



Compact Power Wheelchair | GUT172 Operator's Manual



Warning: Please read and thoroughly understand all instructions before operating. Failure to follow safety rules and other basic safety precautions may result in serious personal injury. Keep these instructions in a safe and easily accessible place so that they can be referred to when needed. Retain these instructions to assist in future servicing.

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1. INTRODUCTION

Please carefully read this owner's manual before using the power wheelchair. Improper use of the power wheelchair could result in harm, injury or traffic accidents.

This owner's manual includes operating instructions for every aspect of the power wheelchair, including assembly instructions and how to deal with possible accidents.

- The symbols used in this manual are explained below:

Read carefully the notes marked with these symbols:



Improper usage could result in serious injury or death.



Improper usage could lead to injury and/or damage to your power wheelchair.



Follow these instructions to keep your power wheelchair in a good operating order.

- This manual includes a copy of repair and maintenance record chart and warranty information. Please keep it in a safe place or in the power.
- If someone else uses the power wheelchair, please make sure that you provide them with the instruction manual for his or her consideration.
- We reserve the right to make design modifications. As designs change some illustrations and pictures in the manual may not correspond to the power wheelchair that you have purchased.
- Power wheelchairs have been designed and manufactured to provide a comfortable, secure and affordable solution for some mobility requirements.

2. SAFETY

2.1 BEFORE DRIVING

The user needs to be familiar with the usage and operation of this power wheelchair before driving.

Therefore please always keep the following safety notices in mind.

2.1.1 The same traffic rules apply to the use of this power wheelchair as apply to pedestrians

- For your safety, please therefore follow the rules that apply to pedestrians.
- Drive on the pavement, single carriage roads, or pedestrian areas only. Never drive on motorways or dual carriageways.
- Please do not drive your power wheelchair after consuming alcohol or when you are tired.
- Please be careful when driving your power wheelchair in low light. It has not been designed for use at night.
- The power wheelchair may only be used on the pavement or pedestrian areas at 4mph. Ensure you keep within this limit.

2.1.2 Practice operating your power wheelchair

Before using the power wheelchair in busy or potentially dangerous areas, familiarize yourself with the operation of your power wheelchair. Please practice in a wide open area like a park. In order to avoid accidents with your power wheelchair while driving, please bear in mind the different driving motions, such as accelerating, stopping, turning, reversing, up-and down ramps.

- Please turn the speed dial to lowest setting for your initial practice.
- Be sure someone accompanies you for safety when driving on the roads for the first time.
- Only use higher speed setting when you are confident that you can easily operate and control your power wheelchair.

2.1.3 The Power wheelchair is only to be used by one person at a time

Do not carry passengers on your powerchair (including children).

2.1.4 Do not use this power wheelchair to carry or haul goods

The maximum weight capacity can be carried, please refer to "SPECIFICATION".

2.2 WHILE DRIVING

2.2.1 Carry out daily inspections.

Refer to the section "INSPECTION".

2.2.2 Do not move your body out of the power wheelchair while moving

- Such action may cause you to lose balance and risk injury from falling.
- Pay attention that your clothes do not tangle in the wheels.

2.2.3 Do not use your power wheelchair under any of the circumstances below.

- On roads with heavy traffic or roads that are muddy, gravelly, bumpy, narrow, snow-covered, icy, or on canal towpaths not protected by any fence or hedge. Keep away from places where you might get the wheels stuck.
- Do not drive at night or when it is raining or snowing, misty or windy.
- Do not drive your power wheelchair in an "S" pattern or make erratic turns.
- Do not take the power wheelchair onto escalators.
- UNDER NO CIRCUMSTANCES SHOULD THE POWER WHEELCHAIR BE USED AS A SEAT IN ANOTHER POWER-CHAIR (E.G. CARS, BUSES, TRAINS, ETC).

2.2.4 About Mobile Phones and other electrical equipment

- Do not use a mobile phone or other wireless communication device while driving.
- Always switch off the power wheelchair and remove the ignition key before using a mobile phone.
- Do not charge the mobile phone or any other electrical device from the power wheelchair battery.

2.2.5 Automatic Power Shut Down

- In order to avoid accidental battery run down, your power wheelchair is equipped with an automatic power shut down facility. If the power wheelchair is turned on, it will automatically turn off after remaining undisturbed for a period of thirty minutes.
- When this situation occurs, simply switch your power wheelchair off and back on and it will be ready to use once again.

2.2.6 Ramps, Inclines and Drops

- Do not drive onto ramps that are steeper than the specified gradient. Refer to the "CLIMBING ANGLE" in "SPECIFICATION".
- Always use a lower speed setting when ascending or descending a gradient.
- Do not drive on roads with large drops or potholes. Refer to the "MAX. GROUND CLEARANCE" in "SPECIFICATION".
- Please slow down when driving on roads with inclines.
- Do not make sudden turns when driving on gravel roads or ramps.
- Always lean forward when climbing a steep gradient.

2.2.7 Starting and Driving

- Make sure the seat is installed properly.
- Fold down the armrests so that you can rest your arms on them.
- Turn on the power.
- Check battery indicator to see whether there is enough power for your journey. If you have any doubt about the remaining power, recharge the batteries before departure.
- Set the speed dial to a position with which you feel safe and comfortable.
- Check the joystick lever works correctly.
- Make sure the electromagnetic brake works correctly.
- Make sure it is safe around you before you drive onto the street.

WARNING

- Do not set in the freewheel mode when driving on a gradient.
- Always re-engage the anti-freewheel device before use. Fail to do so may result in injury
- Always fasten the seat belt when operating the power wheelchair.
- To protect your safety, the power will automatically cut off and electromagnetic brake system will activate while driving down a steep gradient. This will limit the speed to a safe level. Turn the power on again to re-start your power wheelchair.
- **Maximum User Weight Limit**
Refer to section titled "MAX. WEIGHT CAPACITY" in "SPECIFICATION". Overloading past the weight limit may lead to damage of your power wheelchair or cause it to malfunction and will endanger your own safety. The warranty does not cover this type of damage.

