INTCO MEDICAL

STAR

Powered wheelchair

User's manual

CE

Content

STAR
2025-06

1. Preface

Congratulations! You are now the owner of a STAR powered wheelchair!

This powered wheelchair is made by qualified and committed personnel. It is designed and produced according to high-quality standards guarded by Intco.

Please read this Owner's Manual before operating your powered wheelchair for the first time. Improper use of the powered wheelchair may result in harm, injury, or traffic accidents.

If you still have questions after reading this manual, do not hesitate to contact your specialist dealer. They will be glad to help you on this subject.

WARNING!
Improper use could lead to death, serious injury, hazardous conditions, or product malfunction.

ATTENTION!
Improper use could lead to injury and/or damage to your powered wheelchair.

SUGGESTION!
Follow these instructions for best practices, and to keep your powered wheelchair in prime operating order.

If someone else uses the powered wheelchair, please provide a copy of the Owner's Manual for their consideration.

This Owner's Manual is composed of the product design and specifications at the time of publication. As design changes, some illustrations and pictures in the manual may not correspond to the powered wheelchair you purchased. We reserve the right to make design modifications.

The manufacturer disclaims all responsibilities for any personal injury or property damage that may occur due to improper or unsafe use of this product.

2. Safety Notice

- Be aware the device is a heavy duty power wheelchair and is designed for indoor and outdoor use. Extreme care should be taken when driving on unknown terrain or soft soil.
- Regarding to the basic model which is equipped with manual tilting and reclining adjustment function of the seat, do not operate the adjustment mechanism while somebody is sitting on the seat.
- Read and follow the information in the owner's manual. Do not use this product or any available optional equipment without first thoroughly reading and understanding these instructions. If you cannot understand the warnings, cautions, or instructions, contact your dealer before attempting to use this equipment. Otherwise, injury or damage may occur. Never try to use your powered wheelchair beyond its limitations, as described in this manual.
- Keep your feet on the footrest at all times during operation. Do not stand on the footrest.
- Only drive on flat surfaces where all four wheels touch the ground and have sufficient contact to operate the powered wheelchair safely.
- If the battery gauge drops to red, charge the powered wheelchair as soon as possible. Completely discharging the batteries may damage the batteries or shorten the expected life of the batteries.
- Keep metal objects away from the battery terminals. Electric shock may occur.
- Always reduce your speed and maintain a stable center of gravity when cornering. Do not corner sharply when driving powered wheelchair at higher speeds, and reduce speed before cornering.
- Make sure that there are no obstacles behind you while reserving your powered wheelchair.
- Do not allow children to play near or operate the powered wheelchair.
- Some of the parts of the powered wheelchair are susceptible to change in temperature. The controller can only operate in temperature that ranges between -10ºC ~ 40ºC (-14ºF to 104ºF).
- At extremely low temperatures, the batteries may freeze, and your powered wheelchair may not be able to operate. In extremely high temperatures, it may operate at slower speeds due to a safety feature of the controller that prevents damage to the motors and other electrical components.
- Store in a clean and dry condition.
- Do not drive your powered wheelchair at night without proper lighting.
- Do not remove the anti-tip wheels or transit wheels.
- Keep your hands and feet away from moving parts while driving. Be aware of loose-fitting clothes that can become caught in the drive wheels.
- Surface temperatures can increase when exposed to external sources of heat.
- Do not connect an extension cord to the battery charger.
- Disassembling the controller, motor, or charger by anyone other than an authorized service agent is prohibited and voids any applicable warranty.

2. Safety Notice

- Do not take your powered wheelchair on roads or highways.
- Do not use your powered wheelchair if you are under the influence of alcohol, medicines, or other substances that may influence your driving abilities.
- Be cautious when driving your powered wheelchair in busy areas or shopping malls.
- Do not attempt to lift your powered wheelchair by any parts other than the frame (for example, seat or body shrouds)

3.1 General

Before operating your powered wheelchair, fully read and understand this Owner's Manual.

Users may encounter difficult maneuvering situations such as narrow doorways, traveling up and down ramps, cornering, and traveling on uneven terrain. Be sure to lower the speed, take your time, and carefully maneuver the powered wheelchair.

3.2 INTENDED USE

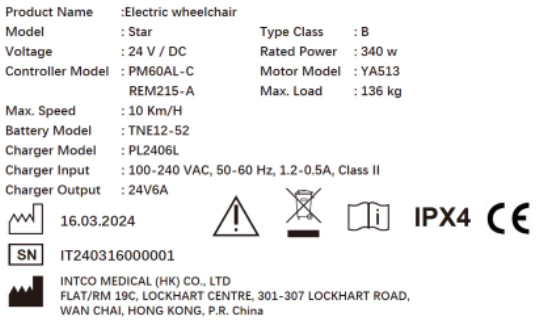
The intended use of this device is to provide mobility to persons limited to a seated position that have the capability of operating a powered wheelchair.
Powered wheelchair is designed for the easy transport of people. It is designed for the use of one person with maximum weight 136Kg, not passengers (including children). Powered wheelchair is designed for adults, not goods, and not for people under 16 years of age. Powered wheelchair is a kind of transportation device, which compensates people with mobility difficulties.

Powered wheelchair consists of frame, motors, controller, batteries, wheels, shells, hardware accessories and so on. The operator must read the product specification carefully and abide by its requirements before using it for the first time, otherwise, this product shall not be used.

This product is repeated use of medical devices many times. This product is used independently in clinic and is not used with other medical devices. This powered wheelchair is not suitable for hemiplegia or paraplegia and this powered wheelchair shall not be used for mentally disabled person.

3.3 Product Safety Symbols

The symbols below are used on the powered wheelchair to identify warnings, mandatory actions, and prohibited actions. It is very important for you to read and understand them completely.



Powered wheelchair information label.

This powered wheelchair complies with ISO 7176-19 standards for occupied transport in a motor vehicle. When travelling in a motor vehicle, the user may remain seated in the powered wheelchair, provided it is properly secured in accordance with the instructions.

Fully charge batteries before operating.
Power off an unattended powered wheelchair.

STAR powered wheelchair is suitable for use as a seat for an occupant when in a motor vehicle.

Manufactured in China.

Contact your local recycling center or authorized provider for information on proper recycling of product components.

Indicates component is for indoor/outdoor use (battery charger excluded).

Contains Lead.

Your product must be disposed of according to applicable local and national statutory regulations. Contact your local recycling center or authorized provider for information on proper disposal of product components.

Indicates a potentially hazardous situation which, if not avoided, could result in death or severe injury. Property damage may also result.

Indicates electrical shock hazard.

EMI-RFI - This product has been tested and passed at an immunity level of 20 V/m.

Indicates that explosive conditions exist.

Corrosive chemicals contained in batteries.

Pinch/Crush points exist.

Indicates a mandatory action that should be performed as specified in order to avoid a hazardous condition/situation. Failure to perform mandatory actions can lead to personal injury and/or equipment damage.

Read and follow the information in the owner's manual.

Indicates maximum weight capacity. Stay within the specified weight capacity of your product.

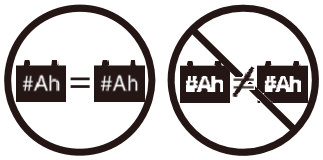
Use only AGM or Gel-Cell batteries to reduce the risk of leakage or explosive conditions.

Wear safety goggles.

N = Neutral (Brakes disengaged; unit in Freewheel Mode)

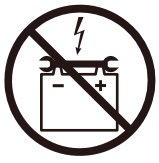
D = Drive (Brakes engaged; unit in Drive Mode)

Indicates a prohibited action that should not be performed at any time or in any circumstances. Performing a prohibited action can cause personal injury and/or equipment damage.



Do not use batteries with different amp-hour (Ah) capacities. Do not mix old and new batteries. Always replace both batteries at the same time.

Do not mix AGM and Gel-Cell batteries.
Always use batteries of the same type andchemistry.



Keep tools and other metal objects away from battery terminals. Contact with tools can cause electric shock.

Do not allow unsupervised children to play near the powered wheelchair while the batteries are charging.

Removal of grounding prong can create electrical hazard. If necessary, properly install an approved 3-pronged adapter to an electrical outlet having 2-pronged plug access.

Do not connect an extension cord to the AC/DC converter or the battery charger.

Indicates flammable material. Do not expose to heat sources such as open flame or sparks. Do not transport batteries with flammable or combustible items.

Avoid exposure to rain, snow, ice, salt, or standing water whenever possible. Maintain and store in a clean and dry condition.

Do not remove anti-tip wheels.

Keep your hands away from the tires when driving. Be aware that loose fitting clothing can become caught in the drive tires.

Do not engage freewheel mode on an incline.

Do not engage freewheel mode on a decline.

24V 38AH Battery capacity label

24V 52AH Battery capacity label

3.4 Modification

Do not modify, remove, disable, or add any parts, features, or functions on your powered wheelchair. Intco offers a wide variety of accessories for your powered wheelchair to help accommodate your needs.

WARNING – Do not modify your powered wheelchair in any way; doing so will void the warranty.

3.5 Safety Check

ATTENTION – Inspect the following components before each use:

- Electrical connections and wire harness – secure and free from corrosion
- Batteries – fully charged and free from corrosion
- Brake – check the electromagnetic brakes are functioning
- Folding system – ensure the powered wheelchair is fully folded out
- The condition of the tires – make sure they are not damaged or excessively worn

If you notice a problem please contact your authorized Intco Provider for assistance.

3.6 Weight Capacity

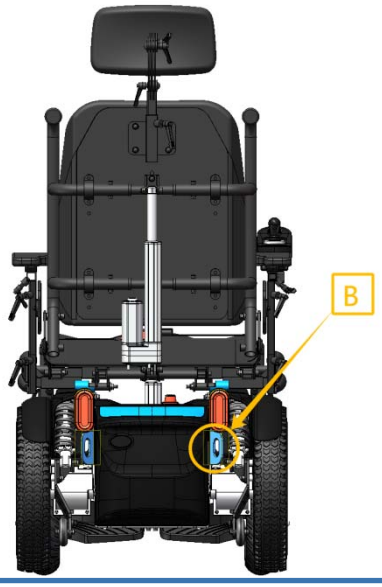
This powered wheelchair is designed and produced solely to transport one person with a maximum weight of 136kg. It is not designed to transport goods or objects or use other than the transport previously described.

WARNING – Exceeding the maximum weight capacity will void your warranty. Intco will not be held responsible for injury or damages resulting from failure to observe weight capacities.

3.7 Transporting Your Powered Wheelchair

When transporting your powered wheelchair by vehicle, it should be securely stowed in the back of a van or truck. Adjustable parts should be removed or properly secured during transport.
Your powered wheelchair is suitable for land and maritime transport.

