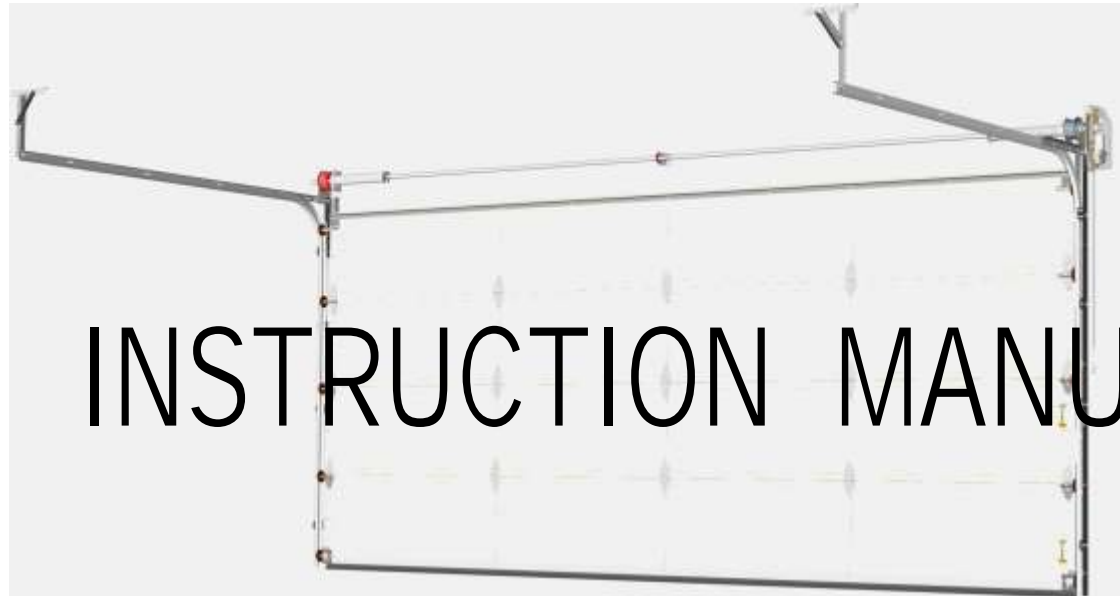
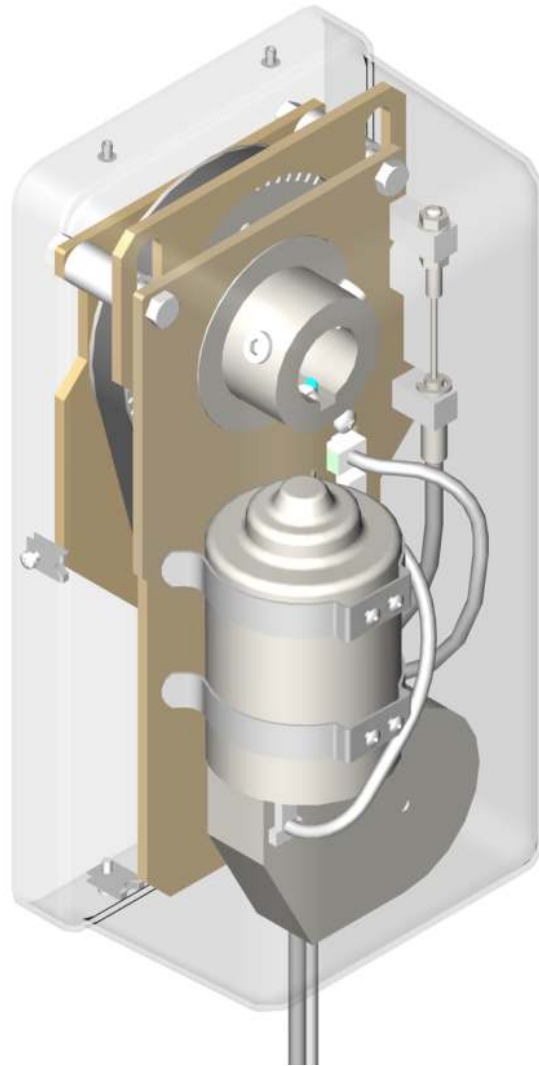




MARTIN RESIDENTIAL TORSION DRIVE OPENER

DC4600 for torsion spring doors up to 15' (4600) High Or up to 500 lbs. (227kg)

*The World's Quietest Door Opener.*TM



INSTRUCTION MANUAL

- See page 7 for IMPORTANT INSTALLATION, MAINTENANCE & SAFETY INSTRUCTIONS
- This instruction manual features “Low Risk” Martin Finger Shield Garage Doors

ISO 9001
Quality
Standard



MARTIN DOOR MFG.



DOOR OPENER INCLUDES:

Motor Assembly See Figures 2a, 2b, 12, 47 and Step 1

DC Motor with Reduction Gear
 Motor Pulley
 Torsion-Shaft Pulley with Set Screws
 Drive Belt
 Drive Belt Tensioning Plate
 Back Plate
 Front Plate
 Front and Back Motor Cover
 Anti-torque Arm with Bolts, Spacer, Nut

Emergency Release Assembly See Figures 6a to 9b and Step 2

Emergency Release Lever with Bracket
 Bowden Cable with Cable Post and D-Shackle
 Screw Hook with Lock Nut
 Chain Extension Package

Control Box Assembly See Figures 10a, 10b and Step 3

Control Box with Screws, Conduit Outlets
 Control Box Lid With Screws and Push Button
 Circuit Board with Transformer, etc.
 Low Voltage DC Motor Wiring Harness
 6' (1830) Power Cord with 3-Prong Plug

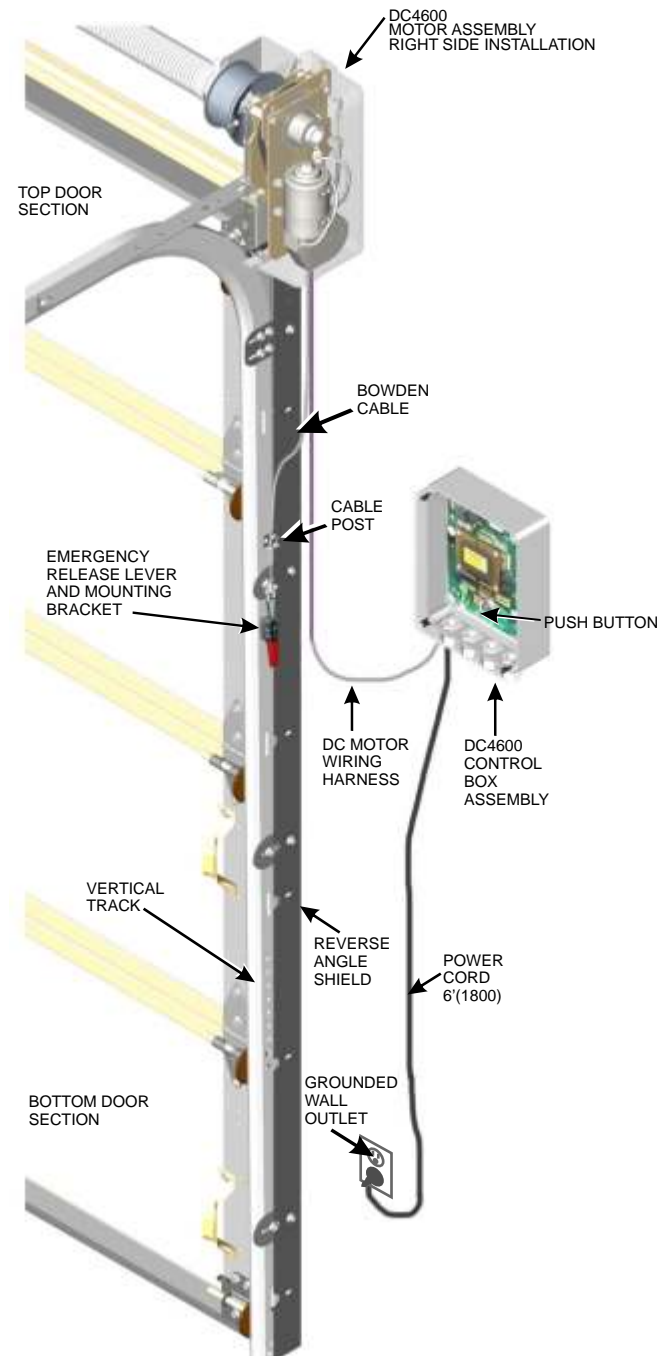
Radio Control Assembly See Step 5

Radio Receiver with optional 4 cond. wire (black, green red, yellow)
 2-Button Transmitter (mini)

Options

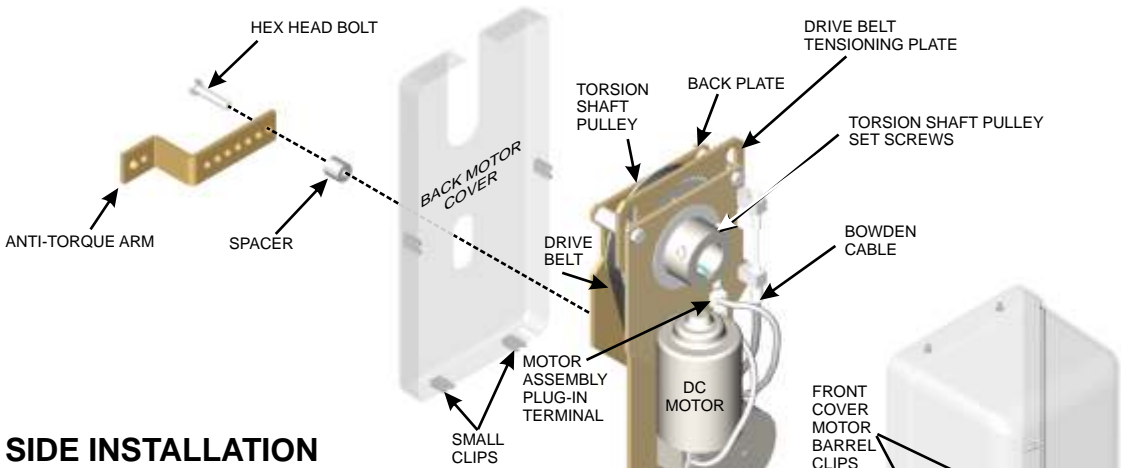
2-Button Transmitter (mini)
 3-Button Transmitter (keychain - micro)
 4-Button Transmitter (mini)
 Mounting Plate (Pocket) for Transmitter (mini)
 Wireless Keyless Entry
 Battery Back-up
 Automatic Solenoid Lock with Side Lock Module
 Door Bell Type Push Button with Wiring
 Keyswitch

