drive

DeVilbiss HEALTHCARE

ST1 Scooter

Instructions for use

CONTENTS

1. INTRODUCTION

Thank you for purchasing this product. These instructions for use should be read carefully and understood before operating the scooter. Improper use or unfamiliarity with the scooter may result in harm, injury or traffic accidents. Keep this manual with the scooter, or in a safe place.

Contact your supplier or check the website for the latest version of this document. Users with visual, reading or cognitive disabilities should seek advice from a professional care provider for an appropriate format. If this is not viable, users should contact their provider. If you have any questions concerning the operation or maintenance of the scooter, contact your provider.

2. CONTACT INFORMATION

For assistance in setting up, using, maintaining your scooter, to report unexpected operation or for any service, warranty, sales or customer service information regarding this product, please contact your provider.

Chien Ti Enterprise Co., Ltd.
13 Lane 227, Fu Ying Road, Hsin Chuang District,
New Taipei City, Taiwan

MedNet EC-REP GmbH
Borkstrasse 10, 48163 Muenster, Germany

Drive DeVilbiss Healthcare Ltd.
Sidhil Business Park, Holmfield, Halifax, West Yorkshire,
HX2 9TN, Great Britain

Drive DeVilbiss Sidhil Ltd.
4 Trench Road, Mallusk, Newtownabbey,
BT36 4TY, Northern Ireland

Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the MHRA or competent authority of your Member State. Please quote the product serial code on all correspondence.

For Service & Support outside the United Kingdom, please contact the local distribution company from where this equipment was purchased. Failure to do so may result in the product warranty becoming void.

3. PRODUCT DESCRIPTION

3.1 Environment

The scooter can be used in both indoor and outdoor environments where appropriate. The scooter can be used on flat, even path surfaces, however the user should avoid grass, gravel, gradients greater than 6° and motorised roads. Additional care should be taken to avoid inclement weather and wet surfaces.

3.2 Intended User Group

The scooter is intended for a single user of weight up to 115kg (18st). The intended user group for this device is any mobility restricted individual that requires assistance with transport. The patient / occupant is the only intended operator. Users must be both mentally and physically capable of operating the device with minimal risk of injury to themselves and others.

3.3 Intended Purpose

The intended use of the scooter is to transport an end user with restricted mobility, as defined in section 3.2.

The scooter is intended to support a single occupant. A risk assessment must always be performed on the suitability of the user to the scooter.

3.4 Indications

To provide transport mobility to an end user with restricted mobility.

3.5 Product Overview

The scooter has been designed to provide a comfortable and secure solution for users who have mobility restrictions. The product is a class A scooter (under EN 12184:2014), class I medical device and class 2 invalid carriage (under The Use of Invalid Carriages on Highways Regulations 1988). For specific guidance with outdoor use, see section 10.6.

This manual is composed from the product design and specifications at the time of publication. As designs change, some illustrations and pictures in the manual may not correspond to the scooter that you purchased. We reserve the right to make design modifications.

4. SAFETY

4.1 Warnings & Cautions

Warning

Warnings in this user manual highlight potential hazards that if disregarded could lead to injury or death.

Caution

Cautions in this user manual highlight potential hazards that if disregarded could lead to equipment damage or failure.

4.2 Risk Assessment

Before using the scooter, a risk assessment must be performed by a competent individual to ensure the safe use of the scooter on a user-by-user basis. It is the responsibility of users and carers to determine that they are both mentally and physically capable of operating the scooter with minimal risk of injury to themselves or others.

The risk assessment should include, but not be limited to:

- Entrapment
- Falling out of the scooter
- Small adults (and children)
- Individuals who lack capacity to operate the scooter
- Users with visual, reading or cognitive disabilities
- Very active occupants
- Unauthorised people with access to the scooter

4.3 Contraindications

- The end user exceeds maximum weight capacity indicated in section 4.4
- The end user has postural support needs that are not addressed by the scooter
- Inability to safely guide a power mobility device

Other contraindications may be relevant which are specific to an individual and / or care environment.

4.4 Scooter Loading

The maximum occupant mass of the scooter is: 115kg (18st)

Maximum occupant mass is the sum of the user mass and the mass of any ancillary attachments or accessories. Exceeding the maximum occupant mass will void your warranty. Your provider will not be held responsible for injury and / or damages resulting from failure to observe load capacities.

Warning

- The maximum load is for the scooter to be occupied by one person only. Additional weight could damage components or destabilise the scooter, potentially causing injury.
- The scooter may only be used to transport one person at a time. It should not be used for climbing. The backrest is not designed to support an entire person's body weight — risk of collapse, entrapment.
- The scooter is not a toy. Children should not be allowed to play near or operate the scooter, as they are at risk of harm.

4.5 Training

All individuals operating the scooter are to be suitably familiar with the functionality and limitations prior to use. It is the responsibility of the user to ensure they are suitably trained to use the scooter and any associated parts safely and correctly. Every effort should be made to resolve deficiencies and should include consideration of retraining, falls prevention and equipment alterations and modifications.

If these instructions for use are not deemed sufficient and the need for training is required, please contact your provider (see section 2) who can discuss training options with you.

