MyTemp®

HOME Comfort Zones

Installation & Safety Manual

System:
Climate Control System (Model HCZ-CSS-03)

Sub-systems
Master Unit (model HCZ-MU-03)
Air Pump & Power Supply Unit (model HCZ-AP-06)
Wireless Receiver (model HCZ-WR-09)
Main Display (model HCZ-MD-01)
Smart Controller (model HCZ-SC-03)
Outside Monitor (model HCZ-OM-05)
Supply Side Plenum Sensor (model HCZ-PS-11)

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Contents:

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Overview:

This building is equipped with the MyTemp® climate control system. The MyTemp system is a HVAC control that uses wireless temperature sensors, pneumatic dampers and multiple control boxes to provide room-by-room temperature control and comfort.

As a result of the installation, this structure now has the following characteristics:

- Pneumatic dampers located inside the ducts for every vent in the house.
- Pneumatic tubing running from each pneumatic damper to the central control box (master unit).
- Wireless temperature sensors (Smart Controllers) in every room.
- HVAC equipment wired to and controlled by the master unit. The master unit is wired to the HVAC equipment like a traditional thermostat using a four-conductor thermostat wire.
- A touch screen display with house, room, and equipment information. This display replaces the standard thermostat.
- NO traditional thermostat.

If you are performing HVAC equipment service, adding or replacing HVAC equipment, or cleaning ducts, please refer to specific sections in this manual.

Sub-Systems:

The MyTemp® system consists of six sub-systems:

Components	Model
Main Display	HCZ-MD-01
Smart Controller	HCZ-SC-03
Master Unit	HCZ-MU-03
Wireless Receiver	HCZ-WR-09
Outside Monitor	HCZ-OM-05
Air Pump & Power Supply Unit	HCZ-AP-06
Supply Side Plenum Sensor	HCZ-PS-11

INSTALLER – Use the information in this booklet plus the information provided in the *Home Comfort Zones Technical Manual* to install the MyTemp system. Store this booklet near the system after installation.

CUSTOMER – Keep this booklet for future reference. HCZ recommends storing this booklet near the system, along with the other HVAC documentation.

HVAC SERVICE TECHICIAN – The MyTemp master unit communicates with the HVAC equipment like a traditional thermostat.

DUCT CLEANER – This house has pneumatic air tubes and dampers installed in the duct system. Certain duct-cleaning equipment will interfere with this installation and potentially damage the system or duct-cleaning equipment. Please contact Home Comfort Zones technical support for assistance.

These instructions are intended as a general guide and do not supersede local codes. Contact proper authorities prior to installation.

WARNING – These instructions are intended as an aid to qualified service personnel for the proper installation and adjustment of the MyTemp® system and as an aid for servicing HVAC equipment attached to the MyTemp system.

WARNING – Improper installation, alteration, adjustment, service or maintenance may cause property damage, injury or loss or life. Installation and service must be performed by a qualified installer, service agent or product supplier.

WARNING – With the exception of the outside monitor, the MyTemp system is designed for indoor use only. Do not expose the components to moisture. Do not mount MyTemp control boxes (master unit and air pump & power supply unit) where they may be accessible to children.

WARNING - DO NOT place the pneumatic tubing in direct contact with furnace heating elements or heat pump equipment.

WARNING – Replace main processor board battery with 3V CR2032 lithium batteries ONLY. Other batteries may present a risk of fire or explosion.

WARNING – DO NOT open the air pump & power supply unit. There are no serviceable parts, and there is a risk of electrical shock.

WARNING – DO NOT “jumper” the thermostat wire at the main display. This can cause damage to the MyTemp equipment. Jump the wire at the master unit.

CAUTION – Injury may occur when using sharp equipment and sheet metal edges. Use care when handling this equipment.

CAUTION – The 120V circuit may cause serious injury due to electrical shock. Sudden power ignition may cause serious injury from moving parts. Leave power disconnected until installation is complete or until otherwise specified by this instruction manual.

CAUTION – DO NOT install MyTemp® system components in environments that exceed recommended operating conditions as described on page 4.

CAUTION – DO NOT paint the outside monitor. Paint may interfere with reception.

CAUTION – DO NOT manually close vents or duct dampers with the MyTemp system installed and operational. This may result in unnecessary conditioning cycles.

