

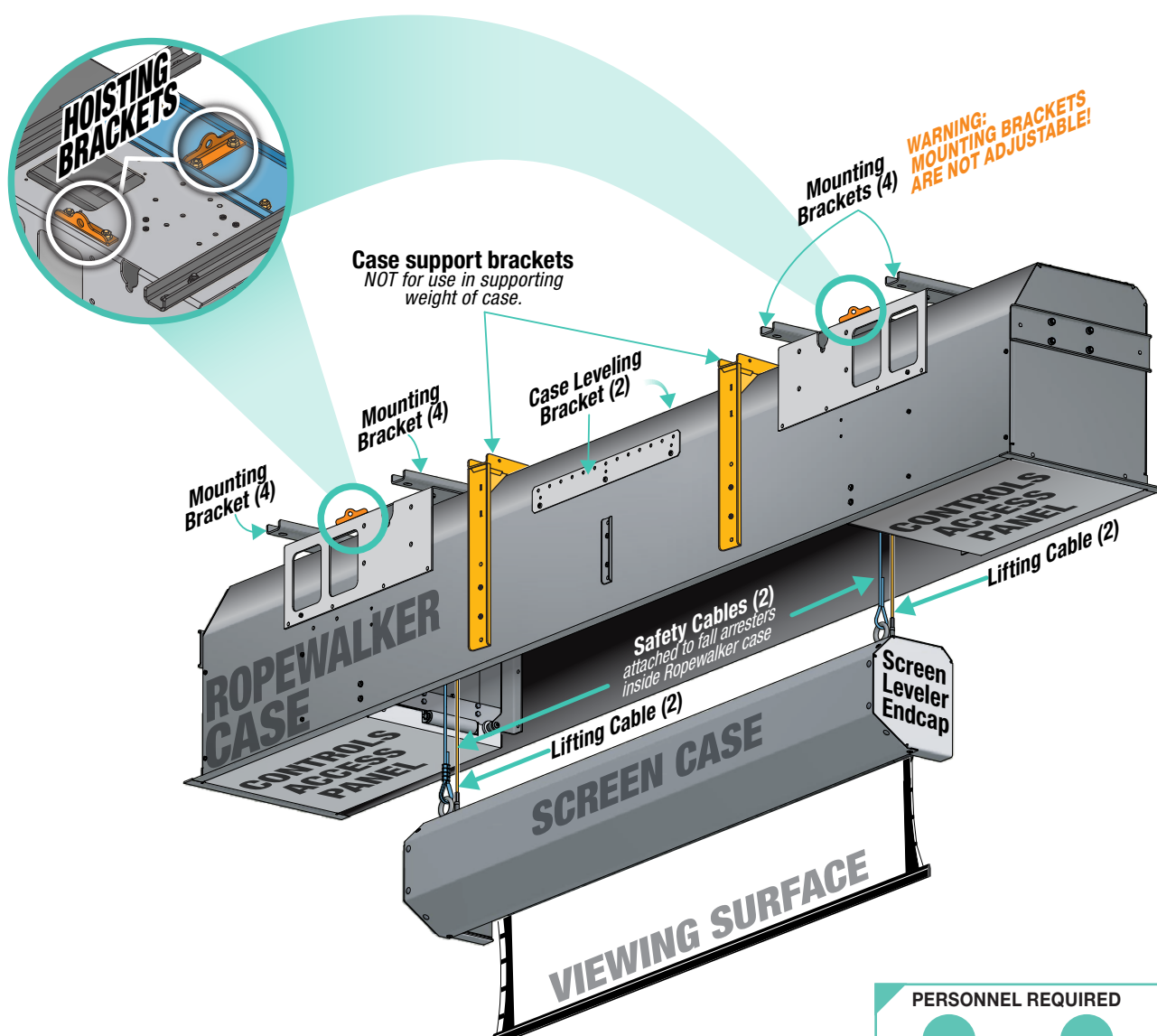
Ropewalker

Electric projection screen with cable drop

INSTRUCTIONS

INSTALLATION & OPERATION

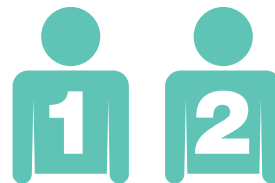
Overview - Components



⚠ CAUTION ⚠

Read and understand all warnings (Page 2 of this document) before beginning installation.

PERSONNEL REQUIRED



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If you have any difficulties installing or servicing your Ropewalker, call your dealer or Draper, Inc.

