UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS DALLAS DIVISION

ROSEN TECHNOLOGIES LLC,

Plaintiff,

Case No. 3:22-cv-732

COMPLAINT FOR PATENT INFRINGEMENT

v.

LENNOX INDUSTRIES INC.,

Defendant.

JURY TRIAL DEMANDED

AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Rosen Technologies LLC ("Rosen" or "Plaintiff") hereby asserts the following claims for patent infringement against Defendant Lennox Industries Inc. ("Lennox" or "Defendant"), and alleges as follows:

SUMMARY

1. Rosen owns by assignment all right, title and interest in numerous United States and foreign patents and applications including United States Patent Nos. 6,619,555; 6,789,739; 7,156,318; 7,185,825; and 7,232,075 ("Asserted Patents").

2. Defendant infringes the Asserted Patents by at least selling, without authorization, Rosen's proprietary technologies in a number of its products including the Lennox iComfort Wi-Fi Thermostat, and other substantially similar products (collectively, the "Accused Products"). These Accused Products are marketed, offered, and distributed throughout the United States, including in this District.

3. By this action, Rosen seeks to obtain compensation for the harm it has suffered as a result of Defendant's infringement of the Asserted Patents.

NATURE OF THE ACTION

4. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*.

5. Defendant has infringed and continues to infringe, and at least as early as the filing and/or service of this Complaint, has induced and continues to induce infringement of, and has contributed to and continues to contribute to infringement of, one or more claims of Rosen's Asserted Patents at least by making, using, selling, and/or offering to sell its products and services in the United States, including in this District, and/or by importing the Accused Products into the United States.

6. Rosen is the legal owner by assignment of the Asserted Patents, which were duly and legally issued by the United States Patent and Trademark Office ("USPTO"). Rosen seeks monetary damages for Defendant's infringement of the Asserted Patents.

THE PARTIES

7. Plaintiff Rosen Technologies LLC is a Texas limited liability company with its principal place of business at 17330 Preston Road, Suite 200D, Dallas, Texas 75252. Rosen is the owner of intellectual property rights at issue in this action.

8. On information and belief, Defendant Lennox is a corporation organized and existing under the laws of Delaware, with a place of business at 2100 Lake Park Blvd., Richardson, TX 75080. Lennox may be served via its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, DE, 19808.

9. On information and belief, Defendant directly and/or indirectly develops, designs, manufactures, distributes, markets, offers to sell and/or sells infringing products and services in the United States, including in the Northern District of Texas, and otherwise directs infringing

activities to this District in connection with its products and services.

JURISDICTION AND VENUE

10. As this is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, this Court has subject matter jurisdiction over the matters asserted herein under 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has personal jurisdiction over Defendant, in part because Defendant does continuous and systematic business in this District, including by providing infringing products and services to the residents of the Northern District of Texas that Defendant knew would be used within this District, and by soliciting business from the residents of the Northern District of Texas. For example, Defendant is subject to personal jurisdiction in this Court because, *inter alia*, Defendant has a regular place of business in the district, and directly and through agents regularly does, solicits, and transacts business in the Northern District of Texas.

12. In particular, Defendant has committed and continues to commit acts of infringement in violation of 35 U.S.C. § 271, and has made, used, marketed, distributed, offered for sale, sold, and/or imported infringing products in the State of Texas, and engaged in infringing conduct within and directed at or from this District. For example, Defendant has purposefully and voluntarily placed the Accused Products into the stream of commerce with the expectation that the Accused Products will be used in this District. The Accused Products have been and continue to be distributed to and used in this District. Defendant's acts cause and have caused injury to Rosen, including within this District.

13. Venue is proper in this District under the provisions of 28 U.S.C. § 1400(b) at least because Defendant has committed acts of infringement in this District and has a regular and established place of business in this District at 2100 Lake Park Blvd., Richardson, TX 75080.

PATENTS-IN-SUIT

14. The Asserted Patents stem from inventions from Howard Rosen. Mr. Rosen has been a dedicated Inventor in the field of electronics for decades. In 1977, he created the first solid state radio frequency epilation equipment.

15. In 1982, Mr. Rosen developed many improvements to the home satellite TV market including the block-down frequency converter to allow for multiple receiver/program viewing from one satellite to a plurality of satellite home receivers.

16. In 1994, Mr. Rosen continued work in communications by inventing automatic caller-id phone number blocking which was represented by U.S. Patent No. 5,309,508 which was subsequently acquired by Motorola.

17. In 1998, among other things, Mr. Rosen developed computerized automatic telephone recorders as well as diagnostic tools for accessing the efficacy of the optic nerve after laser treatment. Mr. Rosen has been referred to many times at trade shows by many peers and companies as a prolific inventor.

18. Around 1999, Mr. Rosen recognized a large void in the thermostat market and a definite need to make thermostats and their controls more user friendly. In or around 2000, he began filing patents on methods for making thermostats with touchscreens which were more intuitive and user friendly and he continued by additionally adding features which would turn out to help make homes more comfortable, efficient, and informative by acting on external stimulus. Further, the thermostats would incorporate more information and display important messages on a thermostat screen while maintaining the principle of user friendliness in working with virtual touchscreen thermostats which would subliminally teach a user how to control the HVAC system in a complex way without any burden on the user.

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19. Mr. Rosen developed thermostats that could change their user interface to adapt to the HVAC systems specifically in a particular equipment environment. AED Electronics Inc., owned by Mr. Rosen, set out to make headways into the HVAC market at the turn of the century.

20. AED Electronics thermostats were beginning to be produced by AED Electronics and were marketed under the OEM names of Carrier Corporation such as "Totaline" as well as private labeling for other companies. Most of the AED products included dot matrix liquid crystal displays similar to the way today's LCD television screen work with dots and the ability to have a virtual touchscreen thermostat allowed thermostat screen greatly improved user interface which could even include changes in contrast and look to accommodate for décor and dark rooms. The list of improvements in the thermostat field that developed by Mr. Rosen, were vast and covered multiple options for user screens including but not limited to making buttons that were only necessary to the user appear on each individual thermostat thus eliminating unused buttons which was the old conventional way of developing thermostats.

21. In 2004, Mr. Rosen developed a remote wireless device that included a temperature sensor and an occupancy sensor that could be placed in many rooms in a building or home so that a thermostat would control temperature more accurately in occupied rooms in commercial buildings or homes.

22. At that point, Mr. Rosen created a company, Verdant Environmental Technologies, which used various methods to wirelessly control large building energy consumption and reduce electrical and fossil fuel demand by as much as 48%. The results were more successful than anyone dreamed of and as a result within approximately 8 years the company was sold to a large multinational group and evolved into products today manufactured as a subsidiary under Emerson Electric.

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23. Mr. Rosen's contributions to the technology now incorporated into today's HVAC systems are immeasurable.

U.S. Patent No. 6,619,555

24. U.S. Patent No. 6,619,555 ("the '555 Patent") is entitled "Thermostat System Communicating With A Remote Correspondent For Receiving And Displaying Diverse Information," and was issued on September 16, 2003. A true and correct copy of the '555 Patent is attached as Exhibit A.

25. The '555 Patent was filed on February 13, 2002, as U.S. Patent Application No. 10/075,886.

26. Rosen is the owner of all rights, title, and interest in and to the '555 Patent, with the full and exclusive right to bring suit to enforce the '555 Patent, including the right to recover for past infringement.

27. The '555 Patent is valid and enforceable under United States Patent Laws.

28. The '555 Patent recognized several problems with existing programmable and non-programmable thermostat systems. Exhibit A at 1:48-64. Specifically, in the prior art, "thermostat systems are [either] programmable by a user" or "may limit, or even make no provision for, user programming... [such as] thermostats distributed throughout a large commercial establishment." *Id*.

29. To address one or more shortcomings of these existing thermostats, the '555 Patent discloses, *inter alia*, a "thermostat system incorporating a communication interface for receiving and displaying diverse information from a remote correspondent." *Id.* at 1:8-10.

U.S. Patent No. 6,789,739

30. U.S. Patent No. 6,789,739 ("the '739 Patent") is entitled "Thermostat System

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With Location Data," and was issued on September 14, 2004. A true and correct copy of the '739 Patent is attached as Exhibit B.

31. The '739 Patent was filed on November 4, 2002, as U.S. Patent Application No. 10/287,677.

32. Rosen is the owner of all rights, title, and interest in and to the '739 Patent, with the full and exclusive right to bring suit to enforce the '739 Patent, including the right to recover for past infringement.

33. The '739 Patent is valid and enforceable under United States Patent Laws.

34. The '739 Patent recognized several problems with existing thermostat systems. Exhibit B at 1:48-64. Specifically, in the prior art solution, "thermostat systems are [either] programmable by a user" or "may limit, or even make no provision for, user programming... [such as] thermostats distributed throughout a large commercial establishment." *Id*.

35. To address one or more shortcomings of these existing thermostats, the '739 Patent discloses, *inter alia*, a "thermostat system incorporating a communication interface for receiving and displaying diverse information from a remote correspondent." *Id.* at 1:9-11.

U.S. Patent No. 7,156,318

36. U.S. Patent No. 7,156,318 ("the '318 Patent") is entitled "Programmable Thermostat Incorporating A Liquid Crystal Display Selectively Presenting Adaptable System Menus Including Changeable Interactive Virtual Buttons," and was issued on January 2, 2007. A true and correct copy of the '318 Patent is attached as Exhibit C.

37. The '318 Patent was filed on September 3, 2003, as U.S. Patent Application No. 10/654,235.

38. Rosen is the owner of all rights, title, and interest in and to the '318 Patent, with

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the full and exclusive right to bring suit to enforce the '318 Patent, including the right to recover for past infringement.

