

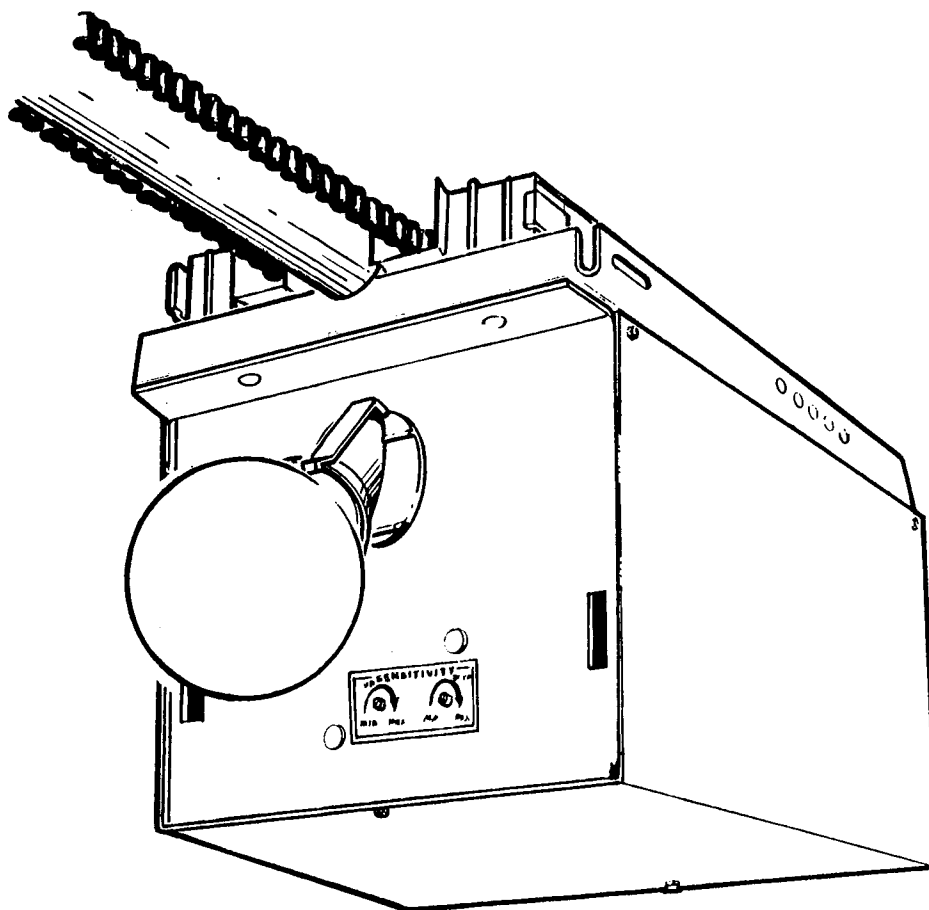
# MODEL 450A

## GARAGE DOOR OPENER SYSTEM



# INSTALLATION INSTRUCTIONS AND OWNERS MANUAL

READ THESE INSTRUCTIONS CAREFULLY  
BEFORE INSTALLING , OR USING THIS OPENER.



### WARNING

DO NOT allow children to play in area of door or with radio control transmitter or with push button control.

### WARNING

Door is under extreme spring tension. Repairs and adjustments, especially to cables and spring assembly, can be hazardous and can result in severe personal injury. Repairs and adjustments should be performed ONLY by QUALIFIED DOOR SERVICE PEOPLE.

After installation is completed, place instructions in close proximity to garage door.

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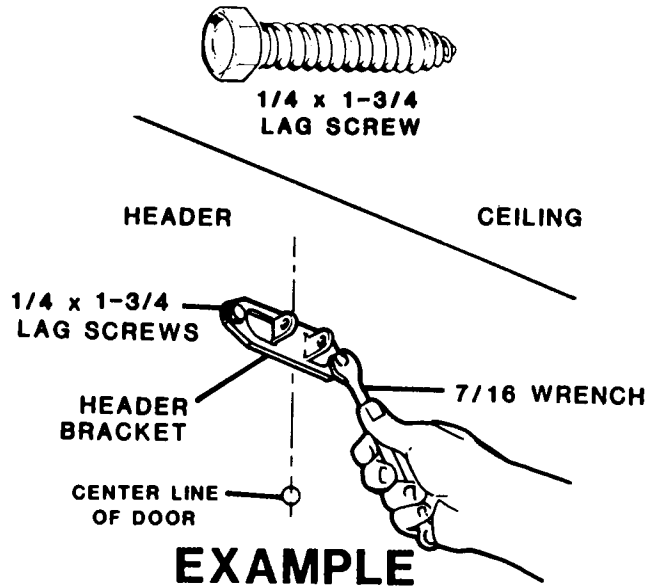
READ THROUGH MANUAL  
BEFORE BEGINNING ASSEMBLY.

# HOW TO USE THIS BOOK

1. Use tools indicated by silhouettes at top of instruction.
2. Perform the instruction according to the words and illustration.
3. Put a check in box after completion of instruction.
4. Proceed to next step.

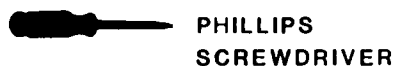
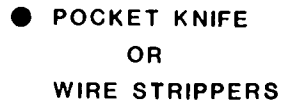
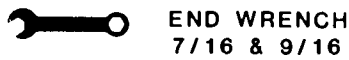


Secure header bracket to header.



# TOOLS NEEDED

You will need the tools shown below to assemble and install this opener.



# GENERAL INSTALLATION NOTES

## Preparing Door for Opener

The following procedures must be performed before opener can be installed. Failure to complete the following procedures can cause opener failure and/or hazardous conditions which could cause personal injury.

1. Check working condition of door. Door should operate freely without sticking or binding, and should not have to be held up or down. Lubricate door rollers and hinges with SAE 30 wt. oil.
2. If any part of the door is worn or broken, call a qualified door service person to repair it before the opener is installed.

### WARNING

Door is under extreme spring tension. Repairs and adjustments, especially to cables and spring assembly, can be hazardous and can result in severe personal injury. Repairs and adjustments should be performed only by qualified door service people.

3. If door is equipped with a locking device, make it inoperative by permanently securing the locking bar in an unlocked position.

### CAUTION

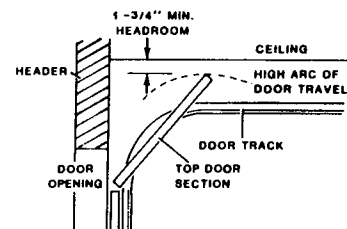
Remove any lift or pull rope to avoid entrapment by rope when the door is opened.

### CAUTION

It is recommended that the top section of door be strutted on doors 16 feet wide or larger.

### CAUTION

This opener cannot be installed on garage doors where the headroom is less than 1-3/4". Headroom is the distance between the ceiling and the high arc of the door's travel.



### WARNING

This opener is not designed for use with one piece doors.

### CAUTION

DO NOT USE lighted-type pushbutton. See troubleshooting chart, page 17.

### CAUTION

Opener must be properly grounded to prevent personal injury and damage to opener components.

