creative conners, inc.

Pushstick V2

Reference Manual, version 1.0

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Getting Started

Congratulations on your purchase of the Pushstick V2 Deck Winch (referred to simply as "V2" moving ahead) from Creative Conners, Inc. The V2 is a winch designed to meet the demands of scenic automation in non-lifting applications.

This manual will direct you through:

1.Unpacking
2.Installing & testing
3.Operation procedures

If you need help along the way contact us either on our website (www.creativeconners.com), via email (support@creativeconners.com), or by phone (401.289.2942)

Word about safety

The Pushstick V2 Deck Winch is not intended for overhead lifting. The V2 is constructed to be a rugged and versatile deck winch, used for deck tracks, traveler tracks, and other lateral motion applications.
The V2 includes several removable Lexan safety covers to prevent any injury or damage. Though removable, these covers are intended to be installed anytime the machine is in service.

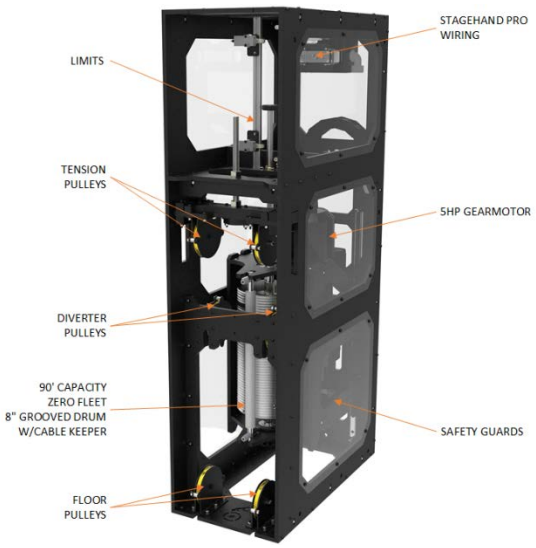
Unpacking

Remove the shipping materials from around the V2 and unbolt it from the pallet. Double check there is no visible damage to the V2 and that all the Lexan covers are in place. If anything appears damaged or missing snap a photo and email it to support@creativeconners.com.

Overview

The V2 is the update to our workhorse deck winch, the original Pushstick. The V2 incorporates several key features to note:

- Zero fleet design
- Stagehand Pro wiring to make installation quicker and cleaner
- Ultimate limits
- 700lb line pull and a brisk 36"/sec max speed
- 90’ cable capacity
- Compact frame and footprint (3 V2's fit in the same area as one original Pushstick)
- Easy to move with a hand truck.

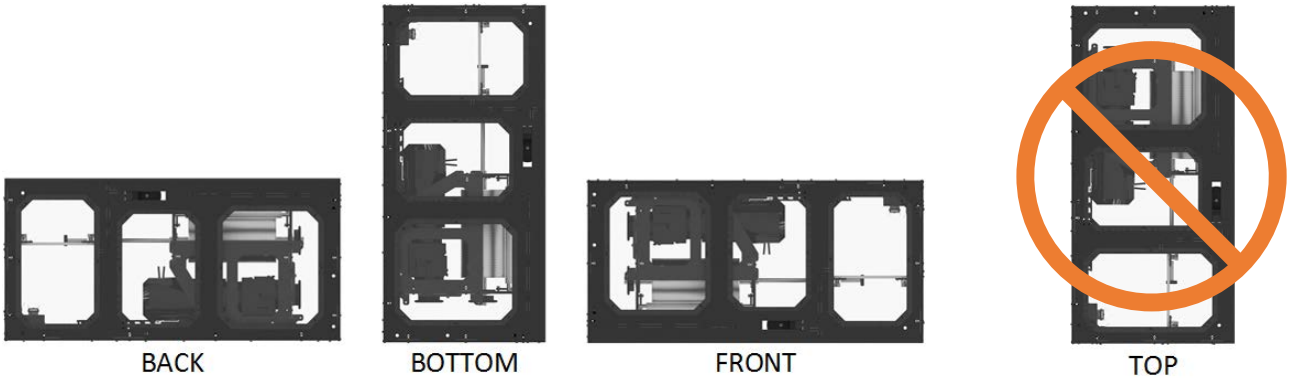


Installation

Mounting the V2

When determining attachment keep in mind the V2 has a 700lb line pull.
The frame incorporates mounting holes into that are compatible with 1-5/8" Unistrut framing and future accessories

The V2 can be mounted in any orientation except on its head (with the Pro connectors down).



