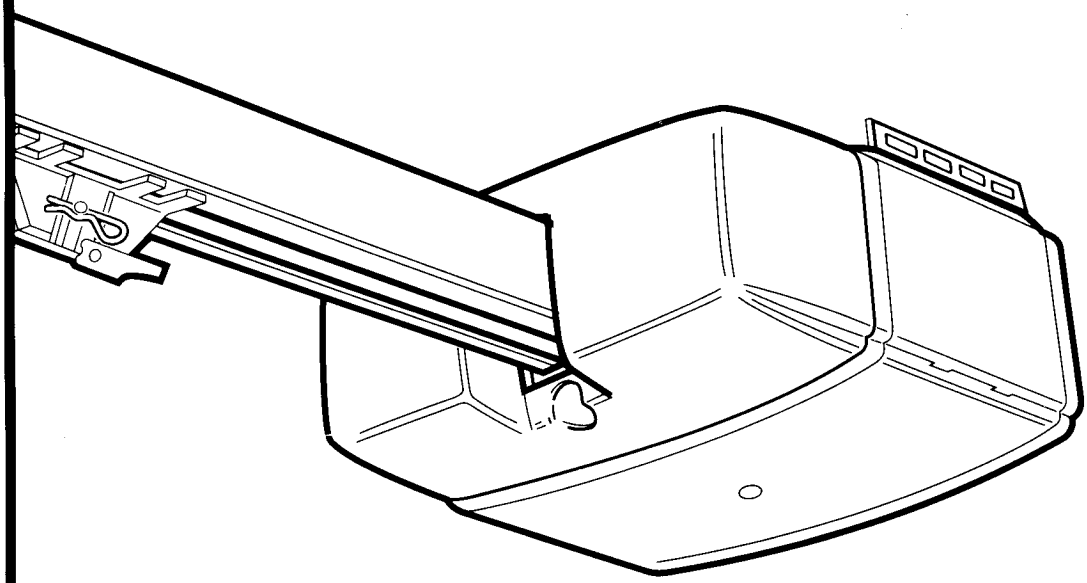
Homeowner's
Installation and operation manual

THIS OWNER'S MANUAL CONTAINS COMPLETE INSTRUCTIONS FOR THE INSTALLATION AND MAINTENANCE OF THIS GARAGE DOOR OPERATOR SYSTEM. IT SHOULD BE MOUNTED NEAR THE INSTALLATION IN A PROMINENT POSITION.



Screw-drive garage door operator
Models Z133b/Z150b Series Operator

WARNING To reduce the risk of injury to persons - Install this operator on:
SECTIONAL DOOR IF CHANNEL BOX SHOWS "SS" or "Z"
ONE PIECE JAMB DOOR IF CHANNEL BOX SHOWS "SJ" or "ZJ"

THIS DOOR OPERATOR WILL REQUIRE CONSTANT PRESSURE ON THE WALL BUTTON TO CLOSE THE DOOR UNLESS THE INFRARED EMITTER AND DETECTOR ARE INSTALLED AND PROPERLY ALIGNED.

MOORE-O-MATIC

Quality Garage Door Operators with Linear Radios

MODEL Z133b
and
MODEL Z150b
INSTALLATION MANUAL

THREE YEAR MANUFACTURER'S WARRANTY

Limited Warranty

THE WARRANTOR WARRANTS THAT: The motor is warranted to be free from any defect in materials and /or workmanship for a period of 10 years from the date of purchase. The drive train will be free from defects in materials and/or workmanship for period of 3 years for Z133b or 5 years for Z150b from the date of purchase. All other parts will be free of defects in materials and workmanship for a period of one year from date of purchase. This warranty applies only to the first retail buyer of a new device. The product must be used in complete accordance with these instructions for installation, operation and care.

Warrantor will repair, or at its option, will replace any device which it finds to require service. The device must be sent to the warrantor at the consumer's expense.

RETURNED FOR REPAIR PRODUCTS:

All returns, not going through your local dealer, must be sent prepaid freight with a pre-authorized **R**eturn **P**art **A**uthorization (**RPA**) number. This authorization number can be obtained by calling the technical service group at (619) 438-7000. The number on the outside of the box will speed processing your return, and may be refused without it. Repaired products will be returned via prepaid freight.

Return to: MOORE-O-MATIC
2580 Pioneer Ave., Suite C
Vista, CA 92083

or

MOORE-O-MATIC
419 Oak Street
Waupaca, WI 54981

The consumer must contact the warrantor to obtain shipping instructions, prior to shipping the device to the warrantor. The warrantor will return the repaired or replaced device to the consumer at the warrantor's cost.

Remedies provided by the warranty are exclusive. Implied warranties under state law are limited to a period of one year from the date of purchase by the consumer. This limitation is not valid in jurisdictions which do not allow limitations of the period of implies warranties.

Warrantor will not be liable for incidental or consequential damages. This limitation is not valid in jurisdictions which do not allow limitations of incidental or consequential damages.

To obtain service under this warranty, the consumer must present a copy of proof of purchase of the device when submitting a device for service.

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

⚠ WARNING

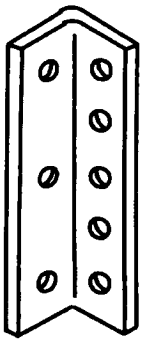
When installing an operator, observe the following safety precautions. They are for your protection and to help make installation easier.

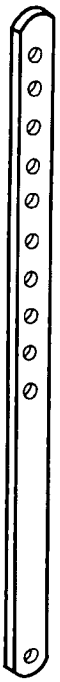
KEEP THIS MANUAL FOR FUTURE REFERENCE!

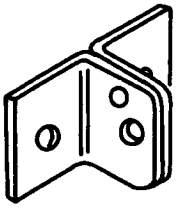
OPERATOR PARTS IDENTIFICATION

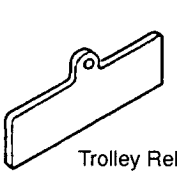
When you unpack the operator, check to ensure it has not been damaged. Make sure all parts have been received before beginning installation. Read all instructions before starting assembly and installation.

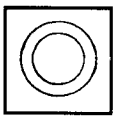
Packed In Channel Carton

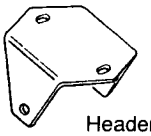

Sectional Door Bracket

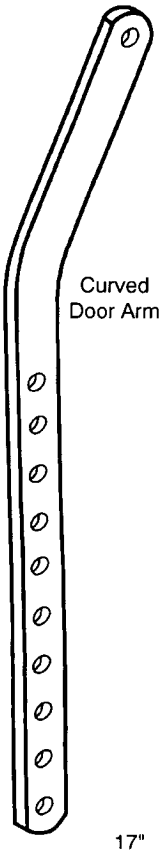

25" Straight Door Arm Jamb Only


Jamb Door Bracket


Trolley Release Handle

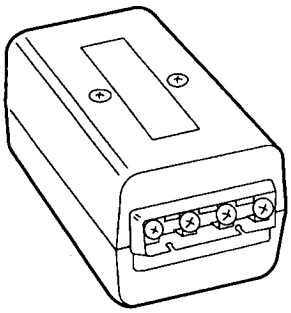

Wall Button

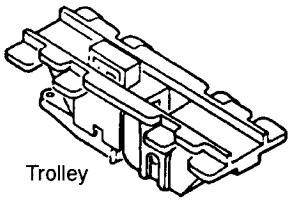

Header Bracket


Curved Door Arm

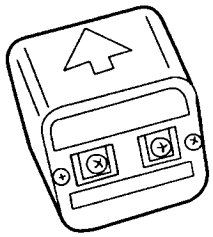

17" Straight Door Arm Sectional

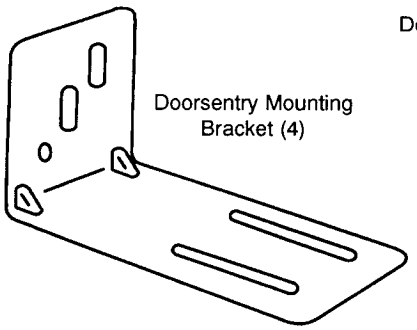

2-Conductor Wire Black/White

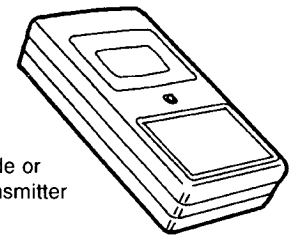

Doorsentry Detector


Trolley

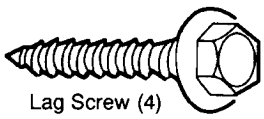

2-Conductor Wire Red/White

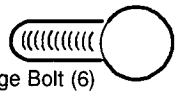

Doorsentry Emitter

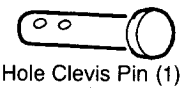

Doorsentry Mounting Bracket (4)


MegaCode or Delta-3 Transmitter

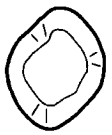
HARDWARE IDENTIFICATION

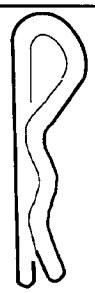

Lag Screw (4) 1/4" x 1"

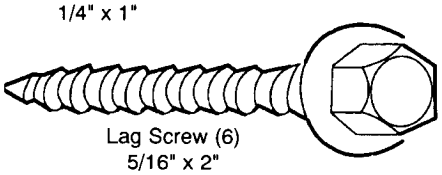

Carriage Bolt (6) 1/4-20 x 1/2"

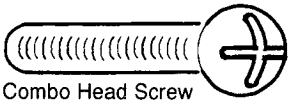

Dual Hole Clevis Pin (1) 5/16" x 3/4"

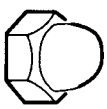

Staples (21)

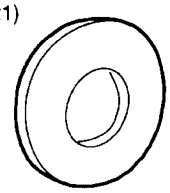

Wave Washer (2)

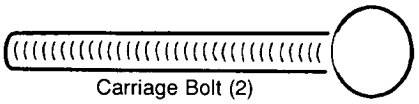

Hitch Pin (1)

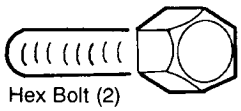

Lag Screw (6) 5/16" x 2"


Combo Head Screw 1/4"-20 x 1-1/2"


Acorn Nut (2) 1/4-20


Flat Washer (1)

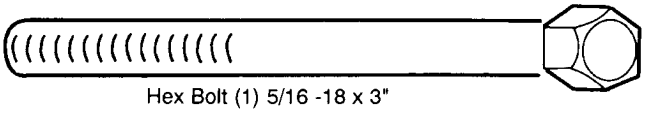

Carriage Bolt (2) 1/4-20 x 2"

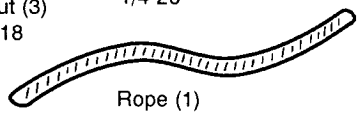

Hex Bolt (2) 5/16 -18 x 1"


Keps Nut (3) 5/16-18


Keps Nut (8) 1/4-20


Lock Washer (2)


Hex Bolt (1) 5/16 -18 x 3"


Rope (1)

⚠ WARNING

When installing an operator, observe the following safety precautions. They are for your protection and to help make installation easier.

SAFETY PRECAUTIONS

When installing an operator, observe the following safety precautions. They are for your protection and to help make installation easier.

