

XR724/Silver 724 Wi-Fi Connected Control

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ACONT724AS42DA

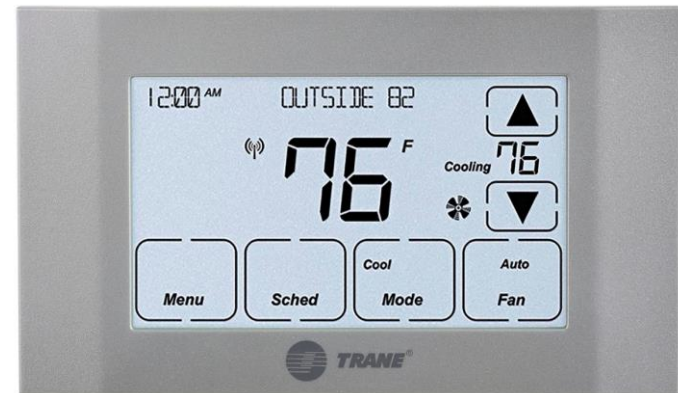
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American Standard
HEATING & AIR CONDITIONING

- Compatible with Nexia Smart Home & Diagnostics *1,2
- Wi-Fi Connectivity
- Remote Access via smart phone, tablet and computer
- Factory Default Application
 - **1H / 1C (Gas, Oil) (AC)**
- 24 Volt common wire required
- Dual Fuel
 - **No kit required**
- Manual / Auto Change-over
 - **Field Selectable**
- BK Capability (PWM)
- Field Selectable Temp Scale
 - **Fahrenheit, Celsius**
- Outdoor Temperature Display & Control
 - **BAYSEN01ATEMPAA**
- Optional Remote Indoor Sensor
 - **ZZSENSAL0400AA**

1- Requires internet service and Nexia Smart Home account
2- Up to 8 thermostats free of charge



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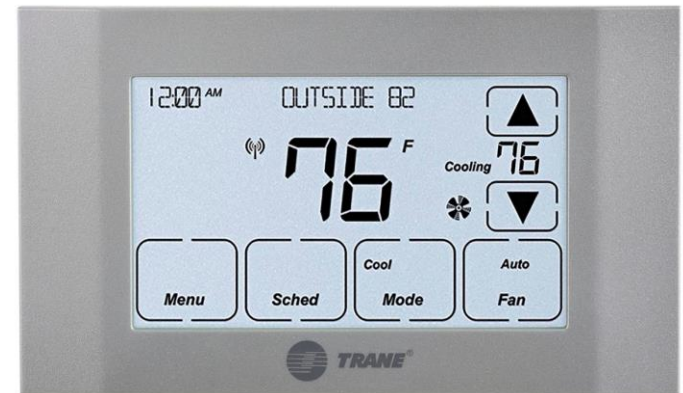
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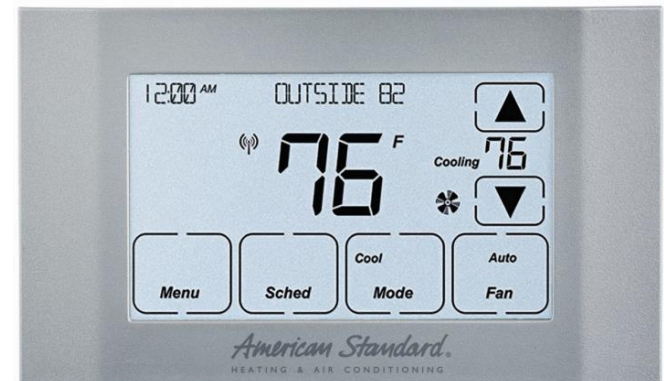


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- Interactive 4.3" black & white touchscreen
- Built in humidity sensor with RH display
- 7 Day programmable, 4 schedules/day
- Energy Savings Mode (ESM)
- Aux & Comp Heat Lockouts
- Service Test Modes
- Remote access via smart phone, tablet, or P.C.
- Smart Continuous Fan (SCF) and Fan Circulation option
- Clean Screen Option



