



TJERNLUND PRODUCTS, INC.

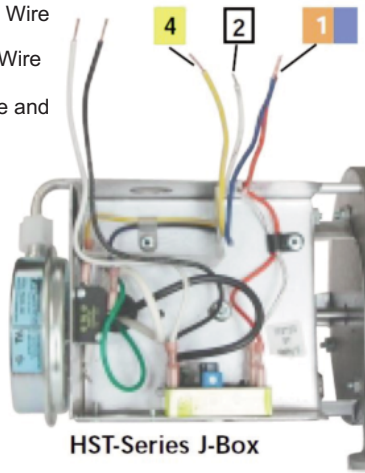
1601 Ninth Street • White Bear Lake, MN 55110-6794
 PHONE (800) 255-4208 • (651) 426-2993 • FAX (651) 426-9547
 Visit our web site • www.tjernlund.com

CONVERSION TIPS FOR OLD HSUL & HST SERIES POWER VENTERS

It's easy to convert old power venter installations to our UC1 universal interlock control. Below we show electrical box photos of our discontinued HSUL and HST series power venters. We have cross referenced the UC1 terminal strip position typically associated with the colored wires of either our HSUL or HST series power venters. Example: A call for heat signal that was wired to the blue leads of an old HSUL series power venter would be reconnected to terminal #1 of the UC1 control. **IMPORTANT:** Follow all cautions and warnings in Power Venter or UC1 wiring section for complete details.

Reconnect to UC1 Terminal #'s.

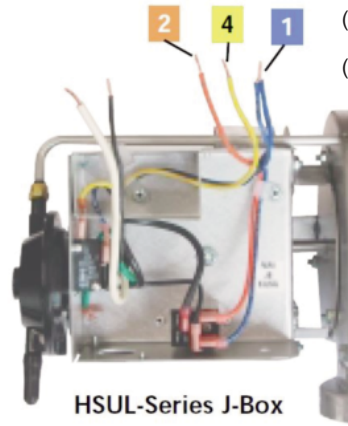
- (UC1 Terminal 4) = HST Yellow Wire
- (UC1 Terminal 2) = HST White Wire
- (UC1 Terminal 1) = HST Orange and Blue Wires



HST-Series J-Box

Reconnect to UC1 Terminal #'s.

- (UC1 Terminal 2) = HSUL Orange Wire
- (UC1 Terminal 4) = HSUL Yellow Wire
- (UC1 Terminal 1) = HSUL Blue Wires



HSUL-Series J-Box

IMPORTANT!!! UC1 BOARD VERSION X.06 UPDATES

If replacing an existing Power Venter or UC1 that includes an X.02 or X.04 version of a UC1 board, the LED lights and sequencing have changed as outlined in this UC1 Board Version X.06 Update notice. See additional recommendations on back page for model specific information if replacing an existing Power Venter or UC1 Board.

X.06 VERSION UC1 BOARD FEATURES

IMPORTANT: This upgraded circuit board features:

A new #6 power LED

Constant red when 115 VAC is supplied to L & N.

A new color for the #2 LED

Constant blue when fan prover safety circuit is closed.

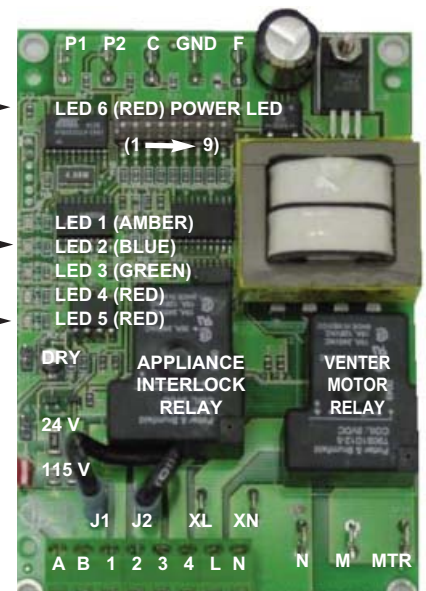
A revised #5 LED

With no call for heat present, flashes 3 seconds on / 3 seconds off if microcontroller is working properly.

New LED # 6 RED
 115V power supplied to UC1 L & N terminals

LED # 2 now BLUE
 (previously GREEN)

LED # 5 RED With no call for heat, flashes 3 seconds on / 3 seconds off if microcontroller is working properly.



