CHAMBERLAIN®
LiftMaster®
PROFESSIONAL

LOGIC BOARD (L3) REPLACEMENT KIT
K001A5729

APPLICATION REQUIREMENTS: Available to all standard commercial door operators using the Logic 3 control board.

INSTALLATION INSTRUCTIONS

⚠⚠ WARNING

To avoid SERIOUS personal INJURY or DEATH from electrocution, DISCONNECT electrical power to operator BEFORE proceeding.

REMOVE EXISTING BOARD

1. Disconnect power to operator.
2. Remove all wires from the existing logic board:
   • Terminal Block (TB1)
   • System Wiring Connector (P6)
   • Motor Wires from Relay (K3)
   NOTE: Remember location of all wiring connections for reinstallation.
3. Remove the coaxial cable from the board F connector (P7).
4. Remove any installed option cards from their corresponding slots on the board.
5. Remove the board from its four mounting posts.

INSTALL NEW BOARD

1. Remove the new board from the protective bag.
2. Match settings from the existing board to the new board:
   • 1 Phase & 3 Phase Jumper
   • Motor Direction Jumper
   • Mode Selector Dial
   • Failsafe/Non-Failsafe Switch
3. Determine if the firmware (U1 socketed chip) is being upgraded with the replacement logic board.
4. Check the label on the U1 chip from the new board against the label on the U1 chip from the existing board. If the labels are identical, then the firmware does not need to be upgraded so the existing chip can be removed and reused if there are remotes that need to be preserved. Otherwise, the firmware should be upgraded and the next series of steps should be skipped.

NOTE: The following information is stored within the firmware chip U1 and will need to be re-programmed if the firmware is upgraded with the board:
   • *All Remote Controls (On Board Receiver Only)*
   • *Timer to Close*
   • *Maximum Run Timer*
   • *Maintenance Alert System*
   • *Up and Down Mid Stops*

EXCHANGE FIRMWARE CHIP (OPTIONAL)

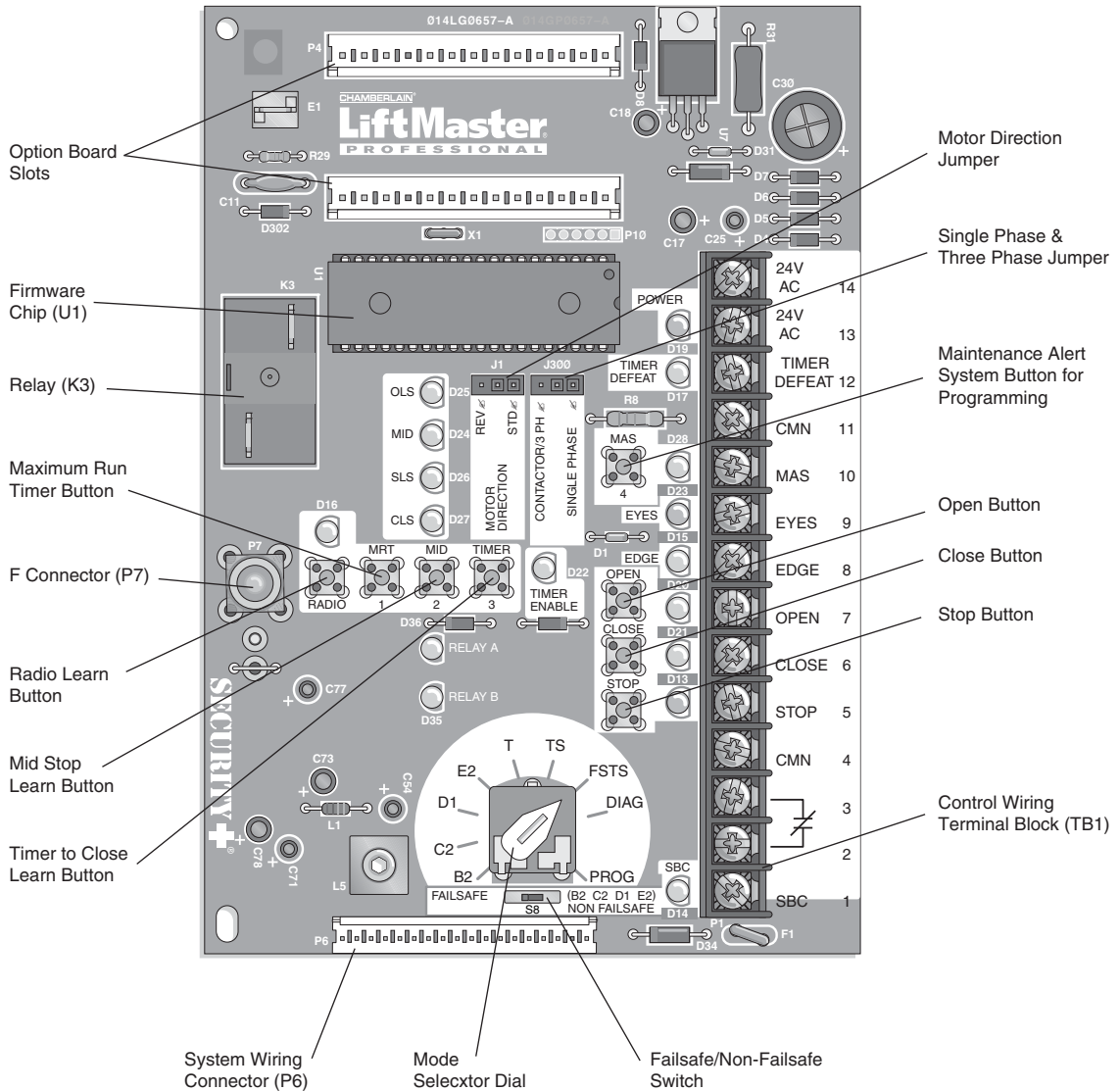*NOTE: These steps should ONLY be taken if the firmware does not need to be upgraded.*

