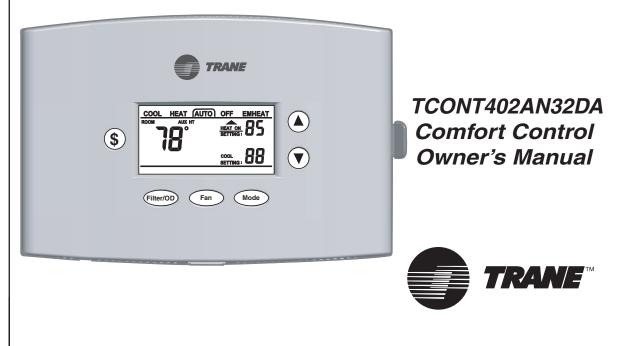
For more information contact your local dealer (distributor)

> Trane 6200 Troup Highway Туler, Texas 75707





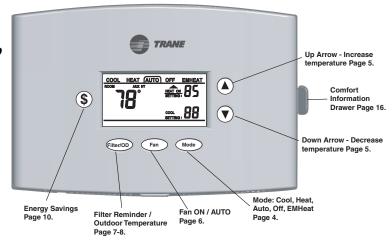


Page

3

Introduction

- 4-10 Keypad functions
- 12-16 Features
- 17 Factory settings
- 18-19 Comfort Control Setup
- 20-21 Troubleshooting
- 22-23 Warranty



Page - 2

Pub. No. 22-5209-04

Table 1A: Warranty Time Periods

COVERAGE TERMS FOR RESIDENTIAL APPLICATIONS: Pursuant to the Trane U.S., Inc. ("Company") limited warranty terms and conditions, the following Products are covered for the base time periods as stated below ("Base Limited Warranty period"). If registered, the Base Limited Warranty Periods for certain products will be extended as stated below ("Registered Limited Warranty Period").

CONTROLS: *CONT200,*CONT401,*CONT402, *CONT600 &*CONT602 Base Limited Warranty Period: one (1) year

Registered Limited Warranty Period: five (5) years

CONTROLS: *ZEMT500 *CONT800,*CONT802,*CONT803,*CONT900. *ZONE950 Base Limited Warranty Period: five (5) years Registered Limited Warranty Period: ten (10) years

ZONING PRODUCTS: *ZONE950, *ZONE940, *ZONE930, ZZONEPNLAC52Z, ZZONE-EXPAC52Z, ZZSENSAL0400, BAYSEN01ATEMPA, BAY24VRP, ZDAMPRD, ZDAMPSM, ZDAMPBM, ZDAMPRR

Base Limited Warranty Period: five (5) years Registered Limited Warranty Period: ten (10) years

HUMIDIFIERS: *HUMD200, *HUMD300 & *HUMD500

Base Limited Warranty Period: five (5) years Registered Limited Warranty Period: ten (10) years

ENERGY RECOVERY VENTILATOR (ERV): *ERVR100, *ERVR200 & *ERVR300

Base Limited Warranty Period: five (5) years Registered Limited Warranty Period: ten (10) years

AIR CLEANERS: TFD & AFD

Base Limited Warranty Period: five (5) years Registered Limited Warranty Period: ten (10) years

VARIABLE SPEED OIL FURNACE: *HV-V, *LF-V, *LR-V,*DF-V

Base Limited Warranty Period: Parts- five (5) years, Heat Exchanger - twenty (20) years Registered Limited Warranty Period: Parts - ten (10) years, Heat Exchanger - Lifetime

NON-VARIABLE SPEED OIL FURNACE: *HV, *LF, *LR,*DF

Base Limited Warranty Period: Parts- five (5) years, Heat Exchanger - twenty (20) years Registered Limited Warranty Period: Parts - ten (10) years, Heat Exchanger - Lifetime

SPECIFIC TERMS FOR COMMERCIAL APPLCIATIONS:

Base Limited Warranty Period Applies for all controls, zoning products, humidifiers and ERV's

All Oil Furnaces: Parts - one (1) year, Heat Exchanger - twenty (20) years

*(First letter may be A or T)

Warranty Low Voltage Room Comfort Controls (Parts Only)

Subject to the terms and conditions of this limited warranty, Trane U.S., Inc. ("Company) extends a limited warranty against manufacturing defects for the product(s) identified in Table 1A attached hereto ("Products) that are installed in a residential application (personal, family or household purposes) under normal use and maintenance in the United States and Canada.