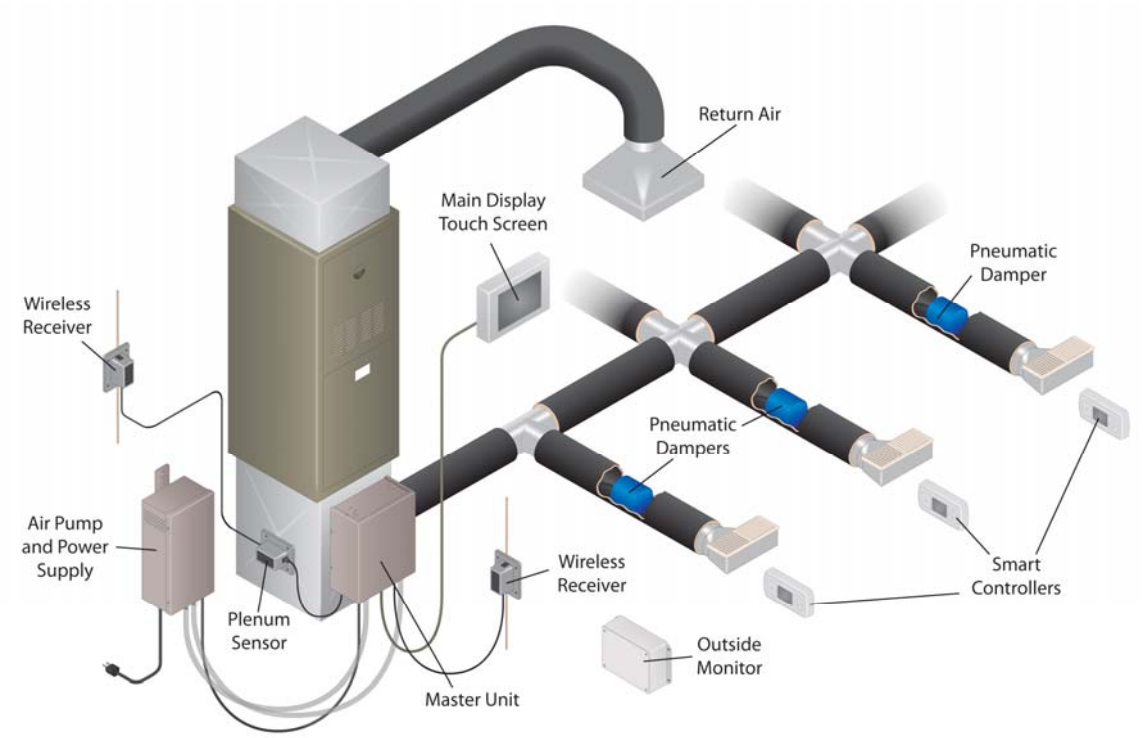
CAUTION - The maximum power requirement for the air pump unit (and the complete MyTemp system) is 40 watts. Consequently, the air pump & power supply unit does not require a dedicated electrical circuit. Generally, power is supplied from the same 120V circuit that powers the HVAC equipment. It may be necessary to install a 120V outlet near the air pump if there are no free outlets. Do not use an extension cord.

CAUTION - Due to risk of electrical shock, this equipment has a plug with a third (grounding) pin. This plug only fits into a grounding outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet. Do not alter the plug.

ⓘ MyTemp® System Specifications ⓘ

Master Unit (HCZ-MU-03)	
Note: Ambient operating temperature external of plenum	
Max. operating temperature (°F / °C)	**140°F / 66 °C**
Min. operating temperature (°F / °C)	**40°F / 4 °C**
Air Pump & Power Supply Unit (HCZ-AP-06)	
Max. operating temperature (°F / °C)	**140°F / 60 °C**
Note: For 12 hours or less per day	
Max. sustained operating temperature (°F / °C)	**105°F / 40 °C**
Note: For continuous (24 hours per day) operation	
Min. operating temperature (°F / °C)	**40°F / 4 °C**
Rated voltage	**120VAC**
Rated power	**40 watts**
Fuse rating	**250V 5A**
Note: The air pump does not require a dedicated electrical circuit	
Wireless Receiver (HCZ-WR-09)	
Max. operating temperature (°F / °C)	**140°F / 66 °C**
Min. operating temperature (°F / °C)	**40°F / 4 °C**
Outside Monitor (HCZ-OM-05)	
Max. operating temperature (°F / °C)	**150°F / 66 °C**
Min. operating temperature (°F / °C)	**-20°F / -28 °C**
Supply Side Plenum Sensor (HCZ-PS-11)	
Max. operating temperature (°F / °C)	**140°F / 66 °C**
Min. operating temperature (°F / °C)	**40°F / 4 °C**
Main Display (HCZ-MD-01)	
Max. operating temperature (°F / °C)	**100°F / 38 °C**
Min. operating temperature (°F / °C)	**40°F / 4 °C**
Smart Controller (HCZ-SC-03)	
Max. operating temperature (°F / °C)	**125°F / 52 °C**
Min. operating temperature (°F / °C)	**40°F / 4 °C**
FCC ID	**RU7-HCZ-SC-02**
Plenum Rated Pneumatic Tubing	
Max. operating temperature (°F / °C) – softness	**227°F / 108 °C**
Min. operating temperature (°F / °C) – brittleness	**-76°F / -60 °C**
CPChem performance pipe – UL Classified	**UL 1820** **UL 94-V2** **NFPA 90A** **ASTM D 1238**
Pneumatic Dampers	
Max. operating temperature (°F / °C)	**175°F / 80 °C**
Min. operating temperature (°F / °C)	**0°F / -18 °C**
Lamcotec urethane / 200 denier nylon	**UL 94 VTM** **UL 2043** **CA Bulletin 117 Section C&D** **NFPA 72** **CFR 1610 & 1632**
Complete System	
MyTemp / HCZ system – UL 916	

