



Smart HVAC Control

Smart Home Automation
for Multifamily



PointCentral[®]

Enterprise Property Automation

powered by  **ALARM.COM**[®]

Smart HVAC Control

Smart Apartment Control is a subset of the world-wide Internet of Things (IoT) movement. New products are continually being introduced to allow the remote control of components in a apartment or apartment. PointCentral is the property management-focused division of Alarm.com, the largest Smart Apartment provider in the world. PointCentral's Property Automation system is based around a cellular gateway installed in the apartment. This device utilizes a cellular radio that communicates securely with the web, and allows online control of a vacant unit.

This edition of "Smart Apartment for Multifamily" focuses on Smart HVAC Control.

HVAC is an abbreviation for Heating, Ventilation and Air Conditioning. Most units have them and it is the most expensive appliance in the property. The investment in an HVAC system can run into the tens of thousands of dollars, and the nuances of an HVAC system are often misunderstood by the average consumer (particularly residents). Therefore, it makes sense to add some level of control to the HVAC system to prevent misuse, abuse and extend the life of this costly appliance.

What is Smart HVAC Control?

Smart HVAC Control is adding the ability to monitor and control Smart Thermostats remotely. Adding schedules, defining acceptable set-point ranges, enabling extreme temperature notifications and monitoring humidity are all components of the PointCentral Smart HVAC Control.

How Does Smart HVAC Control Help you?

Establish acceptable set-point ranges to avoid damage.

Some people believe that if you turn an air conditioner to 60 degrees, the apartment will cool faster. They don't understand that the property cools at the same rate (typically 1 to 2 degrees per hour) regardless of how low the set-point is. So, turning a thermostat to 60 degrees just means the HVAC system is going to run longer. And if it is left at 60 degrees, often an air conditioner will freeze up resulting in thousands of dollars in repair costs.

Smart Thermostat control systems allow your property manager to define a minimum cooling set-point and a maximum heating set-point. This can be done through the PointCentral web portal and wirelessly communicated to the thermostat in your apartment.

VACANT CONFIGURATION

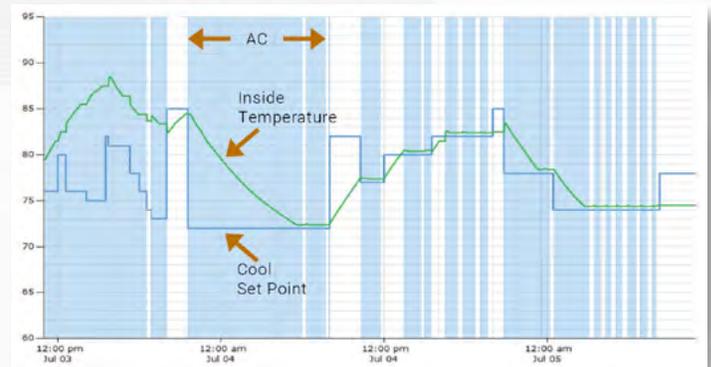
MINIMUM COOL		MAXIMUM HEAT	
Heat Setpoint	45 °F	79 °F	
Cool Setpoint	72 °F	84 °F	
Swing	0.5 °F		
Overshoot	0 °F		
Humidity Setpoint	<input checked="" type="checkbox"/> Maximum: 75 %	<input type="checkbox"/> Minimum: %	
Humidity Differential	3 °F		

By defining minimum cooling and maximum heating set-points for occupied apartments, the resident will be restricted as to how high or low they can adjust the thermostat.

HVAC Analytics identifies small problems before they become big ones.

PointCentral smart thermostats are continually communicating securely with the web. Data points such as current set-point, actual room temperature and HVAC mode (heating/cooling) are tracked on a per-apartment basis in the PointCentral cloud. Algorithms have been developed that analyze this data in conjunction with the apartment address and outside temperature to determine if an HVAC system is operating properly. In a situation where the system is not running efficiently, a notification is sent to the property manager.

