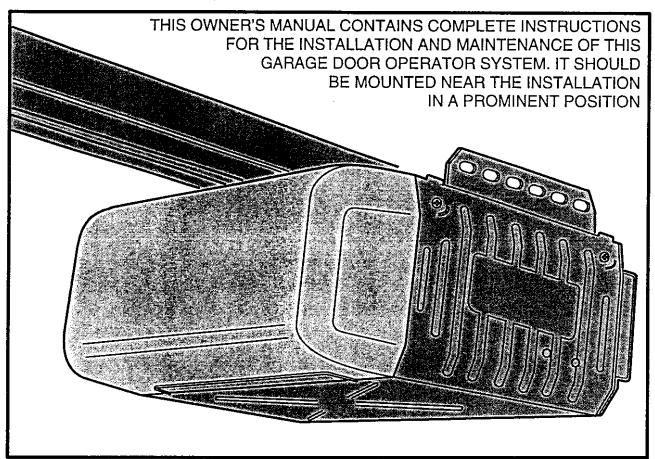
CHAIN-DRIVE GARAGE DOOR OPERATORS

With DoorSentry® Infrared Safety Beam

Models XX325, XX333 & XX350

Assembly and Installation Instructions



WARNING A

To reduce the risk of injury to persons, install this operator on:

SECTIONAL DOOR if channel box is labeled "XSX" or XST.

ONE PIECE JAMB DOOR if channel box is labeled "XJX" or XJT.

A

CAUTION



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 WATIC

Quality Garage Door Operators with Linear Radios (800) 421-1587

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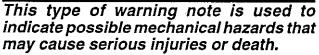
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IMPORTANT SAFETY NOTES

Please read the instructions carefully! This garage door operator is designed to provide safe and reliable service if installed and tested as described in this manual. A garage door is the largest mechanical appliance in a residence. Care must be taken to prevent injury or death during installation and operation of the garage door and garage door operator.

The following formats are used for safety notes in this manual:





WARNING

This type of warning note is used to indicate possible electrical shock hazards that may cause serious injuries or death.

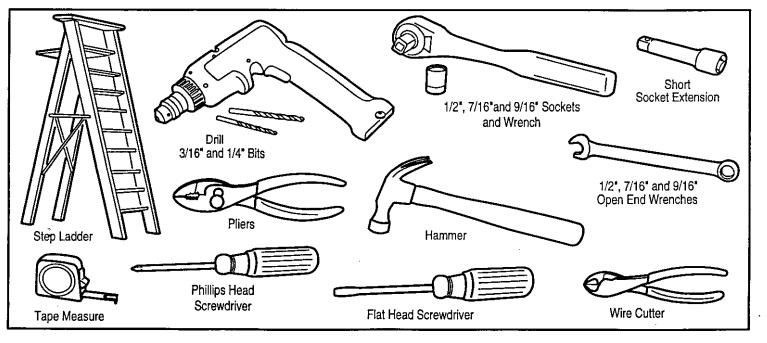


CAUTION

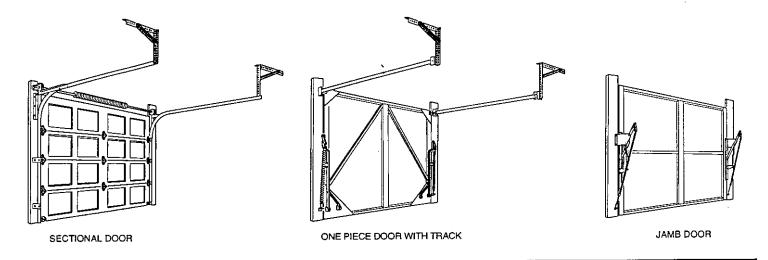


This type of warning note is used to indicate the possibility of damage to the garage door or garage door operator.

INSTALLATION TOOLS REQUIRED



GARAGE DOOR TYPES



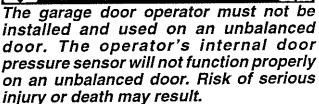
CHECK DOOR BALANCE

For any electric garage door operator to perform safely, it must be installed on a properly balanced garage door. The weight of the garage door is counterbalanced by the garage door spring(s). The springs must be correctly adjusted and the door hardware must be lubricated and in good working order. **Prior to testing, disable lock assembly and remove all ropes.** Before installing the garage door operator, test the operation of the garage door as follows:

- Raise the garage door about halfway up. Release your hold on the door and see if the door balances. It shouldn't go up or down on its own.
- Notice if there is any binding, sticking or rubbing caused by the garage door hardware, track wheels or door frame. The door should travel smoothly.