1. Using a chip puller, remove the firmware chip (U1) from the existing board.
2. Repeat this process to remove the firmware from the new board, taking note of the chip orientation.
3. Place the firmware chip from the existing board into the socket (U1). Make sure that all the pins line up correctly and that pin 1 (denoted by a dimple in the corner of the plastic body of the chip) is positioned closest to TB1-14.
4. Gently press the chip into the socket and verify that none of the pins were bent during the process.

COMPLETE THE INSTALLATION

1. Take the new board and place it into the system making sure that the board is correctly oriented. Press firmly until all of the mounting posts are completely through the mounting holes and the board is retained correctly.
2. Reconnect the coaxial cable to the board F connector (P7).
3. Reconnect the motor wires to relay K3 on the board. Polarity does not matter for these connections. Simply insure that the wires are not over-stretched to make the connection.
4. Reconnect the system wiring connector to the board P6 connector.
5. Reconnect all wires to the main board terminal block (TB1).
6. Install all option cards into the slots on the board.
7. Make sure the electrical box is clear of all debris and tools.
8. Reconnect power to the operator and verify operation. Refer to pages 3 through 12 to reprogram remotes and settings as necessary.

**For more information:
www.devancocanada.com
or call toll free at 855-931-3334**

LOGIC (VER. 3.0) CONTROL BOARD

Option Board Slots

Firmware Chip (U1)

Relay (K3)

Maximum Run Timer Button

F Connector (P7)

Radio Learn Button

Mid Stop Learn Button

Timer to Close Learn Button

System Wiring Connector (P6)

Mode Selecxtor Dial

Failsafe/Non-Failsafe Switch

Motor Direction Jumper

Single Phase & Three Phase Jumper

Maintenance Alert System Button for Programming

Open Button

Close Button

Stop Button

Control Wiring Terminal Block (TB1)

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SECURITY+

014LG0657-A

OLS
MID
SLS
CLS

MOTOR DIRECTION

REV STD

CONTACTOR/3 PH SINGLE PHASE

MRT MID TIMER
RADIO 1 2 3

TIMER ENABLE

RELAY A
RELAY B

POWER

TIMER DEFEAT

MAS

EYES

EDGE
OPEN
CLOSE
STOP

T   TS
E2   FSTS
D1   DIAG
C2
B2   PROG
FAILSAFE   (B2 C2 D1 E2) NON FAILSAFE

24V AC   14
24V AC   13
TIMER DEFEAT 12
CMN   11
MAS   10
EYES   9
EDGE   8
OPEN   7
CLOSE   6
STOP   5
CMN   4
3
2
SBC   1

LOGIC CONTROL PUSHBUTTONS OPEN, CLOSE, STOP

Open, Close and Stop buttons are mounted directly on the logic board. Thus, making it easy to program as well as have door control at the electrical box. Either the stop control or a jumper must be wired between terminals 4 and 5 for the on board push buttons to function.

NOTE: Refer to logic board illustration on page 2 for all component locations. Before programming the logic board, set the operators open and close limits. LEDs on the logic board are provided to assist setting the limits. As each limit is activated the corresponding LED will light up. The abbreviations are Open Limit Switch (OLS), Close Limit Switch (CLS) and Sensing Limit Switch (SLS).

SELECTOR DIAL
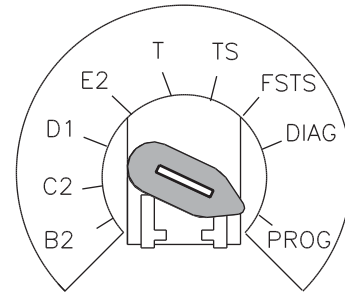
FAILSAFE SWITCH

DETERMINE AND SET WIRING TYPE

Read the descriptions of the different wiring types to determine which setting will be correct for each application.

SET THE SELECTOR DIAL TO THE DESIRED WIRING MODE:

NOTE: For failsafe wiring you must also set failsafe switch to FAILSAFE.

