

HOVABATOR

Model: JDR-2014

English Guide



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In the name of God

Thank you for select and use of Hovabator incubator system JDR2014.

This system is one of the best-selling and most up to dating incubation household appliances from HOVABATOR factory which have very simple and easy use mechanism. It designed and produced according to the highest safety standards and the knowledge of the world.

To use the device, please observe the following cases:

1. The room temperature for device should be between 23 to 27 Celsius degree. Otherwise there will be a considerable decrease in device efficiency. The use of heating and cooling equipment should be considered strictly in summer and winter.
2. Closed spaces and without ventilation is not suitable for incubation and will reduce Chick-making. Be sure that the room has proper ventilation.
3. In the below of device has been built holes to enter fresh air inside; Refrain from placing the unit on soft flooring such as carpet, cause closing these holes and result in death of fetus.
4. Make sure the upper holes that placed in the top of the fan don't be close in any way or any object don't be place on that.
5. Do not open the incubation machine's door in Hatching time(the last three days of incubation), especially after the birth of one or more of the first chickens.
6. Avoid manipulation of machine systems.
7. Before use the device, read poultry incubation instruction textbooks.
8. The best rates of relative air humidity for place where device is used, is 50 to 55 percent .
9. Please contact with the company after-sale service in the case of unforeseen or unusual.

Keep in mind that the process of incubation has three sides, including: A) incubators B) hatching eggs and C) machine operator. If you have the best incubators and use Poor or old fertilized eggs or without sperm, the chicken-making will not possible surely. Of course the opposite is also true. Also should not conceive faint and worthless the role of person experience who using the device as an operator. Observe the following recommendations on conducting a successful incubating will certainly help you a lot.

- Never use of old eggs in incubation. Maximum holding time for hatching eggs

is three days that storage conditions must be considered exactly. After this period, each day that passes chicken-making possibility of eggs is reduced progressively and the incubation efficiency becomes lower. In such a manner that eggs after 5 days, have only 60% and after 8 days have only 15% chance to become chickens.

- Using a Candling light which is along the device, expel no fertilized eggs from the machine. Because the high temperatures inside incubators caused no fertilized eggs go rotten, as a result, gases rising from these eggs choking fetus of the other eggs.

So peruse eggs on the third, the fifth and the ninth day of incubation are required to identify and remove the eggs without sperm.

- Maximum rate of temperature fluctuation in the room is 4 ° C (between 23 to 27 degrees); If fluctuate more than this amount, due to the possibility of shock into the eggs, incubate disappears. In some cases it has been observed that users of the system by ignoring the temperature changing of surrounding in the night (be warmer or colder of room temperature) or in times which they do not present there; they have experienced unsuccessful incubation.
- Never keeping the collected fertilized eggs in the refrigerator before being transferred to incubator. Best conditions to keep the eggs is at a temperature of 18 ° C and relative humidity of 55%. Also, to prevent adhesion of the fetus to septum of the egg, they should rotated every three hours Otherwise in the last three days of incubation the fetus attaches to the egg wall and become decayed.
- When you want transferred the fertilized eggs into the incubators, it is better to placed the eggs for several hours at room temperature (about 25 degrees) so the egg do not perspire and do not shock the fetus.
- It is recommended that after the finishing incubation, break the eggs which have not become chicken and explored the cause of decay. Keep in mind that the eggs without dead fetus(eggs that after 21 days in incubation machine have yolks and whites)don't have sperm at all and couldn't change into chicken, so their fatalities don't relate to your incubation machine.
- When ordering eggs , put their tip down.
- regarding that JDR2014 is a homemade incubator so refrain washing the eggs before putting them into machine and just use a toothbrush without water or detergent to clean the eggs of possible contamination.
- Never choose too big , too small, badly or abnormal shaped eggs to incubate because it will never become chicks.
- In the case of power failure this incubation machine has the capability of working with a car battery for several hours so immediately after the power failure connected device to a battery. If the temperature inside the machine reduced more than three degrees fatalities will be severe and if the time of temperature reduction become longer, the fatalities will be definite.

Terms of device usage

24 hours before ordering eggs inside the machine, connected incubator to the AC power and make sure it is functioning properly. Always have a charged car battery for power outage circumstance.

