

**karma**

*User manual*  
**eFlexx**



A Better Wheelchair, A Better Fit

## GENERAL WARNING

### IMPORTANT

- Do not attempt to use the wheelchair before a qualified person has explained to your satisfaction about how to operate it without causing any risk to yourself or others.

### WARNING:

- Do not operate this powered wheelchair before first reading and understanding this owner's manual. If you are unable to understand the warnings, cautions, suggestions and technical instructions, please contact a dealer, healthcare professional or applicable personnel before attempting to use this power wheelchair -- otherwise, injury or damage may occur. If any procedures other than those described in this owner's manual, it MUST be performed by a qualified technician.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE BY KARMA

### WARNING:

- As a manufacturer of powered wheelchairs, KARMA endeavors to supply a wide variety of powered wheelchairs to meet the many needs of the user. However, the responsibility of final selection of the type of powered wheelchair to be used by an individual rests solely with the user and his/her healthcare professional capable of making such a selection. KARMA strongly recommends consulting a certified rehab technology supplier or assistive technology professional.

## Operating Information

- Performance adjustments should ONLY be made by professionals of the healthcare field or persons fully conversant with this process and the driver's capabilities. Incorrect settings could cause injury to the driver or bystanders and damage to the powered wheelchair and surrounding property.
- To determine and establish your particular safety limits, practice bending, reaching, mounting and dismounting activities in several combinations in the presence of a qualified healthcare professional BEFORE attempting active use of the powered wheelchair.
- For individuals with balance problems, practice mounting and dismounting activities WITH AN ASSISTANT in the presence of a qualified healthcare professional.
- If anti-tippers are standard equipped, DO NOT operate the wheelchair without anti-tippers being installed. Anti-tippers MUST BE attached at all times.
- DO NOT attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees as this may cause loss of balance.
- DO NOT lean over the back of the chair to reach objects behind you as this may cause the powered wheelchair to tip over.
- DO NOT shift your weight or sitting position toward the direction you are reaching as the powered wheelchair may tip over.
- DO NOT use an escalator to move a powered wheelchair between floors. Serious bodily injury may occur.
- DO NOT operate in car lanes on roads, streets, highways, etc.
- DO NOT attempt to move up or down an incline with water, ice or oil film.
- DO NOT attempt to ride over curbs or obstacles. Doing so may cause

your powered wheelchair to turn over and cause bodily harm and/or damage to the powered wheelchair.

- DO NOT make sharp turns, in forward or reverse, at excessive speeds.
- DO NOT attempt to lift the powered wheelchair by its casings and seat.
- DO NOT attempt to lift the powered wheelchair by any detachable parts. Lifting by means of any detachable parts of a powered wheelchair may result in injury to the user or damage to the powered wheelchair. Please hold onto the frame when lifting your wheelchair.
- DO NOT operate the powered wheelchair until you have checked that the surroundings are clear and that the area is safe for travel.
- Please pay attention to the environment, and to keep away from the hazard of external flame. When the user is smoking, pay attention to safety and make sure to extinguish the fire when finished. Be alert to the environment when someone nearby is smoking or using a cigarette lighter, keep away from the hazard and use fire-proof cloth.
- DO NOT use parts, accessories or adapters other than those authorized by Karma. Before attempting to sit in or exit the power wheelchair, turn the power OFF. This will ensure that the power wheelchair will not drive. Turn the power OFF while the wheelchair is not in use. Otherwise, injury and/or damage to the wheelchair and surrounding property may occur.
- DO NOT connect any medical device (i.e., a ventilator, life support machine, et cetera) to the battery. This could cause unexpected failure of the device and the powered wheelchair. KARMA specifically disclaims responsibility to all personal injury and property damage that may occur during use which does not comply with applicable federal, state and local laws and ordinances.
- DO NOT stand on the footplates of the powered wheelchair.

- DO NOT use the wheelchair when the back is folded. This alters the centre of gravity and may cause the wheelchair to tip backwards. The back should only be folded for storage or transport of the wheelchair.
- DO NOT hang anything on the back joints that could cause the backrest folding suddenly and may cause injury.
- DO NOT be towed by other vehicles (cars, motorcycles or bicycles, etc.). Only use freewheel mode on flat surfaces since your electromagnetic brakes are not engaged in this mode, without these brakes it will roll down a hill causing injury or damage. Never drive under the influence of alcohol or medication.
- DO NOT sit in the powered wheelchair within a moving vehicle unless it has been affixed the labels of hook mark.
- DO NOT touch the surface of motors. It could be hot.
- Store your chair in a clean, dry area. If you fail to do so, parts may rust or corrode.
- The product met all the requirements of ISO 7176-14.
- The force necessary to operate the freewheel lever is less than 60N.
- DO make sure the surface temperatures can increase when the wheelchair is exposed to external sources of heat (e.g. sunlight).
- We estimate a life expectancy of five years for the product, provided it is used strict accordance with the intended use as set out in this document and all maintenance and service requirements are met. The estimated life expectancy can be exceeded if the products is carefully used and properly maintained. The life expectancy can be reduced by extreme or incorrect usage.
- The stopping distance on slopes can be significantly greater than on level ground.
- if required , power on/off button can be an emergency stop device.



## WARNING:

- As of this date, eFlexx can NOT be used as seats in any vehicles. That is, KARMA recommends that users are NOT transported in any vehicle while seated in the wheelchair. In the case of accident or a sudden stop, the user or passengers may be at risk of getting injury. The suggested solution is to transfer the user from the wheelchair into a vehicle seat and to securely stow the wheelchair in a separate compartment.

### Ramps

- DO NOT climb, go up or down ramps or traverse slopes greater than the Max Safe Slope for your model specified in Section Specifications.
- When negotiating ramps, if the joystick is released while moving forward, the powered wheelchair will roll backwards approximately one foot before the brake engages. If the joystick is released while in reverse, the powered wheelchair will roll backwards approximately two and a half feet before the brake engages.
- Be sure to reduce your speed when driving on curved roads or making a turn; Do not drive at full speed. Please drive at a slower speed so you have complete control of the wheelchair.

### Electrical

- Check to ensure that all electrical connections are secure at all times.
- Grounding Instructions: DO NOT, under any circumstances, cut or remove the round grounding prong from any plug. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards.
- Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle/outlet in accordance with the National Electrical Code and local laws.

- Do not use an extension cord when charging your batteries. A risk of fire and /or electric shock could be encountered.

## **Batteries**

- The warranty and performance specifications contained in this manual are based on the use of Li-ion batteries.
- Do not use an extension cord when charging your batteries. A risk of fire and /or electric shock could be encountered.
- KARMA strongly recommends to use the batteries supplied by Karma as the power source for this unit. (Refer to Section Battery and Charger).
- Carefully read the battery and charger information prior to installing, servicing or operating the wheelchair.

## **Rain Test**

- KARMA has tested the powered wheelchair in accordance with ISO 7176 Part 9 Rain Test. This test provides the end user or his/her attendant sufficient time to remove his/her powered wheelchair from a rainstorm and retain operation. However, the wheelchair is not designed for usage in rain or storms or under other circumstances where it may be exposed to high levels of moisture, such as:
  - Deep pools of water
  - Pressure washing of the chair
  - Leaving the chair in moist areas such as bathrooms
- Direct exposure to rain or dampness could cause the powered wheelchair to malfunction electrically and mechanically and may cause the powered wheelchair to prematurely rust.
- Salt water can be particularly damaging to the wheelchair components and electrical circuits, causing rust or damage .
- Do not use the chair if the joystick rubber boot is damaged in any way

as moisture can damage the control system.

- Should your chair should get wet, please dry it as soon as possible to help avoid any damage.

### **Stairways**

- DO NOT attempt to move an occupied powered wheelchair between floors using a stairway.
- Use an elevator to move an occupied powered wheelchair between floors. If moving a powered wheelchair between floors by means of a stairway, the occupant MUST be removed and transported independently of the powered wheelchair. Extreme caution is advised when it is necessary to move an UNOCCUPIED powered wheelchair up or down stairs.
- Karma recommends disassembling the wheelchair and transporting the components independently up or down stairs. Make sure to use ONLY secure, non-detachable parts on each component for hand-hold supports.
- DO NOT attempt to lift a powered wheelchair by any removable (detachable) parts. Lifting by means of removable (detachable) parts may result in injury to the user or assistants or damage to the wheelchair.

### **Escalators**

- DO NOT use an escalator to move a powered wheelchair between floors. Serious bodily injury and damage to the wheelchair may occur.

### **You and Your Karma Service Provider**

- No tools are required for assembly. Your wheelchair should be assembled by your authorized Karma dealer. Your authorized Karma dealer is also your service provider. Unauthorized repairs, upgrades and add-ons will negate your warranty.
- Anything wheelchair related that requires tools should be done by



your authorized Karma service provider. Your Karma service provider has the necessary service manual for your wheelchair.

- If you have any defective parts or lose any parts, please contact your dealer for repair and/or replacement. Please only use parts authorized by Karma. Use of parts that are not authorized by Karma will void your warranty.
- Part numbers are listed on our bill of materials (explosion drawings), which we give to our authorized dealers and service providers. Customers should order parts through their dealer as well as all repairs and scheduled maintenance.
- Customers should go to their dealership for all service needs to guarantee their warranty is not void. Always go to an authorized service provider. Unauthorized repairs will void your warranty. Procedures other than those described in this manual must be performed by a qualified technician. They also have the service manual with a complete list of maintenance required to keep your Karma wheelchair in top performance.
- Check the warranty section of this manual to find out what Karma guarantees and what maintenance service and parts that are not covered by the warranty.
- Karma does not have an official list of service providers at this time. Please contact your dealer for service. If you cannot contact your dealer, please contact another authorized Karma dealer for service. If all else fails, contact Karma directly via our website or give us a call and we can refer you to your new service provider.

## CLASSIFICATION & INTENDED USE

- The wheelchair is classified as a class A mobility product for indoor use. This wheelchair is suitable for users up to 100 kg (when mounted with solid tyres) in weight. It also has an extremely durable aluminum alloy frame with tough accessory and does not suffer in dramatic extremes of temperature (neither user nor attendant need touch metal parts in normal use).
- Check with your local government as to legislation pertaining to mobility vehicles to assure your legal requirements to drive on public roads have been met, i.e. a pelvic belt, lighting, registration or licensing.

## CE MARKING

- This powered wheelchair complies with the requirements of the Medical Devices Regulation (EU) 2017/745.



### CAUTION:

- Before purchasing and using Karma wheelchairs, please consult qualified professionals so as to ensure that you choose suitable products and use them correctly as well. For safety reasons, if there is any risk due to the user's movement in the wheelchair or other environmental factors that might cause the wheelchair to tip or the person on the wheelchair to fall off, Karma recommends that you install anti-tippers, pelvic belt, or other additional safety accessories.

# DECLARATION OF CONFORMITY



Document No.: DDC-KP-8-01

## EU Declaration of Conformity

We, with the information specified in the below,

### Our information as the manufacturer:

Manufacturer's Name:	KARMA MEDICAL PRODUCTS CO., LTD
Manufacturer's Address:	NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144, Taiwan
SRN (Single Registration Number):	TW-MF-000013206

### Our authorized representative:

Name:	KARMA MOBILITY, S.L.
SRN (Single Registration Number):	ES-AR-000004852
Address:	C/ PERIODISTA FRANCISCO CARANTOÑA DUBERT, 23 Bajo 33209 GIJÓN – ASTURIAS, SPAIN
Contact Person:	Raquel Yuste
Contact Information:	(+34) 984 390 907

In accordance with

### Regulation (EU) 2017/745 of the European Parliament and of the council Annex I, II, III, IV and IX

hereby declare that the medical device specified below:

<b>Basic UDI-DI of Annex VI:</b>	471987385KP-8LN
<b>Device:</b>	Electrically powered wheelchair
<b>Trade Name or Mark:</b>	Ergo Stand series
<b>Model Number:</b>	KP-80
<b>Product Code according to EMDN:</b>	Y122127
<b>Product Code according to GMDN:</b>	41877
<b>Classification:</b>	Rule 1 of Class I
<b>UDI-DI:</b>	04719873856732

# DECLARATION OF CONFORMITY



Document No.: DOC-KP-B-01

is in conformity with the applicable requirements of the following documents:

Ref. No.	Title	Edition date
ISO 13485	Medical devices - Quality management systems - Requirements for regulatory purposes	2016
ISO 14971	Medical devices - Application of risk management to medical devices	2019
EN 12182	Assistive products for persons with disability - General requirements and test methods	2012
EN 12184	Electrically powered wheelchairs, scooters and their chargers - Requirements and test methods	2014
EN 62366	Medical devices - Application of usability engineering to medical devices	2015
EN 60601-1	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance	2006
EN ISO 10993-1	Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process	2009
EN ISO 10993-5	Biological evaluation of medical devices — Part 5: Tests for in vitro cytotoxicity	2009
EN ISO 15223-1	Medical devices - Symbols to be used with medical device labels, labelling and information to be supplied - Part 1: General requirements	2016
MEDDEV. 2.7/1 Rev. 4	CLINICAL EVALUATION: A GUIDE FOR MANUFACTURERS	2016
MEDDEV 2.12/1 Rev. 8	GUIDELINES ON A MEDICAL DEVICES VIGILANCE SYSTEM	2013

The information on this declaration has been stated on the sole responsibility of KARMA MEDICAL PRODUCTS CO., LTD.

We hereby declare that the device named above has been designed to comply with the relevant sections of the above referenced specifications. The device complies with all General Safety and Performance Requirements.

Date of issue: 4<sup>th</sup> October 2021

Place of issue: NO. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi County, 62144,  
Taiwan

  
Richard Chang, CEO

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# 1. PREFACE

Please carefully read this owner's manual before using the wheelchair. Improper use of the wheelchair could result in harm, injury or traffic accidents. Therefore, for safe and enjoyable use of the wheelchair, please read this owner's manual.

- 1.1 This owner's manual includes operation instructions for the aspects of the wheelchair, assembly instructions, and instructions on how to deal with possible accidents.
- 1.2 The symbols used in this manual are explained below. Pay special attention to the parts marked with these symbols.

	<b>WARNING:</b>	Improper use could lead the user to severe injury or death.
	<b>CAUTION:</b>	Improper use could lead the user to severe injury and/or damage to your wheelchair.
	<b>SUGGESTION:</b>	Follow these instructions to keep the wheelchair in good condition.

- 1.3 This manual includes the repair and maintenance chart as well as the Warranty. Please keep it in a safe place or with the wheelchair.
- 1.4 If someone else uses the wheelchair, make sure that you give him or her this owner's manual for his or her reference.
- 1.5 As designs change, some illustrations and pictures in this manual may not correspond to the vehicle that you purchased. We reserve the right to make design modifications without further notice.

## **2. SAFETY**

### **2.1 Before Using**

- 2.1.1 The user must be familiar with the use and operation of this wheelchair before driving.
- 2.1.2 Therefore, please always keep these safety guidelines in mind.
- 2.1.3 For a visually impaired people, be sure someone accompanies you in case you need assistance.
- 2.1.4 The occupant shall have sufficient ability, functional capability, visual ability and cognizance to operate the wheelchair safely in its intended environment. If not, do not drive it.
- 2.1.5 Do not let anyone touch the wheels, actuator and armrest when they are in motion or being operated to avoid pinch injury.

### **2.2 Traffic Rules**

- 2.2.1 Pedestrian traffic rules apply to this wheelchair, therefore please follow the rules.
- 2.2.2 Drive only on pedestrian areas such as the sidewalk. Never drive the wheelchair on the highway.
- 2.2.3 Be aware of other vehicles when crossing all roads.
- 2.2.4 Be extremely cautious when driving your wheelchair in heavy traffic or the shopping mall.
- 2.2.5 DO NOT drive your wheelchair when you feel tired or consume alcohol.
- 2.2.6 Please do not drive your wheelchair at night.
- 2.2.7 Please follow pedestrian traffic lights, and comply with the traffic regulation.

### **2.3 Practice Driving**

- 2.3.1 Before you are familiar with the operation of your wheelchair please practice in a wide and open area, like a park.
- 2.3.2 To avoid falling off your wheelchair please practice all kinds of



driving motions, such as accelerating, stopping, turning, reversing and going up and down ramps.

