

Leitner BILLI Electric Folding Wheelchair Manual



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Parts of the chair



1Jan2020



Dear Valued Customer,

Congratulations on owning your new lightweight folding electric wheelchair. It is the perfect travel companion, can be folded in seconds and only weighs 26kg without batteries. Read the complete manual before use to make sure that you can enjoy the chair safely.

Thanks for shopping with Leitner!

Kind Regards,

Ephraem Leitner and the Leitner team

We are 100% Australian owned.

**If you need any help please don't hesitate to call us on 1300 856 725 or email
sales@leitner.com.au**

IMPORTANT NOTICE

Read manual, Instructions and Terms carefully before use. It is the buyer's responsibility to make sure the product is safe to use. If necessary ask for help at any good local mobility store. Please keep the invoice. By purchasing and using a product from Leitner, the customer accepts the terms and conditions and warranty published at www.leitner.com.au including www.leitner.com.au/terms-and-conditions/ and www.leitner.com.au/warranty. It is the customers' responsibility to service and maintain the products regularly and to make sure that the product is safe to use before each use. Contact customer support at sales@leitner.com.au or 1300 856 725 for any questions and in case repairs are needed. Leitner does not accept claims for repairs which were performed without our approval. Leitner does not assume any product liability to the extent permitted by the law. Some pictures may be of a similar product.

Safety warnings

- read all instructions and safety warnings before use including the manual available at www.leitner.com.au/manual
- use care and common sense when operating the wheelchair. Ride slowly, check if the path is clear and be prepared at any time to bring the wheelchair to a stop. Do not make any sudden or harsh joystick movements and keep your centre of balance inside the wheelchair. Do not lean out of the wheelchair as it may flip.
- Modifying the wheelchair will void warranty
- When entering the wheelchair make sure the brakes are on, that the wheelchair is switched off and that the user is balanced and won't flip the wheelchair. Make sure the safety folding clamp at the back of the wheelchair is closed before occupying the chair.
- do not wear clothes which may get entangled in the wheels.
- take extra care when moving the wheelchair in reverse
- avoid obstacles. Even small obstacles may cause the wheelchair to loose balance. Use ramps where possible.
- when folding the wheelchair keep body parts clear of moving wheelchair parts to avoid injury or squeezing of body parts
- always bring a communication device with you, like a mobile phone, so that you can contact a suitable person to help you with transport in case of an unlikely breakdown of the wheelchair. It is recommended to buy RACV emergency wheelchair assist <https://www.racv.com.au/onthe-road/roadside-assistance/wheelchair-scooter-assist.html> or call RACV at 13 72 28
- don't use mobile phones or other distracting electric devices while the wheelchair is powered on
- do not use the wheelchair in areas of high electromagnetic interference, e.g. around radio or TV transmitters
- in the unlikely case the controls do not operate as desired, immediately push the "power off" button and contact us
- always keep the wheelchair away from water. Do not ride the wheelchair in the rain, through puddles or the surf. Keep away from ice, salt, snow and dirt. Do not operate in high humidity or sauna. Do not use on sand or rugged terrain. Do not use in dust.
- do not use on wet or slippery surfaces. If the wheelchair is used on moving objects, like cars or ships, follow the safety guidelines to minimize risk. Check with your airline if it is allowed to use a mobility aid with lithium batteries before booking a flight. Also check with the airports you are visiting as they may have different rules than the airline. Ask which documentation is required.
- stop the wheelchair immediately if the wheels lose traction
- check with your local authorities whether the use of the wheelchair is legal
- the load capacity of the back-rest is 75kg. Do not push against the backrest.
- do not overload the wheelchair beyond its weight capacity of 135kg
- do not attempt to open any electric components including the Lithium battery. It may cause serious injury and explosion
- riding an electric wheelchair can be a hazardous activity and therefore the product needs to be maintained properly and a safety check needs to be done before each ride. Using the wheelchair may result in injury or death in the case of accidents. Leitner does not assume any liability, including injury or property damage to the extent permitted by the law. Use the product with care and at your own risk.

Safety warnings

- make sure that the ground which the wheelchair is used on is even and free of obstacles. Uneven surfaces may cause the wheelchair to flip and cause injury. Uneven surfaces also may prevent the wheelchair from operating and turning efficiently. Do not use the wheelchair on loose surfaces, e.g. on gravel, small carpets, sand
- ride the wheelchair carefully as it may flip. The maximum incline the wheelchair may be used on is 12 degrees. When starting to use the wheelchair do so under supervision of a qualified person. When first travelling a new route make sure that there is a person accompanying the occupant to help in case of unforeseen issues with the terrain. Only use wheelchair without supervision after sufficient training.
- when navigating in limited space, for example close to walls, keep hands and arms within the wheelchair armrest so that the arms won't get caught between the wheelchair and objects. Also, in such situations, keep feet inside footrest. Only put feet on footrest after occupying the chair. Do not step on the footrest if you are not sitting in the wheelchair or the wheelchair may flip.
- do not release the brakes on inclines or declines! The wheelchair may roll down uncontrollably and serious injury or death may occur!
- the wheelchair is best suited for indoor use. When using outdoors only use it in dry, clean conditions on even, safe surfaces without obstacles
- don't use wheelchair on stairs, escalators or conveyor belts – use suitable elevator if necessary
- always switch wheelchair OFF when stationary to avoid accidental activation of wheelchair
- the warnings and instructions in the manual have been issued to the best of our knowledge and with the intent to make the wheelchair safe to use. If there are any mistakes or parts in the manual which do not seem to make sense, please contact us immediately and we are happy to work with you to clarify the issues. We do not assume liability for any incorrect information provided in this manual.

