LiftMaster ELITE SERIES®

WIRING DIAGRAM

Model HCTDCUL

⚠ WARNING

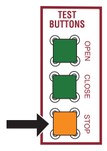
To reduce the risk of INJURY or DEATH:

- DISCONNECT power and battery BEFORE installing or servicing operator.
- Replace ONLY with fuse of same type and rating.
- To be compliant with UL325 and industry safety guidelines, qualified monitored external entrapment protection devices such as photoelectric sensors or edge sensors are required to be installed with this operator at each entrapment zone. Use ONLY LiftMaster approved entrapment protection devices (refer to the accessory page of manual).
- See manual prior to servicing regarding maintenance and required safety testing.

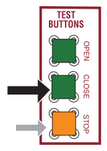
Diagnostic Codes

TO VIEW THE CODES:

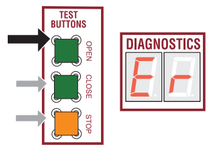
Press and hold STOP...



...then press and hold CLOSE...



...then press and hold OPEN until "Er" shows.



The operator will show the code sequence number followed by the code number:

CODE SEQUENCE NUMBER

The first number shown is the most recent code (example: "01"). The display will show the sequence of codes that occurred starting with "01" and going up to code "20".

A SECOND LATER....

CODE NUMBER

The second number shown after the code sequence number is the code itself (31-99, example" "31").

TO SCROLL THROUGH THE SAVED CODES:

Press the OPEN button to cycle to the most recent code ("01"). Press the CLOSE button to cycle to the oldest code (up to "20").

CODE COLOR KEY:

- LiftMaster System
- Installed System
- Informational
- External Entrapment Protection
- Inherent Entrapment Protection