Connecting the V2 to a Stagehand Pro

Although the V2 comes pre-wired for Stagehand Pro cabling, it is backwards compatible with the Stagehand Classic AC. Adaptors will be required if connecting the V2 to a Stagehand Classic and some functionality will be different.

Prior to attaching the V2 to a piece of scenery, it is important to confirm proper operation. To test the V2's operation you will need a Stagehand Pro AC motor controller (refer to your Stagehand Pro AC manual for installation instructions).

With the Stagehand Pro AC installed, make the following connections between the V2 and Stagehand Pro AC:

- Connect the control connector to the Stagehand AC Pro.
- Connect the motor and brake connector to the Stagehand AC Pro.
- Using a Showstopper cable (5-pin XLR) connect the Showstopper to the E-Stop inlet on the Stagehand AC.

Testing the brake

The Stagehand Pro AC is equipped with a brake testing feature. This feature allows the end user to check the functionality of the brake from the Stagehand. The V2 is equipped with a motor side brake only and although not required, it is a good idea to perform this test on a regular basis. For directions on operating the test please refer to the Stagehand AC Pro manual.

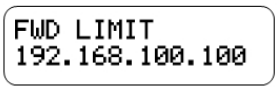
Testing the motor

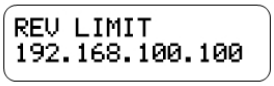
To confirm that your motor is properly connected to the Stagehand Pro AC you should test these conditions:

- **E-Stop** – Release the E-Stop button on Showstopper. You should hear a "click" from inside the Stagehand, this is the E-Stop contactor closing. The LCD display should show that the E-Stop is released by switching the status display to:

  "Not Connected" indicates that the Stagehand is not communicating with a computer running Spikemark.
- **Brake release** – Press the FWD jog button. You should hear a distinct "click" from your motor brake. This is the sound of the brake releasing. Release the FWD jog button. You should hear a click of the brake engaging.
- **Motor Motion** – Press the FWD jog button and slowly turn the knob clockwise. The motor should begin moving. Turn the knob counterclockwise to slow the motor to a stop, then release the jog button. Repeat with the rev jog button.
- **Encoder** – When jogging the motor from a Stagehand Pro, the LCD will display the encoder counts. While jogging the motor verify the counts are increasing while running in the forward direction and decreasing while running in the reverse direction.
- **Limit Switches** – Manually activate the ultimate forward limit and the forward limit then activate the ultimate reverse limit and reverse limit. The LCD display on the Stagehand should indicate when a limit is detected. Please note: If using a Stagehand Classic AC the Ultimate Limits will not function.

- **Manually releasing the brake** - The motor brake is able to be released manually if needed. The release handle is stored on the motor and is screwed into the top of the motor.
  ADD IMAGE

Rigging the V2

If you are unfamiliar with rigging a Zero Fleet winch, be prepared: it is a bit different than a standard winch. This guide is available online with images at:
http://creativeconners.com/resources/manuals

1. Drive the winch to it's full-forward position so that the winch drum is all the way up. You may need to adjust the FWD limit.
2. Start with your cable spool on the right side of the V2 and run your 1/4" wire rope through your rig and bring the end of the cable to the left pulley. It's really handy to leave the spool of cable on the right side of the winch.

3. Start threading the cable (or rope) on the left pulley. Take care to keep the cable inside the standoffs around the pulley so that the cable rides smoothly.
4. Bring the cable up through the tensioner pulley. The tensioner pulley is the one at the end of the threaded rod.

PRO TIP

Make sure the tensioner is lowered all the way so you can suck up all the tension later.

5. Feed the cable around the front of the drum diverter pulley. The drum diverter pulley is mounted to the fixed bar and points inwards towards the drum.
6. Poke the cable through the hole in the bottom of the drum. Make sure that the hole in the drum is lined up vertically with the pulley. If you need to move the drum up or down, just run the winch fwd/rev to get lined up with the hole.
7. Pull some slack through the drum and put an end stop on the cable, or a knot in the rope.
8. Pull the slack back so that the end stop is inside the drum.

PRO TIP

If you don't want to use an end stop, you can fish the cable up to the top of the drum and use the cable clamp up there.