TYPE

C2   Momentary contact to open and stop with constant pressure to close, open override plus wiring for sensing device to reverse. Programmable mid stop available with this wiring type. **Compatible with 3-Button Station and 1-Button Station.**

B2   Momentary contact to open, close and stop, plus wiring for sensing device to reverse and auxiliary devices to open and close with open override. Programmable mid stop available with this wiring type. **Compatible with 3-Button Station, 1-Button Station and 1- and 3-Button Remote Controls.**

D1   Constant pressure to open and close with wiring for sensing device to stop. **Compatible with 2-Button.**

E2   Momentary contact to open with override and constant pressure to close. Release of close button will cause door to reverse (roll-back feature) plus wiring for sensing device to reverse. **Compatible with 3-Button Station.**

FAILSAFE WIRING TYPES

TYPE

TS — Momentary contact to open, close, and stop with open override and Timer To Close. Every device that causes door to open, including a reversing device, activates the Timer To Close. Auxiliary controls can be connected to open input to activate the Timer To Close. If the timer has been activated, the open button and radio control can recycle the timer. The stop button will deactivate the Timer To Close until the next command input. The Timer To Close will function from the programmable mid stop with this wiring type. **Compatible with 3-Button Station, 1-Button Station and 1- and 3-Button Remote Controls.** *(NOTE: Requires self monitoring photo eyes to operate.)*

T — Momentary contact to open, close, and stop, with open override and Timer To Close. Every device that causes the door to open, except a reversing device, activates the Timer To Close. Auxiliary controls can be connected to open input to activate the Timer To Close. If the Timer To Close has been activated, the open button and radio control can recycle the timer. The stop button will deactivate the timer until the next command input. The Timer to Close will function from the programmable mid stop with this wiring type. **Compatible with 3-Button Station, 1-Button Station and 1- and 3-Button Remote Controls.** *(NOTE: Requires self monitoring photo eyes to operate.)*

FSTS — Momentary button contact for open, close and stop programming. Radio controls allowing open, close and stop. User set mid stop. User set Timer To Close. The single button station opens the door to the full open limit bypassing the mid stop and activates the Timer To Close, putting the operator in TS mode until the door reaches the down limit, or is stopped in travel. At which time the operator enters the B2 mode. **Compatible with 3-Button Station, 1-Button Station and 1- and 3-Button Remote Controls.** *(NOTE: Requires self monitoring photo eyes to operate this feature/wire type.)*

C2 Failsafe — Same functions as C2. Self Monitoring safety device must be installed to operate door for each of the following failsafe wiring types. See Self Monitoring Safety Device Options. **Compatible with 3-Button Station, 1-Button Station and 1- and 3-Button Remote Controls.**

B2 Failsafe — Same functions as B2. Self Monitoring safety device must be installed to operate door for each of the following failsafe wiring types. See Self Monitoring Safety Device Options. **Compatible with 3-Button Station, 1-Button Station and 1- and 3-Button Remote Controls.**

D1 Failsafe — Same functions as D1. Self Monitoring safety device must be installed to operate door for each of the following failsafe wiring types. See Self Monitoring Safety Device Options. **Compatible with 2-Button Station and 2-Button Remote Control.**

E2 Failsafe — Same functions as E2. Self Monitoring safety device must be installed to operate door for each of the following failsafe wiring types. See Self Monitoring Safety Device Options. **Compatible with 3-Button Station and 3-Button Remote Control.**

SELF-MONITORING SAFETY DEVICE OPTIONS

To use the operator in any of the Failsafe wiring modes, or Timer To Close wiring modes (TS, T, FSTS), a self monitoring safety device or CPS3 card with photo eyes or safety edges must be installed.

RECOMMENDED SELF-MONITORING SAFETY DEVICES:
CPS-L — NEMA 1 Direct Connect Eyes
CPS-LN4 — NEMA 4 Direct Connect Eyes

IMPORTANT NOTES:

1. External interlocks may be used with all functional modes.

2. Auxiliary devices are any devices that have only dry contacts. Examples: photocell, loop detector, pneumatic or electrical treadles, radio controls, one button stations, pull cords, etc.

3. Open override means that the door may be reversed while closing by activating an opening device without the need to use the stop button first.

STANDARD SINGLE BUTTON REMOTE CONTROL

Built in 3-channel, 315MHz radio receiver allows you to add as many as 23 Security✚® remote controls or dip switch remote controls.

PROGRAMMING REMOTE CONTROLS

STANDARD SINGLE BUTTON REMOTE CONTROL

1. To enter programming, press and release the RADIO button on the logic board (LED will light).

2. Press and hold the remote control button until the LED flashes rapidly, then release remote control button. The LED will then remain on solid after releasing the button. Repeat to add additional remote control(s).

3. Press and release the RADIO button to complete the programming. The programming mode is exited if no activity is performed within 30 seconds.

NOTE: Single button remote control is not supported with D1 and E2 wiring modes.

SINGLE BUTTON REMOTE CONTROL PROGRAMMED AS A SINGLE BUTTON CONTROL (SBC)

This function programs a remote control as a wireless single button control. This function will work in the following modes:

In B2 mode, operation is OPEN/STOP/CLOSE/REVERSE/STOP.

In C2 mode, operation is OPEN/STOP/constant pressure to CLOSE/STOP on release.

In T and TS modes, operation is OPEN/STOP/CLOSE/REVERSE/STOP and Timer to Close start/refresh. *NOTE: If Car Dealer mode is enabled, SBC will be open only stopping at the Open Mid-Stop.*

In FSTS mode, operation is OPEN with Timer to Close start/refresh only, bypassing a programmed Open Mid-Stop.