This limited warranty applies to Products manufactured on or after August 1, 2011.

In order to maximize the available benefits under this limited warranty, the Purchaser (as defined below) should read it in its entirety. All repairs of Product parts covered under this limited warranty must be made with authorized service parts and by a licensed HVAC service provider. Additionally, commercial applications are treated differently under this limited warranty as stated in Table 1A attached hereto. For purposes of this limited warranty, "commercial applications" shall mean any application other than for personal, family, or household use.

TERM: The limited warranty period for Products is as stated in Table 1A attached herelo. If the Purchaser properly registers the Products, the limited warranty period shall be extended as stated in Table 1A attached hereto. Regardless of registration, the Commencement Date for a limited warranty period shall be the date that the original installation is complete and all Product start-up procedures have been properly completed and verified by an installer's invoice. If the installation and start-up date cannot be verified by the installer's invoice, the Commencement Date shall be sixtly (60) days after the factory manufacture date which is verified by the Product serial number. Where a Product is installed in a newly constructed home, the Commencement Date is the date the Purchaser purchased the residence from the builder. Proof of Product purchase, installation, and/or closing date of the residence may be required to confirm the Commencement Date.

The installation of Product replacement parts under this limited warranty shall not extend the original warranty period. The warranty period for any Product part replaced under this limited warranty is the applicable warranty period remaining under the original Product warranty.

WHO IS COVERED: This limited warranty is provided only to the original owner and his or her spouse ("Purchaser") of the residence where the Products are originally installed. This warranty is not transferable except according to terms stated on the applicable website identified below under Registration Requirements. Company has the right to request any and all proof of Product purchase or installation and/or closing date of the residence.

Page - 22 Pub. No. 22-5209-04

WHAT COMPANY WILL DO: Company may request proof of Product purchase and/or installation in order to provide Product parts under this limited warranty. As Company's only responsibility and Purchaser's only remedy under this limited warranty, Company will furnish a replacement part to the licensed HVAC service provider, without charge for the part only, to replace any Product part that fails due to a manufacturing defect under normal use and maintenance. The Purchaser must pay for any and all shipping and handling charges and other costs of warranty service for the replacement part. If a Product part is not available, Company will, at its option, provide a free suitable substitute part or provide a credit in the amount of the then factory selling price for a new suitable substitute part to be used by the Purchaser towards the retail purchase price of a new Company product. Any new Product purchase shall be at Purchaser's sole costs and expenses.

REGISTRATION REQUIREMENTS: All Products must be properly registered online by the Purchaser within sixty (60) days after the Commencement Date to receive the registered limited warranty terms. To register online, go to:

http://www.trane.com/Residential/Trane/Owners/Warranty-Information or http://www.americanstandardair.com/sevicesupport/pages/warranty.aspx and click "Begin Online Registration." If a Purchaser does not register within this stated time period, the base limited warranty terms shall apply.

- ELIGIBILITY REQUIREMENTS: The following items are required in order for the Products to be covered under this limited warranty:
 - The Products must be in the same location where they were originally installed.
 - The Products must be properly installed, operated, and maintained by a licensed HVAC service provider in accordance with the Product specifications or installation, operation, and maintenance instructions provided by Company with each Product. Failure to conform to such specifications and/or instructions shall viol this limited warranty. Company may request written documentation showing the proper preventative maintenance.
 - All Product parts replaced by Company under this limited warranty must be given to the servicing provider for return to Company.
 EVCUL9DES: The following care and equivalent by this include warranty.
 - EXCLUSIONS: The following are not covered by this limited warranty:
 Labor costs including, but not limited to, costs for diagnostic calls or the removal and reinstallation of Products and/or Product parts.
 - Shipping and freight expenses required to ship Product replacement parts
 Failures, defects, or damage (including, but not limited to, any loss of
 - A data or property) caused by (1) any third party product, service, or system connected or used in conjunction with the Products; (2) any use that is not designed or intended for the Products; (3) modification, alteration, abuse, misuse, negligence, or accident; (4) improper storage, installation,

maintenance, or operation including, but not limited to, operation of electrical equipment at voltages other than the range specified on the Product nameplate; (5) any use in violation of written instructions or specifications provided by Company; (6) any acts of God including, but not limited to, fire, water, storms; lightning, or earthquakes; or any theff or riots; or (7) a corrosive atmosphere or contact with corrosive materials such as, but not limited to, chlorine, fluorine, salt, sulfur, recycled waste water, urine, fertilizers, rust, or other damaging substances or chemicals.