- Door Preparation: Before installing your garage door operator, disable all locks, so that the door cannot be locked by accident. Also, remove the rope used for closing the door manually. Failure to do so may be hazardous.
- Hanging material must be secured to the ceiling joists or to a header-plate (such as a 2" x 6") which also must be attached to ceiling joists.
- All permanent wiring should be installed in accordance with local electrical codes.
- Do not permit children to play in the door area.
- Do not operate door unless it is visible, properly adjusted, and free from obstructions.
- The torque-sensing (door pressure) mechanism must be in working order at all times. This is to ensure that the garage door will reverse its direction if an obstruction is encountered during downward travel. The system should be checked periodically.

SPECIFICATIONS

Door Size and Type: The Models Z133b and Z150b will open **sectional type, one-piece track type**, and **one-piece jamb hardware** (no track) **type** doors up to 7 feet high. Channel assemblies for 8 feet high doors are also available.

Required Headroom: 2-3/4" above maximum high-rise point of door.

Travel Time Per Second: Approximately 8" for sectional doors and 5" for one-piece doors.

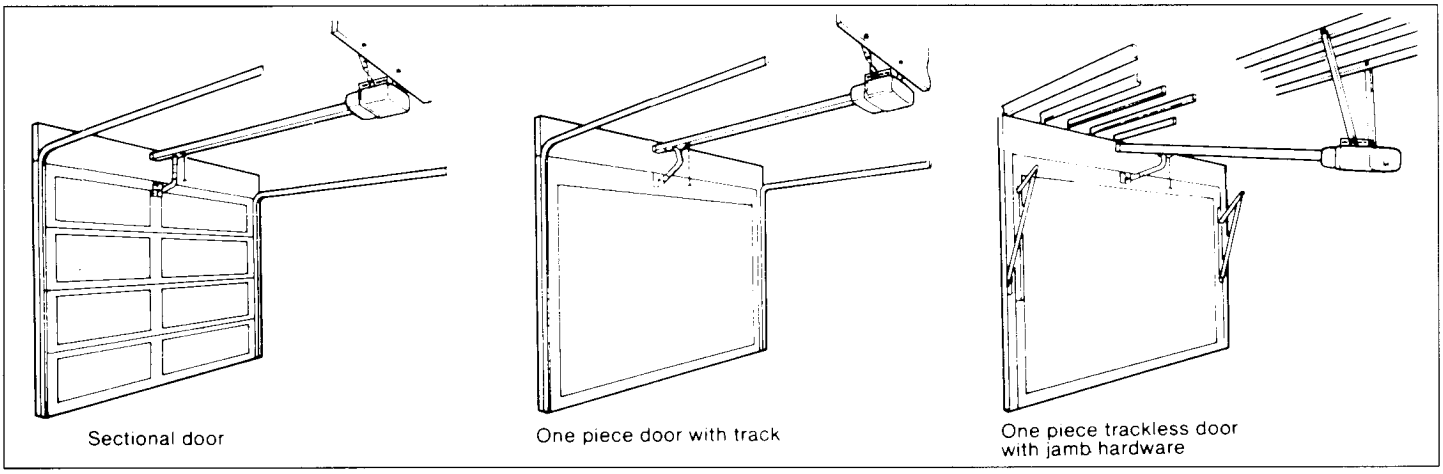
Control: Can be controlled by a wall station, wall button, a radio transmitter, a key switch, or a wireless key pad.

Motor: 1/2 HPR Split Capacitor, 1500 RPM—Z150b
1/3 HPR Split Capacitor, 1500 RPM—Z133b

Power: 120 VAC 60 HZ

FUNCTIONS

- Reverses automatically to fully-open position when an obstacle is encountered during downward travel.
- Stops automatically when an obstacle is encountered during upward travel.
- Light stays on 5 minutes after each use.
- Door can be "parked" at any point in travel.
- Internal themal overload protection motor resets itself.
- Megacode of Delta remote radio control can be coded by home owner.



Sectional door

One piece door with track

One piece trackless door with jamb hardware

PRE-INSTALLATION

Before starting assembly and installation, review these instructions thoroughly, and identify all requirements and components.

Door Hardware and Lubrication

Door hardware must be well lubricated with a light coat of oil, and operate freely, if the operator is to work properly. Lubricate door bearings, rollers, hinges and any other moveable parts. Tighten all hardware. Check door to ensure that it is in proper balance and operates smoothly. If door springs are weak or damaged, they should be adjusted or replaced by a qualified serviceman.

Required Tools

The tools required to install an operator include a drill, 3/16" and 1/4" bits, hammer, screwdriver, 1/2" and 7/16" socket wrenches, tape measure, level, pliers, wire cutters, and a stepladder.

⚠ WARNING

Do not plug in the operator until instructed.

Preparation

When you unpack your operator, check to ensure that it has not been damaged. Make sure all parts have been received before beginning the installation. Separate the parts so that they will be easy to find.

⚠ WARNING

Lightweight doors of light gauge metal, or fiberglass must be reinforced prior to installation of an operator. Moore-O-Matic is not responsible or liable for damages or injury resulting from improper installation. Consult the door manufacturer for specific reinforcement requirements.

ASSEMBLY INSTRUCTIONS

Channel Assembly

Step 1: Place channel assembly on garage floor open side up.

Step 2: Remove trolley latch assembly from parts bag in operator carton. Raise the Quick Disconnect Arm to the vertical position (see Figure 1). Slide over the channel, flanges in the proper orientation as shown in Figure 1. When installing the trolley latch in the channel, be sure the arrow points toward the door end of the channel.

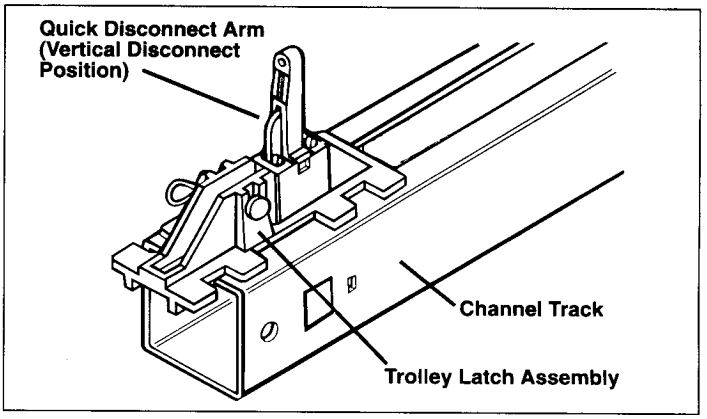


Figure 1

Preparation of Power Unit and Channel Assembly

Step 3: Place power unit upside down on a non-abrasive work surface (see Figure 2).

Step 4: Place packing inserts from power unit under channel assembly to assist in aligning channel and head.

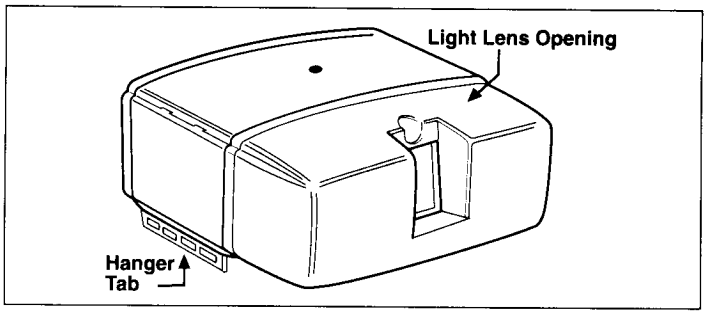


Figure 2

Light Lens Removal

Step 5: Remove light lens by applying pressure and a slight pull at the two locations shown in Figure 3.

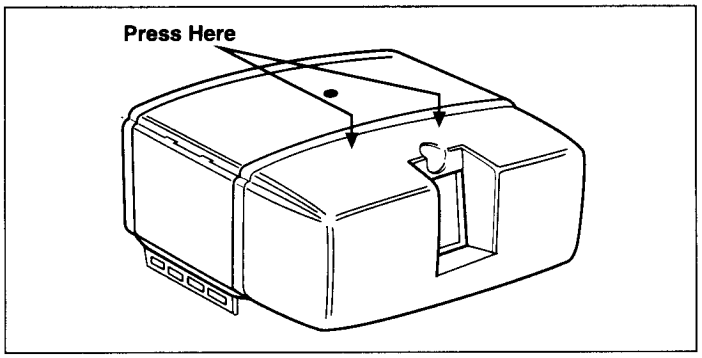


Figure 3

Aligning Power Unit to Channel Assembly

Step 6: Align the flat pulley bore in power unit (see Figure 4), with the flat portions of the drive screw (see Figure 5).

Step 7: To align drive screw with flat pulley bore, turn drive screw to proper position.

Step 8: Place light lens on channel. Insure that the tabs on the light lens face operator head and the center opening (for the rail) is facing upward. Position the head and channel as shown in figure 6.

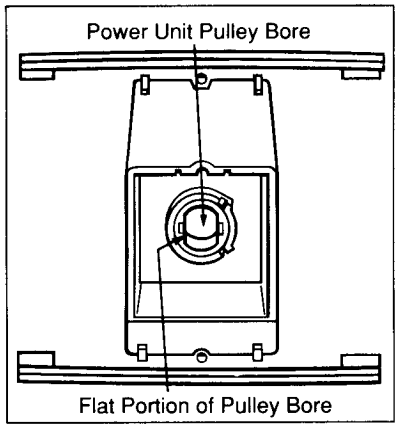


Figure 4

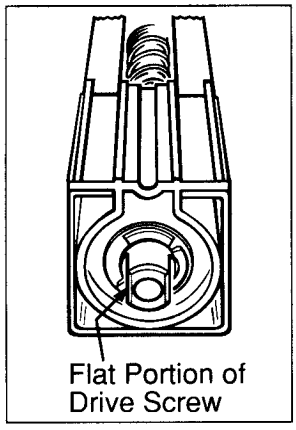


Figure 5

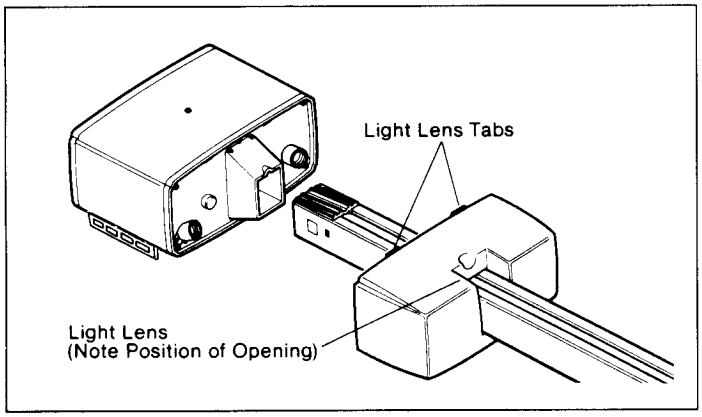


Figure 6

Attaching Channel Assembly to Power Unit

Step 9: Carefully work channel into pocket (see Figure 7).

Step 10: Install the 1/4" - 20 x 1-1/2" combo head screw. See Figure 7.

Step 11: Tighten screw until only one half of pry slot is visible.

Inserting Light Bulbs and Attaching Light Lens

Step 12: Insert a **40 watt light bulb** in each socket. Light bulbs larger than 40 watts **should not** be used. Appliance bulbs are recommended.

Step 13: To install light lens, move it into position against power unit. Depress light lens in area shown in Figure 8 and press lens toward bulkhead. Lens is designed to fit snugly and may require pressure on both sides, and downward, in order to preshape it so that it will slip into slots provided.

