

# Toddler Powerchair



## User Manual

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## Safety

When using electrical product, the basic safety precautions should always be followed including the following:

### Read all precautions before use:

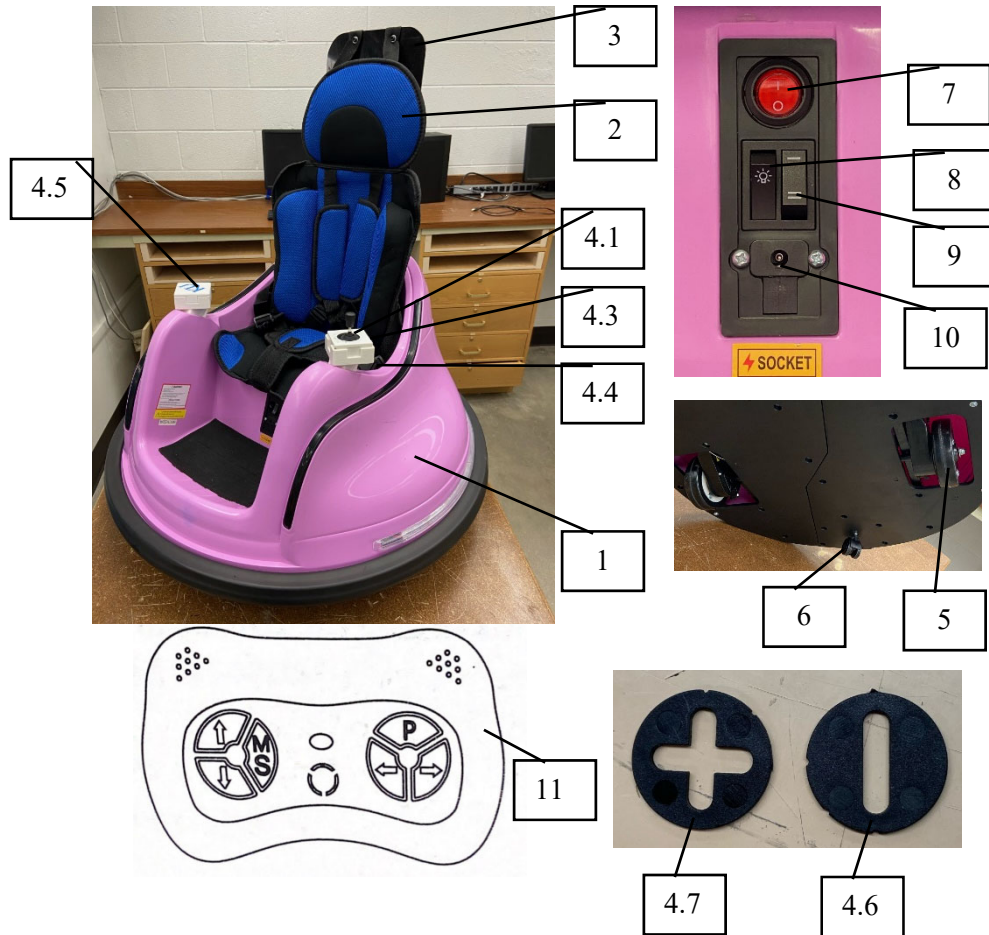
- To Protect against electrical shock, do not immerse cord, charger, transformer, battery, or the product in water or other liquid
- Only use charging devices, transformers, and battery provided or recommended by the manufacturer
- For your children's safety, the product should be assembled by adult
- This toy is not intended for children below 18 months
- Close supervision is necessary when your children is using the product
- Unlatch the battery if not used for a long time
- Personal protective equipment such as helmet is needed when using the product
- Do not use this product as a traffic tool
- Do not use this product on public road, raceway, by the swimming pool, or any potentially dangerous place.
- Do not use this product on slippery surface
- Always keep hands, hair, and clothing away from moving parts
- Maximum users' weight for this product is 66lbs/ 30 kg
- Avoid using this product in tight environment to prevent damage to the product or injury to the user
- Do not use this product in the dark. Only operate this product during daytime or well-lit area
- For your child's safety, please make sure to fasten the seat harness when using this product

### Product Specification

- Speed: 0.7 – 1.3 mph
- Age: 18 – 96 months
- Maximum Weight: 66lbs
- Battery Charge Time: 8 – 12 hours
- Run Time: 2 – 3 hours