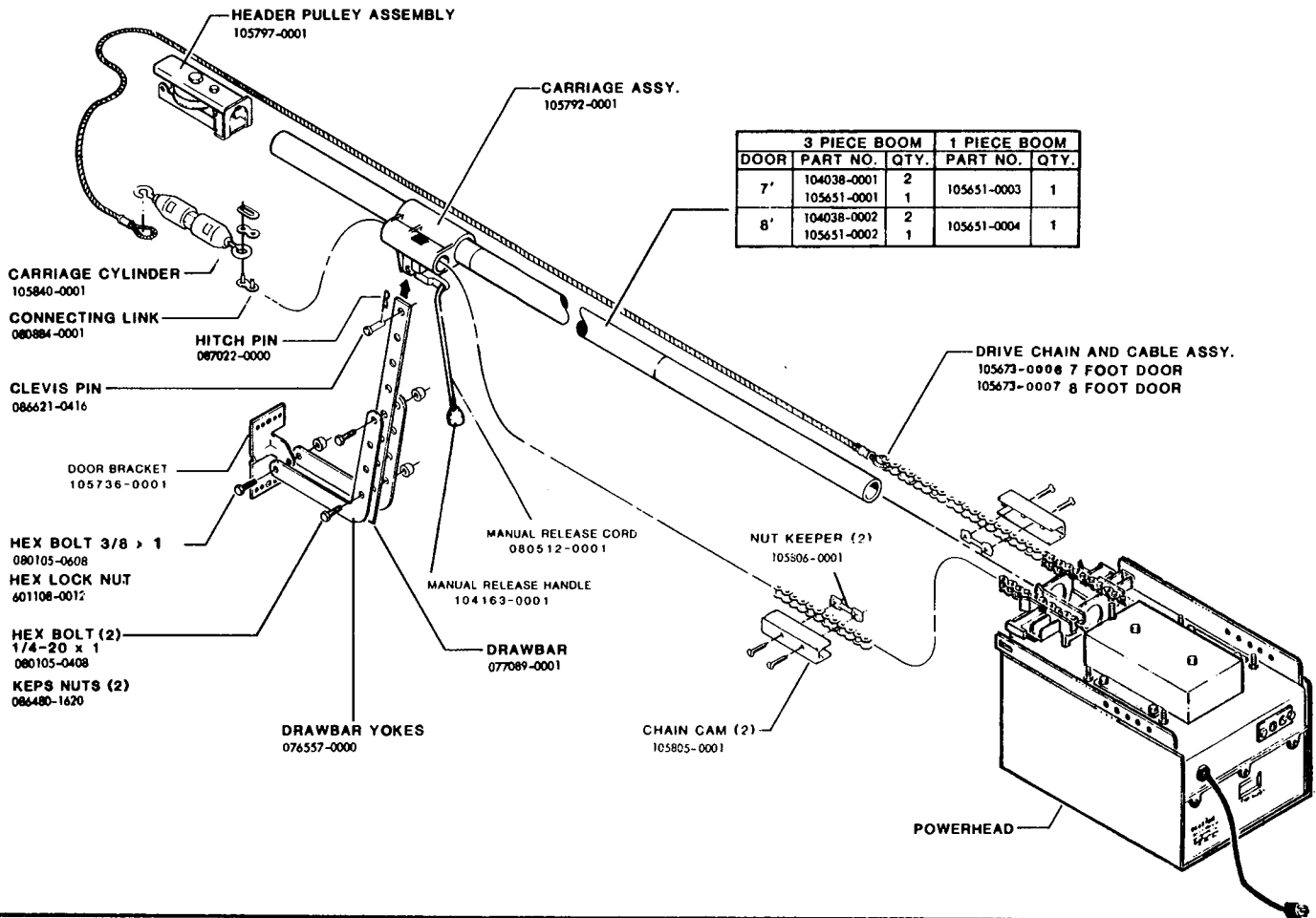
### WARNING

**DO NOT CONNECT ELECTRICAL POWER TO UNIT UNTIL INSTRUCTED TO DO SO.**

### IMPORTANT

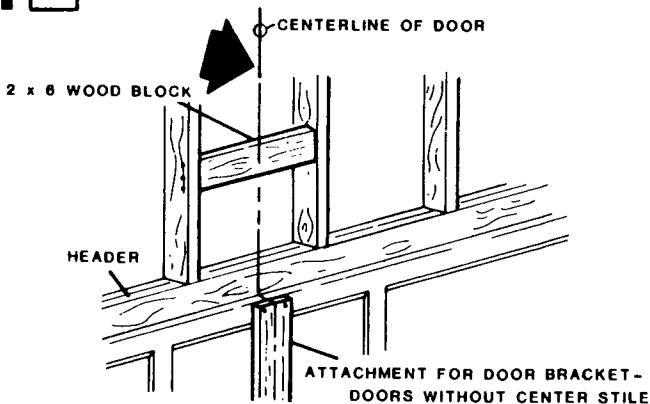
For proper and safe use of the installed opener, carefully read the the Owners Information beginning on Page 15.

# ASSEMBLY DRAWING



## INSTALLATION

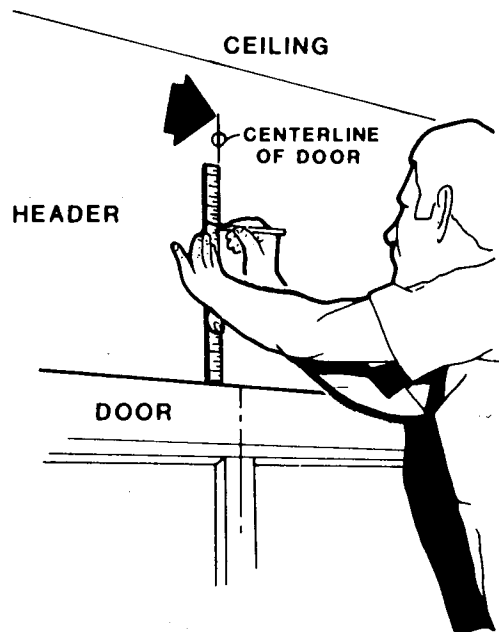
1  Measure width of door to determine center.



If header does not have suitable woodwork where header bracket will be installed, then such will have to be made. It is suggested that a wood 2"x6" be secured to nearby existing woodwork.

If door does not have a center stile or suitable material for attaching door bracket then door must be reinforced with wood or steel at this mounting point. This reinforcing member must attach to both top and bottom rail of the top section. This must be used on fiberglass and thin metal doors.

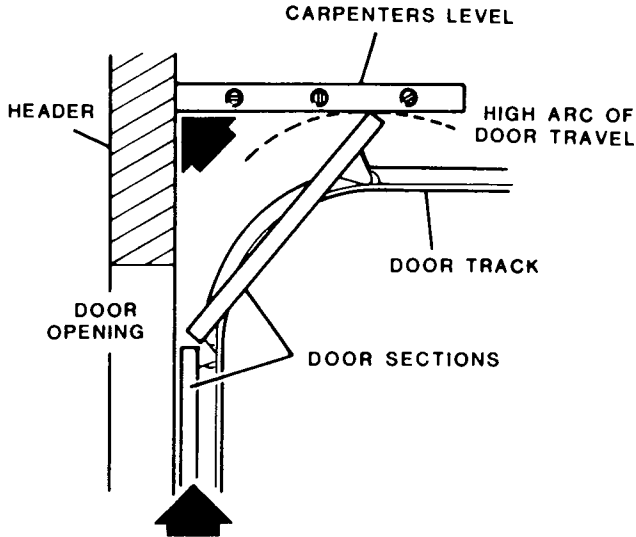
2  Mark center line on door and header.



# INSTALLATION

**3**  2 3 1

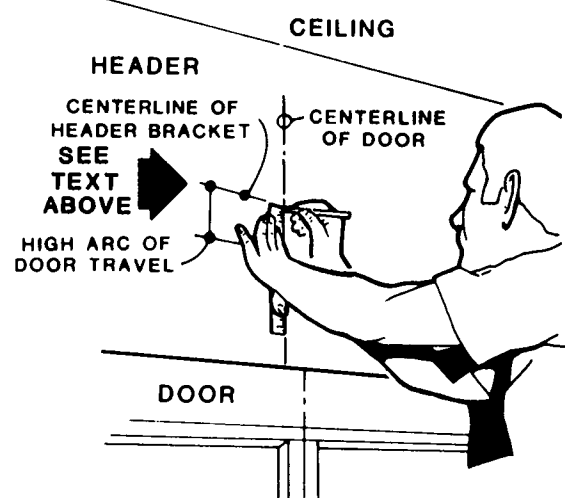
Raise door until top section reaches its highest arc of travel. Mark header on center line at point where level touches header.



IT IS RECOMMENDED THAT OPENER BE MOUNTED A MINIMUM OF 7 FEET ABOVE FLOOR.

**4**

Mark horizontal center line of header bracket  $5/8$ " min. to  $2-1/2$ " max. above high arc of door travel. Use lowest figure permitted by door counterbalance.

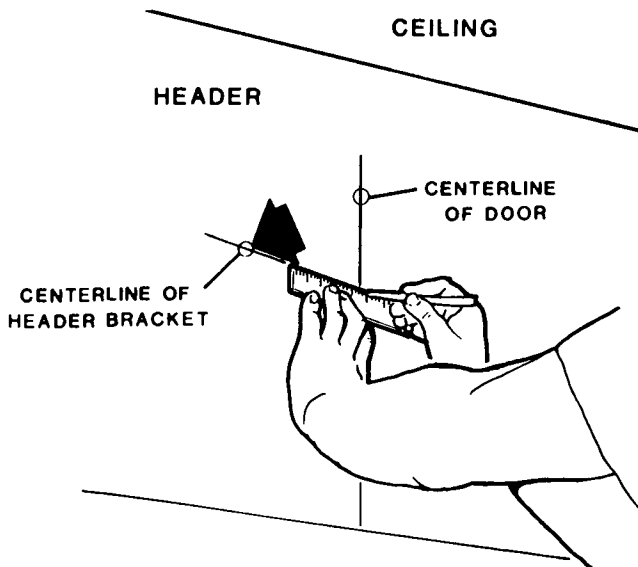


**NOTE**

$1-3/4$ " minimum head room required above high arc of door travel.

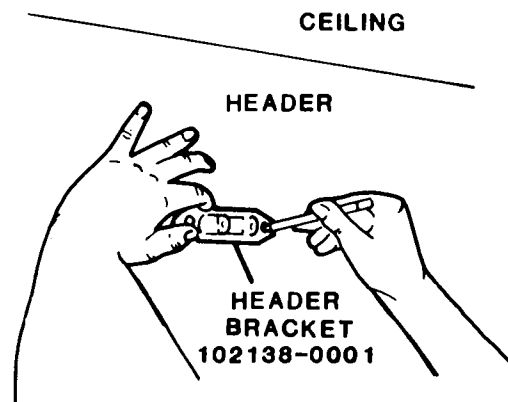
**5**

Mark horizontal center line of header bracket.



**6**

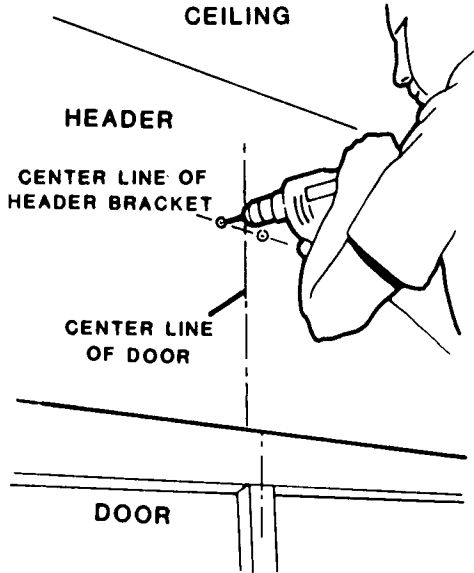
Position header bracket on center line and mark mounting hole locations on center line.



# INSTALLATION

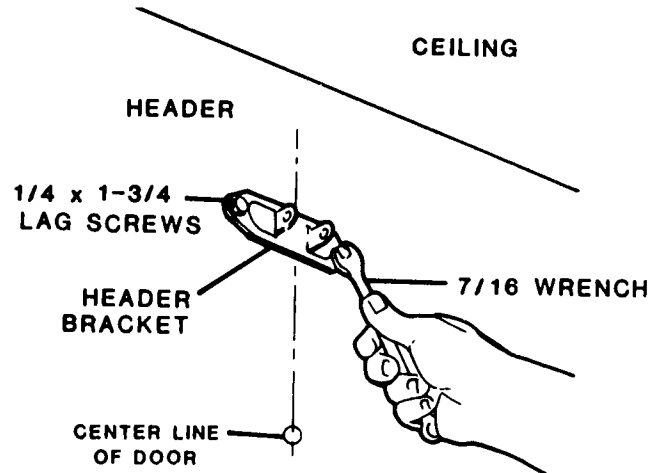
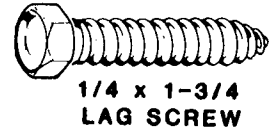
7 

Drill 5/32" diameter holes at marked locations.



8  7/16

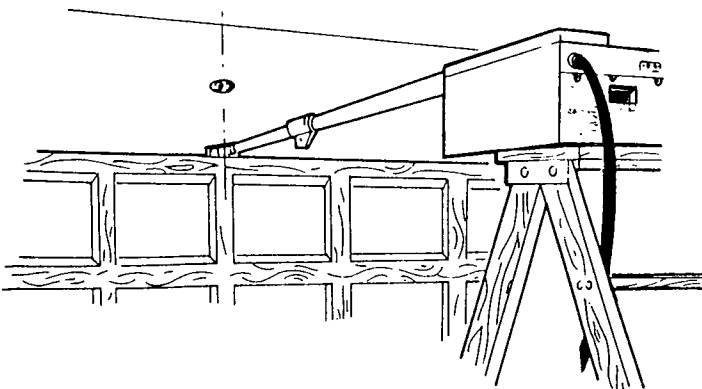
Secure header bracket to header.