2.3.3 Please set the speed to medium when you first start practicing.

2.3.4 Be safe. Make sure someone accompanies you in case you need assistance.

2.3.5 Be sure you are able to control and operate your wheelchair easily and confidently before you set the speed faster.

## **2.4 No Passengers**

2.4.1 KARMA wheelchair is limited to one single driver. Do not carry passengers (including children) on your wheelchair.

## **2.5 No Hauling Heavy Goods**

2.5.1 Do not use this wheelchair to carry or haul heavy goods. The maximum weight that can be carried, including goods, is stated beside "Max. User Weight" in section SPECIFICATIONS.

## **2.6 Rain**

2.6.1 This product is not guaranteed to be water resistant. Please do not drive in the rain, through puddles or spray water. (Figure 2.1)

## **2.7 While Driving**

2.7.1 Please carry out daily inspections. Refer to section DAILY CHECK.

## **2.8 General Warning**

2.8.1 Do not lean over the side of the wheelchair as such an action may cause you to lose balance and fall.

2.8.2 Use caution to assure your clothing doesn't get tangled with the wheels.

## **2.9 Railroad Crossing**

2.9.1 Before crossing the tracks, please stop completely and look both ways.

2.9.2 Cross the tracks perpendicular to avoid your wheels getting stuck.

2.9.3 Do not drive at full speed over railroad tracks.

## **2.10 Circumstances to Avoid**

2.10.1 Avoid roads with heavy traffic, mud, excessive gravel or bumps, snow and ice. These conditions may damage your wheelchair.

2.10.2 Avoid roads that are too narrow or by a canal/waterway without any fence/hedge.

2.10.3 Also avoid places where your wheels might get stuck, slip or not have traction.

2.10.4 Do not drive in a gale, at night or in rainy/snowy/foggy/misty weather. These conditions may cause your wheelchair to rust.  
(See Figure 2.2)

2.10.5 Do not drive in a S-curve, do doughnuts or make sudden turns.

2.10.6 Do not take an escalator.

## **2.11 Mobile Phones and Other Electric Equipment**

2.11.1 Do not use a mobile phone or other wireless communication devices while driving. (See Section EMI/RFI)

2.11.2 Do not charge the mobile phone or other electric devices from your wheelchair's batteries.

## **2.12 Ramps, Inclines and Drops**

2.12.1 Do not drive onto a steep ramp. Refer to "Max. Safe Slope" in Section SPECIFICATIONS for your wheelchair's maximum climbing angle.

2.12.2 When climbing up to an inclined road, please set the speed higher than the medium speed and drive carefully. (Figure 2.3)

2.12.3 When going down an inclined road, set the speed to "1" and never use reverse.

2.12.4 Do not drive on a road with many bumps and holes close to each other, such as potholes or washboard roads. (Figure 2.4)

2.12.5 Do not make sudden turns when driving on gravel roads or ramps.

2.12.6 The maximum surmountable obstacle height is 2.5 cm for your

wheelchair. Exceeding this obstacle height will damage your wheelchair and void your warranty. (See Figure 2.5)

2.12.7 When negotiating an obstacle slow down, put your seat into the full upright position and approach it head on (perpendicular).

2.12.8 Just before the obstacle, speed up until the entire wheelchair has conquered the obstacle. Negotiating an obstacle at an angle may cause your wheelchair to tip over. Don't do it!

2.12.9 When climbing down a curb, slow down just before you get to it and only speed up after the entire wheelchair has lowered to the road.

2.12.10 Again, descending obstacles should be done perpendicularly. (See Figure 2.6)

2.12.11 Karma does not design wheelchairs to take jumps over or off obstacles. Doing so will void your warranty.



#### **WARNING:**

- Do not set the wheelchair in freewheel mode when on an incline or decline.
- If the chair breaks down on railroad tracks, first, check for an oncoming train. If a train is coming, get out of its way immediately! If no train is coming, set the chair to freewheel mode and push the wheelchair off the tracks.

### **2.13 Maximum User Weight Limit**

2.13.1 Refer to "Max. User Weight" in Section SPECIFICATIONS.

2.13.2 Loading exceeding maximum capacity can damage your wheelchair and cause malfunctions yielding a safety hazard. The warranty does not cover damage caused by improper operation of the wheelchair.



(Figure 2.1)



(Figure 2.2)



(Figure 2.3)



(Figure 2.4)



(Figure 2.5)



(Figure 2.6)

## 2.14 Service life

The expected service life of the product is **five years**, presuming that the product is used daily in accordance with the safety operation instructions, inspection and maintenance instructions, and intended use, which described in this manual.

## 2.15 Labeling

Please carefully read all the labeling on the wheelchair before driving it. Do not remove them. Protect them for future reference.



Model:	
Order No.:	
Delivery Date:	
Sewing No.: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6	
Seat Width	Seat Depth
<input type="checkbox"/> 13	<input type="checkbox"/> 13
<input type="checkbox"/> 14	<input type="checkbox"/> 14
<input type="checkbox"/> 15	<input type="checkbox"/> 15
<input type="checkbox"/> 16	<input type="checkbox"/> 16
<input type="checkbox"/> 17 <input type="checkbox"/> 0	<input type="checkbox"/> 17 <input type="checkbox"/> 0
<input type="checkbox"/> 18 <input type="checkbox"/> 5	<input type="checkbox"/> 18 <input type="checkbox"/> 5
<input type="checkbox"/> 19	<input type="checkbox"/> 19
<input type="checkbox"/> 20	<input type="checkbox"/> 20
<input type="checkbox"/> 21	<input type="checkbox"/> 21
<input type="checkbox"/> 22	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<b>karma</b>	Unit: inch

①

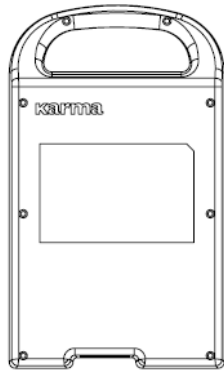
<b>karma</b>		CE
<b>Karma Mobility Ltd.</b>		
<small>Unit 5, Target Park, Showbank Road, Redditch B98 8YN U.K. Tel: 0845-630-3436 Fax: 0845-630-3736</small>		
<b>Karma Medical Products Co., Ltd.</b>		
<small>No. 2363, Sec. 2, University Rd., Min-Hsiung Shiang, Chia-Yi Hsien, Taiwan R.O.C.</small>		
<input type="checkbox"/> indoor use only	MFD : 2016	MAXIMUM USER WEIGHT
<b>Model: eFlexx</b>	<b>S/N XXXXXXX</b>	<b>100 kg</b>

②

③



④



Rechargeable Li-Ion Battery  
 SPEC : Panasonic cell 25.2V/26.1Ah/657.7Wh KLB7S9P(7ICR19/66-9)

FOR YOUR SAFETY, BEFORE YOU USE THE BATTERY, BE SURE TO READ THE OWNER'S MANUAL, LABELS ON THE BATTERY, AND THE FOLLOWING WARNINGS:

Before each use of the battery, inspect its appearance. If there's any crack or damage, do not use it. Please contact the dealer about the damage.  
 Charge the Li-ion battery only with the charger designated by Karma.  
 Use the battery only at the ambient temp. of 0°C to +60°C.  
 Do not charge the battery when the ambient temp. is below 10°C.  
 Do not throw, disassemble, puncture and crush the battery.  
 Do not modify the battery.  
 Do not heat up or burn the battery.  
 Do not immerse the battery in any liquid.

confirming to IATA Requirement UN38.3  
 Made in Taiwan

[Wiring Diagram] Do not change the wiring

[Freewheel Lever] Follow the label to engage or release it.

⑤

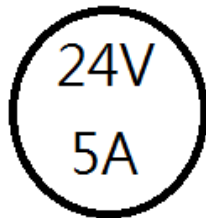


⑥



⑦

Charging socket



### 3. EMI/RFI

This section provides the user with basic information about the problems with EMI, known sources of EMI and protective measures either to reduce the possibility of exposure or to minimize the degree of exposure. This section also shows some conditions in which unexpected or erratic wheelchair movements may occur.



#### CAUTION

- It is very important that you read this information regarding the possible effects of electromagnetic interference on your electric KARMA wheelchair

#### 3.1 Electromagnetic Interference from Radio Wave Sources

3.1.1 Powered vehicles may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations (Radio Frequency Interference), TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones. The interference (from radio wave sources) can cause the powered vehicle to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered vehicle's control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each powered vehicle can resist EMI up to a certain intensity. This amount of resistance 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.

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

### **3.2 The sources of radiated EMI can be broadly classified into three types.**

3.2.1 Hand-held portable transceivers (transmitter-receivers) with the antenna mounted directly on the transmitting unit, such as citizens band (CB) radios, walkie-talkies, security and fire or police transceivers, cellular telephones and other personal communication devices;

**NOTE:**

Some cellular telephones or similar devices transmit signals while they are ON, even though they are not in use.

3.2.2 Medium-range mobile transceivers used in police cars, fire trucks, ambulances and taxis usually having the antenna mounted on the outside of the vehicle; and

3.2.3 Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

**NOTE:**

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



### **3.3 Powered Vehicle Electromagnetic Interference (EMI)**

3.3.1 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 too close to the powered vehicle's control system while using these devices. This can affect your powered vehicle's movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered vehicle.

### **3.4 Warnings**

3.4.1 Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios and cellular phones can affect powered vehicles and motorized wheelchairs.

3.4.2 Following the warnings listed below should reduce the chance of unintended brake release or powered vehicle movement which could result in serious injury.

3.4.2.1 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 vehicle is turned ON.

3.4.2.2 Be aware of nearby transmitters, such as radio or TV stations, and try to stay away from them.

3.4.2.3 If unintended movement or brake release occurs, turn the powered vehicle OFF as soon as it is safe.



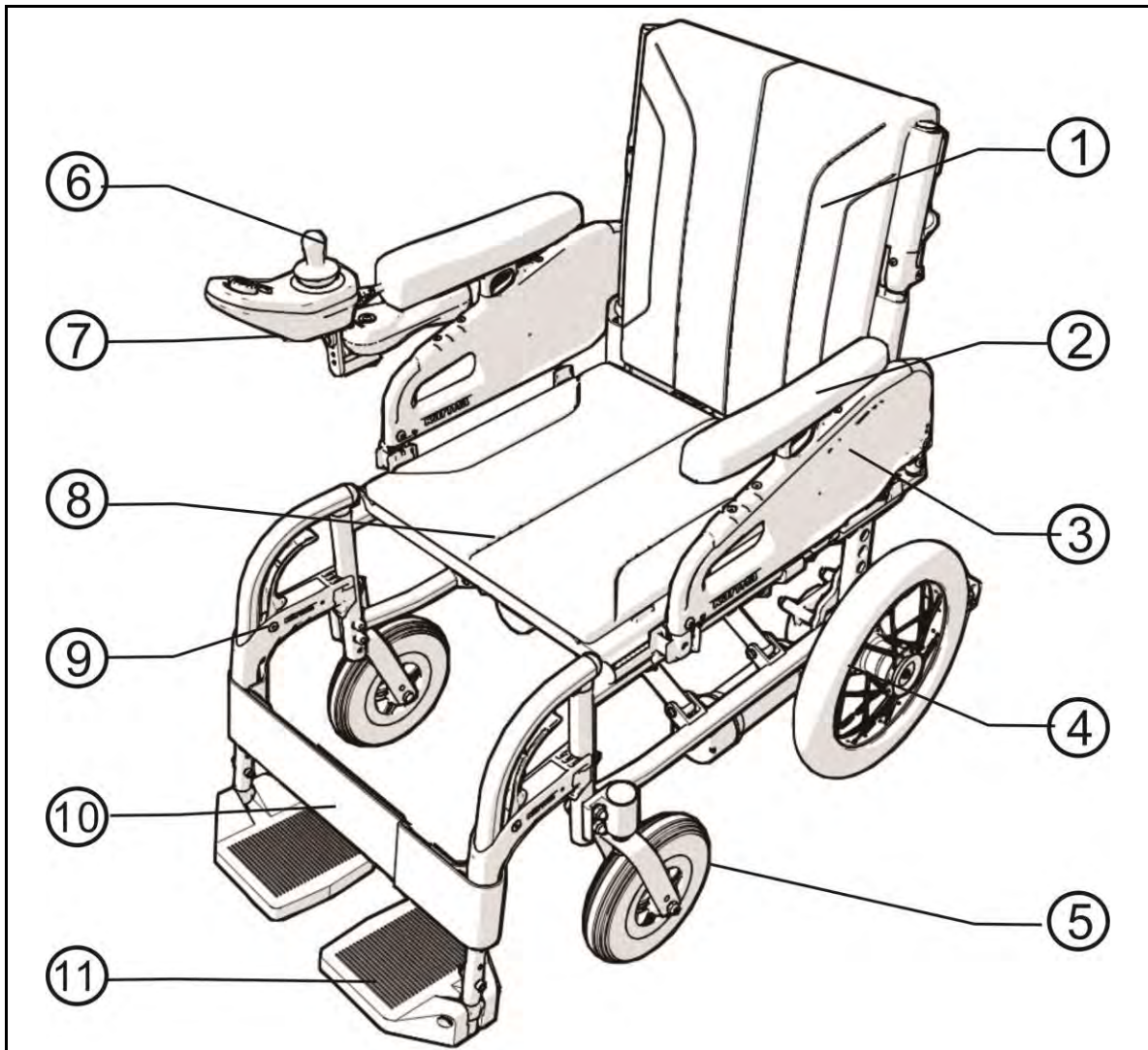
## CAUTION

- Some stores may have automatic (sensor) doors and alarm systems set at certain frequencies that might affect your powered wheelchair

3.4.2.4 Be aware that adding accessories/components or modifying the powered vehicle may make it more susceptible to EMI. There is no easy way to evaluate their effect on the overall immunity of the powered vehicle.

3.4.2.5 Report all incidents of unintended movement or brake release to your powered vehicle dealer or KARMA, and note whether there was a source of EMI nearby.