ATTENTION

- Avoid putting all of your weight on the footrest. This may cause the power wheelchair to tip, possibly resulting in injury.
- Do not turn the power switch to OFF while driving as this will lead to an emergency stop and possible risk of accident and injury.
- Do not set to the higher speeds while driving indoors.
- Do not adjust the speed dial while driving; a sudden change in speed may cause danger to you and others, and may damage your power wheelchair.
- Do not place magnetic devices near the area of the controller as this could affect the safe operation of your power wheelchair.
- Do be careful while driving in heavy traffic or crowded areas.
- While reversing the power wheelchair, beware of people or objects behind you.

2.2.8 Stopping

Release the joystick control lever completely. The power wheelchair will naturally brake and stop.

2.2.9 Driving on the pavement

- Ensure set to the slowest setting when using the power wheelchair on the pavement.
- It is an offence to travel at more than 4 mph on the pavement.
- The limit switch can be set to the fastest setting for use on the road or on private ground.

ATTENTION

- When climbing an incline, do not zigzag or drive at an angle up the face of the of the incline.
- Always drive your power wheelchair straight up the incline.
- This greatly reduces the possibility of a tip or a fall.
- Always exercise extreme caution when negotiating an incline.
- Never travel up or down an incline that can be potentially hazardous (for example, areas covered with snow, ice or cut grass).

2.2.10 Inclines and uneven terrain

When climbing an incline, try to keep your power wheelchair moving. If you must stop, start up again slowly and then accelerate cautiously. When driving down an incline, do so slowly and in the forward direction only. If your power wheelchair starts to move faster than you anticipated or desired it would, allow the chair to come to a complete stop by releasing the joystick. Push the joystick slightly forward and continue traveling slowly down the incline.

2.2.11 Maximum recommended incline

The Power wheelchair has undergone extensive incline testing. Our results show that the maximum incline you can safely climb is six degrees at maximum weight capacity. Five degrees is the angle of most handicap access ramps. Any attempt to climb a steeper slope may put your wheelchair into an unstable position.

2.3 EMI

This section provides the user with basic information that describes the problems with electromagnetic interference (EMI), known sources of EMI, protective measure to either lessen the possibility or exposure or to minimize the degree of exposure, and suggested action should unexpected or erratic movement occur.

ATTENTION

It is very important that you read this information regarding the possible effects of electromagnetic interference on your power wheelchair.

2.3.1 ELECTROMAGNETIC INTERFERENCE (EMI) FROM RADIO WAVE SOURCES

Powered power wheelchair may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones. The interference (from radio wave sources) can cause the power wheelchair to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered wheelchair's control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each power wheelchair can resist EMI up to certain intensity; this is called its "immunity level". The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI. This power wheelchair model has as shipped as with no further modification an immunity level of 20 V/m without any accessories.

There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warning listed below, your risk to EMI will be minimized.

The sources of radiated EMI can be broadly classified into three types:

- Hand-held portable transceivers (transmitter-receivers with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkie", security, fire, and police transceivers, cellular telephones and other personal communication devices.

ATTENTION

Some cellular telephones and similar transmit signal while they are ON, even when not being used.

- Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances and taxis. These usually have the antenna mounted on the outside of the power wheelchair.
- Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

ATTENTION

Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, cassette and small appliances such as electric shavers and hair dryers are not, so far as we know, likely to cause EMI problems to your powered power wheelchair.

2.3.2 POWERED WHEELCHAIR ELECTROMAGNETIC INTERFERENCE (EMI)

Because EM energy rapidly becomes more intense as one move closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very closer to the powered s control system of power wheelchair while using these devices. This can affect powered power wheelchair movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered power wheelchair.

WARNING

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered power wheelchair and motorized power wheelchair. Following the warnings listed below should reduce the chance of unintended brake release or powered power wheelchair movement which could result in serious injury.

- Do not operate hand-held transceivers-receivers, such as citizens band (CB) radios, or turn ON personal communication devices such as cellular phones, while the powered power wheelchair is turned ON.
- Be aware of nearby transmitters such as radio or TV stations, and try to avoid coming close to them.
- If unintended movement or brake release occurs, turn the powered power wheelchair OFF as soon as it is safe.
- Be aware that adding accessories or components, or modifying the powered power wheelchair, may make it more susceptible to EMI (Note: There is no easy way to evaluate their effect on the overall immunity of the powered power wheelchair).
- Report all incidents of unintended movement or brake release to the powered power wheelchair manufacturer, and note whether there is a source of EMI nearby,

2.3.3 IMPORTANT INFORMATION

- 20 Volts per meter (V/m) is a generally achievable and useful immunity level against EMI (the higher the level, the greater the protection);
- This product has an immunity level of 20 V/m without any accessories and connected to it.

3. TECHNICAL SPECIFICATIONS

SKU#	GUT172
Max. Weight Capacity	300 lbs / 136 kgs
Max. Drive Speed	4.0 MPH / 6.4 km/h
Max. Reverse Speed	1.6 MPH / 2.5 km/h
Max. Range	6.7 miles / 10.7 km
Climbing Angle	6° (10.5%)
Turning Radius	19.5" / 496 mm
Ground Clearance	2.3" / 60 mm
Motor	24Vdc-250W x2pcs
Battery	12Vdc-20AH x2pcs, Sealed lead-acid
Charger	2A, Off-Board
Charging Time	>8 hours
Caster Wheel	Solid, 8"x2" / 200x50 mm
Drive Wheel	Solid, 9"x3" / 230x75 mm
Anti-tip Wheel	Yes
Seat Size	18"x 18"/450 x 450 mm
Product Dimension (LxWxH)	35"x22.8"x35.8" / 890x580x910 mm
Package Dimension (LxWxH)	35.4"x23.2"x20.9" / 900x590x530 mm
Total Product Weight	116 lbs / 52.8 kgs
Front Base W/ Battery	57 lbs / 26 kgs
Rear Base	32 lbs / 14.6 kgs
Seat Weight	27 lbs / 12.3 kgs
Battery Weight	26.6 lbs / 12.1 kgs

NOTE: The maximum range is based on an ambient temperature of 68°F/20 °C , a 220 lbs/100 kgs driver, a brand new and fully charged battery, and a constant driving speed of 4 mph at a flat ground. It will be reduced that depends on rider weight, wind speed, temperature, riding style, riding surface, battery condition, and other factors.