-perform a **safety check before each ride**. All parts need to be installed safely and all nuts and bolts need to be tight. If in doubt have the safety check done by a local mobility shop. The following parts need special attention during the safety check:

folding safety clamp at back of the wheelchair needs to be locked so that the wheelchair won't fold while being used

brakes need to be ON before operating the wheelchair by joystick.

brakes need to brake effectively, all nuts and bolts need to sit tight. If the joystick is not engaged and the brakes are on, the wheelchair should not move.

front wheels need to spin freely when lifted off the ground and turned by hand. The axle of the front wheels need be able to spin 360 degrees.

Joystick needs to bring wheelchair to a stop when released. Before occupying the wheelchair, carefully check if the joystick controls work as intended. The control panel needs to be stable and shouldn't move. Tighten up the control panel screw manually if needed to make sure it sits tight.

Armrests need to be locked with the safety clip on the outside of each armrest

Cables must not touch the wheels when using the wheelchair

batteries need to be charged and installed safely

Back-rest and seat cushion need to be attached safely to the wheelchair. **Foot-rest** and **small bag** under wheelchair need to be installed correctly.

Contact 1300 856 725 or sales@leitner.com.au for any questions



Battery Care & Storage

Charge battery after every ride. It is not necessary to fully discharge battery before charging. Lithium batteries do not have any memory effect, so you can charge them at any time. Lithium batteries must not be stored if fully discharged. If your battery is fully discharged, charge it as soon as possible. Storing the battery if fully discharged for longer than 1 day will damage the battery. It is recommend to store the batteries fully charged and then charge it at least every two months. It is not necessary to leave the charger connected to the battery if stored for long periods. Just top the charge up every two months. Disconnect charger from battery and power supply after battery has been fully charged. If batteries are not charged at least every two months, the battery may be damaged and such damage is unfortunately not covered under manufacturer's fault warranty.

WARNING! Lithium-ion batteries may leak, ignite and burst if not handled properly! Always keep away from any material which can catch fire.

Store battery between 10 °C (50 °F) and 30°C (86 °F) in a clean, dry place away from sunlight. Do not store with hazardous, corrosive or flammable materials. Do not expose batteries to heat or fire. Store batteries in fire-proof environment. Operating temperature range during discharge is 5°C (41 °F) to 50°C (122 °F). Do not leave the battery inside car, in direct sunlight or any other hot places. If battery is charged at temperatures lower than 5 °C (41 °F), the range of battery will be reduced.

Do not disassemble, deform or modify battery. Do not connect the + and – terminals of battery with metallic or conductive objects. Do not store with conductive objects such as hairpins or necklaces as short circuits and burns may occur. Do not short circuit battery. Only use original charger.

Do not place into water, salt water and moisture. Do not throw battery or subject it to strong shocks.

Inspect battery and terminals carefully every month for leakage, discoloration, cracks, damage, bloating, signs of melting or corrosion. If fluid leaks from the battery and gets into contact with your eyes or skin, wash affected area with clean water without rubbing your eyes or skin and visit a doctor immediately to reduce damage to eyes or skin. Never handle battery or charger if parts are wet. Dry it thoroughly before usage to avoid electric shock. Store out of reach of pets and children. Battery capacity naturally declines over time and is warranted to be at least 80% capacity within 1 year of purchase.

Always handle carefully with 2 hands. If errors occur, stop using battery, consult manual or contact customer service. Discard batteries according to your local battery disposal guidelines.

Important legal note

This electric wheelchair is sold for personal use only. It is not a medical device in line with the [Therapeutic Goods \(Excluded Goods\) Order No. 1 of 2011](#)
Images for illustration only, actual product may vary.

Assembly instructions

Please refer to the assembly instructions below.

When unpacking the wheelchair take care not damage any parts. If removing the packaging with scissors or a paper knife, make sure not to scratch the wheelchair.