## 4. PARTS



1. Backrest

2. Armrest

3. Side Panel

4. Drive Wheel

5. Front Caster

6. Joystick (Controller)

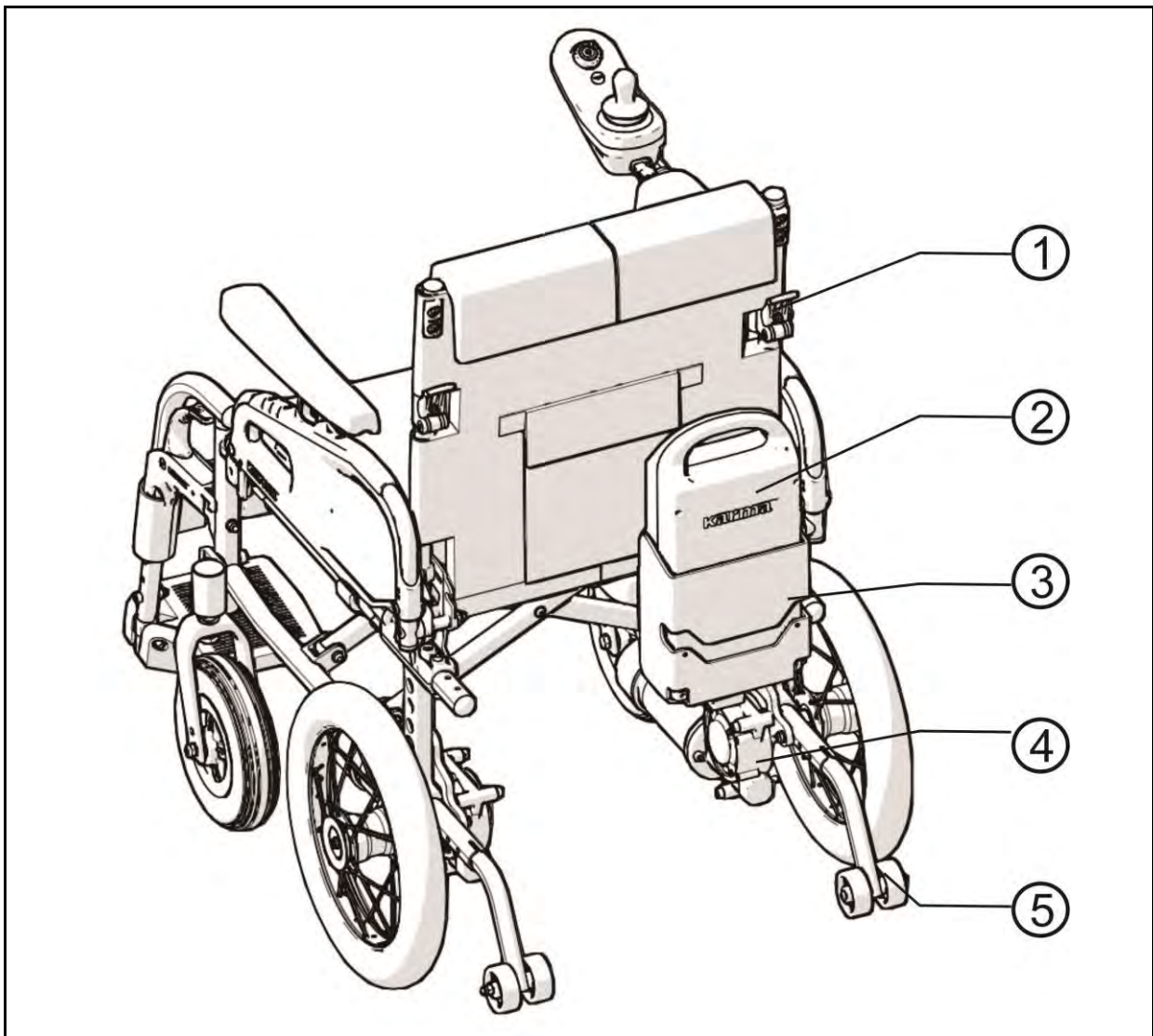
7. Charger Socket

8. Seat

9. Footrest

10. Calf Strip

11. Footplate



1. Back Joint Assembly
2. Battery
3. Battery Pack Assembly
4. Motor
5. Anti-Tipper



**CAUTION:**

- As designs change, some illustrations and pictures in this manual may not correspond to the vehicle that you purchased. We reserve the right to make design modifications without further notice.

## 5. OPERATION

Except the joystick control panel can be operate by the occupant, other operations should be carried out by an assistant.

Anything wheelchair related that requires tools should be done by your authorized Karma service provider.

### 5.1 Preparing for Use

#### 5.1.1 Unpacking

5.1.1.1 If any part is defective or missing, please notify your dealer immediately.

5.1.1.2 Please consult this owner's manual for complete instructions of the installation and operation of your wheelchair.

#### 5.1.2 Installing Swing-Away & Detachable Footrests

Please follow the instructions to install the Swing-Away & Detachable Footrests.

5.1.2.1 Footrests are packaged in a carton. (Figure 5.1).

5.1.2.2 The items included are show as Figure 5.2.

5.1.2.3 Insert the footplate into the footrest. (Figure 5.3)

5.1.2.4 Adjust the footplate to meet the user's needs. (Figure 5.4 and 5.5)

5.1.2.5 Use the #4 Allen Key-to tighten the bolt and the nut. (See Figure 5.6)



Figure 5.1



Figure 5.2

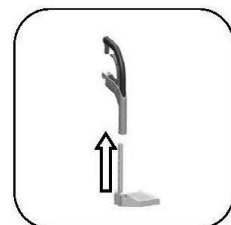


Figure 5.3



Figure 5.4



Figure 5.5



Figure 5.6

## 5.2 Unfolding the Wheelchair

5.2.1 Stand at the side of the wheelchair as you prefer. Unfold the backrest tubes. Hold the armrests and pull those outwards. (Figure 5.7)

5.2.2 Put your hands on the seat pan and press it to the bottom. Be careful not to get your fingers pinched. Make sure the frame is firmly seated in its holder. (Figure 5.8)

5.2.3 Install the footrests. (Figure 5.9)

5.2.4 Flip the footplates down. (Figure 5.10)

5.2.5 Fix the calf straps, and attach them. (Figure 5.11 & 5.12)

5.2.6 Place the back and seat cushion on the wheelchair.

5.2.7 Ready to use!



Figure 5.7



Figure 5.8



Figure 5.9



Figure 5.10



Figure 5.11

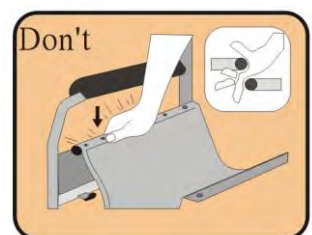


Figure 5.12



### CAUTION

- While completing step 5.2.2, never put your fingers around the sides or under the wheelchair as they can be trapped between the seat and the frame. (See the figure at the right.)
- The calf straps should be adjusted to the length appropriate for the user's condition.



## 5.3 Folding the Wheelchair

Remove the battery from the before folding the wheelchair. Please refer to section installing a removing the battery.

5.3.1 Unfasten the calf strap.

5.3.2 Flip up the footplates. (Figure 5.13)

5.3.3 Pull up the seat by holding the front and the back edges of it.  
(Figure 5.14)

5.3.4 Hold the armrests and push those inwards. (Figure 5.15)

5.3.5 Fold the backrest tubes. (Figure 5-16)



Figure 5.13



Figure 5.14



Figure 5.15



Figure 5.16



### CAUTION

- Be careful not to get your fingers pinched when folding the wheelchair.

## 5.4 Getting Into Your Wheelchair

5.4.1 Push the wheelchair against a wall or a solid piece of furniture.

5.4.2 Ensure the brakes are engaged.

5.4.3 Flip the footplates up.

5.4.4 The user lowers the body and sits on the wheelchair gently.

5.4.5 Flip down the footplates and position your feet in front of the heel loops.

## 5.5 Getting Out of Your Wheelchair

5.5.1 Ensure the brakes are engaged.

5.5.2 Move the feet away from the footplates and flip up the footplates.

5.5.3 With hands on the armrests, the person should bend slightly forward, to bring the body weight to the front of the seat, and then with both feet firmly on the ground and one foot behind the other, push up into the upright position.

## 5.6 Armrest Adjustment

Swing-away and height-adjustable armrest

5.6.1 To flip back the armrest:

5.6.1.1 Press the key locker, lift the armrest up and flip it back. ( Figure 5.17 and 5.18)

5.6.2 To adjust the height of the armrest.

5.6.2.1 Press the spring lock of the armrest and adjust the height of the armrest to meet the user's needs. (Figure 5.19 and 5.20)

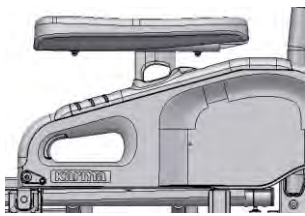


Figure 5.17

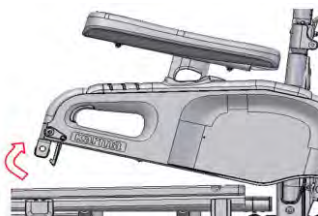


Figure 5.18

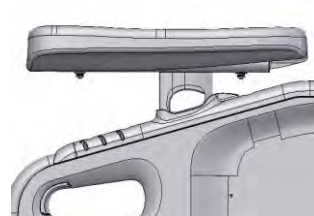


Figure 5.19

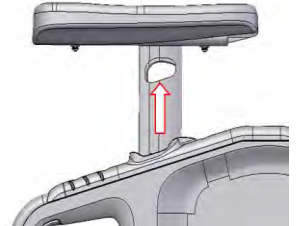


Figure 5.20



### CAUTION

- The armrests are adjustable in height by 8 cm, in increments of 3 cm.
- Before the user uses the armrest to release pressure or transfer, please make sure that the armrest height is secured in the effective range.
- When the attendant is moving the chair when it is occupied, lower the armrest to the lowest point.
- Do not sit on the armrest in any circumstances.



## 5.7 Backrest Angle Adjustment

5.7.1 Flip back the armrest.

5.7.2 Use the tool to loosen the bolts A and nuts C.

5.7.3 Adjust the backrest forward or backward to meet the user's needs.

5.7.4 Retighten the bolts and nuts firmly.

5.7.4.1 The scale showing the back angle is located on the back bracket.

(Figure 5.21)

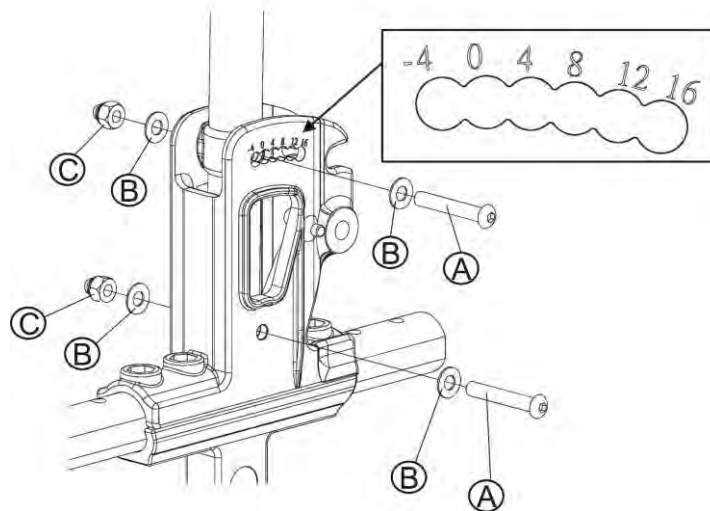


Figure 5.21



### CAUTION

- The adjustment is in increments of 4° (6 positions), and the range of adjustment is 20° (from -4° to 16° )



### WARNING

- When the angle has been adjusted, the wheelchair must be evaluated by a qualified therapist. The position of the anti-tippers must be adjusted to guarantee your safety.
- If the anti-tippers are not fitted, or have been fitted incorrectly, there is a risk of tipping over and of injury.

## 5.8 Seat Depth Adjustment

5.8.1 Remove both of the drive wheels and the seat upholstery. Lift the frame up and place it gently on a level table or place.

5.8.2 Use the tools provided by KARMA to loosen the bolts on the axle plate of quick release drive wheels. (See Figure 5.22)

5.8.3 Move the fixing plate of backrest tube and the axle plate of quick release drive wheel backward. (The length of adjustment depends on the accessory equipped. It can be 1" or 2" long).

5.8.4 Insert the optional extension tubes. (See Figure 5.23)

5.8.5 Tighten the screws to fix the extension tubes. (See Figure 5.24)

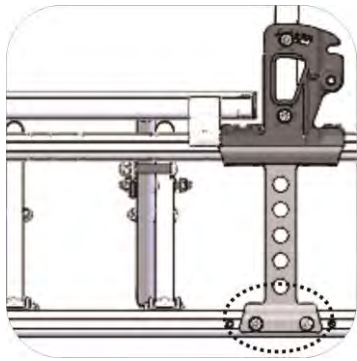


Figure 5.22

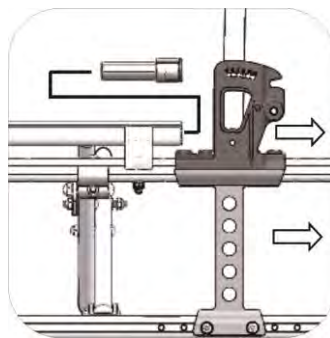


Figure 5.23

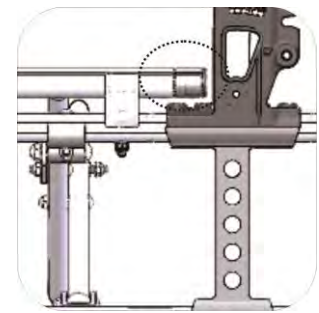


Figure 5.24

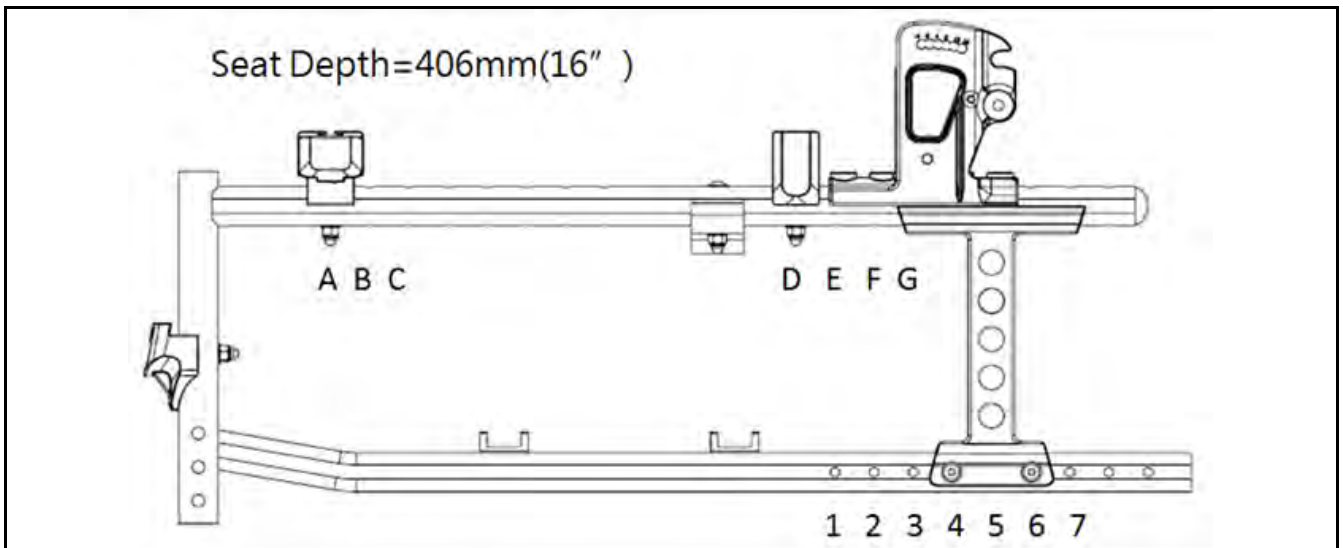
5.8.6 Position back the axle plate of quick release drive wheel, and re-tighten the bolts.

5.8.7 Re-assemble the drive wheels.

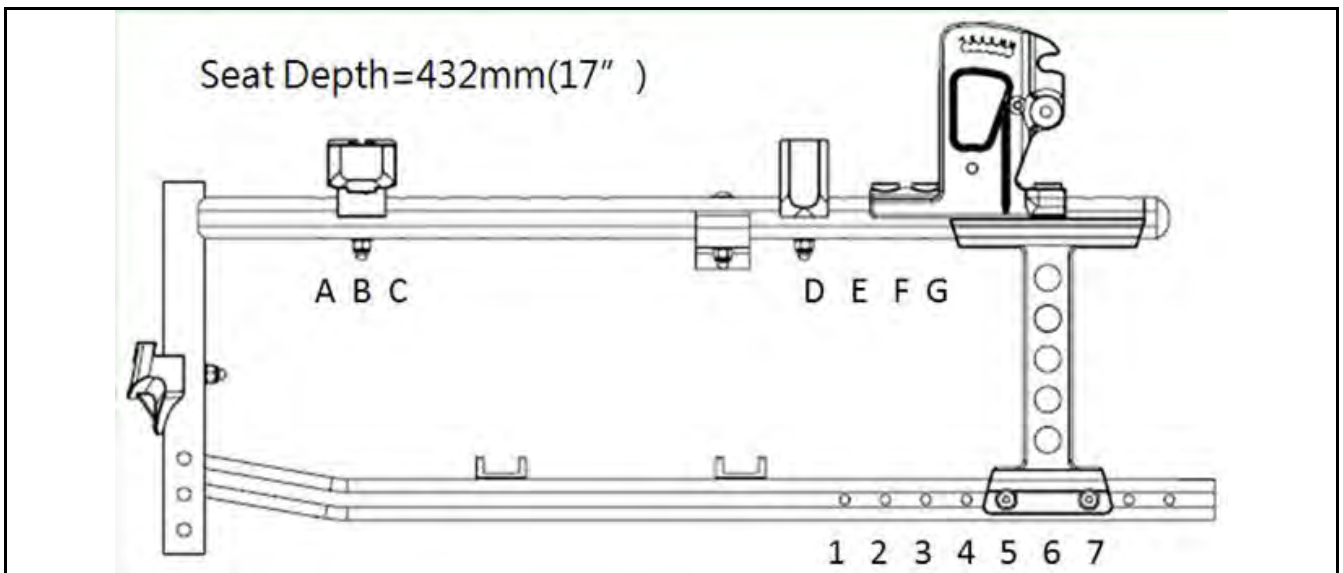
5.8.8 Add the seat depth extension strip at the front of the seat, and place back the seat upholstery.