4. COMPONENTS AND FEATURES



Fig.01

5. ASSEMBLY

5.1 CONNECT BATTERY CABLE

- Loosen and remove the two knobs on the base cover. Lift up the base cover to remove. **(Fig.02)**



- Connect the battery pack. Refit the base cover and tighten the two knobs to secure. **(Fig.03)**



5.2 ASSEMBLE SEAT

- Insert the seat in to the seat post. Lift up the swivel lever and rotate the seat until it locks in position. **(Fig.04)**



- Insert the arms in to the seat. Set the arms to the required width then secure by turning the armrest knobs clockwise. **(Fig.05)**



Fig. 05

- Set the arms to the required height, then secure by turning the armrest knobs clockwise. **(Fig.06)**



Fig. 06

- Insert the controller's square mount into the housing under the armrest. Tighten the star knob on the underside of the controller arm mount to hold it in place at the desired extension. **(Fig.07)**



Fig. 07

5.3 CONNECT POWER CABLE

- Plug the cable from the joystick remote in to the port at the center of the powerchair base. **(Fig.08)**

6. DISASSEMBLE

The powerchair can be quickly and easily separated into 4 sections: seat assembly, front section, and rear section (with or without batteries) and the battery pack.

6.1 DISCONNECT POWER CABLE

- Unplug the joystick from the rear of the powerchair. **(Fig.08)**



6.2 REMOVE SEAT

- Swivel the seat using the lever whilst lifting up the seat to remove. **(Fig.09)**



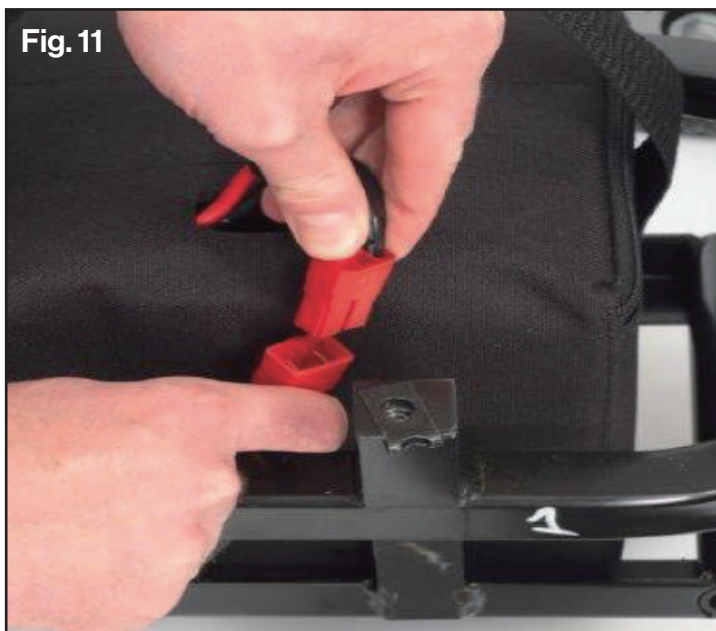
6.3 REMOVE BASE COVER

- Loosen and remove the two knobs on the base cover. Lift up the front base cover to remove. **(Fig.10)**



6.4 DISCONNECTOR BATTERY CONNECTOR

- Disconnect the batteries connector and lift up the battery pack to remove. **(Fig.11)**



6.5 SEPARATE CHASSIS

- Lift up the yellow handle to separate the chassis. This can be done with or without the batteries installed. **(Fig.12)**



7. OPERATION

7.1 CONTROL PANEL

Your wheelchair is operated by a joystick and controller.

Joystick Controller Functions **(Fig.13)**

- 1) Battery Indicator
- 2) ON/OFF Button
- 3) Speed Dial
- 4) Horn Button
- 5) Joystick



7.1.1 Battery Indicator

- The battery gauge shows you that the power wheelchair is switched on. It also indicates the operating status of the power wheelchair.
- When the powerchair is turned on, the battery gauge will light up from left to right with red, orange, and green lights indicating:
- Red lights only: Your powerchair should be charged as soon as possible.
- Red and orange lights only: Do not drive your powerchair for a long trip.
- Red, orange, and green lights: Your powerchair has full battery capacity.

7.1.2 ON/OFF Button

- The ON/OFF button applies power to the control system electronics, which in turn supply power to the power wheelchair's motor.
- Do not use the ON/OFF button to stop the power wheelchair unless there is an emergency.
- Press the power button to switch the powerchair on. If the system is functioning correctly, then the power button will light up green and the battery gauge will display the power remaining in the battery. If the system detects a fault when powering up, then the power button will indicate the fault with a series of red flashes and prevent the system from driving. The battery gauge will flash continuously.
- Press the power button again to switch the powerchair off.



If you use the ON/OFF button to stop the power wheelchair, it may shorten the life of the drive components.

7.1.3 Speed Dial

- Turn this dial to determine to the speed range of the power wheelchair.
- Turn the dial counter-clockwise to go slower and clockwise to go faster.

7.1.4 Horn Button

- Press either button to sound the horn.

7.1.5 Joystick

- The primary function of the joystick controls the speed and direction of the power wheelchair.
- The joystick has 360° of movement and moves the powerchair in a combination of forwards, backwards, left and right.
- The further you push the joystick from the center position the faster the power wheelchair will move.
- When you release the Joystick the brakes are automatically applied.