FIGURE 1



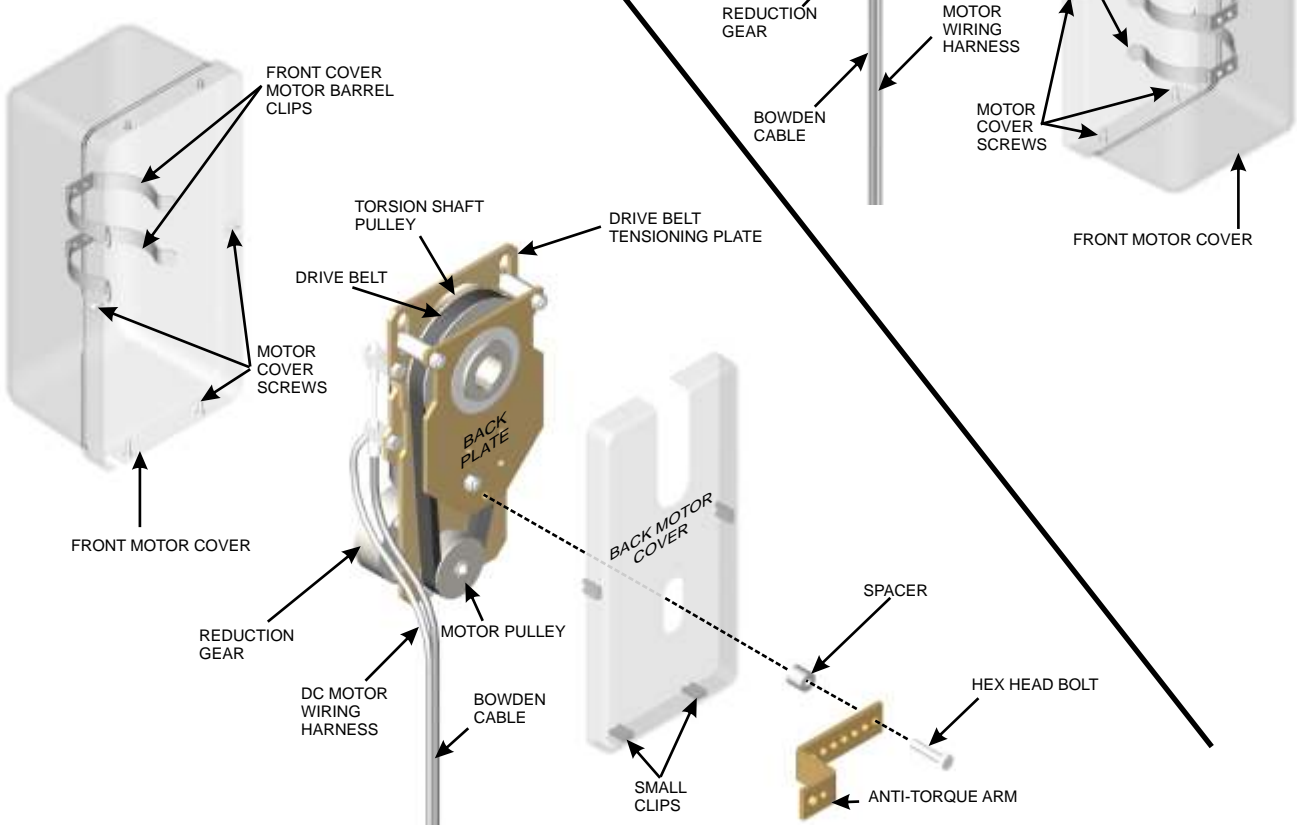
RIGHT SIDE INSTALLATION

FIGURE 2b



LEFT SIDE INSTALLATION

FIGURE 2a



EMERGENCY RELEASE ASSEMBLY

ATTENTION! THE OPENER CANNOT LEARN IF THE DRIVE BELT TENSION ALLOWS THE MOTOR PULLEY TO SLIP

BOWDEN CABLE FASTENED TO VERTICAL TRACK - REGULAR LIFT DOORS

FIGURE 6a

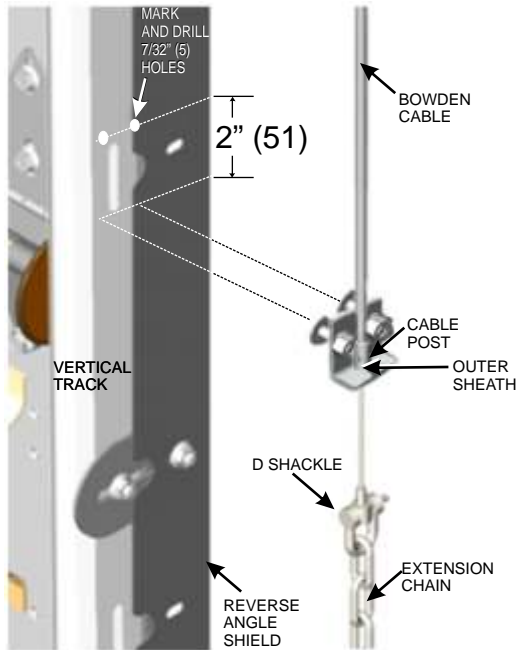
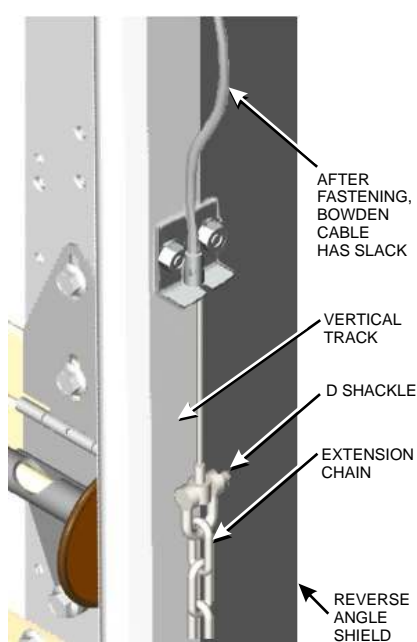


FIGURE 6b



BOWDEN CABLE FASTENED TO DOOR JAMB - VERTICAL/HIGH LIFT DOORS

FIGURE 7a

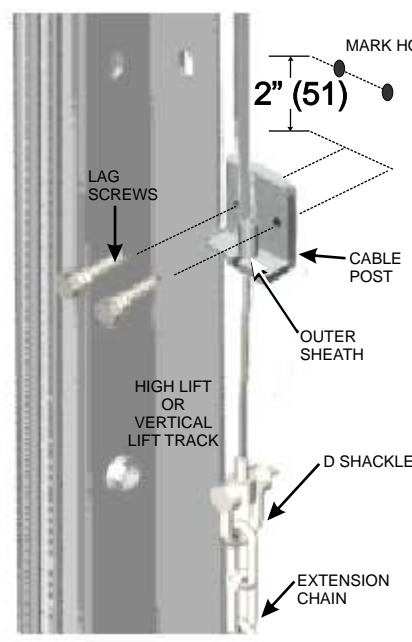
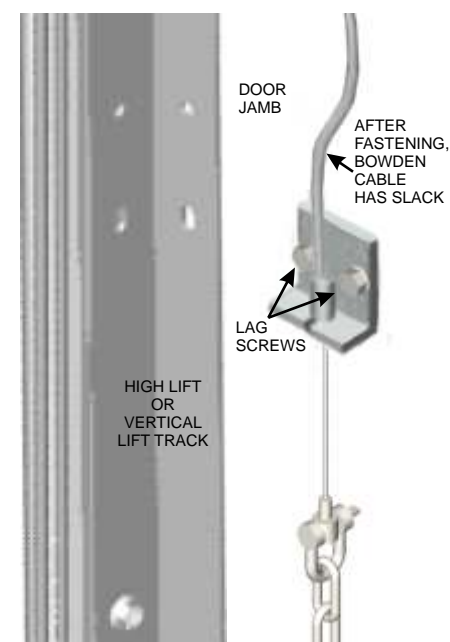


FIGURE 7b



EMERGENCY RELEASE LEVER SCREW HOOK ON D SHACKLE

FIGURE 8a

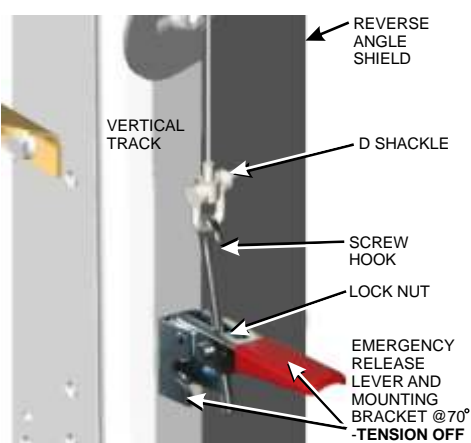
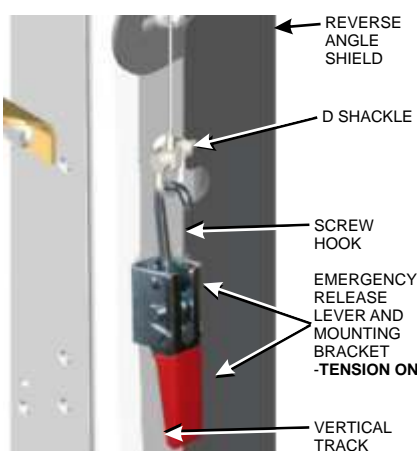


FIGURE 8b



EMERGENCY RELEASE LEVER SCREW HOOK ON EXTENSION CHAIN

FIGURE 9a

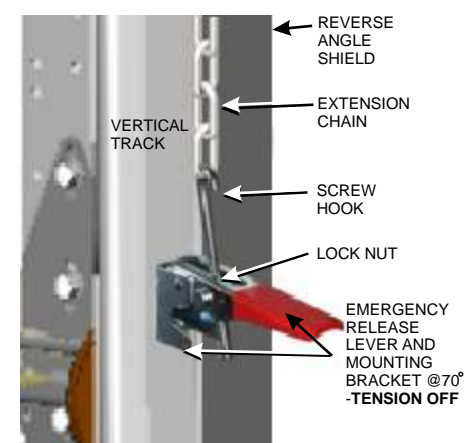
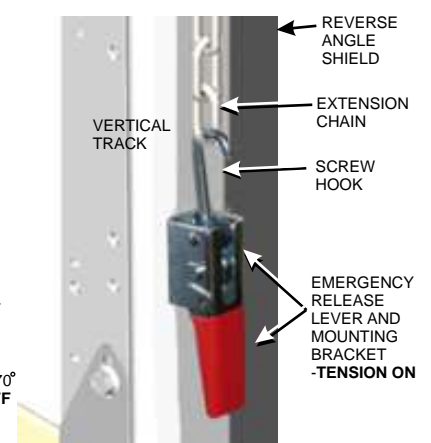


FIGURE 9b



The Martin DC4600 Intelligence

1. The open limit is set automatically as the garage door reaches the fully opened position allowed by the cable drums or optional bumper springs. The close limit is set automatically as the garage door touches the floor.
2. The opener's computer will memorize the limits after two complete cycles, during which time the motor may run slower than normal.
3. After the two complete cycles the garage door will "soft start" and "soft stop" as it opens and closes.
4. The opener's computer will reverse the closing door if it contacts an obstruction 1"(25) high or more above the floor.
5. The opener's computer will stop the door if it contacts an object in the open cycle.