4.6 General Warnings

Warning

- Do not use a damaged or badly worn scooter — risk of harm.
- Check the functionality of the scooter before every use, using the method listed in section 9.3. Check the current fastest speed setting is appropriate. (It is recommended to use a slower speed setting at the beginning of every use, gradually increasing the speed setting as appropriate.)
- Do not use the scooter in rain, ice or snow conditions. Such exposure can damage the scooter and put the user at risk. If exposed to moisture, do not operate the scooter until it has dried thoroughly.
- Do not drive on tall grass, motorised roads, loose surfaces, such as gravel or sand, or in muddy conditions.
- Reduced speed and care should be taken when navigating obstacles.
- Do not attempt to navigate on slopes greater than 6°.
- If unintended movement of the scooter occurs, release the throttle levers to automatically stop the scooter. Do not use the key switch to stop your scooter unless an emergency requires the powering down of the scooter.
- Under no circumstances should the scooter be used as a seat in a motor vehicle.
- The scooter is designed for occupants who weigh less than 115kg (18st); overloading may put the user at risk of falling or entrapment.
- Do not touch any exposed contacts or connectors while using the product or while in contact with other individuals.
- Misused electrical equipment can be hazardous.
- Do not operate the scooter while under the influence of alcohol or when excessively tired.
- Do not operate the scooter at night near motorised roads or in situations without a clear line of sight.
- Only approved parts, specified for the scooter, should be used. Accessories that have not been approved or designed for use with the scooter are not to be used — a hazard could be introduced due to product combination incompatibility. If in doubt, contact your provider.

Warning

- Modification of the scooter, its parts or features is not allowed without the permission of your provider — a hazard could be introduced.
- The scooter is electrically operated, so should not be used in oxygen-rich environments, in the presence of flammable gases, sources of heat or naked flames — risk of explosion / fire. Damaged or worn upholstery increases the risk of fire hazard and should be replaced immediately.
- Individuals unable to drive the scooter without assistance or supervision must not use the scooter without such supervision. Unsupervised use of the scooter must be avoided if there is any doubt about the ability of an individual to operate it safely.
- If children, adults with learning difficulties or pets pose a potential risk of tampering with the scooter, its suitability for use is to be considered during the initial user / product risk assessment.
- Only use freewheel (manual) mode to manually manoeuvre the scooter when unoccupied. Do not use freewheel mode on the scooter whilst occupied and / or on a slope. Always put the scooter in drive mode when freewheel manoeuvring is completed.
- Do not overload the basket - maximum loading weight is 3kg

5. PARTS IDENTIFICATION

6. TRANSPORT & STORAGE

Environmental conditions for transport and storage:

Ambient temperature: 0°C to +40°C

Follow these conditions when transporting or storing the scooter:

- The key switch should be turned off.
- Always fully charge, then remove the battery prior to long-term storage to ensure maximum battery efficiency.
- The scooter should be stored in clean and dry conditions. Cover to protect from fluid ingress, dirt, dust etc.
- Scooters should not be stored on their side, on their backs, or stacked.
- When transporting scooters by vehicle, they should be securely stowed in the back of a van, truck, or boot of a car. Adjustable parts should be removed or properly secured during transport.
- Keep the instructions for use with the scooter or in a safe place.

Note: This vehicle is suitable for land and air transport, but contact your carrier in advance to determine their specific requirements. The battery pack contains two 12V batteries. The batteries are sealed lead acid type and are maintenance free and are non-spillable. They are fitted with spade terminals.

The batteries require charging every week to ensure battery longevity.

The batteries supplied as standard with the battery pack are classified as safe for air transport under IATA special provision A67.

If your scooter is stored for a prolonged period, flat spots may develop in the wheels, causing an uneven sensation when driving. This should work itself out over time. Your provider suggests placing a sturdy platform under the frame to lift the wheels off the ground and take weight off the wheels during storage. If you notice flat spots after continued use, replace the scooter wheels immediately.

Caution

- Infrequently charged batteries, or batteries stored without a full charge are susceptible to permanent damage, causing unreliable performance from your scooter.
- Avoid placing the scooter in direct sunlight — this could damage the electrical system and / or cause label fading.
- Clean the scooter in line with section 11 prior to storage.

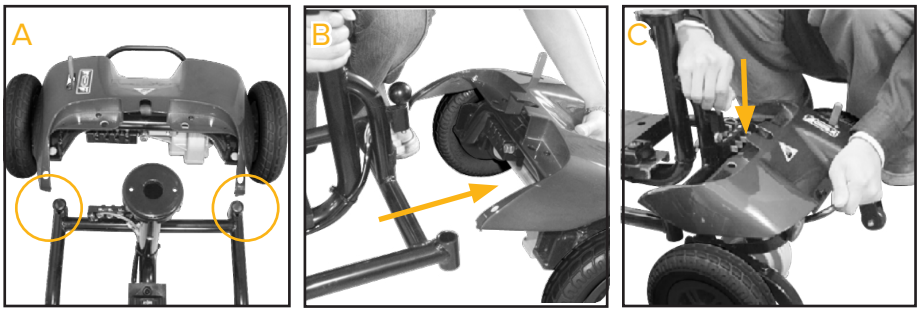
Warning

- Improper storage of your scooter may result in permanent damage to the frame and / or electronics.
- Do not sit on the scooter whilst in a moving vehicle.