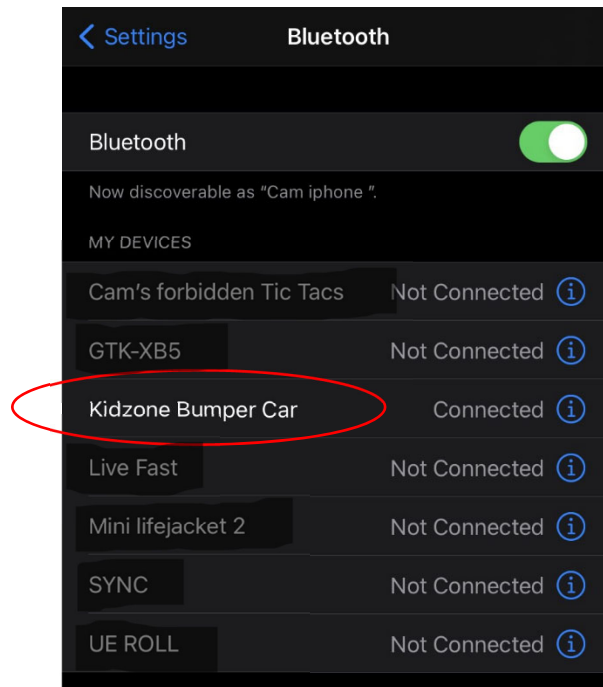
## Parts

1. Powerchair Body
2. Car seat / 5-point harness
3. Backboard
4. Joystick
  - 4.1 Joystick
  - 4.2 Pigtails
  - 4.3 Joystick socket
  - 4.4 Joystick housing
  - 4.5 Opening cover
  - 4.6 2 - way converter
  - 4.7 4 - Way converter
5. Drive wheels
6. Casters
7. Power Button
8. Light Button
9. Speed Button
10. Charging Port
11. Remote Control



## Features

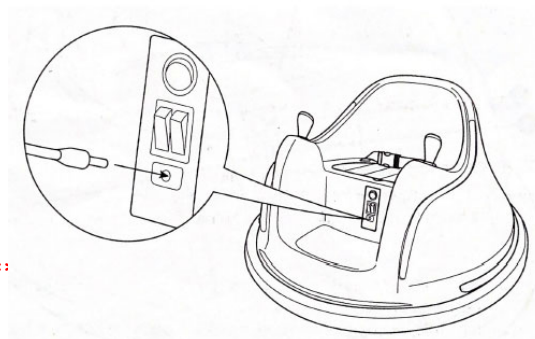
- Bluetooth
  - Settings > Bluetooth > “Kidzone Bumper Car”



## User Instruction

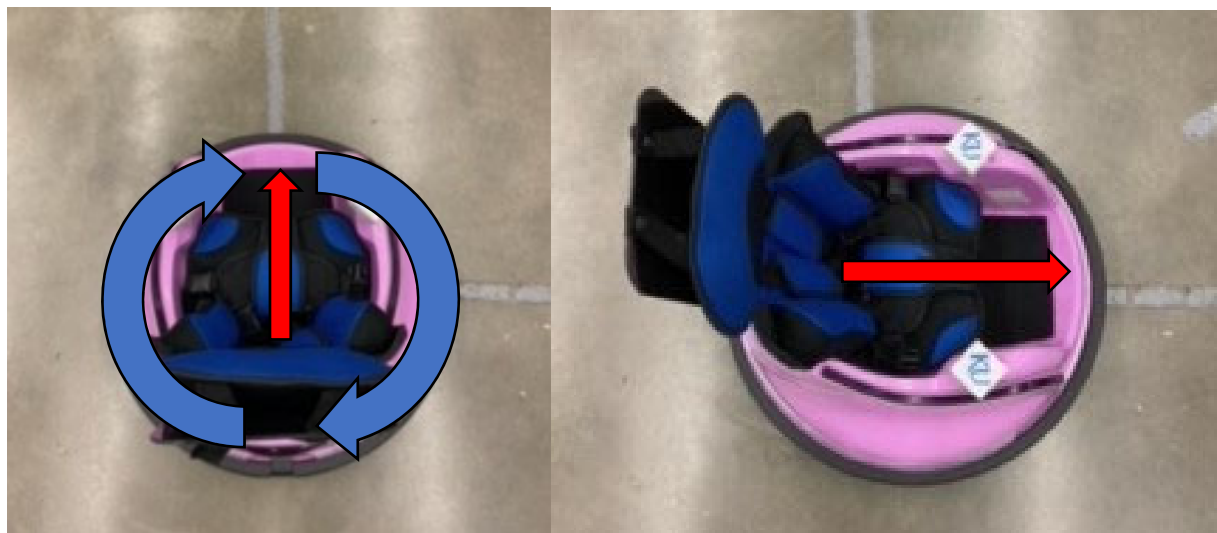
### Charging

- Plug in the charger to the charging port
- Fully charge the battery for 8 – 12 hours
- **\*\*DO NOT charge battery for more than 20 hours\*\***