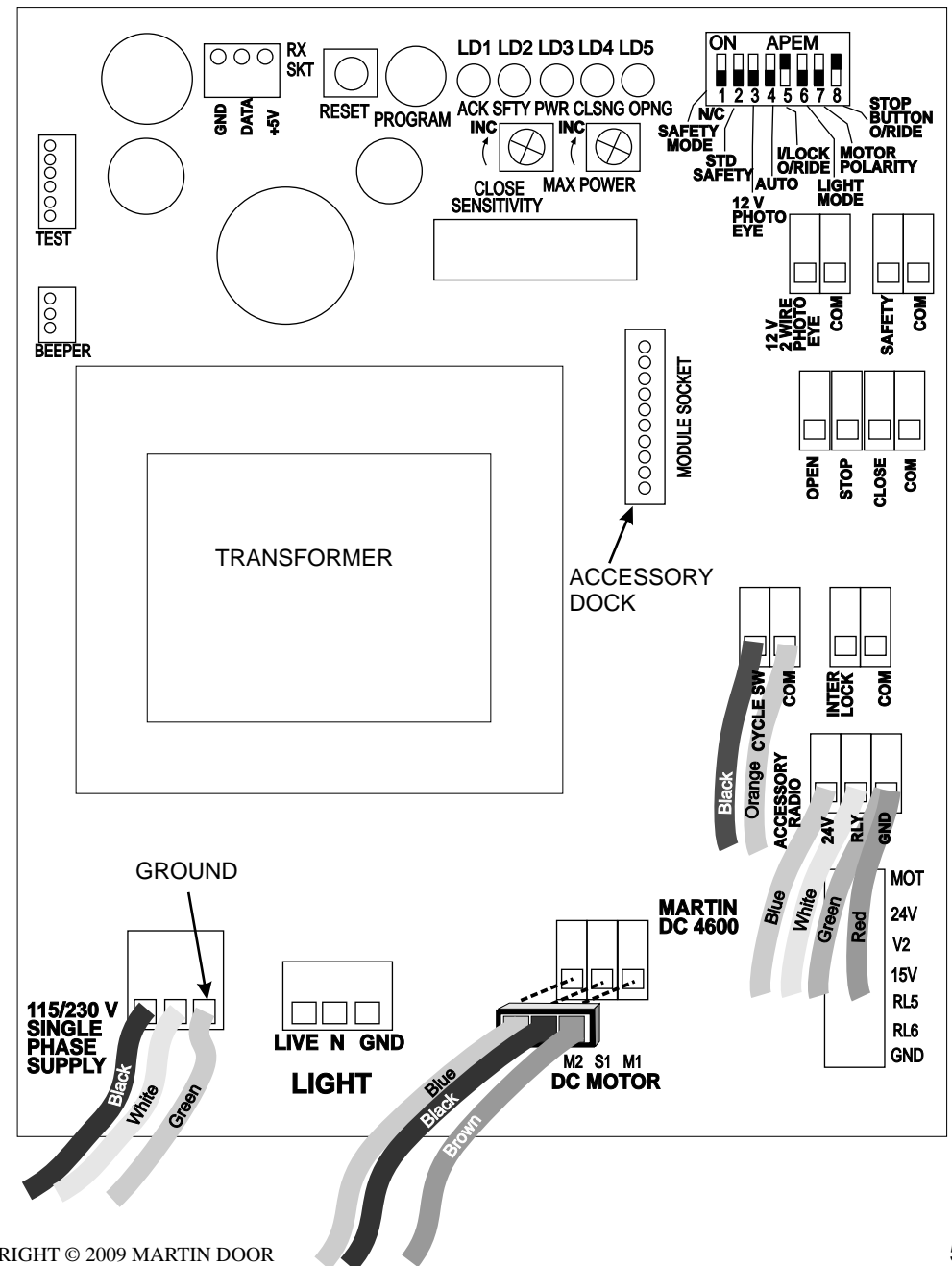
DC 4600 CONTROL BOX ASSEMBLY

FIGURE 10a



DC 4600 CIRCUIT BOARD

FIGURE 10b



PREPARATION

Correct all “High Risk” areas on the garage door before installation of the new Martin Torsion Drive Opener. If unable to correct, replace garage door with a new Martin Garage Door. See Back Page

Decide if the Motor Assembly will be mounted to the right side or left side of the garage door.

The Torsion Tube/Shaft protrudes 5”(130) beyond the lock-on/side bearing bracket. (Motor Assembly side clearance requires an extra 4.5”(114) beyond the end of the tube/shaft.) See Figure 12, 13

A qualified electrician should install a grounded electrical outlet within 5’(1520) of the Control Box Assembly location according to local codes. See Figure 1

Make sure the garage door is properly balanced, the moving steel parts properly lubricated, and the jambs waxed where the garage door rubs. The door should work free and easy as it opens and closes. Please call a trained Martin Dealer if you have a problem or do not understand.

The garage door should be at least 5’(1520) high.

FIGURE 13 (Torsion Tube)

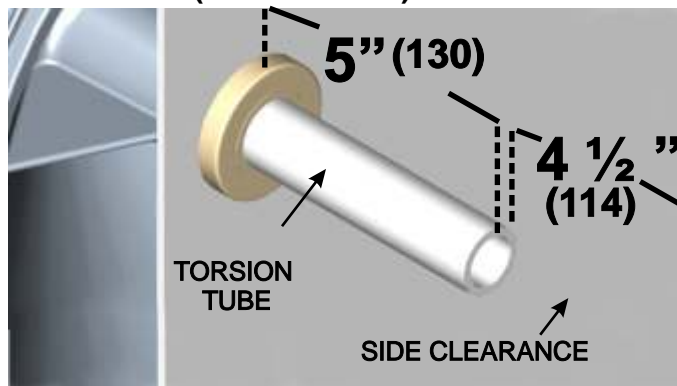
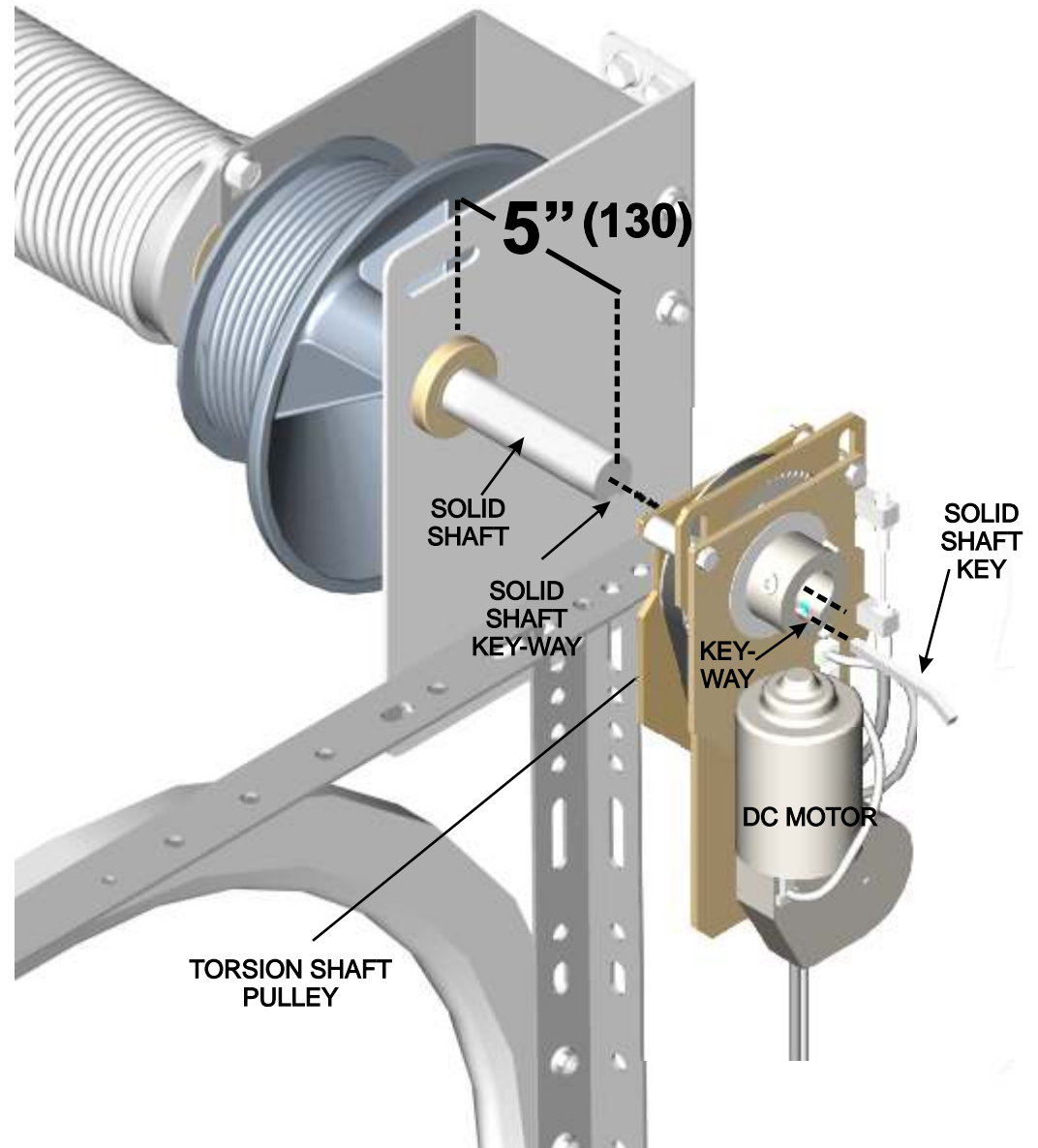


FIGURE 12 (Solid Shaft)



WARNING



TO REDUCE THE RISK OF SEVERE INJURY OR DEATH, READ AND FOLLOW ALL INSTRUCTIONS

Do not install this opener or any other opener on "HIGH RISK" garage doors that may cause severe injury, entrapment or death! See back page for serious injuries which may occur if "HIGH RISK" areas are left uncorrected.

Martin Finger Shield Garage Doors are "Low Risk".

IMPORTANT INSTALLATION INSTRUCTIONS

- **Untrained or Negligent** Installing, Adjusting and Servicing can be Dangerous! The garage door springs and related parts can cause serious injury or death! IF YOU ARE UNSURE, CALL A TRAINED MARTIN DOOR DEALER!
- **Garage door** should be balanced and easy to open and close by hand.
- **Locks** should be disabled and pull down ropes should be removed.
- **Locate** the control box/push button within sight of door, at min. height of 5' (1520) so small children cannot reach it, and away from all moving parts of door.
- **Emergency release lever** should be installed and adjusted to about 6' (1830) above the floor. Monthly check that the lever angle is correct. See page 4, 9
- **Risk of electrical shock** is explained in Step 3. Do not connect opener to source of power until instructed to do so.
- **Entrapment and warning labels** should be installed next to the control box/push button.
- **Where** possible install opener 7'(2135) or more above the floor.