9  A

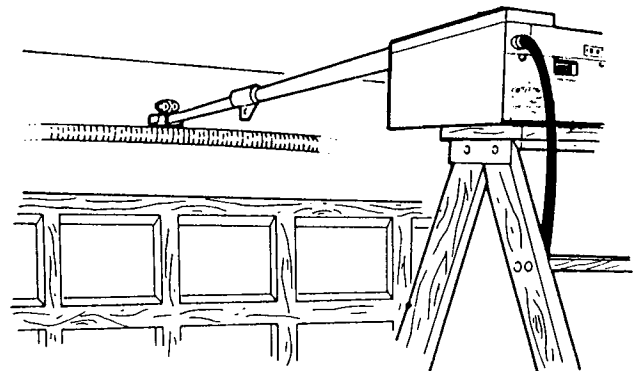
## EXTENSION SPRING DOOR

Rest header end of boom on top edge of top door section and powerhead on top of step ladder.



## TORSION SPRING DOOR

Rest header end of boom on torsion spring and powerhead on top of step ladder.

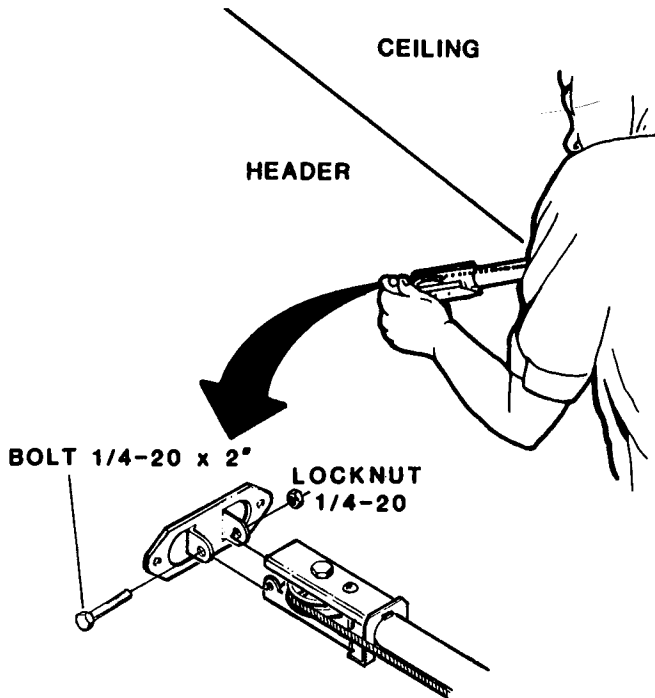


OR

# INSTALLATION

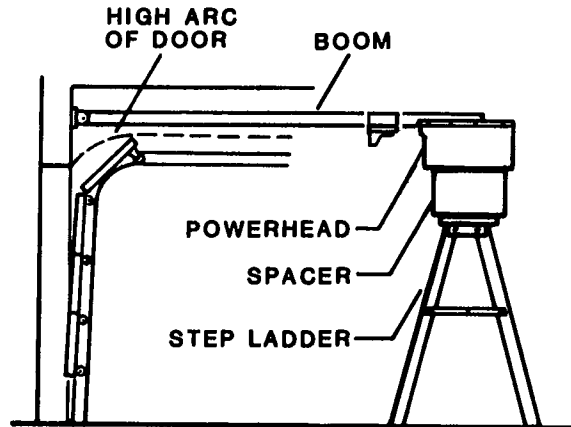
**10**   7/16

Attach header pulley assembly to header bracket.



**11** 

Raise powerhead additionally if required so that boom is above high arc of door when opened.

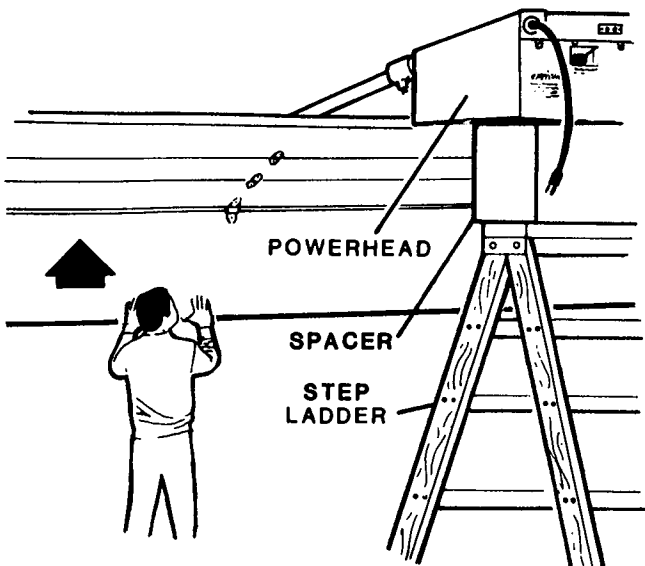


**NOTE**

Carriage should be located near powerhead when raising opener.

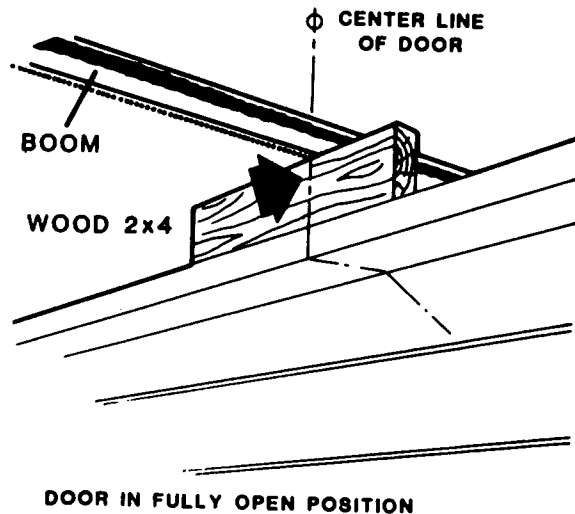
**12** 

Raise door until fully open.



**13** 

Position a wood 2x4 on edge between top door section and boom. Use center line of door to correctly align boom.



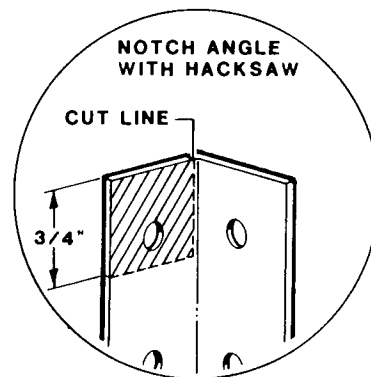
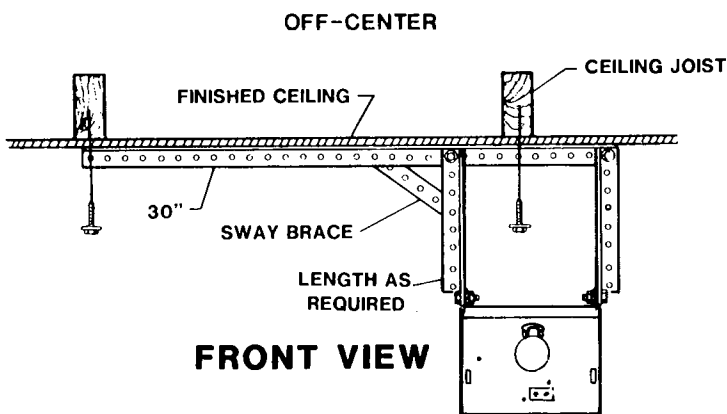
# INSTALLATION



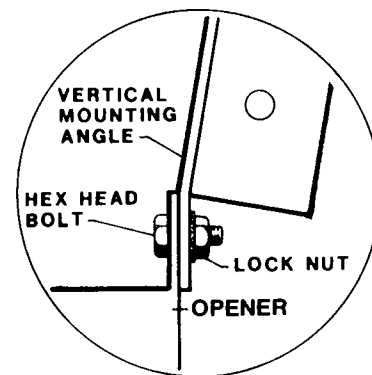
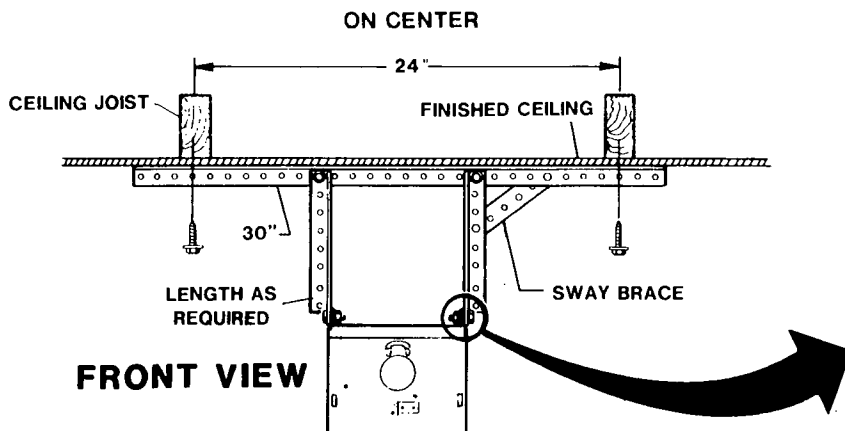
1. Shown are examples of various installation configurations. Determine the configuration which best suits your requirements.
2. If necessary, span ceiling joists with wood 2 x 4's sufficient enough to support opener.
3. Hold ceiling mounting angle in mounting position. Using holes in angle as a guide, drill 5/32" diameter pilot holes in ceiling joists or 2 x 4 framing.
4. Using 1/4" x 1-3/4" lag screws, secure ceiling mounting angle to ceiling joists or 2 x 4 framing.
5. Notch opener end of vertical angles (Detail A).
6. Using 1/4"- 20 x 1/2" hex head bolts and lock nuts, secure angle brackets to opener.
7. Using 1/4"- 20 x 1/2" hex head bolts and lock nuts, secure vertical mounting angles to ceiling joists or 2 x 4 framing. Vertical angles may be bent at notch if necessary (Detail B).

