Installation Instructions

DIGICOM / DIGIHP
Digital Communicating
Thermostat

DESCRIPTION
The Zonex Systems **DIGICOM** thermostat is designed for stand-alone single and two-stage Gas Electric applications or Heat Pumps using Gas Electric inputs (no reversing valve signal on "O" or "B").
The **DIGIHP** (O&B), is designed for stand-alone single and multi-stage heat pumps. The thermostat can be field configured for "B" reversing valve operation. See Configuration.

INSTALLATION
Thermostat and terminal base
1. The thermostat is to be installed on an interior wall, away from drafts, supply air currents and direct sunlight or any heat generating source.
2. To remove the thermostat cover, grasp the cover at the top and pull straight off; do not pivot the cover from the base.
3. Install the thermostat terminal base to the wall using the provided anchors and screws. The thermostat can also be mounted on a 2x4 electrical box using two #6-32" screws.

Wiring
1. Use minimum 18-ga AWG wire for the 24vac control circuits. Do Not connect 24vac wires to the RX/TX terminals.
2. Connect the communication wires to the RX/TX terminals. There are 2 sets of RX/TX terminals for "daisy chain" installation of this circuit. The communication wire specification is: twisted pair (Belden 8740), or shielded twisted pair wire (Belden 8450). Refer to manual (ZCMAN).

Configuration
1. Set the unique address for each thermostat from 01 to 20.
2. Press and hold the *Menu* button until you see the system mode display on the lower right begin to change modes; then press and hold the *Heat/Cool* button with the *Menu* button.
3. When the display shows "address" and the setpoint temperature changes to the address number, press the *UP* or *DOWN* button to raise or lower the number.
4. For "B" mode reversing valve (reversing valve energized in the Heat mode): Press and hold the *Heat/Cool* and *Select* buttons; then press and release the *Menu* button once. Release the *Heat/Cool* and *Select* buttons. The ° symbol next to the setpoint display should disappear.

Calibration
1. When re-calibration is required, to increase the display temperature, press and hold the *Heat/Cool* and *Select* buttons.
2. While holding the 2 buttons down, press the *UP* button once to increase the display temperature 1°; repeat as needed to increase.
3. To decrease the display temperature, while holding the 2 buttons down, press the *DOWN* button once to decrease the display temperature 1°; repeat as needed to decrease.

MANUAL ADJUSTMENTS
Heat and Cool Setpoint Display
Press the *Heat/Cool* button to display the Heat or Cool setpoint temperatures. *NOTE: Press and hold Heat/Cool button for 1 second to change from heat to cool or from cool to heat.*

Temperature setpoints
COOL Setpoint
1. Press the *Heat/Cool* button to display the Cool setpoint on the upper right.
2. Press the *UP* or *DOWN* buttons to change the Cool setpoint temperature.
HEAT Setpoint
1. Press the *Heat/Cool* button to display the Heat setpoint on the upper right.
2. Press the *UP* or *DOWN* buttons to change the Heat setpoint temperature.

FAN Mode
To change the FAN operation to AUTO or ON, press the *UP* and *DOWN* buttons together once. AUTO will energize fan on call for Heat or Cool. ON will energize fan during Occupied time schedule. FAN will de-energize in Unoccupied time schedule.

HVAC system mode
To select Heat, Cool, Auto, Emergency Heat (HP only) or OFF, press and hold the *Menu* button; and when the desired mode is displayed, press the *Select* button and release both.

Override
When the system is in the Unoccupied mode, the thermostat provides a 2-hour override for after-hours system operation. To select the 2-hour override, press the *Select* button and note "override" indicated on the display along with the backlight coming on,. When additional override is required, press the *Select* button again.

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THERMOSTAT OPERATION

Display

The grey display backlight is constantly illuminated in the Occupied mode. The display backlight goes off when in the Unoccupied mode. When in the Unoccupied mode, if any button is pressed, the backlight will illuminate for 5 seconds. If the thermostat is placed into the override mode, the backlight will illuminate until the 2 hours times out.

Minimum Run Time and After Call Delay – There is a minimum run time for heat and cool of 2½ minutes to protect the equipment. After a call for heat or cool is satisfied, a 5-minute delay will lock out calls for heat or cool to prevent system short cycling and allow for system equalization.

COOL – DIGICOM/DIGIHP: The thermostat will make a Y1 cool call when the space temperature rises 1° above the cool setpoint. Y2 will energize when the space temperature rises 2° above the cool set point. Y1 and Y2 de-energize at setpoint. The G circuit is energized for fan.

