

# LightCHAIR<sup>+</sup>



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**LOGO** SILVER  
**EUROPE**

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# I. INTRODUCTION

This user manual provides the user and any accompanying persons with all the necessary information regarding the construction and maintenance of the LIGHTCHAIR+. It contains the information required for the safe operation of this electric wheelchair and provides guidance on identifying and resolving potential malfunctions. Familiarity with the contents of this manual is essential for the safe use of the LIGHTCHAIR+.

The user and accompanying persons must read this manual carefully-paying particular attention to the safety section-before using the chair for the first time. This ensures that the full performance capabilities of the LIGHTCHAIR+ can be utilized.

## Pictograms and terms used as warnings:



### **DANGER!**

**Warning of potential physical danger or risk of death**



### **CAUTION!**

**Warning of potential property damage**



### **NOTE**

**Important information and tips**



### **ENVIRONMENTAL NOTE**

**Note regarding environmental protection**

## I.1 INTENDED USE

The LIGHTCHAIR + is intended for individual use by persons with a total or partial motor impairment of the lower limbs who are capable of properly operating the device for independent mobility within their home or outdoors on smooth surfaces. Do not use the LIGHTCHAIR + on terrain with obstacles, or in muddy, snowy, grassy, or rocky conditions, or in the rain.

The LIGHTCHAIR + must only be used with the options listed in this user manual, and vice versa. Logo Silver Europe, the manufacturer of the LIGHTCHAIR +, accepts no liability for use in combination with medical devices and/or accessories from other manufacturers that are not included in the list of options.

Any use other than that described herein is considered improper. The user, not the manufacturer, bears liability for any personal injury or property damage resulting from improper use. Only persons who have been properly instructed are authorized to use the LIGHTCHAIR +.

Receiving instruction on the use of the LIGHTCHAIR + is essential for protecting individuals from potential hazards and ensuring the device is operated correctly and safely.

## I.2 LIABILITY

The manufacturer's liability applies only if the instructions for use, maintenance, and care, as well as the maintenance intervals for the LIGHTCHAIR +, are observed. The manufacturer expressly states that only spare parts authorized by the manufacturer may be used. Logo Silver Europe accepts no liability for damage arising from the use of spare parts not authorized by the manufacturer, nor for damage resulting from use that does not comply with the instructions. This warranty is governed by French civil and commercial law.

## I.3 INFORMATION REGARDING REUSE

### **The LIGHTCHAIR + is designed for reuse.**

Like used machinery or vehicles, reused products are subject to specific constraints. Changes in characteristics and performance must not compromise user safety during the product's service life.

Based on market monitoring and the state of the art, the manufacturer estimates the service life of the LIGHTCHAIR + to be between 6 and 7 years, provided it is used according to the instructions and maintenance guidelines are followed. This period does not include storage time at the manufacturer's or distributor's premises. Note that if the LIGHTCHAIR + is maintained according to the instructions, it remains reliable beyond the period specified above.

Before reuse, the LIGHTCHAIR + must be thoroughly cleaned. Subsequently, an authorized specialist must inspect the unit for condition, wear, and damage. Any worn or damaged parts, as well as components that do not fit or are unsuitable for the new user, must be replaced.

The maintenance manual contains a schedule of maintenance tasks for each model, along with detailed information and a list of required tools.

## I.4 MAINTENANCE

If you have questions or encounter a problem that you cannot resolve using the user manual, please contact your authorized dealer.



#### NOTE

Servicing and repairs of the LIGHTCHAIR + must be carried out exclusively by personnel qualified and authorized by Logo Silver Europe. In the event of a problem, please contact the specialist dealer who handled the sale.

## II. SAFETY

### 2.1 STANDARDS AND DIRECTIVES

All safety-related information in this manual refers to current French legislation and European Union regulations. In other countries, the corresponding local laws and regulations must be observed.

The LIGHTCHAIR + has been manufactured in accordance with current technical standards to ensure safe operation. The safety of the LIGHTCHAIR + is certified by the CE mark and the Declaration of Conformity.

### 2.2 DECLARATION OF CONFORMITY

As the manufacturer, Logo Silver Europe declares under its sole responsibility that the LIGHTCHAIR + meets the requirements of European Regulation MDR 2017/745 regarding Class I medical devices (in accordance with Annex VIII, Chapter III, Rule 13).

The design, development, and manufacture of the LIGHTCHAIR + fully comply with the following technical safety requirements:

- Risk analysis and management according to NF EN ISO 14971 standards
- Design requirements: NF EN 12182 and NF EN 12184
- Dynamic stability, static stability, fatigue resistance testing
- Product information: NF EN 12182 and NF EN 12184
- Promotional material, user and maintenance guide, labeling, energy consumption determination, determination of speed, acceleration, and deceleration, maximum safe slope climbing capacity, and obstacle climbing capacity.
- Compliance with the NF EN 12184 standard means, among other things, that the values required for incline, obstacle crossing, and speed are met or even exceeded by the LIGHTCHAIR +.

