# HOVA-BATOR

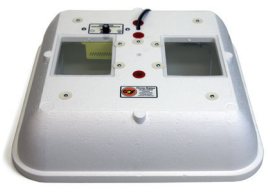
## ELECTRONIC THERMOSTAT CIRCULATED AIR MODEL 2362E

MADE IN USA



## PARTS

Unpack the incubator from box. Check for the components listed below.



Top with heat element, fan, pilot light, thermostat, & vent plugs installed.



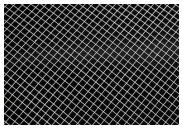
Plastic Liner



Hova-Bator Bottom



Owl Clips x 4

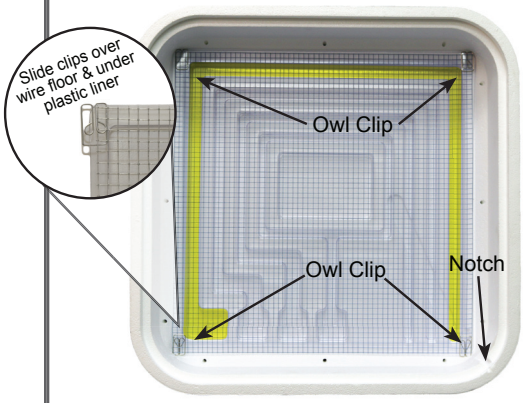


Wire Floor



1825 Thermometer

## SETUP




Unpack the incubator from the box and set aside the thermometer and wire floor. Remove the top half from the bottom. Attach **Wire Floor** to **Plastic Liner** with **Owl Clips** then place floor and liner in **Hova-Bator Bottom**. Arrange the plastic floor as shown using the water troughs and turner power cord notch as reference. In most climates, fill trough #1 (highlighted in yellow) with water. Surface area, not depth, determines humidity; refill trough as necessary to prevent it from drying out.

NOTICE: Humidity troughs should be filled with cool tap water. Careful to avoid spilling excess water outside of trough as it will effect humidity. Humidity should be between 45 and 55% for SETTING and 55 to 65% for HATCHING. Setting the humidity above 65% is not recommended as it may cause condensation to form on the windows and can decrease hatch percentage.

Plug the cord set into the appropriate wall socket. The fan should then run and the small heat indicator light on the thermostat box should be lit. Allow the incubator to warm up for one hour. **When the light begins blinking regularly, the incubator is nearing its set point.**

# LOCATION

An Incubator is designed to bring normal room temperature to the desired temperature. Room temperture of 60°F. or below will reduce the temperature in the incubator. Room temperature change of 10°F. or more will change temperature in incubator & is more pronounced below a temperature of 70°F. The location of the machine is important to successful operation. A room temperature from 70° to 80°F. is ideal, and fresh air without drafts is necessary. Be sure no direct sunlight strikes the incubator and that it sets level. A consistant room temperature within a few degrees is best.

# OPERATION

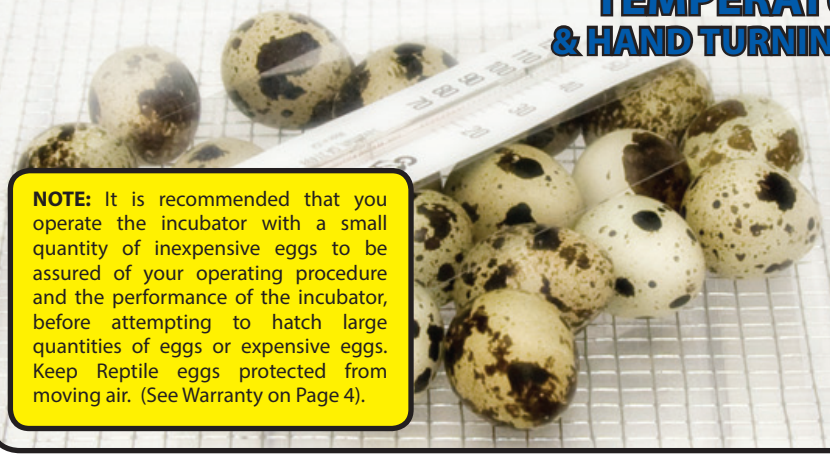
Reference the thermometer inside the incubator. If you desire more heat, (warmer) then turn the dial counter-clockwise (to the left). If you desire less heat, (cooler) then turn the dial clockwise (to the right). Note: Turn the dial in small increments to "fine tune" the temperature inside the incubator. It is a good idea to monitor the temperature frequently to ensure you're maintaining the desired temperature.