MyTemp® System Diagram



Sub-systems

Main display (HCZ-MD-01) – A touch screen that replaces the traditional thermostat. Configuration information for control of the HVAC equipment is accessible from the main display.

Smart Controller (HCZ-SC-03) – Wireless temperature monitoring devices located in every room of the house.

Master unit (HCZ-MU-03) – A component that houses the main processor PCBA (main processor board) and the pneumatic control mechanism. The furnace, AC, heat pump, and other HVAC controls are wired to this device. The traditional thermostat wire (that now controls the main display) is also wired to this device.

Wireless receivers (HCZ-WR-09) – Two receivers that collect and distribute temperature information and user commands from the Smart Controllers and from the outside monitor.

Plenum sensor (HCZ-PS-11) – A sensor that provides plenum temperature and pressure for the supply side.

Outside monitor (HCZ-OM-05) – A sensor that provides outside temperature.

Air pump & power supply unit (HCZ-AP-06) – A component that houses the pneumatic pump and regulates the 120V power for the entire system.

Sub-System Wiring Diagram

The master unit (HCZ-MU-03) contains the main processor PCBA, which controls the HVAC equipment. The other sub-systems wire to the main processor PCBA as follows:

NOTE 1 (J3 & J4 HVAC Connectors)

- R – 24 VAC
- G – FAN
- W – HEAT
- B/Y – COMPRESSOR
- A1, A2, A3 – SECOND STAGE or CHANGE OVER

NOTE 2 (RJ-45 Connectors)

- J6 – SYSTEM BUS 1 (optional)
- J11 – SYSTEM BUS 2 (optional)
- J5 – DEVICE BUS 1 (WR or Plenum Sensor)
- J15 – DEVICE BUS 2 (WR or Plenum Sensor)

NOTE 2 (RJ-11 Connectors)