If the garage door is unbalanced or if the door travel isn't smooth, have a qualified garage door installation professional adjust or repair the door.

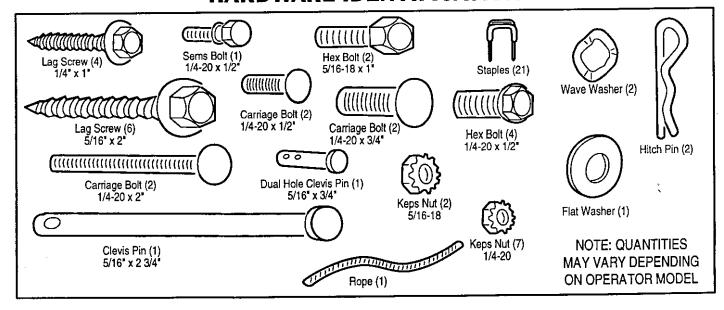
WARNING



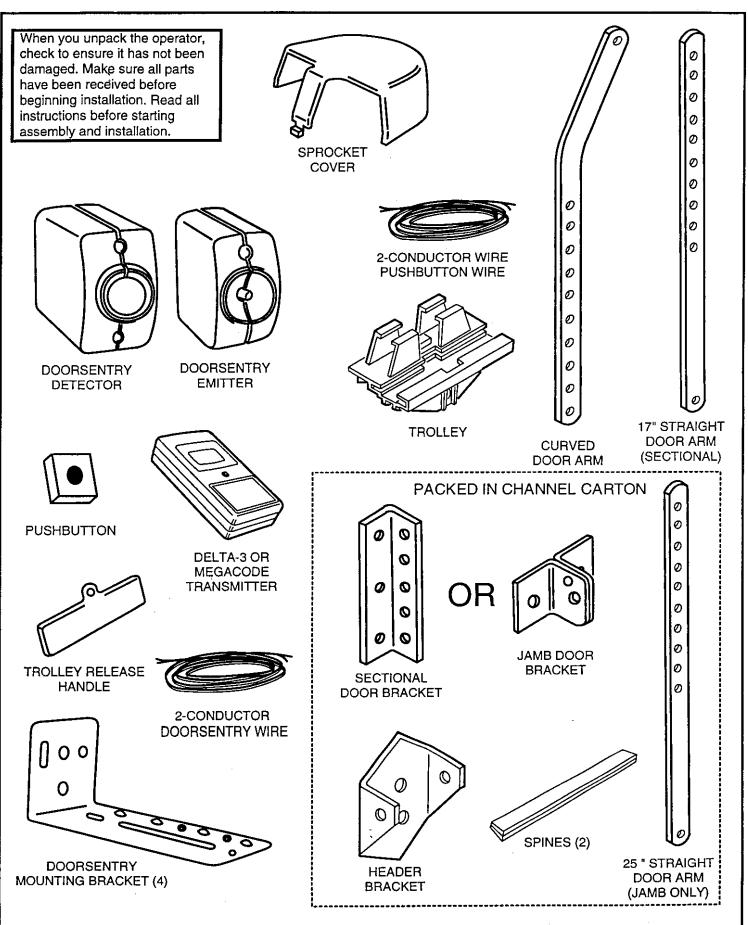
WARNING!

Garage door hardware (springs, cables, brackets, pulleys, etc.) are under extreme pressure and tension. DO NOT ATTEMPT TO LOOSEN, TIGHTEN OR ADJUST ANY DOOR HARDWARE UNLESS YOU ARE A QUALIFIED GARAGE DOOR INSTALLATION PROFESSIONAL!

HARDWARE IDENTIFICATION



OPERATOR PARTS IDENTIFICATION



Installing the Pushbutton

A WARNING A

Children operating or playing with a garage door operator can injure themselves or others. The garage door could close and cause serious injury or death. Do not allow children to operate the wall station or the remote control transmitters.

Install the pushbutton out of reach of children and away from all moving parts of the door. The door must be clearly visible from the pushbutton.

A moving garage door could injure someone under it. Only activate the door when it is properly adjusted, when it can be seen clearly, and when there are no obstructions to the door travel.

