

# [todo] DRIVE USER MANUAL



Contents

1. Safety instructions

1.1. Purpose of use

1.2. Safety Precautions

1.2.1 Symbols used in the instructions

1.2.2 General precautions

1.2.3 Who Should Use

1.2.4 Precautions

2. Product configuration and specification

2.1. Product components

2.1.1 Motor Unit

2.1.2 Joystick Unit

2.1.3 Main Unit

2.1.4 Battery Unit

2.1.5 Clamp

2.1.6 Inner

2.1.7 Other components

2.2. Product specification

3. How to use 17

3.1. Joystick function setting

3.1.1 Bluetooth initialization

3.1.2 Speed level setting

3.1.3 Check the battery level

3.2 How to Operate

3.2.1 How to use and operation sequence

3.2.2 How to use App and manipulation sequence

3.2.3 Attach, remove and charge battery pack

3.2.4 Warning Message

4. How to Store

4.1 Precautions for Storage

4.2 How to Clean

5. Checklist before A/S request

6. Disposal

7. Warranty Policy and Liability

7.1 Service Inquiry

8. Label

8.1 Todo Drive label

8.2 Package handling symbols

Contact Information

Limited Warranty Agreement

3

3

3

3

3

3

4

7

7

8

9

9

10

12

13

14

16

17

17

18

20

21

23

28

29

30

30

30

31

32

32

33

33

33

33

34

35

Use Purpose

This product is a wheelchair power assist device mounted on a manual wheelchair to provide propulsion and a medical device that aims to improve the mobility of manual wheelchair users by helping them move more easily.

1. Safety Instructions

1.1 Purpose of use

This product is a wheelchair power assist device mounted on a manual wheelchair to provide propulsion and a medical device that aims to improve the mobility of manual wheelchair users by helping them move more easily.

1.2 Safety Precautions

- The following precautions are used to protect users and prevent property damage. Please, read them fully and use the product properly.
- Please read the manual carefully and use the product properly before using the product.
- Todo Works is not liable for any accidents and losses that may occur for not being fully aware of the manuals.

1.2.1 Symbols used in the instructions

The symbols below indicate Warning, Caution, Prohibition and Tip respectively. Please pay special attention to the parts marked with these symbols.

1.2.2 General precautions

This product is to be mounted for manual wheelchairs. Please follow the wheelchair instructions and precautions provided by the manufacturer of wheelchair.

1.2.3 Who Should Use

- For your safety, we limit users as following:
- Persons who secure personal safety in an emergency case of sudden situation.
  - Persons who can safely operate the handbrake of the wheelchair in the event of a malfunction
- In addition, if you cannot secure your personal safety according to the level of disability and physical ability, be sure to use it only with the help of an assistant or companion.

| Symbol                                                                                | Name        | Detail                                                                                                                                 |
|---------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------|
|  | Warning     | It means safety precautions. You are required to follow them because failure to do so, it may result in serious harm, injury or death. |
|  | Caution     | If it is not followed, it can lead to product and property loss.                                                                       |
|  | Prohibition | It represents things that you should never do.                                                                                         |
|  | Tip         | <ul style="list-style-type: none"><li>• It is the information that helps you use and understand the product.</li></ul>                 |

1.2.4 Precautions

1) Precautions after purchase

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• Never use anything other than those approved by us.</li><li>• Do not disassemble, modify or remodel the product arbitrarily.</li><li>• Installation of the product is performed by Todo Works engineers or engineers authorized by Todo Works. Do not install the product by yourself or an unauthorized person.</li></ul> |
|  | <ul style="list-style-type: none"><li>• Please use after learning how to use from educator authorized by Todo Works.</li></ul>                                                                                                                                                                                                                                     |
|  | <ul style="list-style-type: none"><li>• Todo Works offers a variety of optional parts (e.g. clamps) separately for effective mounting on a variety of wheelchairs. Therefore, the parts shown in this user's manual may differ from those attached to your wheelchair.</li></ul>                                                                                   |

2) Precautions before Use

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <ul style="list-style-type: none"><li>• Do not hang heavy bags or objects on the wheelchair back. There is a risk of the wheelchair overturning.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|  | <ul style="list-style-type: none"><li>• Before driving, make sure that the various connections (joystick clamps and cables, motor clamps and cables, main unit clamps and cables, battery cables, etc.) of the product are properly connected.</li><li>• Check the inflation pressure of the wheelchair tire before use, as the inflation pressure of the wheelchair tires may affect the driving and brake performance. (For tire inflation pressure, follow the tire inflation pressure recommended by the tire manufacturer.)</li><li>• Make sure the rollover prevention wheel(anti-tipper) is in place before riding.</li></ul> |
|  | <ul style="list-style-type: none"><li>• Check the battery level before riding. If the battery level is low, it can stop during riding.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

3) Precautions for Use

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• This product is designed for wheelchair users. Do not use it for purposes other than its intended purpose (e.g. loading objects).</li><li>• Do not use the remote control function if user is on board.</li><li>• Do not use this product in the environments such as escalators, moving walks, strong electromagnetic fields, steep slopes where there is a risk of overturning of manual wheelchairs, narrow footpaths where wheelchairs cannot pass, near cliffs and cliffs, roads covered with sand, mud, leaves or snow or ice. (If you are driving in an environment other than those mentioned above, judge based on your personal experience and drive safely.)</li><li>• If the road surface gets wet due to snow or rain, the friction between the wheelchair tires and the motor wheel may drop, which may cause the spin with no traction. Lower your speed and drive safely</li></ul> |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <ul style="list-style-type: none"><li>• When starting and stopping, do not start or stop abruptly by operating the joystick suddenly</li><li>• Do not back up the ramp. There is a risk of an accident.</li><li>• Do not drive across the side of the ramp. Risk of a rollover may occur.</li><li>• Never put your hand in wheelchair spokes, between the wheelchair tires and the motor wheels when riding. Also, make sure that clothes or earphone strings are not get caught in those parts mentioned above.</li><li>• Do not operate with the wheelchair brake locked. It may cause product malfunction.</li><li>• Do not distract yourself using the mobile phone while driving.</li><li>• When loading the wheelchair, do not throw the wheelchair equipped with the product.</li><li>• Turn off the power of the main unit when loading it in a vehicle. It may cause the product malfunction or failure.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|  | <ul style="list-style-type: none"><li>• Observe the road traffic laws in your country.</li><li>• Make sure to stop the speed change or check the battery level after stopping in a safe place.</li><li>• When riding in a wheelchair, make sure to turn off the power and lock the wheelchair brakes in a safe place in advance.</li><li>• Drive with Anti-Tipper Wheelchair.</li><li>• Since this product does not replace the brake function, use the wheelchair brake to stop the wheelchair completely.</li><li>• Driving on steep roads, ramps, or uneven roads or during sharp turns may cause the wheelchair center of gravity to collapse and fall to the side. In this case, be sure to slow down and drive safely</li><li>• Wheelchair wheels may get caught in obstacles such as road jaws while riding, so keep your car at a distance long enough to prevent it from being caught.</li><li>• To avoid unexpected situations such as obstacles, sudden stops, and sudden turns, be sure to set your driving speed to the outside environment.</li><li>• If you make a sharp turn or change direction while driving, there is a danger of the wheelchair overturning.</li><li>• When stopping on the slope, stop the wheelchair at right angles to the slope and always use the wheelchair brake.</li><li>• Do not forcibly cross obstacles such as road curbstones or jaws. It may cause an accident and product malfunction.</li><li>• Do not use wheelchair tire covers when using wheelchair at home or indoors.</li><li>• If you hit the furniture or the wall when using wheelchair at home or in a small room, it may cause an accident or breakdown of the product.</li><li>• For folding joysticks, make sure to correctly fix the joystick fixation device</li><li>• Turn off the joystick and lock the wheelchair brakes when stopping in crowded places such as elevators or pedestrian crossings. This prevents accidents caused by accidentally manipulating the joystick or driving the motor or moving the wheelchair wheels.</li><li>• Do not throw the wheelchair equipped with the product when loading the wheelchair.</li><li>• Turn off the main unit when loading the wheelchair. There is a risk of accident due to malfunction of the joystick.</li><li>• If you need help from others to drive smoothly and safely, actively ask for help to prevent accidents.</li></ul> |

