LENNOX®

iComfort® S30 (12U67)
User Guide

Color Touchscreen Programmable Wi-Fi
Communicating Thermostat

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FEATURES

This iComfort® S30 is an electronic communicating, color display touchscreen and 7-day programmable interface which communicates directly with a Smart Hub. The Smart Hub controller stores system parameters and settings in non-volatile memory (i.e., retains data when electrical power fails or is turned off). 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. This home environmental control system also supports:

- Wireless bands 802.11b, 802.11g and 802.11n,
- Lennox wireless point-to-point connection to other iComfort® S30 Smart Hubs in home and other mobile devices running Lennox applications.
- Three languages are supported (English, Français and Español),
- 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, 2 stages of emergency heating),
- Variable - capacity / multiple - stage heat/cool, universal compatibility (gas/electric/heat pump/air conditioner)
- Dual-fuel capable (iComfort® heat pump 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® S30 to non-communicating indoor and outdoor units.
- Humidification measurement and control,
- Dew point adjustment control,
- Humiditrol® Enhanced Dehumidification Accessory (EDA),
- Equipment maintenance reminders,
- Heat/Cool mode -- Permits control of heating, cooling, humidification, and dehumidification without user involvement,
- All Lennox branded iComfort® outdoor units have a outdoor temperature sensor factory installed,
- Enhance defrost control options for Lennox communicating heat pumps using Intellifrost™ Adaptive Defrost Control, part number 103369-04 or later.
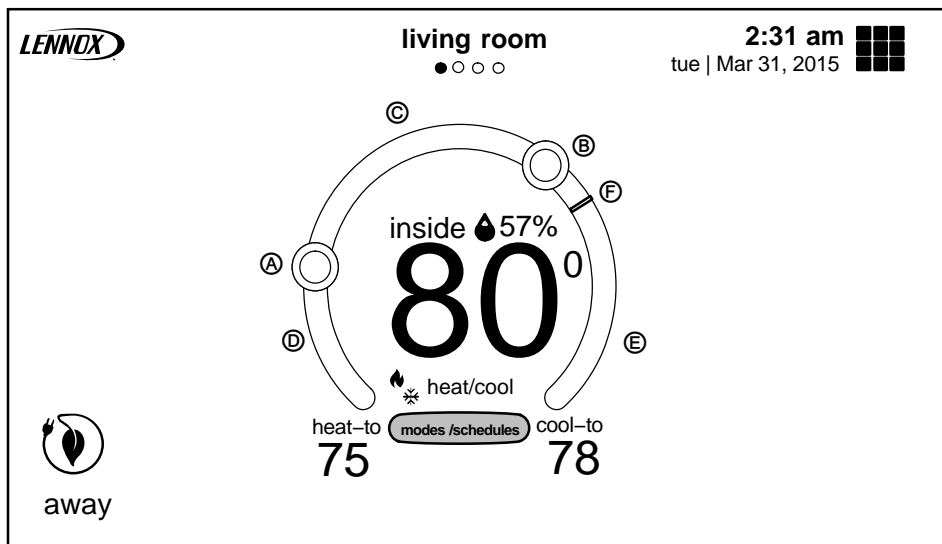
Figure 1. Temperature Dial Feature

A. This is the maximum **heat position indicator** on the dial. This object will be red/white in color. Selecting this object will bring up temperature adjustment dial for the heat-to setting adjustment.

B. This is the maximum **cool position indicator** on the Dial. This object will be blue/white in color. Selecting this object will bring up temperature adjustment dial for the cool-to setting adjustment.

C. This is the location where no system demand will be active. In figure 1, the example would be any temperature between 73°F and 77°F. For example in figure 1, the system would be off between A and B locations.

NOTE - By default the system is configured not to allow the heating and cooling settings to be any closer than 3°F when the system is running in heat / cool mode (auto-changeover).