**NOTE**  
IT IS RECOMMENDED THAT OPENER BE MOUNTED  
A MINIMUM OF 7 FEET ABOVE FLOOR.

## LENGTHWISE CEILING JOISTS



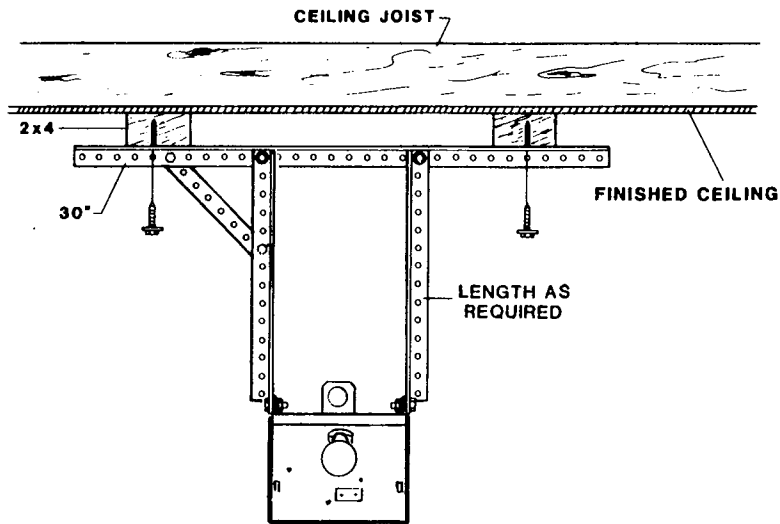
## LENGTHWISE CEILING JOISTS



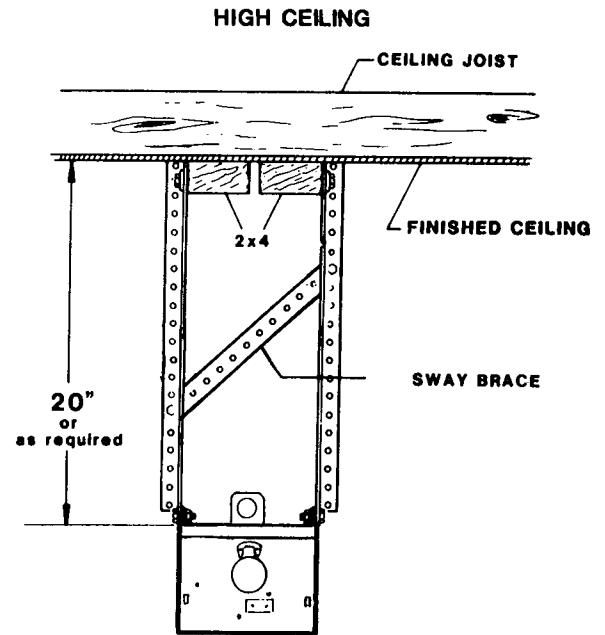


# INSTALLATION

## CROSSWISE CEILING JOISTS

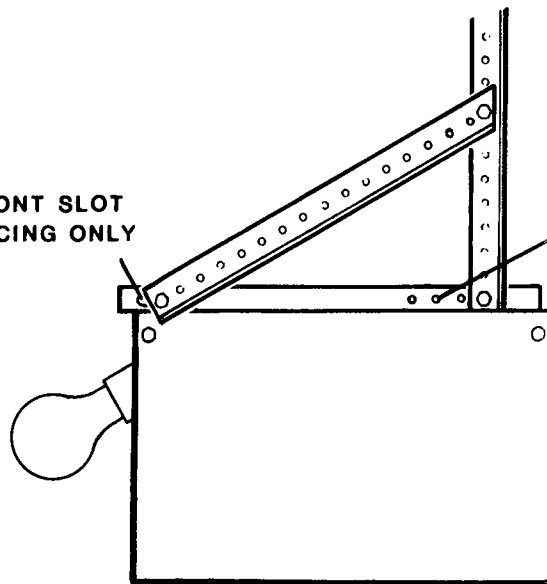


## CROSSWISE CEILING JOISTS



USE FRONT SLOT  
FOR BRACING ONLY

USE HOLES FOR  
MAIN SUPPORT

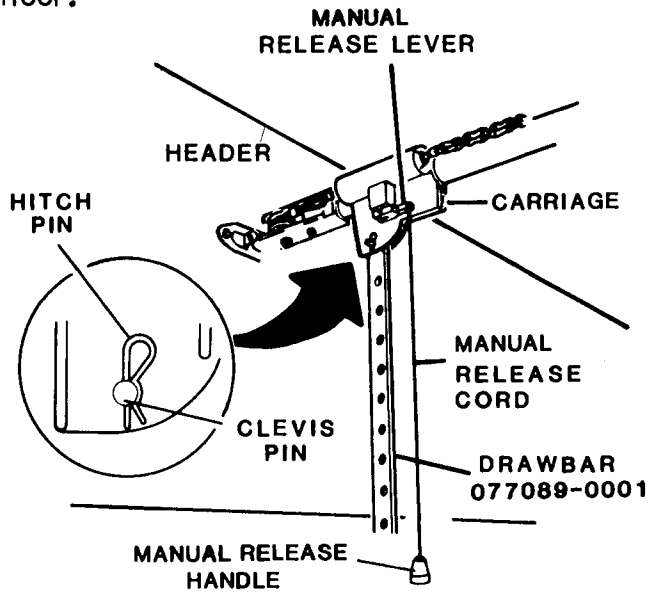


Brace powerhead as shown for best performance

# INSTALLATION

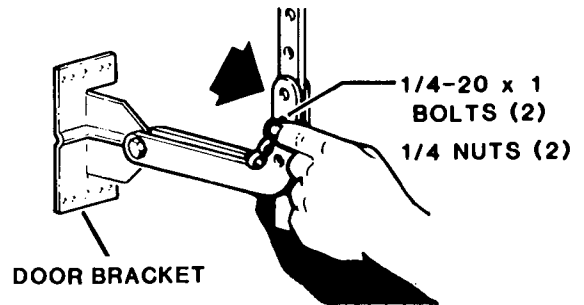
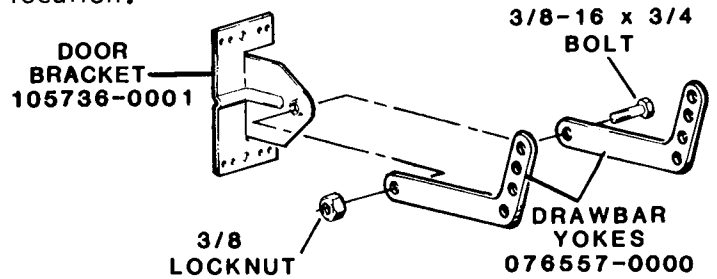
## 15

Plug opener cord into outlet and run carriage toward door using radio transmitter for control. Connect drawbar to carriage using clevis pin and hitch pin. Route pull cord through manual release lever on carriage and locate manual release handle approximately 6 feet above floor.



## 16 7/16 & 9/16

Attach yokes to door bracket. Tighten locknut but do not compress yokes to bracket. Yokes MUST move freely. Temporarily bolt yokes to drawbar to permit check on carriage location.

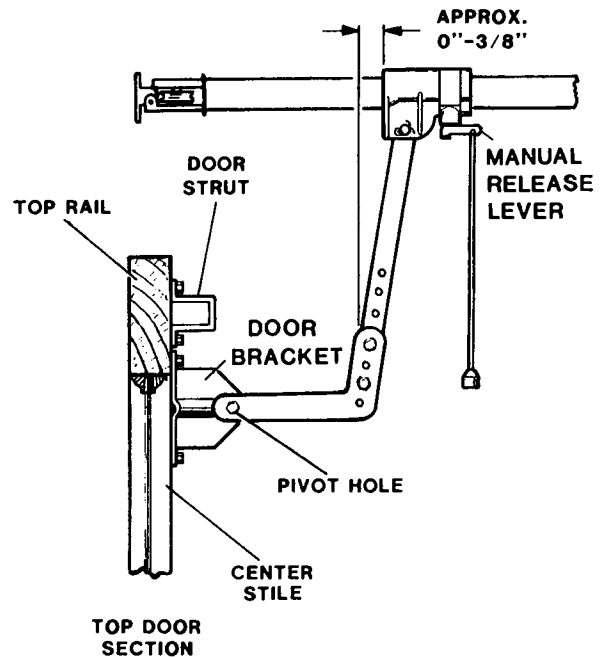


## 17 7/16

Position door bracket against door to check drawbar angle. Drawbar should be at slight angle from door (as shown). If necessary re-adjust down limit switch (see page 14) to obtain correct drawbar position. Door bracket pivot hole should be in line with top fixture roller. If necessary remove yoke bolts and readjust. Secure yoke bolts to drawbar.

### NOTE

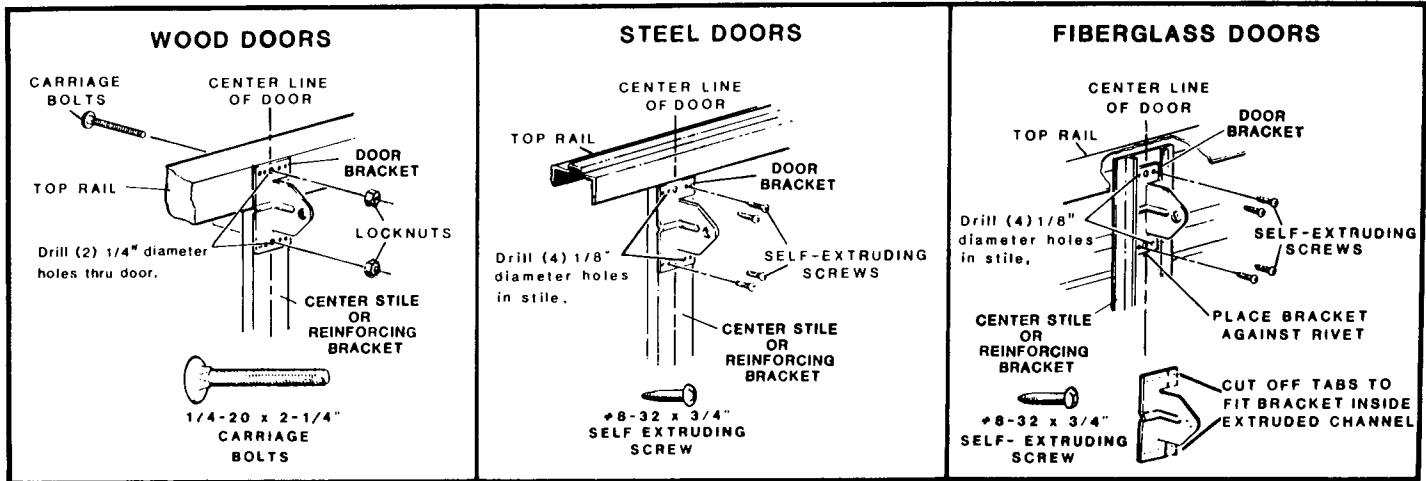
If door strut interferes with mounting of door bracket, move bracket below strut. DO NOT CUT OR MODIFY STRUT IN ANY WAY. Refer to page 11 for attachment of drawbar.