Section 1 - Preparation

Before installing the Ropewalker, ensure that:



1. Installers are certified riggers.
2. A [Ropewalker Submittal](#) has been completed.

⚠ **CAUTION:** Product is very heavy: Installer must provide adequate attachment hardware and anchors as required. Installer must also ensure that structure is of adequate strength.

⚠ **CAUTION:** Case must be mounted low enough from ceiling to gain access to bracket screws.

PLEASE READ - Safety Information

Important Safety Information

 **WARNING** 

Important Safety Information

Improper installation and use of the Ropewalker 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. Turn off power and any nearby equipment or cables carrying electricity before connecting switches, wires, controls, or electrical components.
9. Do not wire motors in parallel without written permission from Draper, Inc.
10. During testing or operation, carefully watch the surrounding area for any potential safety concerns including nearby persons or objects.
11. 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.
12. 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.
13. 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.
14. Unit may need to comply with local, state, or district rules and regulations, in particular when installed in schools. All applicable rules and regulations should be reviewed before installation and use.
15. **Failure to precisely follow installation guidelines invalidates all warranties.**
16. 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.

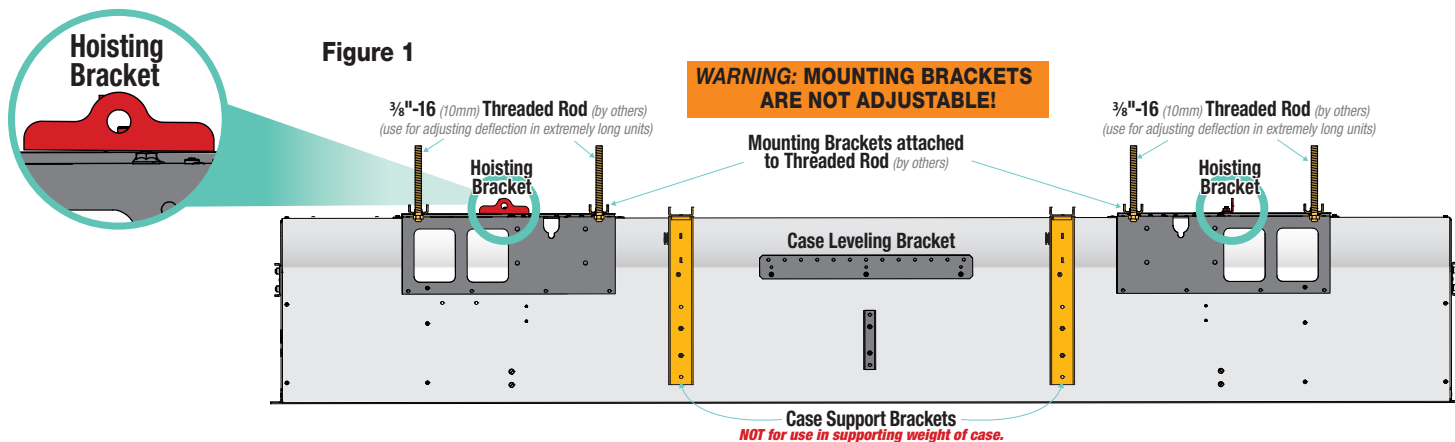
Section 2 - Mounting Ropewalker to Building Structure

Please Note: It is recommended that heavy items be hoisted up to the work area using appropriate machinery, i.e. hoisting lifts, block and tackle, etc. When locating viewing surface and checking clearance for screen operation, remember surface is centered in the length of the case.

Regardless of mounting method used, the following points apply:

1. Screen should be lifted into position **ONLY** by end mounting brackets or hoisting brackets. Keep case level by lifting both end plates at the same time to prevent surface damage. Using more than one mounting hole in each end plate ensures a much more stable installation. **NEVER** attempt to lift screen along its length or in the middle.
2. Entire weight of unit **MUST BE** supported by end plates during installation.
3. Screen should be positively and securely supported so that vibration or abusive pulling will not weaken installation.
4. Installer must ensure that fasteners used are of adequate strength and suitable for mounting surface. Installer must also ensure that structure is of adequate strength. Supporting hardware (*chains, cables, rods, etc.*) must be essentially vertical.
5. Entire bottom of case must be readily accessible after installation is complete.
6. Front, back, and top of case must be straight — not forced to warp or bow.
7. Do not use case to support adjacent sections of ceiling.
8. Do not seal unit in ceiling until electrical connections have been made and screen has been operated successfully.