### 2.3 GENERAL SAFETY INSTRUCTIONS

- The LIGHTCHAIR + must only be used in accordance with the instructions.
- Only duly informed and authorized persons may use the LIGHTCHAIR +.
- Only one person at a time may travel using the LIGHTCHAIR +.
- Additional safety items, such as a seatbelt and high-visibility vest, can be ordered as accessories from Logo Silver Europe.
- All safety instructions contained in this user manual and in all relevant associated documents must be observed and followed. This manual must be available to the user at all times.
- The backrest fabric and the cushion are flame-retardant but can still catch fire. Extreme caution must be exercised regarding the use of open flames or lit cigarettes.
- Exercise caution when crossing obstacles while driving up or down slopes.
- Power level settings must only be changed when the unit is stationary.
- Ensure the joystick is securely attached and positioned upright.
- Ensure the motor levers are disengaged.
- Only original manufacturer options may be used. Optional components must be installed exclusively as described below. Failure to comply with this recommendation voids the warranty.
- If special screws, nuts, or washers are removed, replace them if damaged and tighten them securely.

### 2.4 SAFETY REQUIREMENTS FOR TRANSPORT, STORAGE, AND ASSEMBLY

- The LIGHTCHAIR + is designed to be folded; it must be transported in this position, or inside the optional transport case sold by Logo Silver Europe for safe travel. The LIGHTCHAIR + must be lifted only by the frame components.
- During transport, the electrical system of the LIGHTCHAIR + must be powered down using the «On/Off» button.
- It is prohibited to remain seated in the LIGHTCHAIR + while it is being transported.
- To ensure the longevity of the LIGHTCHAIR +, it must be stored in a sheltered location.
- After any adjustment or modification to the LIGHTCHAIR + settings, all mounting screws and nuts must be firmly retightened.

## 2.5 OPERATIONAL SAFETY REQUIREMENTS

- Before each use, the user must ensure that the LIGHTCHAIR + is in a safe condition and complies with the instructions, including regarding safety functions.
- The operational and safety status of the LIGHTCHAIR + must be inspected at least once a year by an authorized specialist.
- If errors, defects, or other hazards capable of causing personal injury are detected, the LIGHTCHAIR + must be powered down immediately.
- The LIGHTCHAIR + operates only at temperatures between -10°C and +50°C. During operation, the LIGHTCHAIR + must not be exposed to temperatures outside this range.
- The maximum load capacity of the LIGHTCHAIR + is 120 kg. This weight limit must not be exceeded.
- Before each use, perform a visual check to ensure tire pressure is adequate (refer to tire markings).
- Traffic laws must be observed when traveling on public roads.
- The power control must be switched off during transfers.
- Small obstacles should be crossed at a moderate speed (3 km/h), preferably at a right angle.
- Maneuvers must only be performed at low speeds.
- The LIGHTCHAIR + may generate electromagnetic interference that could disrupt the proper functioning of other devices; therefore, it is advisable to switch it off when not in use.
- Regarding the tires, please note the following:
  - The LIGHTCHAIR + tires contain chemical substances that may react with other chemicals (e.g., cleaning products, acids).
  - Direct exposure to sunlight (UV rays) accelerates tire aging. This causes the tire tread surface to harden and the sidewalls to crack.
  - Regardless of wear, the tires must be replaced every two years.
  - Prolonged periods of non-use or exposure to high heat (e.g., if the LIGHTCHAIR + is near a radiator or exposed to sunlight through a window) can cause permanent tire deformation. Therefore, please ensure the chair is kept at a safe distance from heat sources.
- The LIGHTCHAIR + can be safely driven on inclines and declines of up to 8°. It must not be used on slopes with a steeper gradient.
- For safety reasons, reduce speed when driving downhill.
- Charging the batteries may generate explosive gases. Therefore, observe the following safety precautions during charging:
  - Turn off the LIGHTCHAIR +.
  - Ensure the room is well-ventilated.
  - Smoking and open flames are prohibited. Avoid the creation of sparks at all costs.



### **DANGER!**

**If your wheelchair moves unintentionally, release the joystick immediately and the wheelchair will stop automatically. In the event of a joystick or brake malfunction, turn off the power.**

## 2.6 SAFETY REQUIREMENTS FOR SERVICING, MAINTENANCE, AND DISPOSAL

- Servicing of the LIGHTCHAIR + must be performed by personnel qualified and authorized by Logo Silver Europe. This also applies to all repairs and adjustments.
- The On/Off switch must be turned off and the batteries removed before any maintenance work is carried out.
- The LIGHTCHAIR + may be cleaned with a damp sponge (avoid using detergents).
- Defective batteries must be returned to distributors or to Logo Silver Europe for recycling in accordance with environmental specifications.

## 2.7 USER REQUIREMENTS

- Use of the LIGHTCHAIR + is restricted to competent users. Therefore, the user must receive instruction on operating the LIGHTCHAIR + from personnel qualified and authorized by Logo Silver Europe.
- The user must have read and fully understood this user manual.
- Before using the device for the first time, the user must practice operating the LIGHTCHAIR + on flat ground with good visibility, then progress to more challenging maneuvers, such as crossing small obstacles and navigating inclines and declines.
- The user must adapt their driving to the environment, be able to avoid pedestrians or obstacles, and comply with traffic regulations.



