FreeRider®

working together

ATTENTION
Read all parts in this manual before operating your scooter

FR 510-GDX

USERS INSTRUCTION MANUAL

FOREWORD

Please read and follow all instructions in this Users Instruction Manual before attempting to operate your **FR 510-GDX** Scooter for the first time. If there is anything in this manual that you do not understand, or if you require additional assistance for setting it up, contact your authorized **Freerider** agent.

Using your **Freerider** product safely depends upon your diligence in following the warnings, cautions and instructions in this manual. Using your **FR 510-GDX** Scooter safely also depends upon your good judgement and/or common sense, as well as that of your Provider, Carer or Health Professional Always think safety!

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INTRODUCTION

Congratulations on the purchase of your **Freerider 510-GDX**.

Please read this User Instruction Manual carefully before you attempt to operate your FR 510-GDX Scooter. Your User Instruction Manual will assist you to get the most from your machine.

This manual contains important information regarding the safe operation and maintenance of your scooter. Before beginning to use your Scooter, make sure you completely read and understand all instructions thoroughly. Please observe the "Rules for safe use" of this manual. If you have any queries concerning operation or maintenance, consult your authorized Freerider dealer.

Please keep in mind that the operator of the scooter is responsible for accidents or hazards occurring to other people or their property.

Your **Freerider 510-GDX** has numerous features not found on other power Scooters. With proper care and maintenance, you will enjoy many years of dependable service.
Your Freerider 510-GDX Scooter needs to receive maintenance at regular intervals and should be inspected frequently for proper mechanical operation. Trouble shooting guidelines, methods of detecting improper operation and making minor adjustments are included in this manual.

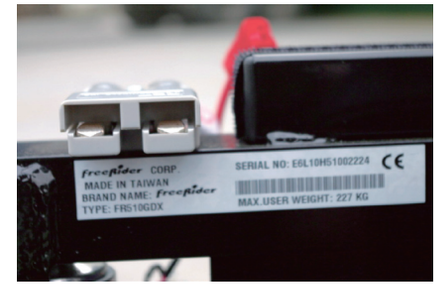
Follow all recommendations to obtain trouble free, safe and enjoyable operation of your Freerider scooter.

Please remember that when it comes to service and repairs, your authorized **Freerider** dealer knows your **Freerider 510-GDX** Scooter best.

GUARANTEE TERMS

GUARANTEE TERMS
Please keep a note of your serial No. .....

(This is located on a plate under the front body cover).



Your **FR 510-GDX** is guaranteed for 12 months from the date of purchase against faults arising due to defects in manufacture or materials. This guarantee does not detract from, but is in addition to your legal rights. Parts replaced or repaired under the terms of this guarantee will be covered for the balance of the 12 months period. This guarantee applies only to parts supplied or approved by **Freerider®**

Due to the individual prescription nature of this product. This guarantee is not transferable.

Note: Extended guarantee insurance can be arranged by your Freerider Distributor, he will be able to advise the extra cost of this cover.

METAL WORK: Metal components, such as the framework and bright metal parts require special attention and may deteriorate in certain conditions. Moisture and salt may corrode parts left unattended, proprietary auto cleaner polishes should be used to prevent long term damage. Failure to clean and protect these components may void your warranty.

PAINT WORK: This guarantee does not cover deterioration of paint work resulting from the lapse of time i.e. natural fading. It is the users responsibility to clean and protect the painted surfaces.

SPEED CONTROLLER: Servicing of the speed controller or battery charger must only be carried out by your local authorized **Freerider** distributor. Any attempt to open or dismantle these items render the guarantee void on that item.

BATTERIES: Batteries carry a limited 12 month guarantee from the original manufacturer which is subject to a stringent wear and tear clause. Any battery faults due to a defect in the original manufacture will normally become obvious within the first two months of use. (See batteries and battery charging section of this manual). Any gradual deterioration in the performance after this period is normal and associated with fair wear and tear, mis-use or accidental damage and as such is not covered by the manufacturers warranty. (Batteries are guaranteed as single parts, only the failed part is replaceable).

⚠ **Warning**: Do not attempt to open the battery vent plugs.

SERVICE CHECKS
In line with all mobility vehicles, your **Freerider** will benefit from regular service inspections to keep it in pristine condition. The frequency of these service inspections will depend on the amount of use your vehicle is put to. We strongly recommend you contact your local Freerider distributor to arrange for a service visit. (See Care & Maintenance Section of this manual).

Your **Freerider** product must be fully serviced at least every 12 months or more frequently if conditions and use require it.

Please contact your authorized **Freerider** distributor who will be able to advise you of his current costs affecting service visits. Please note: Non-warranty service costs are chargeable.

The warranty on your **Freerider** may not apply if routine maintenance is not carried out as defined in the 'Care and Maintenance' section in this manual.

WARRANTY SERVICE VISIT: If your **FR 510-GDX** should need attention due to failure as defined under the guarantee terms, please contact the distributor from whom you purchased your machine. The **FR 510-GDX** shown and described in this manual may not be exactly identical in every detail as your own **Freerider**. However, all instructions are still entirely relevant, irrespective of detail differences. If you are not sure of any details, please consult your **Freerider Authorized Distributor** before driving your Scooter.

DISCLAIMER
Freerider® disclaims all responsibility for any personal injury or property damage which may occur as a result of improper or unsafe use of its products. Mechanical or electrical defects will be dealt with on a contingency liability basis. The part or parts will be replaced or repaired but no responsibility for damage or injury can be implied to **Freerider®**

Guidelines in this manual are intended to assist you in the safe operation of your **Freerider** powered Scooter. If you should have any questions about the correct operation of your Scooter, please contact your

authorized **Freerider** dealer. **Consult your doctor and therapist if you are in doubt about your ability to operate your Freerider Scooter.**

It is the responsibility of the user to carry out daily inspections and regularly maintain and keep records of inspection and maintenance covered in this manual. The user is also responsible for the proper use of the Scooter as detailed in this manual.

RULES FOR SAFE USE

These symbols below are used in this Users Instruction manual to identify warnings and cautions. It is very important for you to read and understand them.

⚠Warning: Failure to note the warnings in this users manual may result in personal injury

⚠Caution: Failure to observe the cautions in this users manual may result in damage to your Scooter.

Your **FR 510-GDX** Scooter is a powerful machine. Please read all of the instructions in this manual before operating your Scooter. Follow notes carefully to ensure safety at all times.

Always make certain your machine is fully charged and in full working order before staring your journey.

1. Do not ride your **FR 510-GDX** without reading this instruction manual. Also read all of the safety instructions and warnings starting with this manual.

2. Only drive your **FR 510-GDX** if your health condition will allow you to be safe.

3. Do not exceed the maximum safe gradient outlined for your vehicle (see Technical Specification, **page 35**).

4. Do not carry passengers or exceed the maximum carrying weight. (See Technical Specifications **page 35**).

5. Do not mount or dismount your **FR 510-GDX** unless it is switched off with the freewheel device fully engaged.

6. Do not switch your **FR 510-GDX** 'on' with the forward /reverse lever depressed.

7. Do not mount or dismount your **FR 510-GDX** unless the speed adjustment dial is set to minimum.

8. Do not reverse your **FR 510-GDX** onto uneven inclines or surfaces. Be cautious when traversing slopes.

9. Do not drive your **FR 510-GDX** in a confined space unless the speed adjustment dial is set low.

10. Do not turn suddenly at full speed, especially on uneven or sloping ground.

11. Do not drive your **FR 510-GDX** where you cannot safely or legally walk. Obey the Highway Code.

12. Do not drive your **FR 510-GDX** unless the seat is locked into the driving position.

13. Do not drive your **FR 510-GDX** with the handlebar adjustment lock, in the unlocked position.

14. Do not drive your **FR 510-GDX** over deep, soft terrain (eg. soft earth, deep grass, loose gravel, snow).

15. Do not drive when under the influence of alcohol or certain drugs which may impair your safety.

16. Do not climb or descend kerbs that exceed the maximum dimension detailed under technical specification of this manual. Do not turn when negotiating kerbs.

17. Always approach small obstacles "straight on" and at low speed.

18. Always approach obstacles straight.

19. Always stop fully before changing direction (forward or reverse).

20. Always keep your feet on the vehicle when driving.

21. Always keep both hands on the handlebars.

22. Always proceed carefully while riding, especially as you approach the downgrade of a ramp.

23. Always reduce speed when descending inclines.

24. Always avoid uneven surfaces.

25. Always consult your physician or a therapist if in doubt about your ability to operate a Scooter.

26. **Transport - Do not sit on your FR 510-GDX while it is in a moving vehicle. Always strap down your FR 510-GDX then transfer to the vehicle seat.**

27. The batteries fitted to your **FR 510-GDX** are maintenance free and do not require topping up with distilled water. **Do not attempt to remove the safety valves situated in the top of the battery. Failure to observe this warning will invalidate your battery guarantee.**

28. Do not drive your **FR 510-GDX** through deep water or clean with a high pressure hose.

29. Do not drive your FR 510-GDX through sea sand or sea water, this is very corrosive. Always wash salt splashing from the metal parts of your Scooter with hot soapy water as soon as possible.

30. Do not drive on motorways, unrestricted dual carriageways (i.e. those with a speed limit of over 50mph), cycle lanes or in bus lanes.

31. Use of an 'amber' warning beacon is advised if you find it necessary to drive on unrestricted carriageways

32. Always switch your lights on at night or in poor visibility.

33. Do not drive your Scooter with a canopy in gale force wind conditions i.e. above 61km/h (38mph).

34. Do not use solid inserts in your tyres, they will increase the weight of your Scooter and reduce the effectiveness of your Scooter's suspension.

Please remember you are a motorized pedestrian and must observe all rules and regulations of other pedestrians wherever possible. Your **FR 510-GDX** has been designed for use on most roads; drive with due care and attention. Read the 'Code of Practice for Class 3 Vehicle Users' section on page 10 of this manual.

Please have a safe journey

SAFETY INSTRUCTIONS AND WARNINGS

GENERAL

⚠**Warning:** Do not attempt to operate your new **FR 510-GDX** Scooter for the first time without completely reading and understanding all of the facts in this Users Instruction Manual.

Your **FR 510-GDX** Scooter is a state-of-the-art device designed to enhance and increase your mobility. **Freerider** provides a range of Scooters to best suit the individual needs and circumstance of the Scooter user.

Please be aware that the final selection and purchasing decision regarding the model of Scooter to be used is the responsibility of the Scooter user who is capable of making such a decision with assistance from his/her healthcare professional (i.e. medical doctor, physical therapist etc.)

The contents of this Users Instruction Manual are based on the expectation that the mobility device expert has properly fitted the Scooter to the user and has assisted the prescribing healthcare professional and/or the authorized **Freerider** Distributor in the instruction process for the safe use of the scooter.

There are certain situations, including some medical conditions, where the Scooter user will need to practice operating the **FR 510-GDX** in the presence of a trained attendant. A trained attendant can be defined as a family member or care professional specially trained in assisting a Scooter user in various daily living activities.

When you begin to use your **FR 510-GDX** Scooter, you will probably encounter situations in which you will need some practice. Simply take your time and you will soon become confident and in control as you maneuver through doorways, on and off elevators, up and down ramps and over moderate terrain. Below are some tips, precautions and other safety measures that will help you to become accustomed to the safe operation of your **FR 510-GDX** Scooter. Your **FR 510-GDX** is fitted with a number of 'Safety Warning Instruction' labels (see page 14). These labels communicate important warnings or instructions. Please familiarize yourself with their location.

SAFETY CHECK

Get to know the feel of your **FR 510-GDX** Scooter and it's capabilities. **Freerider** recommends that you perform a safety check before each use to make certain your Scooter operates smoothly and safely. For details on how to perform these necessary inspections, see the Care and Maintenance section of this manual. Perform the following inspection prior to using your **FR 510-GDX** Scooter.

- Check tire inflation. Rear tires maintained at 35 p.s.i.
- (2.5 bar) Front tires maintained at 30 p.s.i. (2.1bar).
- Check all battery connections, making certain they
- are tight and not corroded.
  Check batteries have been fully charged
- Check operation of brakes
- Check operation of all lights

⚠**Warning**: It is critical that the pressure in the pneumatic tyres is maintained at all times. Failure to observe this warning may result in a serious failure of the tyres or wheel, causing serious personal injury and/ or damage to your Scooter.

Your **FR 510-GDX** Scooter is fitted with pneumatic tyres (air) as standard equipment, the pneumatic quality and feel of these tyres greatly enhances the ride quality of your Scooter. We do not recommend the fitting of solid inserts to replace the air pressure in your wheels, these products add unnecessary weight and place more stress on the suspension components of your Scooter. If puncture resisting security is desired then use an appropriate liquid sealer, your **Freerider** Dealer can advise you on these systems.

⚠**Warning**: Do not carry passengers on your **FR 510-GDX**. Your Scooter is designed for a single occupant which complies with legal requirements for pavement vehicles. Carrying passengers on your Scooter may result in personal injury and/or property damage.

WEIGHT LIMIT

Your **FR 510-GDX** Scooter is designed for a maximum user weight limit of 227kg (500lbs).

⚠**Warning**: When cornering sharply, reduce your speed. When using your **FR 510-GDX** at higher speeds, anticipate changes in the road surface. This will greatly reduce the possibility of a tip or fall. To avoid personal injury or property damage, always exercise common sense when cornering.

CORNERING

Excessively high cornering speeds can create the possibility of tipping. Factors which affect the possibility of tipping include, but are not limited to, cornering speed, steering angle (how sharply you are turning), uneven surfaces, included surfaces (such as heavily cambered pavements), riding from an area of low traction to an area of high traction (such as passing from grass areas to a paved area - especially at high speed while turning), and abrupt directional changes. Do not corner at high speed! If you feel that you may tip over in a corner, reduce your speed and steering angle to prevent your Scooter from tipping.

