JADE™ Economizer with W7220-PCMOD Tool and Prestige® IAQ 2.0 Thermostat.

The JADE controller is a digital unit with economizing, demand control ventilation, and auto calibration strategies used to provide energy savings and comfort for the occupants of small commercial buildings.

JADE automatically recognizes the following components that are wired to it:

• Outdoor enthalpy or dry bulb

• CO_2 for demand control ventilation

• Mixed air for supply air comfort control

• Actuators to control the dampers

After the first 60 minutes of power on, Jade will change from a "setup" mode to an "operation" mode and will control the ventilation and "free cooling" to the building.

Alarm Mode for Failed Components on the JADE economizer system

If a sensor or actuator fails to respond to JADE during the operation mode, the JADE controller has the ability to send a 24 Vac signal, communicating that there is an alarm in the system. This is accomplished by programming the AUX1 O (out) terminal to "SYS" in the System Setup Menu on the JADE controller.

The building operator is able to address the alarm in three ways:

• Connect a light or audio alarm to the AUX1 O out to turn on a visual or audible alarm in the space, where a building operator will notice there is an alarm on the system

• Connect JADE to a W7220-PCMOD tool in the mechanical room, using the two-wire communication terminals (s-bus) and a personal computer to monitor the system

• Use a Prestige IAQ 2.0 thermostat to alarm the occupants that there is a system alarm

The options of connecting a visual or audio alarm to the SYS output when an alarm occurs would normally not be used in an occupied space; these types of alarm systems would be in a warehouse or computer lab.

Using the W7220-PCMOD tool to monitor the occupancy, damper position and status of the sensors in the system allows the building operator to keep a constant or periodic audit record of the economizer system. The PCMOD tool is connected to the JADE controller via two non-polarity wires and to a personal computer via USB cable to log the selected data.

A Prestige IAQ 2.0 thermostat can be used in the system alone or in conjunction with the W7220- PCMOD tool, to alert building occupants when there is an alarm in the economizer system. The wiring diagram for the system is shown in Figure 1 (page 5).

You will need the following components:

• W7220A1000 JADE Economizer (plus sensors and actuator(s))

• R8222N1011 DPDT Relay

• THX9421R5013 Prestige IAQ 2.0 2-wire Thermostat

• THM5421R1013 Equipment Interface Module

• Prestige IAQ 2.0 Thermostat and Equipment Interface Module can be purchased in a kit YTHX9421R5051

To program the Prestige IAQ 2.0 thermostat for JADE controller alarms:

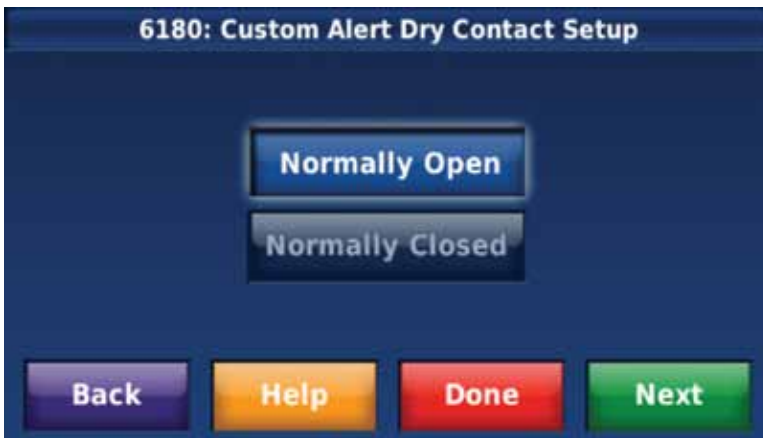**1.** Power thermostat > press Menu > press Installer options > input password > press Create Setup > select options through set up step 6000. Note: The password is the date code located on the back of the thermostat. The date code can also be found in Menu > Equipment Status.