 Products purchased direct including, but not limited to, Internet or auction purchases and purchases made on an uninstalled basis.

Increased utility usage costs.

ADDITIONAL TERMS:

THIS LIMITED WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, WHETHER IN CONTRACT OR IN NEGLGENCE, EXPRESS OR IMPLIED, IN LAW OR IN FACT. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE APPLICABLE PRODUCT WARRANTY. COMPANY DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OBLIGATION OR LIABILITY IN CON-NECTION WITH THE PRODUCTS.

NOTWITHSTANDING ANYTHING IN THIS LIMITED WARRANTY TO THE CONTRARY, COMPANY SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL AND/OR PUNITIVE DAMAGES, WHETHER BASED ON CONTRACT, WARRANTY, TORT (INCLUDING, BUT NOT LIMITED TO, STRICT LIABILITY OR NEGLEGNECE), PATENT INFRINGEMENT, OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAM-AGES. COMPANY'S MAXIMUM LIABILITY HEREUNDER IS LIMITED TO THE ORIGINAL PURCHASE PRICE OF THE PRODUCTS.

No action arising out of any claimed breach of this limited warranty may be brought by a Purchaser more than one (1) year after the cause of action has arisen.

This limited warranty gives you specific legal rights, and you may also have other rights as otherwise permitted by law. If this Product is considered a consumer product, please be advised that some local laws do not allow limitations on incidental or consequential damages, how long a warranty lasts based on registration, or how long an implied warranty lasts, so that the above limitations may not fully apply. Refer to your local laws for your specific rights under this limited warranty.

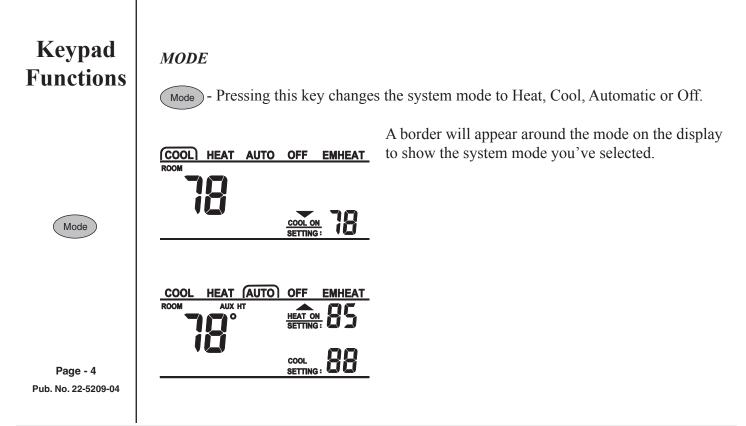
Residential Systems

6200 Troup Highway, Tyler, TX 75707 Attn: Customer Relations

Or visit our website at www.trane.com or www.americanstandardair.com

Introduction

Congratulations on the purchase of your new Trane XR402 Comfort Control! Your XR402 Comfort Control combines the latest digital control technology with intuitive functions that make this control simple to understand and easy to operate. You'll enjoy lower utility bills at the touch of a button with the energy efficiency features built into your XR402 Comfort Control. Your comfort settings are automatically stored in the XR402 Comfort Control's memory eliminating the need for battery backup in the event of power loss. Simply follow the steps in this instruction manual and begin enjoying the benefits of your new Trane XR402 Comfort Control.



