savant

Climate iPhone

FILE NAME Climate_iPhone_1.2

EDITED ON Fri Mar 28 2014

Climate iPhone

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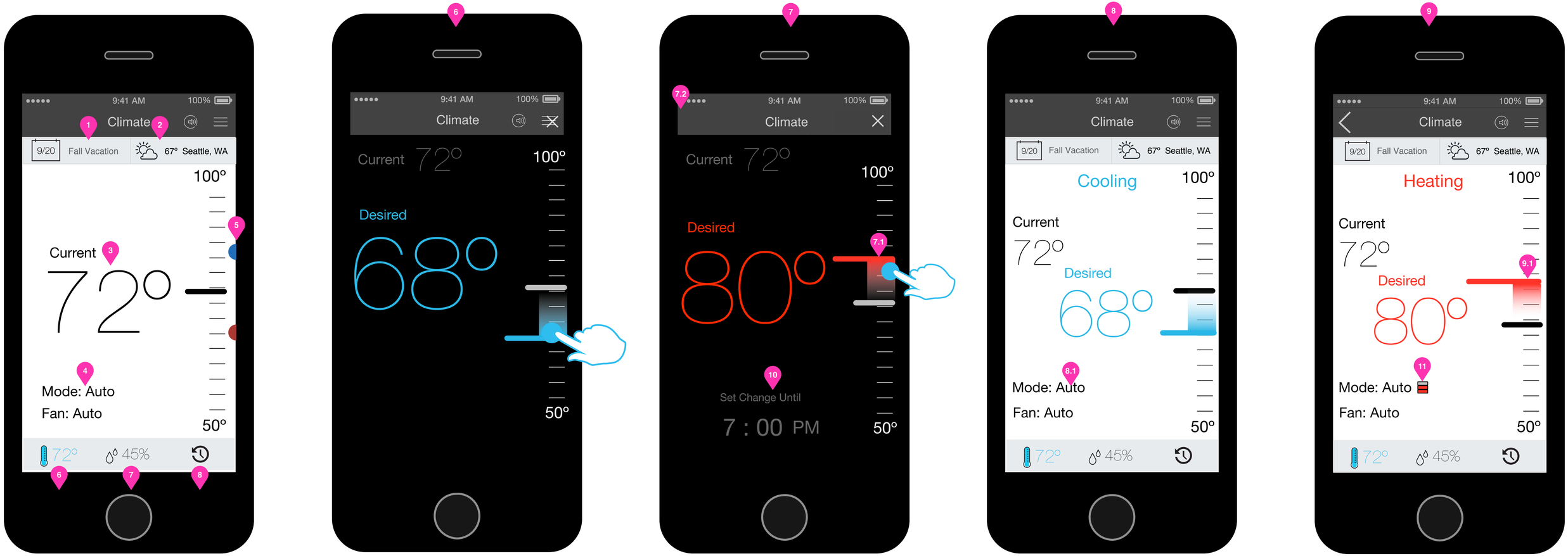
MODIFICATION DATE	VERSION	CREATOR	DESCRIPTION
Tue Mar 11 2014	1.0	Ky Hanzie	Laid out the basics for the IPhone size Climate.
Weds. Mar. 26, 2014	1.1	Dean Wong	Per Ky and Andy, first attempt at transfering climate_android_phone v1.3 to an iPhone world.
Weds. Mar. 26, 2014	1.2	Dean Wong	Revisions include tweaks to all for alignment with iPhone controls per Ky; Layer cleanup for ease of future editing.

Climate iPhone

Climate Control / Dual Set Points 1



Setting the temperature in Auto Mode with Dual Set Point System.

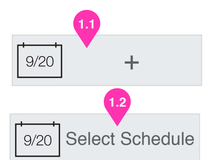
The intent of this screen is to allow the user to see the current temperature, adjust the set points and controls to the desired climate. The three tabs at the bottom are Temperature, Humidity and History. Humidity controls may or may not be available. Therefore, the Humidity tab must populate dynamically.

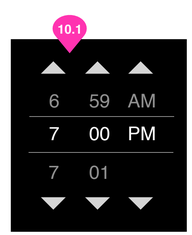
1. If there is a schedule active, it will populate here. If there are no schedules available, there will be a '+' button indicated at (1.1). If there are schedules available, but none active, the system will populate a call to action (1.2) Tapping this is illustrated on page 8.
2. Weather data will populate here. **Note: We need to decide what the source is, and render icons for all permutations of weather data.**
3. Current Temperature is read-only.
4. Mode: (Tap-able)
   Cool, Heat, Auto, Off
   Fan: (Tap-able) On, Auto
5. The cool point and heat point are only BOTH visible if the Mode is in 'Auto'. Otherwise the system will appear as a single set point system, with only cool or heat points in their respective modes. -Also described further.

6. + 7. These illustrations demonstrate that a user can tap on the temperature scale and set the desired set point. When the user does this, the screen will become modal, focusing on the desired temperature, while the current temperature diminishes in visual emphasis. The color will change to represent heating or cooling. A gradient or marker will indicate directionally the difference between the current and desired points.(7.1) Two seconds after the user initiated the temperature change, the screen will fade / animate to what is illustrated at (8 + 9). If the user doesn't want to wait the two seconds, they can tap the X at (7.2).

8. + 9. After the user has changed the desired temperature the screen will indicate that the user has set a new desired temperature until the time at (10) has been reached. In the background, the set points have been changed, but this will not be articulated to the end user. If the system is heating or cooling, that will be indicated. During this time period, the difference between the current and the desired temperature will be indicated with a gradient / mark at (9.1). Also, the set point button at 5.1 will disappear.

10. This is effectively a 'pause schedule' function. When the user is done dragging at (6 + 7) the temperature is 'Set Until' the time indicated here (10) will be reached. When tapped, time selection tumblers (10.1) are revealed in-line to modify time settings. The default value indicated here is the time of the next set point in the schedule. This field is only available if there is an active schedule otherwise there is nothing. (6)
11. This indicates which stages are running.





