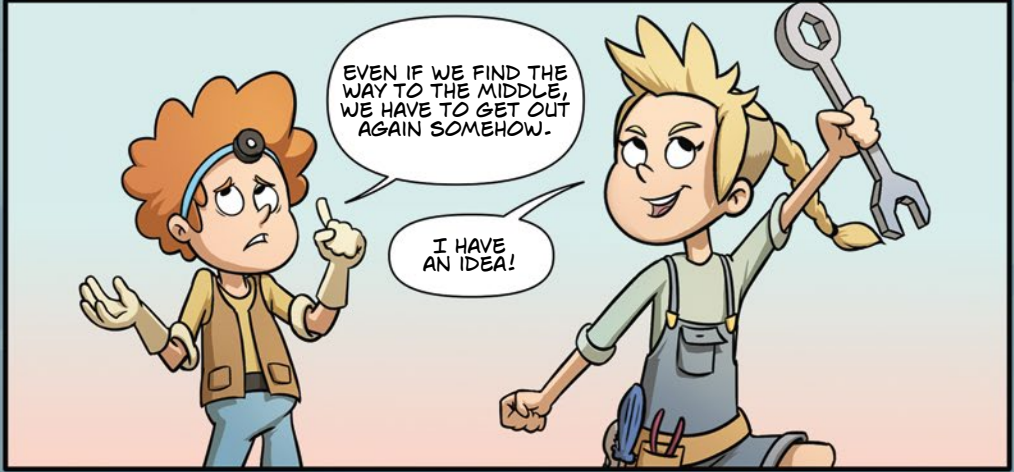
WE NEED NEW ELECTROLYTE FLUID.



WHY DON'T WE LOOK THERE?

...AT LEAST IT'S GLOWING IN THE RIGHT COLOUR!

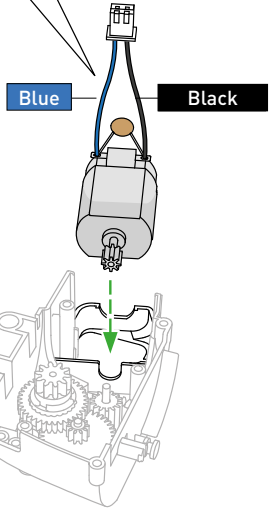
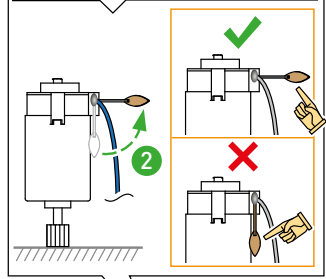
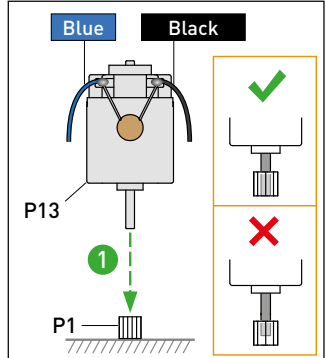
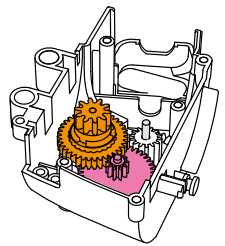
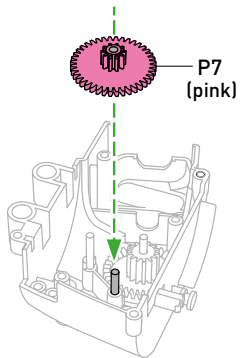
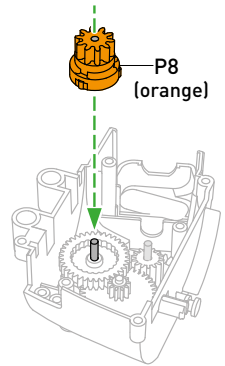
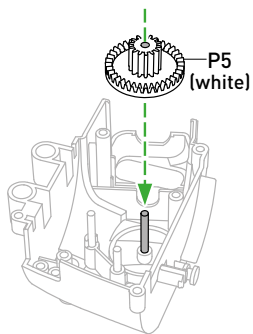
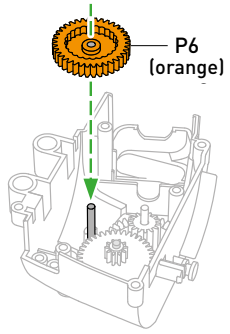
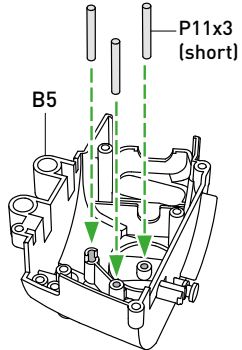
YOU WANT TO GO INTO THE LABYRINTH?



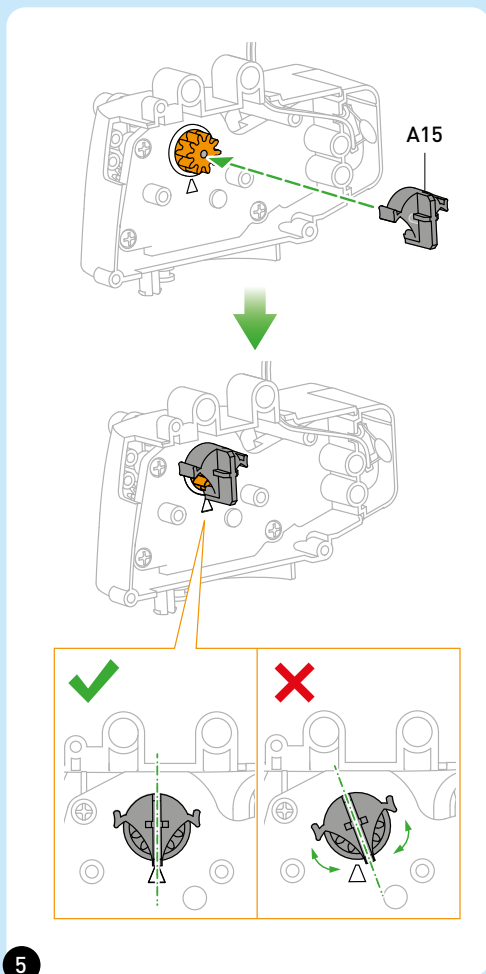
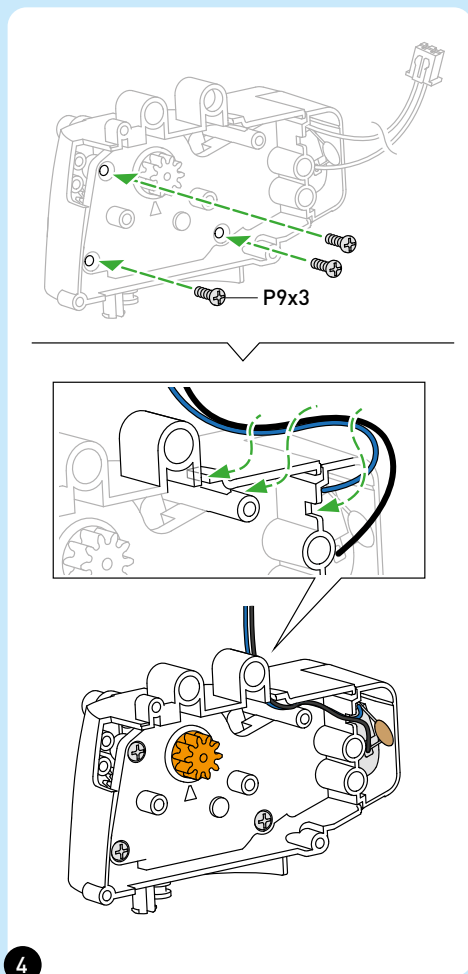
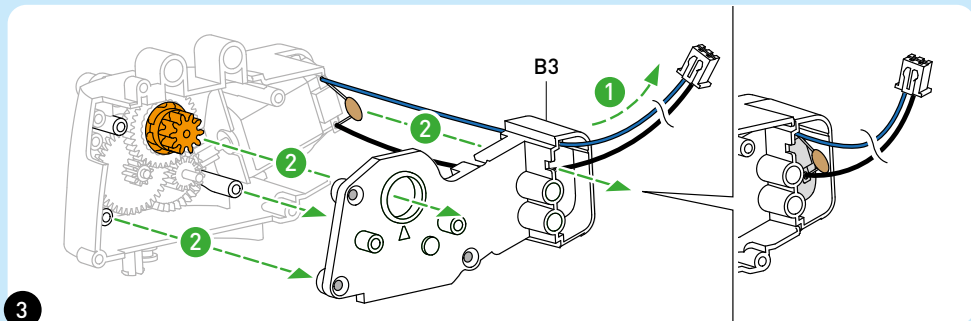
EVEN IF WE FIND THE WAY TO THE MIDDLE, WE HAVE TO GET OUT AGAIN SOMEHOW.

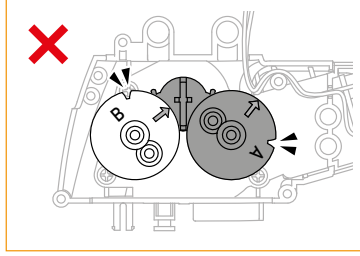
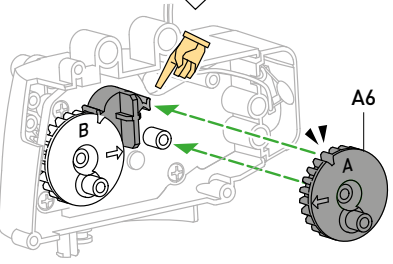
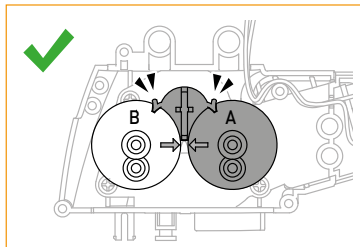
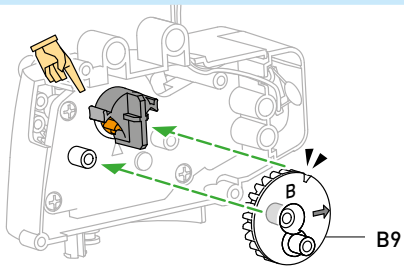
I HAVE AN IDEA!

BODY MODULE

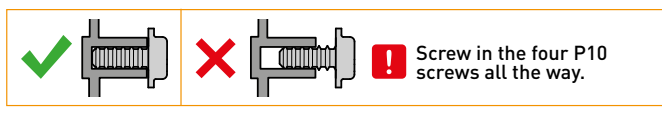
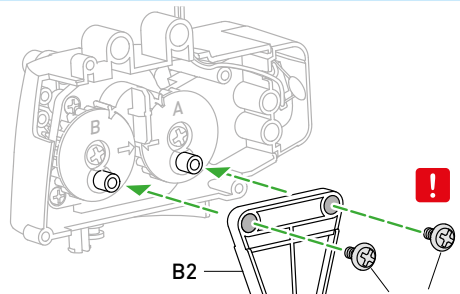
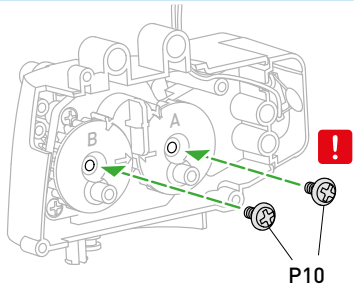


BODY MODULE



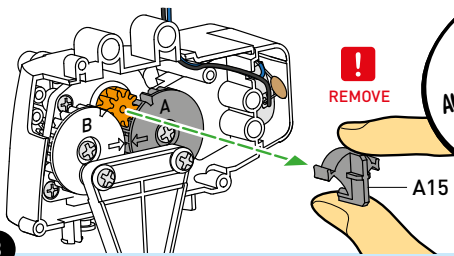


6



! Screw in the four P10 screws all the way.