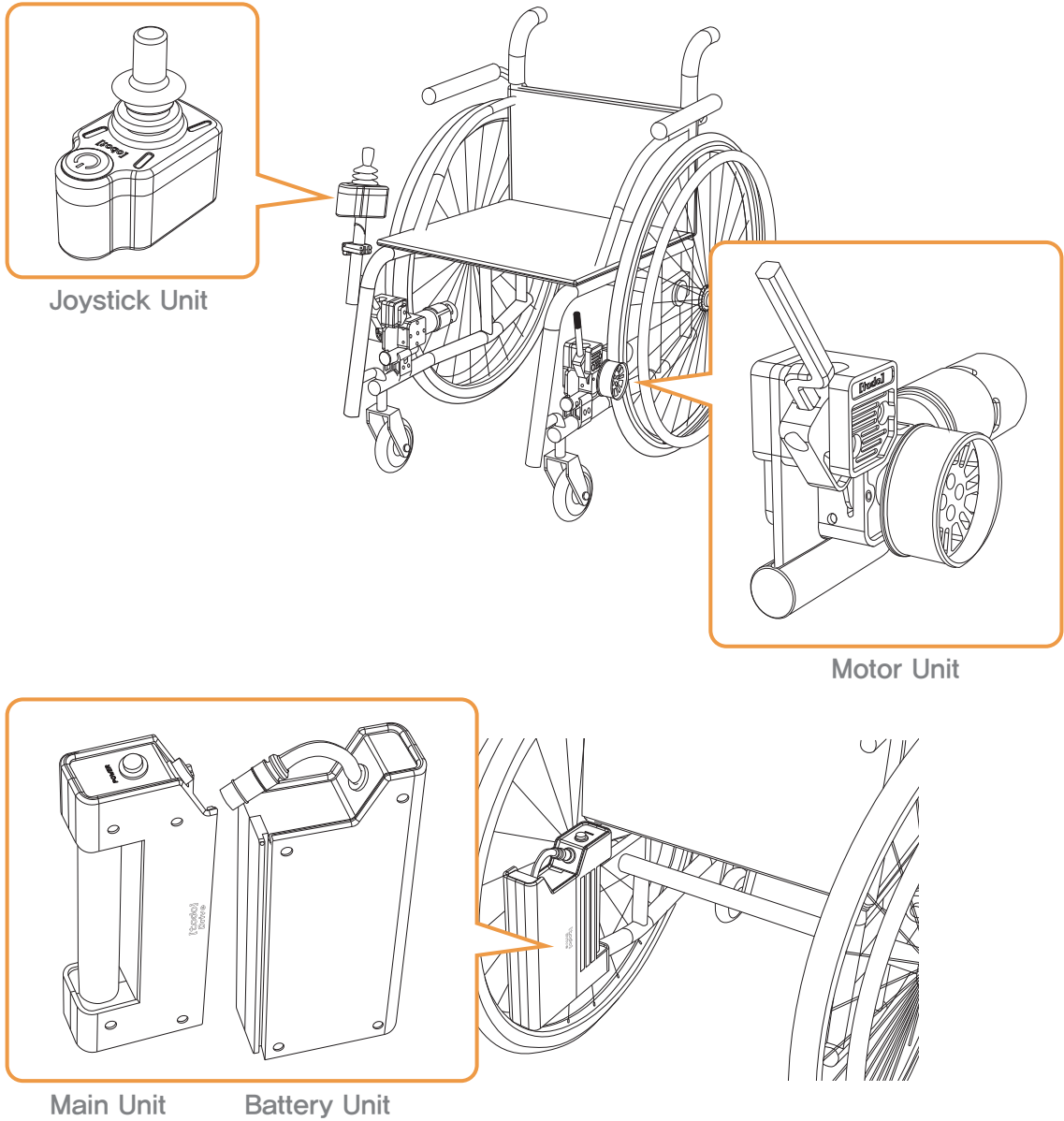
4) Battery Use Precautions

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <ul style="list-style-type: none"><li>• Never disassemble, modify or modify the battery on your own.</li><li>• Do not suddenly remove the battery while driving. It may cause an accident or product malfunction.</li><li>• Do not shock the battery.</li><li>• Do not remove or carry the battery wire by the grip.</li><li>• In case of fire, do not use water or other liquids. Be sure to use a metal fire extinguisher (D-class fire extinguisher)</li><li>• Do not charge the battery in places with high temperature and humidity.</li><li>• Do not store or charge the battery in a place with heating devices or flammable materials.</li><li>• If smoke or abnormal noise occurs during charging, stop charging immediately and contact a service center.</li><li>• Never use the charger to charge any product other than batteries.</li><li>• Do not pull charging cable forcibly when disconnecting the charger from the socket.</li><li>• Do not touch the battery with wet hands while it is being charged.</li><li>• Never put the battery and charger in water.</li><li>• Do not use the battery charger if it is wet.</li></ul> |
|   | <ul style="list-style-type: none"><li>• Stop using immediately if there is damage to the cables or external to the battery and charger.</li><li>• Only use chargers approved by our company for charging the battery.</li><li>• Keep the charger away from preschool children.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|  | <ul style="list-style-type: none"><li>• Charging should be carried out at temperature between 0℃ and 50℃.</li><li>• The charger is designed to work only at 100~240VAC.</li><li>• When charging, make sure the battery and charger are connected properly.</li><li>• Wipe clean with a dry cloth.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|  | <ul style="list-style-type: none"><li>• Fully charge the battery before first use.</li><li>• Always charge the battery fully after using this product.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

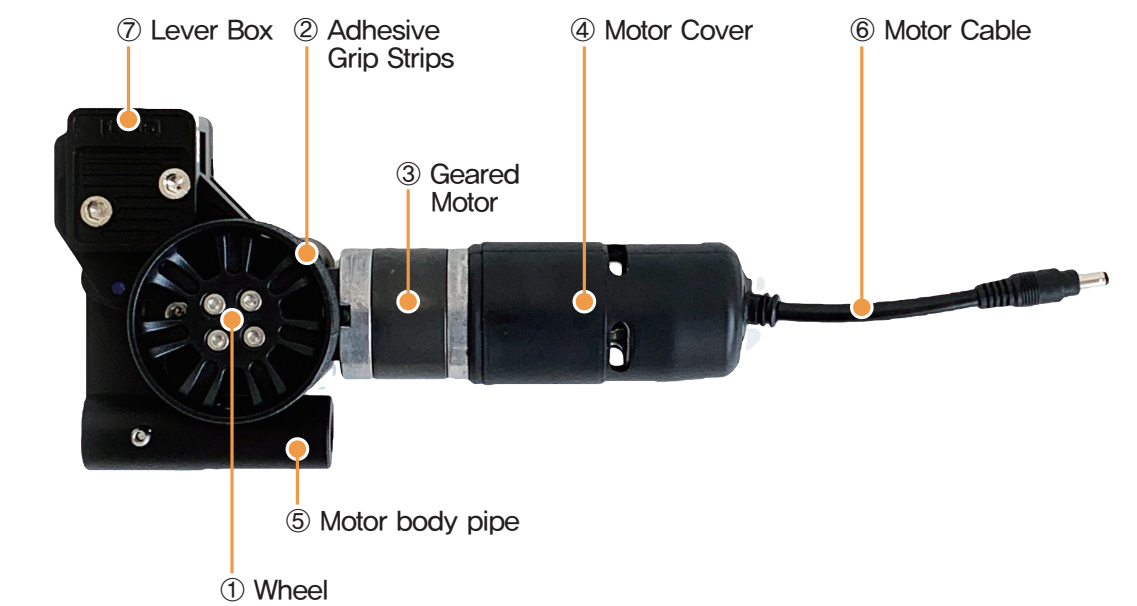
2. Product Configuration and Specification

2.1 Product components

Overall Image



2.1.1 Motor Unit



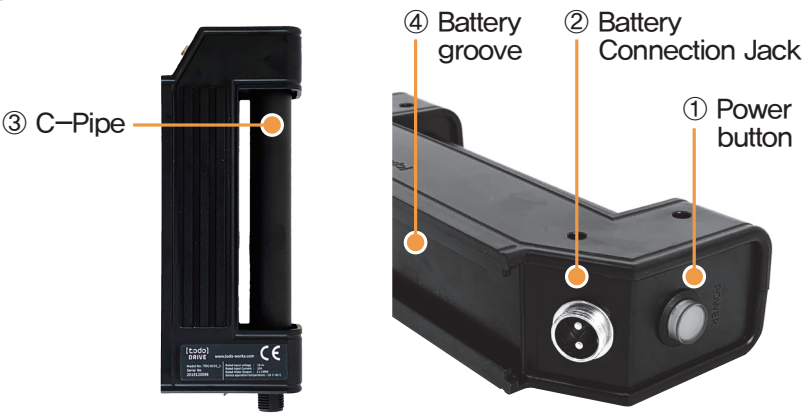
| No. | Item                 | Description                                                                                                | Qt |
|-----|----------------------|------------------------------------------------------------------------------------------------------------|----|
| 1   | Wheel                | Wheels that adhere to the tires of the wheelchair and transfer the driving force of the motor to the tires | 2  |
| 2   | Adhesive Grip Strips | Tape that increases friction between wheel and wheelchair tire                                             |    |
| 3   | Geared Motor         | Parts charged by power to drive wheels and wheels of wheelchairs                                           |    |
| 4   | Motor Cover          | Motor Power Terminal and Motor Rear Cover                                                                  |    |
| 5   | Motor body pipe      | Parts for frame fixing of motor to wheelchair with clamp                                                   |    |
| 6   | Motor Cable          | Cable connecting motor Y-cable left / right to move driving set (motors)                                   |    |
| 7   | Lever Box            | A device that adheres or separates a wheel of a motor to a wheelchair tire                                 |    |