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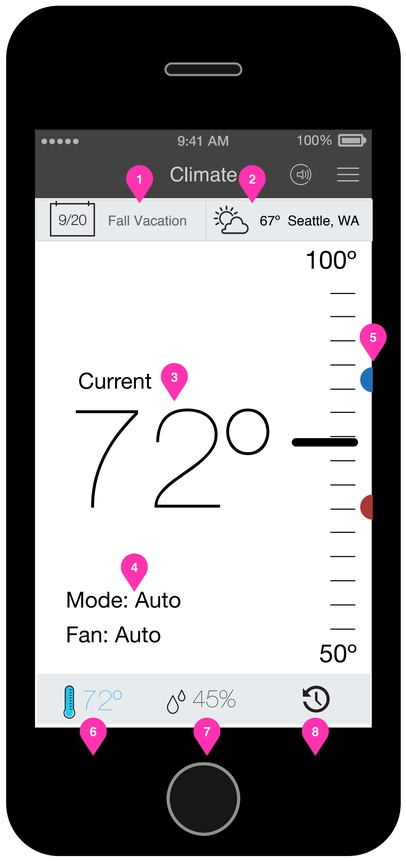
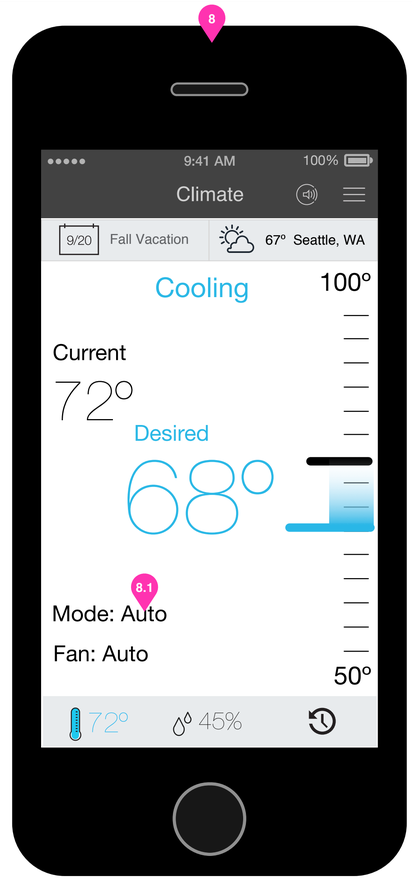
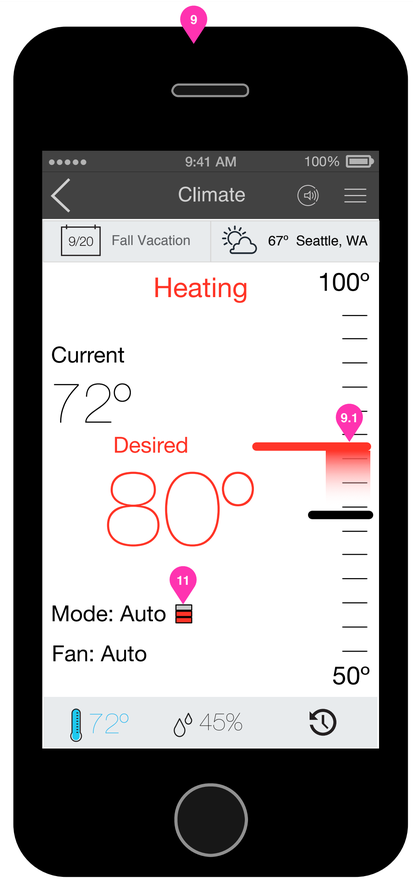
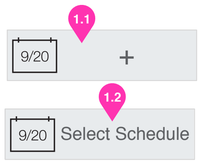
Climate Control / Dual Set Points 2









Setting the temperature in Auto Mode with Dual Set Point System.

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2. Weather data will populate here. **Note: We need to decide what the source is, and render icons for all permutations of weather data.**
3. Current Temperature is read-only.
4. Mode: (Tap-able)

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   Fan: (Tap-able) On, Auto
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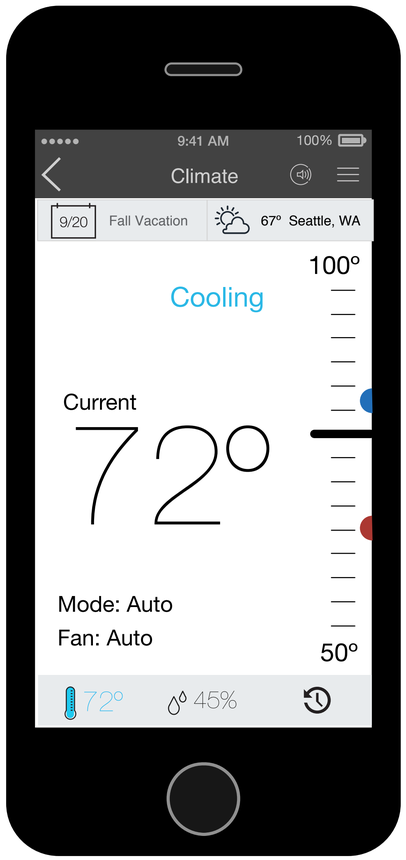
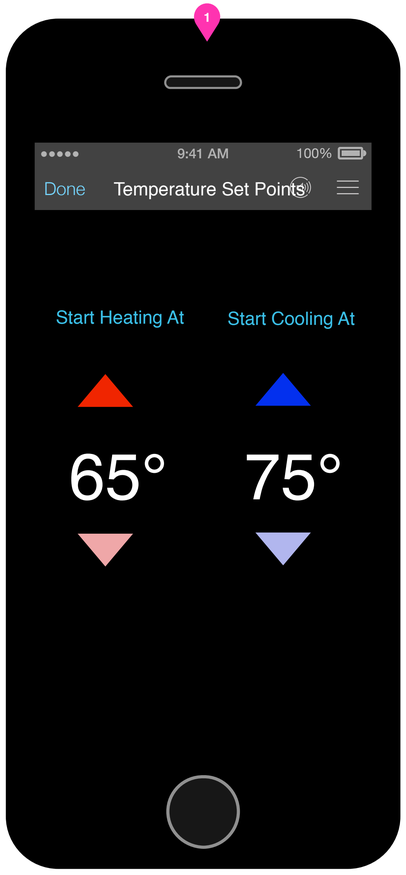
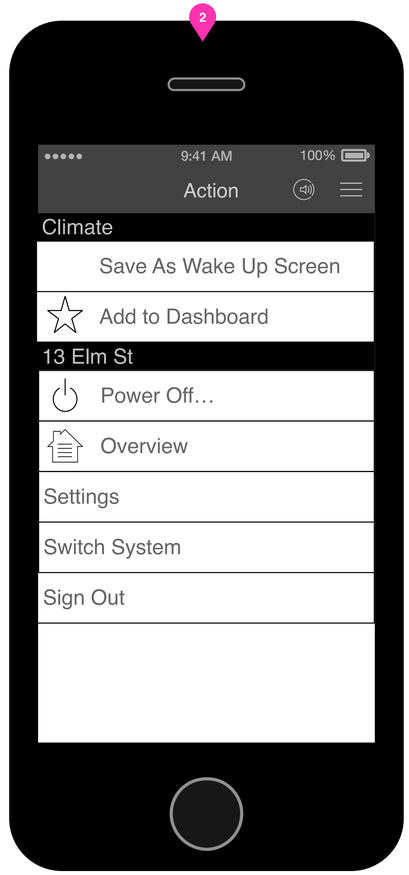
Climate iPhone