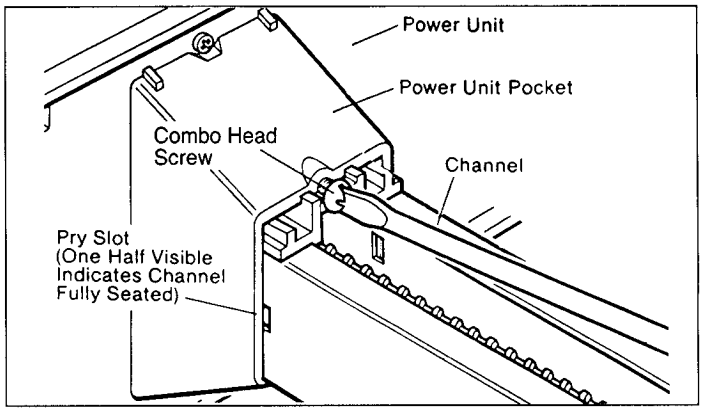


Figure 7

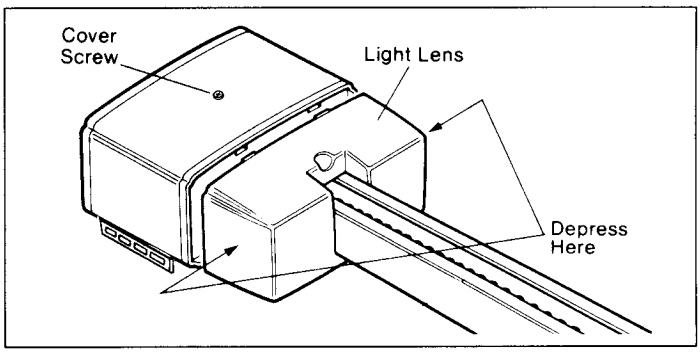


Figure 8

Testing of Opener Prior to Installation

Step 14: Plug operator cord into a grounded receptacle. Lights should turn on. This is a normal function and lights will turn off in approximately five minutes. If lights do not turn on after applying power, check power source.

Testing Opener

Step 15: Check terminal screws (Figure 9) to verify that connections are tight.

IMPORTANT INSTALLATION INSTRUCTIONS

⚠ WARNING ⚠ WARNING

To reduce the risk of severe injury or death to persons:

1. READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS

2. Install only on a properly balanced garage door. An improperly balanced door could result in severe injury. Have a qualified service person make repairs to cables, spring assemblies and other hardware before installing opener.

3. Remove all ropes and remove or make inoperative all locks connected to the garage door before installing opener.

4. If possible, install door opener 7 feet or more above floor. Mount the emergency release handle 6 feet above the floor.

5. Do not connect the opener to power source until instructed to do so.

6. Locate the control button (a) within sight of the door (b) at a minimum height of 5 feet so small children cannot reach and (c) away from all moving parts of the door.

7. Install Entrapment Warning Label (see Figure 18) next to control button and Control Adjustment Label in a prominent location, such as the inside of the garage door, or as instructed in the installation instructions. If labels will not adhere to surface, staple to wall or door.

8. After installing opener, the door **must** reverse when it comes in contact with a 1-inch high (a 2 by 4-inch board laid flat) obstruction located on the floor.

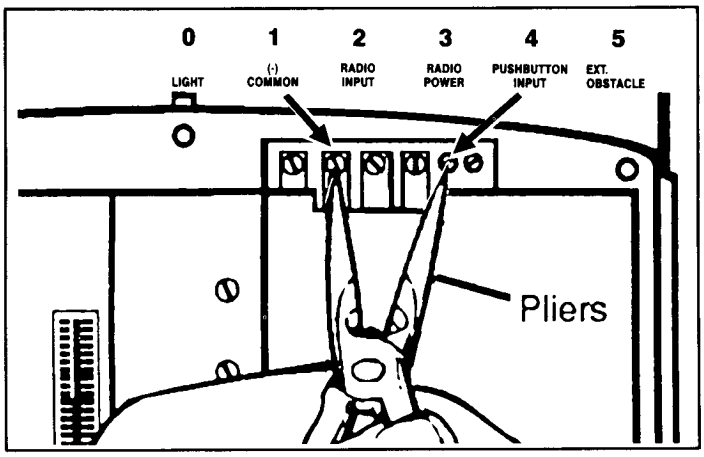


Figure 9

Step 16: This test confirms that power is being supplied to the operator and that the motor and screw-drive mechanism function properly. Note that since this is a low-voltage circuit, this test does not constitute a shock hazard.

Using a needle-nose pliers, momentarily touch terminals (1) and (4) simultaneously. When the connection is made, the motor should start and the trolley should move. After breaking the connection, the trolley will go to full open position at operator end of channel.

Step 17: After completing the check, make sure that trolley is positioned at power unit end of channel. Constant contact is needed to return trolley to door end of channel.

Step 18: Disconnect operator cord from grounded receptacle.

INSTALLATION

Identify your type of door in Figure 10 and proceed as instructed.

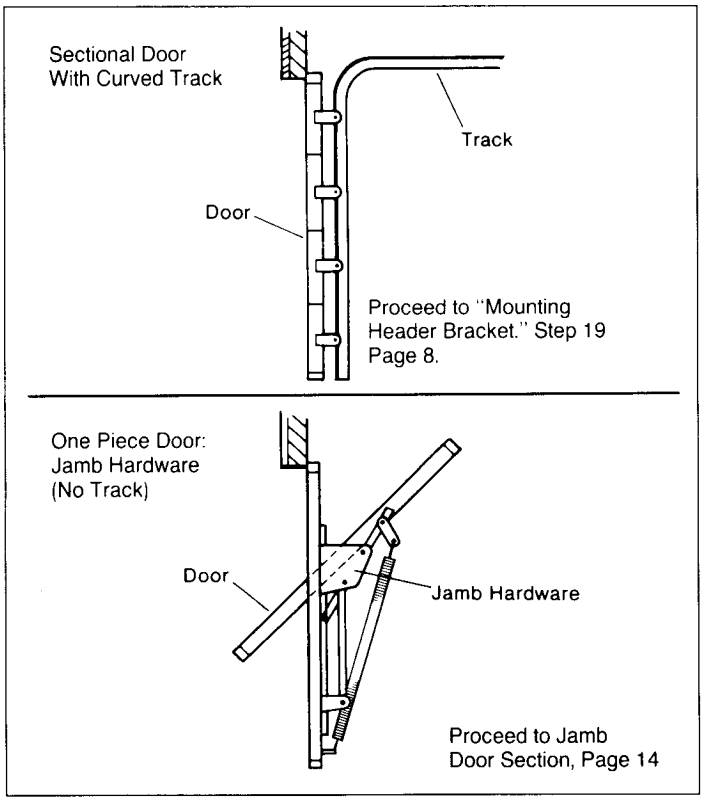


Figure 10

SECTIONAL AND ONE-PIECE TRACK DOORS

Mounting Header Bracket

The header bracket and two 2″ lag screws are required to complete the following installation sequence.

Step 19: Determine center line of door (see Figure 11). Mark center line on header and top of door.

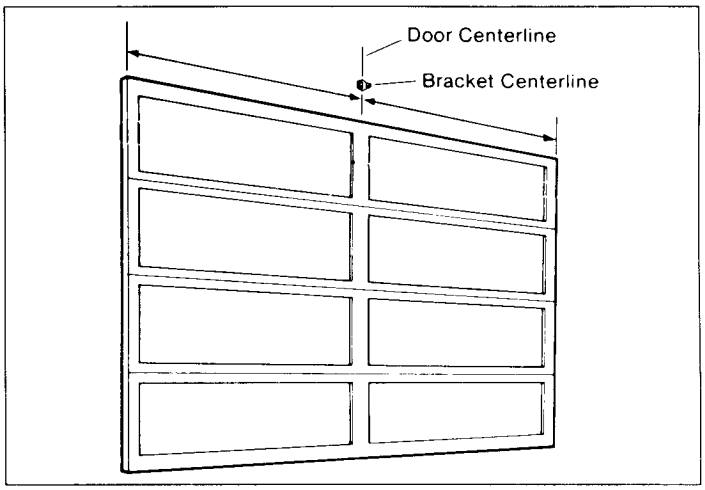


Figure 11

Step 20: Determine high-rise point of door (highest point door reaches when opening) (see Figure 12). Place straight edge or level at top of the center of the door at its highest point of travel. Make sure straight edge is level and mark the door header where it touches. This is your high-rise point.

Step 21: If high-rise point is above door header, install 2″ x 6″ mounting board at this point (see Figure 13).

Step 22: Use 2″ lag screws to mount bottom of header bracket one inch (1″) above high-rise point on center line of header (see Figure 13.)

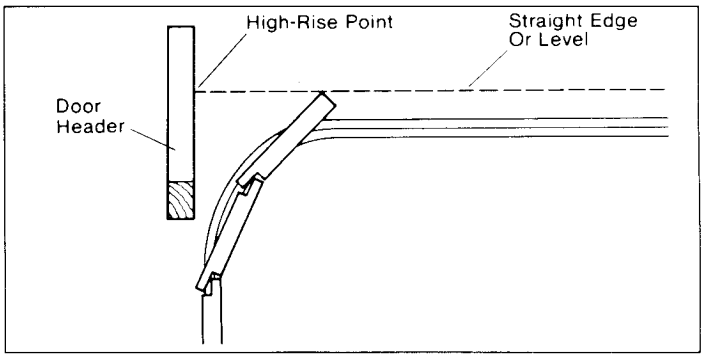


Figure 12

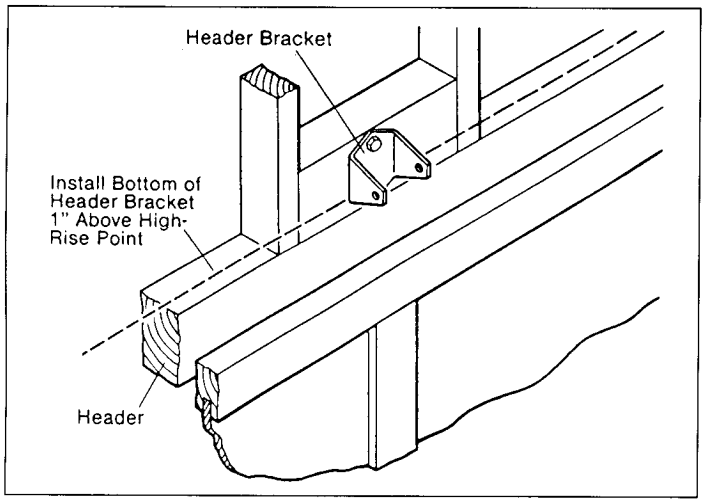


Figure 13

Mounting Channel To Header Bracket

A 3" bolt and keps nut are required to complete this part of the installation.

Step 23: Place the assembled operator on the floor with the exposed end of channel facing the door. Next, raise the end of the channel and insert it in the header bracket (see Figure 14). Secure the channel in the bracket using the bolt and keps nut supplied. Note: Do not tighten the keps nut on bolt until the power head has been mounted.

Note:

When the door is equipped with a torsion spring, the spring extends inward above the door to a distance which creates an angle that makes it impossible to rest the operator head on the floor as shown in Figure 14. For such installation, place the power head on a ladder so that the channel will clear the torsion spring and reach the header bracket.

