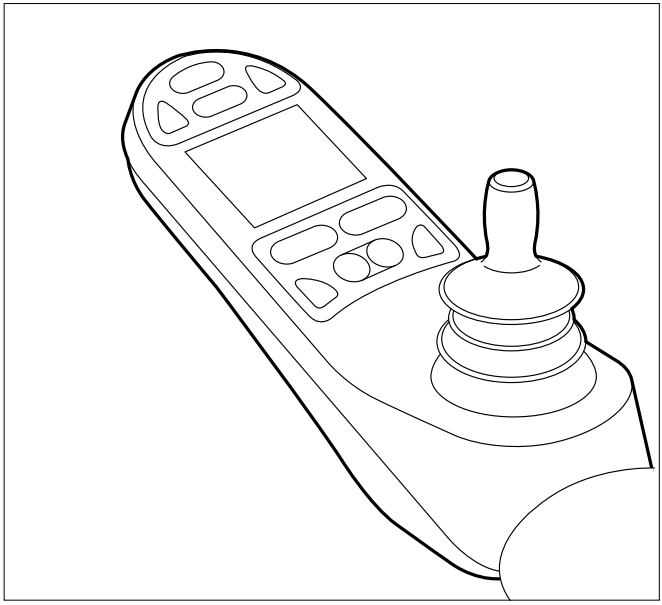
USER MANUAL CONTROLS (CANADA)

R-NET (PG DT)



handicare

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English

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2011-07

1 Introduction

1.1 This user manual

This user manual will help you to use and maintain the controller of your power wheelchair safely. This user manual is a supplement to Handicare's general wheelchair user manual. When necessary this user manual refers to other manuals as shown below:

- 🕮 Wheelchair: Refers to the general wheelchair user manual.
- 🕮 Battery charger: Refers to the user manual for the battery charger.

Read this user manual and the other user manuals referred to carefully before using the product. If one of the user manuals was not included with your wheelchair, please contact your dealer immediately.
In addition to this user manual, there is also a service manual for qualified specialists.

CONTACT HANDICARE IF YOU HAVE A VISUAL IMPAIRMENT.

2 The controller

2.1 R-net controller

A controller will usually have three basic functions:
- Driving and steering a wheelchair
- Operating electrical seat adjustments
- Charging the wheelchairs batteries

There are many different control systems for wheelchairs on the market. If the controller on your wheelchair does not resemble the one in figure 1, contact your dealer.

R-net by PG Driving Technologies is a collective name for the entire control system of the wheelchair. The wheelchair is operated by means of a controller, which includes the following components:

Figure 1

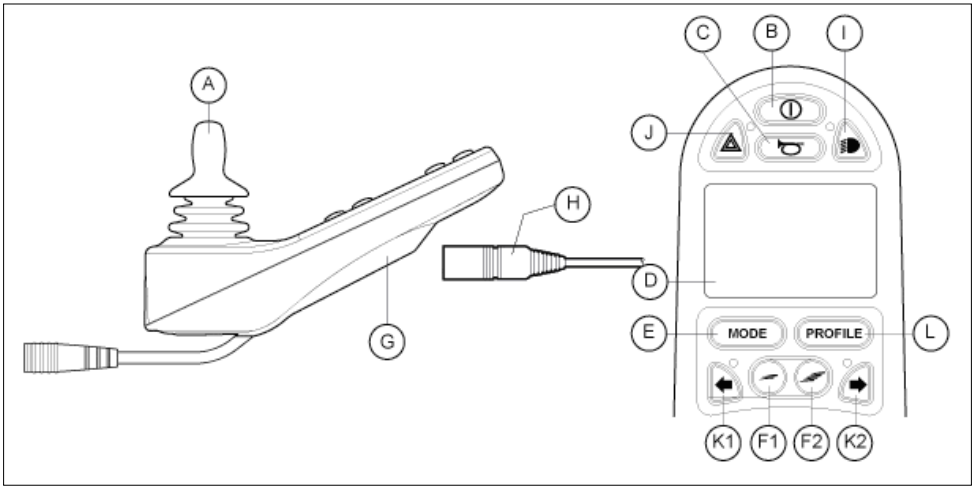

Figure 2

Part	Function
A. Joystick	In the ‘drive’ mode: driving and steering In the ‘adjustment options’ mode:: • Left/right to select the adjustment options • Front/back to select the adjustment options
B. On/off switch	Switching the controller on or off
C. Horn	Warning signal with sound
D. LCD colour display screen	Display and feedback
E. “Mode” button	Changing between the ‘driving’ and the ‘adjustment options’ mode
F1: Speed regulator	Reduce driving speed (slower)
F2: Speed regulator	Increase driving speed (faster)
G. Charge connector	Input for the battery charger
H. Charge plug for the battery charger	Connector for the battery charger
I. Lights button	Switching the lights on or off
J. Hazard lights	Warning signal with lights
K1: Direction indicator left	Switches the left direction indicator on or off
K2: Direction indicator right	Switches the right direction indicator on or off
L. “Profile” button	Select driving profile