Set Points /Overflow Button







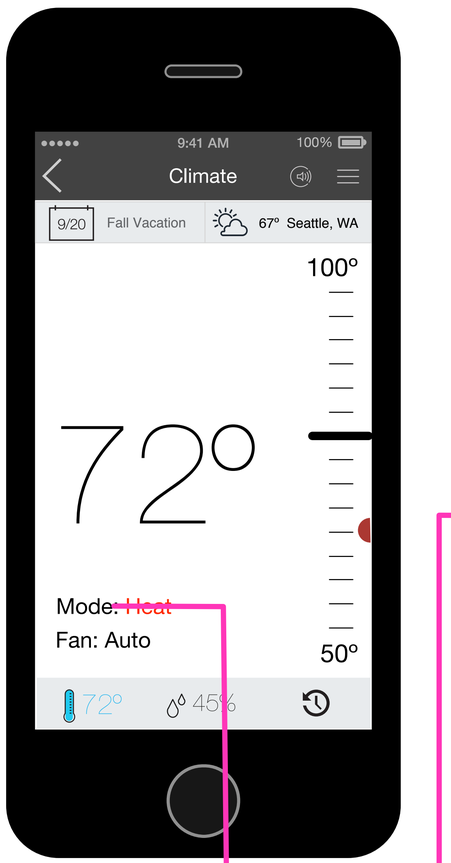
Setting the temperature in Auto Mode with Dual Set Point System.

1. The user has the ability to adjust the set points. When these set points are adjusted, the position of the blue and red dots on the previous page will be moved relative to the temperature scale.

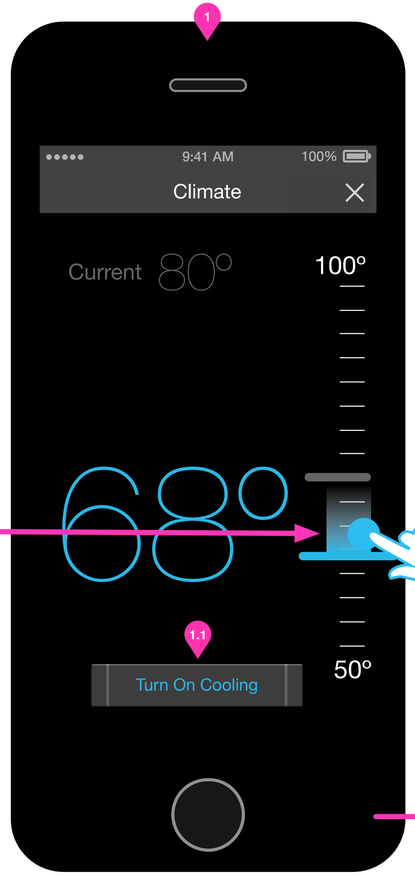
2. When the overflow button is pressed, the user has the ability to save this service to the Dashboard or Save as a Wake Up screen.

Climate iPhone

Lowering the heat while heating



User starts in Heat Mode and then adjusts the the desired temperature down.



Turn On Heat

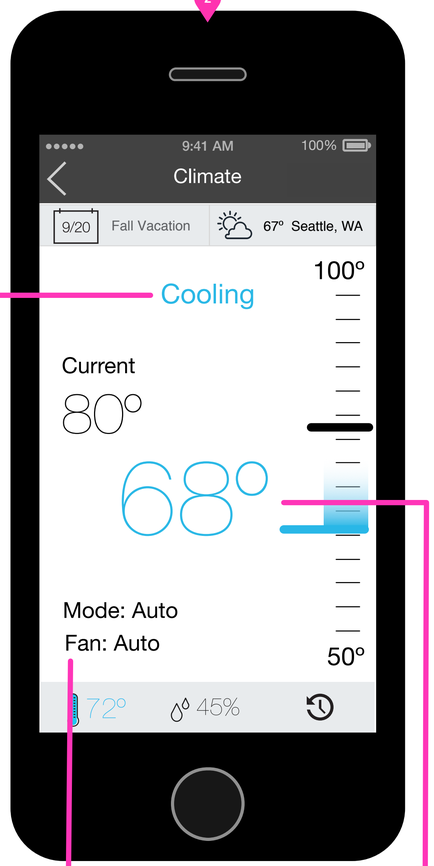
1.2

Set New Temp Until

7 : 00 PM

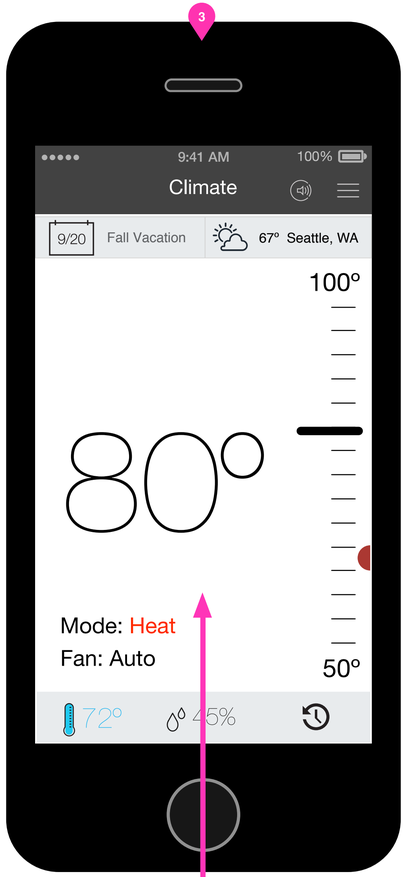
The house will either cool naturally or via air conditioning if the user elects to turn it on.

Cooling only happens if the user dragged the desired temp beyond the cool point.