In order to ensure the safety of the user and to ensure that the powered wheelchair is not damaged during transport, securement-strap must be hooked to the securement points (A) and (B) on the wheelchair following the supplier instructions of the strap-system.



The securement straps must be hooked to the designated securement points (A) and (B) on the wheelchair in accordance with the supplier instructions of the strap-system.
Under this condition, the user may remain seated in the powered wheelchair while the vehicle is in motion.

3.8 Incline Guidelines

Use caution when approaching inclines or declines; if necessary lower the speed before traveling on a slope.
When traveling up an incline, you need to try to keep the powered wheelchair moving forward. If you must come to a stop, use caution and slowly accelerate the powered wheelchair forward.

When traveling down an decline, lower the speed on your powered wheelchair to the lowest setting, and proceed cautiously. If the powered wheelchair is traveling down the decline faster than you expect, slowly release the joystick to come to a stop, then slightly push the joystick forward to continue safely down the decline.

WARNING – Drive your powered wheelchair straight up or down an incline, never backward. Erratic movements or back and forth patterns may increase the chance of tipping. Changes in inclines may decrease stability. Under any circumstances, do not travel on a slope greater than the maximum stability angle for this powered wheelchair.

3.9 Outdoor Operation & Inclement Weather Precautions

While your powered wheelchair is suitable for indoor and outdoor use to assist you in daily living activities, Intco understands there are times you need to operate the wheelchair outdoors and has designed it to perform superbly on level outdoor surfaces.

ATTENTION – When operating outdoors, avoid uneven terrain, soft surfaces, tall grass, loose gravel, loose sand, freshwater, saltwater, edges of streams, lakes, or oceans. If you are unsure about a surface, avoid it.

Exposure to inclement weather should always be avoided. If you find yourself caught in inclement weather while operating your mobility scooter, proceed to the closest shelter immediately. Completely dry your powered wheelchair before operating, charging, or storing.

3.10 Physical Limitations

This powered wheelchair is designed and produced solely to transport one person with a maximum weightof 136kg , and the user must have good eyesight , lucid consciousness . You must exercise awareness, caution, care, and common sense when operating your wheelchair. Always keep in mind your own limitations, and substance use when operating your powered wheelchair.

WARNING – Never use your powered wheelchair while under the influence of alcoholor mind-altering substances. Never smoke while seated in your wheelchair. Damaged or worn upholstery increases the risk of fire hazards and should be replaced immediately.

ATTENTION – Be aware of precautions, warnings, and safety issues when taking prescribed or over-the-counter drugs while operating your powered wheelchair.

3.11 EMI Information

Electromagnetic interference (EMI) tests have been shown to produce adverse effects on the performance and control of electrically powered mobility devices.

EMI can be produced from different sources such as cellular phones, two-way radios, radio stations, television stations, amateur radio transmitters (HAM), wireless computer links, microwave signals, paging transmitters, and transceivers used by emergency vehicles.
The EMI waves can cause unintentional movement of the powered wheelchair or damage to the controller. Every electrically-powered mobility device has a resistance to EMI. The higher the resistance level, the greater the protection. The intensity of the interference can be measured in volts per meter, V/m. At this time, current technology is capable of achieving an immunity level of 20 V/m, which provides protection from more common sources of EMI. Your powered wheelchair, with no modifications, has an immunity level of 20 V/m.

EMI becomes more intense as you move closer to the source. The EMI produced from hand-held radios is of special concern. It is possible to unintentionally bring high levels of EMI very close to the powered wheelchair's control system, affecting your movement and braking. The warnings listed below are recommended to prevent possible interference with the control system of your wheelchair.

WARNING – Do not operate hand-held transceivers such as CB (citizens band) radios, or turn on personal communication devices, such as cellular phones, while the powered wheelchair is powered on.

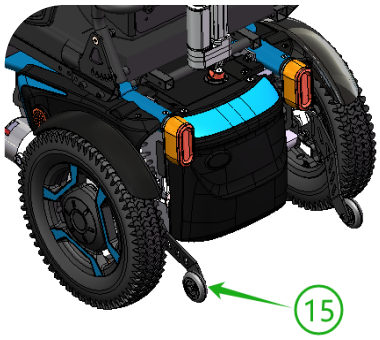
WARNING – Be aware of nearby transmitters, such as radio or television stations, and avoid close.

3.12 Fireproof performance

Ignitability of upholstery according to ISO16840-10 .

4. Your Product

The STAR powered wheelchair is easy to operate and is suitable for indoor and outdoor use. The following picture shows all parts that are relevant for the user/driver. In the operation and maintenance section, these parts are described if applicable.



1. Headrest
2. Backrest
3. Armrest
4. Operating console
5. Seat
6. Footrest
7. Footplate
8. Front wheels
9. Battery housing
10. Driving motors
11. Rear wheels /Driving wheels
12. Front lights
13. Rear lights
14. Safety belt
15. Anti-tip wheels

4.1 Manual Freewheel Lever

Whenever you need or want to push your Powered Wheelchair for short distances, you can put it in freewheel mode.

1. Locate the manual freewheel lever at the front of the driving motors.
2. Push inward on the manual freewheel lever to disable the drive and the brake systems. You may now push your Powered Wheelchair.
3. Push the manual freewheel lever outward to reengage the drive and the brake systems; this takes your Powered Wheelchair out of freewheel mode.

Drive Mode

Freewheel Mode

WARNING – Before placing your Powered Wheelchair into or taking it out of freewheel mode, power off your wheelchair. Never sit on a Powered Wheelchair when it is in freewheel mode. Never put a Powered Wheelchair in freewheel mode on any incline. When your Powered Wheelchair is in freewheel mode, the braking system is disengaged.

- Disengage the drive motors only on a level surface.
- Ensure the wheelchair is powered off.
- Stand to the side of the wheelchair to engage or disengage freewheel mode.
- Never sit on a Powered Wheelchair to do this.
- After you have finished pushing your Powered Wheelchair, always return it to the drive mode to lock the brakes.

1. Battery gauge
2. Power button
   Status indicator
3. Drive speed selector
4. Lights
   (hazard lights and left indicator)
5. Speed dial
6. Seat function selector
7. Horn button
8. Lights
   (position and right indicator)
9. Joystick

4.2 Battery Gauge

When the Power button is pressed down to power up your wheelchair, this gauge indicates approximate battery strength. For further information on the battery gauge, see 8. “Batteries and Charging.”

4.3 Power button/Status indicator

To switch ON the powered wheelchair, press the power button. The power button is the only user input that can activate the system of wheelchair.

- If there is no fault with the system, the status indicator (through the power button) will light up green, and the battery gauge will display the current battery status.
- If there is a fault with the system when powering up, the status indicator will indicate the fault with a series of red flashes, do not hesitate to contact your specialist dealer. They will be glad to help you on this subject.

Power On

Power Off

To switch OFF the powered wheelchair, press the power button; the system will power down and the status indicator will switch off.

4.4 Drive speed selector

The wheelchair's drive speed can be selected with the drive speed select button.

- Press the top of the button to select the next drive speed.
- Press the bottom of the button to select the previous drive speed.

The drive speed selected is indicated on the drive speed indicator, which is located to the right-hand side of the drive select button.The indicator has three LEDs:

Drive speed select button and display

- when drive speed 1 is selected, the bottom indicator will be lit, meaning the current maximum speed is on **'Low'** level.
- when drive speed 2 is selected, the bottom and middle indicators will be lit, meaning the current maximum speed is on **'Medium'** level.
- when drive speed 3 is selected, all indicators will be lit, meaning the current maximum speed is on **'High'** level.

4.5 Seat Function selector

A seating function for activating motions can be selected with the seating function select button.

- Press the top of the button to select the next seating function.
- Press the bottom of the button to select the previous seating function.

Seat function select button

WARNING – only seating functions that have been programmed will be available for selection.

The selected seating function is displayed on the drive/actuator status indicator as shown below.

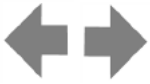
Seating function	Display	Seating function	Display
Tilt		Recline	

4.6 Hazard lights

- To switch on the hazard lights, press and quickly release the left-hand lighting button once. LEDs behind the left-hand button and right-hand button will flash on and off for the duration the hazard lights are operating.
- To switch off the hazard lights, press the left-hand or right-hand lighting button.

4.7 Indicator lights

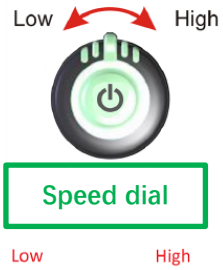
- To switch on the left indicator, press and hold the left-hand lighting button once The LED behind the left-hand button will flash on and off for the duration the left indicator lights are operating.
- To switch on the right indicator, press and hold the right-hand lighting button once. The LED behind the right-hand button will flash on and off for the duration the right indicator lights are operating.
- To switch off either indicator, press the left-hand or right-hand lighting button.



4.8 Position lights

- To switch on the position lights, press the right-hand lighting button once.
- The LED behind this button will remain on for the duration the position lights are operating.
- To switch off the position lights, press the button again.

4.9 Speed dial



The speed dial allows the user to limit the maximum speed of the wheelchair (that is, the speed when the joystick is fully deflected) to suit their preference and environment.

The dial offers 10 discrete steps between the lowest speed (dial set to the left) and the highest speed (dial set to the right).

As a visual reminder, a speed symbol (shown right) is positioned by the speed dial to indicate the low and high positions of the speed dial.

4.10 Horn Button

This button activates a warning horn. Your Powered Wheelchair must be turned on for the horn to beoperational. Press the horn button to sound the horn The horn will sound for as long as the horn button is pressed. Do not hesitate to use the warning horn when doing so may prevent accident or injury.

4.11 Joystick

The joystick controls the direction and speed of drive and seating functions.

Direction control -driving

When the joystick is deflected from the neutral position, the wheelchair will move in the same direction as the joystick.

Direction control-seating

For seating functions, user has to select the actuator first by using the Seat function select button.

When the joystick is deflected forward from the neutral position, the seating motion of selected actuator will extend.

When the joystick is deflected backward from the neutral position, the seating motion of selected actuator will retract.

Stopping

In general, to stop driving or to stop a seating motion, either pull the joystick back to the neutral position, or release the joystick and it will automatically return to the neutral position.

4.12 Lock function

The lock function is used, primarily, to restrict who can use the system, but also can help prevent unintentional use of the controls for when the system is not required for any length of time.

When a system is locked (see below), the system is powered down, and the user controls are not responsive. If the power button is pressed when the system is locked, the locked status is displayed to the user by the battery gauge.

To unlock the system, an unlock sequence must be performed (see below) by the user within a specific time frame. If the sequence is not performed correctly, within the time frame, the system will remain locked and the system will power down again.

Power On

To power down and lock the system, press and hold the power button for 4 seconds.

When entering the locked state, the battery gauge will indicate the transition by flashing LEDs 1, 3, and 5 (far left,middle, and far right) 3 times.