### Operation

- *Power*
  - Press the power switch just below the seat to turn on the powerchair.
    - “Bluetooth mode” will sound
- *Forward*
  - Press the joystick handle straight forwards, towards the top corner and word “FORWARD.”
- *Backward*
  - Pull the joystick handle straight backwards, towards the back corner and word “BACK.”
- *Turning*
  - ZERO DEGREES
    - LEFT: Press the joystick handle straight left, towards the left corner and word “LEFT”
    - RIGHT: Press the joystick handle straight right, towards the right corner and word “RIGHT”
    - The user will turn either direction, but not move in position
    - **\*\*THIS HAPPENS QUICKLY\*\***



- ARC MOTION

- FORWARD LEFT: Press the joystick handle at an angle, between the words “FORWARD” and “LEFT”
- FORWARD RIGHT: Press the joystick handle at an angle, between the words “FORWARD” and “RIGHT”
- BACKWARD RIGHT: Pull the joystick handle at an angle, between the words “BACK” and “RIGHT”
- BACKWARD LEFT: Pull the joystick handle at an angle, between the words “BACK” and “LEFT”
- The user will move about either wheel and turn left or right while also moving positions forward or backwards



- *Joystick swap*

1. Turn the powerchair off
2. Remove “opening cover” (4.5) from adjacent “joystick housing” (4.4)
3. Remove the joystick with the “joystick socket” (4.3) from current “joystick housing” (4.4)
  - a. **\*\*DO NOT PULL FROM JOYSTICK HANDLE. PULL FROM JOYSTICK SOCKET\*\***
4. Pull the joystick out of the car until both male and female ends of the pigtails are showing
5. Disconnect the male of the pigtails from the female
  - a. This is a bit difficult as it provides an airtight seal
6. Place female end of the disconnected pigtail into its “joystick housing” (4.4)

7. Turn the female end 90 degrees so the long side is perpendicular to the long side of the hole. See following picture

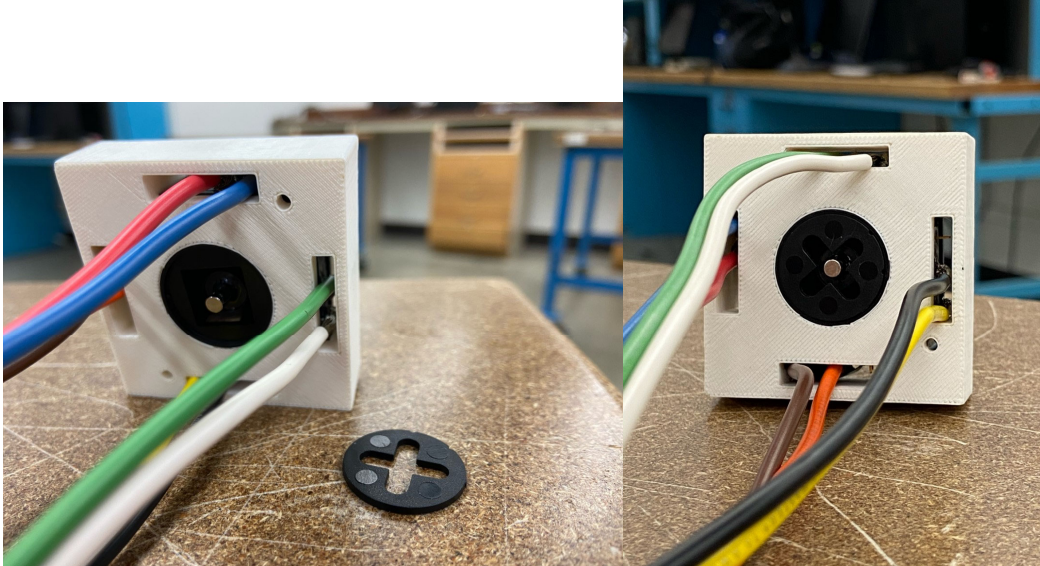


8. Place the “opening cover” (4.5) onto the recently disconnected joystick housing side
9. Connect male end of the pigtail into the other, open side, female pigtail end
  - a. The pigtails only connect one way, it is not possible to connect backwards
10. Rotate the connected pigtails so the long side of the pigtail and long side of the hole are now parallel
11. Place pigtails down into the hole and the joystick with the “joystick socket” (4.3) into the “joystick housing” (4.4) with “FORWARD” facing forward.