Step 24: Raise the head end of the operator and rest it on a ladder about 8' above the floor so that the operator will not obstruct the door when it is opened (see Figure 14). Next, raise garage door to the fully open position (see Figure 15).

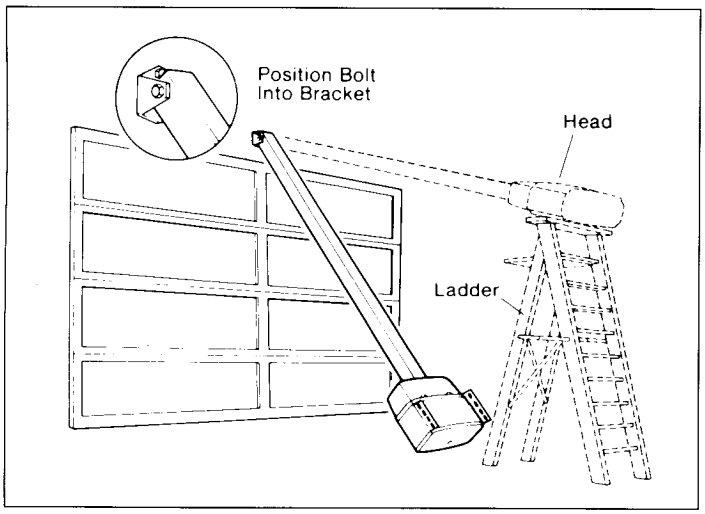


Figure 14

Mounting Power Unit End of Opener

Hanging material of your choice, two 2" lag screws, two 1/4" -20 x 1/2" carriage bolts, and two keps nuts are required to install power head.

Step 25: Bolt the hanging material of your choice to hanger brackets on power head, using the 1/2" carriage bolts and keps nuts. Use the most convenient holes on the power head hanger brackets for this step.

Step 26: Center the power head and channel in line with the header bracket. To accomplish this, align channel with pencil mark at the top center of the door as shown in Figure 15.

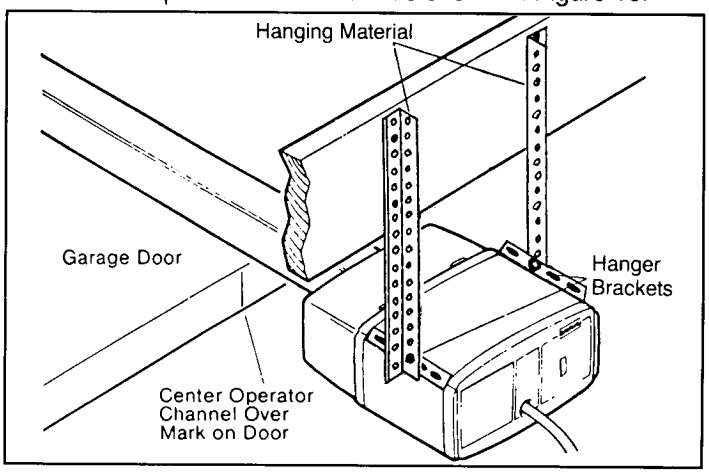


Figure 15

Step 27: Raise channel two inches above top edge of door. Place a 2 x 4 on door and rest operator on it. Use the 2" lag bolts provided to attach the hanging material to ceiling joist or header (see Figure 15). Note that the channel and trolley bottom must clear door by at least two inches.

Step 28: Open and close the door manually to insure that it clears the channel assembly. Then, tighten the bolt on the header bracket.

Note:

Installation requirements may vary with garage construction. Additional material may be required for finished ceiling (dry wall or plaster). In such cases, be sure that the hanger straps are secured to ceiling joists, or to a header-plate (see Figure 15) which, in turn, must be attached through the finished ceiling to the supporting joists.

Note:

Some local codes require the use of a metal conduit to bring power to the operator. When such requirements exist, the installer must then perform steps "A" through "E" as follows:

Step A: Disconnect power cord and remove bottom cover from power head.
Step B: Cut the power cord about three inches from the back of the power unit. Next, pull the three colored power wires into the power head enclosure —one at a time.
Step C: Then, using pliers, remove the insulated cable section from the retaining ring and push ring out of the case—from the inside out.
Step D: Pull the three colored power wires through conduit and use wire nuts to connect them to the matiching wires inside power head.
Step E: Lock conduit into operator head and connect wires and conduit to junction box at power source. At this point, power should be available at the operator head.

Note:

All permanent wiring should be installed in accordance to local electrical codes.

Connection To Power Source

Step 29: The operator power head should be connected to a grounded receptacle located on the ceiling or near the operator's head. If no receptacle is available close by which will accept the operator plug which has the third (grounding) pin, one should be installed.

Step 30: Plug operator power cord into receptacle.

Connecting Wall-Button Station

A length of two-conductor wire and staples are the only materials required to connect a wall switch to the operator. Perform the following steps to complete this part of the installation.

Step 31: Select a convenient mounting location for the wall switch near an access door. It must be mounted no lower than 5 feet so as to be out of reach of small children (see Figure 18) and within sight of garage door.

Step 32: Attach one wire to each of the two terminal screws on the back of the wall switch (see Figure 16).

Step 33: Using the two small screws provided, mount the wall switch at the selected position.

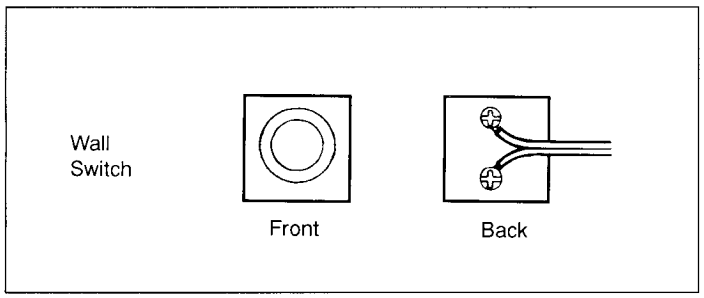


Figure 16

Step 34: Run wires up wall and across ceiling to back of power head. When staples are used to mount wires, they must straddle both wires so that no electrical shorts occur.

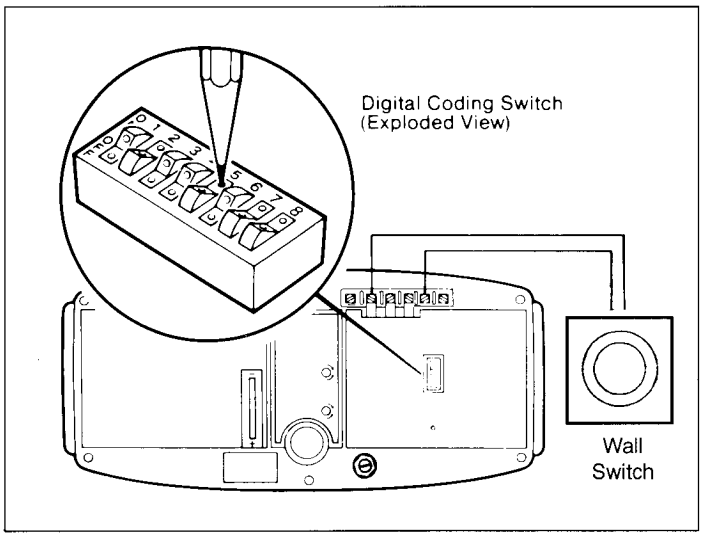


Figure 17

Step 35: Cut off excess wire at the power head, strip wire ends and attach one wire to terminal marked, "1" or "Common". Attach the other wire to terminal marked, "4" or "Pushbutton Input" (see Figure 9, 17, 25).

Step 36: Test the wall switch function by pressing the button. At this point, the motor should engage and the trolley should move approximately 6 inches.

NOTE: The light will turn on and remain on for five minutes. This time interval will occur each time the push button or transmitter is activated.

NOTE: The label shown in Figure 18 must be mounted in a visible place near the wall switch. If label will not adhere to surface, staple to wall.

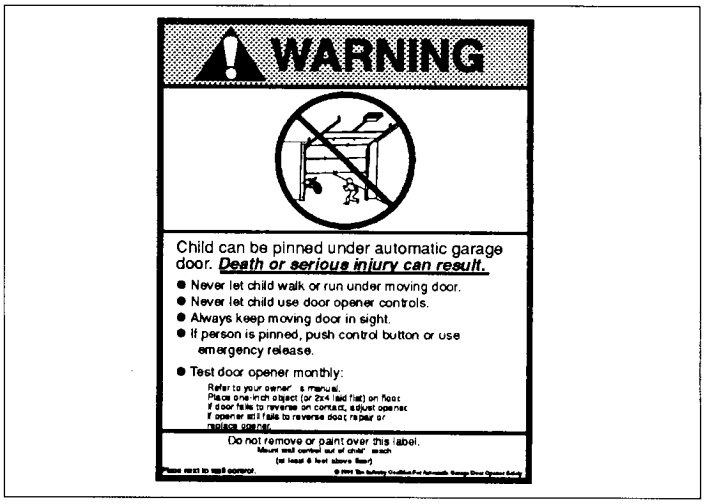


Figure 18

Attaching Door Bracket and Door Arm

To complete this part of installation, it is necessary to use the door arm (which consists of two 17" sections, one straight and one curved), a door bracket, clevis pin, hitch pin, carriage bolts with keps nuts, hex bolts with keps nuts, and a quick-release pull cord.

Note:
For operators installed on fiberglass or metal doors, a reinforcement kit must be used. This kit is available from your dealer. It must be in place before attempting to install the door bracket.

Step 37: Mount door bracket on door in position shown in Figure 19. The flat side of the bracket (which has the least number of holes) should be mounted vertically on the door.

The right-angled portion of the bracket (which contains the door-arm adjustment holes) should be mounted at the center line of the door with the outward facing angle to the right (see Figure 19). Note that the middle of the mounting bracket should be in line with the top rollers at the sides of the door.

To install, use the door bracket as a template and mark position of top and bottom bolt locations on door and drill 1/4"

holes. Note that the carriage bolts should be inserted through the bracket from outside of the door.

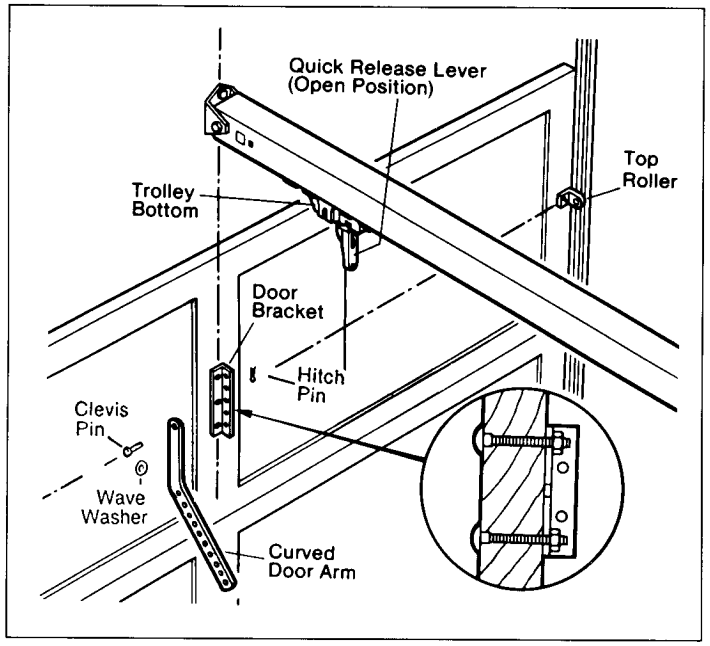


Figure 19

Step 38: Insert dual hole clevis pin through center hole on bracket. Slide wave washer on clevis pin. Then slide clevis pin through hole in curved door arm. Slip hitch pin clip through inside hole in clevis pin for tight fit.