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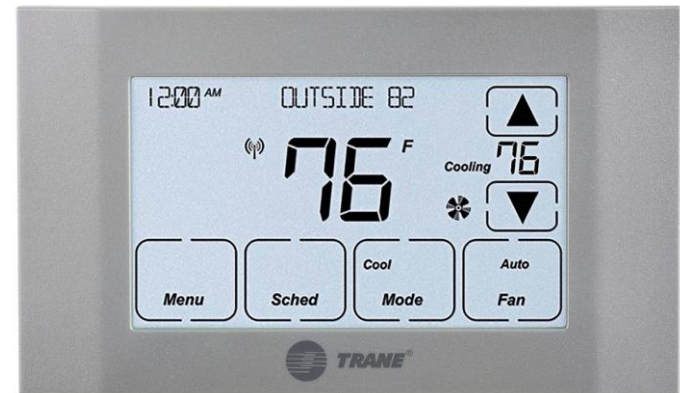
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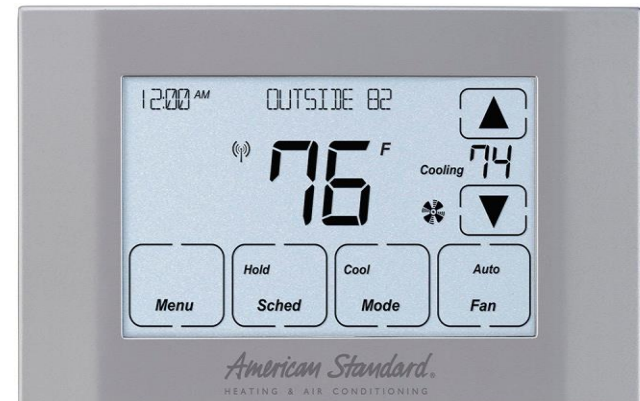


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- Reminders
 - **Service**
 - **Filter**
 - **Humidifier**
- Adjustable continuous fan settings
 - **VS indoor unit required**
- Security Options
 - **Display lock**
 - **Guest lock**
- Upgradable firmware (OTA)
 - **Requires a Nexia Smart Home account**
- Limited Warranty
 - **1 year base / 5 year registered**



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Product Specifications



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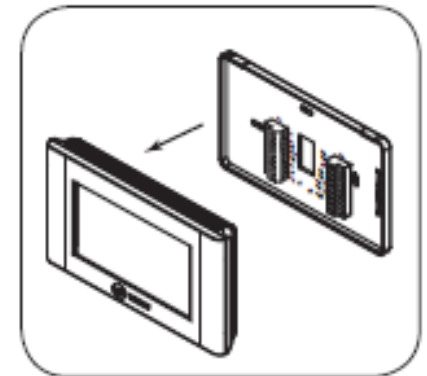
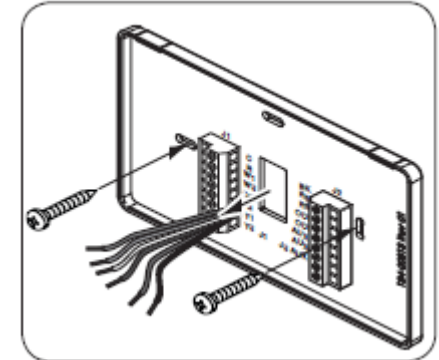
Specification	Description
Product Model:	TCONT724AS42DAA
Product:	XR724 HVAC System comfort control. WiFi communications enabled.
Size:	5.75" wide x 3.5" height x 1" depth
Display:	Fixed Segment LCD, 4" x 2.25", with 17 character alpha numeric display
Touchscreen:	Yes
Backlight:	Yes, White, Controllable, on, off, timeout
Power:	24VAC from HVAC System
HVAC System Type:	Standard (gas/electric), Heat Pump, or Dual Fuel
Heat/Cool Stages:	Up to four stages of heat/two stages cool
PWM Output (BK)	Proprietary Variable speed motor control
Heat Pump Switchover valve:	Selectable change over with cool or with heat
Auxiliary Contact	Humidifier, Ventilation or Dehumidifier control
Communications:	WiFi
Memory:	Non-volatile
Date/Time:	24 hour super capacitor backup Time is automatically updated if the control is connected to Nexia Smart Home Comfort System