2.1.2 Joystick Unit



| No. | Item                     | Description                                                          | Qt |
|-----|--------------------------|----------------------------------------------------------------------|----|
| 1   | J-Push Button            | Button to turn on / off the main system                              | 1  |
| 2   | Joystick                 | Device that controls the direction and speed of wheelchair movement. |    |
| 3   | Joystick Operation Cable | Cable to operate Main Unit by connecting to Joystick Unit.           |    |

2.1.3 Main Unit



| No. | Item                    | Description                                                 | Qt |
|-----|-------------------------|-------------------------------------------------------------|----|
| 1   | Power button            | Button to turn on/off the main unit                         | 1  |
| 2   | Battery Connection Jack | Jack to connect battery cable to supply power of main unit. |    |
| 3   | C-Pipe                  | Pipe to connect wheelchair and main unit                    |    |
| 4   | Battery groove          | Groove for fastening main unit and battery.                 |    |

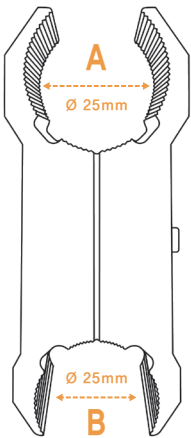
2.1.4 Battery Unit

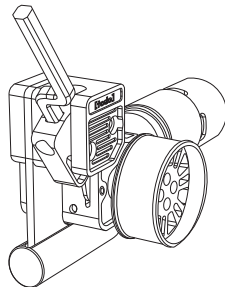
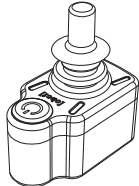
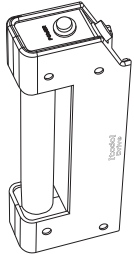


| No. | Item                | Description                                     | Qt |
|-----|---------------------|-------------------------------------------------|----|
| 1   | B-2P Input Circular | Connector cable to connect main unit to battery | 1  |
| 2   | Battery Pack        | Battery to supply power to main unit and motor  |    |

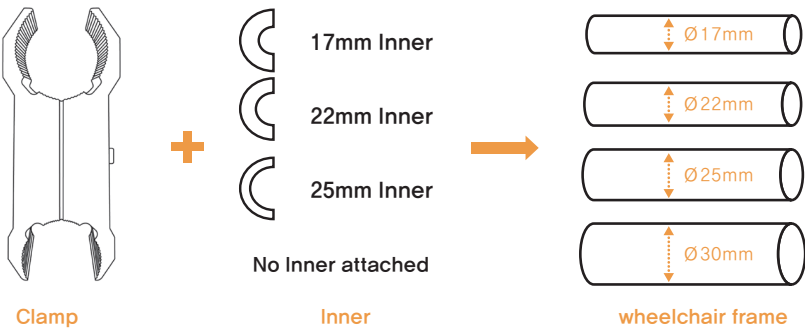
 Fundamental Principal of Clamps and Inners

Mount “A” part on wheelchair frame and mount “B” part on Todo Drive components.

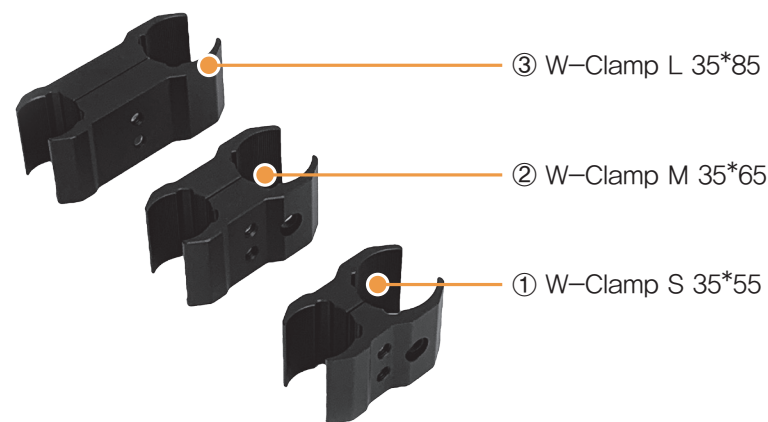


| W-Clamp (S, M, L)                                                                    | T-Clamp S                                                                             | T-Clamp L                                                                            |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |
| Use W-Clamps for Motor Unit mount                                                    | Generally, use T-Clamp S for Joystick Unit mount.                                     | Generally, use T-Clamp L for Main Unit mount.                                        |

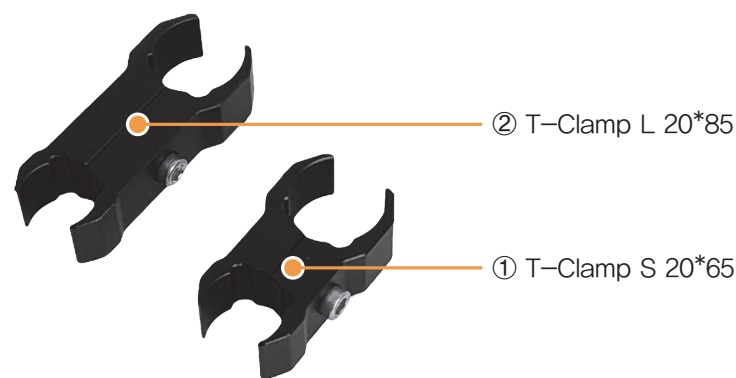
How to attach ‘Clamp Inner’ followed by thickness of wheelchair frame.



2.1.5 Clamp

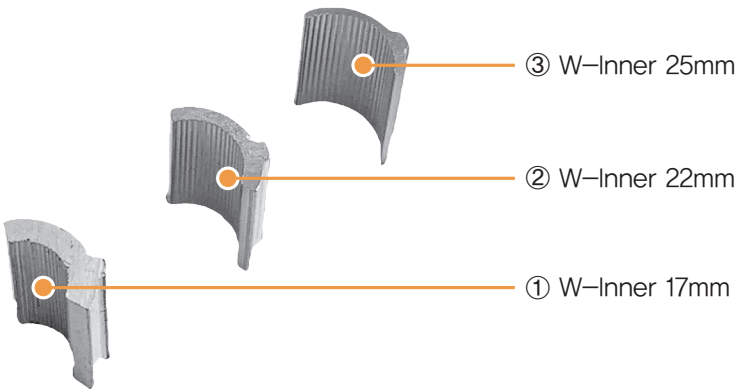


| No. | Item            | Description                                                                                                                                         | Qt |
|-----|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1   | W-Clamp S 35*55 | Parts used to couple the motor to the wheelchair frame (length division: Clamp length depending on whether the X-Bar and the motor are interfering) | 2  |
| 2   | W-Clamp M 35*65 |                                                                                                                                                     |    |
| 3   | W-Clamp L 35*85 |                                                                                                                                                     |    |

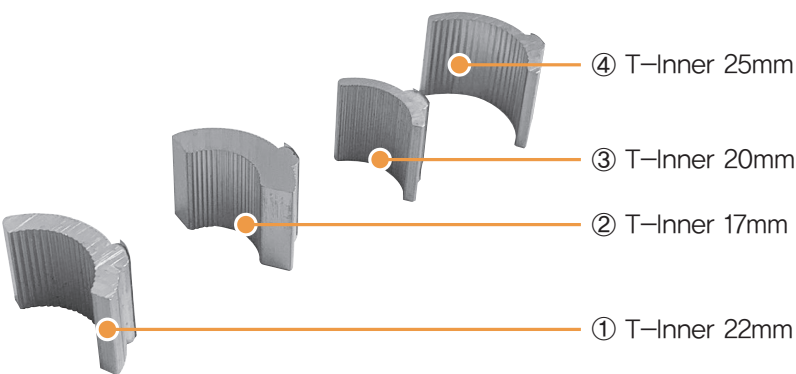


| No. | Item            | Description                                           | Qt |
|-----|-----------------|-------------------------------------------------------|----|
| 1   | T-Clamp S 20*65 | Parts used to couple joystick to the wheelchair frame | 1  |
| 2   | T-Clamp L 20*85 |                                                       |    |

2.1.6 Inner

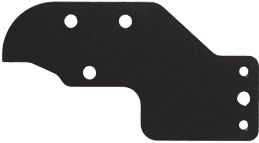


| No. | Item         | Description                                                                                                                                   | Qt |
|-----|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1   | W-Inner 17mm | Attached to 30mm diameter part of W-Clamp and used for coupling (when the wheelchair frame size is the same as the inner diameter of W-Inner) | 4  |
| 2   | W-Inner 22mm |                                                                                                                                               |    |
| 3   | W-Inner 25mm |                                                                                                                                               |    |



| No. | Item         | Description                                                                                                                                   | Qt |
|-----|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1   | T-Inner 22mm | Attached to 30mm diameter part of T-Clamp and used for coupling (when the wheelchair frame size is the same as the inner diameter of T-Inner) | 4  |
| 2   | T-Inner 17mm |                                                                                                                                               |    |
| 3   | T-Inner 20mm |                                                                                                                                               |    |
| 4   | T-Inner 25mm |                                                                                                                                               |    |

