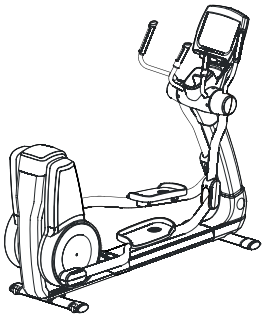

Elevation 95X-ALLXX-01 Commercial Cross-trainer

TROUBLESHOOTING

TROUBLESHOOTING

Tool required: multimeter

Symptom	Probable Cause	Corrective Action
No power to console	Battery voltage incorrect	If the battery voltage is not between 6.5—6.0 VDC, replace the battery.
	Defective power brick or inlet cable (applies only to units with external power supplies)	Verify that the power brick is plugged into the wall and the unit. Verify that the LED on the power brick is lit. If not, replace the power brick. If it is lit, check LED 6 on the GBC for +36V. If the LED is not lit, replace the inlet cable from the power jack to the GBC.
	Broken/slipping Poly-V belt	Check the tension on the Poly-V belt. Increase the tension if necessary. Check the condition of Poly-V belt. Replace it if necessary.
	Defective GBC	When pedaling or if the external power is applied, LED 3 (+6V) and LED 4 (+12V) should be lit. If they are not lit, replace the GBC.
	Defective main cable	Verify that LED 7 on the GBC is lit or blinking when the console is fully operational with pedaling or when the external power is applied. This indicates that communication is present between the GBC and console. If it is not lit, check the main cable connection at the console and the GBC. Re-insert the connector at either end if necessary. If there is still no power, check the main cable for point-to-point and point-to-ground continuity. Replace the main cable if necessary.
	Defective brake	Disconnect the wire from the brake to the GBC. Using a multimeter, verify 12—16 ohms between the two pins of this connector. If the ohm reading falls in this range, reconnect the cable to the GBC and, while pedaling the unit, check for 0.5—16 VDC at the same connector. If either test fails, replace the brake.

TROUBLESHOOTING – CONTINUED

Symptom	Probable Cause	Corrective Action
No resistance during use	Defective main cable or generator cable	Check the main cable connection at the console and the GBC. Re-insert the connector at either end if necessary. If there is still no resistance, check the main cable for point-to-point and point-to-ground continuity. Replace the main cable if necessary.
	Loose or broken drive belt	Check the belt tension. Increase the tension if necessary. Replace the drive belt if it is damaged. Set the timing between the rocker arm assemblies.
	Defective GBC	Verify that LED 1 (+3.3V) and LED 2 (+15V) on the GBC are lit. If either are not, replace the GBC.
	Defective brake	Disconnect the wire from the brake to the GBC. Using a multimeter, verify 12—16 ohms between the two pins of this connector. If the ohm reading falls in this range, reconnect the cable to the GBC and, while pedaling the unit, check for 0.5—16 VDC at the same connector. If either test fails, replace the brake.
Pedals are out of sync with erratic ellipses	Loose or broken timing belt	Check the timing belt tension. Increase the tension if necessary. Replace the timing belt if it is damaged. Set the timing between the rocker assemblies.
	Defective timing belt pulley	Replace the casting assembly and set the timing between the rocker assemblies.
	Timing is off	Check to make sure the pedals are exactly 180 degrees out of phase. Set the timing if necessary.

TROUBLESHOOTING – CONTINUED

Symptom	Probable Cause	Corrective Action
Pedal levers slip or skip	Loose or worn drive belt	Inspect the drive belt for wear. Replace it if it is worn. If not, check the drive belt tension. Increase the drive belt tension if necessary.
	Loose setscrews on drive belt pulley	Apply blue *Loctite* to the setscrews on the pulley and tighten the screws.
Rubbing noise	Rocking link rubbing rocker cover	The rocking link spacer is installed on the wrong side of the rocking link. Move the rocking link spacer to the correct side.
	Deadshaft end caps rubbing against collar covers	The tolerance stack-up can cause a slight interference between the shrouds. Apply a thin coat of petroleum jelly where the deadshaft end caps overlap the collar covers.
Squeaking or grinding noise	Worn, dirty, or defective bearings in the rocking link, rocker arm, or pedal lever assembly	Isolate which assembly has the noisy bearing. Replace either the bearing (if possible) or the assembly.
Thumping or rattling noise	Loose hardware	Identify the source of the noise and tighten all hardware related to the source.
Ticking noise	Loose setscrews on drive belt pulley	Apply blue *Loctite* to the pulley setscrews and re-tighten them.

TROUBLESHOOTING – CONTINUED

Symptom	Probable Cause	Corrective Action
Missing or erratic heart rate when using hand sensors	Pinched heart rate cable	Inspect the heart rate cables. Reconnect any loose cables. Replace any damaged cables.
	Poor heart rate cable connection	Verify that the heart-rate cables are properly connected. Using a multimeter, verify point-to-point continuity.
	Malfunctioning hand sensor	Clean the hand sensors with mild soap and water and test them for functionality (see console Diagnostics). Using a multimeter, verify continuity between the Lifepulse sensor and the cable connection. Replace the hand sensor if it is defective.
	Malfunctioning display console	Test the display console against a known good display console if possible. Replace the console if it is malfunctioning.

TROUBLESHOOTING – CONTINUED

Symptom	Probable Cause	Corrective Action
Missing or erratic heart rate when using telemetry chest strap	Crosstalk from another cross-trainer's transmitter or interference from other electronic devices (cell phones, alarm systems, PDAs, radios, microwaves, industrial motors, or nearby cell phone towers)	Position the cross-trainer at least 3 feet (1 meter), center-to-center, from other units with telemetry and from other electronic devices.
	Malfunctioning receiver	Test the unit with a known good receiver if possible. Replace any malfunctioning receiver.
	Malfunctioning display console	Test the unit with a known good console if possible. Replace any malfunctioning console.
Heart rate displayed when no user is on the unit (ghost heart rate)	Crosstalk from another cross-trainer's transmitter or interference from other electronic devices (cell phones, alarm systems, PDAs, radios, microwaves, industrial motors, or nearby cell phone towers)	Position the cross-trainer at least 3 feet (1 meter), center-to-center, from other units with telemetry and from other electronic devices.

TROUBLESHOOTING – CONTINUED

Symptom	Probable Cause	Corrective Action
Console does not display rpm	Cable connection	Verify that the cables to the GBC are properly connected.
	No pedal movement	Pedal (the user must be pedaling the unit in order for the auto start feature to work).
	Defective battery	Battery voltage should be 6.5—6.0 VDC. If it is not, replace the battery.
	Poor cable connection	Verify that the cables to the GBC are properly connected.
	Defective GBC	When pedaling or if the external power is applied, LED 3 (+6V) and LED 4 (+12V) should be lit. If they are not lit, replace the GBC.
	Defective brake	Disconnect the wire from the brake to the GBC. Using a multimeter, verify 12—16 ohms between the two pins of this connector. If the ohm reading falls in this range, reconnect the cable to the GBC and, while pedaling the unit, check for 0.5—16 VDC at the same connector. If either test fails, replace the brake.
Console lights fail	Defective battery	Test the battery voltage. It should be near 6.5 VDC. If it is below 6.0 VDC, replace the battery.