LOW RANGE SELECTOR SWITCH — Use a small screwdriver or similar tool to move switch in order to operate in the 82° to 92°F range. (Not used for bird eggs)




# TEMPERATURE & HAND TURNING EGGS



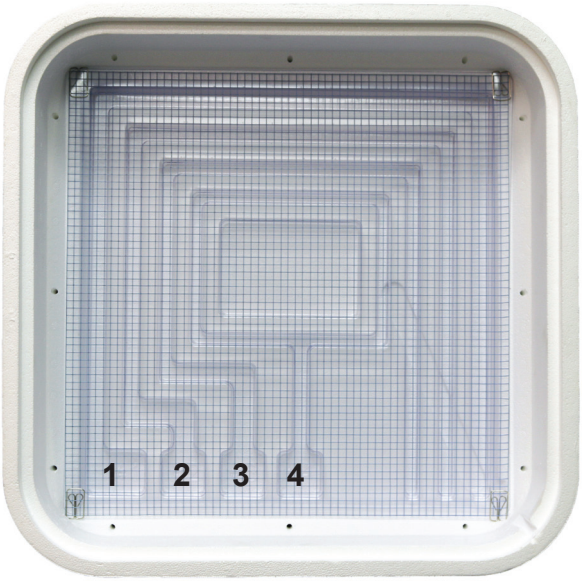


**NOTE:** It is recommended that you operate the incubator with a small quantity of inexpensive eggs to be assured of your operating procedure and the performance of the incubator, before attempting to hatch large quantities of eggs or expensive eggs. Keep Reptile eggs protected from moving air. (See Warranty on Page 4).

Warm eggs to room temperature (70°F. to 75°F.) and place them on wire floor. Let them lay in a natural manner, which is on their sides with the small end slightly down. Turn eggs 2 to 3 times a day. With a pencil, mark an **X** on one side and an **O** on the opposite side of the egg. Turn all eggs so that **X**'s appear face up. Next turning period turn all **O**'s face up. Alternate this routine each turning until 3 days before eggs are due to hatch.

**Read temperature of 100°F. (for most eggs) with the thermometer resting on top of the eggs or turner. Do not put thermometer on wire floor as reading will not be as accurate for egg level.**

# HUMIDITY & HATCHING




*** After hatch pull red vent plugs to help dry chicks.**

Add water every few days to trough #1 only. Usually twice weekly is sufficient. The amount of moisture in the incubator is determined by the surface area of water. **Under high humidity conditions and for some types of eggs, less humidity is required. Humidity may be reduced by covering over a portion of a trough with aluminum foil or switching to one of the smaller troughs.** Humidity for eggs has a broad range, but if there are doubts about humidity, less is usually better than more, except for the last 2 days. **2 to 3 days before the hatch, stop turning the eggs, and fill both trough #1 and #2 with water.**

