SECTION 6

USER'S MANUAL

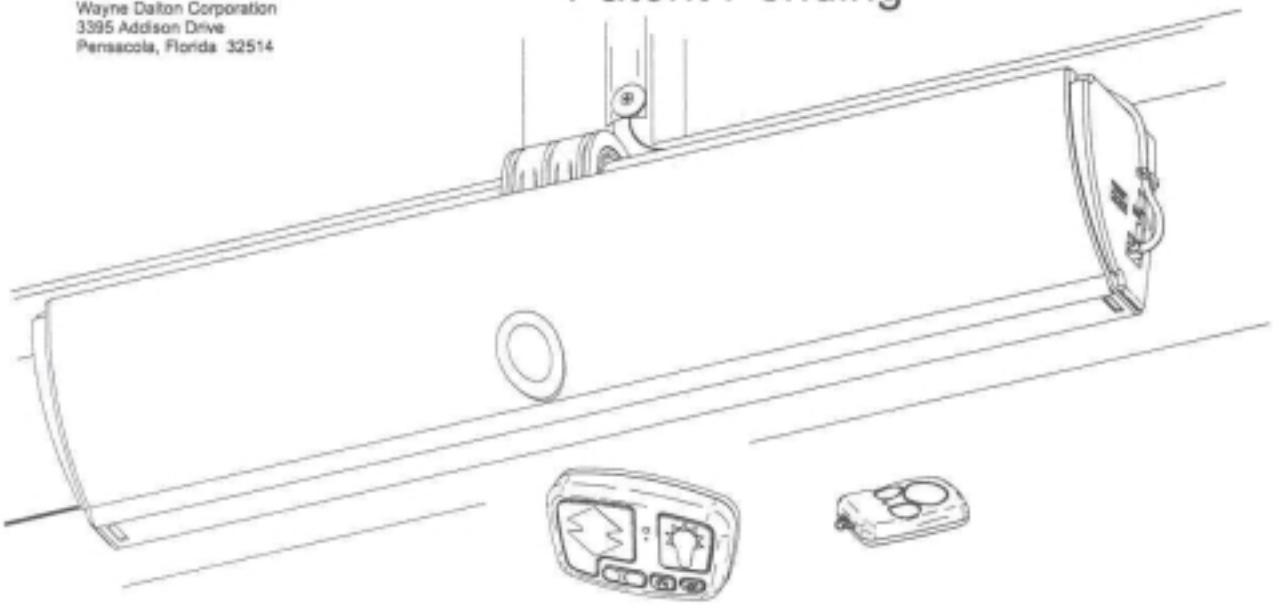
Wayne Dalton

Garage Door Opener

Model 31

Patent Pending

Wayne Dalton Corporation
3395 Addison Drive
Pensacola, Florida 32514



Important Notice!

Read the enclosed instructions carefully before installing this garage door opener.
Pay close attention to all warning labels and notes.
This manual must be attached to the wall in close proximity to the garage door.

Table of Contents

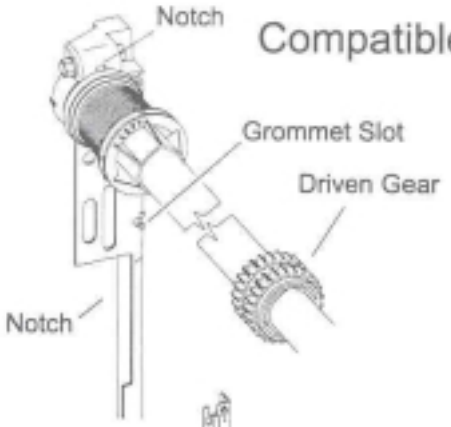
Revised 2/18/99

System Requirements

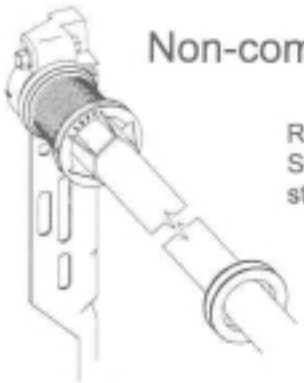
The Wayne Dalton model 31 operator will work with the following garage door systems ONLY:
Any WayneGard series door with a 12" radius track system and a TorqueMaster counterbalance system.

Use of a model 31 operator on any other door system may result in serious personal injury or property damage.

Note: If your Waynegard door was manufactured before March 1, 1999, it may be necessary to obtain and install a "Waynegard TorqueMaster Retrofit Kit for Model 31 Operator". Compatible Torquemaster End Brackets, Center Bushing, and Flag Angles must all be present. Refer to the illustrations below to determine Retrofit Kit Requirements.



Compatible



Non-compatible

Retro fit kit required.
See flag angle to determine style of kit *

Quick Install Waynegard retrofit kit required.

* If compatible flag angles are already present, any of the three kit will work.

Universal Waynegard retrofit kit required.

Waynegard Portland Retrofit kit required.

Features

High Efficiency Motor and Drive Train Enclosed in Unique Header Mounted Case

- Requires no headroom beyond counterbalance system.
- Battery Powered. Fully functional during power outages!
- Advanced Electronics provide continuous monitoring of door forces and automatically stops or reverses door due to obstruction or out of balance condition.