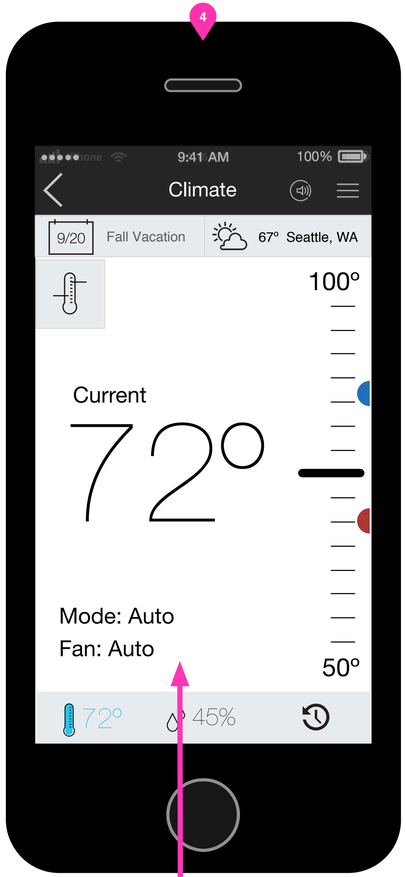
Mode changes if user elected to turn on air conditioning.

When desired temperature is reached



If Cooling was not turned on: Heat Mode

If Air Cooling was turned on: Auto Mode



Changing the Desired Temperature in Heat or Cool Mode / Single Set Point Systems

The first screen indicates that there is a singular set point system or it is only in Heat Mode for a dual set point system. Only the heat point is available. The flow described further will also be the same if the HVAC was in “Off” mode.

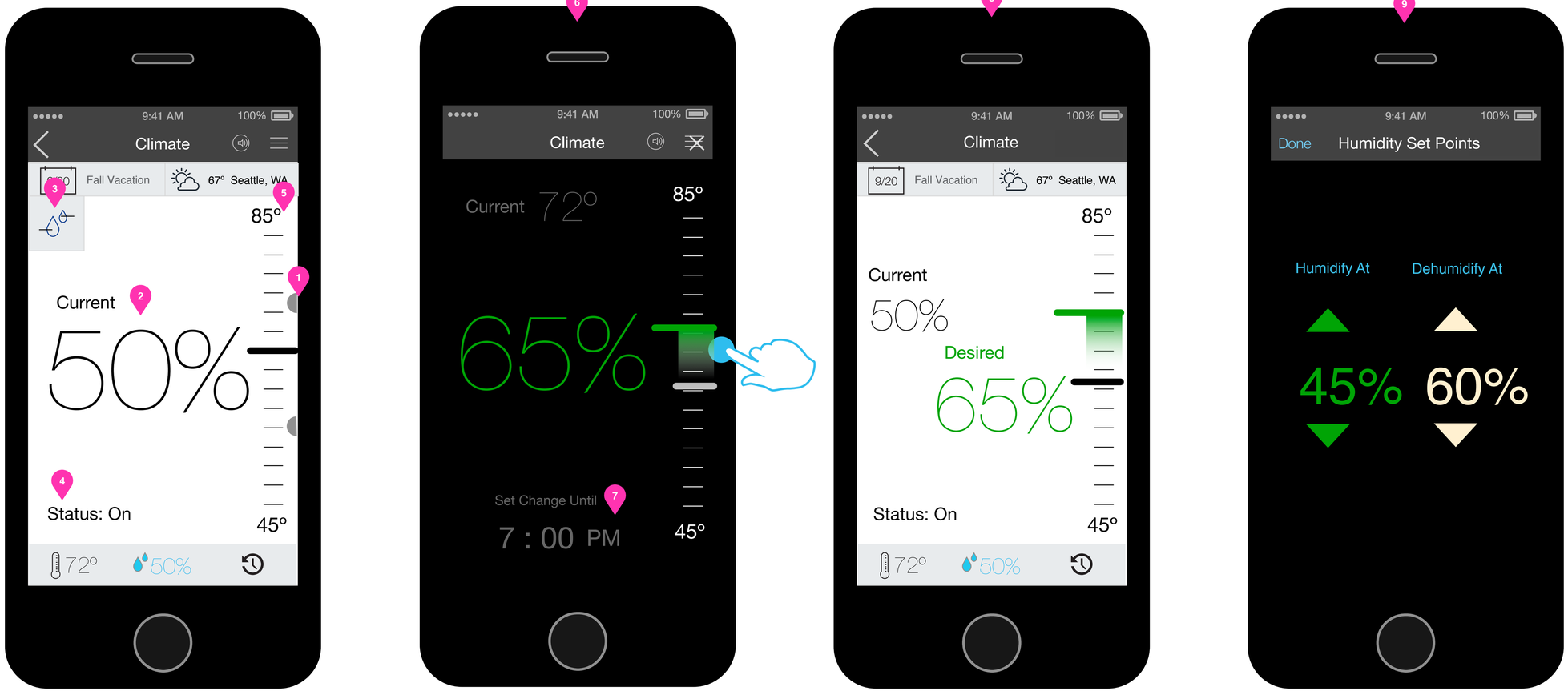
1. Suppose the user wanted to lower the temperature **while in heat mode** and they dragged the heat down significantly . The UI would adjust as illustrated in the second screen and described prior within this document. If the system has a Cool Mode available, the option to turn on the air conditioner is available (1.1) **(Need to establish the value in order to populate this button -it is somewhere outside the boundary of the set points, for instance -X below the heat point and + X above the cool point)**. The opposite would be true if the user set the desired temperature significantly higher while in cool mode. The option to ‘Set New Temp Until’ will be available if there is a schedule active (1.2).

If the user elected to turn on the air conditioner (or heater) at (1.1) the system should go into Auto mode and illustrate the desired temperature at (2) .

2. If the user elected to turn on the air conditioner the system would switch to “Auto” (2.1) mode and begin cooling.
3. If the user didn’t turn on the air conditioning, the house would cool naturally and the screen would go back to its previous state, just with a new heat point.
4. After the system ran the cooling and reached the desired temperature the system will stay in “Auto” mode and be the same as previously described for Auto mode.

Climate iPhone

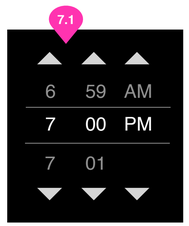
Humidity Set Points 1



Humidity Control Overview

Humidity control employs the same principles as temperature control. Whether there is a dual or single set point system, the user will be able to set the desired humidity. While the user is adjusting the desired humidity, the experience is modal. When the user is done setting the desired humidity, the set points are not visible. The desired humidity is visible until the next set point in time within the schedule, if there is one. If there is a schedule, the user can set the desired humidity until a certain time.