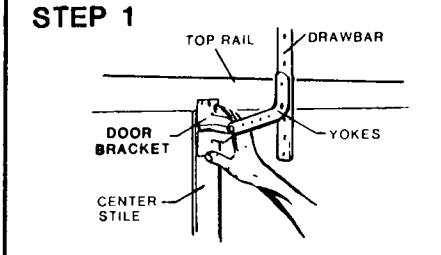
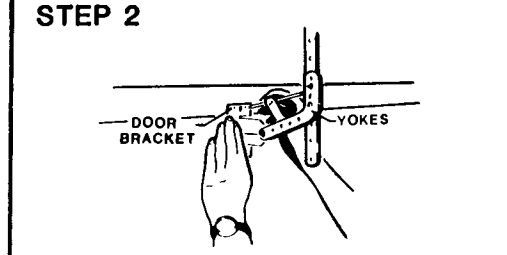
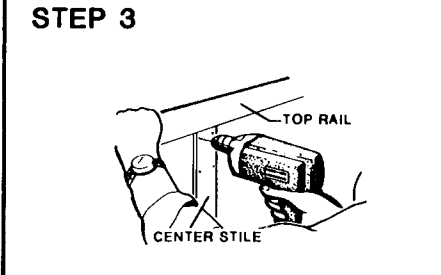
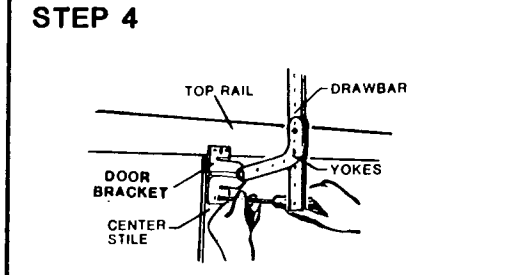


# INSTALLATION

18    7/16

The illustrations below depict installation of door bracket, P/N 105376-0001, on 3 types of doors. Install bracket in the appropriate manner according to door type.



<ol style="list-style-type: none"> <li>With door bracket and yokes attached to drawbar, swing assembly into place against door.</li> <li>Mark mounting hole locations. Refer to wood, steel, or fiberglass door details above.</li> <li>Drill appropriate size mounting holes.</li> <li>Attach door bracket to door using appropriate hardware.</li> </ol>	<p><b>STEP 1</b></p>  <p>TOP RAIL</p> <p>DRAWBAR</p> <p>DOOR BRACKET</p> <p>YOKES</p> <p>CENTER STILE</p>	<p><b>STEP 2</b></p>  <p>DOOR BRACKET</p> <p>YOKES</p>
	<p><b>STEP 3</b></p>  <p>TOP RAIL</p> <p>CENTER STILE</p>	<p><b>STEP 4</b></p>  <p>TOP RAIL</p> <p>DRAWBAR</p> <p>DOOR BRACKET</p> <p>YOKES</p> <p>CENTER STILE</p>

19 

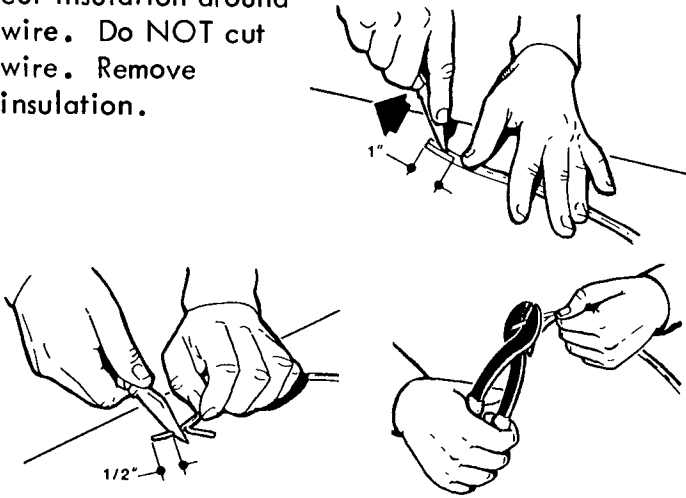
## CHECKLIST

- |  |  |
|--|--|
| <input type="checkbox"/> Header bracket secure.                                      | <input type="checkbox"/> Drawbar to yoke bolts tight.                              |
| <input type="checkbox"/> Door bracket-yoke pivot bolt secure, but not too tight.     | <input type="checkbox"/> Drive chain-cable is tight (tensioned correctly).         |
| <input type="checkbox"/> Header pulley assembly pivot bolt secure but not too tight. | <input type="checkbox"/> Carriage engagement cylinder is engaged with carriage.    |
| <input type="checkbox"/> Hanging bracket bolts tight.                                | <input type="checkbox"/> Make fine adjustments on "UP" limit switch (See page 14). |

# WIRING

## 20

Separate end of push button wire. Carefully cut insulation around wire. Do NOT cut wire. Remove insulation.



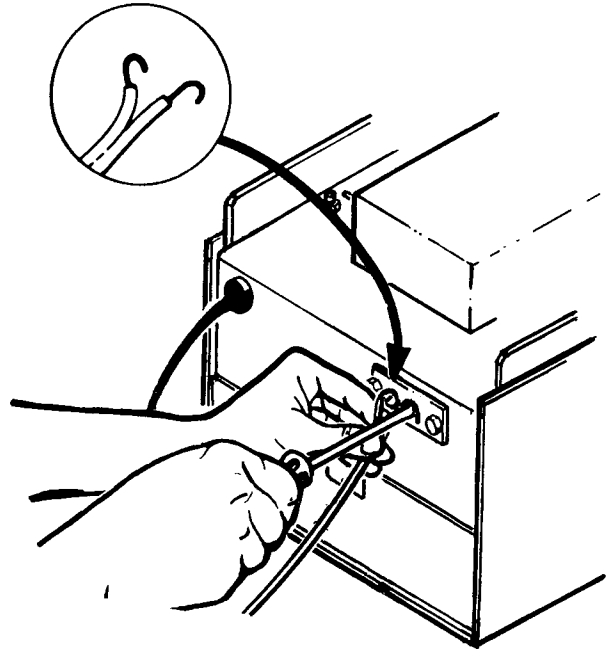
### NOTE

Wire strippers are recommended for removing wire insulation.

Use only wire supplied with the opener or wire of same type and gauge.

## 21

Shape wire leads like a hook, and connect leads to opener terminals.



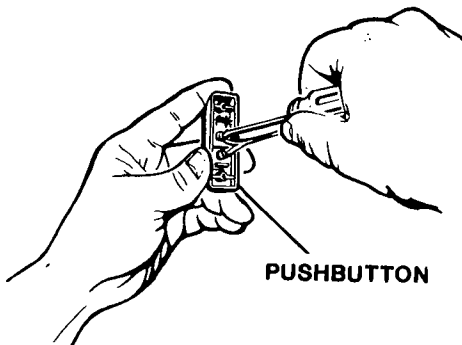
## 22

Route push button wire from powerhead along ceiling to garage entrance door. Staple wire as necessary to prevent entanglement or contact with moving objects.

### CAUTION

Be careful not to pierce wire insulation with staples.

Shape wire leads like a hook, and connect leads to push button terminals.



## 23

Install push button on wall near garage entrance door approximately six (6) feet from floor.

### PUSHBUTTON OPERATION

**TO START OPERATOR:**  
Press pushbutton 1 time. (Door will automatically stop in "fully opened" or "fully closed" position.)

**TO STOP OPERATOR:**  
Press pushbutton 1 time.

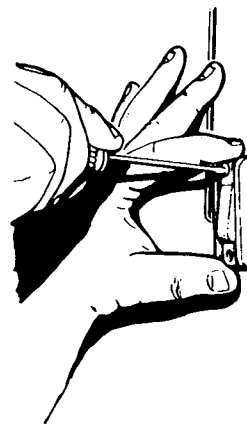
**TO RESTART OPERATOR:**  
Press pushbutton 1 time. (Door will move in opposite direction.)

### CAUTION

To reduce the risk of injury to persons, operate door only when fully visible, properly adjusted, and free of all obstructions. Do not permit children to play in the area of the door. See instruction manual for proper operation. NOTE: To detach the operator from the door, grasp basement rope and pull.

105813-0001

**PUSH BUTTON  
OPERATION DECAL  
105813-0001**



APPROX. 6'-0"

FLOOR

### CAUTION

Button **MUST** be installed out of reach of children.

Peel backing off "PUSHBUTTON OPERATION" decal and attach to wall near pushbutton.

# WIRING

## 24 □

### WARNING

It is important that electrical power to opener be off when powerhead cover is removed. Electrical power must remain disconnected while making electrical connections and limit switch adjustments. Keep hands and objects clear of powerhead if electrical power is re-connected with cover off.

Opener is equipped with a factory installed power cord and must be plugged into a 115 volt, 60 hertz, grounded electrical outlet.

### CAUTION

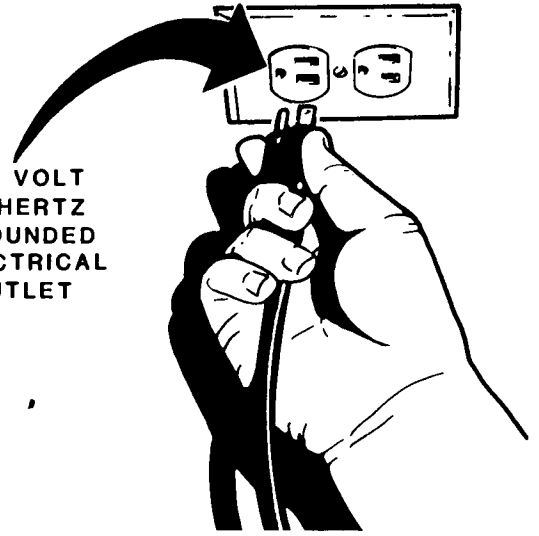
OPENER MUST BE PROPERLY GROUNDED TO PREVENT PERSONAL INJURY AND DAMAGE TO THE OPENER COMPONENTS.

