



# Farmstead Energy Improvement

## (Controllers in Poultry Houses)

Louisiana Job Sheet No. LA374E



House Environmental Controller

### Definition

There are really two basic reasons for putting controllers in chicken houses. The first is to provide a more consistent environment for the chickens at as economical a cost as possible. The other major reason is to make controlling the environment a more manageable job.

### General Information

A properly designed monitoring and control system should be capable of maintaining preset environmental conditions in the building. Baffles are usually controlled by motor controllers, fans may be either on-off or variable speed, heaters require on-off control, and evaporative coolers may require water supply to be automatically turned on and off. Static pressure is usually controlled by regulation the air inlets on negative pressure houses or the air outlets on positive pressure houses. Some air quality factors such as temperature are essential to monitor and control. Others such as ammonia or carbon dioxide may be expensive to monitor (although periodic sampling may be desirable), and they may be controlled indirectly. Relative humidity, although a very important parameter in terms of broiler performance, dust control, and growth of microorganisms, is typically not monitored or controlled in the U.S. where most

poultry houses use curtains and dirt floors. In Western Europe where the houses are typically fully enclosed and often have concrete floors, monitoring and control is usually done with computer-based control systems which monitor and control temperature, humidity, static pressure, and lights. Management must control the benefits, risks and costs associated with maintaining good environmental conditions inside poultry buildings. Different building designs, geographical regions and poultry management practices determine the air quality factors that need to be considered and that are practical to deal with. Environmental control can be complicated at times by competing objectives. For example, it is desirable to heat a pullet house to 90°F and to provide fresh air. In cold weather, levels of ammonia and carbon dioxide might reach harmful levels if the control system does not provide a certain level of minimum ventilation.

### Installation

Installations should be completed by qualified individuals with knowledge of the industry and result in a safe, professionally finished job. Install in accordance with manufacturer recommendations. All federal, state and local codes shall be followed.

### Operation and Maintenance

Adjust settings as needed to obtain the desired results. Controllers must be kept clean with routine maintenance, periodically check wiring and connections. Replace or repair system components as appropriate to ensure proper functioning. Replace missing or damaged safety decals immediately. Follow recommended precautions and safe operating practices.

### References

NRCS AL, LA Conservation Practice Standard, Code 374 – Farmstead Energy Improvement

University of Kentucky Ag Extension

Kentucky Poultry Federation  
Alabama Cooperative Extension, Auburn AL  
thePoultrysite.com

### Controllers

USDA Program Participant: \_\_\_\_\_ Parish: \_\_\_\_\_ Date: \_\_\_\_\_

Field Office: \_\_\_\_\_ Number of Houses: \_\_\_\_\_

Farm No.: \_\_\_\_\_ Tract No.: \_\_\_\_\_ Assisted By: *(field office personnel)* \_\_\_\_\_

**House No(s).** \_\_\_\_\_

Type Controller: \_\_\_\_\_, Number: \_\_\_\_\_

Are all houses the same ( ) yes ( ) no. If no, make same calculations for each house.

**Controller (all houses):**

Planned

Applied

Type Controller: \_\_\_\_\_, No. \_\_\_\_\_ Type Controller: \_\_\_\_\_, No. \_\_\_\_\_

Type Controller: \_\_\_\_\_, No. \_\_\_\_\_ Type Controller: \_\_\_\_\_, No. \_\_\_\_\_

Type Controller: \_\_\_\_\_, No. \_\_\_\_\_ Type Controller: \_\_\_\_\_, No. \_\_\_\_\_

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**USDA Program Participant Certification:**

I certify that I am not receiving other federal funds for controllers and to the best of my knowledge all local and state building codes have been followed, plumbing and electrical codes have been followed as well as manufacturer and/or suppliers requirements.(attach certification from certified installer)

\_\_\_\_\_  
Name Date

**NRCS Acceptance:**

All controllers installed through EQIP on this farm were installed per NRCS standards/specifications and the Accredited Energy Audit. (Photographs of installation, label and manufacturer’s information are on file)

\_\_\_\_\_  
Name Date