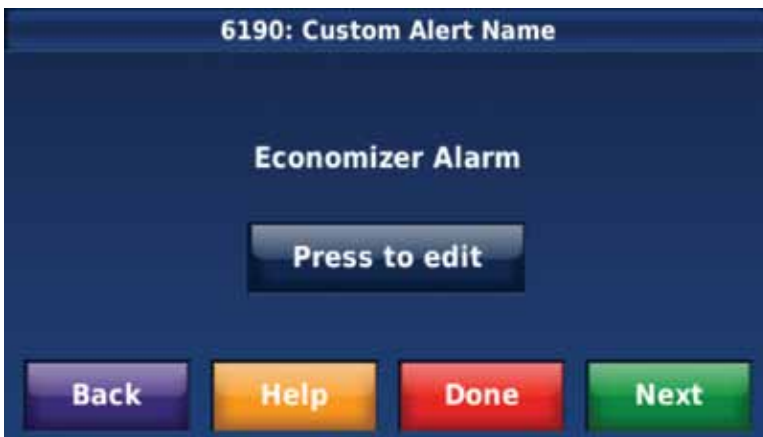**2.** At Installer Setup 6000 (Select the Dry Contacts in the System) > select "Custom Alert".

3. At Installer Setup 6170, select the terminals wired to the dry contact device (S1 or S2). Connect a Normally Open Relay Contact to the S1 or S2 terminals.
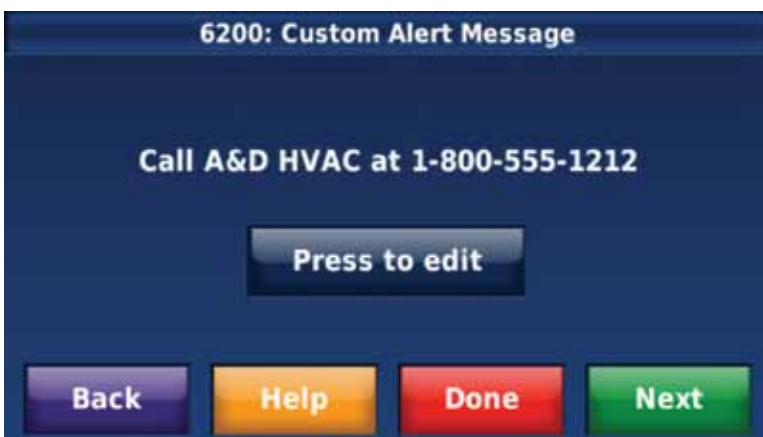
4. At Installer Setup 6180 (Custom Alert Dry Contact Setup) select "Normally Open."

5. At Installer Setup 6190 (Customer Alert Name) > press to edit > type up to 40 characters ex:
"Economizer Alarm" (this will display on the thermostat home screen in an orange box when
there is an alarm on the Jade controller)

