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Troubleshooting

The tables and flow charts in this chapter cover the following potential problems:

- electrical problems: power, cable connections
- electronic problems: PCB, test points, signals
- mechanical problems: noise, vibration, grade, speed, belts

See Chapter 4 for repair and replacement procedures.

Tools

These tools may be needed:

- Flat blade screwdriver
- 10mm hex socket wrench
- 13mm hex socket wrench
- 4mm hex key (Allen wrench)
- stethoscope
- Ohm meter

Warning

High voltage is present under the hood when the treadmill is plugged into a power source; residual high voltage remains for a few minutes after the power is removed. Turn off the treadmill circuit breaker, then unplug the treadmill from the power source before removing the hood. Use extreme caution at all times when the hood is removed.

Secure loose clothing, jewelry, and long hair before working near treadmill parts.

Never place your fingers near rotating parts.

Do not start the walking belt when someone is on the treadmill.

Electrical Problems

Use the following table when:

- The treadmill will not start.
- There is no display on the controller.
- The treadmill stops unexpectedly.

Possible Cause	Action
Treadmill not plugged in	Plug power cord into appropriate outlet.
Power not on	Press the **Power** key on controller.
Limited access control activated, but magnet not in place	ClubTrack 510/612: Place magnet on Quinton logo, then press **Power** twice (off/on). To disable the control, remove magnet, then press **+**, **-**, and **Power** simultaneously. ClubTrack 510/612 Plus: Place magnet on Quinton logo, then press and hold the right-hand function key and press **Power**.
Circuit breaker on treadmill set to OFF	Set treadmill circuit breaker to ON.
Building circuit breaker tripped	Contact building maintenance to reset circuit breaker. If circuit breaker trips again, 1. Check outlet voltage. If necessary, verify that the power at the outlet and at the breaker is the correct rating for the treadmill. 2. Replace the configuration plate (faulty in-rush limiter).
Power cord damaged	Remove cord from outlet and replace
Blown fuse in treadmill	If F1, F3, or F4 are blown: 1. Unplug the treadmill. 2. Unplug the plugs at J2 and J3 of the Treadmill Voltage Configuration PCBA. 3. Measure the primary transformer windings for continuity. • Configuration Plate (P/N 035960) Transformer: Pins 1-2: approximately 24 ohms Pins 5-6: approximately 24 ohms • PCBA (P/N 036028) Transformer: Pins 1-3: approximately 165 ohms Pins 4-6: approximately 200 ohms 4. Replace fuses and if fuses blow again, replace the Configuration Plate Assembly, Treadmill Drive PCBA, or Linear Actuator as indicated.
	If F1 or F2 are blown: 1. Inspect the Linear Actuator (P/N 035853) and ensure that no parts are jammed (e.g. acme thread or grade arm in grade change assembly). 2. Replace fuses and if fuses blow again, replace the Configuration Plate Assembly, Treadmill Drive PCBA, or Linear Actuator as indicated.
Control cable between VSD* and controller faulty	Check for bent or broken pins. Replace control cable. Check cable for continuity and shorts.
VSD failure	Replace VSD if necessary.
Controller failure	Replace controller circuit board.

Possible Cause	Action
Configuration plate connection faulty	Check configuration plate connections; reattach or crimp as required. If problem persists, replace configuration plate.
Treadmill stops during run; **Stop Belt** has not been pressed. No error message appears	Look for loose ground wires. Reconnect and secure if loose.
LCD screen test failure	Replace LCD (p/n 35259-002), repeat test. If test fails again, replace PCBA.
HR ClubTrack Plus LCD does not come on	If the LEDs are on and the treadmill is functioning normally, check the LCD connector. If problem persists, replace the controller PCBA.
External RS232 port failure	Perform loop-back test. If test fails, replace PCBA.
* VSD (variable speed drive): circuit board assembly that controls the motor	

Electronic Problems

Error Codes

The treadmill performs an electronic self-test each time that it is powered up. If a problem is detected during either power-up or operation, an error code appears on the display. Note the code recorded by the owner, then reference the table of error codes.

If you replace a faulty PCB Assembly, return it to the factory and note the error code.

Code	Indication	Recommended Action
E001	Variable speed drive (VSD) microprocessor chip failure	Replace VSD
E002	VSD microprocessor EPROM/SRAM failure	Replace VSD
E004	VSD A/D failure	Replace VSD
E101	Controller PCBA microprocessor failure	Replace controller
E102	Controller PCBA EPROM failure	Replace controller
E103	Controller PCBA interrupt failure	Replace controller
E104	Communication Packet Checksum Fault	Clear the error by pressing **Clear** or **Power**. Attempt to operate the treadmill again. If error persists, replace VSD.