



*Invacare*® **Cruiser Plus**  
**USER MANUAL**

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# CRUISER PLUS USER GUIDE

## INTRODUCTION

Thank you for choosing a **CRUISER plus** - we are certain you will be delighted with it. Just to make doubly sure you really gain the full benefits from your remarkable new **INVACARE** Powerchair and to ensure many years of trouble free performance, this manual gives you essential information concerning Safety, Handling and Operation, together with some helpful tips. Please read it carefully before trying out your new **CRUISER plus**, so that you may truly enjoy your new independence.

We recommend to have your Powerchair inspected and serviced by an authorised **INVACARE** dealer at least once a year. It is in your best interests, not only to ensure your personal safety, but also the continued high performance and long service life of your Powerchair.

Whenever you need special advice and assistance, or if there is any problem with your Powerchair, do not hesitate to contact the local **INVACARE** dealer. He is just a phone call away and has all the equipment and knowhow required to provide you with expert professional service. If you are user with impaired vision contact **INVACARE** after sales department, who will supply you a User Guide with enlarged text.



### IMPORTANT

Your **CRUISER plus** is equipped with the most advanced electronic control system which is fully programmable to suit a wide variety of user preferences. More details later in this manual. However, if you feel, after an initial running-in period that certain characteristics of the Powerchair performance and response require adjustment to customise it in accordance with your particular needs and conditions (e.g. acceleration, braking, damping and general response to joystick movements, etc.), contact your local **INVACARE** dealer who will advise you and carry out any "tuning" required.

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## YOUR LEGAL AND GENERAL RESPONSIBILITIES

As a Powerchair user you must be aware of the risks involved to both yourself and others. However, what is the position if you are involved in an accident and damage the property of a third party, or worse, run into somebody and cause injuries? Many Powerchair users do not realise that they may be held liable in such cases. We strongly recommend that you take out "Third-Party Liability" Insurance to cover you against any possible claims from that direction. If you already have some other insurance policy, ask these insurers what they can offer you for such cover. Alternatively, ask your **INVACARE** dealer who will be able to advise you. In this way you buy yourself not only protection against possible costs, but also peace of mind. You are also responsible to ensure your **CRUISER plus** is in a 'roadworthy condition' at all times.

## DESCRIPTION

Manufactured to the highest possible standards your new **CRUISER plus** powerchair has been designed with the emphasis on safety, comfort and reliability for use by those with restricted mobility.

The **CRUISER plus** has a maximum carrying capacity of 16 stone (100kg) which must never be exceeded. A maximum speed of approximately 4 mph (6.4km/h) and is classified as an 'Invalid Carriage', for use only on Pavements, Footpaths, Pedestrian Zones and areas free from Motor Traffic, not allowed on the Highway except for the purpose of crossing.



**Fig. 1. CRUISER plus - General Features**

1. Side Panels - Removable.
2. Backrest - Tension Adjustable, Removable.
3. Armrests - Height and Width Adjustable, Removable.
4. Joystick Control Box - Variable Position.
5. Manual Wheel Locks (Parking Brakes).
6. Electronic Power Module.
7. Motor/Gearbox Drive Unit.
8. Footrests - Swingaway, Adjustable Height/Angle, Removable.

## SAFETY PRECAUTIONS/SAFE OPERATION



### IMPORTANT WARNING

The day-to-day activities and the more advanced Powerchair techniques depend, on your physical capabilities and your own specific circumstances. Our recommendations may occasionally differ from those of your Therapeutic Adviser or Physician, as they have a better understanding of your abilities. Where this is the case, you **MUST FOLLOW THEIR** advice, they are better placed to tell you what is suitable for you and what is not.

**DO NOT** use your Powerchair when your driving ability is impaired by medication.

Your Powerchair operating system may be influenced by electromagnetic fields such as signals emitted by portable telephones and other similar devices. It is strongly recommended that you switch off your Powerchair whilst in the vicinity of such devices. If your Powerchair is effected by these signals, immediately switch off the power by depressing the On/Off switch.



### CAUTION

Avoid using your Powerchair on rough ground or in adverse weather conditions (snow or ice), always steer clear of obstacles where possible, ensure your clothing and hands are kept clear of all moving parts, ask for assistance when descending or ascending steep gradients. Never attempt to negotiate stairs. Never use an escalator to move a powerchair between floors. Due to both the weight of a Powerchair and its occupant it is not advisable to attempt to be assisted up and down stairs whilst the Powerchair is occupied.

If you are a user with limited mobility we advise that in the case of adverse weather conditions i.e. extreme cold, **DO NOT** attempt a journey without an accompanying attendant. In the event of a power failure you could become stranded in an isolated area, where there is the strong possibility you will be unable to get immediate assistance.

Braking of your Powerchair is dependent on electromagnetic motor brakes. When these are disengaged by declutching the motor gear box drive system, the chair is in **FREEWHEEL MODE**, this mode is for **EMERGENCY USE** only and motor gear boxes should remain engaged at all other times.

To avoid the Powerchair freewheeling, special care must be taken to either apply parking brakes where fitted or re-engage motor brakes.

### Safety Indoors

When using your Powerchair indoors always consider the following potential hazards:

Beware of the fact that many of the premises where you are likely to use your Powerchair may not have been designed with this consideration in mind. You should therefore have an awareness for safety when encountering the likes of narrow doorways, steps, high surfaces, protruding wall fittings and every day household items such as children's toys, electrical appliances etc. Take extra care in kitchen environments.

Consider the fire evacuation procedures for buildings you may be entering. Never put yourself at risk and ensure that you can be easily evacuated in the event of an emergency.

### NOTE

Powerchairs drive very quietly, generally travel faster than the average walking pace and are low to the ground. Always consider these factors when using your Powered Wheelchair in busy pedestrian areas.