6. At Installer Setup 6200 (Customer Alert Message) > press to edit > type up to 140 characters ex:
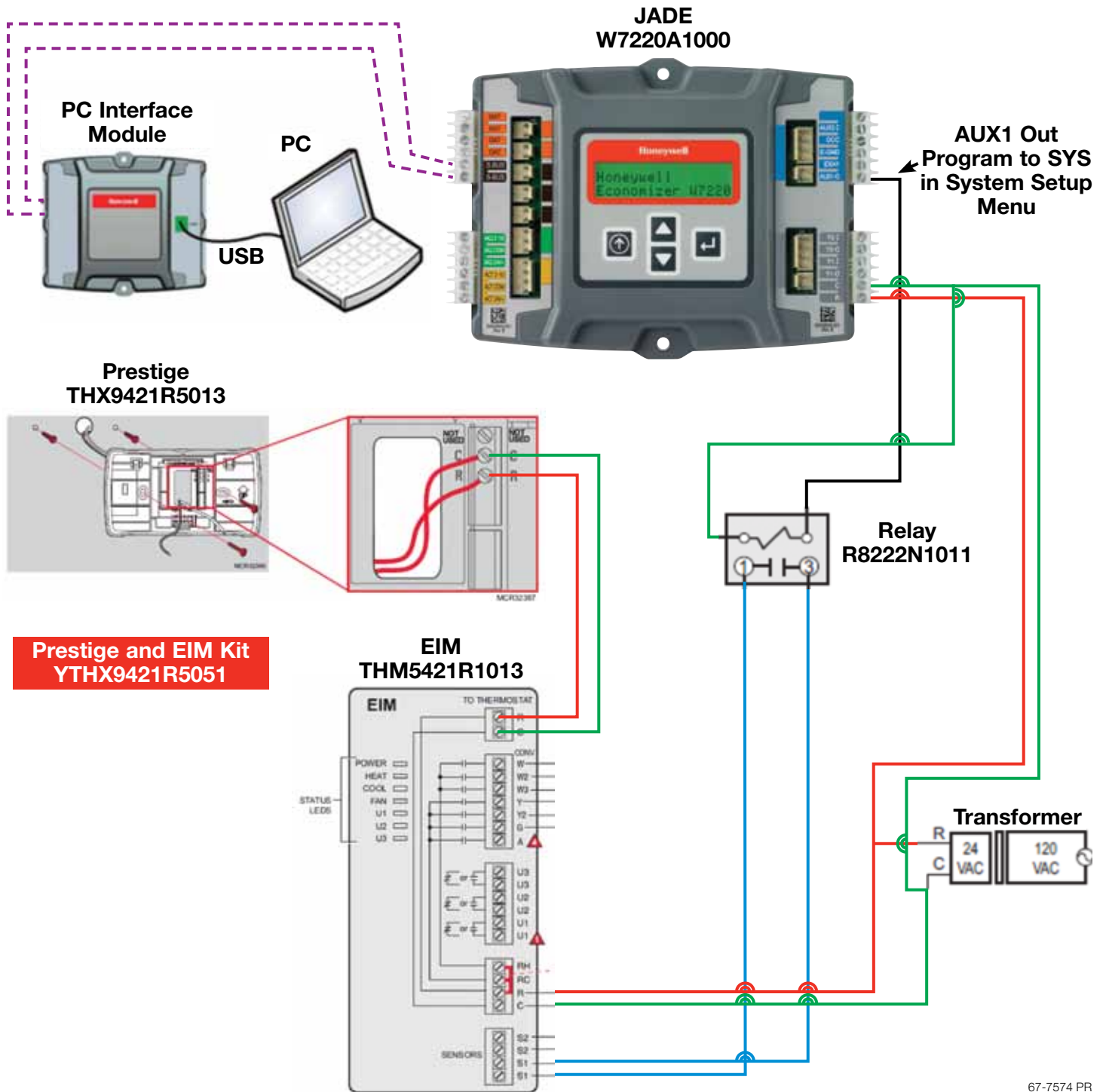"Call for Service 1-800-555-1212"

7. If the occupants clear the alert, the building operator can recover the last 25 alarms in the Alerts Log. The Alerts Log is located in the Menu > Installer Options > Data Logs > Alerts Log

JADE, Prestige IAQ 2.0 and the W7220- PC MOD tool bring the entire package of a comfortable and well ventilated environment together for the occupants. An energy efficient building with economizer and demand control ventilation for the owner and time savings for the service technician. The system will notify the occupants in the building of an economizer alarm via the Prestige IAQ 2.0 thermostat and occupants will call for service. When the technician arrives he can use the W7220-PC MOD tool to read the alarms on his personal computer without going up to the unit on the roof, he will know within minutes of his arrival what the alarm is and how to repair it, prior to going up on the roof. The building owner will increase their energy savings, provide a well ventilated space for the occupants and the service technicians will be able to make more calls and service more customers.

Prestige with EIM connected to a W7220 JADE Economizer.

JADE W7220A1000

PC Interface Module

PC

USB

AUX1 Out Program to SYS in System Setup Menu

Prestige THX9421R5013

Relay R8222N1011

Prestige and EIM Kit YTHX9421R5051

EIM THM5421R1013

Transformer