



## 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

### 24/120 VAC INPUT (10 SECOND TO 10 MINUTE) ADJUSTABLE TIMER/RELAY PART NUMBER 950-1067

**OWNERS INSTRUCTIONS  
 THESE INSTRUCTIONS MUST REMAIN  
 WITH EQUIPMENT  
 DO NOT DESTROY**

**ALWAYS FOLLOW HEATER  
 MANUFACTURER'S INSTRUCTION  
 FOR PROPER OPERATION OF  
 HEATER AND RELIGHTING OF PILOT**

#### READ INSTRUCTIONS CAREFULLY

##### TJERNLUND LIMITED ONE YEAR WARRANTY

Tjernlund Products, Inc. warrants to the original purchaser of this product that the product will be free from defects due to faulty material or workmanship for a period of (1) year from the date of original purchase or delivery to the original purchaser, whichever is earlier. Remedies under this warranty are limited to repairing or replacing, at our option, any product which shall, within the above stated warranty period, be returned to Tjernlund Products, Inc. at the address listed below, postage prepaid. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, AND TJERNLUND PRODUCTS, INC. EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF THIS PRODUCT. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND NO AGENT IS AUTHORIZED TO ASSUME FOR US ANY LIABILITY ADDITIONAL TO THOSE SET FORTH IN THIS LIMITED WARRANTY. IMPLIED WARRANTIES ARE LIMITED TO THE STATED DURATION OF THIS LIMITED WARRANTY. Some states do not allow limitation on how long an implied warranty lasts, so that limitation may not apply to you. In addition, some states do not allow the exclusion or limitation of incidental or consequential damages, so that above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from State to State. Send all inquiries regarding warranty work to Tjernlund Products, Inc. 1601 9th Street, White Bear Lake, MN 55110-6794. Phone (651) 426-2993 • (800) 255-4208 • Fax (651) 426-9547 • Email fanmail@tjfans.com.

## PART # 950-1067 INSTALLATION INSTRUCTIONS

### 24/120 VAC INPUT ADJUSTABLE POST-PURGE TIMER/RELAY

<u>COMPONENT #</u>	<u>DESCRIPTION</u>	<u>REPLACEMENT KIT #</u>
860-0345	24 VAC Input Post-Purge Timer/Relay	950-1067
860-0346	120 VAC Input Post-Purge Timer/Relay	950-1067
860-0349	24/120 VAC Input Post-Purge Timer/Relay	950-1067

**NOTE:** The Tjernlund Timer/Relay Part # 950-1067 is used both as a replacement part and can also be used as an accessory with Tjernlund Draft Inducers, although the UC1 Universal Interlock Control is the preferred accessory for interlocking and controlling Draft Inducers. The Timer/Relay has an adjustable post-purge period of (10 seconds to 10 minutes).

### **⚠ WARNING**

- Disconnect 120 VAC Power to the Power Venter/Draft Inducer and any thermostat / aquastat call for heat before continuing.
- All wiring from the Power Venter/Draft Inducer to the appliance must be appropriate class 1 wiring as follows: installed in rigid-metal conduit, intermediate metal conduit, rigid non-metallic conduit, electrical metallic tubing, Type MI Cable, Type MC Cable or be otherwise suitably protected from physical damage.

### POST-PURGE ADJUSTMENT (10 SECOND TO 10 MINUTE)

To reduce the post-purge cycle turn the adjustment pot counter-clockwise. To increase the post-purge cycle turn the adjustment pot clockwise. Nominal adjustment range is 10 seconds to 10 minutes. **NOTE:** Do not overturn adjustment on Timer/Relay. This will damage Timer/Relay and void warranty

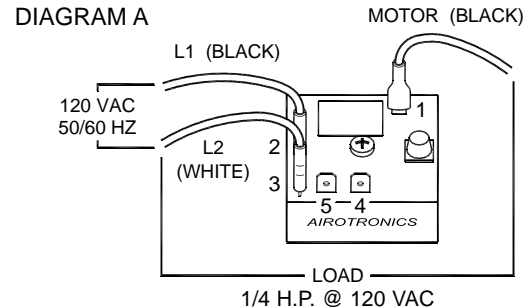
**IMPORTANT:** Run heating equipment through a few cycles to verify post-purge is adequate. Venter should shut off (10 seconds to 10 minutes) after call for heat is removed and post-purge cycle is complete. Oil fired equipment requires a post-purge long enough to eliminate post cycle nozzle drip odor. A longer post-purge may be necessary for longer vent runs or high heat retention, refractory lined combustion chambers. A shorter post-purge may be desired for gas installations.