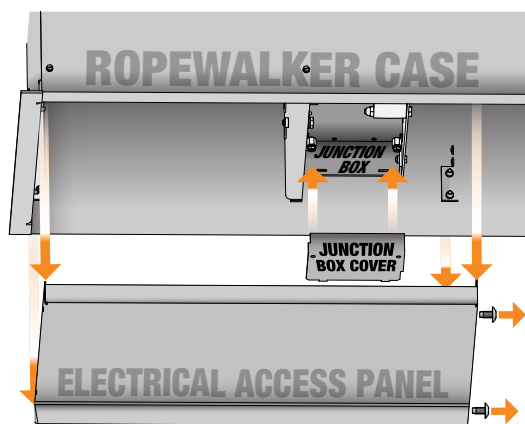
Please Note: **DO NOT** lift case at the center. Case leveling brackets are **ONLY** used to reduce visible case deflection. Lift screen **ONLY** by hoisting brackets. To ensure a safe installation, the entire weight of the installed unit **MUST BE** supported by the mounting brackets.



Section 3 - Electrical Connections

Screen operates on 110-120V, 60 Hz., 7.5A; or 220-240V, 50 Hz., 3A current draw. Junction box is just above the bottom access panel at the left end of screen lift.

Figure 2



To access the junction box

1. Open left side access panel by removing two (2) screws from side of case (Fig 2).
2. Remove two (2) 5/8" (8mm) hex head screws that secure cover to junction box to expose red, brown, black, and white pigtail leads and green ground wire (see Sec. 5, Ropewalker Wiring).
3. For optional low-voltage control, see Section 11.
4. Screen lift is shipped with internal wiring complete and control switch(es) fully boxed. Wire to connect screen to switch(es) and switch(es) to power supply should be furnished by installer. Connections should be made in accordance with attached wiring diagram, and wiring should comply with national and local electrical codes.

CAUTION: All operating switches should be "off" before connecting power.

Section 4 - Removing Shipping Bracket

1. Remove the electrical access panel (Section 3) and locate the shipping bracket (shown in **RED** with hangtag, Fig. 3-A).
2. Remove the shipping bracket from the shaft. Discard (Fig. 3-B).

Figure 3-A

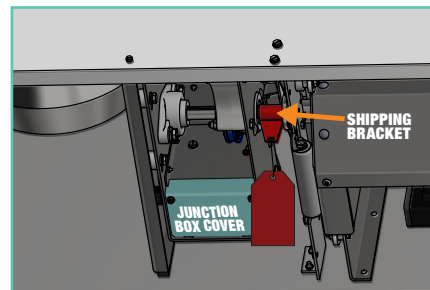
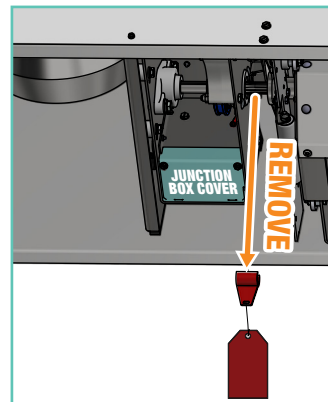


Figure 3-B



Section 5 - Ropewalker Wiring



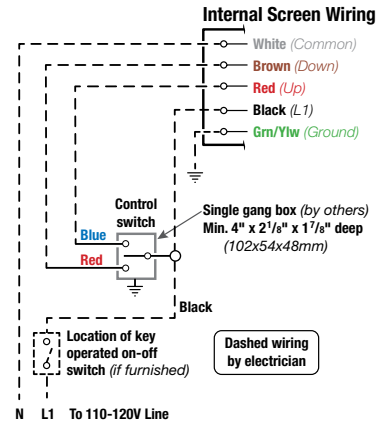
Standard Control Switch (SS-1R)

Single switch requires a standard switch box that measures 3" (76mm) high x 2 1/4" (57mm) wide x 2 1/2" (64mm) deep. Install optional control switch in accordance with wiring diagram (Fig. 4).

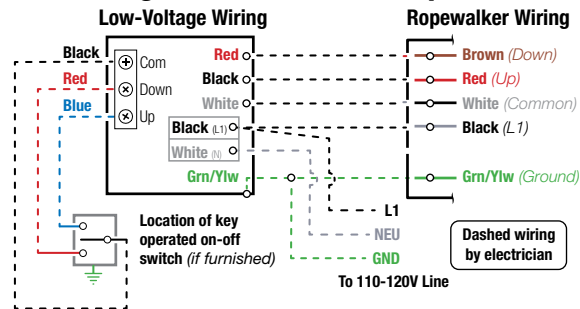
Please Note: For 220V Single Station Wiring see Page 8.