⚠**Warning:** When cornering sharply, reduce your speed. When using your **FR 510-GDX** at higher speeds, anticipate changes in the road surface. This will greatly reduce the possibility of a tip or fall. To avoid personal injury or property damage, always exercise common sense when cornering.

It is always advisable when cornering to lean towards the corner, just as you would on a bicycle, this will enhance the sideways stability of your Scooter.

BRAKING

Your **FR 510-GDX** Scooter is equipped with two powerful brake systems:

1. **Regenerative:** Uses the electricity generated in your **FR 510-GDX** drive motor to rapidly slow your Scooter when the speed direction lever is returned to the centre (neutral drive) stop position; and
2. Disc Park Brake: Located on the end of your drive motor it activates mechanically after the regenerative brake slows your Scooter to a near stop, or when power is removed from the drive system for any reason, as in the case of switching your machine off!

Brake engagement is far more abrupt at higher speeds. It is important that you anticipate when the brakes will engage and that you are braced for the resulting deceleration. Practice braking on level ground to understand your braking distance time.

⚠Warning: Your Scooter can decelerate very quickly. Do not decelerate or turn abruptly when traveling at high speed unless absolutely necessary. If it is necessary to decelerate or turn abruptly when driving at high speed, brace yourself by gripping the steering handlebar tightly and positioning your feet firmly on the floorboard. Users who cannot grip the handlebar tightly and/or place their feet firmly against the footboard should avoid deceleration from or turning abruptly at high speed, and therefore should avoid traveling at high speed. Failure to observe this warning could result in serious personal injury and property damage. Always brace yourself firmly when decelerating your **FR 510-GDX** Scooter.

Never drive down slopes at full speed, always adjust your speed to the driving condition and allow for gradual descents on inclines. Note: when descending a slope it is good practice to switch your Scooter into the "Lo (4mph) speed range, this can be activated while you are driving.

OUTDOOR DRIVING SURFACES

Your **FR 510-GDX** Scooter is designed to provide optimum stability under normal driving conditions i.e. dry, level surfaces composed of concrete or asphalt. However **Freerider** recognizes that there will be times when you will encounter other surfaces such as packed soil, grass and gravel. These surfaces may not be sound and fail to give good traction, caution should be considered before driving on this type of surface to prevent stability problems resulting in injury or damage to your Scooter.

- Reduce your Scooters speed to the 'Lo' switch position when driving on uneven terrain or soft surfaces.
- Avoid long and unsafe grass that can become tangled in the running gear or may hide debris and holes.
- Avoid loosely packed sand and gravel.
- If you feel unsure about a driving surface, please anticipate and avoid that surface.
- Always avoid kerbs if possible use drop down or gaps in pavements.

STREET AND ROADWAY DRIVING

⚠Warning: Your **FR 510-GDX** Scooter has been designed for operation on public streets and roads. It is also designed for operation on pedestrian pavements and traffic free shopping areas.
Your **FR 510-GDX** Scooter must be driven with due care and compliance with the Road Traffic Acts and conditions of the Highway Code. Always obey all local pedestrian traffic rules. Wait until your path is clear of traffic, and then proceed with extreme caution. Note: Always wear light or illuminating clothing when driving your Scooter. **Be aware** that it may be difficult for traffic to see you when you are seated on your Scooter. Only drive your Scooter on the pavement at the 'Lo' 4mph (6km) speed range, it is illegal to drive your **FR 510-GDX** over 4mph in areas where pedestrians walk, i.e. shopping areas, crossings, under passes, parks etc.

WARNING BEACON

A warning beacon must be fitted and illuminated if you drive on an unrestricted dual carriageway i.e. a carriageway that allows speeds of over 50mph. We do NOT recommend that you drive on these roads and advise you to choose an alternative route, avoid fast moving traffic at all times.

INSURANCE

Although at this moment in time it is not a legal requirement for accident insurance cover (third party), it is a sensible precaution. Your Freerider Authorized Agent will be able to give you details of specialist insurance companies or your own insurance company will be able to advise you.

WEATHER PRECAUTIONS

⚠Warning: **Freerider** recommends that you do not operate your **FR 510-GDX** Scooter in icy or slippery conditions or on salted surfaces i.e. Roads and Pavements etc. Such use may result in accident, personal injury or adversely affect the performance and safety of your Scooter.

⚠Warning: **Freerider** recommends that you do not expose your Scooter to any type of heavy moisture at any time i.e. rain, snow or power washer. Such exposure can damage your Scooter. Never drive through deep water or expose your Scooter to sea water. Note: salt is very corrosive to metal and electronic components. Following use in winter or exposure to sea sand and water, your Scooter should be washed with a mild soap and water to remove all ingress of salts. **Do not** use a power hose. **Do not** operate your Scooter if it has been exposed to moisture until it has been thoroughly dried out.

⚠Warning: If your Scooter is fitted with a canopy (cab) avoid gale force winds i.e. winds above 61Km/h (38mph), avoid exposed areas near to water.

FREEWHEEL YOUR FR 510-GDX

Your Scooter is equipped with a manual freewheel lever for convenience when you need to push it. See the Freewheeling your **FR 510-GDX** section on page 13 of this manual.

⚠Warning: **Do not** use your Scooter in the freewheel mode without an attendant present. Personal injury may result.

⚠Warning: **Do not** attempt to personally place your Scooter in freewheel mode while seated on it. Personal injury may result. Ask an attendant for assistance if necessary.

⚠Warning: **Do not** place your Scooter in freewheel mode while on an incline. The Scooter could roll uncontrollably on its own, causing personal injury.

TYRE INFLATION

Your **FR 510-GDX** Scooter is equipped with pneumatic tyres, you should check their condition on a daily basis. Have the tyre pressure checked and if necessary inflated to the recommended pressure at least once a week. This can be found on page 35 under 'Technical Specification'. Properly inflated tyres will help ensure a smooth, stable ride with minimum rolling resistance for your motor, it will also prolong the tire's life and resistance to punctures.

⚠Warning: Always inflate your tyres from a regulated air source. Over inflation from an unregulated air source could over inflate your tyres resulting in "blow out" or personal injury. Do not over inflate your tyres to the maximum inflation pressure indicated on the tyre cover, failure to observe this warning could damage your Scooter wheels. Your tyres are designed for low speed use on pavements and roads. They are not for high speeds, such as in vehicles designed to travel at speeds in excess of 15mph.

MOTOR VEHICLE TRANSPORTATION

Currently there are no standards approved for "tie down" systems in a moving vehicle of any type to transport a person while seated in a Scooter.

Although your Scooter may be equipped with a positioning belt *, this is not designed to provide proper restraint during motor vehicle movements.

Anyone traveling in a motor vehicle should be properly secured in the motor vehicle seat with a safety belt fastened securely.

⚠Warning: **Do not** sit on your Scooter while it is in a moving vehicle. Personal injury may result.

⚠Warning: Always make certain that your **FR 510-GDX** is properly secured when being transported. Failure to comply may result in personal injury and/or damage to your Scooter.

POSITIONING SAFETY BELT

Your **FR 510-GDX** Scooter is fitted as standard with a positioning safety 'lap' belt. It is a legal requirement for Class 3 vehicle riders to wear this belt.

⚠Warning: Wear your seat belt at all times, make certain it is adjusted and fastened securely. Serious

personal injury may result if you fall from your Scooter

ACCESSING YOUR SCOOTER

Getting on and off your Scooter requires a good sense of balance. Please observe the following tips when getting on or off your Scooter:

- Make certain your **FR 510-GDX** Scooter is switched off at the power switch, and the power key is removed.
- Ensure your **FR 510-GDX** is not in the freewheel mode.
- Make certain the seat and handlebars are locked firmly into position.
- The seat armrests can be lifted up to make access easier. Make certain you do not attempt to drive with the armrests raised.

⚠ Warning: Position yourself as far back into the Scooter seat as possible to prevent tipping and causing injury.

⚠ Warning: Avoid using the armrests for weight bearing purposes such as the attachment of shopping bags etc.such use may cause the Scooter to tip and cause personal injury and/or damage to the Scooter.

⚠ Warning: Avoid putting weight onto the steering handlebars, such use may cause the Scooter to tip and cause personal injury and/or damage to the Scooter.

⚠ Warning: Avoid putting all of your weight onto the footboard, such use may cause the Scooter to tip and cause personal injury.

MODIFICATIONS

Freerider has designed your **FR 510-GDX** Scooter to provide maximum mobility. A range of accessories are available from Authorized **Freerider** Agents, to further customize your Scooter needs. However, under no circumstances should you modify, add, remove or disable any feature, part or function of your machine.

⚠ Warning: Failure to observe this warning may result in personal injury and/or damage to your Scooter.

INCLINES

More and more modern buildings are designed with disability access in mind. Ramps have specified percentage of inclination, designed for easy and safe access. Some ramps may have turning switchbacks (180 degree turns) that require you to have good cornering skills on your Scooter.

- Proceed with extreme caution as you approach the downgrade of a ramp or other incline, sit right back in your seat, brace your arms on the handlebars and your feet on the floorboard
- Take a wide arc with your **FR 510-GDX's** front wheels around tight corners, your rear wheels will follow preventing you from cutting the corner short and bumping or getting hung up on raised kerbs.
- When descending an incline keep your speed adjustment set to the slowest speed setting to ensure a safely controlled descent and driving in a forward direction only. If your Scooter descent is quicker than you anticipated allow the Scooter to completely stop, then progress at a slower speed setting.

⚠ Warning: Never drive down an incline at full speed.

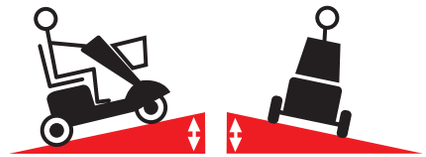
- When climbing an incline, try to keep your Scooter moving, if you must stop, start up again slowly and then accelerate smoothly with caution. Avoid sudden stop starts, lean forward towards your handlebars to increase stability and prevent rearward tipping.

⚠ Warning: When climbing an incline, do not zig-zag or drive at an angle up the face of the incline. Drive your Scooter smoothly up the incline without stopping, this greatly reduces the possibility of a tip or fall.

⚠ Warning: You should not travel over a potentially hazardous incline i.e. areas covered with ice or snow, cut grass or wet leaves or any unstable surface.

⚠ Warning: **Do not** overload your Scooter, at the rear when climbing an incline. Always lean forward to provide the best stability and prevent rearward tipping.

⚠ Warning: Any attempt to climb or descend an incline steeper than shown in the Scooter Specification at the rear of this manual may put your Scooter in an unstable position and cause it to tip, resulting in personal injury. See also Control on an Incline page 17.



STAIRS AND ESCALATORS

⚠ Warning: Scooters are not designed to travel up or down stairs or escalators. Always use an elevator. Failure to observe this warning may result in injury to yourself and others and damage your Scooter.

PREVENTING UNINTENDED MOVEMENT

⚠ Warning: If you anticipate being seated in a stationary position for an extended period of time turn off the power key switch, this will prevent unexpected motion due to inadvertent movement of the direction control lever. Failure to observe this warning may result in personal injury.

DISPOSAL OF ELECTRO-MOBILE SCOOTER

In time when your Scooter becomes unusable it must be disposed of in accordance with the laws implemented at that time. For further information regarding the recycling arrangements for this type of vehicle and its batteries, contact your local authority or government department, details of this can be found in your telephone directory. Alternatively your **Freerider** dealer may help.

The following labels are positioned on your **FR 510 GDX**, they communicate important warnings or instructions regarding the safe operation of you scooter - Please familiarise yourself with their location.

⚠ Warning: Scooters are not designed to travel up or down stairs or escalators. Always use an elevator. Failure to observe this warning may result in injury to yourself and others and damage your Scooter.

PREVENTING UNINTENDED MOVEMENT

⚠ Warning: If you anticipate being seated in a stationary position for an extended period of time turn off the power key switch, this will prevent unexpected motion due to inadvertent movement of the direction control lever. Failure to observe this warning may result in personal injury. Note: your Scooter electronics incorporate a 'sleep' time mode following fifteen minutes of inactivity your Scooter will automatically switch itself off. To start again simply switch your Scooter off, then on again.

DISPOSAL OF ELECTRO-MOBILE SCOOTER

In time when your Scooter becomes unusable it must be disposed of in accordance with the laws implemented at that time. For further information regarding the recycling arrangements for this type of vehicle and its batteries, contact your local authority or government department, details of this can be found in your telephone directory as above.

SAFETY WARMINGS AND INSTRUCTION LABELS

The following labels are positioned on your **FR 510-GDX**, they communicate important warnings or instructions regarding the safe operation of you scooter - Please familiarise yourself with their location.

ALWAYS TAKE CARE AND BE SAFE

ADVISORY SAFETY NOTICE

⚠ Warning: Radio wave sources may affect Scooter control.

Your powered Scooter is designed to operate in appropriate environments, however radio wave sources such as radio or TV broadcasting stations, amateur (Ham) radio transmitters, two-way radios and cellular portable telephones can affect powered motorized Scooters.

The following warnings listed below should reduce the chance of unintended brake release or uncontrolled powered Scooter movement.

1. **Do not turn on** hand held personal communication devices such as citizen ban (CB) radios and cellular phones, while your **Freerider** Scooter is turned on.
2. Be aware of nearby transmitters such as radio or TV stations, and try to avoid coming into close contact with them.
3. If unintended movement or brake release should occur, turn your **Freerider** OFF as quickly as it is safe to do so.
4. Be aware that adding accessories or components or modifying your **Freerider** Scooter may make it more susceptible to interference from radio wave sources.

Note: **There is no easy way to evaluate their effect on the overall immunity of your powered Scooter.**

5. Report all incidents of unintended movement or brake release to your Freerider supplier, noting if there is a radio wave source nearby. He will then be able to diagnose your Scooter to eliminate any possible Scooter component failure. Please note a charge may be made for this service.