6.1 Assembling the Scooter

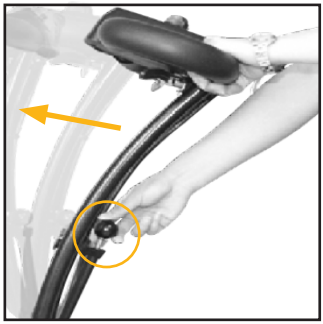
Assembling the Frame

1. Ensure the red freewheel lever is in the 'drive' position.
2. Align the front and rear sections of the scooter (A). Whilst holding the rear section of the scooter with one hand, lift up the front section with the other (B). Bring the two parts together in the direction indicated by the arrow, aligning the left and right side stickers and push in to complete the assembly. Ensure the frame fixing pin locks into position (C).



Raising the Tiller

Lift up the tiller to the required position, ensuring that the tiller adjustment knob locks the tiller in a vertical position.



Fitting the Battery Pack
Line up the battery pack with the recess in the scooter base. Push firmly down, ensuring that the battery pack release lever (circled) clicks back into its locked position.

Note! The battery pack is heavy.

Fitting the Seat
Align the shaft under the seat with the seat post in the scooter base. Lift up the seat rotation lever and then rotate the seat so that it is facing forwards. Release the the lever and ensure that the seat locks in position.

Fitting the Armrests
Remove the plastic caps (A) and loosen the armrest adjustment knobs (B). Insert the armrests into the seat frame and set at the required position. Tightened the knobs to secure the armrests.
The angle of the armrest can be set by adjusting the height of the bolt (C).

Fitting the Basket
Align the bracket, on the back of the basket, with the mounting brackets on the tiller. Push down to fix in position.

Warning

- After assembling the scooter, ensure that the tiller adjustment knob is locked in position.
- Ensure that the seat is locked in the forward facing position before driving.

6.2 Disassembling the Scooter

Removing the Seat
Lift up the seat rotation lever whilst pulling up on the seat and slightly rotating it, to remove.

Removing the Battery Pack
Push the battery pack release lever (circled) forwards whilst lifting up the battery pack by the handle.

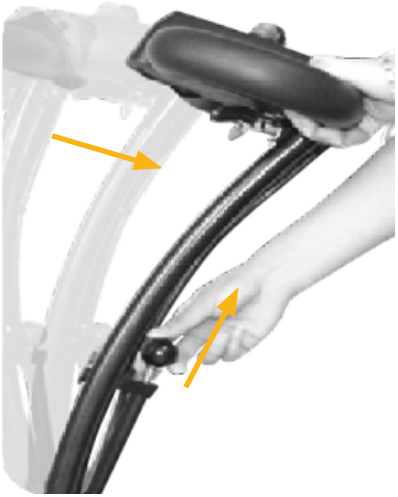
Note! The battery pack is heavy.

Disassembling the Front & Rear Frame
Whilst holding the rear section of the scooter, lift up the frame fixing pin (A). Pull the rear frame away in the direction indicated by the arrow.

Caution

- To prevent shroud damage, do not lean disassembled rear frame forward. Rest it on the anti-tip wheels.

Folding the Tiller
Lift up the tiller adjustment knob to release the tiller and allow it to be folded down, as shown below.



Removing the Basket
If necessary, the basket can be removed by pulling it up off the mounting brackets on the tiller.

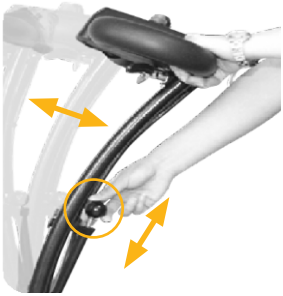
Warning

- Some components of your scooter are quite heavy and you may need assistance to lift or carry them.

7. ADJUSTMENTS FOR COMFORT

Prior to using your scooter, you may want to make adjustments for optimum comfort.
Ensure that the scooter is switched off and unoccupied, before making any adjustments.

7.1 Tiller Angle Adjustment
Lift up the tiller adjustment knob to disengage the pin.
Move the tiller forwards or backwards to the required position. Release the tiller adjustment knob and ensure that the pin fully engages to lock the tiller in position.



7.2 Seat Rotation Adjustment
The seat can be rotated to help with transfers to and from the scooter.
Lift up the seat rotation lever to disengage the pin. Simultaneously, rotate the seat to the most comfortable angle. Release the lever and ensure the pin is fully engaged to lock the seat in position.

Warning

- Ensure that the seat is locked in the forward facing position before driving.

7.3 Seat Height Adjustment
a) Remove the seat and then remove the screw, nut and washer from the seat post.
b) Adjust the seat post to the desired height, then refit the screw, nut and washers, ensuring that they are fully tightened.
c) Refit the seat back into the seat post.
Seat height adjustability 370mm / 390mm / 410mm.