Setting of device digital board

To set the desired temperature inside the incubator, simply press the SET button. After hearing a short beep sound you can enter your desired temperature using the UP and DOWN buttons. Note that the left two digits are temperature rate according to degree and one right digit is the temperature rate according to 0.1 (one tenth of a degree). So if you select 37.7, in fact you enter set ordering of thirty-seven and seven-tenths degrees. After setting the desired temperature, press the SET button to hear a continuous beep sound, then the current temperature will be shown on your device and incubation machine after maximum 30 minutes set on your entered desired temperature.

Setting humidity conditions

A water container for domestic Hovabator device is intended. This container has two lateral equal grooves and two internal non equal grooves, to regulate the required moisture just fill the bigger internal groove with water in the first 18 days of incubation (the setter) and In the last three days of incubation (the hatcher) fill all grooves with water; Keep in mind that this setting is suitable for temperate regions and in dry areas, it is possible that in the first 18 days it required to complete both the internal groove of water or in wet areas may in the last three days or the period of Hatcher is not need to fill all grooves and filling two or three grooves with water to provide adequate moisture be sufficient.

To distinguish suitable moisture use the digital hygrometer on device. Required moisture for several birds is different, but usually moisture of 55 to 65 percent for the Setter period (first 18 days) and moisture of 65 to 75 percent for the Hatcher period (last three days) is suitable.

Never use formaldehyde or any other gas to disinfect the device; to clean device only wash the ABS and plastic parts and clean the bottom section with semi-moist cloth. Never touch the electronic sections for cleaning.

The incubation process in summary

The incubation process is divided into two periods: Setter and Hatcher. In Setter period the eggs placed on special shoulders and rotated continually. During Setter period the fetus grows, formed inside the egg and its body is complete. Setter period for hen egg is 18 days and suitable temperature for that in the setter is 37.7 degrees with humidity if 60%; but in Hatcher period the fetus be complete and exits from egg. The eggs are not rotate during Hatcher period, remove from moving shoulders and transferred into Hatch basket. Hatch period in hen egg is three days and suitable temperature for that in the Hatch is 37.2 degrees with humidity if 70%.

Correct way to hatch eggs

Keep in mind that temperature and humidity during the Setter and Hatcher period is different for various birds. You can gain accurate information through incubation didactic book, however, the following information help you to hatch properly and systematically.

- Write down day of placing the eggs inside the machine carefully to observe the exact time of Hatch.
 - After completion of Setter period remove entire movable shoulder from device and placed Hatch basket into machine and put eggs lying inside of the Hatching basket (side by side).
 - Check out that in the time of Hatching the temperature of room be high, so in transferring eggs to Hatching basket protect from cold shock. 30 ° C is the best temperature for Hatching.
 - To provide the eggs required moisture, before Hatching filled water channels with water according to the instructions.
 - Notice that don't shake the eggs, because the trivial shake cause the rupture of inner membrane and chicken be drowned and die before exiting from egg.
 - Hatching act should be done in the fastest possible time then the eggs transferred into Hatch basket quickly and closed the unit door, otherwise, the number of chicks will die inside the eggs. Keep in mind that the maximum time required for egg hatching in Hovabator machine is five minute.
 - Do not open device door to bring out the first chick, no hurry is need to take out the chicks because born chicks have not need to remove until 48 hours.
 - Never open the incubator door without cause in Hatching time. It is better the door get open once in second day to bring out the first chicks and once in fourth day (the last day of Hatching) to take out the remaining chicks. Each time you open the door of the machine in hatching time, the number of chicks inside the eggs dry out and die.
 - In these conditions it is possible that chicks birth continued until fifth day: 1- If in the setter period the device temperature be lower than the required temperature 2- if smart thermometers not calibrated 3- because of the altitude the thermometer be outside of the standard calibration, so never remove the eggs in the third or fourth day.
 - During the hatching period, provided that the minimum required water get supply you can remove the air plug or use plug with bigger holes, because during Hatch fetus need more oxygen.
- ✓ Notice that for a successful incubation there is three factors: 1. fresh egg with sperm 2. Precise incubation machine 3. Experienced operator, so never put the expensive ornamental birds egg in the machine for the first time, for the first or second time it is better use of inexpensive birds egg.

✓

When is the best time to Hatch?