7

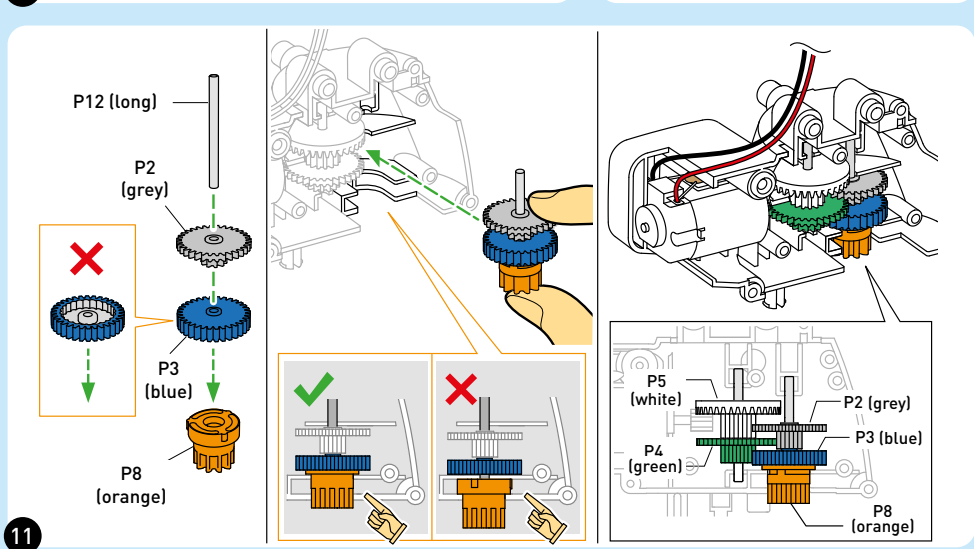
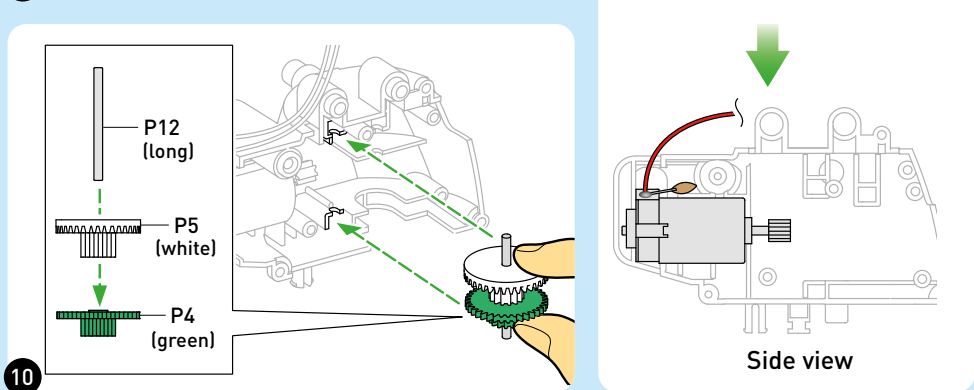
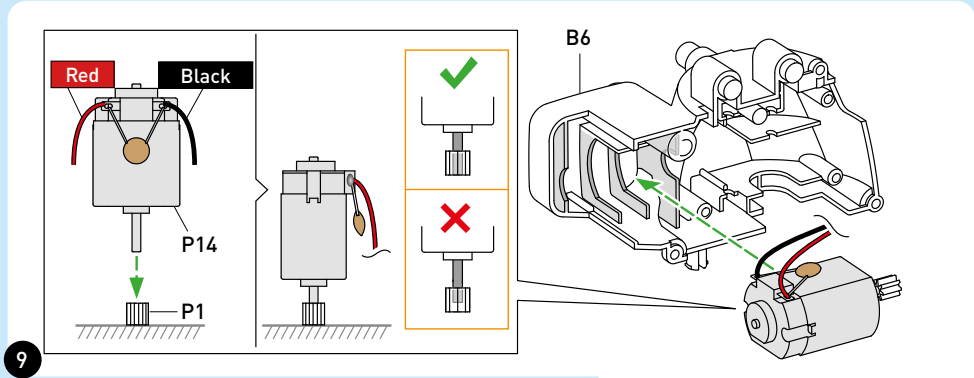


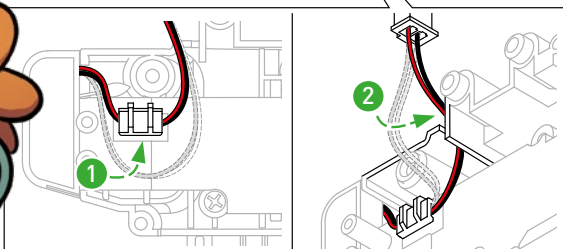
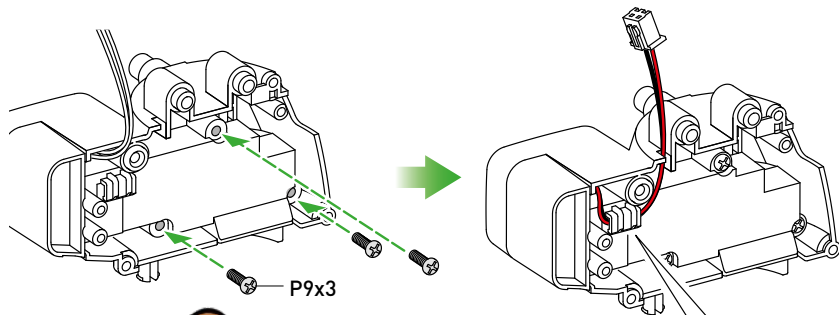
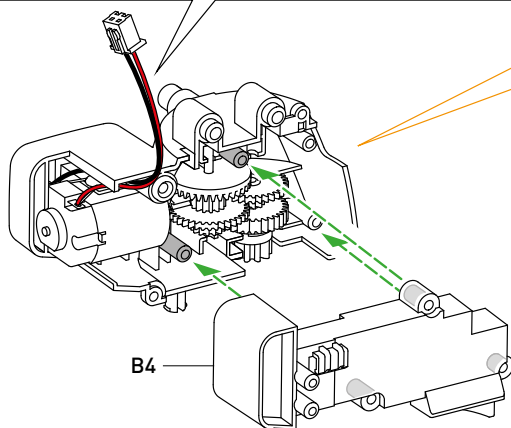
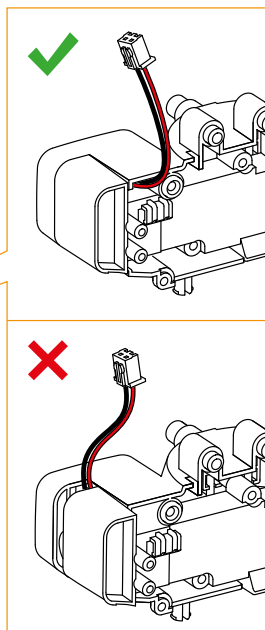
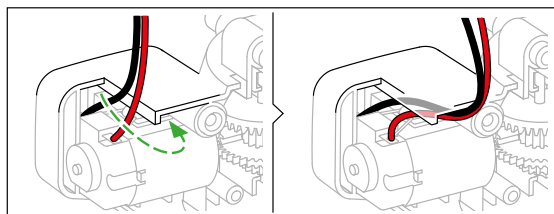
ONLY REMOVE THE AUXILIARY PART A15 AFTER STEPS 1 TO 7!