IMPORTANT MAINTENANCE & SAFETY INSTRUCTIONS

- **Monthly**, check the opener's down cycle safety reverse. The door must reverse when it contacts a 1 1/2" (38) high object (or a 2X4 board laid flat) on the floor. A closing door must also reverse if the photo eyes are interrupted.
- **Always** keep the moving door in sight and away from people and objects until it is completely closed. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.
- **NEVER GO UNDER A STOPPED, PARTIALLY OPEN DOOR**
- **Do not allow children** to operate or play with the garage door opener controls. Keep all remote control transmitters away from children.
- **The emergency release** should only be used when garage door is in the closed position. Weak or broken springs may cause door to fall if released in the open position, increasing the risk of severe injury or death. Use caution when using the release with door open.
- **Monthly** visually check the lift cables, spring assembly, hardware, etc. for wear and stability.
- **If the Safety Reverse** or any other part of the garage door and opener system do not work properly, or if you do not understand, call a trained Martin Door Dealer.

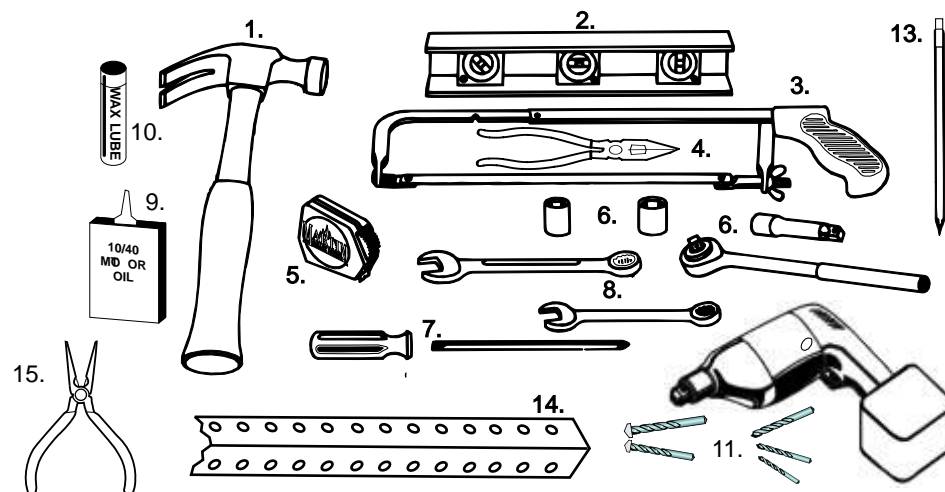
SAVE THESE IMPORTANT INSTRUCTIONS

THE FOLLOWING ITEMS ARE HELPFUL TO COMPLETE A SATISFACTORY MARTIN GARAGE DOOR AND OPENER INSTALLATION:

1. Hammer
2. Level (magnetic)
3. Hacksaw
4. Wire Cutters
5. 18' (5500) Measuring Tape
6. Socket Wrench set for 7/16" (11), and 9/16" (14) with 3" (76) Extension
7. Regular and Phillips Screwdriver
8. End Wrench set for 13/32" (10), 7/16" (11), and 9/16" (14)
9. 10/40 Motor Oil Lubricant
10. Wax Lubricant (paraffin, candle, etc.)
11. Cordless Drill with 1/8" (3), 13/64" (5), 1/4" (6) Bits plus 1/4" and 3/8" (6 and 10) Masonry Bits
12. Step Ladder (not shown)
13. Pencil
14. Punched Angle Opener Hanger: 8' X 1-1/4" X 1-1/4" (2440 X 32 X 32)
15. Needle Nose Plier and Wire Stripper.

ALL MEASUREMENTS IN PARENTHESIS () ARE MILLIMETERS IN THIS INSTRUCTION MANUAL.

NOTE: Bolts, lock nuts and lag screws for fastening the punched angle are furnished with the door opener hardware fasteners.



INSTALLATION INSTRUCTIONS FOR MARTIN RESIDENTIAL TORSION DRIVE DOOR OPENER

THESE INSTRUCTIONS ARE INTENDED FOR PROFESSIONAL GARAGE DOOR OPENER INSTALLERS. READ THROUGH THE COMPLETE INSTRUCTION, MANUAL, SPECIFICATIONS AND APPLICABLE OPTIONAL INSTRUCTIONS BEFORE BEGINNING.

STEP 1 INSTALLING THE MOTOR ASSEMBLY

Study "PREPARATION" on page 6 and "INTELLIGENCE" on page 5.

Install back motor cover on torsion tube. See Step 8

Slide the motor assembly on the torsion tube/shaft. If the torsion shaft is solid, align the key-ways and insert the key provided. See Figures 12, 17, 18

Decide what holes to use and where the anti-torque arm will be fastened to the horizontal track angle (the arm may be reversed for convenience), bearing bracket, etc. and to the back plate of the motor assembly with the 10mm hex head bolt and 1/2"(13) spacer. Fasten the 10mm hex head bolt and 1/2"(13) spacer through the back motor cover into the back plate of the motor assembly. See Figures 2a, 2b, 14, 15, 17

Position motor assembly close to horizontal track angle, plumb, level and square (vertically).

Fasten tight the long and short end of the anti-torque arm.

Tighten the set screws, in the torsion-shaft pulley, of the motor assembly with allen wrench provided. **Do not use a manual ratchet or power allen wrench driver. Tighten as tight as necessary by hand only.**

FIGURE 14

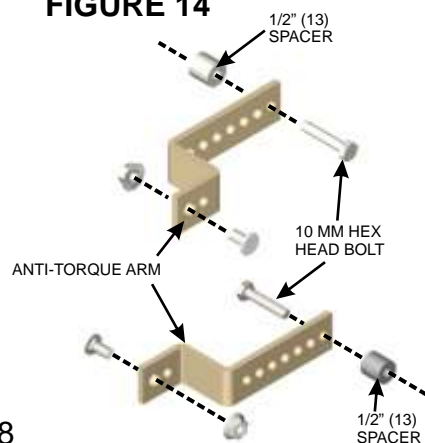


FIGURE 15

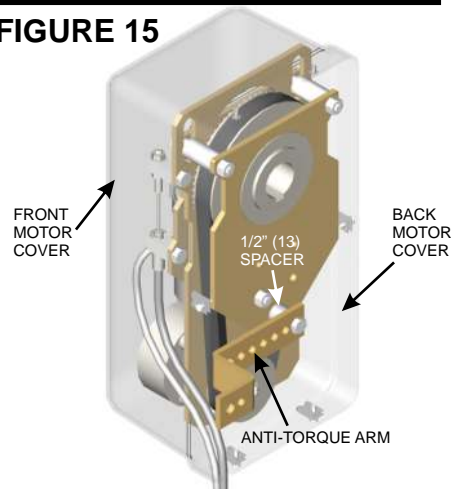


FIGURE 17 (Torsion Tube)

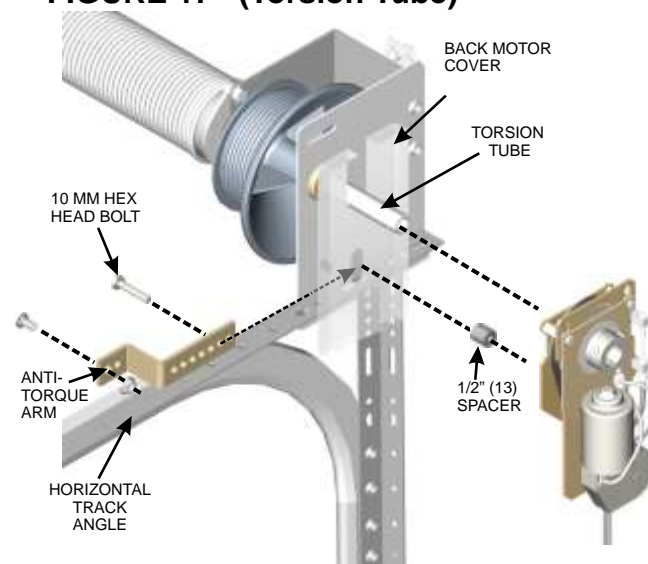
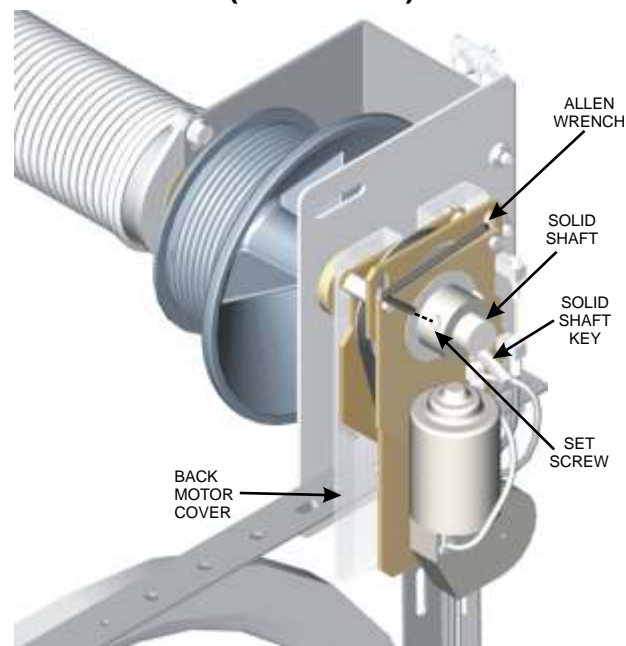


FIGURE 18 (Solid Shaft)



STEP 2 INSTALLING THE EMERGENCY RELEASE ASSEMBLY

Fasten the cable post which is fastened to the outer sheath of the bowden cable to the vertical track or track bracket, etc., with the two flat head 7/32" (5) screws and nuts provided. (If fastened to the jamb, use optional 2 1/2" (64) long hex head lag screws.) Allow at least 2" (51) slack to the outer sheath of the bowden cable. Mark and drill two 7/32" (5) holes. See Figures 6a to 7b, 21

Place screw hook in D-shackle at end of bowden cable or at the end of the extension chain. See Figures 8a to 9b, 21

The Emergency Release Lever should be about 5' - 6' (1830) above the floor. If the Bowden cable is not long enough, a short piece of chain (optional) should be used.

Mark and drill two 7/32" (5) holes in the vertical track or track bracket, etc., with the emergency release lever at about a 70° angle. Fasten emergency release lever with mounting bracket using two 7/32" (5) flat head screws and nuts provided. See Figures 8a to 9b, 20, 21

The Bowden Cable should be taut when the emergency release lever is at about a 70° angle. Adjust the screw hook as necessary, then tighten the lock nut. Push the emergency release lever down. Drill new holes and remount if required.