39. The '318 Patent is valid and enforceable under United States Patent Laws.

40. The '318 Patent recognized several problems with existing programmable thermostats. Exhibit C at 1:65-2:9. Specifically, in the prior art solution, "[t]here is a fundamental problem with the prior art programmable thermostat systems: they are difficult to program to the extent that some users are unable to successfully program them. This is because the user interfaces which have been employed in prior art programmable interfaces are not highly intuitive." *Id.* at 2:10-15. Furthermore, the prior art relied on "fixed position real or virtual buttons, at least some of which have multi-functions depending upon the point which a user has reached in the programming process." *Id.* at 2:15-20.

41. To address one or more shortcomings of these existing thermostats, the '318 Patent discloses, *inter alia*, "a field programmable thermostat which may be user-configured to limit functionality only as necessary for the specific conditioned space for which the program is being established." *Id.* at 3:1-5.

<u>U.S. Patent No. 7,185,825</u>

42. U.S. Patent No. 7,185,825 ("the '825 Patent") is entitled "Programmable Thermostat Employing A Fail Safe Real Time Clock," and was issued on March 6, 2007. A true and correct copy of the '825 Patent is attached as Exhibit D.

43. The '825 Patent was filed on June 24, 2004, as U.S. Patent Application No. 10/875,579.

44. Rosen is the owner of all rights, title, and interest in and to the '825 Patent, with the full and exclusive right to bring suit to enforce the '825 Patent, including the right to recover

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for past infringement.

45. The '825 Patent is valid and enforceable under United States Patent Laws.

46. The '825 Patent recognized several problems with existing thermostat systems. Exhibit D at 2:10-55. Specifically, in the prior art, "power to a programmable thermostat is supplied from the controlled space conditioning equipment, and either a battery or very high capacity capacitor ('super-cap') provides backup power to 'ride out' equipment power failure ('outage') until power is restored" *Id* at 2:18-22. Furthermore, "[b]atteries must be changed at intervals to ensure that the thermostat will continue to hold its time and setting throughout an outage." *Id*. at 2:22-25.

47. To address one or more shortcomings of these existing thermostats, the '825 Patent discloses, *inter alia*, a "a fail safe real time clock in a programmable clock, particularly a thermostat incorporating a vacation mode of operation." *Id.* at 2:56-59.

U.S. Patent No. 7,232,075

48. U.S. Patent No. 7,232,075 ("the '075 Patent") is entitled "Thermostat System With Touchscreen With User Interfaces Or Operational Algorithms Via A Remote Correspondent" and was issued on June 19, 2007. A true and correct copy of the '075 Patent is attached as Exhibit E.

49. The '075 Patent was filed on January 19, 2005, as U.S. Patent Application No. 11/039,180.

50. Rosen is the owner of all rights, title, and interest in and to the '075 Patent, with the full and exclusive right to bring suit to enforce the '075 Patent, including the right to recover for past infringement.

51. The '075 Patent is valid and enforceable under United States Patent Laws.

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52. The '075 Patent recognized several problems with existing thermostat systems. Exhibit E at 1:34-3:4. Specifically, in the prior art "information or operational interfaces of programmable thermostats can be incomprehensible or overly challenging to many users with advanced age, learning skills, poor vision and others in similar circumstances". *Id.* at 2:27-30. In the prior art, "user interface that use a mixture of raised push buttons with representations of environmental sensor information and control data on a segmented liquid crystal display." *Id.* at 2:35-38. The '075 Patent provides a solution to the prior art problems where "thermostat systems are [either] programmable by a user" or "may limit, or even make no provision for, user programming... [such as] thermostats distributed throughout a large commercial establishment." *Id.*

53. To address one or more shortcomings of these existing thermostats, the '075 Patent discloses, *inter alia*, a thermostat "whose user interface can be easily changed after installation to accommodate equipment or control options not anticipated at installation or to change the user interface to a form not possible with a control program originally installed with the thermostat." *Id.* at 3:5-10.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,619,555

54. Rosen incorporates by reference and re-alleges paragraphs 1-53 of this Complaint as if fully set forth herein.

55. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '555 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, the Lennox iComfort Wi-Fi Thermostat, and other substantially similar products (the "'555 Accused Products").

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56. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 18 of the '555 Patent in connection with the '555Accused Products. This description is based on publicly available information. Rosen reserves the right to modify this description, including, for example, on the basis of information about the '555 Accused Products that it obtains during discovery.

18) thermostat system for controlling space conditioning equipment comprising: - For instance, the '555 Accused Product is a thermostat system.



This thermostat supports: Wireless bands 802.11b, 802.11g and 802.11n Three languages (English, French, Spanish) Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating) Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner). Dual-fuel capable (iComfort®-enabled HP only) with two balance points Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement, iHarmony[®] Zoning System (2 - 4 zones) Lennox iComfort® Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI® to non-communicating indoor unit, Humidification measurement and control. Dew point adjustment control Humiditrol® Enhanced Dehumidification Accessory (EDA) Multiple-stage HVAC systems Equipment maintenance reminders Autochangeover mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.

18(A) a temperature sensor for providing an electrical signal indicative of the

temperature of a conditioned space in which the temperature sensor is situated;— For instance,

the '555 Accused Product includes temperature sensors for detecting temperature in the installed

location. The sensor further sends the corresponding temperature value to the thermostat.

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating operation to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40°F. The thermostat will not allow any cooling operation to begin until it senses a temperature higher than 40°F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor. Select heating system mode to heat the indoor space to above 40°F.

18(B): a liquid crystal display for selectively displaying an alphanumeric message; -For instance, the '555 Accused Products include an LCD touchscreen that displays various options, including temperature, to a user.



Wi-Fi Figure 3. Features Screen - Indoor Settings

EDIT PROGRAMS (SCHEDULE)

Touch edit programs button (see fig. 3). Figure 4 shows the EDIT PROGRAMS screen.

Edit the "season programs" to reflect your preferences. (The Save energy program uses high-efficiency Energy Star settings to promote energy conservation.)

- select programs Select a preset program; or touch and hold any button to enable the keyboard to change program names to suit your preferences.
- select days Select week/weekend, individual days, all 7 days.
- time Use up/down arrows to change time in 15 minute increments. · cool- and heat-to - Use up/down arrows to change temperature in 1 degree increments.
- fan mode Select on, auto, or circulate

and holding the time button for that time period un time is replaced with add and notioning the unite button for that unite period un unite is replaced with add setting. To re-enable, touch add setting that time period. Use the restore button to restore defaults for the preset programs. It no additional adjustment are made to any programs, touch "X" button to exit. If changes are made to any programs then fouch the save button and then touch X to



Figure 4. EDIT PROGRAMS Screen

TURN PROGRAMMING ON

If the programming is OFF, touch the system mode button (shown in figure 5, labeled **heat or cool**) to open the manual settings menu. **Programs** is the final selection in this menu. Select **programs** to display the program settings menu. (The menu will disappear if you don't make a setterion within a few seconds). Select an option (e.g. **spring/fall**). The system mode button will display the selected program (e.g. **spring...program is ON**).

Touchscreen

help (?).

 \bigcirc

Features a large, easy-to-use display with adjustable brightness



1(C): processor, said processor including; — For instance, the '555 Accused Products

includes a processor; further including.

77 A	HOMEOWNER'S MANUAL iComfort Wi-Fi [®] Thermostat Touch-Screen Programmable Communicating Thermostat	
ox Industries Inc. Ialas, Texas, USA		
iComfort Wi-Fi® Web and Mobile Apps	CONTROLS 507342-01 5/2017 Supersedes 507342-01 507342-02	
ort Wi-Fi®	General Congratulations on choosing the iComfort Wi-Fri [®] touch-screer programmable thermostalt The state-of-the-art technology built into thi device makes it easy for you to adjust your home's comfort settings while a home or from a remote location (via Internet access)! Help screens are just a touch away. Use this manual as an introduction to whole new word of home comfort.	
MUST BE LEFT WITH THE HOMEOWNER FOR FUTURE REFERENCE	WARNING	
NOTICE	Do not switch system to cool if the outdoor temperature is below 45°F (7°C). This can damage the cooling system.	
	A WARNING	
	This product contains a chemical known to the State of California to	

1(C)(1): a central processing unit;—For instance, the '555 Accused Products includes a

central processing unit.

	HOMEOWNER'S MANUAL	
C2017 Lennox Industries Inc. Dallas, Texas, USA	Ort. iComfort Wi-Fi®Thermostat Touch-Screen Programmable Communicating Thermostat	
2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CONTROLS 507342-01 5/2017 Supersedes 507342-01 507342-02	
- 🖾 🗑 🙀 🔰 📑 72° 📅 🚍	General	
IComfort WI-FI® Thermostat	Congratulations on choosing the iComfort Wi-FI [®] touch-screen, programmable thermostalt The state-0f-the-art technology built into this device makes it easy for you to adjust your home's comfort settings while at home or from a remote location (via Intermet access)! Help screens are just a touch away. Use this manual as an introduction to a whole new world of home comfort.	
NUST BE LEFT WITH THE HOMEOWNER OR FUTURE REFERENCE	MARNING	
NOTICE se this thermostat only as described in this manual.	Do not switch system to cool if the outdoor temperature is below 45°F	
	(7°C). This can damage the cooling system.	
	A WARNING	
	This product contains a chemical known to the State of California to	

1(C)(2): a real time clock;—For instance, the '555 Accused Products includes a processor having a real time clock.

Adjusting System Setting		
SET TIME AND DATE		
Use the arrows to select Time and Date ; touch edit to proceed to the "Set current time and date" screen.		
When "Time and Date" screen appears, enter the correct date as follows:		
Use the left and right arrows to change the month and year.		
 Touch a day of the month to select it. 		
Touch on the hour or minute; up down arrows appear to allow change.		
 Touch the am/pm field to toggle it between am and pm. 		
 When the correct date and time is set, touch save to save settings and return to previous settings screen. 		
Touch next to continue to next screen		

1(C)(3): a memory coupled to said central processing unit for storing program and data

information; and;- For instance, the '555 Accused Products includes a memory coupled to the

CPU.



I(C)(4): an input/output unit including - For instance, the '555 Accused Products includes a processor in the thermostat having I/O modules. The I/O modules are coupled with the processor.