8

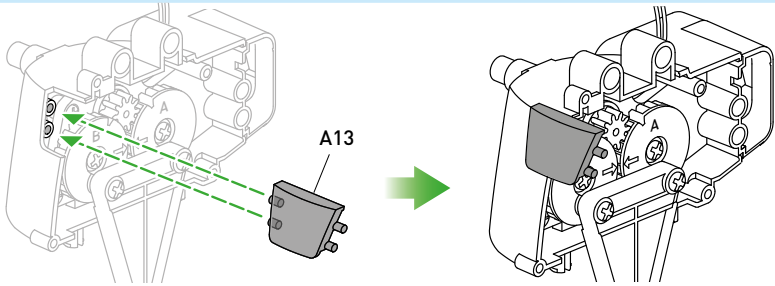
BODY MODULE



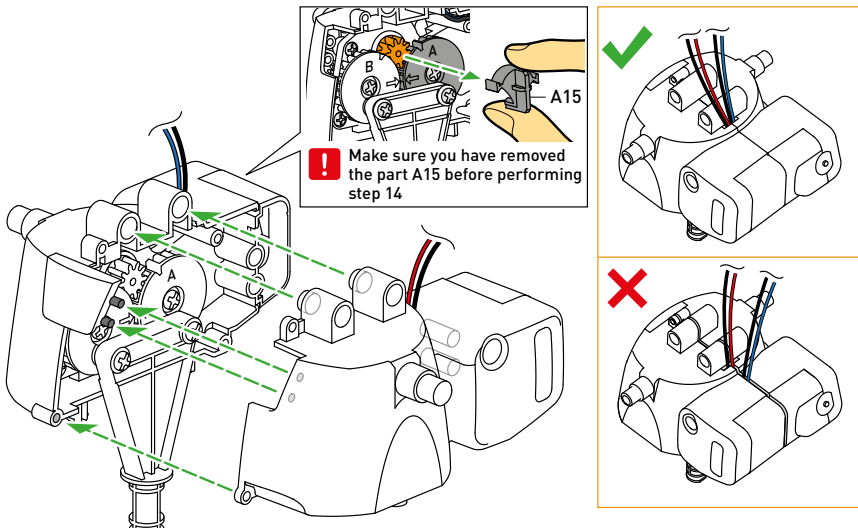


BODY MODULE

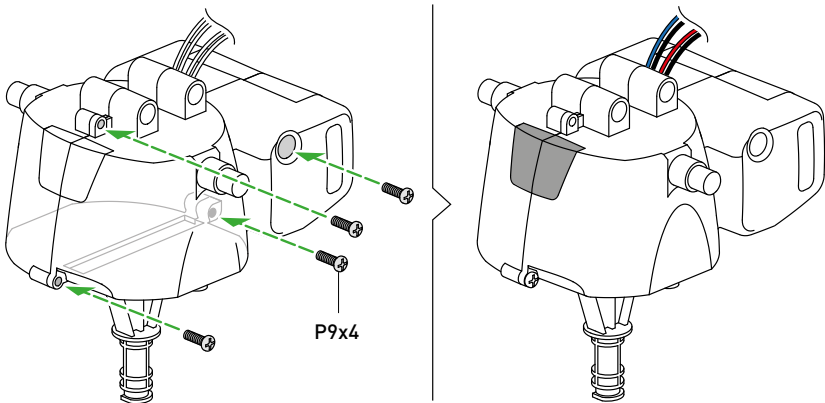
13



14

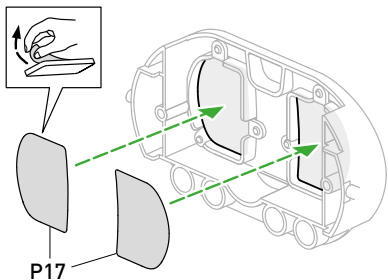
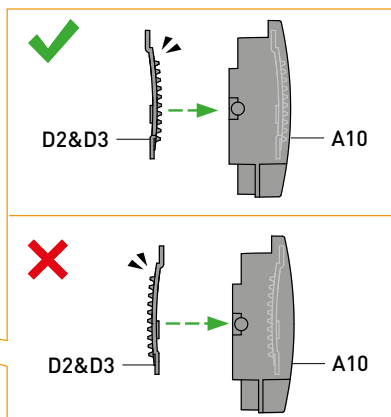
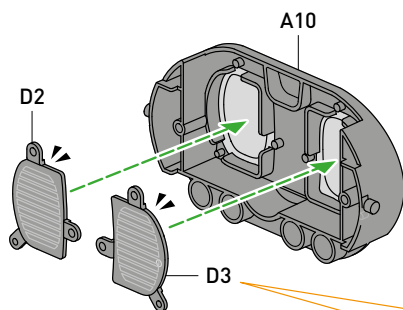
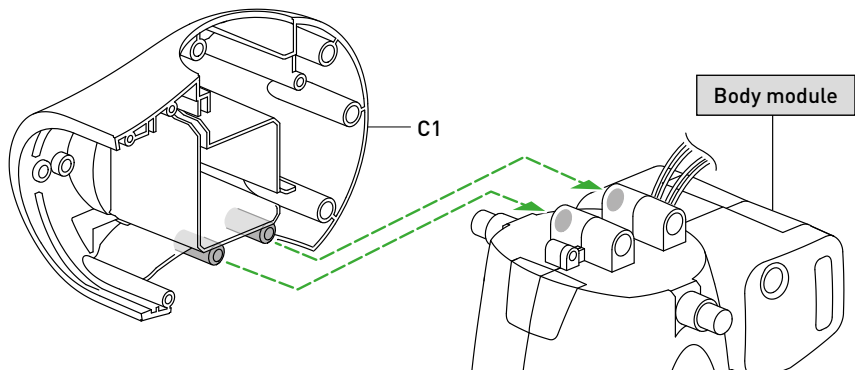


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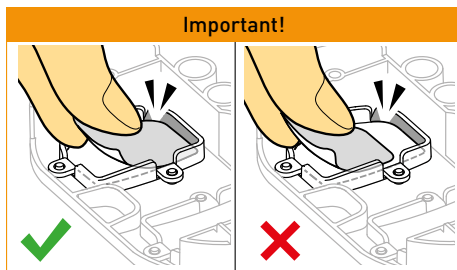


HEAD MODULE

1



*P17 is on the white sticker film.

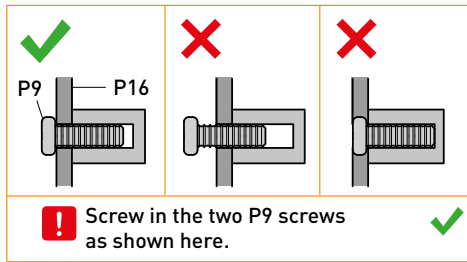
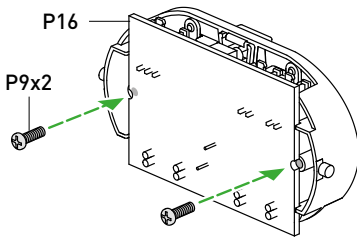
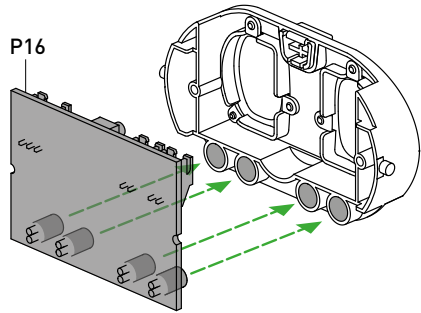
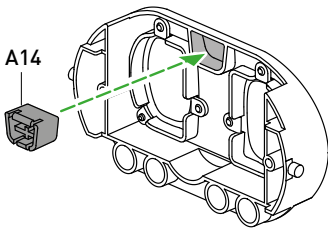


Pay attention to the exact alignment of the sticker.

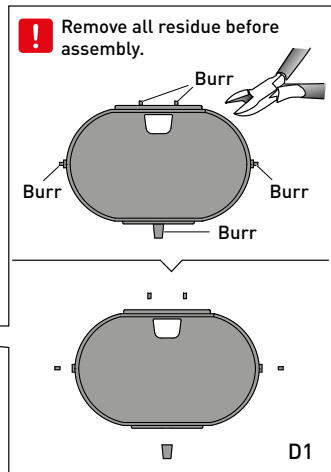
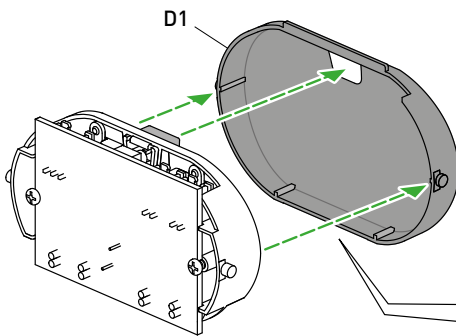
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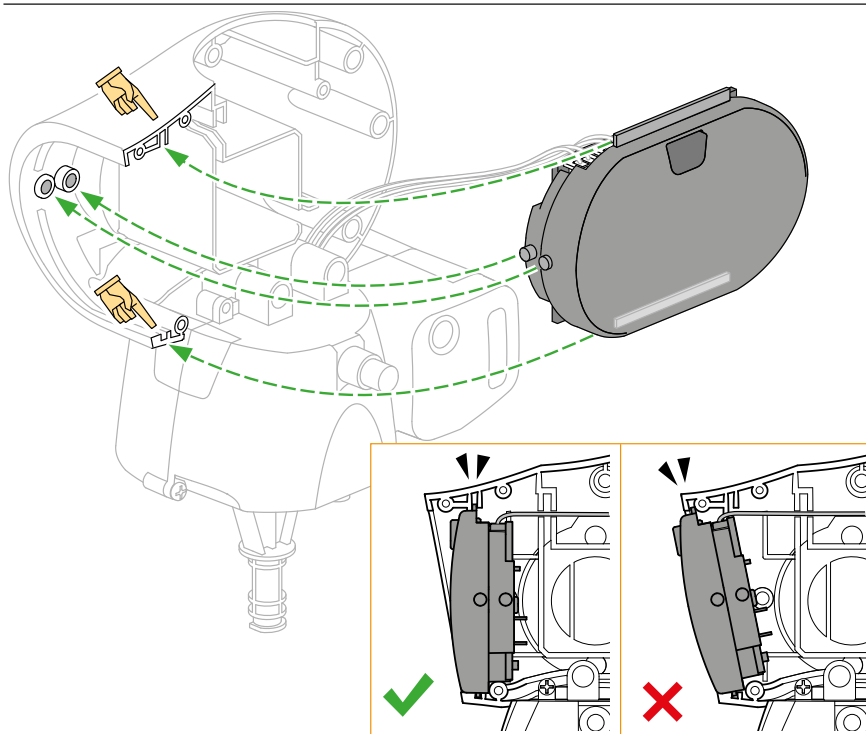
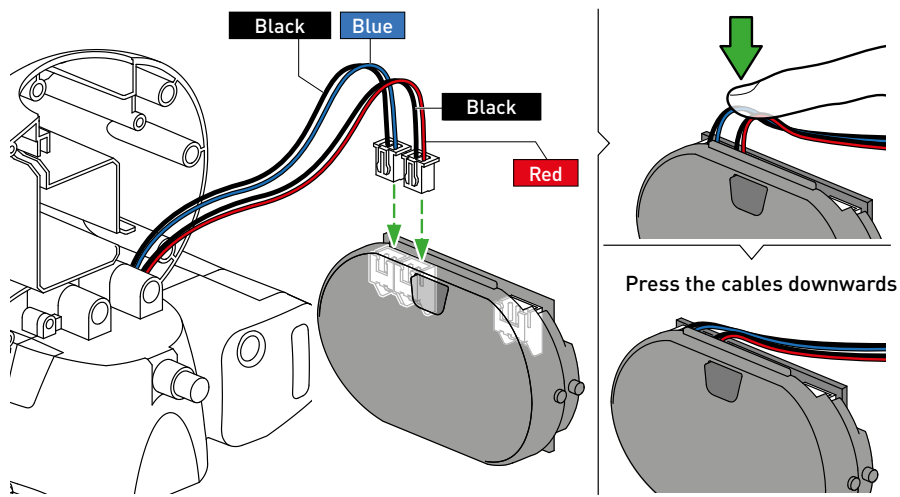
HEAD MODULE