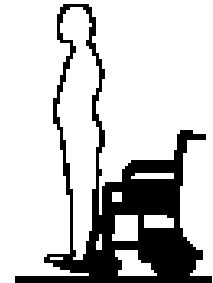
### Some Useful Tips

Before you venture off on your first journey, ensure that everything is adjusted to your specific needs, read this Manual to familiarise yourself with the product and its functions. **DO NOT** attempt to drive without attendant on hand until you are fully proficient in using and manoeuvring your Powerchair.

Ensure power is switched off before entering or leaving your Powerchair. Before switching on, check that both motors are engaged, tyres are inflated to the correct pressure and are in good condition. When on the move DO NOT attempt turns at full speed, especially while travelling downhill. Before changing from forward to reverse, and vice versa, you must stop, failure to do so will cause severe damage to the electronics. DO NOT use your Powerchair beyond its limitations. Due to the both the weight of a Powered Wheelchair and its occupant it is not advisable to attempt to be assisted up and down stairs whilst seated.

When entering or leaving your Powerchair, DO NOT stand on the footplates.

If you have to brake in an emergency, release the joystick. DO NOT switch off power while the Powerchair is moving, it would cause an abrupt, sharp stop. Before you change the Drive Mode (UP or DOWN) we advise you to stop the Powerchair in order to avoid a sudden leap forward when selecting a higher level programme, or an abrupt deceleration when changing to a lower level programme.



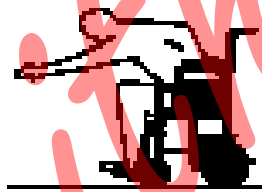
DO NOT use your Powerchair beyond the limitations set out in this manual concerning kerb height, gradients, etc.

### **Stability and Balance**

To ensure stability and safe control of your Powerchair you must at all times maintain proper balance. The Powerchair is designed to remain stable and upright during normal use, so long as you do not move your centre of gravity outside the normal seating position.

### **Reaching - Bending Forward**

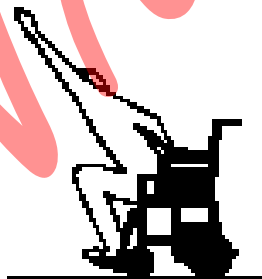
Ensure power is OFF. DO NOT lean forward your body out of the Powerchair further than the length of the armrests.



DO NOT attempt to pick up objects from the floor by bending forward and reaching between your knees.

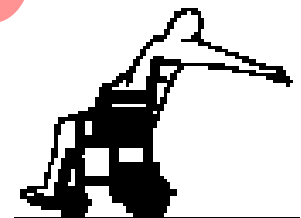


DO NOT attempt to reach objects by sliding forward to the edge of the Powerchair seat.



### **Reaching - Bending Backwards**

Again ensure power is switched OFF. DO NOT reach back any further than your arm will extend without changing your sitting position.



DO NOT lean over the top of the backrest as it will shift the centre of gravity, risking tipping over.

DO NOT hang heavy loads or objects on the backrest. They may make the Powerchair unstable, especially on an incline.

### **Driving on Level Ground**

Try to get the "feel" of the Powerchair controls in a safe, level environment. If you are not satisfied with the response of the joystick (or whatever control devices fitted), contact **INVACARE'S** Recommended Service Centre and they will be able to re-programme the controller to your individual needs.

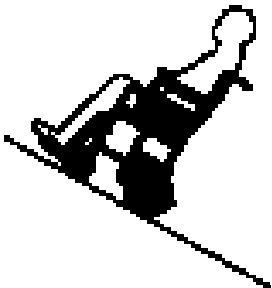
## Negotiating Gradients/Slopes



### CAUTION

Never attempt to climb or descend an incline where the surface is rough, wet or slippery (gravel, loose chippings, grass, rain, black ice, snow etc.),

Your Powerchair can safely climb gradients of 20% or a ratio 1 : 5. DO NOT attempt to climb or descend slopes that are in excess of these figures, fit anti-tipping levers (Fig. 2) for slopes and outdoor use.



If you are in a situation where by the Powerchair fails to climb a ramp and stalls mid-way through the manoeuvre, DO NOT attempt to turn the Powerchair to drive back down in a forward facing direction, always reverse slowly in a steady, flowing action and DO NOT brake harshly, as this will upset balance in this situation. If possible, always seek the assistance of an attendant.

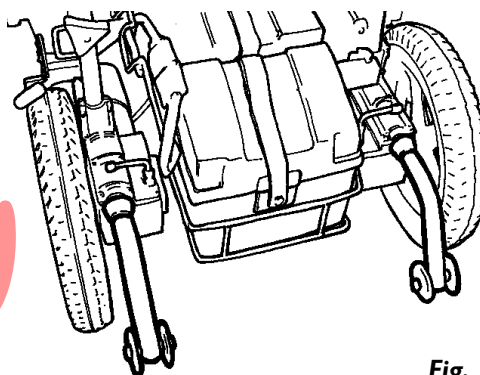


Fig. 2

## Negotiating Kerbs

When approaching kerbs wherever possible mount and dismount pavements via ramps. Always approach the kerb head on (Fig. 3), not at an angle (Fig. 4). NEVER attempt to reverse down a kerb.

### Without Kerb Rider

Your Powerchair is capable of overcoming a 2" (5cm) kerb without a Kerb Rider. Before negotiating the kerb ensure the speed control setting is set to maximum, as the front wheels are about to make contact with the kerb push the joystick fully forward and hold it there until both rear and front wheels have climbed the kerbstone.

### With Kerb Rider

If a Kerb Rider (optional) is fitted, your Powerchair is capable of overcoming a 4" (10cm) kerb. Before negotiating the kerb ensure the speed control setting is set to maximum and the Kerb Rider is in the engaged position (facing forward). As the Kerb Rider makes contact with the kerb push the joystick fully forward and hold it there until both rear wheels have climbed the kerbstone. Your Powerchair Prescriber will provide you with a demonstration and instructions on fitting.

