

# Crest **CS5**



by **IGO**

## USER MANUAL

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# 1. PREFACE & INTRODUCTION




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

This owner's manual includes operating instructions for every aspect of the power chair, 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:

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	<b>Warning</b>	Improper usage could result in serious injury or death
	<b>Attention</b>	Improper usage could lead to injury and/or damage to your power chair.
	<b>Suggestion</b>	Follow these instructions to keep your power chair in good operating order.

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- » This manual includes a repair and maintenance record chart and warranty information. Please keep it in a safe place.
- » If someone else uses the power chair, please make sure that you provide them with the instruction manual for their 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 chair that you have purchased.

Power Chairs have been designed and manufactured to provide a comfortable, secure and affordable solution for some mobility requirements.



## 2. SAFETY NOTICE

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### 2.1 BEFORE DRIVING

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The user needs to be familiar with the operation of this power chair before driving. Therefore please always keep the following safety notices in mind.

#### **The same traffic rules apply to the use of this power chair 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 chair after consuming alcohol or when you are tired.
- » Please be careful when driving your power chair in low light. It has not been designed for use at night.
- » The power chair may only be used on the pavement or pedestrian areas at 4mph.

#### **Practice operating your power chair**

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

- » Please turn the speed dial to value 1 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 chair.

#### **The Crest CSS Power Chair is only to be used by one person at a time**

Do not carry passengers on your power chair. (including children)

#### **Do not use this power chair to carry or haul goods**

- » The maximum weight that can be carried is advised in the 'Specification' section under "MAX LOAD WEIGHT"



## 2. SAFETY NOTICE

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### 2.2 WHILE DRIVING

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#### **Carry out daily inspections.**

*Refer to the section titled "DAILY CHECKING"*

#### **Do not move your body out of the power chair while moving**

- » Such action may cause you to lose balance and risk injury from falling.
- » Ensure you wear suitable clothing that won't get tangled in the wheels

#### **Do not use your power chair 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 chair in an "S" pattern or make erratic turns.
- » Do not take the power chair onto escalators.
- » UNDER NO CIRCUMSTANCES SHOULD THE POWER CHAIR BE USED AS A SEAT ON MOVING TRANSPORT (E.G. CARS, BUSES, TRAINS, ETC).

#### **Mobile Phones and other electrical equipment**

- » Do not use a mobile phone or other wireless communication device while driving.
- » Always switch off the power chair and remove the ignition key before using a mobile phone.
- » Do not charge the mobile phone or any other electrical device from the power chair battery.
- » Do not use this power chair to carry or haul goods.

#### **Automatic Power Shut Down**

In order to avoid accidental battery run down, your power chair is equipped with an automatic power shut down facility. If the power chair 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 chair off and back on and it will be ready to use once again.



## 2. SAFETY NOTICE

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### Ramps, inclines and drops

- » Do not drive onto ramps that are steeper than the specified gradient. Refer to the section entitled "CLIMBING ANGLE" in Specifications.
- » Always use a low speed setting when ascending or descending a gradient.
- » Do not drive on roads with large drops or potholes. Refer to the section entitled "MAX. GROUND CLEARANCE" in Specifications.
- » 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.

### Starting and Driving

1. Make sure the seat is installed properly.
2. Fold down the armrests to enable use.
3. Turn the power on.
4. 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.
5. Set the speed dial to a position with which you feel safe and comfortable.
6. Check the joystick lever works correctly.
7. Make sure the electromagnetic brake works correctly.
8. Make sure it is safe around you before you drive onto the street.



#### Warning!

- » Do not set in 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 chair.
- » 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 chair.
- » **Maximum User Weight Limit** Refer to section titled "MAX. LOAD WEIGHT" in Specifications. Overloading past the weight limit may lead to damage of your power chair or cause it to malfunction and will endanger your own safety. The warranty does not cover this type of damage.



## 2. SAFETY NOTICE

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### Attention

1. Avoid putting all of your weight on the footrest. This may cause the power chair to tip resulting in injury.
2. 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.
3. Do not set to the higher speeds while driving indoors.
4. 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 chair.
5. Do not place magnetic devices near the area of the controller as this could affect the safe operation of your power chair.
6. Do be careful while driving in heavy traffic or crowded areas.
7. While reversing the power chair, beware of people or objects behind you.

### Stopping

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

### Driving on the pavement

The Power Chair is limited to a maximum speed of 4mph. It is an offence to travel at more than 4 mph on the pavement.



### Attention

- » When climbing an incline, do not zigzag or drive at an angle up the face of the incline.
- » Always drive your power chair 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. SAFETY NOTICE

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### Inclines and uneven terrain

When climbing an incline, try to keep your power chair 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 chair 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 travelling slowly down the incline.

### Maximum recommended incline

The Crest CSS Power Chair has undergone extensive incline testing. Our results show that the maximum incline it can safely climb is 6 degrees at maximum weight capacity. 6 degrees is the angle of most disabled access ramps. Any attempt to climb a steeper slope may make your Crest CSS unstable.



Figure 1. Maximum Recommended Incline Angles





### 3. EMI

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This section provides the user with basic information that describes the problems with electromagnetic interference (EMI), known sources of EMI, protective measures to either lessen the possibility of 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 Crest CSS power chair.

#### **Electromagnetic Interference (EMI) from radio wave sources**

Power chairs 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 mobile phones. The interference (from radio wave sources) can cause the power chair 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 chair 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 chair model has 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 guidelines listed below your risk to EMI will be minimized.

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

1. 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, mobile telephones and other personal communication devices.



#### **Attention**

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

2. 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 chair.



### 3. EMI

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3. 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, and small appliances such as electric shavers and hair dryers are not, so far as we know, likely to cause EMI problems to your power chair.

#### **Power Chair Electromagnetic Interference (EMI)**

Because EM energy rapidly becomes more intense as one moves 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 close to the control system of the power chair while using these devices. This can affect power chair movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the power chair.

#### **Warnings**

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

#### **Important Information**

1. 20 Volts per meter (V/m) is a generally achievable and useful immunity level against EMI (the higher the level, the greater the protection);
2. This product has an immunity level of 20 V/m without any accessories and connected to it.



## 4. PARTS INTRODUCTION

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### Parts Description



1. Joystick Controller

2. Armrest

3. Seat back

4. Seat

5. Armrest fixed knob

6. Drive Wheel

7. Caster Wheel

8. Footrest

9. Battery Box



## 5. OPERATION

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### 5.1 CONTROL PANEL

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Your Crest CSS is operated by a joystick and controller

#### Control Functions

1. Battery Gauge
2. ON/OFF Button
3. Horn Button
4. Speed/Profile Increase Button
5. Speed/Profile Decrease Button
6. Joystick



### 5.2 OPERATING YOUR POWER CHAIR

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#### Battery Gauge

The battery gauge shows you that the power chair is switched on. It also indicates the operating status of the power chair

#### ON/OFF Button

The ON/OFF button applies power to the control system electronics, which in turn supply power to the power chair's motor.

Do not use the ON/OFF button to stop the power chair unless there is an emergency.



#### Attention

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



## 5. OPERATION

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### Speed Dial

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

### Horn Button

Press either button to sound the horn.

### Joystick

The primary function of the joystick is to control the speed and direction of the power chair. The further you push the joystick from the center position the faster the power chair will move. When you release the joystick the brakes are automatically applied.

### Joystick Depth Adjustment

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



### Locking the Joystick

To lock the joystick press the power button down for 10 seconds until you hear a beep. The joystick is now locked and cannot be used to operate the chair. You will see the Red » Green LED lights flashing from Green to Red individually for 10 seconds and the Joystick will turn off.

### Unlocking the Joystick

Turn the joystick on. Press the Horn button down 3 times and the Joystick will unlock and be ready for use.



## 5. OPERATION

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### Suggestion

1. You should recharge the batteries after each time the power chair is used to ensure maximum range. The batteries should be charged at least once a week even if the power chair is not used.
2. After charging or replacing a new battery, drive the power chair for 2-3 minutes to make sure the battery capacity is sufficient.
3. In winter, the battery may respond more slowly and the battery range may be reduced.
4. When driving on a gradient, the battery indicator light might move up and down. This is normal and should not cause concern.
5. Even with proper care and use of the battery it is natural for the battery's capacity to reduce with time. Therefore, when the battery's range has reduced by about 50% from when it was new, it is time for it to be replaced. Please contact your dealer about replacement batteries. If an old battery continues to be used it can lead to a rapid decline in performance.
6. The battery range will be reduced when driving frequently on slopes or rough terrain, as this requires a greater consumption of power.
7. The batteries have a six-month warranty covering manufacturing defects. This warranty does not cover faults due to incorrect battery recharging.

### Braking

Electro-magnetic brake: Release the speed control lever completely, and the electromagnetic brake will be activated automatically, and the power chair will stop.



### Warning

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



## 5. OPERATION

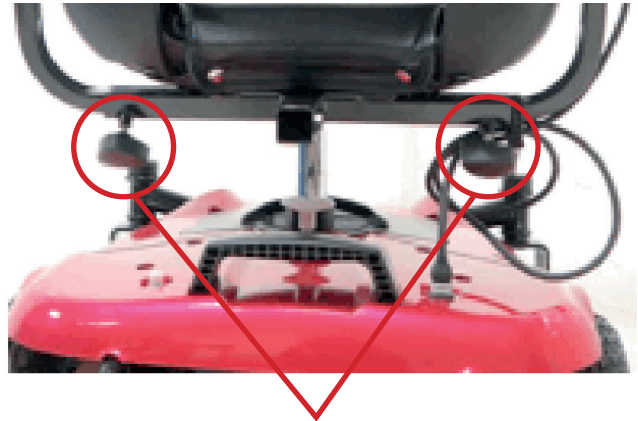
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### 5.3 ADJUSTING THE SEAT

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#### To adjust the armrest width:

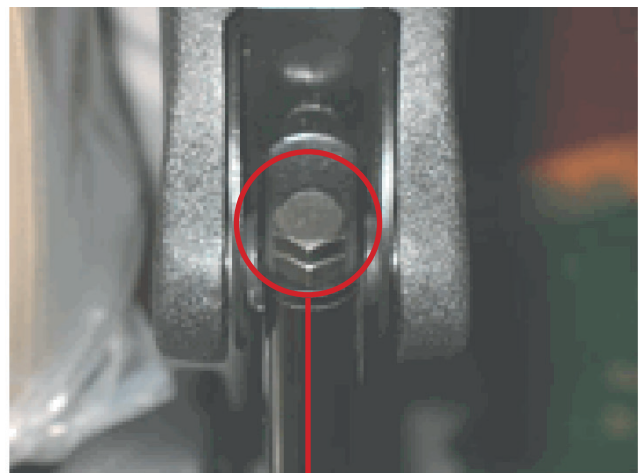
1. Loosen the knobs.
2. Slide the armrests in or out to the desired width.
3. Tighten the knobs.



**knobs**

#### To adjust the armrest angle:

1. Lift up the armrest.
2. Loosen the hex nut.
3. Adjust the socket screw up or down to the desired arm angle position.
4. Tighten the hex nut.
5. To determine the same angle for the opposite armrest, count the exposed threads after the hex nut has been tightened.
6. If necessary, repeat the steps for the opposite armrest.



**Hex**

#### To adjust the height of armrests:

1. Loosen knob on handle.
2. Move armrest to required position.
3. Tighten knob.



**Knob**

**Armrest**



## 5. OPERATION

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### To remove the seat:

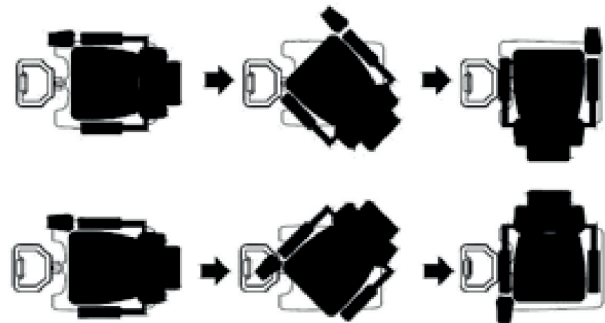
1. Turn the power OFF.
2. Make sure the Crest CSS is not in freewheel mode.
3. Push the seat rotate lever while pulling up on the seat to remove.



**Seat Rotate Lever**

### To rotate the seat:

1. Turn the power OFF.
2. Make sure the Crest CSS is not in freewheel mode.
3. Pull the seat rotate lever while pulling up on the seat to rotate.



### To change the seat height:

1. Remove seat (See *"To remove the Seat"*)
2. Remove the shroud.
3. Disengage and remove the seat height adjustment pin from the seat post.
4. Remove the height adjustment pin from each of the four posts.
5. Raise or lower each post to the desired position.
6. 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.)
7. Reinstall the shroud.
8. Reinstall the seat.
9. Plug the connectors into the electronics tray.





## 5. OPERATION

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### 5.4 ADJUSTING THE FOOTREST

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#### To adjust the footrest angle:

You can adjust the angle of the footrest with a hex wrench (M6).

1. Loosen the screw under the footrest.
2. Adjust hex nut to set the footrest angle, and then tighten the screw.



## 5. OPERATION

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### 5.5 HOW TO SET TO FREEWHEEL MODE

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For your convenience, the Crest CSS is equipped with a freewheel lever. This lever allows you to disengage the drive motors and manoeuvre the chair manually.

#### To engage the drive and take the power chair out of freewheel:

1. Turn the freewheel lever to "DRIVE" position (left and right).
2. Activation of the joystick automatically releases the brake so the powered Crest CSS can be driven.

#### To disengage the drive and place the power chair in freewheel:

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



#### Warning

Do not use your Crest CSS Power Chair 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 chair may roll down, causing injury!



#### Suggestion

If a lever is difficult to move in either direction, gently rock the power chair back and forth; the lever should then move to the desired position.

### 5.6 CIRCUIT BREAKERS

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The Power Chair has a circuit breaker protruding through the shroud cover at the right of the power chair.

- » 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.



## 6. BATTERY CHARGING & CARE

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### 6.1 BATTERY

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- » The Crest CSS Power Chair 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 power chairs.
- » These batteries are maintenance free and there is no need to refill with water.
- » Do not expose the battery to temperatures below -10°C or above 50°C when charging or storing the power chair. Outside 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!

#### **Use proper batteries**

- » Your power chair operates on two 12 volt batteries.
- » They should be a minimum of 20 ampere hour rating. Only deep cycle sealed case construction batteries should be used in the power chair.
- » When you buy a replacement, insist on a deep cycle sealed case. Do not use any other type.

### 6.2 CHARGING THE BATTERIES

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The battery charger is essential in providing long battery life. Located underneath the utility tray, it is designed to optimize your Crest CSS's performance by charging safely, quickly and easily. The power chair 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 or not the charger is working. The ammeter and the charger are only functional when the charger power cord is plugged into a wall outlet.



## 6. BATTERY CHARGING & CARE

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### Charging the batteries on-board using the charger

- » Position the power chair 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 recommend 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 Crest CSS.



**Charger**



#### **Warning**

1. Keep away from flammable objects while charging as it may lead to fire or explosion of battery.
2. Do not smoke while charging as the battery may release hydrogen gas. Always charge the battery in a well-ventilated space.
3. 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.**

1. 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 chair if you use a charger which is not correctly specified.
2. 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.
3. Do not charge in temperatures  $-10^{\circ}\text{C}$  or higher than  $+50^{\circ}\text{C}$  as the charger may not work well and the batteries could be damaged.



## 6. BATTERY CHARGING & CARE

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### **Suggestion – How to maximize your battery's efficiency and service life**

1. Fully charge any new battery before its initial use.
2. 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.
3. Always complete the charging until the red LED light turns green. NEVER stop charging before it is complete.
4. Keep your batteries fully charged whenever possible.
5. If the power chair is not used for an extended period, batteries should be charged at least weekly to keep them fully usable.
6. The ambient temperature affects charging time, it will be longer in the winter.
7. After charging, do not leave the charger socket plugged into the power chair as this will cause a power drain and temporarily reduce range.

### **Charging the batteries off-board using the charger**

The Crest CSS has a removable battery box.

1. Remove the Seat
2. Lift the battery box out of the shroud and take this to the closest power outlet. Plug the charging cable into the wall outlet and connect to your battery box.
3. When your batteries are fully charged, unplug the charging cable from the wall outlet.

### **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 chair are sealed and as such are maintenance free with no risk of battery leakage. Please follow the steps below to clean the battery.

1. Turn the Crest CSS power switch to OFF.
2. Remove the seat.
3. Remove the battery box from the Crest CSS shroud.
4. Remove the screws from the underneath of the battery box to open the battery box unit.
5. Use a clean cloth to wipe off the soiled area.
6. Remove the battery.
7. Wipe with a clean cloth. If the terminal is covered with white powder, wipe it clean using warm water.



## 6. BATTERY CHARGING & CARE

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### Replacing the battery

1. Turn the Crest CSS power switch to OFF.
2. Remove the seat.
3. Remove the battery box from the Crest CSS shroud.
4. Remove the screws from the underneath of the battery box to open the battery box unit.
5. Disconnect the negative terminal (black) wires first, then the positive terminal (red) wires by removing the four nuts and bolts from each battery terminals.
6. Remove the batteries.
7. Place new battery in terminal.
8. Connect the positive terminal (red) wires first, then the negative terminal (black) wires by tightening the nuts.
9. Install the battery box and seat.



#### **Warning**

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



#### **Suggestion - How to maximize your battery's efficiency and service life**

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



## 7. INSPECTION AND MAINTENANCE

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



## 7. INSPECTION AND MAINTENANCE

### 7.2 REGULAR CHECKING RECORD

To make sure your power chair is correctly serviced, take this 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
Service Dates				
<b>Controller</b>				
On/off switch				
Joystick				
Braking				
Recharge point				
<b>Batteries</b>				
Levels				
Connections				
Discharge test				
<b>Wheels and Tyres</b>				
Wear				
Pressure				
Bearings				
Wheel nuts				
<b>Motors</b>				
Wiring				
Noise				
Connections				
Brake				
Brushes				
<b>Chassis/Footrest</b>				
Condition				
Footrest				

YEAR	1	2	3	4
Service Dates				
<b>Upholstery</b>				
Seat				
Back				
Armrests				
<b>Electrics</b>				
Connections condition				
Utility tray				
<b>Test run</b>				
Forwards				
Reverse				
Stop				
Left turn				
Right turn				
Slope test				
Over obstacles				
<b>List Items repaired:</b>				
_____				
_____				
_____				
_____				
_____				
_____				
_____				

### 7.3 BATTERY, FUSE AND TYRE

#### Battery

Refer to the section titled "BATTERY CHARGING AND CARE "

#### Fuse

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



#### Suggestion

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





## 7. INSPECTION AND MAINTENANCE

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### Tyres

The condition of the tyres depends on how you drive and use your power chair.

- » Inspecting Tyre Tread.
- » Please check the tread depth regularly. Replace the tyres when the tread depth is less than 0.5 mm.



#### **Attention**

When tread depth is below 0.5mm it can easily lead to power chair slippage, making braking distances longer. Therefore replace the tyres 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**

1. Do not splash water onto the power chair as this could cause the electronic system to malfunction.
2. Do not use petrol, solvents or aerosols as these may deform or damage the shrouds.
3. Do not use wax.

## 7.4 STORAGE

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Make sure the power chair is stored as follows:

- » With the charger unplugged
- » With the power switch OFF



#### **Suggestion**

Always store the power chair 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. For details inquire to your dealer.



## 8. TROUBLE SHOOTING & SPECIFICATION

### Trouble Shooting

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



## 8. TROUBLE SHOOTING & SPECIFICATION

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### Specifications

Item	Crest CSS
Dimension (L×W×H )	850×585×885mm 33.5×23×34.8 inches
Weight:	
Batteries	30.8lbs / 14 Kg
Without batteries	72.6lbs / 33 Kg
Seat weight	15.8lbs / 7.2 Kg
Total weight	120lbs / 54.2 Kg
Battery	20AH/12Vx2
Caster wheel	8"×2 Solid / 200x50mm
Rear wheel	9"×3.3 Solid / 230x75mm
Motor	250W/3000RPM
Charger	2A Off-Board
MAX. Speed	4 mph / 6.4Km/h
Climbing angle	6°
Controller	Dynamic Shark 40A
Anti-tip wheel	2.36" /50 mm
Charging time, hours	>8 hours
Weight capacity	136 kg / 300lbs

Please note that the maximum range is based on an ambient temperature of 20°C, a 75kg driver, a brand new and fully charged battery, and a constant driving speed of 4/5 mph with 70% battery power discharged.

*NOTE: Specifications are subject to change without notice.*



## 8. TROUBLE SHOOTING & SPECIFICATION

### 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 are suggestions only; the intention is that one of the suggestions may help you clear the problem. If in doubt, consult your supplier.

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 connector 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

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



## 9. WARRANTY DECLARATION

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### Quality / Warranty Declaration

Products are to be fit for purpose and of excellent quality and performance. For valid warranty claims I-GO will, at their discretion, replace / repair / refund items mutually agreed to be defective.

The power chair's warranty is as follows:

- » Frame: Two year limited warranty
- » Controllers: One year limited warranty
- » Electronic Components and Charger: One year limited warranty
- » Batteries: 6 month limited warranty
- » Warranty Exclusion: The following items are not covered by warranty
  - *Motor Brushes / Wheel Tyres / Arm Pads*
  - *Seat Cushion / Fuses and Bulbs / Tiller Cover*
  - *Rear Shroud / Front Shroud and Consumable Parts*

Any damage or defect of any nature occurring from the misuse, abuse of the product, improper operation or improper storage is not covered. The warranty starts from the date of arrival of our products.



# NOTES

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# NOTES

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***Crest*** **CSS**