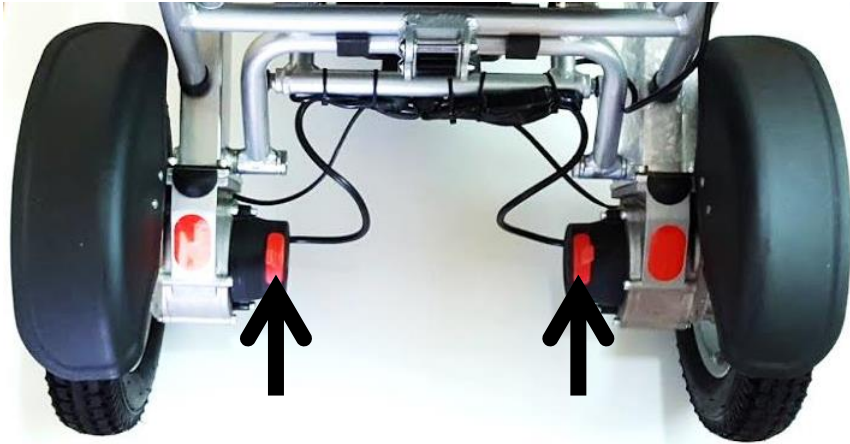
Before you start:

Check the wheelchair for damage or missing parts

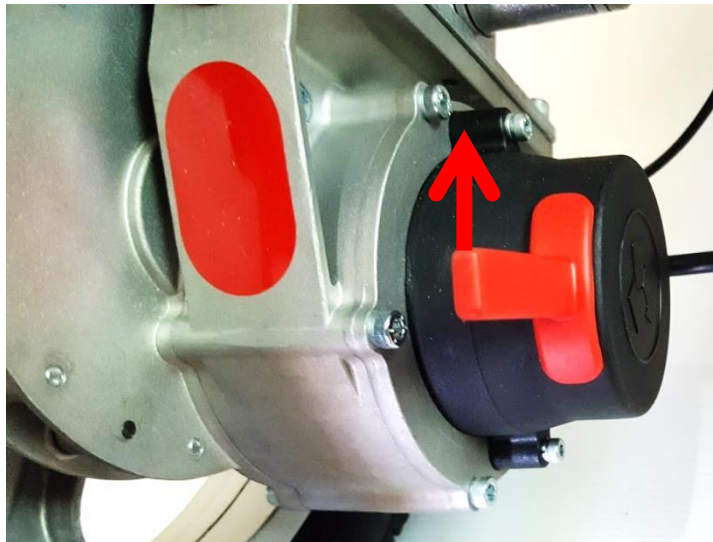
Wheelchairs are fragile items. Although we are using first class courier services and the products are professionally packed it may happen that they get damaged during transit. Please check the wheelchair for damage upon arrival and let us know immediately. We will then work with you on a solution.

If there are any missing parts please also let us know immediately and we will send a replacement part as soon as possible. Call 1300 856 725 or email sales@leitner.com.au

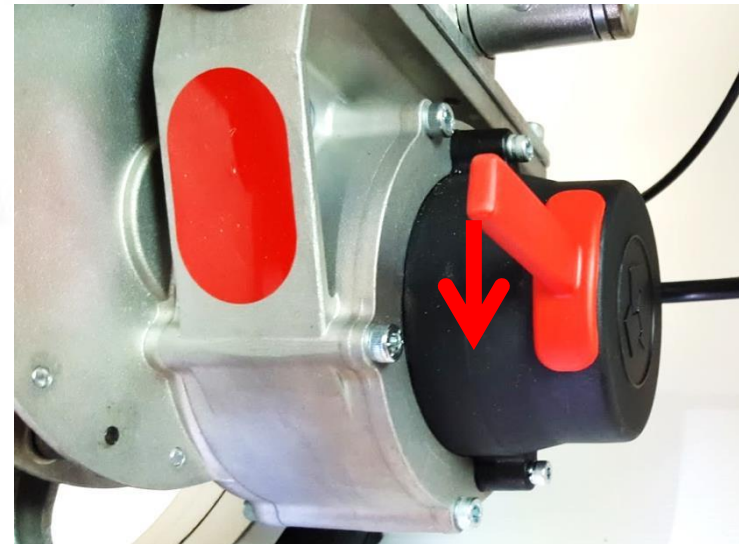
Activating and releasing the brakes



The brakes can be activated or released at the back of the wheelchair. There is a red lever on each wheel (black arrows).



Large image of the left brake lever. **Push the lever up** in the direction of the red arrow above **to activate the brake.**



Push the lever down in the direction of the red arrow above **to release the brake.**

Activating and releasing the brakes

Safety warnings

After releasing the brakes, the wheelchair can be pushed manually and it can't be operated by the occupant anymore.

Before releasing brakes, double check that the folding safety clamp at the back of the wheelchair is locked. If the safety clamp is not locked, the wheelchair may fold while the occupant is on the wheelchair.

Make sure the grip of the bar on top of the backrest is stable and suitable for pushing the wheelchair manually. Make sure that the backrest is installed safely. Only release brakes with consent of occupant. Only release brakes on flat and even surfaces. Do not release brakes on inclines or declines. Pushing the wheelchair manually may be harder as compared to pushing a non motorized wheelchair due to drag of the motors in the rear wheels.