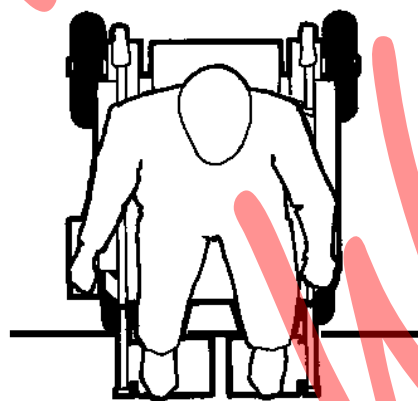


Fig. 3

Direction of Travel

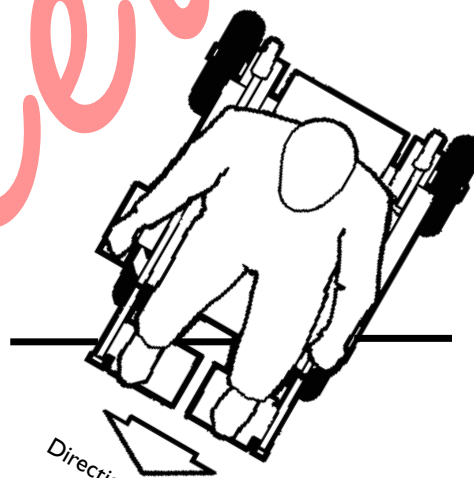


Fig. 4

Direction of Travel

## NOTE

Before negotiating kerbs ensure the following:

1. Anti-tipping levers are fitted (Fig. 2).
2. Always approach head on (Fig. 3) and not at an angle (Fig. 4).
3. Do not allow the Powerchair to come to a halt midway through manoeuvre.
4. Use gentle upper body movement, if possible, to assist motion.
5. Do not attempt to climb kerbs or gradients with backrest reclined to any degree.

## You, Your Powerchair and Others



### CAUTION

Powerchairs are strictly forbidden on motorways and their use is strongly discouraged on highways with fast moving traffic.

On the Pavement, in Pedestrian Zones or in Supermarkets it is obvious that you must show as much consideration and common sense to others as you expect from them. The controller of your Powerchair enables you to use various preset “drive programmes”, where maximum speed and acceleration are automatically limited to a specific level, select the programme best suited for the environment in which you find yourself and in accordance with the given conditions.

When you cross the carriageway of a public road take extra care allow time to cross, observe the Highway code, if your Powerchair is equipped with a full set of lighting, ensure they are lit during lighting-up hours. Although you are not required by law to hold a driving license, you are responsible and fully liable for proper operation and use of these lights in compliance with the Highway Code which in this respect applies to you as much as to the motorist. An important fact to bear in mind is that you must not present a traffic hazard even in the event of a breakdown. The most common cause may be discharged batteries. It is important it is to keep the batteries in a fully charged condition, we can only repeat this warning at this stage. If you do suffer a breakdown for whatever reason, there are two steps you should take immediately: First switch on the hazard warning lights (if fitted). Next, seek the assistance of a passer-by. Explain where to find the motor disengagement/de-clutching lever, ask him/her to switch to freewheel, so that the Powerchair can be pushed by hand and moved when in a safe place always ensure motor gear boxes are re-engaged.

### Safeguarding Others

If there are children in your family or household, keep the Powerchair away from them. It is not intended to be used as a toy. It isn't just about safeguarding the Powerchair, it is also about protecting others and yourself from injury.

Finally, we want you to get the most out of your **INVACARE** Powerchair, ensuring that the safety of yourself and others is never in jeopardy. If you are in any doubt about safe techniques, handling or care of the Powerchair, contact a recognised expert before putting yourself and others at risk.



## PREPARING YOUR POWERCHAIR READY FOR USE

### Unfolding



#### CAUTION

When unfolding and folding your Powerchair take care to ensure that your hands or fingers are not positioned between moving parts and therefore likely to become trapped.

Whether it is delivered to your home or you brought it back in the boot of your own car, your Powerchair will have arrived folded with the footrests (or elevating legrests) separated. If it has a reclining backrest, the headrest extension will also be detached. In this case push the tubes of the headrest extension firmly and squarely into the backrest tubes before you unfold the Powerchair. It is easier to do this first, before the backrest is opened and stretched.

To fit the Backrest proceed as follows: Align the end of the Backrest Tube with the Backrest Socket on the Side Frame. Insert the Backrest Tube socket until the stop at the bottom is reached. Screw in both Handknobs and tighten fully. (Do not over-tighten)

A demonstration showing assembly procedures relating to the correct installation of Batteries, Battery Cradle, Joystick Control Box and the connection of the Wiring Harness will have been carried out by your **INVACARE** supplier/dealer prior to delivery/collection, if you experience difficulties during assembly, DO NOT hesitate to contact your dealer who will be pleased to assist you.

You can carry out the following steps standing up or seated, whichever is more comfortable to you.

1. Manoeuvre the Powerchair into a position, so that you are facing one side of it and that both wheel locks are applied.
2. Tilt the Powerchair towards you. Rear wheel and castor on the side away from you are slightly lifted off the floor.
3. Press down on the seat side tube furthest from you and the Powerchair will smoothly unfold.
4. Locate and Fit Armrests, Backrest, Footrests and Joystick Box assemblies.
5. Install Batteries/Cradle, ensure the Cradle is correctly located on the Hangers (Fig.5). Take care when lifting Batteries. To avoid injury be sure to adopt the correct lifting posture, ask for assistance if required.
6. Connect Harness and Cables.
7. Check all components are located correctly and fasteners are securely tightened.
8. Check the operation of all components and ensure they function correctly.

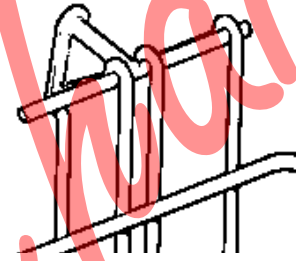
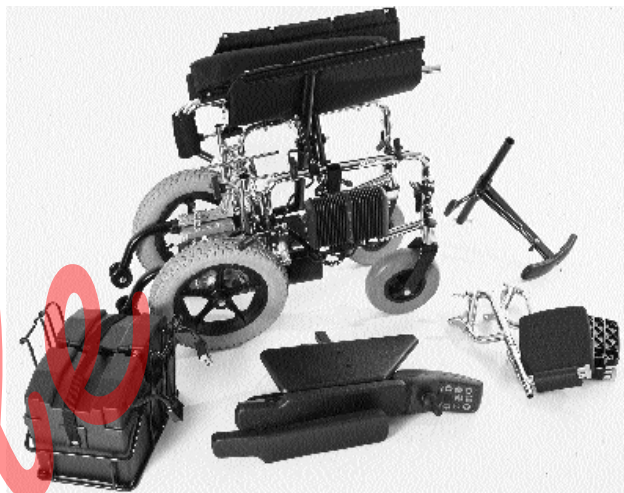


Fig. 5

### **Folding/Dismantling**

For ease of storage and transportation your Powerchair has been designed to dismantle into easily manageable components (Fig. 6), remember, when lifting to adopt the correct posture, knees bent back straight, ask for help if you cannot manage the heavier components.

1. Switch off power on the Joystick Box.
2. If a stay bar is fitted across the backrest, detach it's removable end and allow it to hang freely along the outer backrest tube, also remove the kerb rider (if fitted).



**Fig. 6 - Folded/Dismantled Cruiser Plus**

3. Check the footrests/legrests are in a locked position towards the front of the chair and that the footplates are folded upward to vertical position. Alternatively, remove the footrests/legrests from the Powerchair. To remove the footrest, press the plastic lever behind the vertical chassis tube swing the footrest outward and unhook it from the frame. To install the footrest, hold it slightly angled away from the Powerchair, with the two hinge plates above the mounting pins on the powerchair frame, align the holes in the hinge plates with the mounting pins, so that you can slide the hinge plates over the pins. Swing the footrest forward to its normal position until it snaps into lock.
4. Disconnect all cables from the underside of the Electronic Power Module and the Battery connecting cables.
5. Slacken the Thumbscrew in the vertical Arm Support Tube and remove both Armrests along with the Joystick Box assembly. To remove the armrest, proceed in the same manner and simply pull it out of its mounting socket, altogether. On the side where the joystick box is fitted (usually on the right) the connecting cable from the joystick box to the underside of the electronic power module is long enough, so that this armrest can be removed in the same manner, place by the side of the Powerchair, alternatively, disconnect the joystick box cable from the power module.
6. Slacken the Backrest securing knobs and remove the Backrest.
7. Remove the Batteries and Cradle. Take care when lifting Batteries. To avoid injury be sure to adopt the correct lifting posture, ask for assistance if required.
8. With a firm grip pull both side tubes of the seat upward. The two Powerchair halves will concertina together and reduce the Powerchair to a compact stowage size.

### **NOTE**

*If your Powerchair is stowed or transported in a horizontal position, place it with the side of the power module and the joystick box uppermost, in order to avoid any damage.*

### **Footplate Height/Angle**

As tools are required, adjustments to suit your needs should only be made by your **INVACARE** supplier/dealer prior to delivery/collection. If adjustments are required at a later date contact your dealer who would be pleased to assist you.

### **Note**

*The following adjustments should be made by an assistant while you are seated in the Powerchair.*

### **Armrest Height**

Loosen the thumb screw in the vertical armrest support tube and pull or push the armrest up or down to the desired height. Re-tighten the thumb screw.

### **Joystick Position**

The Joystick Box should be in a position where the drive controls are within easy reach. If required, slacken the thumb screw in the horizontal joystick box support tube and slide the joystick box forward or rearward to the desired position. To adjust the height loosen the thumb screw in its vertical mounting tube and pull or push the Joystick Box, together with its horizontal support, up or down. Re-tighten the thumb screw(s).

### **Seat Width**

The seat width is adjusted by reducing or increasing the distance between the armrests/side panels (refer to General Specification Data for adjustment range). Slacken the screw at the bottom end of the armrests/side panel mounting socket and slide the armrest/side panel inward or outward to the desired position. Re-tighten the screw(s). This adjustment may, of course, be made either on both sides or on one side only.

### **Tension Adjustable Backrest - Adjustment**

Unique to the **CRUISER plus** Powerchair is the ergonomically designed Tension Adjustable Backrest, a fully adjustable back upholstery system that can be adjusted to suit the users back profile.

1. With the user seated and parking brakes on, release and lift the backrest rear cover panel (Fig. 7.1) up and clear of the tension straps (Fig. 7.2).
2. Release all the tension straps from their fasteners (Fig. 8.1).
3. With the user leaning back adjust the tension straps allowing them to self adjust to the users profile.
4. With the user continuing to lean back tighten and secure the tension straps ensuring that they are not overtightened.
5. Lower the rear cover panel and secure into position. Check that the user is comfortable, re-adjust if required.

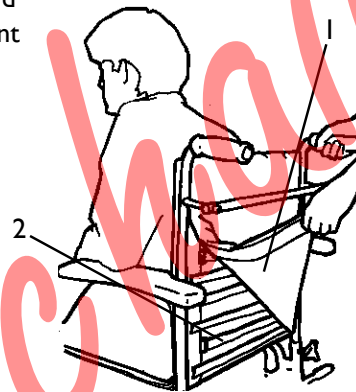


Fig. 7

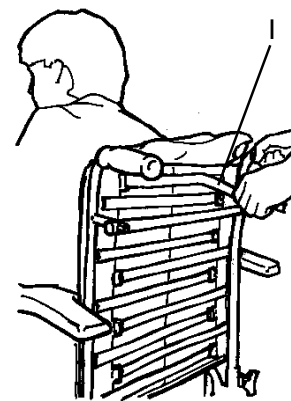


Fig. 8

### **Accessories Including Seat Belt Attachment**

If included with your purchase of your Powerchair, these will have been factory fitted or by your **INVACARE** supplier/dealer, who would have provided you with a demonstration of operation and fitting etc.

## CONTROLS AND OPERATING YOUR POWERCHAIR

For detailed description of joystick operation, refer to the Operating Manual supplied with the joystick.

### NOTE

Before you start using your Powerchair you must boost the battery charge by carrying out charging procedures as described in "Battery Charging" and always check the following:

1. Freewheel is engaged in drive Position (Fig. 9).
2. Adjustments have been made to suit your individual needs and fasteners securely tightened.
3. Tyres are in good condition and correctly inflated - see specification table on page 19. Or as specified on the Tyre Side Walls.
4. Check the operation of all controls (lights and indicators if fitted) and they function correctly.

### Operation

Seated in your Powerchair. Press the ON/OFF Switch. The light in the switch will come on and should be steady. All ten lights of the Battery Charge Indicator are also on, confirming that batteries are fully charged. In the Drive Mode Display Window a figure between 1 and 5 will appear. In Drive Mode 1 speed and acceleration are very slow. In Drive Mode 5 the Powerchair will reach maximum speed and acceleration. Each time you press the UP selector key you will see in the window the next higher number, and each time you press the DOWN selector key you will see the next lower figure. In this way you can select any intermediate drive mode between very low speed and acceleration and maximum speed and acceleration, whichever suits best the given conditions in which you drive and which you prefer at the time. As already indicated, the electronic controller of your powerchair is programmable. It means the way in which the Powerchair behaves in any of these five drive modes can be changed and adjusted according to your requirements and wishes. Contact your **INVACARE** supplier/dealer.

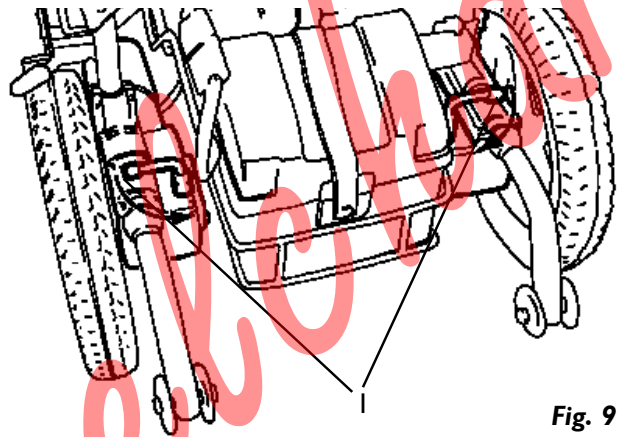


Fig. 9

### Freewheel Operation

To push the Powerchair by hand in the event of a fault or battery failure, or simply to move it

WITH NO OCCUPANT in it, the two motor/gearbox units can be declutched from the rear wheels. First ensure that power is switched OFF on the joystick box. Then, standing behind the powerchair, turn the lever (Fig. 9) with the little black end cap on each of the motor/gearbox units through 90 degrees outward, so that they are at a right angle to their normal engaged position. To restore powered drive, turn BOTH levers back to their normal position.



### CAUTION

*Freewheel operation is only intended for short-term use in SPECIAL CIRCUMSTANCES, NOT as a regular or permanent mode of Powerchair movement. In freewheel mode the Powerchair is NOT secured by the electromagnetic brakes, as both brake systems are out of action during this time.*

Before you attempt to drive the chair, ensure that BOTH declutch levers are FULLY returned to normal operating position (Fig. 9).

### **Driving Practice**

Release the manual wheel locks. With the joystick you now control speed (within the selected Drive Mode) and direction of the Powerchair. The more you move it forward, the faster you travel. To reverse, pull the joystick backward. By moving the joystick left or right (while the Powerchair is moving forward or backward) you steer the Powerchair. Push the joystick full left or right, and the Powerchair will turn around within its smallest turning circle. To slow down, guide the joystick towards its centre (neutral) position. If you have to stop in an emergency, simply release the joystick. It will automatically snap back to neutral and the Powerchair will come to a smooth halt. As a last resort ONLY press the On/Off switch which will serve as an emergency off switch. Once at a standstill, the Powerchair is instantly locked by the electromagnetic parking brakes, so that it is perfectly safe while it is stationary, even on an incline.

### **Shutdown - Parking**

For security shutdown, parking indicator lighting and the adjustments of electrical options, refer to the Operating Manual supplied with the joystick.

### **Transferring to and from your Powerchair**

Circumstances and individual needs will vary from person to person, we advise you consult your Therapeutic Adviser who will help to advise and develop your skills for the appropriate transfer methods to suit your individual requirements. DO NOT attempt transferring unaided until you are confident and proficient in the skills to do so, remember always during transfer make sure the brakes are in the locked position and the Powerchair is manouvered as close as possible to the transfer seat.

## **ROUTINE MAINTENANCE AND GENERAL CARE**

Your Powerchair is perhaps the one piece of equipment which gives you freedom and mobility, therefore it is important to look after it. Your Powerchair comprises of sophisticated electronic control systems and electrically operated parts, which should be checked and adjusted at regular intervals. Some of these checks you can, and should, carry out yourself, such as proper working order of all lights, effective functioning of wheel locks or parking brake, correctly inflated tyres etc. There are procedures which demand more expertise, we therefore strongly advise you to have your Powerchair inspected and serviced by your local **INVACARE** supplier/dealer at least once a year. It will save you money in the long term, because certain minor irregularities or faults that are detected at an early stage before they develop into some major and more costly repairs.

Looking after your Powerchair also means “safe-keeping”. When you park it and leave it outdoors, choose a place as safe and protected from the weather as you possibly can. Don't forget to remove the “ignition” key and to activate any built-in special security devices (for instance the magnetic key operated immobilisation lock).