### 120 VAC SUPPLY AND OUTPUT TO MOTOR WIRING

The output or motor switching side of the # 950-1067 has three terminals. L1 or the 120 VAC supply power lead is attached to terminal 2. White or the 120 VAC neutral lead is attached to terminal 3 and the Black or 120 VAC "hot" motor lead is attached to terminal 1. **IMPORTANT:** Terminals 2 (L1) and 3 (L2) must be powered continuously with 120 VAC.

### ELECTRICAL RATING

The Terminal 1 (Motor Load) and Terminal 3 (L2) 120 VAC Load contacts are rated for 1/4 H.P. @ 120 VAC.



### REPLACEMENT OF DEFECTIVE TIMER/RELAY

- Remove the electrical box cover of the Power Venter.
- Mark the Black wire on defective Timer which is the load wire to the motor. This terminal will be marked BLK MOTOR, LOAD or be the #1 Terminal if replacing an Airotronics Timer. Remove the defective Timer and (4) plastic stand offs if necessary.
- Place the 120 VAC supply L1 Black wire on Terminal 2. Place the White L2 wire on Terminal 3 and place the Black Motor Load wire on Terminal 1, (See Diagram A).

### WIRING

The # 950-1067 Timer/Relay may be used to replace either the 24 VAC input # 950-1060 or the 120 VAC input # 950-1065 Timer/Relays. The # 950-1067 is designed to accept either 24 VAC or 120 VAC control input signals on terminals 4 & 5. The control inputs are non-polarity sensitive.

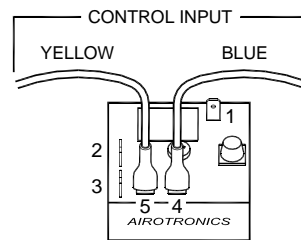
The output or motor switching side of the # 950-1067 has three terminals. Viewing the Timer/Relay as shown in Diagram A, L1 or the "hot" power lead is attached to terminal 2. L2 or the neutral lead is attached to terminal 3 and the Black or "hot" motor lead is attached to terminal 1. **NOTE:** In order for the timer to operate after appliance shutdown, terminals 2 and 3 must be powered continuously with 120 VAC.

The Timer/Relay kit is supplied with quick-connect leads for when it is installed as an accessory control. In most cases it will be easier to use the existing wire leads when installing it as a replacement for a defective Timer/Relay.

## CONTROL INPUT WIRING

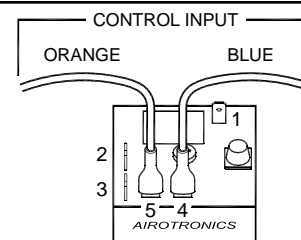
If you are replacing the Timer/Relay of a **VP-2/VP-3** or **WHK2** connect the control input voltage as shown in Diagram B.

DIAGRAM B



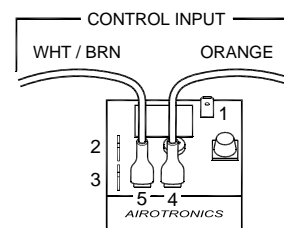
If you are replacing the Timer/Relay of an **HST** manufactured before August 1st 1992, or any **GPAK-JT/GPAK-1T/GPAK-1TR** connect the control input voltage as shown in Diagram C. **NOTE:** Terminal 4 of the Timer/Relay is Blue in the **GPAK-T** Series and Orange in the **HST-Series**. Terminal 5 of the Timer/Relay is White/Brown in the **HST-Series** and Orange in the **GPAK-T** Series.

DIAGRAM C



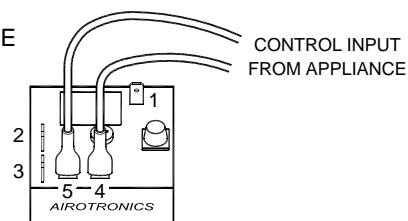
If you are replacing the Timer/Relay of an **HST** manufactured after August 1st 1992, or any **HST120**, connect the control input voltage as shown in Diagram D.