When the emergency release lever (RED) is pushed down, the drive belt tensioning plate moves, tightening the drive belt on the motor and torsion shaft pulley. **The garage door opener will not function without proper drive belt tension. The computer cannot learn if drive belt slips.** Pushing the emergency release lever up or down, disconnects or connects the garage door opener to the garage door. **The garage door should be closed when connecting or disconnecting the Emergency Release Lever. Following a power outage etc, disconnect the power from the control box for 30 seconds. After reconnecting the power, open and close garage door two or more complete cycles (door may run slow).** The computer should restore the original open and close positions without a calibration reset. See Step 4 for calibration reset

Note: The emergency release lever is first set at a 70° angle before engaging, because the chain, cable, belt, etc. will slightly stretch during the first few cycles. **NEVER ALLOW THE EMERGENCY RELEASE LEVER TO BE LESS THAN 65° WHEN DISENGAGED WITH THE BOWDEN CABLE TAUT. CHECK DRIVE BELT FOR PROPER TENSION AFTER ONE MONTH OF USE. SEE FIGURES 8a to 9b, 20, 21**

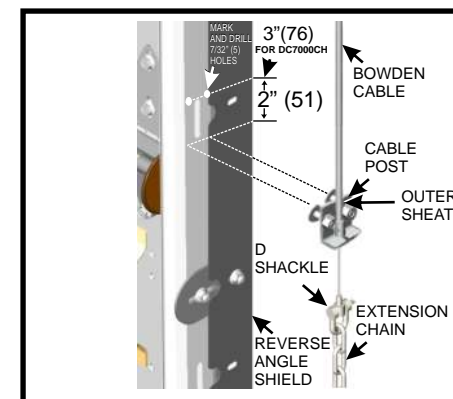
FIGURE 20



About a
70° Angle

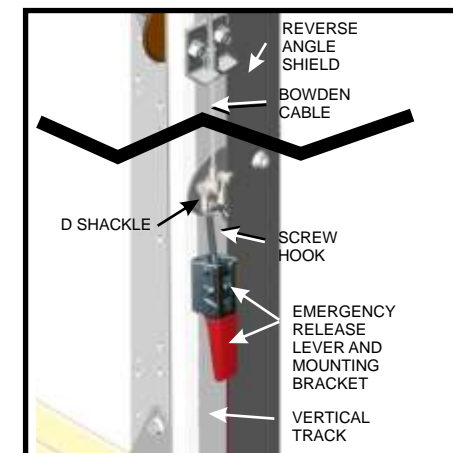
ATTENTION! THE OPENER COMPUTER CANNOT LEARN IF THE DRIVE BELT SLIPS

FIGURE 21 BOWDEN CABLE AND EMERGENCY RELEASE LEVER FASTENED TO VERTICAL TRACK - REGULAR LIFT SEE PAGE 4 FOR OTHER MOUNTING OPTIONS



THE DRIVE BELT MAY NEED TO BE TIGHTENED IF:

1. The opener does not instantly turn off when the door is fully open or closed.
2. The door opener reverts to continuous "slow speed" learning mode.
3. The door can be easily moved by hand with the opener off.
4. The opener computer loses its program.
5. The newly installed opener has been used for one month.
6. The door has been opened and closed more than 5000 times (cycles).



STEP 3 INSTALLING THE CONTROL BOX ASSEMBLY

Fasten the control box to the wall about 5' (1520) from the ground with screws. The holes are in the corner pillars, which are outside the water resistant gasket of the control box. See Figures 1, 24 Because the push button is mounted in the control box lid, the control box should be mounted within sight of the garage door, clear of all moving garage door parts.

ATTENTION! The control box is water resistant. Do not drill holes in the control box! **Route all wires through the conduit outlets at the bottom of the control box.** Dress wiring tight and straight, using ties, staples or other means. See Figures 23, 24

Temporarily fasten the control box lid to the left or right side, above or below the control box to prevent it from hanging by the push button wires during the setup process. See Figures 23, 24 The push button should only be used when the garage door area is free of people or any obstructions.

Plug the three wire low voltage DC motor wiring harness, if not plugged in, into the terminal block at the bottom right hand side of the circuit board that is marked "DC Motor". See Figures 10b, 26a, 26b. Plug the opposite end into the three way terminal in the motor assembly. See Figures 2b, 27. Do not cut or shorten excess wiring. Coil excess wire and tie away from moving parts. See Figure 28

FIGURE 25



FIGURE 26a



FIGURE 26b



FIGURE 27



FIGURE 28



FIGURE 23



FIGURE 24



STEP 3 CONTINUED

The **control box** assembly includes a 6'(1800) power cord with a three prong plug. The third prong is ground. To reduce the risk of electric shock do not alter or change plug or outlet in any way. Do not try to conceal or staple the power cord or try to rout it through a door way, window, wall, ceiling, floor, etc. The power cord must be routed away from moving parts.

Also see "WARNING" On page 12.

Wait until Step 4 before plugging the power cord into the grounded electrical outlet.

DO NOT PINCH WIRING! The door opener will not work properly with damaged wiring.

DIP Switch Positions. See Figure 10b, 30, 31

Observe the factory set positions of each dip switch in the upper right hand corner of the circuit board.

Sw1	Safety Mode	Off/Normally Closed
Sw2	Standard Safety	Off (On for photo-eyes, etc.)
Sw3	12 Volt Photo-eye	Off (On for photo-eyes, etc.)
Sw4	Auto Close	Off (N/A in North America)
Sw5	Inter-Lock Over-Ride	On (Off for inter-lock lock-out switch)
Sw6	Lighting Mode	Off (On eliminates light delay timer)
Sw7	Motor Polarity	On/Off (as required)
Sw8	Stop Button Over-Ride	On

See Figures 30, 31

Abbreviations

ACK = Acknowledge	RLY = Relay
SFTY = Safety	V = Volt
PWR = Power	N = Neutral
CLSNG = Closing	COM = Common
OPNG = Opening	GND = Ground
L.E.D. = Light Emitting Diode	TX = Transmitter
	RX = Receiver

CLEARING SERVICE DUE REMINDER INSTRUCTIONS

At 1500 cycles, the opener may turn on a "service due reminder" (delay to close). To disable do the following:

Turn off the power (or press and hold the reset button)

Press and hold the case lid button

Turn on the power (or release the reset button)

Release the case lid button after ACK flashes three times

Note the two confirmation ACK flashes

FIGURE 30

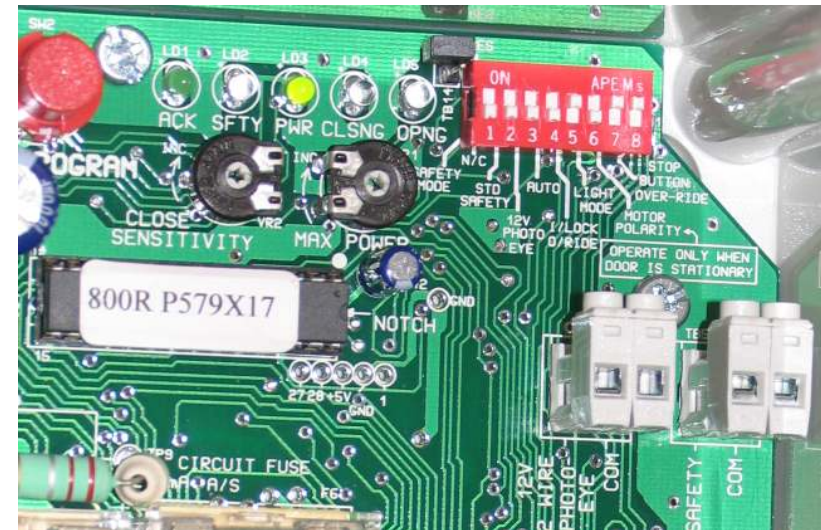
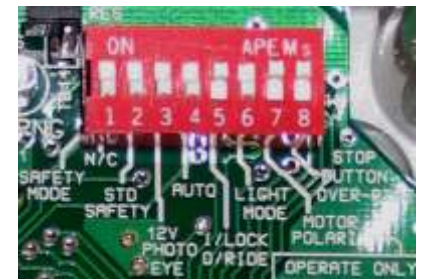
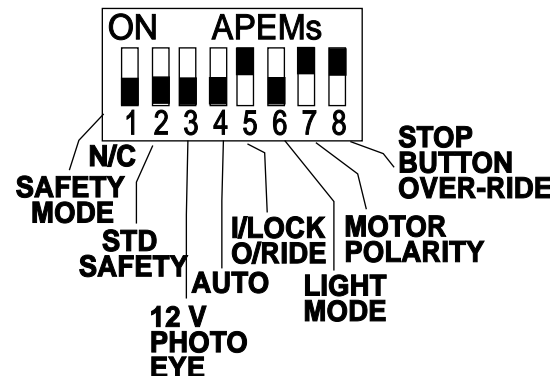


FIGURE 31



STEP 4 CONNECTING OPENER TO POWER (All basic and accessory wiring such as photo-eyes should be completed)

Plug the 6' (1830) power cord into a 10 amp minimum, grounded electrical outlet. Observe the L.E.D. Light #3 PWR illuminates at top of circuit board. If no outlet is available or if power will be wired in direct, contact a qualified electrician. Notice that the power cord wires are connected into the green "main" terminal at the bottom of the circuit board. Observe LIVE, N, and GND. See Figures 10a, 10b, 40

WARNING! To help prevent electrocution, death, fire, etc, the installation of wiring and approved grounded electrical outlet must be done in accordance with local electrical and building codes. **DO NOT USE AN EXTENSION CORD. DO NOT USE A 3-PRONG TO 2-PRONG PLUG ADAPTER.** Also see "The Control Box" on page 11.

Push emergency release lever up to disconnect opener from garage door.

Manually open garage door about 3' (915).

Push emergency release lever down to reconnect opener to garage door. **Press** push button.

IF DOOR OPENS:

and LED light #5 OPNG illuminates
Press push button to stop door
Unplug power cord or turn off power
Push emergency release lever up
Manually close garage door
Push emergency release lever down
Plug in power cord or turn on power
Perform Calibration Reset (see below)
Press push button to open door
Open and close door two complete cycles

IF DOOR CLOSES:

Press push button to stop door
Unplug power cord or turn off power
Push Emergency Release Lever up
Manually close garage door
Push emergency release lever down
Move dip switch #7 to the opposite position
Warning! Never move dip switch #7 with power on.
Plug in power cord or turn on power
Perform Calibration Reset (see below)
Press push button to open door
Open and close door two complete cycles

Note: The door may move **slow** while the computer learns the open and close limits.

The computer cannot learn if the drive belt slips. See Step 2

Following power outage etc., disconnect power from the control box assembly with the door closed. Reconnect power. If the door performs incorrectly after three cycles, perform a calibration reset with the door closed.

Calibration Reset

Press and hold reset button.
Press and hold program button.

Release reset button. Wait and observe that the L.E.D. #1 ACK blinks.

Release Program Button. Observe that the L.E.D. #1 ACK blinks twice, confirming Calibration Reset. See Figure 41

FIGURE 40



FIGURE 41



THE DRIVE BELT MAY NEED TO BE TIGHTENED IF:

1. The opener does not instantly turn off when the door is fully open or closed.
2. The door opener reverts to continuous "slow speed" learning mode.
3. The door can be easily moved by hand with the opener off.
4. The opener computer loses its program.
5. The newly installed opener has been used for one month.
6. The door has been opened and closed more than 5000 times (cycles).

