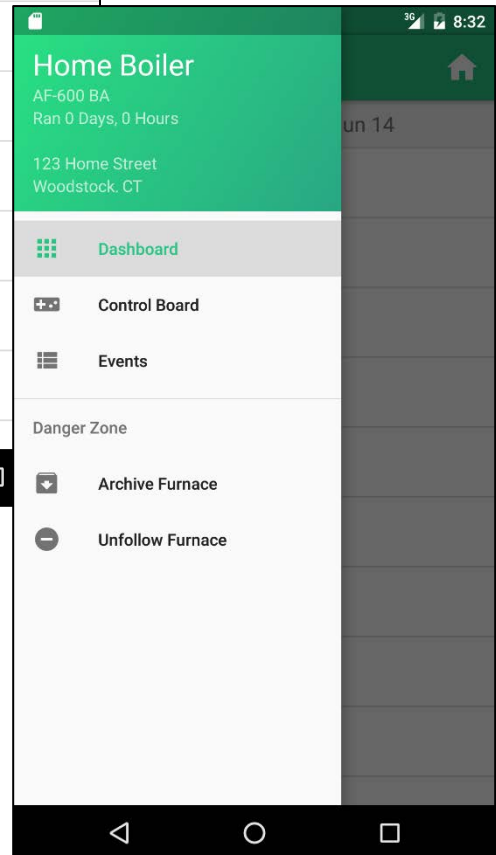
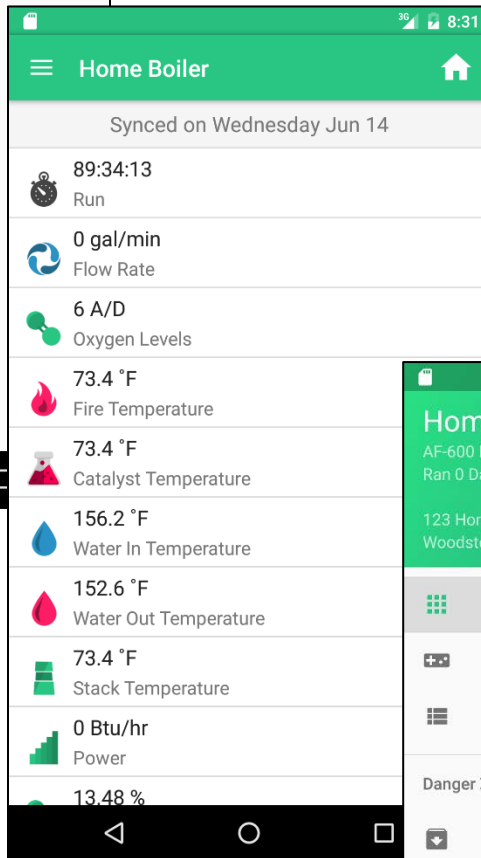
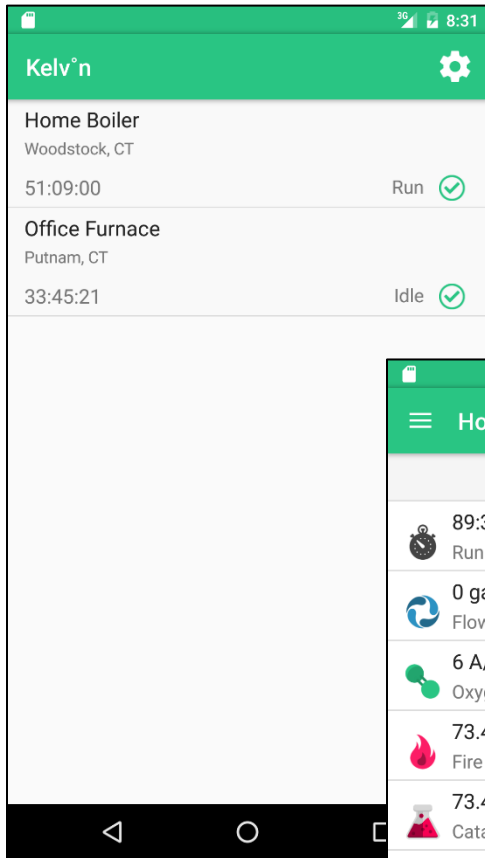