5.8.9 Cover the seat depth extension strip with the extended part of the seat upholstery.

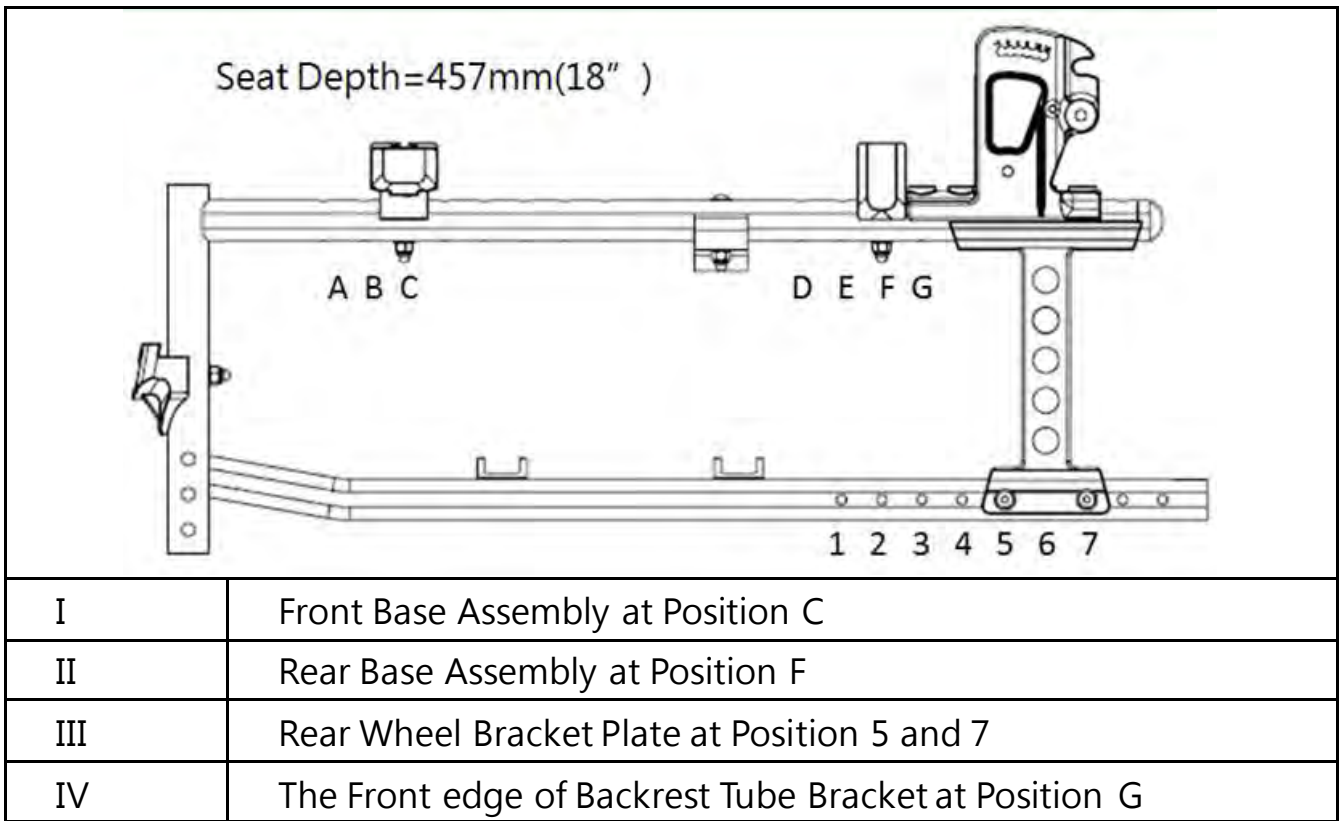
## 5.9 Adjusting the gravity center



I	Front Base Assembly at Position A
II	Rear Base Assembly at Position D
III	Rear Wheel Bracket Plate at Position 4 and 6
IV	The Front edge of Backrest Tube Bracket at Position E



I	Front Base Assembly at Position B
II	Rear Base Assembly at Position D
III	Rear Wheel Bracket Plate at Position 5 and 7
IV	The Front edge of Backrest Tube Bracket at Position F



## WARNING

- When the Depth has been adjusted, the wheelchair must be evaluated by a qualified therapist. The position of the anti-tippers must be adjusted to guarantee your safety.
- If the anti-tippers are not fitted, or have been fitted incorrectly, there is a risk of tipping over and of injury.

### 5.10 Footplate Height Adjustment

5.10.1 Use the tool provided by KARMA to loosen the bolts at the bottom part of the footrest. (See Figure 5.25)

5.10.2 Adjust the height till the user feels comfortable or the user's thighs are parallel to the ground. Retighten the bolts.



Figure 5.25



Figure 5.26



Figure 5.27



Figure 5.28



## CAUTION

- The adjustment is in increments of 2.5 cm (5 positions), and the range of adjustment is 10 cm.
- The distance between the footplates to the floor must be more than 3 cm from the floor. (See Figure 5.26)
- Make sure that the footplate height is adjusted properly according to the user's calf length to reduce pressure on the body. (See Figure 5.27 and 5.28)

### 5.11 Detaching Footrest

Footrests can be swung away and be detached, which makes transferring out of the wheelchair easier.

5.11.1 Unfasten the calf straps. (See Figure 5.29)

5.11.2 Flip up the footplates. (See Figure 5.30)

5.11.3 Hold the release lever and swing the footrest to the side.

Depending on the environment the user is in, you can swing it inward or outward. (See Figure 5.31)

5.11.4 When the footrest is swung to the side, it can be detached by lifting it up. (See Figure 5.32)



Figure 5.29



Figure 5.30



Figure 5.31



Figure 5.32

### 5.12 Pelvic belt

Please follow the instructions below to use the pelvic belt for your safety.

5.12.1 How to Operate it.

5.12.1.1 When you sit on the wheelchair, fasten the pelvic belt. (See Figure 5.33)

5.12.1.2 Adjust the belt and make it fit your body for comfort and safety.

5.12.1.3 The most comfortable way of using the pelvic belt is to keep it as 45 degrees. (Figure 5.34)

5.12.1.4 When you don't use it, please fasten the belt to avoid the belt dropping into the drive wheels during motion.



Figure 5.33

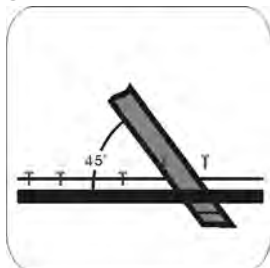


Figure 5.34

### SUGGESTION

- Please kindly be advised that the pelvic belt should be fitted tightly around the user's pelvis and be tightened until you can just get one finger through between the pelvic belt and the user. Kindly check the pelvic belt position is fitted to the place as we recommend. If it is not able to be this way, please consult your supplier.

## 5.13 Pelvic belt Adjustment

5.13.1 Make sure that the total length of the pelvic belt is sufficient.

5.13.2 Adjust the length of the pelvic belt through the buckle of both ends. (Figure 5.35)

5.13.3 Pull the two parts of belt tight. (Figure 5.36)

5.13.4 Push the buckle of both ends to the plastic clip so that the pelvic belt will not slip out of the position.



Figure 5.35



Figure 5.36

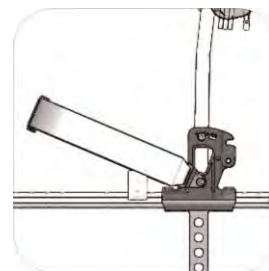


Figure 5.37

## 5.14 Pelvic belt Fitting

5.14.1 Loosen the screw on the back bracket.

5.14.2 Fit the pelvic belt. Use the screw you removed and retighten.(Figure 5.37)

5.14.3 Maintenance

5.14.3.1 The pelvic belt is made from 100% polyester fibers and the clasp is made from plastic. It does not require any maintenance but should be inspected every month to ensure that the edges are not frayed and weekly to make sure that it correctly fits the user.



### CAUTION

- **Maintenance:** There is no specific maintenance for the pelvic belt; however, please check if the edge of the pelvic belt is worn or torn before you use it. Meanwhile, please adjust the pelvic belt properly to fit the user. If the pelvic belt is damaged, please replace a new one immediately.

## 5.15 Parking Brake Assembly Adjustment (20" Drive Wheel)

This wheelchair is equipped with two manual parking brakes.

5.15.1 The brakes are applied directly against the tires. Push the handle forwards to engage or pull the handle backwards to release.

5.15.2 Braking could be less efficient due to:



Figure 5.38

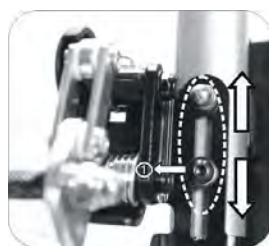


Figure 5.39

5.15.2.1 Worn tire tread.

5.15.2.2 Low tire pressure (pneumatic tires).

5.15.2.3 Wet tires.

5.15.2.4 Improper Brakes adjustment.

5.15.3 The parking brakes are not designed to be used for a moving wheelchair.

5.15.4 Release the joystick to engage the electromagnetic brake to stop the wheelchair when it is powered on. Or use the handrims for braking when the wheelchair is propelled manually. Make sure that the interval between the tires and the brakes complies with the given specifications. (Figure 5.38)

5.15.5 To adjust the interval between the tires and the brakes, first loosen the bolts and set the appropriate gap. Then re-tighten the bolts. (Figure 5.39)



## CAUTION

- After each adjustment of the drive wheels, check the interval between the tires and the brakes and re-adjust the brakes if necessary.

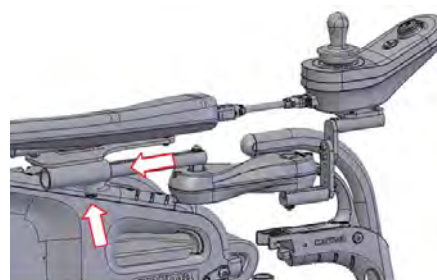
### 5.16 Wheel

Do not touch the wheels when they are rotating to prevent the user's hands or fingers from being pinched.

### 5.17 Parallel Swing Away mechanism

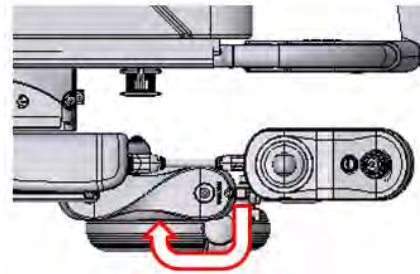
5.17.1 Insert the parallel swing away controller assembly into the armrest tube.

5.17.2 Adjust it to an appropriate position and retighten the screw.



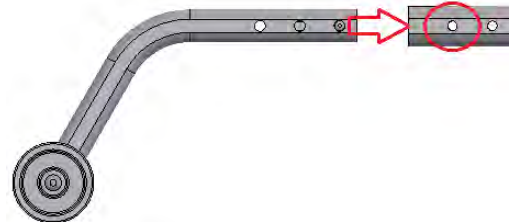
5.17.3 The wheelchair has a side steering control unit, which is either mounted on the left or right armrest. The joystick module can be mounted on a swing away mechanism. This system enables you to sit close to a table.





### 5.18 Anti-Tipper

Anti-tippers **MUST** be equipped. The main purpose of anti-tippers is to prevent the user from tipping over backward.



5.18.1 Use the tools provided by KARMA to install the anti-tippers.

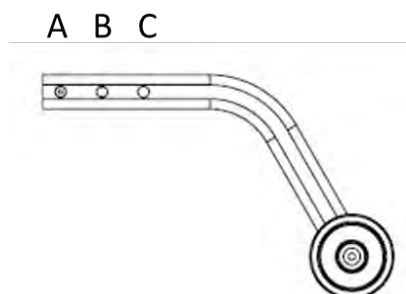
5.18.2 Pull and push the anti-tippers to ensure they do not slide and are properly installed.



### CAUTION

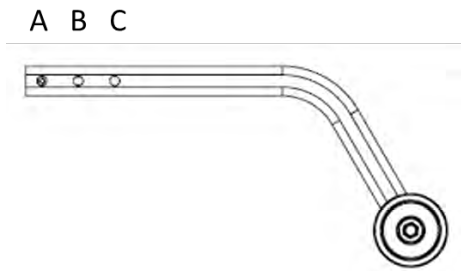
- Anti-tippers **MUST** be equipped. If they are not fitted, or have not been fitted correctly, there is a risk of tipping over and of injury
- The anti-tippers have to be adjusted according to the seat depth.
- There are three seat depth settings, 16" , 17" and 18" . If the seat depth is changed, the anti-tippers must be adjusted according to the seat depth.

5.18.3 Anti-tipper setting for a wheelchair equipped with 14" drive wheels



A	Seat Depth: 17" and 18"
B	Seat Depth: 16"
C	Not used

### 5.18.4 Anti-tipper setting for a wheelchair equipped with 20" drive wheels



A	Seat Depth: 17" and 18"
B	Seat Depth: 16"
C	Not used

### 5.19 Foldable handgrip

5.19.1 The foldable handgrip can be Flip up to 90°. When it reaches this position, a click sound will be heard.



5.19.2 Press the release button to fold the handgrip.



### 5.20 Freewheel Hub

The position of the freewheel hub is at the center of the drive wheel. The purpose of it is to allow the chair to roll freely when the chair is not switched on or when there is no electricity.

5.20.1 Freewheel Mode : to allow the chair to roll freely when the chair is not switched on or when there is no electricity, set the chair into freewheel mode according to the following instructions:

5.20.1.1 Pull the two freewheel hubs out (Figure 5. 41)

5.20.1.2 Rotate the freewheel hubs for about 45 degrees.

5.20.1.3 Let go the freewheel hub, and note that do not let it insert into the slot. The chair will now roll freely.

5.20.2 To engage the motors : The wheels do not roll freely

5.20.2.1 Pull the two freewheel hubs out

5.20.2.2 Rotate the freewheel hubs for about 45 degrees.

5.20.2.3 Let go the freewheel hub, and make sure that it inserts into the slot. You can tell that it inserts into the slot when you hear a click sound. (Figure 5.42)

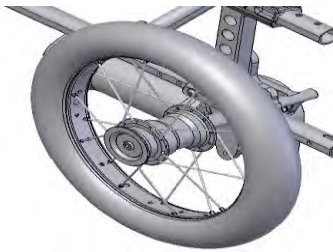


Figure 5.39

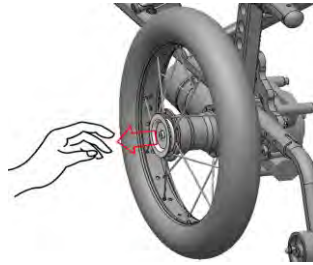


Figure 5.40

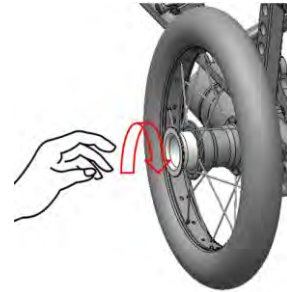


Figure 5.41



## WARNING

- The electromagnetic brake won't function in freewheel mode. Be sure to have an attendant with you when the wheelchair is in freewheel mode.
- Do not set the wheelchair in freewheel mode when on an incline or decline. Only use freewheel mode on flat surfaces since your electromagnetic brakes are not engaged in this mode. Without these brakes, it will roll down a hill causing injury or damage.

## 5.21 Freewheel Levers

The freewheel levers to allow manual pushing of the powered wheelchair if required.