1. Press and release the RADIO button on the logic board (LED will light).

2. Press and release the SBC externally wired button or TIMER on the logic board (LED flashes rapidly and then remains on solid).

3. Press and hold the remote control button until the LED flashes rapidly. The LED will then remain on silid after releasing.

4. Press and release the RADIO button on the logic board (LED flashes rapidly and then turns off). The programming mode is exited if no activity is performed within 30 seconds.

NOTE: Requires self-monitoring photo eyes when using constant pressure to close (wiring C2, D1 and E2).

ERASING REMOTE CONTROLS

Press and hold the RADIO button on the logic board until the RADIO LED flashes rapidly (approximately 5 seconds). All remote controls will be erased.

⚠ WARNING

To prevent possible SEVERE INJURY or DEATH, install reversing sensors when:

• The radio is used.

• The 3-button control station is out of sight of the door.

• Or ANY other control (automatic or manual) is used.

Reversing devices are recommended for ALL installations.

NOTICE: To comply with FCC and or Industry Canada (IC) rules, adjustment or modifications of this receiver and/or transmitter are prohibited, except for changing the code setting or replacing the battery. THERE ARE NO OTHER USER SERVICEABLE PARTS.

Tested to Comply with FCC Standards FOR HOME OR OFFICE USE. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
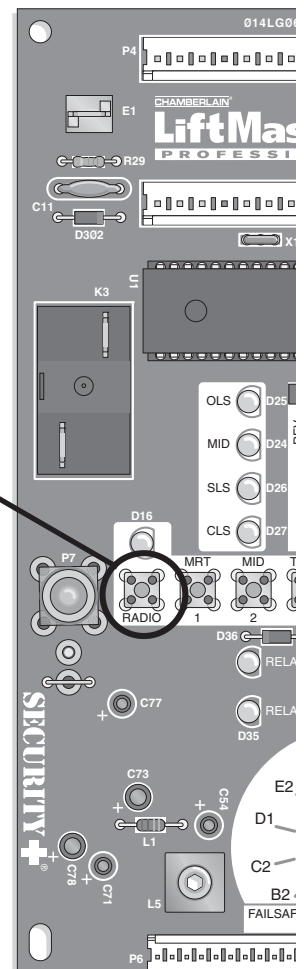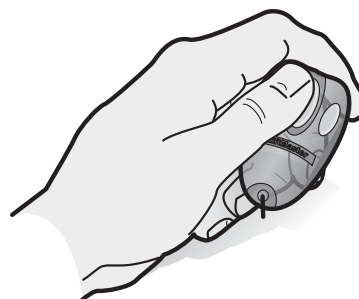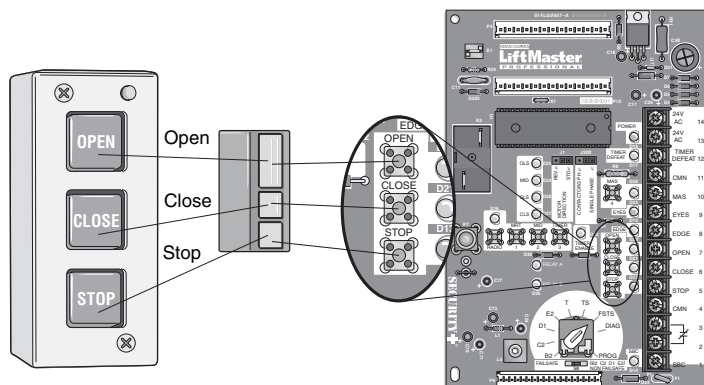
3-BUTTON REMOTE CONTROLS

Your 315MHz Security✛®or dip switch remote control can be programmed to operate as a 3-button wireless control station: the large button will open the door, the middle button will close the door, and the third button will stop the door's movement. You may set up this feature as follows:

1. To enter programming press the RADIO button on the logic board (the RADIO LED will light).

2. To program the OPEN button to a remote control press the OPEN button on the logic board. The RADIO LED will flash and then stay on solid. Then press the corresponding button on the remote control. The RADIO LED on the logic board will flash, this confirms that the remote control has been programmed. (By programming the remote control you use 1 channel of the 23 channels on the radio receiver.)

3. To program the CLOSE button to a remote control press the CLOSE button on the logic board. The RADIO LED will flash and then stay on solid. Then press the corresponding button on the remote control. The RADIO LED on the logic board will flash, this confirms that the remote control has been programmed. (By programming the remote control you use 1 channel of the 23 channels on the radio receiver.)

4. To program the STOP button to a remote control, press the STOP button on the logic board. The RADIO LED will flash and then stay on solid. Then press the corresponding button on the remote control. The RADIO LED on the logic board will flash, this confirms that the remote control has been programmed. (By programming the remote control you use 1 channel of the 23 channels on the radio receiver.)

5. After learning remote controls press the RADIO button on the logic board (LED will turn off). *NOTE: If no activity within 30 seconds the radio will automatically exit programming mode.*

REMOTE CONTROL PROGRAMMING FEATURE

Program Remote Controls from the 3-button control station (3BCS).

Requires Firmware Version 4.6 or higher and a 3BCS with the MAS connected to the control board.