8. SYMBOL DEFINITION

The following symbols are found on this scooter:

Symbol	Description
	Warning Beware of potential hazard
	Caution Beware of potential product damage
	Refer to instructions for use - Recommended Failure to read the instructions for use could introduce a hazard
	Refer to instructions for use - Mandatory Failure to read the instructions for use could introduce a hazard
	Medical Device
	Maximum occupant mass
	Do not create a stack of more than 2 boxes
	Fragile, handle with care
	Use no hooks
	This way up

Symbol	Description
SN	Serial Number
REF	Product Code
#	Model Number
QTY	Quantity
UKRP	UK Responsible person
EC REP	Authorised EU Representative
	Manufacturer
	Date of manufacture
	Importer
	W.E.E.E (Waste Electrical and Electronic Equipment)
	Keep away from rain
	Beware of trapping points
	This device must not be used as a seat in a motor vehicle.

9. CHARGING & PREPARING FOR USE

9.1 Installation

Warning

- Before preparing the scooter, ensure these instructions have been read and fully understood.
- Prepare the scooter in a dry, indoor environment.
- Do not attempt to disassemble the scooter whilst in use.
- Only competent persons are to prepare the scooter for use. If in doubt, contact your provider
- Ensure a risk assessment in line with local health and safety policy, is undertaken to ensure that staff are not put at risk when performing assembly activities.

9.2 Battery Charging

Warning

- Do not open the battery pack.
- Do not connect an extension cord to the battery charger.
- Keep metal objects away from the battery terminals; electric shock may occur.
- Ensure the charging cable is not under excessive tension to avoid cable damage — damaged cables can create an electrocution / fire risk.
- Ensure the battery is not exposed to direct sunlight or a secondary heat source — direct heating of the battery via an external source could pose a fire risk or cause an explosion.
- Do not drive the scooter whilst the charging cable is attached or connected.

Caution

- Only charge the scooter with the approved charger, using the charging port on the battery pack. Never charge the scooter using a different charger. Use of the socket to supply power to other electrical equipment may damage the scooter's control system and EMC performance.
- Charge fully before each use.

The batteries should be fully charged before initial use, after your daily activities and before being stored for any significant length of time.

The battery pack can be charged either when it is installed or removed from the scooter.

- Switch the key ignition off.
- If required, remove the battery pack.
- Open the charging socket cap on the battery pack (circled) and connect the charger's round plug into the charging socket.
- Plug the charger's power cord into the mains supply.
- Switch on the mains power at the socket.

Warning

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

The charger LED will illuminate as follows:
Red - The charger is powered. Yellow - The battery is charging.
Green - The battery is fully charged.

When the LED turns green then bulk charging is complete, however the charger will continue to trickle charge the batteries. Trickle charging is used to improve battery longevity and performance.

The charging duration is approximately 6-8 hours. For optimum performance the batteries should be charged for 10 hours, but never more than 24 hours

9.3 Checking Before Use

It is important to check the functionality of the scooter before the initial use to ensure its safe operation.

- With the freewheel lever set to 'NEUTRAL', the scooter should move freely when pushed by hand. With the freewheel lever set to 'DRIVE', it should not be possible to move the scooter by hand.
- Gently pull on either of the throttle controls and ensure the scooter responds correctly.
- Turn the tiller console and ensure the wheels respond correctly.
- Release the throttle control after moving in any direction. The throttle control should immediately return to the neutral position and the scooter should come to a stop.

10. OPERATION OF THE ST1 SCOOTER

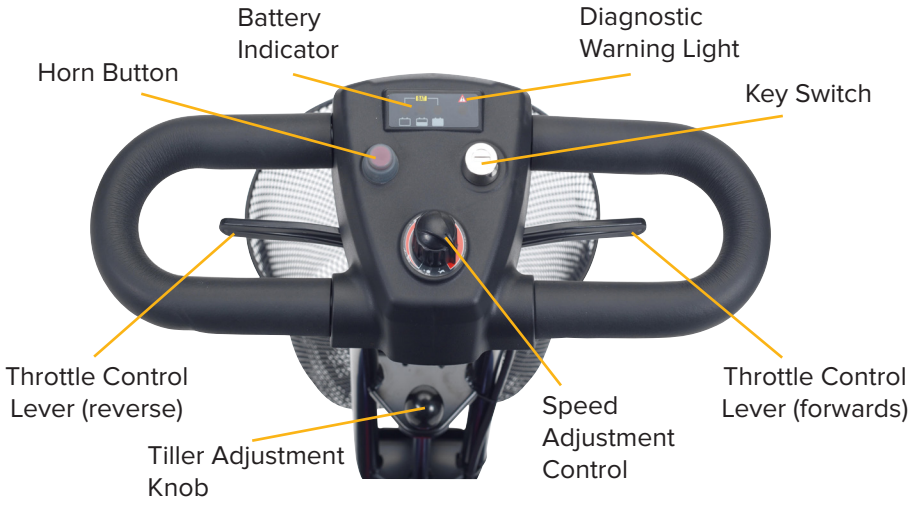
Before first operation, please remove the lock nut and then press the button of circuit breaker on the battery pack, to activate the system.