7.2 HOW TO OPERATE YOUR POWER WHEELCHAIR

7.2.1 How to operate the locking system 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 timeframe. If the sequence is not performed correctly, within the timeframe, the system remains locked.

- a) To 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. **(Fig.14)**
- b) To unlock the system, press the Power button once, and then, press the Horn button twice within 10 seconds. **(Fig.15)**

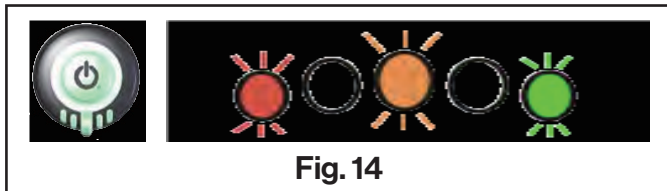


Fig. 14

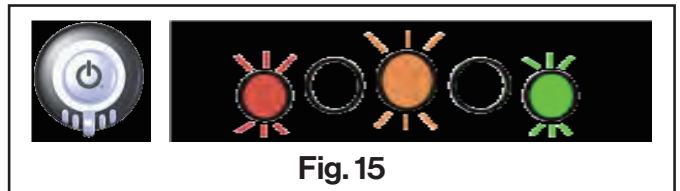


Fig. 15

7.2.2 JOYSTICK depth adjustment

Your power wheelchair may be equipped with an adjustable joystick. This function enables you to move the joystick from the armrest to the desired position.

(Fig.16)

7.2.3 BRAKING

Electro-magnetic brake: Release the speed control lever completely, and the electromagnetic brake will be activated automatically, and the power wheelchair will stop. (Fig.16)

⚠ WARNING

When on a gradient NEVER switch the power wheelchair to the freewheel mode. The electromagnetic brakes will not be applied and this may result in injury.

Fig. 16

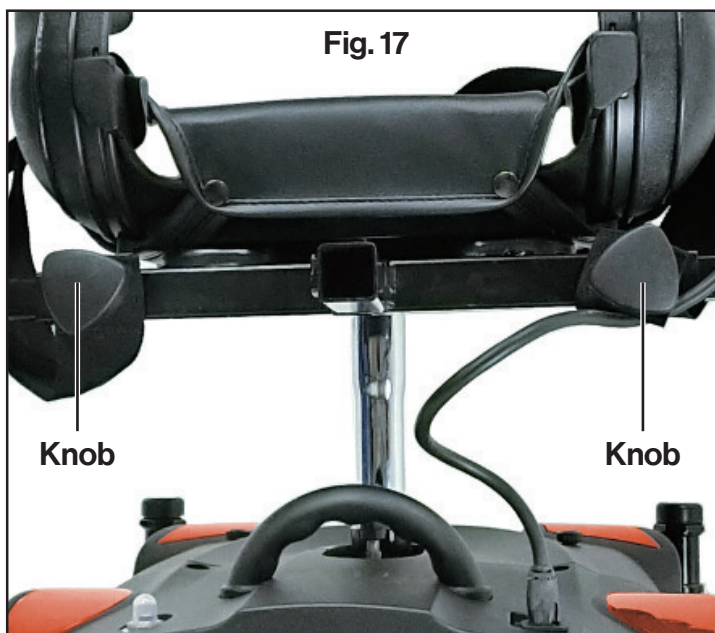


7.3 HOW TO ADJUST THE SEAT

7.3.1 To adjust the armrest width (Fig.17)

- Loosen the knobs.
- Slide the armrests in or out to the desired width.
- Tighten the knobs.

Fig. 17



7.3.2 To adjust the armrests angle (Fig.18)

- Lift-up the armrest.
- Loose the hex nut.
- Adjust the socket screw up or down to the desired arm angle position.
- Tighten the hex nut.
- To determine the same angle for the opposite armrest, count the exposed threads after the hex nut has been tightened.
- If necessary, repeat the steps for the opposite armrest.

Fig. 18



7.3.3 To adjust the height of armrests (Fig.19)

- Loose knob on handle.
- Move armrest to required position.
- Tighten knob.

7.3.4 To remove the seat

- Turn the power OFF.
- Make sure the wheelchair is not in freewheel mode.
- Push the seat rotate lever while pulling up on the seat to remove.

7.3.5 To rotate around the seat (Fig.20)

- Turn the power OFF.
- Make sure the wheelchair is not in freewheel mode.
- Lift up the seat rotate lever and then rotate the seat.
- Release the lever and carry on rotating the seat until it locks in position.

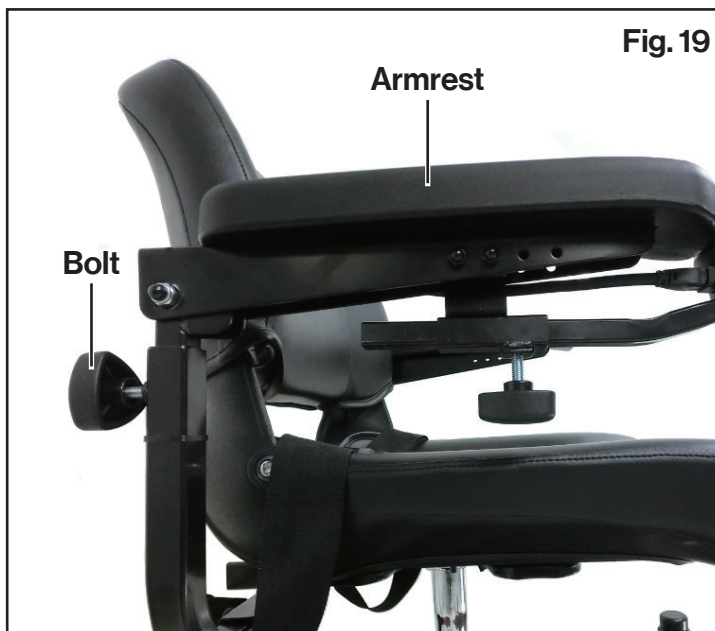
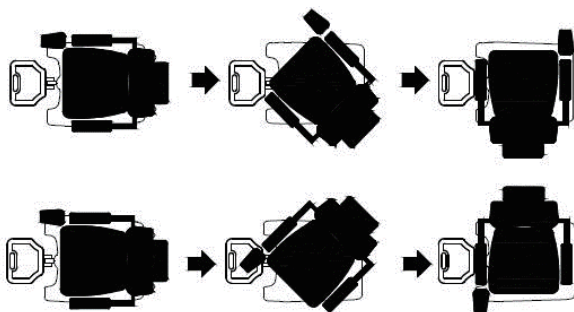