Figure 4

Single Station Control



Low-Voltage Control for 110V Ropewalker



Low-Voltage Contact Closure Control Wiring

See wiring diagram at left.

1. Remove strain relief from the Low-Voltage Controller and replace with electrical conduit.
2. Connect Low-Voltage Controller to motor in accordance with wiring diagram.
3. If RF Remote included, program frequency of receiver by following steps below.

Please Note: For 220V Low-Voltage Wiring see page 8.

Programming RF Receiver Frequency

1. Open dip switch cover on end of Low-Voltage Controller (Fig. 5). Cover opens by loosening outer screw and rotating cover.
2. Locate the dip switch bank inside receiver and set the dip switches per the following chart, then close dip switch access cover. A switch is in ON when in the down position (toward the mounting plate).

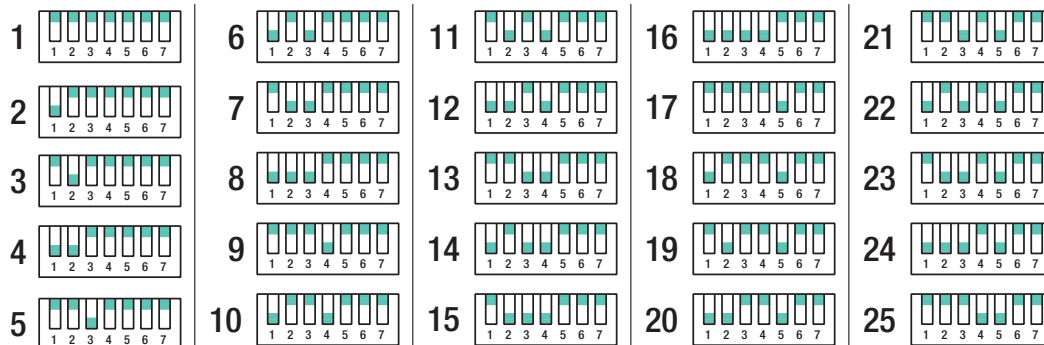
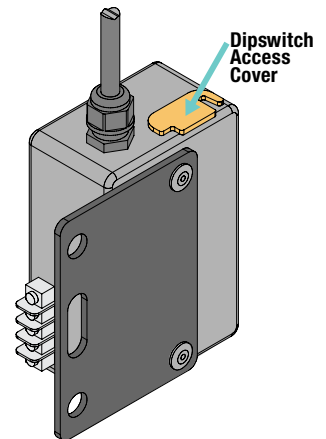


Figure 5



Attaching Optional Key Switch or Contact Closure Control to Low-Voltage Control

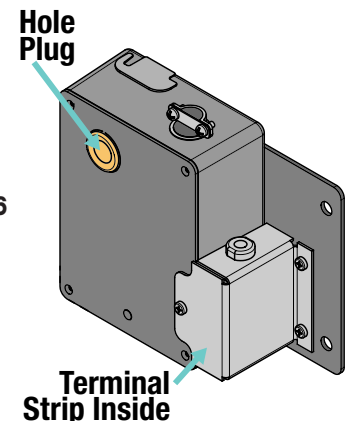
Low-Voltage Control Receiver is capable of having dual methods of operation.

It is possible to attach an optional Low-Voltage backup key switch, in addition to being operated with an optional 99-Station RF Transmitter.

To connect the optional key switch, pull a three-conductor control wire between the switch location and the Low-Voltage Control. The connections between the key switch and the terminal block (located on the outside of the receiver housing) should be made per Figure 6.

Key or contact closure must be held closed to operate Ropewalker to lower limit or closed position.