This feature allows the user to add additional remote controls from the 3BCS. By default the remote control learn option is off. *NOTE: Requires access to the operator electrical box to enable or disable this feature.*

To turn this feature on:

1. Turn the SELECTOR DIAL to PROG.

2. Press and release the RADIO button. The RADIO LED will be lit.

3. Press and release the MID button. The RADIO LED will flash quickly 6 times.

4. Press and release the RADIO button. The RADIO LED will turn off.

5. Return the SECTOR DIAL to the desired wiring type.

To add remote controls from the 3BCS:

1. With the door in the fully closed position (close limit activated), press and hold STOP.

2. While holding STOP, press and hold CLOSE.

3. While holding STOP and CLOSE, press and hold OPEN.

4. Release all three buttons once the MAS LED has lit.

5. Learn a remote control by one of the following methods:

   a. Programming a **standard single button/single function remote control**, push and hold the remote control button until the MAS LED goes out. Repeat steps 1 through 4 to add additional remote controls.

   b. Programming a **3-button/three function remote control** (open/close/stop), first push the button on the 3BCS (example: OPEN) and then press and hold the button on the remote control (example: large button) that you want to correspond with the selected (example: OPEN) command until the MAS LED flashes and goes out. Repeat steps 1 through 4 to add additional buttons (close and stop).

To turn this feature off:

1. Turn the SECTOR DIAL to PROG.

2. Press and release the RADIO button. The RADIO LED will be lit.

3. Press and release the MRT button. The RADIO LED will flash quickly 3 times.

4. Press and release RADIO button. The RADIO LED will turn off.

5. Return SELECTOR DIAL to desired wiring type.

NOTE: Restoring the operator to Factory Default (see "RESETTING FACTORY DEFAULTS") will also disable this feature. The remote controls will still be learned.

MAINTENANCE ALERT SYSTEM (MAS)

Feature: An internal cycle counter will activate a flashing LED on the 3-button control station when the preset number of cycles or months has elapsed (whichever occurs first). Setting this feature is optional. By default this feature will never activate. Logic 3.0 operators incorporate a self diagnostic feature built into the MAS LED. In addition to indicating when routine maintenance is due, the MAS LED can be used to troubleshoot some problems with the operator.

Benefit: The Maintenance Alert System (MAS) assists the installing dealer in setting up a routine maintenance program. Once programmed, the MAS notifies the end user (with a flashing LED on the 3-button station) when a preset number of cycles/months has elapsed and scheduled maintenance is due.

To Program:

1. The Maintenance Alert System (MAS) assists the installing dealer in setting up a routine maintenance program. Once programmed, the MAS notifies the end user (with a flashing LED on the 3-button station) when a preset number of cycles/months has elapsed and scheduled maintenance is due.
2. Close the door.
3. Turn the selector dial to PROGRAM.
4. Press and release the MAS SET button.
5. Press the STOP button once to clear the MAS counter.
6. Press the OPEN button once for every 5,000 cycles increments. Press the CLOSE button once for every 3 month increments. Press the STOP button once to clear the MAS memory.
7. Press the MAS SET button to complete the programming. The on board LED will flash back the programmed settings. The OPEN LED will flash once for every 5,000 cycles. The CLOSE LED will flash once for every 3 months.
8. Turn the selector dial back to the desired wiring type.

NOTE: If MAS LED flashes 2 or more flashes in a row followed by a pause, an operator error occurred.

Example: A door is installed with 30,000 cycle springs and has an annual service contract. To set the MAS, turn selector dial to PROGRAM, press MAS button, press the STOP button to clear the memory and then press the OPEN button 6 times (30,000 cycles) and close 4 times (12 months). Press the MAS again to complete the programming. Set the selector dial to desired wiring type.

Special Notes about MAS: A 5th wire must be run to the control station to activate the MAS LED. The MAS LED on the logic board is always enabled. When the operator is serviced after the MAS LED has started to flash, repeat the setup procedure to program in the number or cycles desired until the next service visit OR press and hold the MAS button for 5 seconds in the PROGRAM mode to reset the MAS with its current programmed value. To disable the MAS, follow the programming procedure above and press the STOP button to reset the counter to zero. Every time the operator leaves the close limit is counted as one cycle.

To view how many cycles are programmed into the MAS, set the selector dial to DIAGNOSTIC and press the MAS button. The
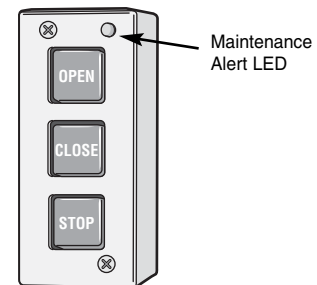
SELECTOR DIAL
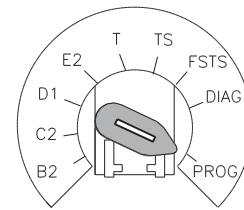
Operation will vary depending on wiring type

3-BUTTON STATION
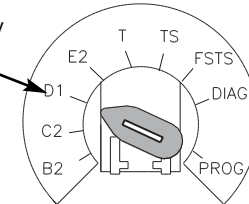
Maintenance Alert LED

Press This	To Get This
OPEN	Adds 5,000 cycles to Maintenance Alert System Activation Counter.
CLOSE	Adds 3 Months to Maintenance Alert System Activation Timer.
STOP	Clears memory, sets Maintenance Alert System Activation Counter to 0 cycles and 0 months.

