


Infinite Switch-Field Calibration

Part #8425-65 for Electric Broiler Models: E2412, E2424, E2436

 **CAUTION:** Read and understand this service bulletin thoroughly before starting. Only a trained, experienced service technician should attempt this service procedure.

This guide will serve as an instruction of how to verify the calibration of the 8425-65 EmberGlo Infinite Switch and how to adjust its duty cycle if needed. Please read through all of the instructions prior to testing.

1. Turn off the power to the E24 electric broiler and fully disconnect the power cord from the wall. If the broiler is hard wired, turn off the circuits to the broiler and disconnect the power leads to the broiler.
Ensure the broiler is completely cool before proceeding.
2. Remove the hopper from the broiler.
3. Remove the electrical cover plate(s) from the broiler. Set the screws to the side.
 - a. The E2412 and E2436 have 1 cover plate. The E2424 has 2 cover plates.
4. Reconnect power to the broiler and confirm it powers back on.
5. Turn the knob of one of the infinite switches on to power level 4.
6. Let the grate heat up for 2 minutes.
7. Using a stopwatch, record the time of the ON/OFF cycles for 3 power cycles. Once complete, turn the knob back to power level 0.
 - a. You can tell if the power is on or off by looking at the relay. If its tab is flush with the relay, it is on. If its tab protrudes above the relay, it is off.
8. Calculate the duty cycle of the infinite switch that was tested. At power level 4, the duty cycle should be between 19-36%.
 - a. To calculate the duty cycle, average the ON times of 3 cycles and the OFF times of 3 cycles. The duty cycle equals the average ON time divided by the sum of the average ON time and average OFF time. See the equation below:

$$\text{duty cycle} = \frac{\text{average ON time}}{(\text{average ON time} + \text{average OFF time})} \times 100\%$$

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AVOID ERROR IN PARTS SELECTION. When ordering use complete EmberGlo Part Number and Description. Furnish the Product Model Number, Bill of Material Number and Serial Number (if available) from the specification plate found on the product.

IMPORTANT: Availability of parts as well as specifications are subject to change without notice. Please consult factory for item availability.

SAFETY INFORMATION TERMS: The following terms are used to identify hazards, safety precaution of special notations and have standard meanings throughout this manual. They are printed in all capital letters using a bold type face as shown below, and preceded by the exclamation mark symbol. When you see the safety alert symbol and one of the safety information terms as shown below, be aware of the hazard potential.



DANGER: Identifies the most serious hazards which will result in severe personal injury or death.
WARNING: Signifies a hazard that could result in personal injury or death.
CAUTION: Identifies unsafe practices which would result in minor personal injury or product and property damage.



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9. If the infinite switch is outside of the 19-36% duty cycle range, there is a 5/64" adjustment screw on the face of the infinite switch. This can be screwed in or out to increase or decrease the duty cycle. Only adjust this screw in small increments then check results. **Before you adjust the infinite switch, ensure the broiler is disconnected from the power and cool per step 1.** Remove the knob on the infinite switch and set to the side.
 - a. If the duty cycle is too low, use an Allen key to screw in the screw clockwise no more than 1/4 turn.
 - b. If the duty cycle is too high, use an Allen key to screw out the screw counterclockwise no more than 1/4 turn.
10. Repeat steps 4-9 for each infinite switch until all meet the 19-36% duty cycle range.
11. Reattach the knob(s) to the infinite switch(es) and reinstall the electrical cover plate(s) and hopper once testing is complete. Ensure power is connected to the broiler.

Please contact EmberGlo Sales (sales@emberglo.com) with any questions about this process.