1. Humidity set points.
2. Current Humidity, while not in manual override.
3. Tapping this button will allow the user to set the humidity set points.
4. Status = HCL(humidity controller): (Tap-able) On, Off
5. CAN THE SCALE HERE BE DYNAMIC? + 10% from the max and -10% from the min recorded values?
6. The user is setting the desired humidity (for dual or single point systems).
7. The change described above will take effect until this time period. This can be defined by the end user via (7.1) time selection tumblers are revealed in-line to modify time settings. By default, it is the next set point within the schedule.
8. The user has adjusted the temperature manually. It will remain in this view until the time period at (7) has been reached.
9. When the user taps the button (3) they then have the ability to set the humidity set points.



Climate iPhone

History

History / Totals

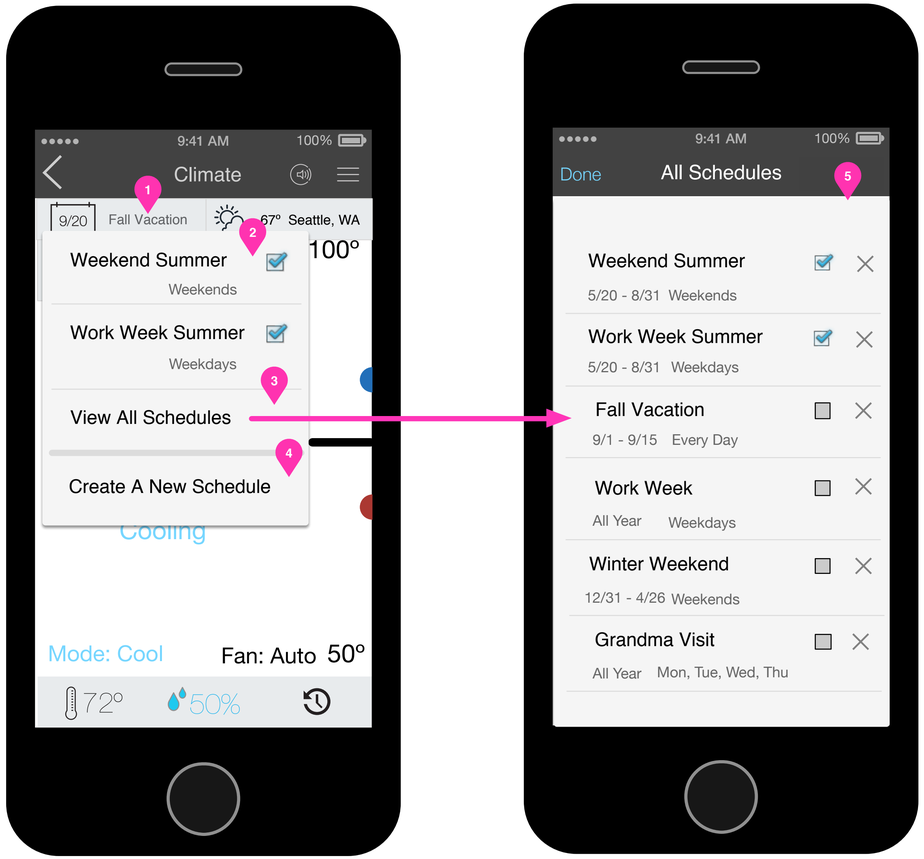
History Data has two forms. Totals, and Detailed Chart. The totals page is the first selection. The totals page indicates when the heating or cooling was on within the system over the course of one day.

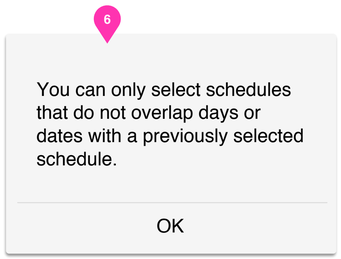
1. The user has selected the Week Chart. 7. The Week Chart will have the latest day as the last day in the chart by default, and highlighted. The date spinner will always be exactly a seven day time span.
2. The date range is indicated here. **Note: I (AH) am unsure of how far back the date selection will be able to go. -Need advice.**
3. The chart simply represents the total usage in bar graph form over the course of 24 hours. Date and day of the week are necessary.

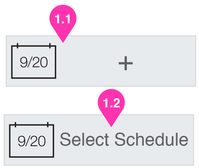
History / Detailed Chart

For the Day Chart: it should be able to rotate into landscape position. When rotated, the Y axis will expand to the full height, however since the time axis is scrollable, the hourly dimensions will be the same has represented in the landscape orientation.

1. The user has selected to view the Detailed Chart.
2. View Details will open a modal window that will allow the user to choose which data points are represented on the screen. As different data points are selected, the scale of the chart is dynamic and therefore would be expected to change.
3. Date Range is selectable here. Whatever the date range that is selected, the time resolution of the chart will be no greater or less than hourly. The user cannot select a period any less than one day. **Note: I (AH) am unsure of how far back the date selection will be able to go. -Need advice. Also should the climate schedule for this time period populate here?**
4. The chart can span only one 24 hour period, and is not expected to scroll horizontally. Days will be indicated. PM will be indicated.
5. By default the Indoor temperature will be represented here.
6. Lines charted here indicate the Heat and Cool Set Points that the end user had set. Other data will populate as expected along the scale.(5.1 + 5.2) These metrics are dynamic and represent high and low ranges for temperature and humidity.
7. Other data such as Fan, Heat, Cooling ‘On Time’ will represent simply as bars at the bottom.