OPEN button LED will flash once for every 5,000 cycle increment programmed and the CLOSE button LED will flash once for every 3 month increment programmed.

To view how many cycles have elapsed since the last time the MAS was programmed, set the selector dial to "Diagnostic" and press the "MAS" button. Press the OPEN button; the OPEN LED will flash once for every 5,000 cycles that has elapsed. Press the CLOSE button; the CLOSE LED will flash once for every (3) months that has elapsed. Press the MAS button to exit.

OPEN MID STOP

Feature: The mid stop feature is to open the door to a preset point prior to the fully open position.

Benefit: The door opens to a midpoint between open and close reducing heating and cooling costs. The door will not cycle fully, providing longer door and operator life.

To Program:

1. Close the door.
2. Turn selector dial to "PROGRAM."
3. Press the "MID SET" button on logic board.
4. Press the OPEN button, wait until the door reaches the desired mid stop height, then press the STOP button.
5. Press the MID SET button to complete programming.
6. Turn selector dial back to desired wiring type.

NOTE: A momentary open command will open the door fully from the "Mid Stop" position. Once at the "Mid Stop," Photo eyes and other safety devices will not open the door beyond the mid stop position, except in E2 mode. The Timer to Close will work from the Mid Stop.

To clear the Mid Stop set the selector dial to Program and press and hold the MID SET button for 5 seconds. The MID SET LED will flash rapidly and turn off once the Mid Stop has been cleared.

DOWN MID STOP

A new feature is the down mid stop which can be enabled with the purchase of the red/green light kit (RDGRNCARD). See kit instructions of how to enable this new feature.

TIMER TO CLOSE

Feature: Timer automatically closes door after preset time. All safety devices must be unobstructed.

Benefit: The door will automatically close after pre set amount of time. Great for apartment buildings, fire stations and other applications where the end user wants the door to close automatically after a specified amount of time.

Requirements: Must have at least one of the following safety devices attached: CPS-L, CPS-LN4 or CPS3 card with valid safety device. Wiring type must be set to TS, T or FSTS.

TO PROGRAM MANUALLY (Method 1):

1. Close the door.
2. Turn the selector dial to PROGRAM.
3. Press the TIMER button on the logic board.
4. Press the STOP button to clear the timer.
5. Press the OPEN button for every 5 seconds the operator should wait before attempting to close the door. Press the CLOSE button for every 60 seconds the operator should wait before closing the door.
6. Press the TIMER button to complete programming. The OPEN/CLOSE button LEDs will flash to confirm the timer setting. The OPEN LED will flash once for every 5 seconds programmed and the CLOSE LED will flash once for every 60 seconds programmed.
7. Turn the selector dial to desired timer wiring type (TS ,T or FSTS).

Example: To close the door after 70 seconds. Turn selector dial to Program, press the TIMER button, press the STOP button to clear the timer, Press the CLOSE button once for 60 seconds and press the OPEN button twice for 10 seconds. Press the TIMER button to finish programming the timer. Turn selector dial to desired Timer wiring type. (TS, T or FSTS).

SELECTOR DIAL
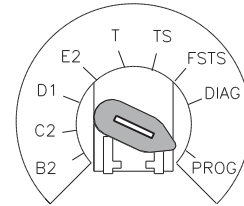
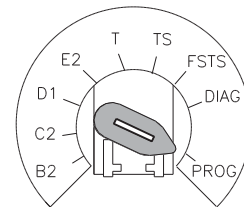Operation will vary depending on wiring type
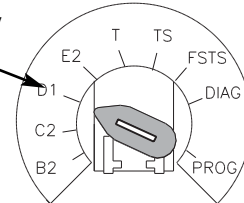
⚠ WARNING

To prevent possible SEVERE INJURY or DEATH, install reversing sensors when:
- The radio is used.
- The 3-button control station is out of sight of the door.
- Or ANY other control (automatic or manual) is used.

Reversing devices are recommended for ALL installations.

SELECTOR DIAL

Operation will vary depending on wiring type
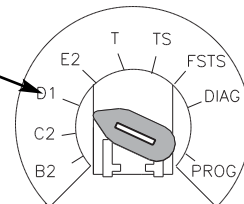
TIMER TO CLOSE

PROGRAM TIMER TO CLOSE BY EXAMPLE (Method 2):

To Program:

1. Close the door.
2. Turn the selector dial to PROGRAM.
3. Press and hold TIMER button for 5 seconds until TIMER LED flashes.
4. Press the OPEN button and wait for the door to reach full open or mid stop position.
5. Wait for desired amount of time to pass. (An internal stop watch starts counting when the door stops moving.)
6. Press the TIMER button or CLOSE button to stop the timer. (TIMER SET LED will turn on.)
7. Turn the selector dial to the desired wiring type.

Example: The door should close 15 seconds after a truck enters a garage. To program the Timer to Close, turn the selector dial to PROGRAM, press the TIMER button until the TIMER LED blinks, press the OPEN button and wait until the door reaches the open position, wait for the truck to pass through, count 15 seconds and then press the CLOSE button.