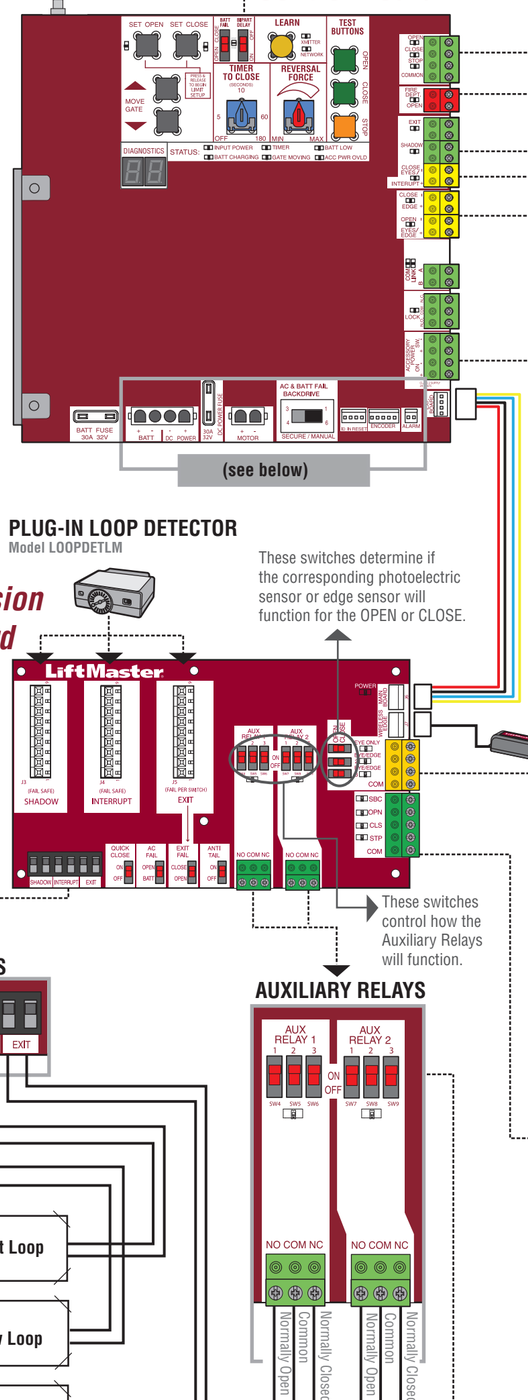
CODE	MEANING	SOLUTION
31	Main control board has experienced an internal failure.	Disconnect all power, wait 15 seconds, then reconnect power (reboot). If issue continues, replace main control board.
34	Absolute Position Encoder Error, not getting position information from encoder	Check APE assembly and wiring connections. Replace the APE assembly if necessary.
35	Max-Run-Time Exceeded Error	Check for an obstruction, then reprogram the limits.
36	Product ID Error	Was the control board just replaced? If so, erase limits, enter limit setup mode and set limits. If not, disconnect all power, wait 15 seconds, then reconnect power before changing product ID harness.
37	Product ID Failure	Unplug product ID harness then plug back in. Disconnect all power, wait 15 seconds, then reconnect power before replacing product ID harness.
38	Hard Stop Limit	Limit may be set too tightly against a non-resilient hard stop (re-adjust limit). Operator may be at end of travel (re-adjust mounting).
40	Battery overvoltage	Too much voltage on the battery. Check harness. Make sure there is NOT a 24V battery on a 12V system.
41	Battery overcurrent	Possible short of the battery charge harness. Check harness. Make sure you do NOT have a 12V battery on a 24V system.
42	No battery at boot up	Check battery connections and installation. Replace batteries if depleted to less than 20V on a 24V system or less than 10V on a 12V system. Make sure there is NOT a single 12V battery on a 24V system.
43	Exit Loop Error	Failure or missing loop (SHORT or OPEN - LiftMaster Plug-in Loop Detector only) Check loop wiring throughout connection. May be a short in the loop, or an open connection in the loop.
44	Shadow Loop Error	
45	Interrupt Loop Error	
46	Wireless edge battery low	Replace batteries in wireless edge.
50	Door out of balance detected	Check counterbalance springs condition and setting.
53	Brownout occurred	AC/DC board supply dipped below allowable level. Review power supply and wiring. If rebooting, ensure enough time for discharge of power to force a fresh boot.
60	Minimum number of monitored entrapment protection devices not installed	Review monitored entrapment protection device connections. Vertical gate/door operators require the installation of the first external monitored entrapment protection device in the close direction to function.
61	CLOSE EYE/INTERRUPT held more than 3 minutes	Check wired input on main control board; check for alignment or obstruction.
62	CLOSE EDGE held more than 3 minutes	
63	OPEN EYE/EDGE held more than 3 minutes	
64	CLOSE EYE/INTERRUPT held more than 3 minutes	Check wired input on expansion board; check for alignment or obstruction.
65	CLOSE EYE/EDGE held more than 3 minutes	
66	OPEN EYE/EDGE held more than 3 minutes	
67	Wireless edge triggered more than 3 minutes	Check wired input for wiring issue or obstruction.
68	Wireless edge loss of monitoring	Check wireless edge inputs.
69	Wireless edge triggered	IF an obstruction occurred, no action required. If an obstruction did NOT occur, check inputs and wiring.
70	CLOSE EYE/INTERRUPT triggered, causing reversal, preventing close, or resetting TTC	IF an obstruction occurred, no action required. If an obstruction did NOT occur, check alignment, inputs, and wiring on main control board.
71	CLOSE EDGE triggered, causing reversal, preventing close, or canceling TTC	
72	OPEN EYE/EDGE triggered, causing reversal or preventing opening	
73	CLOSE EYE/INTERRUPT triggered, causing reversal, preventing close, or resetting TTC	IF an obstruction occurred, no action required. If an obstruction did NOT occur, check alignment, inputs, and wiring on expansion board.
74	CLOSE EYE/EDGE triggered, causing reversal and preventing close or canceling TTC	
75	OPEN EYE/EDGE triggered, causing reversal or preventing opening	
82	Close input (EYE/EDGE) communication fault (expansion board)	Check the connections between the main board and the expansion board.
83	Open input (EYE/EDGE) communication fault (expansion board)	
84	Non-monitored device detected on the wireless safety system	Non-monitored contact closure devices are not supported. Make sure connected devices are monitored. Check edges for proper orientation and resistive end cap connection.
91	Force Reversal	Check for obstruction. If no obstruction, check that the mechanical assembly is engaged and free to move. See section on Limit and Force Adjustment, and Obstruction Test in the manual.
93	RPM / STALL Reversal	Check for obstruction. If no obstruction, check the operator wiring and that the mechanical assembly is engaged and free to move. Replace APE assembly.
99	Normal Operation	No action required