This thermostat supports:

- Wireless bands 802.11b, 802.11g and 802.11n
- Three languages (English, French, Spanish)
- Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating)
- Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner).
- Dual-fuel capable (iComfort®-enabled HP only) with two balance points.
- Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement,
- iHarmony[®] Zoning System (2 4 zones)
- Lennox iComfort[®] Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI[®] to non-communicating indoor unit,
- Humidification measurement and control.
- Dew point adjustment control
- Humiditrol[®] Enhanced Dehumidification Accessory (EDA)
- Multiple-stage HVAC systems
- Equipment maintenance reminders
- Autochangeover mode Permits control of heating, cooling, humidification, and dehumidification without user involvement
- All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.



- selection. Touch the back button. 5. The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment (louch yes) or if finished, touch the mext button to advance to the "Adjust a setting..." screen (see page 15).
- NOTE Adding humidity regulating non-communicating devices may be a 2-step procedure
- First the device must be installed and wired. After the humidifier is installed, the setting under the "System" mode "Humidification Control Mode" defaults to "Basic".

- The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment (touch yes) or if finished, touch the next button to advance to the "Adjust a setting ... " screen.

NOTE - Adding humidity regulating non-communicating devices may be a 2-step procedure:

- First the device must be installed and wired. After the dehumidifier is installed, the setting under the "System" mode "Dehumidification Control Mode" defaults to "Basic".
- Second, set Humiditrol® comfort adjust overcooling and the min/max dehumidification setpoints if desired (see page 16).

While iComfort Wi-Fi is designed for use with premium Lennox® equipment, the iComfort Wi-Fi Flex can work with almost any system. So no matter what type of home heating and cooling equipment you have, you can enjoy the innovation of Lennox, and a more comfortable, energy-efficient home.



	iComfort Wi-Fi®	iComfort Wi-Fi [®] Flex
Compatible with Lennox®-brand communicating heating and cooling equipment	•	
Compatible with Lennox-brand non-communicating equipment and most other brands of heating and cooling equipment		•
Touchscreen Operation	•	•
Remote Access	•	•
7-Day Programmable	•	•
One-Touch Away	•	•
5-Day Weather Forecast	•	•
Customizable Reminders	•	•
Automatic Updates	•	•
Dual-Fuel Compatible	•	•
Humidity Control	•	•
Diagnostics and Alerts	Highly Advanced	Limited Reporting
Compatible with zoned systems	Designed for integration with iHarmony® Zoning System	
Exchanges information with heating and cooling equipment	Uses Lennox Precise Comfort® Technology to optimize system performance	
Warranty	5-Year Limited	5-Year Limited

I(C)(4)(a): a sensor input coupled to said temperature sensor for receiving said electrical signal therefrom- For instance, the '555 Accused Products includes a built-in temperature sensor, which senses the temperature around and sends a signal indicative of the temperature to the processor of thermostat. Also, it receives temperatures from its built-in sensor. This received temperature is displayed on the thermostat's LCD display

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating operation to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40°F. The thermostat will not allow any cooling op- eration to begin until it senses a temperature higher than 40°F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor . Select heating system mode to heat the indoor space to above 40°F.

I(C)(4)(b): a control output coupled to the space conditioning equipment for issuing control signals thereto; and- For instance, the '555 Accused Products connects to the heating or cooling systems based on heating or cooling signals generating from the output present in the thermostat.

iComfort Wi-Fi® Thermostat

The communicating iComfort Wi-Fi[®] thermostat is an electronic 7-day programmable touch-screen thermostat with a color display. It also offers enhanced capabilities which include: humidification measurement and control, dew point adjustment control, dehumidification measurement and control, Humiditrol® Enhanced Dehumidification Accessory (EDA) compatibility, and equipment maintenance reminders. The thermostat's autochangeover mode permits control of heating, cooling, humidification, and dehumidification without



communications between said processor and a first remote correspondent which is a source of

current information; and- For instance, the '555 Accused Products includes an interface to

connect to the internet using Wi-Fi for receiving weather information from the internet.





1(D): means coupling said communications interface and said first remote correspondent; and:- For instance, the '555 Accused Products includes means for connecting to the internet.





I(E): a program stored in said memory for displaying messages received from said first remote correspondent, which received messages do not pertain to the operation of said thermostat system, on said liquid crystal display.:- For instance, the '555 Accused Products includes a weekly forecast program that uses the weather information received from the internet (first remote correspondent). The thermostat also displays weather data on the LCD touchscreen.





57. At least as early as of the date of the filing of the Complaint, Defendant has had actual knowledge of the '555 Patent.

58. Additionally, Defendant contributorily infringes at least one or more claims of the '555 Patent by providing the '555 Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '555 Patent, that are known by Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '555 Accused Products are specially designed to infringe at least one or more claims of the '555 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

59. At least as early as the filing and/or service of this Complaint, Defendant's infringement of the '555 Patent was and continues to be willful and deliberate, entitling Rosen to

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enhanced damages.

60. Additional allegations regarding Defendant's knowledge of the '555 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

61. Defendant's infringement of the '555 Patent is exceptional and entitles Rosen to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

62. Rosen is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '555 Patent.

63. Rosen is entitled to recover from Defendant all damages that Rosen has sustained as a result of Defendant's infringement of the '555 Patent, including, without limitation, a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 6,789,739

64. Rosen incorporates by reference and re-alleges paragraphs 1-63 of this Complaint as if fully set forth herein

65. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '739 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, among other things, the Lennox iComfort Wi-Fi Thermostat, and other substantially similar products ("the '739 Accused Products").

66. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 1 of the '739 Patent in connection with the '739 Accused Products. This description is based on publicly available information. Rosen reserves the right to modify this description, including, for example, on the basis of

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information about the '739 Accused Products that it obtains during discovery

1.: A location response system with an environmental controller located at a single physical location adapted to be an integral part of a system of environmental sensing or control for a local and substantially enclosed space comprising: - For instance, the '739 Accused Product is a thermostat system which can provide information related to the indoor and outdoor environments of a home and display the local weather information based on postal /zip code of an area.



This thermostat supports:

- Wireless bands 802.11b, 802.11g and 802.11n
- Three languages (English, French, Spanish)
- Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating)
- Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner).
- Dual-fuel capable (iComfort®-enabled HP only) with two balance points.
- Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement,
- iHarmony[®] Zoning System (2 4 zones)
- Lennox iComfort[®] Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI[®] to non-communicating indoor unit,
- Humidification measurement and control.
- Dew point adjustment control
- Humiditrol[®] Enhanced Dehumidification Accessory (EDA)
- Multiple-stage HVAC systems
- Equipment maintenance reminders
- Autochangeover mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement
- All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.



1(A) a physical location of the environmental controller stored as location data in storage means in the controller;— For instance, the '739 Accused Products display the local

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weather information based on postal/zip code of an area. The address/zip code is saved by the thermostat to show weather forecast for that area based on that zip code.





1(B): transmitter means connected to the controller adapted to transmit location data to

a remote device physically remote from the controller, so that a location response is induced at the remote device; and;- For instance, the '739 Accused Products uses a Wi-Fi network connection for transmitting location data to a remote weather service device.



1(C): location response is storage of the location data at the remote device and correlation of the physical location to location response data stored at or available to the remote device or created by processing of location data at the remote device, whereafter location response data is transmitted from the remote device to the controller;-For instance, the '738 Accused Products receive local weather information based on its postal /zip code from remote weather service devices and provide the outdoor temperature and weather forecast on the screen display. The remote weather service device provides the weather forecast based on the zip code of an area.



67. At least as early as of the date of the filing of the Complaint, Defendant has had actual knowledge of the '739 Patent.

68. Additionally, Defendant contributorily infringes at least one or more claims of the '739 Patent by providing the '739 Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '739 Patent, that are known by Defendant to be specially made or adapted for use in an infringing manner, and are not staple

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articles with substantial non-infringing uses. The '739 Accused Products are specially designed to infringe at least one or more claims of the '739 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

69. At least as early as the filing and/or service of this Complaint, Defendant's infringement of the '739 Patent was and continues to be willful and deliberate, entitling Rosen to enhanced damages.

70. Additional allegations regarding Defendant's knowledge of the '739 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

71. Defendant's infringement of the '739 Patent is exceptional and entitles Rosen to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

72. Rosen is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '739 Patent.

73. Rosen is entitled to recover from Defendant all damages that Rosen has sustained as a result of Defendant's infringement of the '739 Patent, including, without limitation, a reasonable royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,156,318

74. Rosen incorporates by reference and re-alleges paragraphs 1-73 of this Complaint as if fully set forth herein

75. Defendant has infringed and is infringing, either literally or under the doctrine of

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equivalents, the '318 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, among other things, the Lennox iComfort Wi-Fi Thermostat, and other substantially similar products ("the '318 Accused Product").

76. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 1 of the '318 Patent in connection with the '318 Accused Products. This description is based on publicly available information. Rosen reserves the right to modify this description, including, for example, on the basis of information about the '318 Accused Products that it obtains during discovery

1: A programmable thermostat system for controlling space conditioning equipment comprising: - For instance, the '318 Accused Product is a programmable thermostat which controls the room temperature and humidity level (space conditioning equipment).



This thermostat supports:

- Wireless bands 802.11b, 802.11g and 802.11n
- Three languages (English, French, Spanish)
- Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating)
- Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner).
- Dual-fuel capable (iComfort®-enabled HP only) with two balance points.
- Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir[™] system catalyst service / replacement,
- iHarmony[®] Zoning System (2 4 zones)
- Lennox iComfort[®] Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI[®] to non-communicating indoor unit,
- Humidification measurement and control.
- Dew point adjustment control
- Humiditrol[®] Enhanced Dehumidification Accessory (EDA)
- Multiple-stage HVAC systems
- · Equipment maintenance reminders
- Autochangeover mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement
- All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.

1(A) at least one environmental condition sensor providing an electrical signal indicative of the ambient temperature of a conditioned space in which said environmental condition sensor is situated;— For instance, the '318 Accused Products include temperature sensors (environmental condition sensor). The sensors detect the current space temperature and displays the current indoor temperature (providing an electrical signal indicative of the ambient temperature of a conditioned space in which said environmental condition sensor is situated).