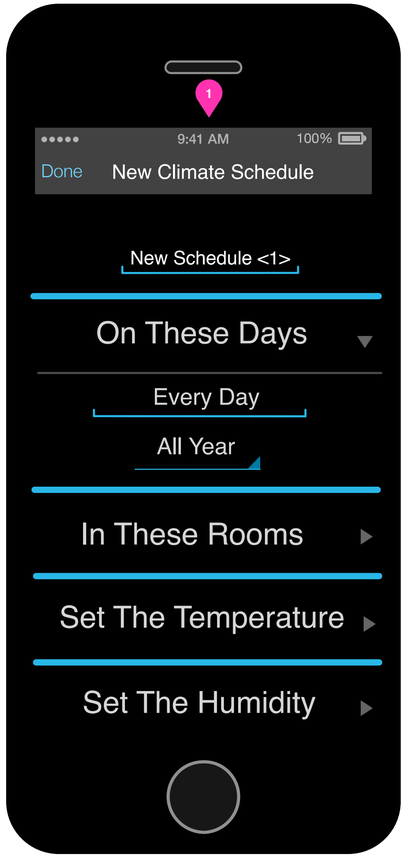


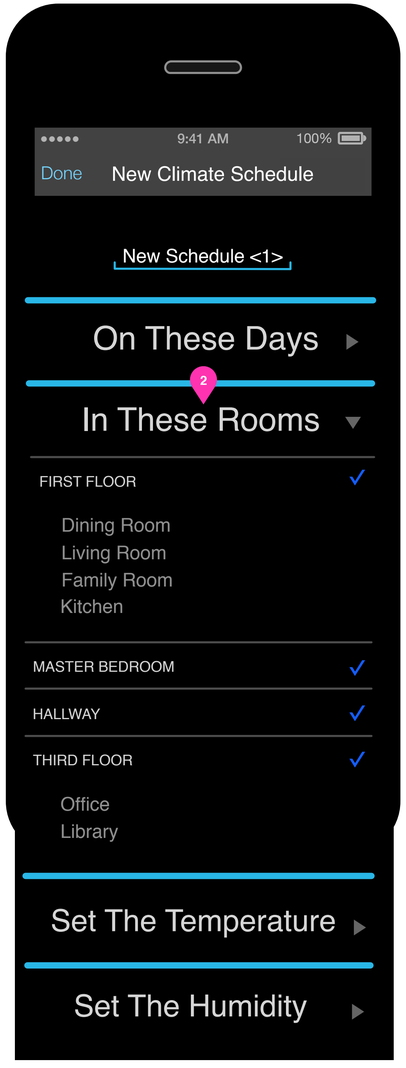
Schedule Selection, Creation and Management

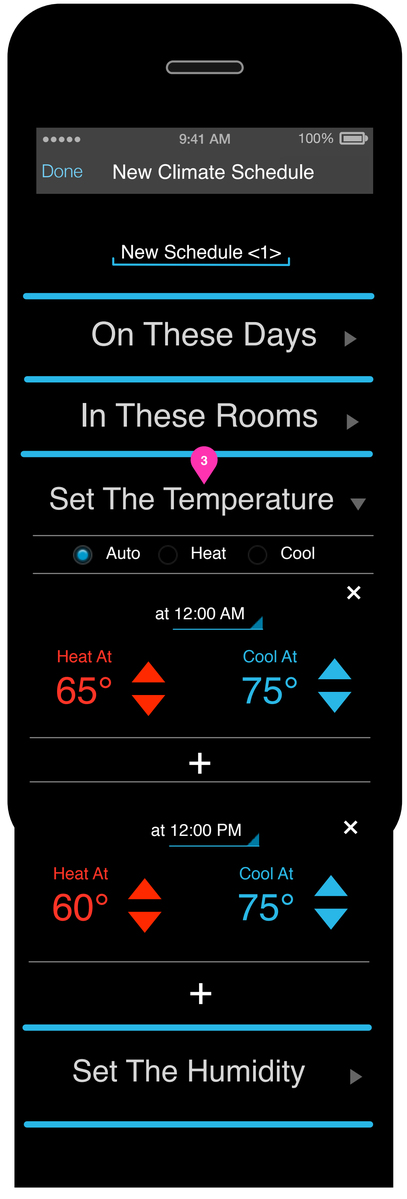
1. If there is a schedule active, it will populate here. If there are no schedules available, there will be a '+' button indicated at (1.1). If there are schedules available, but none active, the system will populate a call to action (1.2). When the user taps this button a drop down will be produced.
2. The topmost items in the drop down will be applied schedules. Only one can be running or active at a time, however schedules can be applied for specific days and date ranges. By this method, the user can *apply* different schedules throughout the year or based on different days. Applied schedules are checked. The time parameters are indicated below. Date ranges can be applied, or a schedule can be applied that runs all year. Days are also indicated.
3. Viewing All Schedules will bring the user to a page that allows them to manage schedules.
4. Creating a Schedule will bring the user to the flow described on the next page.
5. Multiple schedules can be applied.
6. If a user tries to select day / date that overlaps with a previously selected schedule, a warning will become visible to the user. They will not be able to make that selection

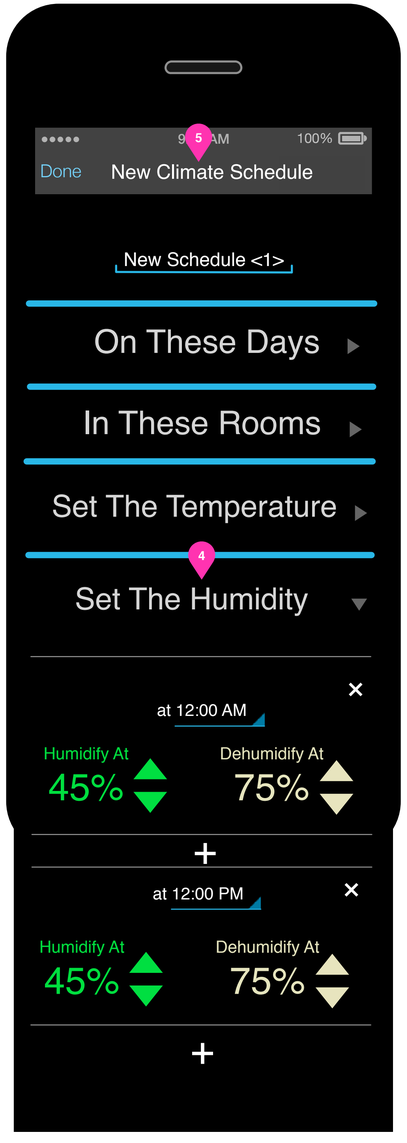
Climate iPhone

Climate Scheduling 2









Schedule Creation

The intent of this structure is to allow a user to see all parameters (time, location, temp) that construct a schedule in a simple 'sentence', and to allow them to fill in the specific settings within the 'sentence'. When the screen opens for the first time / upon new schedule creation, the only open parameter will be the time.

By default the schedule will have a name of New Schedule <number>

1. Tiime / On These Days: The user can select days (opens a modal window) and between All Year, and Date Range. Described on the next page.

2. Location / In These Rooms: HVAC Zones are represented. HVAC Zones can be a singular 'room' or a group of logical rooms. The climate settings will be applied to all rooms selected.

