Apple alums give home thermostats a new twist

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Nest Labs, a startup founded by former Apple engineers, hopes to do for home thermostats what their former employer did for smartphones -- make them hip and intuitive.

The startup came out of stealth mode on Tuesday to unveil the Learning Thermostat, which can be taught to maintain its owners' precise comfort level after a week or less of use, saving energy lost through manual adjustment.

"We created the world's first learning thermostat," Nest vice president of marketing Erik Charlton said while giving AFP an early look at the device.

"You interact with it for a few days and it programs itself to your schedule," he said. "You don't have to touch it again."

Nest co-founder Tony Fadell is a former senior vice president of the Apple division behind iPods and iPhones. Fellow co-founder Matt Rogers was a lead iPod software engineer working with Fadell at Apple.

Rounding out the staff is Nest's vice president of technology Yoky Matsuoka, once head of innovations at Google, and vice president of operations Johnny Gilmore, formerly a general manager at Sling Media.

"Ten million thermostats are sold every year and there has been little innovation since the 1950s," said Charlton, who headed computer mouse

marketing at [Logitech](#) before joining Nest. "We are changing that."

The company began taking US orders online at nest.com for the thermostats, which were priced at $249 each. The devices begin shipping in November.

"We believe this will pay for itself within a year," Charlton said.

Inspiration for Nest came when Fadell was building an environmentally-friendly home in Northern California and discovered that thermostat technology was stuck in a bygone era.

"Tony has always had green interests," Charlton said. "He knew we could do better than what was out there and pulled together a team to do it."

The sleek, disk-shaped thermostat is controlled by turning an outer ring. A black display screen showing the temperature turns blue to indicate cooling or red to show rooms are being heated.

Machine learning built into thermostats lets them adapt to patterns in homes within a week of regular use. The more users adjust their Nest thermostats, the more precisely the devices learn preferred comfort levels in homes.

"There is an enormous amount of computing power built into it," Charlton said.

Sensors in the thermostat assess whether lights are on or there is movement, determining when people are away and then shifting to energy-saving settings.

A green leaf appears on-screen to prompt users to save energy and money by altering their usual thermometer setting by a barely noticeable

degree.

Learning Thermostats also tell people how long it will take to get rooms to desired temperatures, letting them assess whether they will be home long enough to justify the process.

"It turns out that the thermostat controls half the energy in the home," Charlton said.

Nest thermostats have Wi-Fi connectivity to link up to the Internet, and a free iPhone application lets people manage home climates from afar or mine data about energy used for heating or cooling.

"They are iPhone guys, so we had to have a cool app for it," Charlton said.

An application to connect with Android-powered mobile gadgets will be released a couple of weeks after Learning Thermostats launch.

Nest is based in the Northern California city of Palo Alto and began the thermostat project 18 months ago. The startup has a team of about 100 people.

The roster of investors in the startup includes Silicon Valley heavyweights Google Ventures and Kleiner Perkins Caufield & Byers.

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