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating op- eration to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40°F. The thermostat will not allow any cooling op- eration to begin until it senses a temperature higher than 40°F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor . Select heating system mode to heat the indoor space to above 40°F.

1(B): a transparent touch pad juxtaposed with a liquid crystal display to constitute a touch screen for interactive interface with a user; - For instance, the '318 Accused Products

include a transparent touchscreen.





1(C): a processor, said processor including;-For instance, the '318 Accused Products

includes a processor.

	HOMEOWNER'S MANUAL	
C2017 Lennox Industries Inc. Dallas, Texas, USA	iComfort Wi-Fi [®] Thermostat Touch-Screen Programmable Communicating Thermostat	
Contist Wi-Fr [®] Web and Mobile 72	CONTROLS 507342-01 5/2017 Supersedes 507342-01 507342-02	
iComfort Wi-Fi [®] Thermostat	General Congratulations on choosing the iComfort Wi-Fi [®] touch-screen, programmable thermostalt The state-of-the-art technology built into this device makes it easy for you to adjust your home's comfort settings while at home or from a remote location (via Internet access)! Help screens are just a touch away. Use this manual as an introduction to a whole new world of home comfort.	
THIS MANUAL MUST BE LEFT WITH THE HOMEOWNER FOR FUTURE REFERENCE		
NOTICE Use this thermostat only as described in this manual.	Do not switch system to cool if the outdoor temperature is below $45^\circ {\rm F}$ (7 $^\circ {\rm C}$). This can damage the cooling system.	
	A WARNING	
	This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.	

1(C)(1): a central processing unit;-For instance, in the '318 Accused Products the

processor, includes a central processing unit.



1(C)(2): a real time clock;- For instance, in the '318 Accused Products the processor, includes a real time clock.



1(C)(3): a memory coupled to said central processing unit for storing program and

data information; and;-For instance, in the '318 Accused Products the application processor includes internal memory.



1(C)(4): an input/output unit coupled between said processor and said touch screen for carrying out information transfer there between, said input/output unit further including;-For instance, the '318 Accused Products include an I/O unit for providing coupling between processor and LCD touch screen interface.

This thermostat supports:

- Wireless bands 802.11b, 802.11g and 802.11n
- Three languages (English, French, Spanish)
- Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating)
- Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner).
- Dual-fuel capable (iComfort®-enabled HP only) with two balance points.
- Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement,
- iHarmony[®] Zoning System (2 4 zones)
- Lennox iComfort[®] Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI[®] to non-communicating indoor unit,
- Humidification measurement and control.
- Dew point adjustment control
- Humiditrol[®] Enhanced Dehumidification Accessory (EDA)
- Multiple-stage HVAC systems
- Equipment maintenance reminders
- Autochangeover mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement
- All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.



- Touch one of the radio buttons to select the type of humidifier (or select Not Installed, if removing humidifier); touch save.
 The previous screen returns, but the current value now shows your
- The previous screen returns, but the current value now shows your selection. Touch the **back** button.
 The "Add or Remove..." screen reappears with your addition shown in
- The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment (touch yes) or if finished, touch the next button to advance to the "Adjust a setting..." screen (see page 15).
 NOTE - Adding humidity regulating non-communicating devices may be a
- 2-step procedure:
 - First the device must be installed and wired. After the humidifier is installed, the setting under the "System" mode "Humidification Control Mode" defaults to "Basic".
- When you scroll to the Dehumidifier device, (Note the current value, e.g. Humiditrol.) Click back to return to the "Add or Remove..." screen.
- 5. The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment (touch yes) or if finished, touch the next button to advance to the "Adjust a setting..." screen.

NOTE - Adding humidity regulating non-communicating devices may be a 2-step procedure:

- First the device must be installed and wired. After the dehumidifier is installed, the setting under the "System" mode "Dehumidification Control Mode" defaults to "Basic".
- Second, set Humiditrol[®] comfort adjust overcooling and the min/max dehumidification setpoints if desired (see page 16).

While iComfort Wi-Fi is designed for use with premium Lennox® equipment, the iComfort Wi-Fi Flex can work with almost any system. So no matter what type of home heating and cooling equipment you have, you can enjoy the innovation of Lennox, and a more comfortable, energy-efficient home.



	iComfort Wi-Fi®	iComfort Wi-Fi [®] Flex
Compatible with Lennox®-brand communicating heating and cooling equipment	•	
Compatible with Lennox-brand non-communicating equipment and most other brands of heating and cooling equipment		•
Touchscreen Operation	•	•
Remote Access	•	•
7-Day Programmable	•	•
One-Touch Away	•	•
5-Day Weather Forecast	•	•
Customizable Reminders	•	•
Automatic Updates	•	•
Dual-Fuel Compatible	•	•
Humidity Control	•	•
Diagnostics and Alerts	Highly Advanced	Limited Reporting
Compatible with zoned systems	Designed for integration with iHarmony® Zoning System	
Exchanges information with heating and cooling equipment	Uses Lennox Precise Comfort® Technology to optimize system performance	
Warranty	5-Year Limited	5-Year Limited
1(C)(4)(a): a sensor input coupled to each said environmental condition sensors for

receiving said electrical signal therefrom; and;-For instance, the '318 Accused Products include

thermostat sensors that sense the current space temperature (receiving said electrical signal).

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating operation to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40°F. The thermostat will not allow any cooling operation to begin until it senses a temperature higher than 40°F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor. Select heating system mode to heat the indoor space to above 40°F.

1(C)(4)(b): a control output coupled to the space conditioning equipment for issuing

control signals thereto; and;-For instance, the '318 Accused Products control the heating and

cooling system (space conditioning equipment).

iComfort Wi-Fi® Thermostat

The communicating iComfort Wi-Fi[®] thermostat is an electronic 7-day programmable touch-screen thermostat with a color display. It also offers enhanced capabilities which include: humidification measurement and control, dew point adjustment control, dehumidification measurement and control, Humiditrol® Enhanced Dehumidification Accessory (EDA) compatibility, and equipment maintenance reminders. The thermostat's autochangeover mode permits control of heating, cooling, humidification, and dehumidification without



1(D): a control program stored in said memory for causing said central processing

unit to communicate through said input/output unit to selectively;-For instance, the '318

Accused Products enable a user to set different system modes which are stored on the thermostat.





1(D)1): establish on said liquid crystal display;-For instance, the '318 Accused Products

include an LCD touchscreen for display purpose..



1(D)(1)(a): a representation of a first virtual button at a first predetermined position

on the liquid crystal display; and;-For instance, the '318 Accused Products LCD screen displays

various icons (a first virtual button).



1(D)(1)(b): a first legend indicative of a first control function of said thermostat, which first control function is for controlling a first space conditioning equipment component, which first control function is active when the first legend is viewable;;-For instance, in the '318 Accused Products, the "system is heating" graphic represents that the thermostat is in Heating mode.





I(D)(2): read the position on the touch pad juxtaposed with said first predetermined position on said liquid crystal display to determine if the representation of said first virtual button has been touched;;-For instance, in the '318 Accused Products, when a user touches the adjustable temperature arrow on the touch screen of the thermostat (first virtual button has been touched), a cooling/heating signal is sent to the equipment.



I(D)(3): if the first virtual button has been touched;-For instance, the '318 Accused Products provide for a user to adjust the temperature by touching the adjustable temperature arrows.

In event of power failure -The thermostat v	vill reboot after po	wer is		WHAT Y	OU CAN DO F	ROM THE HOME SCREEN
WHAT THE HOME SCREEN TELLS YOU.	E screen will retun	n.			The Home Scr access to adj	een provides you with convenient ust heating and cooling setpoints, I as humidity levels in your home
After the thermostat and the system have been fully connected and powered on, the	Heating	Cooling setpoint	System mode	Outdoor temperature	Away Mode	From this screen you may:
displayed. Figure 1 shows a display and describes what the thermetat is thing you	por indoor terf	gerature set	temp	outdoor temperature	-	 adjust temperature settings
When the system mode is set to heat or cool, the system	7	O ° [7	5	80	away Internet weather	 access menus to change the program mode
is operating in <u>manual</u> mode; Indoor When a particular <u>program</u> has been selected, program name will (<i>if feature is</i> bronget)		0 7		forecast te	forecast go	 change how the fan operates
be displayed on the system mode button (e.g., summer program is on).	indoor hum	idity is 41%	use arrows to change temperature	Lo 60 "	reatures	 access the "Features screen" (fig. 3) by touching (2)
OTHER INFORMATION status The system will run until the indoor temperature is within the range specified	System Wi-Fi 9:39	is cooling am May 23, 2012	(Zone 1	》 <u>∧</u>	Fan is set to AUTO	 access and view active service alerts by touching the
by the selected cooling and heating setpoints (70 to 75 degrees in this example). Wi-Fi set butt	up Time, mor on (touch t	nth, day, year to change)	Zoning (if installed and enabled)	Service alerts are	Help screen	 access help screen by touching the "?" icon
The "Wi-Fi" button in the bottom left corner provid to the Wi-Fi setting screen. Wi-Fi with a Δ benea a prior connection to the server has been lost. Wi connection is re-established, the triangle goes aw	les access th it indicates nen the Wi-Fi /ay.	Figure 1. Hor	ne Screen (T	ypical)	Temperatum opera	e adjustment and system mode of ation selection are described fully beginning on Page 15.
Away Mode sets the thermostat for energy-savin while you are gone for an extended period of time system will only come on if the indoor temperatur heating), or if the indoor temperature rises above	g system operatio a. In this mode, the e falls below 62 de 85 degrees (for co	on e egrees (for ooling).		lf th you will b eve	e installer has acti e able to set the de n if no physical hu See Page	vated the indoor humidity feature, asired humidity level in your home midifier or dehumidifier is present. 17 for details on humidity control.
		Page	. 2	iComfort V	Vi-FI [®] 7-Day Progran	mable Communicating Thermostat
		rage				
	Ciccici					



1(D)(3)(a): determining that the thermostat has been directed to control a second space conditioning equipment component;- For instance, the '318 Accused Products allows a user to set different modes by touching the virtual buttons.