STEP 5 RADIO CONTROL AND EXTRA PUSH BUTTON

Radio Receiver (Install before Step 4)

Remove the cover. Mount the receiver on the wall, next to the control box assembly. See Figure 33

Route the receiver wires up through the conduit outlet in the control box and plug the three labeled wires to the terminals marked 24V, RLY, and GND. The terminal is marked ACCESSORY RADIO. See Figure 32

Connect the blue wire to 24V, white wire to RLY, green and red wire to GND. See Figure 32

To Program first transmitter press and hold button TA1 on receiver circuit board. See Figure 33

After three or four seconds the LED will blink for about ten seconds.

During the ten seconds press and hold transmitter button until the LED illuminates. Release transmitter button and observe that the LED turns off. Test transmitter. See Figure 33

To delete the transmitter memory in the receiver, press and hold button TA1 ten seconds. The LED will blink a few times and then illuminate. Release the button.

Antenna

The 315 MHZ receiver antenna wire on the radio receiver is about 13"(340) long and can have multiple arrangements for the best distance. In a normal installation the distance from the transmitter to the antenna wire should be 50' to 150'(15240 to 45720). **Do not lengthen or shorten the antenna wire.**

NOTE: The Distance from the transmitter to the antenna may be reduced by electrical interference or spherical disturbances in the area, various lights or transformers in and out of the garage, automatic sprinkler system timers, various audible or inaudible sounds, noise, radio signals in the area, concrete, steel or lead in and around the garage, antenna wire touching metal, etc.

External Push Button

Fasten additional white w/ black stripe and white wires to Case Button terminal, in parallel with existing box cover lid push button wires. Fasten other end of wires to the external push button. See Figure 32

FIGURE 32

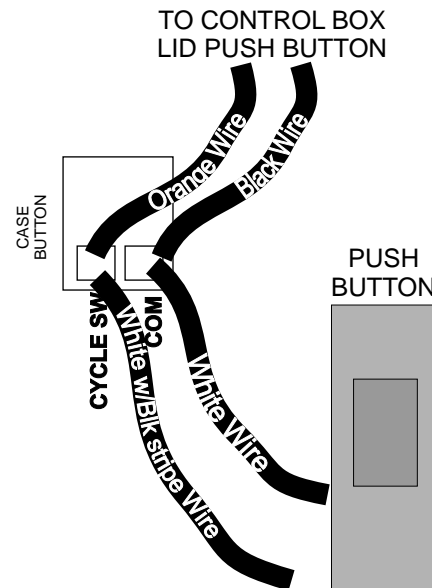
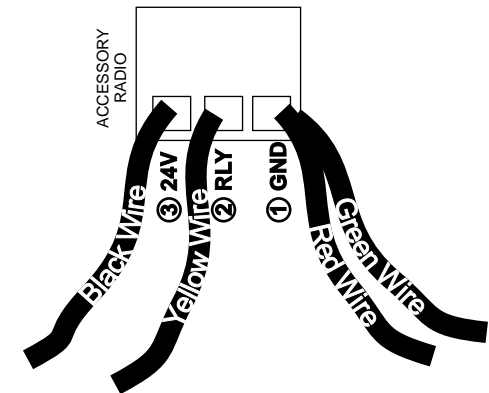
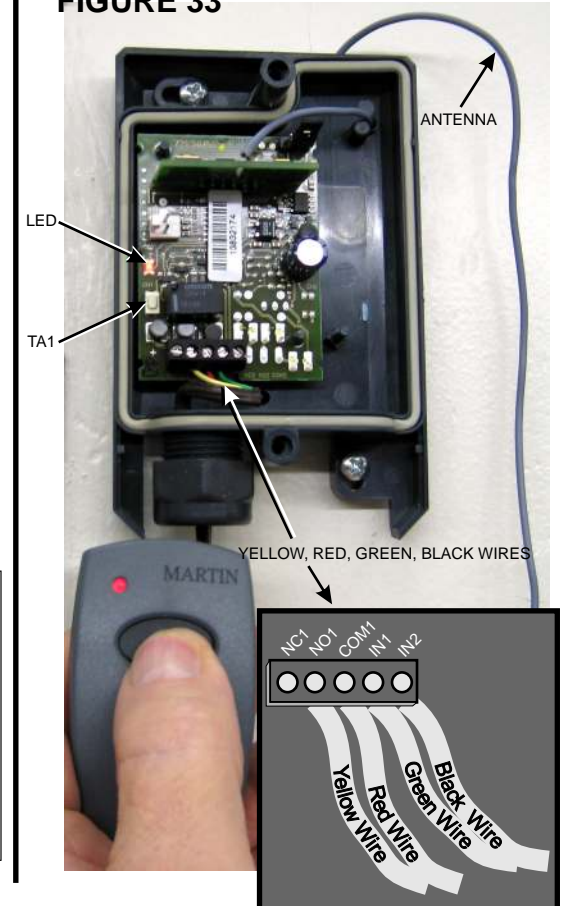


FIGURE 33



STEP 5 CONTINUED
TRANSMITTERS

THE BATTERY:

Pry transmitter apart using a small coin to expose battery. The 3 Volt #CR2032 battery is shown. Battery may last 4 to 5 years. See Figure 34

TRANSMITTER MOUNTING CHOICES:

Transmitter can be carried alone, attached to a key chain, attached to the visor clip or attached using the optional mounting plate. See Figures 34, 35, 36

MULTIPLE TRANSMITTERS:

Each transmitter has been factory programmed with different private security codes. For your information there are 284 trillion different codes. 2-channel transmitters have 2 different codes. 4-channel transmitters have 4 different codes. Additional transmitters that come with the opener or are purchased separately as accessories have their own different codes that must be changed to match your first transmitter.

Connect the programming time to both transmitters. See Figures 36, 37, 38 and 39

Press and hold button on your present transmitter. Indicator light will illuminate. While still holding the 1st transmitter button, press and hold the button on the new or second transmitter. Code transfer will occur in approximately 2 seconds when the indicator light will blink and then illuminate on the new transmitter. See Figure 39

The 315 MHz transmitters are "Home Link" compatible. Follow instructions furnished in the automobile owners manual for non-rolling code applications.

TRANSMITTER OPERATION:

Press button until garage door begins to move. The indicator light on the transmitter will illuminate. Press button at any time during travel to stop the garage door.

FIGURE 34

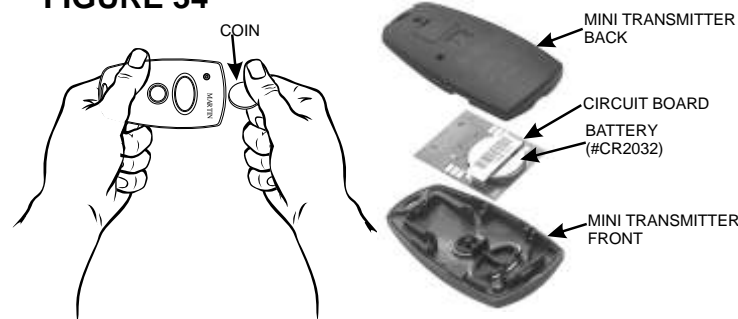


FIGURE 35

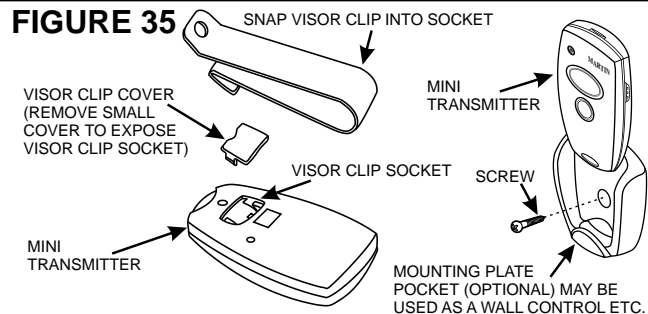


FIGURE 36

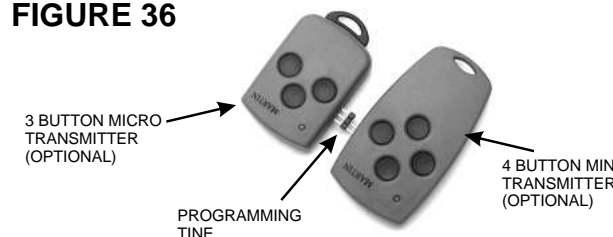


FIGURE 37

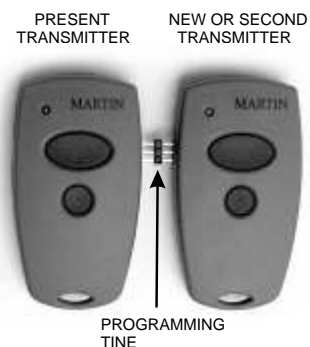


FIGURE 38

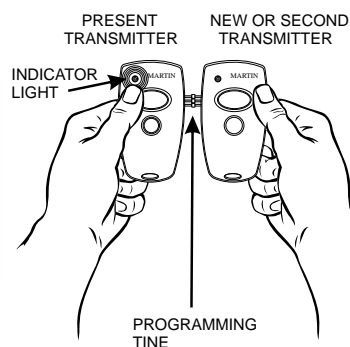
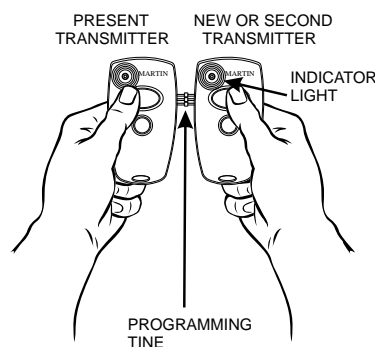


FIGURE 39



FCC Certified: This device complies with Part 15 of the FCC rules. 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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

STEP 6 PROGRAMMING THE GARAGE DOOR OPENER SYSTEM

Press the push button to open door. Observe that LED #5 OPNG illuminates as the garage door opens. The garage door will stop when it reaches the full open position allowed by the cable drums or optional bumper springs. Press the push button to close the door. Observe that LED #4 CLSNG illuminates as the garage door closes. The garage door will stop when it reaches the floor. If OPNG or CLSNG light does not go out when door stops, the belt tension may need to be adjusted (Max Power and Close Sensitivity may also need adjusting). See Figure 43

Open and close garage door two more complete cycles. Observe the movement of the garage door as the computer memorizes the open and close position. You may notice that LED #1 ACK illuminates from time to time. The garage door opener system now provides “soft start” and “soft stop” as the door opens and closes. See Figure 43

Do Not touch the following settings unless you are sure.

