

Troubleshooting

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

- Switch the controller off and then switch it on again. Check to see if the wheelchair functions again.
-  WHEELCHAIR Check if the free wheel switch is switched to drive.
- Check if the joystick was in the neutral 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.
- Check whether all the battery clips are firmly in place.

If your wheelchair is still not working, or is not working as it should, go through the wheelchair functionality table in the following paragraph.

 TECHNICAL in case of controller issues for more detailed information. The R-net and VR2 technical manuals can be downloaded at the www.pgdt.com or www.DIETZ-Power.com website.

Warning!

Before changing bus cables, fuses and/or modules, remove both fuses from the battery compartment, so the system will be 'dead'.

Wheelchair functionality table

A. Wheelchair does not switch on	
Cause	Possible solution
Buscables not connected	Check buscable connections of the joystick module to the power module (can also be through the actuator module!)
Pins in connectors are loose or damaged	Check connectors for loose or damaged pins. If damaged replace cable.
Buscable defect	Check all bus cables for damage. Bypass each buscable with new one to check functionality.
Fuse defect / Thermal trip	Check fuses and replace if needed.
Battery connections are loose	Check battery connections and restore if needed.
Battery voltage too low	Measure battery voltage and charge batteries.
Battery defect	Measure battery voltage. Voltage below 10 V can indicate that one battery is defect. Replace batteries.
Remote control or button defect	Check by replacing with new one.
Power Module defect	Check by replacing with new one.

B. Wheelchair continuously drives slower than normal	
Cause	Possible solution
Speed limit due to microswitch signal from seating function.	Check if all seating options are in neutral position. Measure resistance from the speed limit cable in different seating positions. Bad cable connections or a broken resistor influences the drive inhibit signal.
Incorrect programming	Check for correct program. Re-program if needed.
Parking brake partially engaged	Check parking brake function. Clicking sound at engaging/disengaging should be present. Check temperature of parking brake after driving.

C. Wheelchair drives slower throughout the day (or after several hours)	
Cause	Possible solution
Poor batteries	Check batteries and battery voltage.
Poor or incomplete battery charging	Check battery charger. Check charging duration with the user.
Thermal rollback (overheating)	Check usage of wheelchair, extreme usage can cause the power module to decrease the maximum currents for protection.
	Check wheelchair in freewheel mode for extreme resistance on rolling or turning.
	Check Gyro cabling and/or replace Gyro module.

D. Wheelchair only drives well for a short period of time	
Cause	Possible solution
Current limit is set too low or the controller is underspecified	Check program settings and/or replace controller.

E. Wheelchair can be powered up, but does not drive	
Cause	Possible solution
Parking brakes are in freewheel mode (flash code on remote)	Set parking brakes to Drive mode.
Drive inhibits active (flash code on remote)	Check program which Drive inhibits are present. Check cabling of Drive inhibits on wheelchair.

F. Wheelchair has too little power to drive properly	
Cause	Possible solution
Tyre pressure of drive wheels or castors is too low	Check pressure and inflate if needed. See User manual for correct value.
Programming of speed and Torque Settings is not correct	Check programming and make corrections if needed.
Programming of Motor Load Compensation is not correct	Check programming and make corrections if needed. Check with manufacturer for correct value.

G. Wheelchair veers to one side	
Cause	Possible solution
Programming of Load Compensation is not correct.	Check programming and make corrections if needed.
Motors are not "balanced"	Check motor rpm. See motor label for correct value.
Tyre pressure or tyre size left and right are different	Check tyre pressure and tyre size (diameter).
Suspension "hardness" left and right are different.	Check suspensions and make sure left and right side have identical suspension rates.
Carrier is not "in balance" due to mechanical flaws	Check for loose bolts, cracked or worn frame parts. Check height of carrier left and right.
User weight is not in the center of the wheelchair	Check position of user, see if position can be improved. If not possible use veer compensation in program to correct the steering.
Chair stops intermittently	High Voltage due to overcharging or driving down slopes with full batteries (regenerative braking). Check battery voltage, drive down slope at lower speed.
Worn carbon brushes	Check brushes, replace if needed.
Speed Limit due to micro switch	Check functioning of micro- switch. Due to vibrations or shocks it can temporarily switch to Slowdown mode.