1(D)(3)(b): activating a second control function for controlling the second space conditioning equipment component; and;-For instance, the '318 Accused Products include the functionality to activate a second control function for controlling the second space conditioning equipment, such as the Cooling mode.



1(D)(3)(c): displaying on said liquid crystal display a second legend indicative of said second control function of said thermostat, which second control function is for controlling the second space conditioning equipment component, which second control function is active when the second legend is viewable.;-For instance, the '318 Accused Products can display a second legend indicative of a second control function, which in turn controls a second space conditioning equipment component.



77. At least as early as of the date of the filing of the Complaint, Defendant has had actual knowledge of the '318 Patent.

78. Additionally, Defendant contributorily infringes at least one or more claims of the'318 Patent by providing the '318 Accused Products and/or software components thereof, that

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embody a material part of the claimed inventions of the '318 Patent, that are known by Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '318 Accused Products are specially designed to infringe at least one or more claims of the '318 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

79. At least as early as the filing and/or service of this Complaint, Defendant's infringement of the '318 Patent was and continues to be willful and deliberate, entitling Rosen to enhanced damages.

80. Additional allegations regarding Defendant's knowledge of the '318 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

81. Defendant's infringement of the '318 Patent is exceptional and entitles Rosen to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

82. Rosen is in compliance with any applicable marking and/or notice provisions of35 U.S.C. § 287 with respect to the '318 Patent.

83. Rosen is entitled to recover from Defendant all damages that Rosen has sustained as a result of Defendant's infringement of the '318 Patent, including, without limitation, a reasonable royalty.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 7,185,825

84. Rosen incorporates by reference and re-alleges paragraphs 1-83 of this Complaint

45

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as if fully set forth herein.

85. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '825 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, among other things, the Lennox iComfort Wi-Fi Thermostat, and other substantially similar products, ("the '825 Accused Products").

86. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 1 of the '825 Patent in connection with the '825 Accused Products. This description is based on publicly available information. Rosen reserves the right to modify this description, including, for example, on the basis of information about the '825 Accused Products that it obtains during discovery

1: A programmable thermostat for controlling space conditioning equipment comprising: - For instance, the '825 Accused Product is a programmable thermostat which controls the cooling and heating systems (space conditioning equipment).



This thermostat supports:

- Wireless bands 802.11b, 802.11g and 802.11n
- Three languages (English, French, Spanish)
- Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating)
- Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner).
- Dual-fuel capable (iComfort®-enabled HP only) with two balance points.
- Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement,
- iHarmony[®] Zoning System (2 4 zones)
- Lennox iComfort[®] Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI[®] to non-communicating indoor unit,
- Humidification measurement and control.
- Dew point adjustment control
- Humiditrol[®] Enhanced Dehumidification Accessory (EDA)
- Multiple-stage HVAC systems
- Equipment maintenance reminders
- Autochangeover mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement
- All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.

1(A): means coupling suitable power for energizing said thermostat from said space conditioning equipment to said thermostat;— For instance, the '825 Accused Product draws power (power for energizing) from HVAC transformer (said space conditioning equipment).

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1(B): an interactive interface for a user to enter programming information into said thermostat; - For instance, the '825 Accused Products include an LCD touchscreen display. The touchscreen enables a user to configure settings such as set schedules, priorities etc. (to enter programming information).





 Touchscreen
 Image: Comparison of the second secon

1(C): a temperature sensor for providing an electrical signal indicative of the temperature of a conditioned space in which the temperature sensor is situated;-For instance, the '825 Accused Products works with temperature sensors. The temperature sensor detects the

current space temperature and enables a user to see the current indoor temperature.

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating operation to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40°F. The thermostat will not allow any cooling operation to begin until it senses a temperature higher than 40°F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor . Select heating system mode to heat the indoor space to above 40°F.

1(D): a processor, said processor including;-For instance, the '825 Accused Products

includes a processor.

	HOMEOWNER'S MANUAL
ndustries Inc. Texas, USA	iComfort Wi-Fi [®] Thermostat Touch-Screen Programmable Communicating Thermostat
T2: Comfort Wi-Fl® Web and Mobile Apps	CONTROLS 507342-01 5/2017 Supersedes 507342-01
tt Wi-Fr® nostat	General Congratulations on choosing the iComfort Wi-Fi® touch-screen, programmable thermostal! The state-of-the-art technology built into this device makes it easy for you to adjust your home's comfort settings while at home or from a remote location (via Internet access)! Help screens are just a touch away. Use this manual as an introduction to a whole new world of home comfort.
F BE LEFT WITH THE HOMEOWNER	WARNING
NOTICE described in this manual.	Do not switch system to cool if the outdoor temperature is below $45^\circ F$ (7°C). This can damage the cooling system.
	A WARNING
	This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

1(D)(1): a central processing unit;-For instance, in the '825 Accused Products the

processor, includes a central processing unit.

	HOMEOWNER'S MANUAL
ennox Industries Inc. Dallas, Texas, USA	iComfort Wi-Fi [®] Thermostat Touch-Screen Programmable Communicating Thermostat
iComfort Wi-Fi [®] Web and Mobile Apps	CONTROLS 507342-01 5/2017 Supersedes 507342-01 507342-02
	General
rt Wi-Fi® nostat	orgrammable thermostal! The state-of-the-art technology built into this device makes it easy for you to adjust your home's comfort settings while al home or from a remote location (via internet access)! Help screens are just a touch away. Use this manual as an introduction to a whole new world of home comfort.
UAL MUST BE LEFT WITH THE HOMEOWNER FOR FUTURE REFERENCE	WARNING
NOTICE	Do not switch system to cool if the outdoor temperature is below 45°F (7°C). This can damage the cooling system.
t only as described in this manual.	

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1(D)(2): a first memory coupled to said central processing unit for storing program and

data information; and;-For instance, in the '825 Accused Products the application processor includes internal memory.



I(D)(3): an input/output unit including: - For instance, the '825 Accused Products includes input/output. Said I/O receives and sends data between the variety of thermostat sensors, LCD screen, and the space conditioning equipment.

This thermostat supports:

- Wireless bands 802.11b, 802.11g and 802.11n
- Three languages (English, French, Spanish)
- Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating)
- Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner).
- Dual-fuel capable (iComfort®-enabled HP only) with two balance points.
- Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement,
- iHarmony[®] Zoning System (2 4 zones)
- Lennox iComfort[®] Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI[®] to non-communicating indoor unit,
- Humidification measurement and control.
- Dew point adjustment control
- Humiditrol[®] Enhanced Dehumidification Accessory (EDA)
- Multiple-stage HVAC systems
- Equipment maintenance reminders
- Autochangeover mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement
- All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.

Adding Non-Communicating Outdoor Unit and Accessories Figure 13. Registration Screen NOTE - This following information is customer setup instructions and is shown here to allow the installer to help walk the customer through the setup process. OUTDOOR UNIT (AIR CONDITIONER OR HEAT PUMP) To add (or remove) an outdoor unit that is not iComfort®-enabled, y be at the "Add or Remove Non-communicating equipment?" scree Touch the yes button next to Add or Remove Non-communicating equipment?. In the "non-communicating device list" screen, use the arrows to After registering through your iComfort Wi-Fi® thermostat interface, go to the homeowner's computer and locate the email sent from the server NOTE - if the customer has already setup an account, click the "Click highlight Outdoor Unit Type and touch edit. Here" button to access that account. Touch one of the radio buttons to select a 1-or 2-stage air conditioner unit or a 1-or 2-stage heat pump unit; touch save Click on the Register link; the screen (to the left) will appear. Fill in the User Use arrows to highlight any red colored text in the device list (e.g. select Outdoor Unit Capacity; text turns white). Touch edit. Name and Password fields and check the agree to terms and conditions box. Click Create User button. 507341-02 12 Second, if you want another mode, i.e. Precision, Basic Dew Point, or Precision Dew Point, the device requires further configuration (see page 15). Use either the up or down arrows to display the correct size outdoor unit. Touch save to continue. NOTE - If the defaults are correct, you do not have to make any changes, but you must touch save. When all red text is gone, the back button will appear; touch it to return to the "Add or Remove Non-communicating equipment?" ADDING HUMIDITROL® OR AN AUXILIARY DEHUMIDIFIER Before adding a dehumidifier, be sure that: ADDING A HUMIDIFIER the dehumidifier is wired to the furnace or air handler control as shown on the Optional Accessories wiring diagram (see page 42), Before adding a humidifier, be sure that the: the entire system is wired, powered up, and the thermostat has detected the system's installed communicating devices, and you are at the "Add or Remove Non-communicating equipment?" screen. Humidifier is wired to the furnace or air handler control as shown on the Optional Accessories wiring diagram (see page 42), Entire system is wired, powered up, and the thermostat has detected To add (or remove) a dehumidifier, you must be at the "Add or Remove the system's installed communicating devices, and you are at the "Add or Remove Non-communicating equipment?" screen. municating equipment?" so 1. Touch the yes button on this screen. In the "non-communicating device list" screen, use the arrows to highlight **Dehumidifier** and touch **edit**. Note the current value (e.g. Not Installed). To add (or remove) a humidifier: 2. Touch the yes button on this screen. 1. 2. In the "non-communicating device list" screen, use the arrows to highlight Humidifier (note the current value, Not Installed) and touch 3. Touch one of the radio buttons to select the type of dehumidifier (or select Not Installed, if removing dehumidifier); touch save. edit When you scroll to the Dehumidifier device, (Note the current value, e.g. Humiditrol.) Click **back** to return to the "Add or Remove..." screen. Touch one of the radio buttons to select the type of humidifier (or select **Not Installed**, if removing humidifier); touch **save**. 4. 3. The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment (louch **yes**) or if finished, touch the **next** button to advance to the "Adjust a setting..." screen. The previous screen returns, but the current value now shows your 5. selection. Touch the back button. The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment 5 (touch yes) or if finished, touch the next button to advance to the "Adjust a setting..." screen (see page 15).