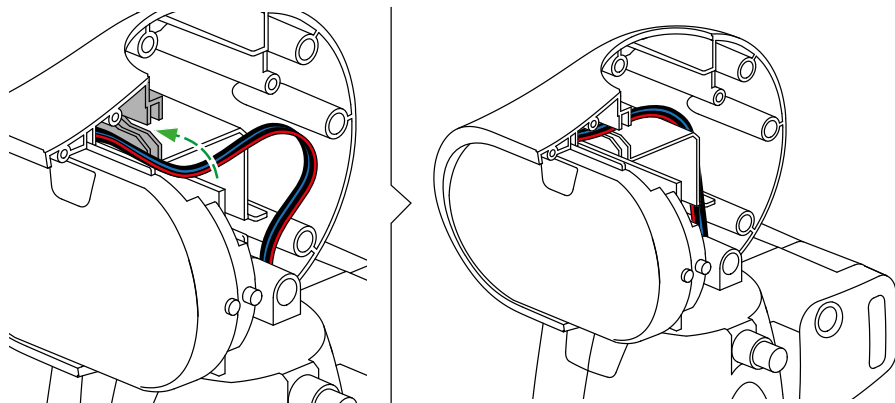
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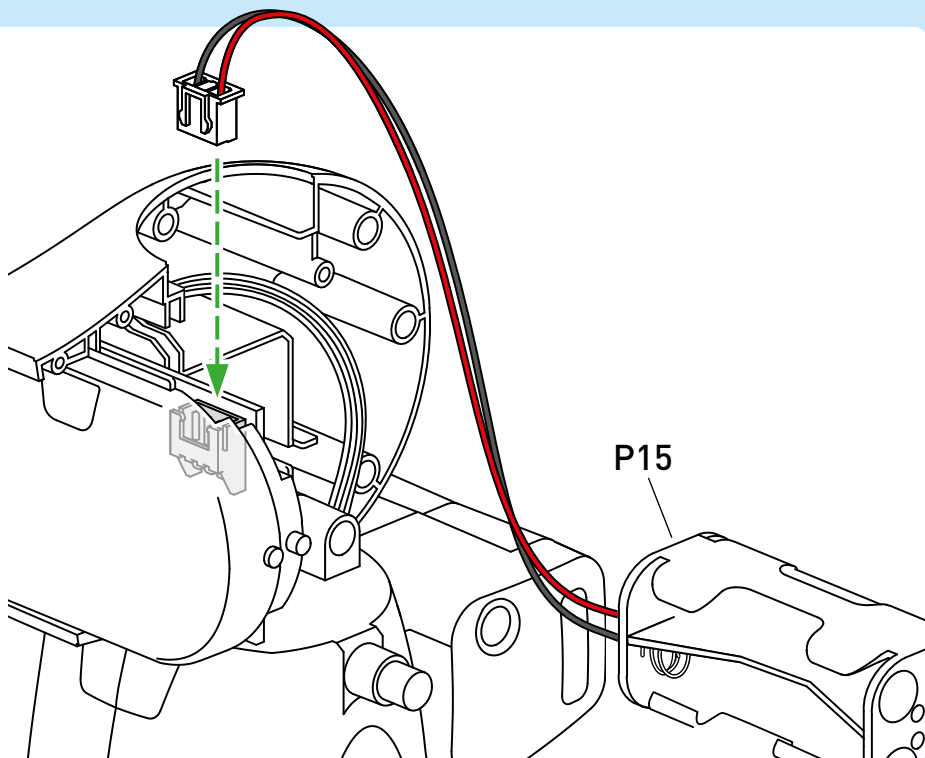
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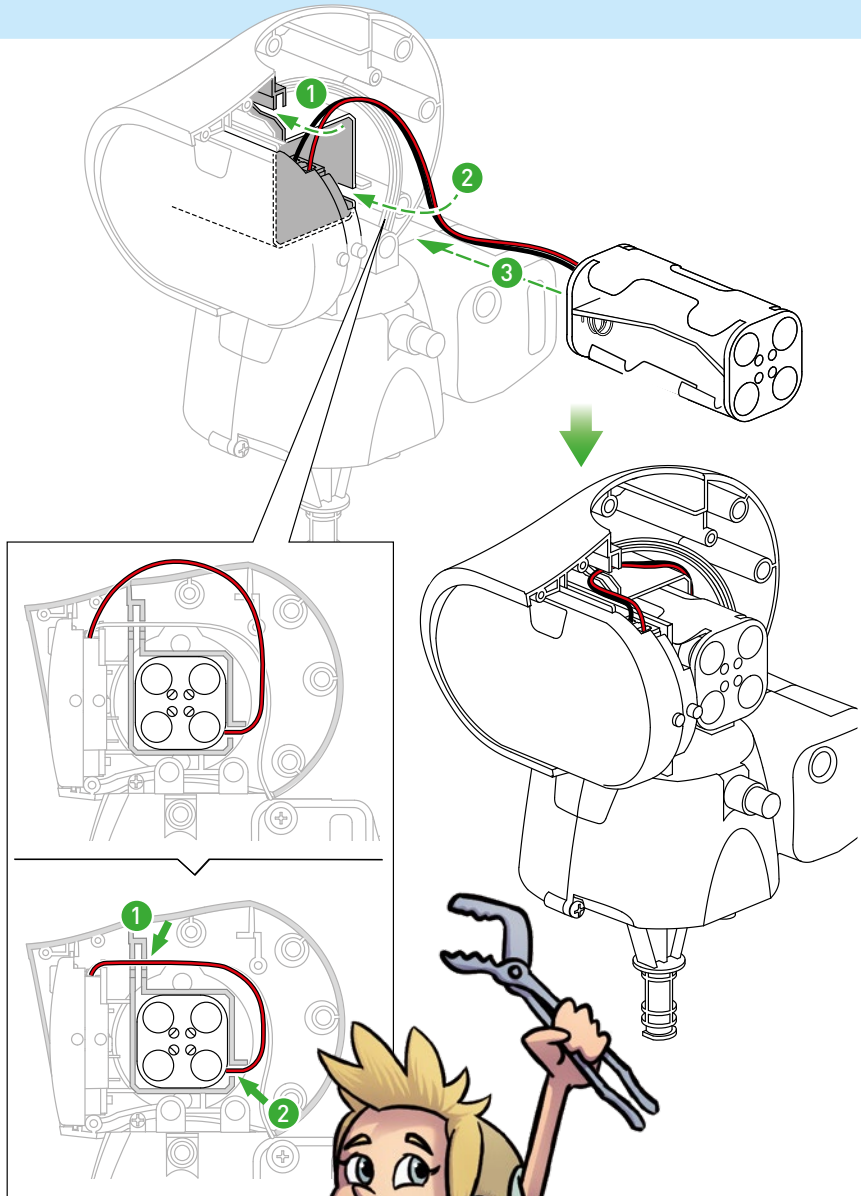


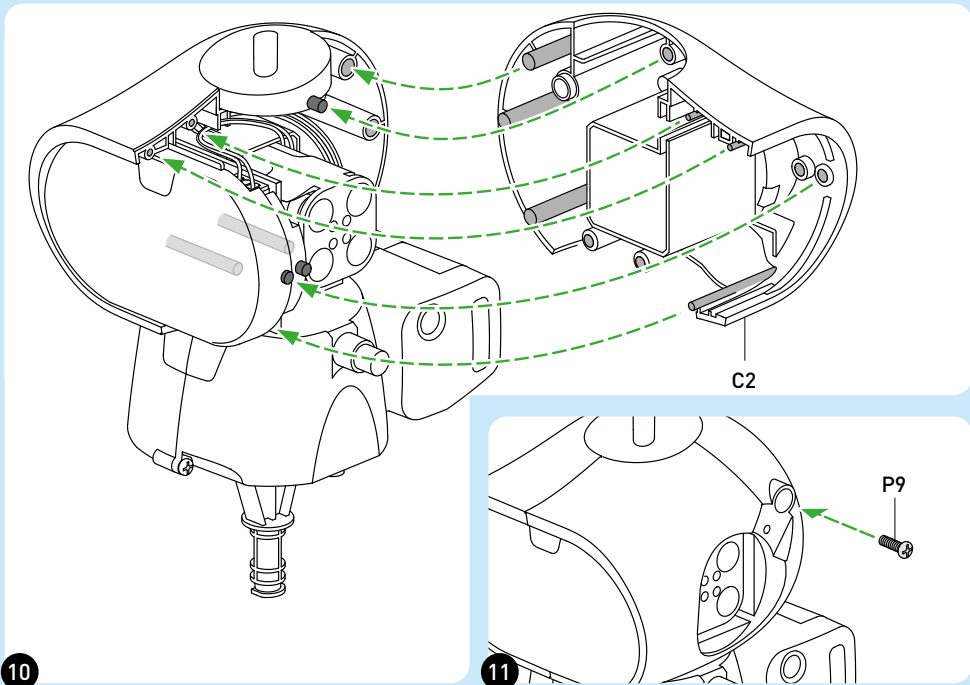
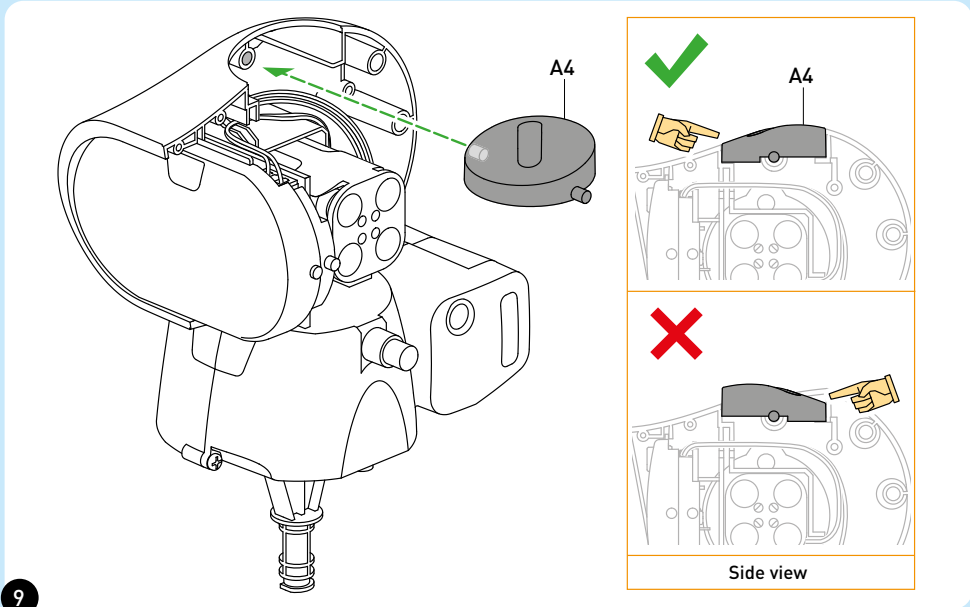


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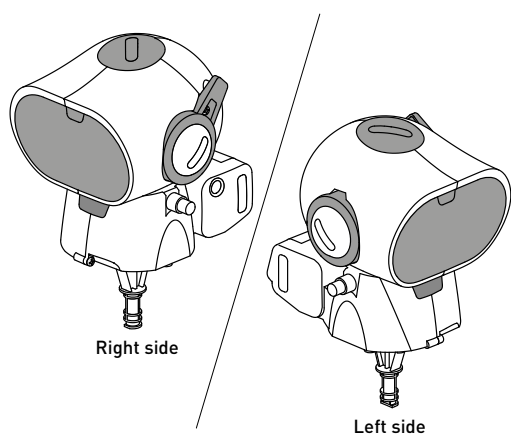
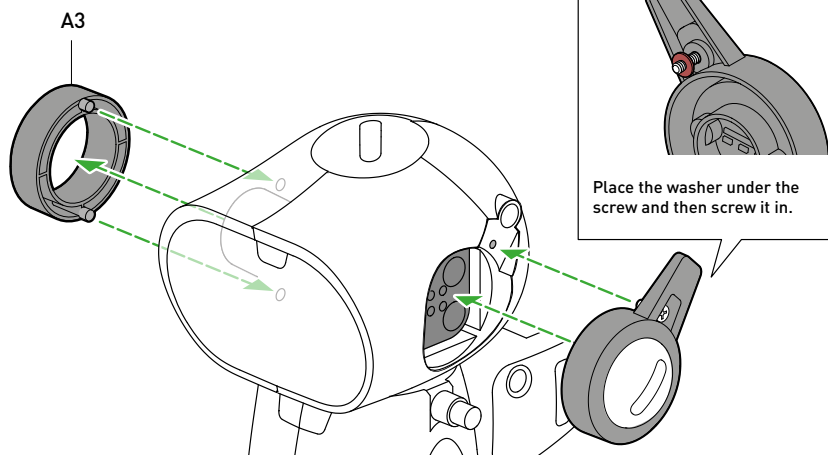
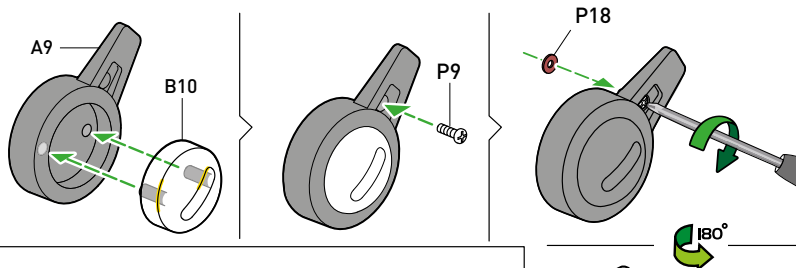