5.21.1 Freewheel Mode: This is to allow manual pushing of the powered wheelchair. To set the chair into freewheel mode, push down the levers positioned at the both sides of the chair. When the levers are pushed down completely, then release the levers, and the powered wheelchair is now in freewheel mode. (Figure 6.41)

5.21.2 Drive mode: Make sure to pull both the levers up, and then the wheelchair can be driven by motor power. (Figure 5.42) ◦

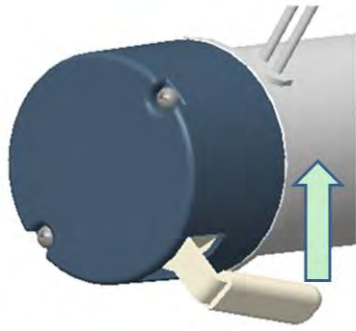


Figure 5.42

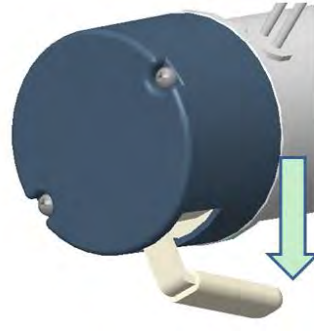


Figure 5.43



## WARNING

- The electromagnetic brake won't function in freewheel mode. Be sure to have an attendant with you when the wheelchair is in freewheel mode.
- Do not set the wheelchair in freewheel mode when on an incline or decline. Only use freewheel mode on flat surfaces since your electromagnetic brakes are not engaged in this mode. Without these brakes, it will roll down a hill causing injury or damage.

### 5.22 Motor Brakes

5.22.1 Electro-magnetic brakes operate automatically when the controller joystick is central with a delay of approximately 1/2 second. The controller automatically provides progressive deceleration before the electro-magnetic brakes come into operation.

5.22.2 To check the brakes are operating correctly: Switch the wheelchair on and move the joystick in any direction. The brakes should disengage. Repeat this check in all four directions ensuring the brakes engage each time the joystick is released to its central position. An audible click from each motor indicates the brakes are working.

## 5.23 Installing and Removing the Battery

### Quick Release Version

5.23.1 When removing the battery, loosen the strap which is used to fasten it. Hold the handle of the battery and lift up it up. The battery can be removed now.

5.23.1.1 When installing the battery, hold the handle of the battery, ensure battery capacity indications facing forwards, align the battery to the connectors of the battery pack, and gently slide the battery to the bottom of the battery seat. (Figure 5-32)

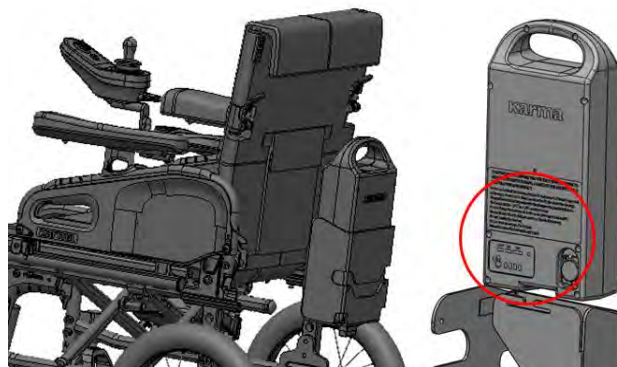


Figure 5-32

5.23.1.2 Guide the strap through the handle.(Figure 5.44)

5.23.1.3 Fasten the strap to fix the battery.(Figure 5.45)

### Fixing Version

5.23.2 The battery is fixed in the pack by two extra screws.

5.23.2.1 When removing the battery, loosen the two screws and the strap which are used to fasten it. Hold the handle of the battery and lift up it up. The battery can be removed now.(Figure 5.43~5.45)

5.23.2.2 When installing the battery, hold the handle of the battery, ensure battery capacity indications facing forwards, align the battery to the connectors of the battery pack, and gently slide the battery to the bottom of the battery seat. (Figure 5.46)

5.23.2.3 Guide the strap through the handle

5.23.2.4 Fasten the strap and screws to fix the battery.

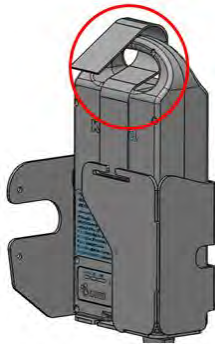


Figure 5.44

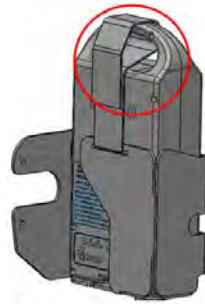


Figure 5.45

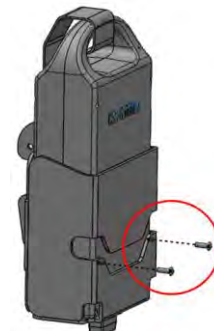


Figure 5.46



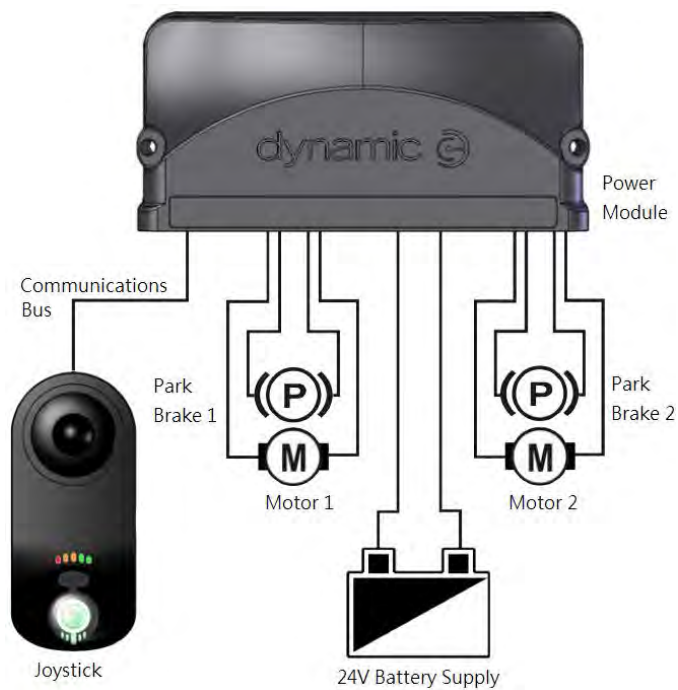
## WARNING

- The weight of a 26.1AH battery is about 4kg.
- When installing and removing the battery, avoid any risk of dropping the battery.

### 5.24 Operating the wheelchair

5.24.1 Do not operate the wheelchair before you're familiar with the operation of the joystick and controller. All parameters of the controller are set as factory default setting. The setting is made to ensure that the controller have the best performance in every condition. Should there's any need to modify the parameter setting due to medical considerations, it's necessary to have Karma's professional to do the modification to ensure the safety of users. Also, all modification shall be performed in accordance to safety regulations.

5.24.2 Safety regulations shall be followed. The circuit design of the wheelchair is made under the consideration of user's safety. Do not modify or adjust the circuit design.



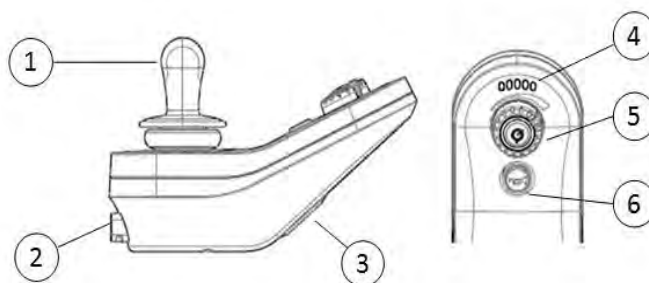
Wiring Diagram of the Controller & Joystick.



## CAUTION

- Do not use the Wheelchair before you are familiar with how to operate the controller.
- Before operating the wheelchair, please perform inspections according to the Section 9.
- Have Karma's professional to modify the parameter setting of the controller to ensure the safety of users.

### 5.25 Controller Panel



1. Joystick
2. Socket for Power Cable
3. Charger Socket

4. Battery Gauge and Diagnostics Indicator
5. ON/OFF Switch and Speed Adjustment Knob
6. Horn Button

## 5.26 How to operate your wheelchair

### 5.26.1 Power ON/OFF :

5.26.1.1 Press the power button. Be sure not to touch the joystick while switching on the controller. Your battery & diagnostics indicator should light up.



### 5.26.2 Speed Adjustment Button :

5.26.2.1 The speed adjustment buttons allow you to set various maximum forward and reverse speeds. The settings are a percentage of maximum power. Adjust the speed setting according to the environment in which you are operating the wheelchair.

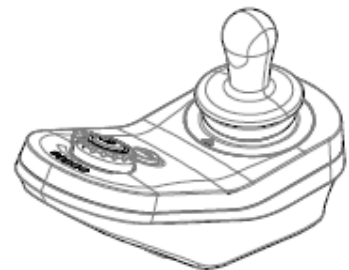


5.26.3 After adjusting the maximum speed setting, operate the joystick to drive the wheelchair and control the direction of movement. Push the joystick forward to drive the wheelchair forward. Pull the joystick backward to drive the wheelchair backward.

Notice : The more the indicators, the faster the speed.

5.26.4 Please adjust the maximum speed to a lower setting before you get used to control your wheelchair.

5.26.5 Please slow down your speed when driving indoors, on roads with heavy traffic, mud, excessive gravel, bumps, snow and ice





5.26.5 Avoid driving on roads which are too narrow or by a canal or waterway without any fence or hedge.

5.26.6 In case of emergency, release the joystick and the wheelchair will quickly slow down, the electromagnetic brake will be activated to stop the wheelchair. You will hear a click sound when the electromagnetic brake is activated.



## CAUTION

- The stopping distance will vary with your forward/reverse speed.
- The stopping distance on slopes can be significantly greater than that on level ground.
- To park the wheelchair, be sure to park on flat ground and then turn the power to OFF.

### 5.27 Locking the wheelchair

The controller can be locked to prevent unauthorized use. To lock the system, press the Power button for 4 seconds, the battery gauge will indicate the transition by flashing LEDs 1, 3, and 5 (far left, middle, and far right) 3 times.

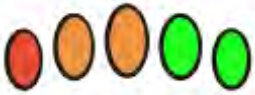






### 5.28 Unlocking the wheelchair

When the power is off, 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,.

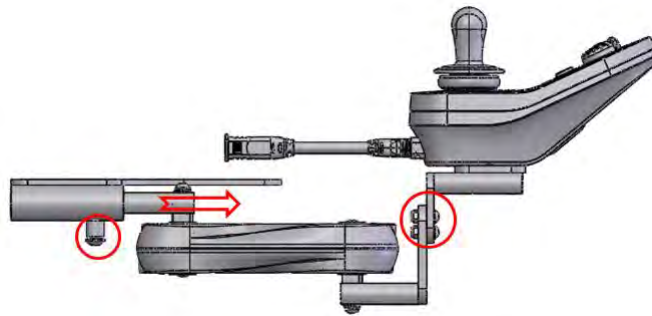


## 5.29 Battery Capacity Indications

Battery Guage	Battery Level
	Fully charged
	
	
	Charging the battery as soon as possible
	Charging the battery immediately.

## 5.30 Controller position Adjustment

You can adjust your controller for your convenience on control. Release the screw underneath the armrest with controller, and adjust the proper position you desire. Finally, tighten the screw.



## 6. BATTERIES AND CHARGER

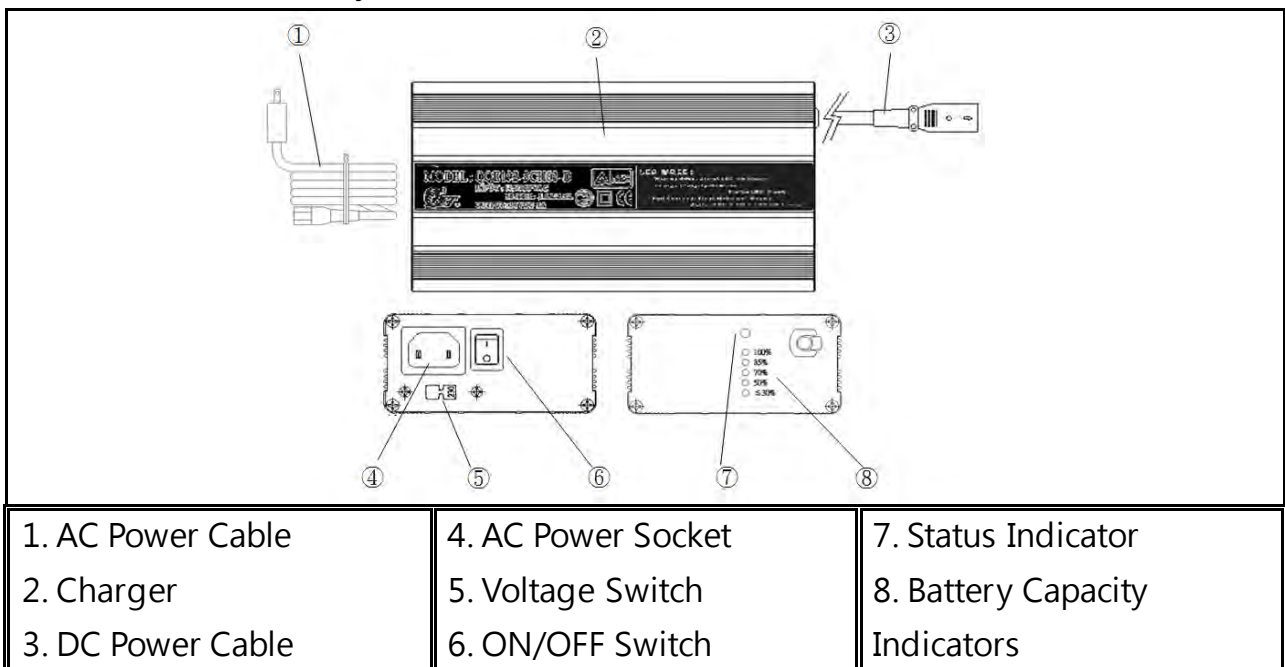
Before you attempt charging, ensure you read and understand the instruction manual supplied with the battery charger, and you choose the correct input voltage for battery charger.

### 6.1 Charger

6.1.1 The charger is specified for charging Lithium batteries. Please charge batteries according to the following instruction to prevent from damaging the charger or batteries, failing to charge batteries or malfunction of battery capacity indications.

6.1.2 Before charging batteries, make sure the charger has been set to the correct voltage setting by setting the 110V <=> 220V switch to match the local AC voltage. If it is not correctly set, this will cause damage to the charger. Before changing the switch setting, ensure the charger is disconnected from AC line voltage.

6.1.3 The battery will detect the internal temperature of itself when being charged. It will automatically trigger the protecting procedure to inhibit charging if the temperature is too high. When the battery is cooled down, it will trigger the charging automatically.





## CAUTION

- Before charging batteries, make sure the charger has been set to the correct voltage setting. If it is not correctly set, this will cause damage to the charger.
- Before changing the switch setting, ensure the charger is disconnected from AC line voltage.

### 6.2 How to Charge the Battery

Before you attempt charging, ensure you read and understand the instruction manual supplied with the battery charger, and you choose the correct input voltage for the battery charger.

There are two ways to charge the battery. The first one is to charge the battery through the controller. The other one is to charge the battery by connecting the charger to it.

#### 6.2.1 Charging the battery through the controller

Be sure to follow the procedures listed below precisely.

6.2.1.1 Make sure the charger has been set to the correct voltage setting (Figure6-1).



Figure6-1



Figure6-2



Figure6-3

6.2.1.2 Power Switch is labeled with "I" and "O" symbols. The "I" represents power on and the "O" represents power off.

6.2.1.3 The power of the charger is OFF when O (labeled on the button) is pressed down (Figure6-2).

6.2.1.4 Connect the DC power cable of the charger to the charger socket of the controller panel (Figure6-3).

6.2.1.5 Connect the AC power cable of the charger to the AC power

socket (Figure6-4).

6.2.1.6 Ensure all cables are properly connected. Turn on the charger as I (labeled on the button) is pressed down (Figure6-5).