2.1.7 Other components

| No. | Image                                                                               | Item                       | Description                                                                                                            | Qt. |
|-----|-------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------|-----|
| 1   |    | Upper Body Bracket 100mm   | Accessories used when wheelchair frame only exists on seat                                                             | 2   |
| 2   |    | Lever 25mm                 | Handle Coupling to Lever Box (length division: 25 mm depending on whether it's interfering with wheelchair)            | 2   |
| 3   |    | Lever 40mm                 | Handle Coupling to Lever Box (length division: 40 mm depending on whether it's interfering with wheelchair)            | 2   |
| 4   |  | Motor Y-Cable              | Cable that connects the motor unit connected to the left / right wheels of the wheelchair to main unit and drives them | 1   |
| 5   |  | J-folding Mount (L: 170mm) | Support for mounting / fixing on wheelchair by joining with Joystick Unit                                              | 1   |
| 6   |  | Todo Charger 16.8V 3.5Ah   | Charging adaptor to charge the battery                                                                                 | 1   |
| 7   |  | Adhesive Grip Strips       | Tape that increases friction between wheel and wheelchair tire                                                         | 4   |

| No. | Image                                                                                 | Item                 | Description                                                                       | Qt. |
|-----|---------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------|-----|
| 8   |    | Hex Key, 5mm         | Fixing device to fix screws of clamp used when mounting TODO DRIVE on wheelchair. | 1   |
| 9   |    | SUS Hex Bolt 4*15    | Bolts to secure wheel                                                             | 4   |
| 10  |    | SUS Hex Bolt 5*15    | Bolts to secure motor body pipe                                                   | 6   |
| 11  |  | SUS Hex Bolt 6*12    | Bolts to secure lever                                                             | 2   |
| 12  |  | Flat Head Screw 3*10 | Bolts to secure folding joystick magnets                                          | 4   |
| 13  |  | Flat Head Screw 4*10 | Joystick and joystick cradle mounting bolts                                       | 6   |

2.2 Product Specification

|                                |                                                                                     |
|--------------------------------|-------------------------------------------------------------------------------------|
| Model Name                     | TDV-V2.1                                                                            |
| Moveable distance (*)          | Max 7km (±5%)                                                                       |
| Climbing angle (*)             | Max 6°                                                                              |
| speed (*)                      | 0.2 ~ 6km/h                                                                         |
| Occupant weight                | Max 90kg                                                                            |
| Usage environment (**)         | Temperature -10℃ ~ 60℃ Humidity < 85%RH                                             |
| Waterproof rating              | IPX0                                                                                |
| Motor rated power              | 2×138.5W                                                                            |
| Communication environment      | Bluetooth 4.0 (Rated frequency 2.4GHz)                                              |
| Recommended device             | Android 4.4 / iOS 8.0                                                               |
| Battery specification          | Li-ion Rechargeable Battery 14.4V Max 10,000mAh 144Wh<br>Charging Time : Within 4hr |
| Storage temperature / humidity | Temperature 3℃ ~ 40℃ / Humidity 0 ~ 70%RH                                           |
| weight (***)                   | Max 5kg                                                                             |
| Expected Product Lifespan      | 2 years                                                                             |
| Application                    | TODO Drive+ V.1.0.3                                                                 |
| Applicable Software            | TODO+Drive-V1.2.0.6                                                                 |

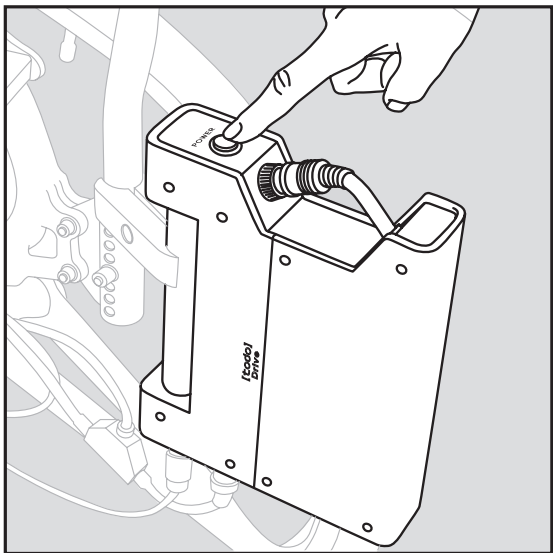


(\*) Varies depending on occupant weight, usage pattern, road conditions, temperature.  
(\*\*) In low temperature, the battery usage time and battery performance may be reduced.  
(\*\*\*) The above specifications may vary depending on the options you selected when you purchased.

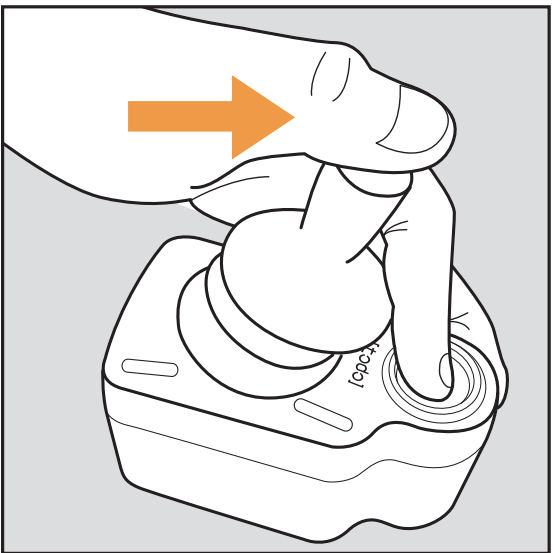
3. How to Use

3.1 Joystick function setting

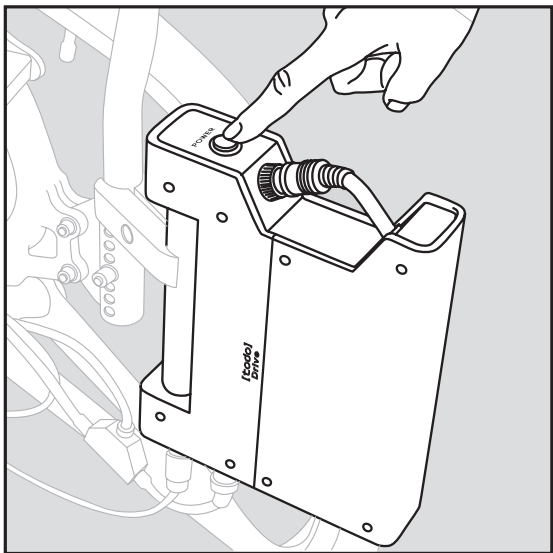
3.1.1 Bluetooth initialization



1) Turn off the main unit.



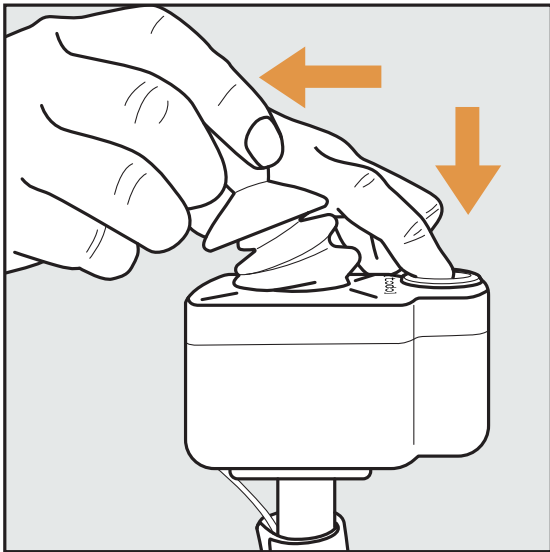
2) Press the power button while pushing the joystick all the way forward.



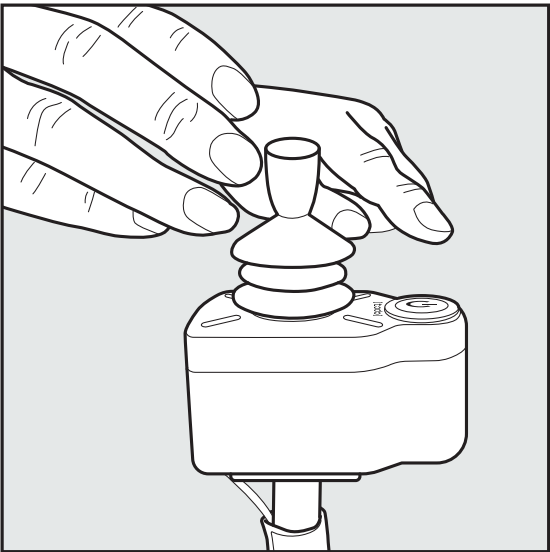
- 3) Turn on the power of the main unit while holding No. 2)
- 4) The buzzer will sound once (“Bee~”) and about 2 seconds later (“Bee~ Bee~ Bee~”) will sound three times to indicate that the initialization is complete.