Folding the wheelchair



Before folding the wheelchair, **remove the seat cushion (C)**. It is attached to the wheelchair by Velcro and can be removed by simply lifting it up (direction of arrow). Fold the chair slowly and carefully. Make sure the batteries will not fall out accidentally during folding. **Caution! Pinching hazard.** Take care not to injure yourself while folding the chair.

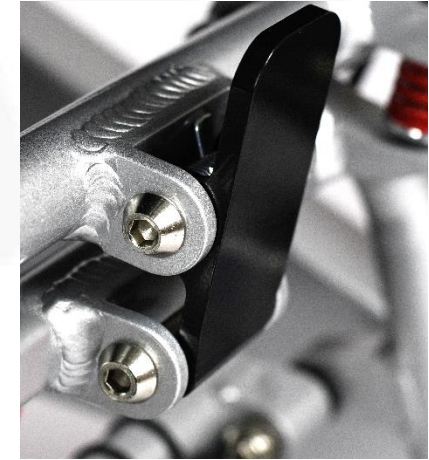
Releasing and closing the folding safety lock



The folding safety lock is located at the centre of the backside of the wheelchair (red circle). **Warning! It needs to be locked if the wheelchair is occupied.** The lock holds the wheelchair together and prevents it from folding.



To fold the wheelchair, **unlock** the safety lock by pushing the top part of the black lever. The lever will disengage from the lower silver bolt. Now the wheelchair can be folded. **Warning: Do not occupy the wheelchair if the clamp is released!**



To **lock** the wheelchair folding mechanism, make sure that the lower part of the black lever holds the lower silver bolt. **Check that the wheelchair is locked, stable and safe before occupying.**

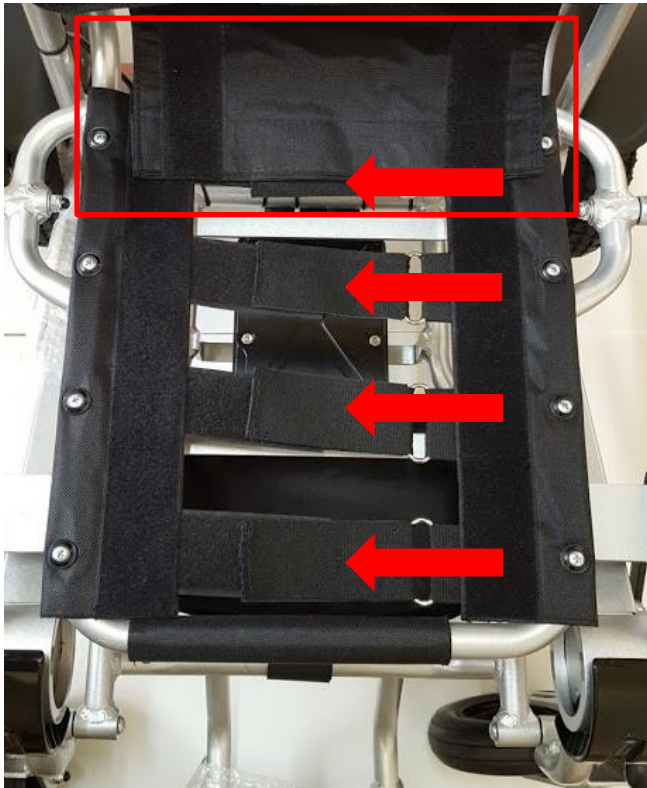


After unlocking the folding safety lock, grab the wheelchair by the top of the backrest and at the centre of the front frame of the seat and fold it in the direction of the arrows. Leave the weight on the rear wheels. (Please note this illustration shows the wheelchair with the seat cushion. **Please remove the seat cushion** before folding as it may be in the way).



Fold the wheelchair as shown above. Fold the wheelchair slowly and avoid over-stretching any wires. If necessary adjust wires to release tension. Remove joystick (circle) if you wish to reduce the size further (refer to instructions elsewhere in this manual).

Installing the seat cushion



Make sure all 4 Velcro straps under seat cushion are secure (arrows). Make sure the lower part of the back-rest is attached to the Velcro at the back of the seat (red rectangle)



Attach seat cushion with zip facing the back. Make sure cushion is attached securely. The COVER of the cushion is removable and washable (up to 80 degrees).

Installing the backrest



View from the front: First make sure that the lower part of the back-rest is attached to the back of the seat (red rectangle). Then, attach front part of backrest padding to the Velcro (arrows).



View from the back:

Make sure the two horizontal straps (S) are tight. Attach the back part of the backrest to the upright Velcro lines (V).



Correctly installed backrest (front view).



Correctly installed backrest (rear view).
Make sure the backrest is installed safely
before use.