Troubleshooting (Continued)					
Symptom	Possible Cause	Action			
Heating will not come on.	 System Mode not set to Heat. Minimum off time delay being enforced. Loose connection to control or system. Heating system requires service or control requires replacement. 	 Set Mode to heat and raise the setpoint above room temperature. If heating does not come on within 5 minutes, Check Heating. Check - Repair connections. Repair system / Replace control. 			
Cooling will not come on.	 System Mode not set to Cool. Minimum off time delay being enforced Loose connection to control or system. Cooling system requires service or control requires replacement. 	 Set Mode to cool and lower the setpoint below room tempera If cooling does not come on within 15 minutes, contact servic Repair connections. Repair system / Replace control. 			
Cool ON or Heat ON is displayed, but no warm or cool air is coming from the registers.	 The heating equipment turns on the fan when the furnace has warmed up to a setpoint. Heating or cooling equipment is not operating. 	 Wait one minute after Heat ON is displayed and then check the registers. Check Heating and Cooling system. 			
Control does not respond to keypad presses.	1. "Keypad locked" is displayed on LCD. 2. Keypad failure.	1. Unlock keypad - press Up+Down arrow together until "Keypad locked" appears. 2. Replace Control.			
Fan does not operate properly in heat or cool mode.	 Incorrect wiring. Heating or cooling equipment inoperative. 	1. Correct wiring. 2. Repair system.			
Fan runs all the time.	1. Fan mode set to ON. 2. Shorted control wiring.	1. Set fan mode to AUTO. 2. Check / Repair wiring.			
Cooling cycle too fast or too slow. (Narrow or wide temperature swing).	The location of the control and/or the size of the cooling system may be influencing the cycle rate.	Verify cycle rate adjustment Step 20 & 22.			
Heating cycle too fast or too slow. (Narrow or wide temperature swing).	The location of the control and/or the size of the heating system may be influencing the cycle rate	Verify cycle rate adjustment Step 24, 26, 28, 30 & 32			

Table 2	Troubleshooting			
e Symptom	Possible Cause	Action		
	 Blown fuse or tripped circuit breaker. Furnace power switch OFF. Furnace blower compartment door or panel loose or not properly installed. 	 Replace fuse or reset breaker. Turn switch to ON. Replace door panel in proper position to engage safety interlock or door switch. 		
Indoor temperature display is incor- rect.	Temperature display needs calibration.	Calibrate Sensor - User Setup Step 59.		
Outdoor temperature display is incorrect.	Temperature display needs calibration.	1. Calibrate Sensor - User Setup Step 60. 2. Disconnect outdoor sensor from controls terminal block and check th sensor and field wiring reisitance value - Table 2.		
Outdoor temperature display shows "" and Service indicator on solid.	Outdoor temperature sensor open or shorted Outdoor sensor field wiring open or shorted	 Replace outdoor sensor. Check / repair outdoor sensor field wiring. 		
Cannot set Heating setpoint above 80 degrees	Deadband between Heating and Cooling set too high	Decrease Deadband setting - User Setup Step 52.		
Service indicator Flashing on and off.	Control EEPROM write error.	Press any key and Check / Re-enter Setup Choices.		
Service indicator solid on and "" in temperature display.	Onboard indoor temperature sensor open or shorted	Replace Control		
Room & Service icon flashing	Remote indoor temperature sensor open or shorted	 Check / repair remote indoor sensor field wiring. Replace remote indoor sensor 		
Temperature setting will not change. (Example: Cannot set heating higher or cooling lower).	 Upper and/or lower temperature limits were reached. "Keypad locked" is displayed on LCD. 	 Check the temperature setpoints: Heating limits are 40 - 85F. Cooling limits are 65 - 90F. Unlock keypad - press Up+Down arrow together until icon disappears. 		
Room temperature overshoots when Energy Savings Key (\$) is used or the Heat/Cool settings is changed more than 2 degrees.	Oversized heating or cooling equipment. Control can not respond fast enough to prevent overshooting.	Set Control Response Rate to "Fast" - Step 34.		

Pub. No. 22-5209-04

UP / DOWN Arrow



- Use these keys to raise or lower the Heat or Cool Setting.

- The first key press turns on the back lighting and a border around the setting to be adjusted without changing the setting.

COOL HEAT	AUTO	OFF	EMHEAT
ROOM		HEAT Settin	G: 68
		COOL SETTIN	G: 74

- Pressing the Up or Down arrow again will raise or lower the setting that has the border around it.

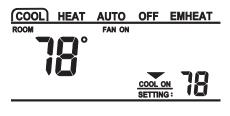
- If you press and hold the Up or Down arrow, the temperature setting will advance rapidly.

- When the control is set to Auto mode, pressing the Mode key once changes the position of the border to heat or cool.