3.1.2 Speed level setting

① Start speed setting mode

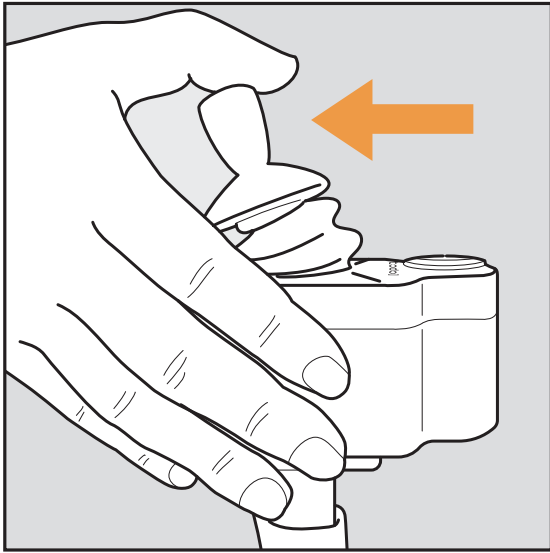


1) Press the power button once while pulling back the joystick.  
(The unit is powered on)



2) When the buzzer sounds three times (“B ~ B ~ B ~”), release the joystick that you pulled backward.

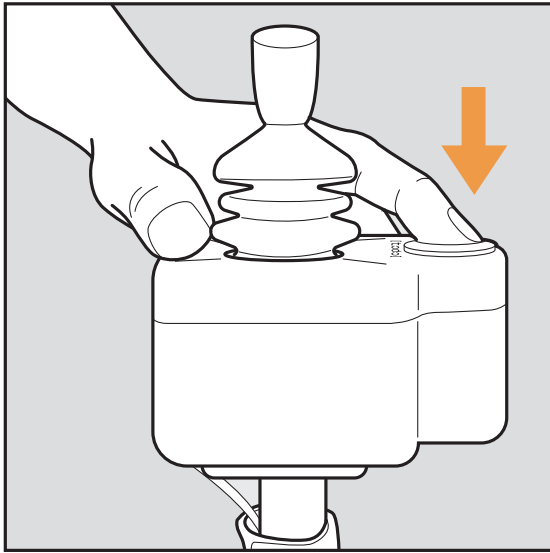
② Set speed level



1) Each time you pull the joystick backward, the speed increases by 1 step. The current speed level is indicated by the number of flashing LEDs on the push switch and the number of buzzers.

| Level | Max. Speed | Buzzer/LED |
|-------|------------|------------|
| 1     | 0.9Km/h    | 1 time     |
| 2     | 2Km/h      | 2 times    |
| 3     | 3Km/h      | 3 times    |
| 4     | 4Km/h      | 4 times    |
| 5     | 6Km/h      | 5 times    |

③ Set speed level



1) When the buzzer sound of the desired speed level is heard, press the power button for 3 seconds and confirm that the start sound (“Bee ~ Lee ~ Ring”) and the LED of the power button light up.



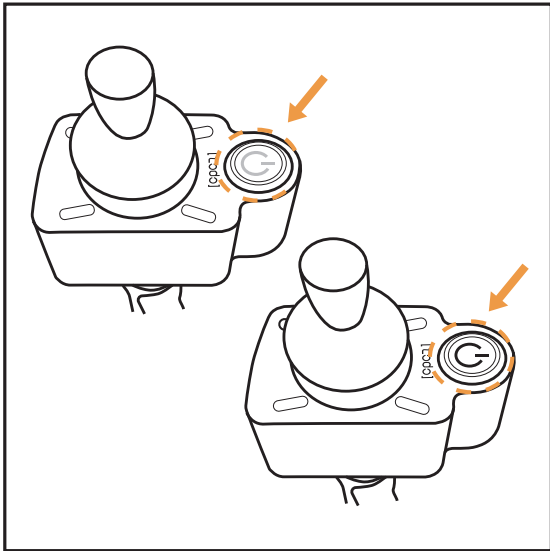
■ Be sure to change the speed after stopping in a safe place without any inclination or obstacles.



■ The last set speed is retained even if the power is turned off and on after the speed is set.

3.1.3 Check the battery level

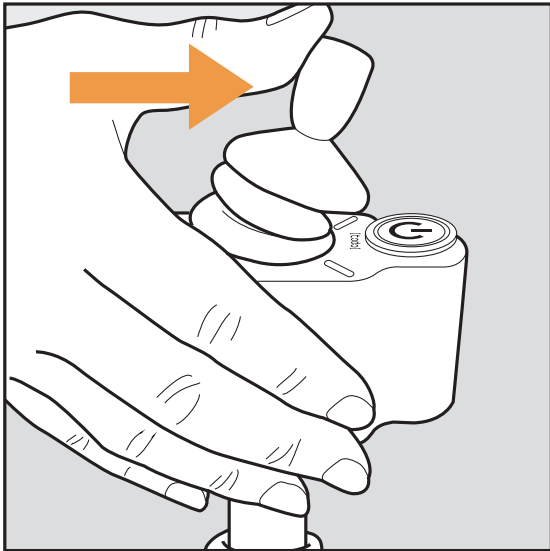
① Start battery check mode



- 1) Press the power button once to turn on the power.
- 2) Press the power button one more time to turn off the power.

| Battery Level | Buzzer/LED |
|---------------|------------|
| 100~90%       | 6 times    |
| 90~30%        | 10 times   |
| Less than 30% | 30 times   |

② Check the battery level by buzzer sound and LED



- 1) If the joystick is pushed for 2 seconds while the power is off, the LED blinks with buzzer sound.



Check the battery level while joystick is turned off.

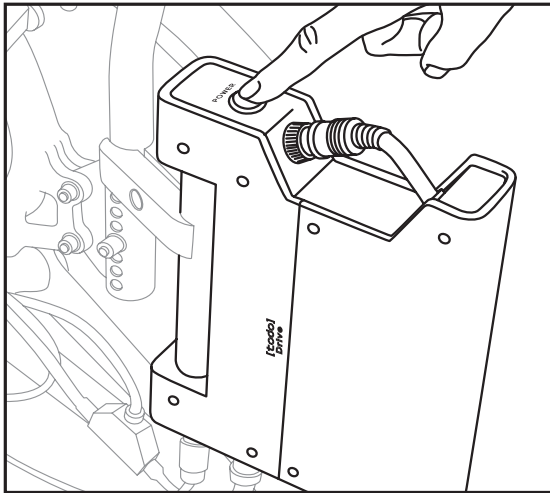


Be sure to change the speed after stopping in a safe place without any inclination or obstacles.

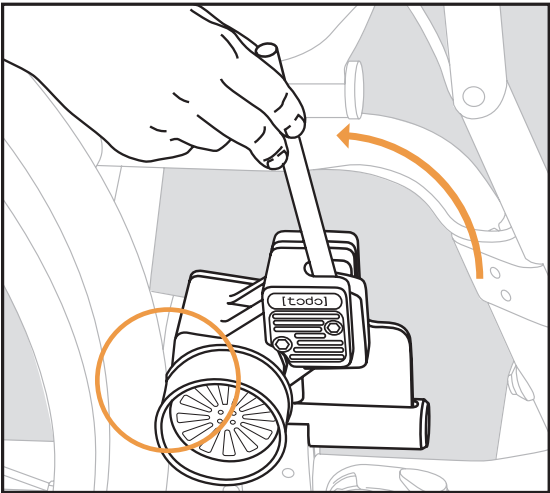
3.2 How to Operate

3.2.1 How to use and operation sequence

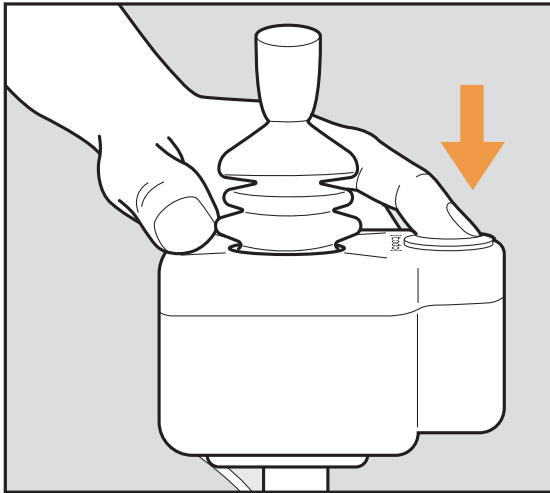
① Motorized operation On



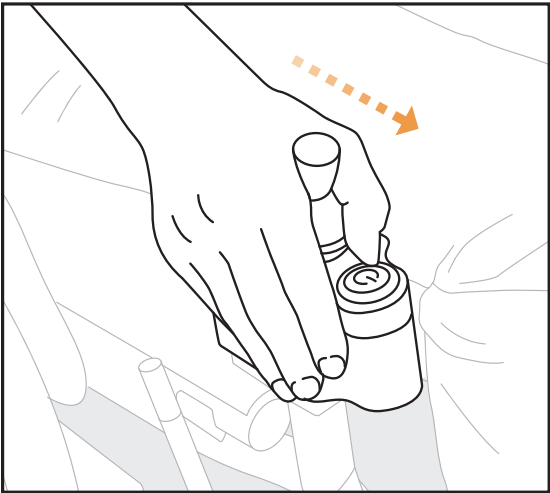
- 1) Turn on the power of main unit.