System locking

Power Off

To power up and unlock the system, press the power button once, and then, press the horn button twice — the horn button must be pressed twice within 10 seconds of pressing the power button.

System unlocking

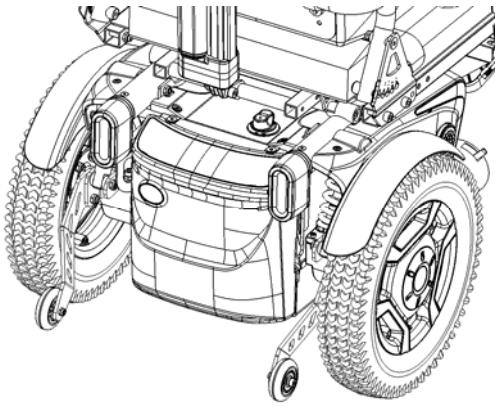
If the user implements the unlock sequence incorrectly, or the power button is pressed again before the unlock sequence is complete, the system will return to the locked state.

During an unlock attempt, the battery gauge will indicate the system is in a locked state by flashing LEDs 1, 3, and 5 (far left, middle, and far right) until either the system is powered off, unlocked, or the Sequence Timeout is reached.

4.13 Anti-tip wheels

The anti-tip wheels of this Powered Wheelchair has good performance and strong safety.

The design of the anti-tip wheels enhances the stability of the wheelchair. This reduces the likelihood of the wheelchair tipping over during the uphill process.



5.1 Before getting onto your powered wheelchair

- Have you fully charged the batteries? See 9. “Batteries and Charging.”
- Is the manual freewheel lever in the drive (outward) position? Never leave the manual freewheel lever in the inward position unless you are manually pushing your Powered Wheelchair.
- Ensure the air temperature is between 14°F/-10°C to 104°F/40°C.
- Ensure the air humidity is between 30% to 70%.
- Ensure the atmospheric pressure is between 86 kPa to 106kPa.

5.2 Getting onto your powered wheelchair

1. Make certain that the power button is in the status of power off .

WARNING – Never attempt to get onto or off of your Powered Wheelchair without first powering off your wheelchair. This will prevent the Powered Wheelchair from moving if accidental joystick contact is made.

2. Stand at the side of your Powered Wheelchair.
3. Disengage the footrest lever and rotate both footrests outwards until the seat is freely to walk in.
4. Position yourself comfortably and securely in the seat.
5. Rotate both footrests inwards until you can put your feet on them comfortably.
6. Make certain that your feet are safely on the footplates.
7. Make certain that your Safety belt is fastened.

5.3 Pre-Ride Adjustment and check

- Is the seat at the proper sitting position? See 6. “Comfort Adjustments.”
- Is the seat secured into place?
- Is the power button pressed down and the status indicator (through the power button) light up green?
- Does the Powered Wheelchair’s horn work properly?
- Is your proposed path clear of people, pets, and obstacles?
- Have you planned your route to avoid adverse terrain and as many inclines as possible?

5.4 Operating your powered wheelchair

WARNING – The following can adversely affect steering and stability while operating your Powered Wheelchair:

- Holding onto or attaching a leash to walk your pet.
- Carrying passengers (including pets).
- Hanging any article from the armrests or operating console.
- Towing or being pushed by another motorized vehicle.

WARNING – Keep both arms on the armrests and your feet on the footplates at all times while operating your Powered Wheelchair. This driving position gives you the most control over your vehicle.

- Set the speed adjustment dial to your desired speed.
- Press your fingers against the appropriate side of the joystick.
- The electromagnetic brakes automatically disengages, and the Powered Wheelchair accelerates smoothly to the speed you preselected with the speed adjustment dial.
- Push the joystick in the direction of front left to steer your Powered Wheelchair to the left.

- Push the joystick in the direction of front right to steer your Powered Wheelchair to the right.
- Push the joystick forward to drive straight ahead.
- To stop, slowly release the joystick. The electromagnetic brakes will automatically engage when your Powered Wheelchair comes to a stop.

NOTE: Your Powered Wheelchair's reverse speed is slower than that of the forward speed you preset with the speed adjustment dial.

5.5 Getting off of your powered wheelchair

1. Bring your Powered Wheelchair to a complete stop.

WARNING – Never attempt to get onto or off of your Powered Wheelchair without first powering off the wheelchair with the power button. This will prevent the Powered Wheelchair from moving if accidental joystick contact is made.

2. Press down the power button to power off.
3. Loosen the safety belt.
4. Disengage the footrest lever and rotate both footrests outwards until you are free to walk out.
5. Carefully and safely, get out of the seat and stand to the side of your Powered Wheelchair.
6. Rotate both footrests inwards until they restore to the original positions.

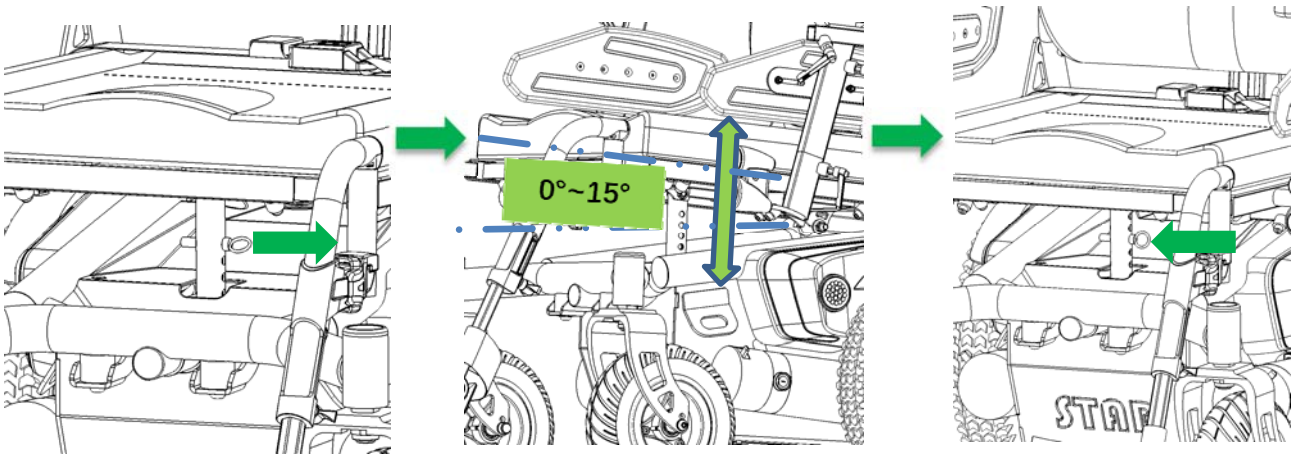
6.1 Seat tilting Adjustment

Option 1: Electrical Adjustment

If your wheelchair is equipped with tilting actuator
It is easy to adjust the seat tilting position:

1. Press the seat function select button to choose the 'Tilt' seating function.
2. The selected seating function will be displayed on the drive/actuator status indicator.
3. Pull the joystick forward or backward from the neutral position.
4. The tilting angle of seat will change accordingly and steplessly from 0°~20°.

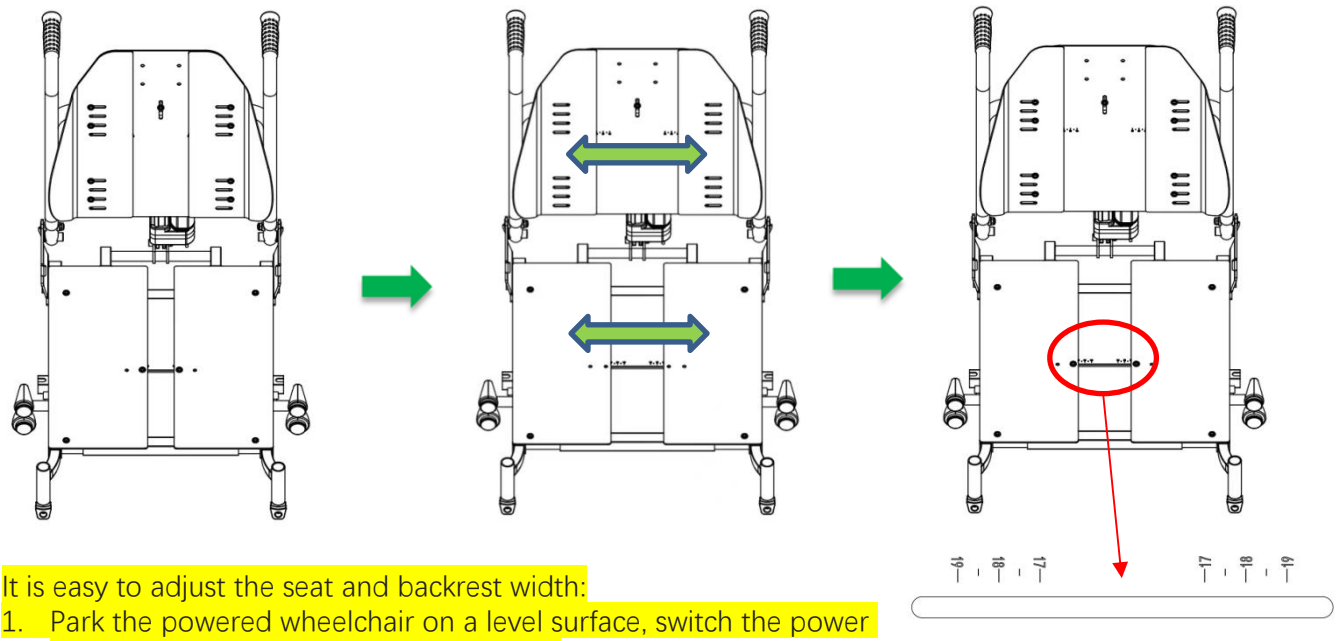
Option 2: Manual Adjustment



If your wheelchair is equipped with manual tilting adjustment tube:

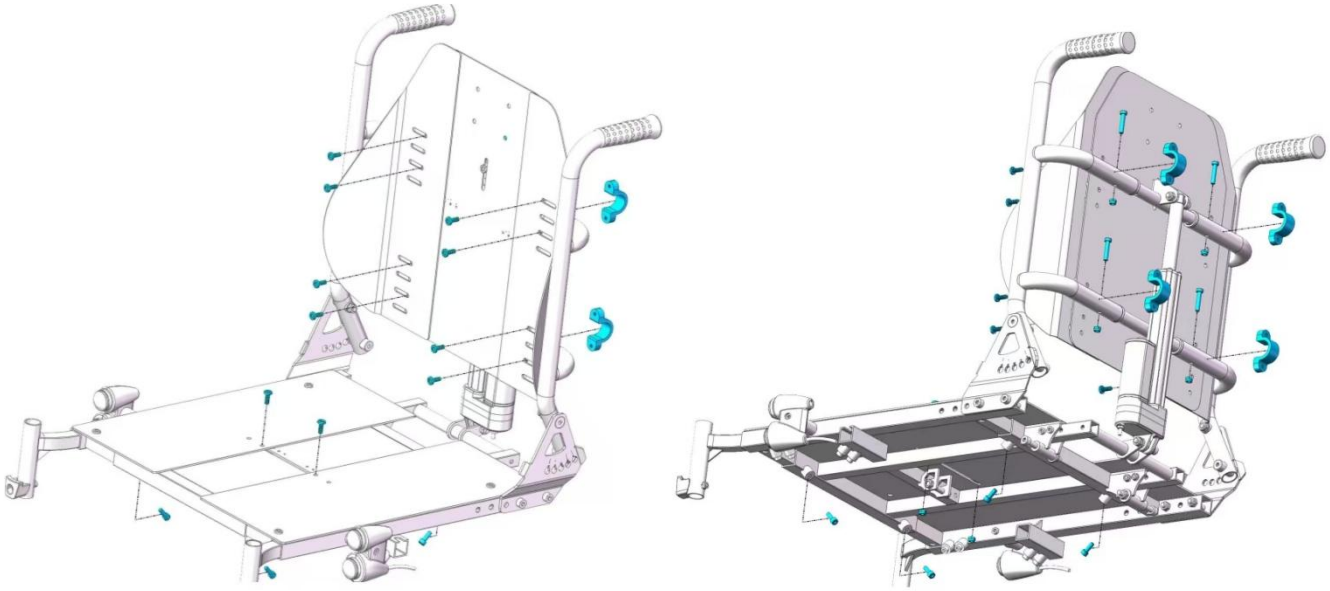
1. Pull out the quick-release pin in the adjustment tube.
2. Lift up or lower down the seat to the desired position.
3. Align the outer adjustment tube hole with the inner tube hole.
4. Plug in the quick-release pin back to the adjustment tube.
5. The tilting angle of seat will change accordingly from 0°~15°.

6.2 Seat and Backrest width Adjustment



It is easy to adjust the seat and backrest width:

1. Park the powered wheelchair on a level surface, switch the power OFF, and ensure the wheelchair is stable.
2. Using the tool hex key 6# that comes with the wheelchair, loosen the screws at the positions shown in the figure below.
   Loosen the fasteners on both sides equally. Do not remove the screws completely unless required.
3. Adjust the seat and backrest width to the desired position (17" / 18" / 19").
   Ensure the left and right sides are set to the same width and all components are properly aligned.
4. Tighten all screws securely and confirm there is no looseness or abnormal movement of the seat or backrest.
5. Before use, perform a final check to ensure the seat and backrest are firmly fixed and stable.



Screw Position

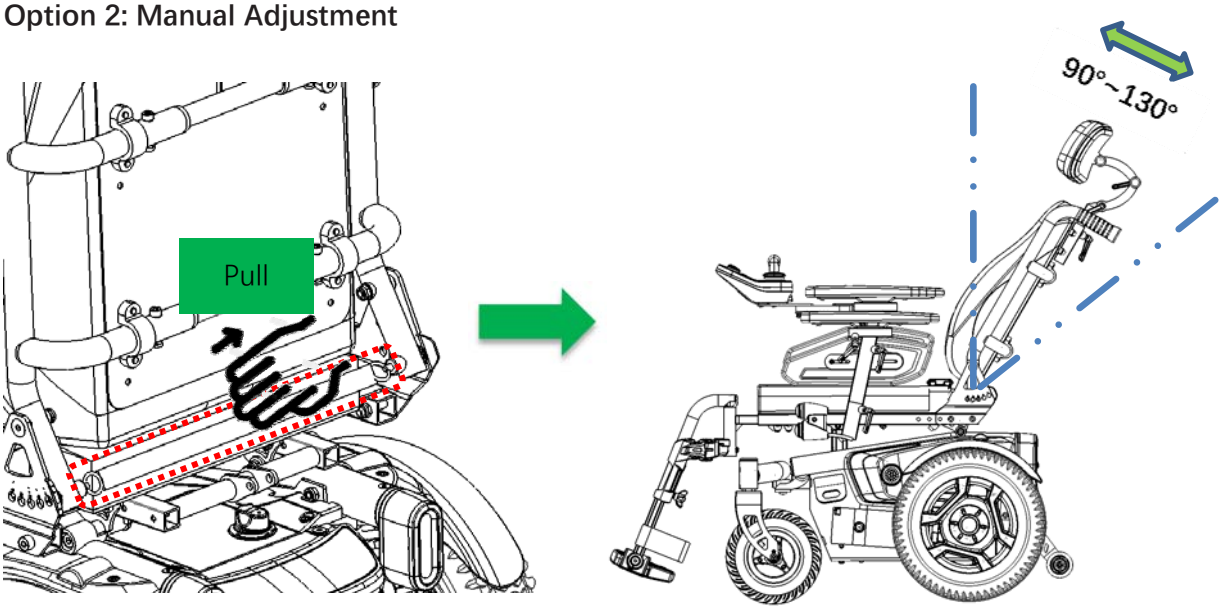
6.3 Backrest Adjustment

Option 1: Electrical Adjustment

If your wheelchair is equipped with reclining actuator
It is easy to adjust the backrest position:

1. Press the seat function select button to choose the 'Recline' seating function.
2. The selected seating function will be displayed on the drive/actuator status indicator.
3. Pull the joystick forward or backward from the neutral position.
4. The reclining angle of backrest will change accordingly and steplessly from 90°~140°.
5. During the adjusting process, be careful not to put your hands inside the gap between the backrest and the mounting plate, so to avoid potential pinching or crushing.

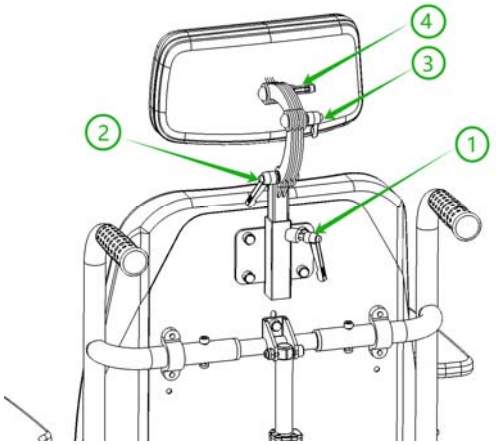
Option 2: Manual Adjustment



If your wheelchair is equipped with pull strap and spring pins:

1. Pull the backrest strap.
2. Adjust the backrest angle.
3. Align the spring pins into the adjustment holes on both side.
4. Loosen the strap and check if it is secure.
5. The reclining angle of backrest could change by 10° at a time, achieving 90°/100°/110°/120°/130°.
6. During the adjusting process, be careful not to put your hands inside the gap between the backrest and the mounting plate, so to avoid potential pinching or crushing.

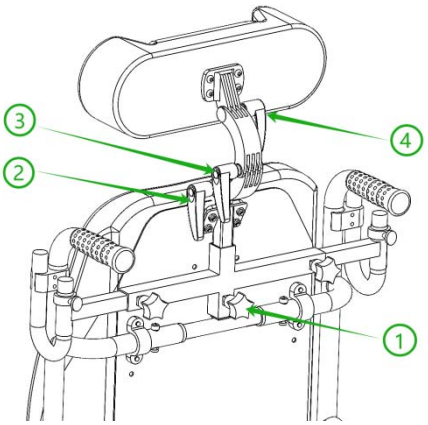
6.4 Headrest Adjustment



Option 1: Comfortable foaming headrest

If your wheelchair is equipped with foaming headrest
It is easy to adjust the headrest position:

1. Rotate the adjustment screw ① counterclockwise.
2. Loosen the headrest height adjustment tube.
3. Pull the headrest upward or downward to adjust to the desired height position. Mind the gap between the adjustment tube and the mounting tube to avoid potential pinching or crushing.
4. Rotate the adjustment screw ① clockwise to lock the height adjustment tube.
5. Rotate the adjustment screw ②③④ counterclockwise.
6. Adjust the headrest to the comfortable position you like.
7. Rotate the adjustment screw ②③④ clockwise to lock.

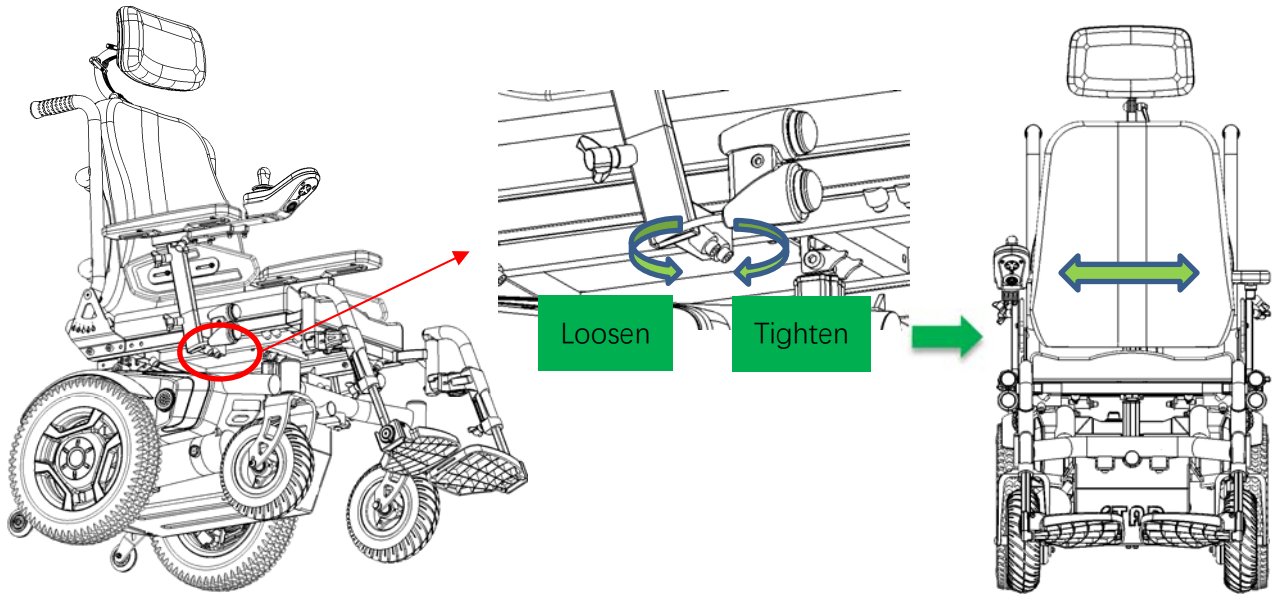


Option 2: Normal fabric headrest

If your wheelchair is equipped with fabric headrest:

1. Rotate the adjustment knob ① counterclockwise.
2. Loosen the headrest height adjustment tube.
3. Pull the headrest upward or downward to adjust to the desired height position. Mind the gap between the adjustment tube and the mounting tube to avoid potential pinching or crushing.
4. Rotate the adjustment knob ① clockwise to lock the height adjustment tube.
5. Rotate the adjustment screw ②③④ counterclockwise.
6. Adjust the headrest to the comfortable position you like.
7. Rotate the adjustment screw ②③④ clockwise to lock.