Kelv°n

Biomass Controls Android Application



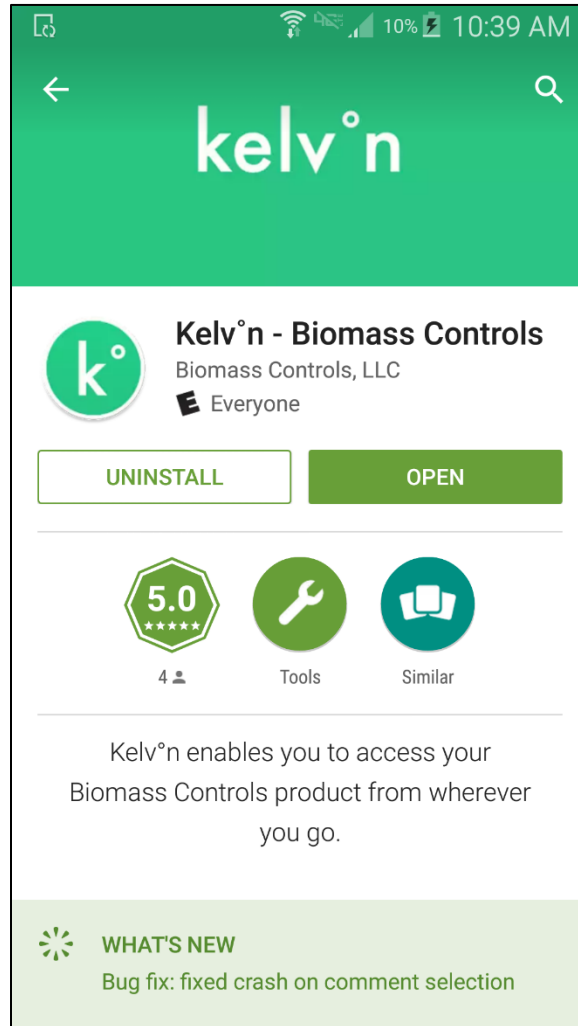
Product Manual 1.3.0
August 2016

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Downloading Kelv°n

To install Kelv°n on your mobile device, go to the Google Play store and type “Biomass Controls” into the search bar. Find the application titled “Kelv°n – Biomass Controls” and download by tapping “Install”.



Open the app after download. The app will open to the login screen where you will be prompted to register an account.

Creating an Account

Simply enter in a valid email address and create a password and tap “Sign in or Register” to register an account. If an account already exists under that email account, Kelv°n will attempt a login. Otherwise, it will bring you to a user registration screen, which will ask for some information. This process should only take about a minute to complete.

Kelv°n

Email

Password

SIGN IN OR REGISTER

[FORGOT PASSWORD](#)

Kelv°n

Account Information

Name
Info

Email
info@biomasscontrols.com

Phone Number
9785555555

Password

Password
password

Confirm Password
password

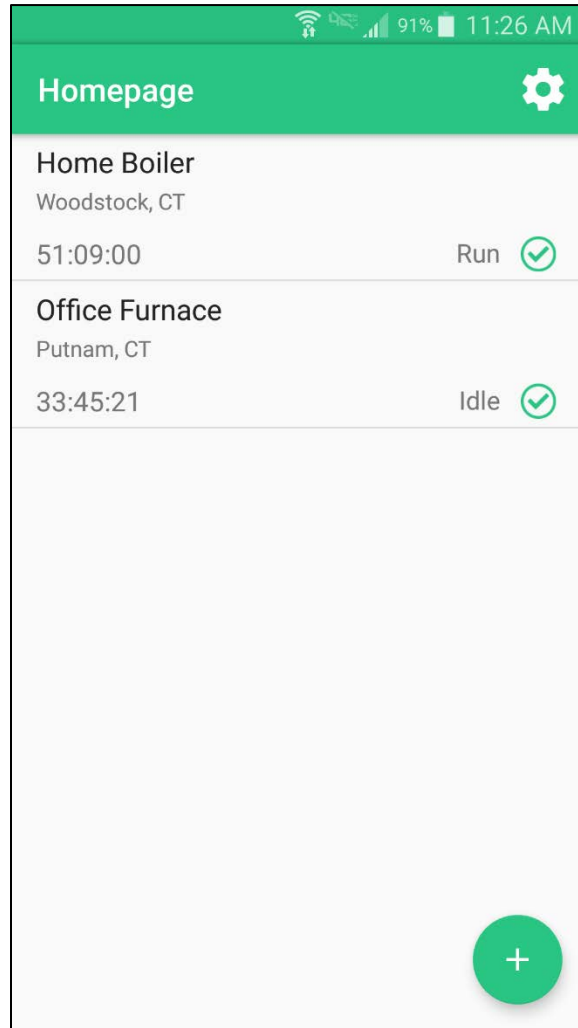
Default Location

Address
00 Canal Street

Fill out the information and press the checkmark in the top right corner to create your Kelv°n account. Kelv°n will take you to the furnace homepage, entitled “Homepage.”