Deluxe Wall Station Control

- Oversized Up/Down button for easy opening and closing of garage door.
- Oversized Light button for easy use of light fixture as convenience light.
- Timer button for delayed door operation allowing user time to move away from door prior to door movement.
- Pet button automatically sets door to a slightly open position for pet access or ventilation.
- Transmitter Program button allows convenient programming of remote controls.
- Convenient "One Touch" Limit Setting
- Wireless mounting for easy installation and clean appearance.

Deluxe Remote Control Transmitter

- Three buttons for use with up to six separate doors.
- Secure Rolling Code: Eliminate remote door activation by would-be intruders.
- Convenient key chain or visor mounting

Deluxe Two Bulb Light Fixture

- Provides safety and convenience light during door operation and remains on for four minutes after door motion stops.
- Can be operated independently from door operation using wall station.
- Provides signals to warn user of safety or operational problems.

Service Disconnect

- Allows door to be operated manually to verify and maintain proper door balance.

Available Accessories

- Photo electric non-contact obstruction sensor - Wayne Dalton Model No. ML2
- Keyless entry system

Pre-Installation

Model 31 should only be installed on a properly counterbalanced, properly operating garage door. A door that binds, sticks or is out of balance could cause severe injury. Do not attempt to compensate for an improperly adjusted door by the installation of an operator. This will interfere with the proper operation of the operator and/or damage the door and/or operator.
Perform the following checks:

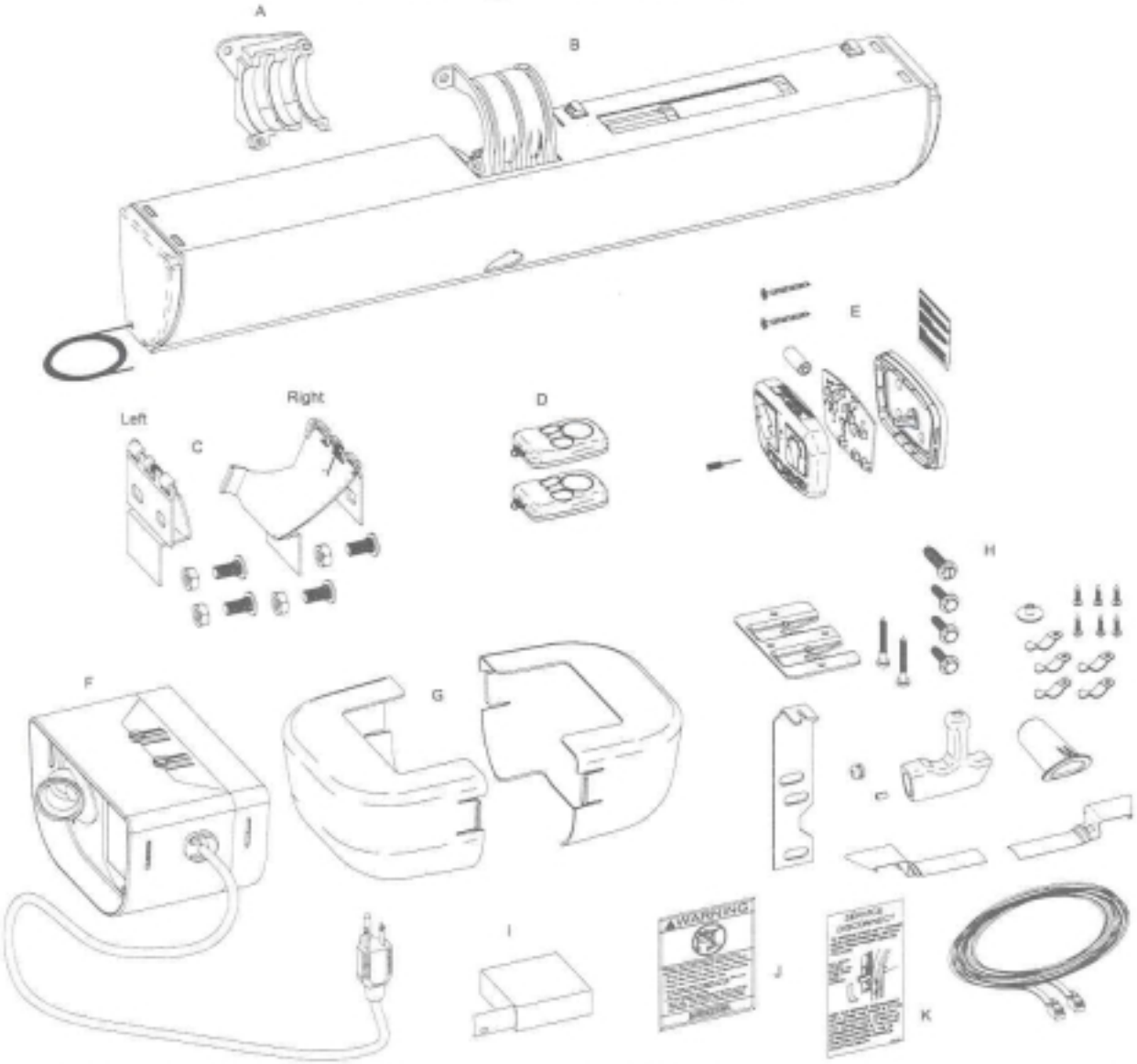
Garage Door

1) Fully raise and lower the garage door and check for any sticking or binding that occurs. Have a qualified service person lubricate, repair, or adjust as necessary.
2) Lift the garage door approximately half way open. When released the door should stay in position. If the spring tension pulls the door further open or the door weight pulls the door further down, the door is not properly balanced. Refer to the TorqueMaster owners manual or have a qualified service person balance the door.
3) When properly installed, a door should remain clear of the opening when allowed to rest at it's natural, fully opened position. Refer to the TorqueMaster owners manual or have a qualified service person balance the door.
4) Lift the door to the full open position. Manually rotate the TorqueMaster torque tube to allow the door to descend. If the suspension cables go slack leaving the door hanging in the horizontal track, have a qualified service person incline the horizontal track until the door descends during torque tube rotation.

Operator

Unpack and inspect carefully for any possible shipping damage or missing parts. Refer to the illustration on page four. Do not attempt installation if any parts are damaged or missing.

Package Contents



(A) Die Cast Center Bracket [1]
(B) Power Head Unit [1]
(C) Cable Lock Set (1 Right/1 Left Hand) [1] (*)
(D) Radio Transmitters (Remote Control) [2]
(E) Wall Station Kit [1] (**)
(F) Light Fixture [1]
(G) Diffusers [1]
(H) Hardware Pack [1] (***)
(I) Interface Cable Cover Roll [1]
(J) Entrapment Label [1]
(K) Disconnect Decal [1]

(*) (1) Left Hand Lock Assembly, (1) Right Hand Lock Assembly, (4) 3/8" Rib Neck Bolts, (4) 3/8" Nuts.

(**) (1) Cover/Button Assembly, (1) Base, (1) 12 Volt Battery, (1) Index Card, (1) Programming Tool. (1) Circuit Board, (2) #6 x 1/14" Wood Screws.

(***) (3) 1/4 X 1-1/2" Lag screws, 5/16 x 1 5/8" Lag Screw, (2) #10 x 1-1/2" Wood Screws, Light Fixture Bracket, Grommet, Cable Stop, Disconnect Handle, Screw Cover, Snubber Set, Flag Bracket, (5) Cable Cover Clips, Cable Cover Bushing, (6) #6 x 7/8" Pan Head Screws, Interface Cable.

IMPORTANT INSTALLATION INSTRUCTIONS

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

READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.

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

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

Where possible, install the door opener 7 foot or more above the floor. For products requiring an emergency release, mount the emergency release 6 feet above the floor.

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

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

Install Entrapment Warning Label next to control button in a prominent location. For products requiring an emergency disconnect, install the Emergency Release marking on or next to the Emergency Release.

After installing opener, the door must reverse when it contacts a 1 1/2" high object (or a 2 by 4 board laid flat) on the floor.

Do not wear rings, watches, or loose clothing when installing or servicing a garage door system.

Installation and wiring must comply with local building and electrical codes. Connect the power cord to a properly grounded outlet. Do not remove ground pin from power cord.

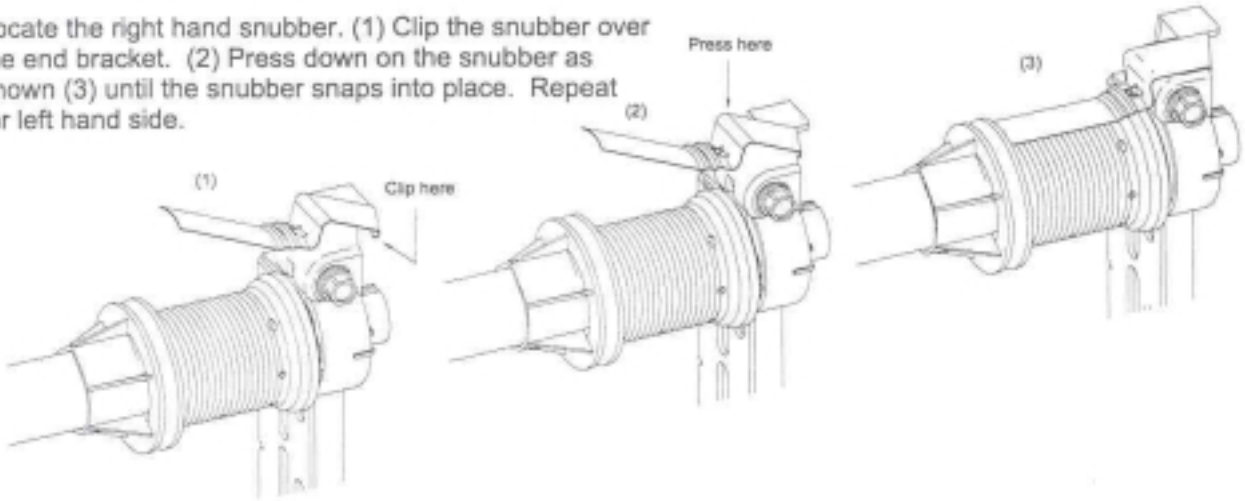
AFTER INSTALLATION IS COMPLETE, FASTEN THIS MANUAL NEAR GARAGE DOOR.
PERFORM PERIODIC SAFETY CHECKS, MAINTENANCE AND ADJUSTMENTS, AS RECOMMENDED.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications; However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that which the receiver is connected. Consult the dealer or an experienced radio/television technician for help. WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Installation

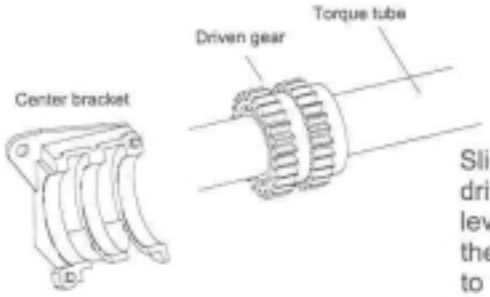
1 Cable Snubber Installation

Locate the right hand snubber. (1) Clip the snubber over the end bracket. (2) Press down on the snubber as shown (3) until the snubber snaps into place. Repeat for left hand side.

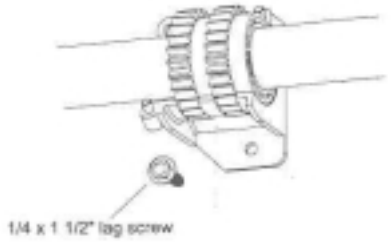


2 Center Bracket Installation

Bend tab out of way as shown. Remove (2) lag screws from existing stamped Center Bracket and discard bracket.



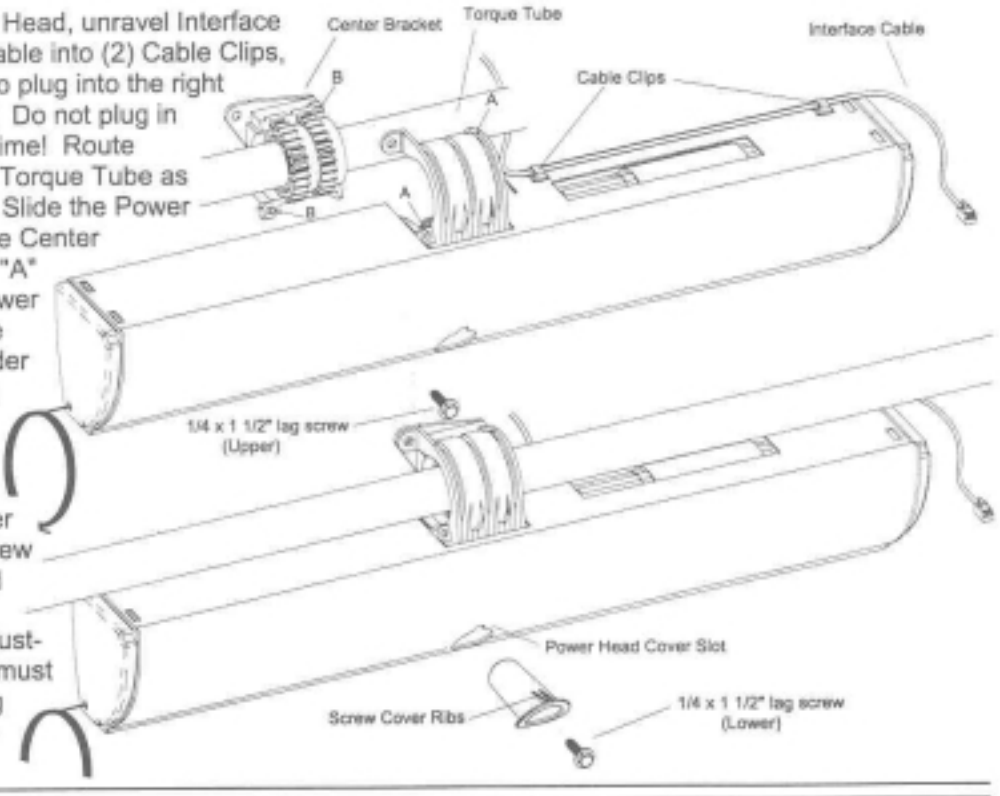
Slide the new Center Bracket onto the driven gear from underneath. Next, level the torque tube with the top of the door and secure the Center Bracket to the header with (1) 1/4 x 1 1/2" lag screw in the bottom hole as shown.



3

Power Head Installation

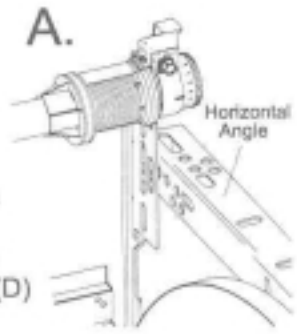
Before installing Power Head, unravel Interface Cable and pre install Cable into (2) Cable Clips, leaving enough Cable to plug into the right hand End Cap. NOTE: Do not plug in Interface Cable at this time! Route Interface Cable behind Torque Tube as shown. (Power Head) Slide the Power Head assembly onto the Center Bracket, aligning holes "A" and pins "B". Level Power Head with Torque Tube before securing to header with (2) 1/4 x 1 1/2" lag screws. Secure upper lag first and then align ribs on Screw Cover with slot in Power Head Cover; Insert Screw Cover into Power Head then secure lower lag. NOTE: All leveling adjustments of Power Head must be done prior to driving either of these last two lag screws.

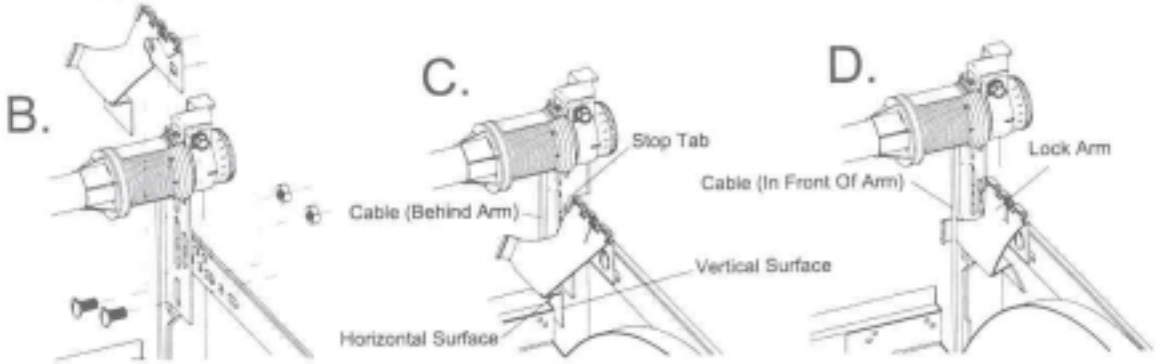


4

Cable Lock Installation

Verify that horizontal angle is right side up (as shown in B,C,D). If angle is upside down (as shown in A) swap right and left hand horizontal angles.
Align holes in Lock with corresponding holes in Horizontal Angle. Once aligned, secure Lock to track using (2) 3/8" rib neck bolts (B). Lock Arm should pivot freely at spring loaded hinge. Gently raise door to confirm Cable Lock is adjusted to stop door from opening. Cable Lock's horizontal surface is should come into contact with top of door and Cable Lock's vertical surface should be parallel with side of door. Adjust Lock Arm Travel by bending Stop Tab so Lock Arm will not pivot beyond side of door. Pivot Lock Arm downwards and slide counterbalance cable in front of Arm (D) Repeat for opposite side.





5

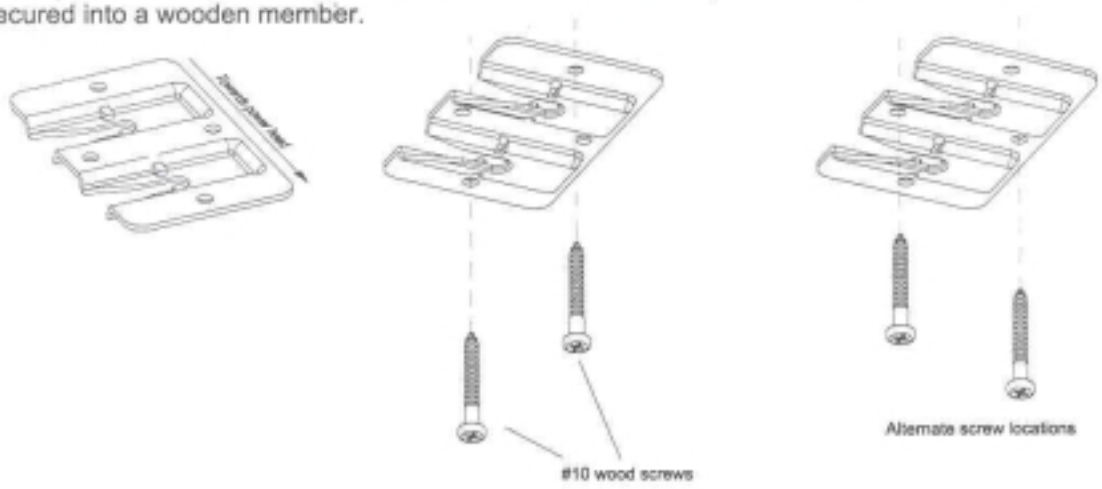
Light Fixture Installation

Before installing Fixture Bracket to ceiling, pre-assemble Bracket to Light Fixture snap post to become familiar with the force required to engage snaps. Remove Bracket from Light Fixture.

5A

Find a location on the ceiling, within four feet from a 120 Volt Grounded Electrical Outlet and within twelve feet from Power Head, to mount Light Fixture. NOTE: The door must clear the Light Fixture when the door is in the up position. Orient and secure the Fixture Bracket to the ceiling using (2) #10 x 1 1/2" wood screws as shown.

NOTE: Make sure the screws are installed into wood ceiling framing members and not just into drywall. There are two sets of holes in the brackets 90° apart to insure the screws are secured into a wooden member.

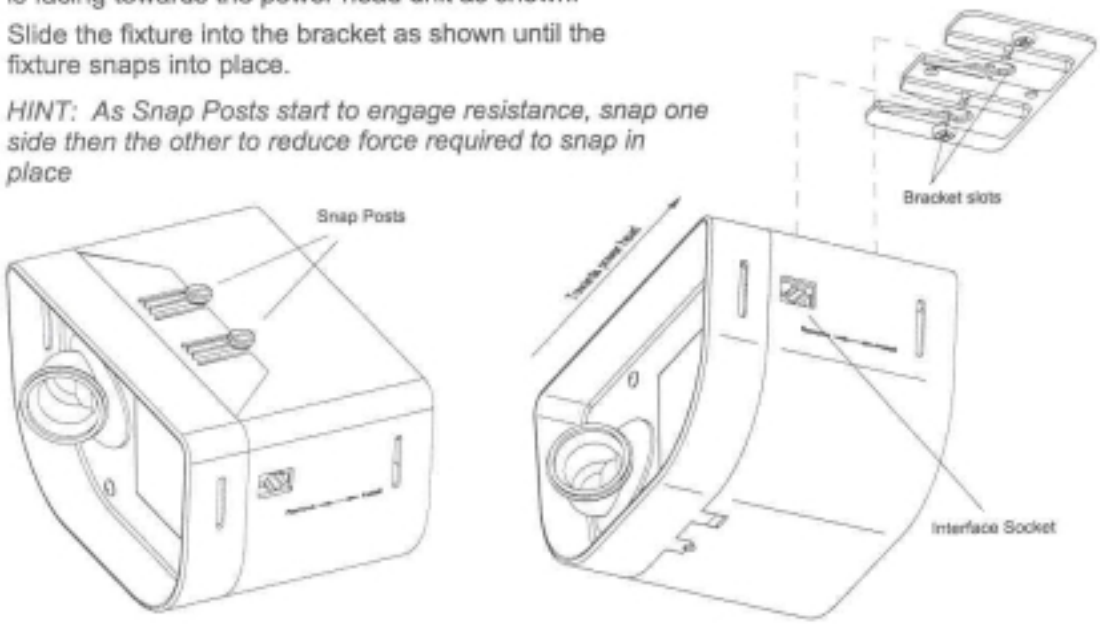


5B

Align the two Snap Posts on the light fixture with two corresponding slots in the fixture bracket, making sure the interface socket is facing towards the power head unit as shown.

Slide the fixture into the bracket as shown until the fixture snaps into place.

HINT: As Snap Posts start to engage resistance, snap one side then the other to reduce force required to snap in place



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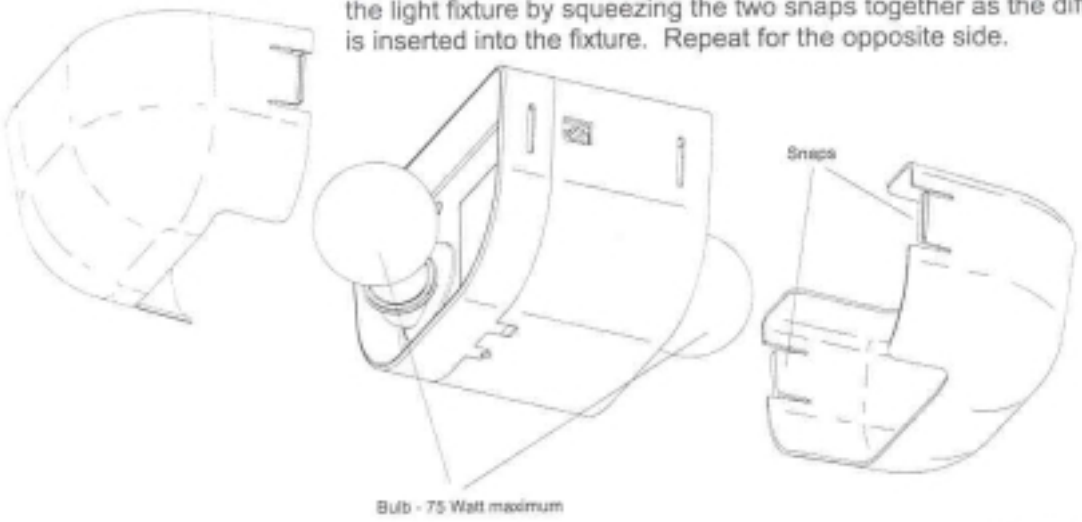
Light Bulb Installation

Screw a 75 Watt maximum bulb into each socket. For maximum bulb life, "rough service" bulbs are recommended. Snap the diffuser into the light fixture by squeezing the two snaps together as the diffuser is inserted into the fixture. Repeat for the opposite side.



7

Interface Cable Installation

Plug one end of Interface Cable into Endcap clip and then into Power Head Interface Jack. Plug opposite end of Interface Cable into Light Fixture Interface Jack.

8

Interface Cable Cover Installation

The Cable Cover is used to shield the Interface Cable. Depending on the celling height, the Cable Cover may need to be trimmed to fit. Measure the distance along the ceiling from Light Fixture to front of wall and along wall from ceiling down to Power Head. Trim Cable Cover to this total length, if necessary.

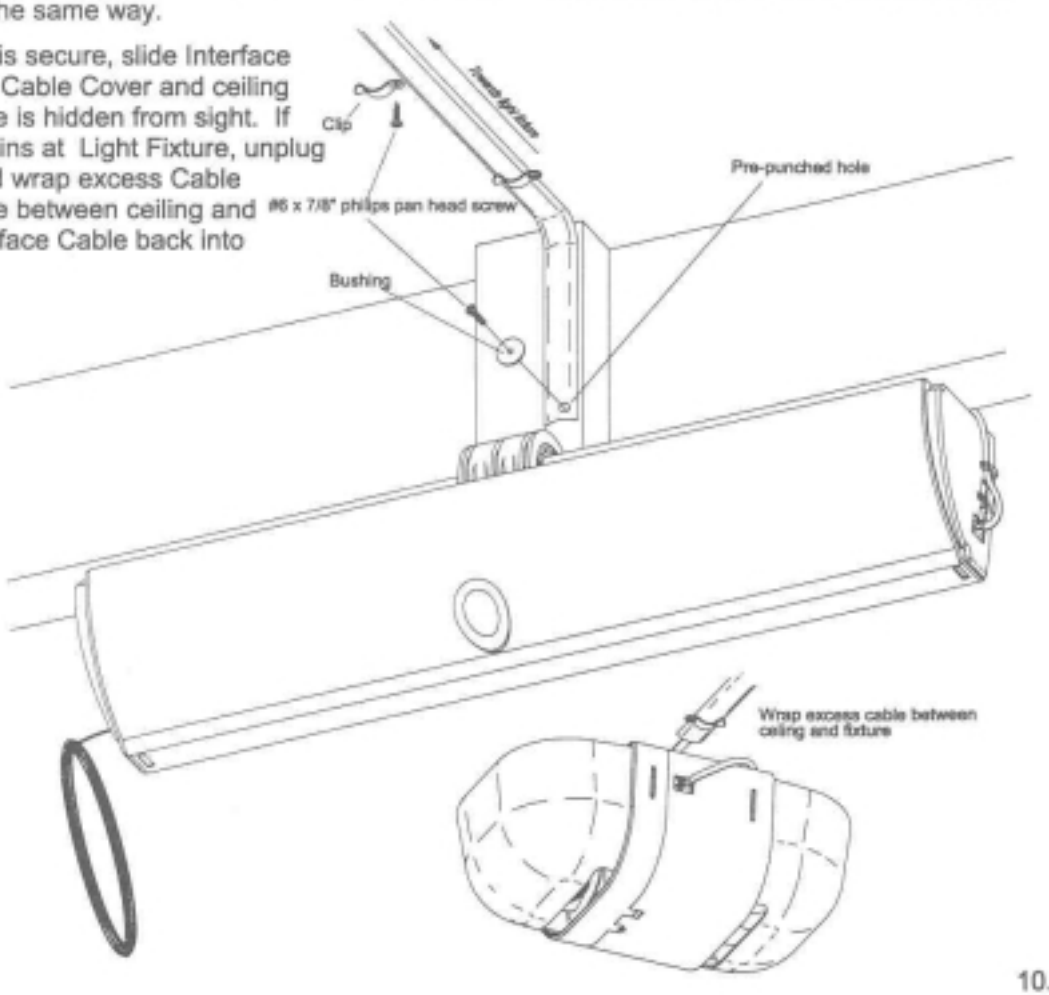
Method 1.

Insert bushing into hole in Cable Cover end. Position Cable Cover and Bushing above Power Head, against wall, and secure with a #6 x 7/8" Philips Pan Head Screw through Bushing into wall. Route Cable Cover up wall, onto ceiling and secure Cable Cover to ceiling using a #6 x 7/8" Philips Pan Head Screw through a Cable Cover Clip as shown. Route Cable Cover in a straight line from Power Head to Light Fixture installing Cable Cover clips equidistant from each other making sure the Clips are all oriented the same was as shown.

Method 2.

Insert Bushing into hole in Cable Cover end. Position Conduit and Bushing on ceiling centered at Light Fixture and secure with a #6 x 7/8" Philips Pan Head Screw. Route Conduit, in a straight line, towards Power Head and secure Conduit to ceiling, just before the ceiling and wall meet, with a Cable Cover Clip and a #6 x 7/8" Philips Pan Head Screw. Run Cable Cover down wall towards the Power Head and secure Cable Cover end with another Clip and Screw. Place remaining Clips and Screws along ceiling equidistant apart taking up slack of Cable Cover between Light Fixture and Power Head making sure all Clips are oriented the same way.

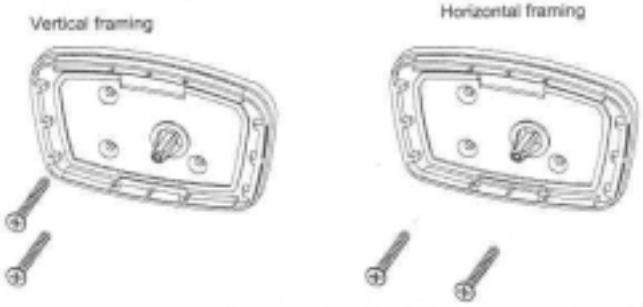
Once Cable Cover is secure, slide Interface Cable between the Cable Cover and ceiling until Interface Cable is hidden from sight. If excess Cable remains at Light Fixture, unplug Interface Cable and wrap excess Cable around Light Fixture between ceiling and light, and plug Interface Cable back into Light Fixture jack.



9

Wall Station Installation

9A Locate a convenient place to mount the wall station. Measure five feet up from the floor and secure the wall station base into the wood wall framing using two #6 x 1 1/4" philips drywall screws. Use the two left side holes for vertical framing or the two bottom holes for horizontal framing.

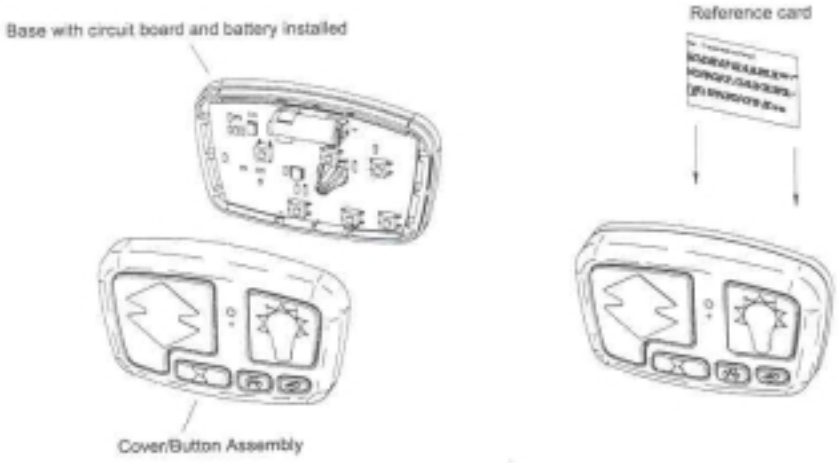


9B Insert the bottom of the Circuit Board under the bottom snap of the base. Pivot the board up until it snaps into place. For best results, press on the board between the two battery terminals.

9C Insert the battery into the circuit board being careful to match the (+) positive battery marking with the (+) positive circuit board marking.

9D Align the Cover/Button assembly with the Base and Circuit Board. Press the Cover over the Base until the cover snaps into place. A uniform seam between the Cover and the Base indicates a proper installation.

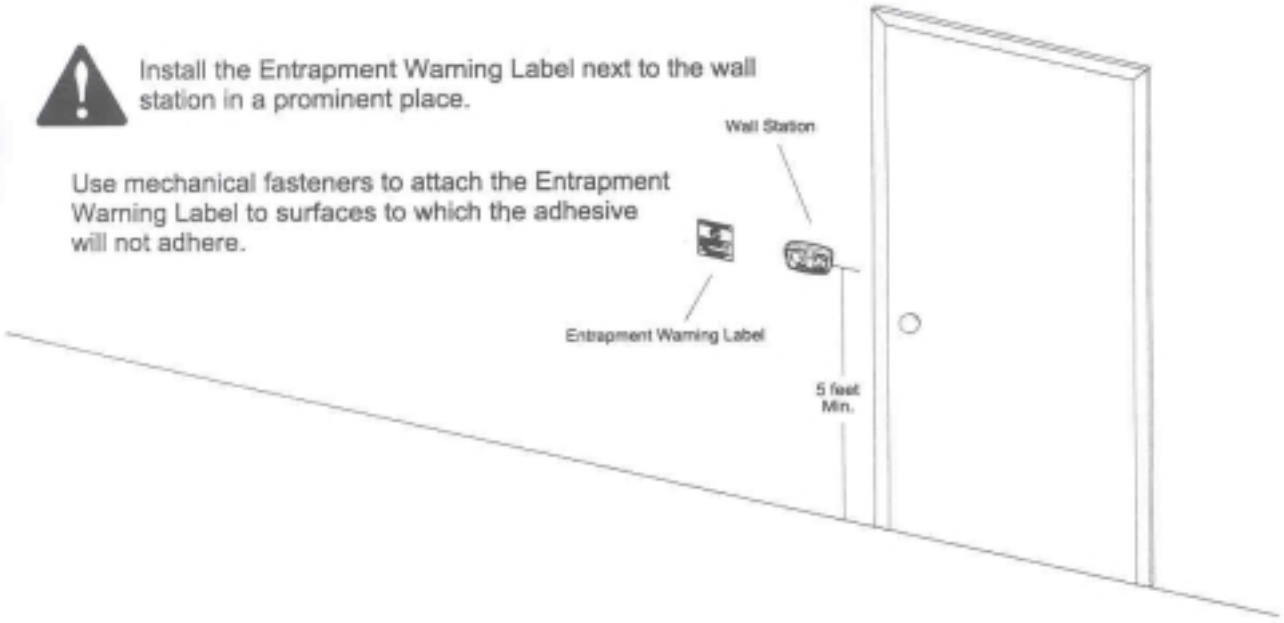
9E Fold and slide wall station reference card into slot behind wall station.



10 Entrapment Label Installation

Install the Entrapment Warning Label next to the wall station in a prominent place.

Use mechanical fasteners to attach the Entrapment Warning Label to surfaces to which the adhesive will not adhere.



11 Complete Electrical Connections

Remove the left hand End Cap by applying pressure to the bottom snap with a screw driver, then rotating the bottom of the End Cap outward until the end cap is removed accessing the battery connectors. Next, attach the male battery pack connector to the female power head connector. Tuck the connectors and excess wiring into the power head and reinstall the End Cap.