Installation



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- Standard 18awg control wire
- Use standard 1/8" thermostat screwdriver for securing wires on terminal block
- Hardwired common is required
- Do not run 24v and Remote Sensor connections in the same thermostat wire bundle
- Mounting 724 control to metal stud wall will adversely affect connectivity



Installation

- Field Wiring Diagrams
 - *Heat/Cool (16 diagrams)*
 - *Heat Pump (12 diagrams)*
 - *Dual Fuel (6 diagrams)*
- Diagrams include:
 - *All new Hyperion/Forefront air handlers*
 - *TEM3 air handlers*
 - *Legacy variable speed and non-variable speed air handlers*
 - *Packaged Heat/Cool, Heat Pump and Dual Fuel units*

Note: All diagrams for indoor units with variable speed blowers, depict BK connected

Onboard Humidity Sensor



- RH% always shown on display
- Field selectable dehumidification options
 - Enhanced Dehumidification
 - Dehumidification Overcooling (1 – 3 degrees)
- Adjustable Cooling RH set point
 - 30% to 60% in 5% increments
- RH Calibration (Field)
 - -7% to 7%

Indoor Remote Sensor



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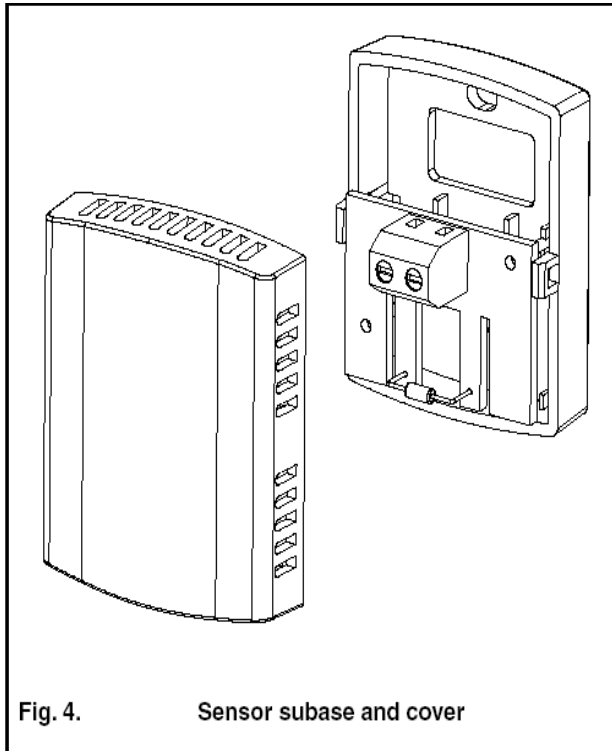


Fig. 4. Sensor subbase and cover

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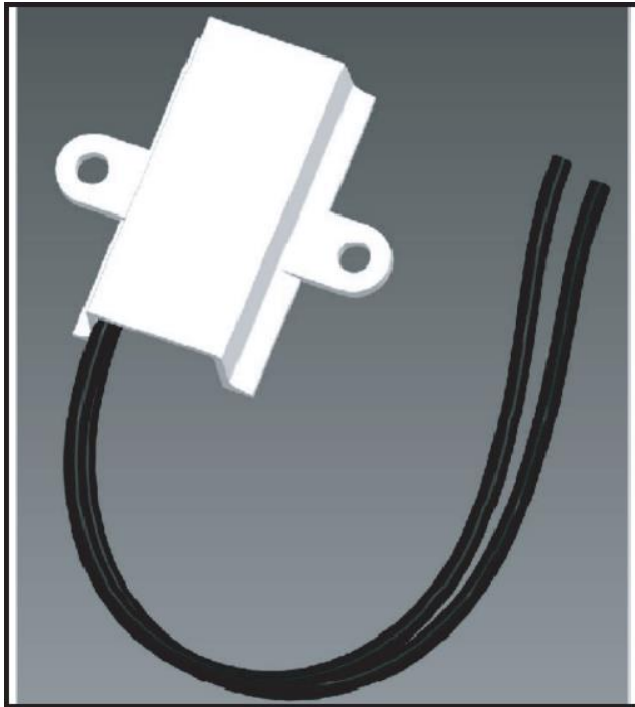
Separate Cable required!

