

PRECISE TEMPERATURE CONTROL IS THE KEY TO PROFITABILITY

Pennsylvania Egg Producer Protects Laying Hens with GUARD-IT Autodialers

A large egg producer in Pennsylvania recently installed RACO GUARD-IT Autodialers to monitor their flock of 1.5 million chickens, which produce a remarkable 1.2 million eggs per day.

These numbers are typical in this high volume industry that is worth 4.5 billion dollars and produces 253 million laying hens a year (for 1997, and projected to 260 million for 1998) in the United States. In this business environment, control of variables such as temperature and feed consumption becomes a very serious and critical factor, and may be the only way to stay profitable.

Feed is the most expensive component in egg production, and is reported to be 65-70% of the cost associated in raising laying hens. Controlling how much a producer's birds eat determines whether the producer is profitable or not.

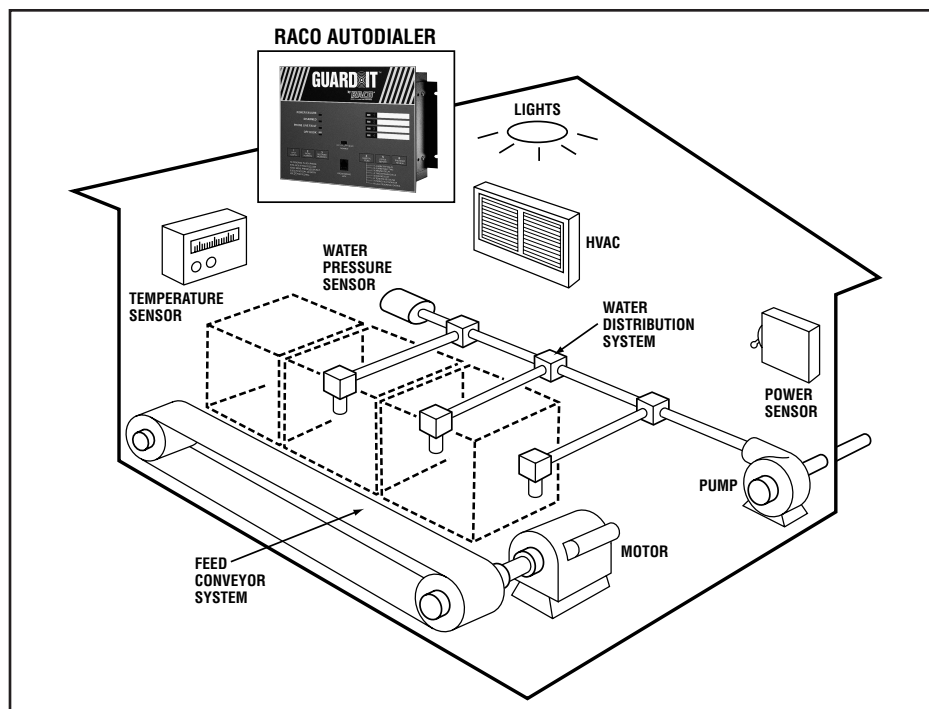
Science has figured out that temperature determines the amount of food consumed by chickens. Food consumption, in turn, controls the quality and size of the egg. Within practical limits, the higher the temperature, the greater the food consumption. On the other hand, the birds must eat enough to maintain a desired egg quality and size.

To strike a balance between food consumption and egg quality and size, it has been determined that the opti-

mum temperature of a hen house should be 85° Fahrenheit. If the temperature varies upward, even just a small fraction of 5 degrees, a chicken will eat too much feed. If it goes down, the bird will not eat enough and egg quality and size will be degraded.

Being able to control this very critical temperature envelope is the life-line of the producer from a profitability standpoint. To ensure precise control,

a quality alarm monitoring system was needed. The company initially installed RACO GUARD-IT systems at three of their hen houses to monitor temperature, drinking water pressure, and electrical power for the automatic feeders, HVAC systems, water pumps, and lights. The GUARD-IT autodialers were set to provide around-the-clock protection for the flock—24 hours a day, 7 days a week, 365 days a year.