Figure 6



Section 6 - Leveling Viewing Surface *(NOTE: This step may not be needed. Contact Draper.)*

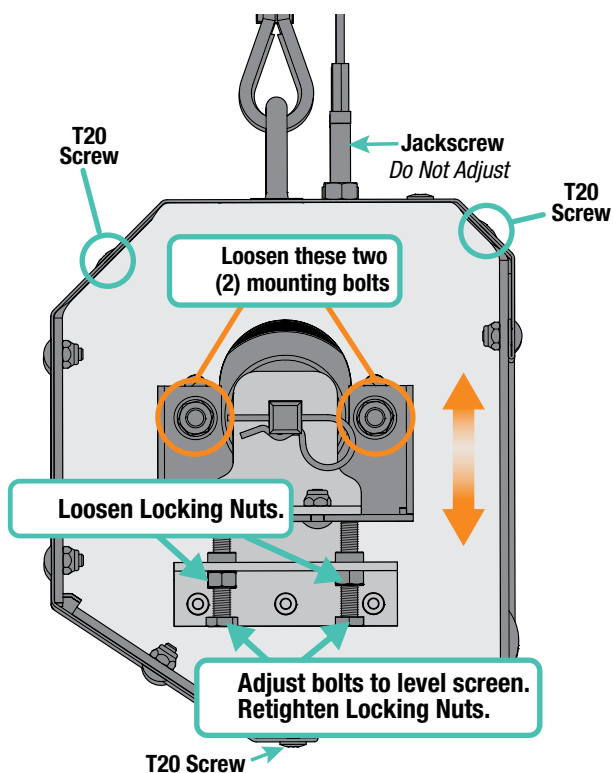
⚠ WARNING: Do not adjust the jackscrews that connect the cables to the screen case without consulting Draper® technical support!

The Ropewalker case must be installed level (*Section 2*). Cables are adjusted at the factory.

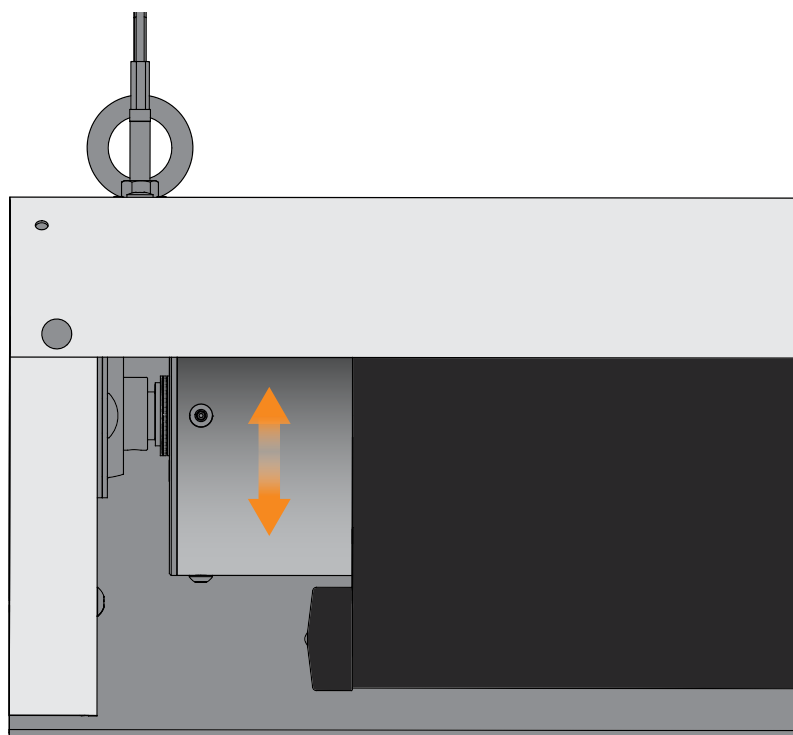
Due to screen configuration and manufacturing tolerances, it may be necessary to re-level the viewing surface within the screen case:

1. Raise or lower viewing surface to the viewing position.
2. Using a T20 Torx screwdriver, remove the three (3) Torx head screws from audience right end of the screen case.
3. Remove the endcap from the end of screen case.
4. Once the endcap is removed:
 - A. Loosen both roller mounting bolts and the locking nuts (*Fig. 7*).
 - B. Turn the two (2) adjustment bolts to raise or lower the audience right end of the viewing surface roller.
 - C. Check with a 4-foot level. Adjust until dowel is level.
 - D. Once level, retighten locking nuts, mounting bolts and re-attach the endcap.

Figure 7



End View of Screen Case
(endcap removed)



Back View of Screen Case

Section 7 - Limit Switch Adjustments

WARNING: Screen case must be engaged or retracted inside the Ropewalker case when adjusting the limits.