Installing the joystick on right hand side armrest



Align the joystick console with the opening on the right hand side armrest as shown in the picture above and insert it into the armrest tube (direction of red arrow).



Turn the knob (K) anti-clockwise until the joystick console is installed safely and won't move.



If your plugs have two white arrows, line up arrows and connect the plugs.

Carefully connect the black plastic pin on the joystick cable with the groove on the cable on the wheelchair armrest. Do not use force! Do not damage the metal pins inside the joystick cable! If they are bent by accident, carefully bend them back with a forceps. Damaging metal pins during installation is not covered by warranty.



After connecting the wires, move the barrel (arrow) to the centre and turn it in the direction of the arrow. This will lock the two cables in place and prevent them from disconnecting by accident. Adjust the wire slack so that the wire is not in the way while operating the wheelchair.

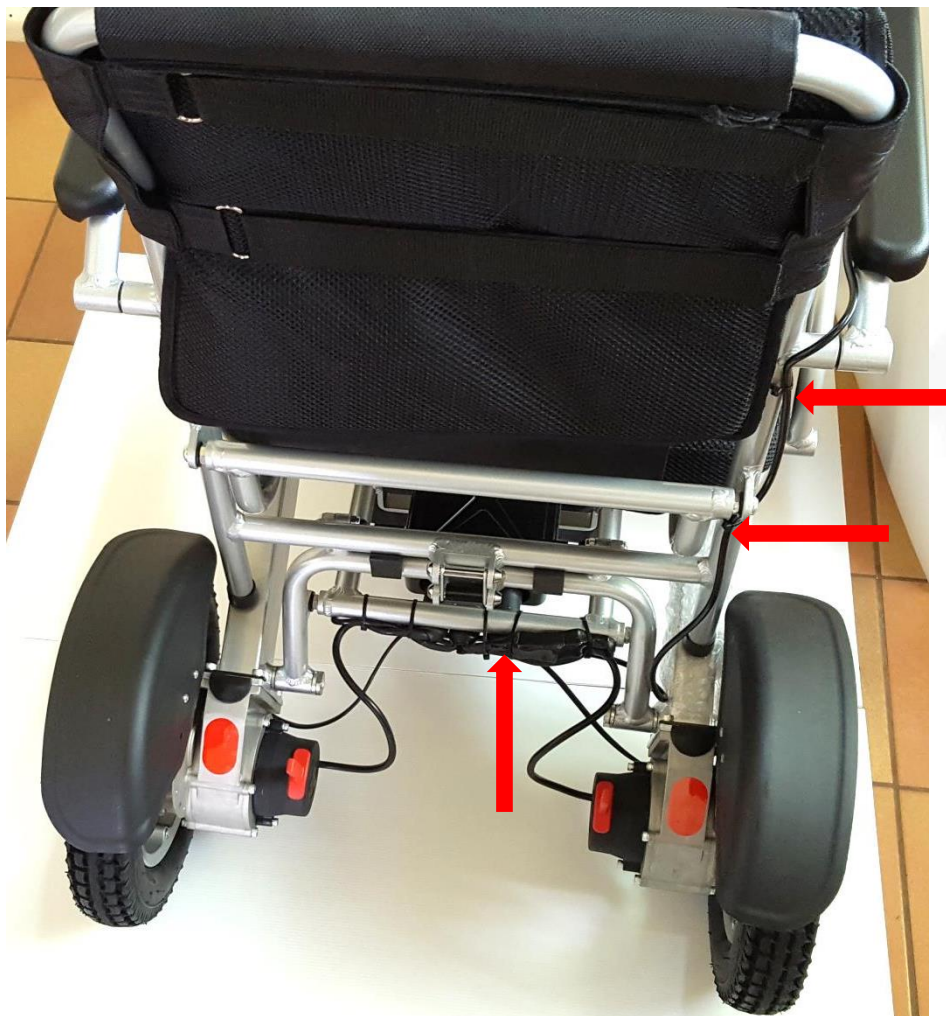
Installing the joystick on left hand side armrest

The wheelchair is setup by default to have the joystick installed on the right hand side. It is possible to install the joystick on the left hand side armrest. In short, remove the wire, install the wire on the left side and install the console in the same way as on the right side. Please follow the instructions below.



Unscrew the knob (K) by hand from the right armrest and screw it into the same socket on the left armrest. Use a screwdriver to remove the screw (arrow) which holds the black cable latch (L) on the right armrest.

Installing the joystick on left hand side armrest



Cable management

The cable of the joystick console runs down the back of the wheelchair and is fastened with cable-ties. Carefully note the position of the cable ties (arrows) and then remove the cable ties carefully with a paper knife or scissors. Attach the wire carefully with new cable ties on the left hand side. Please note that the cable needs slack for folding. It shouldn't be too tight as it may damage the cable when folding. The cable should also not touch any wheels or the ground. If you need help please contact us or ask your local mobility shop for assistance.