H. Castor wheels "wobble" at higher speed	
Cause	Possible solution
Tyre pressure too high.	Check tyre pressure and decrease if needed. See user manual for correct value.
Too little load on the castor wheels.	Modify seating setup if possible or decrease tyre pressure.

I. Motors make excessive noise	
Cause	Possible solution
Worn carbon brushes	Check carbon brushes and collector. If needed replace brushes or motor.

J. Wheelchair wobbles overall or moves up and down when driving	
Cause	Possible solution
Drive wheels have radial misaligned tyres. Can be caused by long (weeks) inactive periods	Check for misalignment of tyres. If misaligned, reduce tyre pressure to 1 bar, drive for several minutes at moderate speed and increase pressure again to advised value. Misalignment can be reduced this way. If not sufficient replace wheel.

K. Seating actuator does not function	
Cause	Possible solution
Current setting is not correct	Check programming and make corrections if needed. Contact manufacturer for correct settings.
Cables not connected or cables damaged	Check cables and replace if needed.
Wheelchair goes into fault status when actuator is operated	Actuator has a short circuit that becomes active when the actuator is operated. Replace actuator.
Actuator inhibit is active	Check program to see what actuator inhibit is present. Check if inhibit signal is functioning correctly (example: with lift and tilt to maximum, recline will no longer move backwards).
Actuator module (output) fault	Try actuators on different output channel to check what output channel has a fault.

L. Seating actuator only functions for a short time	
Cause	Possible solution
Maximum current setting is too low	Check programming and make corrections if needed. Contact manufacturer for correct settings.
Actuator time out setting is too short (or actuator speed is too low)	Check programming and make corrections if needed. Contact manufacturer for correct settings.
Actuator is internally not functioning properly	Check actuator temperature after operation and/ or check for excessive noise when operated. Replace actuator.
Seating mechanism is moving poorly or with extreme friction	Check mechanism on loose bolts, cracked or bent parts. Replace parts or modules.

M. Seating actuator moves in wrong direction (after replacement)	
Cause	Possible solution
Wiring connections possibly twisted in cable or motor	Change actuator direction in driving program or replace cable or part.

N. Lighting does not function	
Cause	Possible solution
Cabling not (correctly) connected	Check cabling. See wiring diagrams for correct connections.
Lighting settings not correctly set in program	Check programming and make corrections if needed.

O. Wheelchair moves/turns very slowly and seems to be lacking power	
Cause	Possible solution
Load compensation too low, incorrect setting.	Modify load compensation in driving program. Check with manufacturer for correct settings.
Too much load on front castors (RWD).	Modify seating setup to have better weight distribution.

P. Wheelchair moves very rapidly and jerky	
Cause	Possible solution
Load compensation is too high.	Modify load compensation in driving program. Check with manufacturer for correct settings.

Q. Castor wheels shimmy at higher speeds (≥10 km/h)	
Cause	Possible solution
The anti-shimmy set does not function properly.	Change the rubber rings.
Not enough pressure on the castor wheels.	In case of a light-weight user, it might help to set the CoG setting of the seating system a little more towards the castors. This will result in more pressure on the castor wheels. Note; adjustment of the seating system should always be done with caution, since incorrect weight distribution might negatively affect drive performance and comfort.
High tire pressure (air castors only).	The tires can be inflated up to 3.5 bar. In case of shimmy problems it might help to lower the tire pressure of the castor wheels (min. 1.5 bar). Note; This is not a preferred solution. Lower tire pressure will result in more friction between the wheel and ground. This can cause problems when turning on carpet and can have a negative effect on the range.

If the problem is not solved with the help of the solutions in the tables, contact DIETZ-Power.