10.1 Operational Limits

Ambient temperature:	0°C to +40°C
Operating Humidity:	20% to 85% RH

10.2 Scooter Controls

Please refer to the image below to identify your scooter controls and their functions. Familiarise yourself with the terminology to better understand references throughout these instructions.



Caution

Make sure the scooter functions work correctly before operating, using the checklist in section 9.3 for guidance.

Key Switch
The key switch applies power to the control system electronics, which in turn supplies power to the motors. Insert the key into the key switch and turn clockwise to power up the scooter.

Speed Adjustment Control
Turn the speed knob to determine the maximum speed of the scooter. Turn the knob clockwise to increase the speed setting and turn the knob anticlockwise to decrease the speed setting.


Warning

- Do not turn the key switch off whilst driving as this will lead to an emergency stop and possible risk of damage or injury.
- When at rest, power down your scooter to prevent unintended motion.
- Do not adjust the speed setting whilst driving as this could result in loss of control. Do not set the highest speed whilst driving indoors.
- Always ensure the tiller adjustment knob is locked in position before driving the scooter.
- Always check the tiller turns freely before driving.

Moving and Braking
To move forward, pull the right hand side of the wigwag paddle with your hand towards you whilst resting the palm of your hand on the handle bar. Pull the left hand side of the wigwag paddle towards you and the scooter will move backwards. To brake, release the wigwag paddle which will return to neutral and activate the electromagnetic brake automatically and bring the scooter to a prompt stop. The wigwag paddle allows you to control the speed of the scooter up to a maximum speed determined by the speed control. The further the wigwag paddle is deflected, the faster the scooter will go (up to 4mph).


Warning

Do not push both left and right hand sides of the wigwag simultaneously. You will not be able to control the scooter.

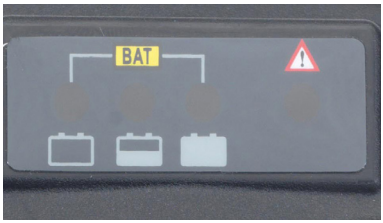
Braking – Electromagnetic Brake
Release the wigwag paddle completely, and the electromagnetic brake will be activated automatically and the scooter will stop.


Warning

When on a gradient, never set the vehicle to freewheel mode. The brakes will not be applied.

Battery Indicator

When the scooter is turned on, the battery indicator will display the battery charge status as follows:
Red: The battery is empty and requires immediate charging.
Orange: The battery is getting low and requires charging.
Green: Your scooter has full battery capacity.



The remaining charge indicated by the battery indicator will vary by the driving time incurred and how you drive. Repeated starting, stopping and climbing will consume power more quickly.

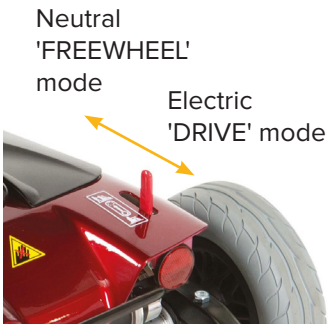
Diagnostic Warning Light

If the LED is permanently illuminated then the scooter is functioning normally. If the LED is flashing, this means the scooter has encountered a problem. The LED will flash a number of times then pause. Count the number of flashes to determine the problem. If you experience any flash sequences, first restart the scooter, ensuring the wigwag paddle is released. If this does not remedy the problem recharge the batteries. If the error persists contact your Dealer.

Freewheel Lever

The lever located on the right-hand rear side of the scooter is used to engage the scooter motors to the wheels. When the lever is pushed backwards, the scooter is in drive mode. The controls will operate the scooter and the brakes will be engaged. The scooter cannot be moved by hand in this mode.

When the lever is pushed forwards, the scooter is in freewheel mode. The scooter motors and brakes are disengaged, and the scooter is free to move by hand.



Warning

Never sit on your scooter when it is in freewheel mode and never use freewheel mode when the scooter is on an incline. The scooter brakes are disengaged and will be free to move. Failure to do so may cause personal injury.

10.3 Driving the Scooter

You must exercise awareness, caution, care, and common sense when operating your scooter. Always keep in mind your own limitations and substance use.

Users may encounter difficult manoeuvring situations such as narrow doorways, travelling up and down ramps, cornering, and travelling on uneven terrain. Be sure to lower the speed, take your time, and carefully manoeuvre the scooter.

Warning

- Never use your scooter while tired, smoking, under the influence of alcohol or other mind-altering substances. Be aware of precautions, warnings, and safety issues when taking prescribed or over-the-counter drugs before driving.
- If there is a history of active seizures in the last 6 months, clearance should be obtained from a neurologist that the patient's seizures do not prohibit safe use of a motorised device.
- When operating the scooter, the occupant is expected to be positioned appropriately in the seat, with limbs clear of moving parts to prevent entrapment. Never reach, lean or bend when driving the scooter.
- Always make sure the power is off before getting on and off the scooter.
- Carers should keep clear once the scooter is powered on. Do not operate the controls while anyone is entering or leaving the scooter – a hazard may be introduced.
- Do not let children play near or operate the scooter.
- Keep your feet on the scooter at all times during operation. However, do not stand with your full weight directly on the scooter – risk of tipping or personal injury.
- Keep your hands and feet away from moving parts while driving. Be aware of loose-fitting clothes that can become caught in the drive wheels.
- Always reduce your speed and maintain a stable centre of gravity when turning corners.