6.2.1.7 The green status indicator will be on when the charger is turned on (Figure6-6).

6.2.1.8 The battery capacity indications show the battery level (e.g. 70%) (Figure6-7).



Figure6-4



Figure6-5



Figure6-6



Figure6-7

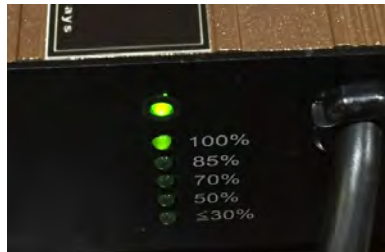


Figure6-8



Figure6-9

6.2.1.9 The charger begins charging the battery when the status indicator starts flashing.

6.2.1.10 Do not stop charging the battery before it is fully charged.

6.2.1.11 The battery is fully charged when the status indicator stops flashing and is always on. The battery capacity indicators will indicate 100% (Figure6-8).

6.2.1.12 Turn off the charger as O (labeled on the button) is pressed down.

6.2.1.13 Remove the AC power cable of the charger from the AC power socket.

6.2.1.14 Remove the DC power cable of the charger from the charger Socket of the controller panel.

## 6.2.2 Charging the battery by connecting the charger to it

Remove the battery from the wheelchair and connect the charger to it. Be sure to follow the procedures listed below precisely.

6.2.2.1 Make sure the charger has been set to the correct voltage setting (Figure6-1).

6.2.2.2 Power Switch is labeled with "I" and "O" symbols. The "I" represents power on and the "O" represents power off.

6.2.2.3 The power of the charger is OFF when O (labeled on the button) is pressed down. (Figure6-2).

6.2.2.4 Connect the DC power cable of the charger to the charger Socket of the battery (Figure6-9).

6.2.2.5 Connect the AC power cable of the charger to the AC power socket (Figure6-4).

6.2.2.6 Ensure all cables are properly connected. Turn on the charger as I (labeled on the button) is pressed down (Figure6-5).

6.2.2.7 The green status indicator will be on when the charger is turned on (Figure6-6).

6.2.2.8 The battery capacity indications show the battery level (e.g. 70%) (Figure6-7).

6.2.2.9 The charger begins charging the battery when the status indicator starts flashing(Figure6-7) ° .

6.2.2.10 Do not stop charging the battery before it is fully charged.

6.2.2.11 The battery is fully charged when the status indicator stops flashing and is always on. The battery capacity indicators will indicate 100%(Figure6-8) ° .

6.2.2.12 Turn off the charger as O (labeled on the button) is pressed down.

6.2.2.13 Remove the AC power cable of the charger from the AC power socket.

6.2.2.14 Remove the DC power cable of the charger from the charger

socket of the battery.

### 6.2.3 Stop charging and recharge the battery

If it is necessary to stop charging the battery before it is fully charged and then to recharge the battery later or somewhere else. Be sure to follow the procedures listed below precisely.

6.2.3.1 The power of the charger is OFF when O (labeled on the button) is pressed down. (Figure6-2).

6.2.3.2 Remove the AC power cable of the charger from the AC power socket.

6.2.3.3 Wait until the status indicator of the charger is off.

6.2.3.4 Remove the DC power cable of the charger from the charger socket of the controller panel or the battery.

6.2.3.5 When it is ready to recharge the battery, connect the DC power cable of the charger to the charger socket of the controller panel or the battery.

6.2.3.6 Connect the AC power cable of the charger to the AC power socket.

6.2.3.7 Ensure all cables are properly connected. Turn on the charger as I (labeled on the button) is pressed down (Figure6-5).

6.2.3.8 Refer to 6.2.1.7 or 6.2.2.7 to remove the charger when the battery is fully charged.



## WARNING

- If the battery is installed on the wheelchair, be sure to charge it through the charger socket of the controller and do not charge it by connecting it to the charger.
- Turn off the charger before disconnecting the AC power cable from the AC power socket.

## 6.3 Charging the Batteries If Any of the Following Conditions Occurs

6.3.1 You have used your wheelchair for more than an hour continuously.

6.3.2 You've used more than one quarter of the total charge.

6.3.3 When you haven't used the wheelchair for more than two weeks.

6.3.4 If the current charge is not enough to reach your final destination

## 6.4 Charging Time

6.4.1 It is recommended to charge the battery immediately after using the wheelchair.

6.4.2 The charging time is about 6 hours depending on the status of the batteries. Remove the charger after the battery is fully charged.

6.4.3 If it takes more than 7 hours to fully charge the battery, this could be because the battery or the charger is aging. Do not repair the charger or battery by yourself because it may result in danger. Contact your dealer for service to replace the charger or battery to prevent the user from danger or the wheelchair from damage.

6.4.4 If you do not use the battery for a long time, switch into sleep mode. Check and charging battery every month.



### CAUTION

- Before charging, make sure to set the 115V↔230V switch to match the local AC voltage. If the switch is improperly set to a lower or higher voltage position, it will cause damage to the charger, and, Change the 115V↔230V switch settings only when charger is disconnected from AC line voltage.



### WARNING

- Be sure to follow the guidelines to avoid accidents while charging. If not, this will void the warranty.
- Be sure to only use a KARMA approved battery charger and charge the battery completely every time. If a non-genuine charger is used, it may result in danger.
- Never disassemble or modify the charger. This will negate the warranty.



- Do not disconnect the charger if the charging is not completed. The battery capacity indicators will indicate 100% if the battery is fully charged. The battery life will be seriously shortened if the battery is repeatedly used without being fully charged. Therefore, be sure to always charge the batteries fully.
- Do not use an extension cord or multi-plug when charging your battery. A risk of fire and/or electric shock could be encountered.
- Keep your wheelchair away from flammable objects while charging, as it may lead to fire or explosion of the battery.
- Do not expose the batteries to temperatures below 10°C or above 45°C when charging or storing the vehicle.
- Never connect or disconnect the plug (cord) with wet hands or if the plug (cord) is wet to avoid possible electric shock.
- Please charge the battery in a well-ventilated area where it is not directly exposed to sunlight. Do not charge the battery under rainfall, in morning dew or in an area where the humidity is high.
- Keep the charger away from heat sources such as heater, flame, sunlight and so on.
- Do NOT attempt to drive the wheelchair before disconnecting the charger and cables from the wheelchair and the power socket.
- Do not touch the surface of the charger because it may get hot when it is charging the battery. The surface temperature may be up to 50°C. Wait for 5 minutes to cool down the charger before storing it.
- Disconnect the charger and all cables from the wheelchair and the power socket after completing to charge the battery.

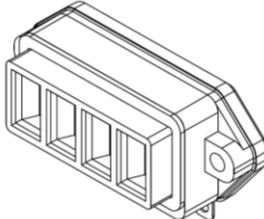
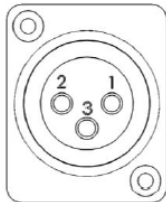


## CAUTION

- Please follow the guidelines below to avoid accidents while charging.
- Do not cover the charger with any waterproof cloth or other objects while charging the battery.
- Do not put the charger on flammable objects.
- As a general rule, recharge batteries as frequently as possible to assure the longest possible life and to minimize required charging time. It is critical not to let them run low at any time and if doing so, it will reduce the life of the batteries.
- The drive range will be shortened when driving frequently on slopes or uneven ground, as this consumes more battery power.

## 6.5 Batteries

The wheelchair is equipped with Li-ion battery, and the spec of the battery is:

Rated Capacity		11.5Ah (290Wh)	26.1Ah (657.7Wh)
Charge current		<6A	
Switch	Function	Battery Capacity · wake up · alarm disable shutdown mode for shipment	
Indicator	Color	Red x 1 · Yellow x 1 · Green x 2	
	Function	<p>●●●●→75~100%</p> <p>●●●→50~75%</p> <p>●●→25~50%</p> <p>●→0~25%</p>	
I/O port	Discharge		
	Charge		

FOR YOUR SAFETY, BEFORE YOU USE THE BATTERY, BE SURE TO READ THE OWNER' S MANUAL, LABELS ON THE BATTERY, AND THE FOLLOWING WARNINGS:

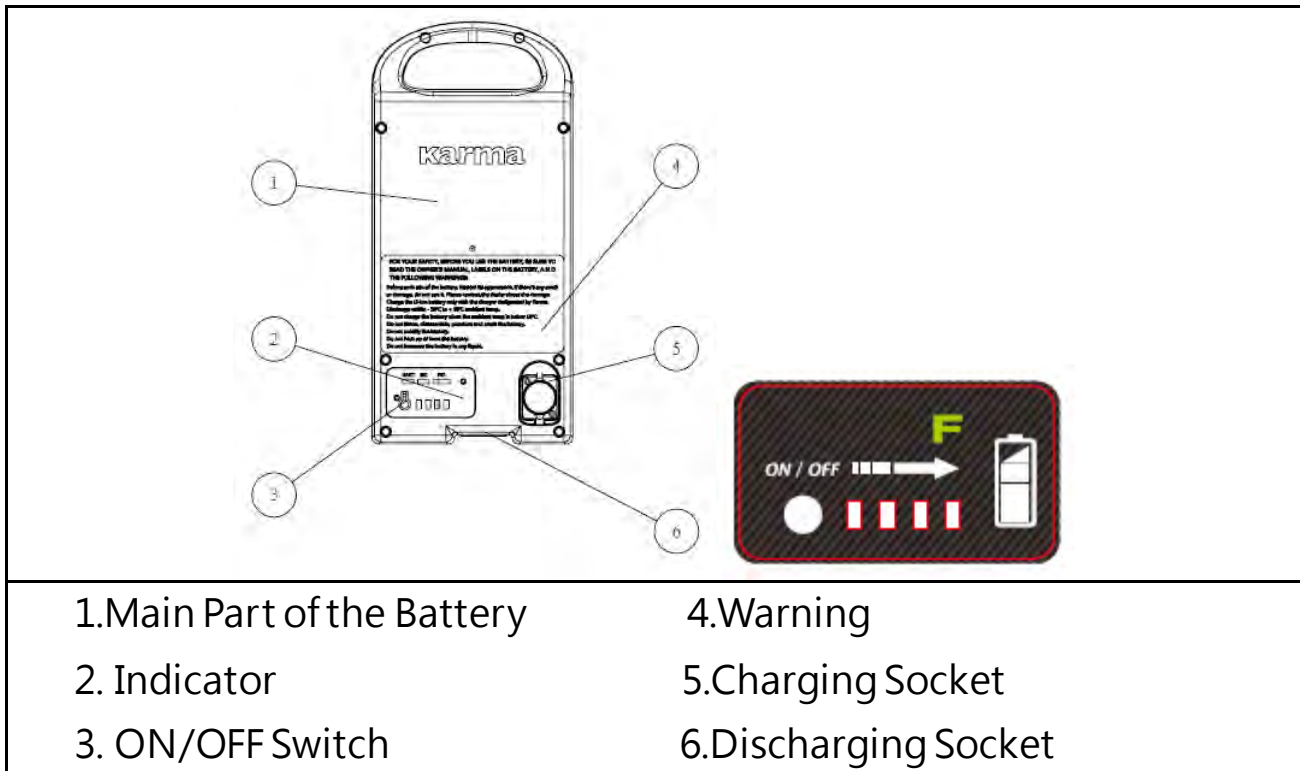
Before each use of the battery, inspect its appearance. If there' s any crack or damage, do not use it. Please contact the dealer about the damage



## WARNING

- There are many risks involved with improper disposal of batteries, whether damaged or not.
- Batteries may contain heavy metals and be considered hazardous waste.
- Do not to operate the wheelchair with depleted batteries, since the occupant could be stranded.
- Many regions around the world now strictly enforce laws to help protect our environment. By not disposing of batteries properly, you may be liable for fines from your local through national government.
- By not recycling batteries, they end up in landfills that are already low on space. From these landfills, lead and other chemicals may leach into streams and rivers destroying ecosystems and poisoning local water resources.
- Improper disposal of batteries may also cause injury to unsuspecting others that come in contact with them. If you come in contact with fluids or corroded powder from a battery, rinse with water and contact a physician if necessary. If contact with eyes occurs, rinse for 15 minutes and then visit a physician.
- Incinerating or burning a battery will cause it to explode. Cleaning & Recycling for more information.
- Do not use an extension cord when charging your batteries. A risk of fire and /or electric shock could be encountered.
- Do not expose the batteries to temperatures below 10°C or above 45 °C when charging or storing the vehicle.
- Charge the Li-ion battery only with the charger designated by Karma
- Discharge within 0°C to + 60°C ambient temp.
- Do not charge the battery when the ambient temp is below 10°C
- Do not throw, disassemble, puncture and crush the battery
- Do not modify the battery
- Do not heat up or burn the battery
- Do not immerse the battery in any liquid
- NEVER allow any of your tools and/or battery cables to contact BOTH terminal posts at the same time. An electrical short may occur and injury or damage may occur.

## 6.6 The Battery & Diagnostics Indicators



## 6.7 Functions of Switch


### 6.7.1 Activate or Deactivate Sleep Mode




The batteries are set in sleep mode when they are sent out of the factory. Deactivate sleep mode before using the battery. The sleep mode can be activated or deactivated by pressing the ON/OFF switch for 5 to 8 seconds.

There are two ways to deactivate sleep mode.

6.7.1.1 Deactivate sleep mode by press the ON/OFF button for 5 to 8 seconds.

6.7.1.2 72 hours unused, the battery automatically return to sleep.

Indicators	Description	Buzzer
	The indicators will light up one after another.	The buzzer will beep twice every second.

	<p>All the indicators will be on for one second.</p>	
	<p>The indicators will indicate the battery level for five seconds.</p>	
	<p>All indicators will be off.</p>	

6.7.1.2 Deactivate sleep mode by charging the battery


6.7.1.2.1 Refer to section "How to charge the battery"

6.7.1.2.2 If the sleep mode cannot be deactivated by charging the battery, disconnect the charger from the controller or the battery. Press the ON/OFF button for 5 to 8 second.

6.7.1.2.3 If the sleep mode cannot be deactivated after pressing the ON/OFF button, contact your dealer for service.

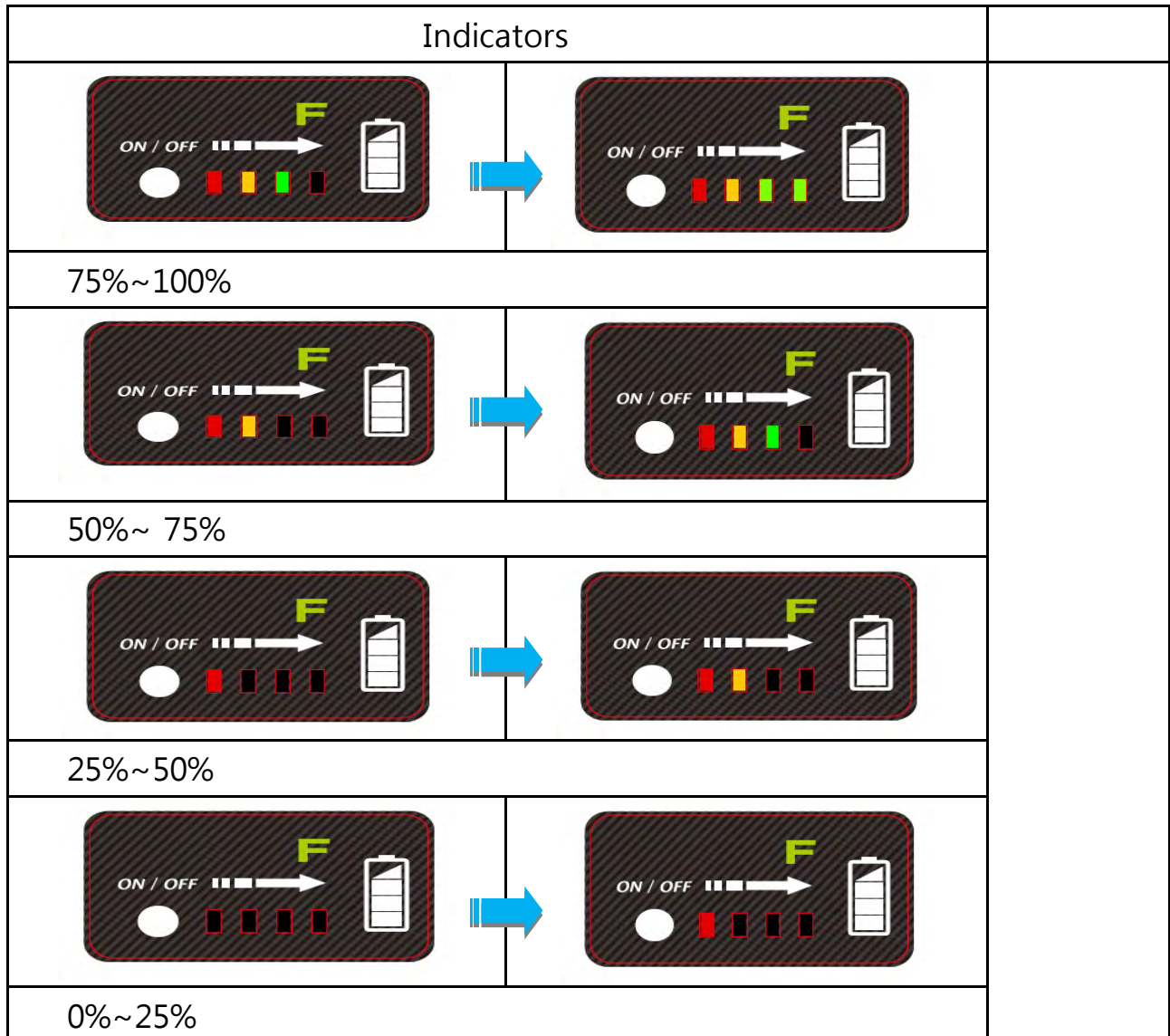
6.7.2 Battery Level

6.7.2.1 Press the ON/OFF switch. The indicators will indicate the battery level. The indicators will be on for five seconds and then off.