- Options
 - ***[None] Default setting***
 - ***Replaces onboard sensor***
 - Disables onboard sensor
 - Allows control to be installed in different location
 - ***Averages with onboard sensor***
 - RS sensor averages its temperature with the onboard sensor

Indoor Remote Sensor Failure

- Heat/Cool operations terminated
- Top toolbar will indicate
 - “Sensor Fail”
- (- -) F Displayed on screen

Outdoor Ambient Sensor



BAYSEN01ATEMPA

- Application
 - *Display and Control*
- Field Connection
 - *Separate cable required*

Security Options



- Options
 - ***[Unlocked] Factory Default***
 - Enables selection of all menus and settings
 - ***Display Lock***
 - Disables selection of all menus and settings
 - ***Guest Access***
 - Disables selection of all menus and settings
 - Raise or lower Htg/Clg set point (+/-) 5 degrees
 - Change system mode

Security Options



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- Display Lock/Guest Access
 - Lock Icon will appear when enabled
- To Disable
 - Press and Hold the “Up” and “Down” arrows until the lock icon disappears



Service Test Modes



- **Service Test Modes**
 - Indoor Blower 50% & 100% (VS indoor blower required)
 - Cooling 1st & 2nd stage
 - Compressor Heating 1st & 2nd stage
 - Indoor Heat Single Stage, 1st, 2nd stage
 - AUX Contact
- System minimum “On” and “Off” times are disabled
- 30 minutes timer for each test
- Countdown timer displayed for remaining time

Test Modes



Test Mode		
Test Mode	Settings	Description
Blower (Non-VS)	Blower On	Energize "G" circuit
Blower (VS)	50%, 100%	Energize "G" and "BK" circuit
Cooling	Single Stage, 1st Stage, 2nd Stage	Energize selected "Y", "Y1" or "Y2", "O" and "G" circuit (BK also for VS indoor unit)
Comp Heating	Single Stage, 1st Stage, 2nd Stage	Energize selected "Y", "Y1" or "Y2" and "G" circuit ("BK" also for VS indoor unit)
Indoor Heating	Single Stage, 1st Stage, 2nd Stage	Energize selected "W", "W1" or "W2" ("G" circuit also for electric heat)
Aux Relay	Relay On	Close normally open dry contacts
Once testing is complete, press the Done button to exit and return to Menu.		

Aux Contacts



- One set of configurable AUX contacts
 - Ventilation (ASHRAE 62.2)
 - Whole-house Dehumidifier
 - Whole home Humidifier control