Caution

Always check the scooter is free of obstructions before use.

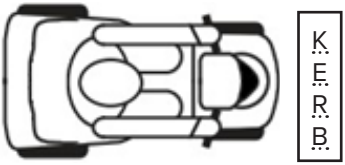
10.4 Steps, Kerbs & Fixed Obstacles

Use extreme caution when operating your scooter near kerbs, porches, stairs, escalators, drop-offs, unprotected ledges, and raised areas. Approach slowly, and make sure the front of the scooter is perpendicular to the obstacle.

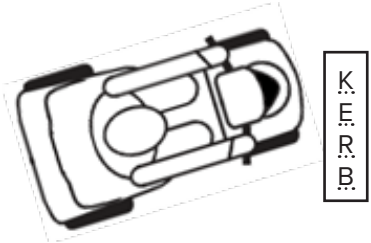
To manoeuvre up a fixed obstacle – Increase the forward speed until the scooter has cleared the obstacle, and then you may reduce the speed.

To manoeuvre down a fixed obstacle – Reduce the forward speed just before the front wheels come in contact with the obstacle and remain at the reduced speed until scooter has cleared the obstacle, then you may increase the forward speed.

Correct Approach:



Incorrect Approach:



Warning

- Never attempt to navigate your scooter over a kerb or other fixed obstacle taller than the maximum ground clearance. Refer to section 15 for this information.
- Never attempt to navigate your scooter backwards over an obstacle. Make sure that there are no steps, kerbs or other obstacles behind you while reversing – tipping / falling risk.
- Never attempt to operate your scooter on steps or escalators.

10.5 Inclines

Use caution when approaching inclines or declines. If necessary, lower the speed before travelling on a slope.

When travelling up an incline try to keep the scooter moving forward. If you must come to a stop, use caution and slowly accelerate the scooter forward. When travelling down an incline, lower the speed on your scooter to the slowest setting, and proceed cautiously.

If the scooter is travelling down the incline faster than you expected, slowly return the throttle lever to neutral to come to a stop, then slightly pull the throttle lever forward again to continue safely down the incline.

Warning

- Drive your scooter straight up or down an incline, never backwards. Erratic movements, or back and forth patterns may increase the chance of tipping.
- Be careful when driving on inclines. Inclines vary and doing so may decrease stability.
- Do not, under any circumstances, travel on a slope greater than the maximum stability angle for this scooter. Refer to section 15 for this information. Exceeding the stability angle may cause unstable conditions.

10.6 Outdoor Operation & Inclement Weather Precautions

Exposure to inclement weather should always be avoided. Monitor weather forecasts before starting a journey to reduce risks. If you find yourself caught in inclement weather while operating your scooter, proceed to the closest shelter immediately. Completely dry your scooter before operating, charging, or storing.

Warning

- Do not take your scooter on roads or highways.
- Be cautious when driving your scooter in busy areas, such as shopping malls.
- If you get caught outside in the rain, seek shelter immediately and dry the scooter with a cloth.
- Do not drive your scooter at night without proper lighting.
- Avoid exposure to moisture, standing water, rain, snow, ice or salt when possible. Operating in rain, snow, salt, mist and on icy or slippery surfaces may have an adverse effect on the electrical system.
- At extreme temperatures, the batteries may freeze, and your scooter may not be able to operate. In extreme high temperatures, it may operate at slower speeds due to a safety feature of the controller that prevents damage to the motors and other electrical components. Operational limits stated in section 10.1 must be observed.

Caution

If you are unsure of a surface, such as gravel, it is recommended to avoid it and locate an alternative route.

10.7 After Use Instructions

Remove the key after use of the scooter.

Store the scooter in a location that cannot be interfered with by children, meets the storage conditions in section 5 and is free from excess moisture.

Clean the scooter with a soft cloth and ensure it is dry (see section 11).

11. CLEANING

Warning

- Never use direct contact with water to clean the scooter. This could cause damage to the electrical components and put the user at risk. Only a damp cloth should be used.
- Always disconnect the scooter from the mains supply prior to cleaning.
- Never use any neat bleach or similar chemicals on the seat or armrests, as this may damage various materials.
- PPE must be worn during manual decontamination to prevent the risk of infection.
- Deviating from the specified cleaning instructions could cause a biological hazard, especially in multi-user environments, and adversely affect the life and efficiency of the product.

Caution

Regular cleaning can help prolong the lifespan of the scooter.

Use a damp cloth with a mild soap or detergent to clean the frame, and then dry thoroughly. A light coat of car wax can be used on the painted surfaces to retain the high-gloss appearance.

12. MAINTENANCE & SERVICING

Warning

- Always disconnect the scooter from the main power supply and remove the battery prior to performing any maintenance procedures (where viable).
- Never attempt to deconstruct the enclosures, re-wire any components or replace internal battery components. Modification of the scooter is not allowed without the permission of the manufacturer and electrical system components are only to be replaced by authorised service personnel.
- No maintenance or servicing should be conducted while the device is in use – risk of electric shock, entrapment, loose parts, etc. If not possible due to the occupant's mobility, a risk assessment should be carried out, and if deemed safe to proceed, care should be taken to avoid contact with the occupant when working on electrical items.
- Failure to carry out the following checks at the stated frequencies could negatively influence the essential performance of the scooter and as a result put individuals at risk.
- Allow all components to cool before performing maintenance. Parts of the motor system can generate heat while driving.