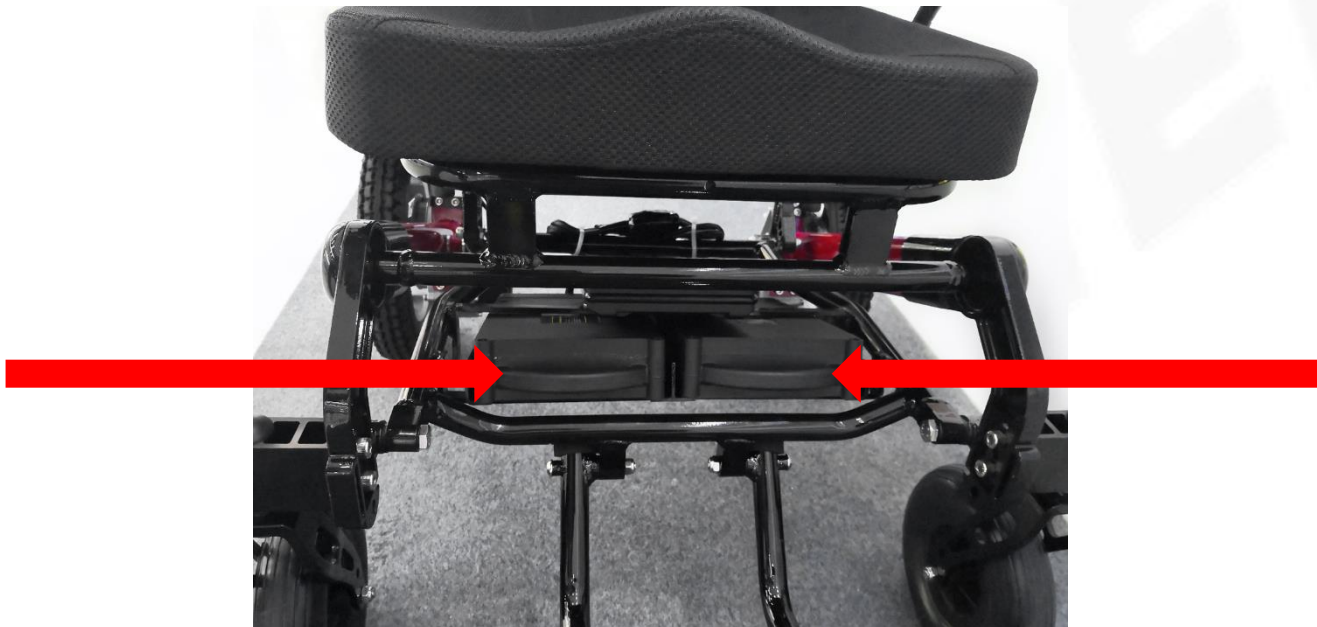
Installing the joystick on left hand side armrest



Remove the round black cover (C) on the left armrest and put it on the right armrest. Remove the screw and washer at the back of the left armrest (arrow) and install the cable latch. Insert the joystick console, fasten it securely with the knob and check that both armrests are installed safely with all screws. When folding the wheelchair for the first time, do so slowly and carefully, to make sure the cable is not stretched too much. If it's stretched, adjust cable tension until the wheelchair can be folded safely.

Removing and installing the batteries

Warning: always switch wheelchair power OFF before removing or installing batteries.



The batteries are located underneath the seat (red arrows). Grab battery at handle (red arrows) and gently pull battery towards the front of the chair.

The batteries can only be inserted into the battery tray if they are in the right orientation.

Make sure the battery is all the way in and stable and won't fall out. Do not use force.

Charging the batteries

The wheelchair is equipped with quality Lithium batteries. Lithium batteries are a modern technology which is not suffering from memory effects like some older battery types, which means that Lithium batteries can be charged anytime, also e.g. if they were only half discharged. It is recommended to charge the battery after each use. This will not reduce the battery life. Charging an empty battery takes about 7 hours and it will take less time if there is still charge remaining in the battery. Please note the wheelchair may have a lower top speed when the batteries are near empty.

Battery Care & Storage

Lithium batteries must not be stored if fully discharged. If your battery is fully discharged, charge it as soon as possible. Storing the battery if fully discharged will damage the battery. Such damage is not covered by the manufacturer's fault warranty. It is recommended to store the batteries fully charged and then charge it every two months. It is not necessary to leave the charger connected to the battery if stored for long periods. Just top the charge up every two months.

Charging the batteries

Warning: always switch wheelchair power OFF before charging batteries.



To charge both batteries on the wheelchair, connect the big round silver 3-prong connector to the inlet on the underside of the joystick console, then connect the charger to the power point (AC 110-220 V, 50-60 Hz).

The batteries can also be charged individually by connecting the charger directly to the battery.

Warning: the charger may get very hot. Always keep charger away from any materials which can catch fire. The charger is intelligent and will stop charging once the battery is full. Red light on charger: charging. Green light on charger: fully charged (or not connected).