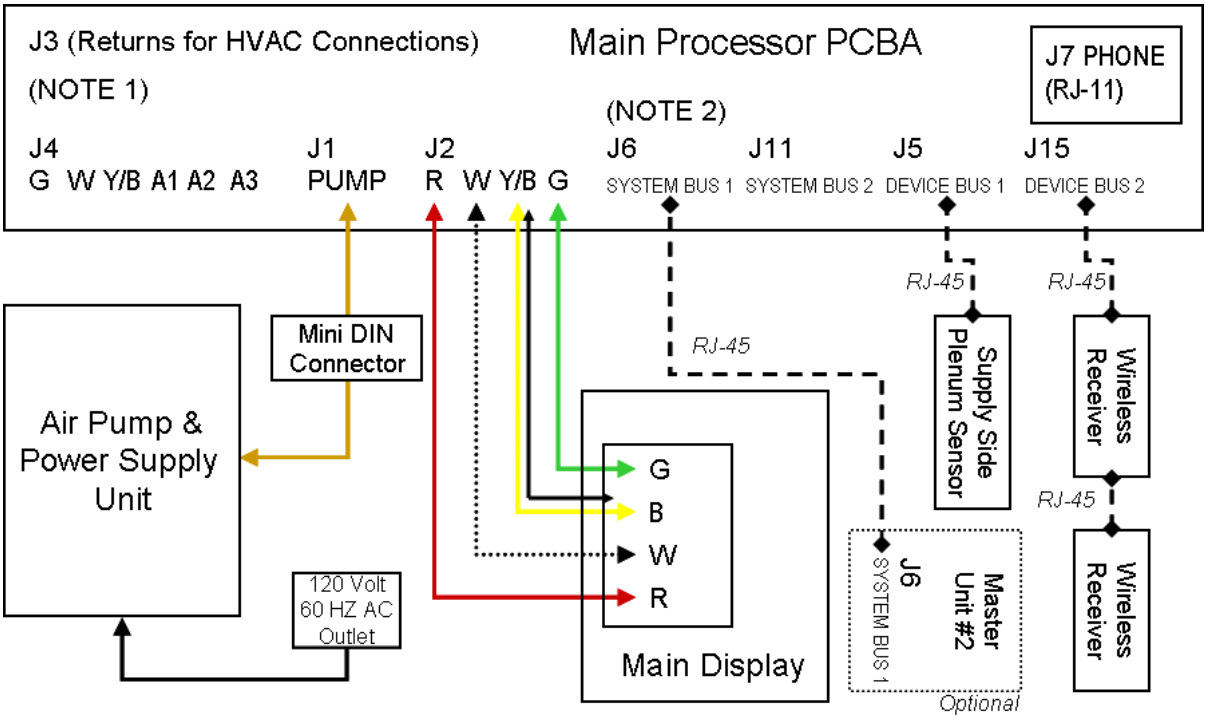
- J7 – PHONE LINE (if modem card installed)

RED DIP SWITCHES

- System ID 1-5

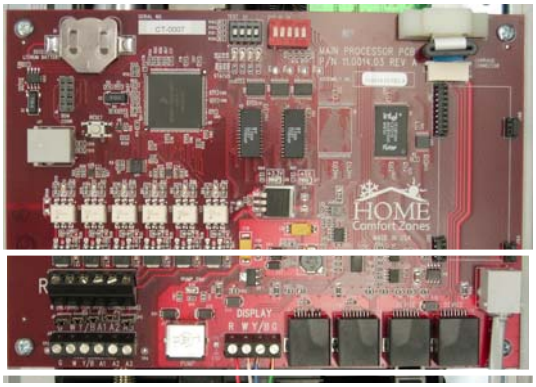
BLACK DIP SWITCHES

- ALL ON (UP) – Normal Operation
- 1 – OFF (DOWN) / 2,3,4 – ON (UP) – SERVO TEST



Main Processor Board Wiring Diagram

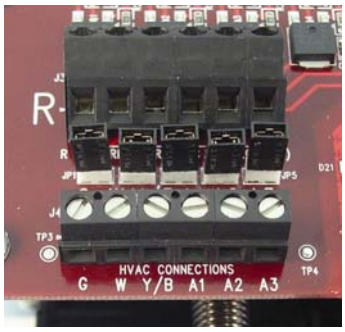
The main processor PCBA contains the main processor board. All of the HVAC equipment is wired to and controlled by the main processor board.



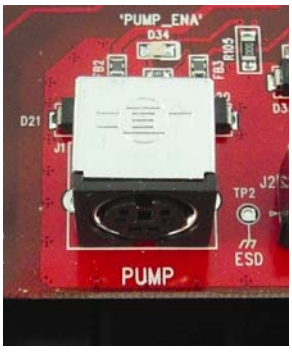
HVAC Wiring Convention

Config	G	W	Y/B	A1	A2	A3
Furnace Only	Fan (G)	Heat (W)				Vent
A/C Only	Fan (G)		Cool (Y)			Vent
Furnace + A/C	Fan (G)	Heat (W)	Cool (Y)			Vent
2-Stage Furnace	Fan (G)	Heat (W1)		Ht2 (W2)		Vent
2-Stage A/C	Fan (G)		Cool (Y1)		Cool2 (Y2)	Vent
2-Stage Furnace + A/C	Fan (G)	Heat (W1)	Cool (Y1)	Ht2 (W2)	Cool2 (Y2)	Vent
Heat Pump	Fan (G)	Aux Ht. (W/W1)	Comp (Y)	CO (O/B)		Vent
2-Stage HP	Fan (G)	Aux Ht. (W/W1)	Comp (Y)	CO (O/B)	Comp2 (Y2)	Vent

