



TECH TROUBLESHOOTING BLUEPRINT MASTERING POWER WHEELCHAIR SUPPORT

Getting the appropriate information to obtain the desired insights

Ask the customer the right questions

Using Insights – Actions from obtained info

NOTE: The more items the customer can provide in the list below on the left, the more likely the troubleshooting will be successful. The highlighted below is critical information/equipment required to increase chances of success.

<ul style="list-style-type: none"> • The chair's Serial Number 	Identify parts, options, and programming that the power wheelchair was delivered with from the factory.
<ul style="list-style-type: none"> • A copy of the chair's programming 	Compare the original programming with the current programming and look for errors.
<ul style="list-style-type: none"> • A copy of the chair's fault log 	Leveraging historical Data: Compare past and current events for insights on current challenges.
<ul style="list-style-type: none"> • Do you have a programmer? What type? 	
<ul style="list-style-type: none"> a) A wired dongle (D51846) 	Access the OBP (On board programming). Program and see faults. Files CANNOT be SENT.
<ul style="list-style-type: none"> b) A wired dongle and computer 	Same as above, but now multiple copies can be saved. Program and fault/event logs can be emailed to Tech Support. Requires software to be installed and administration rights of the computer.
<ul style="list-style-type: none"> c) A Wi-Fi dongle (D00231) and any device? 	Same as above, but now input states of the e-bx and ISM can be monitored. Does not require software and uses any internet browser with Wi-Fi connectivity. Can be a phone, tablet, or computer.
<ul style="list-style-type: none"> d) A micro-USB cable and e-bx software 	Allows the use of a cable and software to monitor e-bx inputs and perform iQ actuator diagnosis.
<ul style="list-style-type: none"> • A 5-push button Power Seating Keypad 	Allows the use of a special boot up diagnostic process to move faulty actuators and identify limiting faults on the chair.
<ul style="list-style-type: none"> • An LCD keypad, instead of LED 	Without a programmer, diagnostics are limited to a sequence of blinking lights on the LED joystick. An LCD joystick provides text for diagnostics (assuming no programmer is available).
<ul style="list-style-type: none"> • Do you have a multi-meter? 	Measure battery voltage (individually and together), measure current, check continuity of switches, wires, and/or connectors.
<ul style="list-style-type: none"> • Any spares? 	
<ul style="list-style-type: none"> a) Spare Power Module 	Will rule out issues with the power module.
<ul style="list-style-type: none"> b) Spare ISM or e-bx 	Will rule out issues with the ISM or e-bx modules.
<ul style="list-style-type: none"> c) Spare joystick cable (ex. D00173 and/or D00231) - R-Net cable 	Will identify or rule out issues with joysticks or cables, i.e. "BAD CABLE" errors. A good cable will provide a reference point for checking continuity on other cables.
<ul style="list-style-type: none"> d) Spare Jumper pins for modules, or a "MacGyver Paperclip" 	Will rule out that attached switches are functional or not functional as in a limit switch or an actuator position sensor. In the absence of tools a) to c), a paper clip is a last resort.
<ul style="list-style-type: none"> e) Spare actuator extension cable (1000455) 	Will identify or rule out issues with cables, i.e. "BAD CABLE" errors. A good cable will provide a reference point for checking continuity on other cables.



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Strategies to finding the problem and resolving the issue. ▶

Action
Possible problems/issues

NOTE: The action highlighted below is recommended.

01 Turn the power "OFF" on the joystick. Wait 10 seconds. Turn it back "ON".
Joystick/screen issue?

02 Unplug the chair's batteries. Wait 1 minute. Plug the batteries back in and turn on the joystick.
Power module needs reset?

03 Engage and disengage the motors. Cycle the power to the chair. Switch left motor with right motor to identify source of error.
Free wheel/brake issue?

04 Save the chair's programming to your PC/device.
A clean starting point before investigating.

05 Save the chair's event log (faults/error codes) to your PC/device.
Can be sent to Tech to help resolve issues.

06 Reload previously saved programming back into chair to overwrite current programming.
Will rule out issues related to programming if reloading doesn't change the issues.

07 Use "Reset to Preset" feature in programming to restore programming that is currently stored in the power module to "factory programming".
Good, if you didn't save the programming.

08 Check the battery voltage; at the joystick, at the individual terminals of the batteries (check both batteries individually).
*- Helps find loose/bad connections and issue due to batteries.
- If one battery is significantly lower or higher than other can affect chair performance/distance.*

09 Check the voltage at the joystick and drive the chair.
Fully charged chair, take for a drive and measure voltage (look for big drops in voltage >2 volts). If the voltage drops more than 2 V while driving normally, the batteries may need to be replaced or investigated further.

10 If chair is equipped with multiple actuators, have any functions disappeared in your selections?
Missing function is not communicating. If e-bx, switch to unused part?

11 Check cabling, wire ties (not too tight) and connectors (loose or broken).
Intermittent or not functioning do to lose wire or damage.



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Resources



All error/flash codes are available for R-net, VR2 and S-drive:
[PG Drives Technology : Online Diagnostics | Curtiss-Wright Service Center \(pgdt.com\)](#)



Software:
[Software downloads | AMYLIOR](#)



Order forms:
[Order forms for Electric Wheelchairs & Mobility Products | AMYLIOR](#)



Parts manual:
[Parts Manual | AMYLIOR](#)



Instruction guides:
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