9. Run the winch in reverse all the way back down and wind the drum full of cable.
10. Line up the top hole in the drum with the bottom of the right drum-diverter pulley.
11. With the drum full of cable, transferred from your spool, pull off an extra 6' of working line. Cut the cable and feed the end into the right floor pulley.
12. Repeating the same process on the left side, bring the cable up to and through the front of the tensioner pulley.
13. Feed the cable through the drum diverter.
14. Poke the end of the cable through the hole in the drum.
15. Loosen the cable clamp, slip the cable through, and tighten (a small ratchet is awesome for this step).
16. With the cable secure, use a 1-⅛" wrench to tighten the tensioner rod. This will stretch the tension pulleys and take up any slack in the system.
17. Run the winch fwd/rev a few times to confirm proper operation.

Operating the V2

Once the connection to the Stagehand is confirmed and the V2 is rigged you can program it as you would any other winch in Spikemark.
The max speed of the V2 is 36" per second. It can be oversped from the Stagehand to a max of 72" per second though the line pull capacity will be reduced by half.

Troubleshooting

Motor is jerky

Ensure the motor brake is disengaging
Run the auto-tune process outlined in the Stagehand Pro AC manual
Adjust the tuning parameters as outline in the Spikemark manual

Stagehand Pro AC displays “Brake Fault”

Ensure the motor/brake cable is plugged in

When trying to move the Stagehand Pro AC displays “Drive Fault”

Ensure the motor/brake cable is plugged in
Ensure the control cable is plugged in
Call Creative Conners, Inc. with the fault code displayed on the Mitsubishi keypad

Motor stops short of target and a limit fault displays on the Stagehand

Confirm limit switches are set properly, adjust as necessary.

Cable does not wrap onto the drum correctly or makes a “crunchy” sound

Ensure the grooves of the drum are aligned with the diverter pulleys

Limit Switch is not activating

Adjust position of limit switch

Technical Support

Phone

You can call our technical support at 401-289-2942 Monday-Saturday from 8am – 6pm EST.
Phone support is free for 90 days, after that a rate of $30/hr. applies to support calls.

Web

There is an active user support forum on our website.
http://www.creativeconners.com/phpBB2/index.php

Email

If you have a technical question you can email technical support support@creativeconners.com.

Specifications

Specifications

Input voltage	230V/460V 50/60Hz 3-phase
Max input current	13.6 amps
Brake Input Voltage	200-240V
Max Line Pull	700 lbs.
Max line speed	36”/sec.
Required wire rope size	¼”
Max wire rope capacity	90’
Machine weight	430 lbs.
Dimensions (H/W/D)	60”x15”x29”