Homepage

The default “Homepage” page contains two furnaces, “Home Boiler” and “Office Furnace.” These are demo furnaces that every account follows, and should be there.

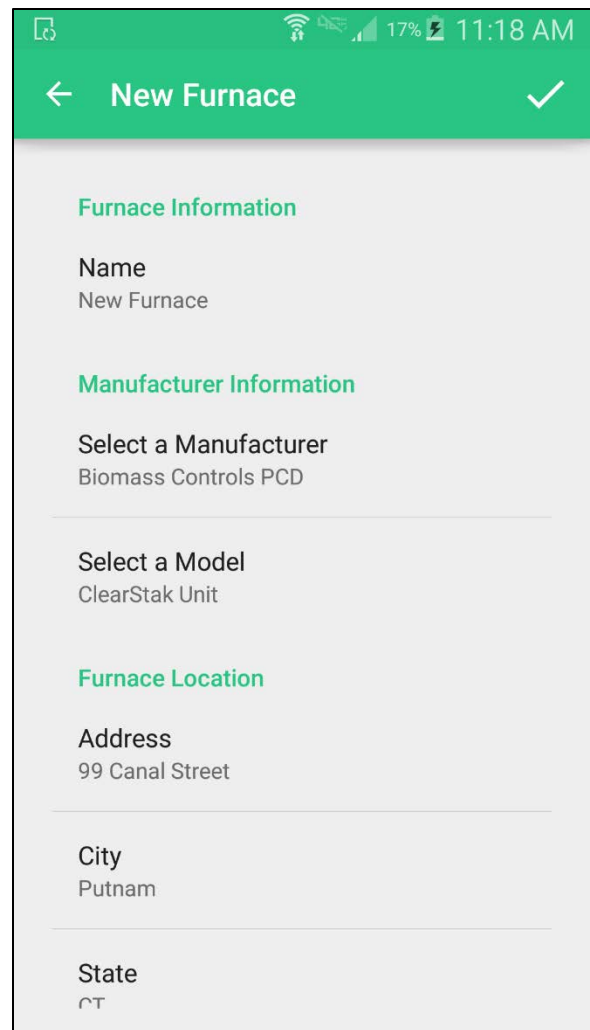
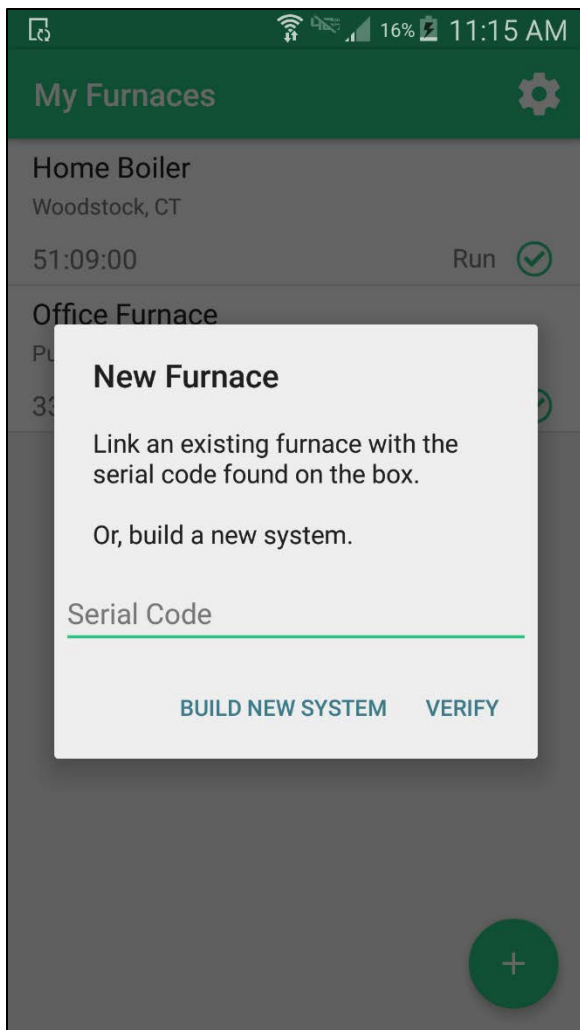


Adding a System

Unless someone has already shared a system with your account, there will only be the default two systems on this page. There are two ways to pair a system with your account:

1. Ask the owner of the system to share this furnace with your account (details on how to do this are further down in this manual under Followers).