Installer Settings



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INSTALLER SETTINGS		
Setting	Sub Settings	Range
Equipment Type	ODU Type (Outdoor Unit)	None, [AC], HP
	ODU Stages	[1 Stage], 2 Stages
	Compressor Type*	[1 Comp - 2 Stage], 2 Comp - 2 Stage
	IDU Type	[Gas / Oil], Electric, Hydronic
	Hydronic Type*	[Hydro Air], Wet Heat
	ID Heat Stages	[1 Stage], 2 Stages
	ID Fan Type	[Non-Variable], Variable
	SOV Operation*	[with Cool], With Heat
Sensor Settings	Remote Sensor	[None], Replace Indoor, Average
	ODT Sensor	[None], Outdoor
Accessories	Aux Relay	[None], Humidity, Ventilation, Dehumidifier
	Control Option*	[With Active Heat], Without Active Heat
	Vent Run Time*	[Off], 5 - 60 min in 5 min increments
Comfort Settings	Control Response	[Normal], Less Aggressive, More Aggressive (see page 9 for definitions)
	Dehumidify*	[Yes], No
	Overcooling Limit*	[Off], 1 deg, 2 deg, 3 deg
	Smart Cont Fan*	[No], Yes
Airflow Settings	One of the following groups will be displayed	
Fan type = Non Variable	On Delay Cooling	[0], 5-90 Sec in 5 sec increments
	Off Delay Cooling	[0], 5-90 Sec in 5 sec increments
	On Delay Heating*	[0], 5-90 Sec in 5 sec increments
	Off Delay Heating*	[0], 5-90 Sec in 5 sec increments
Fan type = Variable	On Delay Cooling	Disabled, [Enhanced Mode], 30 sec delay
	Off Delay Cooling	Disabled, [1.5 Min at 100%], 45 sec delay
	On Delay Heating*	Disabled, [Enhanced Mode], 30 sec delay
	Off Delay Heating*	Disabled, [1.5 Min at 100%], 45 sec delay
Hydronic Type = Hydro Air	On Delay Heat	[0], 5-90 Sec in 5 sec increments
	Off Delay Heat	[0], 5-90 Sec in 5 Sec increments
Lockouts*	Aux Heat	[No], Yes
	Aux Lockout ODT*	30 - 70 Deg [50 Deg]
	Comp Heat	[No], Yes
	Comp Lockout ODT*	5 - 70 Deg, [40 Deg]
Once all selections have been made, press the Done button to exit and return to menu. Press Next to navigate to the next setting.		

Installer Settings

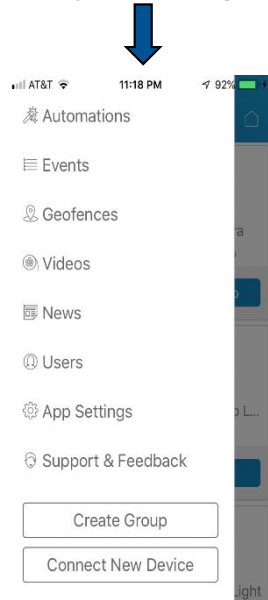


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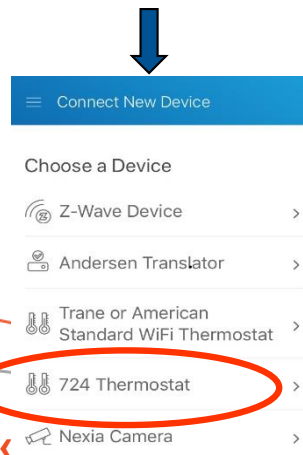
XR724 Control Response Profiles

Cooling	Normal	Less Aggressive	More Aggressive
Cooling Delta Stage 1 ON	0.5	1	0.5
Cooling Delta Stage 2 ON	1.5	2	1
Cooling Delta Stage 1 OFF	-0.5	0	-1.0
Cooling Delta Stage 2 OFF	-0.5	0	-1.0
Heating - HP	Normal	Less Aggressive	More Aggressive
Comp Heat Delta Stage 1 ON	0.5	1	0.5
Comp Heat Delta Stage 2 ON	1.5	2	1.0
Indoor Heat Delta Stage 1 ON	2.5	3	1.5
Indoor Heat Delta Stage 2 ON	3.5	4	2.0
Comp Heat Delta Stage 1 OFF	0	0	0
Comp Heat Delta Stage 2 OFF			
Indoor Heat Delta Stage 1 OFF			
Indoor Heat Delta Stage 2 OFF			
Heating - Gas	Normal	Less Aggressive	More Aggressive
Indoor Heat Delta Stage 1 ON	0.5	1	0.5
Indoor Heat Delta Stage 2 ON	1.5	2	1.0
Indoor Heat Delta Stage 1 OFF	0	0	0
Indoor Heat Delta Stage 2 OFF			
Timers	Normal	Less Aggressive	More Aggressive
Heat Stage UP Timer	15 min	20 min	10 min
Cool Stage UP Timer			