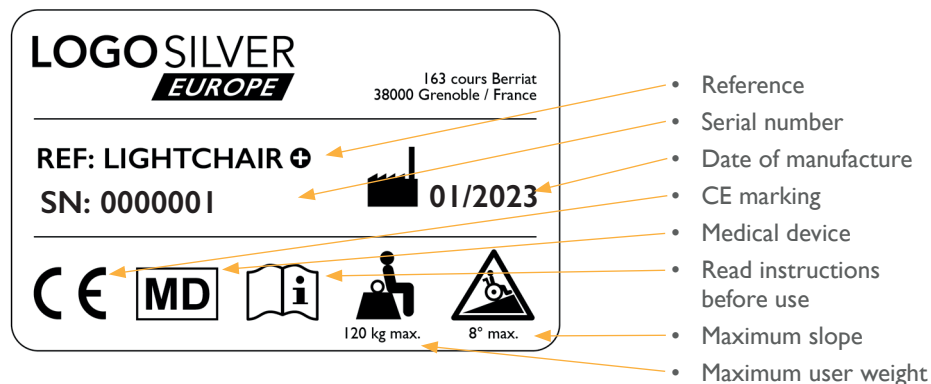
### **DANGER!**

**Do not use the LIGHTCHAIR + if you are extremely tired or under the influence of alcohol or medication.**

## 2.8 SAFETY FUNCTIONS

In the event of danger, the LIGHTCHAIR + can be switched off at any time using the On/Off button. The charger will automatically cut off once the batteries are charged.

## 2.9 WARNING PLATES AND SIGNAGE



## 2.10 ELECTROMAGNETIC INTERFERENCE

Your wheelchair may operate in areas affected by electromagnetic interference from certain transmitters, such as radios, cordless intercoms, mobile phones, radar systems, etc. In such cases, the operation of your wheelchair may be disrupted. Electromagnetic interference can affect the electric wheelchair's control system. Certain disturbances may cause brake failure, unintended starting or movement, and irreversible damage to the control system.

### Electromagnetic Interference Classification

- Short-range radio transceivers. Examples include urban radio signals, walkie-talkies, mobile network systems, and signal transmission devices.
- Medium-range mobile radio transceivers. These are typically installed in buildings or vehicles. Examples include police, fire, taxi, and ambulance radio transceivers.
- Long-range radio transceivers. These are typically installed on towers, such as commercial, radio, or TV transmission systems.



### WARNING!

The wheelchair and battery chargers comply with the following standards: GB/T 18029.21 Wheelchairs – Part 21: Requirements and test methods for electromagnetic compatibility.



### WARNING!

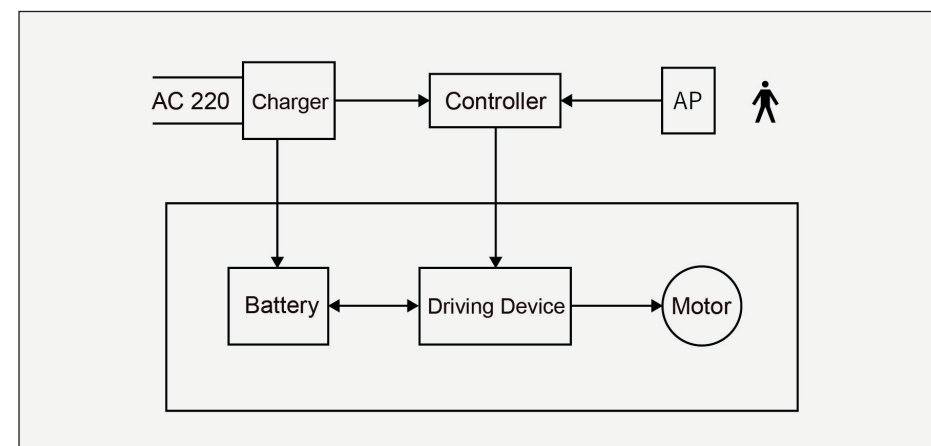
Electromagnetic interference (EMI) can affect the operation of the wheelchair. Such interference may originate from mobile phones, radio transmitters, televisions, etc.

### Prevention of Electromagnetic Interference

- Do not use portable radio transceivers—such as mobile phones, radios, etc.—while the wheelchair is powered on.
- Avoid driving near radio transmission systems, such as radio and television transmitters.
- If the electric wheelchair malfunctions or the brakes fail, please contact your company or dealer.

## III. STRUCTURE AND PERFORMANCE

### 3.1 LIGHTCHAIR + WIRING DIAGRAM



3.2 LIGHTCHAIR + STRUCTURE

The LIGHTCHAIR + electric wheelchair consists of the following components: a base with an aluminum alloy frame, 2 front wheels, 2 rear wheels, a seat, an adjustable steering column, a joystick, 2 electric motors, an electromagnetic brake, 2 rechargeable lithium-ion batteries, and 2 anti-tip wheels.

fig. I



IV. SPECIFICATIONS

The main specifications include dimensions and weight.