Step 39: Remove clevis pin and hitch pin clip from trolley. Insert the straight section of the door arm into the quick-release trolley bottom and slide the clevis pin through the quick-release trolley bottom and door arm. Lock in place with hitch pin clip (see Figure 20).

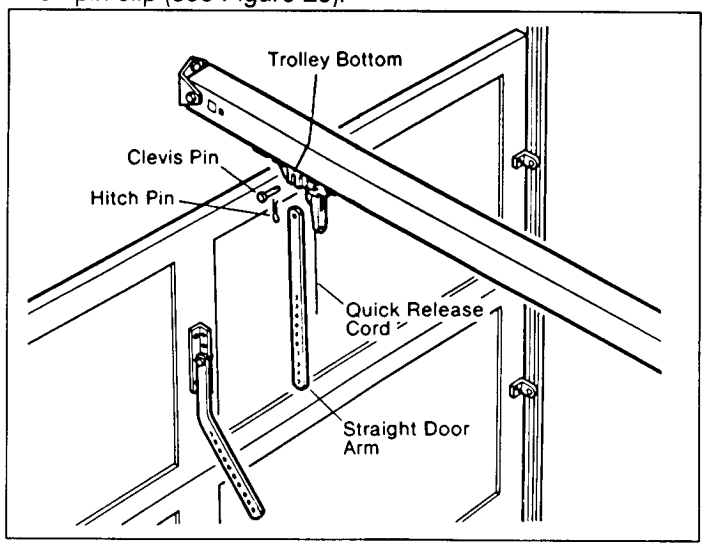


Figure 20

Step 40: Connect the two free ends of the door-arm assembly by rotating the curved section upward to the straight section so that two holes in each section can be matched (see Figure 21).

NOTE: If the holes do not match precisely, slide the trolley bottom toward the operator head until a match occurs. At that point, insert a bolt at the adjoining holes. Next, insert second bolt through lowest set of adjoining holes.

Step 41: Attach pull cord to quick-release lever on trolley bottom as shown in Figure 21. The red handle should be 6' above the garage floor.

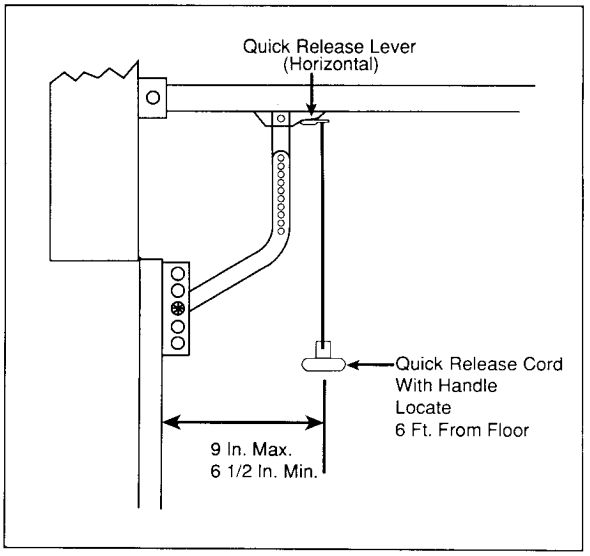


Figure 21

Note:

The quick-release lever (with pullcord attached) must be in the hortizontal position (up) (see figure 21). If the quick-release (disconnect) lever is in the vertical position (down), the trolley bottom will not engage the "traveler" that rides the screw drive and the door will not move.

Step 42: Return Quick Release Lever to horizontal position (see Figure 21). Raise the door manually until the quick-release mechanism in the trolley bottom engages the traveler on the screw drive. Note: If it is difficult to raise the door, pull the door arm toward the operator head (away from the door) while lifting the door. When the trolley bottom engages the traveler, it will snap together audibly, lock into position, and cease to move.

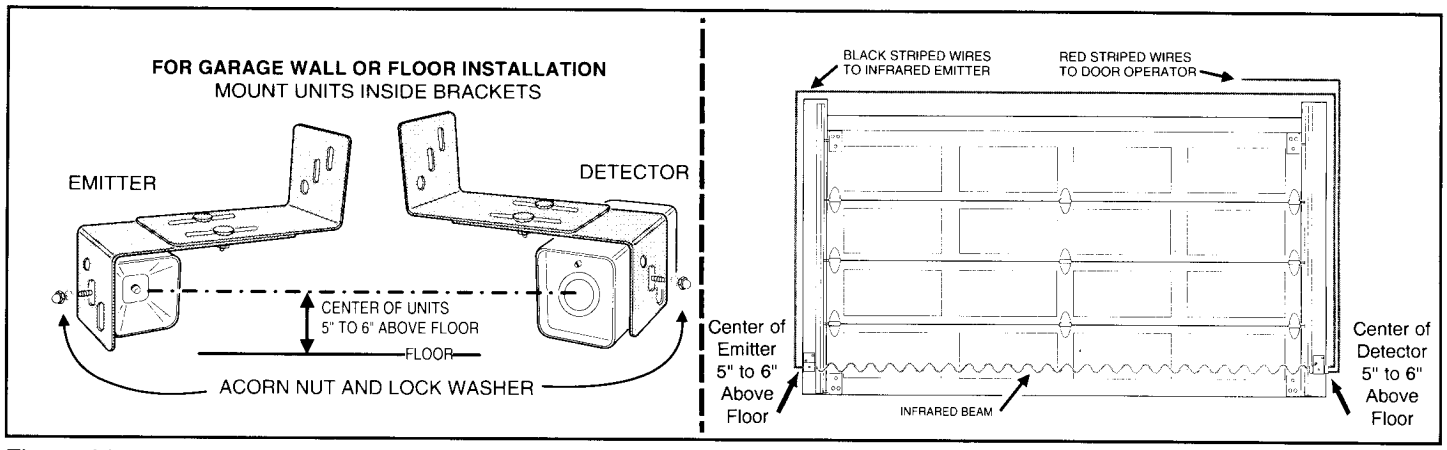


Figure 22

External Obstruction-Sensing Devices

The following information is to be used when connecting the external obstruction-sensing device such as a photorelay to a "Z" series operator for which terminals are provided to receive such an input.

⚠ WARNING

Failure to test and adjust the safety reverse system may result in serious injury or death from a closing garage door. Repeat this test once a month and adjust as needed.

Install the Moore-O-Matic object sensor, The "DoorSentry" after the garage door opener installation has been completed.

THIS SYMBOL MEANS WARNING— PERSONAL SAFETY OR PROPERTY DAMAGE INSTRUCTION. READ INSTRUCTIONS CAREFULLY.

The "DoorSentry" object sensor must be installed and operated in strict accordance with the following safety instructions.

Failure to comply with the following instructions may result in personal injury or property damage.

Before installing the "DoorSentry", be sure to complete all garage door opener installation instructions as provided in your owners manual.

Disconnect power to garage door opener before installing the Moore-O-Matic object sensor.

Step 43: The "DoorSentry" must be installed so the path of the light beam is not obstructed by the garage door, door tracks, springs, hinges, rollers or any other part of the door mechanism. It may be necessary to add a piece of wood to the wall at mounting locations to insure proper clearance (or to install sensors on masonry wall construction).

⚠ WARNING

Install the DoorSentry no higher than 5" to 6" from the floor to the center of the emitter and detector to protect small children

Step 44: Install emitter and detector inside garage on each side of garage door. Center of sensors must be positioned at the same height (approximately 5" to 6" above the floor). Directional arrows on the sensor labels must point toward each other and be horizontal to the floor. (See Figures 22 & 23)

NOTE: Detector should be installed on the "Shade" side of the garage, away from the sun's direct rays.

Step 45: For each bracket assembly drill two 3/16" pilot holes into the wall centered into slotted holes. Fasten bracket to walls with two lag screws through slotted holes. Position bracket to be square with the floor. Tighten both lag screws (see Figure 23). For each bracket assembly, attach mating bracket using the carriage bolts and nuts, as in Figure 22. Do not completely tighten nuts yet. Position detector in bracket as shown in Figure 22. Fasten detector to bracket with acorn nut and washer. Do the same with emitter. Slide bracket unit out from wall an equal distance until beam is completely clear of garage door, door hinges, tracks, springs, rollers, or any other part of door mechanism.Tighten carriage bolts and nuts.

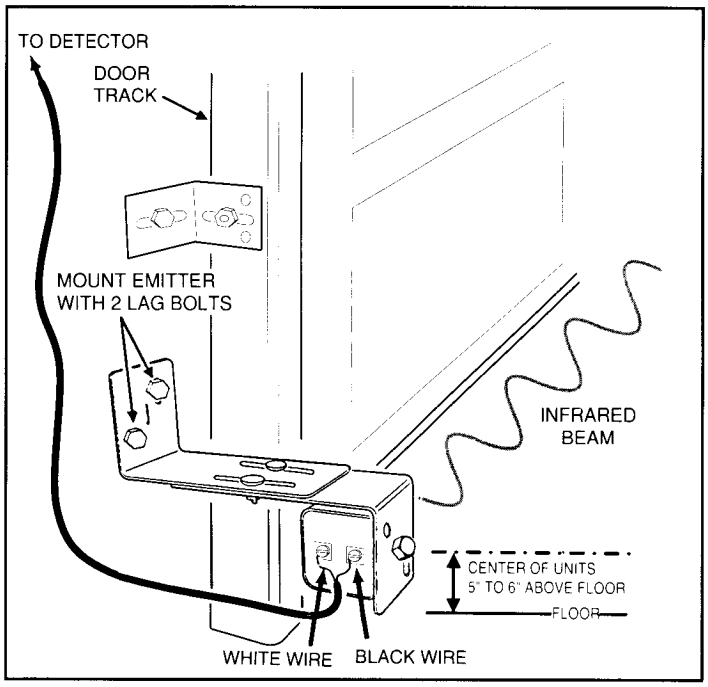


Figure 23

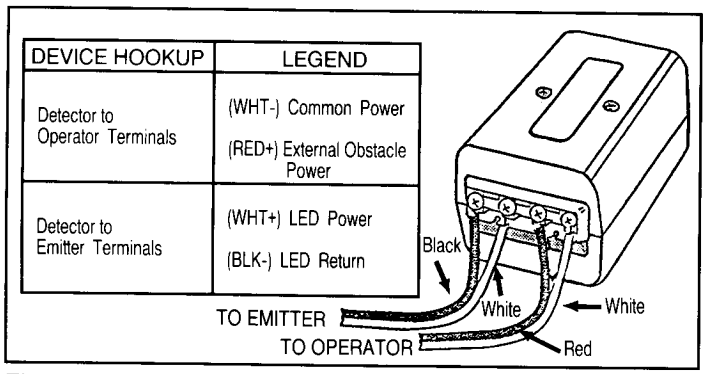


Figure 24

Step 46: Attach black striped wires to detector, run up and over the door to the terminals on the emitter. Attach wires to emitter terminals by color as shown on label. (See Figures 24). Use insulated staples to fasten wires to walls surrounding garage door.