3 Set The Tempmerature: The user can select the mode, and then the heat and cool points. If the mode is Heat, only the heat set points will be visible. The plus button will add a set point between whatever set points exist. By default there will be one set point starting at 12:00 AM. The user can change the time. If they do so, if the new time is after or before an already created set point, it will be moved. If a user creates a new set point between two other set points, the time will be the mid-way point between. The her can remove the set point by tapping the X.

4. Setting the humidity works exact;y the same as temperature control interactions, however there is no mode to select. (HCL = off or on)

5. Camcel and Done should remain 'sticky' at the top, as in creating a new event in the google calendar app.

Schedule Creation Continued

1. When a user selects the Days field a modal window will appear that allows the user to select specific Days. When certain patterns are selected, they should abide by the format at (1.1). By default, the current day will be selected. There must be one day seleted. If the user tries to deselect a day when it is the only day selected they must not be able to.

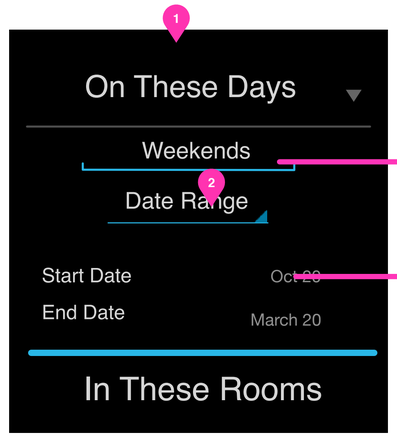
2. 'All Year' or 'Date Range' . When Date Range is selected the start date will be the current date. The end date will be month from the current date. **THOUGHT: Maybe year is not an option, and if left blank the schedule becomes perennial(?). However it works, the start date must be before the end date.**

3. When selecting rooms, there must always be one room selected. If the user tries to deselect a room and it is the only room selected, they must not be able to.

4 + 5. Rules describing the set points are covered on the previous page. When selecting the time, the default time selection tumbers would be a good solution.

6. When the user is saving the schedule, they can elect to save it to the dashboard. They will also have the ability to save and apply, or just save. If it isn't applied, it won't 'kick in' until the user does so from the View Schedules flow described previously within this document.

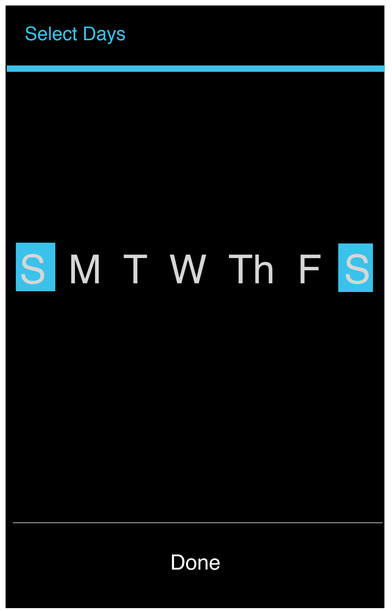
7. If the user elected to 'save and apply now', there must be a check to see if there are conflicts with rooms / dates / days from other schedules or presets. The user can elect to edit schedules from here.



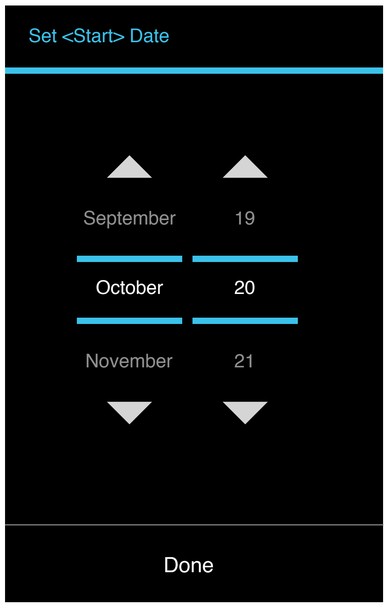
1.1 **Display of Days**

Disparate days	Mon, Tue, Wed
Singular day	Friday
Weekends	Weekends
Weekdays	Weekdays
Every day	Every Day

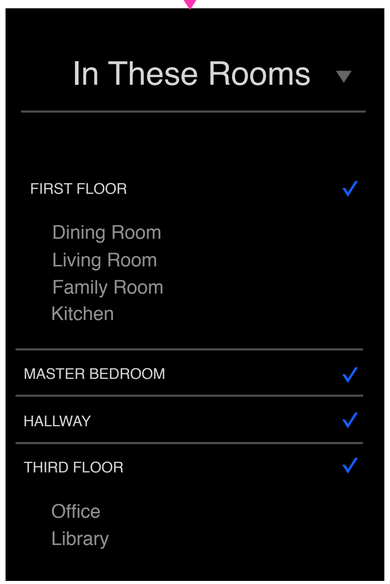
You must select at least one day.

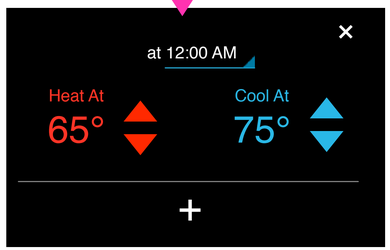


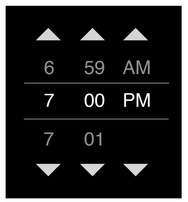
The start date must be before the end date.

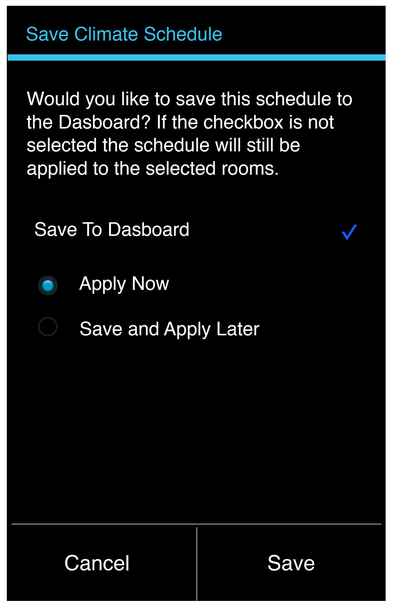


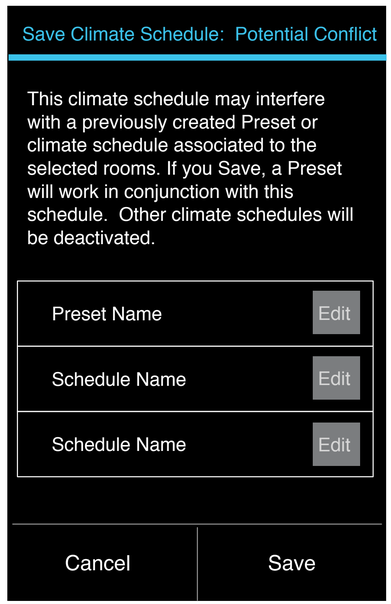
You must select at least one room.





