

Stagehand Pro AC™

Quick Start Guide v1.0

Start Here

The Stagehand Pro AC is the next generation Stagehand motion controller. It is designed from the ground up to safely and smoothly control overhead hoists such as the Creative Conners Spotline while also integrating seamlessly with deck winches and Spikemark to *Make It Move!* The Stagehand Pro AC is available in both 5HP and 10HP configurations. All Stagehand Pro's incorporate a Mitsubishi VFD offering zero speed full torque, redundant E-Stop circuits, Showstopper and Spikemark connections.

What's in the box

You will find the Stagehand Pro AC and one 10' Mains Power Cable (L15-30 to Harting). Contact us immediately if anything is damaged or missing. The reference manual can be found at creativeconners.com/resources

Mounting Options

The Stagehand Pro AC comes standard with rubber feet and handles and can be placed on a table, shelf or the floor. It can also mount directly to a Spotline Hoist or be rack mounted with the included rack ears. The Stagehand Pro AC 10HP is only intended to be rack mounted. Whether in a rack or free-standing the Stagehand Pro AC should always be mounted vertically.

Connections

There are five electrical and data connections that need to be made on the back of the Stagehand before you can begin using it:

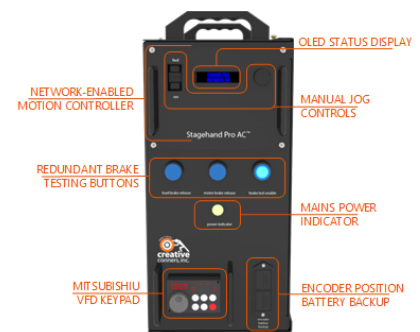
1. Mains power - From distro panel with an L15-30 to 6 pin Female Harting cable
2. Motor and brake output - To Spotline Hoist with the 12 conductor Motor cable
3. Encoder and Limits - To Spotline Hoist with 24 conductor encoder cable
4. Network - To Network switch with CAT5 cable and Ethercon or standard RJ45 connectors
5. Showstopper - To the Showstopper 3 Base or Hub with a Showstopper (standard DMX) cable



Testing the Movement

If you are testing a Hoist, ensure there is no load on the hoist and release the E-Stop. Once released the display of the Stagehand will display Connected (or Disconnected) with an IP Address. *If the screen is showing "Set IP" use the jog wheel to scroll to OK and press the wheel in.*

- Testing the Brakes. Press and hold the **Brake Release Enable** button on the face of the Stagehand Pro. With that engaged press and hold the **Motor Brake Release** button, you should hear a click from the hoist. Do the same with the **Load Brake Release**.
 - *If either (or both) brakes do not release ensure the E-Stop is released and that the motor cable is connected to the Stagehand and the Hoist.*
- Jogging the motor from the face of the Stagehand Pro. Once the brakes have been successfully tested, on the face of the Stagehand Pro press and hold the FWD button and slowly turn the jog wheel clockwise. The Hoist should be moving FORWARD and the encoder counts, displayed on the face of the Stagehand Pro should be counting positively. Turn the wheel counter clockwise until the motor stops moving and release the FWD button. Follow the same procedure with the REV button, confirming the encoder counts are counting negatively.



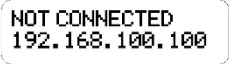
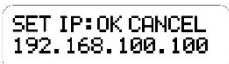
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- *If the encoder counts are not counting correctly, you will need to swap any 2 hot legs on the motor cable to reverse the motor direction*

Once the brake functionality and motor jogging are confirmed, you are ready to *Make It Move!*

Setting the IP Address

Although the Stagehand Pro can manually control your Hoist directly, the real power comes once the Stagehand is connected to Spikemark through the Network. Any device on the Network is required to have a unique IP address, including Spikemark, a Consolette and each Stagehand.

- To set the IP address, first release the E-Stop and confirm the Stagehand Pro display is showing "Not Connected" and an IP Address. 
 - Click (depress) the jog wheel, "Set IP" will be displayed along with the current IP Address.
 - Turn the wheel to the desired part of the IP Address you need to change and click the wheel. 
 - Turn the wheel until the desired number is displayed. Click the wheel to set.
 - Select any additional parts and set those numbers.
 - Once all parts of the IP Address are set use the wheel to highlight "OK" and click the wheel.

Connecting to Spikemark

Once the Stagehand Pro IP Address is set, open Spikemark and use the Machine Library to add your Hoist and Stagehand to the Cue Grid. Once the Hoist is added highlight it in the cue grid and update the IP Address on the right hand side of the screen and press the Connect button. You are now ready to write your first cue. Please refer to the Spikemark reference manual for further details.

Troubleshooting

Below is a list of the most common issues encountered with the Stagehand Pro. Our full reference manual is available for download at <http://creativeconners.com/resources/manuals>

PROBLEM	SOLUTION
Stagehand will not connect to Spikemark	Confirm E-Stop is released Confirm IP Address is set correctly at the Stagehand and in Spikemark
Status display is cycling <i>Brake Fault, Drive Fault, E-Stop</i>	Release the E-stop Confirm the Stagehand is connected to the Showstopper 3 Base or Hub with a Showstopper cable
Status display shows "SET IP"	Turn the knob until CANCEL is highlighted and press the knob.
When jogging forward, the encoder position decreases. When jogging in reverse, the position increases	Swap any 2 power legs going to the motor Swap the encoder signal: A with B and /A with /B
Motor runs roughly or makes strange noises when jogging manually	Run the auto-tuning procedure outlined in the Reference Manual
Drive faults when the motor tries to move	There are several reasons the drive may be faulting. Below are the most common fault codes which will be displayed on the VFD keypad:
ETHN	overload caused either by too much load, or failure of the brakes to release. Make sure the brake(s) are wired correctly and plugged in.
ELF	output phase loss caused by the motor being disconnected. Make sure the motor is properly wired and plugged in.

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EOSD	speed deviation error. Caused by a mismatch between encoder feedback and command motor speed. Make sure the Speed Encoder is properly wired and plugged in.
EECT	encoder signal loss. The Speed Encoder is disconnected, make sure it's wired up and plugged in.
EOS	over speed. The motor was running faster than the maximum value programmed for the drive. This usually means the motor was in free fall. Remove the load from the motor and begin testing in a controlled environment to determine if the machine is healthy.

If you need further assistance we are available on the phone at 401-289-2942 during normal business hours, or via email at support@creativeconnors.com.