- NOTE: A standard pushbutton is supplied with the operator. An optional 3-function wall station (Model XX-WS) with light control and vacation lock can also be used with this operator (see Operator Accessory page).
- ☐ Strip 1/4" of insulation from one end of the 2-conductor wire supplied with the operator.
- Connect the wires to the two terminals on the back of the pushbutton. With the standard pushbutton, polarity of the wires is unimportant.
- Select a convenient location for mounting the pushbutton near an access door. The door must be clearly visible from the wall station. Use the screws provided to mount the pushbutton at a minimum height of 5 feet, where children cannot reach it and away from all moving parts of the door.

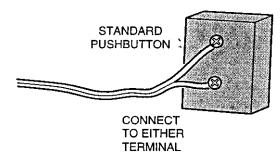
A CAUTION A

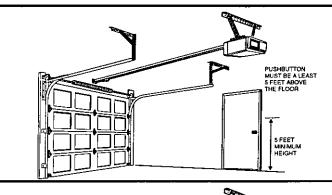
Be careful to route the wiring away from any moving parts of the door, gear or track mechanism.

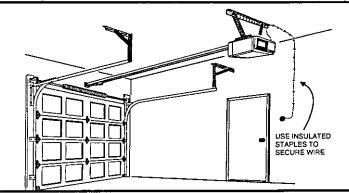
- ☐ Route the wire to the back of the operator. Use the insulated staples provided to secure the wire. Staples must straddle both wires to avoid electrical shorts.
- □ Cut the wire, leaving about 6" slack, strip back each conductor about 1/4".
- Connect the one wire to the COMMON pushbutton terminal and the one wire to the PUSHBUTTON terminal on the back of the operator.
- Apply the User Safety Instruction Label to the wall next to the pushbutton. Use staples or tacks to help the label remain in place over time.

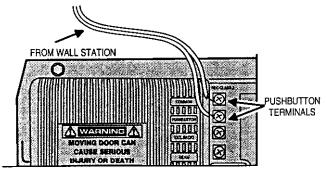


DO NOT PLUG THE OPERATOR IN AT THIS TIME! More installation is required.









IMPORTANT!

Apply the User Safety Instruction Label to the wall next to the push-button.



Installing the DoorSentry® Infrared Safety Beam

The DoorSentry consists of two units, an infrared emitter and an infrared detector. The emitter constantly sends a narrow infrared beam to the detector. If the door is moving down, and an obstacle interrupts the beam, the DoorSentry will stop the door and reverse it causing the door to go up.

If the door is up and there is an obstacle interrupting the beam, or the DoorSentry is not aligned, the radio transmitter will not function. The operator will only run the door down if constant pressure is applied to the wall station pushbutton.



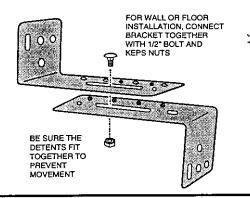
Without a properly installed and adjusted DoorSentry object sensor, persons (particularly children) could be killed by a closing garage door. Read and follow all instructions carefully.

**NOTE: 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 for installation on masonry wall construction.

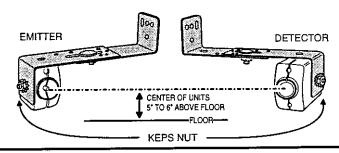


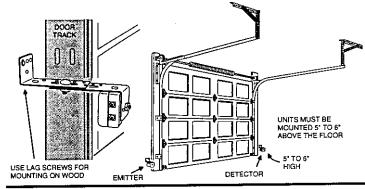
Install the DoorSentry no higher than 5" to 6" from the floor to the center of the emitter and detector to protect small children.

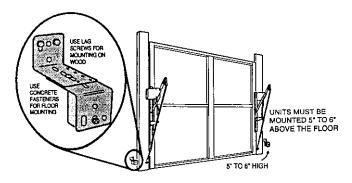
- www.NOTE: The detector must be installed on the "shade" side of the garage door, where sun will not shine directly into the detector lens.
- □ Assemble the two DoorSentry brackets from the four L-shaped brackets using two 1/4-20 x 1/2" carriage bolts and 1/4-20 keps nuts. Finger tighten hardware only until later adjustment.
- □ Position detector and emitter on their brackets and secure them with the 1/4-20 keps nuts.
- Position the units at the same height (approximately 5" to 6" above the floor). The clear emitter infrared light must point towards the clear detector lens. Use a pencil to mark the locations for the lag screws for wall or floor mounting.
- ☐ Drill two 3/16" pilot holes for lag screws at marks. Mount the brackets with two 1/4" x 1" lag screws (or proper concrete fasteners when floor mounting), tighten with a 7/16" socket.