NOTES: To read back the Timer to Close setting, turn the selector dial to Diagnostic and press the TIMER button. The OPEN LED will flash once for every 5 seconds programmed and the CLOSE LED will flash once for every 60 seconds programmed.

To deactivate the timer from the open position press the STOP button. The timer will be reactivated on the next operation command. To deactivate the timer for more than one cycle, attach a switch to 11 and 12 (Common and Timer Defeat).

All timer modes require a supervised safety device to be installed.

Reminders: FSTS wiring mode allows the Timer to Close to be activated by the Single Button Control (terminal 1) only. T wiring mode allows the door to attempt to close only one time for safety purposes.

SELECTOR DIAL

Operation will vary depending on wiring type

CAR DEALER MODE

Feature: The car dealer mode uses the SBC (Single Button Control input) to bring the door from a closed position to the programmed Open Mid-Stop position and keep it at that location even with multiple inputs.

Benefit: Provides energy cost savings by limiting the door opening height.

Requirements: This feature works in conjunction with the programmable Timer-to-Close feature. To enable this feature you must first connect a treadle, photo eye or loop detector accessory to the SBC input and must have at least one of the following safety devices attached: CPS-L, CPS-LN4 or CPS3 card with valid safety device. Wiring type must be set to TS or T.

To program:

1. Start with the door in the closed position.
2. Turn the SELECTOR DIAL to PROG.
3. Push the TIMER button and release (Green Timer LED will be lit).
4. Push the MID button and release. This turns on the Car Dealer Mode. (The Green Timer LED will flash 6 times indicating the Car Dealer Mode is turned on)
5. Push the TIMER button and release.
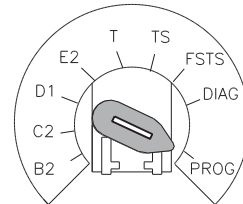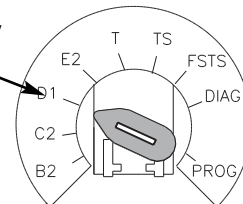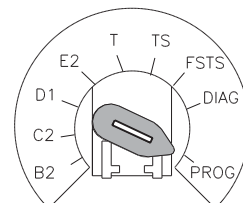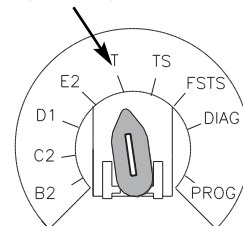6. Turn the SELECTOR DIAL to the desired wiring type (TS or T).

NOTE: To disable the Dealer Mode follow steps 2 and 3, then press the MRT button and release. (The GREEN TIMER LED will flash 3 times indicating that the Car Dealer Mode is off)

SELECTOR DIAL

Operation will vary depending on wiring type

AUXILIARY REVERSAL SYSTEM / RPM SENSOR

Feature: This feature utilizes the RPM sensor connected to the logic board to detect when the clutch slips and reverses the door (clutch must be properly adjusted). In addition, the RPM eliminates the need for a centrifugal switch on 1/3 and 1/2 horsepower single phase motors.

Benefit: The Auxiliary Reversal System reverses the operator upon hitting an obstruction, preventing excessive door and operator damage. We require the use of safety devices for primary safety protection. By removing the centrifugal for 1/3 and 1/2 horsepower single phase motors, the leading cause of motor failures is eliminated. (Auxiliary Reversal System not applicable on models GH and GT.)

NOTE: This feature is automatically learned and does not require programming.

RPM Sensor

Logic Board
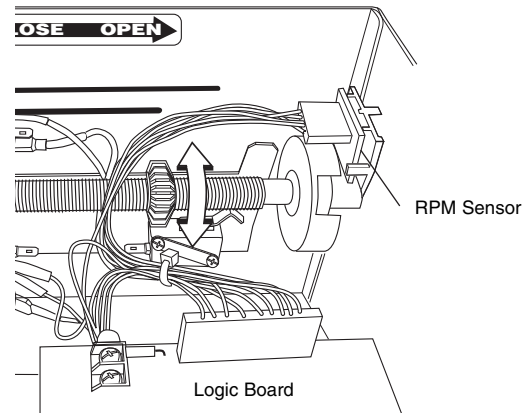
MAXIMUM RUN TIMER (MRT)

Feature: The operator can learn the time it takes to open or close the door plus an additional 10 seconds.

Benefit: If the operator does not meet its open or close limit within the set time it will stop, limiting damage to the door and operator.
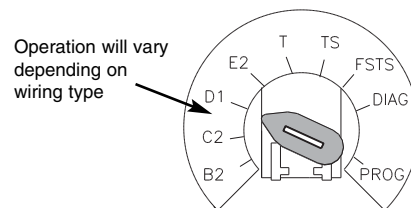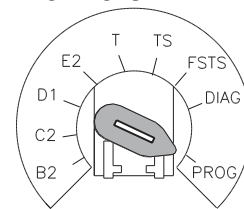
To Program:

NOTE: The default setting for the MRT is 90 seconds. In the event the application requires the MRT be manually learned for a longer duration follow steps below.