Force Setting: MAX POWER is factory set at one o'clock. Force can be slightly increased by turning screw clockwise 10 degrees at a time. See Figure 10b, 43

Sensitivity Setting: CLOSE SENSITIVITY is factory set at one o'clock. Sensitivity can be increased by turning screw clockwise 10 degrees at a time. See Figure 10b, 43

Place a 1 1/2"(38) high object (or a 2X4 laid flat) on the floor, under the door. When the closing door contacts the object, it should stop, reverse, and automatically return to the open position. See Figure 44

If the door does not reverse, the drive belt may be slipping. After correcting drive belt tension and the door still does not reverse, call a trained Martin Door dealer. See Step 2

STEP 7 INSERT INSTRUCTION MANUAL INTO PACKET

Fold and Insert instruction manual into the packet located on the #3 door section of the Martin garage door or mount to the wall.

An Important safety/instruction label is included with opener package. This label and the instruction manual must be fastened inside your garage where they can be easily seen. Fasten them next to the wall control box. Peel off the protective backing, and press onto smooth, clean surface. Tacks or additional adhesive may be necessary. **DO NOT REMOVE OR PAINT OVER ANY LABELS.** See Figures 45, 46

FIGURE 43

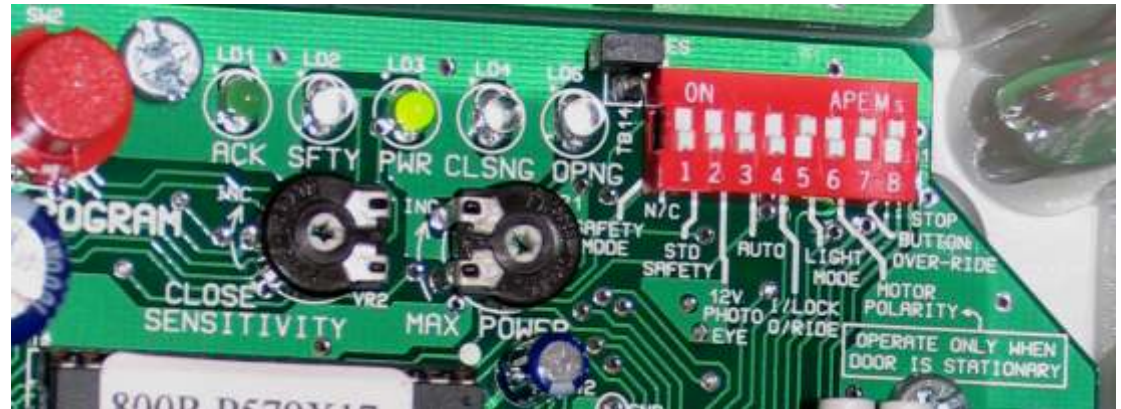


FIGURE 44

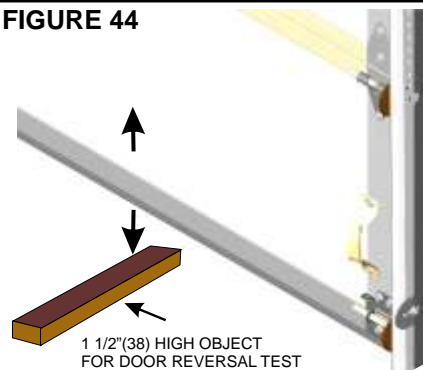


FIGURE 45

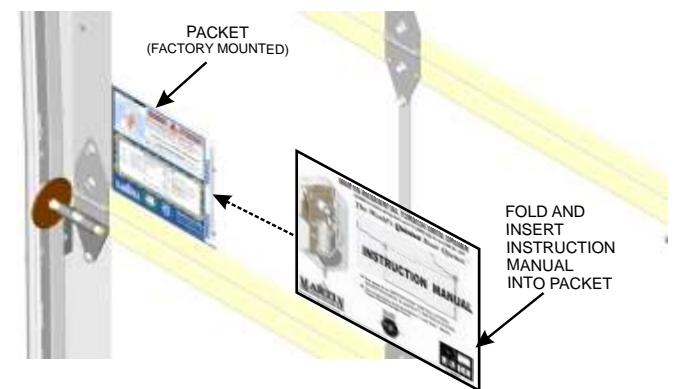
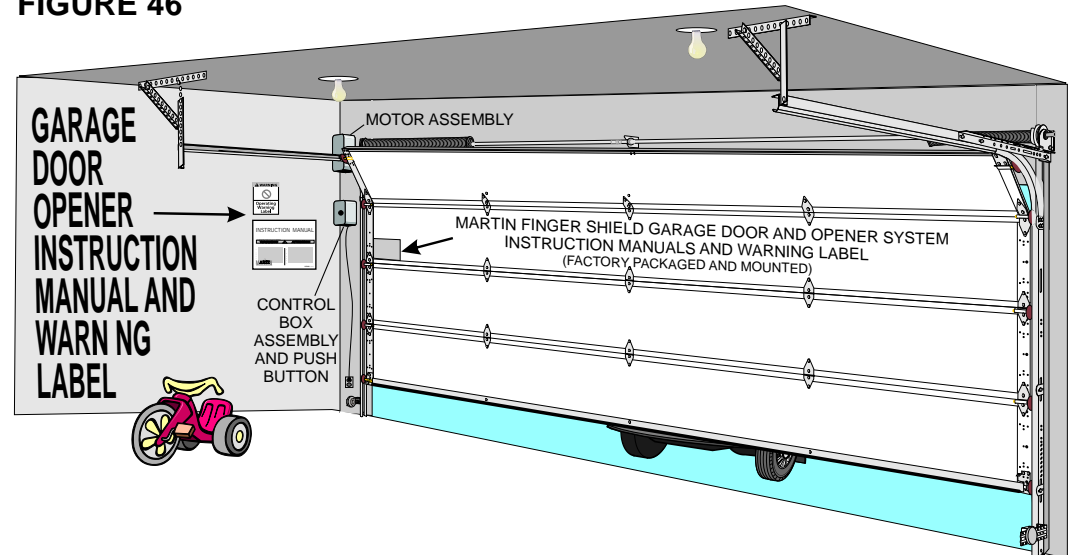


FIGURE 46



STEP 8 INSTALLING THE FRONT MOTOR COVER

The front cover has two motor barrel clips, which fasten over the motor barrel. Position the front cover with the clips touching the motor barrel, then with a hand over the clip area, firmly push the front cover until the clips fasten to the motor barrel. Fit the two pegs located in the top edge of the back cover into the two holes located in the top edge of the front cover. Fasten front and back cover together with the small screws into the small clips. See Figures 2a, 2b, 47

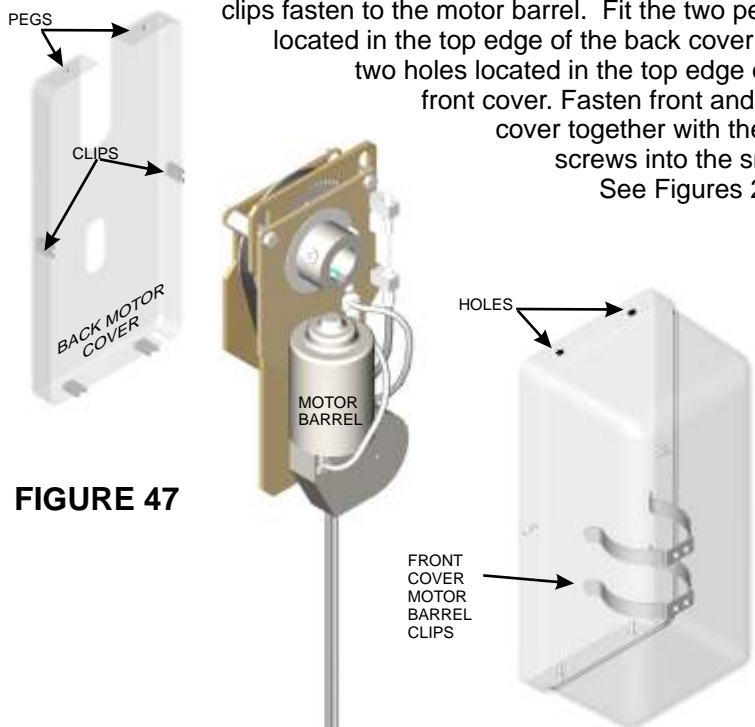


FIGURE 47

INTERLOCK CIRCUIT WIRING

A pair of "Interlock" terminals is provided for a pass door switch or a key switch (lock-out switch) to be interlocked to the opener, to prevent the garage door from opening if the "Interlock" terminals are open circuit. See Figure 10b, 48a

Interlock O/RIDE, DIP switch No. 5 is normally set to ON. If you want to add an interlock device, move switch No. 5 to OFF. See Figure 10b, 48b

A slide lock switch may be installed and connected into the interlock terminals. However this may not be necessary because the opener will detect the obstruction and stop the garage door if the slide lock is left in the lock position.

FIGURE 48a

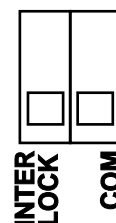
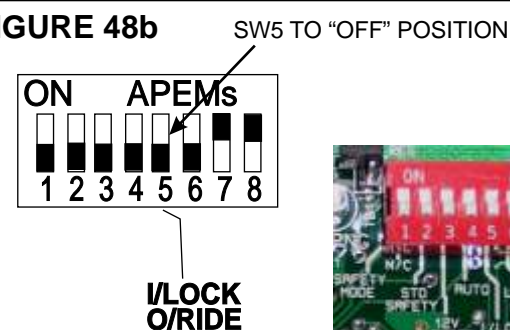


FIGURE 48b



WARNING



TO REDUCE THE RISK OF SEVERE INJURY OR DEATH, READ AND FOLLOW ALL INSTRUCTIONS

IMPORTANT MAINTENANCE & SAFETY INSTRUCTIONS

- **Monthly**, check the opener's down cycle safety reverse. The door must reverse when it contacts a 1 1/2" (38) high object (or a 2X4 board laid flat) on the floor. A closing door must also reverse if the optional photo eyes are interrupted.
- **Always** keep the moving door in sight and away from people and objects until it is completely closed. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.
- **NEVER** go under a stopped, partially open door.
- **Do not allow children** to operate or play with the garage door controls. Keep the remote control away from children.
- **If the Safety Reverse** or any other part of the garage door and opener system do not work properly, or if you do not understand, call a trained Martin Door Dealer.
- **The emergency release** should only be used when garage door is in the closed position. Weak or broken springs may cause door to fall, if released in the open position, increasing the risk of severe injury or death. Use caution when using the release with door open.
- **Monthly** visually check lift cables, spring assembly, hardware, etc. for wear and stability.
- **KEEP GARAGE DOOR PROPERLY BALANCED.** See garage door owner's manual. An improperly balanced door increases the risk of severe injury or death. Call a trained Martin Door Dealer to repair lift cables, spring assemblies and other hardware.

SAFETY CIRCUIT WIRING (Photo-eyes required for U.L. 325 compliance)

Install photo-eyes before step 4. If the garage door is to be operated without any safety devices then the STD SAFETY, DIP switch NO. 2 and 3 should be OFF. If a device such as a safety edge is installed then the STD SAFETY DIP Switch NO. 2 should be set to the ON position. This provides a safety STOP and RE-OPEN control of the garage door if the safety circuit becomes active while the garage door is closing. See Figure 49, 50

When using the supplied photo eyes DIP switch NO. 3 should be ON. See Figure 49
Install the photo eyes (see instruction sheet supplied with photo eyes). Wire the photo eyes according to figures 5 and 6 of the photo eye instruction sheet. Do not follow figure 7.