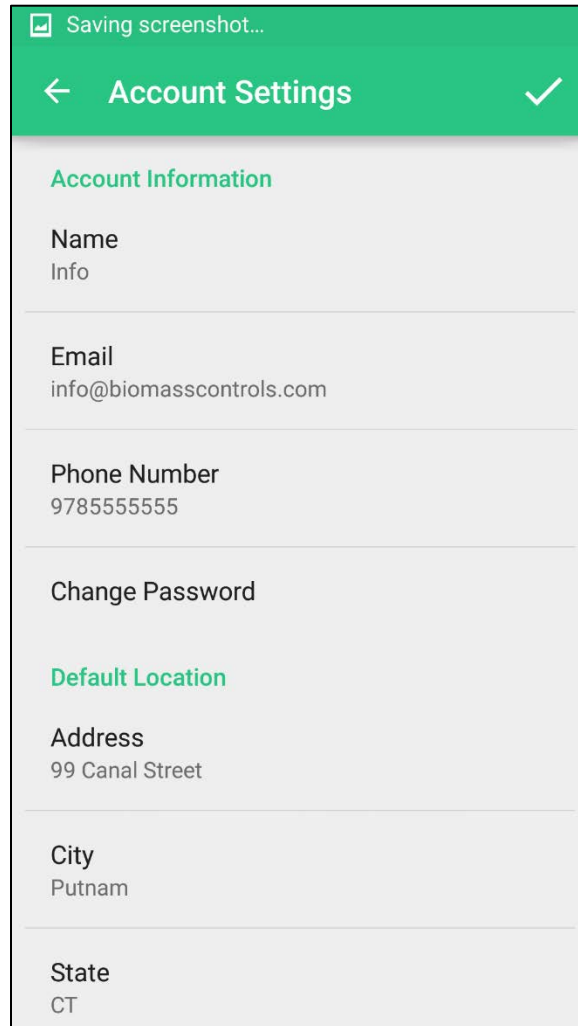
2. Tap the floating action button to start adding a system. This will open a dialog prompting you to enter in a serial code. Biomass Controls will issue a serial code with your system.
 - a. If a system with this serial code already exists in the system (someone has already created the system in their own Kelv°n app), the system will simply be linked to your account. This will add the system to your “Homepage” page within a few minutes.
 - b. If you are the first user to link to this system, select “Build New System”, which will bring you to a data screen. Enter the information requested and press the checkmark in the top corner to create a new system.



The new system will now be visible on the “Homepage” page. From here, you can view a specific system by tapping on it.

Account Settings

You can access your account settings by tapping the “Settings” icon on the top right of the “My Furnaces” page. This will take you to a screen with your account information. Key functionality includes changing your name, email, phone number, or default location. You can also set your unit preference for measurements and notification preferences, as well as change your password or log out of Kelv°n.