1. Download Nexia App from the:
 - a) Apple store
 - b) Android store
2. Press Connect New Device
(screens may differ slightly from this)



3. Press 724 Thermostat



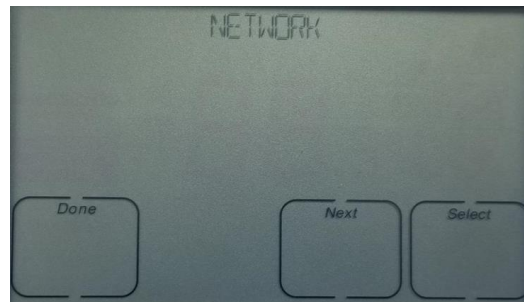
4. *From 724 Home Screen
Press Menu



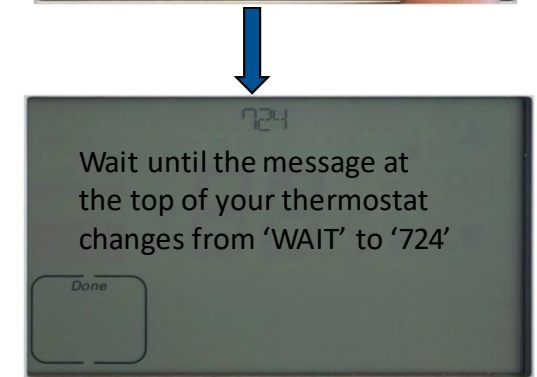
5. Press Next



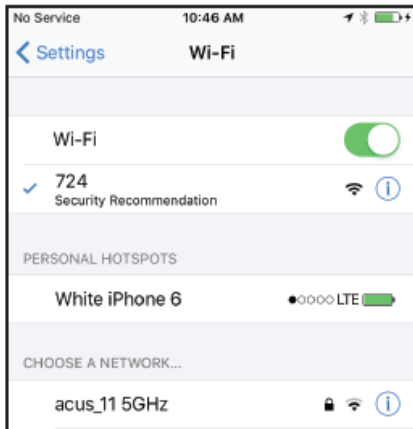
6. Press Select on Network screen



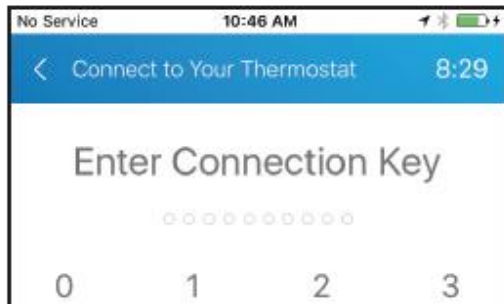
7. Press Yes to Join Network



8. Press the "Home Button" your mobile device, then on an **Android device** press settings > connections > Wi-Fi. On an **iOS device** press settings > Wi-Fi you will also need to turn off mobile data. Under networks select "724". Upon connection to the 724 network press the home button on your mobile device.



9. Once connected navigate back into the Nexia app and the thermostat will have generated a code at the top of the thermostat screen to enter into the Nexia app



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10. At this point the app will ask you to select a Wi-Fi source for the thermostat