If a convenient electrical outlet has to be installed it is recommended that such work be performed by a licensed electrician. Use of an extension cord is NOT RECOMMENDED.

### NOTE

If extension cord is required for temporary testing and adjustment, use only 3 wire (grounded) with a minimum 10 amp rating. This will assure proper operation of electronic system.

115 VOLT  
60 HERTZ  
GROUNDED  
ELECTRICAL  
OUTLET



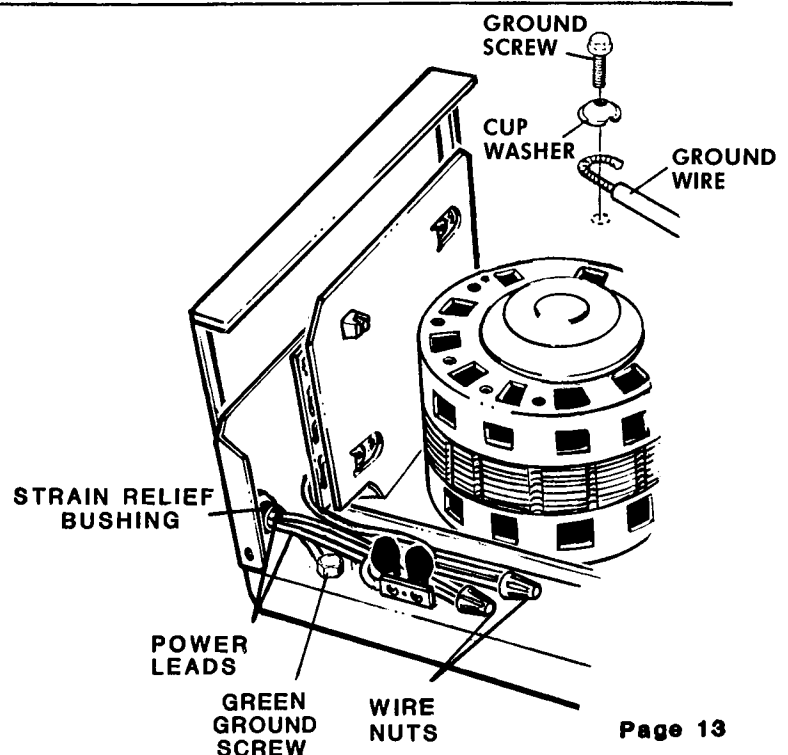
When installing a convenient electrical outlet, it is suggested that an electrical switch be installed to facilitate emergency power cutoff.

## 25 □

If local electrical codes require permanent wiring, proceed as follows:

Disconnect opener from any power source.

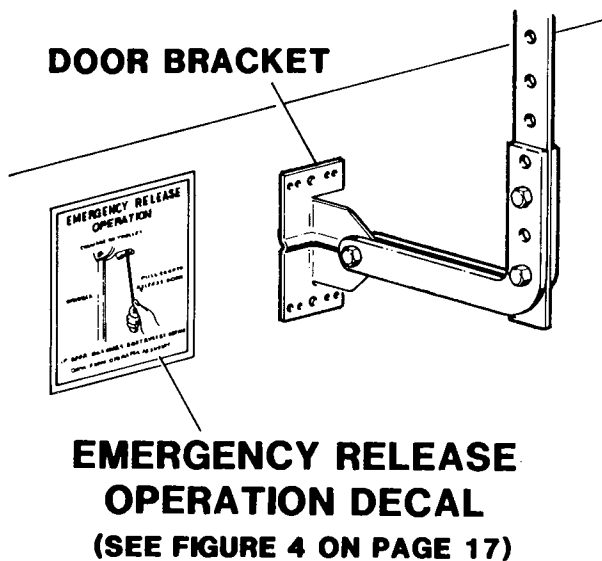
1. Remove opener cover (6 screws), two (2) wire nuts and disconnect green ground wire.
2. Remove power cord and strain relief bushing.
3. Connect conduit to opener frame through the 7/8" diameter hole.
4. Use appropriate wire connectors and connect black power wire to the two (2) black wires (in opener) and white power wire to the three (3) white wires. **CONNECT GREEN GROUND WIRE TO GREEN GROUND SCREW IN OPENER USING CUP WASHER. (Provided in Hardware Bag.) MAKE SURE CONNECTION IS SECURE.**
5. Reinstall opener cover.



# OPERATION AND ADJUSTMENT

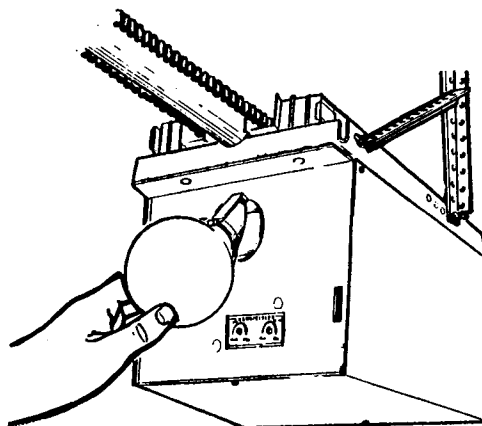
## 26 □

Remove protective backing from EMERGENCY RELEASE OPERATION decal and install on door, near door bracket.



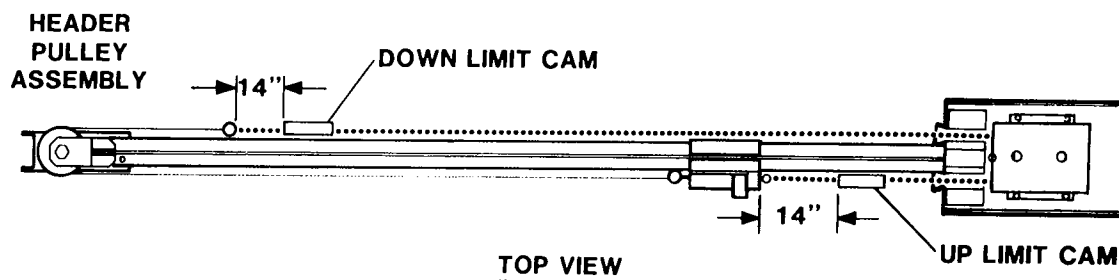
## 27 □

Install light bulb (60 watt maximum).



## CHAIN CAM ADJUSTMENT

Door travel is limited by the placement of the chain limit cams. Moving a chain cam one chain link, varies carriage movement by 1/2 inch (and thus affects door travel proportionately). Use the transmitter to control the opener when making final adjustments.



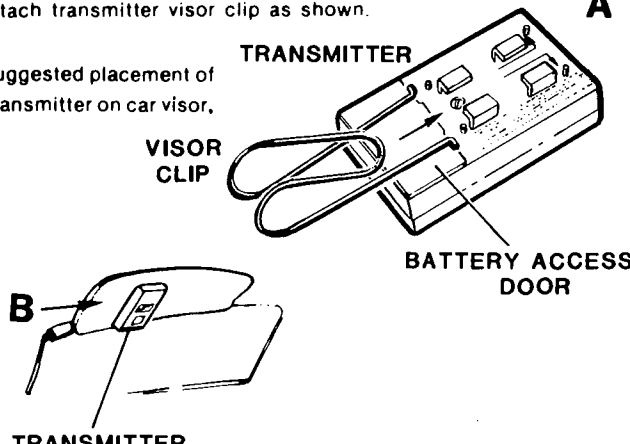
## DOWN TRAVEL ADJUSTMENT

Using transmitter, run carriage to down position. Check position of carriage and, if necessary, readjust so that the drawbar will be almost vertical when the door is closed. To readjust, use transmitter to move carriage approximately 2 feet in the open direction, stop, then adjust chain cam. Using transmitter, again run the door to closed. Check to see that the door is sealing properly to floor. Repeat procedure if further adjustment is needed.

## UP TRAVEL ADJUSTMENT

Using transmitter, run carriage to the up position. Check door position and readjust chain cam as necessary to stop door just after clearing the top of the door opening. Do not allow the door to open beyond this point.

# OWNERS INFORMATION - OPERATION/ADJUSTMENT

Transmitter Visor Clip Mounting	General Information
<p>A. Attach transmitter visor clip as shown.</p> <p>B. Suggested placement of Transmitter on car visor.</p>  <p>Labels: TRANSMITTER, VISOR CLIP, BATTERY ACCESS DOOR, TRANSMITTER.</p>	<p>If you have two transmitters and one does not work it is reasonable to assume the problem is in the transmitter. However, when you have one transmitter and it does not work, the problem may be in the receiver. When returning controls to the factory for service, it is always recommended that you send the receiver and all transmitters so they can be serviced and tested as a set.</p> <p>When writing to the factory for assistance or when returning a control for repair be sure to include the following information:</p> <ol style="list-style-type: none"> <li>1. RADIO CONTROL MODEL NO.</li> <li>2. NUMBER OF TRANSMITTERS</li> <li>3. DOOR OPENER MODEL NO. AND MANUFACTURER'S NAME</li> <li>4. DATE UNIT WAS INSTALLED</li> <li>5. NATURE OF DIFFICULTY</li> </ol> <p>See Page 19 for address.</p>

## NOTE

For maximum Radio Control performance on garages with two or more openers, it is recommended that the Radio Frequency(RF) of each unit be different. For example: 380 --- RF on one opener with 360 --- on the second opener. (Refer to sticker on back of transmitter).

Your Radio Control System	How To Change Radio Coding
---------------------------	----------------------------

Your Tertiary Digital Control is designed to give years of trouble-free service. The concept of Digital Control allows you to easily change the coding of your control, should you experience "phantom" operation. Phantom operation is the inadvertent opening or closing of your garage door by an outside signal source other than your own hand-held transmitter.

Should you experience this inadvertent operation, follow these simple steps to change the coding of your transmitter(s) and receiver. We recommend you do not change the coding UNLESS you are experiencing "phantom" operation.

3. To change the code (see Fig. 2), simply change the position of one or more of the code switches on the Receiver and Transmitter(s) circuit board. PLEASE NOTE: The code switches (three position) settings of the Receiver and Transmitter(s) must match each other. EXAMPLE: If code switch No. 1 is "+" in the Receiver, code switch No. 1 must be "+" in the Transmitter(s), and so on.