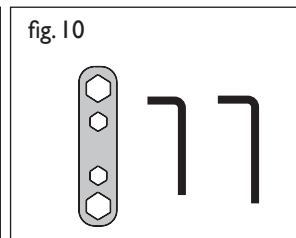
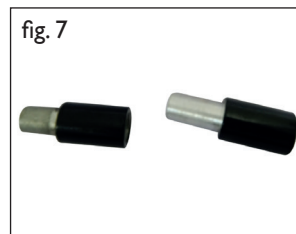
|                                       |                                                   |
|---------------------------------------|---------------------------------------------------|
| Accessibility                         | Indoor & outdoor use on smooth surfaces / Class B |
| Configuration                         | Rear-wheel drive (2 wheels)                       |
| Overall dimensions                    | Length: 1010 mm (with footrests)                  |
|                                       | Width: 620 mm                                     |
|                                       | Height: 980 mm                                    |
| Folded wheelchair dimensions          | 335 mm x 620 mm x 870 mm                          |
| Seat height (from ground)             | Front: 550 mm / Rear: 520 mm                      |
| Seat width                            | 440 mm                                            |
| Seat depth                            | 450 mm                                            |
| Armrest height (from seat)            | Front: 230 mm / Rear: 200 mm                      |
| Backrest height                       | 480 mm                                            |
| Backrest tilt                         | 22° to 43°                                        |
| Seat tilt                             | Non-reclining                                     |
| Battery weight                        | 2 x 1.115 kg                                      |
| Wheelchair weight                     | 32 kg (with batteries)                            |
| Maximum user weight                   | 120 kg                                            |
| Maximum speed                         | 6 km/h                                            |
| Braking distance                      | 70 cm                                             |
| Turning radius                        | 80 cm                                             |
| Static stability                      | 6°                                                |
| Dynamic stability                     | 6°                                                |
| Slope capability                      | 6°                                                |
| Maximum slope                         | 8°                                                |
| Obstacle clearance                    | 4 cm                                              |
| Range                                 | 25 km                                             |
| Motors                                | 250 W x 2                                         |
| Lithium batteries (airline-compliant) | 24V 6Ah x 2                                       |
| Electronics                           | ZB YISHENG                                        |
| Battery charging                      | External and via joystick / 6 h                   |
| Front wheels                          | 200 x 50 mm                                       |
| Rear wheels                           | 325 x 55 mm                                       |

# V. COMPONENTS AND INSTALLATION

## 5.1 COMPONENTS

Your LIGHTCHAIR + electric wheelchair will arrive carefully packed in a cardboard box.

- Open the top of the box, then turn the box onto its side to make it easier to remove the wheelchair and its components:
  - 1 user manual (fig. 2)
  - 1 controller (fig. 3)
  - 1 folded wheelchair (fig. 4)
  - 1 seat cushion (fig. 5)
  - 2 remote controls (fig. 6)
  - 1 armrest adjustment kit (fig. 7)
  - 1 charger + cable (fig. 8)
  - 2 batteries (fig. 9)
  - Tools (fig. 10)



## 5.2 INSTALLATION

### 5.2.1 Unfolding

- Continue pressing the button on the remote control until the chair is fully unfolded. (Fig. 11)



### 5.2.2 Installing the seat cushion

- Position the seat cushion so that the Velcro on the back of the cushion aligns with the Velcro on the seat plate. (Fig. 12)



### 5.2.3 Positioning the controller (Fig. 13)

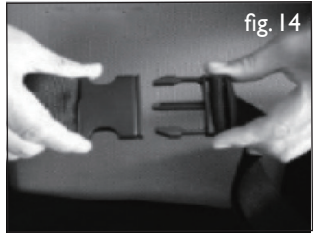
- Slide the controller stem into the tube located under the armrest (left or right, as required).
- Tighten the screw located under the tube to secure the controller in the desired position.
- Connect the controller cable. Ensure the pins are properly aligned without bending them.



### 5.2.4 Seat belt

The seat belt limits body movement and provides cushioning, preventing the user from sliding forward on the seat. In the event of an accident, it holds the user firmly in the seat to prevent potential injury.

- The seat belt must be adjusted to fit the user.
- Press the seat belt button to unfasten it.



#### **DANGER!**

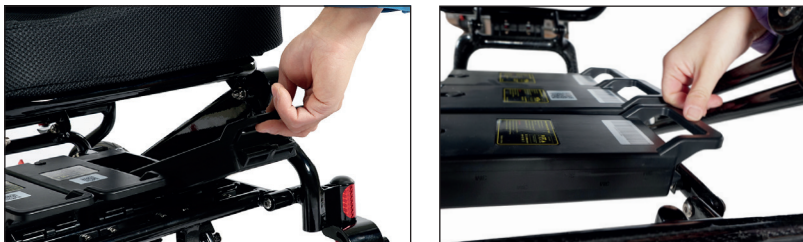
**For your safety, the seatbelt must be fastened before driving your LIGHTCHAIR + electric wheelchair.**

### 5.2.5 Battery installation

The batteries are installed in the receiver housing located beneath the seat plate.

- Turn off the power to the LIGHTCHAIR + electric wheelchair.
- Hold the battery by the handle.
- Slide the battery into the receiver until it reaches the connector.
- Press down gently. A «click» confirms that the battery is properly engaged.

fig. 15



#### **WARNING!**

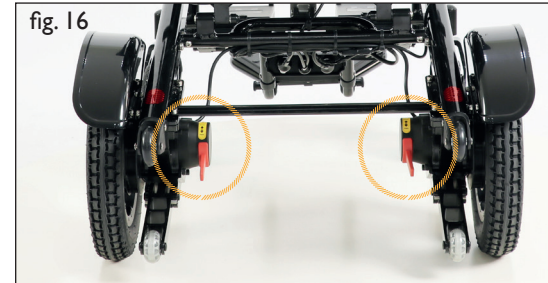
**Ensure that the power to the electric wheelchair is turned off before performing this operation.**

## VI. OPERATION AND DRIVE

Electric mode: to engage electric mode, push the motor locking levers upwards.