Your Scooter has been tested to the following standards with reference to **EN12184**. Emissions **EN50022(B)**, Immunity **IEC1000-4-3, E.S.D. IEC801-2**

Note: **All figures, speeds, measurements and capacities shown in this manual are approximate and do not constitute specifications. Our policy is one of continual improvement. We reserve the right to alter, without notice, any weights, measurements or other technical data shown in this manual. If you require specific accurate data, please contact your Freerider authorized dealer.**

Enjoy your FR 510-GDX

CODE OF PRACTICE FOR CLASS 3 VEHICLE USERS

WHAT IS A CLASS 3 VEHICLE?

Three types of 'invalid carriage' are defined in The Use of Invalid Carriages on Highways Regulations 1988':

Class I - manual wheelchair, i.e. self-propelled or attendant -propelled, not electrically powered;

Class 2 - powered wheelchairs and scooters, for footway use only with a maximum speed limit of 4 mph.

Class 3 - powered wheelchairs, and other outdoor powered vehicles, including scooters, for use on roads/highways with a maximum speed limit of 8 mph and facility to travel at 4 mph on footways (see also definition page 4 of this manual).

WHERE CAN CLASS 3 VEHICLES BE USED?

They can be used:
On footpaths, pavements, bridleways and pedestrian areas at a maximum speed of 4 mph.
On most roads at a maximum speed of 8 mph.
They cannot be used on motorways, cycle lanes or in bus lanes (when in operation). Nor is it advisable to use them on unrestricted dual carriageways (i.e. those with a speed limit of over 50 mph). If they are 4-wheeled vehicles, then they must use an amber flashing light for conspicuity when used on dual carriageways.

WHAT ARE THE LEGAL REQUIREMENTS?

A Class 3 vehicle is not legally defined as a motor vehicle and, therefore, the user is not required to have a driving license or to take a test. The vehicles themselves are not subject to Vehicle Excise Duty ('road tax') or mandatory insurance requirements.
However, the law does say that:
a Class 3 vehicle can only be used by a disabled person aged 14 or over, or by an able-bodied person who is demonstrating a vehicle before sale, training a disabled user or taking the vehicle to or from a place for maintenance or repair.
The vehicle must have certain construction features, including:
- a maximum unloaded weight of 170 kg (380 lbs);
- a maximum width of 0.85 meters (2'9");
- a device to limit its speed to 6.4 kmph (4 mph);
- a maximum speed of up to 12.8 kmph (8 mph);
- an efficient braking system;
- front and rear lights and reflectors, and direction indicators which are able to operate as a hazard warning signal;
- an audible warning instrument (horn);
- a rear view mirror;
- an amber flashing light if a 4-wheeled vehicle is used on an unrestricted dual carriageway. i.e. a dual carriageway road having a maximum speed in excess of 50 mph.

If these conditions are not met, you are liable to prosecution by the police.

Should I have insurance?

Although it is not a legal requirement, an insurance policy is strongly advised. Suitable schemes are not too expensive and are available to cover your personal safety, other people's safety and the value of the vehicle.

WHAT SHOULD I DO TO PREPARE MYSELF FOR THE ROAD?

If you are using a powered vehicle for the first time, or if it is a while since you have driven on the road, you are strongly advised to get some training. For details of courses, contact your local Disabled Living Centre, Mobility Centre or your local authority's Road Safety Unit, or contact the Department of Transport's Mobility Unit. Useful addresses are listed at the end of this booklet.
Carefully read the owners instruction manual for your **Freerider** Scooter before driving. Please make certain it is in full working order.
In addition to this booklet, you should also look at a current edition of the Highway Code and become familiar with the various traffic signs and signals you may come across when you are driving.
Although there is no legal eyesight requirement, you should be able to read a car's registration number from a distance of 12.3 meters (40 ft).
It is essential that you monitor your ability to do this regularly throughout your time as a Class 3 vehicle user.
It is advisable to wear fluorescent clothing during the day and something reflective at night. This will help others to see you in daylight or poor visibility. The leaflet 'Be Safe. Be Seen', which is available free from the Department of Transport, gives advice on clothing. But above all don't wear dark clothes at night.
Your **Freerider** Scooter has a lap belt fitted to it, always use it - even for short journeys.
As a general rule, plan your journeys carefully. This way, you could reach your destination without having to negotiate major roundabouts, rush-hour traffic, or busy roads. However, if the situation on the road does become too daunting, you can always switch to pavement mode (4 mph) and move to the footway until you feel confident enough to rejoin the traffic.

WHAT 'RULES OF THE ROAD' SHOULD I FOLLOW?

Class 3 vehicles should not be used if you are under the influence of alcohol, drugs, or medication that may affect your driving ability. If you are in any doubt, consult your doctor.

ON FOOTWAYS

Show consideration for pedestrians, particularly elderly people or those who are blind, partially sighted, deaf or hard of hearing. Although Class 3 vehicles can legally travel at 4 mph on footways or in pedestrian areas, it is not always safe to travel at this speed if pedestrians are not able to move out of the way quickly enough, e.g. in a crowded shopping precinct.
You can take advantage of pelican and zebra crossings when in 4 mph mode in order to cross from one footway to another.
When moving off the footway on to the road (to use the vehicle in the high speed mode), take special care. Before moving off, always look round and make sure it is safe to join the traffic and watch out, in particular, for cyclists.

ON THE ROAD

When on the road, drive with due care and attention, always traveling in the direction of the traffic, obeying traffic signs and signals and give way to pedestrians who

are crossing at junctions or pedestrian crossings. Keep a special look out for children crossing roads because they may lack the skills and experience to negotiate traffic safely.
Remember that, in comparison with the majority of other vehicles on the road, a Class 3 vehicle is not powerful or conspicuous. As a Class 3 vehicle driver, you are often in a similarly vulnerable position to cyclists - especially at roundabouts and junctions.
Direction indicators must always be used to indicate maneuvers on the road.

Always use the front and rear lights in the dark or when visibility is poor due to adverse weather conditions.
The vehicle's horn should not be used when the vehicle is stationary (unless there is danger due to another moving vehicle) or between 11.30 at night and 07.00 in the morning. When the vehicle is moving, the horn should be used to warn other road users that you are there - it should not be used as a rebuke.

Watch out for obstructions in the road ahead, such as drains, pot-holes and parked cars. When passing parked cars, watch out for doors being opened in your path or the vehicle moving off without indicating.

HOW TO DEAL WITH ROAD JUNCTIONS AND ROUNDABOUTS?

Take extra care at junctions. When going straight ahead at road junctions, check to make sure there are no vehicles about to cross your path.
When turning left, watch out for other vehicles overtaking, prior to turning left across your path.
There are several options for dealing with right turns, especially turning from a major road. If moving into the middle of the road is difficult or dangerous, you can stop on the left hand side of the road and wait for a safe gap in the traffic. You can also negotiate the turn as a pedestrian, i.e. switching to pavement mode and traveling between footways. If the junction is too hazardous, it may be worth considering an alternative route.

Similarly, when negotiating major roundabouts, e.g. roundabouts with two or more lanes, it may be safer to stay in the left hand lane, even when you are turning right or taking the last exit and treat each exit you cross as a junction. Alternatively, it may be safer to use the footway or find a route which avoids the roundabout altogether.

PARKING

All the normal parking restrictions should be observed. Your vehicle should not be left on the footways unattended if it causes an obstruction to other pedestrians -especially those in wheelchairs or those with prams or pushchairs. Remember too, to look out for blind or partially sighted people when parking.
Parking concessions provided under the Blue (Orange) Badge Scheme will apply to all Class 3 vehicles displaying a current badge. If you think you are entitled to a badge, you can apply to your Local Authority Social Services Department or to the Chief Executive of your local Regional or Island Council if you live in Scotland.

HOW CAN I KEEP MY VEHICLE ROADWORTHY?

It is essential that you keep your vehicle in good working order in accordance with Freerider's recommendations. Freerider suppliers should be able to answer any questions you might have about the maintenance of your Class 3 vehicle.
In general, keep your batteries fully charged and your tyres at the correct pressure.
Lighting equipment should be kept clean and in good working order. Windows, windscreens and mirrors should also be clean and clear of obstructions for good all-round vision.
It is important that your vehicle undergoes a thorough safety check at least once a year.

GETTING TO KNOW YOUR FR 510-GDX

PRODUCTION DESCRIPTION

Your **FR 510-GDX** supplied has fitted as standard the following features:
- Rear-wheel drive via sealed drive axle
- 75 A/H sealed non-maintenance lead-acid batteries (100Ah option)
- Captain-style seat with folding backrest, adjustable width arm-rests and safety belt
- Seat rotates and is fully adjustable forwards and backwards and for height.
- Simple controls situated on the steering handlebars regulate speed and braking
- Three independent braking systems
- Steering is controlled by a handle-bar attached to a linkage system which turn the two front wheels
- 'State-of-the-art' micro-controller electronics ensures a smooth, comfortable and safe drive on all surfaces and gradients.
- 4 / 8 m.p.h. speed switch selection.
- Automatically charging system.
- Front and rear suspension via sprung hydraulic shock absorbers.
- Front and rear lights. Direction indicator warning lights.

- Rigid steel tubular frame.
- Your Scooter seat can be removed; with the handlebars lowered and with the aid of ramps your **FR 510- GDX** can be transported in a suitable estate car.
  However your Scooter is not designed to transport the user in a moving vehicle.

Your FR 510-GDX Scooter should be serviced as recommended in this manual by an approved Freerider Distributor in order to ensure safe, reliable operation. For service details and list of consumable parts, options and accessories refer to the appropriate section of this manual.

FR 510-GDX FEATURE GUIDE

1 Steering handlebars
2 Driving mirror
3 Console
4 Charging socket
5 Basket
6 Front light
7 Direction indicator lights
8 Front bumper
9 Amber side reflectors
10 Floor mat
11 Alloy wheels with black tyres
12 Rear lights and indicators
13 Adjustable angle seat with backrest

PURPOSE OF YOUR FR 510-GDX SCOOTER

⚠ Your **FR 510-GDX** Scooter is suitable for persons who require independent mobility combined with comfort, maneuverability, reliability and a product that needs a minimal amount of maintenance.

The intended user should posess some degree of ability with the use of both arms and hands, reasonable balance and good eyesight, and a degree of spatial awareness. The user should have received training in the use of the product, preferably in their normal environment. The maximum user weight for the **FR 510-GDX** can be found in the rear of this manual, under 'Technical Specification'.

Your FR 510-GDX is suitable for use indoors at low speeds in shopping malls or outdoors on dry, reasonably smooth level road surfaces. It climbs slopes safely up to 8° and over obstacles up to 2.5cm (1"). Your Scooter should not be used in torrential rain or snow, on loose slippery surfaces and slopes or on wet grass etc., which could become a danger to the rider, and other road users.

Passengers must not be carried. Excess baggage outside of the seating area can affect stability.

Your FR 510-GDX is a 'Class 3* vehicle and designed for pavement use at up to 4mph. And for roads at up to 8mph. To drive a FR 510-GDX you must be aged 14 years or over, be suffering from some physical disability and capable of reading a car's registration number at 12.3 meters (40ft). Do not drive your FR 510-GDX if you are under the influence of alcohol, drugs or medication that may affect your ability. If you are in doubt consult your doctor. You should also familiarize yourself with the current edition of the Highway Code and read the Code of Practice for Class 3 vehicles (page 34 of this manual).

* Definition

Electrically powered scooters are classified in the following categories: Class 3 as defined in "The Use of Invalid Carriages on the Highway Regulations 1988". A Scooter designed for use on roads/highways with a maximum speed limit of 8mph and a facility to travel at 4mph on footways. Class 'B' as defined in The European Standard EN12184: 1999. A scooter sufficiently compact and maneuverable for some indoor environments and capable of traveling over longer distances and negotiating outdoor obstacles.

GETTING TO KNOW YOUR FR 510-GDX

Your **FR 510-GDX** Scooter is delivered in a strong tri-wall carton. When unpacking the carton, carefully remove the nylon strapping avoiding contact with the face; warn onlookers of your actions and of possible danger. Remove all packing materials, avoid using sharp instruments as this may damage the Scooter. Carefully remove the Scooter from the carton base; to minimize damage to the Scooter and the operator, two people should be used for this operation.

Safely dispose of all packaging materials, your local waste disposal authority can advise you on this procedure.

Your **FR 510-GDX** Scooter is delivered fully assembled, fitting the two batteries, driving mirror and the seat assembly together with minor adjustments are detailed on the following pages under 'Operation a full but

these is no detail on boots fit mirror or seat technical specification for your **FR 510-GDX** can be found at the rear of this manual.

A great deal of thought and consultation has gone into the design of your state-of-the-art, life-changing Scooter. Your **FR 510-GDX** Scooter will help to increase your mobility and therefore give you more time and energy to enjoy life. The **FR 510-GDX** is a medium size four wheeled vehicle which will allow you to negotiate obstacles encountered on pavements and most roads.
The following are just some of the features that will enhance your driving.

COMFORT - The contoured seat together with the shock absorbing suspension helps cushion you from the vibrations of a journey, giving you day-long comfort. A fully proportional speed-controller with a speed restriction facility allows you a smooth, safe jerk-free ride.

VERSATILITY - The multi positional seat which swivels for easy access, together with infinitely variable handlebar positioning, will allow you to set the Scooter to your own individual driving position.

SERVICE - Your **Freerider FR 510-GDX** has been designed to be service friendly. Sealed batteries which are virtually maintenance-free will give your **FR 510-GDX** the power it requires. Should you need to take your batteries on an aircraft, then you can have peace of mind because the batteries are totally spill-free. (Please consult your carrier for details).

SAFETY - The advanced speed controller has been designed with extensive self-checking circuits to give you the maximum 'state-of-the-art' safety technology. Two fully automatic electronic braking systems give the driver confidence in any environment. The on/off key can be removed for added security and safety, this disables the electronic drive circuitry, and your **FR 510-GDX** cannot therefore be driven away by any unauthorized person.

CAUTION - Do not switch 'off' the on/off power key when you are moving; this will automatically apply the motor parking brake suddenly and could place you in a dangerous situation.

CHARGING - Your **FR 510-GDX** is fitted with a battery level indicator. Charging is straight forward. Your charger is fully automatic and will reduce to a top-up charge mode when the re-charge cycle is complete. (See Batteries and Battery Charging section of this manual).

FREEWHEELING YOUR SCOOTER

If for reasons of convenience, you require to push your **FR 510-GDX** Scooter for a short distance, the drive system can be put into 'freewheel mode'. This will allow your **FR 510-GDX** to roll freely.

FR 510-GDX FREEWHEEL PROCEDURE

The freewheel device is a red lever located at the rear right hand side of your Scooter. To freewheel your FR 510-GDX first switch off the power switch located on the **FR 510-GDX's** control console. Pull up the red lever until a distinct click is felt (disengage). You can now push your FR 510-GDX with ease. Please note, in this mode with the power switch in the off position, the braking safety system is automatically activated when the Scooter is pushed quicker than walking speed, this is an automatic 'run away' safety checking system, it also reduces the risk of casual theft.

By switching on the console power switch at this stage you will introduce some heavy motor braking, you will note the green status light on your console is now flashing five times. This indicates that your FR 510-GDX is in a freewheel mode and you cannot drive your Scooter. Note, the quicker you push your Scooter the heavier the brake will be applied.

To re-engage the drive system, simply push backwards on the red handled lever until a distinct click is felt. Switch the power switch on your console off and then on, the green status light will be fully illuminated and you will be able to drive your FR 510-GDX once again.

⚠ Warning: **Do not sit on your FR 510-GDX Scooter with the freewheel device in the disengage position. Your FR 510-GDX Scooter has limited braking and will not drive in this mode, the green status light on your console will flash five times.**

⚠ Warning: If your FR 510-GDX Scooter is in the freewheel mode when you turn on your power key switch and depress your speed forward - reverse lever, you will not be able to move under motor power. Dismount and re-engage the drive system by pulling the red freewheel lever down. Remount your Scooter, switch the power switch off and on again until the green status light fully illuminated. Your FR 510-GDX will now drive under motor power again.

⚠ Warning: Always check that the freewheel device is in the drive position before attempting to drive your Scooter after it has been left unattended for a period of time. **Failure to observe this warning may result in an accident.**

General note: If you are able to push your Freerider **FR 510-GDX**the drive system is disconnected. Do not attempt to drive your Scooter. Please check once again the above mentioned procedure for re-engaging the drive.

⚠ Warning: If your batteries are disconnected from your Scooter there will be no brake function in the

freewheel mode. Do not leave your Scooter unattended in this situation as it could roll away causing damage to other parties or property. Always re-engage the drive system when left unattended.

⚠Warning: **Yellow** warning notice label situated on your rear cover located under your seat.

Please take extreme care

LEARNING TO GET ABOUT

⚠Warning: If you are not an accomplished outdoors mobility product driver, we strongly recommend that you first practice in an open area, free from traffic and preferably with an attendant who can assist you.

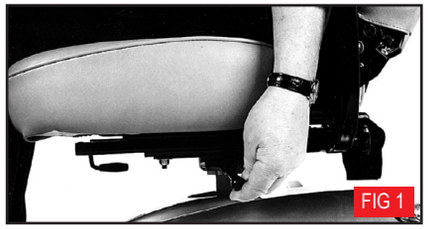
MOUNTING

For your first drive make certain that you and your **FR 510-GD**X Scooter are on a level surface. Put the power on/off key into its slot, but leave it turned off. Stand behind the **FR 510-GDX's** seat, and reach down to the 'Seat Lock Lever'. It will be on the left side directly under the armrest. Grasp the 'black' knob on the lever and pull up, releasing the Seat (Fig 9, Page 27). It will now turn easily to meet you. If need be, you can lock the seat into position to make it steady before you sit down. You can also lift up the armrest to assist this procedure. Seat yourself and swing the seat to face the handlebars. Make sure you are straight, then release the spring assisted lever, making certain that it locks your seat firmly in position.

Next, turn the 'Speed Adjustment Dial' to minimum (min), and the Hi/Lo switch to (Lo), turn the 'on/off' key to 'on'. (The battery state indicator will illuminate). Gently operate the right control lever to start you in a forward direction. To stop simply release the lever, the brakes will be automatically applied.

⚠Warning: Please take care not to have your hand on the forward/reverse control lever when you switch 'on' your **FR 510-GDX**; this will result in your machine going into a fault mode. Switch 'off ' then 'on' again to clear the fault.

⚠Warning: If your **FR 510-GDX** has been adapted for left hand, forward operation then this procedure will be reversed: i.e. operating with the left control lever for forward direction and the right control lever for reverse direction.



DISMOUNTING

Always switch off your Scooter before dismounting. Locate the seat lever and pull up. Now you can rotate the seat, lock it, and ease yourself onto your feet.
If you prefer you can swing the armrests back to allow you to pivot on your seat and then ease yourself onto your feet.

⚠Caution: Do not use the handlebars as a crutch to lever yourself out of your seat. Failure to observe this warning may damage the handlebar mechanism and make the Scooter unstable.

⚠Warning: Always keep the seat locking lever pulled fully up when rotating your seat, failure to observe this warning will result in permanent damage to the seat post structure.

PARKING IN PUBLIC

If you need to park and leave your **Freerider FR 510-GDX,** simply remove your key. This will keep the brake on and make your Scooter difficult to move. It is best to leave it in sight of someone like a store assistant etc. who can watch it for you. Another precaution is to note your serial number and the date of purchase.
Your serial number can be found on the plate attached to the front wheel cross member located under the body cover.

BASIC DRIVING

Make certain you are comfortably seated on your **FR 510-GDX** and both armrests are down. Ensure that the 'Speed Control Dial' and 'Hi-Lo' switch are set to minimum for your first drive. When you have become more confident you can increase the settings to a higher speed. Push the right speed control lever slowly, you will very gently move forwards. Release the lever, and you will gently stop. Practice these two basic functions until you get used to them.

Steering the **FR 510-GDX** is easy and logical by turning the handle bars in the direction you wish to maneuver. Be sure to remember to give a wide clearance when turning so that the rear wheels follow the path of the front ones, instead of cutting short.

Cutting short on pavement corners or 'cut outs' can mean that a back wheel will go off the pavement, causing a stability problem. Avoid this at all times by steering an exaggerated wide arc around the obstacle.

If you must steer in a tight spot, such as entering a doorway or when turning around, stop, turn the handlebars to where you want to go, then apply the power gently. This will make the **FR 510-GDX** turn sharply. It will still go gently, and with complete stability. Practice in an open area, until you are proficient. Please remember that your **FR 510-GDX** Scooter is a long vehicle, please take this into consideration when making

a turning maneuver. In some circumstances you may need to make several maneuvers to completely change direction i.e. three point turn.
Reversing requires attention. Be sure your 'Speed Control Dial' and 'Hi-Lo' switch are set to minimum before you reverse, push the left reverse control lever (Fig 8, Page 26). Remember, when you reverse you have to steer in the opposite direction to the way you want to go. Practice is required here, again use that open space. Please note as a safety requirement reverse speed is half of forward speed.

Note: If your **FR 510-GDX** is set up for left forward driving the afore mentioned description is reversed. Also note when driving in reverse the speed dial may need to be set towards 'max' to allow sufficient power to your drive motor, failure to note this warning may 'stall' your Scooter.

REMEMBER: If it is a tight turn, turn your steering column before applying power. Steer wide of all corners and obstacles, please move slowly and with care.

⚠Warning: Do not turn your 'on-off' power key switch to the 'off' position when your **FR 510-GDX** is in motion, this will apply the motor brake. Failure to observe this warning may irreparably damage the main electronic speed control unit or drive transmission. Always first slow your **FR 510-GDX** down to a stationery position before you switch your Scooter off.

CONTROL THROUGH TIGHT SPOTS

When you start using your **FR 510-GDX** you will meet some obstacles that will require some practice to drive through smoothly.
Here are some common problems, with tips that will help you master them quickly. You will soon be in control through doors and up and down ramps with surprising ease by following these tips.

CONTROL THROUGH DOORS

Approach an unfamiliar door slowly, sizing it up. Does it have a knob or push bar? Does it open toward you or away? Think in terms of using the power of the **FR 510-GDX** to do the work for you! You need not strain. Remember your Scooter is a wide vehicle.

Hold the doorknob or bar in one hand and apply power with the other hand. If the door is self closing, you can go through, allowing the door to close behind you, if you go quickly enough. If not, just stop when you're clear of the door and push it closed.

If the door opens toward you, hold the knob or bar with one hand and gently let the reverse power do the work. When the door is open wide enough, go ahead quickly, leaving the hand on the door to keep it free of the Scooter and letting go as you pass the doorjamb. It is an easy technique. Practice makes perfect. Remember - your **FR 510-GDX** can do the work without wearing you out!

Going through doors, with the back wheels: If you're not moving, your rear wheel is probably caught. Reverse and try again. Take your time - relax - enjoy yourself.

⚠Caution: Remember your **FR 510-GDX** Scooter is a large vehicle and in some situations it may be too long or wide to maneuver through some doors or walkways.

CONTROL ON AN INCLINE

More and more buildings have ramps for wheelchair access. Some have a change of direction in the middle, and good cornering is required.

Make a wide maneuver with your front wheels around tight corners, so that your back wheels follow a wide arc to stay clear of the corner.

If you stop while facing uphill, the automatic parking brake will hold you safe. To start again, slowly operate the forward direction lever, the parking brake will release and you will start to move.

Going down the ramp, keep your speed slow. This will keep you in a safely controlled descent. If you wish to stop completely, release the control lever, and you will come to a gentle stop, avoid sudden stop starts.

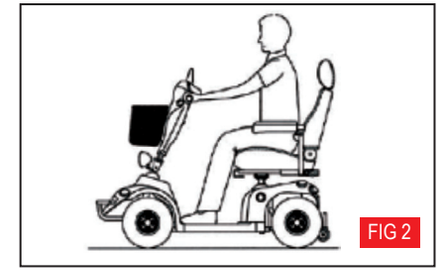


Fig17: Normal driving position

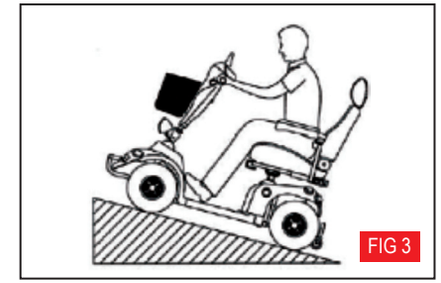


Fig18: Increased stability driving position

When you approach an incline, it is best practice to

lean forward, (Fig 2,3). This moves the centre of gravity of your **FR 510-GDX** towards the front of the Scooter for improved stability. When you approach a decline, it is best practice to lean backwards in your seat, this will transfer the centre of gravity towards the rear of your Scooter to improve traction and stability.

⚠ Warning: Do not exceed the incline guidelines or any other specifications presented in this manual.

⚠ Caution: Most new pavements have wheelchair access ramps at intersections. We strongly recommend that you use these at every opportunity. If there are none, and you can't find a driveway either, you may be able to go over the kerb, if it is small enough. You can also with your **FR 510-GDX** Scooter drive on the road until you find a suitable entry point for the pavement.

⚠ Warning: If you require to climb or descend a kerb or similar small obstacle, you should be aware that this will 'jolt' and bump your Scooter and also yourself, it will also increase the risk of tipping your Scooter and making it less stable. Only attempt to negotiate up or down a kerb or similar obstacle if you are fully competent and medically fit and are able to counter balance any sudden movements towards instability.

The obstacle must be within the capability of your Scooter, the obstacle must be under 9cm (3.5"). (Please note your Scooter is very powerful and can climb higher obstacles but the ground clearance of the lowest point is your front steering axle, failure to observe this warning may permanently damage your Scooter, and will not be covered by warranty.)

Be careful. When negotiating a kerb or similar obstacle it must be approached square-on, at a direct 90° angle. Always approach the kerb so that both front and back wheels go over at the same time, and in the same direction.

When going up a kerb, turn your 'Hi/Lo' speed switch to 'Lo' speed, and your 'min-max' speed range knob to a suitable setting for motor power to negotiate the size of the obstacle. Start 15cm (6") back from the kerb. Apply the power gently, increase as necessary. Steer straight keeping the power maintained, do not stop half way or you may cause an obstruction. Be prepared to feel a bump as each wheel reaches and climbs the kerb. Again, with an amount of practice, you will find this procedure easy to do.

⚠ Warning: On no account should you charge at the kerb, this may damage your Scooter and could make it unstable - **always think before you make a maneuver.**

Going down a kerb is simple, but must be taken slowly to avoid jarring. Slowly approach the obstacle driving your front wheels over the kerbs. Use as little power as possible. Look out for traffic, observe the rules of the road at all times. Accelerate quickly over the road looking and listening for other road users. It is good practice to switch your 'hazard' lights on when making this kind of maneuver, you will make your Scooter more visible to other road users.

⚠ Warning: Please note the size of the kerb that you can climb or descend will depend on certain factors.

1. Your body weight, together with any objects you may be carrying.
2. The shape of the kerb. Square kerbs set in gullies are very difficult to negotiate.
3. Weather conditions; wet slippery surfaces can be dangerous. Always avoid these situations if possible.

Note: If your Scooter wheels have been fitted with a solid puncture resisting inserts then kerb climbing must be avoided. **Freerider** do not recommend these inserts as they reduce the pneumatic suspension properties of your Scooter.

CONTROL OVER GRASS & GRAVEL ETC.

Care must be taken when attempting to drive over soft surfaces such as those found in parks etc. The surface may look level, but this can be deceiving and hidden dangers may make your **FR 510-GDX** become unstable or grounded. Avoid unkept grass, loose deep gravel or sand, do not exceed the capabilities of your Scooter.

Always have an attendant to assist you in circumstances where you are not certain of the terrain. Always anticipate and think safety.

⚠ Caution: Because of the power of your **Freerider FR 510-GDX**, you will be able to climb inclines. But the maximum safe gradient limit is 10 degrees. The reason for this is to ensure good stability.

Always avoid where possible turning on slopes or climbing kerbs. Always make certain that your **FR 510-GDX** is in full working order and your batteries are fully charged before attempting to drive.

Never attempt to drive beyond the design capability of your **Freerider FR 510-GDX**. Observe weather conditions. Tyres can slip on wet or icy surfaces.

DO NOT DRIVE THROUGH DEEP WATER OR LEAVE YOUR FREERIDER EXPOSED TO HEAVY RAIN.

i.e. During or after a thunderstorm.

Do not attempt to turn when negotiating an incline, only turn when all wheels are fully on or off the incline; failure to observe this warning could result in the machine becoming unstable and toppling over.

Always lean forward when ascending an incline and backwards when descending. This will enable you to maintain good stability and will eliminate any chance of a rear or forward upset.

PLEASE NOTE: The rear stability of your Scooter is dependent on a number of factors which you should consider before attempting to climb an incline or other obstacle: (a) your height; (b) the height of your seat; (c) your weight and (d) the angle of the incline you are attempting to climb. All of these factors can affect the rear stability of your **Freerider FR 510-GDX** Scooter. If you are unsure of your capability to climb an obstacle, then try another route - always think 'safety first'.

BATTERIES & BATTERY CHARGING

BATTERY INSTALLATION

Your **FR 510-GDX** Scooter is equipped a battery pack with two maintenance free 12 volt 75Amp/hr batteries. The batteries are linked together by wiring cables to supply the electronic system with 24 volts of power.

⚠ Warning: **It is imperative that the two batteries are connected correctly to prevent a short circuit between the two batteries.**

When first installing the batteries follow these assembly instructions.

1. Connect the red wire of the battery cable to the + (positive) terminal of the battery, with the fasteners provided.
2. Connect the black wire of the battery cable to the -(negative) terminal of the battery, with the fasteners provided.
3. Repeat this procedure on the second battery making certain the red/black terminal covers are secured over each terminal.
4. Position each battery onto the Scooter frame (see Fig 4), with the battery terminals to the outside and away from the metal chassis.

⚠ Caution: Batteries are heavy you may require assistance.

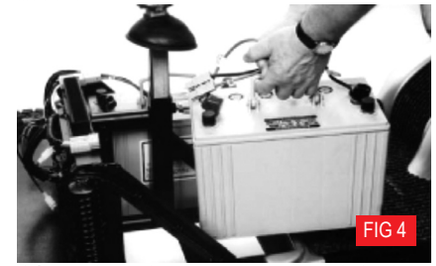


FIG 4

5. Secure the two batteries into position with the clamp bracket 'J' bolt (Fig 5) and wing nut supplied (Figs 6).

Note: The 'J' bolt hooks into an 8mm hole situated in the seat post support bracket.

FIG 5

6. Connect the two grey plugs of the batteries into the two grey sockets of the wiring circuit (Fig 6).

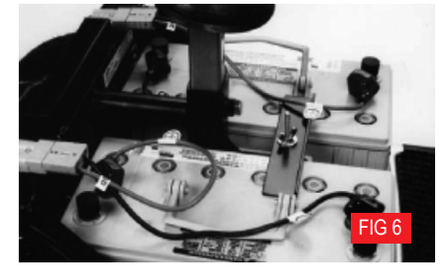


FIG 6

7. Switch on your Scooter, the battery meter will now illuminate to show the state of charge in the batteries and your Scooter is ready to drive.
8. Switch off your Scooter, fit the battery cover and seat. (see also Battery Installation diagram Fig 7)

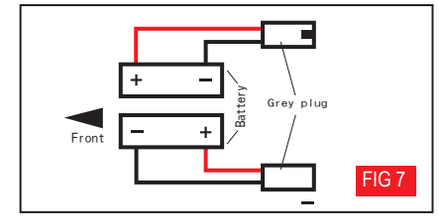


FIG 7

BATTERY CONNECTIONS

⚠Warning: Batteries are heavy, always handle with two hands. You may require assistance. Do not allow metal tools to touch both battery terminals together, this will cause an electrical short and may damage the battery and injure you. Always cover the battery terminals with the red/black plastic covers.

BATTERY CHARGING

Your **FR 510-GDX** has a lot of power for a Scooter. Keeping it working to its maximum potential means that its two batteries must be maintained with full power. Nightly recharging, after use, will help you to give them a longer life and will ensure your **FR 510-GDX** is always ready to go when you are.

BATTERIES

Your **FR 510-GDX** is fitted with two sealed maintenance -free batteries, especially designed for motive traction use. This means that you do not have to worry about topping up the cells.

⚠Warning: Do not attempt to remove the safety valves situated in the top of the battery. Failure to observe this warning will invalidate your battery guarantee.

Your **FR 510-GDX** batteries are virtually maintenance-free because the electrolyte is immobilized in a special form and therefore will not leak out, even if the battery is accidentally overturned.
Because your Freerider batteries are sealed they are more likely to be accepted for carriage on aircraft. Please consult your carrier prior to departure, as they will need advance warning that you wish them to carry batteries. Please note: Each carrier reserves the right not to carry what may be termed 'HAZARDOUS CARGO'. Freerider cannot be held responsible for their final decision.

BATTERY CHARGER

The battery charger supplied, is special to your FR 510-GDX and it may not be suitable for any other powered mobility product. Only use the charger supplied with your FR 510-GDX other makes of charger may permanently damage your batteries and would invalidate the Guarantee.

CHARGING THE BATTERIES

Please refer to the battery charger instruction attached along with the battery charger.

YOUR GUIDE TO SAFE AND LASTING BATTERIES

1. For longest life, your batteries should always be re¬charged after use. Preferably over night.
2. If your FR 510-GDX is not used for a period of time, a refreshing charge should be given every month. Never leave your batteries in a discharged condition. This is particularly important with sealed batteries as fitted to your **FR 510-GDX**. If your batteries fall below a total terminal voltage of 12 volts, the charger supplied with your Scooter will not operate. Please consult your Freerider dealer.
3. If your FR 510-GDX has been stored away for some time, re¬charge your batteries before re-using it.
4. **Every month**, check the connections on the batteries, making sure they are tight and clean.
5. **Batteries carry a limited guarantee from the original manufacturer which is subject to a stringent wear and tear clause. Any battery faults due to a defect in the original manufacture will normally become obvious within the first two months. Any gradual deterioration in performance after this period is normally associated with fair wear and tear, mis-use or accidental damage and, as such, is not covered by the manufacturer's warranty. (This does not affect your statutory rights).**
   Note: If one battery becomes faulty during the guarantee period only that battery from the pair will be replaced.

FREQUENTLY ASKED QUESTIONS

Why do my batteries require recharging?

Batteries are the fuel tank for your Scooter. They provide the vital energy to power your vehicle. When you ride your Scooter, the drive motor consumes the energy stored in the batteries. The battery's energy is gradually reduced over the period of driving time and will need to be replaced before you can use your Scooter again. Similar to the situation with a motor car, in that you need to replenish the fuel as it is used up as energy, likewise with your Scooter, you need to replace the used battery energy by re-charging the discharged battery cells.

How does my Charger work ?

Your battery Charger is an intelligent automatic charging instrument. Your Charger's robust framework contains a number of quality components; namely a transformer, rectifier and complex control circuitry.
The Charger receives the 230volts domestic electricity supply via a standard 3-pin wall plug and reduces this voltage down to 24 volts via a transformer. At the same time it rectifies the A.C., alternating domestic current into D.C., direct current. This matches exactly, the voltage characteristics stored by your Scooter's batteries. Your Charger automatically controls the re-charge cycle from the moment that you switch it on to the moment the green 'Charge Complete' light on the face of your Charger illuminates.

When your battery's voltage is very low, the Charger will work extremely hard to replenish the spent energy. This is called the 'Bulk Charging' stage. As the battery voltage approaches 90% of the full charge capacity, the Charger reduces its output for the final stage of the re-charge cycle. The time taken from switch-on to the end of the bulk charging will vary, depending on the amount that the batteries have been used, or in time their age. At this point a timer is automatically started, to regulate the final stage of the charging cycle, this set time ensures maximum capacity and battery life.

The length of time to re-charge your batteries will vary from 4 up to 6 hours. This variation in time is due to the following factors:

1. Depth of discharge - The amount of energy you have removed from your batteries when driving your Scooter.
2. Battery age - This is due to the changes in their internal electrical resistance.

Where can I re-charge my batteries ?

In most safe domestic environments, i.e. your house, garage or shed. Do not expose to rain or spray - for indoor use only.

Later on in this information, there is reference to the way temperature variations can affect the performance of your vehicle. When charging your batteries where reasonably practicable, ensure that the battery Charger is close to the vehicle being charged so that the temperature of the battery Charger and batteries are almost compatible.

For example, a vehicle may be outside whilst the battery Charger is inside. It is possible in this situation that the battery Charger will sense the inside temperature, whereas the batteries on the vehicle will be at the outside temperature, resulting in an undercharged situation. This situation must be avoided.

How often must I re-charge my batteries ?

Many factors come into play when deciding how often to charge your batteries. You may use your vehicle all day on a daily basis or you may not use it for weeks at a time. Other factors such as driver and baggage weight, smooth or rough terrain, flat areas or inclines and speed must all be considered.

With these variables you should concern yourself with two questions: HOW OFTEN should I charge and for HOW LONG? The Charger is designed so that it is impossible to overcharge your batteries. If you follow the guidelines below, your batteries will provide safe and reliable operation.

1. **If you use your vehicle during the day.** put it on charge as soon as you have finished using it. The Charger is fully automatic so it will not overcharge your batteries. Your vehicle will be ready each morning to give you a full days service. It is recommended that you charge your batteries after daily use until the green 'Charge Complete' light illuminates.
2. **If you use your vehicle infrequently** (once a week or less) you should charge it at least once per week until the green 'Charge Complete' light illuminates.
   Remember: Keep your batteries fully charged and avoid deeply discharging them.
3. **Storing batteries :** Batteries should always be stored fully charged. Check once a month and recharge fully if needed. Sealed batteries can hold their charge for approx. 6 months. Always disconnect battery leads. If they are left connected on the Scooter, remember key switches, meters, lights and electronic circuits can drain the batteries rapidly. It is advisable to disconnect the batteries for prolonged storage. Store in a warm, dry room.

How can I ensure maximum battery life ?

Simply put, a fully charged battery is a happy battery! A fully charged battery will provide reliable performance and extended battery life, so keep your batteries fully charged whenever possible. Remember batteries are expensive to replace, good maintenance will save you an unnecessary expense!

Handling your batteries

Extra care must be taken when handling batteries, if you decide to dismantle your vehicle for transportation etc.
Dropped batteries, even from a very small height, can lead to damage of the internal components, causing premature cell failure. Your batteries are sealed and do not require maintenance. Do not force open the valves in the battery top.

⚠Warning: Batteries are heavy, you may need assistance when lifting.

Disposal
Pb Caution: Used batteries must not be disposed of by means of a domestic refuse disposal unit (dustbin) etc. Please contact your Dealer to dispose of used batteries. Please note, he may charge for this service.

BATTERY WARRANTIES

The batteries fitted to your vehicle are guaranteed against a manufacturing or material defect for 6 months. Any battery faults due to a defect in manufacture or materials will be obvious within a few weeks of use. Your batteries are not guaranteed to perform to full capacity for 6 months. This will, of course be dependent

on the actual use of the vehicle and how often the batteries are cycled i.e. discharged and charged.

Gradual deterioration in performance and reduction in range is normal and associated with fair wear-and-tear, misuse or accidental damage. Under these circumstances, the warranty will not apply. It is a fact that some users due to their hectic lifestyle, weight or operating conditions, may wear their batteries out during the original battery manufacturer's guarantee period due to extensive use of their Scooter. This is termed 'Cycle Life'. Batteries have a defined number of discharge cycles they can make i.e. the more times you use your Scooter the more cycles your battery will make - the shorter their life span.

If you take time to run-in your batteries properly, it will be worth it. Remember: how long your batteries will provide service is quite often a reflection of the care they receive. This is how to run-in your new batteries:

1. Fully recharge any new batteries prior to your initial use. This will bring your battery up to about 88% performance.
2. Ride your vehicle around the local area. Do not venture too far away until you become accustomed to the controls and feel of the vehicle. This will gently run-in your batteries.
3. Give your batteries another full charge and run the vehicle again. The batteries will now perform to over 90% of their full potential.
4. After 15 to 20 charging cycles, the batteries will top off at 100% charge and last for an extended period due to your patience and care in the first few days of operation.

How can I get the maximum operating time per charge ?

Rarely do we have an ideal driving situation such as a smooth, flat, hard terrain with no wind or curves and warm temperatures. More often, we are presented with hills, uneven and loosely packed surfaces, curves, wind, cold and heavy loads. All of these factors will affect the distance or running time per battery charge.

Here are a few suggestions for obtaining the maximum range per charge:

1. Always charge your batteries fully prior to your trip. It is a good idea to keep your Charger connected when the 'Charge Complete' (green) light is illuminated in the 'Top-Up' mode.
2. Maintain relevant tyre-pressures as stated in the Technical Specifications of this Users Instruction Manual.
3. Plan your trip in advance to avoid inclines, kerbs and soft surfaces.
4. Limit your baggage weight to essential items.
5. Try to maintain an even speed to avoid stop and start driving.
6. Ensure recommended routine servicing of the vehicle's components, i.e. motors, brakes, electrical connections etc., is carried out as instructed in this Users Instruction Manual.

⚠ Warning: When working or disposing of your batteries.

1. Always make certain the terminals of your batteries are covered with the red/black terminal protectors. Do not allow metal objects to short out the terminals, your battery could explode causing you injury.
2. Do not allow your batteries to freeze. If frozen allow them to naturally thaw out before charging, failure to observe this warning may damage the batteries.
3. If you need to replace your batteries, contact your **Freerider** Agent. Only batteries supplied as original equipment on your machine will give you the best performance. When charging batteries make certain the positive and negative terminals are correctly assembled. Failure to observe this warning may cause an explosion, short circuit or fire.
4. Always handle batteries carefully, they are heavy, it may require two people for lifting. Wear protective gloves and glasses when handling.

Pb 5. Dispose of worn out batteries carefully, contact your local waste disposal authority.

CHARGER MAINS PLUG

Your Charger's main input cord is already fitted with a moulded plug incorporating a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced, an ASTA approved Bs1362 fuse must be used of the same rating. If the plug supplied is not suitable for your socket outlet, it should be cut off and destroyed ☆ .The end of the flexible cord should be suitably prepared and the correct plug fitted. If any other type of plug is used a 5amp fuse must be fitted either in the plug, adaptor or at the distribution board.

☆ **WARNING:**A plug with bared flexible cord is hazardous if engaged in a live socket outlet

PLUG WIRING INSTRUCTIONS

Important: The wires in the mains lead are colored in accordance with the following code: Blue-neutral, Brown-live As these colors may not correspond with the colored markings identifying the terminals in your plug, proceed as follows: The wire which is colored Blue must be connected to the terminal in the plug which is marked with the letter N or colored Blue or Black. The

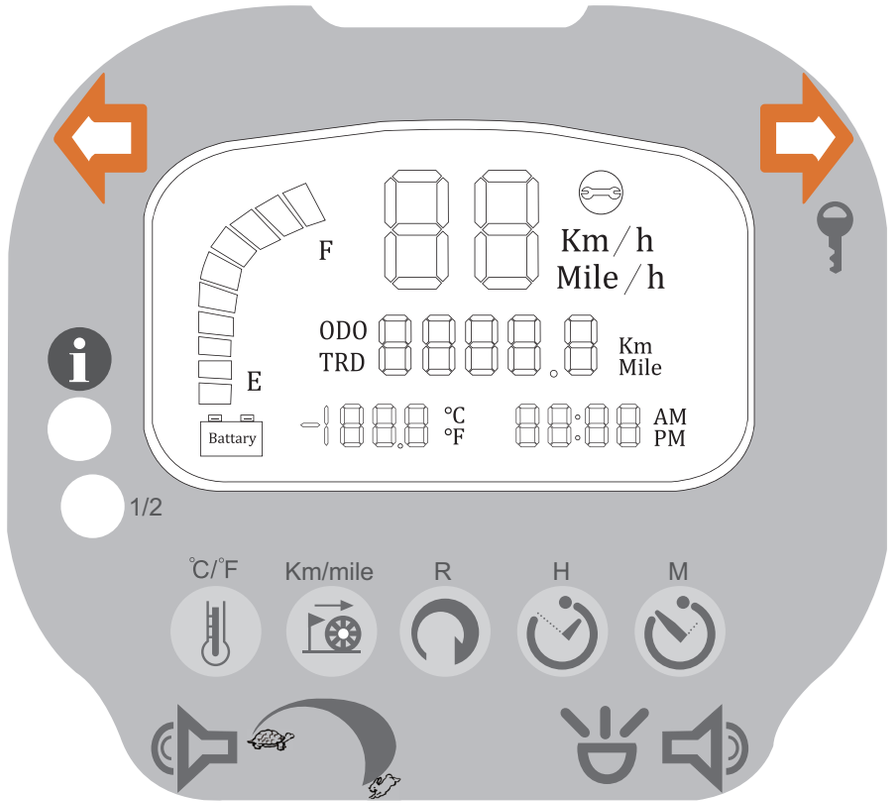
wire colored Brown must be connected to the terminal which is marked with the letter L or colored Brown or Red.

⚠ Warning:Do not connect either wire to the earth terminal which is marked with the letter E, by the earth symbol or colored green or green/yellow.

⚠ Caution:Fittings marked are double insulated and do not need to be earthed. If in doubt or difficulty is experienced, consult a qualified electrician.

OPERATION

CONTROL FEATURES



	Sign	Function	Specifications
1		On-Off Power switch	Will activate controller system and control panel.
2	F E Battary	Batteries condition Indicator	Bars will illuminate to show the level of charge in your batteries
3	ODO TRD Km Mile °C °F AM PM	Distance/ Temperature / Time indicator	Will illuminate when power On and they also exhibit in different value.
4		Direction Indicator	Will illuminate when the director switch is activated press to terminate
5		Status light	The green light will illuminate at a constant rate when Key switch on and will flash for identify faults
6	1/2	Half speed indicator	Will illuminate when the half switch is activated
7	°C/°F	°C °F	Switch between Centigrade and Fahrenheit 1. Short press for switching between Centigrade and Fahrenheit. 2. Press sustained to get into program setting mode P1, P1 is the diameter of drive wheels，scope from 15cm~100cm, a higher value will increase speed value indicate.
8	Km/mile	ODO TRD Km Mile	Switch between Km and Miles 1. Short press for switching between kilometer and mile. 2. Press sustained to get into program setting mode P2, P2 is the loadstone (magnet) setting，scope from 1~8. 3. Press sustained to reset ODO. 4. Press『Km/Mile Reset』to get back P1 mode.

	Sign	Function	Specifications
9	R	ODO TRD Km Mile	Reset the distance(range) 1. Short press to switch between ODO/TRIP. 2. Press sustained to reset TRIP.
10	H	AM PM	Hour setting 1. Short press to increase hours value. 2. Press sustained「H」to increase hour value sustainability. 3. Will return normal (drive) mode after 3 sec. without setting.
11	M	AM PM	Minute setting 1. Short press to decrease minute value. 2. Press sustained「M」to decrease minute value sustainability. 3. Will return normal (drive) mode after 3 sec. without setting.
12		Left and right horn button	Press to sound a warning to other road users.
13		Speed Adjustment Dial	Allow to pre-select you desired top speed.
14		Front/Rear light switch	Simply push on and off to Front and rear light

Your controls are located on the handlebar console (see page 21) they are:

1 **On - Off Power Switch:** Located on the right side of your control console. Insert the key and turn clockwise.
This controls the power to your speed control system. You will note that after half a second the battery condition gauge will illuminate with a solid light. Your **FR 510-GDX** is now ready to drive. To switch off your Scooter turn the key anti-clockwise. Remove the key when your vehicle is left unattended.
⚠ Caution: Do Not switch to 'off' when your **FR 510-GDX** is moving. Failure to observe this warning will result in the motor brake being applied suddenly and placing you in a dangerous situation.

You should only switch 'off' when in motion in the case of an emergency. Continual use in this mode may cause undue stress to the drive system and damage the main electronic speed control unit.
Be extremely cautious on slopes. Sit upright in your seat or your machine could become less stable.

Sleep Time: When you rest your **FR 510-GDX** Scooter with the electronics switched 'on' you are using

valuable battery power. Your **FR 510-GDX** Scooter will automatically go into a sleep mode to preserve battery energy after approximately 15 minutes. To start your Scooter again simply switch the key to 'off' and back to 'on' again, your Scooter is now ready to go.

2. Battery Gauge/Status Indicator Light: Located at the top of your console. This is a 10 bar segmented colour illuminated display which indicates when your Scooter is switched on, it also displays the status of the batteries, the speed controller and the Scooter's electrical system.

'Battery Gauge': When your Scooter is switched on, after half a second, the colored bars will illuminate to show the level of charge in your batteries. If the battery gauge displays red, yellow and green your batteries are fully charged and you are ready to drive. As the power is used up in your batteries the bar indication will move towards the red sector indicating the state of charge at that precise time.

If the battery gauge displays red and yellow, then your batteries have lost charge and they should be recharged as soon as you can, but you will still have power to spare. When the battery gauge falls into the red sector, either steady or flashing slowly, then you should recharge your batteries without delay.

It is not recommended to drive your Scooter regularly with the battery charge indication in the yellow to red sector, as this will shorten battery life. It is wise to re-charge your batteries after each journey especially as it enters the yellow to red sectors of your battery gauge (see Batteries and Battery Charging section of this manual) Note: When driving up steep slopes or similar obstacles your **FR 510-GDX's** motor will be working hard, the battery gauge may move towards the red sector, it will recover towards the green sector once the load on your motor is reduced, this does not indicate low batteries.

'Status Warning Indicator': When you turn your FR 510-GDX Scooter on, after half a second the battery bar gauge will illuminate at a constant rate indicating the state of charge level in your batteries. The battery bar gauge is connected to a very sophisticated diagnostic system which can identify faults should they occur on the main speed control system or some other part of your Scooter's electronic drive system. If in the unlikely event a fault should occur with your **FR 510-GDX** Scooter you can find out what has happened by counting the number of bars that are flashing on the battery gauge. For instance if your batteries run low on power, the status indication will flash slowly one bar, indicating that the batteries need recharging or that there is a poor connection to the batteries. The Battery Status Bar Gauge detects 9 similar fault diagnostic signals, reference to these diagnostic codes is found under 'fault finding' on page 25.

3.**Distance/ Temperature/ Time indicator :**
Will illuminate when power On and they also exhibit in different value.

4. Direction Indicator Light Switch: Located at the bottom right of your console, the direction indicator lights for right and left maneuvers are controlled by this switch. When making a turning maneuver on the road the appropriate switch direction should be made. Simply, when turning right 'flick' the switch to the right, you will note a warning 'bleeper' is audible and the appropriate direction warning lightwill flash. To cancel the direction indicator return the switch to the centre position. The left direction indicators are activated by 'flicking' the switch to the left. Caution: Please note the direction indicators are not self-canceling.

⚠ Warning:Please be aware to test the function of your direction lights before each journey. Failure to observe this warning could put you and other road users into a dangerous situation. If in the event a direction indicator
bulb fails, you will note the direction warning light on your console flashing quicker than normal, in this situation the appropriate bulb should be substituted.

5.Status light::The green light will illuminate at aconstant rate when Key switch on and will flash for identify faults.

6. Hi/Lo Speed Switch: Located on the left side of your console this switch controls the maximum high (Hi) and low (Lo) speed range for your **FR 510-GDX** Scooter. When riding on the pavement or in shopping areas the low 4mph speed range must be engaged, this is a legal requirement and must be adhered to at all times.
When the low speed range is chosen a 'red' warning light will illuminate. The Hi/Lo speed range switch can be operated while the Scooter is in motion.

Please note the Hi/Lo speed switch works in conjunction with the speed adjustment dial and the forward/reverse speed lever; the speed dial must be set to it's highest setting for maximum speed in both Hi and Lo speed settings.

7.**Temperatures :** Switch between Centigrade and Fahrenheit.
1. Short press for switching between Centigrade and Fahrenheit.

FR510GDX Flash Codes

Flash	Description	Meaning
1	Battery Low	The batteries are running low. Recharge the batteries.
2	Low Battery Fault	The batteries have run out of charge. Recharge the batteries. Check the battery and associatedconnections and wiring.

Note:
The **Low Battery Fault** Flash code, described above, is a requirement of various safety standards.
The scooter will output a visible and audible low battery warning if the battery voltage drops below 90% of its cut-off voltage. The warning will be two short flashes, and will **take priority over all other flash codes** in the system.

3	High Battery Fault	Battery voltage is too high. This may occur if overcharged &/or travelling down a long slope. If travelling down a slope, reduce your speed to minimize the amount of regenerative charging.
4	Current Limit Time-out or Controller too hot	The motor has been exceeding its maximum current rating for too long. The scooter may have stalled. Turn the controller off, leave for a few minutes and turn back on again. The motor may be faulty. Check the motor and associated connections and wiring.
5	Park Brake Fault	Either a park brake release switch is active or the park brake is faulty. Check the park brake and associated connections and wiring. Ensure any associated switches are in their correct positions.
6	Drive Inhibit	Either a Stop function is active or a Charger Inhibit or OONAPU condition has occurred. Release the Stop condition (seat raised etc.) Disconnect the Battery Charger Ensure the throttle is in neutral when turning the controller on. The Throttle may require re-calibration.
7	Speed Pot Fault	The throttle, speed limit pot, SRW or their associated wiring may be faulty. Check the throttle and speed pot and associated connections and wiring.
8	Motor Voltage Fault	The motor or its associated wiring is faulty. Check the motor and associated connections and wiring.
9	Other error	The controller may have an internal fault. Check all connections and wiring.

2. Press sustained to get into program setting mode P1, P1 is the diameter of drive wheels.scope from 15cm~100cm, a higher value will increase speed value indicate.

8.**Distance:** Switch between Km and Miles
1. Short press for switching between kilometer and mile.
2. Press sustained to get into program setting mode P2, P2 is the loadstone(magnet) setting.scope from 1~8.
3. Press sustained to reset ODO.
4. Press"Km/Mile Reset"to get back P1 mode.

9.**Reset:** Reset the distance(range)
1. Short press to switch between ODO/TRIP.
2. Press sustained to reset TRIP.

10.**Hour:** Hour setting
1. Short press to increase hours value.
2. Press sustained "H" to increase hour value sustainability.
3. Will return normal (drive) mode after 3 sec. without setting.

11.**Minute:** Hour setting
1. Short press to decrease minute value.
2. Press sustained "M" to decrease minute value sustainability.
3. Will return normal (drive) mode after 3 sec. without setting.

12. **Horn Button:** (Yellow) Positioned in the bottom centre of your console, press to sound a warning to other road users.

13.Speed Adjustment Dial: This allows you to pre-select your desired top speed. The dial is proportional to speed and can be set anywhere between 'min' and 'max' increments. Turn the dial knob anti-clockwise to minimum for a very gentle operation, and clockwise towards maximum to increase your speed. **NOTE:** When attempting to climb obstacles, you will need to set the dial to a high setting. Remember the higher position you set your speed dial to, the faster your Scooter will travel. Caution: The speed adjustment dial works in conjunction with the Hi/Low speed switch , if both are set to their lowest settings there may not be sufficient power delivered to the motor to drive your Scooter, in this case turn the speed dial up to a higher setting.

14. Front/Rear Light Switch: This rocker type switch controls the function of the front and rear lights. Simply push down on the left side for 'on' and the right side for 'off'.