6.5 Armrests width and height Adjustment

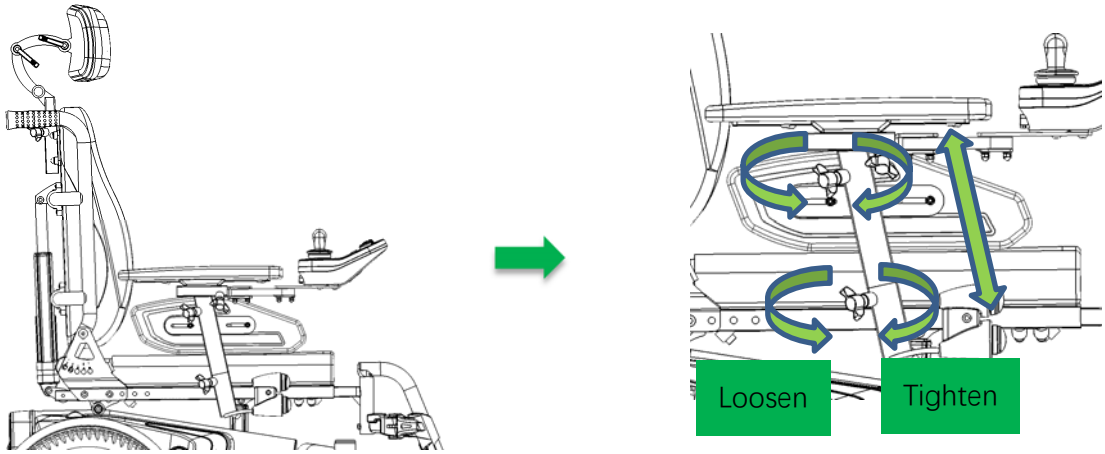


Width Adjustment

It is easy to adjust the armrests width:

1. Using the tool hex key 5# that comes with the wheelchair to rotate the 2x screws counterclockwise.
2. Loosen the armrest width adjustment tube.
3. Pull the armrest outward or inward to adjust. Mind the gap between the adjustment tube and the mounting tube to avoid potential pinching or crushing.
4. Repeat step 1~3 to the armrest of the other side.
5. Check both armrests if they are set to the desired positions.
6. Rotate the screws clockwise to tighten the armrest width adjustment tubes.

Height Adjustment

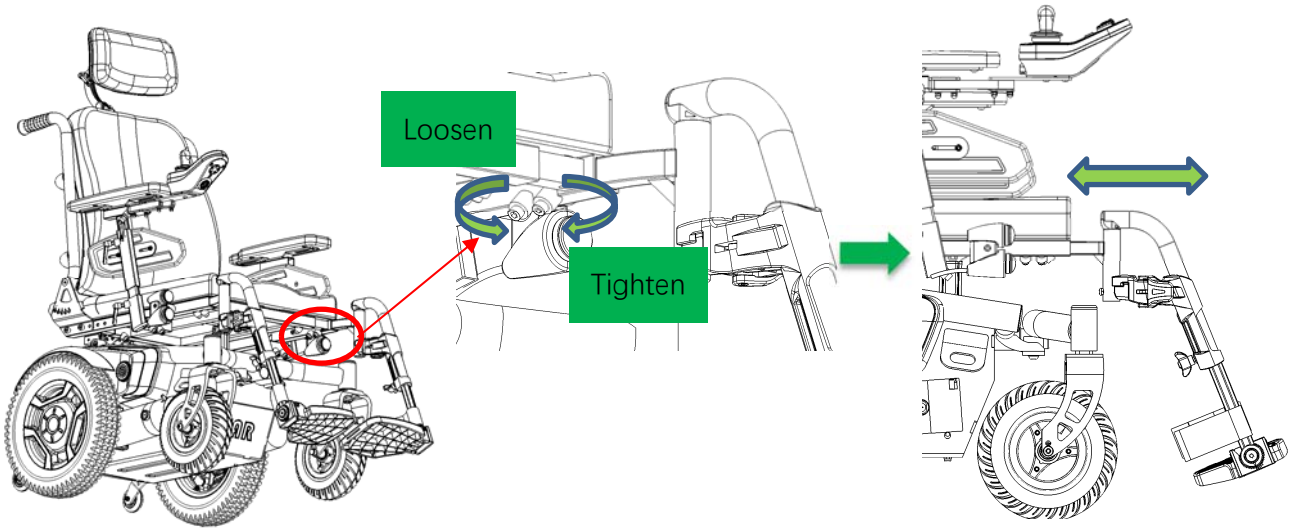


It is easy to adjust the armrests width:

1. Rotate the 2x screws counterclockwise.
2. Loosen the armrest height adjustment tubes.
3. Pull the armrest upward or downward to adjust to the desired position; Mind the gap between the adjustment tube and the mounting tube to avoid potential pinching or crushing.
4. Rotate the screws clockwise to tighten the armrest height adjustment tube.
5. Repeat step 1~4 to the armrest of the other side.

6.6 Footrests Adjustment

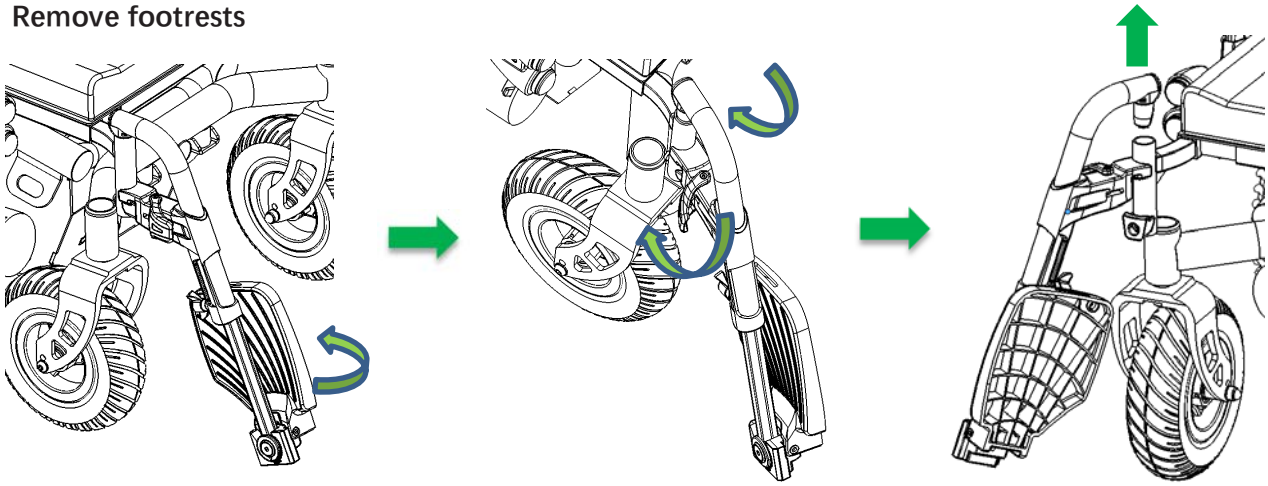
Position Adjustment



It is easy to adjust the footrests position:

1. Using the tool hex key 5# that comes with the wheelchair to rotate the 2x screws counterclockwise.
2. Loosen the footrest adjustment tube.
3. Pull the footrest outward or inward to adjust. Mind the gap between the adjustment tube and the mounting tube to avoid potential pinching or crushing.
4. Repeat step 1~3 to the footrest of the other side.
5. Check both footrests if they are set to the desired positions.
6. Rotate the screws clockwise to tighten the footrests adjustment tube.

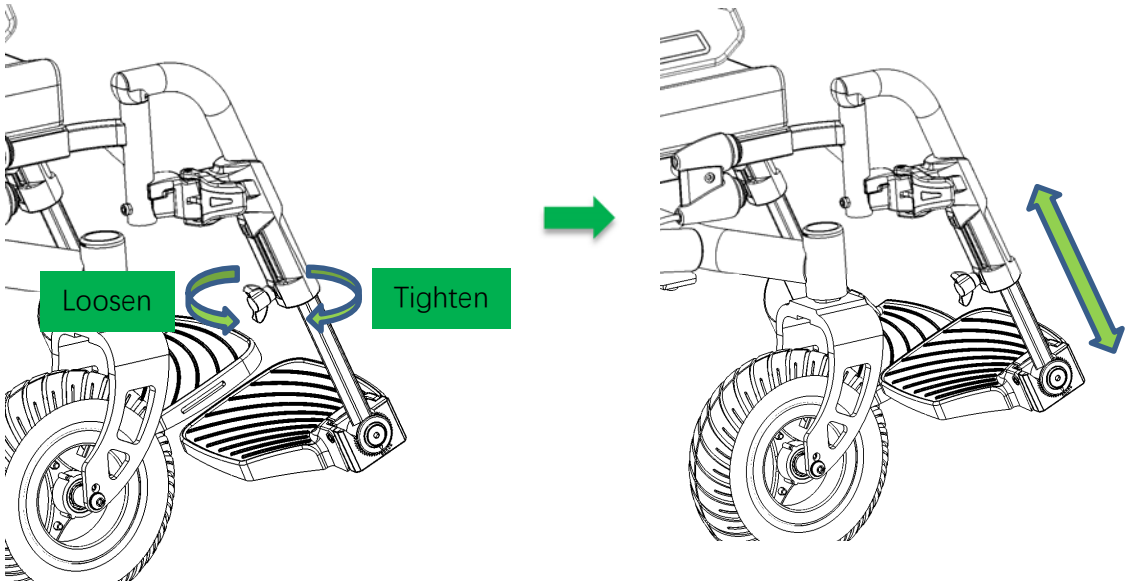
Remove footrests



It is easy to remove the footrests:

1. Flip up the footplate.
2. Pull the handle outward to release the locking mechanism. Mind the gap between the handle and the guiding slot to avoid potential pinching or crushing.
3. Rotate the footrest outward. Mind the gap between the footrest and the mounting tube to avoid potential pinching or crushing.
4. Let go of the handle and pull up the footrest to remove.
5. Repeat step 1~4 to the footrest of the other side.