The best time to Hatch is after pecking of the first chicken to the egg shell during the Setter period, in other words, the Setter period should continue until you can observe the weak hit of first chicken on the egg shell. An example: Hen egg Setter duration is defined of 18 days, there is the possibility of hitting a chicken from the seventeenth day so maximum from seventeenth day till nineteenth day of incubation (1 +18 days) we waiting for the first blow to the egg shell. As soon as one of chicks hit the egg and cracked egg shells, however partially, immediately hatching all eggs(it does not make any difference that we are in seventeenth day or eighteenth or nineteenth) but if until the end of nineteenth day did not happen this, Hatch all eggs.

Even though we try to use the best parts in the manufacture and assembly of this device and various stages of quality control in the production line of machine parts are defined ,however due to human error, faults are possible for any human production. Please contact with company after-sales service in case of failure or faulty device, as soon as your device will repaired or replaced. We have tried to select the most experienced, most active and most compassionate personnel , warranty and after sales service however, your sincere attitude and tolerance in dealing with this people will better their actions. We apologies for the probable defect of the equipment and thank you for your cooperation with our personnel.

Causes of unsuccessful incubation

There are many different reasons for an unsuccessful incubation which incorrect use or malfunction of the device are only part of these reason. Below are some of the other reasons:

Fatality before spawning:

If the hatching egg remain in the bird's body much than normal, fetus grows inside egg and this caused the death of the fetus after removal of eggs from the bird's body. Indeed the egg loses capability of becoming a chicken before enter incubation machine.

Fetus early death:

fetus death in the first days of incubation inside device usually occurs because of improper storage. Of course, this kind of death can indicate improper disinfection of egg.

Fatality of the developing fetus:

Mortality after the first week of incubation usually happens due to lack of nutrients in eggs. For example little amount of vitamins may increase fetus death, since vitamins are important in the development of the chick muscle and blood systems.

Death in the last week of incubation:

This period is more important and critical than all the previous steps and death usually occurs in this period and it has two main reasons: 1- Lack of proper rotation during the Setter period(in the case of Hovabator with advanced rotation system this cause has been omitted), 2- The second reason that may also occur in Hovabator is not providing sufficient moisture during hatching.

Safety recommendations:

- ❖ **Please do not manipulate the machine and never touch the electronic system or device.**
- ❖ **Device transformer or switching is the most sensitive and important parts which should be examined by a skilled technical workers after each incubation period or monthly.**
- ❖ **Because of safety, probable repairs should only be carried out by staff of Guarantee personnel and company after sales service.**
- ❖ **In case of any problem do not use the device and immediately contact with after sales service group.**

Important advice on how to use the device:

- i. **Device engine in accordance with the world up to date knowledge, spin a complete cycle every four hours and during these four hours inclined shoulder to the left and right twice, as a result, the turn is very slow and is not visible with the eye. So do not worry about the turn and check the turn manner some times.**
 - ii. **Device digital hygrometer is running with battery which should replaced sometimes. Keep in mind that decrease in the battery charge may occur problem in operating mechanism of hygrometer.**
 - iii. **Every so often, using an accurate thermometer check accuracy of device digital thermo regulator because it may lose its accuracy for the reason of depreciation. In this case, contact company after-sales service to guide you. Note that the device thermometer is making America and is very accurate and isn't testable with common household thermometer.**
 - iv. **Electric current is transmitted to the motor using a specific socket which you should open that when open device door and connect that when close door. Note that this case never forget because if you do not connect the socket, then the eggs turning engine will be stop and serious damage may occur.**
 - v. **Transformer or electricity diminishing switching should be in the vicinity of air and away from heating appliances.**
- ✓ **It's important to remember that the best efficiency of household and small incubator is achieved when working with three-quarters capacity. In other words, for an incubator machine with a capacity of 48 eggs give the best performance when working with the 36 eggs. So if you are looking for the highest efficiency, always use the device with 75% capacity.**

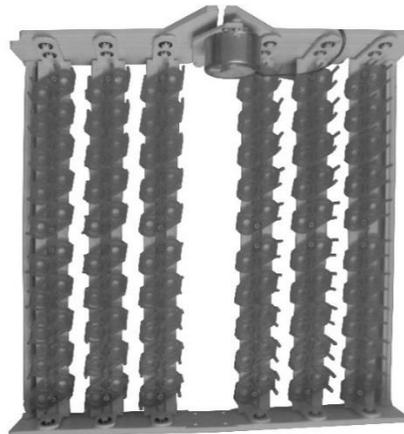
Introducing Tools and Parts of Hovabator JDR2014:

1) Shoulder and Rock



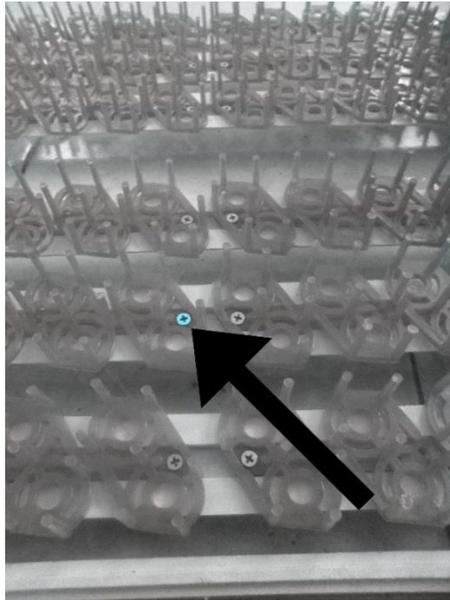
Hen shoulder

This picture representing Hovabator versatile Rock (shoulder). This shoulder has the capacity of 48 eggs of medium birds such as pheasant, hen, crown hen



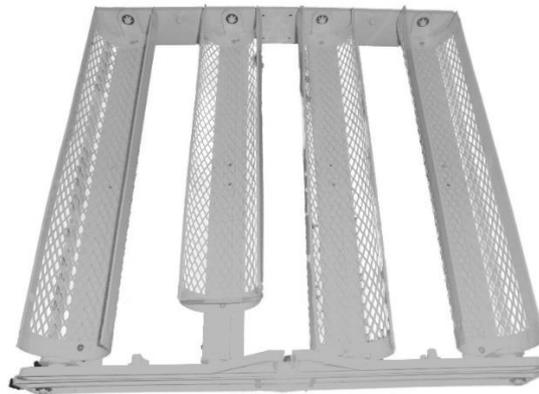
Quail shoulder

Hen shoulder (medium) normally be installed on the Rock by the factory. If you want to install small eggs shoulder on the Rock which are giving free along with device, simply unwind an avian shoulder screws and remove them from the rock and install small eggs shoulder with the same screws.



Shoulder replacement Bolt

The third shoulder which install on device is the shoulder of large eggs such as goose, turkey, duck and swan... . This shoulder is not provide with device and must be purchased separately. If you've just bought a turkey shoulders, to install it similarly you must remove the previous shoulders and using bolt replace new shoulders, except that the two middle cradle pieces should be separate by separating pins, because in turkey shoulders there are only four movable shoulders.



Turkey shoulder

Because separate the pins and movable parts is hard, it is better to purchase turkey Rock and shoulder separately.

2) Water container for water supply

Below picture shows the water container of Hovabator incubator. This container is made of electricity ABS and uses to supply needed moisture.

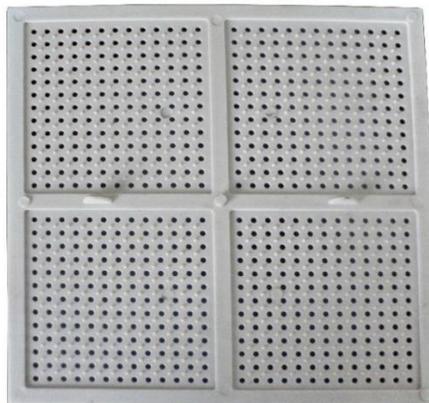


Water container

In the Setter period only channel 2 is filled with water, but in Hatch period all four channels are filled with water. As mentioned previously, you can fill channels with water more or less according to conditions.

3) Hatch basket

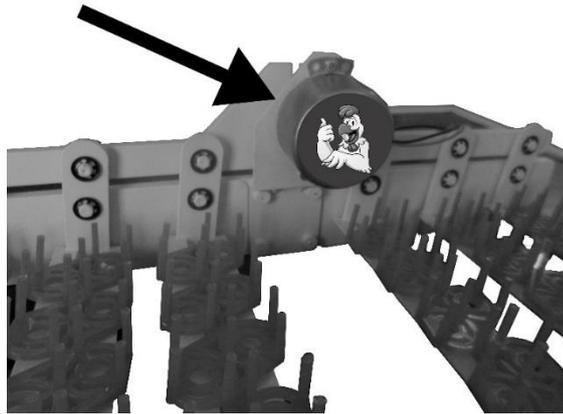
Below picture shows Hatch basket. During the last three days of incubation (in the Hatch period) the rock must be completely out of the machine and placed on the Hatch basket. Keep in mind that the rough part of the basket should be up and the water container should be under the device in both Setter and Hatch period.