15. **Hazard Warning:** Positioned to the top of your console, when pressed this red triangular button activates all of the amber flashing direction lights to warn other road users that you are stationary or in distress. This function should only be used in emergencies. You will note that both green direction lights at the top of your console are flashing to warn you the hazard system is in operation. To cancel the hazard warning simply press and release the red triangular button.

FORWARD, REVERSE CONTROL LEVER

Located under the handlebar grips (Fig 8). Your speed and braking in forward and reverse motion is controlled here. The right lever moves your **FR 510-GDX** Scooter in a forwards direction and also controls the rate of speed by the proportional amount of pressure applied. The left lever moves the **FR 510-GDX** in a reverse direction and controls the rate of speed by the pressure applied. The lever when released will automatically return itself to the neutral braking position, and you will slow down and gently stop. The rate at which you brake is also proportional to the movement of the control lever, the quicker you return it to the centre position the harder you will brake. Your Freerider distributor can modify your Scooter if you require so that the left hand lever will give you forward speed direction and the right hand lever will give you reverse speed direction.

FIG 8

⚠Warning: Do not attempt to operate the right and left lever simultaneously, failure to observe this warning may distort the lever system and could put you at risk. It should also be noted that reverse speed is set at half of full speed, this is a safety precaution, always make certain the Hi/Lo speed switch and the 'min and max' speed selection dial are set high enough to give you adequate power for your reverse maneuver.

⚠Warning: If you are not an accomplished outdoors powered vehicle driver, we strongly recommend that you seek advice from your local 'road safety officer' who may be able to advise you of any training schemes that are available in your locality, your local Freerider Distributor may also help you in finding training in road craft skills.

We strongly recommend that you first practice in an open, safe area, free from traffic, preferably with a companion who can assist you. Please remember as a road user you are required by law to drive your Scooter with due care and regard to other road users and pedestrians. Although you do not by law require a driving license, road tax, M.O.T. test or insurance, we strongly recommend that you insure yourself and your Scooter against any risk that could occur, your Freerider Dealer will advise you of insurance companies who specialize in this field or you could seek advice from your own insurance company who provide other cover for you such as house insurance.
We also bring your attention to the 'Code of Practice for Class 3 Vehicle Users' this can be found on page 10,11 of this manual.

COMFORT ADJUSTMENT

Before setting out on your **Freerider FR 510-GDX** you need to make sure that your seat is in the correct driving position.

Your Freerider distributor will set the seat to the correct height for your individual needs.
The seat has seven basic adjustments to assist your comfort.
1. Seat Lock Lever: (Fig 9). This allows the seat to swivel through 360° and lock in a convenient position. The locking lever is located under the left side of the seat. NB: It can be re¬located on the right side for your convenience. Pull up fully to release the seat allowing rotation. Release lever to lock the seat into the desired position.

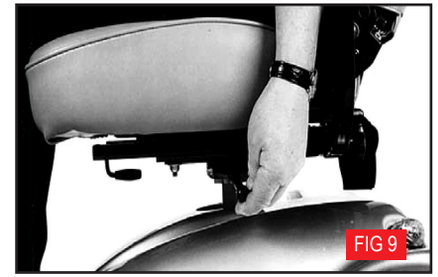


FIG 9

⚠Warning: When driving, the seat should be locked in the straight ahead position.

⚠Caution: The seat locking lever must be lifted up fully when rotating the seat, failure to observe this may result in unnecessary wear of the lever or seat post.

Removing seat from Scooter: The seat mounting post is designed with a special 'one position' lifting point, this will prevent the seat from inadvertently dismounting itself in the case of an accidental upset of the Scooter. The seat can only be demounted by turning the seat 90° to the right or left from the forward driving position.

2. **Armrest Width Adjustment:** On each side at the rear of the seat you will find a large black knob (Fig 10). By simply loosening this knob you are able to slide the armrests in or out to whatever width you desire. Re-tighten the knobs fully. You may need a friend to assist you with this initial setting up operation. This may extend the width of your Scooter.

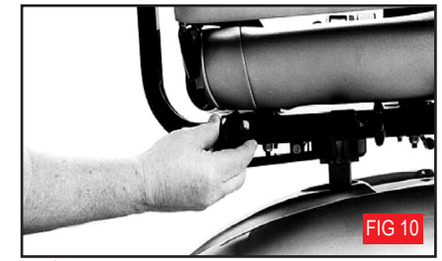


FIG 10

⚠**Caution:** The backrest of your seat will not fully fold forwards if the armrests are positioned too closely towards one another.

⚠Warning: Do not drive your **FR 510-GDX** with the arms removed or in the raised position.

3. **Armrest Angle Adjustment:** (Fig 11). The armrest angle can be adjusted individually to suit your needs. To make adjustments to the armrest angle you will need two 13mm spanners (not provided). Lift the arm upwards, you will note the adjusting bolt. First loosen the locking nut, rotate the bolt in or out until the required angle is found, lower the arm and check the angle for comfort; re¬adjust as necessary. Finally tighten the locking nut.

FIG 11

⚠ Warning: When lowering the arm make certain clothing or fingers are not positioned under it.

4. Seat Slide Adjustment: (Fig 12). Located on the right front side of the seat. This lever allows you to adjust your seat forwards and backwards when sitting on the seat. Simply pull up the lever and move in the desired position backwards by pushing or forward by hitching. As soon as the lever is released, the seat will lock into the new position.

FIG 12

⚠ Caution: Test that the seat has fully locked by hitching backwards and forwards.

Warning: Do not carry out this operation when your Scooter is moving, first stop apply the brakes and then carry out the seat positioning.

FR 510-GDX SEAT:

The seat as fitted to your **FR510-GDX** Scooter, has a fold down backrest (see Fig 13). The seat has two height positions. Your Freerider distributor will position the seat to allow you the most comfortable driving position.

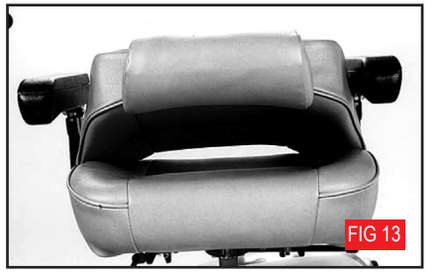


FIG 13

5. Seat Height Adjustment: You may need to alter the seat height setting at a later date, please follow these instructions.

   1. Remove your seat from the Scooter by lifting the seat locking lever and lifting the seat clear of the vehicle.
      Note: your seat can only for safety reasons be removed when it is turned 90° to the right or left from the straight ahead driving position. Please take care when lifting heavy weights. Place your seat on a soft clean work area.

   2. With the aid of a 17mm spanner (not supplied) loosen the 10mm seat clamp fixing bolt.

FIG 14

   3. Remove the 10mm fixing bolt and reposition the bolt into one of the two preferred location holes of the seat mounting tube (see Fig 14).

   ⚠ 4. Re-tighten the 10mm fixing bolt. Refit the seat onto your **FR 510-GDX** Scooter. Warning: Do not have the seat set too high, you must be able to place both feet firmly on the Scooter's floor area. Stability will be reduced the higher your seat is set on the mounting tube. Always take great care when cornering, lean into the corner to achieve the best stability from your Scooter.

6. Backrest Angle Adjustment: For a comfortable driving position the backrest of your seat can be adjusted to one of the four fixed positions by moving the stop bolt located in each side hinge bracket (see Fig 15). The left hinge bracket is marked 90°. 100°, 105° and 120° with corresponding hole positions.
   With the aid of a 4mm hexagon key and a 9mm spanner (not provided) remove and reposition the stop bolt from each of the two hinge brackets, into the appropriate angled position.
   Retighten each bolt and locknut making certain the two bolts are located in exactly the same position on either side.

FIG 15

⚠ Warning: Both stop bolts must be positioned in the same position for the backrest to be fully supported, failure to observe this warning may distort the backrest frame.

⚠ Warning: The rearward stability of your scooter will be reduced the greater the backrest is set past 90°.

Always take great care when going up steep slopes or kerbs, always lean forward to achieve the best stability for your scooter.

7. **Backrest Height Adjustment:** The upper cushion of your backrest (see Fig 16) can be adjusted for height, giving you more back support if you are tall, by operating the small latch at the base of the left hand round support bar. Lift the cushion up or push down for the most comfortable position. The headrest will also lift out for convenience.

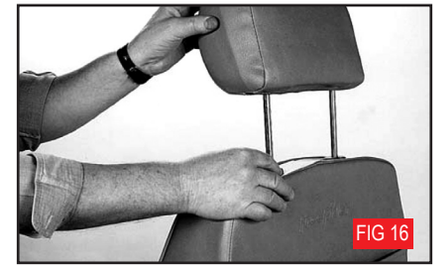


FIG 16

8. Lap Safety Belt: Your FR 510-GDX seat is fitted with a safety belt to prevent you from slipping forwards under braking conditions or when going down a slope or over obstacles, always use it - even for short journeys.

   The lap belt can be adjusted on one side to fit comfortably around your waist. To fit simply connect the two buckles together (see Fig17) until a distinct 'click' is heard. To remove simply 'press' the red buckle and the two belts will separate. Caution: Care should be taken when the belt is not in use, it should be connected together and placed in the centre of the seat cushion. Failure to observe this notice could lead to the two buckles falling onto and damaging the bodywork, catching a person or foreign body.

FIG 17

HANDLEBAR ADJUSTMENT

The handlebar of your **FR 510-GDX** is designed to allow you to position it in a comfortable driving position. It can be locked into numerous positions or unlocked to move freely for transportation.

FIG 18

The handlebar lock is operated by a black lever positioned handlebar (see Fig 18). To release the handlebar from a locked position pull the black lever upwards, the handlebar will now move freely, but under mild tension.
To lock the handlebar into a comfortable driving position, simply push the black lever downwards until the handlebar is locked firmly into position.
With the combination of the seat adjustments together with the handlebar movement, you should find a suitably comfortable driving position.

⚠ Warning: Always make certain the handlebar locking lever is fully down and the handlebar is securely clamped onto the chrome support plates before driving your Scooter. For service adjustment of this part, refer to the Care and Maintenance section of this manual.

BASIC TROUBLE SHOOTING

If your Freerider **FR 510-GDX** will not start:

1. Check the power key switch is turned fully 'on'. If it is, the battery condition indicator meter displayed on your console, will be operating. If the first red status light is flashing once per second, charge your batteries.

   If the battery condition meter fails to operate when the key switch is in the 'on' position, check the following:

   1. Make sure the battery charger is not plugged into the tiller charge socket, this will prevent drive.
   2. Check both battery connectors (grey connectors). Check battery terminal condition (Fig 6, page 17).

   3. Check the 'circuit breaker': If your **FR 510-GDX** stops for no apparent reason, it is probably due to the circuit breaker disconnecting from the speed control electronic box (see Fig 19). On rare occasions, a temporary overload on the electric circuit can occur - for instance when climbing a steep incline. If this happens, the circuit breaker situated under the rear body cover will trip and all power to your drive system will be automatically switched off. Wait for approximately 60 seconds, switch the circuit breaker to 'on' by entering a finger through the access hole in the top of the rear body cover (located under your seat) and press the switch on. The battery gauge will light up and you are now ready to drive again. (See Fig 26)

FIG 19

If the circuit breaker trips up again wait for 5 minutes and try again.

⚠ Caution: If you find the circuit breaker is continually tripping out, contact your authorized Freerider dealer.

The battery condition indicator meter flashes, your Freerider does not drive:

1. Check the motor drive plug, located under the rear body cover positioned in the main controller module .
2. Check the freewheel lever is fully engaged . If it is engaged you should not be able to push your machine. If disengaged, the green status light on your console will be flashing five times.

If your Freerider Scooter does not slow down or behaves erratically:
1. Turn off the power 'on' key switch.
2. Inform your authorized Freerider dealer.

⚠ Warning: Warning: If you find for any reason your **FR 510-GDX** does not reduce speed when you let go of the forward-reverse speed lever, switch your FR 510-GDX 'off ' with the on/off key. The parking brake will activate immediately and stop your Scooter. Beware the machine will stop very suddenly, brace yourself with the handlebars, sit back in your seat.

⚠ Warning: This operation should only be carried out as an emergency; continual use of this facility will damage the drive transmission and motor brake.

Inform your authorized Freerider dealer before using your machine again.

⚠ Warning: If you feel for any reason that your Scooter is not driving correctly or making an unusual noise, stop using the machine. Be safe, contact your **Freerider** dealer, he will be able to advise you.

A reversing buzzer is provided for when you are driving in a reverse direction. This is an important safety feature to make other people aware of your change of direction.

STEADY RIPPLING OF BATTERY GAUGE

This indicates that you have switched your Scooter on with the forward-reverse speed lever depressed. Return lever to the neutral speed position and try again.

FUSES

The fuses protect your FR 510-GDX lighting and direction indicators (flashers) from receiving an overload of electrical current. The fuses used in the FR 510-GDX are the same type which are found on automobiles. In the unlikely event that a fuse should 'blow' and need replacing (see Fig 20, Page 31) use only a fuse of a the same rating. Please note the size of fuse has been selected to give your Scooter the best protection without premature blowing

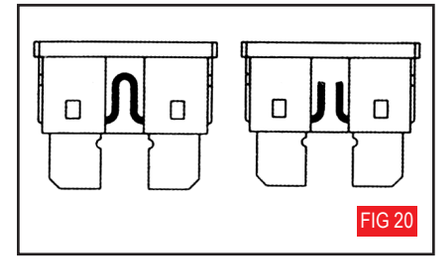


FIG 20

⚠ Warning: **Do not use fuses with a higher rating than fitted as this may cause permanent failure to the wiring and wiring connectors or personal injury.**

Two fuses are located below the FR 510-GDX rear body cover (see Fig 21) the fuses are positioned in black plastic housings which are sealed by hinged lids.

For access to the fuses, following the removal of your seat and rear body cover, lift the fuse block from it's mounting.