Caution

All maintenance should be conducted by a competent person. Disassembling the controller, motor, or charger by anyone other than an approved service engineer is prohibited and voids any applicable warranty. For any maintenance concerns, contact your provider

12.1 General Guidelines

Routine maintenance is required to ensure the maximum use of your scooter. While some of the maintenance can be done by yourself, you may need assistance from an authorised service engineer. If you have any doubts, contact your provider.

If there are any signs of damage, or the scooter is not performing as it should, withdraw it from service until the scooter has been repaired and is fit for use.

Preventative maintenance is key to keeping the scooter in prime operating condition. Follow the Maintenance Schedule at the end of this manual to periodically inspect the scooter for serviceable items.

- Avoid knocking or abuse to the control unit
- Avoid prolonged exposure to extreme heat or cold
- Keep the scooter clean and free from moisture
- Never use a conditioner on the tread of the wheels
- Check for the presence of flat spots on the tyres
- Check all electrical connections, ensuring they are fastened and not corroded
- Check the frame and all components for loose fasteners and tighten where appropriate

The following conditions may indicate a serious problem with your scooter. Contact your provider if one of the following conditions occurs:

- Motor or gearbox noise
- Frayed electrical cables
- Cracked or broken connections
- Uneven wear on the tyres
- Veering to one side when steering straight
- Bent or broken wheel assemblies
- Will not power on
- Loose seat or seat components

All wheel bearings have been lubricated and sealed. They should not require subsequent lubrication during maintenance.

If in doubt about the correct replacement of a component, contact your provider.

12.2 Fault Resolution

Minor faults with the scooter can be resolved using the steps below:

- Switch off scooter by removing the power key.
- Check scooter freewheel lever is in 'Drive' mode.
- Check the charger is not plugged into the socket on the battery pack.
- Ensure the throttle lever is released.
- Press the circuit breaker to reset.
- Switch the scooter back on with the power key and wait 5 seconds before trying the throttle lever.

If this does not resolve the issue, recharge the battery and repeat the above procedure. If the fault is still not resolved, do not use the scooter, turn off the power and contact your provider.

12.3 Repair

Contact your provider to discuss the replacement of components on the scooter. Some spare parts may be replaced by the user under instruction from service personnel, however other components will require installation by a service engineer.

13. DISPOSAL OF PARTS

When the scooter, the electrical system or any associated packaging and accessories have come to the end of their useful life, follow W.E.E.E. (Waste Electrical and Electronic Equipment) policies, local and national regulations for recycling and disposal.

Individual parts can be separated and disposed according to the type of material. The electrical components of the scooter should not be disposed in municipal waste. Some of these electrical components could be harmful to the environment and where viable, can be recovered and reused / recycled.

When the scooter is unpacked for the first time, the cardboard box, and plastic packaging used can be recycled at recycling centres that offer suitable cardboard and polymer recycling programmes respectively.

For further information about disposal, contact your local waste agency, recycling centre, or provider. If in doubt, contact your provider

Warning

The scooter and any associated parts are to be decontaminated before disposal to avoid the risk of cross-contamination.

14. ELECTROMAGNETIC COMPATIBILITY (EMC)

Electromagnetic interference (EMI) tests have shown to produce adverse effects on the performance and control of electrically powered mobility devices. EMI can be produced from different sources, such as cellular phones, amateur radio transmitters (HAM), microwave signals and emergency vehicle transceivers. The EMI produced from hand-held radios are of special concern.

The EMI waves can cause unintentional movement of the scooter, or damage to the controller. Every electrically powered mobility device has a resistance to EMI. The higher the resistance level the greater the protection. The intensity of the interference can be measured in Volts per meter, V/m.

If the scooter or any alternative equipment is found to be operating abnormally, turn off the piece of equipment that is believed to be causing the interference (if possible, as soon as it is safe) to identify the source of the RF energy. Once identified, mitigation measures are to be taken, such as the separation distances being increased and / or the device(s) being re-orientated. If the scooter continues to operate abnormally, turn off at the mains supply and contact your provider

The warnings listed below are recommended to prevent possible interference with the control system of your scooter. Your scooter, with no modifications, has an immunity level of 20 V/m. For specific emissions and immunity information relating to the scooter, contact your provider Report EMI incidents to your provider using the details provided in section 2.

Warning

- Do not operate hand-held transceivers or turn on personal communication devices while the scooter is powered on. Avoid use adjacent to or stacked with other equipment where possible. If adjacent use is necessary, the scooter should be observed to verify normal electrical operation in the configuration in which it is to be used.
- Use of accessories and cables other than those specified or provided by your provider could result in increased electromagnetic emissions or decreased electromagnetic immunity of the scooter and result in improper operation or driving performance.
- Portable RF communications should be used no closer than 30 cm to any part of the scooter (including its cables), otherwise a degradation in performance could result.
- Avoid use around radio transmission systems, such as radio or television stations.