Fig. 19



Fig. 20

7.3.6 To change the seat height (Fig.21)

- Remove seat (See "To remove the Seat")
- Remove the base cover.
- Disengage and remove the seat height adjustment pin from the seat post.
- Remove the height adjustment pin from each of the four posts.
- Raise or lower each post to the desired position.
- Reinstall the seat height adjustment pin through the seat post and armrest post. (Bend the end of the pin lock and position it over the end the pin.)
- Reinstall the base cover.
- Reinstall the seat.
- Plug the connectors into the electronics tray.

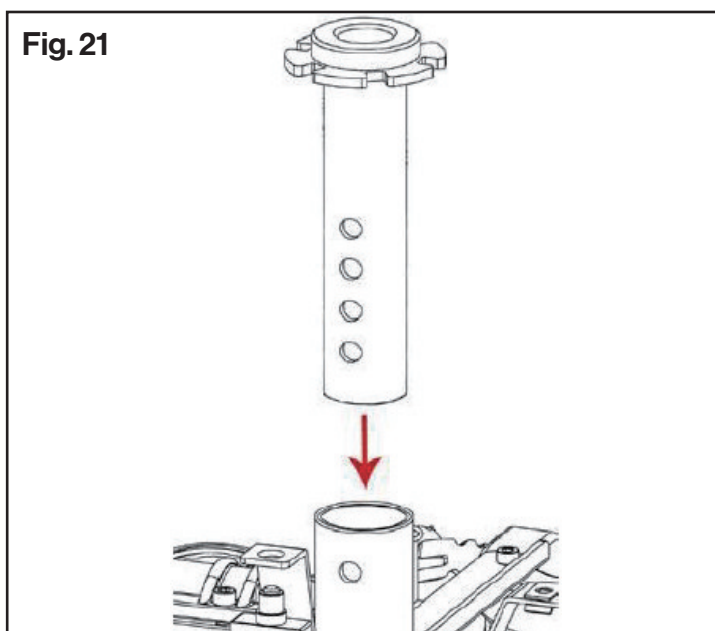


Fig. 21

7.4 HOW TO ADJUST THE FOOTREST

7.4.1 To adjust the footrest height (Fig.22)

- Remove the screw and nut.
- Adjust footboard to one (1) of three (3) mounting positions.
- Reinstall the screw and nut. Make sure the screw locking.

7.5 HOW TO SET TO FREEWHEEL MODE (Fig.23)

For your convenience, the wheelchair is equipped with a freewheel level. This lever allows you to disengage the drive motors and maneuver the chair manually.

7.5.1 To engage the drive and take power wheelchair out of freewheel

- Turn the left and right freewheel lever to "DRIVE" position (Upward).
- Activation of the joystick automatically releases the brake so the powered wheelchair can be drive.

7.5.2 To disengage the drive and place power wheelchair in freewheel

- Turn the left and right freewheel lever to "NEUTRAL" position (Downward).

⚠ WARNING

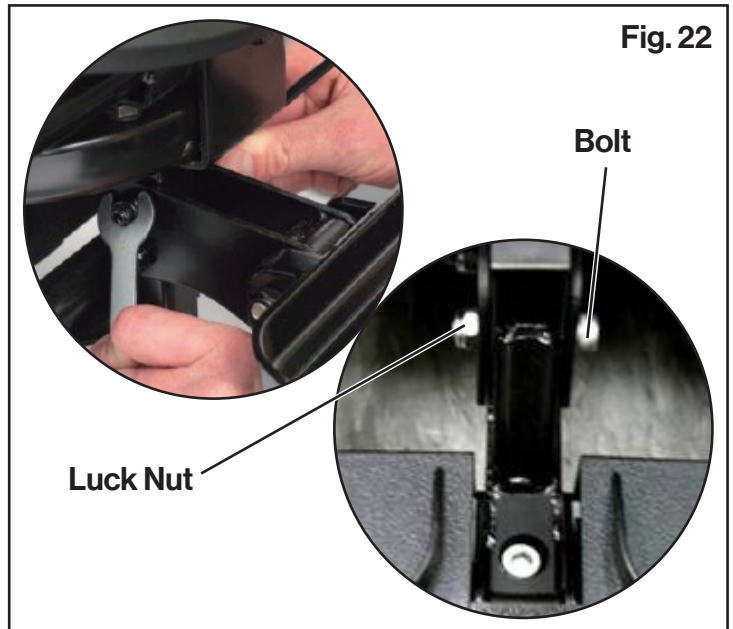
Do not use your Power wheelchair while the drive motors are disengaged unless you are in the presence of an attendant! Do not disengage the drive motors when on an incline as the power wheelchair may roll down, causing injury!

⚠ SUGGESTION

If a level is difficult to move in either direction, gently rock the power wheelchair back and front; the level should then move to the desired position.

7.6 CIRCUIT BREAKERS (Fig.24)

- The Power Chair has a circuit breaker on the base cover.
- In the unlikely event of a short circuit or heavy overload, all power to the power chair will be shut off.
- To reset, depress the circuit breaker button. A few minutes wait is required before the circuit breaker will reset.
- If the power chair continues to shut down after resetting have it serviced by a dealer.