Manual mode: to switch to manual mode, push the motor locking levers downwards. Use this mode to allow the wheelchair to be pushed manually by another person. (Fig. 16)

fig. 16



#### **DANGER!**

**Do not use your wheelchair in manual mode unless assisted by an attendant. Doing so could result in injury.**



#### **DANGER!**

**Do not switch your wheelchair to manual mode while on a slope. Doing so could cause the wheelchair to roll down the slope, potentially resulting in injury.**

### 6.1 USING THE CONTROLLER

This is the key component of an electric wheelchair. It allows you to control all the wheelchair's electronic functions (Fig. 17). The controller is generally mounted on an armrest and connected to a motor and a battery housed in the casing.

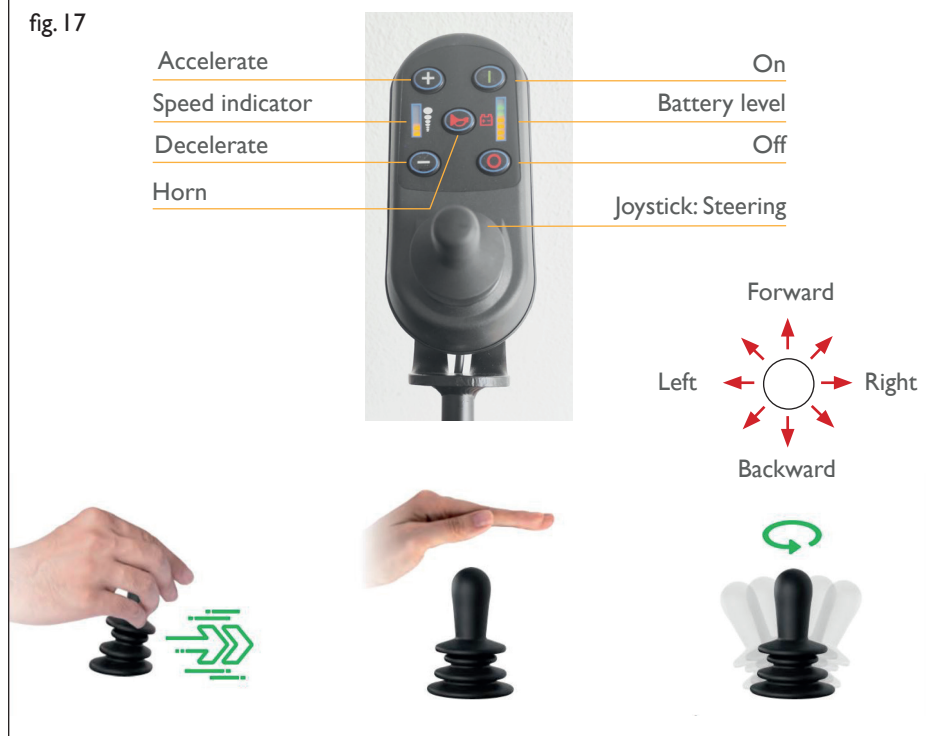


#### **NOTE!**

**If the wheelchair moves accidentally, immediately release the joystick to stop the wheelchair.**

- **Joystick:** The joystick controls the wheelchair's movements, including speed and direction (forward, backward, left, right, etc.). The further you push the joystick from its center position, the faster the wheelchair moves. Whenever you release the joystick, it automatically returns to the center, and the brake automatically stops the wheelchair.
- **Horn:** Pressing this button sounds the horn.
- **Accelerate/Decelerate and Speed Indicator:** Once the wheelchair is powered on, the speed indicator displays the current maximum speed setting. The user can adjust this setting using the + or - buttons.
- **Charger Port:** This port is intended solely for use with this wheelchair. Do not use the port to power other electrical devices; doing so could damage the wheelchair's control system or affect its EMC (electromagnetic compatibility) performance.

fig. 17



**WARNING!**

Turn off the power when getting in or out of the chair.

## 6.2 BATTERY USE

Your LIGHTCHAIR + electric wheelchair arrives with fully charged batteries, providing a range of approximately 25 km under normal operating conditions.

We recommend using the wheelchair until the batteries are fully discharged to optimize their lifespan.

When the red power indicator light is on, stop driving and recharge immediately or replace the battery with a fully charged one.

- Always use the original charger; never use other charging devices.
- Charge in a location that complies with fire safety regulations and keep the unit under supervision during the charging process.
- Specifications regarding warranty and battery performance mentioned in this manual apply specifically to the lithium-ion battery.

