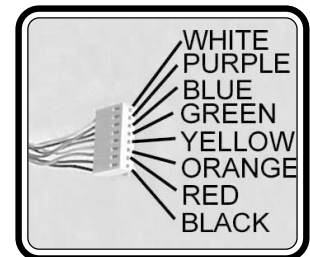


ELECTRONIC TROUBLESHOOTING

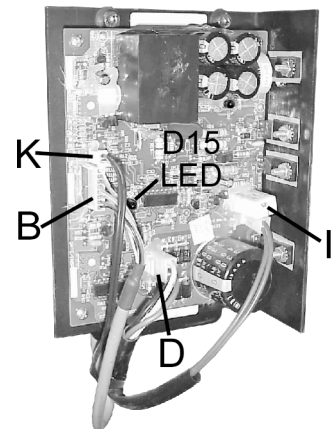
1. PROBLEM: Console LED's will not light, console will not power up

NOTE: The bike must be pedaled at greater than 50 RPM while performing the following tests.

- SOLUTION:**
- Check the wires going to the back of the computer, if the wires are secure and console will not start see step b.
 - Use a multimeter set to VDC. With the cable still connected to the computer, check voltage between pin 5 (yellow) and pin 7 (red). Voltage should be 8.2 V +/- 0.2 VDC. If the voltage is present, and within tolerance, replace the computer. If there is no voltage, or it is not within tolerance, see step c.
 - Remove the right pedal and shroud. Reinstall the pedal. Disconnect the eight-pin cable from the lower control board B. While pedaling at greater than 50 RPM and using the multimeter, check voltage between pin 5 (yellow) and pin 7 (red) on the lower control board for 8.2 VDC +/- 0.2 VDC. If the voltage is correct, check all the wire connections in the connectors for loose or bad connections and repeat step a. If voltage is not correct, see step d.
 - Disconnect the three-pin cable from the lower control board D. Use the multimeter to measure the AC voltage between pins 1&2, 1&3, and 2&3 of the cable. Voltage should be greater than 30 VAC, if it is, replace the lower control board. If voltage is not, see step e.
 - Disconnect the three-pin cable from the brake. Check voltage between pins 1&2, 1&3, and 2&3 on brake connector F. If voltage is greater than 30 VAC check for loose pins or connections in connector. If voltage is not greater than 30 VAC replace the brake.



910E/920E lower board



NOTE: For help with use of a Multimeter, see Appendix A.



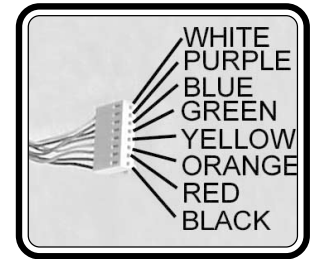


ELECTRONIC TROUBLESHOOTING (continued)

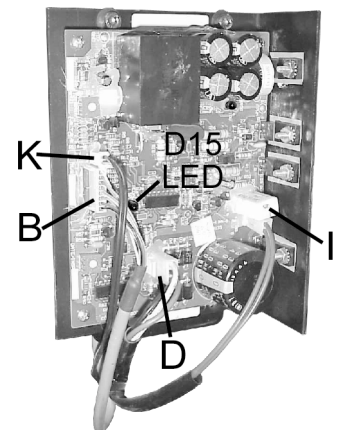
2. PROBLEM: Bike has erratic or incorrect resistance during work out.

NOTE: The bike must be pedaled at greater than 50 RPM while performing the following tests.

- SOLUTION:**
- Check the wires going to the back of the computer, if the wires are secure and still varying or no resistance, or heavy resistance go to step b.
 - Use a multimeter set to VDC. With the cable still connected to the computer, check DC voltage between pin 7 (red) and the black lead to pin 8 (black) on the cable. Voltage should be 8.2 VDC +/- 0.2 VDC. If voltage is correct, and within tolerance, go to step c. If no voltage is read or if it is below tolerance, go to step d.
 - Attach a jumper wire (or paper clip) between pin 1 (white) and pin 5 (yellow) of the eight-pin cable. The bike should have a strong resistance. If you do get strong resistance, replace the console. If there is no strong resistance go to step e.
 - Remove the right pedal and shroud and remove the eight-pin connector from the lower board at B. Measure the continuity of the cable. (See appendix for instructions on measuring OHMS). If cable is good, replace lower control board. If cable is bad replace cable.
 - Remove the two-pin brake coil connector from the lower control board at I. Set the multimeter to measure resistance OHMS. Place your leads to the two pins in the cable, Resistance should be 11 OHMS +/- 3 OHMS. If there is no resistance, replace the brake. If there is resistance replace the lower control board.



