CIRCULATED AIR HOVA-BATOR

FOR MODEL 1583, 2362N & 220 VAC VARIANTS

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).

LOCATION

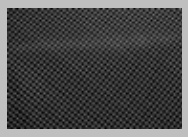
An Incubator is designed to bring normal room temperature to the desired temperature. Room temperture of 60°F. or below will reduce the temperature in the incubator. Room temperature change of 10°F. or more will change temperature in incubator & is more pronounced below a temperature of 70°F. The location 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.

PARTS

Unpack the incubator from box. Use thermostat bracket as handle to remove the incubator top from inside the bottom, where it is packed for shipping. Check for the components listed below.

Hova-Bator Top

With fan, heat element, pilot light, thermostat bracket, & vent plugs installed. 2362N top shown.



Wire Floor

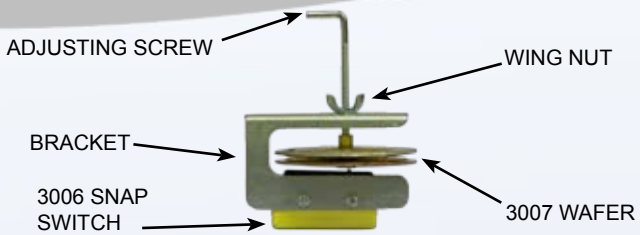
Hova-Bator Bottom

Plastic Liner

1825 Thermometer

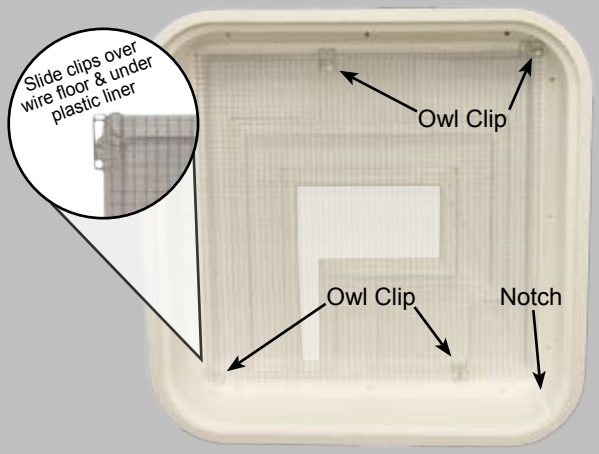
Owl Clips x 4

THERMOSTAT



SETUP

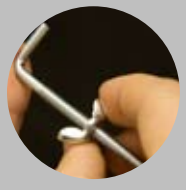
Install the **Plastic Liner** and **Wire Floor**



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.

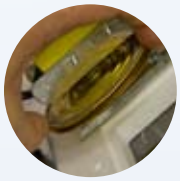
Fill **Center** trough (highlighted) with warm water. Surface area effects humidity not depth; refill trough as necessary to prevent it from drying out.

THERMOSTAT SETUP



Thread wing nut onto adjusting screw.

Thread adjusting screw assembly into slot until enough of shaft is visible on inside of incubator to accept wafer.



Thread wafer onto adjusing screw till it stops, then tighten adjusting screw untill thermostat button clicks. Back wafer off one half turn.

ADJUSTING THE THERMOSTAT

Loosen Wing Nut to make adjustments.

Turn adjusting screw counterclockwise to raise temperature & clockwise to lower.

Re-tighten wing nut to secure the setting. The light will come on when the heat is on. **Adjust the temperature for 100°F. for most eggs.** Allow the incubator to operate for at least ½ day to stabilize the setting before putting in eggs.

TEMPERATURE

& HAND TURNING EGGS

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. About two thirds of the way through the hatch, watch for increasing temperature due to chick development. Adjust thermostat accordingly. For operation with automatic egg turner, see page two.

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

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.

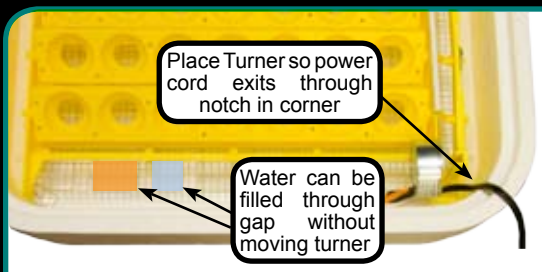
CAUTION - About half way through incubation process, you will note that the temperature will be increasing and you will have to adjust thermostat down nearly one full turn. This is normal and is caused by the embryo forming into a chick and generating heat.

HATCHING

Add water every few days to the center trough only. Usually twice a week is sufficient. The amount of moisture in the incubator is determined by the surface area of water exposed to the air. **Under high humidity conditions and for some species of birds, less humidity is required. (The humidity in the incubator can be reduced by covering part of the water trough with aluminum foil and securing it with tape)** Whenever there are doubts about the level of humidity in the incubator, less is usually better than more, except for the last two days. **2 to 3 days before the hatch, stop turning the eggs, and fill both the center and the outer troughs with water.**

Place top on the incubator and do not remove until hatch is complete*. 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.