The BIPART DELAY switch is used to select the opening speed.
BIPART DELAY OFF (default) = 8 in./sec. open speed.
BIPART DELAY ON (fast) = 11 in./sec. open speed .

ANTENNA

COAXIAL CABLE

Control Board



PLUG-IN LOOP DETECTOR
Model LOOPDETLM

These switches determine if the corresponding photoelectric sensor or edge sensor will function for the OPEN or CLOSE.

Expansion Board

These switches control how the Auxiliary Relays will function.

LOOPS

Interrupt Loop

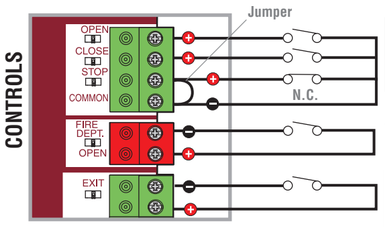
Shadow Loop

Exit Loop

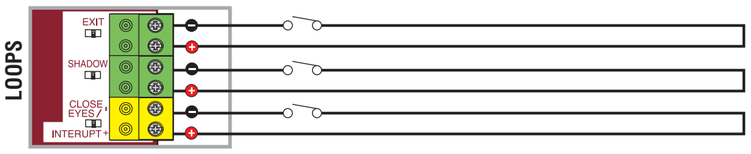
AUXILIARY RELAYS

Wireless Edge Kit
Model LMWEKITU

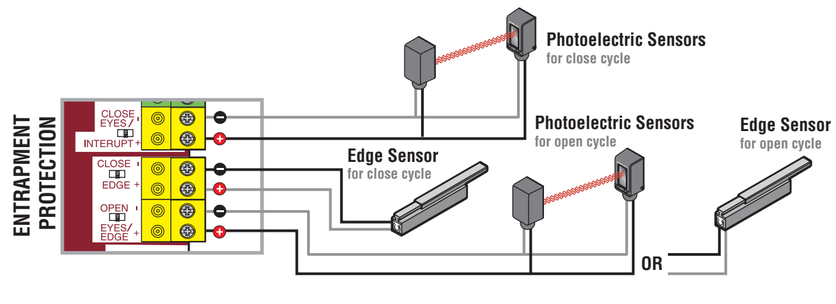
CONTROLS



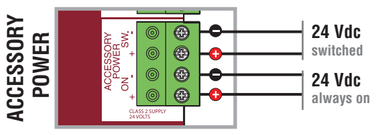
LOOPS



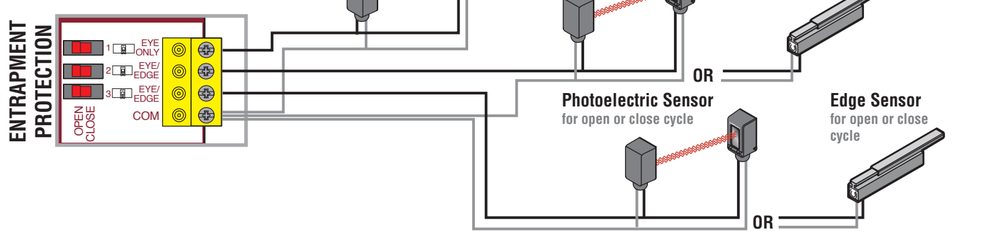
ENTRAPMENT PROTECTION



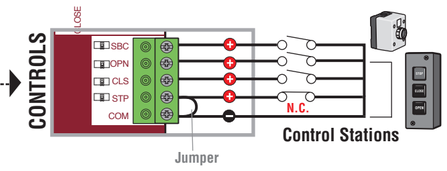
ACCESSORY POWER



ENTRAPMENT PROTECTION



CONTROLS



SWITCH SETTINGS

1	2	3	RELAY 1	RELAY 2
OFF	OFF	OFF	Relay always off	Relay always off
OFF	OFF	ON	Energizes at open limit	Energizes at open limit
OFF	ON	OFF	Energizes when not at close limit	Energizes when not at close limit
OFF	ON	ON	Energizes when motor is on	Energizes when motor is on