4. If you have purchased only one Transmitter and you wish to purchase a second one, specify the frequency and code found on the white sticker on the back of the Transmitter or Receiver case.

### How To Change Radio Coding

1. Open transmitter access door as shown in Figure 1.

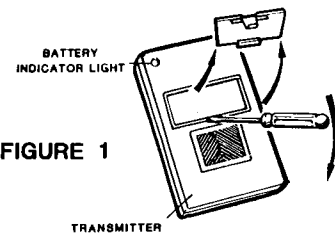


FIGURE 1

Insert small screwdriver in code switch access door slot and snap it out.

2. Access code switch on opener through opening on back of opener powerhead.

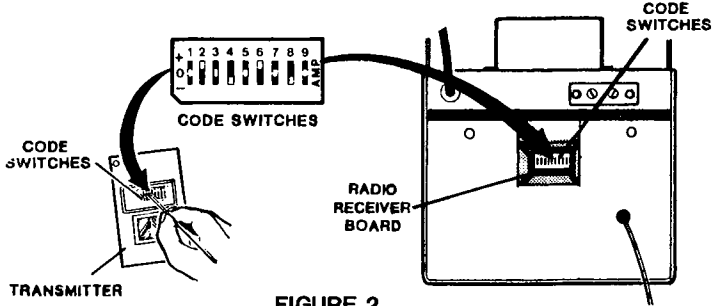


FIGURE 2

**EXAMPLE:**  
 Specify frequency number and letters when ordering a second transmitter.

FREQ 360-BBC  
 MFG. 880915

When you receive the new transmitter it will NOT work with your present Digital receiver if you have previously changed the code switches in the receiver. You MUST position the new Transmitter code switches to the same "+", "0", "-" sequence as your receiver code switches. Refer to Item 3 above.

5. Replace Code Access door on Transmitter.

**NOTE:**  
 Warranty on the Control will be nullified if service other than specified in the service hints is not performed at the factory.

# OWNERS INFORMATION- OPERATION/ADJUSTMENT

## Operation

On initial power application or after a power failure, the motor will always run first in the open direction when signaled from either the transmitter or wall push button.

Thereafter opener always restarts in the direction opposite its last run.

TO START OPENER: Press transmitter push button or wall push button 1 time.

TO STOP OPENER: Press transmitter push button or wall push button 1 time.

## Adjustment and Testing of the Reversing System

### WARNING

The proper adjustment and testing of the Reversing System is important for the safety of everyone who uses your door and opener. Failure to properly adjust and test may result in serious personal injury from a closing garage door. The System consists of an electronic device that senses motor slowdown due to increased load.

The Reversing System is a safety feature that reverses the door's travel and returns it to the fully open position if the door encounters an obstruction or resistance while closing. If this does not happen and the door cannot close completely, an additional back-up circuit will automatically reverse the motor within 30 sec. and fully open the door.

The reversing system is designed to operate in the closing direction after the motor has run one second, and until the door is closed completely.

The sensitivity of the reversing mechanism is controlled by the sensitivity adjusting shaft (See Fig. 3). The end of the shaft is marked to serve as a position indicator and can be rotated thru 3/4 turn between maximum and minimum sensitivity. Turning the shaft clockwise increases the sensitivity so as to require less resistance to reverse the door. The reversing system should be set for maximum sensitivity (indicator in green area of arrow or possibly yellow area) consistent with proper operation of the door. Do not decrease the sensitivity to compensate for a binding or sticking door (indicator in red area). If setting must be in red area, check door operation manually (See Item 9, Page 17).

As a final check, place a 1-1/2" thick board on the floor in the path of the door. When the door strikes this board it should reverse within 2 seconds and fully open. If it does not, check the door opener linkage, and opener for proper adjustment and operation.

For your safety, it is vital that the reversing mechanism be adjusted to perform properly. Check it every six months or call a professional door service person to check it for you. If, for any reason, the opener is not functioning properly, immediately disconnect the opener from the door (Emergency Release Operation) and do not reconnect until the problem is corrected.

## Adjusting "Up" Sensitivity

The "Up" sensitivity adjustment shaft is located beside the reversing sensitivity ("Down") adjustment. If the door encounters an overload while opening, the opener will stop only. Turning the "Up" sensitivity knob counter-clockwise will increase the amount of force necessary to stop the door's upward movement if it encounters an obstruction. Turning the shaft clockwise will decrease the force required to stop the door. Adjustment should be made just to the point that will allow the door to fully open.

### WARNING

If satisfactory operation of the door/opener cannot be achieved by following the instructions above, disconnect the opener from the door by pulling the emergency release rope (page 17), then check operation of the door alone. If door balance, rollers, and hinges operate smoothly, without striking or binding in the jambs, reconnect the opener and repeat the sensitivity adjustment procedure. If door/opener operation is still unsatisfactory, contact qualified door service personnel.

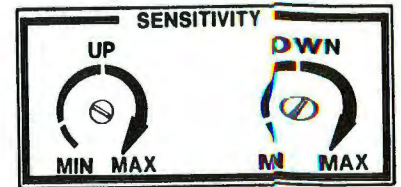


FIGURE 3



## GENERAL INFORMATION

- When "Emergency" or "Manual" operation of door is required, refer to "EMERGENCY RELEASE OPERATION" decal mounted on garage door.

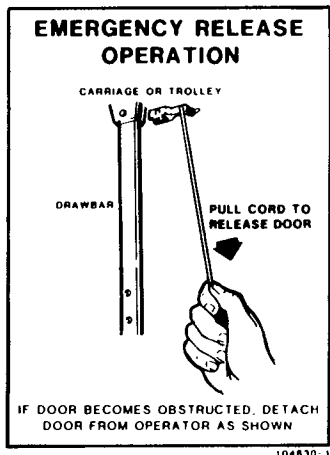


FIGURE 4

- To reconnect the opener, place the manual release lever in the horizontal position and run the opener. It will automatically reconnect.
- Operate door only when fully visible and clear of all persons and obstructions.

### WARNING

DO NOT allow children to play in area of door, or with radio control transmitter, or with push button control.

- If light does not work when opener is in use, replace light bulb. Use 60 watts max. To remove the lens, apply force to the sides of the lens with thumbs and pull out. Replace lens by inserting side retainer tabs into the holes and push in on the front of the lens to snap front tabs into place.
- Oil door hinges, rollers, and springs once each year with 30 weight oil. Wipe off any excess oil.
- Transmitter is equipped with a standard 9 volt battery. Do not substitute with any other voltage input.
- Opener motor is protected against burn-out by an internal protector which will stop motor if door is opened and closed too many times in succession, or if some other overload condition exists. If motor stops, allow it to cool 10-15 minutes, then press wall push button to resume operation.
- It is suggested that every 6 months door be disconnected from opener and manually operated. Door should open and close freely. If door does not operate freely, correct the problem.

### WARNING

Door is under extreme spring tension. Repairs and adjustments, especially to cables and spring assembly, can be hazardous and can result in severe personal injury. Repairs and adjustments should be performed ONLY by QUALIFIED DOOR SERVICE PEOPLE.

- For normal conditions, lubrication of opener rotating and sliding parts is not required. Motor is permanently lubricated.
- DO NOT lubricate boom. It is possible a film may develop inside the nylon carriage. This film may cause binding in freezing weather. To correct, spray boom, or either side of carriage, with a spray lubricant (WD 40, LIQUID WRENCH, etc.), run opener open and closed, then wipe boom clean.

## TROUBLESHOOTING GUIDE

This troubleshooting guide shows malfunction symptoms and their possible causes. Use it to help determine the cause of a problem. Disconnect power to the opener before opening the cover unless inside voltages have to be measured.

The microprocessor does a self test when power is connected to the opener, when the pushbutton or transmitter button is pushed and at the end of the light timing cycle, which is a 4 minute period after each motor run. The self test shows a system problem by flashing the opener lights.

SYMPTOM	POSSIBLE CAUSE
Opener light flashes at 1 second intervals for 7 flashes.	Safety System indicating fault or Safety Wiring open.
Opener light flashes at 1-1/2 second intervals for 5 flashes.	Short in wall pushbutton, lighted pushbutton or pushbutton circuit, or a failure in the radio output circuit.
Opener inoperative from transmitter or pushbutton when pressed BUT Opener light flashes at 1/2 second intervals for 15 flashes.	* Both limit switches are on (Door at one and the other defective). Defective opener wiring.
Door will not open using radio or pushbutton when pressed.	Short in wall pushbutton, lighted pushbutton or pushbutton circuit.
Door will not open using radio but will with pushbutton.	Defective transmitter, check battery in transmitter. * Defective radio receiver.
Door starts down, runs 1 second and reverses.	* Safety System indicating fault or Safety Wiring open.
Door runs down, hits floor and reverses within 1/2 second.	Improper adjustment of down limit switch. * Defective limit switch. * Defective circuit board.
Door starts down, runs longer than 1 second, then reverses.	Obstruction in doorway or roller pathway. Hard operating or defective door. Sensitivity control set too light.
Door raises, carriage hits powerhead.	Improper adjustment of up limit switch. * Limit switch defective. * Circuit board defective.
Door runs up, won't run down.	* Down limit switch or circuitry open. * Circuit board defective.
Door runs down, won't run up.	* Up limit switch or circuitry open. * Circuit board defective.
Door runs down, hits obstruction, does not reverse immediately, but reverses in 30 seconds.	* Safety System indicating fault or Safety Wiring open.
Motor runs, door will not open.	Broken chain, chain-cable, drive sprocket, or drive gear.
Door drives into floor and does not stop running until thermal shutdown.	* Stuck relay contact.
Door drives into powerhead and does not stop running until thermal shutdown.	* Stuck relay contact.
Door starts up, runs longer than 1 second, and then stops.	* Safety System indicating fault or Safety Wiring open.

\* Requires the assistance of a qualified repairman.

## TRANSMITTER SERVICE HINTS

### NATURE OF DIFFICULTY:

#### 1. Short Distance-

When Battery Condition Light is quite dim or begins to flicker, replace battery.