### **Tyres**

Pneumatic tyres should be checked once a week for correct tyre pressure. To inflate the tyre, only use the pump provided. NEVER use a forecourt compressed air line. At the same time check the tyres for excessive wear and possible damage (cracks, etc.). Check that solid tyres are firmly seated on the wheel rim (not loose) and free of damage. Excessively worn or damaged tyres should be replaced without delay.

### **Joystick Box and Power Module**

Joystick Box and Power Module are in a splashproof enclosure, they should not be subjected to direct spillage of liquids (tipped over glasses, etc.). If spillage does occur, switch off power and dry the affected surfaces with an absorbent cloth. Do not expose the joystick box or the power module to excessive heat at close range (electric fire, hot air blower, etc.). To clean the joystick box and power module wipe the surfaces with a lint free cloth dampened with warm water or alcohol. DO NOT USE SOLVENTS.

## NOTE

The indicator light in the ON/OFF switch may also begin to flash in certain other situations, because it also functions as a fault indicator in the event of any failure in the electric and/or electronic system of the Powerchair. For details, refer to the TROUBLESHOOTING in the joystick Operation Manual supplied with your Joystick..

Check the joystick rubber gaiter and keypad are in good condition and show no signs of cracks, pin holes, etc.

Once a month check the various connections on the underside of the power module to verify that they are in place and tight. Damaged or corroded connectors or terminals, as well as damaged cables should be replaced immediately.

## IMPORTANT

All Cables of the control system have special-type connectors which fit into their respective sockets in the power module. They are locked in place by a small spring pin on the side of the connector. To disconnect a cable, when you want to remove the joystick box or fold the Powerchair for example, grasp the connector with your fingertips and squeeze the spring blade or spring pin against the connector and at the same time pull the connector out of its socket. To reconnect a cable, place the connector against its socket, check that you hold it in the correct position relative to the socket, then simply push it firmly home into the socket until the spring blade or spring pin snaps into lock. It is most important that these cable connectors are correctly installed at all times, otherwise the Powerchair cannot operate properly. If you are in any doubt as to the proper functioning or condition of any part of the control system, do not hesitate to contact your **INVACARE** supplier/dealer immediately.

DO NOT attempt to open the joystick box or the power module as this will invalidate all warranties.

## Cleaning

Upholstery and metal work can be maintained by a wipe-over with a soft cloth. If you have been out in wet, muddy conditions, sponge off all dirt and wipe with a dry cloth. Should chromium parts develop dull areas during the course of time, especially if your Powerchair is frequently is exposed to high humidity, rain etc., the finish can be restored with a proprietary brand auto wax or chromium polishing agent. DO NOT use any harsh abrasives. As a preventive treatment against the loss of high polish chromium parts may be given a light petroleum jelly coating. DO NOT use solvents, silicone spray, polishing wax or any abrasive cleaning materials

## BATTERIES AND BATTERY CHARGING



### IMPORTANT WARNINGS

THE BATTERY CHARGER SUPPLIED WITH YOUR POWERCHAIR IS FOR INDOOR USE ONLY, IT MUST BE PROTECTED FROM MOISTURE AND EXTERNAL HEAT SOURCES.

HANDLE THE BATTERY CHARGER WITH CARE, IF IT HAS BEEN DROPPED OR DAMAGED, DO NOT USE IT.

DO NOT USE AN EXTENSION LEAD FOR CONNECTION FROM THE MAINS TO THE CHARGER UNLESS ABSOLUTELY NECESSARY. IF YOU DO USE ONE ENSURE IT IS IN GOOD CONDITION.

ONLY USE THE CHARGER SUPPLIED WITH YOUR POWERCHAIR.

BATTERIES ARE HEAVY, IF YOU HAVE TO REMOVE THEM, ENSURE YOU ADOPT THE CORRECT LIFTING POSTURE TO AVOID INJURY. ASK FOR ASSISTANCE IF NECESSARY.

Nithsdale

Wheelchairs

Connect the charger to the mains and switch on.

When charging is complete switch off and disconnect from the mains.

If required, the charger can be left connected to the Powerchair and to the mains. This will keep the batteries 100% charged and compensate for self-discharging over a long period. (You cannot overcharge your batteries).

If you experience charging difficulties or require further advice, do not hesitate to contact your local INVACARE supplier/dealer.

### **Charging Procedure for Powerchairs Fitted with Tray and Chin Control Options**

1. Ensure that power is switched OFF on the joystick box.
2. Check that the ventilation slots on the charger are clean and unobstructed.
3. Disconnect the main power lead from the rear of the battery box, (Fig.10).
4. Connect the charger output lead to the power lead socket connector at the rear of the battery box, (Fig.11).
5. Connect the charger power supply cable to the mains socket and switch the power on. The red "Mains ON" and the yellow "Charging" lights on the charger will come on.
6. It is recommended the charger is left connected as described until the green full charge light illuminates to obtain optimum performance of the batteries.
7. When the green "Charge Complete" light illuminates, the batteries are fully charged and ready for use. The charger will switch off automatically.
8. Disconnect the charger from the mains.

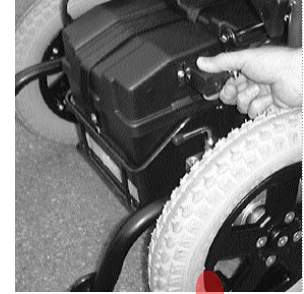


Fig.10



Fig.11

#### **NOTE**

*An "Overvoltage" condition may also occur temporarily while you are descending a steep gradient with fully charged batteries, when the motors virtually have the effect of a dynamo, adding to the batteries.*