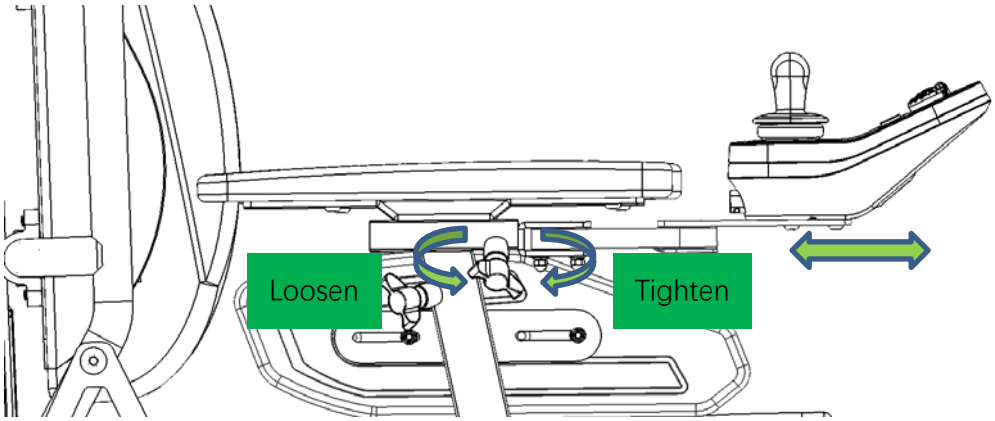
Footplates height Adjustment



It is easy to adjust the footplates height:

1. Rotate the adjustment knob counterclockwise.
2. Loosen the footplate height adjustment tubes.
3. Pull the footplate upward or downward to adjust to the desired position. Mind the gap between the adjustment tube and the mounting tube to avoid potential pinching or crushing.
4. Rotate the adjustment knob clockwise to tighten the footplate height adjustment tube.
5. Repeat step 1~4 to the footplate of the other side.

6.7 Operation Console Adjustment



It is easy to adjust the operation console:

1. Rotate the screw counterclockwise.
2. Loosen the controller adjustment tube.
3. Pull the controller adjustment tube forward or backward to adjust to the desired position. Mind the gap between the adjustment tube and the mounting tube to avoid potential pinching or crushing.
4. Rotate the screw clockwise to tighten the controller adjustment tube.

7. Disassembly And Assembly

7.1 Disassembly

You can disassemble the Powered Wheelchair into several pieces: ① the seat cushion, ② the back cushion, ③the headrest, ④ the wheelchair frame, ⑤ the footrests. ⑥the operation console. No tools are required to disassemble your Powered Wheelchair. Always disassemble or assemble your Powered Wheelchair on a level, dry surface with sufficient room for you to work and move around—about 5 feet (1.5 meters) in all directions.

7.2 Disassembly Procedures

WARNING – Do not lift weight beyond your physical capability. Ask for assistance when necessary while disassembling or assembling your Powered Wheelchair.

Identification key

1. Seat Cushion
2. Back Cushion
3. Headrest
4. Frame
5. Footrests
6. Operation Console

Disassembled Powered Wheelchair

1. Remove the seat cushion by lifting it straight up and off the Powered Wheelchair. The seat cushion is attached to the seat frame by Velcro.
2. Remove the back cushion by pulling it forward and off the Powered Wheelchair. The back cushion is attached to the back frame plate by Velcro.
3. Remove the headrest by loosening the adjustment screw on its height adjustment tube to pull it off the mounting tube from the back frame.
4. As for the removal of footrests, please refer to **6.5** “Remove footrests"
5. Remove the operation console by loosening the adjustment screw on its position adjustment tube to pull it out of the mounting tube.

7.3 Assembly

1. Using the tool hex key 6# that comes with the wheelchair to fasten the screw and bolt between the upper installing hole of the reclining actuator and the mounting hole of back frame.
2. Reinstall the seat cushion.
3. Reinstall the back cushion.
4. Reinstall the headrest and fully secure the headrest adjustment screw. See figure in 6.1.
5. Reinstall the footrests and fully secure the adjustment screws. See figure in 6.5.
6. Reinstall the operation console and fully secure the adjustment screws. See figure in 6.3

8. Basic Troubleshooting

WARNING – If the battery symbol light is flashing on the battery gauge then the wheelchair has detected a fault. If this happens, follow the procedure below:

1. Release the joystick, then power the wheelchair off and on. If this does not clear the fault then proceed to step 2 below.
2. Power the wheelchair off and recharge the battery fully. If this does not clear the fault then proceed to step 3 below.
3. Count the number of flashes. The symbol will flash a number of times before a long pause. Count the number of flashes between pauses and report this to your dealer. The flash error codes are listed below for reference.

Flash	Error description	Possible action
1	Remote / joystick error	Check cables and connectors. Replace remote module.
2	Network or configuration error	Check cables and connectors. Check Bluetooth pairing. Reconfigure the system. Recharge the battery. Check charger. Replace modules. Contact supplier.
3	Left motor error	Check cables and connectors. Replace power module. Check and/or replace left motor.
4	Right motor error	Check cables and connectors. Replace power module. Check and/or replace right motor.
5	Left park brake error	Check cables and connectors. Check left park brake is released.
6	Right park brake error	Check cables and connectors. Check right park brake is released.
7	Module error (other than remote module)	Check cables and connectors. Check modules. Replace LiNX Access Key. Replace power module. Recharge battery. If the wheelchair stalled, reverse away or remove obstacles, or if the wheelchair was moved while turned off, cycle the power.

Note: The error indicator may continue to flash after an error has been rectified. To clear the error indication, cycle the system's power.

9. Batteries And Charging

Read the battery charging instructions in this manual and supply with the battery charger before charging the batteries. The battery condition gauge on the operating console indicates the approximate strength of your batteries using a color code. From right to left on the gauge, green indicates fully charged batteries, yellow a draining charge, and red indicates that an immediate recharge is necessary. To ensure the highest accuracy, the battery condition gauge should be checked while operating your Powered Wheelchair at full speed on a dry, level surface.

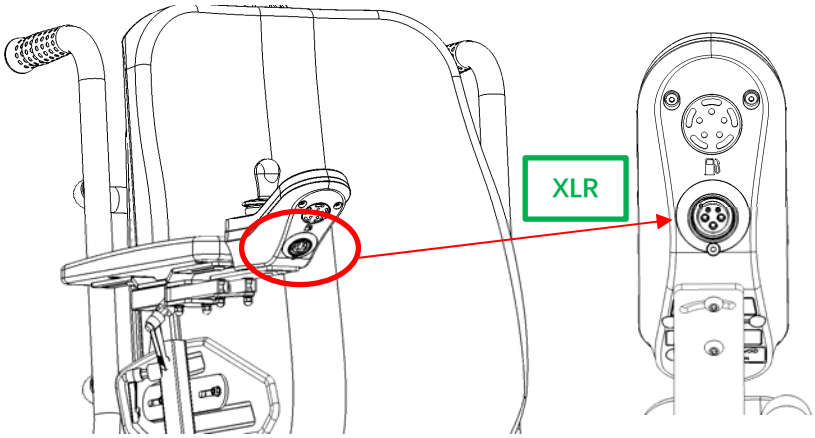
9.1 First Charge

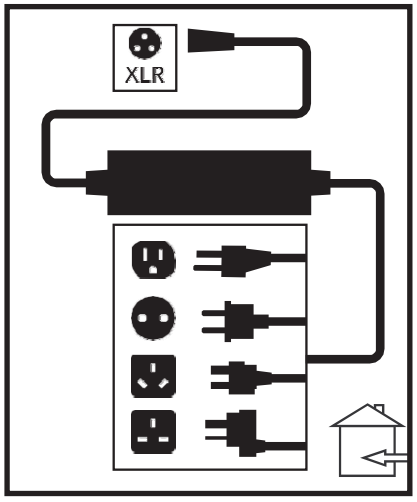
Your powered wheelchair requires two long-lasting, 12-volt, deep-cycle batteries that are sealed and maintenance-free.

They are recharged by the supplied off-board charging system. Charge your powered wheelchair's batteries for at least 8 to 14 hours prior to using it for the first time. Keep the batteries fully charged to keep your powered wheelchair running smoothly.

9.2 Charging Your Wheelchair

The powered wheelchair can be charged using the charging ports located on the operating console. Plug the charger into the console and then into the electrical outlet. When the batteries are fully charged, remove the charger from the wheelchair.





9.3 Operating Temperatures

Your powered wheelchair is designed to operate ideally between -10°C ~ 40°C (14°F to 104°F). In extremely cold conditions, your batteries may freeze depending on the battery charge, usage, and composition of the batteries. In extremely hot conditions, your powered wheelchair may operate at a slower speed. This is due to the safety mechanism built into the unit to prevent damage to the gearbox and other electronic functions when operating too hot.

9.4 Battery Operation and Charging

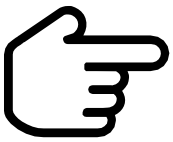
If you use your powered wheelchair daily, charge its batteries as soon as you finish using it for the day. Your powered wheelchair will be ready each morning. We recommend that you charge your powered wheelchair's batteries for at least 8 to 14 hours after daily use. We recommend charging the batteries for an additional 4 hours after the battery charger indicates that charging is complete.

If you use your powered wheelchair once a week or less, charge its batteries at least once a week for at least 24 hours.

9.5 Charging Batteries

ATTENTION – Keep your batteries fully charged and avoid deeply discharging your batteries. Refer to the manual supplied with the battery charger for charging instructions. We recommend charging your batteries for at least 48 continuous hours once per month to improve battery performance and battery life.

The light on your charger indicates different charge status.
Red Light – This means that charging is in operation.
Green Light – This means that bulk charging (95% charge) is complete and the charger is trickle charging the battery.



ATTENTION – There is a charger that inhibits function on your powered wheelchair. The powered wheelchair will not run, and the battery condition meter will not operate while the batteries are charging (when the battery pack is being charged on the powered wheelchair).

WARNING – Removal of grounding prongs can create an electrical hazard. If necessary, properly install an approved 3-pronged adapter to an electrical outlet having 2-pronged plug access.

WARNING – Never use an extension cord to plug in your battery charger. Plug the charger directly into a properly wired standard electrical outlet.

WARNING – Do not allow unsupervised children to play near the powered wheelchair while the batteries are charging. We recommend that you do not charge the batteries while the powered wheelchair is occupied.

WARNING – Explosive gases may be generated while charging the batteries. Keep the powered wheelchair and battery charger away from sources of ignition such as flames or sparks and provide adequate ventilation when charging the batteries.

WARNING – You must recharge your powered wheelchair's batteries with the supplied off-board charger. Do not use an automotive-type battery charger.

WARNING – Inspect the battery charger, wiring, and connectors for damage before each use. Contact your authorized Provider if the damage is found.

WARNING – Do not attempt to open the battery charger case. If the battery charger does not appear to be working correctly, contact your authorized Provider.

WARNING – Be aware that the battery charger case may become hot during charging. Avoid skin contact and do not place on surfaces that may be affected by heat.