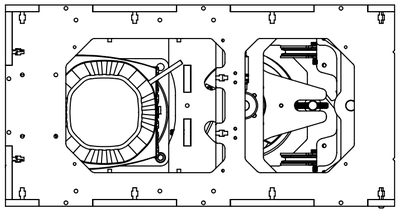
Physical Specifications

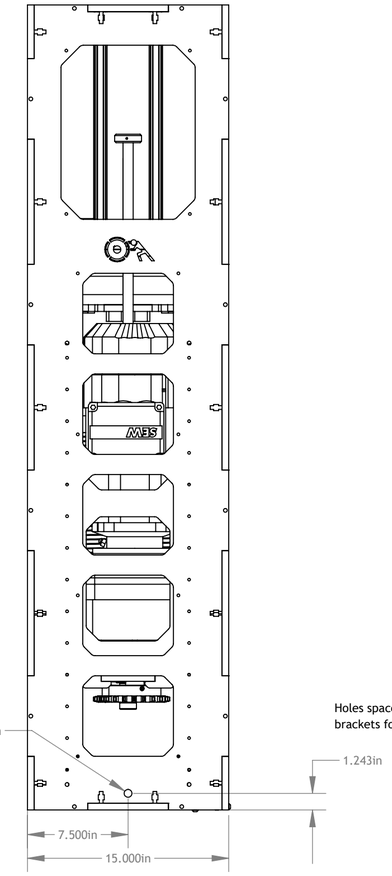
See attached drawing

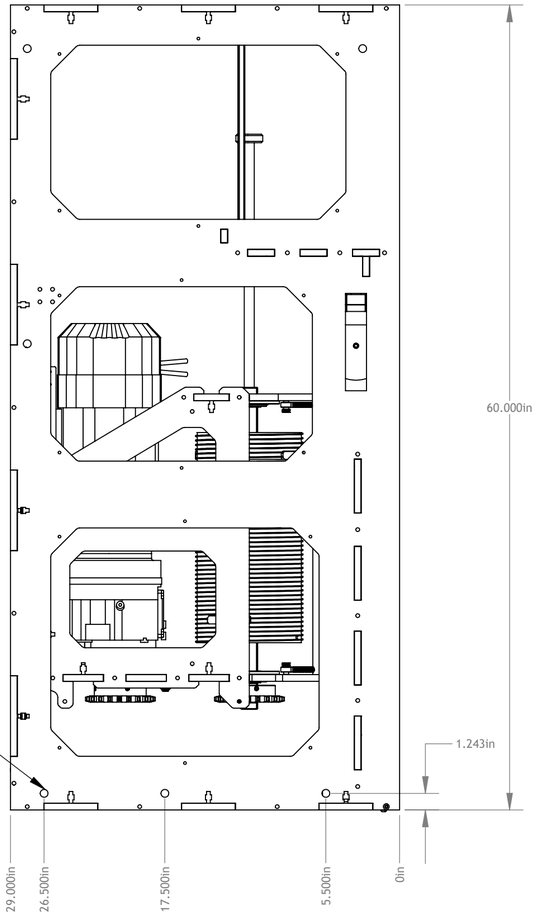
REVISIONS			
Rev.	Drawn	Date	Revisions

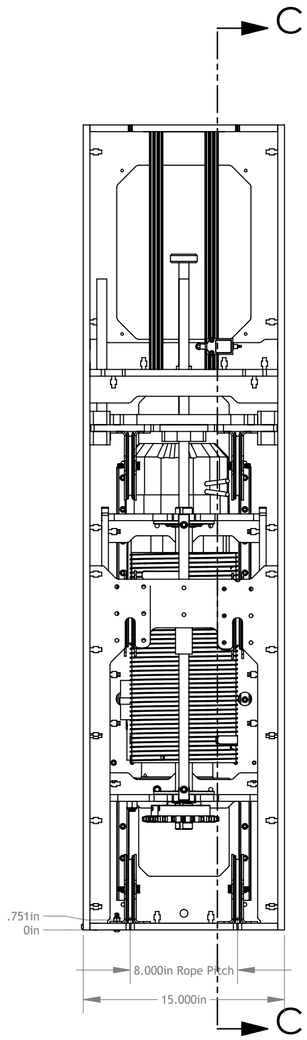
creative conners, inc.
84 cutler st. #7 | warren, ri 02885
401-289-2942

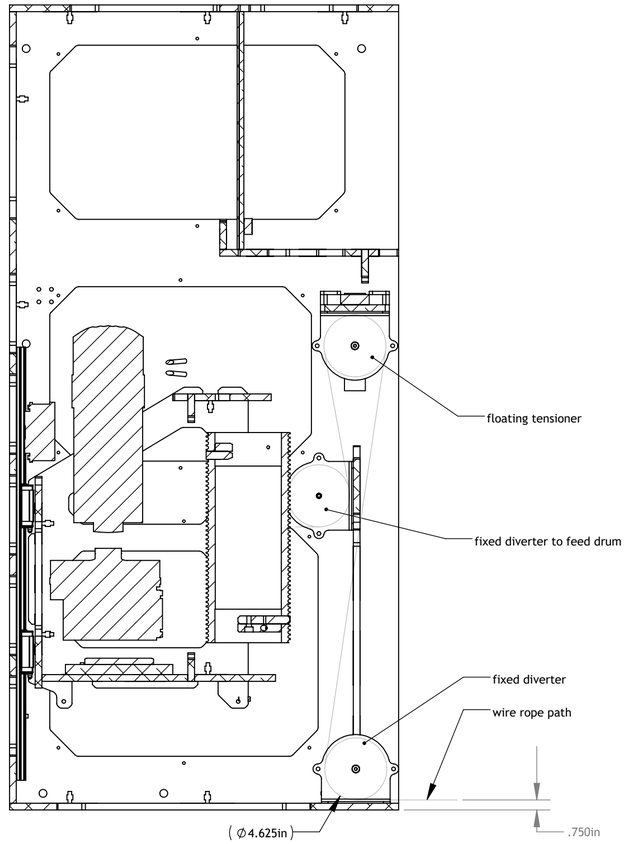
Pushstick v2
Orthographic Views
Scale: 1:8
Drawn on: 1/5/2016
Revised on: -











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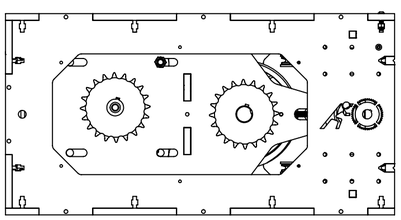

tolerances:
fractions: ±1/16
.xx : ±0.010
.xxx : ±.003

PS1