Functions of the joystick console

Power ON

Bars indicate
battery charge
level.

Power OFF

Push the
joystick to
control
wheelchair
movement.

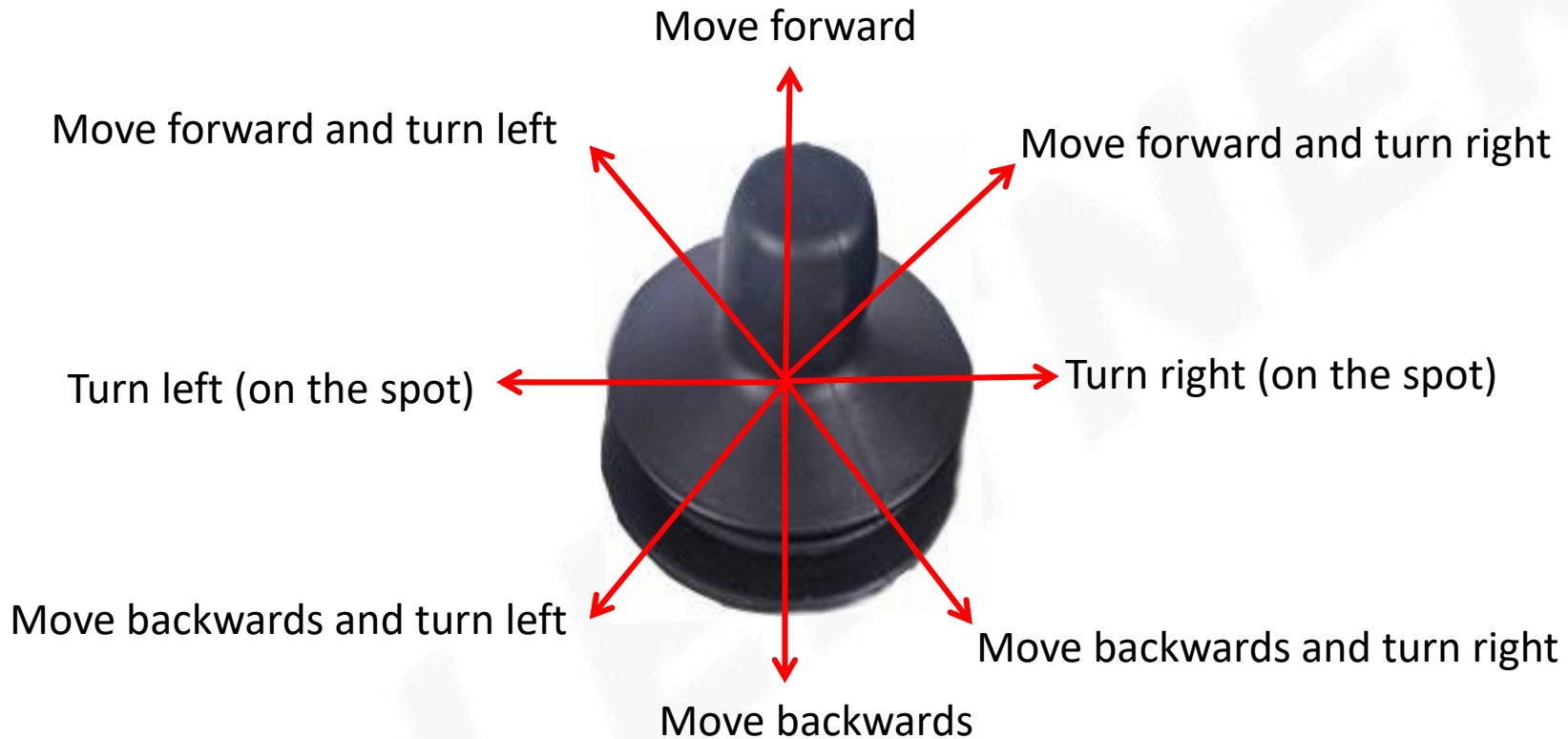
Horn

increase top speed
(maximum speed is
about 5 km/h,
walking speed).

Display of top speed
level. The more bars on
the display, the higher
the top speed.

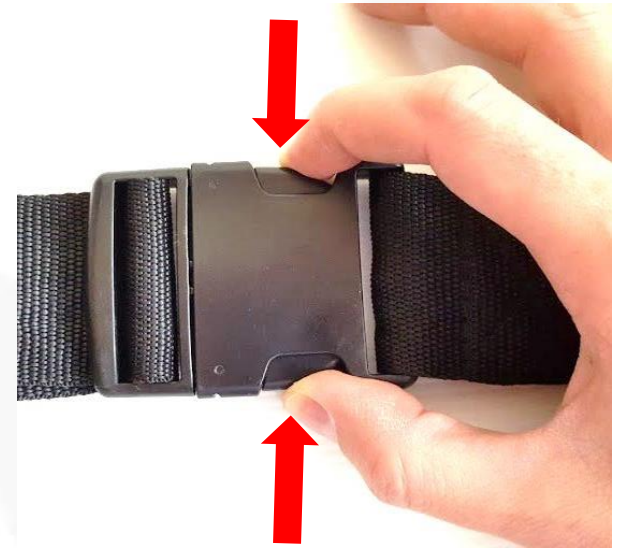
Decrease top speed.
Low speed levels
should be used in
situations where there
is not much space and
where precise
navigation is needed.