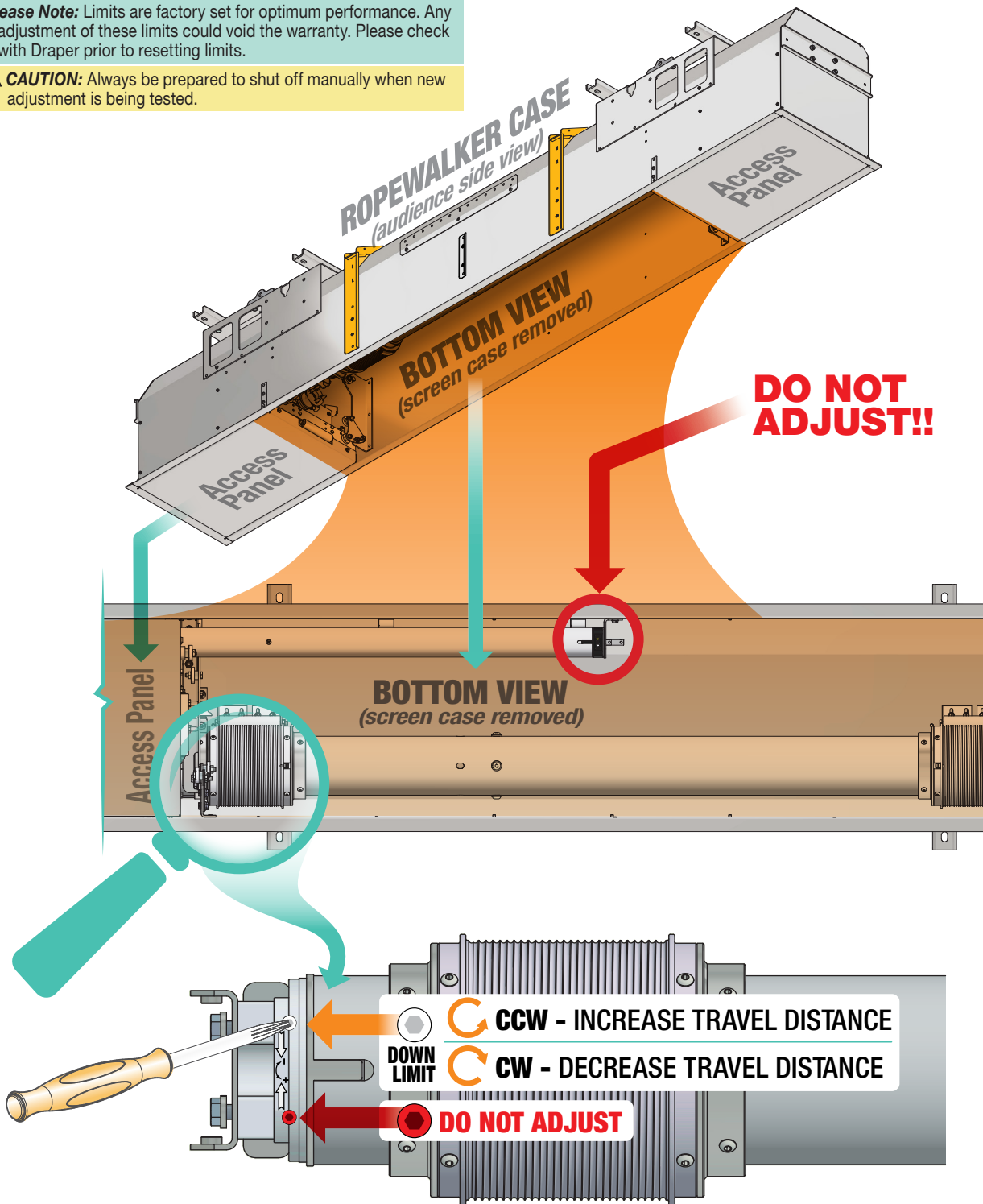
1. Refer to Figure 8 for the proper adjustment procedures.
2. Position of screen can be adjusted using the white down limit setting screw:
 - Turning the white screw counter clockwise will cause the screen position to move farther down.
 - Turning the white screw clockwise will cause the screen position to move up.

CAUTION: Be sure all switches are in "off" position before adjusting limit switches.

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

CAUTION: Always be prepared to shut off manually when new adjustment is being tested.

Figure 8



Section 8 - Inspecting Cables for Signs of Excess Wear

How Often to Look:

- Regardless how infrequently the Ropewalker is used, a thorough inspection should be carried out annually at a minimum.
- Frequency of inspections depends on how often the Ropewalker is used.
- Equipment which is used frequently should be inspected approximately every 300 uses.

Where to Look:

- Stress points most likely to suffer from excess wear are along attachment points.
- Wear and damage can occur at any point along the wire lift line. The entire length should be checked.
- All lift line terminations (*cable clamps, thimbles, loops, Nico sleeves*) should be inspected.