WARNING – If your battery charger has not been tested and approved for outdoor use, then do not expose it to adverse or extreme weather conditions. If the battery charger is exposed to adverse or extreme weather conditions, then it must be allowed to adjust the difference in environmental conditions before use indoors.

9.6 Batteries Removal and Installation

Batteries removal and installation described in this section are intended for after-sales service or battery replacement.
This procedure should not be considered part of normal daily operation.

The battery compartment is designed to accommodate two 12V batteries.

Maximum allowable battery dimensions (each):

- Length: 224 mm
- Width: 135 mm
- Height: 178 mm

Batteries exceeding these dimensions may not fit properly and may cause installation difficulties or safety risks.

The following battery models are recommended for use with this wheelchair:

Standard configuration:

- TNE12-38
- TNE12-52

Optional configuration:

- TNE12-58

Only sealed, maintenance-free, deep-cycle lead-acid batteries with equivalent specifications may be used.

WARNING – Before removing or installing the batteries, switch off the wheelchair and turn the battery switch to the OFF position.Disconnect the charger from the wheelchair.

Battery removal and installation should be performed by trained personnel or authorized service providers.

- Battery Removal & Installation Procedure （Figure 1–14）

Figure 1

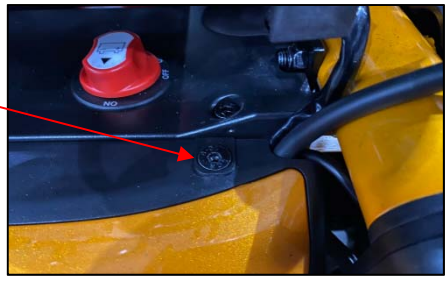


Figure 2

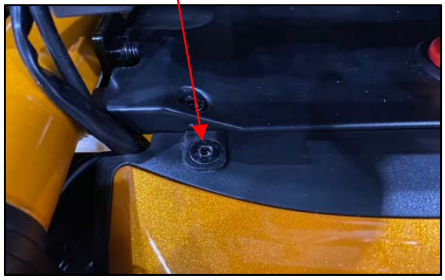


Figure 3

Figure 4

Figure 5

Figure 6

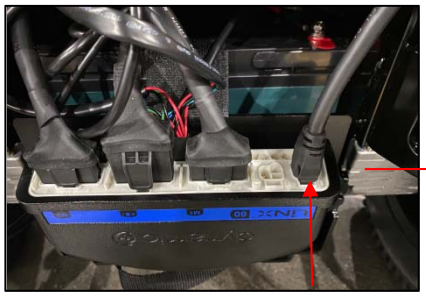


Figure 7

Figure 8

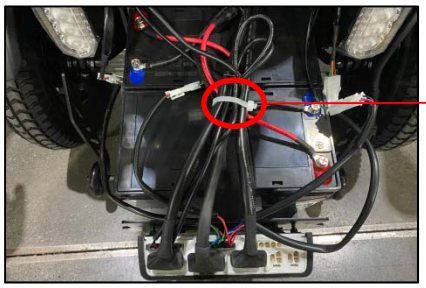


Figure 9

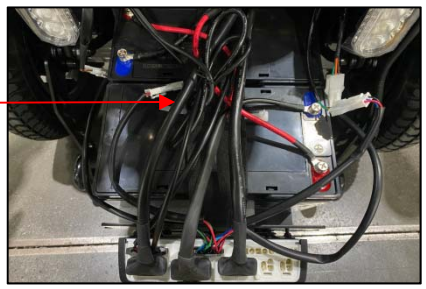


Figure 10

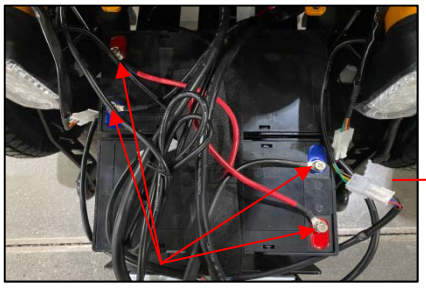


Figure 11

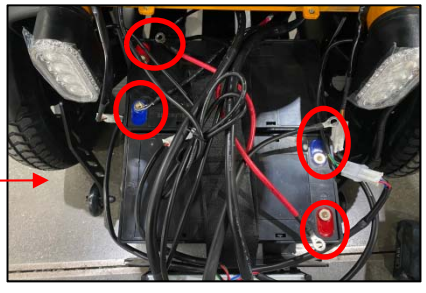


Figure 12

Figure 13

Figure 14

1. Battery Removal
   1) Remove the battery cover as shown in Figure 1 through Figure 4.
   2) Carefully loosen the fixing screws, disconnect the battery connectors, and remove the battery using the pull strap (see Figure 5 through Figure 8).
   3) Release the fixing straps or fasteners securing the batteries (see Figure 9 through Figure 12).
   4) Grasp the battery handles and lift the batteries upward to remove them from the battery compartment (see Figure 13 and Figure 14).

2. Battery Installation
   1) Place the batteries into the battery compartment in the correct position (see Figure 13 and Figure 14).
   2) Secure the batteries with the fixing straps or fasteners (see Figure 9 through Figure 12).
   3) Reinsert the batteries fully into the compartment, tighten the fixing screws, and reconnect the battery connectors correctly (see Figure 5 through Figure 8).
   4) Reinstall the battery cover and ensure it is properly secured (see Figure 1 through Figure 4).
   5) After all components are properly installed and secured, turn the battery switch to the ON position.

After installation, ensure that the batteries are securely fixed and that all connectors are properly connected.
Do not operate the wheelchair if any components are loose.

WARNING – Do not install or remove the batteries while the wheelchair is powered on.

WARNING – Do not short-circuit the battery terminals.

WARNING – Ensure that all battery connectors are connected correctly. Incorrect connection may damage the wheelchair.

WARNING – Handle the batteries carefully. Do not drop or impact the batteries.

WARNING – If the batteries or cables are damaged, stop using the wheelchair and contact your dealer or authorized service personnel.

10. Care And Maintenance

Your powered wheelchair requires a minimal amount of care and maintenance. If you do not feel confident in your ability to perform the maintenance listed below, you may schedule inspection and maintenance at your authorized provider. The following areas require periodic inspection or care and maintenance.

10.1 Tire

Regularly inspect your powered wheelchair's tires for signs of damage or wear.

10.2 Wheel Replacement

Your powered wheelchair is equipped with PU tires or Solid tires. If you have a damaged or worn tire, the entire wheel must be replaced. Contact your authorized provider for information regarding replacement wheels for your powered wheelchair.

WARNING – Wheels on your powered wheelchair should only be serviced/replaced bya qualified technician. Be sure that the wheelchair is powered off and the powered wheelchair is not in freewheel mode before performing this procedure.

10.3 Exterior Surfaces

Bumpers, tires, and trim can benefit from an occasional application of a rubber or vinyl conditioner.

10.4 Cleaning and Disinfection

Use a damp cloth and mild, non-abrasive cleanser to clean the plastic and metal parts of your powered wheelchair. Avoid using products that may scratch the surface of your powered wheelchair. If necessary, clean your product with an approved disinfectant. Make sure the disinfectant is safe for use on your product before application.

WARNING – Follow all safety instructions for the proper use of the disinfectant or cleaning agent before applying it to your product. Failure to comply may result in skin irritation or premature deterioration of upholstery or powered wheelchair finishes.

10.5 Battery Terminal Connections

Make certain that the terminal connections remain tight and are not corroded.

10.6 Wiring Harnesses

- Regularly check all wiring connections.
- Regularly check all wiring insulation, including the charger power cord, for wear or damage.
- Have your authorized Provider repair or replace any damaged connector, connection, or insulation that you find before using your powered wheelchair again.

10.7 Daily Checks

With the power turned off, check the joystick. Make sure it is not bent or damaged and that it returns to the neutral position when you release it. Do not try to repair it. See your authorized provider if there is a problem.

Visually inspect the operating console cable. Make sure that it is not frayed, cut, or has any wires exposed. See your authorized provider if there is a problem.

Check for flat spots on solid tires. Flat spots could adversely affect stability.

Inspect the armrests for loose hardware, stress points, or damage. See your authorized provider if there is a problem.

Check the brakes. This test should be carried out on a level surface with at least 3 feet (1 meter) of clearance around your powered wheelchair.

10.8 Weekly Checks

Inspect the controller and charger connectors for corrosion. Contact your authorized provider if necessary.

Check for proper tire inflation if equipped with pneumatic tires. If a tire does not hold air, contact your authorized provider for replacement of the tube.

10.9 Monthly Checks

- Check that the anti-tip wheels do not rub the ground when you operate the powered wheelchair.
- Check for extreme wear on the anti-tip wheels. Replace them as necessary.
- Check for tire wear. See your authorized provider for repair.
- Keep your powered wheelchair clean and free of foreign material, such as mud, dirt, hair, food, drink, etc.

10.10 Yearly Checks

Take your powered wheelchair to your authorized provider for yearly maintenance, especially if you use your powered wheelchair on a daily basis. This helps ensure that your powered wheelchair is functioning properly and helps prevent future complications.

10.11 ABS Plastic Shrouds

If your powered wheelchair has a body shroud with a glossy finish, the body shroud has been sprayed with a clear sealant coating. You can apply a light coat of car wax to help it retain its high-gloss appearance. If your powered wheelchair has a body shroud with a matte finish, use ONLY products developed for matte-finish paint. Do not use wax, detail spray, ArmorAll®, or any product made for a glossy paint.

10.12 Axle Bearings and The Motor/Transaxle Assembly

These items are all pre-lubricated, sealed, and require no subsequent lubrication.

10.13 Console, Charger, and Rear Electronics

Keep these areas free of moisture. Allow these areas to dry thoroughly if they have been exposed to moisture before operating your powered wheelchair again.

10.14 Nylon Lock Nut Replacement

Any nylon insert lock nut removed during the periodic maintenance, assembly, or disassembly of the powered wheelchair must be replaced with a new nut. Nylon insert lock nuts should not be reused as it may cause damage to the nylon insert, resulting in a less secure fit. Replacement nylon insert lock nuts are available at local hardware stores or through your authorized provider.

10.15 Storing Your Powered Wheelchair

If you plan on not using your powered wheelchair for an extended period of time, it is best to:

- Fully charge its batteries prior to storage.
- Remove the batteries from the powered wheelchair, or at a minimum, turn the battery switch to the OFF position.
- Store your Powered Wheelchair in a warm, dry environment.
- Avoid storing your Powered Wheelchair where it will be exposed to temperature extremes.
- Recommended storage temperature: -10°C/-14°F to 40°C/104°F.
- Ensure the atmospheric pressure is between 86 kPa to 106kPa.