Step 47: Run the red striped two-conductor "**DoorSentry**" wire from the detector up the side of the door opening and over to the channel. Run the wire across the top of the channel to the operator terminals marked "Common" and "Ext. Obst." (see Figure 25). Attach the three (3) adhesive squares provided to each end and the center of the top side of the channel assembly. Place wire under adhesive square to hold wire away from any moving parts of channel or door.

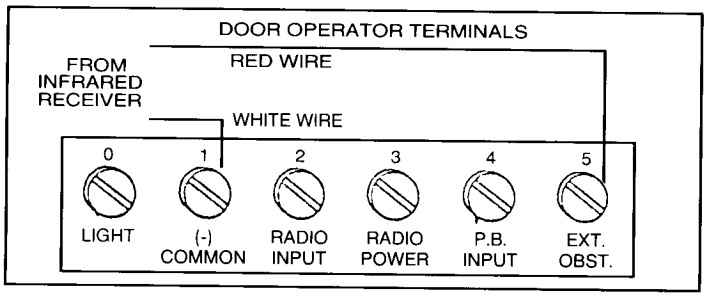


Figure 25

Step 48: Plug garage door operator power cord in receptacle. Small red lamp in detector should glow. If red lamp flashes after installation, check bracket position (see Step 45). Arrows should be horizontal to the floor. If brackets are installed correctly, position of detector within mounting bracket may require adjustment. Loosen detector case mounting nut and rotate detector. If red lamp glows, retighten mounting nut. Alignment is correct. If light continues flashing after adjustment, check the following:

1. Dirt on the detector lens or sunlight shining directly into the receiver lens causing interference.
2. Short in black striped or red striped wires. These can occur under staples or at screw terminals.
3. Incorrect wiring of detector to emitter.

Step 49: Test the object sensor. Place an object in the path of the invisible-light beam between detector and emitter as the garage door is closing. The door **must** reverse and return to a full open position. The garage door operator will not respond to a CLOSE command from the transmitter if the red light in the detector is flashing. The garage door can be closed manually by applying constant pressure on wall button, or by pulling down on the red emergency release handle connected to the trolley.

NOTE: Code radio instructions included with the radio. Repeat operator test using radio controls (see Figure 17).

Adjusting Up-Down Door Travel

Limits are set at the factory for 7 foot doors.
The up and down travel limits are adjusted in the following sequence.

Step 50: Depress the transmitter button and observe the door's direction of travel and where it stops. If the operator traveled in the Up direction, go to Step 51. If the operator traveled in the Down direction go to Step 53.

Step 51: To increase the "up" distance, turn the slotted "Up Limit" screw in the clockwise direction (see Figure 26). Note that each turn is equal to approximately one inch of door travel. Then estimate the number of turns required.

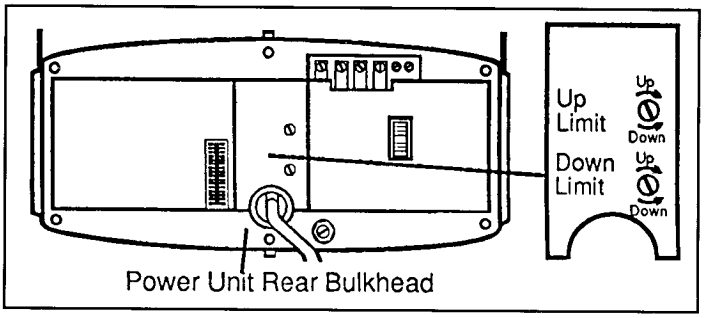


Figure 26

Step 52: Activate the transmitter so that the door will travel approximately one foot in the downward direction and depress the button again to stop the door. Then activate the transmitter to check the "up" distance. Continue this procedure until the "up" limit is properly adjusted.

Step 53: To increase the "down" distance turn the slotted "Down Limit" screw in the counter clockwise direction (see Figure 20). Note that each turn is equal to approximately one inch of door travel. Then estimate the number of turns required.

Step 54: Activate the transmitter so that the door will travel approximately one foot in the upward direction and depress the button again to stop the door. Then activate the transmitter to check the "down" distance. Continue this procedure until the "down" limit is properly adjusted. If you have not adjusted "up" limit go to Step 51.

NOTE: As the door approaches the upper and lower limits selected, reduce the number of turns per adjustment.

Step 55: To decrease the upper and/or lower travel limit, activate the transmitter, and while the door is still in motion (up or down), activate the transmitter again. This will stop the door in the "park" position. Then decrease the travel adjustment as desired. "Parking" the door a distance away from the limit switch (instead of against them) makes the adjustment easier.

Adjusting Door Pressure Sensitivity

The door pressure (obstacle sensing) mechanism must be in proper adjustment at all times. This is required to ensure the garage door will reverse its direction in the event that an obstruction is encountered during downward travel. If force on door seems excessive, decrease door pressure, never increase the pressure beyond that required to close the door.

Note:
Read the following directions thoroughly before setting the door pressure.

Step 56: Activate the transmitter to raise the door to the open position.

Step 57: Place a sturdy 2 x 4 laid flat on the floor so that it will be struck by the center of the door as it closes.

Step 58: Activate the transmitter so that the door will close and contact the obstruction. The door must reverse its direction of travel within 2 seconds after it encounters the obstruction.

Step 59: If the door stops after encountering the obstruction, it is an indication that the down limit needs to be adjusted. Turn the down limit screw one or two turns in the down direction (see Figure 26). Keep in mind that the door arm should not pass the vertical position.

Step 60: Repeat Steps 56 through 59 to ensure correct operation.

Note:
If the door does not reverse on the obstruction after repeated adjustment attempts, disconnect door from operator and call for professional help.

⚠ WARNING

The door, door hardware, and equipment should be checked often, at least monthly to ensure that door and operator are functioning properly.

Note:
The door pressure should be no greater than is required to cause the door to reverse its direction when it encounters an obstruction while closing.

TRACKLESS DOORS (JAMB)

The requirements for installing a garage door operator on a trackless door are different from the requirements for installing the same type operator on a sectional or one-piece, track-mounted door.

Trackless doors are one-piece doors which employ jamb-type counterbalance hardware as part of the lifting mechanism. They are sometimes called "California" doors. Typically, the one-piece door and its accompanying hardware appear as shown in Figure 28. Note that there is another type of one-piece, trackless door that operates on a pivot. This garage door operator is **not recommended** for use on the pivot type garage door.

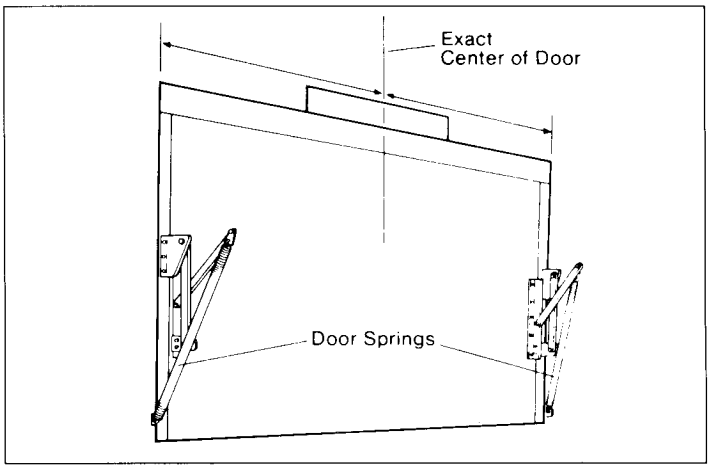


Figure 28

Attaching The Header Bracket

Step 61: Establish the exact center of the door and mark that location on the header above the door as shown in Figure 28.

Step 62: Establish the high-rise point of the door. That is its highest point of travel when it opens or closes (see Figure 29). To establish this point, open the door and measure the distance between its highest point of travel and the floor. Next, measure the height of the door. The difference is the door rise.

Step 63: Having calculated the door high-rise point, refer to the chart shown in Figure 30. With reference to the high-rise point, the chart shows the distance above the door where the bottom of header bracket should be installed.

Note:
For optimum operation of trackless doors, the power head end of the operator should be lower than the end of the channel attached to the header bracket above the door. In turn, this requirement makes it necessary to install the header bracket high enough above the door so that the high-rise point of the door clears the channel when the door opens or closes.

Step 64: Using the 2″ lag screws provided, install header bracket on center line of door at the height shown in Figure 30.

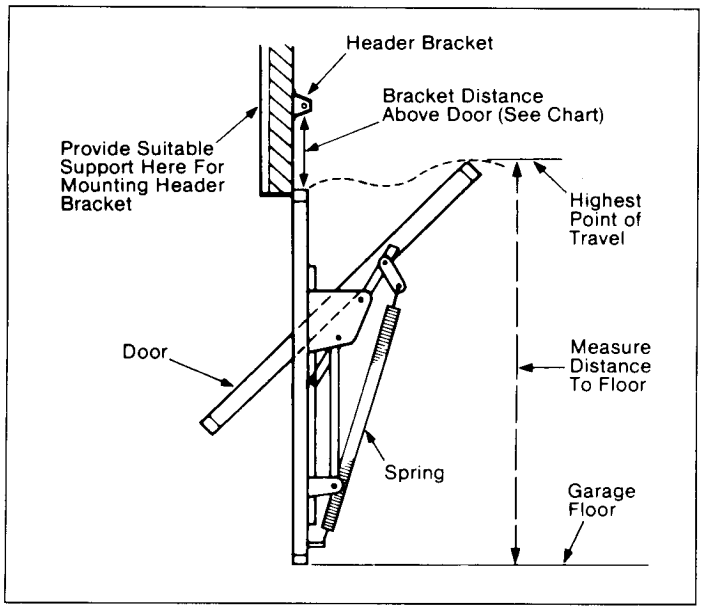


Figure 29

High-Rise Point Above Door (In Inches)	Location of Header Bracket Above Door (In Inches)
Up to 4	Up to 10
4 to 8	10 to 15
8 to 12*	15 to 20

Figure 30

NOTE: These charted header bracket locations cannot be achieved in garages with low ceiling. If this is the situation, mount the header bracket as high as possible, and hang the head end at the lowest acceptable (safe) level.

Mounting Channel to Header Bracket

Step 65: Refer to Step 23 on page 8.

Mounting Power Unit End of Operator

To complete this series of steps, hanging material of your choice, 2″ lag screws, 1/4″ - 20 x 1/2″ carriage bolts, and keps nuts are required.

Step 66: Bolt hanging material to power head (see Figure 15, page 8).

Step 67: Raise power head end of operator until high-rise point of door clears channel assembly by at least one inch, or until the power head is level with the top edge of the door when it is in the open position (see Figure 31). Temporarily maintain that position (on a ladder, for example) until the hanger material on the operator head is permanently mounted.

Note: When installed properly, the head end of the operator should be at least 7′ above the floor.