2.2 Display

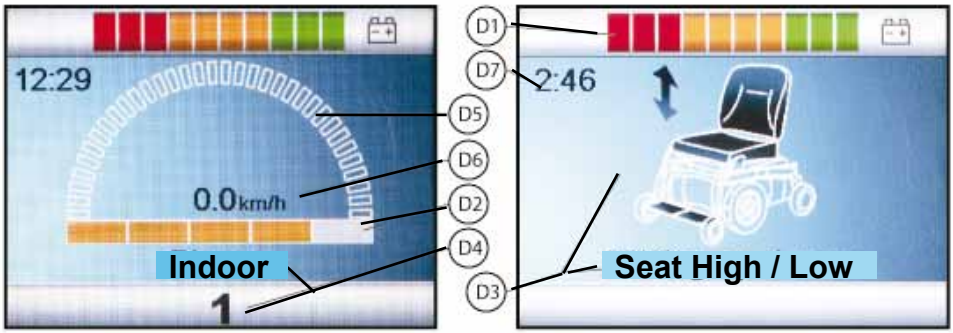

Figure 3 left: In the ‘drive’ position, Figure 3 right: In the ‘adjustment options’ position

Part	Function
D1: Battery indicator	Displays the power level of the battery
D2: Maximum speed	Displays the maximum speed limit as set by the user
D3: Adjustment option	Displays the selected adjustment options
D4: Profile	Displays the selected profile
D5: Speed indicator	Displays a graph of the actual speed
D6: Kilometre (/ Mileage) counter	Displays the actual speed
D7: Clock	Displays the time

3 Driving the wheelchair with the controller

3.1 Switching the controller on or off

To be able to drive or operate the electronic adjustment options of the wheelchair, the controller must be switched on. Press the on/off button (B in figure 2).

3.2 Driving the wheelchair

Driving an electric wheelchair is done by operating a joystick. Move the joystick forwards and the wheelchair will also move forwards. Steer left and right and the wheelchair will turn.

3.3 Speed

The maximum speed can be controlled by the speed regulator on the controller (F1 en F2 in figure 2). The speed bar on the display screen will display the maximum speed (D2 in figure 3). Speed can be controlled with the joystick while driving. If the joystick is moved a little, the wheelchair will move more slowly.

3.4 Driving Profile

This controller can also be set to make the wheelchair suitable for different driving profiles or environments. For example, selecting the profile for indoors will ensure that the wheelchair will react more ‘calmly’. Once outside, the profile can be adjusted to a more ‘robust’ setting. The name of the current profile is displayed in the speed bar (D4 in figure 3). R-net allows you to adjust the maximum speed within different profiles or environments.

3.5 Selecting a profile

To switch to a different profile, just press the ‘profile’ button (L in figure 2). Press the ‘profile’ button until the most appropriate profile has been selected.

4 Operating the electrical adjustment options

Not every wheelchair has been equipped with electronic adjustment options. We make a distinction between four different adjustment options to the seating system as per the pictures in figure 2:
A: Seat tilt adjustments
B: Seat high/low adjustments
C: Backrest recline adjustments
D: Legrest elevation adjustments

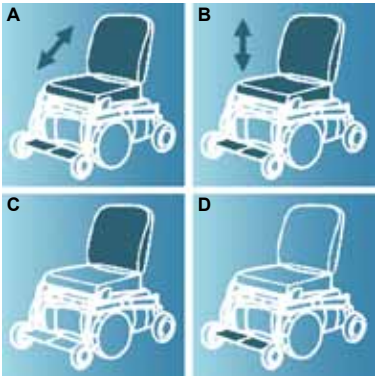

Figure 2 Electrical adjustment options

4.1 Selecting the desired adjustment option

1. Switch on the controller
2. Press the ‘mode’ button to select the ‘adjustment options’ mode (see figure 2). The controller will now be in the ‘adjustment options’ mode and one of the four pictures in figure 2 will be visible on the joystick display.

The joystick is used to select and operate the electronic adjustment options.

3. Move the joystick to the left or the right to select the desired adjustment option. The selected adjustment option will be visible on the display screen.
4. Moving the joystick forwards and/or backwards will activate the selected electronic adjustment option (see table 5). Move the joystick forwards or backwards until the desired adjustment option has been attained.