NOTE - Adding humidity regulating non-communicating devices may be a 2-step procedure: NOTE - Adding humidity regulating non-communicating devices may be a

- First the device must be installed and wired. After the dehumidifier is installed, the setting under the "System" mode "Dehumidification Control Mode" defaults to "Basic".
 - Second, set Humiditrol[®] comfort adjust overcooling and the min/max dehumidification setpoints if desired (see page 16).

While iComfort Wi-Fi is designed for use with premium Lennox® equipment, the iComfort Wi-Fi Flex can work with almost any system. So no matter what type of home heating and cooling equipment you have, you can enjoy the innovation of Lennox, and a more comfortable, energy-efficient home.

First the device must be installed and wired. After the humidifier is installed, the setting under the "System" mode "Humidification Control Mode" defaults to "Basic".

2-5

en procedure



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	iComfort Wi-Fi®	iComfort Wi-Fi [®] Flex
Compatible with Lennox®-brand communicating heating and cooling equipment	•	
Compatible with Lennox-brand non-communicating equipment and most other brands of heating and cooling equipment		•
Touchscreen Operation	•	•
Remote Access	•	•
7-Day Programmable	•	•
One-Touch Away	•	•
5-Day Weather Forecast	•	•
Customizable Reminders	•	•
Automatic Updates	•	•
Dual-Fuel Compatible	•	•
Humidity Control	•	•
Diagnostics and Alerts	Highly Advanced	Limited Reporting
Compatible with zoned systems	Designed for integration with iHarmony® Zoning System	
Exchanges information with heating and cooling equipment	Uses Lennox Precise Comfort® Technology to optimize system performance	
Warranty	5-Year Limited	5-Year Limited

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I(D)(3)(a): a sensor input coupled to said temperature sensor for receiving said electrical signal therefrom; and; - For instance, the '825 Accused Products includes a thermostat sensor which senses the current space temperature (receiving said electrical signal).

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating operation to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40°F. The thermostat will not allow any cooling op- eration to begin until it senses a temperature higher than 40°F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor . Select heating system mode to heat the indoor space to above 40°F.

1(C)(4)(b): a control output coupled to the space conditioning equipment for issuing

control signals thereto; and; - For instance, the '825 Accused Products control the heating and

cooling system (space conditioning equipment).

iComfort Wi-Fi[®] Thermostat

The communicating iComfort Wi-Fi[®] thermostat is an electronic 7-day programmable touch-screen thermostat with a color display. It also offers enhanced capabilities which include: humidification measurement and control, dew point adjustment control, dehumidification measurement and control, Humiditrol® Enhanced Dehumidification Accessory (EDA) compatibility, and equipment maintenance reminders. The thermostat's autochangeover mode permits control of heating, cooling, humidification, and dehumidification without



1(D)(4): a real time clock;- For instance, in the '825 Accused Products the processor,

includes a real time clock.



1(D)(5): a non-volatile random access memory; and; - For instance, in the '825 Accused

Products the processor includes a non-volatile random access memory.



1(D)(6): a control program stored in said first memory; - For instance, the memory of

'825 Accused Products stores all the settings and other information in the memory.





Use the arrows to select **Time and Date**; touch **edit** to proceed to the "Set current time and date" screen.

When "Time and Date" screen appears, enter the correct date as follows:

- Use the left and right arrows to change the month and year.
- Touch a day of the month to select it.
- Touch on the hour or minute; up down arrows appear to allow change.
- Touch the am/pm field to toggle it between am and pm.
- When the correct date and time is set, touch save to save settings and return to previous settings screen.

Touch next to continue to next screen.

1(D)(a): said real time clock to periodically read its current time and date information

into said non-volatile memory; and; - For instance, the'825 Accused Products include a real

time clock which periodically reads the current time and date into the non volatile memory.

Adjusting System Setting

SET TIME AND DATE

Use the arrows to select **Time and Date**; touch **edit** to proceed to the "Set current time and date" screen.

When "Time and Date" screen appears, enter the correct date as follows:

- Use the left and right arrows to change the month and year.
- Touch a day of the month to select it.
- Touch on the hour or minute; up down arrows appear to allow change.
- Touch the am/pm field to toggle it between am and pm.
- When the correct date and time is set, touch save to save settings and return to previous settings screen.

Touch next to continue to next screen.

This is a 24VAC C than 30VAC.	WARNING Class 2 thermostat. Do not install on voltages higher
Do not switch syst (7°C). This can da	tem to cool if the outdoor temperature is below 45°F amage the cooling system.
iComfort Wi-Fi [®]	Thermostat - Technical Description and
Features	
Features The 24VAC iComfo color display touchs system parameters when electrical pow	rt Wi-Fi [®] thermostat is an electronic communicating screen and 7-day programmable thermostat. It stores and settings in non-volatile memory (i.e., it retains data er fails or is turned off).

1(D)(b): upon restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock.; - For instance, the'825 Accused Products upon restart after a loss and subsequent return of power will read the time and date from the non volatile memory.

Adjusting System Setting

SET TIME AND DATE

Use the arrows to select **Time and Date**; touch **edit** to proceed to the "Set current time and date" screen.

When "Time and Date" screen appears, enter the correct date as follows:

- Use the left and right arrows to change the month and year.
- Touch a day of the month to select it.
- Touch on the hour or minute; up down arrows appear to allow change.
- Touch the am/pm field to toggle it between am and pm.
- When the correct date and time is set, touch save to save settings and return to previous settings screen.

Touch **next** to continue to next screen.

WARNING
This is a 24VAC Class 2 thermostat. Do not install on voltages higher than 30VAC.
Do not switch system to cool if the outdoor temperature is below $45^{\circ}F$ (7°C). This can damage the cooling system.
iComfort Wi-Fi [®] Thermostat - Technical Description and Features
The 24VAC iComfort Wi-Fi [®] thermostat is an electronic communicating, color display touchscreen and 7-day programmable thermostat. It stores system parameters and settings in non-volatile memory (i.e., it retains data when electrical power fails or is turned off).
The iComfort Wi-Fi [®] thermostat can connect to online services via the Internet through the homeowner's Wi-Fi access point. After online registration is completed, the system may then be accessed by the homeowner from anywhere using a remote Internet connection via computer or personal communicating device.
Refer to page 37 for information on making connections to the thermostat.

87. At least as early as of the date of the filing of the Complaint, Defendant has had actual knowledge of the '825 Patent.

88. Additionally, Defendant contributorily infringes at least one or more claims of the '825 Patent by providing the '825 Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '825 Patent, that are known by Defendant to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '825 Accused Products are specially designed

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to infringe at least one or more claims of the '825 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

89. At least as early as the filing and/or service of this Complaint, Defendant's infringement of the '825 Patent was and continues to be willful and deliberate, entitling Rosen to enhanced damages.

90. Additional allegations regarding Defendant's knowledge of the '825 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

91. Defendant's infringement of the '825 Patent is exceptional and entitles Rosen to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

92. Rosen is in compliance with any applicable marking and/or notice provisions of35 U.S.C. § 287 with respect to the '825 Patent.

93. Rosen is entitled to recover from Defendant all damages that Rosen has sustained as a result of Defendant's infringement of the '825 Patent, including, without limitation, a reasonable royalty.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 7,232,075

94. Rosen incorporates by reference and re-alleges paragraphs 1-93 of this Complaint as if fully set forth herein

95. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '075 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by

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making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, among other things, the Lennox iComfort Wi-Fi Thermostat, and other substantially similar products ("the '075 Accused Product").

96. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of Claim 1 of the '075 Patent in connection with the Accused Products. This description is based on publicly available information. Rosen reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery

1): A thermostat system for controlling space conditioning equipment comprising: - For instance, the '075 Accused Product is a thermostat system for controlling space conditioning equipment such as heater, boiler, humidifiers, heating system or cooling system.



This thermostat supports: Wireless bands 802.11b, 802.11g and 802.11n Three languages (English, French, Spanish) . Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating) Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner). Dual-fuel capable (iComfort®-enabled HP only) with two balance points. Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement, iHarmony[®] Zoning System (2 - 4 zones) Lennox iComfort® Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI® to non-communicating indoor unit, Humidification measurement and control. Dew point adjustment control Humiditrol® Enhanced Dehumidification Accessory (EDA) Multiple-stage HVAC systems Equipment maintenance reminders Autochangeover mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement All Lennox branded communicating outdoor units contain a built-in

1(A) a temperature sensor for providing an electrical signal indicative of the temperature of a conditioned space in which the temperature sensor is situated; - For instance, the '075 Accused Products come with a temperature sensor, which is used to detect the temperature of a room. The sensor senses the temperature and displays it on the thermostat screen. The temperature sensor is situated within the conditioned space.

outdoor temperature sensor.

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating operation to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40°F. The thermostat will not allow any cooling operation to begin until it senses a temperature higher than 40°F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor. Select heating system mode to heat the indoor space to above 40°F.

1(B): a transparent touch pad juxtaposed over a liquid crystal display to constitute a touch screen for interactive interface with a user and for selectively displaying alphanumeric and graphic devices; - For instance, the '075 Accused Products come with an LCD (liquid crystal display) having a transparent touch pad which is an interactive interface, displaying graphical icons and text to represent temperature, schedule a program or set priority for rooms.



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(X)

1(C): a processor, said processor including;-For instance, the '075 Accused Products

include a processor.



1(C)(1): a central processing unit;—For instance, the '075 Accused Products include a

central processing unit.