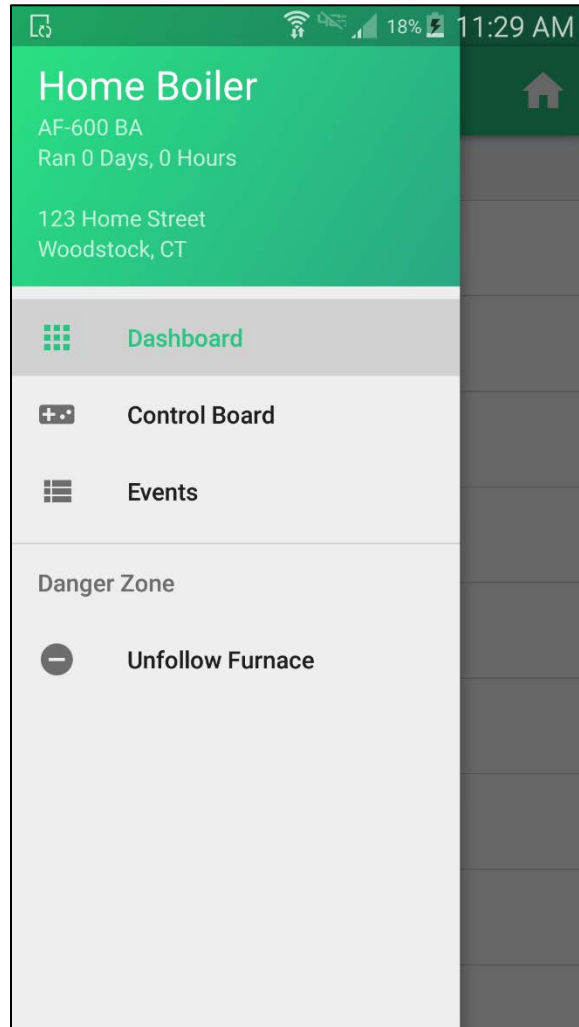


Viewing a System

A system has several options and data for you to view. These include sensor values, comments, and furnace settings. A system has a Dashboard, a Control Board, and an Events view, as well as the ability to unfollow said system.

Navigation

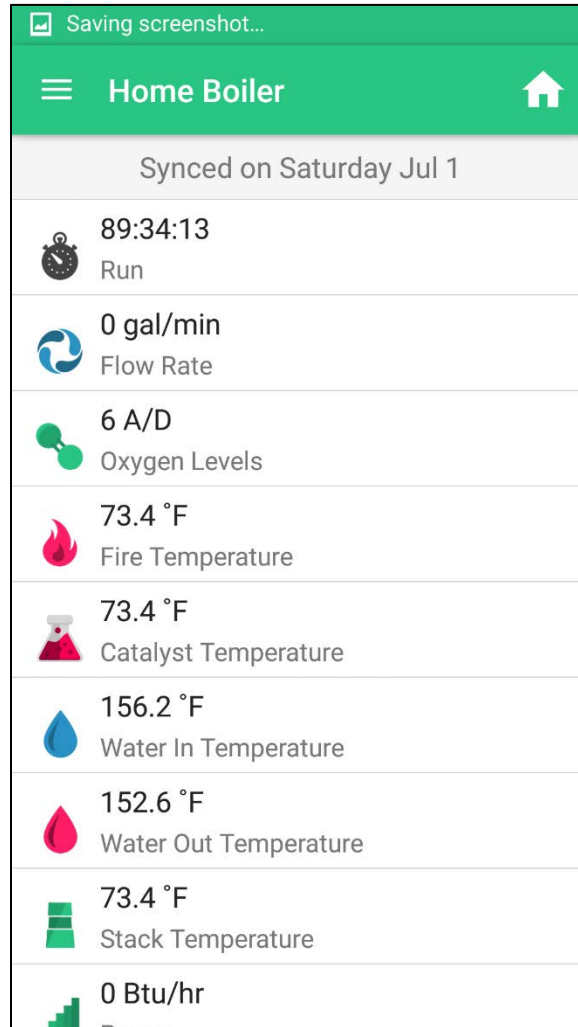
Navigating through the furnace view page is done using the sliding drawer on the top left. This opens a contextual menu that provides several options.



The home button on the top right will take you back to the “Homepage” page.