Two battery charging methods are available:

- Via the controller: allows both batteries to be charged simultaneously (Fig. 19)
- Directly via the battery (Fig. 21)

fig. 18

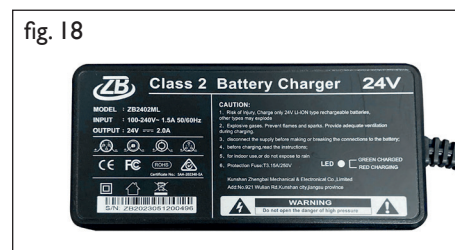


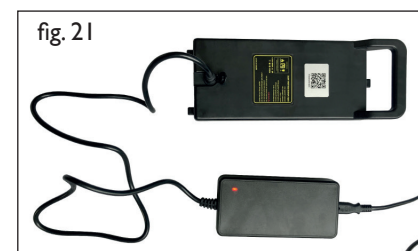
fig. 19



fig. 20



fig. 21



### 6.2.1 Charging the batteries via the controller

- Charge both batteries simultaneously using the controller's charging port. (Fig. 19)
- Turn off the controller.
- Connect the charger (Fig. 18) to the controller port (Fig. 19).
- Turn on the controller.
- The red LED on the charger indicates that charging is in progress.
- The green LED on the charger lights up when the battery is fully charged.

**CAUTION!**

When using the controller port, limit the continuous charging time:

- for two batteries: 6 hours max.
- for one battery: 3 hours max.

### 6.2.2 Direct battery charging

- Switch off the main power supply.
- Lift the protective cover on the battery charging port. (Fig. 20)
- Connect the charger to the battery. (Fig. 21)
- Plug the charger into the mains.
- The red LED on the charger indicates that charging is in progress.
- The green LED on the charger lights up when the battery is fully charged.

**WARNING!**

Connecting other devices to the socket of the supplied battery charger may damage the control system and will void the warranty.

**WARNING!**

The 24V/2A charger supplied by the manufacturer meets the requirements specified in Section I, «General Safety Requirements,» of the GB9706.1-2007 standard for medical electrical equipment. Batteries must be charged using the supplied charger. The use of any other type of charger is prohibited.

**WARNING!**

Ensure that the power cord is not stepped on, crushed, or bent. Prevent the power cord from being pulled or knotted.

**WARNING!**

All batteries must be fully charged before using the electric wheelchair.

**WARNING!**

Hold the plug when disconnecting the power cord.

**DANGER!**

Never operate the electric wheelchair while the battery is charging.



Do not use a non-standard power source (such as a generator or inverter), even if the voltage and frequency meet the requirements.



Keep children and pets away from the power cord and do not allow them to bite or chew on it.



If the circuit breaker (or fuse) trips repeatedly during charging, unplug the charger immediately and contact the dealer.

### 6.2.3 Over-discharge protection device

When the batteries are depleted, the over-discharge protection device activates. The maximum speed is then reduced. Please charge the batteries as soon as possible.

### 6.2.4 Battery replacement

To replace the batteries, contact your authorized Logo Silver Europe dealer.

Do not use batteries of a different capacity, brand, or type when replacing the batteries.

A damaged original battery must be replaced at the same time as the other existing batteries. Do not mix old and new batteries.

The battery contains hazardous and corrosive chemicals:

- Keep away from flammable materials.
- Do not place near heat sources or expose to heat.
- Do not transport batteries alongside flammable or combustible materials.
- Unauthorized disassembly of the battery is prohibited.
- Short-circuiting the battery or placing it in a fire is prohibited to prevent the risk of explosion.

**DANGER!**

Never charge a frozen battery; doing so could cause injury and damage the battery.

## 6.3 FOLDING AND UNFOLDING

Your LIGHTCHAIR + electric wheelchair is equipped with a remote control to facilitate folding and unfolding for storage or transport.

- Ensure there are no obstacles nearby before folding or unfolding the wheelchair.

### 6.3.1 Folding

- Remove the seat cushion before folding the wheelchair.
- Keep pressing the button on the remote control until the wheelchair is fully folded. (Fig. 22)



### 6.3.2 Unfolding

- Keep pressing the button on the remote control until the wheelchair is fully unfolded. (Fig. 23)
- Replace the seat cushion before using the wheelchair.



## 6.4 BACKREST TILT

### 6.4.1 Adjusting the backrest angle

- Pull up the actuator lever located at the back of the backrest.
- At the same time, hold the upper frame of the backrest with one hand and push downwards.
- Release the actuator lever when the backrest reaches the desired angle.

fig. 24



### 6.4.2 Returning the backrest to the original position

- Pull up the actuator lever located at the back of the backrest.
- Continue pressing on the actuator until the backrest returns to the original angle.

fig. 25



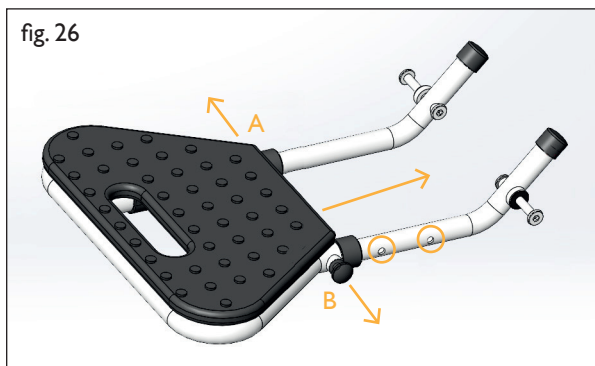
**DANGER!**  
Do not fold the chair while someone is sitting in it: risk of serious injury.

## 6.5 FOOTREST LENGTH ADJUSTMENT

The footplate on your LIGHTCHAIR + electric wheelchair has 3 holes for adjusting its length.