	HOMEOWNER'S MANUAL
inconstruction inconstruction in the second	iComfort Wi-Fi [®] Thermostat Touch-Screen Programmable Communicating Thermostat
72 Comfort Wi-Fi® Web and Mobile Apps	CONTROLS 507342-01 5/2017 5/2017 507342-01 507342-02
fort Wi-Fi®	General Congratulations on choosing the iComfort WI-FI® touch-screen, programmable thermostal! The state-of-the-art technology built into this device makes it easy for you to adjust your home's comfort settings while at home or from a remote location (via Internet access)! Help screens are just a touch away. Use this manual as an introduction to a whole new world of home comfort.
FOR FUTURE REFERENCE	A WARNING
NOST BE LEFT WITH THE HOMEOWNER FOR FUTURE REFERENCE NOTICE only as described in this manual.	Do not switch system to cool if the outdoor temperature is below 45°F (7°C). This can damage the cooling system.
FOR FUTURE REFERENCE NOTICE tonly as described in this manual.	WARNING Do not switch system to cool if the outdoor temperature is below 45°F (7°C). This can damage the cooling system.

1(C)(2): a real time clock;—For instance, the '075 Accused Products include a processor having a real time clock.

Adjusting System Setting

SET TIME AND DATE

Use the arrows to select **Time and Date**; touch **edit** to proceed to the "Set current time and date" screen.

When "Time and Date" screen appears, enter the correct date as follows:

- Use the left and right arrows to change the month and year.
- Touch a day of the month to select it.
- Touch on the hour or minute; up down arrows appear to allow change.
- Touch the am/pm field to toggle it between am and pm.
- When the correct date and time is set, touch save to save settings and return to previous settings screen.

Touch next to continue to next screen.

Image: Constraint of the system is a 24VAC Class 2 thermostat. Do not install on voltages higher than 30VAC. Do not switch system to cool if the outdoor temperature is below 45°F (7°C). This can damage the cooling system. iComfort Wi-Fi® Thermostat - Technical Description and Features The 24VAC iComfort Wi-Fi® thermostat is an electronic communicating, color display touchscreen and 7-day programmable thermostat. It stores system parameters and settings in non-volatile memory (i.e., it retains data when electrical power fails or is turned off). The iComfort Wi-Fi® thermostat can connect to online services via the Internet through the homeowner's Wi-Fi access point. After online

registration is completed, the system may then be accessed by the homeowner from anywhere using a remote Internet connection via computer or personal communicating device.

Refer to page 37 for information on making connections to the thermostat.



1(C)(3): a memory coupled to said central processing unit for storing program and data

information; and;- For instance, the '075 Accused Products include a memory coupled to the

CPU.



I(C)(4): an input/output unit including - For instance, the '075 Accused Products include a processor in the thermostat having I/O modules. The I/O modules are coupled with the

processor.

This	thermostat supports:
•	Wireless bands 802.11b, 802.11g and 802.11n
•	Three languages (English, French, Spanish)
•	Air conditioning or heat pump units with up to four stages of heat / two stages of compressor operation (2 stages of heat pump heating, 2 stages of auxiliary back-up heating and 2 stages of emergency heating)
•	Variable-capacity / multiple-stage heat / cool and universal compatibility (gas/electric/heat pump/air conditioner).
•	Dual-fuel capable (iComfort®-enabled HP only) with two balance points.
•	Indoor air quality with time-based notification of consumables including media filters, UVC bulbs, humidifier pads and PureAir™ system catalyst service / replacement,
•	iHarmony [®] Zoning System (2 - 4 zones)
•	Lennox iComfort [®] Equipment Interface Module (Catalog number 10T50) (provides iComfort Wi-FI [®] to non-communicating indoor unit,
•	Humidification measurement and control.
•	Dew point adjustment control
•	Humiditrol [®] Enhanced Dehumidification Accessory (EDA)
•	Multiple-stage HVAC systems
•	Equipment maintenance reminders
•	Autochangeover mode Permits control of heating, cooling, humidification, and dehumidification without user involvement
•	All Lennox branded communicating outdoor units contain a built-in outdoor temperature sensor.

		Adding Non-Communicating Outdoor Unit and Accessories
NOT is si the Afte hom NOT Hen Click	Figure 13. Registration Screen <i>ITE</i> - This following information is customer setup instructions and hown here to allow the installer to help walk the customer through setup process. rregistering through your iComfortWi-Fi [®] thermostat interface, go to the recovers's computer and locate the email sent from the server. <i>ITE</i> - if the customer has already setup an account, click the "Click e" button to access that account. k on the Register link; the screen (to the left) will appear. Fill in the User ne and Password fields and check the agree to terms and conditions box. k Create User button.	 OUTDOOR UNIT (AIR CONDITIONER OR HEAT PUMP) To add (or remove) an outdoor unit that is not iComfort®-enabled, you must be at the "Add or Remove Non-communicating equipment?" screen. 1. Touch the yes button next to Add or Remove Non-communicating equipment?. 2. In the "non-communicating device list" screen, use the arrows to highlight Outdoor Unit Type and touch edit. 3. Touch one of the radio buttons to select a 1-or 2-stage air conditioner unit or a 1-or 2-stage heat pump unit; touch save. 4. Use arrows to highlight any red colored text in the device list (e.g. select Outdoor Unit Capacity; text turns white). Touch edit.
507	/341-02	12
5. NO	Use either the up or down arrows to display the correct size outdoor unit. Touch save to continue. TE - If the defaults are correct, you do not have to make any changes, but	 Second, if you want another mode, i.e. Precision, Basic Dew Point or Precision Dew Point, the device requires further configuration (se page 15).
you touc	must touch save . When all red text is gone, the back button will appear, h it to return to the "Add or Remove Non-communicating equipment?"	ADDING HUMIDITROL [®] OR AN AUXILIARY DEHUMIDIFIER Before adding a dehumidifier, be sure that:
ADI Befr	tern. DING A HUMIDIFIER ore adding a humidifier, be sure that the:	 the dehumidifier is wired to the furnace or air handler control as show on the Optional Accessories wiring diagram (see page 42),
•	Humidifier is wired to the furnace or air handler control as shown on the Optional Accessories wiring diagram (see page 42),	 the entire system is wired, powered up, and the thermostat ha detected the system's installed communicating devices, and you ar at the "Add or Remove Non-communicating equipment?" screen.
•	Entire system is wired, powered up, and the thermostat has detected the system's installed communicating devices, and you are at the "Add or Remove Non-communicating equipment?" screen.	To add (or remove) a dehumidifier, you must be at the "Add or Remove Non-communicating equipment?" screen.
Too	dd (or romouo) a humidifior	 Touch the yes button on this screen.
1.	Touch the ves button on this screen.	 In the "non-communicating device list" screen, use the arrows to highlight Dehumidifier and touch edit. Note the current value (e.g. Note)
2.	In the "non-communicating device list" screen, use the arrows to	Installed).
	highlight Humidifier (note the current value, Not Installed) and touch edit.	 Touch one of the radio buttons to select the type of dehumidifier (a select Not Installed, if removing dehumidifier); touch save.
3.	Touch one of the radio buttons to select the type of humidifier (or select Not Installed , if removing humidifier); touch save .	 When you scroll to the Dehumidifier device, (Note the current value e.g. Humiditrol.) Click back to return to the "Add or Remove" screen
4.	The previous screen returns, but the current value now shows your selection. Touch the back button.	 The "Add or Remove" screen reappears with your addition shown in the system devices list. At this point, you may add more equipmer (touch yes) or if finished, touch the next button to advance to the
5.	the system devices list. At this point, you may add more equipment	"Adjust a setting" screen.

•

The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment (touch yes) or if finished, touch the next button to advance to the "Adjust a settling..." screen (see page 15). 5.

NOTE - Adding humidity regulating non-communicating devices may be a 2-step procedure:

- First the device must be installed and wired. After the humidifier is installed, the setting under the "System" mode "Humidification Control Mode" defaults to "Basic".
- First the device must be installed and wired. After the dehumidifier is installed, the setting under the "System" mode "Dehumidification Control Mode" defaults to "Basic". Second, set Humiditrol[®] comfort adjust overcooling and the min/max dehumidification setpoints if desired (see page 16).

NOTE - Adding humidity regulating non-communicating devices may be a 2-step procedure:

While iComfort Wi-Fi is designed for use with premium Lennox[®] equipment, the iComfort Wi-Fi Flex can work with almost any system. So no matter what type of home heating and cooling equipment you have, you can enjoy the innovation of Lennox, and a more comfortable, energy-efficient home.



	iComfort Wi-Fi®	iComfort Wi-Fi [®] Flex
Compatible with Lennox®-brand communicating heating and cooling equipment	•	
Compatible with Lennox-brand non-communicating equipment and most other brands of heating and cooling equipment		•
Touchscreen Operation	•	•
Remote Access	•	•
7-Day Programmable	•	•
One-Touch Away	•	•
5-Day Weather Forecast	•	•
Customizable Reminders	•	•
Automatic Updates	•	•
Dual-Fuel Compatible	•	•
Humidity Control	•	•
Diagnostics and Alerts	Highly Advanced	Limited Reporting
Compatible with zoned systems	Designed for integration with iHarmony® Zoning System	
Exchanges information with heating and cooling equipment	Uses Lennox Precise Comfort® Technology to optimize system performance	
Warranty	5-Year Limited	5-Year Limited

1(C)(4)(a): a sensor input coupled to said temperature sensor for receiving said electrical signal therefrom- For instance, the '075 Accused Products include sensor inputs that

receive a signal indicative of the temperature to the processor of thermostat.

29	Critical	(Thermostat) The thermostat is reading an indoor temperature that is higher than 99°F. The thermostat will not allow any heating operation to begin until it senses a temperature lower than 99°F.	Indoor temperature rose above 99°F during a heating or cooling demand. Heating opera- tion is not allowed. Check to ensure that Heating Equipment is not stuck ON (reversing valve, etc.). Check the accuracy of the thermostat temperature sensor. Select cooling system mode to cool the indoor space.
30	Moderate	(Thermostat) The thermostat is reading an indoor temperature that is lower than 40° F. The thermostat will not allow any cooling operation to begin until it senses a temperature higher than 40° F.	Indoor Temp fell below 40°F. Cooling operation is not allowed. Check to ensure that cool- ing equipment is not stuck ON. Check accuracy of the thermostat temperature sensor. Select heating system mode to heat the indoor space to above 40°F.