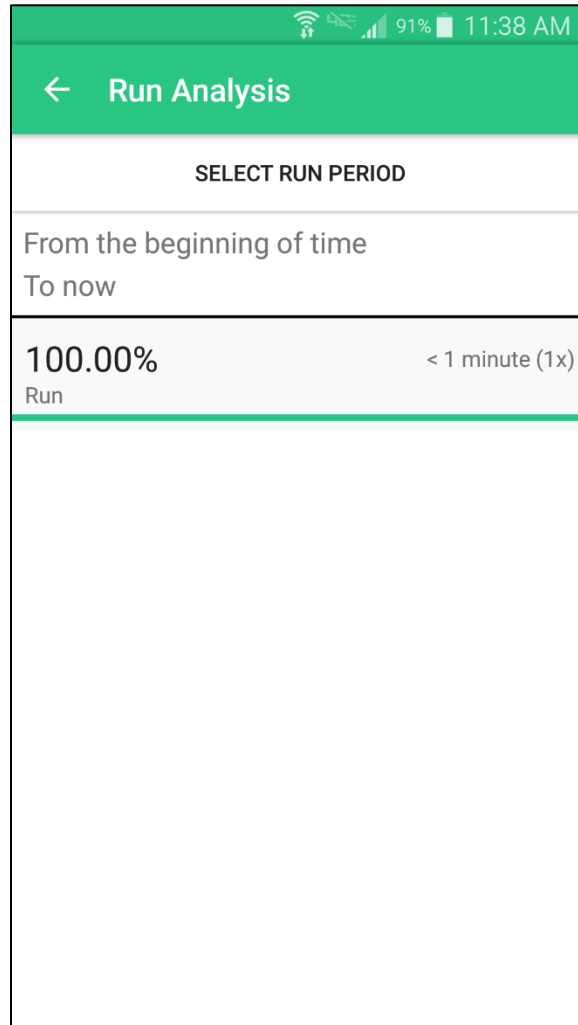
Dashboard

The Dashboard for a system contains data from its sensors. This is the default page that opens when a system is selected for viewing.



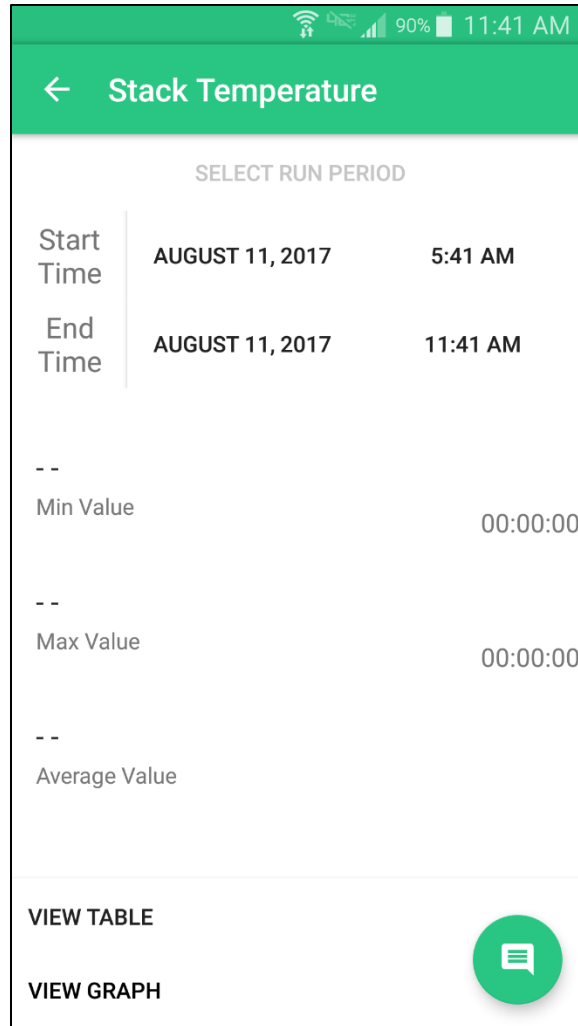
Run Statistics

Clicking on the first element in the list (“Run”) will open an analysis page that can show run statistics for any given run period, selected by pressing the button at the top.



Sensor Data

Tapping on any other item in the list will expand its data page, which shows the minimum, maximum, and average values of the sensor for any given run periods. Select the “Select Run Period” button to select a run period to display.



This page also allows you to view the data for the current run period as a table or a graph, as well as rename the sensor. You can also comment on this specific sensor using the floating button on the lower right. Commenting is discussed further in the Events section.

Control Board

The control board allows you to manage system information and preferences you may have. You can manage alerts and see export data from this page. System owners can modify settings such as the name and location, as well as access a few more settings and features. This can be seen below; the viewer is on the left and owner is on the right.

Winter 2016 Test

Press the checkmark to save changes.

Furnace Name
Winter 2016 Test

Furnace Location

Address
233-337 River Rd

City
Putnam

State
CT

Furnace Actions

Alert Me For

Export Data

Kelvin Direct

Winter 2016 Test

State
CT

Furnace Actions

Alert Me For

Export Data

Followers

Wireless Configuration

Sensor Selection

Adjust Setpoints

System Control

Kelvin Direct

Viewer

As a viewer, you may select alerts, export data, and use Kelvin Direct. Alerts allow you to subscribe to different actions on the system, and you will receive notifications via the method you selected in the Account Settings page (email, text, both, or neither). Exporting data will allow you to export a brief summary for any given run period, or a full spreadsheet containing all sensor data for that period. Kelvin Direct will be discussed further down in its own section.

Owner

As an owner, you see all the options that a viewer sees and some additional options exclusive to all owners of the system. These are outlined below:

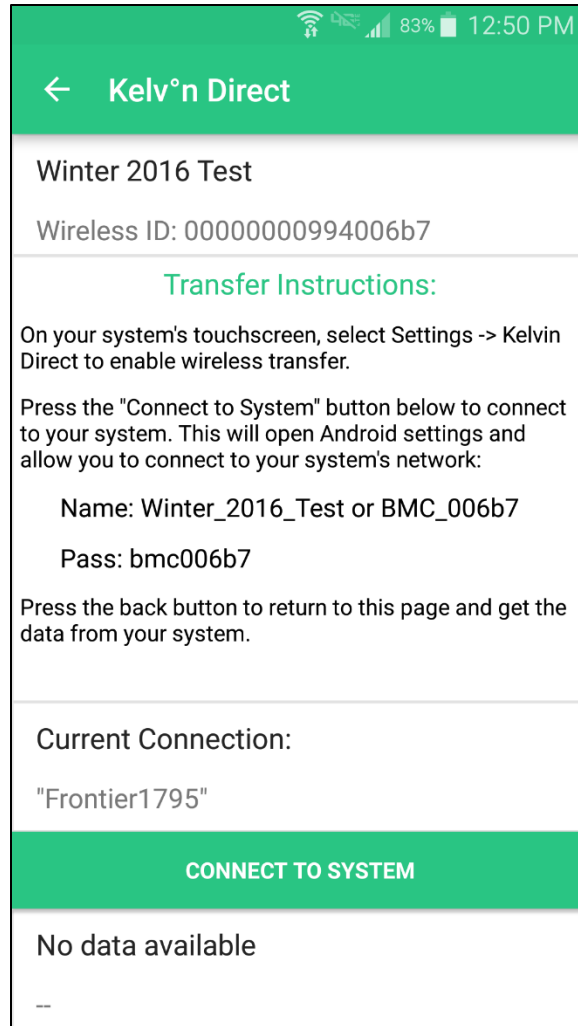
- **Followers** – See all other followers of the system, both owners and viewers. You can also delete and add new owners or viewers as necessary using the floating button in the lower right.
- **Wireless Configuration** – Configure your system to connect to or disconnect from the internet. This option will pop up a dialog containing the Wireless ID of your device, or prompt you to enter one in. Connected systems will stream data directly to our databases, while disconnected systems will store data locally. Local data can be accessed using Kelvin Direct (discussed further below).
- **Sensor Selection** – This popup allows you to toggle which sensor values can be seen on the Dashboard. This feature is useful for limiting the amount of information seen on the dashboard to only relevant data.
- **Adjust Setpoints** – This option allows you to remotely change settings on your system from the app. Simply use the buttons to set the value and press the checkmark in the upper right to send your requests to the system.
- **System Control** – This option provides you with options for controlling your system. These include things like “Reboot” and “Update”. Simply click on the option you want to request.

Kelvin Direct

When a system does not have Internet, it collects data locally. To upload this data so that Kelvin can access it, this data must be collected. Your system manual will have instructions on how to do so using a flash drive and Kelvin Direct.

Kelvin Direct allows you to use the app to collect the data file from the system and upload it to our database so that Kelvin can display it. On your system’s screen, simply press the “Kelvin Direct” button to configure your system for wireless transfer.

Then press the “Kelvin Direct” option in the app to start a transfer.



To connect to your system, press the “Connect to System” button to open Android settings to the WiFi page. From here, connect to the network hosted by your system. The name of this network will be either the system name, or “BMC” followed by the last five digits of the wireless ID. The password for the system will be generated for you by the app. After connecting to the system, press the back button to return to Kelv’n.

From here, simply press the “Get Data” button to collect the queued data from the system. Once this data is on your phone, you may disable wireless transfer by selecting “Disable KDT” on your system touchscreen (as specified in your system manual).

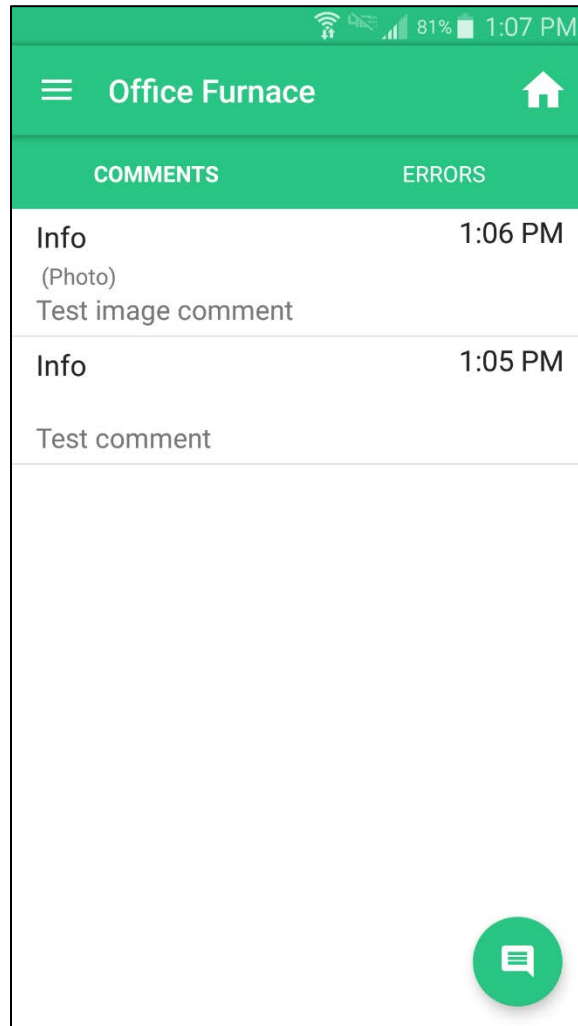
The data is now stored to a file in your app. To upload this data, simply connect to the internet and press “Upload Data” whenever you can. The file will remain stored on your phone until you upload it.

Events

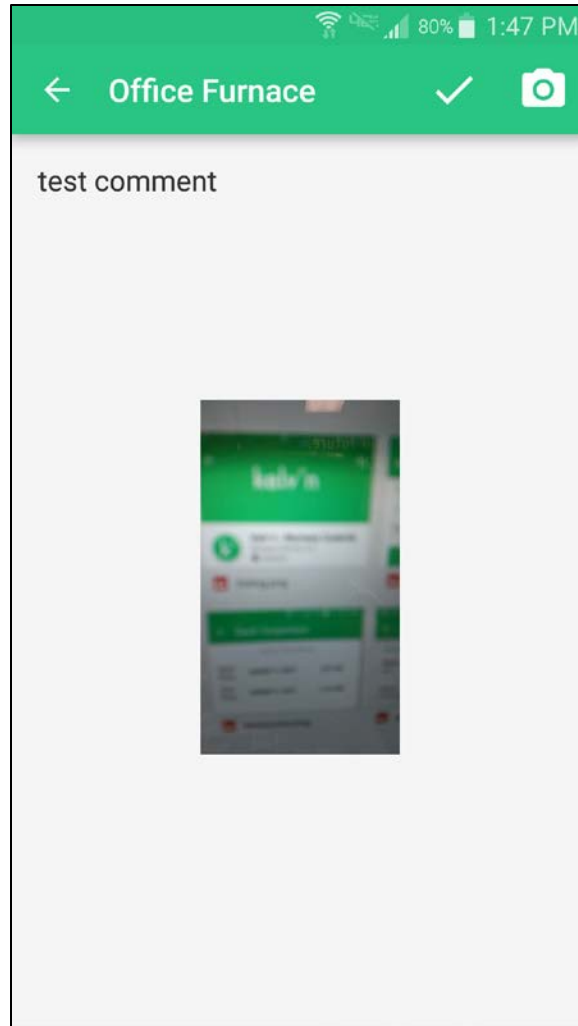
The events view allows you to see and make comments as well as view the error log. This is useful for communicating with other followers on the system.

Comments

Comments are notes put in by users on the system, or on specific sensors on the system. These will all show up on this page with the newest comments on top.



To make a comment, press the floating button on the bottom right. This will take you to the comment builder. From here, you can type in a message and attach a picture using the "Camera" button on the top right. Press the checkmark to save your comment and it will appear on the above page. Press back to cancel your comment.



Errors

In the rare event that an error occurs with your system, it will be logged under the "Errors" tab. These errors are viewable only, and will contain a runtime and a date for logging purposes.

Unfollowing a System

If you no longer want to see a certain system, simply select "Unfollow System" in the navigation drawer. This will prompt you to confirm before removing the furnace from your "Homepage" page. To add a system back, ask an owner to add you as a follower or add it yourself using the serial code.