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



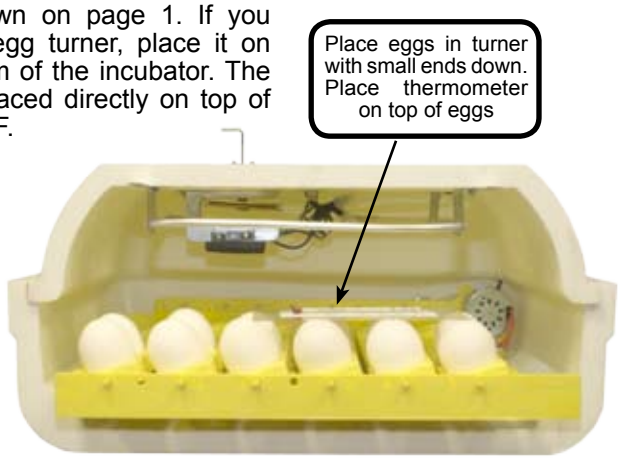
AUTOMATIC TURNER

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 thermometer should be placed directly on top of the eggs operating at 100°F.

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 my noting rack angle over time.



Thermal Air model shown

GENERAL INFORMATION

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 PLUGS

Red vent plugs are located on the top of the incubator. These should be removed when the incubator is used at altitudes greater than 6000 feet above sea level. One or both may also be removed during or after the hatch if water drops appear on the window due to high humidity. This will help to dry the chicks and the incubator. If removing the plugs 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 plugs after the 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.

INCUBATION TROUBLE SHOOTING CHART

PROBLEM	CAUSE	NOTES
Many clear eggs. No blood rings. (determined by candling or opening eggs)	1. Infertility 2. Eggs too old or too dirty to set. 3. Embryo died early. Either before incubation or 1 to 2 days after.	1. No males or too few. 2. Eggs should be no older than 14 days. 3. Rough handling and/or temperature extremes before or just after setting.
Slight blood rings in most eggs.	1. Improper temperature before or just after setting. 2. Improper handling.	1. Eggs to be stored small end down with room temperature 60 to 80 F. 2. Check for temperature spikes in incubator.
Many dead immature chicks.	1. Improper temperature in the incubator. 2. Improper or lack of turning of eggs. 3. Insufficient oxygen. 4. Improper feeding of flock or breeding.	1. Check temperature settings and adjust for next hatch. 2. Eggs to be turned at least once a day (multiple times better). 3. Full ventilation may be required at higher altitudes. Never cut out fresh air flow.
Many chicks fully formed in shells with only some hatching or piping 1 or more days early	1. Incubator setting is too warm (1/2 to 1-1/2 F).	1. Reduce setting slightly for next hatch on the same thermometer in the same location.
Many chicks fully formed in shells with only some hatching or piping 1 or more days late.	1. Incubator setting is too cool (1/2 to 1-1/2 F).	1. Increase setting slightly for next hatch on the same thermometer in the same location.
Many chicks fully formed in shells with only some hatching or piping on the expected hatch date.	1. Humidity incorrect in the incubator. 2. Incubator door opened too frequently during hatch 3. Insufficient oxygen.	1. Check air sack of eggs. If too large, increase humidity. If too small, decrease humidity. 2. For precise humidity use gram scale to determine proper weight loss. Many eggs require 13% loss.
Chicks fully formed but none hatched or piped.	1. Temperature setting too extreme. 2. Sudden and prolonged temperature change at time of hatch. 3. Insufficient oxygen	1. Check accuracy of thermostat and thermometer. 2. Check operator procedure for type of eggs. 3. Check to see vents are not completely closed.

HOVA-BATOR REPLACEMENT PARTS

Part#	Description
1640N	Top only for- 162 - Without Windows
1641	Pkg. of 2 Windows for - 1602N
1778	Top;/-1582 - Window Incub./No Hardware
1642N	Bottom for Hova.Bator Incubator
1643	Set 4 Heat Element Clips
1644	15” x 15” Wire Floor for Hova-Bator.
1715	Thermostat Switch Complete. 15 Amp
1850	Red Easy Read Incubator Thermometer

Part#	Description
3007	Thermostat Wafer
1645	110 Volt 25 Watt Square Heat Element
1717	110 Volt 5’ Cord Set for Incub. & Turner
3017	110 Volt Pilot Light for Hova-Bator
1646	220V 25 Watt Square Heat Element
1727	220V 5’ Cord Set for Incub. & Turner
3027	220V Pilot Light for Hova.Bator
1765	Clear Plastic Liner for Hova-Bator Bottom

AUTOMATIC TURNER REPLACEMENT PARTS

Part#	Description
1655	11OV Turn Motor w/ Electric Cord Attached
1682	Pkg. 2 Egg Rack Retainer for Turner
1686	Pkg. 6 Plastic Quail Egg Rack for Turner

Part#	Description
1688	Pkt. 03 Hitch Pin for Egg Rack on Turner
1689	Plastic Connecting Bar/Egg Racks to Motor
1696	Pkg. Plastic Universal Egg Rack for Turner

LIMITED WARANTEE & RESTRICTIONS

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Do not expose electrical parts to water. Installation of electrical parts should be done by a qualified electrician. Use of replacement parts other than intended by GQF Mfg. Co. is not permitted. GQF not responsible if product does not comply with local product codes or codes outside of the USA.

GQF MANUFACTURING CO.

G.Q.F. MANUFACTURING COMPANY
Phone 912-236-0651
P.O. Box 1552 - Savannah, GA 31402
www.GQFMFG.com