INTRODUCING AUTOMATION . . .

. . . TO WOOD STOVES

SMART STOVE™

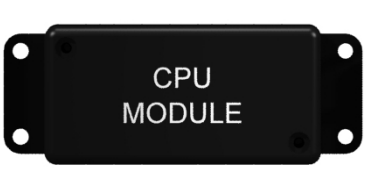
from **Inven Inc.**

AN INTEGRATED CONTROL SYSTEM FOR WOOD STOVES
CREATING AN AUTOMATED COMBUSTION PROCESS

CONTROLS CUSTOMIZED FOR YOUR APPLICATION

BENEFITS

Safety: A clean burning wood fire is a beautiful thing to behold. However, it can also be a very dangerous thing to have in your home. SmartStove has been developed to ensure safety at all times. The standard battery backup system continues to maintain draft control even during a power loss of up to 24 hours. If the stove door is left ajar, creating a situation where draft control is impossible, an over-temperature audible alert will bring attention to the problem. If the battery backup begins to expire, the system shuts down in a fail-safe manner by closing the draft control before going to sleep.
Convenience: SmartStove brings "Load and Go" convenience to heating with wood. Starting with a hot bed of coals from a prior fire, the system allows a user to load the firebox for the night, and then immediately head off to bed without any need to wait around for an hour or more for the fire to reach operating temperature in order to set the draft and fan speed for the rest of the night.
Efficiency: A wood fire is a very dynamic process that changes dramatically throughout its duration. Most people will set the draft and fan speeds twice during a fire: first, to start the fire, and second, when the fire is up to temperature (unless they forget). Due to the dynamic nature of a wood fire, this means that the settings for the stove will be optimum for two short periods during the entire fire. The SmartStove maintains optimum efficiency settings throughout the combustion process.
Cleaner Burn: A clean burning wood fire means a cleaner environment and little or no creosote build up in the chimney. Less creosote means reduced risk of a chimney fire.
Flexibility: The SmartStove system is flash programmable and is designed to be optimized for every stove product into which it is integrated. Every stove is different, so this system is designed to be flexible enough to meet the needs of every application.
Modular: The modular system configuration enables stove manufacturers to offer multiple price-points in their product line, by omitting optional modules. For example, if a free standing stove does not include a circulating fan, the fan control module can be omitted, reducing the cost. Modules can be added later for additional functionality.



SYSTEM OPTIONS

CPU Module and one control are required. With no user interface, the system operates in one mode for the controls that are attached.
Optional: Draft Actuator for draft control.
Optional: Fan Module for circulator fan control.
Optional: User Interface for Fire-Minder, operating mode selection, status display, configurability, and manual fan speed.
Modules can be selected for the particular application and price point.
The CPU auto detects the attached modules and adapts accordingly.

FEATURES

User Interface communicates with the main control using a bidirectional wireless link allowing the interface to be placed anywhere within a home.
Modular configuration.
Combustion draft control.
Heat exchange fan speed control.
Measures stove case temperature.
Multiple operating modes provide varying degrees of heat, with User Interface module.
Computer-driven.
Flash programmable and reprogrammable.
Adaptive Auto calibration feature enables the system to discover the amount of travel in the stove's draft control and operate within those constraints.
Standard battery backup will keep draft control running for up to 24 hours during a power outage.
Over-temperature alert if door is left partially open resulting in an uncontrolled draft condition.
Fire-Minder alert, when user enabled, will sound an audible alert when it is time to add wood.

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