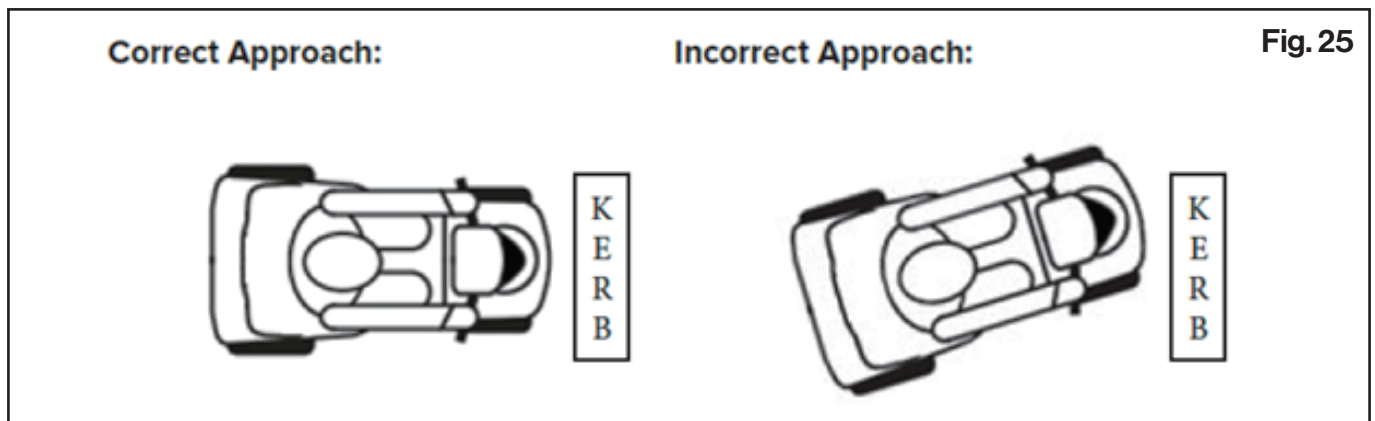


7.7 DRIVING THE POWERCHAIR

- You must exercise awareness, caution, care, and common sense when operating your powerchair. Always keep in mind your own limitations and substance use.
- Users may encounter difficult manoeuvring situations such as narrow doorways, travelling up and down ramps, cornering, and travelling on uneven terrain. Be sure to lower the speed, take your time, and carefully manoeuvre the powerchair.
- For your safety, fasten the safety belt before you drive the powerchair.
- Always reduce your speed and maintain a stable centre of gravity when turning corners.
- Do not let children play near or operate the powerchair.

7.8 STEPS, KERBS & FIXED OBSTACLES (Fig.25)

- Use extreme caution when operating your powerchair near kerbs, porches, stairs, escalators, drop-offs, unprotected ledges, and raised areas. Approach slowly, and make sure the front of the powerchair is perpendicular to the obstacle.
- To manoeuvre up a fixed obstacle – Increase the forward speed until the powerchair has cleared the obstacle, and then you may reduce the speed or return the joystick to neutral.
- To manoeuvre down a fixed obstacle – Reduce the forward speed just before the front wheels come in contact with the obstacle and remain at the reduced speed until powerchair has cleared the obstacle, then you may increase the forward speed.
- Never attempt to navigate your powerchair over a kerb or other fixed obstacle taller than the maximum ground clearance.
- Never attempt to operate your powerchair on steps or escalators.



7.9 INCLINES

- Use caution when approaching inclines or declines. If necessary, lower the speed before travelling on a slope.
- When travelling up an incline, try to keep the powerchair moving forward. If you must come to a stop, use caution and slowly accelerate the powerchair forward.
- When travelling down an incline, lower the speed on your powerchair to the slowest setting, and proceed cautiously.
- If the powerchair is travelling down the incline faster than you expected, slowly return the joystick to the centre to come to a stop, then slightly push the joystick forward again to continue safely down the incline.
- Drive your powerchair straight up or down an incline, never backwards. Erratic movements, or back and forth patterns may increase the chance of tipping.
- Do not, under any circumstances, travel on a slope greater than the maximum stability angle for this powerchair. Exceeding the stability angle may cause unstable conditions.

7.10 OUTDOOR OPERATION & INCLEMENT WEATHER PRECAUTIONS

- Exposure to inclement weather should always be avoided. Monitor weather forecasts before starting a journey to reduce risks. If you find yourself caught in inclement weather while operating your powerchair, proceed to the closest shelter immediately.
- Completely dry your powerchair before operating, charging, or storing.
- Always use the pavement when it is available. When there is no pavement, use extreme caution when on the road and where possible travel in the direction of the traffic.
- Be cautious when driving your powerchair in busy areas, such as shopping malls.
- Do not drive your powerchair at night without proper lighting.
- At extreme temperatures, the batteries may freeze, and your powerchair may not be able to operate. In extreme 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.

8. BATTERY CHARGING AND CARE

8.1 BATTERY

Use proper batteries

- The Power wheelchair uses two long- lasting, 12 volt, deep-cycle batteries. These batteries are sealed and maintenance free. Since they are sealed, there is no need to check the electrolyte (fluid) level. Deep-cycle batteries are designed to handle a longer and deeper discharge. Though they are similar in appearance to automotive batteries, they are not interchangeable. Automotive batteries are not designed to handle a long, deep discharge and are unsafe for use in powered power wheelchairs.
- These batteries are maintenance free and there is no need to refill with water.
- Do not expose the battery to temperatures below 32°F (0°C) or above 122°F (50°C) when charging or storing the power wheelchair. Under the above temperature range can cause the battery either to freeze or overheat, causing damage and shortening its life.

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling!