- Pull knobs A and B simultaneously.
- Slide the footplate along the tubes to the desired positioning holes.
- Ensure that knobs A and B are fully engaged in the selected holes to secure the footplate to the tubes.

fig. 26



## 6.6 ARMREST SPACING ADJUSTMENT

The spacing between the armrests on your LIGHTCHAIR + electric wheelchair can be increased using the supplied adjustment kit.

- Insert the supplied spacers (fig. 27).

fig. 27



## 6.7 OPERATION

### 6.7.1 Preparation before use

- Turn off the power before any transfer.
- Check that the brakes are working.
- Fold up the footrest, then hold the armrest to sit in the wheelchair.
- You can also raise the armrest to sit down sideways, then pivot and bring your legs forward. (Fig. 28)
- Do not lean too far forward; otherwise, the wheelchair may tip over. (Fig. 29)
- Do not get out of the wheelchair by pushing down on the footrest; otherwise, the wheelchair may tip over.

fig. 28



fig. 29



### 6.7.2 Practice before use

- Find a spacious area, such as a public square, and ask an assistant to help you practice until you feel confident enough to use the LIGHTCHAIR + on your own.
- Press the power button on the joystick; the battery indicator light will turn on.
- Select the lowest speed setting until you can operate the chair confidently.
- Push the joystick forward and observe the wheelchair's movement; then, push it in various directions and observe how the wheels turn.
- Release the joystick; you will see the wheels come to a stop.
- Once you are proficient, you can practice making «S» turns. After becoming familiar with «S» turns, you can try reversing, paying close attention to the speed setting. The reverse speed should be lower than the forward speed.

## VII. DIAGNOSTICS AND TROUBLESHOOTING

For your convenience, this product features an automatic fault warning function. In the event of a malfunction, the controller lights will flash and the horn will sound. You can identify the fault using the information in the table. If the problem persists after checking for the fault, do not use the wheelchair. Turn it off and contact your dealer.

| LED*            | Diagnostic Fault      | Troubleshooting                                                          |
|-----------------|-----------------------|--------------------------------------------------------------------------|
| 1 LED lights up | Low battery           | Charge the battery                                                       |
| 2 LEDs light up | Left motor fault      | Check the motor and connections                                          |
| 3 LEDs light up | Left brake fault      | Check the brake lever position and inspect the braking system for damage |
| 4 LEDs light up | Right motor fault     | Check the motor and connections                                          |
| 5 LEDs light up | Right brake fault     | Check the brake lever position and inspect the braking system for damage |
| 6 LEDs light up | Control unit overload | Check that the brake is released and the wheels are not locked           |
| 7 LEDs light up | Joystick fault        | Check that the joystick is in the neutral position                       |
| 8 LEDs light up | Control unit fault    | Control unit fault                                                       |
| 9 LEDs light up | Control unit fault    | Control unit fault                                                       |

\* Joystick with remote control option



### ATTENTION!

To ensure the quality of the electric wheelchair, please contact your dealer to replace parts such as batteries, tires, the controller, motors, and the charger. Maintenance must be performed by the dealer's service department.

## VIII. SAFETY FEATURES AND ACCIDENT MANAGEMENT

- Seat belt: please refer to 5.2.4 Seat belt
- Release the joystick in the event of a malfunction: the wheelchair will stop.

## IX. MAINTENANCE

Your electric wheelchair requires regular maintenance. Some checks can be performed by you, while others should be carried out by your dealer. Preventive maintenance is very important. If you follow the maintenance instructions in this section, your wheelchair will operate trouble-free for years. If you have any questions regarding the maintenance or operation of your wheelchair, please contact your dealer or our after-sales service.

### 9.1 MOISTURE

Your wheelchair, like most electrical and mechanical equipment, is sensitive to environmental conditions. Avoid humid environments. Direct or prolonged exposure to water or moisture could cause electronic and mechanical failure of the wheelchair. Water can corrode electrical components and the wheelchair frame.

### 9.2 TEMPERATURE

- In extremely cold weather, the battery may freeze.
- Extreme temperatures can cause components such as the charger and the battery (e.g., sealed lead-acid or gel batteries) to freeze.
- Extremely hot weather may result in a reduction of your wheelchair's speed.

### 9.3 GENERAL GUIDELINES

- Avoid bumping the controller, especially the joystick.
- Avoid prolonged exposure of your wheelchair to extreme conditions, such as hot, cold, or humid environments.
- Keep the controller clean.
- Check all electrical connections, including cable and charger connectors, and ensure they are all tight and secure.
- If only the red LEDs on the battery gauge are lit, you must recharge the batteries as soon as possible for 8 to 12 hours.



### DANGER!

Never charge a cold or frozen battery; doing so can damage the battery and create a risk of explosion.

- The wheelchair frame has a protective coating. You can apply a light coat of car wax to maintain its shine.
- Check the cables. Ensure they are connected and free of corrosion. The battery must be placed flat in the battery compartment, with the connector facing inward.
- All wheel bearings are lubricated and sealed; no further lubrication is required.
- Check for loose parts, such as the wheel axle, bearing assembly, and the wheelchair itself. Tighten any loose parts securely.