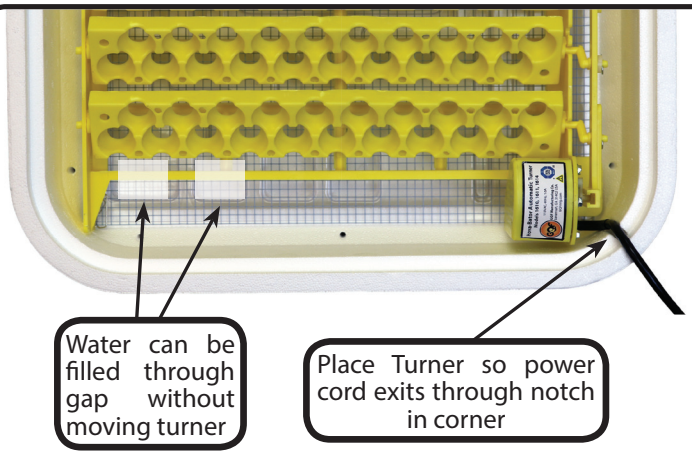
Place top on the incubator and do not remove until hatch is complete* or 24 hours. Remove dry chicks as soon as possible to a brooder that has food and water and temperatures of about 95°F to 100°F. Chicks can survive up to 48 hours after hatch without food or water, but feed and water them as soon as possible to avoid stress. Some cases may require moving chicks to brooder to dry.

The liner tray has 4 troughs to allow more options for humidity. Trough 1 is the largest and trough 4 is the smallest. **IN MOST CLIMATES USE #1 FOR SETTING AND BOTH #1 and #2 DURING THE HATCH PERIOD.**

In HIGH humidity climates it may be necessary to use smaller troughs for setting and hatching. For instance #2 for setting then #2 and #3 at the end of the hatch.

In extreme LOW humidity climates a combination of troughs may be used to reach the desired setting. Filling troughs #1 and #4 during the setting period for example.

In testing, when trough #1 was filled completely it lasted 3 days before needing refilling (room humidity at 40%).




# AUTOMATIC TURNER

Set up incubator as shown on page 1. If you are using the automatic egg turner, place it on the wire floor in the bottom of the incubator. The turner motor uses metal gears for additional strength when turning heavy loads. These gears can emit noise during normal operation.

Three days before eggs are to hatch remove eggs from turner, lay them on their side on wire floor in their natural unsupported position. Add water according to instructions. Do not attemp to hatch eggs while turner is in the incubator as the slow turning motor could crush the chicks.When turner is removed for hatching, maintain temperature by placing thermometer on top of eggs.

The tuner operates very slowly. You should not expect to see movement upon installation. Proper operation is detected by noting rack angle over time.

# MOISTURE

The purpose of supplying moisture in and incubator is to prevent excessive drying of the natural moisture from within the eggs. The correct amount of humidity can be determined by the size of the air sack when candled, or by weighing the egg to gauge percent of weight loss. Both methods require knowledge and experience that first time operators usually do not have. The Hova-Bator is designed for simplicity in this matter, and works well for most species.



# AFTER HATCH

Chicks may be removed 24 hours after they start to hatch. Extremely wet chicks should be left in incubator to dry. If they don't dry in eight or more hours, remove them to a brooder or heat lamp, with temperatures of 95°F to 100°F Plan to remove chicks once a day, as every time incubator is opened, warm moist air escapes. Avoid chilling of wet chicks. Some chicks may be late in hatching, so you can leave remaining unhatched eggs up to 2 days longer. Clean your incubator after the hatch with soap and water only. The plastic liner for the Hova-Bator bottom can be cleaned using detergents or disinfectants.

# VENT PLUG

A red vent plug is located on the top of the incubator. This should be removed when the incubator is used at altitudes greater than 6000 feet above sea level. The plug may also be removed after the hatch is complete if water drops appear on the window due to high humidity. This will help to dry the chicks and the incubator. If removing the plug does not reduce the humidity enough, it may be necessary to prop up the top slightly, to facilitate drying. If so, be sure to maintain proper temperature. Alternately, the top may be removed quickly, and moisture wiped from the windows to aid drying. Replace the plug after chicks are removed.





# BROODING

When chicks are removed from the incubator they must have a place that is warm and dry. A brooder should have one section that is heated, with a temperature of 100 degrees (for the first week) and an unheated section for exercise. Food and water should be partially in heated area. Temperature should be reduced 5 degrees each week until it is down to 70 degrees. Some types of chicks need a temperature around 70 degrees until they are nearly grown.