Using the joystick



Move the joystick in the directions shown above. If the joystick is released, the wheelchair will stop and the brakes will engage. Do not make sharp movements with the joystick. Always control the wheelchair with care. **The joystick control is proportional, which means if you push it just a little and wait for two seconds, the wheelchair will move slowly**, but if you push it all the way, then the wheelchair will move at the maximum speed set on the console. Start using the joystick at low speed levels and only push it gently.

Strap (NOT included with most wheelchairs)



If your box contains a strap, please refer to warnings below.

WARNING: Straps can be a choking hazard if used incorrectly. Do not use unless you have consulted a professional first how to use straps on wheelchairs.

Use the latch (circle) to adjust length (approximately from 82cm to 144cm length). Push both ends together in the directions of the arrows to close the strap.

To **release** strap, push in the direction of the arrows and pull both ends apart.

Flipping the armrests up



Switch power off before unlocking the armrests. The locking mechanism for the armrests is on the outside of the armrests (red circle). Left armrest shown in picture. Only move the the wheelchair with locked armrests.



Locked: the lever points down



To **unlock**, turn the lever anti-clockwise until it points up

When flipping the armrest which has the joystick installed, make sure the wires are not damaged.



Flip armrest up by pushing it in the direction of the red arrow.



The left armrest is flipped up. The right armrest has the same flipping mechanism.

To flip it down, follow steps in reverse and make sure the armrests are locked safely.

ELECTRIC LIGHT-WEIGHT FOLDING WHEELCHAIR SPECIFICATIONS

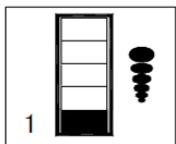


- weighs 26 kg without batteries
- weighs 28.5 kg with batteries
- fully assembled electric wheelchair is 101cm long, 58cm wide, 93cm high (at top of backrest)
- folds into a small package of 78x58x37cm (control panel removed), 93x58x37cm with control panel
- top speed about 5km/h, distance with one full charge about 20km based on a 70kg occupant on the flat. If the terrain is hilly or if the occupant weighs more, the distance per charge will be less. Monitor battery charge closely to avoid running out of battery.
- two rear drive 250w motors, 24V, DC, brushless
- maximum 12 degree climbing ability
- turning radius about 85cm
- two 6ah Lithium batteries (total capacity 12ah)
- charge time from empty to full: ~7 hours
- maximum weight capacity of wheelchair 135kg

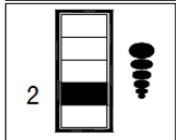
- 12.5inch x 2.25inch rear wheels with 4mm deep profile, solid PU
- 7inch x 1.77inch front wheels, 1mm deep profile, solid PU
- storage bag under seat: 27cm wide, 18cm deep, 15cm high. Bag closes with a zip, and is attached to frame with quick-release Velcro latches.
- seat cushion size 42cm deep, 45cm wide
- distance from top of seat cushion to floor 46cm, without cushion 40.5cm
- padded armrests 33cm long, 4.5cm wide
- flip-up footrest. clearance from ground 6cm, slightly angled upwards
- footrest dimensions: 17cm deep, 18cm wide (back), 33cm wide (front), trapeze shape
- 1 year warranty for motor, batteries, and controller for manufacturer's fault
- 2 year warranty for frame for manufacturer's fault

Trouble-shooting

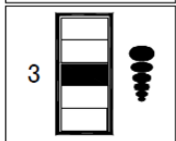
If the wheelchair does not operate as intended, the lights on the joystick console may flash pointing to the cause of the fault as described below:



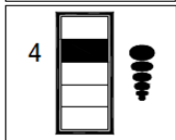
First red light flashing: indicates the battery is not fully inserted.



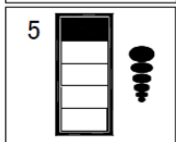
Second red light flashing: indicates the joystick is not connected properly.



Third red light flashing: indicates the wheelchair is charging.



Fourth red light flashing: indicates the joystick has been moved when turning on power or the motor wires are not connected properly.



Fifth red light flashing: indicates the brake is not connected or damaged.

It is recommended to have the wheelchair checked after initial assembly by a professional, for example a local mobility shop, followed by a check-up after the first use and regular professional servicing.

If you need any assistance, please contact us on sales@leitner.com.au or 1300 856 725

Enjoy your lightweight folding electric wheelchair 😊