This notification allows the property manager to schedule maintenance before it becomes an emergency, saving significant costs.

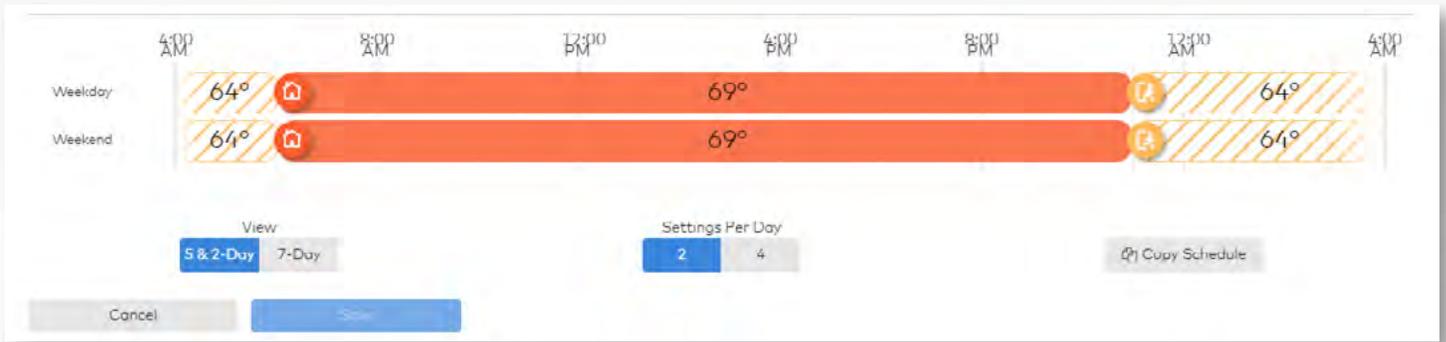


The above graph allows a property manager to see what the thermostat settings are should a resident call and complain about the heating or cooling system.

By looking at the graph, an assessment can be made whether an HVAC system needs maintenance or is responding appropriately given the outside temperature.

Utilize schedules for vacant apartments.

As the Apartment manager, you're paying the energy bill when an apartment goes vacant. While good intentioned, many vendors, showing agents and prospective residents will adjust a thermostat to a comfort setting (cooler in the summer, warmer in the winter) while working in or viewing your apartment. If they forget to return the thermostat to an energy-saving mode, you spend money cooling or heating an empty unit.



With web-enabled schedules (see graphic above) added to your thermostat, you can be assured that at the end of the day, your thermostat will be reset to the energy-saving mode. By doing so, you eliminate the risk of excessively cooling or heating a vacant apartment, and save the wear and tear on your HVAC system.

Monitor and Control Humidity. High humidity can result in significant property damage and loss of comfort. The PointCentral smart thermostat humidity monitoring capability can automatically adjust the humidity levels in the apartment by running the air conditioning when humidity thresholds are exceeded.

Will My Residents Benefit or Care?

Residents can utilize HVAC schedules to save money on energy bills. Just as utilizing online schedules during vacancy will save you money, they will also allow your residents to save money on their energy bills.

ENERGY STAR® has confirmed savings of 9% to 16% when heating



and 15% to 23% when cooling. These savings, along with the convenience of controlling the thermostat through a mobile app, will provide the incentive for residents to pay a monthly fee for this service.



Wakefield Research showed that 86% of millennials and 65% of baby boomers are willing to pay more for a rental unit outfitted with smart apartment devices.

PointCentral, headquartered in Portland, Oregon, and a subsidiary of Alarm.com, designs, manufactures and markets enterprise-grade Smart Home solutions for the vacation rental, residential, and multifamily property management markets. PointCentral solutions provide customers in these markets with the ability to monitor and control smart home technology across all properties in their inventory over a best-in-class secure and reliable network – reducing risk, improving security, controlling assets, reducing energy costs and improving guest/tenant satisfaction.



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