The incubator top is not satisfactory as a brooder, as there is not sufficient heat and the chicks may peck it to pieces. Feed and water chicks at once. Check with a local feed dealer for the proper feed for type of chicks you have hatched.

## Great Hatch Recipe

- Do not bother the thermostat unless it is absolutely necessary. The working of the machine may be affected if the thermostat is tampered with excessively.

- Do not over crowd the eggs.

- Keep the eggs clean. Perspiration from the hands or any sort of grease is injurous because it stops up the pores of the shells.

- After each temperature adjustment, allow ample time for temperature to stabilize.

-Avoid opening the lid during hatch.

## Hatching Time

Chicken—21 days.
Quail—23 days.
Cortunix—17 to 18
Pheasant—23 days.
Chukar—23 days.
Turkey—28 days.
Swan—30 to 37 days.
Goose—28 to 30 days.
Duck—28 to 33 days.
Parakeet—18 days.
Parrots—28 days.
Dove—14 days.
Mynah—14 days.
Finch—14 days.
Button Quail—16 days.
Valley Quail—21 to 22 days.

## POOR HATCH

There are many factors involved with the hatching process and any one can hamper or stop chick development. Old eggs, infertile eggs, damaged or dirty eggs, poor flock health, and eggs not properly turned during incubation are some of the factors. Some chicks may only partially emerge from the shell. These chicks after time may be assisted out of the shell but due to their weak condition often do not survive. It is not unusual in a large batch of eggs to have a few of these even with good hatches.

Check the unhatched eggs. Take note of the exact number of days it took to hatch any eggs (counting the day they were set as day one) or note the number of days for any eggs to pip the shell. Check unhatched eggs for chick development and note the number of these eggs in the batch. If all or most of the eggs have no development (clear inside) then the microscopic embryo had died before or at time of incubation or the egg was never fertile. **If over 70% of the developed eggs hatched then there is little adjustment that can be done with humidity or temperature to improve this.** If many of the unhatched eggs are developed or partially developed into chicks and if eggs were of good quality and properly handled then perhaps adjustments in temperature or humidity may be required.

If eggs hatched on time, then begin any adjustments with the humidity first. Review the section under MOISTURE for adjustments. Make only one adjustment and then test it on a setting of eggs before making any other adjustments.

If eggs have been determined to hatch late or pip late (one day or more), first check for too much humidity then look for too low of a temperature setting. If eggs pip or hatch early (one day or more) then look for too high of a temperature. Eggs hatching early or late due to temperature are probably within one degree of the proper temperature setting.

## INCUBATION PERIODS FOR SEVERAL SPECIES OF BIRDS

| Requirements | Bobwhite Quail | Cotumix Quail | Ostrich | Emu | Rheas | Duck | Muscovy Duck | Goose | Guinea | Pheasant | Peafowl | Chicken, Bantam | Turkey | Chukar Partridge | Grouse | Pigeon |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Incubation period (days) | 23-24 | 17 | 42-48 | 43-50 | 35-40 | 28 | 35-37 | 28-34 | 28 | 23-28 | 28-30 | 21 | 28 | 23-24 | 25 | 17 |

*** % Weight loss: Total weight loss from beginning to end of Incubation should be 12%-16%.**

**% Weight Loss = Original wt. - Present wt. / Original wt.**

**Average Daily Wt. Loss Required = Original wt. X .14 / Incubation Period (Based on 14% total loss)**

### LIMITED WARRANTY

*GQF Manufacturing Co., Inc. guarantees against defect for a period of 1 year from date of purchase. This warrantee is void for product more than 3 years old when not sold direct from GQF to the consumer. Notify GQF Mfg. Co. of any defective items, giving catalogue number and name of item and what is wrong with item. Send copy of invoice showing date of purchase. GQF Mfg. Co. will send replacement, or replacement parts, or notify regarding return. Shipping charges for express shipping or shipments outside of the continental USA are to be paid by the customer. Product being used outside of the continental USA may need to be returned to GQF at user's expense for warrantee work. Returning of items without written permission will be at owner's expense.*

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