D. When there is an active call for heating, this area of the dial will fade back and forth from white to red.

E. When there is an active call for cooling, this area of the dial will fade back and forth from white to blue.

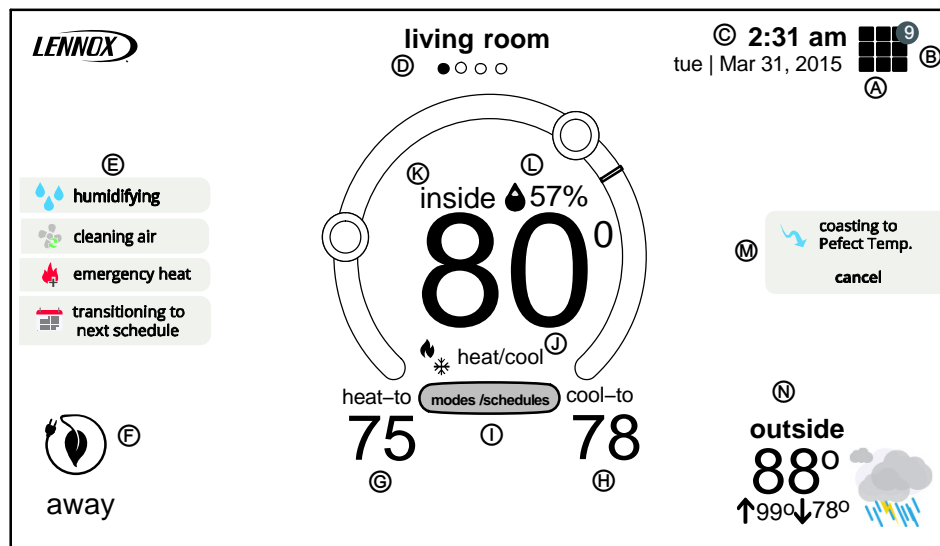**F.** The yellow line indicates the actual room temperature on the temperature dial indicator.

Figure 2. Screen Elements

A. The square boxes icon which will be referred to in this instruction as the **MENU** is for accessing notifications and settings. See performance reports (not available until version 3.01 release), notifications on page x, and settings on page x.

B. A circle with a number indicates new notifications. Press on the **menu > notifications** to display active notifications. Types of notifications included critical, warnings reminders, info and all. This information can also be sorted by last 24 hours, last 30 days, last 12 months and all.

C. This is the current time, day of the week and date (month/day/year). This information can be adjusted from the **menu > settings > general > date & time** screen.

D. This will be displayed when the system is configured for zoning. The iHarmony system can support up to four zones. By default the zones are labeled Zone 1, Zone 2, Zone 3 and Zone 4. There are also four dots underneath the name that indicates which zone is being displayed on the HOME screen. The zone being displayed will be a solid white circle. See figure 3 on how to rename each zone.
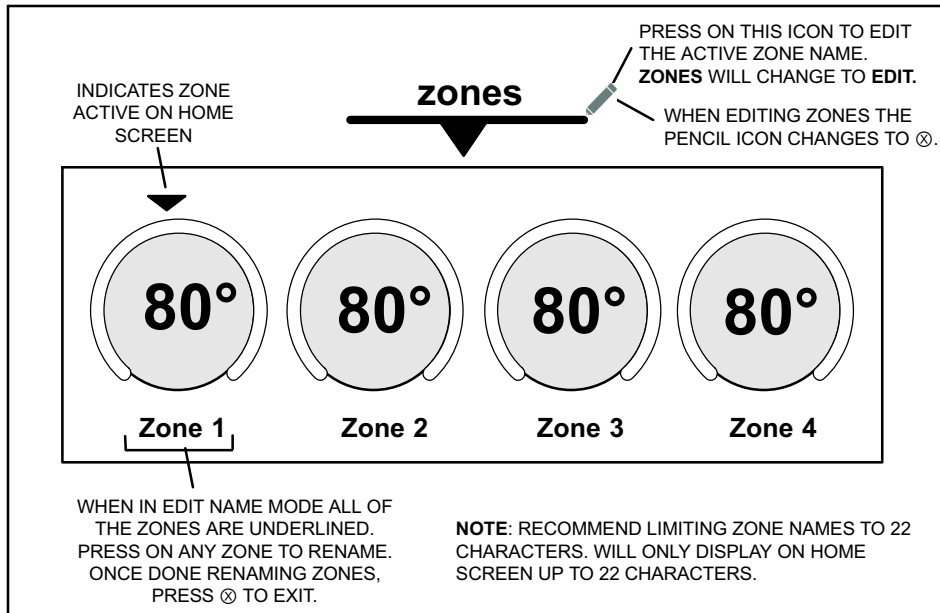
INDICATES ZONE ACTIVE ON HOME SCREEN

PRESS ON THIS ICON TO EDIT THE ACTIVE ZONE NAME. **ZONES** WILL CHANGE TO **EDIT**.

WHEN EDITING ZONES THE PENCIL ICON CHANGES TO ⊗.

zones

80°   80°   80°   80°

Zone 1   Zone 2   Zone 3   Zone 4

WHEN IN EDIT NAME MODE ALL OF THE ZONES ARE UNDERLINED. PRESS ON ANY ZONE TO RENAME. ONCE DONE RENAMING ZONES, PRESS ⊗ TO EXIT.

NOTE: RECOMMEND LIMITING ZONE NAMES TO 22 CHARACTERS. WILL ONLY DISPLAY ON HOME SCREEN UP TO 22 CHARACTERS.

Figure 3. Zoning Pop-Up Display

Each zone can also be renamed from **menu > settings > iharmony zoning**.