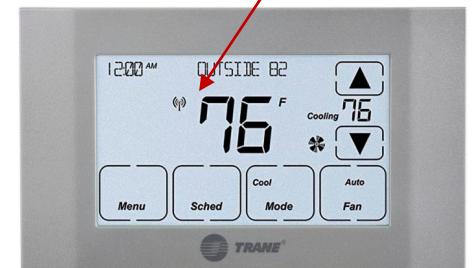
11. Select Wi-Fi and enter password



12. Once connected to the Wi-Fi network it will pair 724 to Wi-Fi and the enrollment process is now complete



Once enrolled there will be a icon displayed on the home screen



Troubleshooting



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Troubleshooting		
Symptom	Possible Cause	Action
Display will not come on	Loss of 24VAC between R & C at the Control	1) Check wiring between R & C 2) Check transformer for 24VAC output 3) Check for broken or shorted thermostat wire
Indoor Temperature display is incorrect	1) Indoor temperature display needs calibrating (always allow 1 hour before calibrating after any power cycle) 2) Heat from the touchscreen is being trapped within the body of the control	1) Calibrate indoor temperature sensor 2) Relocate the control away from any competing air sources or redirect the air sources away from the control
Indoor humidity display is incorrect	Indoor humidity sensor needs calibrating	Calibrate humidity sensor
Room temperature overshoots the desired setpoint in cooling mode	1) The delta "Off" in cooling mode is set to a negative number 2) Cooling overshoot is enabled and the indoor RH is higher than the target cooling RH 3) Minimum compressor on time has not been met	1) Intended operation; if objectionable, change the delta "Off" to 0 degrees 2) Intended operation; if objectionable, disable cooling overshoot or raise cooling target RH 3) Intended operation; if objectionable, lower minimum on time (lowest setting available is 3 minutes)
Room temperature overshoots the desired setpoint in heating mode	Minimum compressor/indoor heat on time has not been met	Intended operation; if objectionable, lower the minimum on time (lowest setting available is 3 minutes)
Cooling will not come on	1) System mode is not set to Cool/Auto or setpoint is set too high 2) Delta "On" for cooling is set too high 3) Minimum off time delay is being enforced 4) Cooling system may need service	1) Select the correct system mode and/or lower the setpoint 2) Change the delta "On" setting for cooling mode 3) Intended operation; if objectionable, lower the minimum off time delay (lowest setting is 5 minutes) 4) Check/repair system
Heating will not come on	1) System mode is not set to Heat/Auto or setpoint is set too low 2) Delta "On" for heating is set too high 3) Minimum off time delay is being enforced 4) Heating system may need service	1) Select the correct system mode and/or raise the setpoint 2) Change the delta "On" setting for heating mode 3) Intended operation; if objectionable, lower the minimum off time delay (lowest setting is 5 minutes) 4) Check/repair system
Heating or Cooling is being displayed, but no air coming from registers/vents	1) Fan delay time has not expired 2) System is not operating properly	1) Wait one minute for blower delay to end, then recheck register/grills 2) Check/repair system
Fan runs all the time	1) Fan mode is set to "On" or "Circ" 2) System is not operating properly	1) Intended operation; if objectionable, change fan mode to "Auto" 2) Check/repair system
Fan is set to "On" but not running	1) Smart continuous fan (SCF) is enabled and the indoor humidity is higher than the cooling target RH (SCF will be displayed on fan mode button) 2) System is not operating properly	1) Intended operation; if objectionable, disable SCF or raise cooling target humidity 2) Check/repair system

Practice



- User Settings
 - Thermostat
 - Change from °F to °C
 - Save (Press Done)
 - Change from °C to °F
 - Done (Saves changes)
 - Display
 - Enable –Display Lock
 - Done (Saves changes)

Practice



- User Settings
 - Display
 - Lock Icon on screen
 - Disable Display Lock

Practice



- Enter Installer Settings Menu
- Installer's Settings
 - Equipment Type
 - HP
 - 2 stage
 - 1 Comp – 2 stages
 - Electric Heat
 - 2 stage
 - Variable blower
 - Done

Practice



- Enter Installer Settings Menu
- Installer's Settings
 - Sensor Settings
 - Add outdoor temp sensor
 - Done
 - Comfort Settings
 - Dehumidification Overcool to 2 degrees
 - Enable Warm Air Discharge

Practice



- Enter Test Mode
 - Blower
 - Cooling Stage 1
 - Cooling Stage 2
 - Indoor Heating
 - Press Done to exit

Practice



- Restore Factory Defaults
 - Enter Installer Settings
 - Press Next -> Restore Defaults
 - Press Select
 - Yes to restore
 - Control will return to Home screen

Questions