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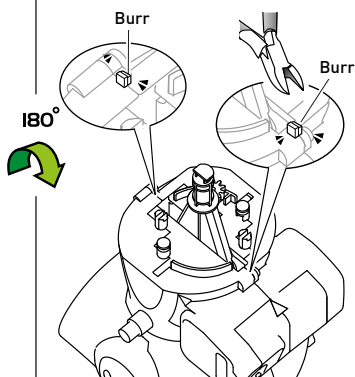




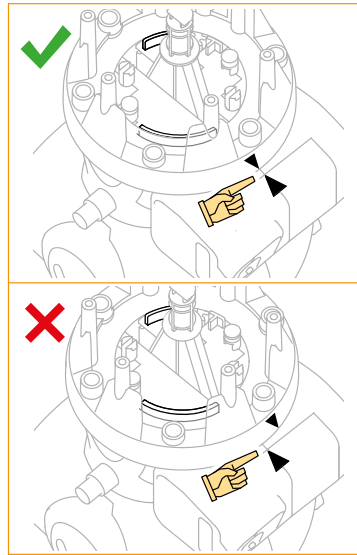
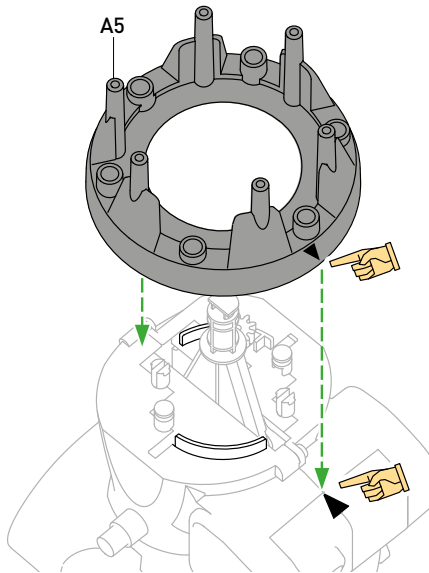
! Get help from an adult if one of the following steps is difficult for you.



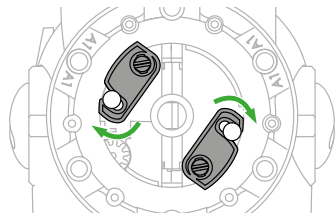
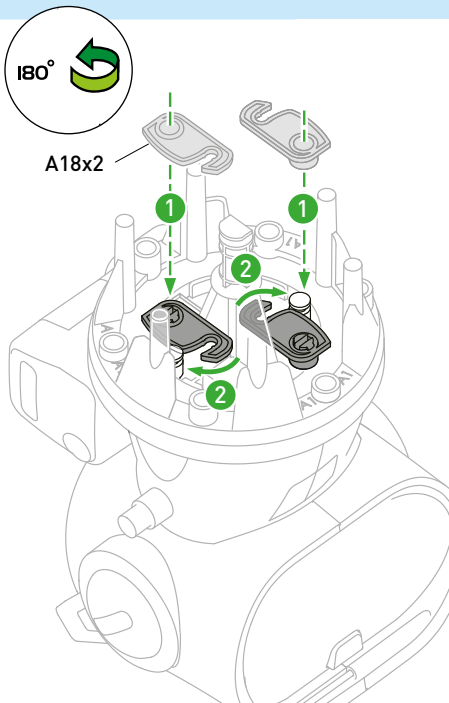
! Remove all residue before assembly.



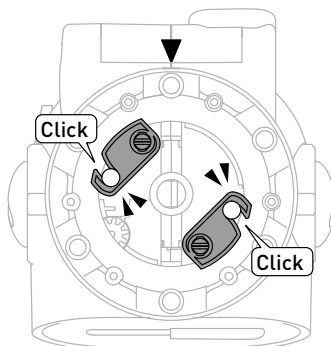
13



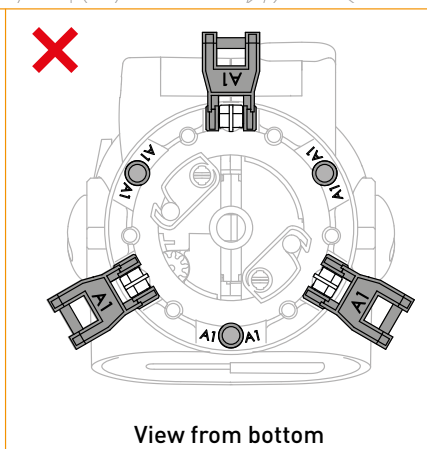
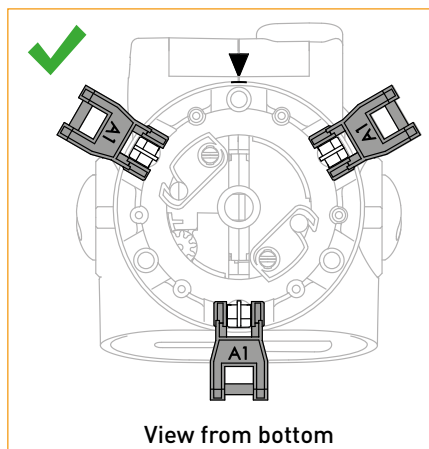
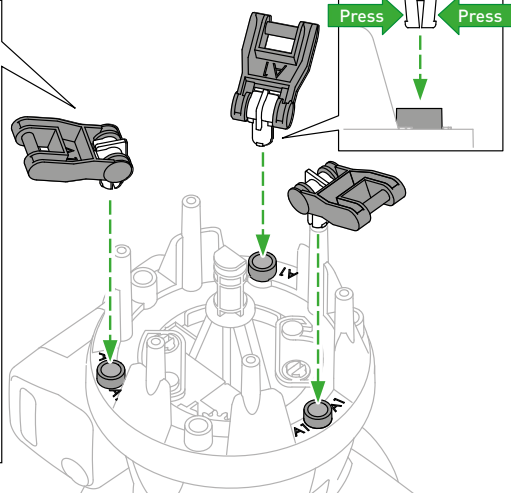
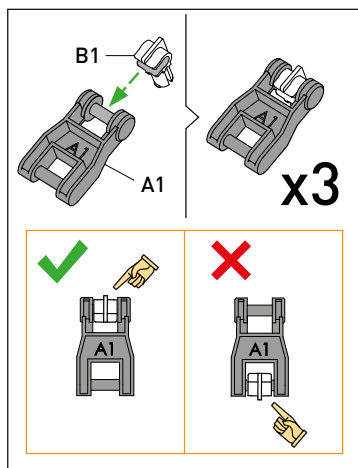
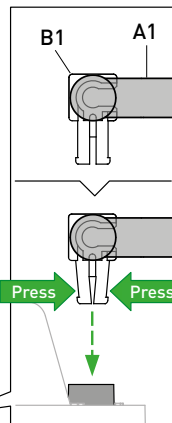
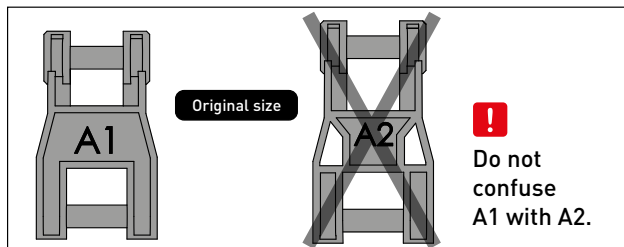
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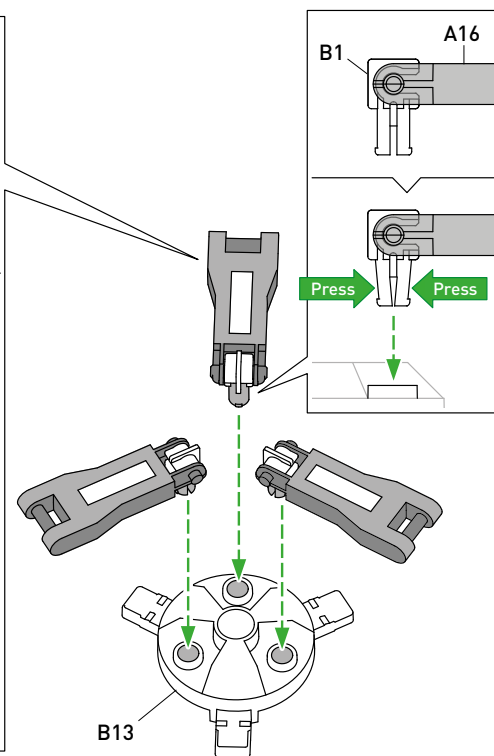
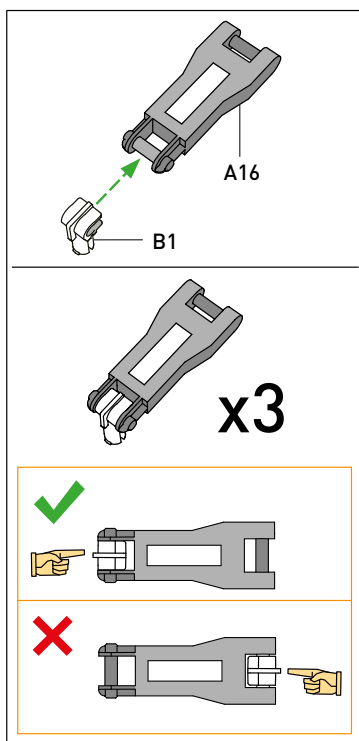


! Ensure that A18 engages with a "click"