ON	OFF	OFF	Energizes 3 seconds prior and during gate motion	Energizes 3 seconds prior and during gate motion
ON	ON	OFF	Energizes with AC or solar power	Energizes with battery power
ON	OFF	ON	Energizes when gate is tampered with	Energizes when gate is tampered with
ON	ON	ON	LEDs will blink cycle count	Not used

RED/GREEN LIGHT FUNCTIONALITY

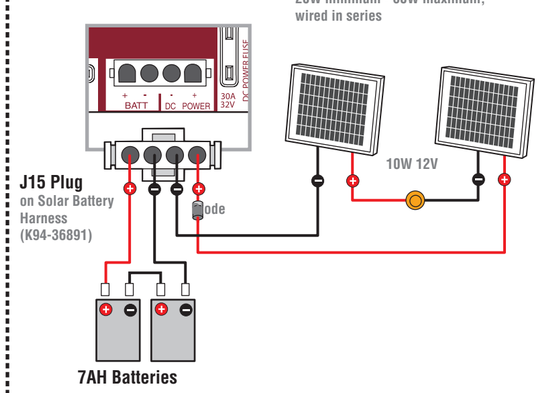
Red light wired to AUX RELAY 1. **Green light** wired to AUX RELAY 2.

GATE STATE	AUX RELAY 1 SWITCHES			AUX RELAY 2 SWITCHES		
	1 OFF	2 OFF	3 OFF	1 ON	2 ON	3 ON
CLOSED	Red light OFF*			Green light OFF		
OPENING	Red light ON/FLASH			Green light OFF		
OPEN	Red light OFF			Green light ON		
CLOSING	Red light ON/FLASH			Green light OFF		
Defined Mid Stop	n/a			n/a		
Undefined Mid Stop	Red light ON			Green light OFF		
Timer more than 5 seconds	Red light OFF			Green light ON		
Timer less than 5 seconds	Red light ON/FLASH			Green light OFF		

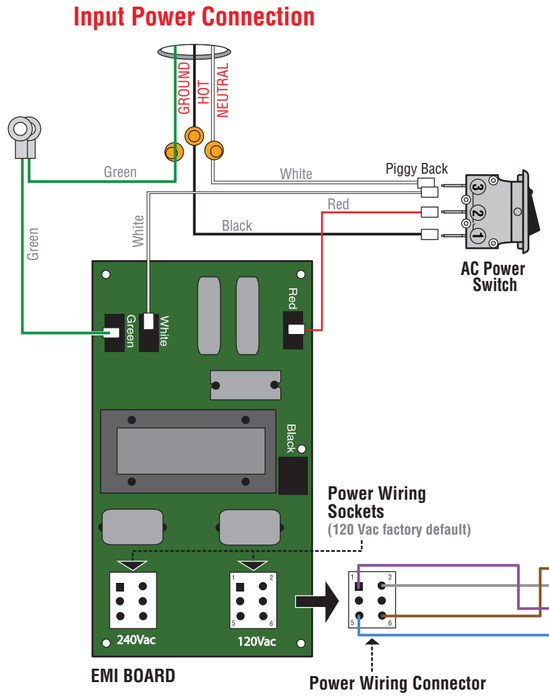
* For red light ON when gate/door is closed, set switch 1 on AUX RELAY 1 to ON

Solar (Optional)

Solar Panels (Optional)
20W minimum - 60W maximum, wired in series



Input Power Connection



CONTROL BOARD