E. This area display various functions that are either pending or currently active. Indicators are humidifying, dehumidifying, cooling, heating, ambient lockout, emergency heat, cleaning air, transitioning to next schedule and load shedding. What does it mean:

- Load Shedding - Provides a method for a local utility company to limit the maximum power level usage of the outdoor unit.

- Ambient Lockout - This is to keep your air conditioner unit from running when outdoor temperature is below a predefined limit.

- Emergency Heat - All heat pumps operating in northern climates (below 35°F) we normally need a supplemental heating source. Usually it is in the form of electric heating provided by the indoor unit. Other sources could be gas, oil, or hot-water back-up systems as well. The supplemental heat is also referred to as "second-stage" or "back-up" heating, with "first-stage" being the heat pump only. Emergency heat is when you use your supplemental heat (2nd stage) by itself, without the use of your heat pump (1st stage heat). Option is not available for non-heat pump systems.

F. Away - When away is selected the system will automatically use energy saving settings (heat-to **62** and cool-to **85**). Temperatures can be adjusted by pressing on the available temperature setting (i.e., heat-to or cool-to). To exit away, press the **cancel** icon. In a zoning system, all zones are set to a single heat-to and cool-too setting.

G. Pressing on the heat-to area will allow the temperature setting to be changed. Press on either setting will bring up the temperature adjustment dial.

H. Pressing on the cool-to area will allow the temperature setting to be changed. Press on either setting will bring up the temperature adjustment dial.

NOTE - If the system is running on a schedule, any adjustment will display the **schedule will hold until next period** *and* **select duration of hold***. Press either hold or duration to select the desired time duration. The hold period can be cancelled by pressing the cancel icon along the right side of the Home screen.*

I. This is the location that to select the system mode of operation or run a schedule, fan mode and turn the system off. To exit this screen, press the house icon.

Select Mode

Figure 4 illustrates the various modes of operation. To select a mode for the system or a specific zone, press the desired operation (see figure 4). The gray shaded area indicates the item has been selected.

Fan Operation

There are three fan modes of operation which are auto, on and circulate. Pressing on the fan icon will allow selection of the desired fan mode.

- **AUTO** - Fan will follow the fan setting in the selected schedule.

- **ON** - Fan is NOT following the schedule and runs continuously until it is changed from the **selected mode**.

- **CIRCULATE** - Fan is following schedule and cycles during periods of equipment inactivity. Circulate run time is dependent on user settings.
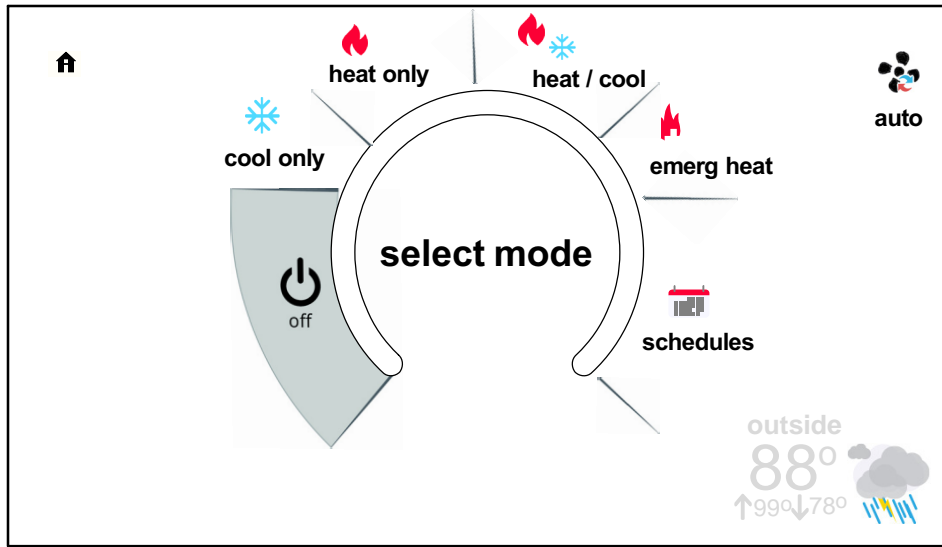
Figure 4. Selecting Mode for System or Specific Zone (If Zoning is Installed)

Schedules

When selecting schedules, the available options are Schedule IQ and schedules 1 through 4. Schedule IQ is pre-define and can be change or renamed by selecting **edit schedules**. All other schedules can be renamed and customized.

Schedule IQ - This schedule operating in heat / cool mode and answering a few simple questions will allow the system to know how to set the temperature for the home based on time settings.