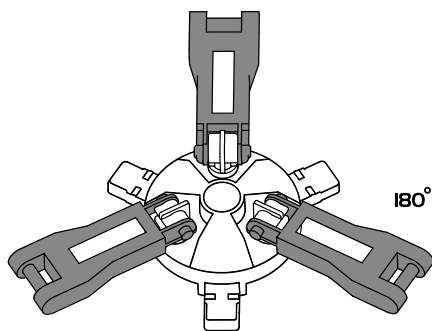


View from bottom

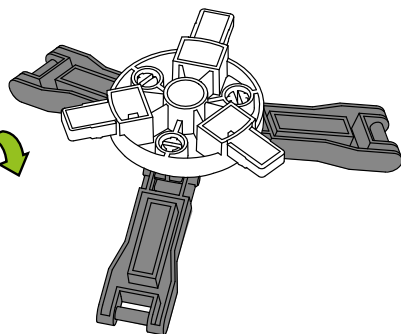




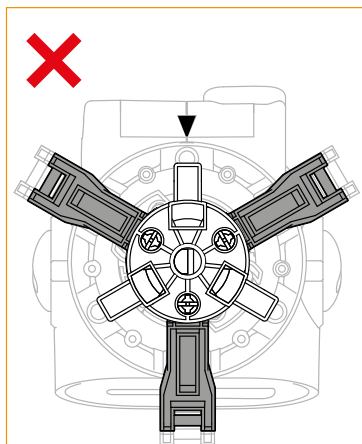
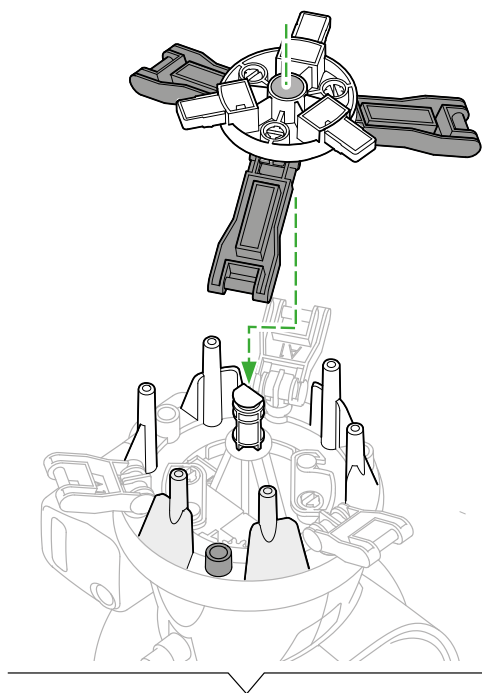
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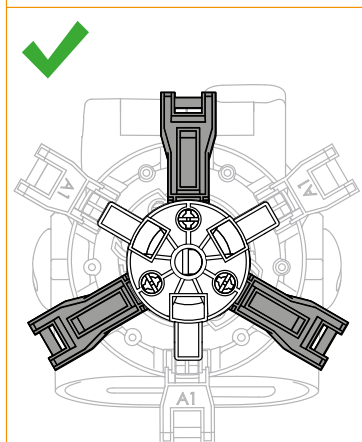
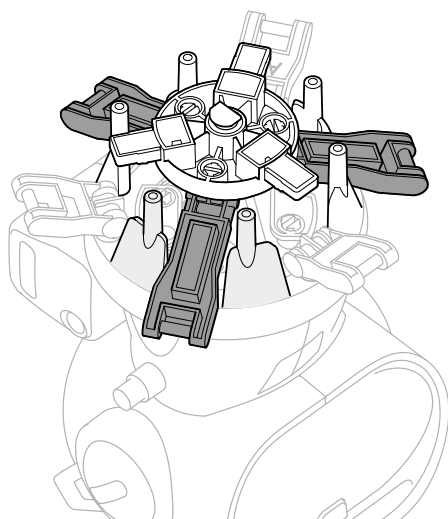
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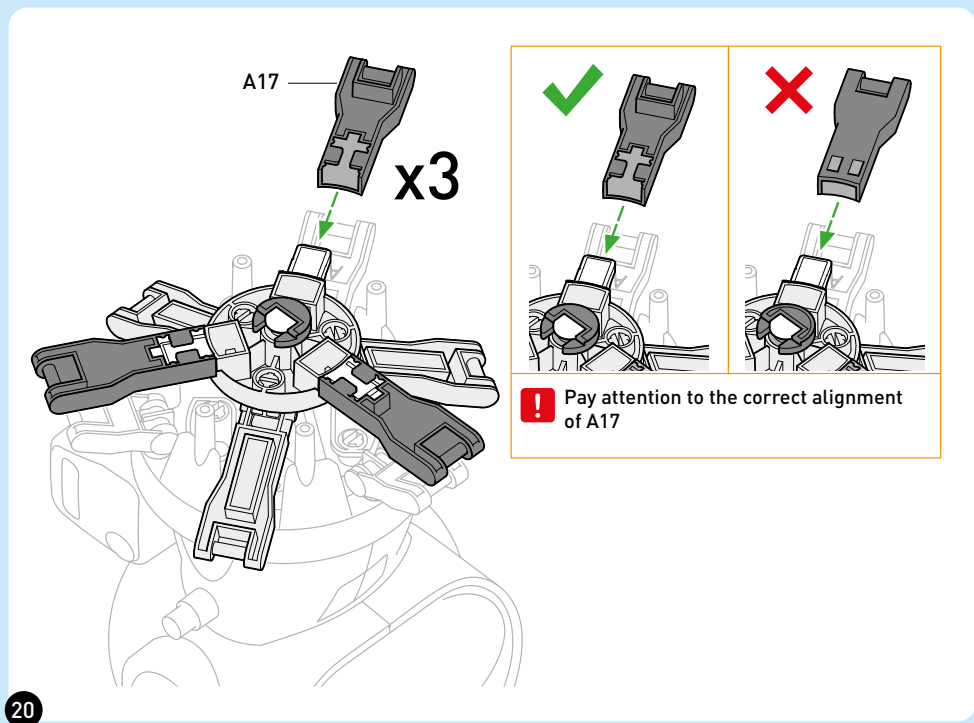
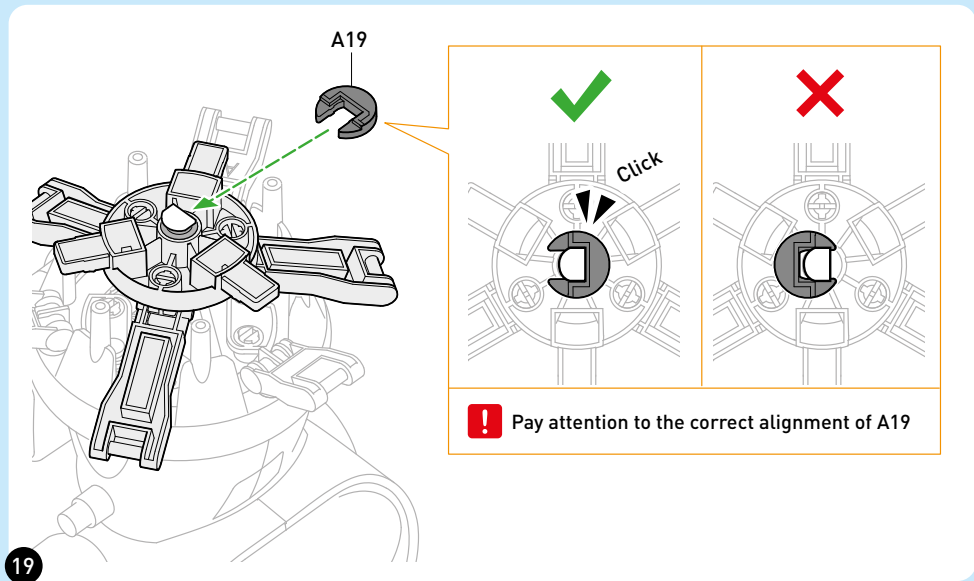
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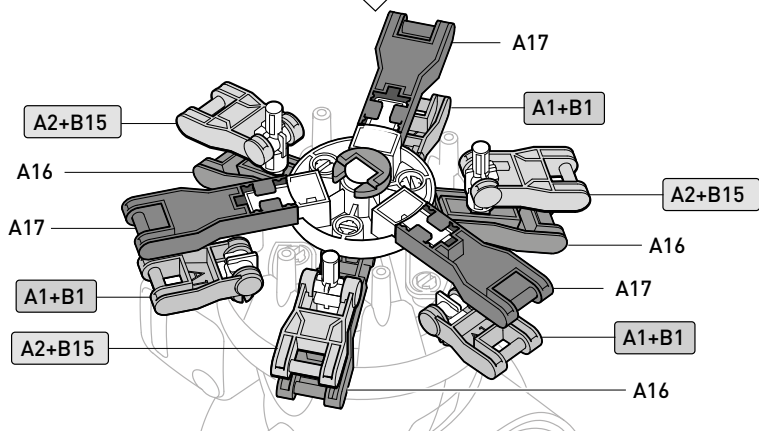
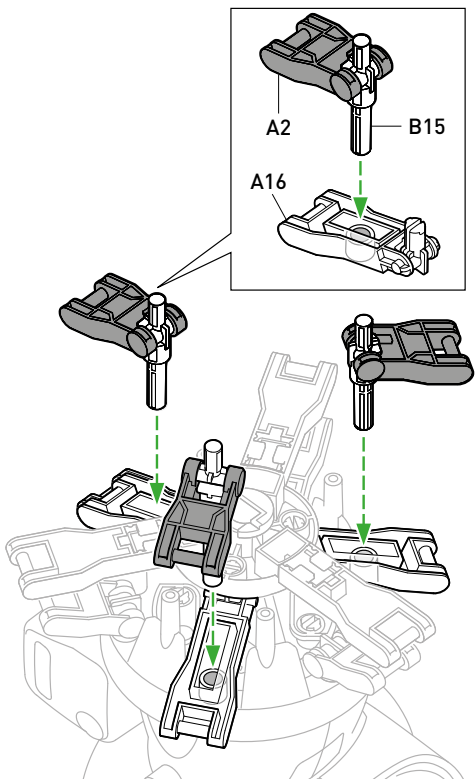
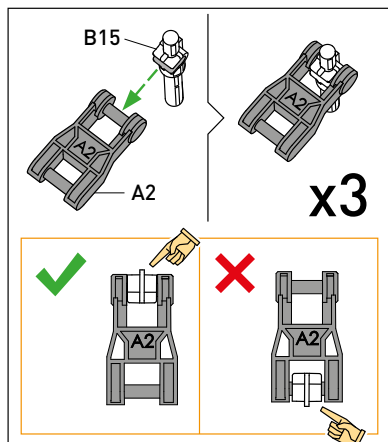
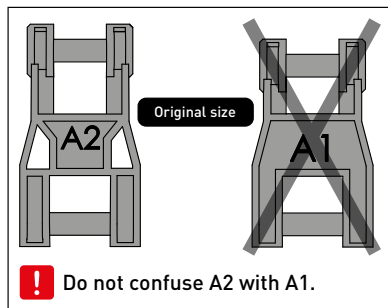