- 2) Pull the levers on both wheels so that the motor wheel is in close contact with the wheelchair tires.



- 3) Press the power button of the joystick for 3 seconds to check starting sound ("Bee~ Lee~ Ring~") and LED blinking of the power button.

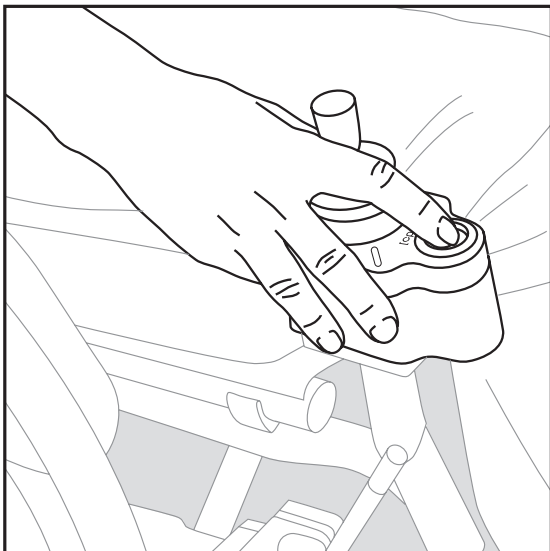


- 4) Push the joystick forward slowly.

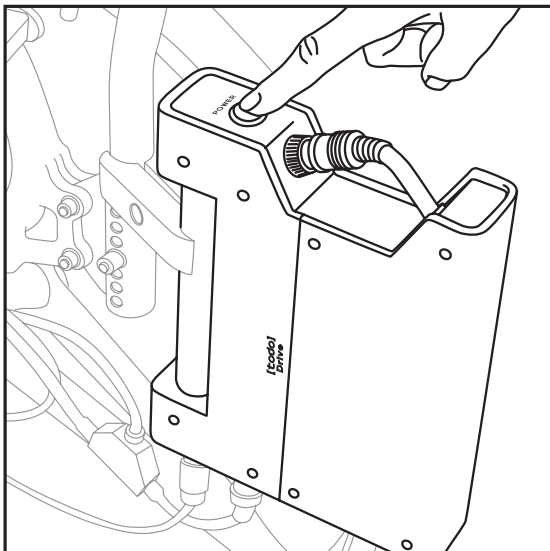


Operate the joystick smoothly and slowly. Sudden operation of joystick increases the risk of accidents and wears tires quickly.

② Motorized operation Off

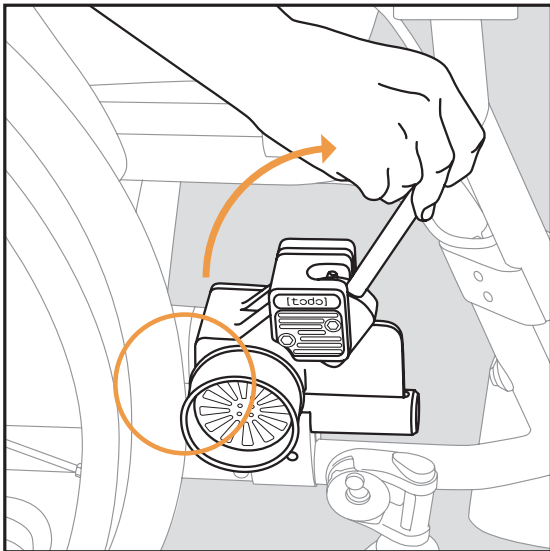


1) Turn off the power of the joystick.



2) Turn off the main unit's power for complete power off.

③ Manual operation



1) Push or pull the motor levers on both sides of the wheel to remove the motor wheel from the wheel of wheelchair.

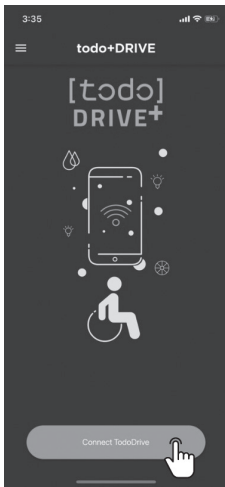
3.2.2 How to use App and manipulation sequence

- Search for 【TodoDrive+】 on the Google Play Store or AppStore.
- Download 【TodoDrive+】 App
- 【TodoDrive+】 App is compatible with Andorid 4.4 or later / iOS 8.0 or later.



▪ Data charges may apply when downloading from a data usage environment.

① Bluetooth Initialization



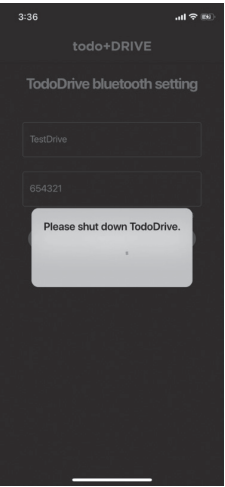
01 Initial Screen

Touch the **【Connect Todo Drive】** at the bottom of the Start screen.



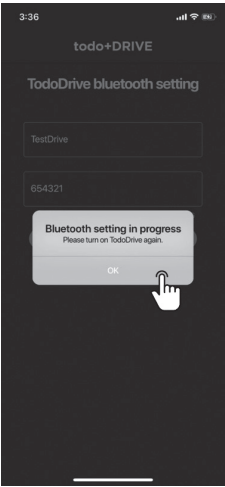
02 Device selection Screen

Select TODODRIVE out of searched device.



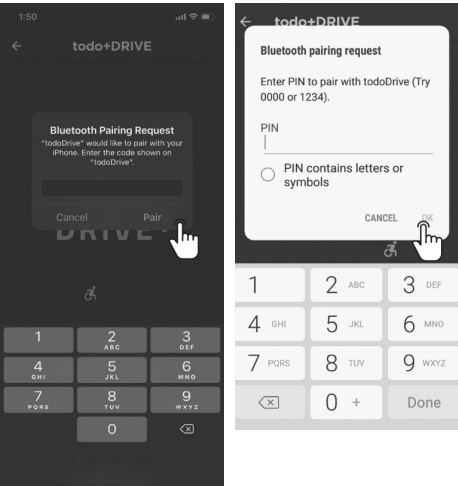
05 Bluetooth Initilization

Enter your desired device name and PIN number. After touching **【Apply】** button, turn off the product's main unit.



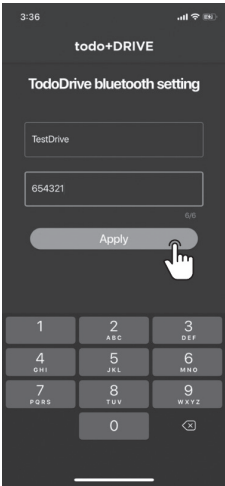
06 Bluetooth Initilization

After turning off TODODRIVE main unit and then **【Setting Bluetooth】** window pops up, turn on the product's main unit and touch Confirm button.



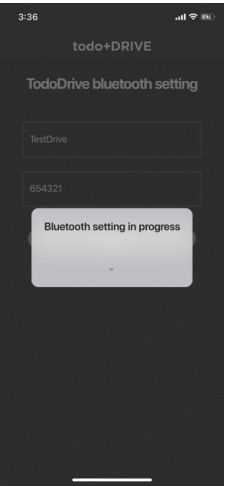
03 Enter PIN number

Enter TODODRIVE initial PIN number **【123456】** and touch the **【Connect by Pair】** button. (Within 30sec)



04 Bluetooth Initilization

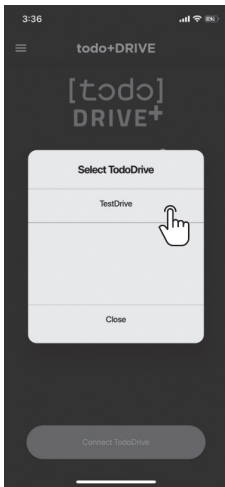
Reset device name and PIN number at the first Bluetooth connection. Device name can only be English except TODODRIVE.  
PIN Number : 6 digits except **【123456】**



07 Bluetooth Initilization

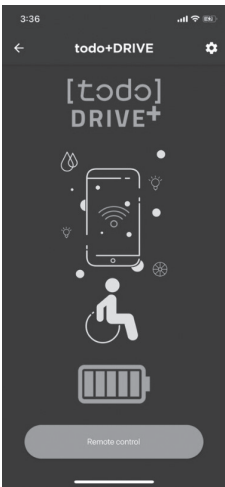
When turning on the main unit, it goes back to the first screen which will be connected to the revised TODODRIVE.