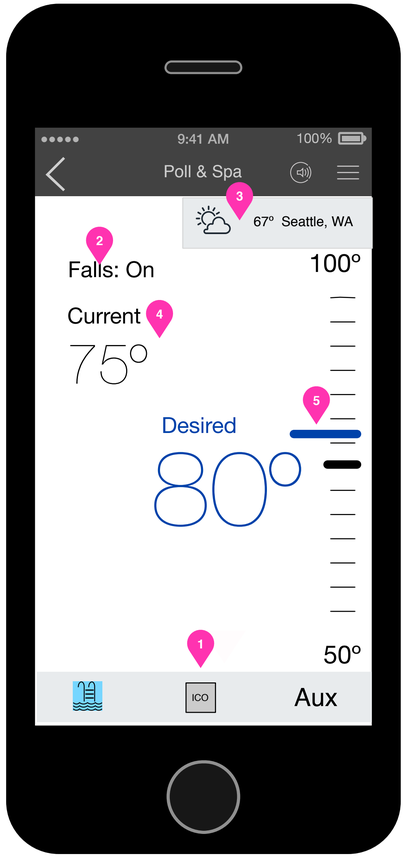


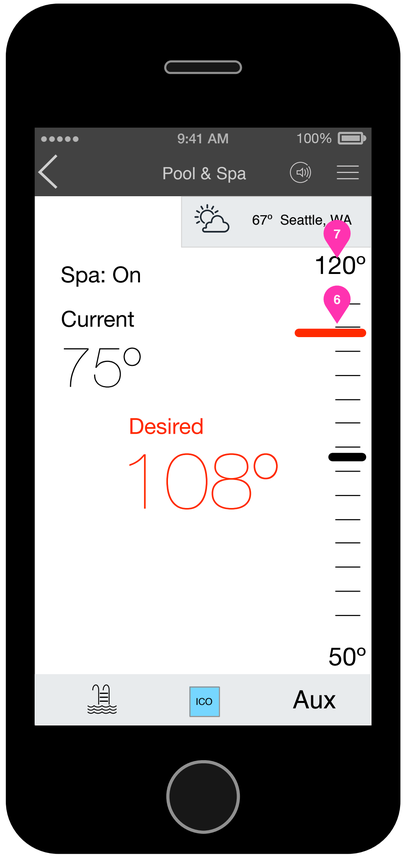


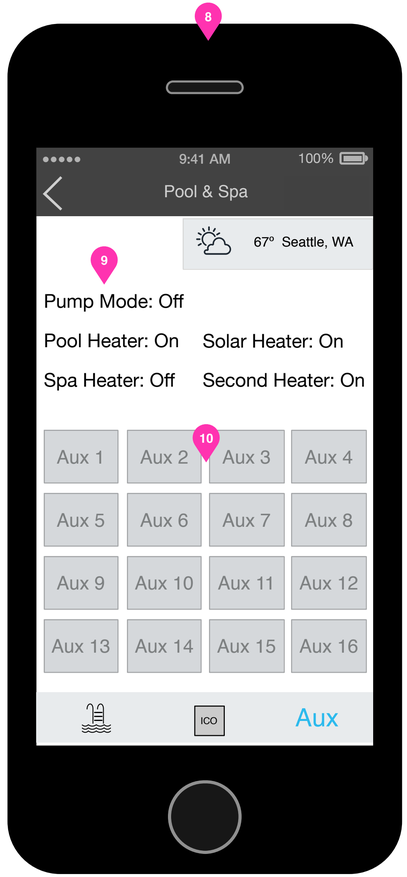


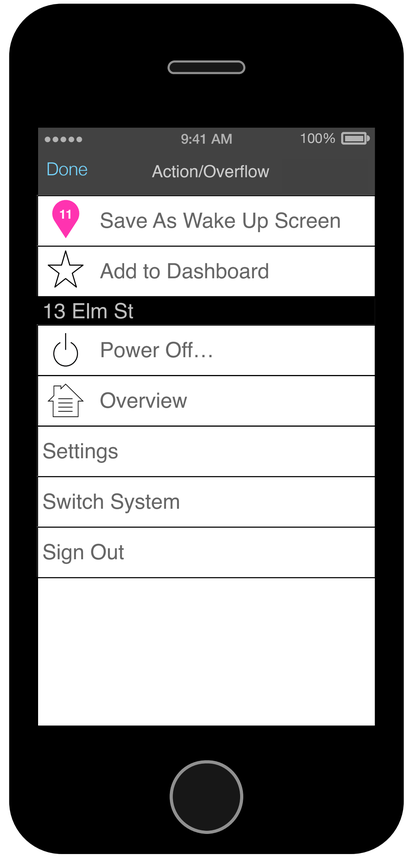
Climate iPhone

Pool & Spa









Pool & Spa

1. This services is divided into three sections Pool, Spa and Auxiliary controls. The intent of this screen is to allow the user to see the current temperature and adjust the set points and controls to the desired climate of their pool and spa ecosystem. The tabs at the bottom are dynamic, and therefore if there is no Spa, but there is a pool, the Spa tab will not populate.
2. Current modes
   Falls: (Tap-able) On, Off
   Spa: (Tap-able) On, Off
3. Weather data will populate here. **Note: We need to decide what the source is, and render icons for all permutations of weather data.**
4. Current Temperature info is read-only and not draggable.

5 + 6. The Pool Set Points: Supported profiles today allow for sending values to these systems. A draggable interface will be provided to the user to set temperature values.

7. CAN WE MAKE THIS SCALE DYNAMIC to be +10 of the max read temperature and -10 from the coolest recorded temp?
8. Auxiliary Control. This would only populate with all other controls than temperature.

Auxiliary Control Overview

The Auxiliary Control screen populates with all controls that are not temperature.

9. Pump Mode: (Tap-able)
   Pool Heater: (Tap-able)
   Spa Heater: (Tap-able)
   Solar Heater: (Tap-able)
   Second Heater: (Tap-able)
10. Auxiliary Buttons will populate dynamically and will have functionality defined by the integrator and will populate a name defined by the integrator.
11. The user can save this as a Wake Up screen, Save the widget for this page to the dashboard.