910E/920E lower board



NOTE: For help with use of a Multimeter, see Appendix A.

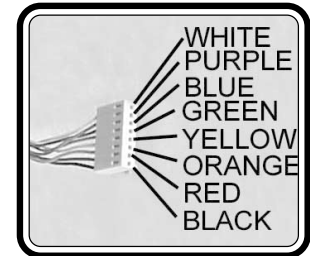


ELECTRONIC TROUBLESHOOTING (continued)

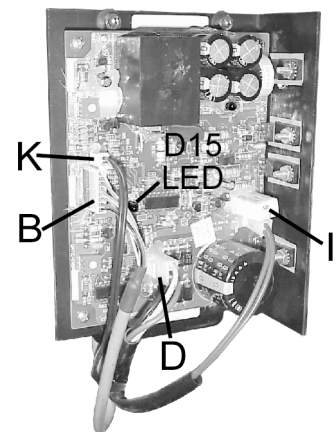
3. PROBLEM: Bike does not display correct pedal speed or pedal speed error is displayed.

NOTE: The bike must be pedaled at greater than 50 RPM while performing the following tests.

- SOLUTION:**
- Check to see if the eight-pin connector on the console is loose or disconnected, if so, securely reattach the connector. If connector is secure, see step b.
 - Remove the right pedal and shroud, reinstall pedal and pedal bike to achieve brake rotation. LED D15 on the lower control board should turn off when the magnet passes by the speed pickup. If the light does not illuminate adjust speed pickup to within 5mm of speed sensor. If the light does illuminate, see step c.
 - Remove the pickup connector at the lower control board K. Connect a multimeter to the two pins on the pickup cable. Rotate the pedal, as the magnet passes the speed sensor the resistance should measure less than 3 Ohms. If there is no resistance replace the speed pickup. If there is resistance, see step d.
 - Remove the eight -pin cable at the lower control board B and test the cable for continuity. If the cable has no continuity or if any wire is bad, replace the cable. If the cable measures continuity, replace the lower control board.



910E/920E lower board



NOTE: For help with use of a Multimeter, see Appendix A.A.

4. PROBLEM: No heart rate from chest strap or incorrect reading.

- SOLUTION:**
- Confirm that the chest strap has a new battery. Make sure the chest strap is polar compatible, and that it is rated for extended distance. If the chest strap does not meet all three conditions it is not compatible and must be changed out with a compatible strap. If your strap does meet all three requirements go to step b.
 - Try moving your machine to an area away from electrical components, i.e. Television, Microwave oven, etc. If still getting incorrect readings, try a new strap. If moving the equipment and changing out the strap do not help, replace console.



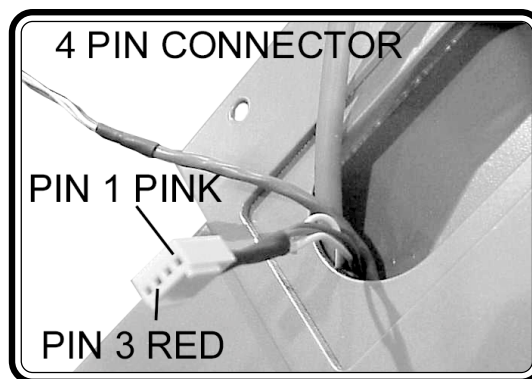
ELECTRONIC TROUBLESHOOTING (continued)

5. PROBLEM: No contact heart rate reading.

NOTE: The bike must be pedaled at greater than 50 RPM while performing the following tests.