View from bottom

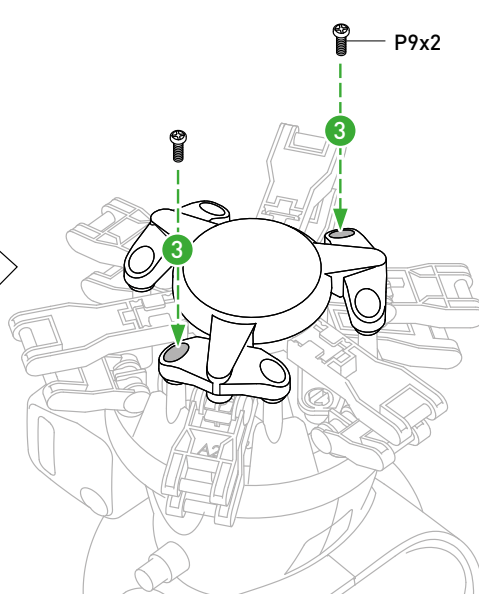
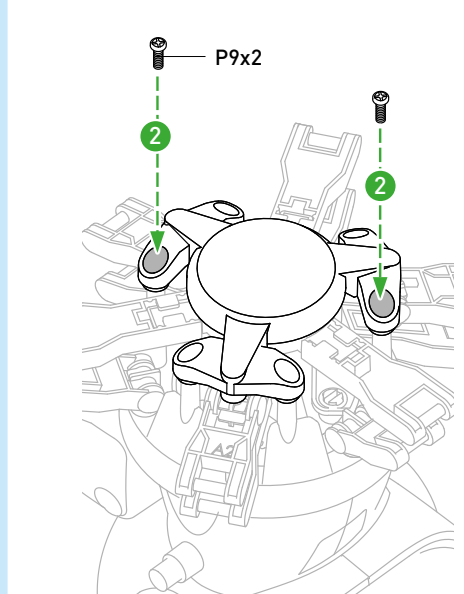
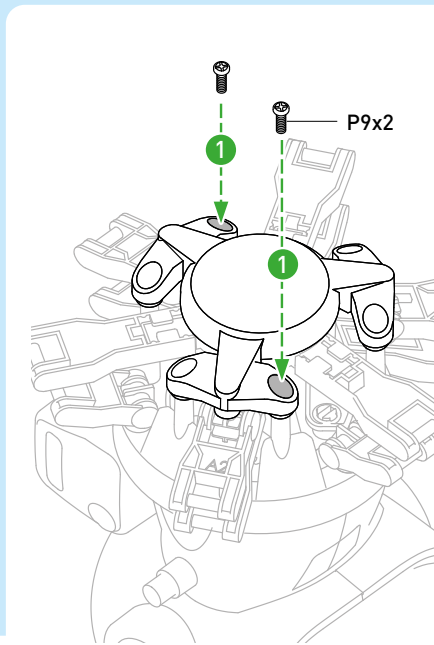
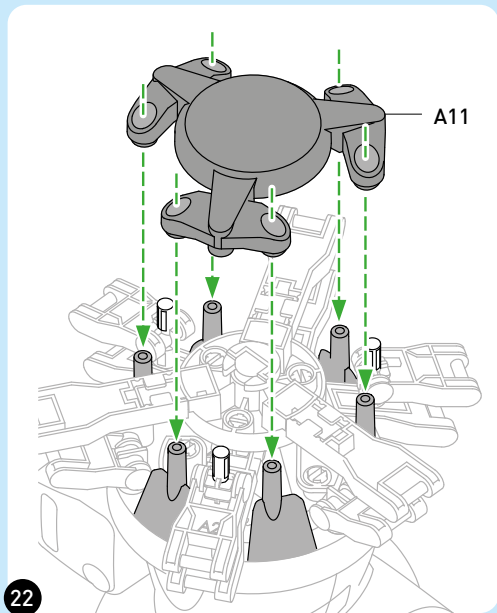


View from bottom

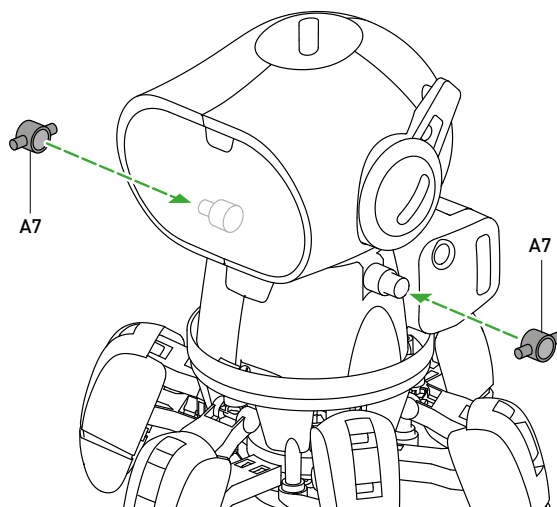
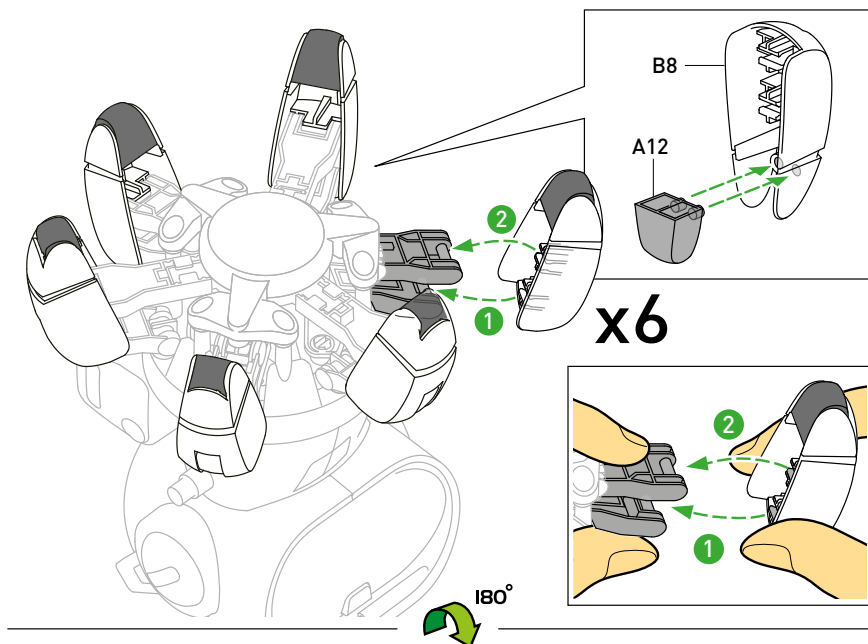


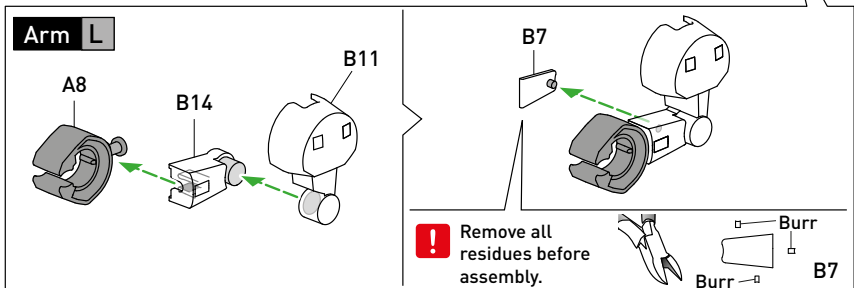
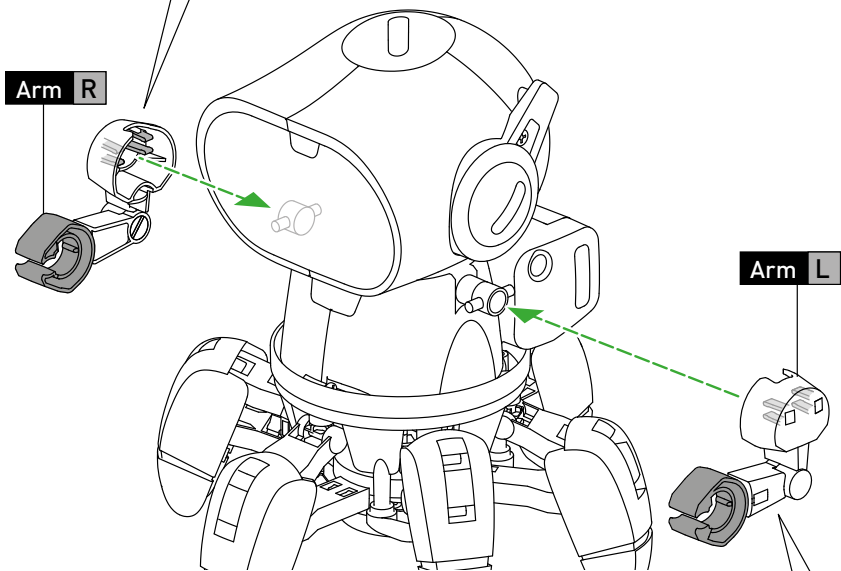
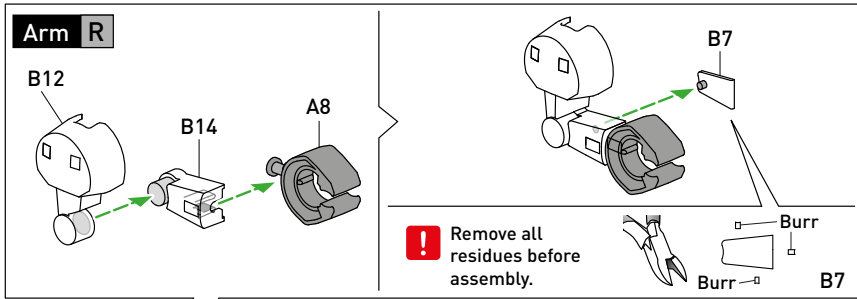


LEGS



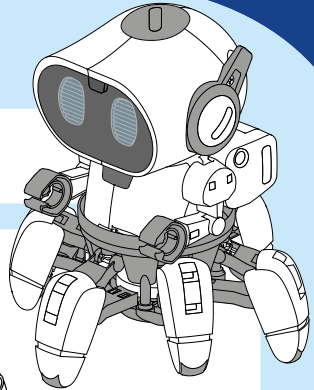
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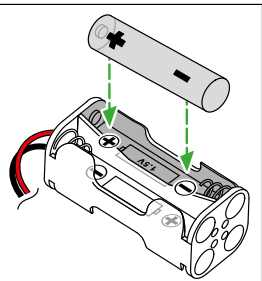
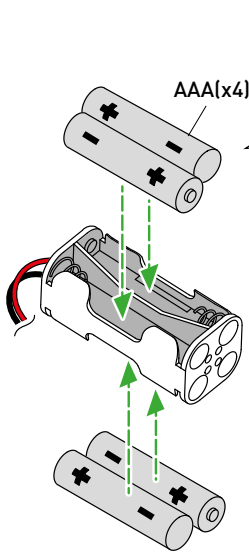
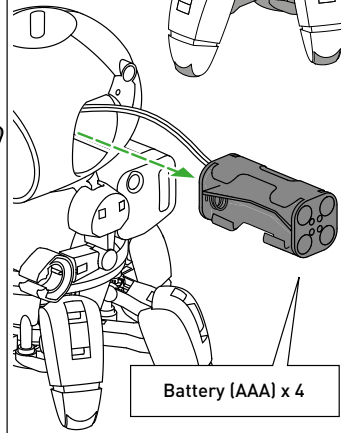
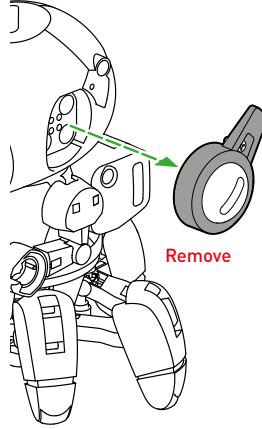
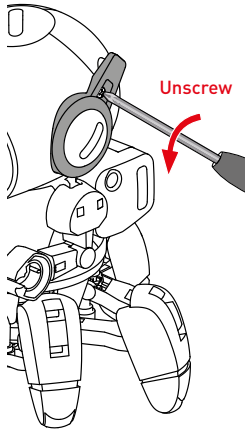


INSERTING AND CHANGING BATTERIES

Done!

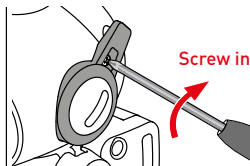


Inserting and changing batteries



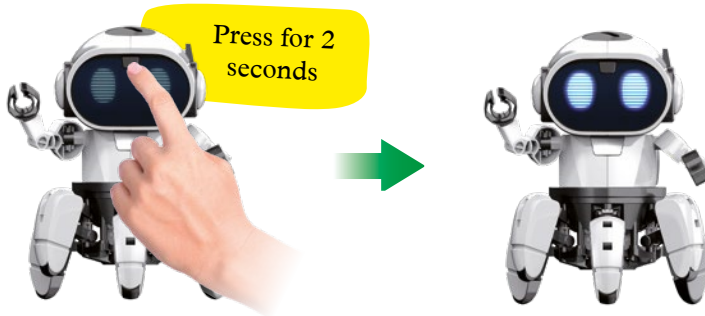
- › The batteries are not to be short circuited. A short circuit can cause the wires to overheat and the batteries to explode.
- › Different types of batteries or new and used batteries are not to be mixed.
- › Batteries are to be inserted with the correct polarity (+ and -). Press them gently into the battery compartments.
- › Non-rechargeable batteries are not to be recharged. They could explode!

- › Rechargeable batteries are only to be charged under adult supervision.
- › The supply terminals are not to be short-circuited.
- › Exhausted batteries are to be removed from the toy.
- › Dispose of used batteries in accordance with environmental provisions, not in the household trash.
- › Avoid deforming the batteries.



Switching on and standby mode

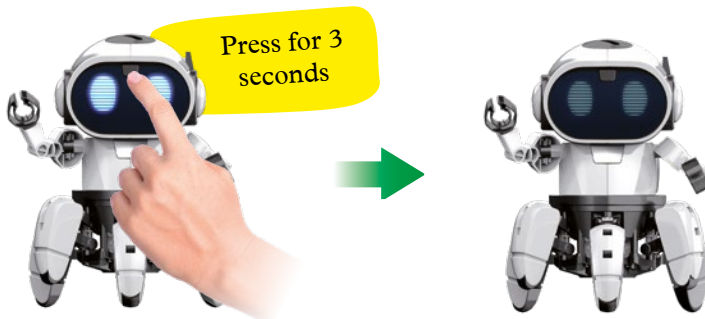
To switch on Chipz, simply hold down the button on his “forehead” for 2 seconds. Chipz’ eyes light up and he will make sounds. He is now in the standby mode and is waiting for an input from you.



Chipz is somewhat impatient. If you let him wait, he will stomp his feet and beep to remind you that he is waiting. If you let him wait for longer than 60 seconds, he will switch off on his own.

Switching off

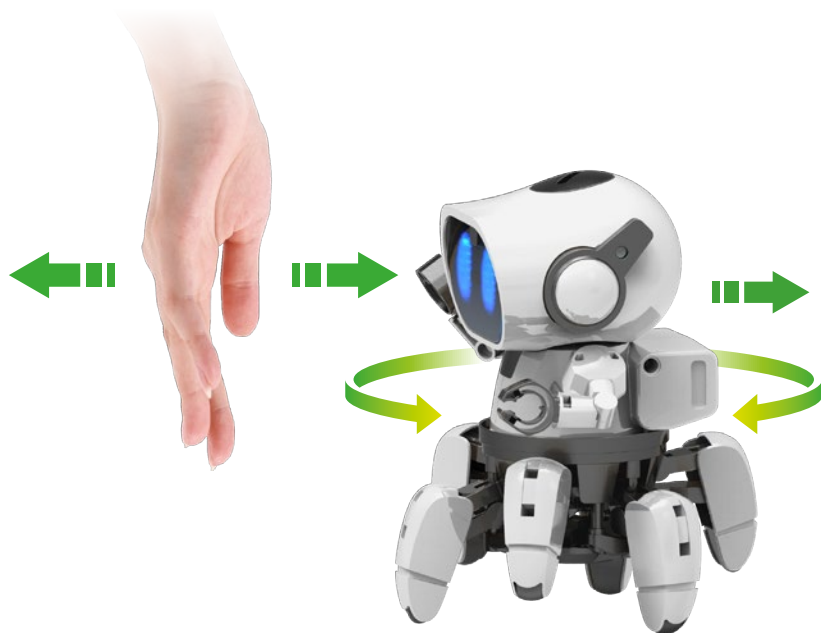
To switch Chipz off, proceed in the same way as switching him on. This time, hold the button for 3 seconds and Chipz will shut down. He will make a switching off sound and his eyes will go dark.



FOLLOW-ME MODE

Follow-me mode

To activate follow-me mode, Chipz must be in standby mode. Now you just have to press the button on his “forehead” once briefly and the follow-me mode is activated. Chipz indicates this mode by only lighting up his left eye briefly.



In follow-me mode, Chipz detects objects with his infrared sensors:

Hold your hand in front of Chipz' face. If your hand gets too close to him, he will back away from it. If you remove your hand, he will follow it, even if you pull it sideways out of his view.

TIP!

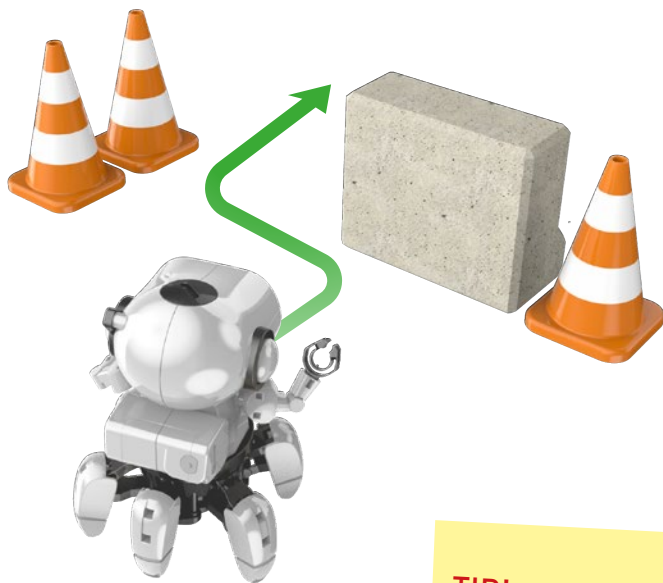
Chipz can be affectionate:
If you have a friend who also has a robot that is turned on, Chipz can follow this other robot if he is in follow-me mode.

Explorer mode

If Chipz is in standby mode, press the button on his “forehead” twice in a row to activate explorer mode.

If Chipz is in follow-me mode, you just have to press the button once. Chipz indicates the explorer mode by only lighting up his right eye briefly.

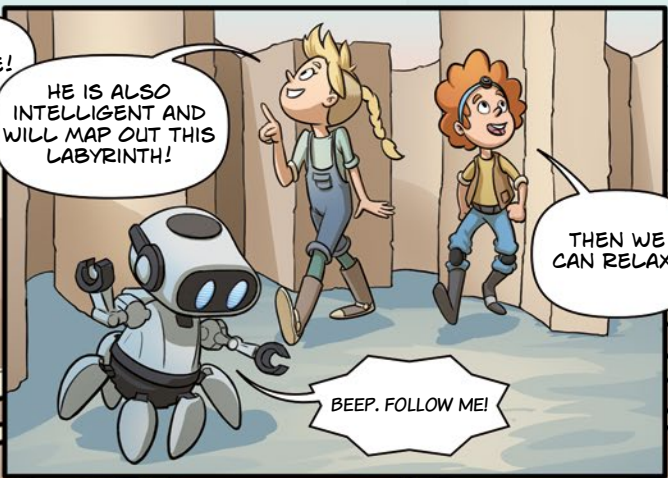
You can always switch between explorer mode and follow-me mode by pressing the button.



Chipz is pretty stubborn in explorer mode. He will simply keep going straight ahead until he encounters an obstacle. Chipz detects obstacles with his infrared sensors and avoids them on his own by turning his upper body and changing direction.

TIP!

It's really fun to build a labyrinth of books or boxes for Chipz and send him into it in explorer mode. You'll see: Sooner or later, Chipz will find a way out of the labyrinth on his own.





GET OVER HERE...



...AND GIVE US A HUG!

FINALLY SOMEONE CAME.



I WAS STARTING TO THINK NO ONE SAW MY SOS SIGNAL.

CAN YOU FIX MY ROCKET?

THAT WILL BE TOUGH...

BUT IF YOU HELP US, THEN WE CAN SURELY BRING YOU WITH US!

BUT HOW ARE YOU GOING TO FIND THE WAY OUT OF THE LABYRINTH?

I TRIED AND FAILED!

NO PROBLEM!



I CAN REMEMBER EVERY PATH!

FOLLOW ME!

ROBOTS IN USE DAILY

Robots are somewhat commonplace for many people. Whether in kids' rooms, in factories, in hospitals or in the garden - robots are used nearly everywhere. Here are a couple of examples:

INDUSTRIAL ROBOTS

Most robots are found in factories and have a very special job there, which they do with a very high level of precision. This could be welding, painting, bolting or simply placing parts very precisely. Industrial robots usually look very different than robots from films. They often only consist of one big arm, or are simply cranes with wheels to automatically bring parts from A to B.



HOUSEHOLD ROBOTS

Robots are also widespread now in our homes. They vacuum up dust or mow the lawn. Some can even clean windows. In other words: They do jobs that are rather annoying for us.

OTHER ROBOTS

There are of course many more robots. There are robots in shopping centres who show us the way. In hospitals, they help during surgeries and the military uses many different robots.

The function usually greatly determines what robots look like. Robots that look similar to humans are usually in the group of service robots. We have direct contact with these robots, which is why it is advantageous if they look familiar to our eyes. People we humans tend to attribute human characteristics to robots who are human-like.

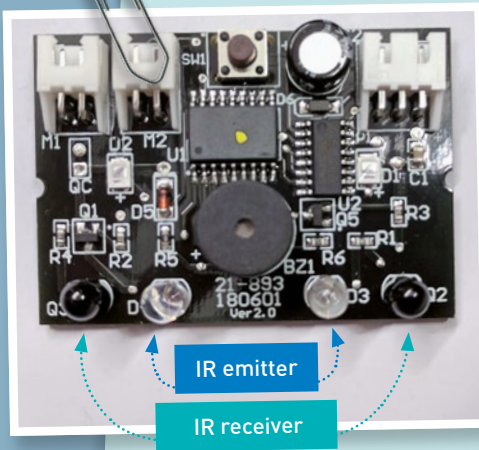




ARTIFICIAL INTELLIGENCE

Most robots are not particularly intelligent, because they simply follow their programming or they are remote controlled by humans. Robots with artificial intelligence are able to learn and make their own decisions. This makes them “autonomous”, which means they can complete their tasks on their own without requiring a command to do so. One example of this is self-driving cars.

WHAT ARE INFRARED SENSORS?



Chipz owes his intelligence to the infrared sensors on his printed circuit board. His infrared transmitters (transparent) send out infrared rays. These are reflected by objects and registered by the infrared receivers (black). In this way, Chipz can avoid colliding with objects. The shorter the rays travel, the closer the obstacle is. Bats use a similar technology, but they use ultrasound instead of infrared radiation.

TIP!

Infrared radiation is invisible to the human eye. But there is a trick you can do to see it anyway: Look at Chipz' face through a mobile camera while he is in explorer or in follow-me mode. You can see a purple glow in the transparent infrared emitters, which is not visible to the naked eye.