1. Start with the door in the closed position.
2. Set the selector dial to "PROGRAM."
3. Press MRT button on logic board.
4. Press the OPEN button and wait for the door to reach the full open limit.
5. Once the door has reached the open position, programming is complete.
6. Turn dial to desired wiring type.

NOTE: To reset MRT only, turn selector dial to program and press and hold the MRT button until the MAS led flashes rapidly.

SELECTOR DIAL

Operation will vary depending on wiring type

RED/GREEN WARNING LIGHT CARD

Feature: The Red/Green warning light card flashes a warning light for 10 seconds prior to the Timer to Close activating the door to close.

Benefit: Advanced warning of the door closing helps prevent traffic collisions with the door.

Light Control Module Operation: The green lights on the OPTION BOARD will turn on if the board is seated properly and the power is on. When the door reaches the full open limit or mid stop, the timer circuit and the green lamp holder will be activated. (Green lamp will not be activated if timer setting is less than 10 seconds.) The red lamp holder will receive power as indicated at right.

Requirements: Must have the LiftMaster Red/Green warning light kit RDGRNCARD and must have at least one of the following safety devices attached: CPS-L, CPS-LN4 or CPS3. See Red/Green warning light instructions for further details.

TIMER SETTING	RED LAMP HOLDER RECEIVES POWER
Timer setting equals zero	Activates when the door closes and until close limit is activated
Greater than 10 seconds	10 seconds before door starts to close and until close limit is activated
Less than or equal to 10 seconds	Activates when the door reaches the open limit or mid stop
	The red lamp holder receives power when the door opens and remains activated if the door is stopped manually before reaching the mid stop or the open limit

RESETTING FACTORY DEFAULTS - CLEARING MEMORY

To reset most of the user installed settings back to factory defaults:

1. Turn the selector dial to DIAGNOSTIC.
2. Press and hold the STOP button for 5 seconds. The MAS LED will flash momentarily when the factory defaults have been restored.
3. Return the selector dial to the desired wiring type.

Factory Defaults:

a. Timer to close = 0 seconds
b. CPS-L photo eyes = unlearned
c. The Mid Stop is deactivated
d. The Maintenance Alert System is deactivated
e. The Maximum Run Timer is set to 90 seconds
f. Dealer Mode is deactivated
g. Restoring the operator to Factory Default will also disable this feature. The remote controls will still be learned.

NOTE: Life of Operator feature (Odometer/Cycle Counter) and programmed remote controls are not cleared.

SELECTOR DIAL
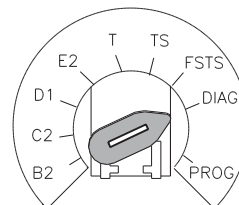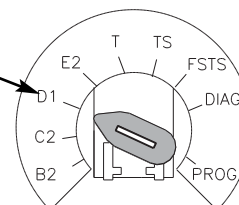
Operation will vary depending on wiring type

MAINTENANCE SCHEDULE

For use with Maintenance Alert System.
Check at the intervals listed in the following chart:

ITEM	PROCEDURE	EVERY MONTH	EVERY 3 MONTHS OR 5,000 CYCLES	EVERY 6 MONTHS OR 10,000 CYCLES	EVERY 12 MONTHS OR 20,000 CYCLES
Drive Chain	Check for excessive slack. Check and adjust as required. Lubricate.		●♦		
Sprockets	Check set screw tightness.		●		♦
Clutch	Check and adjust as required.			●	♦
Belt	Check condition and tension.			●	♦
Fasteners	Check and tighten as required.			●	♦
Manual Disconnect	Check and operate.			●	♦
Bearings and Shafts	Check for wear and lubricate.		●♦		
Safety Reversing Sensors	Check alignment and functionality.	●			

⚡⚠ WARNING

To avoid SERIOUS PERSONAL INJURY or DEATH from electrocution, disconnect ALL electric power BEFORE performing ANY maintenance.

♦ **Use SAE 30 Oil (Never use grease or silicone spray).**
  • Do not lubricate motor. Motor bearings are rated for continuous operation.
  • Do not lubricate clutch or V-belt.
♦ **Repeat ALL procedures.**
● Inspect and service whenever a malfunction is observed or suspected.

LIFE OF OPERATOR FEATURE (ODOMETER/CYCLE COUNTER)

The operator is equipped with an odometer to show how many months and cycles the operator has performed from the time it was installed. This feature can help determine how long the operator has been in service.
1. Start with the door in the closed position.
2. Turn the SELECTOR DIAL to DIAG (diagnostic mode).
3. Press and release the MAS button on the logic board.
4. Press and release the MRT button on the logic board.
5. The open and close lights will flash. OPEN for every 5,000 cycles and CLOSE for every 3 months.
6. Return the SELECTOR DIAL to the desired wiring type.

NOTE: *If the operator has not reached 5,000 cycles or 3 months, there will be no indications.*

HOW TO ORDER REPAIR PARTS

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WHEN ORDERING REPAIR PARTS PLEASE SUPPLY THE FOLLOWING INFORMATION:

✓ **PART NUMBER**
✓ **DESCRIPTION**
✓ **MODEL NUMBER**