How to Look:

- While wearing tough work gloves, wrap a cotton cloth gently around the wire lift line and either operate the Ropewalker or manually work hands along the cables.
- If there are snags or other damage developing, the cotton cloth will catch on them. Visually inspect the wire lift line for signs of abrasion, corrosion, and discoloration.

What to Look For:

- Lift lines must be inspected periodically for signs of wear.
- Visually inspect the wire rope, looking for broken or flat wires, corrosion, excessive wear or signs of chemical etching.
- Ensure the wire lift line is not rubbing against anything at any point along the run, and that it is free of dirt and grease.
- Cable thimbles and loops should continue to hold their shape and not be elongated.

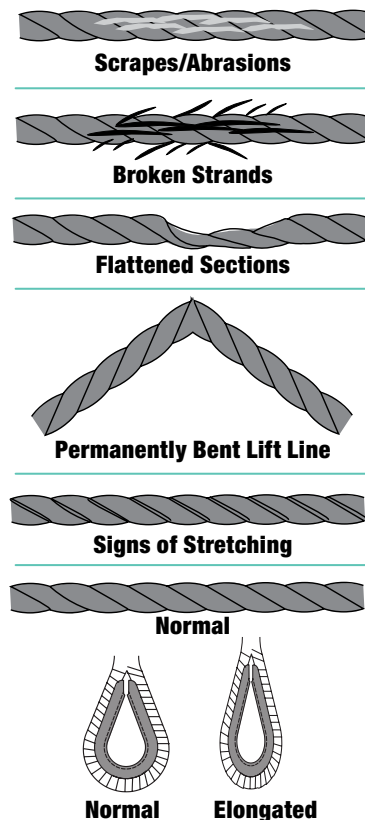


Figure 9

Section 9 - Cable Arresters

Operation of the Self-Retracting Device

1. Inspect the Self-Retracting Device before operating the Ropewalker. Do not use if inspection shows damage or any malfunction.
2. Follow the instructions contained in this manual and on the labels. Failure to follow instructions may result in serious injury or death.
3. A certain amount of tension must remain on the cable at all times to ensure proper operation of the internal brake.

⚠ CAUTION: Do not allow the cable to become slack. If the cable becomes slack, remove the Ropewalker from service for inspection.

Locking Mechanism

1. The Self-Retracting Device utilizes an acceleration based locking mechanism.
2. The locking function requires a certain payout rate during a fall event to function correctly.
3. A clear path is required to assure positive locking of the Self-Retracting Device.
4. Ensure the lock is functioning properly:
Pull the cable out a short distance and tug sharply. The cable must lock.
If it fails to lock, remove Ropewalker from service immediately.

Fall Arrest Impact Indicator

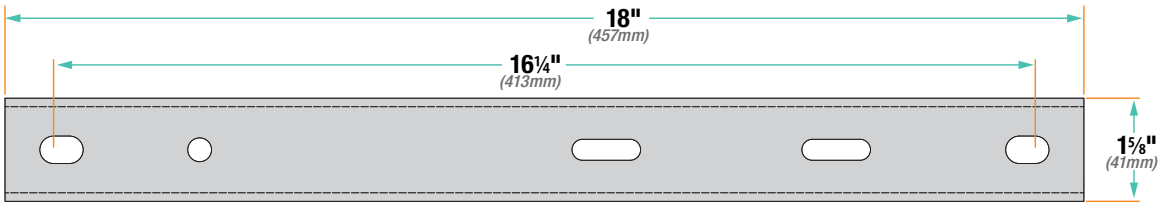
⚠ CAUTION:
DO NOT allow one Self-Retracting Device cable to become tangled or twisted during use.
DO NOT clamp, knot, or prevent the cable from retracting or being taut.
DO NOT lengthen the Self-Retracting device by connecting a cable or similar component.

After a Fall

⚠ Remove from service any equipment that has been subjected to fall arrest forces or that exhibits damage consistent with such forces.