**Periodic Maintenance**  
Maintenance Operation

	Initial	Weekly check/adjustment	Monthly check/adjustment	Regular check/adjustment
<p><b>1. Parking brakes</b> Parking brakes do not chafe against the tyres when moving. Motor parking brakes function correctly.</p>			●	●
<p><b>2. Cross-braces</b> Check that they are not worn or bent.</p>			●	
<p><b>3. Armrest</b> Check that all fasteners are in place. Check that they are easy to remove and refit. Check that the armrest lock assembly functions.</p>	●	● ●		
<p><b>4. Seat and seat-back upholstery</b> Check that both are in good condition.</p>			●	
<p><b>5. Rear drivewheels</b> Check tightness of axle bolt. Check rear wheels for wobble.</p>		●	●	
<p><b>6. Front castors</b> Check the axle function for free wheel. Adjust the bearing if the wheel wobbles or grips. Check that all castor fork bearings are tight.</p>		●	● ●	
<p><b>7. Inflatable tyres</b> If the Powerchair has inflatable tyres, check that they are filled to the pressure specified on the sidewall also check for excessive wear and damage.</p>	●	●		
<p><b>8. Cleanliness</b> Clean all mechanical components. Clean seat and seat-back upholstery with soapy water.</p>			● ●	
<p><b>9. Electrics</b> Plug and socket connections. Batteries have been fully charged before use of the chair. Supporting brackets and fasteners are tight. If lights are fitted check all lamps work.</p>	● ● ● ●			

Take your Powerchair to your local **INVACARE** supplier/dealer once a year for a periodic checkup and maintenance. Regular checkups will identify damaged and worn components and promote better and more comfortable operation of your Powerchair.

## TROUBLESHOOTING

The following check list is to assist you in locating and rectifying certain fault conditions. If the problem persists after you have made the checks, contact your local **INVACARE** supplier/dealer.

### **Powerchair will not drive, ON/OFF light does not come on, when ON/OFF switch is pressed.**

1. Power cable from battery boxes not properly connected to Power Module.  
Check and make proper connection.
2. Batteries completely flat. Charge batteries. If they do not accept charge, contact your local **INVACARE** dealer.
3. Defective power supply cable or connector, contact your local **INVACARE** dealer.

### **Powerchair pulls to one side.**

1. Check that both manual wheel locks (handbrakes) are released.
2. Check that both motor/gearbox units are fully engaged (clutch levers in normal operating position).
3. Check that BOTH front wheels (castors) turn and swivel freely.

### **Powerchair will not drive - ON/OFF light flashing.**

If the light in the ON/OFF switch on the joystick box flashes, it indicates a fault in the Powerchair electric/electronic system. This flashing occurs in "bursts" of flashes separated by a two second pause. The number of flashes in each of these "bursts" indicates the nature and location of the fault. Faults which affect the safety of the Powerchair will cause the Powerchair to stop, or prevent it from starting.

For further details refer to Joystick Box Operating Manual supplied with your Joystick.

## TRANSPORTATION

**INVACARE** always advises that a Powerchair secured in a vehicle will not provide the equivalent safety level and security as bespoke seating systems and recommends transfer to the vehicle seating, but also recognises that it is not always practical for the user to be transferred.

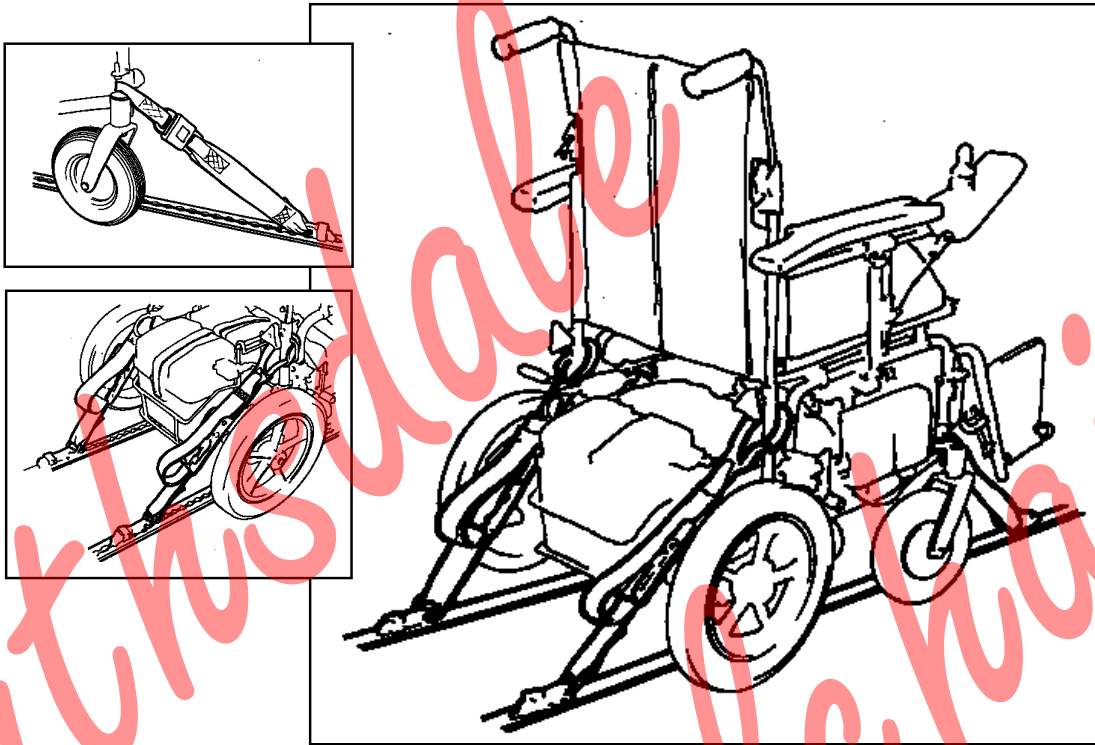
In cases where transfer is not possible then the Powerchair should only be secured as follows:

### **NOTE**

*Your safety during transportation, largely depends upon the diligence of the person securing the Tie-downs and passenger restraints, it is your responsibility to ensure that your Powerchair has been secured safely.*

1. Ensure that your model of Powerchair is suitable for transportation with an occupant in a vehicle. If you are unsure, seek advice from your Powerchair supplier/dealer.
2. Seek confirmation from the Transporter that the vehicle is suitably designed, insured and equipped to transport a passenger seated in a Powerchair.
3. Any part of the Powerchair (accessories etc.) that can be easily detached should be removed and stored in the vehicle luggage hold during transportation.