By default times listed are 6:00 am, 9:00 am, 5:00 pm and 9:00 pm. A specific time can be changed by pressing on the individual time. A set time screen will appear

(see figure 5) which will allow adjustment of the time schedule. The specific time period can also be removed by selecting delete period. When adjustments are completed, press done.
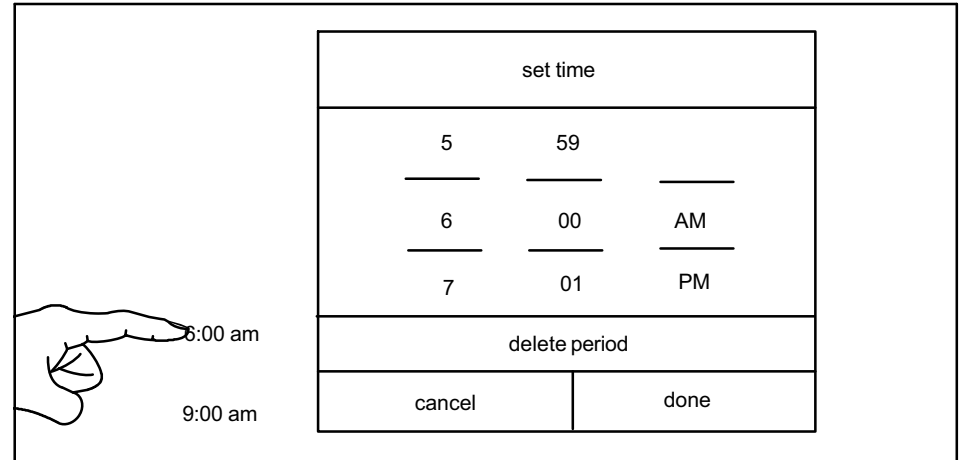
Figure 5. Set Schedule Time Screen

For each time setting, a specific fan operation can be set as well. Options are on, auto and circulate. Other options are rename the schedule and restore defaults. Press the house icon exit the screen.

J. Indicates the actual mode of operation the system in running.

K. This is the room temperature and will display inside above the temperature. If the feels like option is enabled, then the worlds feels like will appear about the number. The feels like feature can be enabled in the user settings area.

L. This icon and number represents the humidity level inside the home. This will only be displayed if enable din the user settings for display. The rain drop will be displayed as different levels based on humidity percentage detected in the home.

M. Items that may appear in this area of the screen are as follows:

transitioning to next schedule	While running a schedule the system is adjusting temperature soon to the next temperature time setting.
schedule hold until next period cancel	While running a schedule a manual adjustment to the temperature setting is done. To return back to the regular temperature setting govern by the schedule, press cancel.
coasting to Pefect Temp. cancel	This will only appear in non-zoning system and it indicates the system is set to a single temperature setting. They system was running in cooling mode and turned off to coast to the desired temperature setting.
coasting to Pefect Temp. cancel	This will only appear in non-zoning system and it indicates the system is set to a single temperature. They system was in heating mode and turned off to coast to the desired temperature setting.

N. This area of the screen will displayed either the outdoor temperature or weather forecast depending on how the system is set. The outdoor weather option under **menu > settings > display > outdoor weather** has to be **ON** and outdoor temperature is set to **Internet** and **weather provider** set to one of the two options available.

Press on the weather section of the Home screen to display detail information concerning local weather. The weather displayed is also dependent on the user correctly adding the home info. Go to **menu > settings > home info** and verify or add the home information.

If only the outdoor sensor is to be used, go to outdoor temperature and set to **sensor**.

NOTE - If Internet and weather provider are selected, weather information will only be displayed once the S30 Control System has been setup and connected to the Internet.

SETTINGS

The setting screen will allow the homeowner to connect to their home Wi-Fi router, give the system a name, smart away and feels like features. Fan, heat & cool settings, humidity settings, notifications setup, general, display, home info and account.

🏠	settings	
📶	wi–fi	local
✏️	name	upstairs
📍	away	
〰️	feels like	off
❀	fan	
🔥❄	heat & cool	
💧	humidity	
🏛	iHarmony zoning	
⚠️	notifications	
🧰	advanced settings	
⚒	general	
▭	display	
ⓘ	home info	
👤	account	

📶 WI-FI

This is for connecting the S30 Control System to the home wireless network. This settings is disabled by default.

Access Point is Visible

1. Slide the option to **ON** to enable Wi-FI.

2. Wi-Fi network will show not connected. Press on **not connected**.

3. **Select a network** will be displayed listing all detected networks within range. Selected your home network by pressing on the network name.

4. Assuming that your network is secure, a password is requested. Enter your password and press join to continue.

NOTE: If you wish to see the characters you are typing, check show password.

Access Point is Hidden

1. Slide the option to **ON** to enable Wi-FI.

2. Wi-Fi network will show not connected. Press on **not connected**.

3. Select **other**.

4. The enter new network information screen will appear. Enter the name of the hidden network.

5. **Select Security**. Options are none (not recommended to use a unsecured network), WEP, WPA, WPA2, WPA enterprise and WPA2 enterprise.

