

SUBJECT

APRIL 16, 2002 BODYGUARD / LO-21 OPERATION AND TROUBLESHOOTING

BODYGUARD
& LO-21

For the Bodyguard to work properly with the LO-21, and to be able to set-up for two door positions, as well as be inhibited during the closing cycle, the data must be of the correct value and of the correct polarity. The dipswitches on the LO-21 must also be configured correctly. If any of these items are incorrect, the system will not function as intended.

1. When experiencing set-up problems with the Bodyguard and LO-21, try these simple tricks of the trade to help troubleshoot, and always remember, If data is not present, the Bodyguard will not function properly:

- With the door in the open position, using a BEA remote control, unlock the Bodyguard and press Magic Wand, then the number 2 key. The Bodyguard should begin flashing green to indicate a set-up. If it does not, it is a strong sign that data may be incorrect.
- If the red LED comes on at the Bodyguard as the door is closing, data may be incorrect. IMPORTANT: On some Horton and Doromatic installations, the red LED on the Bodyguard may be on during the closing cycle. This is because the door control box is providing the lockout function, and it is inhibiting the safety circuit, and not the Bodyguard.
- Check the LED status on the LO-21. The red LED should come on while the door is closing: if not, simply try swapping the red and black wires from the LO-21. On the LO-21U/B, there are no LED's during closing. The LO-21U/B will have a red LED illuminated during detection while the door is closed, and a green LED during detection while the door is open.
- Check terminals 6 & 7 on the Bodyguard with a multi-meter. Be sure to connect the negative probe to terminal 6(-) and the positive probe to terminal 7 (+). Be sure to set the meter to a DC voltage scale. The following should be observed while at the respective door position:

CLOSED	OPEN	CLOSING
0 Volts DC	12 Volts DC	8 Volts DC

- If voltage is present, but of the wrong polarity, simply swap the red/white striped wire and the white wire on terminals 6 & 7 at the Bodyguard. Also remember, red from the lockout always gets connected to the positive side of the DC voltage source (motor).
 - If voltage is NOT present at the Bodyguard data terminals, check the source where the red wire and the black wire from the LO-21 are connected. Voltage must be present when the door is in the open position or in the closing position.
 - If data keeps getting lost while the door is in the open position, the "STALL" or "HOLD" setting on the door control box may be too low. Typically, a value of at least 12 to 13 volts (as low as 3 to 6 volts for the LO-21U or LO-21B) must be present at the DC source (motor) where the red and black wires are connected, when the door is open. Hence, the HOLD adjustment on the control box may have to be slightly increased to insure adequate voltage to the LO-21 once the HOLD voltage takes over at the control box.
2. Dipswitch settings must also be configured so that the proper lockout time will occur as the door is closing. The total time set on the dipswitches should be close to the actual overall closing time on the door from the full open position.
- Allow doors to begin closing from the fully open position.
 - Step in behind the door as it is closing, and remain there. Observe the Bodyguard LED.
 - If red LED on Bodyguard comes on before door gets fully closed, lockout time delay needs to be increased. If the red LED does not come on until several seconds after the door is fully closed, lockout time delay needs to be decreased.
3. Upon completion of all adjustments, be sure to perform a thorough walk-test, and always ensure compliance with applicable safety standards.
4. On the LO-21B/U, dipswitch number 6 should be down or ON for all power open spring close doors.
5. IMPORTANT REMINDER: Upon completion of programming the Bodyguard sensor, be sure to lock the program settings by pressing the LOCK key twice on the remote control. Be sure to press the LOCK key once, then pause for a second, and press the LOCK key a second time. As with any remote control procedure, pressing keys too quickly in succession may allow a signal to not be acknowledged.
6. **WARNING:** When installing any BEA lockout relay, the red / white striped wire, and white wire (Data Wires) must never touch each other when power is applied to the module. If the wires do touch each other, damage to the module will result. The functional indication will be improper data voltage. Usually the indicating voltage will be the same for door open and door closed. Thus, a dual setup for the Bodyguard pattern will not be possible.

REMEMBER, DO NOT PLUG THE WIRE HARNESS INTO THE MODULE UNTIL ALL WIRING IS COMPLETE.

COMPANY
CONTACT

If after troubleshooting a problem, a satisfactory solution cannot be achieved, please call B.E.A., Inc. for further assistance during Eastern Standard Time at **1-800-523-2462 from 7am - 5pm.**
For after-hours, call East Coast: 1-866-836-1683 or 1-800-407-4545 / Mid-West: 1-888-308-8843 / West Coast: 1-909-596-3011. DO NOT leave any problem unresolved. If you must wait for the following workday to call B.E.A., leave the door inoperable until satisfactory repairs can be made.
NEVER sacrifice the safe operation of the automatic door or gate for an incomplete solution.