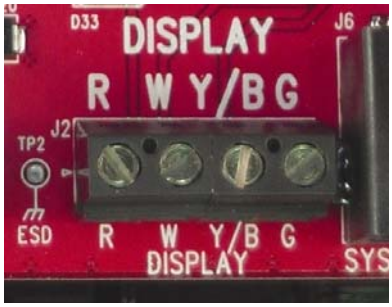
J3 / J4 - HVAC CONNECTIONS
R – 24 VAC
G - Fan
W – Heat or auxiliary heat
Y/B – Compressor or A/C
A1, A2, A3 – Secondary stages, change over or auxiliary equipment



J1 – PUMP CONNECTIONS
PUMP – Mini DIN Connector

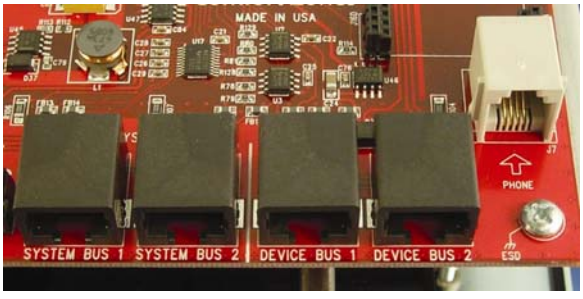


J2 – MAIN DISPLAY CONNECTIONS
R – 5V supply voltage
W – RS232 transmission
Y/B – RS232 reception
G – Ground



RJ45 CONNECTIONS
J6 – SYSTEM BUS 1 – Multiple System
J11 – SYSTEM BUS 2 – Multiple System
J5 – DEVICE BUS 1 – Wireless Receiver or Plenum Sensor
J15 – DEVICE BUS 2 – Wireless Receiver or Plenum Sensor

RJ11 CONNECTIONS
J7 – PHONE – Phone Line (if modem card installed)



HVAC Equipment Service

In general, there are no special requirements for servicing HVAC equipment that is controlled by a MyTemp system. The MyTemp system is wired to and controls HVAC equipment in the same manner as traditional thermostats. As a result, HVAC equipment can be serviced in traditional ways.

CAUTION: Perform all "jumper" work at the master unit. DO NOT perform "jumper" work at main display.

When working on HVAC equipment wiring, power down the MyTemp system by unplugging the air pump & power supply unit. Restart the system by plugging it back in.

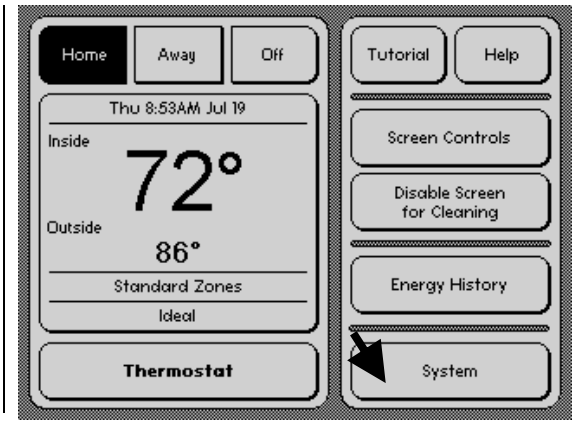
Note: When the air pump is unplugged there is no "in-house" control of the HVAC equipment.

HVAC Equipment Replacement

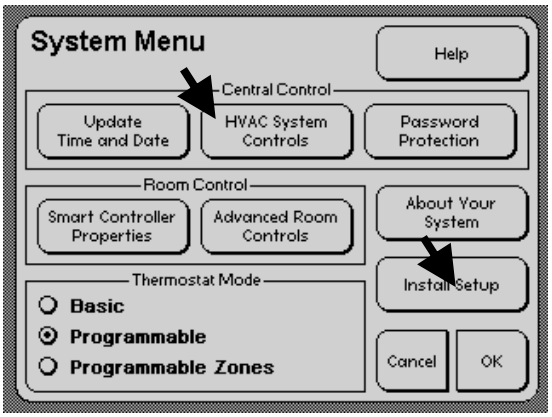
If the HVAC equipment is being replaced with different equipment or if it is being upgraded, please contact Home Comfort Zones or an authorized HCZ dealer.