	Move joystick backwards	**Move joystick forwards**
Seat tilt adjustment	The entire chair will tilt backwards	The entire chair will tilt forwards
Seat high/low adjustments	The entire chair will be raised	The entire chair will be lowered
Backrest recline adjustments	The backrest will tilt backwards	The backrest will tilt forwards
Legrest elevation adjustments	The legrest angle will increase, the footplate will be raised	The legrest angle will decrease, the footplate will be lowered

Table 3 Electrical adjustment options

5. To return to the ‘drive’ mode: Press on the ‘mode’ button to select the ‘drive’ mode.

Note: If you adjust the seat height by using the high/low option or use the electrical tilt adjustment 0 - 45°, the speed will be reduced due to safety reasons.

5 Lights

With the R-net it is possible to control the following lights:

- Lights (I in figure 2)
- Hazard Lights (J in figure 2)
- Direction indicators (K1 & K2 in figure 2)

6. Troubleshooting

If the wheelchair will not function while the batteries are fully charged, check the following points before consulting your dealer:

- Switch the controller off and then switch it on again. Check to see if the malfunction has been solved.
- Check if the free wheel switch was switched to Drive.
- Check if the joystick was in the 0 position when the controller was switched on. In other words, the joystick must not be moved when the controller is being switched on or off.

Malfunctions list

An extended malfunction list can be found in the appendix of the service manual (for qualified specialists only). The service manual can be found on www.handicare.com

7. Locking the controller

To lock the controller with the special key (H1 in figure 6):

- Insert and remove the special key into the Charger Socket on the Controller (G in figure 6). The controller is now locked and the following screen will be displayed.

To unlock the controller with the special key:

- If the control system has switched off, press the On/ off (B in figure 2).
- Insert and remove the special key into the Charger Socket on the Controller (G in figure 6). The controller is now unlocked.

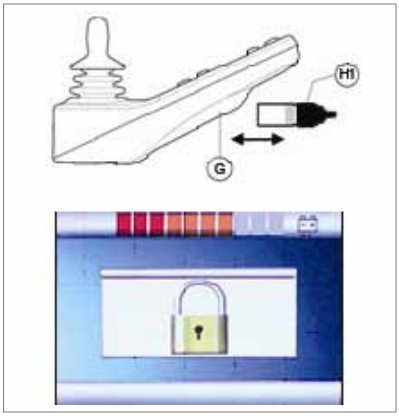

Figure 4

8 Technical specifications

Supply Voltage:	24 Vdc
Operating Voltage:	16Vdc to 35Vdc
Peak Voltage:	35Vdc
Reverse Battery Current:	40Vdc
PWM Frequency:	20kHz ± 0.5%
Brake Voltage:	12/24Vdc
Brake Current:	200 µ A min. 1A max.
Charger Connector:	Use only Neutrik NC3MX
Battery Charging Current:	12Arms max.
Maximum Drive Current:	R-net 60 30A R-net 80 80A R-net 120 120A
Indicator Outputs:	45W per side
Lighting Outputs:	21W per side
Brake Light Output:	42W total
Actuator Current:	15A max at reduced speed. 12A max at full speed.
Moisture Resistance:	Electronics to IPX4
Operating Temperature:	Non LCD Modules -25°C to +50°C Modules with LCD Screens -10°C to +50°C
Storage Temperature:	Non LCD Modules -40°C to +65°C Modules with LCD Screens -20°C to +65°C

EMC tested on sample wheelchair:

Susceptibility:	Tested at 30V/m to EN12184 (1999) and ANSI/ RESNA requirements
Emissions:	To EN55022 Class B
ESD:	IEC801 part 2

9. Technical diagrams

9.1 Technical diagram

The technical diagrams can also be found on the cover of the specific electronic component.