DIAGRAM D



If you are adding the Timer/Relay to an existing Draft Inducer/Power Venter, connect the 24 or 120 VAC control input voltage as shown in diagram E.

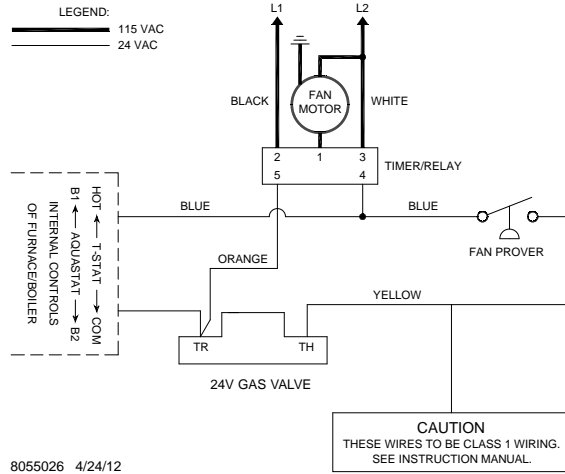
DIAGRAM E



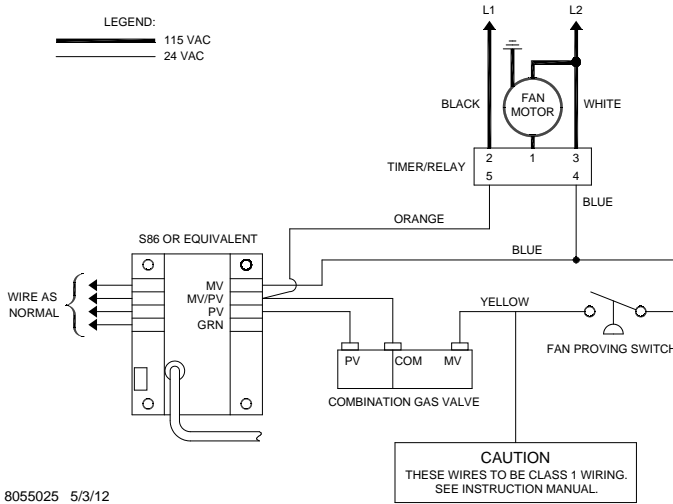
**NOTE:** The UC1 Universal Interlock Control is the preferred accessory for interlocking and controlling Draft Inducers & Power Venters.

**IMPORTANT:** Run heating equipment through a few cycles to verify post-purge is adequate. Venter should shut off (10 seconds to 10 minutes) after call for heat is removed and post-purge cycle is complete. Oil fired equipment requires a post-purge long enough to eliminate post cycle nozzle drip odor. A longer post-purge may be necessary for longer vent runs or high heat retention, refractory lined combustion chambers. A shorter post-purge may be desired for gas installations.

TYPICAL 950-1067 WIRING WHEN CONNECTED TO A 24 VAC GAS VALVE



TYPICAL 950-1067 WIRING WHEN CONNECTED TO A 24 VAC ELECTRONIC IGNITION GAS VALVE



TYPICAL 950-1067 WIRING WHEN CONNECTED TO A 120 VAC OIL FIRED APPLIANCE WITH FAN MOTOR LESS THAN 1/4 H.P. (BURNER MOTOR NOT TO EXCEED FAN PROVER AMP RATINGS)

WARNING: INSTALLER MUST PERFORM A SAFETY CHECK.

1. DISABLE THE POWER VENTER WITH THE APPLIANCE(S) CALLING FOR HEAT.
2. IF UTILIZING DRAFT HOOD SPILL SWITCHES AS THE SAFETY, THE APPLIANCE(S) MUST SHUT DOWN WITHIN 3 MIN.
3. IF UTILIZING THE FAN PROVING SWITCH AS THE SAFETY, THE APPLIANCE(S) MUST SHUT DOWN IMMEDIATELY. IF THE APPLIANCE(S) DO NOT SHUT DOWN, CONTACT TJERNLUND PRODUCTS, INC. FOR ASSISTANCE AT 1-800-255-4208.

LEGEND  
 ——— DENOTES LINE VOLTAGE FIELD.

NOTES  
 ⚠ POWER SUPPLY, PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION. 115V/60/1