6. Once security type is selected, a password field will appear. Enter the password to access your home Wi-Fi network.

7. Press **join**.

NOTE: If you wish to see the characters you are typing, check show password.

Whether connecting to a visible or hidden network, if successful the connection icon above both the router and Internet icon will have a green check mark above each.
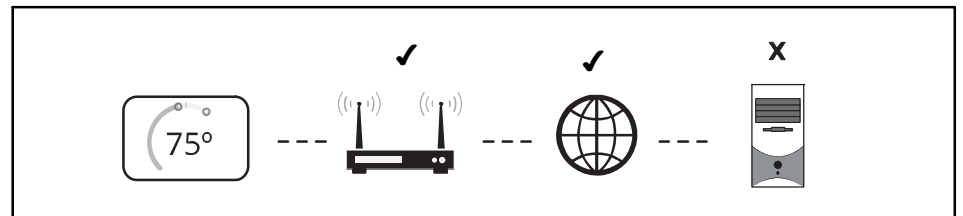
Troubleshooting Wi-Fi Connection

The following terminology is used in this troubleshooting section:

- **Router Signal Strength (RSSI)**. RSSI is an indication of the signal strength of the Wi-Fi router being received by the scanning device (i.e., smart phone). Therefore, the higher the RSSI number (or less negative in some devices), the stronger the signal.
- **802.11a, g and n** are wireless networking specification that extends throughput up to 130mbps using the 2.4 GHz band.
- **Internet Protocol Address (IP address)**. This is a numerical label assigned to each device (e.g., computer, printer, thermostat) participating in a computer network that uses the Internet Protocol for communication. An IP address serves two principal functions: host or network interface identification and location addressing.

Electromagnetic Interference Causing Poor Connectivity

Locate both the thermostat and router away from other devices that could possibility interfere with wireless communications. Some examples of other devices that could interfere are:

- Microwave ovens
- Wireless cameras
- Portable phones and bases
- Baby monitors
- Wireless speakers
- Bluetooth devices
- Garage door openers
- Neighbor's wireless devices.

To eliminate a possible source of interference, temporally disable any devices and see if Wi-FI performance has improved.

Router Signal Strength (RSSI)

The ideal signal strength range for the iComfort® S30 is -1 to -69 RSSI. The signal strength can be viewed from the thermostat interface. Use steps 1

1. Press NETWORK SETTINGS; this screen shows a graphical view of buttons representing Wi-Fi options OPEN and SECURE wireless networks and a button for adding a network.

2. Select the access point that has already been establish and connected too. When selecting the info icon, a screen will appear which will display an option to forget the network and IP address assigned to the iComfort® S30 by your router, sub-net mask, router, DNS and RSSI. The RSSI signal strength is anywhere between -1 to -69, then the signal strength is sufficient. If outside this range, the either locate the router closer to the thermostat or add a repeater.
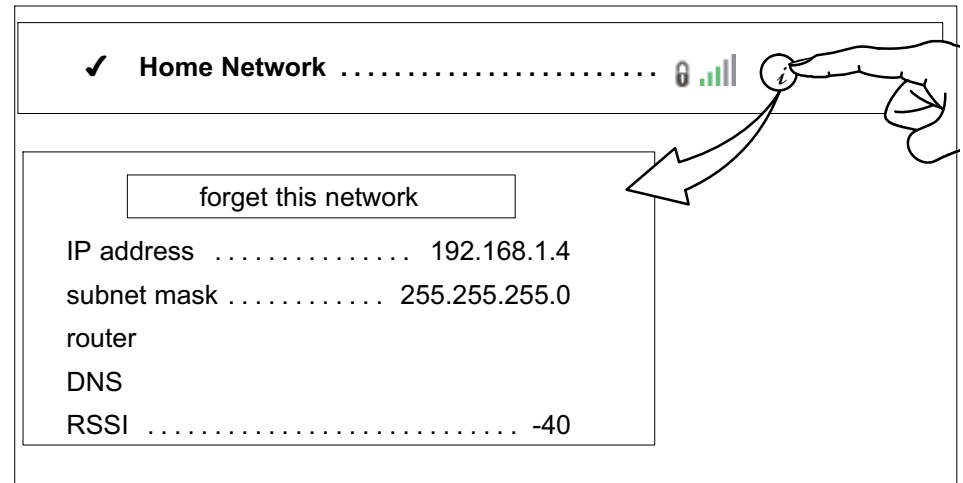

Figure 6. Verifying Signal Strength

(i) HOME INFO

This information should have already been completed by the installer. However, selecting this option will allow the home information to be verify and corrected if necessary. If the home information is missing then enter the information now. This information is required to registered the system when creating an account.

There is also a selection option to remove the home information as well.

👤 ACCOUNT

Reasons to create an account:

- To enable remote access to the system using a mobile device with the Lennox mobile application installed while away from home. The will allow remote adjustment for temperature settings and other features.
- To enable the Smart Away feature discussed later on in this instruction.
- To directly communicate to the Dealer any issues the system may be incurring.

This menu allows two options:

Using Existing Account

If an account has already been created, then use the **sign in** option to access your account. Enter your email address and password to connect your system to your online account.

Creating a New Account

1. Use this option to create an account. Enter your email and desired password to use. Select **create new account**.

2. The new account screen will appear. Enter your first name, last name and phone number (optional).

3. Enter an email address and repeat to verify email address.

4. Create a password under the set password location. Retype the password to verify.

5. Check the box that will allow your dealer to receive service alerts and possibility fix your issue remotely (recommended).

6. Check that you agreed to the Lennox EULA. Press on LENNOX EULA to read the end-user license agreement.

If the setup and connection to the Lennox server is successful, a green check mark will appear above the service icon under the **wi-fi** menu option.
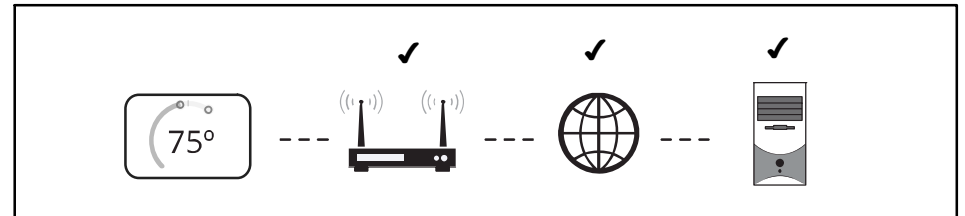
SMART AWAY

Smart Away is a feature that can be enabled once you have created and registered your account. Both Home Info and Account menu options must be completed for this option can be enabled. Once enabled, you can set the low and high temperature setting when smart away determines that no one is home. The Smart Away feature depends on the iComfort® S30 Mobile Application running on your mobile device (smart phone or tablet).
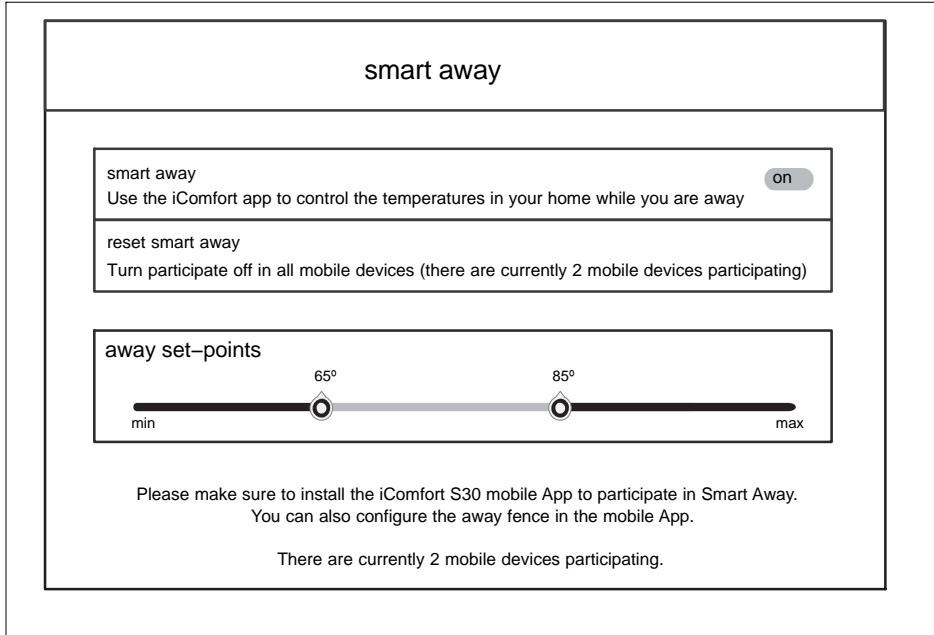

Figure 7. Smart Away Screen

FEELS LIKE

The feels like feature is a combination of outdoor and indoor temperatures and indoor humidity to determine what is actually feels like in the home.
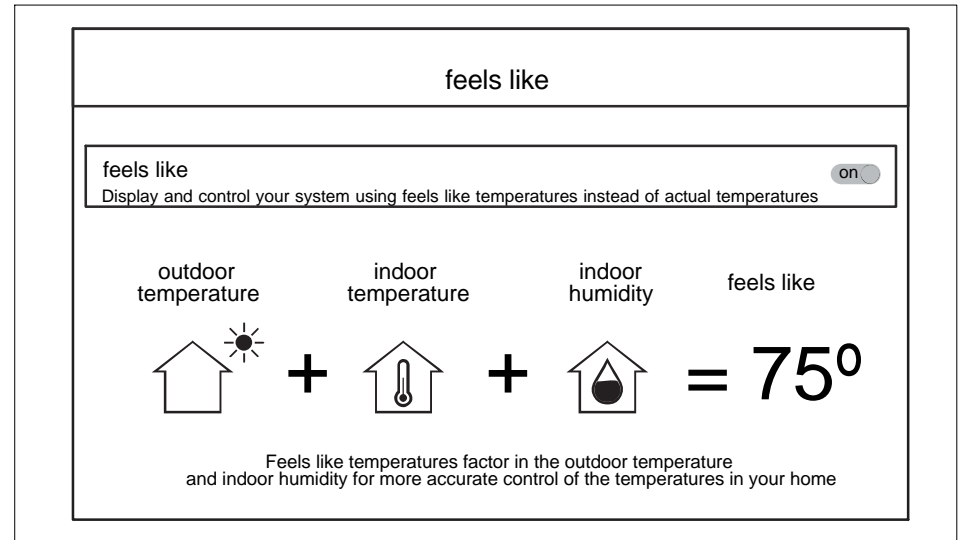

Figure 8. Feels Like Screen

FAN

This option will only appear when the **circulate** option is selected under the home screen modes / schedules screen. This will allow adjustments between 18 to 54 minutes on how long the air will circulated each hour. The circulate option runs during any mode selected except when the system is turned off.

♦ HEAT & COOL

This screen allows changes to how the system operates. Options are single set-point, heat pump mode (normal or comfort), auxiliary heat and safety protection.

1. **Single Set-Point** (**Perfect Temp**): Option will only be available in non-zoning systems. This option allows the user to control both heating and cooling temperatures with one single temperature setting. Default is off.

2. **Select Heat Pump Mode** (only available with system using a heat pump). Options are normal and comfort. Default is normal. Descriptions for what each setting does is displayed on the screen.

3. **Auxiliary Heat** (only on heat pump systems): If your **AUX** lockout temp is 40ºF/4.4ºC, then **auxiliary heat** will come on when the outdoor air temperature drops below 40ºF/4.4ºC. With **Heat** Pump Balance, you don't have to worry about the **AUX** lockout temp.

4. **Safety Protection**: Alerts you if the house gets too cold or hot which is set under this menu option on the setting for both low and high temperatures. The system will automatically turn on either cooling or heating if the home's interior temperature reaches either the low or high setting. A notification is also sent to the Home screen notification area and user mobile application.

⬤ HUMIDITY

Options under this section are humidity control set to OFF or DEHUMIDIFY. Default is DEHUMIDIFY. If DEHUMIFY is selected the following options are available:

The following terms used in this section are described as follows:

Table 1. Modes of Operations

Dehumidification	Normal	In this mode, dehumidification occurs if these conditions are met and signals are present at specific terminals: ▶ Dehumidification has been enabled on installer settings. ▶ Unit is in COOL mode. ▶ Dehumidification demand exists (RH above set point). ▶ Cooling demand exists (Y1 energized).
	Max	In this mode, dehumidification occurs if all MAX conditions are true, except cooling demand may or may not be present. Maximum over cool from cooling set point is 2ºF.
	Climate IQ	Monitors current climate conditions and automatically removes excess humidity when necessary.
Humidification	Normal	These thermostat modes allow the homeowner to control the relative humidity (RH) between 15 and 60%. The following conditions must be met for either mode to operate: ▶ humidification mode has been enabled, and ▶ the unit is in HEAT mode, and ▶ humidification demand exists Additionally, the **NORMAL** mode requires heat demand exists.
	Max	
	Dewpoint	Dew point adjustment mode will change the humidification set point based on the outdoor temperature and a user-defined dew point adjustment setting.

NO HUMIDIFIER / DEHUMIDIFIER ACCESSORIES OR HUMIDITROL AND AUXILIARY DEHUMIDIFIER

1. **Dehumidification Control Center** - Options are **normal**, **max** and **Climate IQ** (Auto)

2. **Dehumidification Set-Point**. Adjustable setting between 40 and 60 percent humidity.

BYPASS (24VAC) HUMIDIFIER INSTALLED

Humidity Control: Options are off, humidify, dehumidify and humidify + dehumidify.

HUMIDIFY

1. When **Humidify** is selected, options under **Humidification Control Center** are **normal**, **max** and **dew point**.

2. In addition, dehumidification set-point (left) + humidification set-pint (right are adjustable. Range is 15% to 60 % humidity.

DEHUMIDIFY

1. **When Dehumidify** is selected, options under **Dehumidification Control Center** - Options are **normal**, **max** and **Climate IQ** (Auto)

2. In addition, dehumidification set-point (left) + humidification set-pint (right are adjustable. Range is 15% to 60 % humidity.