Connect wires to the 12 V 2 WIRE PHOTO EYE and COM terminals. White or Striped wire may go to either terminal. See Figure 50.

Each time the safety circuit is activated LED LD2 will illuminate. This is useful when testing the operation of photo-eyes, etc. without operating the garage door. See Figure 10b, 51

In Europe it is necessary to arrange for the safety circuit to be monitored for both an open circuit and a short circuit in which case the circuit must include an 8.2 K resistor at the furthest point in the external circuit. DIP switch No.1 should be set to ON which is the position marked "RES" for resistive. If the safety circuit is interrupted while the door is operating with the auto close DIP switch No. 4 set to ON, then timer will reset during each interruption of safety circuit while the door is open. The auto-close function is not operational for North America.

OPTIONAL LIGHTING

For optional light, connect wires to the orange LIGHT terminal at the bottom of the circuit board. The lighting wires should be rated at 10 Amps (lights - 250 watts maximum). See Figure 52

DIP switch No. 6 should be set to the OFF position if the light is required to turn on when the door is operated and turn off three minutes from the last operation.

DIP switch No. 6 should be set to the ON position if the light is required to turn ON when the door is opened, and turn OFF when the door is closed.

For qualified electricians only: A garage ceiling light may be wired to turn on/off by the door opener. The door opener and ceiling light must be powered by the same circuit breaker. Install one black wire from the LIVE plug-in of the LIGHT terminal to the black wire of the ceiling light.

FIGURE 52



FIGURE 49

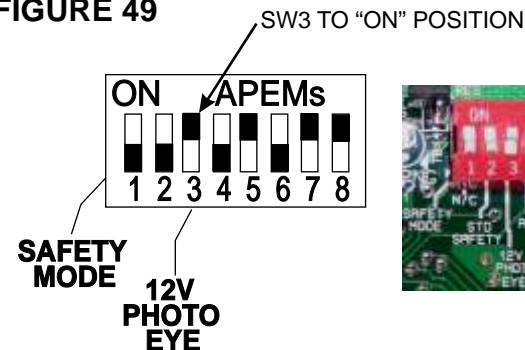


FIGURE 50

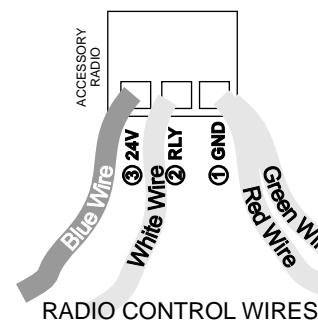
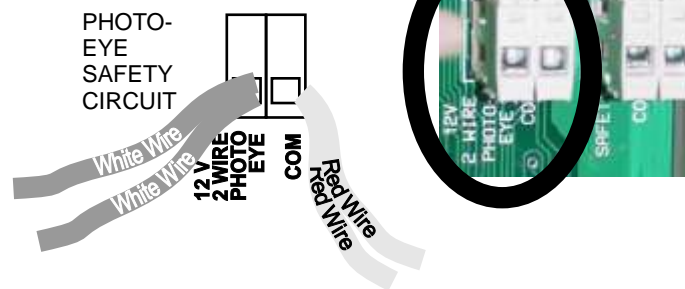


FIGURE 51



HAVING A PROBLEM?

Situation:	Likely Cause and Solution
Opener does not operate from either the push button or transmitter:	<p>Does opener have electricity? Plug a lamp into the grounded outlet. If it does not turn on, have a qualified electrician service the outlet.</p> <p>Have you disengaged all locks on door? If not, do so.</p> <p>Has snow or ice built up under door? Door may be frozen to ground. Remove any restrictions.</p> <p>The garage door spring may be broken. Call a trained Martin Door Dealer to replace the spring and service the door.</p>
Opener operates from transmitter but not from push button:	<p>Are wiring connections correct? Check optional push button wiring.</p> <p>If opener does not run, check wiring connections at control box and check wires for shorts or breaks.</p>
Opener operates from push button but not the transmitter:	<p>Has the opener learned the code of the transmitter? Repeat transmitter programming steps. See Page 13 and 14.</p> <p>Have all transmitters been set with the same code? Repeat code learning procedure. See Page 13 and 14.</p> <p>Does the transmitter indicator light blink when the transmitter button is pressed? If not, replace battery.</p>
Door has a Close Delay	<p>Follow steps in the "Clearing Service Due Reminder Instructions. See Page 11</p>
Door does not open completely:	<p>Is something obstructing the door? Remove obstructions from the garage door area. Close the door disconnect emergency release.</p> <p>Open and close door manually. If door has been working properly but now doesn't, increase the force and/or reduce the sensitivity. After adjustment is completed, repeat tests. See STEP 4 and 6. Maybe springs should be tightened. Tighten drive belt. Call a Martin Door Dealer.</p>
Door does not close completely:	<p>Is something obstructing the door? Remove obstructions from garage door travel area.</p> <p>If door has been working properly but now doesn't, increase the closing force and/or reduce the sensitivity. After adjustment is completed, repeat the tests. See STEP 4 and 6. Maybe springs are wound too tight. Tighten drive belt. Call a Martin Door Dealer.</p> <p>Are optional photo eyes (if installed) obstructed with dust and spider webs, or out of line? Keep photo-eyes clean.</p>
Door opens but will not close at all:	<p>Check the optional photo eyes (if installed) for proper connection, alignment and cleanliness. Tighten drive belt.</p> <p>Review and increase force and/or reduce sensitivity. After adjustment is completed, repeat the tests. See STEP 6.</p>
Door reverses for no apparent reason:	<p>Is something obstructing the door? Clear ice, snow, sand or dirt from garage floor area where garage door closes. Also, push emergency release lever up with door in closed position. Open door manually. If it is unbalanced call a trained Martin Dealer.</p> <p>Review and increase force and/or reduce sensitivity. Tighten drive belt. Garage door may be too heavy for opener. Call a trained Martin Door dealer. See STEP 4 and 6.</p>
Opener strains as it operates door:	<p>Door may be out of balance or springs broken. Close the door and push emergency release lever up. Open and close door manually.</p> <p>A properly balanced door will hold itself part way open while being supported entirely by its springs. If it does not, call a trained Martin Door Dealer. DO NOT attempt to correct an unbalanced or damaged door. Call a trained Martin Door Dealer.</p>
The OPNG and CLSNG LED remains illuminated	<p>The drive belt tension may be too loose and slipping. Close door and disconnect power. Push the emergency release lever up. Tighten the screw hook a few turns. Make sure lever is at 70 degrees. Push the emergency release lever down, connect power.</p>
Door runs slow for an extended time	<p>The drive belt tension may be too loose and slipping. Tighten the screw hook same as above. Open and close door two complete cycles for computer to learn limits. Do a calibration reset. Push the emergency release lever down, connect power.</p>
Opener does not move door at all:	<p>Springs are broken or door is out of balance. Call a trained Martin Door Dealer.</p> <p>Door may be locked with a manual door lock. Disable or remove any manual door locks.</p>
Opener won't work due to power failure:	<p>Push the emergency release lever up. Door can be opened and closed manually. When power is restored, reconnect at the exact location of the disconnect. Open and close two cycles. If door does not work properly, perform "Calibration Reset". See STEP 4</p>

OPENER SPECIFICATIONS

Model	Maximum Door Height	Maximum Door Weight	Minimum Door Height	Approximate Weight Plus Packaging
DC4600	15' (4600)	500 lbs (230)	5' (1520)	17 Lbs. (37)

MOTOR ASSEMBLY

Model	DC4600			
Width	5.5" (140)			
Height	11" (280)			
Depth	4.75" (121)			
Side Clearance Required Beyond Lock-on/Side Bearing Bracket	8.5" (216)			
Clearance Required Above Center of Torsion Tube/Shaft	2.5" (64)			
Power	½ hp (700 N)			
Ratio	2.2:1			
Speed per second "Run Time"	6" – 7" (150-180)			
Soft Start/Soft Stop (Adds Seconds to "Run Time")	Self calibrating to the height of the garage door.			
Voltage	42 Volts Supplied from Control Box Assembly			
Current	Direct (DC) Supplied from Control Box			
Drive	V-Belt			
Drive Reduction	V-Belt, Pulleys, and Worm Drive Gear Box			
Operating Temperature Range	-13F(-25C) To 167F(75C)			
Cycles Per Hour	Unlimited			
Continuous Cycle Heat Build Up	Insignificant - Opener remains close to air temperature			
Overload Protection	Yes			
Lubrication	Permanent			
Emergency Release Assembly	Standard on all units			
Torsion Tube/Shaft Length	5.0" (130) beyond the lock-on/side bearing bracket			

CONTROL BOX ASSEMBLY

Model	DC4600			
Width	6.5" (170)			
Height	8.7" (220)			
Depth	4.7" (120)			
Watts	265			
Amps Req.-115 Volts	2.2			
Volts Hertz (Hz)	115V 50/60 Hz			
Current	AC			
Supply	Single Phase			
Circuit Board	Computer Technology			
Circuit Board Temperature Range	-13F(-25C) To 185F(85C)			
Surge Suppression	Built-in			
Control Box Internal Temperature	Higher than the external temperatures, because transformer heating warms internal air. This feature allows for cold room installations			
Open and Close Limits	Automatic			
Instant Reverse	Standard in the down run cycle			
Force and Sensitivity Settings	Factory preset and adjust automatically to light and heavy garage doors. Can be slightly re-adjusted and set. See STEP 6			
Push Buttons	One Button			
Radio Controls	Included			
Automatic Close Timer	15 seconds to 4 minutes. Not available for North America			
Automatic Open, Safety Terminal	For optional loop detectors, photo eyes, radar, edge sensor, etc.			
Lighting Terminal	Maximum current is 3A Amps required per 100 watts at 115 Volts is .84			

WARNING



ATTENTION

Correct all "HIGH RISK" areas before installing opener.

IF UNSURE, CALL A TRAINED MARTIN DOOR DEALER

COMMON HIGH RISK GARAGE DOOR AREAS

- Exposed wide-open section joints, inside and outside Hands & fingers entrapped, severed or crushed. 1/3 are children.
- Exposed holes in tracks larger than 1/4" (7) Fingers entrapped or severed. Most are children.
- Exposed track brackets fastening vertical tracks to jambs Hands & arms entrapped, broken or severed. Most are children.
- Exposed outside lift cables Entrapment or strangulation. Most are children.
- Exposed rollers moving in vertical tracks with sharp leading edges. Fingers entrapped, cut or severed.
- Exposed center mount torsion springs bracket or side mount stretch springs .. Severing of body parts and death.

COMMON REPORTED SERIOUS INJURIES

If unable to correct "HIGH RISK" areas, replace with a new Martin Door.