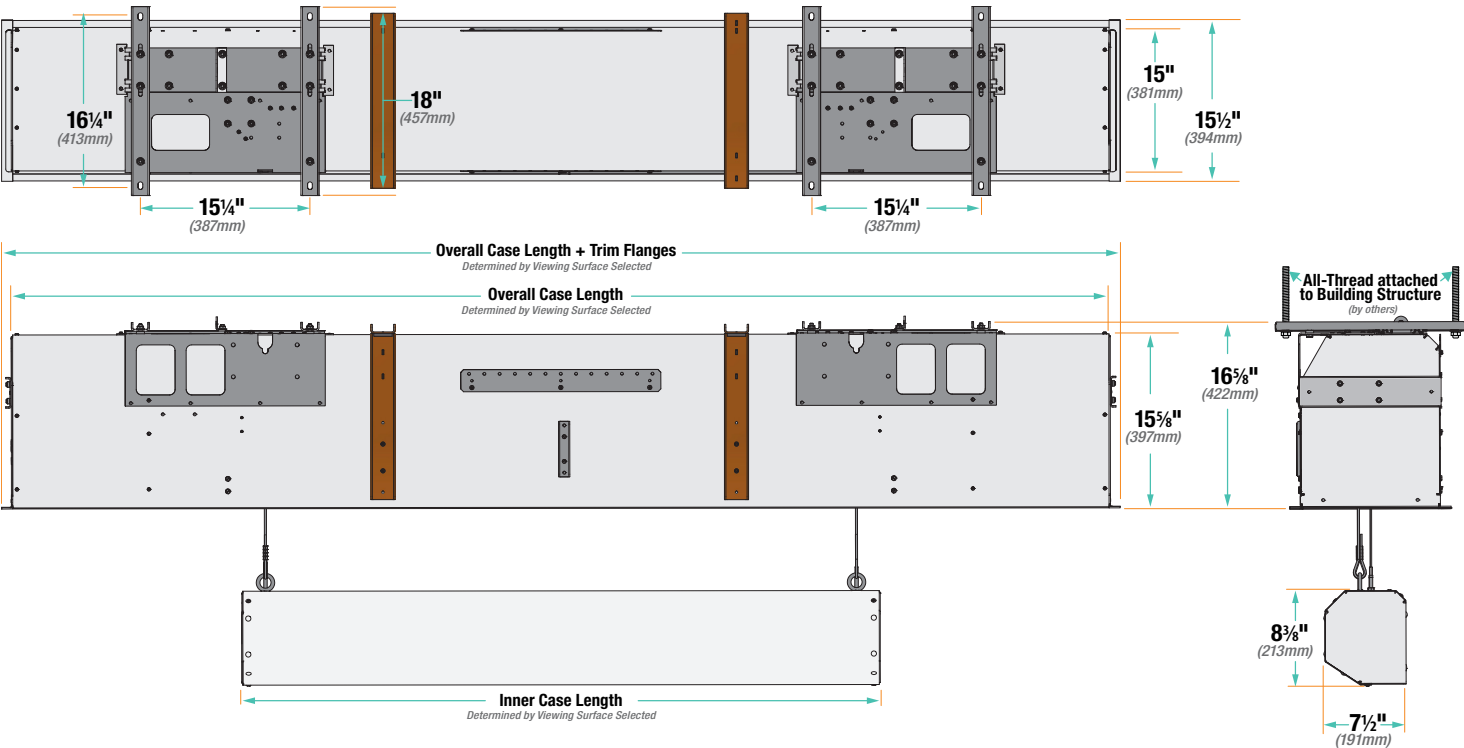
Section 10- Dimensions

Mounting Bracket Dimensions



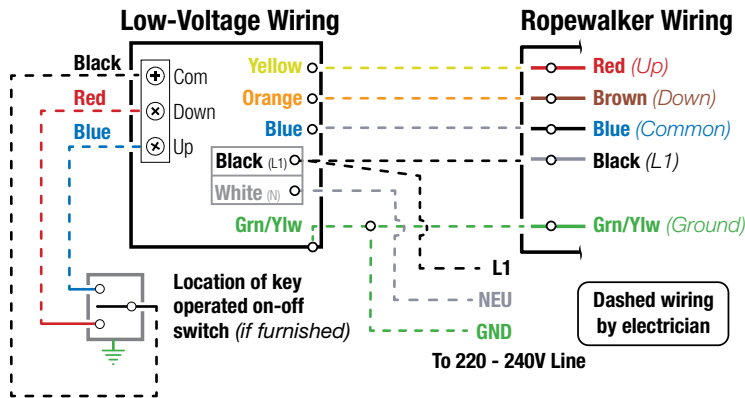
Ropewalker Case Dimensions

WARNING: MOUNTING BRACKETS ARE NOT ADJUSTABLE!



Section 11 - 220V Wiring Diagrams

Low-Voltage Control for 220V Ropewalker



Single Station Control