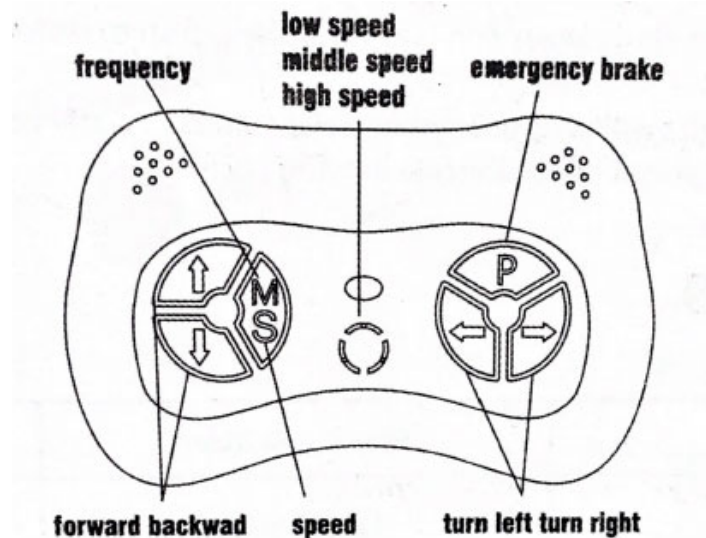
- *Limiting directions of movement*

*This is not generally recommended. Do this only if necessary. The 4-way connector eliminates gradual turns and separates forward/backward motion from right/left zero-radius turning. The 2-way reducer will allow either right/left zero-radius turning only or forward/backward only, but not both.*

1. Turn off powerchair.
2. Unplug the joystick from the car
  - a. Follow steps 3 – 6 from *Joystick swap*
3. Turn joystick, “joystick socket”, and pigtail over and make room to access the center circle
4. Choose which reducer to use
5. Place reducer into center circle with the smooth side touching the joystick
  - a. Note which ways the openings should be facing (facing each corner for the 4 – way reducer [4.7] and the top/ bottom corners for 2 – way reducer [4.6])
6. Use a small narrow object to pick reducer back out of center circle once finished.



- *Remote Control Unit (see image below)*
  - Press the directional buttons on the far left to move the vehicle forward/backward
  - Press the directional buttons on the lower right to turn the vehicle
    - THIS HAPPENS AS A ZERO (RADIUS) TURN
  - Press the “P” button to enable the emergency/parking brake
    - All running functions will be disabled when this one the button is pressed
    - Press the “P” button to re-enable the other controls
  - Press the “S” button to vary the speed of the vehicle
    - Speeds 1, 2, 3
  - \*The “M” button is to connect the controller to the car\*
    - If disconnected, insert batteries and press the “M” button for 2 – 4 seconds and the indicator will flash once connected.





## Seat

The blue seat insert is composed of padding and a 5-point harness for security of the rider. The blue seat insert is attached to the black HDPE backboard and the back of the car for security. We made sure that the blue insert could be removed for cleaning purposes. To remove it, unscrew the bolts and nuts attaching the top straps to the backboard. The bottom straps are pulled through slits in the seat of the car and attached underneath the car. To access this, remove all the screws in the plates on the underside of the car. From here you will see two circular retainers (as seen below), into which the straps are woven. Remove the straps from the circles. To remove the pelvic belt, underneath the car next to each circular retainer is a screw. Unscrew each and pull belt out from the top.



The rest of the insert is held by hook and loop strips (like Velcro) to the backboard and seat so just pull apart the strips and the insert should be completely unattached and able to be washed. When washed, reinstall by reversing these steps.

## Wheels

The car originally came with two cheap plastic wheels as the main drive wheels. We have replaced the main wheels with hard rubber wheels that are very durable so those should not need to be replaced. We also created a new gear using Object 3D printing material that is bolted into the wheel and attached firmly to the axle of the car.

There are also two smaller wheels on the underside of the car called casters. These are there for support and to help balance the car on elevated surfaces. The casters attached are the original ones that came with the car, so they may face more wear and tear. In case they start to wear down, we have given you four extra casters. To replace these, use a screwdriver to take out all the screws in the plate that covers the underside of the car. Once the plate is removed, use a screwdriver to remove the existing casters and use the same screws and nuts to put the new ones back on.