The RACO Autodialers monitor temperature, power on/off, and water pressure. They report an alarm condition if the temperature goes above a high setpoint or below a low setpoint, loss of pressure in the water distribution system, and loss of power to the air ventilation systems, water pumps, and feed conveyor motors.

The most critical alarm monitoring function is hen house temperature. Typically, the autodialer would be programmed to report an alarm condition if the temperature went above a high setpoint or below a low setpoint. The autodialers also report an alarm if there were a loss of power or loss of water pressure. The autodialer itself has battery backup so that it will function if power goes out.

Managers are automatically notified by an alarm if any of the monitored conditions vary from the programmed tolerances. Upon detection of an alarm condition, GUARD-IT automatically calls a list of 8 pre-programmed phone numbers, calling each number until it gets an acknowledgement. When a connection is made, the system reports the station identity and the problem in the form of a digitally pre-recorded voice message.

A GUARD-IT system can call or be called over the standard landline or cellular telephone networks. It can report to a computer or call standard phones, cellular phones, numeric or voice pagers, or voice mail systems. And at any time, the user can call in for a status report from any remote phone. A GUARD-IT system is field programmable by the user at the system's control panel via a standard touch-tone

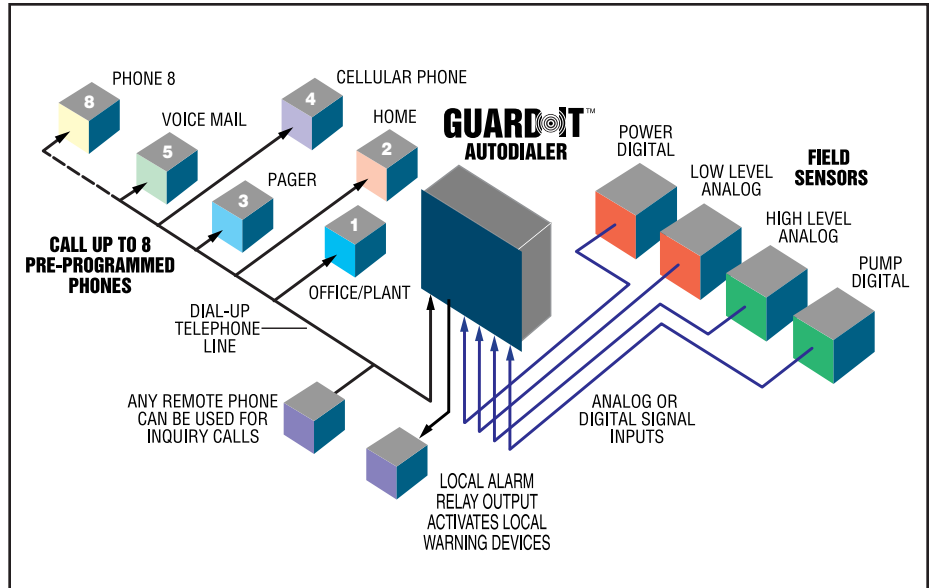
phone handset. GUARD-IT systems sense digital inputs and/or analog signals from remote facilities. They accept information coming from level and temperature sensors, float switches, flow meters, pumps, compressors, or other devices being monitored. If the information indicates an alarm condition, the autodialer starts its calling sequence.

"We chose GUARD-IT over other brands because it is easy to program, not only the first time through, but

every time we have to change the phone numbers and calling order," said a spokesperson for the producer.

"RACO's autodialers have proven to be cost-effective, and we plan to purchase more monitors to encompass all of our hen houses within the next year."

RACO Autodialers also have an enviable reputation for reliability. This, together with ease of operation, makes RACO the ideal choice for a wide range of monitoring and alarm reporting applications.



Guard-It Systems have four inputs which can be configured for either analog or digital sensing. The system can call up to eight preprogrammed phone numbers over the standard dial-up telephone and cellular networks.

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REMOTE ALARMS AND CONTROLS

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