WARNING – Operation under high temperature, tires becoming soft.
Operation under very low temperature, user gets freezing.
Operation under very low temperature, tires crack.

- Recommended storage humidity: 30% to 70%.

WARNING – High humidity content may affect the strength of the frame.

Batteries that are regularly and deeply discharged, infrequently charged, stored in extreme temperatures, or stored without a full charge may be permanently damaged, causing unreliable performance and limited service life. It is recommended that you charge the powered wheelchair batteries periodically throughout periods of prolonged storage to ensure proper performance.

For prolonged storage, you may wish to place several boards under the frame of your powered wheelchair to raise it off of the ground. This takes the weight off the tires and reduces the possibility of flat spots developing on the areas of the tires contacting the ground.

10.16 Disposal of Your Powered Wheelchair

Your powered wheelchair must be disposed of according to applicable local and national statutory regulations. Contact your local waste disposal agency or authorized provider for information on proper disposal of packaging, metal frame components, plastic components, electronics, batteries, neopren e, silicone, and polyurethane materials.

11. Specifications

STAR
2025-06

Model	STAR	
Type	Powered Wheelchair, rear wheel drive, Class B	
Max. weight of user	136Kg	
Max. speed (driving forward)	10m/h	10km/h
Min. braking distance at max. speed	1700mm	1700mm
Endurance mileage	24V52Ah Lead-acid Battery: 30km 24V38Ah Lead-acid Battery: 21km	
Maximum height of obstacle	50 mm	
Maximum safe slope	10°	
Minimum turning radius	900 mm	
Minimum width required to reverse	900 mm	
L x W x H Dimensions unfolded(mm)	1080 x 580 x 1215	
Carton size (mm)	1020 x 725 x 850	
Total mass, battery included	106.5Kg (24V52Ah Lead-acid Battery) 98.5Kg (24V38Ah Lead-acid Battery)	
Weight of battery	24V52Ah Lead-acid Battery: 26kg 24V38Ah Lead-acid Battery: 18kg	
Effective seat depth	430~480 mm	
Effective seat width	430~480 mm	
Seat surface height at front edge	75 mm	
Height footplate	130~200 mm	
Angle seat surface	0-15°	0-20°
Motor	2x340 Watt, electromagnetic brakes	
Battery	24V52Ah(C20) / TNE12-52 24V38Ah(C20) / TNE12-38	
Controller	Dynamic controller Drive only	Dynamic controller Drive+Light+Actuator
Protection class	IP X4	
Battery charger	Input : 100-240VAC , 50-60Hz , 1.2-0.5A , Class II Output : 24VDC , 6A	
Protection class of battery charger	IPX1	
Insulation class of battery charger	Class 2	
Max. sound level scooter motor	68 dB	
EMC compatible according to	ISO 7176-21	
Ignitability of upholstery according to	ISO16840-10	
Diameter rear wheels (number)	14x3 inch	14x3 inch
Diameter front wheels (number)	9x3 inch	9x3 inch
Suspension	Rear Suspension	
Storage and use temperature	5 ° C to +41 ° C	
Humidity to store and use	30% ~70%	

We reserve the right to introduce technical changes. Measurement tolerance ± 15 mm /1.5 kg / 1.5°.
* The theoretical action radius reduces if the powered wheelchair is frequently used on slopes, rough surfaces or to climb kerbs. The maximum driving distance is tested in ideal circumstances according to ISO7176-4.

11. Specifications

Speed and range may vary with user weight, type of terrain, battery charge and condition. The information contained herein is correct at the time of publication; Intco reserves the right to alter specifications.

Disclosure information (ISO)						
	min.	**max.**			**min.**	**max.**
Overall length with legrest	1155mm	1820mm		Seat plane angle	-5°	20°
Overall width	590mm	710mm		Effective seat depth		450mm
Folded length		850mm		Effective seat width		430mm
Folded width		600mm		Seat surface height at front edge		75mm
Folded height		970mm		Backrest angle	90°	144°
Total mass		102.4kg		Backrest height		520mm
Mass of the heaviest part				Footrest to seat distance	450mm	575mm
Static stability downhill				Leg to seat surface angle		110°
Static stability uphill				Armrest to seat distance	170mm	290mm
Static stability sideways				Front location of armrest structure		
Energy consumption		30km		Handrim diameter		
Dynamic stability uphill				Horizontal location of axle		
Obstacle climbing		45mm		Minimum turning radius	900mm	
Maximum speed forward		10km/h		Maximum occupant mass		136kg
Minimum braking distance from max speed		1500mm		Required doorway entry depth		

12. Warranty

12.1 Two (2) Years Limited Warranty

Structural frame components, including: seat support tube and welded frames, have two (2) years warranty.

12.2 One (1) Year Limited Warranty

Your STAR Powered Wheelchair is fully guaranteed for twelve (12) months from the date of purchase against faults arising due to defects in manufacture or materials. This warranty does not detract from, but is in addition to your legal rights.

All electronic parts and drivetrain, including controller, battery charger, differential, motor, wheels and brakes, have a one (1) year warranty. Servicing to the controller, battery or battery charger must be carried out by your authorized Intco Provider. Any attempt to open or dismantle these items renders the guarantee void on that item.

12.3 Not Covered Under Warranty

This guarantee does not extend to those items which may need replacement due to normal wear and tear (tires, belts, bulbs, upholstery, plastic shrouds, motor brushes, fuses, and batteries), or damage to the product caused by misuse or accident for which Intco or its agent cannot be held responsible. This warranty does not include labor or service calls.

12.4 Batteries

ATTENTION – Gradual deterioration in performance due to being left in a discharged state, left in cold conditions for long periods of time, or worn out through heavy use is not covered.

Batteries are covered by a six (6) month warranty from the original manufacturer.

12.5 Service Checks and Warranty Service

Warranty service can be performed by an authorized Intco Provider. Please contact your authorized Intco Provider for advice on the current cost affecting the service visit.

12.6 Replacement Units

The availability of replacement units and/or spare parts is subject to the discretion of the provider, not the manufacturer. For more information regarding replacement units and/or spare parts, contact your authorized Intco Provider.

Guidance and Manufacturer's Declaration

Important information regarding Electro Magnetic Compatibility (EMC)

This electrical medical equipment needs special precautions regarding EMC and put into service according to the EMC information provided in the user manual;

The equipment conforms to this IEC 60601-1-2:2014+A1:2020 standard for both immunity and emissions. Nevertheless, special precautions need to be observed:

- The equipment with ESSENTIAL PERFORMANCE/Following ESSENTIAL PERFORMANCE is intended used in Home healthcare environment.

ESSENTIAL PERFORMANCE:

The Electric Wheelchair can work normally without moving out of control, and the speed change is not more than ± 20%.

- WARNING! Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- The use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- WARNING! Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Electric Wheelchair, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- WARNING! If the use location is near (e.g. less than 1.5 km from) AM, FM or TV broadcast antennas, before using this equipment, it should be observed to verify that it is operating normally to assure that the equipment remains safe with regard to electromagnetic disturbances throughout the expected service life.

When the AC input voltage is interrupted, the equipment will stop battery charging and if the power supply restored, it could be recovered automatically, this degradation could be accepted because it will not lead to unacceptable risks and it will not result in the loss of basic safety or essential performance.

Following degradation caused by Electrostatic Discharge or Electrical fast transients/burst could be accepted because it will not lead to unacceptable risks and it will not result in the loss of basic safety or essential performance:

During all immunity tests, a digital tachometer was used to monitor the rotating speed of wheel and a clamp meter was used to monitor the output current of battery charger to verify the performance of EUT.

EMI Compliance Table (Table 1)

Table 1 - Emission

Phenomenon	Compliance	Electromagnetic environment
RF emissions	CISPR 11 Group 1, Class B	Home healthcare environment
Harmonic distortion	IEC 61000-3-2 Class A	Home healthcare environment
Voltage fluctuations and flicker	IEC 61000-3-3 Compliance	Home healthcare environment

EMS Compliance Table (Table 2-5)

Table 2 - Enclosure Port

Phenomenon	Basic EMC standard	Immunity test levels
		Home healthcare environment
Electrostatic Discharge	IEC 61000-4-2	±8 kV contact ±2kV, ±4kV, ±8kV, ±15kV air
Radiated RF EM field	IEC 61000-4-3	10V/m 80MHz-2.7GHz 80% AM at 1kHz
Radiated RF EM field	IEC 61000-4-3	20V/m 26MHz-2.5GHz 80% AM at 1kHz
Proximity fields from RF wireless communications equipment	IEC 61000-4-3	Refer to table 3
Rated power frequency magnetic fields	IEC 61000-4-8	30A/m 50Hz or 60Hz

Table 3 – Proximity fields from RF wireless communications equipment

Test frequency (MHz)	Band (MHz)	Immunity test levels
		Home healthcare environment
385	380-390	Pulse modulation 18Hz, 27V/m
450	430-470	FM, ±5kHz deviation, 1kHz sine, 28V/m
710	704-787	Pulse modulation 217Hz, 9V/m
745		
780		

810	800-960	Pulse modulation 18Hz, 28V/m
870		
930		
1720	1700-1990	Pulse modulation 217Hz, 28V/m
1845		
1970		
2450	2400-2570	Pulse modulation 217Hz, 28V/m
5240	5100-5800	Pulse modulation 217Hz, 9V/m
5500		
5785		

Table 4 – Input a.c. power Port

Phenomenon	Basic EMC standard	Immunity test levels
		Home healthcare environment
Electrical fast transients/burst	IEC 61000-4-4	±2 kV 100kHz repetition frequency
Surges Line-to-line	IEC 61000-4-5	±0.5 kV, ±1 kV
Conducted disturbances induced by RF fields	IEC 61000-4-6	3V, 0.15MHz-80MHz 6V in ISM bands and amateur radio bands between 0.15MHz and 80MHz 80%AM at 1kHz
Voltage dips	IEC 61000-4-11	0% U_T; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°
		0% U_T; 1 cycle and 70% U_T; 25/30 cycles Single phase: at 0°
Voltage interruptions	IEC 61000-4-11	0% U_T; 250/300 cycles

Table 5 – Signal input/output parts Port

Phenomenon	Basic EMC standard	Immunity test levels
		Home healthcare environment
Conducted disturbances induced by RF fields	IEC 61000-4-6	3V, 0.15MHz-80MHz 6V in ISM bands and amateur radio bands between 0.15MHz and 80MHz 80%AM at 1kHz

Table 6 – IEC 60601-1-2:2014+A1:2020

Test mode	Frequency	Test level (A/m)	Modulation	Dwell time (s)	Result
Mode1 Mode2	30kHz	8	CW	3	PASS
	134.2kHz	65	Pulse Modulation 2.1kHz	3	PASS
	13.56kHz	7.5	Pulse modulation 50 kHz	3	PASS

Your Health
Intco Protects

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