4. The Powerchair should always be transported in a forward facing direction. Rearward facing is only acceptable if your head and back can be supported by a suitable bulkhead.
5. **INVACARE** recommend the 4-Point Webbing Tie-Down System with Karabiner should be used to secure your chair within the vehicle, these restraints are available from Unwin Safety Systems and Koller Engineering (both companies based in the UK, Yeovil in Somerset).
6. When attaching the tie-downs to the Powerchair, it is imperative they are fixed onto the **MAINFRAME** only of the Powerchair and not onto any attachments or accessories (wheels, castors, footrests, armrests, anti-tipping levers etc).



7. The Tie-Downs should be secured, as close as possible, at an angle of 45° to ensure maximum effectiveness of the restraint in all directions.
8. If your Powerchair has a headrest it should always be used during transportation, if not ask the transporter if a universal headrest is available that will fit onto your Powerchair.
9. During transportation it is **essential** that you are secured by three point lap and diagonal occupant restraint system, which is anchored to the vehicle wall and floor rails. Powerchair lap belts can be used in **addition** to the three point restraint system but must not be considered as an alternative to the occupant restraint system.

## TECHNICAL SPECIFICATION DATA - CRUISER plus Powerchair Classification - Type B Indoor/Outdoor

Seat Minimum Width	16.5 in	42 cm
Seat Maximum Width	18 in	46 cm
Seat Minimum Depth	17 in	43 cm
Seat Maximum Depth	18 in	46 cm
Seat Height	19.25 in	49 cm
Overall Height	37.75 in	96 cm
Overall Minimum Width	23.5 in	60 cm
Overall Maximum Width	25.25 in	64 cm
Overall Minimum Length	41.75 in	104 cm
Overall Maximum Length	46 in	117 cm
Armrest Minimum Height	8 in	20 cm
Armrest Maximum Height	13.75 in	35 cm
Minimum Footrest - Seat Distance	15 in	38 cm
Maximum Footrest - Seat Distance	20 in	51 cm
Max. User Weight	16 stone	100 kg
Tyres - Front, Pneumatic	36 psi	2.5 bar
Tyres - Rear, Pneumatic	40 psi	2.7 bar
Electrical System	24V	
Batteries	Two 12V - 25AH Gel Type	
Battery Charger	240V/24V Gel Type 7Amp	
Minimum Turning Radius *	34.25 in	87 cm
Range *	13 miles	21 km
Speed *	1-4 mph variable	1-6.4 km/h variable
Gradient *	1:5	20%
Kerb Riding Ability *	2in (5cm) without Kerb Rider capable of 4in (10cm) with Kerb Rider	
Overall Weight, including Batteries	138 lbs	62.7 kg
Weight of Heaviest Part	63 lbs	27.5 kg

\* Dependent on User Weight, condition of Batteries, Tyre Pressures and the Terrain on which the Powerchair is being used. **INVACARE** reserve the right to alter specifications without prior notice.

## WARRANTY TERMS & CONDITIONS

### Standard INVACARE Terms

This is to certify that your **CRUISER plus** Powerchair is warranted by **INVACARE** (UK) Ltd., for a period of 1 year.

1. Only **INVACARE** chairs purchased at full price are warranted against defective workmanship and materials.
2. If a defect or fault is discovered the **INVACARE** dealer from whom the appliance was obtained should be notified immediately.
3. The manufacturer will not accept responsibility for damage caused by misuse or non-observance of the instructions set out in the users manual.
4. During the period of the Warranty, any parts that have become defective due to faulty workmanship or materials, will be renewed or repaired without charge by the **INVACARE** dealer.
5. The Warranty will be forfeited should any unauthorised alteration be made to the equipment.
6. The Purchaser's statutory rights under the Consumer Protection Act are not affected.

### Limitation of liability

This Warranty does not extend to the consequential costs resulting from fault clearance, in particular freight and travel costs, loss of earnings, expenses etc.

- natural wear and tear
- inappropriate or incorrect use
- defective assembly or setting-up by the purchaser or third parties
- defective or neglectful treatment
- use of unsuitable spares

For questions or support, please contact your authorised **INVACARE** Dealer. He has the necessary know-how and equipment plus the special knowledge concerning your wheelchair which enables him to offer you all-round satisfactory service.

Should you wish to contact us directly, we are at your service under the following addresses and phone numbers.

#### **United Kingdom**

INVACARE (UK) Ltd

South Road Bridgend Mid Glamorgan - CF31-3PY

Tel (Customer Service): 01656 - 647 372 Fax (Customer Service): 01656 - 649 016

#### **France**

POIRIER Groupe INVACARE

Les Roches F-37230 Fondettes

Tel (Service Après-Vente): 02 47 - 62 64 15 Fax (Service Après-Vente): 02 47 - 62 64 64

#### **Deutschland**

INVACARE Deutschland GmbH

Dehmer Str. 66 D-32549 Bad Oeynhausen

Tel (Kundendienst): 05731 - 754 210 Fax (Kundendienst): 05731 - 754 216

#### **The Netherlands**

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Tel : +31 - (0) 318 - 550 056 Fax: +31 - (0) 318 - 555 054

#### **Sverige**

INVACARE AB

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Tel (Kundjänst): 0583 -140 85 Fax (Kundjänst): 0583 -124 05

#### **Spain**

REHADAP SA

c/Areny, s/n, Poligon Industrial de celrà, 17460 Celrà (Girona) - España

Tel. 0972 - 49 32 00 Fax: 0972 - 49 32 20

#### **Italy**

Mecc San S.R.L.

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Tel: 0445 - 380059 Fax: 0445 - 380034

#### **Portugal**

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