15. SPECIFICATION

Product Name:	ST1 Scooter
Model Numbers:	ST1BBE, ST1RBE
Manufacturer Code:	HS-118
Top Speed*	4 mph (6.4 kph)
Maximum Range*	6.2 miles (10 km)
Rated Slope	6°
Maximum Stability Angle	6° (dynamic)
Ground Clearance	35 mm (1.4”)
Minimum Turning Radius	1270 mm (50”)
Scooter Dimensions:	
L × W × H	1000 × 510 × 890 mm (39” × 20” × 35”)
Wheels:	
Front Wheels	195 × 50 mm (7.7” × 2”)
Rear Wheels	195 × 50 mm (7.7” × 2”)
Wheel Type	Solid, PU
Maximum Occupant Mass:	115 kg (18 stone)
Product Weight (with batteries):	40.3 kg
Battery Weight (pair):	8.2 kg (18 lb)
Motor Type:	24 V, 250 W
Battery Supplied:	12 V 12 Ah, x2 sealed lead acid

The battery charger is considered a detachable part of the scooter equipment.

Max Controller Output:	50 A
Max Charger Output:	2.0 A
Application Environment:	See section 3.1

* Maximum range is based on an ambient temperature of 20°C, a 75kg user weight and a brand new fully charged battery by a constant driving speed at 6 km/h with 70% battery power discharged. Speed and range may also vary depending upon user weight, battery charge and condition, incline, weather conditions and driving behaviour.

16. WARRANTY

Drive DeVilbiss Healthcare Ltd. guarantees this product is free from defects in material and workmanship under normal use for 2 years (with the exception of batteries and tyres which are guaranteed for 1 year and the frame which is guaranteed for 3 years), from date of purchase from Drive DeVilbiss Healthcare Ltd. and its subsidiary companies or authorised dealers (Your Supplier). All implied warranties, of fitness and merchantability, are limited in the total duration of 2 years from date of purchase. Proof of purchase must be presented with any claim.

Drive DeVilbiss Healthcare Ltd. makes no other warranties, expressed or implied and all implied warranties of merchantability, non-infringement and fitness for a particular purpose are hereby disclaimed. In no event will Drive DeVilbiss Healthcare Ltd. be liable for punitive, special, or consequential damages.
Except as provided herein, this warranty will not apply to any Drive DeVilbiss Healthcare Ltd. products that have been (a) damaged by lightning, water, or power surges, (b) neglected, altered, abused, or used for a purpose other than the purpose for which they were designed, (c) repaired by you or any other party without Drive DeVilbiss Healthcare Ltd. prior written authorisation, (d) used in conjunction with a third-party product or products not approved in advance by Drive DeVilbiss Healthcare Ltd. (e) damaged or failed by or attributes to acts of God, (f) damaged, caused by failure to follow instructions, or (g) otherwise used in a manner inconsistent with any instructions provided by Drive DeVilbiss Healthcare Ltd. The warranty explicitly exempts consumable items.
This warranty contains the entire agreement between You, your Supplier and Drive DeVilbiss Healthcare Ltd. with respect to any warranty matters and supersedes any and all other written or oral statements, representations or agreements relating to the subject matter of this warranty.

In the event of a product defect during the warranty period you should contact your Supplier, whether it be Drive DeVilbiss Healthcare Ltd., its subsidiary companies, authorised dealers or international distributors, who will at their option, unless otherwise provided by law, do one of the following:
a) correct the defect by product repair within the terms of the warranty, b) replace the product with one of the same or similar design or c) refund the purchase price.

Please note if a fault is outside of the warranty terms and conditions (please see above), any repair undertaken will be charged for.
All replaced parts and products on which a refund is made become the property of Drive DeVilbiss Healthcare Ltd. Repaired or replaced parts and products are warranted for the remainder of the original warranty period.
You will be charged for repair or replacement of the product made after the expiration of the warranty period.

Drive DeVilbiss Healthcare Ltd. cannot be held responsible for any injury or incident which relates to the use of this product in conjunction with accessories manufactured by companies other than Drive DeVilbiss Healthcare Ltd.
Drive DeVilbiss Healthcare Ltd. has a policy of continual product improvement and reserves the right to amend specifications covered in this document.

17. MAINTENANCE SCHEDULE

Inspect your scooter routinely for service issue or wearable items.

Inspection	DAILY	WEEKLY	MONTHLY	SIX MONTHLY
All Parts			✓	
Turning, Driving, Preset and Disassembly etc.		✓		
Brake system	✓			
Connections		✓		
Battery Condition	✓			
Wheel Condition			✓	
Motors				✓
General Device Inspection		✓		
Cleaning	✓			

SUGGESTION – Once a year, take your scooter to a service engineer for inspection and maintenance who is authorised on behalf of your provider.

The expected service life of the scooter is 5 years.

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Drive DeVilbiss Healthcare Ltd. provide these instructions for use and product markings.

NB. Images contained in this document are for illustration and parts identification purposes only, and may not reflect final product outlook appearance.

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