- Only deep cycle sealed case construction batteries should be used in the power wheelchair.
- When you buy a replacement, insist on a deep cycle sealed case. Do not use any other type.

8.2 CHARGING THE BATTERIES

- The battery charger is essential in providing long battery life. Located underneath the utility tray, it is designed to optimize your wheelchair's performance by charging safely, quickly and easily.
- The power wheelchair ammeter and charger plug are located on the utility tray for easy viewing.
- The ammeter indicates the rate of charge being administered to fully recharge the batteries. It is also a good indication of whether the charger is working.
- The ammeter and the charger are only functional when the charger power cord is plugged into a wall outlet.

To charge the batteries using the off-board charger

- Position the power wheelchair next to a standard wall outlet.
- Be certain the controller power is turned off.
- Connect the charging cable into the charging socket.
- Plug the charging cable into the wall outlet.
- We also recommended that the batteries are not charged for more then 24 hours.
- When your batteries are fully charged, unplug the charging cable from the wall outlet.
- Disconnect the charging cable from the wheelchair.

⚠ WARNING

- Keep away from flammable objects while charging as it may lead to fire or explosion of battery.
- Do not smoke while charging as the battery may release hydrogen gas. Always charge the battery in a well-ventilated space.
- Avoid electric shock! Never connect or disconnect the plug or cord with wet hands while charging. Do not connect or disconnect the plug or cord when they are wet.

⚠ ATTENTION

Please follow the rules below to avoid accidents while charging.

- Please use the manufacturer's supplied charger only, and recharge the battery to its full capacity every time. You may damage the battery and power wheelchair if you use a charger which is not correctly specified.
- Please charge in a well-ventilated space not directly exposed to sunlight. Do not charge in areas that are humid or exposed to rain, mist nor dew.
- Do not charge in temperatures 32°F (0°C) or higher than 122°F (50°C) as the charger may not work well and the batteries damaged.



Fig. 26

SUGGESTION

How to maximize your battery's efficiency and service life

- Fully charge any new battery before its initial.
- Be sure to charge the battery fully every time. Battery life will be seriously diminished if the battery is repeatedly used without being fully charged.
- Always complete the charging until the orange LED light turns green. NEVER stop charging before it is complete.
- Keep your batteries fully charged whenever possible.
- If the power wheelchair is not used for an extended period, batteries should be charged at least weekly to keep them fully useable.
- The ambient temperature affects charging time, it will be longer in the winter.
- After charging, do not leave the charger socket plugged the power wheelchair as this will cause a power drain and temporarily reduce range.
- In wintertime, the battery may respond more slowly and the battery range may be reduced.
- The battery range will be reduced when driving frequently on a slope or rough terrain, as this requires a greater consumption of power.
- When driving on a gradient, the battery indicator light might move up and down. This is a normal phenomenon and should not cause concern.

8.3 CLEANING THE BATTERY

If the batteries are contaminated by water, battery acid, dust or other substances, they will discharge quickly. The batteries supplied with the power wheelchair are sealed and as such are maintenance free with no risk of battery leakage. Please follow the steps below to clean the battery.

- Turn the power switch to OFF.
- Remove the seat.
- Remove the base cover and unplug the terminal of the joystick.
- Use a clean cloth to wipe off the soiled area.
- Remove the battery.
- Wipe with a clean cloth. If the terminal is covered with white powder, wipe it clean using warm water.

8.4 BATTERY REPLACEMENT

- Remove the seat. (See "To remove the seat")
- Remove the base cover.
- Disconnect the negative terminal (black) wires first, then the positive terminal (red) wires by removing the four nuts and bolts from each battery terminals.
- Remove the batteries.
- Place new battery.
- Connect the positive terminal (red) wires first, then the negative terminal (black) wires by tighten the nuts and on each battery terminals.
- Install the base cover and seat.

WARNING

- Be sure the battery wires are connected to their right battery terminal.

SUGGESTION

- Make sure the terminals are installed properly and replace the cover.
- Do not use the battery to charge telecom or other equipment.
- Battery efficiency will vary with outside conditions- driving range will be reduced in winter. If the power wheelchair is not used for a long time, charge the battery at least every week.
- Replace both batteries together.

9. INSPECTION AND MAINTENANCE

9.1 INSPECTION

Initial adjustments should be made to suit personal body structure and preference. Thereafter, follow these checks and maintenance procedures.

No.	Item	Initially	Weekly	Monthly	Periodically
1	General (Mechanical Troubleshooting) • Power wheelchair rolls straight (no excessive drag or pull to one side).	☐			☐
2	Arms • Secure but easy to release; adjustment levers engage properly. • Adjustable height arms operate and lock securely. • Pivot point free of wear and looseness.	☐ ☐ ☐		☐	☐ ☐
3	Seat and back upholstery • Inspect for rips or sagging.	☐	☐		☐
4	Seat • Seat secured to the power wheelchair frame. • Inspect seat release latches	☐ ☐			☐
5	Drive wheel • Mounting bolts are secure • No excessive side movement or binding when lifted and spun when disengaged (free-wheeling)	☐ ☐			
6	Caster assemblies • Bolt are tight. • Inspect caster assembly for proper tension by spinning caster assembly; caster assembly should come to a gradual stop. Attention: As with any power wheelchair, the wheels and tires should be checked periodically for cracks and wear, and replaced if necessary.	☐ ☐	☐ ☐	☐ ☐	
7	Caster assemblies/ wheel • Ensure all fasteners are secure.	☐			
8	Wheels/tires • Inspect for flat fasteners are secure. Attention: As with any power wheelchair, the wheels and tires should be checked periodically for cracks and wear, and replaced if necessary.	☐			
9	Cleaning • Clean upholstery and armrests.	☐			☐

9.2 REGULAR CHECKING RECORD

To make sure your power wheelchair is correctly serviced, take it to your dealer for regular maintenance checks. The initial inspection should be made after the first month's use, thereafter every six months. Your dealer may charge a fee for this.

