An Incubator is designed to bring normal room temperature to the desired temperature. Room temperature 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 consistent room temperature within a few degrees is best.

**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 temperature 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 consistent 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 heat element, pilot light, thermostat bracket, & vent plugs installed.

- **Wire Floor**

- **Plastic Liner**

- **1825 Thermometer**

- **Owl Clips x 4**

### 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 trough #1 (highlighted in yellow) with warm water. Surface area, not depth, effects humidity; 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 adjusting screw till it stops, then with incubator plugged in turn adjusting screw counterclockwise until light comes on. Keep turning counterclockwise as needed to reach desired temp. Allow the temperature to stabilize and then adjust as needed.**

**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.**
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 the trough with aluminum foil or thin plastic. 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.

PIace 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.

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 the trough with aluminum foil or thin plastic. 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*. 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.

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 attempt 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 turner operates very slowly. You should not expect to see movement upon installation. Proper operation is detected my noting rack angle over time.
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. (see HATCHING)

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.

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.

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 injurious 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.
- Coturnix - 17 to 18 days.
- Pigeon - 23 days.
- Chick - 22 days.
- Turkey - 28 days.
- Swan - 30 to 37 days.
- Pheasant - 28 to 30 days.

- Duck - 28 to 30 days.
- Parakeet - 18 days.
- Parrots - 28 days.
- Dove - 14 days.
- Mynah - 14 days.
- Finch - 14 days.
- Button & Valley Quail - 16 days.
## INCUBATION TROUBLE SHOOTING CHART

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>CAUSE</th>
<th>NOTES</th>
</tr>
</thead>
</table>
| Many clear eggs. No blood rings. (determined by candeling 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 off 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.  
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

<table>
<thead>
<tr>
<th>Part#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1640N</td>
<td>Top only for- 1602N - Without Windows</td>
</tr>
<tr>
<td>1641</td>
<td>Pkg. of 2 Windows for - 1602N</td>
</tr>
<tr>
<td>1778</td>
<td>Top/1582 - Window Incub./No Hardware</td>
</tr>
<tr>
<td>1642N</td>
<td>Bottom for Hova.Bator Incubator</td>
</tr>
<tr>
<td>1643</td>
<td>Set 4 Heat Element Clips</td>
</tr>
<tr>
<td>1644</td>
<td>15” x 15” Wire Floor for Hova-Bator.</td>
</tr>
<tr>
<td>3122</td>
<td>Thermostat Switch Complete. 15 Amp</td>
</tr>
<tr>
<td>1825</td>
<td>Hova-Bator Thermostat</td>
</tr>
<tr>
<td>1645</td>
<td>110 Volt 25 Watt Square Heat Element</td>
</tr>
<tr>
<td>1717</td>
<td>110 Volt 5’ Cord Set for Incub. &amp; Turner</td>
</tr>
<tr>
<td>3017</td>
<td>110 Volt Pilot Light for Hova-Bator</td>
</tr>
<tr>
<td>1646</td>
<td>220V 25 Watt Square Heat Element</td>
</tr>
<tr>
<td>1727</td>
<td>220V 5’ Cord Set for Incub. &amp; Turner</td>
</tr>
<tr>
<td>3027</td>
<td>220V Pilot Light for Hova.Bator</td>
</tr>
<tr>
<td>1765</td>
<td>Clear Plastic Liner for Hova-Bator Bottom</td>
</tr>
</tbody>
</table>

### AUTOMATIC TURNER REPLACEMENT PARTS

<table>
<thead>
<tr>
<th>Part#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1655</td>
<td>110V Turn Motor w/ Electric Cord Attached</td>
</tr>
<tr>
<td>1682</td>
<td>Pkg. 2 Egg Rack Retainer for Turner</td>
</tr>
<tr>
<td>1686</td>
<td>Pkg. 6 Plastic Quail Egg Rack for Turner</td>
</tr>
<tr>
<td>1688</td>
<td>Pkt. 03 Hitch Pin for Egg Rack on Turner</td>
</tr>
<tr>
<td>1689</td>
<td>Plastic Connecting Bar/Egg Racks to Motor</td>
</tr>
<tr>
<td>1696</td>
<td>Pkg. Plastic Universal Egg Rack for Turner</td>
</tr>
</tbody>
</table>

### LIMITED WARRANTY & RESTRICTIONS

GQF Manufacturing Co., Inc. guarantees against defect for a period of 1 year from date of purchase. This warranty 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 or international shipping are to be paid by the customer. GQF’s warranty applies to residents of the USA only. International warranty claims are handled by the authorized GQF dealer that sold the equipment in that area. Returning of items without written permission will be at owner’s expense.

Whereas GQF Mfg. Co. has no control over usage of equipment and product supplied, it assumes no responsibility for losses or damage from the equipment or product other than replacement of defective parts. No guarantee on hatchability of eggs. GQF assumes no responsibility for losses due to shipping damage, late shipment or arrival of product.

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. Custom modifications and use of non GQF parts can void the warranty. GQF is not responsible if product does not comply with local product codes or codes outside of the USA.