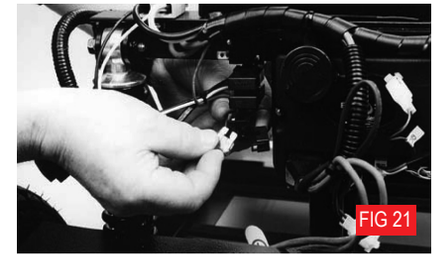


FIG 21

Lift up the appropriate fuse lid and withdraw the 'blown' fuse. Replace the blown fuse with identical rated fuse, close fuse lid and replace fuse block onto mounting.

The fuses are located in the following order:-Top-left driving lights, Middle-flashing turn indicator lights, Bottom-lright driving lights.

REAR LIGHT WIRING CONNECTOR

The rear lights mounted to your FR 510-GDX rear body cover are connected to the main wiring loom by a four pin plug and socket (see Fig 22). To move the rear body cover first remove your seat. The cover is positioned onto the Scooter by 'velcro' type fittings. Simply lift up the cover, making certain you are clear of the seat mounting post. Before fully lifting the body cover unlatch the lighting plug and socket by pushing down on the locking latch, the body cover can now be carefully removed.

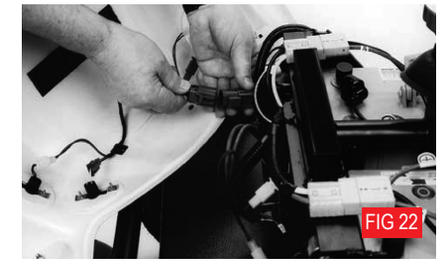


FIG 22

BATTERY INSTALLATION DIAGRAM

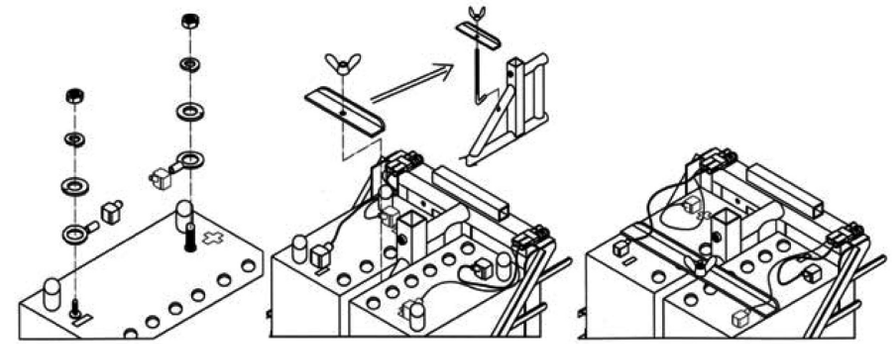


FIG 23

CARE & MAINTENANCE

Your **FR 510-GDX** like any other electro-mechanical machine will benefit from regular servicing by your Freerider dealer. You too, can help keep your FR 510-GDX in tip-top condition by following a simple guide to home maintenance.

Note: Only competent people should carry out service work.

SEAT UPHOLSTERY

A damp cloth and a little soapy water will keep your seat, backrest and arms looking smart. Do not use abrasive cleaners as this will damage the coating. Upholstery can be damaged by chemical cleaners. The coating material can also degrade over a period of time due to contamination by natural oils in the hair and skin.
Ultra-violet light can also reduce the life of the upholstery coating material. This is a normal ageing process and cannot be guaranteed (see exclusions in the Guarantee Terms).

BODYWORK

The painted bodywork on your **FR 510-GDX** Scooter can be lightly washed with clean soapy water. Do not use abrasive cleaners or strong detergents. This could fade the colour, an auto type shampoo works well. Remove salt contact as this is very corrosive to bright metal parts.

⚠ Caution: **Do not** hose down your FR **510-GDX** with a powerful cleaner. Water could be forced into the electronics and cause permanent damage.

On the painted finish, be cautious not to wash with a dirty cloth as this could scratch the paint finish. Auto polish can be used to keep the paintwork and bright chrome parts in pristine condition.

The metal framework of your **FR 510-GDX** should be cleaned twice a year and any paintwork damaged should be treated to prevent further attack from the elements. Wash regularly if contact is made with road or sea salt, this is very corrosive.
Do not store your **FR 510-GDX** in damp conditions. This may affect the electronics if left for very long periods of time. Moisture, if left unattended can cause deterioration on metal work, protect with proprietary cleaners.

ELECTRONICS

Servicing of the drive electronics and charger should only be carried out by your local **Freerider** service dealer. These units are sealed and should not be opened.

BROKEN SEALS WILL INVALIDATE YOUR GUARANTEE.

Do not operate your Freerider FR 510-GDX in exceptional weather conditions ie. very heavy rain or wind. Cover your machine up, if it is to be left unattended and outside for a long period of time.
Do not drive through deep water with your FR 510-GDX. This could damage the electronic speed controller. Sea and road salts are very corrosive and should be neutralized quickly.

MOTOR

The motor on your **Freerider FR 510-GDX** is fitted with four long-life brushes. The brushes should be inspected for wear every 12 months or more frequently if you use you **FR 510-GDX** daily for long periods. The brushes should be changed when they have worn down to approximately 8mm in length.

DRIVE TRANSMISSION LUBRICATION

This unit is factory filled and will not normally need additional lubrication.

Note: Your **Freerider FR 510-GDX** transmission is filled with a special lubricant. Do not attempt to force grease into the transmission as this will contaminate the original lubrication and will invalidate your guarantee.

⚠ Caution: Take care when handling the transmission, keep well away from clothing. It is normal to find a light film of lubrication around this part.

MOTOR BRAKES

Safety Note: For your own safety, we recommend that you check the function of your **FR 510-GDX** brakes prior to a journey.

Motor Brake: If the motor brake is functioning correctly and the drive is engaged you will not be able to push your machine when it is switched off. Or switched on with the speed control lever in the 'zero speed', central position.

⚠ Warning: If your machine can be pushed as described above, the motor brake could be faulty. Please do not use, contact your local **Freerider** distributor.

Note: Check the Freewheeling Instructions on page 13 of this manual.

DRIVING BRAKE

⚠ Warning: When you drive your **Freerider FR 510-GDX** and you let go of the speed control lever your **FR 510-GDX** should reduce speed very quickly. If you notice a change in the normal slowing/braking condition of your **FR 510-GDX** and it does not slow down quickly, please do not use your machine, contact your **Freerider** distributor.

TYRES

Check the condition of your tyres regularly. Look for signs of wear, cuts and foreign objects lodged in the tread. Maintain the tire pressures at all times; failure to comply with this can lead to poor performance of your machine and could make your machine unsafe and/or unstable. Tyres should be replaced when the tread is worn to 0.5mm.

⚠ Warning: Your **Freerider** is designed with 'split' wheel rims. Do not remove wheel bolts with the wheel inflated. Maintain pneumatic tires at the recommended tire pressure found in this manual under 'Technical Specifications'. Failure to observe this warning may result in personal injury.

TYRE SERVICING-REAR WHEEL

To remove the wheel for service follow these instructions

1. Place your Scooter on a suitable work stand.
2. With the aid of two 19mm spanners remove the center nuts from the wheel axle (see Fig 24) slide the wheel from the axle noting any spacers and bearings.

FIG 24

3. With the aid of two 13mm spanners (not supplied) deflate tyre as nessary before remove the 8mm nuts and bolts from the wheel rim and centre hub. (Have you deflated the tyre?)
4. Part the inner and outer wheel rims from the axle hub and tyre side wall.

To reassemble the wheel following the installation of the replacement tyre or tube follow the above procedure in reverse order noting the following points:

1. Make certain you have securely tightened the two split wheel rims to the centre hub with the original nuts and bolts.
2. Make certain your tyre is correctly inflated to the recommended pressure.
3. Make certain the hub bearings and any spacer washers or bushes are correctly located.
4. Tighten the special ' nyloc ' locking centre nut. **Not:** If the plastic locking ring on the nut is damaged the nut should be replaced.

Note: The rear wheel hubs are located to the drive axle by a steel key. If the hubs need removing for service, you will first need to remove the hub centre nut with a 19mm spanner. Please note the hub fits firmly onto the drive axle, removal of the hub will be aided with the use of a suitable 'puller' tool.

⚠ Warning: Please note the rims of your wheel are a split rim system, do not dismantle the wheel from the hub without first letting air out of the tyre.

TIRE PRESSURES

FR 510-GDX wheels are pneumatic and their pressure needs to be maintained at Front 30psi (2.1 bar) Rear 35psi (2.5 bar).

⚠ Warning: Pressures exceeding those recommended will result in an uncomfortable ride. Underinflation will result in poor battery and motor performance. Do not inflate to the maximum pressures marked on the side wall of the tire, this could damage the tire or wheel rim. These pressures are the tire manufacturer's maximum pressures and are not suitable for your Scooter.

BATTERIES

Keep your batteries well charged (see Battery Charging section of this manual). Keep batteries clean and in a dry frost-proof place. Keep battery terminals tight. Your Freerider Agent will be able to annually test your batteries for their state of service.
Note: a charge may be made for this service.

⚠ IMPORTANT: It is not possible to predict the life expectancy of your batteries. This is mainly due to the different workloads a battery can be subjected to. (see page 25 of this manual)

Some **Freerider FR 510-GDX** users will use their vehicle every day and for long periods of time. Their batteries will receive a near total discharge, and the life of the batteries will be short (12 months or less in some cases).

Other **FR 510-GDX** users will use their machines less frequently, putting their batteries through a less demanding discharge lifestyle. These batteries will probably have a longer life in excess of 12months. This can only be a general guide and one cannot be more

specific, due to other factors such as; motor loads, tyre pressures, general service factors, working conditions, periods of non-use and abuse etc.

When you need to purchase batteries, always insist on the model fitted as original equipment to your **FR 510-GDX**. Do not use less expensive car starter batteries. If in doubt, consult your local Freerider authorized agent. Warning: Correct disposal of exhausted batteries is advised.

Please note: The charger supplied with your Freerider Scooter is specifically designed for sealed type batteries and may not work correctly with other battery designs. (See also Batteries and Battery Charging section of this manual).

LUBRICATION

The **Freerider FR 510-GDX** has been designed with low maintenance in mind. Wheel bearings and steering bearings are sealed for life. The following points will need checking/lubricating at the following service intervals:

RECOMMENDED SERVICE INTERVALS

DAILY Check the following:
- Operation of motor brake
- Operation of driving brake
- Operation of manual emergency brake
- Operation of seat lock (see page 27)
- Tire condition
- Batteries are fully charged
- Operation of driving lights and turning indicators

⚠ Caution: Only drive your **FR 510-GDX** Scooter if it is in full working order.

WEEKLY Check the following and adjust as necessary:
- Arm rest tightening knobs (see page 28)
- Tire pressures
- Battery fastening strap (see page 31)
- Allow battery charger to go through a full recharge cycle until the green light is illuminated
- Clean paintwork with auto shampoo. Do not use a high pressure hose. Wax painted and bright metal parts.

SIX MONTHS **Check and adjust as necessary:**
- Tire wear, replace as necessary (minimum tread 0.5mm)
- All fasteners and fittings for sound function.
- Tension of handle bar lock and hinge bolt.
- Battery connections.
- Inspect all electrical plugs and sockets for damage and good contact and fit.

Lubricate the following:
- Speed accelerator lever pivot point (see Fig 25)
- Spray metal parts with moisture repellent (WD40)
- Seat lock lever pivot bolt
- Seat arm hinges
- Inspect, lubricate and adjust upper handle bar steering bearings with grease

FIG 25

ANNUALLY
Check the following and adjust as necessary:

- Motor carbon brush wear (minimum brush length 8mm)
- Front wheel bearings for wear
- Chassis for sound welds
- Rear Drive wheel hub key
- All wheel bolts
- Drive axle securing nuts
- Motor mounting bolts
- Magnetic motor brake disc and function
- Manual brake shoe lining wear
- Main control box electrical connections
- Main wiring loom for damage
- All steering components
- Clean chassis and repaint any exposed parts
- Lubricate on/off power key barrel with light oil
- Replace any damaged axle seals
- Cycle test charger for full operation function
- Cycle test batteries for operating capacity (This test can be performed by your Freerider Agent)

LUBRICATION

Use a general purpose light lubricating oil on moving parts. All wheel bearings are factory sealed and should not normally need lubricating.

Your drive axle is factory filled with a special lubricant and will not normally need replacing.

⚠ Caution: Do not mix other lubricants with this factory fitted drive axle lubricant. Failure to observe this caution will invalidate your guarantee.

Please note: These service intervals are a guide, more frequent use of your Scooter may require adjustment to these suggested intervals.

TECHNICAL SPECIFICATION

Dimensions	cm	inch
Total Length	152	60
Maximum width over wheels	74	29
Turning Diameter (between walls)	125.5	49.5
Maximum seat height from base	49	19.5
Minimum seat height from base	46	18
Maximum seat height from ground	76	30
Seat backrest angle (adjustable)	90° to 105°	
Seat fore-aft sliding adjustment	8	3
Minimum seat width (arms adjustable)	48	19
Seat depth	49	19
Backrest height (without extension)	46	18
Maximum Handlebar height from ground (adjustable)	74	29
Minimum handlebar height from ground (folded for transportation)	46	18
Ground clearance	8.8	3.5
Front Wheel size	31	12.5
Rear Wheel size	35	14

Weights	Kg	Lbs
Total weight including batteries	107.5	237
Frame Assembly (heaviest part)	87	192
Seat	18	39
Battery (each)	32	70
Charger	9	20
Maximum user weight	190 Kgs / 220 Lbs / 30 stones	

SERVICE HISTORY

This sectio n is designed to assist you in keeping a record of any service and repairs to your **Freerider** Scooter. Should you decide to sell or exchange your Scooter in the future this will prove most helpful to you.Your Se rvice agent will also benefit from a documented record and this book should accompany the Scooter when service or repair work is carried out. The service agent will complete this section and return the book to you.

DETAILS OF WORK CARRIED OUT	DEALER STAMP

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