Technical Bulletin #45

Please Pass On To Your Technicians

DESCRIPTION

DATE: September 2009

SUBJECT: Bodyguard/DK-12, LO-21/B/P/S/U, MC-15 troubleshooting chart.

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Bodyguard relearns when door opens and closes	1. No motor voltage on the LO-21 red and black motor lead connection. 2. No data voltage while door is closed or open. 3. Constant data voltage while door is closed or open. *See notes on the next page for additional information*	1. Put door in hold open and check DC Voltage on red & black wires at LO-21 crimp terminals. You should read at least 12 vdc positive with the positive test lead on the LO-21 RED wire. If polarity is reversed, you must reverse the LO-21 red and black leads at this connection. 2. If correct, continue and check data on Bodyguard terminals 6(-)/brown & 7(+)/blue. Door Closed = 0 VDC. Door Open = +12 VDC + or – 10% Door Closing Cycle = 6-8 VDC + or – 10% Follow readings back to connections and lockout harness crimps. Repair connections as necessary or replace Lockout. If data polarity is reversed, reverse data wires at Bodyguard or LO-21. 3. If you find a constant voltage on Data, while the door is closed, open, or closing, replace LO-21. **NOTE:** Ensure not to short data wires with power applied or you may destroy the lockout.
Door recycles	1. If using a LO21B/S/U/P or MC-15. 2. If using LO-21, Motion sensor or door mounted sensor on approach side may be seeing door.	1. LO-21B/U/P Change dipswitch 6 and/or swap motor leads. (Most likely dipswitch 6) 2. LO-21S/MC-15 – swap Motor leads. 3. LO-21B/U/P, Besam CUP – Use PMD to increase F12 numerically higher. 4. If LO-21- Adjust motion sensor or door mounted sensor patterns.
Bodyguard Red LED on when door is closing	1. When using BEA Lockouts this Indicates Bodyguard is not inhibited in door closing. Motor and/or Data leads could be backwards. **2. Normal for some door manufactures that use internal lockouts.**	1. Check data and/or motor polarity. Red wire of all lockouts must be connected to the +vdc of the motor or voltage source. Black to –vdc. Data should be + on BG 7/Blue and – on 6/Brown.
Bodyguard Red LED off when door is closing	1. Normal indicates Bodyguard is being inhibited during closing cycle. (When using a BEA lockout)	1. When using some proprietary door manufactures lockout this may not be true. I.e. Horton 4190, Record 5100.
LO -21 Red LED on with door closed.	1. Only if using LO-21B/S/U/P or MC-15. Normal if Bodyguard is in detection 2. If LO-21 check motor polarity. Ensure dip switches are set appropriately.	1. Red led should only come on when door is at full close and Bodyguard/DK12 is in detection. 2. Check motor polarity.
LO -21 Green LED on with door closed.	1. If using LO21B/P/U and with Bodyguard in detection this could indicate you have voltage on the motor wires	1. Ensure dip switch 6 is set correctly down towards green led for most applications except Besam MP/CUP.
LO-21 Red LED on during open cycle.	1. If LO-21B/P/S/U or MC15 this is wrong. 2. If LO-21 motor leads could be backwards	1. Swap motor voltage leads or dip switch 6 could be reversed, or loose motor lead connection. 2. Swap LO21 motor leads.
LO-21 Green LED on during open cycle.	1. If LO-21B/S/P/U or MC15 this is normal. 2. If LO-21 could be interrupt of the safety beam input if applicable.	1. This indicates the correct voltage polarity. 2. Check safety beam circuit for faulty input.
LO-21 Red LED on with door open.	1. If LO-21B/P/S/U or MC15 this is indicates no voltage or reversed polarity on the motor leads.	1. Check to ensure "+" voltage is on red and "-"is on black while the door is open. Or if applicable check dip switch 6.
LO-21 Green LED on with door open.	1. If LO-21B/P/S/U/ or MC-15 this is normal if Bodyguard is in detection. Or could be short on beam input if applicable. 2. If LO-21, possible short on Grey & Violet wires or, if used, faulty safety beam. 3. If LO21P this typically is normal.	1. LO21B/U Check for short on LO21B/U beam circuit. Black/white & Red/white wires. 2. Check for short between Grey & Violet wire of LO-21 and/or faulty safety beam input. 3. Could also indicate activating device in detection if using LO21/P.
LO-21 Red LED on with door open	1. Bodyguard in detection and if LO-21B/S/U/P or MC-15. Could mean reversed motor polarity. 2. If LO-21 & Bodyguard not in detection. Motor voltage is too low to monitor & LO-21 is inhibiting.	1. Check motor polarity for +vdc on red LO-21 wire. 2. Adjust motor voltage if applicable.

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
No LED on LO-21	**1. LO21. Short grey and purple leads to illuminate green led.** **2. LO-21B/U & MC-15 Short grey and purple leads in door closed position, red led should illuminate. If in door open position green shall illuminate with proper motor polarity.** **3. LO-21S, Short green wires and red led should illuminate in door close position or green led in door open position.** 4. LO21P. Ensure activating sensors Com. & N.O. are wired to Black/white & Red/white respectively. **5. Check Orange & Brown wiring for voltage at crimp. If using Vdc, brown wire must connect to + vdc, orange to – vdc.**	1.If no green led from the purple and grey shorting then check for power or wire harness crimp 2. LO21B/U & MC-15. Ensure that BG/DK12 Com. (white), and N.O. (green), is wired to Purple and Grey. If no led check for power or wire harness crimp. 3. LO21S, check for power or wire harness crimp if no led. LO21P. Short Black/white & Red/white. Green led should illuminate and open door. 4. Check for power or wire harness crimp. If trouble continues replace crimp with wire nut. 5. If any above fail then replace lockout.

NOTE:

If the Bodyguard is relearning each door open and/or door closed cycle there is a quick, easy, and safe way to troubleshoot this. Simply use your remote control to facilitate your troubleshooting in the following steps.

DOOR CLOSED:

I. When the door is closed perform unlock, wand, 1 (closed door setup). The Bodyguard should flash green indicating it is setting up. If yes this is normal. If no proceed to next step.

i. When the door is closed perform unlock, wand, 2 (open door setup). If the Bodyguard flashes green indicating it is setting up then this means that the Bodyguard has constant data. This could be the result of a defective LO21, a reversed dip switch # 6 depending on which version LO21, or simply constant data whereas there shouldn't be any data.

DOOR OPEN:

II. When the door is open perform unlock, wand, 2 (door open setup). The Bodyguard should flash green indicating it is setting up. If yes this is normal. If no proceed to next step.

i. When the door is open perform unlock, wand, 1 (closed door setup). If the Bodyguard flashes green indicating it is setting up then this means the Bodyguard has no data. This could be the result of the motor wires reversed or not connected, the data wires reversed or not connected. Either way the Bodyguard has no data. Troubleshoot your LO21 and/or its wiring connections.

COMPANY CONTACT

Do not leave problems unresolved. If a satisfactory solution cannot be achieved after troubleshooting a problem, please call BEA, Inc. If you must wait for the following workday to call BEA, 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.

he following numbers can be called 24 hours a day, 7 days a week. For more information, visit www.beasensors.com

Canada & Texas: 1-866-836-1863 **Central 1-800-407-4545**
West 1-888-419-2564 **East 1-866-249-7937**