HUMIDIFY + DEHUMIDIFY

1. When **Humidify + Dehumidify** is selected, options under **Humidification Control Center** are **normal** and **max**

2. Options under **Dehumidification Control Center** - Options are **normal**, **max** and **Climate IQ** (Auto)

3. In addition, dehumidification set-point (left) + humidification set-pint (right are adjustable. Range is 15% to 60 % humidity.

IHARMONY ZONING

This option will only appear on the menu if iHarmony® zoning system is installed.

1. **Zoning**: This section allows the user to turn ON or OFF zoning. If zoning is automatically detected by the system, the default is ON.

2. **Screen Lock All Zones**: Not sure what this does?????

3. **Zones 1 through 4**: Pressing on the right arrow will bring up a screen so that each zone can be renamed if desired.

NOTIFICATIONS

The section allow the user to setup reminders for various accessories. By default all listed items are disabled. The reminders can be set for 3, 6, 12 , 24 months can a custom reminder by specific date.

ADVANCE SETTINGS

This section is for installers and technicians ONLY to customized system settings and run various diagnostic tests.

GENERAL

This section provides information and setting changes for various displayed items.

About

This page will provide detailed information concerning the HD-Display (thermostat info) and Smart Hub. Information provided are model number, serial number, hardware, software and Wi-Fi revisions.

Dealer Info

This page will display or allow information to be changed concerning the dealer. Items included on this page are name, address1, address2, city, state, zip code, country/region, phone, email and website. There is access a dealer access option at the bottom of the page. Press the > button to access the dealer access page.

Dealer Access

1. **Remote View**: This option to allows the dealer access to remotely view you system only. Options are ON and OFF. Default is OFF.

2. **Remote Control**: There are two options under this section, OFF and ON/ALWAYS. Selecting the desired option will place a green check mark next to the feature.

Alerts and Notifications: Default is OFF. Turning on this feature will allow automatic notification to your deal that your system needs maintenance.

Screen Lock

There are three options for screen locking. Default is unlocked.

- **Unlocked** - Changes can be made to any settings.

- **Partially Unlocked** - Screen is locked but temperature settings can be changed.

- **Locked** - No changes can be made.

To unlock partially locked or locked, press anywhere on the screen and hold for five seconds.

Date & Time

The following items can be set on this screen:

1. This page will allow the clock to be changed to **24 hour** (military). Default is OFF.

2. The following settings are only available if the system is not connected to the Internet. At the bottom of the screen a message indicating "your thermostat is not connected to the Internet - you can set the day and time manually."

   - **Daylight Savings** - ON or OFF. Default is OFF.

   - **Time Zone**: Options are Pacific, Mountain, Central and Eastern. Default is Center. Select time zone and press SET.

   - **Set Time** - Local time can be adjusted. Press SET to finish.

   - **Set Date** - Current date can be set. Press SET to finish.

NOTE - If the system is connected to the Internet, only changing to 24 hour clock can be selected.

Language

This allow the language used on the screen to be changed. Options are English, French and Spanish. Default is English.

Software Update

Option settings available on this screen are:

- **Automatic Updates** - ON or OFF. Default OFF.

- Information concerning the available update version and file size.

- **Learn More** - Provides information concerning the improvements or bug fixes.

- **Download and Install** button - Used to manually download the update.

☐ DISPLAY ━━━━━

The following setting options available are:

1. **Outdoor Weather** - Turn ON to display weather on the HOME screen.

2. **Outdoor Air Quality** - Turn ON to display outdoor air quality on the weather screen.

3. **Outdoor Temperature** - Options are:

   - OFF - No display of temperature or Internet Weather on HOME screen.

   - Internet - Will display weather from Internet weather provider. If set to Internet, then also set Weather Provider.

   - Sensor - Display outdoor temperature only from installed remote outdoor sensor.

   - Weather Provider - Options are AccuWeather or The Weather Network.

4. **Indoor Humidity** - Turn ON to display indoor humidity above the indoor temperature on the HOME screen.

5. **Proximity Sensor** - When turned ON, the display will wake up automatically upon approach.

6. **Screen Saver** - Options for this feature are:

   - Off - Screen is on all the time.

   - Weather - Will display Internet Weather if turn on or outdoor temperature from remote outdoor temperature sensor.

   - Power Save - Screen is blank until the screen is touched or activated by proximity sensor if enabled.

   - Picture (to upload a picture use the iComfort mobile application or please visit myicomfort.com

7. **Screen Brightness** - There are two options which are:

   - If auto brightness is turned ON, control of screen brightness is automatically controlled by the system. If turned OFF screen brightness can be adjusted using the sliding scale adjustment tool.

8. **Temp Scale** - User can set to either Fahrenheit or Celsius temperature display.

9. **Clean Screen** - Allow user 30 seconds to clean the screen without. The display will count down to 0. During the period, the screen will not respond to any touches.

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