1(C)(4)(b): a control output coupled to the space conditioning equipment for issuing control signals thereto; and- For instance, the '075 Accused Products connect to the heating or cooling systems based on heating or cooling signals generating from the output present in the thermostat.

iComfort Wi-Fi[®] Thermostat

The communicating iComfort Wi-Fi[®] thermostat is an electronic 7-day programmable touch-screen thermostat with a color display. It also offers enhanced capabilities which include: humidification measurement and control, dew point adjustment control, dehumidification measurement and control, Humiditrol[®] Enhanced Dehumidification Accessory (EDA) compatibility, and equipment maintenance reminders. The thermostat's autochangeover mode permits control of heating, cooling, humidification, and dehumidification without

ucor involvement



1(C)(4)(c): a communications interface adapted to establish communications between

said processor and a first remote correspondent which is a source of functional programming;

and- For instance, the '075 Accused Products include Wi-Fi which connects the thermostat to a

remote correspondent. The remote correspondent which is a source of functional programming

can be a fan, humidifiers, or any other space conditioning equipment that is to be controlled.

Adding Non-Communicating Outdoor Unit and Accessories Figure 13. Registration Screen OUTDOOR UNIT (AIR CONDITIONER OR HEAT PUMP) NOTE - This following information is customer setup instructions and is shown here to allow the installer to help walk the customer through To add (or remove) an outdoor unit that is not iComfort®-enabled, you must be at the "Add or Remove Non-communicating equipment?" screen. the setup process. 1. Touch the yes button next to Add or Remove After registering through your iComfort Wi-Fi® thermostat interface, go to the Non-communicating equipment? homeowner's computer and locate the email sent from the server In the "non-communicating device list" screen, use the arrows to highlight Outdoor Unit Type and touch edit. 2. NOTE - if the customer has already setup an account, click the "Click Here" button to access that account. 3. Touch one of the radio buttons to select a 1-or 2-stage conditioner unit or a 1-or 2-stage heat pump unit; touch save Click on the Register link: the screen (to the left) will appear. Fill in the User Name and Password fields and check the agree to terms and conditions box. Click **Create User** button. Use arrows to highlight any red colored text in the device list (e.g. select Outdoor Unit Capacity; text turns white). Touch edit. 507341-02 12 Second, if you want another mode, i.e. Precision, Basic Dew Point, 5. Use either the up or down arrows to display the correct size outdoor unit. Touch save to continue or Precision Dew Point, the device requires further configuration (see page 15). NOTE - If the defaults are correct, you do not have to make any changes, but you must touch save. When all red text is gone, the back button will appear; touch it to return to the "Add or Remove Non-communicating equipment?" ADDING HUMIDITROL® OR AN AUXILIARY DEHUMIDIFIER Before adding a dehumidifier, be sure that: screen the dehumidifier is wired to the furnace or air handler control as shown ADDING A HUMIDIFIER on the Optional Accessories wiring diagram (see page 42), Before adding a humidifier, be sure that the: the entire system is wired, powered up, and the thermostat has Humidifier is wired to the furnace or air handler control as shown on the detected the system's installed communicating devices, and you are at the "Add or Remove Non-communicating equipment?" screen. Optional Accessories wiring diagram (see page 42), Entire system is wired, powered up, and the thermostat has detected To add (or remove) a dehumidifier, you must be at the "Add or Remove the system's installed communicating devices, and you are at the "Add or Remove Non-communicating equipment?" screen. Non-communicating equipment?" screen. 1. Touch the yes button on this screen. To add (or remove) a humidifier: In the "non-communicating device list" screen, use the arrows to highlight Dehumidifier and touch edit. Note the current value (e.g. Not 2. Touch the yes button on this screen. 1. Installed). 2 In the "non-communicating device list" screen, use the arrows to highlight Humidifier (note the current value, Not Installed) and touch 3 Touch one of the radio buttons to select the type of dehumidifier (or select Not Installed, if removing dehumidifier); touch save. When you scroll to the Dehumidifier device, (Note the current value, e.g. Humiditrol.) Click **back** to return to the "Add or Remove..." screen. 3. Touch one of the radio buttons to select the type of humidifier (or select Not Installed, if removing humidifier); touch save. 4. The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment 5. The previous screen returns, but the current value now shows your 4 election. Touch the back button. (touch yes) or if finished, touch the next button to advance to the The "Add or Remove..." screen reappears with your addition shown in the system devices list. At this point, you may add more equipment 5. "Adjust a setting ... " screen. NOTE - Adding humidity regulating non-communicating devices may be a (touch yes) or if finished, touch the next button to advance to the "Adjust a setting..." screen (see page 15). 2-step procedure: NOTE - Adding humidity regulating non-communicating devices may be a

2-step procedure:

- First the device must be installed and wired. After the humidifier is installed, the setting under the "System" mode "Humidification Control Mode" defaults to "Basic".
- First the device must be installed and wired. After the dehumidifier is installed, the setting under the "System" mode "Dehumidification Control Mode" defaults to "Basic".
- Second, set Humiditrol® comfort adjust overcooling and the min/max dehumidification setpoints if desired (see page 16)

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1(D): a control program stored in said memory for causing said central processing unit

to selectively:- For instance, the '075 Accused Products have programs stored in memory that cause the CPU to perform certain tasks, such as choosing system modes or scheduling a day.




1(D)(1): establish on said liquid crystal display one or more representations of buttons at a separated and predetermined positions; - For instance, the '075 Accused Products have an LCD (liquid crystal display) having a transparent touch pad, which is an interactive interface displaying graphical icons and text to represent temperature, scheduling of programs, or settings for rooms.



1(D)(2): read the position on the touch pad juxtaposed with said predetermined

position to determine if said representation of a button has been touched; and - For instance, in the '075 Accused Products, when Cool mode has been selected, the "Cool" button is displayed at a position on the touch screen.

Adjusting Room Temperature, Away Mode, Clock and Weather	
Adjust temperature when programming is OFF — When the programming is OFF; the system mode button (shown in figure 21, labeled heat or cool) indicates a manual mode (no mention of "program"). In this mode, touch one of the two set temp buttons to change the temperature setting. The up/down arrows appear, allowing you to adjust the "cool to" (or "heat to") values to the desired temperature setting. This setting will remain until you decide to change it again. (The inset shows an alternate configuration of button layout in non-program mode.)	system is currently using energy saving AWAY settings indoor temperature set temp 788° (82 cooldo 60 text to
<image/> <caption><caption><text></text></caption></caption>	<image/> <section-header><figure><figure><figure><image/><image/></figure></figure></figure></section-header>



1(D)(3): if said a representation of a button has been touched, processing this information to establish a condition incorporated into the operation of said thermostat system; – For example, when the representation of a button has been touched, processing this



information, the operation of the thermostat responds accordingly.

I(D)(4): establish communications between said processor and a first remote correspondent from which is transferred to said memory one or more modules of functional programming; and; - For instance, the '075 Accused Products include a processor, which communicates with a first remote correspondent (e.g. heater, cooler, humidifier and fan), which is transferred to memory.





I(D)(5): operate said transferred functional programming to change or add to representations on the touch screen, where said changes or additions of representation on the touch screen were not available to the control program before their transfer to the memory; -For instance, in the '075 Accused Products, a user may read the position of the button on the touch screen to see if it has been pressed (e.g., when placed into Cool mode, the predetermined position of the Cool button is represented on the touch pad). A communication interface is also included on the touchscreen, allowing the thermostat processor to connect with heaters, humidifiers, air conditioners, or fans (the remote correspondent devices).

1(E): means coupling said communications interface and said first remote correspondent - For instance, the '075 Accused Products connect to a remote correspondent such



as fans, humidifiers, or any other space conditioning equipment.



97. At least as early as of the date of the filing of the Complaint, Defendant has had actual knowledge of the '075 Patent.

98. Additionally, Defendant contributorily infringes at least one or more claims of the '075 Patent by providing the '075 Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '075 Patent, that are known by Defendant to be specially made or adapted for use in an infringing manner, and are not staple

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articles with substantial non-infringing uses. The '075 Accused Products are specially designed to infringe at least one or more claims of the '075 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

99. At least as early as the filing and/or service of this Complaint, Defendant's infringement of the '075 Patent was and continues to be willful and deliberate, entitling Rosen to enhanced damages.

100. Additional allegations regarding Defendant's knowledge of the '075 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

101. Defendant's infringement of the '075 Patent is exceptional and entitles Rosen to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

102. Rosen is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '075 Patent.

103. Rosen is entitled to recover from Defendant all damages that Rosen has sustained as a result of Defendant's infringement of the '075 Patent, including, without limitation, a reasonable royalty.

PRAYER FOR RELIEF

WHEREFORE, Rosen respectfully requests:

A. That Judgment be entered that Defendant has infringed at least one or more claims of the Asserted Patents, directly and/or indirectly, literally and/or under

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the doctrine of equivalents;

B. An award of damages sufficient to compensate Rosen for Defendant's infringement under 35 U.S.C. § 284, including an enhancement of damages on account of Defendant's willful infringement;

C. That the case be found exceptional under 35 U.S.C. § 285 and that Rosen be awarded its reasonable attorneys' fees;

D. Costs and expenses in this action;

E. An award of prejudgment and post-judgment interest; and

F. Such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Rosen respectfully demands a trial by jury on all issues triable by jury.

Respectfully submitted,

Dated: June 7, 2022

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CERTIFICATE OF SERVICE

I hereby certify that on the 7th day of June, 2022, I electronically filed the foregoing document with the clerk of the court for the U.S. District Court for the Northern District of Texas, Dallas Division using the electronic case filing system of the court. The electronic case filing system sent a "Notice of Electronic Filing" to the attorneys of record who have consented in writing to accept this Notice as service of this document by electronic means.

<u>/s/ Stevenson Moore</u> Stevenson Moore