## 9.4 MAINTENANCE AFTER USE

- Turn off the wheelchair (disconnect all connectors) if it will not be used for an extended period.
- Do not allow children or careless individuals to use the wheelchair.
- Store the wheelchair at normal temperatures to prevent deformation and maintain long-term performance.
- Clean and dry the wheelchair using a clean, soft cloth. Never use chemical products for cleaning (to avoid deformation and discoloration).
- Remove the fabric seat cover and wash it if soiled. Dry it thoroughly before use.

## 9.5 DAILY CHECKS

To keep the wheelchair in good condition, inspect it before every use. Refer to the table for weekly, monthly, and semi-annual checks.

| Parts and functions to inspect | Every time | Once a week | Once a month | Twice a year |
|--------------------------------|------------|-------------|--------------|--------------|
| All parts                      |            |             | x            |              |
| Joystick                       | x          |             |              |              |
| Braking system                 | x          |             |              |              |
| Connections                    |            | x           |              |              |
| Battery condition              | x          |             |              |              |
| Tire condition                 |            |             | x            |              |
| Chassis condition              |            |             |              | x            |
| Front wheel condition          |            | x           |              |              |
| Cleanliness                    | x          |             |              |              |



### NOTE

Only spare parts from Logo Silver Europe may be used. Failure to comply with this requirement voids the warranty. If you encounter any problems during maintenance, please consult your dealer. The LIGHTCHAIR + must be inspected once a year exclusively by qualified personnel authorized by Logo Silver Europe.

## 9.6 CLEANING

- The LIGHTCHAIR + must be cleaned regularly, regardless of usage or the level of soiling.
- Never wash the wheelchair with water or expose it directly to water.
- The frame surface has a protective coating. Clean it using a cloth dampened with soapy water, then dry it completely.



### WARNING!

Never use chemical products to clean the seat and armrests, as this could damage the material or make it slippery.



### WARNING!

Risk of damage to the electronic system! Risk of malfunction! When cleaning the LIGHTCHAIR +, ensure that water does not come into contact with the electronic components or batteries.



Do not use harsh cleaning agents, solvents, or stiff brushes.

## 9.7 DISINFECTION AND REUSE OF THE WHEELCHAIR

Before transferring the wheelchair to another user, ensure it has been thoroughly cleaned and disinfected. All surfaces that come into contact with the user must be disinfected using a suitable product.

Many disinfectant products are commercially available and must be used in accordance with the manufacturer's instructions.

Before using these products on the wheelchair, test the solution on a small area to ensure it is compatible with the wheelchair's materials.

Silver Europe recommends one of the following products:

- Accelerated hydrogen peroxide-based disinfectant solution (APH technology)
- Alcohol-based solution
- Alkyl dimethyl/ethyl benzyl ammonium chloride solution



**CAUTION!**

Do not use solvents, bleach, abrasives, synthetic detergents, or aerosols.  
Ensure surfaces are rinsed with clean water and dried completely.  
Follow the manufacturer's instructions for industrial or household cleaning products.



**CAUTION!**

Logo Silver Europe accepts no liability regarding the effectiveness of the disinfection process in the event of contamination, cross-infection, or damage to the product.

## X. TRANSPORT AND STORAGE

### 10.1 TRANSPORT

- You can transport the wheelchair whether folded or unfolded.
- It is prohibited to remain seated in the LIGHTCHAIR + during transport, as it is not equipped with specific restraint rings or anchor points.
- Once the wheelchair is folded, the crossbar can be used to move it easily. (fig. 30)



**DANGER!**

When transporting the wheelchair, whether folded or unfolded, it is recommended to secure it using the vehicle's tie-down points.



**DANGER!**

The wheelchair must not be used as a seat while the vehicle is being driven.

### 10.2 STORAGE

- The LIGHTCHAIR + must be stored in a dry place, protected from extreme temperatures and humidity.
- Remove the batteries before storage to protect the electrical components.

## XI. WARRANTY

The wheelchair is covered by a 2-year warranty from the date of delivery, excluding corrosion and wear parts (such as tires), provided it is used normally and in accordance with the manual. Batteries are covered by a 1-year warranty.

- The warranty covers any manufacturing defects or defects in the quality of raw materials and components under normal conditions of use (excluding normal wear and tear).
- The warranty is limited to the free repair or replacement of parts and sub-assemblies acknowledged as defective (covering parts, labor, and transport), following inspection by an authorized representative.
- Warranty repairs must be authorized and performed by an authorized provider. Do not return parts without obtaining prior authorization.

### EXCLUSIONS FROM WARRANTY

- Accidental impact, negligence, abnormal use, or improper maintenance,
- Modifications made without the manufacturer's authorization,
- Use that does not comply with the instructions in the user guide provided with the product or that falls outside the product specifications,
- Removal or erasure of the serial number,
- Storage in cold temperatures or leaving batteries completely discharged for an extended period.

## XII. DISPOSAL

- Comply with applicable environmental protection regulations.
- Used batteries are accepted for return by your retailer or Logo Silver Europe.
- The LIGHTCHAIR + can be returned to Logo Silver Europe for recycling.

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**ENVIRONMENTAL NOTE**

To dispose of the LIGHTCHAIR+, discard all components and materials in an environmentally friendly manner and in accordance with current waste sorting regulations.



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