

# CARAMOOR Center for Music and the Arts

Katonah N.Y.



## MODEL:

**ENERGUARD Custom**  
**20 Wireless Space Temperature Sensors,**  
**Two Boiler Lead/Lag Heating Control**  
**10 Zone Control Valves**

## CARAMOOR CENTER for MUSIC and

**the ARTS** is the legacy of Walter and Lucie Rosen, who established the estate and built a great house as its centerpiece, filling it with treasures collected on their travels around the world.

The heating plant was upgraded in 2003 and included the replacement of the original boilers with new energy efficient hot water boilers and the ENERGUARD together with the addition of 10 new ( 2" ) fully modulating proportional zone control valves. Delicate furnishings in the music museum required a heating control system that would offer the tightest control of space temperatures. Running new wires to wall mounted thermostats was not possible because the walls and wall paper through out the mansion are of historical value.

The ENERGUARD with wireless temperature sensors was the only solution. The boilers are started and stopped under command of the ENERGUARD. The lead boiler is rotated weekly to ensure even run time. If the Lead Boiler fails the lag boiler is commanded to start.

Hot water is maintained in the heating plant at 170 degs during the winter and a 6" three way modulating control vale under command of the ENERGUARD resets the discharge water temperature from the plant based on space temperatures. Hotter temperature water is circulated to the facility when the space temperatures are reporting cold temperatures. As the building temperatures rise the discharge water temperature is lowered. Outside air temperature is not taken in to account to prevent overheating.

Two wireless temperature are located in each zone and are averaged together. When the zone is cold the 3 way valve is commanded to "open" to provide heat. When the zone is satisfied the valve is commanded closed.



### *Caramoor Mansion*

149 Girdle Ridge Road  
Katonah, NY 10536

## HIGHLIGHTS:

- \* Reduced Fuel Cost by 22%
- \* Control 2 Burner Lead Lag
- \* 10 Riser Zone Valves
- \* 20 Wireless Temperature Sensors
- \* Domestic Hot Water Monitored
- \* PC With Color Graphics
- \* Inter-Net Connection
- \* Password Protected
- \* Alarms\Exception Reports
- \* P.C. Color Graphics
- Historical Trending
- XY Trend Plot Of All Variables

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**BOILER CONTROL \* HVAC CONTROL \* HEAT-MASTER™ \* ENERGUARD™ \* WIRELESS TEMPERATURE SENSORS**  
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