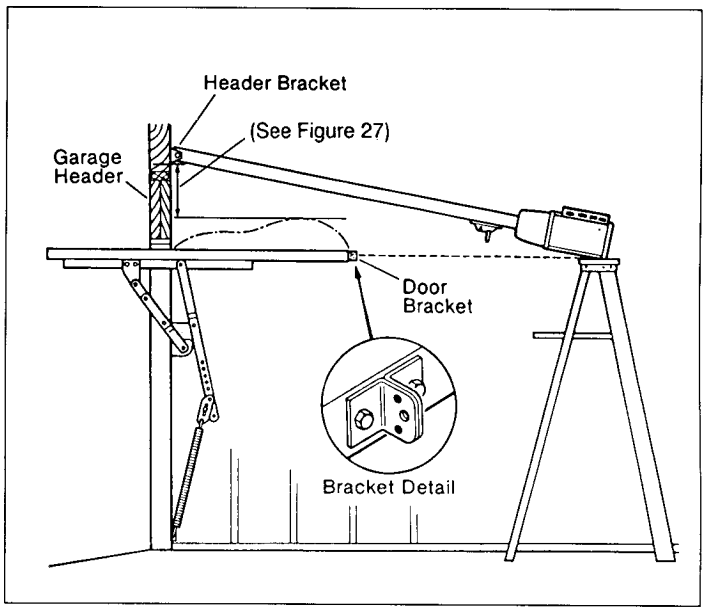


Figure 31

Step 68: For mounting power head, electrical power connections, and wall station, refer to Step 25 (page 8) through Step 36 (page 9).

Mounting the Door Bracket and Door Arm

The door bracket and door arm assemblies for trackless doors are shown in Figures 31 and 32.

Step 69: Install door bracket on center line as close as possible to the top edge of the door, (see Figure 31). If it is not possible to put the door bracket on the top edge of the door, install the door bracket as close as possible to the top edge.

Step 70: Hold the straight door arm up to the door bracket already mounted and align the proper holes (see Figure 32). Slide the flat washer and wave washer onto the dual hole clevis pin. Insert the clevis pin into the aligned holes and slide hitch pin clip through outside hole of clevis pin.

Step 71: Attach the curved section of the door arm to the trolley bottom as shown in Figure 32. To attach, remove the hitch pin clip from the clevis pin and remove the clevis pin from the trolley bottom. Next, insert door arm section into trolley bottom and place clevis pin through the trolley bottom and door arm and lock in place with hitch pin.

Step 72: Connect the two free ends of the door arms by rotating the straight section upward to the rear vertical (toward the curved door-arm section) so that two holes in each section can be matched (see Figure 32). Connect the two parts of the door arm using the bolts and keps nuts supplied.

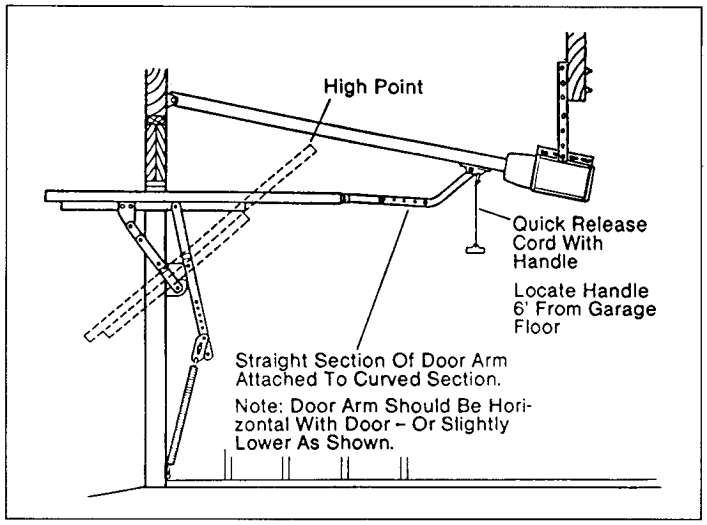


Figure 32

Note: If holes do not match precisely, slide the trolley bottom toward the operator head until a match occurs. At that point, insert a bolt through top adjoining holes. Next, insert second bolt through lowest set of adjoining holes.

Step 73: Attach pull cord to quick-release lever on trolley bottom as shown in Figure 32. Note that the red handle should be 6' above garage floor.

Setting Travel Limits

Step 74: Refer to Steps 50 through 55 (page 12) in the section describing Track Mounted Doors.

Setting Door Pressure Sensitivity

Step 75: Refer to Steps 56 through 60 (page 13) in the section describing Track Mounted Doors.

IMPORTANT SAFETY INSTRUCTIONS

WARNING—To reduce the risk of severe injury or death:

1. READ AND FOLLOW ALL INSTRUCTIONS

2. Never let children operate, or play with door controls. Keep remote control away from children.

3. Always keep 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.

4. Test door opener monthly. The garage door MUST reverse on contact with a 1 inch object (or a 2 by 4 board laid flat) on the floor. If adjusting either the force or the limit of travel, retest the door opener. Failure to adjust the opener properly may cause severe injury or death.

5. If possible, use the emergency release only when the door is closed. Use caution when using this release with the door open. Weak or broken springs may cause the door to fall rapidly, causing injury or death.

6. KEEP GARAGE DOORS PROPERLY BALANCED. (See owner's manual.) An improperly balanced door could cause severe injury. Have a qualified service person make repairs to cables, spring assemblies and other hardware.

7. **SAVE THESE INSTRUCTIONS.**

TROUBLESHOOTING GUIDE

READ PAGE 6 FOR IMPORTANT INSTALLATION INSTRUCTIONS

Opener does not open from wallbutton or transmitter.	• Check electric power to operator. Check fuses or circuit breakers. • Are all door locks disabled? • Is beam properly installed and aligned? (Red LED should shine steady) • Check for dead short in wallbutton wiring.
Opener works from transmitter but not from wallbutton.	• Check wallbutton and wiring for correct wiring or short in wiring. • Make sure that staples do not penetrate wires.
Opener works from wallbutton but not from transmitter.	• If LED on transmitter does not light, change battery. • Check to see that transmitter and receiver are coded alike.
Door will go up, but not down.	• If door will go down when constant pressure is applied, check beam for alignment, obstruction or short in wiring.
Door opens and closes by itself. (Phantom operation)	• Change code in receiver and transmitter. • Intermittent short in wiring to pushbutton. Locate and repair or replace wiring.
Light bulbs burn out frequently.	• Use "Appliance" or "Garage Door Opener" bulb.

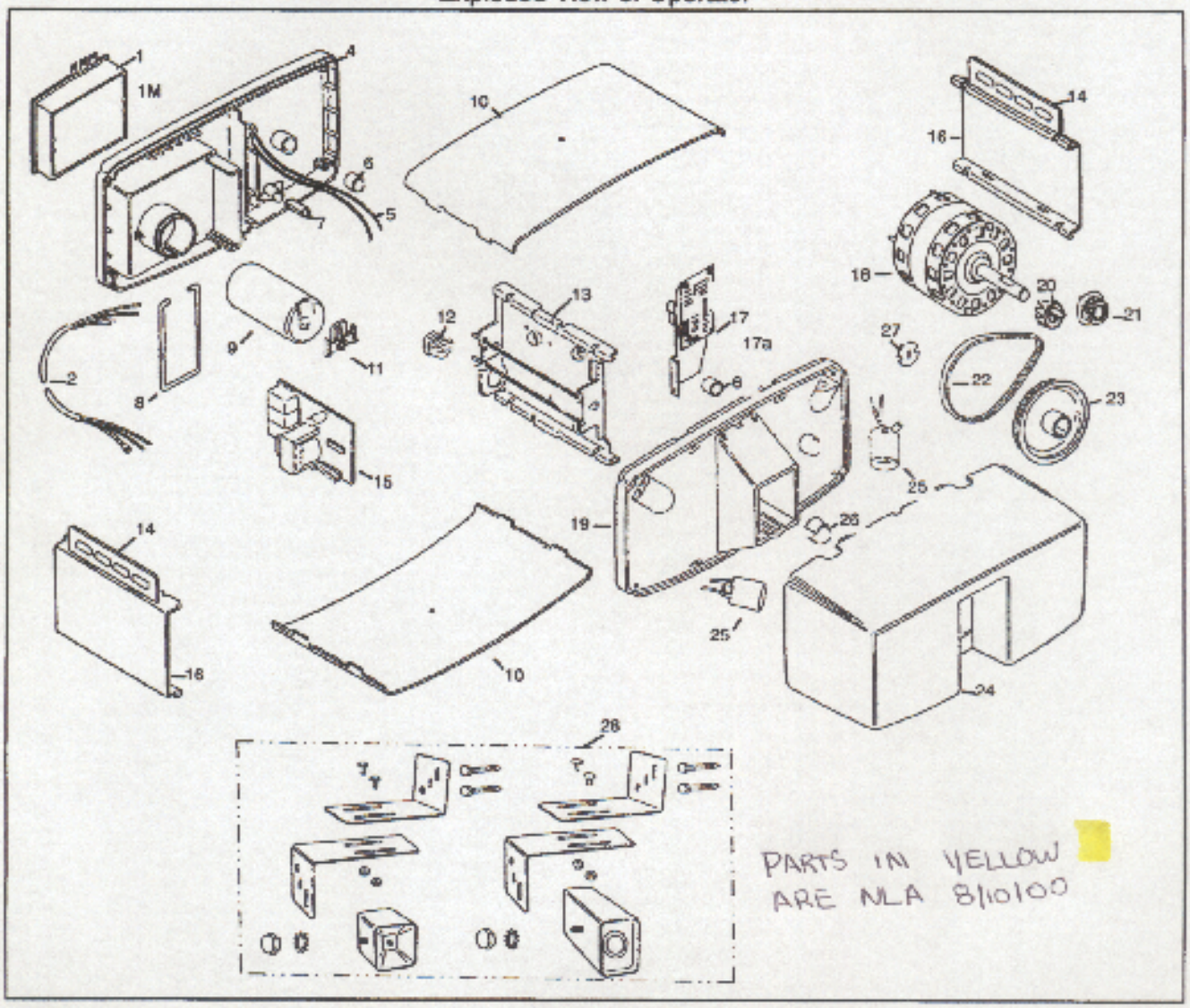
If the above suggestions do not fix the problem with your opener, contact your local Moore-O-Matic dealer or installer. Or you may contact Moore-O-Matic at the following locations:

Western Repair Center
2580 Pioneer Avenue, Suite C
Vista, CA 92083
(800) 835-5666