Main Display Service Screens

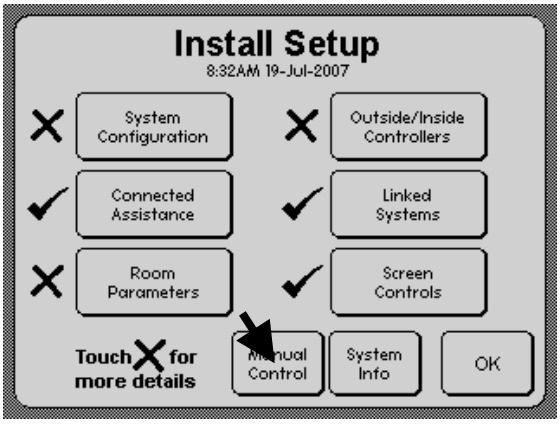
You can monitor and test HVAC equipment wiring and operation from the main display. To access this capability, you must go to the Install Setup screen. To access Install Setup, go to the main screen and select System. From the System screen, select Install Setup (main screen → System → Install Setup). From the Install Setup screen, select Manual Controls. The Manual Controls screen displays buttons for Heat, Cool, Circulate, and so on, depending on the HVAC equipment. In addition, you can use the Plenum Conditions button to verify temperature and pressure conditions during different cycles.



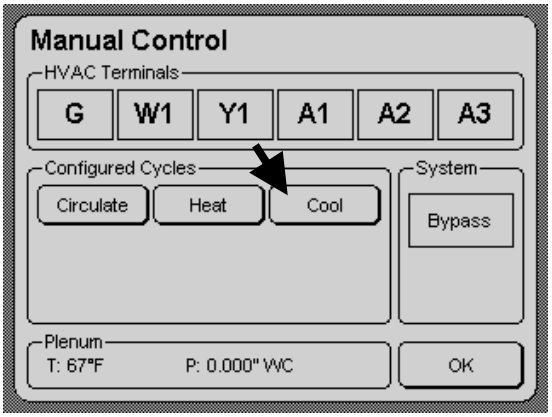
Main Screen: To access the System screen, select the button in the lower right.



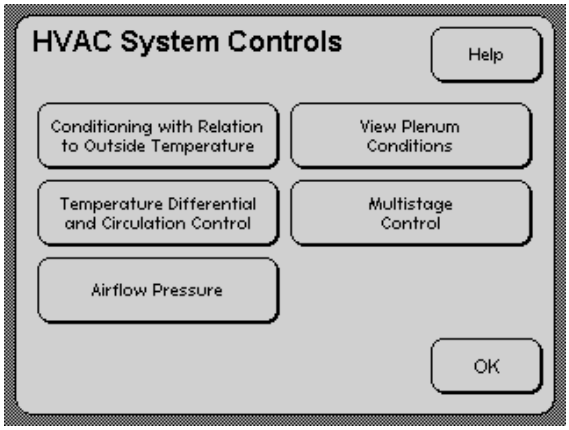
System: To access Install Setup click the button indicated below. Ignore the warning message that appears. HVAC System Controls (see below) is also accessed from this screen.



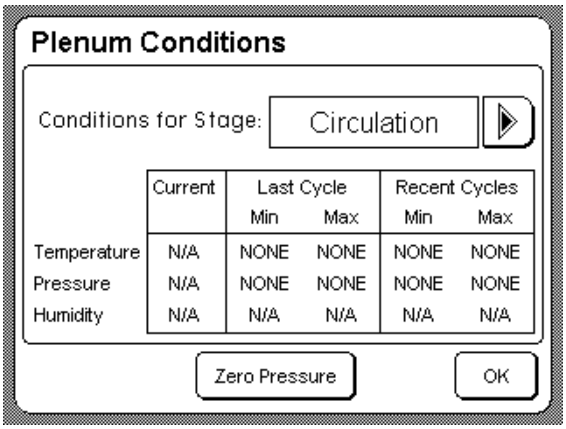
Install Setup Screen: Click on the Manual Controls button ONLY. Accessing other areas can cause the MyTemp system to malfunction.



Manual Control: The Manual Control screen provides an easy way for verifying that the HVAC equipment wiring and function are correct. Buttons on the Configured Cycles activate the specified HVAC system and display its wiring to the main processor board.



HVAC System Controls: The HVAC Systems Control is accessed from the System Menu (see above) and allows has settings for multi-stage equipment, air flow and temperature lock out of equipment.



Plenum Conditions: The Plenum Conditions screen provides current temperature and pressure readings that you can use to verify operation and temperature change.

Room Information

Room Name (14 characters maximum)	Floor	Number of Registers	Duct Sizes	Value Number / Register (unique # 1-24)	Smart Controller ID (HEX code)
Outside (Temperature Sensor)	**NA**	**NA**		**NA**	
Bypass	NA	NA			

Notes:

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_____
_____
_____