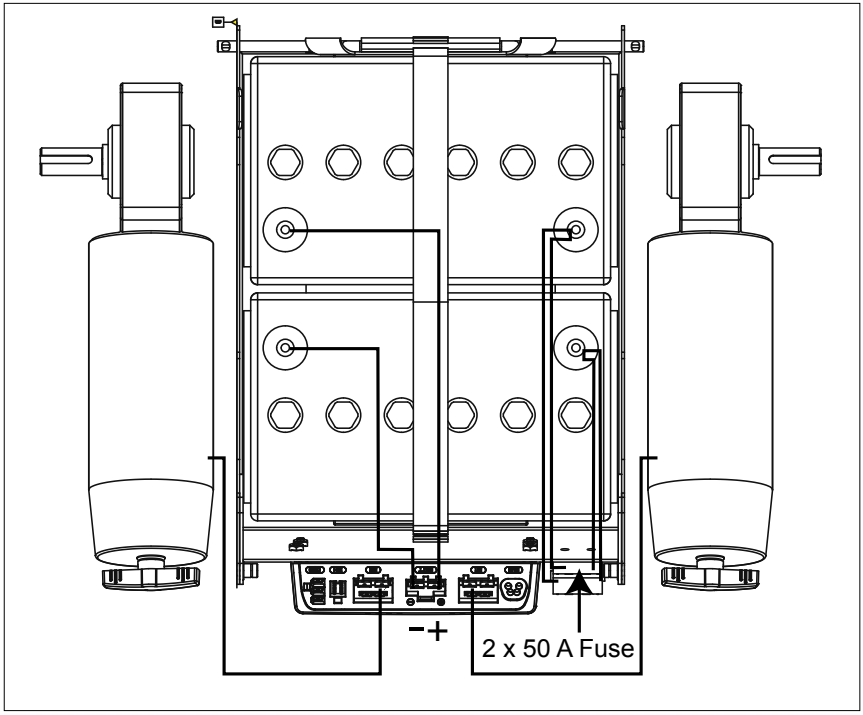

Figure 5

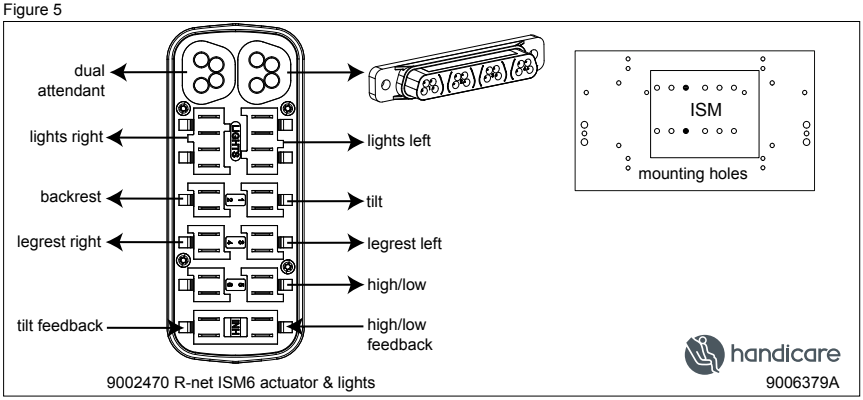

Figure 6

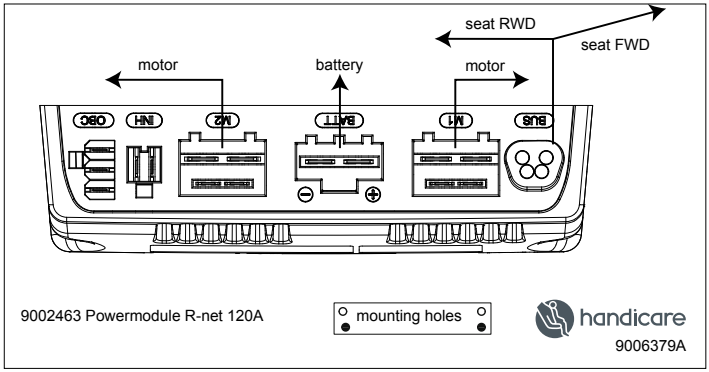

Figure 7

9.2 Technical diagram battery charger

The controller's standard configuration includes a '3-pin connection'. Ensure that the battery charger is properly connected so that the 'negative pole' and the 'inhibit' are connected, enabling the system to prevent the wheelchair from moving when the battery is being charged.

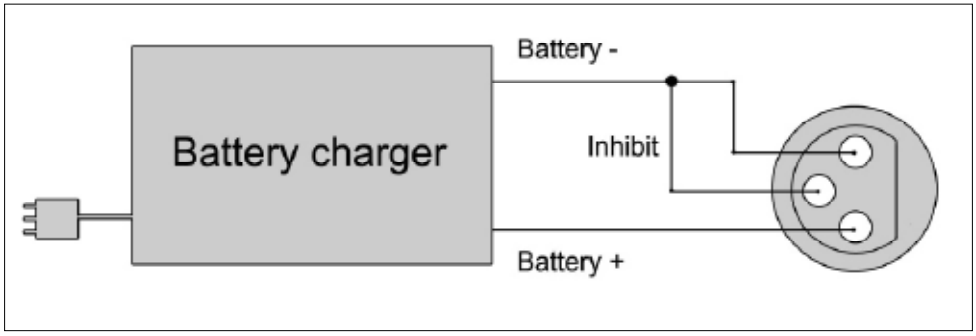

Figure 8

Dealer:

Serial number:

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