Central Repair Center
419 Oak Street
P.O. Box 349
Waupaca, WI 54981

MODEL Z133b/Z150b REPLACEMENT PARTS LIST

Exploded View of Operator

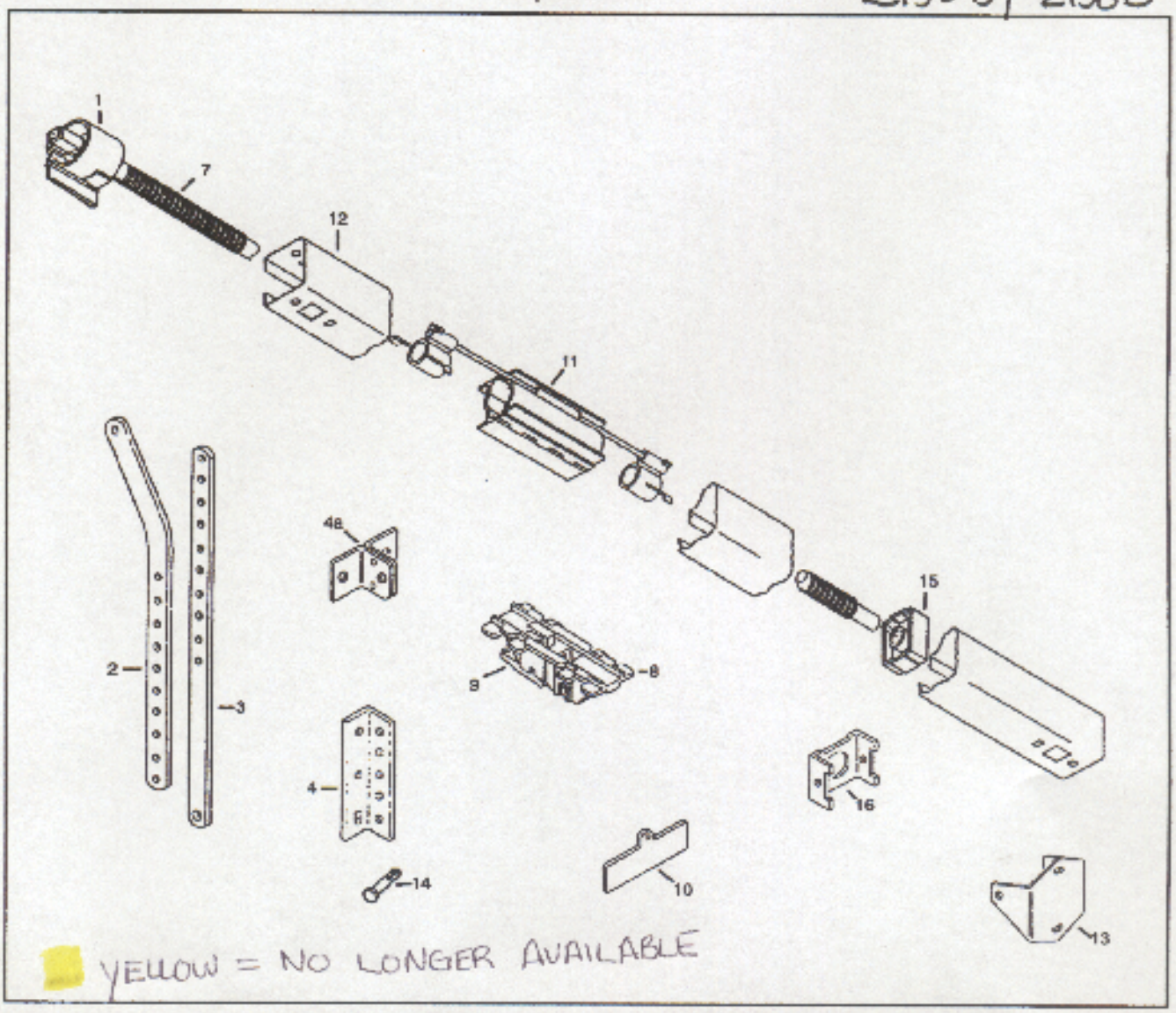


ITEM	PART NO.	DESCRIPTION	QTY
1	DR	DRM RECEIVER Delta	1
1M	MDRM	MDRM MEGACODE RECEIVER	1
2	210964-02	POWER CORD ASSEMBLY	1
3	210451-01	TERMINAL	6
4	211801-001	REAR BULKHEAD ONLY	1
5	209058-01	POTENTIOMETER ASSEMBLY	1
6	211796	BEARING .500 ID	2
7	210511	MOTOR MOUNT TUBING	1
8	211806	CAPACITOR RETAINER	1
9a	210719	CAPACITOR 43-53 MFD	1
9b	210718	CAPACITOR 53-64 MFD	1
10	211819-001	COVER, GREEN	2
11	211811	CAPACITOR RETAINER CAM	1
12	210977	STRAIN RELIEF BUSHING	1
13	209060-04	CENTERFRAME ASSEMBLY	1
14	209035	HANGER BRACKET	2

ITEM	PART NO.	DESCRIPTION	QTY
15	AAE00341	CONTROL BOARD	1
16	211820-001	SIDE PANEL, GREEN	2
17	AAE00306	TORQUE BOARD (Board Only)	1
17a	210143-01	TORQUE BOARD ASSEMBLY	1
18	210407	MOTOR 1500 RPM	1
19	211802-001	FRONT BULKHEAD ONLY	1
20	209034	ENCODER WHEEL	1
21	R211639	PULLEY, 17 TOOTH	1
22	211815	DRIVE BELT	1
23	211814	PULLEY, 57 TOOTH	1
24	211803	LIGHT LENS	1
25	211792	LAMP HOLDER	2
26	211810	SHIM BEARING	1
27	211818	LIMIT DISK	1
28	AAE00324	SENSOR EYES ONLY	1
29	211422	MANUAL, Z133b/Z150b	1

REPLACEMENT PARTS LIST

Exploded View Z133B/ Z150B

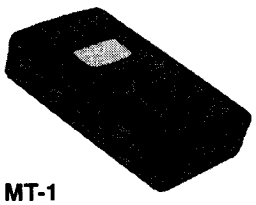


YELLOW = NO LONGER AVAILABLE

ITEM	PART NO.	DESCRIPTION	QTY
1	211979	THRUST BLOCK	1
2	211233	CURVED DOOR ARM	1
3	211235	DOOR ARM 17"	1
3a	211603	DOOR ARM 25" JAMB	1
4	211435	DOOR BRACKET SECT	1
4a	211601-01	DOOR BRACKET JAMB	1
7	210454-001	DRIVE SCREW 111"	1
7a	214102-001	DRIVE SCREW 123"	1
7b	214140-001	DRIVE SCREW 70"	1
8	211609-02	TROLLEY SLIDE ASSEMBLY	1
9	A7206	LATCH REPLACEMENT KIT	1
10	211226	RED HANDLE	1

ITEM	PART NO.	DESCRIPTION	QTY
11	AAE00363	TROLLEY REPLACE KIT–SECT	1
11a	AAE00362	TROLLEY REPLACE KIT–JAMB	1
11b	210472-02	TROLLEY REPLACE KIT–FULL	
		LENGTH JAMB	1
12	212688-001	CHANNEL 111"	1
12a	212688-002	CHANNEL 123"	1
12b	214139	CHANNEL 93" JAMB	1
12c	212136	CHANNEL 93" FULL LENGTH	
		JAMB	1
13	211797	HEADER BRACKET	1
14	210106	CLEVIS PIN DUAL HOLE	1
15	212140	BEARING BLOCK	1
16	212141	BEARING BLOCK SUPPORT	
		(JAMB ONLY)	1

OPERATOR ACCESSORIES



MT-1

1-Channel Standard Transmitter

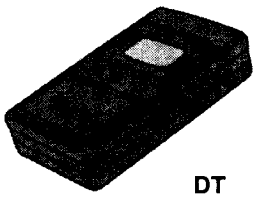
Controls single garage door operator.

MegaCode 318

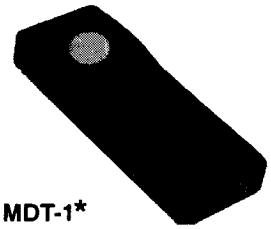
1-Channel Delta-3 Transmitter

Controls single garage door operator.

310 only



DT



MDT-1*

1-Channel Deluxe Transmitter

Controls single garage door operator.

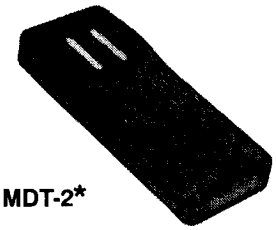
MegaCode 318

2-Channel Delta-3 Transmitter

Controls two devices.

310 only

DT-2



MDT-2*

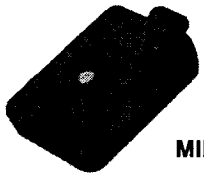
2-Channel MegaCode Transmitter

Controls two devices. The top button can be used to control a third device.
MegaCode 318

Mini Transmitter

Designed to be used with a keychain. Activates one device.

310 only



MINI

MMT-1*

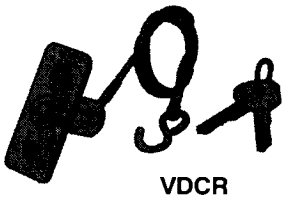
MegaCode Mini Transmitter

Designed to be used with the keychain provided.
Activates one device.

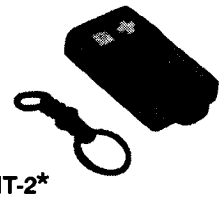
MegaCode 318

Vault Door Cable Release

For garage doors with no service door.
Release operator from outside.



VDCR



MMT-2*

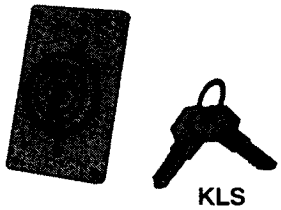
MegaCode Mini Transmitter (Two Button)

Designed to be used with the keychain provided.
Activates two devices.

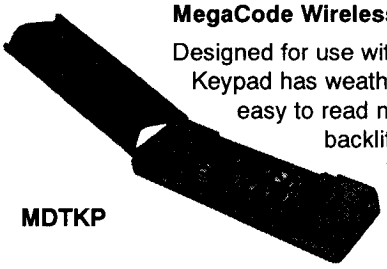
MegaCode 318

Key Lock Switch

A wired control station outside a garage.
Secure from anyone without a key.



KLS



MDTKP

MegaCode Wireless Keypad

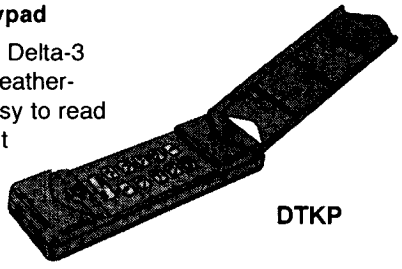
Designed for use with MegaCode radios. Keypad has weather-proof construction, easy to read numbers and is backlit for use at night.
100,000 possible codes.

318 only

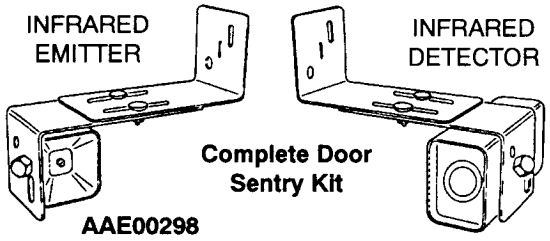
Delta-3 Wireless Keypad

Designed for use with Delta-3 radios. Keypad has weather-proof construction, easy to read numbers and is backlit for use at night.
256 possible codes.

318 only



DTKP



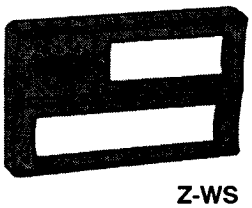
Complete Door Sentry Kit

AAE00298

Wall Station

Independently controls garage door operator and lights.
Vacation switch disables radio for added security.

3 function, 2 wire.
Screw drive only.



Z-WS

* Available in alternative frequencies.

THIS OWNER'S MANUAL CONTAINS COMPLETE INSTRUCTIONS FOR INSTALLATION AND MAINTENANCE OF THIS GARAGE DOOR OPERATOR SYSTEM. IT SHOULD BE MOUNTED NEAR THE INSTALLATION IN A PROMINENT POSITION.

MOORE-O-MATIC

Quality Garage Door Operators with Linear Radios

419 OAK STREET • WAUPACA, WI 54981 • (715) 258-5577

(April '97 Printing)

211422B