Keypad Functions

FAN

Fan - Pressing this key selects whether the indoor fan motor runs in automatic or continuous mode.



The FAN ON indicates that you have selected to operate the fan in continuous mode.

Pressing the Fan keypad button again returns the indoor fan mode of operation to automatic and FAN ON goes away.

Fan
 For variable speed indoor equipment, if you press and hold the Fan button for several seconds, the display changes to the Quick Setup option for continuous fan airflow. Use the UP and DOWN arrow buttons to change the airflow setting. NOTE: This feature is not available if the comfort control is set to BK Output disabled in Installer Setup.

Table 1

Comfort Control Setup

Menu Item	Default	Setting (Choices) (Press UP or DOWN arrow)	Step (Press Mode or Fan)	Menu Item	Default	Setting (Choices) (Press UP or DOWN arrow)	Step (Press Mode or Fan)		
Temperature Display	0	0 = Fahrenheit 1 = Celsius	50	Calibrate Indoor Temperature	0	Calibrated Room Temperature + / - 5 Degrees (1/2 degree	59		
Auto or Manual Changeover	1	0 = Manual 1 = Auto	51	Calibrate Outdoor		increments) Calibrated Outdoor Temperature			
Setpoint Dead- band	3	2 - 10 Degrees Fahrenheit 1.5 - 5.0 Degrees Celsius	52	Temperature (Enabled in step 9)	0	+ / - 5 Degrees (1/2 degree increments)	60		
Waiting Icon	1	0 = Disable 1 = Enable	53	Calibrate Remote	0	Calibrated Room Remote Indoor- Temperature + /- 5 Degrees (1/2	61		
Cooling Droop	1	0 = Off 1 = 1 Degree	54	Continous Fan Airflow	50%	degree increments) 35% - 100%	62		
Energy Savings - Cooling Set- point Offset	5	2 = 2 Degrees 0 - 25 Degrees Fahrenheit 0 - 15 Degrees Celsius	55	Exit User Setup (Press Mode)	SA	CA = Cancel SA = Save US = Default User Settings	99 (Exit)		
Energy Sav- ings - Heating Setpoint Offset	5	0 - 45 Degrees Fahrenheit 0 - 25 Degrees Celsius	56	Note: Pressing the Energy Saving Key (\$) anytime during setup will advance to step 99. Step 99 - Make setting selection and than press MODE to exit. <u>SAve</u> = Save selections. <u>USer</u> = Default User setting. <u>CA</u> ncel = Cancel Selections for current session and return tp previous session selections					
Indoor Filter Timer Method	0	0 = Calendar Days 1 = Fan Run Time Days	57						
Indoor Filter Re- minder - Days	30	1 - 180 Days 0 = Disable	58						

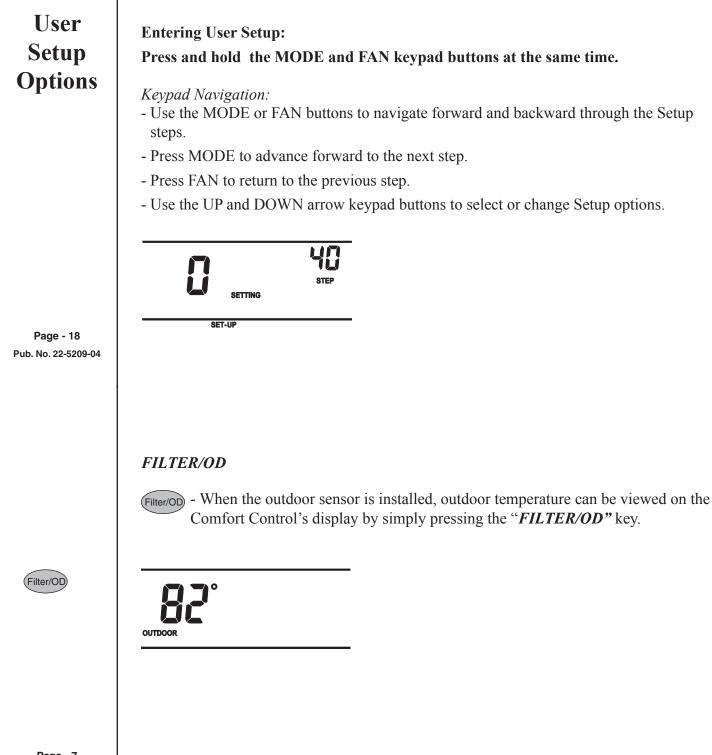
Lock - Unlock Keypad:

Press and hold Up Arrow and Down Arrow at the same time for several seconds. ("Keypad Locked" icon will display on LCD screen)

Fan

Page - 6 Pub. No. 22-5209-04

User Setup Options (cont-)



Page - 7 Pub. No. 22-5209-04

Keypad Functions (cont-)



FILTER/OD



- Press this key twice to display how many days remain before time to replace or clean the filter. The "*FILTER/OD*" indicator will flash on the display when the filter timers days remaining reaches zero.



- Press the "*FILTER/OD*" key twice after cleaning or replacing the filter to turn off the filter indicator and reset the timer.

DAYS REMAINING FOR FILTER

- If the filter is serviced before the timer expires, press the "*FILTER/OD*" key twice to display the "days remaining for filter". Press the Down arrow to change the remaining days to zero. Press the "*FILTER/OD*" key twice to reset the timer.

Factory Default

Settings

Page - 8 Pub. No. 22-5209-04

> *User Defined Options and Factory Default Settings: (See Table 1, page 19)* Temperature Display - Fahrenheit or Celsius (Default is Fahrenheit)

Auto or Manual Changeover - (Default is Auto)
Setpoint Deadband - 2 - 10 degrees (Default is 3 degrees)
Waiting Indicator - Enable or Disable (Default is Enable)
Cooling Droop - Off, 1, or 2 degrees (Default is 1 degree)
Energy Saving Cooling Setpoint Offset - 0 - 25 degrees (Default is 5 degrees)
Energy Saving Heating Setpoint Offset - 0 - 45 degrees (Default is 5 degrees)
Indoor Filter Timer Method - Calendar Days or Fan Run Time Days - (Default is Calendar Days)
Indoor Filter Timer Days - 1 - 180 days (Default is 30 days)
Calibrate Indoor Temperature - + / - 5 Degrees (Default is 0 degrees)
Calibrate Remote Indoor Temperature - + / - 5 Degrees (Default is 0 degrees)
Continuous Fan Airflow - 35% - 100% (Default is 50%)

Features (cont-)

Calibrate Outdoor Temperature

This option allows calibration (or deliberate miscalibration) of the outdoor temperature sensor. The selected number is number of degrees, plus or minus, which will be added to actual temperature. The number can range between + 5 and - 5 degrees in 1/2 degree increments. Factory default is 0. This adjusted value will be used and displayed as actual temperature. For example, if 2 is selected, 72 degrees actual will read 74 degrees.

Comfort Information Drawer

The drawer attached to the mounting base of the control is designed to provide a convenient location for the user to locate their local servicer. A standard business card can be folded and inserted into the slot on the drawer to remind the User whom to call when service is required.

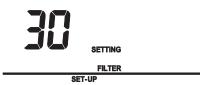
Page - 16 Pub. No. 22-5209-04

FILTER/OD



If you press and hold the filter/OD keypad button for several seconds, the display changes to the Quick Setup option for the filter timer. Use the UP or DOWN arrow keypad buttons to change the timer setting if desired, 1 - 180 days. NOTE: Setting to 0 will disable filter timer.

Filter/OD



- Press the filter/OD button again to return to normal display or just wait a few seconds and the display will return on its own.

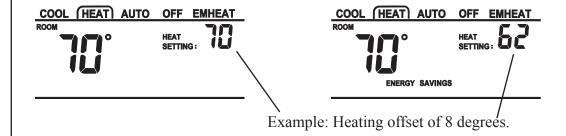
Keypad Functions (cont-)

Page - 10 Pub. No. 22-5209-04

Energy Savings



) - Use this key to lower your systems energy consumption and save money at the same time! Pressing the Energy Savings keypad button changes the indoor temperature setting to a warmer temperature when the system is operating in the cooling mode and to a cooler indoor temperature setting when operating in the heating mode. Energy Savings will appear on the display.



Service Indicator

"SERVICE" automatically flashes when an internal fault or error has been detected by the control. See Table 2 on pages 20 & 21.