IMPORTANT:

For 950-8804 UC1 Replacement Board Kits: If this is a 950-8804 UC1 board kit and you are replacing an existing UC1 board with this new board, note Dip Switch settings on existing UC1 circuit board so that those same settings can be positioned on this replacement circuit board. NOTE: Adhere appropriate included label over existing label in UC1 or SideShot electrical box. Also adhere "Checking Memory for Last Fault Code" sticker on inside of UC1 or SideShot SS1 Series electrical box. On SS2 Series adhere to underside of electrical box.

For SideShot Series SS1 Models: The Pre-Cycle Prover Status Check is deactivated from the factory on the SS1 Series. Because of the low set point of the SS1 Fan Prover (as low as .03" w.c.) cross winds may cause the Fan Prover to close prior to a call for heat. Activating the Prover Status Check on the SS1 may cause nuisance lockouts. **Important:** Deactivate the Pre-Cycle Prover status check if installing this board on a new or existing SS1 installation by pushing the #9 dip switch up or "ON" to disable.

For Draft Inducers with the UC1: Natural draft or winds may be sufficient to close the fan prover switch contacts prior to a call for heat when using the PS1505 fan prover with a draft inducer. Keeping the Pre-Cycle Prover Status Check activated may cause nuisance lockouts. **Important:** Deactivate the Pre-Cycle Prover status check if installing this board on a new or existing draft inducer installation by pushing the #9 dip switch up or "ON" to disable.

LED INDICATOR LIGHTS

- LED #1 (Amber) Appliance call for heat.
- LED #2 (Blue) Safety circuit through P1 & P2 (Venter Fan Prover and/or High Limit). Indicates Venter prover is closed during run cycle. Burner circuit is energized with Interlock Relay contact closure from terminal 3 to 4.
- LED #3 (Green) Power switched to Venter motor from L to MTR & M.
- LED #4 (Red) Status / Fault indicator.
- LED #5 (Red) Used as a status indicator.
- LED #6 (Red) 115 VAC power supplied to board.

LED STATUS INDICATORS

- LED #4 & #5 (Red) Flashing Alternately = Venter in Pre-purge. (Pre-Purge options 0, 5, 20, 35 seconds)
- LED #4 & #5 (Red) Flashing in Unison = Venter in Post-Purge. (Post-Purge options 0, 30 seconds or 1, 2, 4, 8, 16 minutes)
- LED #4 Flashes Continuously* = Fan Prover opened for more than 10 seconds during burner cycle. (Venter will run for 10 minutes, attempting to make Fan Prover)
- LED #5 (Red) Flashing Intermittently = With no call for heat, flashes 3 seconds on / 3 seconds off if microcontroller is working properly.

LED FAULT INDICATORS

Fault conditions are indicated by counting the number of times LED #4 (Red) flashes.

- LED #4 Flashes 2 Times Fan Prover was in electrically closed position prior to venter operation.
- LED #4 Flashes 3 Times* Fan Prover does not close within 60 seconds after call for heat.
- LED #4 Flashes 4 Times* Fan Prover did not re-close after 10 minutes of Venter operation.
- LED #4 Flashes 5 Times* Fan Prover opened for more than 10 seconds during burner cycle but closed within 10 minutes.

* Investigate cause of Fan Prover short cycling such as; Firing burner at capacities or temperatures exceeding Venter limits, excessive vent pipe runs, elbows directly on venter discharge, high winds, plugged / kinked Fan Prover sensing tube or a faulty Fan Prover switch. In-Forcer model's intake screen and prefilter, if applicable, should be cleaned if necessary.

IMPORTANT: Fault codes will automatically be displayed after a fault condition occurs. If the call for heat interlock signal or 115 VAC power is removed, the UC1 board will reset and the fault will be stored in memory instead of displayed. Any new fault will replace any previous fault.

CHECKING MEMORY FOR LAST FAULT CODE

IMPORTANT: Prior to accessing the fault code memory, note the settings of the dip switches so that they can be returned to their original Pre / Post-Purge positions. When power is supplied to the UC1 use caution when moving dip switches.

The last fault code can be retrieved at any time by setting all dip switches 1-8 to the up, or "on" position. The last fault code, or lack there of, will be indicated by counting the number of times LED 4 flashes. By moving any of the dip switches back to their original position, the fault code will be cleared. **NOTE:** The UC1 board must have its 115 VAC power supply present when any of the (1-8) dip switches are moved back to their original position for the fault code to clear.