FOR GARAGE WALL OR FLOOR INSTALLATION MOUNT UNITS INSIDE BRACKETS







Wiring the DoorSentry® Infrared Safety Beam

The DoorSentry system receives power from the operator and sends its control signals back to the operator through two-conductor wire.

☐ Strip 1/4" of insulation from the supplied 2-conductor wire. Attach to the terminals on the *emitter*. (Either wire to either terminal.)



CAUTION



Be careful to route the wiring away from any moving parts of the door, gear or track mechanism.

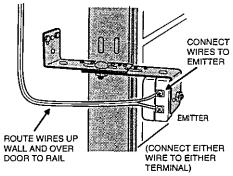
- Route the wires up the wall, halfway over the door, along the top of the rail using the spines supplied or across ceiling to the back of the operator head, leaving about 6" slack.
- ☐ Cut the wire. Strip 1/4" of insulation from the wire. Attach to the terminals marked COMMON & BEAM on the back of the operator. (Either wire to either terminal.)
- ☐ Strip 1/4" of insulation from the supplied wire. Attach to the terminals on the *detector*. (Either wire to either terminal.)
- ☐ Route the wires up the wall, halfway over the door, along the top of the rail using spines supplied or across ceiling and back of the operator head, leaving about 6" slack.
- ☐ Strip 1/4" of insulation from the wire. Attach to the terminals marked COMMON & BEAM on the back of the operator operator. (Either wire to either terminal.)
- ☐ Secure all the wires to the wall and ceiling with the insulated staples. Staples must straddle both wires to prevent shorts.

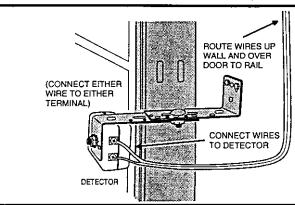


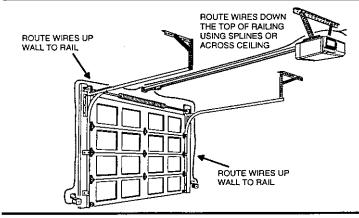
WARNING

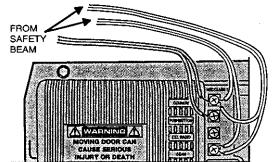


Failure to test and adjust safety reverse system may result in serious injury or death from a closing garage door. Repeat the test once a month and adjust as needed. See Page 19 for adjustment and testing details.









CONNECT EITHER WIRE TO EITHER TERMINAL

Connecting Operator to Power Source

WARNING A

To prevent electrocution or fire, installation and wiring must be in compliance with local electrical and building codes.

Cord and Outlet Connection

The operator should be connected to a grounded receptacle on the ceiling or near the operator head. If none is available which will accept the grounded operator plug, one should be installed by a qualified electrician. Do not use an extension cord.

A WARNING A

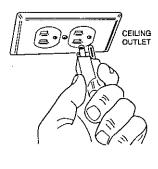
To reduce the risk of electric shock, this operator has a grounding type plug, with a third grounding pin. This plug will only fit into a grounding type outlet. If the plug doesn't fit into the outlet, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

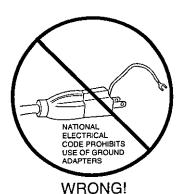
- ☐ Plug operator into grounded receptacle.
- ☐ When operator is plugged in, a click should sound in the operator and the light should turn on. If light does not turn on, check the power source and light bulb.

Permanent Wiring

SOME LOCAL ELECTRICAL CODES REQUIRE PERMANENT WIRING TO THE POWER SOURCE THROUGH CONDUIT. FOLLOW THESE STEPS ONLY IF PERMANENT WIRING IS REQUIRED.

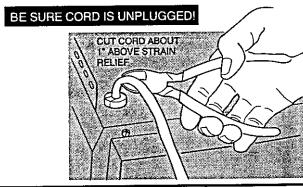
- □ Be sure power cord is disconnected.
- ☐ Cut the power cord about 1" from the strain relief bushing on the operator.
- □ Remove the four side screws and bottom cover of operator.
- ☐ Use pliers to remove the strain relief bushing. Discard bushing.
- ☐ Remove the outer insulation from the power cord and strip the white, black and green wire insulation back about 1/4".
- □ Pull white (neutral), black (hot) and green (ground) wires through conduit.
- □ Connect the conduit to the operator with the appropriate termination.
- ☐ Use wire nuts (not supplied) to connect the wires to the matching color wires inside operator head.
- NOTE: Be sure the wires inside of the operator are clear of the gears and all moving parts.
- □ Replace the operator cover and four side screws.
- Connect conduit wires to power source at junction box.
- When power is applied to the operator, a click should sound and the light should turn on. If light does not turn on, check the power source, wiring and light bulb.

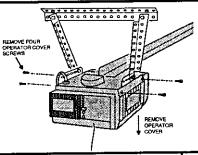




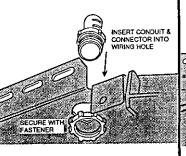
RIGHT

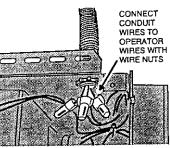
FOR PERMANENT WIRING ONLY!!!











ADJUSTMENT STEP 2

Testing the Radio Remote Control

WARNING A

Children operating or playing with a garage door operator can injure themselves or others. The garage door could cause serious injury or death. Do not allow children to operate the radio remote control(s) or the wall station.

A moving garage door could injure or kill someone under it. Activate the operator only when the door is clearly visible, free of obstructions and adjusted properly.

The radio receiver is located in the rear bulkhead of the operator. The small white wire serves as an antenna for the receiver.

More transmitters can be purchased for additional users of the door operator. Before purchasing, check to see if your operator is equipped with MegaCode or Delta-3 radio remote controls.

Delta-3 Radio Controls

If the operator is equipped with Delta-3 Radio Controls, the eight position switch on all transmitters must be set to the same code. Only one code can be learned into the receiver. The code should be changed from the factory setting prior to use.

MegaCode Radio Controls

MegaCode transmitters are permanently factory coded. Up to 10 MegaCode transmitters can be stored in the receiver's memory.

Programming the receiver

To add transmitters.

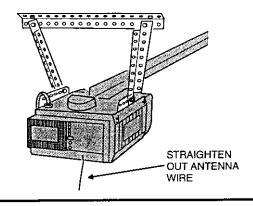
☐ Momentarily press the receiver's learn button. The receiver's red learn light will glow if there's room in the receiver's memory for more transmitters. The red light will stay on for about 5 seconds. A transmitter must be entered while the red light is still on. Press the transmitter button. The red learn light will flicker and the operator light will flash once indicating that the receiver has accepted the transmitter.

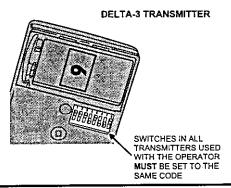
To remove a transmitter:

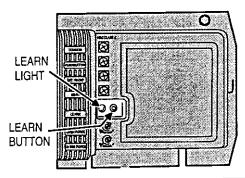
- □ Press and hold the receiver's learn button for 10 seconds or more. This will erase all of the transmitters stored in the receiver's memory. The receiver's red programming light will blink.
- ☐ Follow the previous step to re-program all needed transmitters.
- ☐ For programming multi-channel transmitters, refer to the instructions supplied with the equipment.

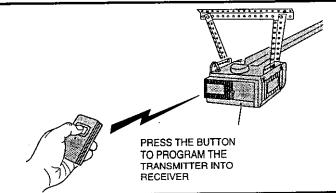
Testing

- ☐ Before testing the radio control, straighten out the antenna wire so it points down toward the floor.
- Stand clear of the door, press the transmitter button and verify that the operator starts.









USER INSTRUCTIONS 1

Using the Garage Door Operator

Opening the Door

- * Press the wall station pushbutton or activate a wireless remote control transmitter (see Adjustment Step 2 for details on testing the radio remote control).
- * When the operator is activated, the courtesy lamp will light and the door will begin to open.
- * The door will open until the up limit is reached (unless an obstacle is encountered, which will stop the door).
- * The courtesy lamp will remain lit for about 5 minutes after the operator stops.

Closing the Door

- * Press the wall station pushbutton or activate a wireless remote control transmitter.
- * When the operator is activated, the courtesy lamp will light and the door will begin to close.
- * The door will close until the down limit is reached (unless an obstacle is encountered, which will stop and reverse the door).
- * The courtesy lamp will remain lit for about 5 minutes after the operator stops.

Stopping the Door Mid-travel

- * The door motion can be halted immediately at any time by pressing the wall station push-button or by activating a wireless remote control transmitter.
- * The next time the operator is activated, it will move in the opposite direction.

Manually Using the Door

- * The trolley release handle is used to disengage the operator from the garage door. It can be used during power failures to allow manual operation of the door.
- * Pull the red trolley release handle to disengage the door.
- * The door can now be raised or lowered manually.
- * To re-engage the door, flip the trolley release lever up. Move the door manually until the trolley engages the traveler on the chain. It will engage with a snap.

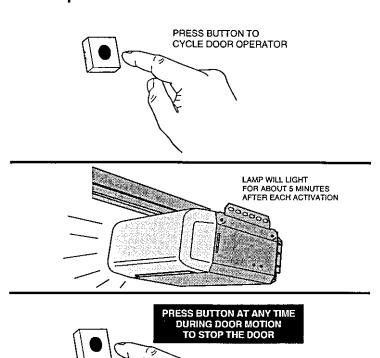
OPTIONAL MODEL XX-WS 3-FUNCTION WALL STATION FEATURES

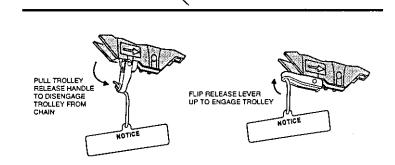
Wall Station Vacation Lock (With 3-function Wall Station Only)

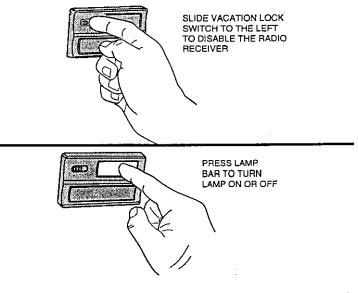
- * The lock switch on the wall station prevents the operator from receiving radio control signals. The operator light will flash four times, but not activate, if the lock switch is on and a transmitter is activated.
- * Slide the lock switch to the locked position for additional security. The operator will not respond to radio control signals but will still activate from the wall station push-button.
- * Slide the lock switch to the unlocked position to return the operator to normal operation.

Wall Station Light Control (With 3-function Wall Station Only)

- * If the operator's courtesy lamp is off, pushing the wall station's light button will turn the operator's lamp on. The lamp will remain on until the light button is pressed again or until the operator is cycled.
- * If the operator's courtesy lamp is on, pushing the wall station's light button will turn the operator's lamp off.







USER INSTRUCTIONS 2

Care for the Garage Door Operator



Always perform the door force safety system test after making any adjustments to the operator (see Page 22).

Seasonal weather changes affecting the door could require some fine tuning of the operator's adjustments over time. Wooden doors can swell and gain weight during wet periods, sectional door hinges and rollers might bind during cold periods, etc.

Monthly Testing

- ☐ With the door closed, pull the trolley release handle to disengage the trolley from the chain.
- By hand, from outside the garage, slowly open the door all the way, then close it all the way. Notice if there is any binding, sticking or rubbing caused by the garage door hardware, track wheels or door frame. The door should travel smoothly.
- ☐ Raise the garage door about halfway up. Release your hold on the door and see if the door balances. It shouldn't go up or down on its own. Close the door.
- ☐ Move the trolley release lever into the horizontal position. Raise the door manually until the trolley engages the traveler on the chain. It will engage with a snap.
- NOTE: If the garage door is unbalanced or if the door travel isn't smooth, have a qualified garage door installation professional adjust or repair the door.
- ☐ Perform the DoorSentry infrared safety beam alignment tests as described in Adjustment Step 1.
- Perform the up and down limit adjustments as described in Adjustment Step 3.
- □ Perform the door force adjustments as described in Adjustment Step 4.

Bi-Annual Testing

Check the chain tension and adjust it if necessary as described in Assembly Step 3.

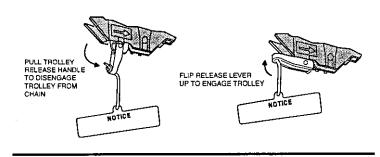
Yearly Maintenance

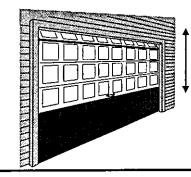
Check the door hardware for lubrication needs. Lubricate door hinges, rollers and bearings according to door manufacturers recommended procedures.

Courtesy Lamp Indications

The courtesy lamp will flash to indicate various conditions:

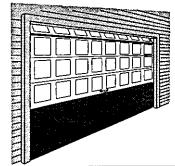
- * One flash occurs when a transmitter is learned.
- * Two flashes occur when the DoorSentry beam is interrupted while the door is in motion.
- * Three flashes occur when the open or close force settings are exceeded.
- * Four flashes occur if a transmitter is activated while the 3-function wall station vacation switch is on.
- * Five flashes occur if a transmitter is activated while the pushbutton wires are shorted.
- * Six flashes occur and the motor stops if the operator motor runs more than 30 seconds.





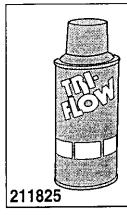
RAISE AND LOWER
THE DOOR BY HAND

CHECK FOR DOOR STICKING BINDING OR RUBBING



POSITION DOOR HALFWAY UP

VERIFY THAT THE DOOR BALANCES



Tri-Flow Lubricant

Factory recommended lubricant for operator chain, door hardware and screw drive trolleys. (4 oz. aerosol can.)

OPERATOR ACCESSORIES



1-Channel Standard MegaCode Transmitter

Controls single garage door operator. 318 MHz

1-Channel Delta-3 Transmitter

Controls single garage door operator. 310 MHz



MT-1



1-Channel Deluxe MegaCode Transmitter

Controls single garage door operator MegaCode 318 MHz DX 433 MHz



Controls two devices. 310 MHz





2-Channel Deluxe MegaCode Transmitter

Controls two devices. The top button can be used to control a third device. MegaCode 318 MHz DX 433 MHz

MiniTransmitter

Designed to be used with a keychain. Activates one device. 310 MHz



MINI-T



Act-21 Mini **Transmitter**

Designed to be used with the keychain provided. Activates one device. 318 MHz

Vault Door Cable Release

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



VDCR



Act-22 Mini Transmitter (Two Button)

Designed to be used with the keychain provided. Activates two devices. 318 MHz

Key Lock Switch

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



KLS



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. 1,000,000 possible codes.

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.

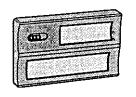


DoorSentry Kit

The DoorSentry emitter constantly sends a narrow infrared beam to the detector which will detect an obstacle in the path of the door. The operator will then stop and reverse the direction of travel of the door.

Wall Station

Independently controls garage door operator and lights. Vacation switch disables radio for added security. 3 function - 2 wire XX Operator Only!



XX-WS

LIMITED WARRANTY

THE WARRANTOR WARRANTS THAT: The motor on this operator is warranted to the consumer against defects in material and workmanship for Ten years from the date of purchase. The drive train will be free from defects in materials and/or workmanship for a period of:

MODEL XX325 - One year MODEL XX333 - Three years MODEL XX350 - Five years

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 to first retail buyers of new devices. The product must be used in complete accordance with Moore-O-Matic's instructions for installation, operation and care.

Warrantor will repair, or at its option, replace, any device it finds that requires 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 Return Product Authorization Number (RPA#). This authorization number can be obtained by calling the Technical Services Group at 1-800-421-1587. This number should be clearly written on the outside of the box to speed the processing of your return. Returned product without an RPA# may be refused. Repaired products will be returned via prepaid freight.

The consumer must contact the warrantor at the phone number listed above 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 this 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 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, and you may also have other rights which vary from state to state.

IMPORTANT !!!

Linear radio controls provide a reliable communications link and fill an important need in portable wireless signaling. However, there are some limitations which must be observed.

- * For U.S. installations only: The radios are required to comply with FCC Rules and Regulations as Part 15 devices. As such, they have limited transmitter power and therefore limited range.
- * A receiver cannot respond to more than one transmitted signal at a time and may be blocked by radio signals that occur on or near their operating frequencies, regardless of code settings.
- * Changes or modifications to the device may void FCC compliance.
- * Infrequently used radio links should be tested regularly to protect against undetected interference or fault.
- * A general knowledge of radio and its vagaries should be gained prior to acting as a wholesale distributor or dealer, and these facts should be communicated to the ultimate users.



Quality Garage Door Operators with Linear Radios