Indicators	Battery Level	Description
	<p>The indicators will show the status of the battery level.</p>	<p>The indicator will be on for 5 seconds and then off.</p>

## 6.8 The Status of Battery Level while Charging the Battery

When the battery is removed from the wheelchair and is connected to the charger, the status of the battery level can be seen from the indicators.



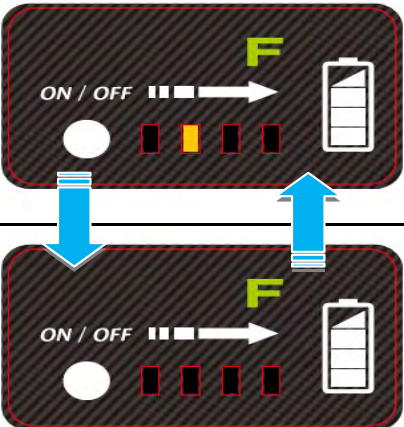
### WARNING

- If the battery is installed on the wheelchair, be sure to charge it through the charger socket of the controller and do not charge it by connecting it to the charger.

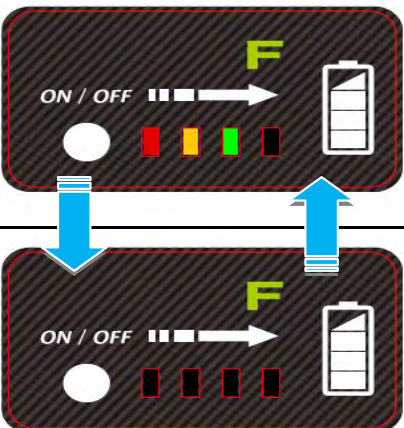
## 6.9 Abnormal indicators and Actions

If an abnormal situation occurs, the indicators will lit up and buzzer will beep.

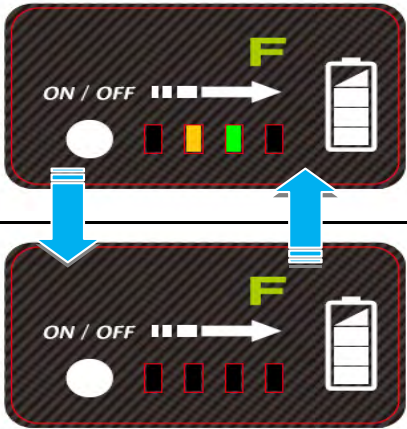
### 6.9.1 The voltage of the battery is too high during charging.

Indicators	Buzzer	Action
	Continuous beeping	<ol style="list-style-type: none"> <li>1. Disconnect the charger from the battery.</li> <li>2. The indicators and the buzzer will be off.</li> </ol>

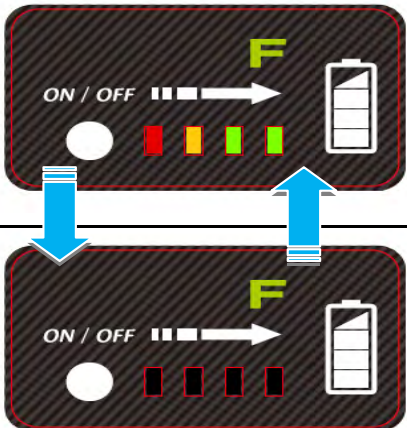
### 6.9.2 The charging current is too high during charging.

Indicators	Buzzer	Action
	Continuous beeping	<ol style="list-style-type: none"> <li>1. Disconnect the charger from the battery.</li> <li>2. The indicators and the buzzer will be off.</li> </ol>

6.9.3 The temperature of the battery is too high or too low during charging.



Indicators	Buzzer	Action
	<p>Continuous beeping</p>	<ol style="list-style-type: none"> <li>1. Use the battery only at the ambient temperature between 0°C and 60°C.</li> <li>2. Do not charge the battery when the ambient temp. is below 10°C.</li> <li>3. Disconnect the charger from the battery.</li> <li>4. The indicators and the buzzer will be off when the temperature of the battery is between 0°C and 60°C.</li> </ol>

6.9.4 The temperature of the battery is too high or too low during charging when operating the wheelchair.

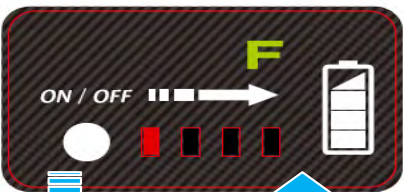

Indicators	Buzzer	Action
	<p>Continuous beeping</p>	<ol style="list-style-type: none"> <li>1. Use the battery only at the ambient temp. of 0 °C to + 60°C.</li> <li>2. The indicators and the buzzer will be off when the temperature of the battery is between 0°C and 60°C.</li> </ol>





### 6.9.5 The battery capacity is too low.

Indicators	Buzzer	Action
	<p>The buzzer will beep for every 4.5 seconds.</p>	<p>Charge the battery immediately.</p>
		

### 6.9.6 The current of the battery is too high when operating the wheelchair.

Indicators	Buzzer	Action
	<p>Continuous beeping</p>	<ol style="list-style-type: none"> <li>1. Do not operate the wheelchair on a slope steeper than Max. safe slope.</li> <li>2. Wait for several seconds. The indicators and the buzzer will be off</li> </ol>
		

### 6.9.7 An electrical short circuit occurs if terminal posts of the battery are shorted.

Indicators	Buzzer	Action
	<p>Continuous beeping</p>	<ol style="list-style-type: none"> <li>1. Refer to section 6.5 for your safety.</li> <li>2. After the cause of the short circuit is removed, the indicators and the buzzer will be off.</li> </ol>
		



## CAUTION

- Exceeding the specified temperature range can lead to either freezing or overheating of the batteries. This will damage the batteries and shorten its service life.
- Failure to use the correct battery size and/or voltage may cause damage to the powered wheelchair and give unsatisfactory performance. For replacement of batteries, please contact your local KARMA supplier/dealer in order to ensure that the new batteries are correctly be used.



## SUGGESTION

- It is recommended that you charge the batteries immediately when the battery indicator shows only three or fewer signals.
- After charging or replacing new batteries, drive the wheelchair for 2-3 minutes to make sure the batteries are fully charged before going on a long journey.
- In wintertime, the batteries may respond slowly and the drive range may also be reduced. You must store your wheelchair indoors above freezing temperatures.
- When driving on an incline, the battery indicator light might move up and down. This is normal.
- Even if the batteries are used properly their capacity will decay over time, thereby reducing the drive range (maximum distance traveled per full charge). Thus, when the drive range becomes about 50% of what brand new batteries would offer, it's time to replace them with new batteries. Otherwise, the batteries may die unexpectedly leaving you in a possibly precarious situation.
- The drive range will be shortened when driving frequently on slopes or uneven ground or over curb, as this consumes more battery power.

## 7. INSPECTION AND MAINTENANCE

### 7.1 Daily Check

Check the following items before driving. If you find anything abnormal, visit your KARMA wheelchair dealer for further inspection before using it.

Item	Inspection Content (if applicable)
Joystick Controller	<p>Is the joystick loose and/or making noise?</p> <p>Can the joystick be turned left and right smoothly?</p> <p>Can the speed buttons be adjusted freely and do they function well?</p> <p>Does the wheelchair stop when the joystick is released completely?</p> <p>Does it light up when the power is ON?</p> <p>Is there enough power for your trip?</p> <p>Does the horn work well?</p>
Motor	<p>Is there any abnormal noise?</p> <p>Does the electromagnetic brake work properly?</p>
Freewheel Mode	<p>Do the freewheel hubs work properly?</p>
Driver's Seat	<p>Does the driver's seat recline?</p> <p>Do the seat angle adjustment knobs(or buttons)work properly?</p> <p>Does the surface of the seat remain or break?</p>
Tires	<p>Are there any cracks or other damage to the tires?</p> <p>Check the tire tread depth and air pressure.</p>
Other	<p>Is there any abnormal motor noise?</p>



### CAUTION

- Visit a KARMA wheelchair dealer for inspection and maintenance if you find anything abnormal.

## 7.2 Regular Maintenance Record

In order to ensure that your wheelchair is in good condition, please contact Karma authorized dealers regularly and make further wheelchair inspection and maintenance records. We recommend that you inspect and maintain your wheelchair **every six months**.

### SUGGESTION

- Even if you don't use the wheelchair for a long time, the wheelchair should still be maintained regularly.
- You should clean your wheelchair, inside and out, regularly to keep it beautiful and safe.

I - Inspection

A - Adjustment

△ - Repair

3 - Replacement

T - Tightening

L - Add Oil

Item/Period		1 mth	6 mth	12 mth	18 mth	24 mth	30 mth
Joystick Control Unit			I	I	I	I/3	I/3
Power Module			I	I	I	I/3	I/3
Controller Buttons			I	I	I	I/3	I/3
Connection to the Electrical System				I		I	I/A
Motor	Operation and Noise		I	I	I/A	I/A	I/3
	Electromagnetic Brakes		I	I	I	I/3	I/3
	Connection to the Electrical System			I		I	
Batteries	Loose or Corroded Terminals	I	I	I	I	I/3	I/3
	Connection to the Electrical System	I	I	I	I	I/3	I/3

Item/Period		1 mth	6 mth	12 mth	18 mth	24 mth	30 mth
	Damage to the Electrical Cord/Cable	I	I	I	I	I/3	I/3
Charger	Charging Function and LED Light	I	I	I	I/Δ	I/Δ	I/Δ
	Socket, Plug and Cords			I		I	
	Fan Functions Properly (if applicable)			I		I/Δ	
Driver's Seat	Recline Function			I/L		I/L	
Tires	Cracks/Surface Damage	I/3	I/3	I/3	I/3	I/3	I/3
	Tread Depth		I	I/3	I	I/3	I
	Abnormal Wear Pattern			I/3		I/3	
Wheel Rim	Tightness of Bolts and Nuts			T		T	
	Wear or Deformation Around Tires			I/3		I/3	

## 7.3 Tires

7.3.1 The condition of the tires is affected by the way you drive and use your wheelchair.

7.3.2 Inspecting Tire Tread: please check the tread depth regularly. Replace the tires when the tread depth is less than 0.5 mm.



### CAUTION

- Please ensure that the tire is flat before you disassemble the rim to replace the pneumatic tire.

## 7.4 General Maintenance

7.4.1 You must maintain the vehicle more frequently if you drive on grass, sand or gravel roads often.

7.4.2 Do not use water, oil or other chemical solutions to clean your wheelchair. Be sure NOT to spray the vehicle with water, as not to damage the electronic components and PCB circuit board.

7.4.3 Please clean the vehicle by wiping it with either a dry or moist cloth.

7.4.4 Please take the vehicle to an authorized KARMA wheelchair dealer for repairs and adjustments. Improper adjustments could lead to wheelchair malfunction or an accident.

7.4.5 Please use a soft and dry cloth to keep your wheelchair clean. Use moderate or mild detergent to clean the wheelchair, if necessary.



### CAUTION

- Before performing any maintenance, be sure to turn the power OFF and unplug the charger if connected.
- DO NOT over-tighten hardware. This could cause damage to the frame and hardware.



## SUGGESTION

- Do not directly spray water on your wheelchair to wash it, as this could lead to a malfunction in the electric system.
- Do not use gasoline, solvents or other abrasive solutions; the casing may become deformed or damaged.



## WARNING

- After ANY adjustments, repair or service and BEFORE use, make sure that all hardware is tightened securely, otherwise injury or damage may occur.

### 7.5 Suggested Maintenance Procedures

- 7.5.1 Before using the powered wheelchair, make sure all nuts and bolts are tight.
- 7.5.2 Check all parts for damage or wear and have a qualified technician replace it if necessary.
- 7.5.3 Check all parts for proper adjustment.
- 7.5.4 Ensure that the batteries are properly maintained and charged as required.
- 7.5.5 Inspect the brake for proper operation.
- 7.5.6 The wheels and tires should be checked periodically for cracks and wear, and should be replaced by a qualified technician.
- 7.5.7 Regularly check for loose nuts and/or bolts in the front and drive wheels. If loose, have them adjusted by a qualified technician.
- 7.5.8 Clean dirt, dust and grease from exposed components.
- 7.5.9 A qualified technician can be found with an authorized distributor/dealer.

## 7.6 Transporting and Storing

7.6.1 The wheelchair may be disassembled for ease of transport.

Please refer to section 5 for more detailed information on the individual steps. Reverse the order for reassembly.

7.6.2 Please store the wheelchair in a location where it is out of direct sunlight, rain and dew.

7.6.3 When stored for a long time, please charge the batteries to full and then disconnect the battery terminals. Even if you don't use the wheelchair for a long time, the wheelchair should still be maintained regularly. Before using the powered wheelchair, Please refer to Section 7 INSPECTION AND MAINTENANCE for more information.

7.6.4 For more details, consult your KARMA wheelchair dealer.

### WARNING:

- As of this date, eFlexx can NOT be used as seats in any vehicles. That is, KARMA recommends that users are NOT transported in any vehicle while seated in the wheelchair. In the case of accident or a sudden stop, the user or passengers may be at risk of getting injury. The suggested solution is to transfer the user from the wheelchair into a vehicle seat and to securely stow the wheelchair in a separate compartment.



## 8. TROUBLESHOOTING

### Trouble or Problems with Your Wheelchair

You can inspect the following before taking your wheelchair to a KARMA wheelchair dealer.

Problem	Checking Points and Corrective Action
My wheelchair does not start	Is the power turned OFF? ↓ Turn ON the power.
	Do the batteries still have power? Is the battery indicator light not on? ↓ Charge the batteries.
	Is the charger plugged into the wheelchair? ↓ Unplug the charger and put it away.

If you cannot solve the problem by yourself, contact your KARMA wheelchair dealer for help.

### 8.1 Error Indication








If there is 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.