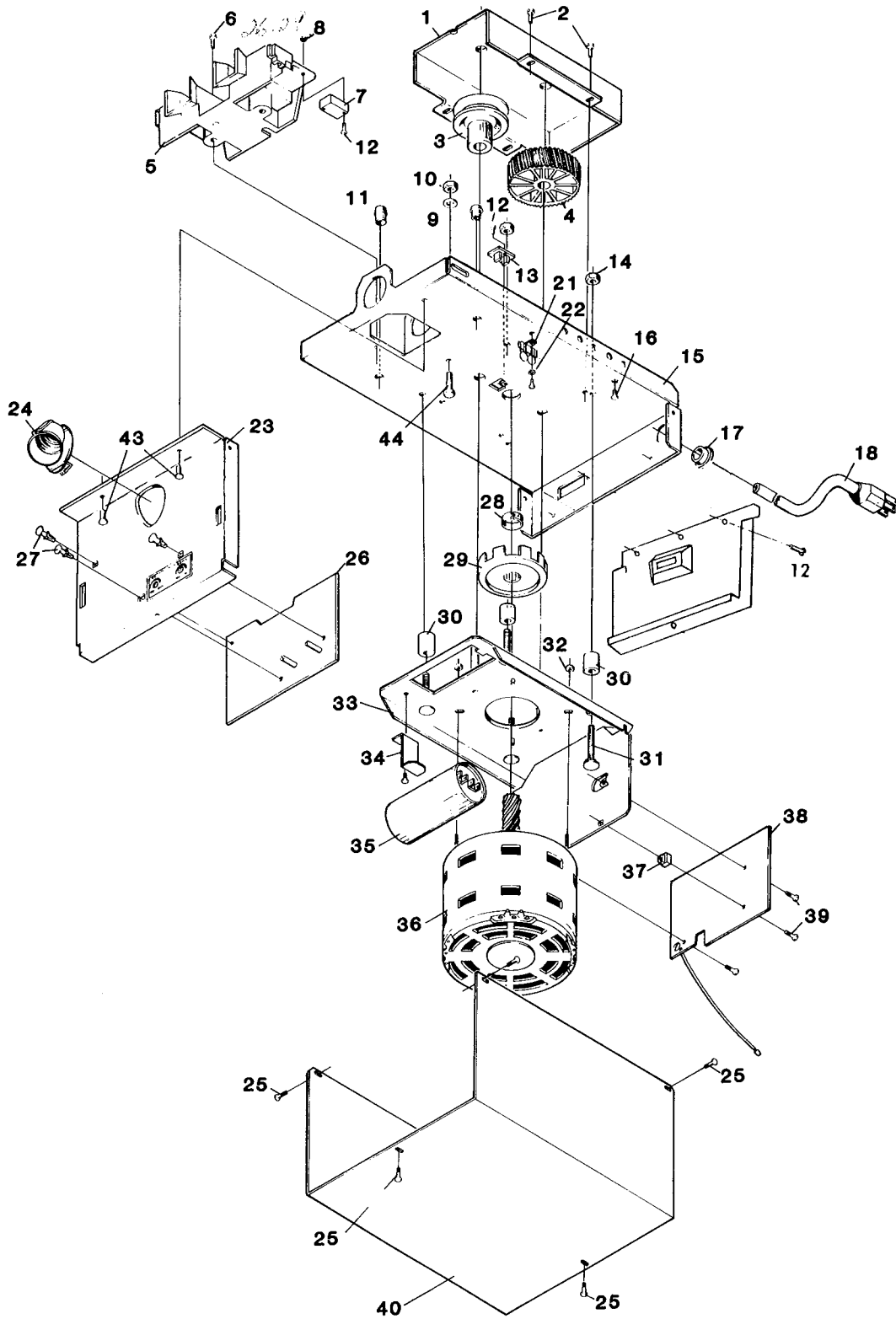
#### 2. Inoperative or Intermittent Operation-

A. Check Code Switches in transmitter or receiver.

B. When Battery Condition Light is quite dim or begins to flicker, replace battery.

C. Be sure battery connector makes good contact to battery terminals.

# ILLUSTRATED PARTS BREAKDOWN



## PARTS LIST

1.	107519-0001	Cover, Gear/Idler
2.	086575-0604	Screw, THDF #8-32 x 1/4"
3.	102103-0001	Idler, Chain
4.	104086-0001	Gear, Main Drive Assembly
5.	106484-0001	Limit Switch Assembly
6.	080288-0812	Screw, R.H.M.S. #4-40 x 5/8"
7.	106505-0001	Switch, Limit
8.	086480-0840	Nut, Keps #4-40
9.	080302-1618	Washer, Flat 1/4" x 9/16"
10.	086480-1620	Nut, Keps 1/4-20
11.	086168-0001	Bushing, Snap-Nylon
12.	086575-0506	Screw, THDF #6-32 x 3/8"
13.	107638-0001	Sensor Board, Optic
14.	086480-1324	Nut, Keps #10-24
15.	107516-0001	Frame, Main
16.	107442-0002	Screw, Green Ground
17.	076877-0016	Busing, Strain Relief
18.	107443-0001	Cord Assembly, Power
19.	107612-0001	Cover, Cops Board
20.	104703-0001	Terminal Strip
21.	106453-0001	Protector Assembly, Surge
22.	080324-0003	Washer, Lock Ext. #8
23.	107514-0001	Endplate, Lamp
24.	107593-0001	Lampholder
25.	086575-0504	Screw, #6-32 x 1/4"
26.	107524-0003	Safety Board
27.	107543-0001	Support, Circuit Board
28.	107594-0001	Ring, Compression
29.	107384-0001	Rotor, Optic
30.	107462-0001	Spacer, Motor Plate
31.	086420-0310	Bolt, Carriage #10-24 x 1-1/4"
32.	086480-1232	Nut, Keps #8-32
33.	107616-0001	Plate Assembly, Motor Mounting
34.	107610-0001	Retainer, Capacitor
35.	077156-0005	Capacitor, 40-48 MFD 330V <i>107871-5 &amp; 108267-1 Sleeve</i>
36.	105867-0001	Motor, 1/4 HP Spline Shaft 6 Pole
37.	107526-0001	Plasti-Grommet
38.	107557-0001	Board, Cops W/SW W/R.C. 115V
39.	607083-0001	Screw, THDF #6-32 x 3/8"
40.	107517-0001	Cover, Powerhead
41.	107607-0001	Harness Assembly, Control NS
42.	107605-0001	Harness Assembly, Power NS
43.	604062-0002	Rivet
44.	080019-0002	Bolt, Track 1/4-20 x 3/4"

NS- Not Shown

## PARTS AND SERVICE

For parts and service, contact the nearest Distributor.

When ordering parts, specify:

MODEL NUMBER

PART NUMBER

PART DESCRIPTION

Repairs to transmitter and receiver should be performed by a qualified repairman. See Radio Control Instructions.

### NOTE TO OWNER

IF SERVICE IS REQUIRED ON THE CONTROL  
MAIL THE COMPLETE UNIT  
(RECEIVER AND TRANSMITTERS)

to

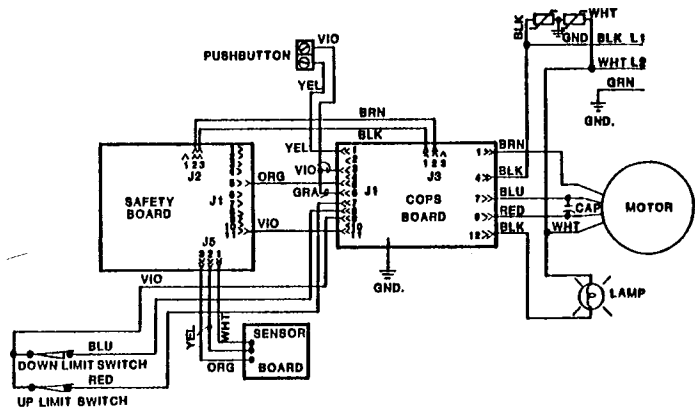
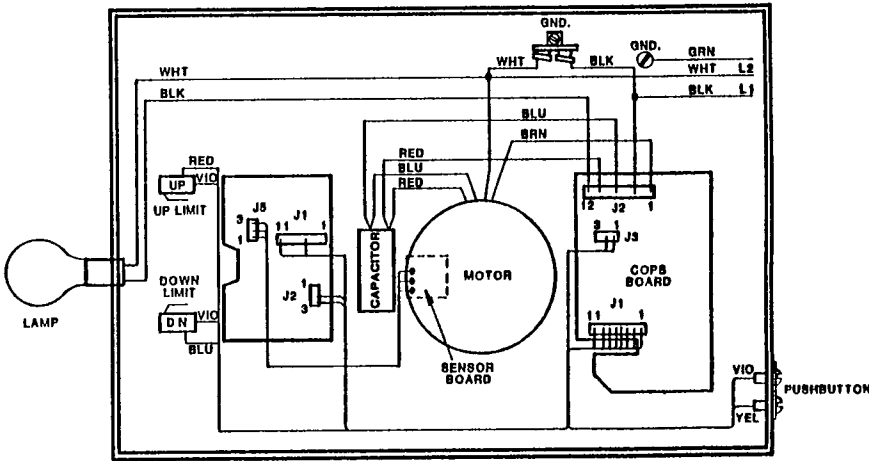
**OVERHEAD DOOR CORP.**

Advance Operator Div.

801 St. Joe, Shelbyville, IN. 46176

# WIRING DIAGRAM

# WIRING SCHEMATIC



## LIMITED WARRANTY

The authorized distributor of Overhead Door Corporation products whose name appears below ("Seller") warrants this automatic garage door opener system to be free from defects in material and workmanship under normal use and service. This warranty extends only to the original consumer ("Buyer").

During the following periods after the sale, Seller shall furnish the goods and services indicated to repair or replace any portion of the system determined by Seller to be defective:

- 1 year All parts and labor (including installation, if the system was installed by Seller)
- 5 years Motor only

The foregoing represents Seller's sole obligation under this warranty, and is conditioned upon Buyer giving notice to Seller within the respective warranty period. Proof of purchase is required.

If Seller concludes that repair or replacement is necessary, Seller will commence work within a reasonable time after the decision to repair or replace is made.

This warranty does not apply if the system has been altered or repaired by any person not authorized by the Seller, or has been subject to misuse, neglect or accident.

Seller has not established any informal dispute settlement procedure of type described in the Magnuson-Moss Warranty Act.

SELLER ASSUMES NO LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. WARRANTIES IMPLIED BY LAW ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF SALE.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Inquiries to the Seller concerning this warranty should be directed to: