

Position and Manner of Display of US Flag

When displayed either horizontally or vertically against a wall:

- Flag should be oriented to display the field of stars to the observer's uppermost left.

When displayed away from the wall or in the middle of a room:

- If the building has one main entrance, flag should be suspended vertically and oriented with the field of stars to the observer's uppermost left upon entering.
- If the building has more than one main entrance, the flag should be suspended vertically near the center of the room and positioned with the field of stars to the upper north corner if entrances are east and west, or with the field of stars to the upper east when entrances are north and south.
- If the building has entrances in more than two directions, flag should be located near the center of the room and should be oriented to display the field of stars in the upper east corner.

Source: The American Legion

TOOLS REQUIRED

PENCIL

POWER DRILL

TAPE MEASURE

HARDWARE (by others)

LEVEL

⚠ CAUTION ⚠
Read and understand all warnings (Page 2) before beginning installation.

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If you have any difficulties installing or servicing your Patriot Motorized Flag, call your dealer or Draper, Inc.

PLEASE READ - **Safety Information**

Important Safety Information



WARNING



Important Safety Information

Improper installation and use of the Patriot Motorized Flag can result in serious injury or death. Primarily, injuries can occur if the unit falls due to imprecise installation, mishandling of the unit during installation, or installation on an insufficient wall or ceiling structure. Please use extreme care.

1. Please read the following installation guidelines thoroughly and follow them carefully. Failure to do so may cause product to fall or otherwise fail, and could result in serious injury.
2. Installation and calibration of the unit should only be performed by an authorized, qualified, and experienced professional. In particular, electrical work and wiring [indicated in diagram by dashed lines] must be completed only by a qualified professional electrician who has read this manual completely and is familiar with the construction and operation of this equipment and the hazards involved.
3. Do not affix the unit to walls or ceilings that have inadequate strength to permanently hold the unit during use. It is the owner's and installer's responsibility to confirm the wall or ceiling to which the unit attaches is sufficient to permanently hold the weight and stress loads of the unit at all times. Draper, Inc., is not responsible for improper installation, application, testing, or workmanship related to the product at place of installation.
4. It is the installer's responsibility to make sure appropriate fasteners are used for mounting.
5. All hardware must be installed level. Unit must be level and square.
6. Never leave the area while operating the unit during installation, maintenance, or normal operation, unless it is secure and safe.
7. Before testing or operation, carefully inspect the entire area and path (*especially underneath*) of unit to be sure no persons or objects are in the area.
8. During testing or operation, carefully watch the surrounding area for any potential safety concerns including nearby persons or objects.
9. An appropriate disconnect device shall be provided as part of building installation.
10. Suitable for use in environmental air space in accordance with Section 300-22(c) of the National Electric Code, and Sections 2-128, 12-010(3) and 12-100 of the Canadian Electrical Code, Part 1, CSA C22.1
11. Connections must be made in accordance with attached wiring diagram, and wiring must comply with national and local electrical codes.
12. All operating switches should be "off" before power is connected.
13. Do not wire motors in parallel without written permission from Draper, Inc.
14. After installation, the entire system, including all sensors, should be carefully tested to ensure safe and normal operation. Extreme care should be taken during testing to remain clear of moving parts to avoid possible injury.
15. Operation of unit should be performed only by authorized and qualified personnel, who have been trained in its safe and effective operation and understand its safety features.
16. The safety features of the unit should never be disabled, bypassed, or overridden. The system should not be operated until all safety features are properly and completely installed, calibrated, and tested.
17. **Failure to precisely follow installation guidelines invalidates all warranties.**
18. Custom products/installations may not be reflected in this manual. Call Draper, Inc., if you have questions about the installation of custom products or any questions about your installation.

Before Beginning Installation

1. Look for any job site conditions that could interfere with installation or operation of the system.
2. Read carefully and be sure to understand all installation instructions and all related operations manuals. These instructions are intended to serve as a guide for the installer and owner. They should be followed closely and combined with the expertise of experienced qualified installers. Draper, Inc., is not responsible for improper installation, application, testing, or workmanship related to the product at place of installation. Please retain all instructions for future use.
3. Open cartons lengthwise.
4. Locate and lay out all pieces.
5. Inspect all boxes to make sure you have received the proper unit and parts. Controls may be shipped separately, or in same carton as unit.
6. If you have any difficulties with installing, servicing, or operating your unit, call your dealer or Draper, Inc., 765-987-7999.

Section 1 - Hanging Motorized Flag

Section 1.1 - Ceiling Installation

PLEASE NOTE: It is the installer's responsibility to make sure appropriate fasteners are used for mounting.

1. Engage each case mounting bracket (*attached to case*) with top of housing (*Fig. 1*) and tighten set screws.
2. Flag should be sufficiently supported to withstand vibration.

Please Note: A hoisting bracket is included on each end of the case to aid in installation. Hoisting bracket is **NOT TO BE USED** for final installation, only to hoist the case up to the mounting location.

3. Ensure that fasteners are of adequate strength and suitable for the mounting surface chosen. Supporting hardware such as chains, cables, two $\frac{3}{8}$ " (9.5 mm) rods, etc., must be precisely vertical.
4. Entire bottom of case must be readily accessible after installation is complete.
5. Front, back, and top of case must be straight—not forced to warp or bow.

CAUTION: Flag case and flange are not designed to serve as ceiling support.

6. Do not seal unit in ceiling until electrical connections have been made and flag operates successfully.

Suspended Ceiling Installation—

Chains should be attached to solid beams or rafters above unit. If possible, mounting brackets should be positioned so chains hang vertically. Turnbuckles should be connected between chains and mounting brackets. After the unit has been suspended, turnbuckles should be adjusted so that flag hangs level.

Recessed Ceiling Installation—

Recess should be constructed to fit case with brackets (*see "Case Dimensions" on pages 6-7*). Design recess so that entire bottom of case is unobstructed to permit access to bottom panel, roller and flag for servicing if required.

Section 1.2 - Wall Installation

Wall Brackets should fasten to studing or other structural supports within wall that are capable of supporting weight of case (205 lbs).

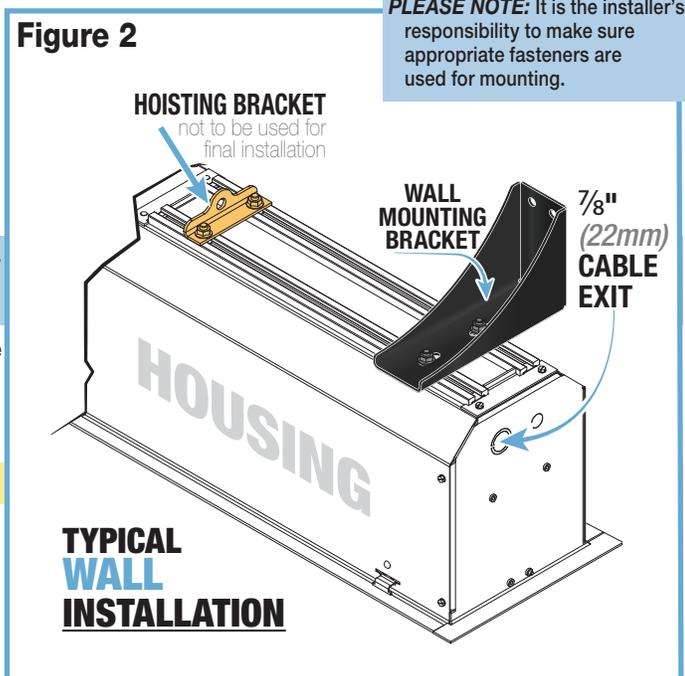
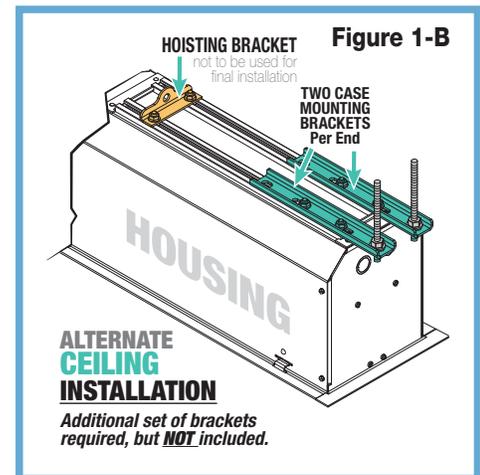
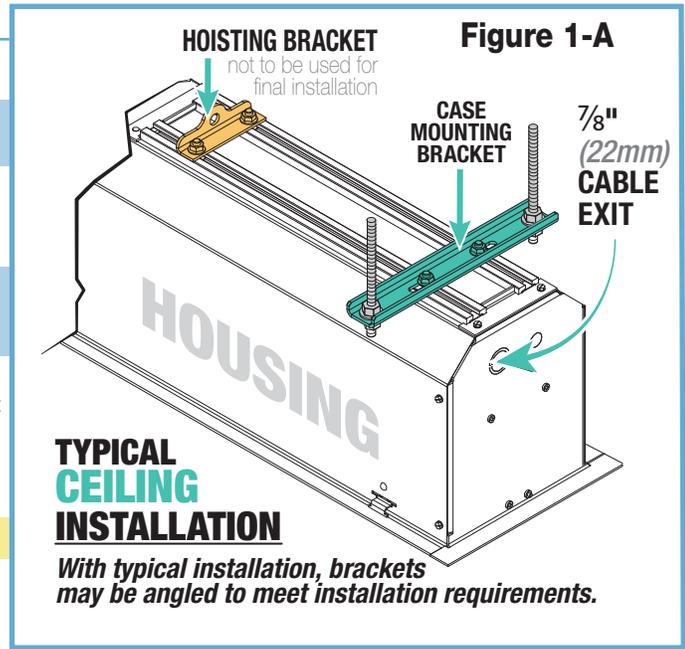
1. Remove each ceiling mounting bracket (*attached to case*) from top of housing (*Fig. 2*) replace with the wall mounting brackets, and tighten set screws.
2. Case should be sufficiently supported to withstand vibration.

Please Note: A hoisting bracket is included on each end of the case to aid in installation. Hoisting bracket is **NOT TO BE USED** for final installation, only to hoist the case up to the mounting location.

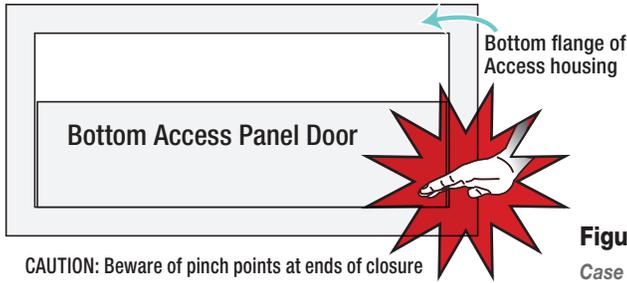
3. Ensure that fasteners are $\frac{3}{8}$ " (21mm) in diameter, are of adequate strength and suitable for the mounting surface chosen.
4. Entire bottom of case must be readily accessible after installation is complete.
5. Front, back, and top of case must be straight—not forced to warp or bow.

CAUTION: Screen case and flange are not designed to serve as ceiling support.

6. Do not seal unit until electrical connections have been made and screen operates successfully.



Section 2 - Bottom Patriot Panel Installation/Removal



Bottom access panel secures to the Motorized Flag housing with two screws (*one on each end*), and held in the closed position by engagement brackets with ball detents that snap into case support brackets (*Fig. 3*).

Figure 3
Case as seen from below

CAUTION: Beware of pinch points at ends of closure

CAUTION: The following requires two people to perform safely.

1. Press up on access panel and pull toward the front of the flag housing to disengage hinges and remove access panel.

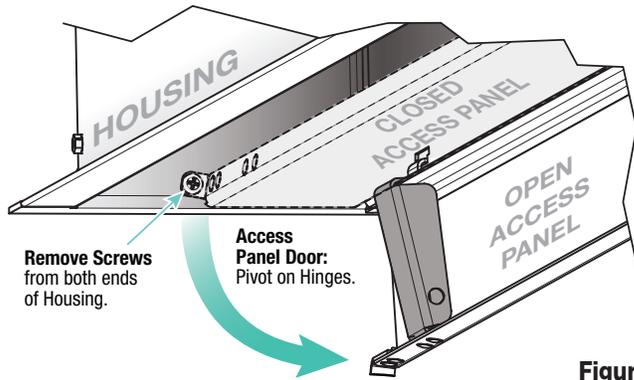
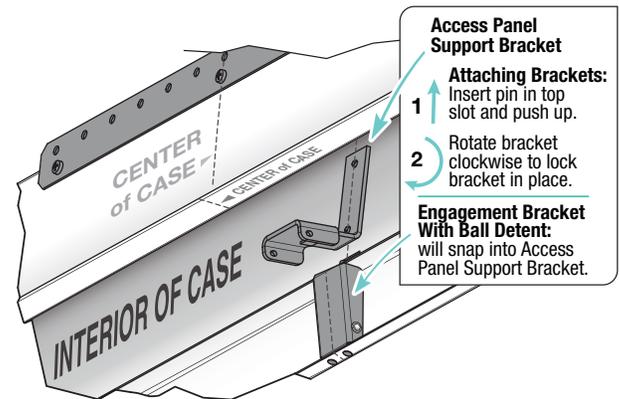


Figure 4
Removing Access Panel

2. To Remove/Install support brackets:



Section 3 - Operation

CAUTION: When operating for the first time, cycle unit down and up several times to confirm satisfactory operation. Be prepared to cut POWER if necessary.

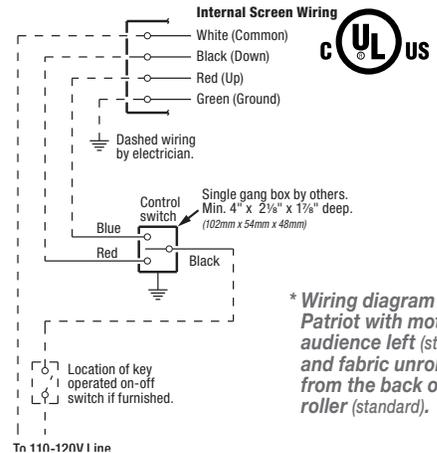
- **KEY OPERATED SWITCH (standard)** - Two key-operated switches optionally available with this unit:
 - Key-operated power supply switch controls power to flag and switches. When "off", switches will not operate flag. Key may be removed from switch in either "on" or "off" position.
 - 3-position key switch permits the flag to be operated directly by key. Requires flag operator to have a key.

Section 4 - Electrical Connections

1. Motorized Flag operates on 110-120V, 60 Hz., 2.3 amp current draw.
2. Junction box is located just above the bottom access panel at the left end of the Motorized Flag.
3. Open the access panel/trap door for access to the junction box cover. (See bottom access panel/trap door opening and closing instructions below).
4. Remove two (2) hex head screws that secure the cover to the junction box to expose the red, black, and white pigtail leads and the green ground wire per wiring diagram on at right.
5. Motorized Flag ships with internal wiring complete and control switch(es) fully boxed. Wire to connect Motorized Flag to switch(es) and switch(es) to power supply should be furnished by installer. Connections should be made in accordance with wiring diagram (at right), and wiring should comply with national and local electrical codes.
6. All operating switches should be "off" before power is connected.

Please Note: Do not wire motors in parallel.

110-120V MOTOR STANDARD Single Station Control



Section 5 - Limit Adjustments

Please Note: Flag limits are factory set for optimum performance of the flag. Any adjustment of these limits could void the warranty. Please check with Draper prior to resetting flag limits.

Please Note: If flag is "Right Hand Motor," the WHITE/DOWN (I) and YELLOW/UP (II) limit screws are reversed (Fig. 11).

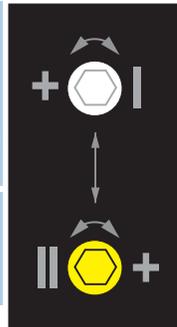


Figure 10

DOWN Limit (I):
Clockwise
decreases
down travel.

UP Limit (II):
Counterclockwise
increases **up** travel.

CAUTION:

- Be sure all switches are in "off" position before adjusting limit switches.
- Be prepared to shut off manually while testing.
- Flag may be damaged by lowering it too far and exposing roller.
- Motor must be installed so that limit switches are pointed down.

Section 5.1 - Standard Motors Limit Adjustments (Fig. 10)

Section 5.1.1 - "Down" Limit Adjustment (requires 5/32" (4 mm) Hex key)

To Reduce Flag Drop:

1. Raise flag surface approximately 1' (30 cm) above desired setting and turn off.
2. Turn DOWN (I) limit screw clockwise (3 screw turns = 1/2 roller revolution).
3. Test by lowering flag. Repeat steps 1 & 2 until desired position is reached.

To Increase Flag Drop:

1. Lower flag to down limit.
2. With down switch on, turn DOWN (I) limit screw counterclockwise (3 screw turns = 1/2 roller revolution) to increase drop.
3. Test by raising flag approximately 1' (30 cm) then down to new down limit.
4. Repeat steps 2 and 3 until desired position reached.

Section 5.1.2 - "Up" Limit Adjustment

If Flag Raises Too High:

1. Lower flag surface approx. 1' (30 cm) below desired setting and turn off.
2. Turn UP (II) limit screw clockwise (3 screw turns = 1/2 roller revolution).
3. Test by advancing flag up.
4. Repeat steps 1 through 3 until desired position is reached.

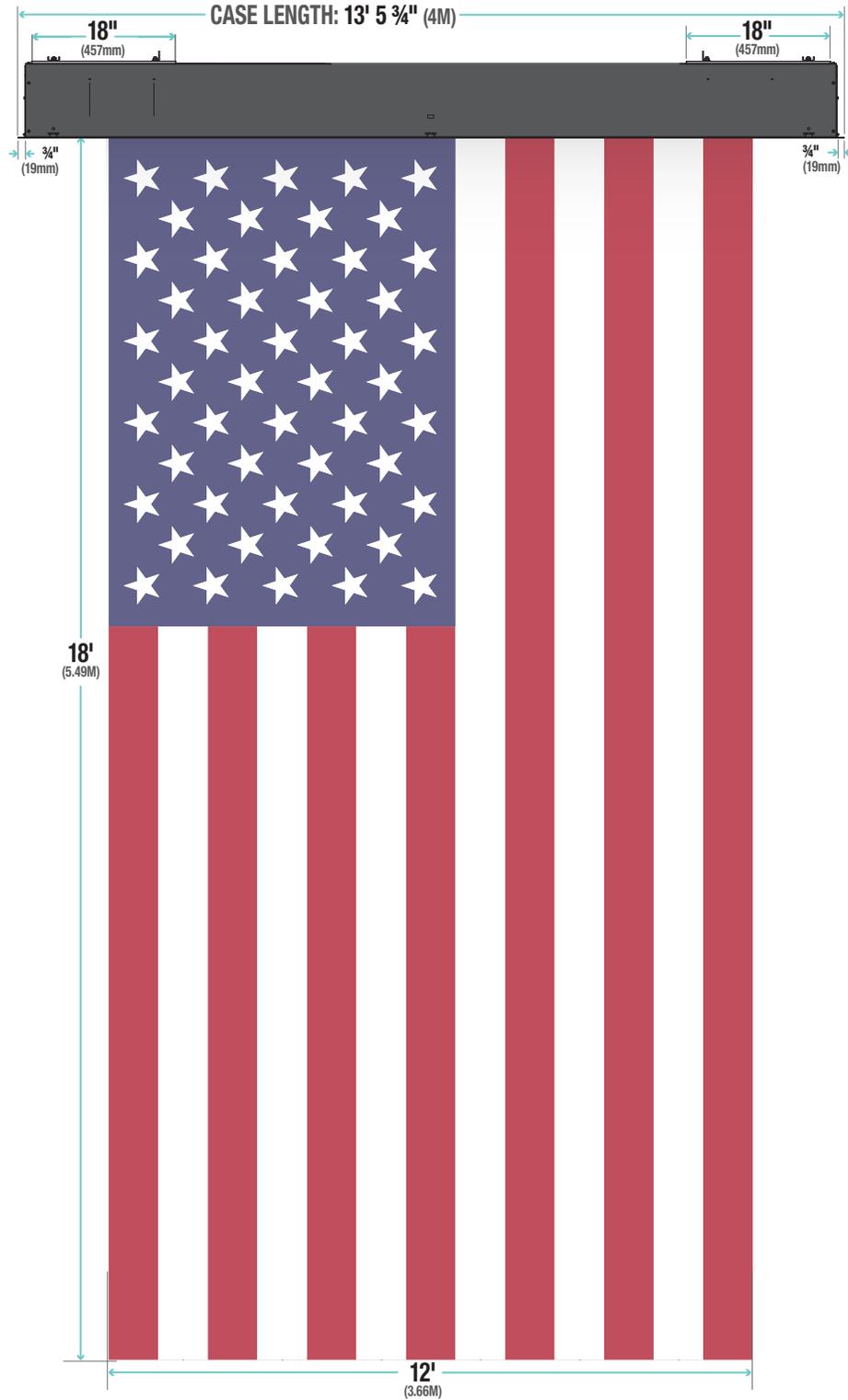
If Flag Needs to Raise Higher:

1. Lower flag surface approx. 1' (30 cm) below desired setting and turn off.
2. With UP switch on, turn UP (II) limit screw counterclockwise (3 screw turns = 1/2 roller revolution).
3. Repeat steps 1 and 2 until desired position is reached.

CAUTION: DO NOT allow dowel to wrap over roller when operating flag! This could damage flag.

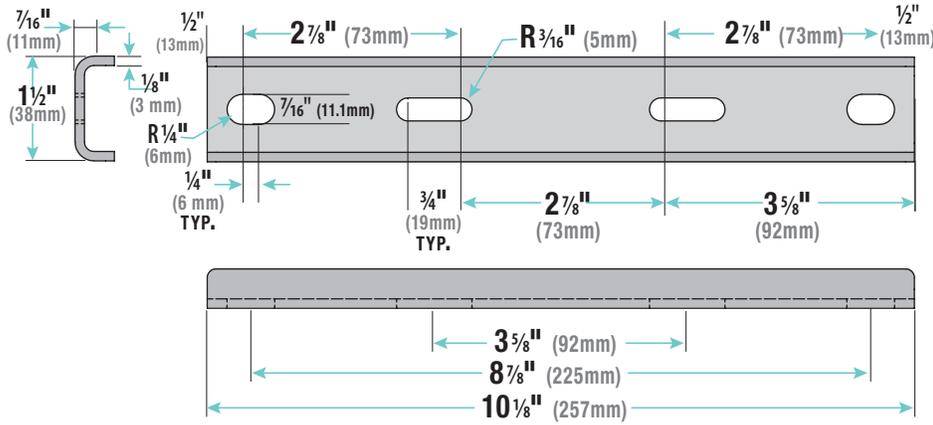
Section 6 - Case Length Dimensions

Vertical Case Length - 500101



- For minimum length of ceiling cutout: subtract 1 1/4" (32mm) from case length (measured from outer edge of flanges).
- For minimum width of cutout (front to back): see case width dimensions below.

Section 8 - Ceiling Mounting Bracket Dimensions



Section 9 - Wall Mounting Bracket Dimensions