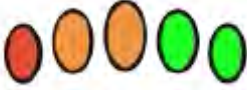
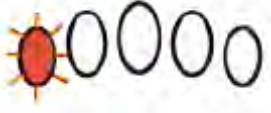
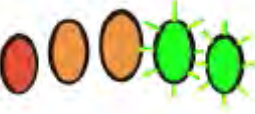
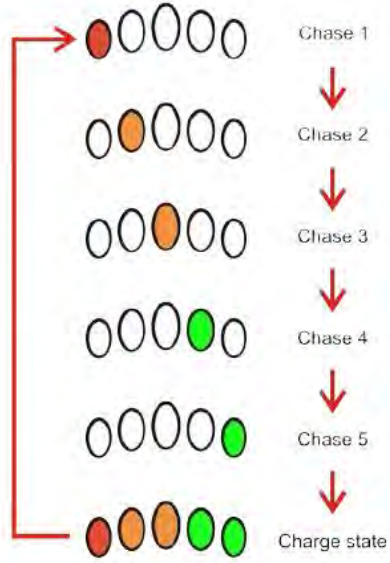
The table below describes the error indication, and a few possible actions that can be taken to rectify the problem. The actions listed are not in any particular order and are suggestions only; the intention is that one of the suggestions may help you clear the problem. If in doubt, please consult your dealer or customer service engineers.

8.1.1 The wheelchair can't be driven when there's an error that influences the safety.

8.1.2 After the error is cleared, the wheelchair can be driven again.

## 8.2 Error Indication Table

Flash code		Error description	Possible action
1		Remote joystick error	Check cables and connectors Replace the Remote
2		Network or configuration error	Check cables and connectors Recharge the battery Check charger Replace modules Contact the dealer
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 Replace modules
6		Right park brake error	Check cables and connectors Check right park brake is released Replace modules
7		Module error (other than Remote)	Check cables and connectors Check modules Replace LiNX Access Key Power Module Recharge battery If the chair stalled, reverse away the chair or remove any obstacles. If the chair was moved while turned off, please wait for a few seconds and switch on the power again.

The battery gauge LEDs	Information
 <p data-bbox="156 409 480 443">Batt Gauge Maximum</p>	<p data-bbox="647 230 1417 432">Batt Gauge Maximum is indicated on the battery gauge with all LEDs lit and signifies that the battery level is somewhere between 81 and 100% of full capacity.</p>
 <p data-bbox="156 678 520 768">Batt Gauge Low Voltage Warning</p>	<p data-bbox="647 517 1422 719">A low battery warning is generated when the battery voltage falls below the Batt Gauge Low Voltage Warning set-point. This is indicated on the battery gauge with the red (left-most) LED flashing.</p>
 <p data-bbox="156 987 531 1077">Batt Gauge High Voltage Warning</p>	<p data-bbox="647 804 1414 1055">A high battery warning is generated when the battery voltage goes above the Batt Gauge High Voltage Warning set-point. This is indicated on the battery gauge with all LEDs lit, and the two green (right-most) LEDs flashing.</p>
 <p data-bbox="156 1749 405 1783">Battery charging</p>	<p data-bbox="647 1133 1410 1395">The Battery Gauge will indicate the system is being charged by cycling between a left-to-right chase sequence, and then displaying the approximate battery charge state at the end of the chase sequence.</p>

## 9. SPECIFICATIONS

Product Model	eFlexx		
Nominal seat width (mm)*	360 / 15	410 / 17	460 / 19
Nominal seat depth (mm)**	415 / 16	440 / 17	465 / 18
<b>Front caster / Drivewheel size (in)</b>	<b>8 / 14</b>	<b>8 / 14</b>	<b>8 / 14</b>
Backrest height (mm)	410	410	410
Headrest height above seat (mm)	N/A	N/A	N/A
Armrest to seat distance (mm)	210 ~ 290	210 ~ 290	210 ~ 290
Front location of armrest structure (mm)	315 ~ 545	315 ~ 545	315 ~ 545
Seat surface height at front edge (mm)	485	485	485
Footrest to seat distance (mm)	325 ~ 425	325 ~ 425	325 ~ 425
Effective seat width (mm)	405	455	500
Effective seat depth (mm)	560	585	610
Seat plane angle (X°)	7	7	7
Backrest angle (X°)	6 ~ 26	6 ~ 26	6 ~ 26
Seat to backrest angle (X°)	90 ~ 110	90 ~ 110	90 ~ 110
Leg to seat angle (X°)	99	99	99
Overall length with legrest (mm)	1015 ~ 1065	1015 ~ 1065	1015 ~ 1065
Overall width (mm)	560	615	665
Overall height (mm)	860	860	860
Folded length (mm)	815	865	915
Folded width (mm)	505	505	505
Folded height (mm)	730	730	730
Total mass (kg)	35.0	35.0	35.0
Total mass without batteries (kg)	30.9	30.9	30.9
Mass of the heaviest part (kg)	27.0	27.0	27.0
Maximum user weight (kg)	100	100	100
Motor power (W)	250	250	250
Battery capacity (Ah)	11.5*1 / 26.1*1	11.5*1 / 26.1*1	11.5*1 / 26.1*1
Charger output current (A)	5	5	5
Drive range (km)***	10 (11.5Ah)	10 (11.5Ah)	10 (11.5Ah)

	20 (26.1Ah)	20 (26.1Ah)	20 (26.1Ah)
Battery Compartment (L x W x H) (mm)	155 x 75	155 x 75	155 x 75
Maximum speed forward (km)	8	8	8
Minimum braking distance from max speed (mm)	2500	2500	2500
Obstacle climbing (mm)	35	35	35
Ground clearance (mm)	100	100	100
Minimum turning radius (mm)	945	975	1055
Minimum turning radius without user (mm)	795	825	905
Reversing width (mm)	1105	1210	1230
Static stability downhill (X°)	15	15	15
Static stability uphill (X°)	20	20	20
Static stability sideways (X°)	11	11	11
Dynamic stability uphill (X°)	6	6	6
Ability to climb rated slope (X°)***	10	10	10

\* **Nominal seat width** is measured the width of seat cushion at 120mm in front of the backrest. This value is mainly used in the product ordering process.

\*\* **Nominal seat depth** is measured from the front end of the seat cushion to the back cushion. This value is mainly used in the product ordering process.

\*\*\* **Drive range/ Ability to climb rated slope** are estimated based on the following conditions: 20°C~35°C, 100 kg occupant, brand new fully charged batteries and driving on the flat road.

- The actual product specifications differ from the data in the table by  $\pm 1$  cm  $\pm 0.5$  kg.
- The actual product specifications may vary according to different configurations.
- Karma reserves the right to modify information herein without further notice.
- If you want to know more about the measurement methods of wheelchair specifications, please scan the QR code to watch the instructions on the Karma website.



Product Model	eFlexx		
Nominal seat width (mm)*	360 / 15	410 / 17	460 / 19
Nominal seat depth (mm)**	415 / 16	440 / 17	465 / 18
<b>Front caster / Drivewheel size (in)</b>	<b>8 / 20</b>	<b>8 / 20</b>	<b>8 / 20</b>
Backrest height (mm)	410	410	410
Headrest height above seat (mm)	N/A	N/A	N/A
Armrest to seat distance (mm)	210 ~ 290	210 ~ 290	210 ~ 290
Front location of armrest structure (mm)	295 ~ 560	295 ~ 560	295 ~ 560
Seat surface height at front edge (mm)	485	485	485
Footrest to seat distance (mm)	325 ~ 425	325 ~ 425	325 ~ 425
Effective seat width (mm)	390	455	510
Effective seat depth (mm)	545	585	610
Seat plane angle (X°)	7	7	7
Backrest angle (X°)	6 ~ 26	6 ~ 26	6 ~ 26
Seat to backrest angle (X°)	90 ~ 110	90 ~ 110	90 ~ 110
Leg to seat angle (X°)	99	99	99
Overall length with legrest (mm)	1125 ~ 1175	1125 ~ 1175	1125 ~ 1175
Overall width (mm)	590	645	690
Overall height (mm)	860	860	860
Folded length (mm)	835	895	945
Folded width (mm)	520	520	520
Folded height (mm)	715	715	715
Total mass (kg)	37.8	37.8	37.8
Total mass without batteries (kg)	33.7	33.7	33.7
Mass of the heaviest part (kg)	29.0	29.0	29.0
Maximum user weight (kg)	100	100	100
Motor power (W)	250	250	250
Battery capacity (Ah)	11.5*1 / 26.1*1	11.5*1 / 26.1*1	11.5*1 / 26.1*1
Charger output current (A)	5	5	5
Drive range (km)***	10 (11.5Ah) 20 (26.1Ah)	10 (11.5Ah) 20 (26.1Ah)	10 (11.5Ah) 20 (26.1Ah)

Battery Compartment (L x W x H) (mm)	155 x 75	155 x 75	155 x 75
Maximum speed forward (km)	8	8	8
Minimum braking distance from max speed (mm)	2500	2500	2500
Obstacle climbing (mm)	35	35	35
Ground clearance (mm)	125	125	125
Minimum turning radius (mm)	985	990	1015
Minimum turning radius without user (mm)	795	840	865
Reversing width (mm)	1335	1380	1405
Static stability downhill (X°)	18	18	18
Static stability uphill (X°)	18	18	18
Static stability sideways (X°)	13	13	13
Dynamic stability uphill (X°)	6	6	6
Ability to climb rated slope (X°)***	10	10	10

\* **Nominal seat width** is measured the width of seat cushion at 120mm in front of the backrest. This value is mainly used in the product ordering process.

\*\* **Nominal seat depth** is measured from the front end of the seat cushion to the back cushion. This value is mainly used in the product ordering process.

\*\*\* **Drive range/ Ability to climb rated slope** are estimated based on the following conditions: 20°C~35°C, 100 kg occupant, brand new fully charged batteries and driving on the flat road.

- The actual product specifications differ from the data in the table by  $\pm 1$  cm  $\pm 0.5$  kg.
- The actual product specifications may vary according to different configurations.
- Karma reserves the right to modify information herein without further notice.
- If you want to know more about the measurement methods of wheelchair specifications, please scan the QR code to watch the instructions on the Karma website.



## 10. OPTIONAL ACCESSORIES



Adjustable Footplate



Stump Footrest



Headrest collocated with foldable handle



Elevating Legrest



Lateral Support Bar



Vertical Footrest



### CAUTION

- DO NOT use parts, accessories or adapters other than those authorized by Karma.
- You shall have a professional to modify the wheelchair or install parts. When doing so, ensure it will not have an adverse impact on the performance of stability and safety.



## 11. CLEANING & RECYCLING

### 11.1 Cleaning

- 11.1.1 In order to lengthen the life of your wheelchair, it is suggested that you clean the wheelchair periodically (if not daily), especially after it is used in the rain or snow.
- 11.1.2 We suggest that you don't use your wheelchair in the rain or snow.
- 11.1.3 If you are traveling and get caught in the rain, we suggest you try to find shelter and turn OFF your wheelchair while waiting it out.
- 11.1.4 If you can't find shelter, proceed to your destination.
- 11.1.5 However we do not recommend you do this often as it may shorten the life of your wheelchair or cause damage.
- 11.1.6 Driver's seat upholstery: use soapy water. Wring out the sponge/cloth before scrubbing. Do not use the wheelchair until it is dry.
- 11.1.7 Frame: wipe with a damp cloth, but be sure not to splash/spray the wheelchair with water, as doing so may damage the motor, electrical wiring and battery.
- 11.1.8 If compressed air is available, you can use the compressed air to clean your wheelchair (do not exceed 7K and keep the nozzle at least 10 cm away from your wheelchair).
- 11.1.9 Casing: wipe with a damp cloth. After it is dry, coat the casing with a light layer of wax, if desired.

## 11.2 Post-Consumer Recycling

11.2.1 A post-consumer recycling plan should follow the Environmental Protection Administration's regulations.

11.2.2 The items listed below are for reference only as local law and regulation may vary.

Material	Part Name	Method
Aluminum-alloy	Frame	Recyclable
ABS	Various	Recyclable
Various	Battery	Recyclable
Various	Motor/Reduction Gear	Recyclable
Various	Electric Parts	Recyclable

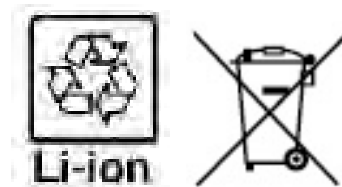
11.2.3 There are many organizations in many countries you can find on the internet that will accept used goods for charity or disassemble electronic equipment and batteries to recycle them.

11.2.4 Please search the information highway to help less fortunate individuals and protect our planet for future generations.

11.2.5 If you do not have access to the world wide web please use your local phone directory, ask for operator assistance or go to your local government center for more information.

11.2.6 Various parts of this wheelchair should be recycled to the collection and recycling location nearest to you. Earth Day is every day.

11.2.7 Check with your local recycling center on where and how to recycle used batteries as this information varies from region to region.



## 12. WARRANTY

### 12.1 Serial Number

To ensure after-sale service and warranty, please record and fill in the serial number which can be found on the frame.

This warranty is VOID if the original chair serial number is removed or altered.

Model	eFlexx
Serial Number	

### 12.2 Contents and Duration of Warranty

12.2.1 If the parts of the product need to be repaired or replaced due to manufacturing defects, they can be repaired or replaced free of charge within the warranty period (a repair of this kind will hereafter be called warranty maintenance).

12.2.2 Frame is warranted for a period of 5 years and electrical system (controller, motor, charger, actuator and PCB) for a period of 1 year after delivery to the customer, then the affected parts will be repaired or replaced free of charge.

12.2.3 Battery warranty is subject to the periods set by the manufacturers. Please contact your local dealer in detail.

12.2.4 Consumable parts such as bearings, cables, carbon brushes, circuit breakers, covers, footplates, light bulbs, pads, side guards, upholsteries, wheels and similar parts are excluded from the warranty.

12.2.5 Warranty maintenance can be performed by authorized KARMA wheelchair dealers only.

12.2.6 KARMA is not responsible for the transportation costs for repair and replacement.

12.2.7 Warranty maintenance is the repair or replacement according to

the condition of the parts, and replaced parts will be the property of KARMA.

12.2.8 KARMA reserves the right to modify product specifications without further notice; KARMA is not responsible for any changes to product specifications.

### **12.3 The Claims from This Warranty Shall Not Arise for The Following Reasons**

12.3.1 The product or part has been damaged by accident, improper use, incorrect assembly or poor maintenance. The evaluation of it is the privilege of KARMA.

12.3.2 Damage resulting from normal wear and tear.

12.3.3 Any overloading of the product, please check the label for maximum user weight.

12.3.4 The product or part has not been maintained or serviced in accordance with the manufacturer's recommendations as shown in the User Manuals and/or the Service Manuals.

12.3.5 Use or install parts or accessories which are not manufactured or not approved by KARMA.

12.3.6 Damage resulting from use in unsuitable environments.

12.3.7 Damage resulting from any addition, modification, or alteration of the product or parts without the approval by KARMA.

12.3.8 Damage resulting from external factors, such as chemicals, oil, debris, etc.

12.3.9 Damage caused by natural disasters.

### **12.4 The Responsibilities of the User**

12.4.1 Fully adhere to operation guidelines set forth in this manual.

12.4.2 Perform self-inspection and basic maintenance.

12.4.3 Keep a record of self-inspections and basic maintenance.

12.4.4 Not permit any alteration, addition, or modification or use of parts not manufactured by KARMA.

12.4.5 Thoroughly read and understand this manual.

## 12.5 The Responsibilities of the Dealer

12.5.1 Follow this owner's manual and educate user about product operation and basic maintenance

12.5.2 Verify and check whether the warranty conditions are met.

12.5.3 Provide relevant warranty information and recommendations for improvements.

## 12.6 Transfer of Warranty Rights

If you purchase a second-hand KARMA wheelchair while it is still within the warranty period, bring this user manual and the wheelchair to the authorized dealer and perform necessary product inspection, maintenance and warranty inheritance procedure.

Full Name:			
Gender:	Male <input type="checkbox"/>	Female <input type="checkbox"/>	
Date of Birth:	Year	Month	Day
Address:			
Model:	KARMA eFlexx		
Serial Number:			
Date of Purchase:	Year	Month	Day
Purchaser Signature:			

### Dealer's Data

Name of the Store:	
Phone No. & Address:	

If you have any suggestions on how to improve our products, please don't hesitate contacting your local dealer to let us know what you think of your wheelchair. Thank you and enjoy.





# karma

A Better Wheelchair, A Better Fit



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