DIGIHP – O or B is energized for the reversing valve circuit depending on configuration.

HEAT – DIGICOM: The thermostat will make a W1 heat call when the space temperature is 1° below the heat setpoint. W2 will energize when the space temperature is 2° below the heat setpoint. W1 and W2 de-energize at setpoint.

NOTE: The "G" fan circuit on the DIGICOM thermostat is not energized in the Heat mode unless the fan is set for ON operation.

HEAT – DIGIHP: The thermostat will make a Y1 heat call when the space temperature is 1° below the heat setpoint. Y2 will energize when the space temperature is 2° below the heat setpoint. W2 (aux heat) will energize when the space temperature is 3° below setpoint. Y1, Y2 and W2 de-energize at setpoint. O or B output is energized for the reversing valve circuit depending on configuration.

DIGICOM – FAN operation for electric heat applications. A pilot relay may be required to energize the fan for heat operation on electric heat applications. This relay is a 24vac coil – SPST and is field supplied. The coil is energized from W1 and C from the **DIGICOM** thermostat terminal base.
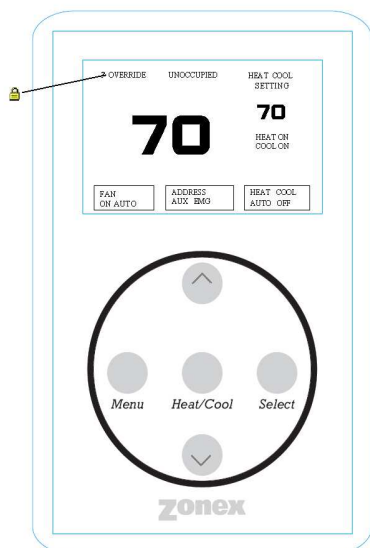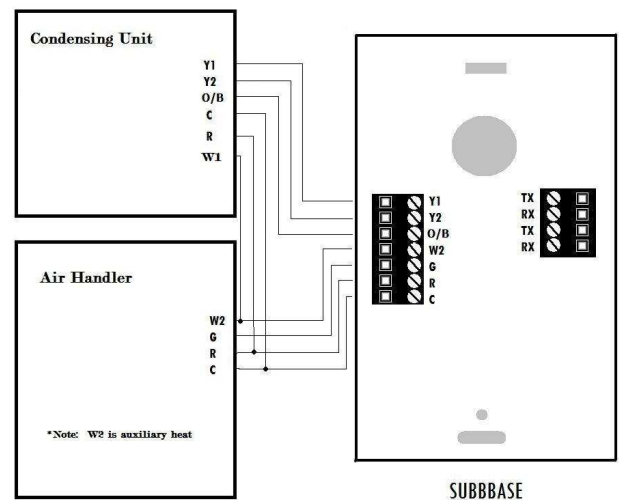

DIGICOM
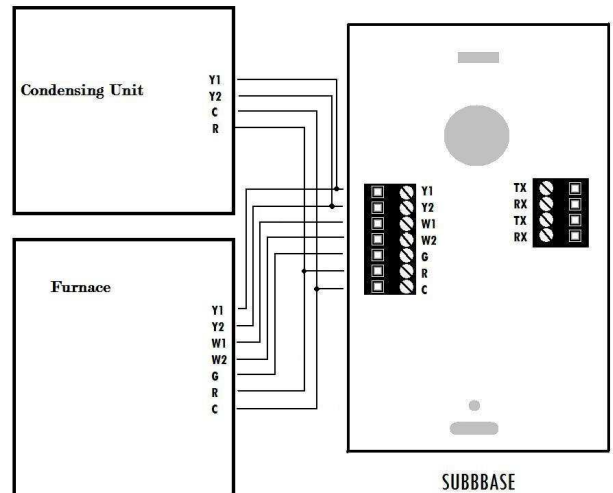
TERMINAL FUNCTIONS

R – 24vac	W1 – Stage 1 heat
C – 24 vac common	W – Stage 2 heat
Y1 – Stage 1 cooling	
Y2 – Stage 2 cooling	RX – RS 485 receive
G – Blower circuit	TX – RS 485 transmit

DIGIHP

TERMINAL FUNCTIONS

R – 24vac	O/B – Reversing valve
C – 24vac common	W2 – Aux/Emerg Heat
Y1 – Stage 1 cooling	
Y2 – Stage 2 cooling	RX – RS 485 receive
G – Blower circuit	TX – RS 485 transmit