Year	1	2	3	4	Year	1	2	3	4
Service Dates					Service Dates				
Controller					Upholstery				
On/off Switch					Seat				
Joystick					Back				
Braking					Armrests				
Recharge Point					Electrics				
Batteries					Connections Condition				
Levels					Utility Tray				
Connections					Test Run				
Discharge Test					Forwards				
Wheels And Tires					Reverse				
Wear					Stop				
Pressure					Left Turn				
Bearings					Right Turn				
Wheel Nuts					Slope Test				
Motors					Over Obstacles				
Wiring					List Items Repaired				
Noise									
Connections									
Brake									
Brushes									
Chassis/Footrest									
Condition									
Footrest									

9.3 BATTERY, FUSE AND TIRE

9.3.1 Battery

Refer to the section titled "BATTERY CHARGING AND CARE"

9.3.2 Fuse

If the battery charger is turned on and no LEDs are lit, check the fuse.

SUGGESTION

Ask for help from dealer to inspect or replace the fuse as the steering base cover must be removed for access.

9.3.3 Tires

The condition of the tires depends on how you drive and use your power wheelchair.

- Inspecting Tire Tread.
- Please check the tread depth regularly. Replace the tires when the tread depth is less than 0.5 mm.

ATTENTION

When tread depth is below 0.5mm it can easily lead to power wheelchair slippage, making braking distances longer. Therefore replace the tires as early as possible when they are found to have insufficient tread depth.

ATTENTION

Before doing any maintenance, turn the power switch to OFF and remove the charger cords.

SUGGESTION

- Do not splash water onto the power wheelchair as this could cause the electronic system to malfunction.
- Do not use petrol, solvents or aerosols as these may deform or damage the base covers.
- Do not use wax.

9.4 STORAGE

Make sure the power wheelchair is stored as follows:

- With the charger unplugged
- With the power switch OFF

SUGGESTION

Always store the power wheelchair in a location where it is out of direct sunlight, rain or dew. If storing for an extended period, charge the battery to full power and then disconnect the battery terminal.

10. TROUBLE SHOOTING

10.1 TROUBLE SHOOTING

Symptom	Possible cause	Solution
Limited driving distance.	1. Batteries not fully charged. 2. Batteries weak won't hold charge.	1. Charge batteries overnight or ensure 10 hours of charge between uses. Make sure setting on charger is correct. 2. Replace batteries
Batteries not charging.	1. Charger not working. 2. Battery connections loose. 3. No current at wall outlet. 4. Bad connection on charger, charger cable, plug or internal wiring problem.	1. Replace charger. 2. Check all connections. Secure connections. 3. Switch to another wall outlet. 4. Replace charger or internal repairs required. 5. Contact dealer.
Batteries draw excessive current when charging.	1. Battery failure.	1. Replace batteries
Charge indicator shows low charge. Level immediately after charging.	1. Batteries weak won't hold charge. 2. Electrical malfunction. 3. Charger not operating.	1. Replace battery. 2. Contact dealer. 3. Replace charger.
Battery indicator flashes the charge level is low-too soon after being recharged.	1. Have charger checked. 2. Weak batteries.	1. Service or replace charger. 2. Contact dealer. 3. Replace batteries.
Wheel chair will not drive.	1. Motor release levers disengaged. 2. Battery requires charging. 3. Charger plugged in. 4. Circuit breaker tripped.	1. Engage motor release levers. 2. Charge batteries. Make sure setting on charger is correct. 3. Unplug charger from wall outlet. 4. Reset breaker. If breaker trips again, it may indicate need for internal repairs. 5. Contact dealer.
Motor "chatter" or runs irregularly.	1. Electrical malfunction.	1. Contact dealer
Joystick erratic or does not respond as desired.	1. Electrical malfunction. 2. Controller programmed improperly.	1. Contact dealer 2. Contact dealer
Only one (1) rear wheel turns.	1. Electrical malfunction. 2. One (1) motor release lever is engaged.	1. Contact dealer 2. Disengage motor release lever.
Wheelchair does not respond to commands. Power indicator off even after recharging.	1. Poor battery terminal connection. 2. Electrical malfunction.	1. Clean terminals. 2. Contact dealer.

10.2 Error Indication

- If there is an error with the system when it is powered up, then the status indicator will flash red; the number of flashes will indicate the type of error.
- The table below describes the error indication, and a few possible actions that can be taken to rectify the problem. The actions listed are not in any particular order and suggestions only; the intention is that one of the suggestions may help you clear the problem. If in doubt, consult your supplier.
- The error indicator may continue to flash after an error has been rectified. To clear the error indication, cycle the system's power.

Flash Code	Error Description	Possible Action
1	Remote / Joystick error.	Check cables and connectors. Replace Remote.
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 break is released.
6	Right park break error.	Check cables and connectors. Check right park break is released.
7	Module error. (other than Remote)	Check cables and connectors. Check modules. Replace LiNX Access Key. Replace Power Module. Recharge battery.

10.3 POWERCHAIR INDIFICATION NUMBER (Fig.26)

To ensure the correct after sales service and warranty service support, please record the power wheelchair identification number found on the rear right-hand side of the frame.



11. WARRANTY

Twelve (12) months for workmanship of the product, except for wearing parts. Warranty period starts from the product purchase date. Warranty covers material quality and workmanship only. Warranty does not cover product for issues caused by improper usage or any operation not in accordance with the specifications of this manual. Any modification or tampering with the product in any way voids the warranty.

Warranty not applicable

Use loss or discomfort due to change over time (coating surface, plating surface, natural fading and deterioration of resin, etc.).

Use different methods of operation and overload (overload, load capacity, etc.) than those shown in the operating instructions, etc.

External factors such as soot, medicine, guano, acid rain, flying stone, metal powder, etc. Natural disasters such as typhoons, floods, fires, earthquakes, etc.



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