② How to use TodoDrive+



01 Device Selection

Among the searched equipment, select your product.



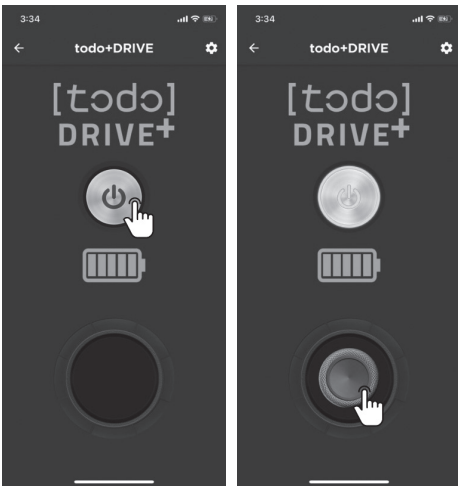
02 Main Screen

Move to main screen after normal connection of App and TODODRIVE. The battery level and 【Remote control】 functions are displayed on the screen.



03 Remote Control Screen

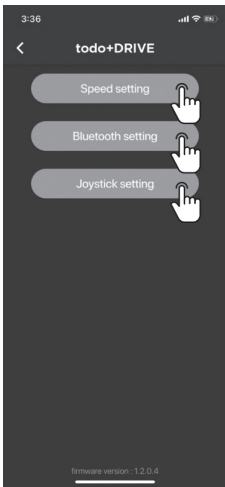
After touching 【Remote control】 button, move to the main screen after complete safety agreement.



04 Remote Control Screen

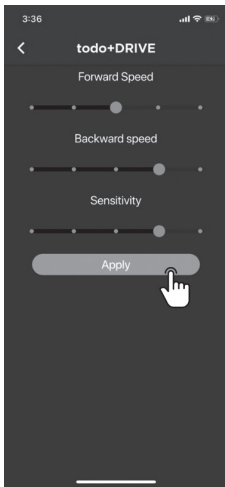
The product's joystick power may be turned ON/ OFF. Remote control is activated when the power on.

③ Personalizing Function Setting



01 Setting Screen

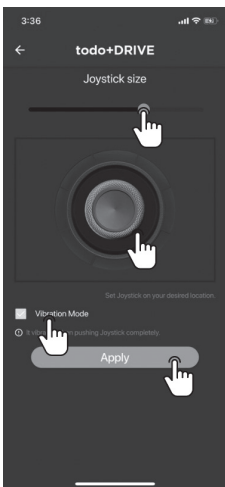
Touch the setting icon on the top right corner and speed, Bluetooth, and joystick settings will be displayed. Each button accesses to each setting screen.



02 Speed Setting

It can adjust Forward/Reverse speed and Joystick sensitivity on the speed setting screen.

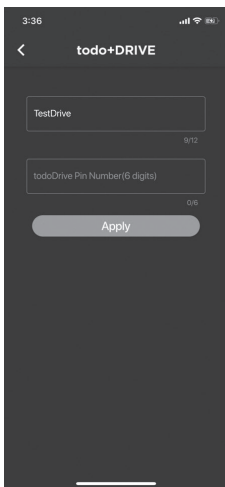
- Forward speed : Lev. 1 ~ 5 (Max. Speed : 6km/h)
- Reverse speed : Lev. 1~5 (70% of Forward speed)
- Sensitivity : Adjust Joystick responsiveness of every direction.



03 Joystick Setting

It customizes Joystick size, location and activates vibrate mode.

Vibrate mode : Vibration occurs when the app joystick is out of the max operating range.

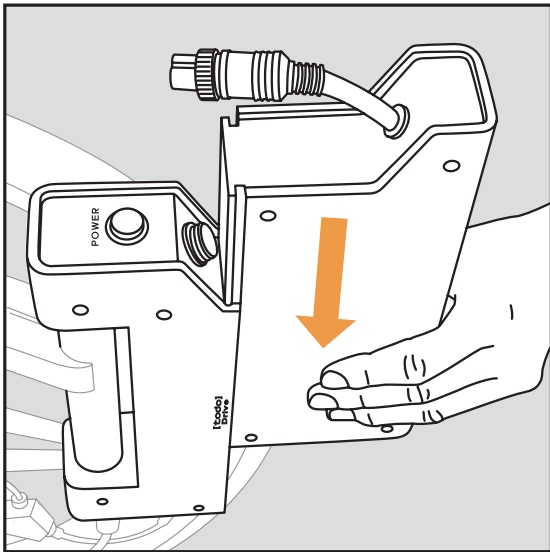


04 Bluetooth Setting

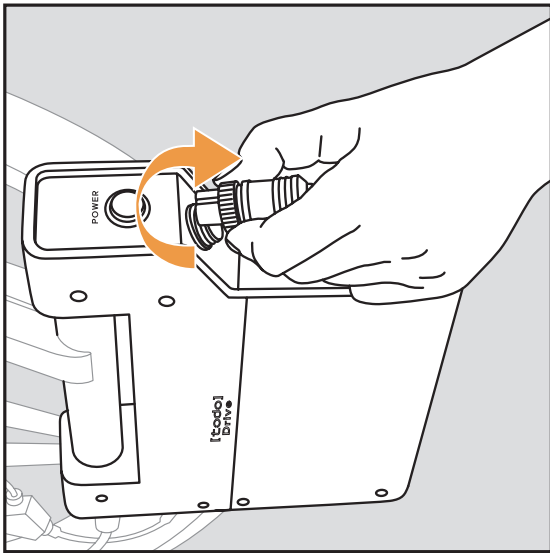
Set to change the default device name and PIN number. Setting method is same as initial Bluetooth setting method.

3.2.3 Attach, remove and charge battery pack

① Attach and remove battery pack



- 1) Align the grooves on the battery pack with the main unit as shown in the figure. The battery pack will not slide out to the side when properly fitted.
- 2) Slide the battery pack all the way down until it matches the bottom.

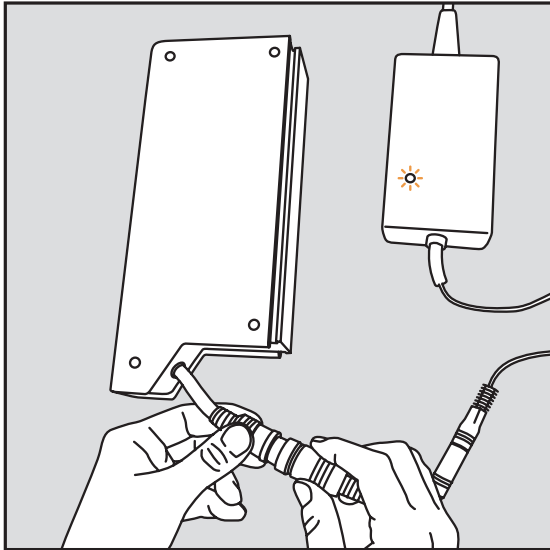


- 3) Connect the plug of the battery pack to the socket on the control section.
- 4) Turn the metal ring of the wire connection to the right to secure the wire completely.

▪ After inserting the battery pack, be sure to turn on the main unit to check whether the battery pack is properly connected.

▪ Remove the battery in the reverse order of installation.

② Battery pack charging



- 1) Connect plug of the battery to the socket of charger
- 2) Red LED light on charger
- 3) Green LED lights up when charging is complete

▪ The time taken to charge the battery depends on the remaining battery charge and can take up to 4 hours.

3.2.4 Warning Message

1) Over Current Protection Alarm

- ① Phenomenon
  - The beep(“Bee~~~~”) keeps beeping for more than 10 seconds on the control panel.
  - Even when the joystick is operated at maximum, the forward / reverse and left / right controls are applied very slowly.
- ② Measure
  - Move to a safe place and then turn off and turn on the system.
  - Slow down and avoid \*excessive uphill driving.
  - If symptoms persist, turn off the system power, switch to manual mode, and contact our company or your specialist dealer.

2) Over Temperature Protection Alarm

- ① Phenomenon
  - The periodic beep (“Bee ~ Bee ~”) at 1 second intervals continues to beep on the joystick section.
  - The wheelchair does not move forward, only the left / right turns

- ② Measure
- Leave the actuator cool.
  - Slow down and avoid \*excessive uphill driving
  - If symptoms persist, turn off the system power, switch to manual mode, and contact our company or your specialist dealer.