- SOLUTION:**
- a. Grasp the contact grips and see if the pulse display " P " starts blinking. If the display does not blink, check the connection on the back of the computer. If the display does blink, but there is no reading, see step b.
 - b. Disconnect the four-pin connector from the back of the computer. Use a multimeter to measure continuity from pin 1 to the metal on the left hand grip. Repeat this with pin 3 and the metal on right hand grip. If there is more than 3 OHMS resistance, check the cable for short. If no continuity, disconnect the metal grips and check the connection on the inside.
 - c. Check for resistance between pin 1 and pin 3. There should be no resistance or a measurement of infinite (open). If there is any resistance check the four-pin cable for shorts.
 - d. If no heart rate or erratic heart rate displays, try moving the bike away from any electromagnetic interference (TV, microwave etc.) If problem persists, replace the computer.

NOTE: For help with use of a Multimeter, see Appendix A.





MECHANICAL TROUBLESHOOTING

1. PROBLEM: Belt slipping, too tight or makes noise

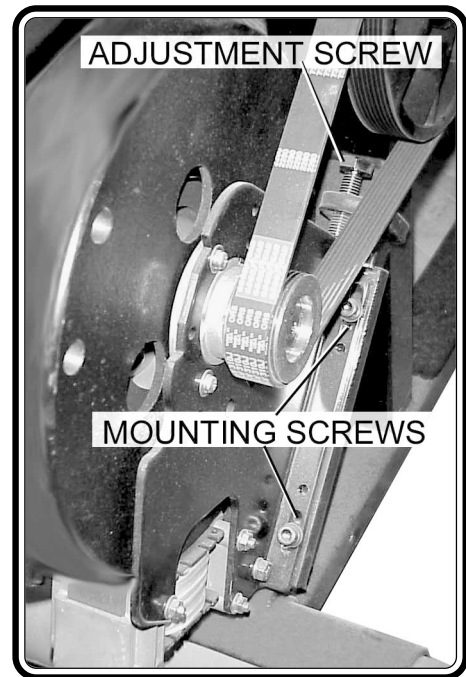
SOLUTION: a. Check belt for wear and adjust tension.

The belt tension is set and maintained by moving the brake with adjustment screw.

The belt tension is increased by loosening the mounting screws and then tightening the belt by turning the adjustment screw clockwise.

The belt tension is decreased by loosening mounting screws and then loosening the adjustment screw by turning the adjustment screw counter-clockwise.

Check that the belt tension is correct before reassembly by replacing pedals and riding bike. If tension is correct, firmly tighten the lock nut on the adjustment screw.



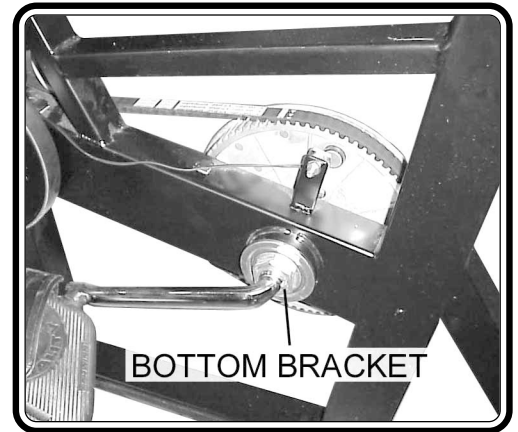
NOTE: *Proper belt tension is achieved when the belt does not slip under normal pedaling forces at the highest resistance. When belt tension is too high there is excessive friction in the drive train, which gives the bike a poor feel when ridden and causes premature wear on drive train components. Proper belt tension is best achieved by starting with a slightly loose belt and increasing tension with half turns (clockwise) of the adjustment screw until the belt does not slip at the highest resistance setting.



MECHANICAL TROUBLESHOOTING (continued)

2. PROBLEM: Bottom bracket feels tight, rough, or makes noise

- SOLUTION:**
- a. Adjust bottom bracket.
 - b. Replace bottom bracket.



3. PROBLEM: Bottom bracket feels loose

- SOLUTION:**
- a. Make sure bearing cups are secure in frame.
 - b. Adjust bottom bracket

4. PROBLEM: Drive train noise

- SOLUTION:**
- a. Noise once per revolution: check bottom bracket or pedals.
 - b. Noise once every 1.5 revolutions: check belt
 - c. Noise multiple times per revolution: Check tension pulley, belt or flywheel hub.

NOTES

**FOR MORE DETAILED INFORMATION CONTACT
TECHNICAL SUPPORT AT 1-800-864-1270**