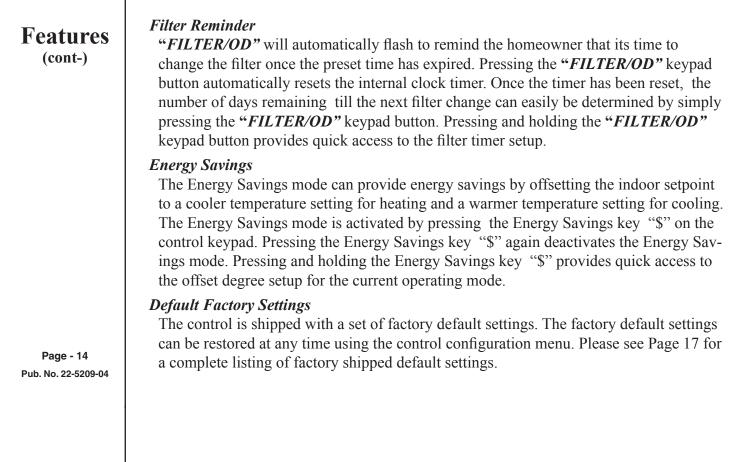
Wait Indicator

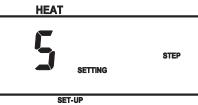
"WAITING" will illuminate when the indoor setpoint is moved in the direction of calling for additional system capacity. *"WAITING"* indicates that the control is adjusting to the new settings.

Calibrate Indoor Temperature

This option allows calibration (or deliberate miscalibration) of the room temperature sensor. The selection is the number of degrees added to actual temperature. The number can range between + 5 and - 5. Factory default is 0. This adjusted value will be used as actual temperature for both display and control action. For example, if 2 is selected, 72 degrees actual will read 74 degrees.

Pub. No. 22-5209-04





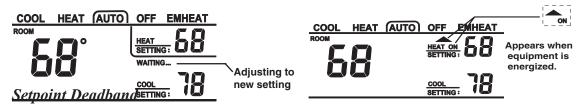
Press and hold the Energy Savings keypad button to gain Quick Access to the Energy Savings setup screen.Use the UP or DOWN arrow keys to change the offset degrees setting.

NOTE: Energy Savings offset degrees are selected separately for heating and cooling. Press the Mode keypad button while viewing this screen to access the Cooling or Heating offset degrees setting, then use the UP or DOWN arrow key to select the desired number of offset degrees.

- Press the Energy Savings keypad button again to return to normal display or just wait a few seconds and the display will return on its own.

Auto Changeover

When the system mode is set to Auto, the control automatically switches between heating and cooling modes to maintain the desired comfort level.



The number of degrees separating Heating and Cooling setpoints. Neither the heating or cooling system operate when the indoor temperature is within the deadband. The amount of separation between mode setpoints is user defined between 2 and 10 degrees. When the control is set to Auto, and the cooling setpoint is changed to a cooler setting, the heating setpoint also changes to maintain the selected degrees separation. The same action occurs when the heating setpoint is changed to a warmer temperature.

Outdoor Temperature Display - (sensor must be installed)

The Outdoor Temperature Sensor is included with your Comfort Control. When installed, it will allow you to view the outdoor temperature from within the conditioned space by pressing the Filter/OD keypad button. The Comfort Control's display will return to normal display on its own within a few seconds.

Backlit Display & Keys

The liquid crystal display and keypad will illuminate whenever a keypad button is pressed to improve thermostat visibility. The back light stays on for 20 seconds after the last key press. The Up and Down arrows are continuously lit.

Cooling Droop

Cooling Droop is an automatic function that cycles the compressor on to improve indoor comfort by removing moisture from the air. The Droop cycle is activated when space temperature is at or below the cooling sensible temperature setpoint. When this function is active, the control will control indoor temperature at 1 or 2 degrees below cooling setpoint. The Droop cycle is deactivated when the indoor temperature rises above the cooling setpoint.

Keypad Lock

Locking the control keypad can help prevent unwanted tampering or changing the control settings by pressing the controls UP and DOWN arrow keypad buttons at the same time and holding for 2 seconds. The "KEYPAD LOCKED" icon will appear on the control's display. Repeating this combination unlocks the keypad.

Page - 12 Pub. No. 22-5209-04

Features