3) Battery Low Voltage Protection Alarm

- ① Phenomenon
- The beeper (“Ti Ti Ti ~”) sounds quickly on the joystick and the LED blinks for 5 seconds. After the blinking stops, the same alarm pattern repeats after about 30 seconds.
- ② Measure
- Check the condition of battery pack connection.
  - If the connection is correct, prepare for charging because it needs charging.
  - If there is extra battery pack, move to a safe place for battery replacing.

\*Excessive uphill: A ramp of 10° or more



▪ If the warning alarm persists, contact us or your dealer.

4. How to Store

4.1 Precautions for Storage

- 
- Do not touch the motor while it is in use or immediately after use because the motor may be hot.
  - Do not store or leave in a humid place.
  - Do not store or leave in direct sunlight or high temperature.
- 
- Turn off the power of main unit when not using this product. Joystick may be accidentally operated, or battery discharged.

4.2 How to Clean

Never clean components with a high pressure washer or running water and do not use cleaning agents or chemicals.  
Keep this product clean as it is frequently dusty and soiled. Use a dry cloth or brush to remove dust and debris and clean it once a week.

5. Checklist before A/S request

Before calling for service, read the user manual and try to solve the problem for the following symptoms. If the problem is not solved, contact us or your dealer.

- Main power does not work.**
- Check the battery cable connection.
  - If the battery is well connected, remove it and then charge it with a dedicated charger.
  - If the power does not turn on even after charging the battery, contact us.
- Joystick does not turn on.**
- Check if the main unit is turned on.
  - Check the joystick cable connection.
  - Make sure the joystick is not moved when the power is turned on. This product does not turn on if the joystick movement is detected when the power is turned on.
  - If the problem is not solved, contact us.

- One or both motors do not spin.**
- Make sure you have pressed the joystick power switch for at least 3 seconds. This product enters safe mode when pressed for less than 3 seconds when the joystick is turned on, and the motor does not move in safe mode.
  - Check both motor cable connections to the main unit.
  - If the problem is not solved, contact us.

- Tire wear is severe.**
- Check the wheelchair tire pressure.
  - Check the condition of motor wheel grip strips.
  - If the tire pressure and the wheel tape are intact, check the distance between the motor wheel and the tire.
  - If the problem is not solved, contact us.

- It can't climb the slope well.**
- Check the slope. The recommended climbing angle is 6°.
  - Check the battery level. If the battery level is less than 30%, charge the device sufficiently before operating the device.
  - Check the tire pressure and wheel tape condition. Insufficient tire pressure or abrasion of the wheel tape can cause problems in climbing the slope due to low friction between the tire and the wheel tape.
  - If the problem is not solved, contact us.

- Even though you operate the joystick while the power is on, the wheelchair does not move.**
- Check if the power button has been pressed for more than 3 seconds.
  - Check if the hand brake is tightened.
  - Make sure the wheels are not stuck in the obstacles.
  - If the problem is not solved, contact us.

6. Disposal



The device should be disposed in accordance with the local regulatory requirements.

7. Warranty Policy and Liability

Todo Works provides a two-year free warranty from the date of purchase on the product determined to be a manufacturing defect. However, even if the product is not delivered to the customer, the warranty period begins six months after the date of shipment to the distributor. The manufacturer’s obligations due to manufacturing defects is limited to the replacement of parts found to be defective with new or refurbished parts (However, the battery shall be limited to provide one-year free warranty from the date of purchase.) The customer must sign the warranty policy agreement document at the time of purchase for the warranty to take effect.

Defective parts occurring within the warranty period will be repaired, replaced or refunded at the manufacturer’s sole discretion. In this case, the manufacturer will be responsible for the shipping cost of sending back and returning of the part.

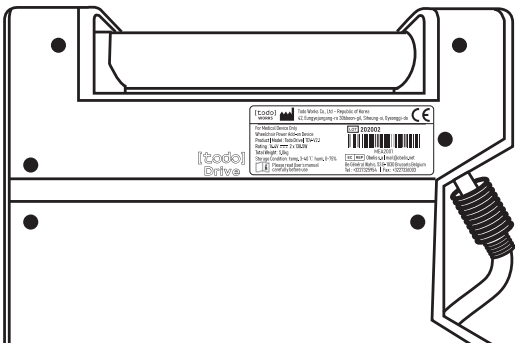
In the warranty period, a replacement fee will occur in the following cases. All transportations and incidental expenses incurred at the time of sending back and return shall be covered by the responsible person.

- 1. Defects resulting from non-compliance with the user manual (improper installation, operation, and maintenance); Customer negligence
- 2. Defects caused by installation or repair with parts other than the manufacturer's genuine parts
- 3. Defects caused by unauthorized modification and repair of the product
- 4. Defects caused by natural disasters and accidents during transportation
- 5. A / S request for the product whose serial number is changed, damaged or removed
- 6. A / S request for general abrasive consumables

The warranty period is not extended due to the A / S history that occurred during the warranty period. The warranty for any product or part exchanged within the warranty period shall expire on the same date as the original warranty of the product itself. This warranty is the buyer's sole remedy for the product and the seller's exclusive obligation. Policy regarding out of warranty products is at the discretion of the place of purchase. Some other countries may have different terms and conditions of warranty. Only Todo Works reserves the right to change this warranty.

7.1 Service Inquiry

Contact your Todo Drive dealer if any maintenance, repair, or service is required. The serial number of the product is required for A / S request. See the image below for the serial number location.



8. Label

8.1 Todo Drive label



8.2 Package handling symbols

|                        |                                           |                |                  |
|------------------------|-------------------------------------------|----------------|------------------|
| Keep way from sunlight | Waste Electrical and Electronic Equipment | No open flames | Fragile          |
| Temperature 3~40℃      | This way up                               | Recyclable     | Direct current   |
| Keep away from rain    | Authorized Representative                 | Manufacturer   | Intended For Use |

Contact Information

This manual can be downloaded from Todo Works Co., Ltd. website. In case there is any problem in Todo Drive components, please contact the local dealer or the head office of Todo Works Co., Ltd specified below.



**Todo Works Co., Ltd – Republic of Korea**  
42, Eungyejungang-ro 306beon-gil, Siheung-si (14923), Gyeonggi-do  
T: +82-80-427-7272 | W: www.todo-works.com | M: todo@todo-works.com



Obelis s.a - Belgium  
Bd Général Wahis, 53 B-1030 Brussels  
T: +3227325954 | F: +3227326003 | M: mail@obelis.net



Todo Drive conforms to the requirements laid down in the European Medical Device Directive 93/42/EEC as well as the applicable sections of standard DIN EN 60601-1-2, EN 62366:2008, EN 62304:2006, EN 15223-1:2012, EN ISO 14971, ISO 13485 : 2016, and ISO7176-8.

For Dealer

Limited Warranty Agreement

|                      |  |                     |  |                                                          |  |                            |  |          |  |
|----------------------|--|---------------------|--|----------------------------------------------------------|--|----------------------------|--|----------|--|
| Customer Information |  |                     |  |                                                          |  |                            |  |          |  |
| Customer Last name   |  | Customer First name |  | Middle Initial (if you have)                             |  | Birthdate(6–digits)        |  |          |  |
| Street Address       |  |                     |  | City                                                     |  | State                      |  | ZIP code |  |
| Phone number         |  | Email address       |  | Todo Drive Serial Number<br>(Label affixed on Main Unit) |  | M                          |  |          |  |
| Purchase Date        |  |                     |  | Wheelchair Brand                                         |  | Wheelchair Model           |  |          |  |
| MM                   |  | DD                  |  | YY                                                       |  |                            |  |          |  |
| Dealer Information   |  |                     |  |                                                          |  |                            |  |          |  |
| Company              |  | Dealer Name         |  | Address                                                  |  |                            |  |          |  |
| Dealer Signature     |  |                     |  |                                                          |  | Remarks about the Customer |  |          |  |

Todo Works provides limited warranty to customers who have purchased a Todor Drive from an authorized dealer. Warranty agreement form shall be completed and signed, so be sure to fill them outwith the dealer at the time of purchase. You may fill out this form in hand and submit it to the dealer.

User’s Agreement of Todo Drive Mobile Application  
Todor Drive users can download a free Todor Drive App on their smartphone. (Both Android and IOS) For more information on using the app, read the user manual and pay extra attention to the safety and risk information included.

Follow the road traffic laws and regulations applicable to the country in use. Todo Works is not responsible for any damage (accident, failure, damage, or etc) caused by non–compliance with road traffic laws and regulations.  
Remote control shall be only used when there is no person in the wheelchair. Todor Works is not responsible for any damage caused by use in violation of this statement.

I UNDERSTAND THE ABOVE AND AGREE THAT THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE BREACH.

NAME : \_\_\_\_\_ DATE : \_\_\_\_\_ SIGNATURE : \_\_\_\_\_



## Todo Drive User Manual

©2020 by Todo Works Co., Ltd

1st edition, Mar 2020  
All rights reserved.

Any reprinting or unauthorized use  
without the written permission  
by Todo Works Co., Ltd is expressly  
prohibited.

Printed in Republic of Korea.