Hatch basket

4) Gearboxes motor

This engine performs egg turning during incubation. Note that at any time during the incubation period, the engine socket should be removed from the digital board when the door is opened and connected again when the door is closed. Otherwise, rotation is stopped and there is a significant loss.



Gearboxes motor

5) Battery connection pliers

When cut off the electric current, you can use this pliers to connect incubator into car battery. Simply connect the red pliers to the anode and blue or black pliers to the cathode, and connect that's socket to the adaptor on the incubator machine.



Battery connection pliers

6) Candling

In the fourth and seventh days of incubation, use candling light for isolation and removal of eggs without sperm. In this way that turn off room light and in the complete dark place, put the egg on the candling light. Fertilizable eggs are seen as dark and their blood vessels absolutely become distinct while eggs without sperm completely shine.



Candling

7) Switching or electricity reducer transformer

This segment is used to convert 12V AC to urban 220V . Connect one end of this piece into a power outlet and the other end into incubation machine.



HOVABATOR SWITCHING

8) Air plug

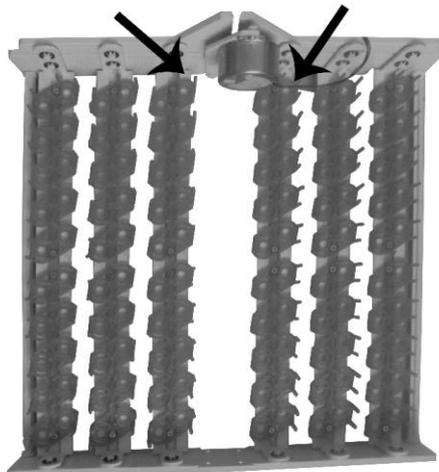
Air plug is a means to regulate moisture and oxygen. As the incubation process goes forward and more days pass from the time of placing the eggs inside the machine, the chicken needs more oxygen. In the condition of oxygen providing, gradually use a plug with bigger holes and in Hatch period in the condition of moisture providing, remove air plug completely.

Also, to reduce moisture can use air plug. If the humidity level inside the machine increased, in the condition of temperature providing can remove air plug to reduce humidity.



Air plug

- ✓ If possible, don't put any egg in the left and right side of engine, because The generated heat by the gearboxes engine may damage eggs.



- **Notice**

During Setter (incubation first 18 days), when the eggs are inside the rock, take out the Hatch basket from machine and keep out of that. During Setter If the hatching basket be inside the device, prevents reaching moisture to the eggs and reduce Hatch percentage.

- **Important warning**

Be careful the temperature and humidity sensor doesn't caught in the element when transporting , it causes serious and connective problems in the incubator electrical system.



Schedule of eggs incubation

Egg type	The total incubation period	Temperature in the setter	Relative humidity percentage in the setter	Egg rotation on this day to stop	Temperatures in the Hatcher
Canary	13-14	38	55-61	11	37.2
Types of chicken	21	37.5-37.6	57-60	18	37
cockatiels	18-20	37.5	58-63	15-18	37.2
cockatoo	22-30	37.5	58-63	20-27	37.2
Connor	28	37.5	58-63	25	37.2
Cuckoo	14	37.5	58	12	37
Duck	28	37.5	58-63	25	37
Moscow duck	35-37	37.5	58-63	31-33	37
Fringillidae	14	37.5	58-63	12	37.2
Domestic goose	30	37.5	63	27	37
Types of goose	22-30	37.5	63	20-27	37
Ptarmigan	24-25	37.5	52-58	22	37.2
A guinea hen	28	37.5	52-57	25	37
Lovebird	22-25	37.5	58-63	20-22	37.2
Macau	26-28	37.5	58-63	23-25	37.2
Mynah	14	38	55-61	12	37.2
Parakeet	18-26	37.5	58-63	15-23	37.2
Parrot	18-28	37.5	58-63	15-25	37.2
Psittacus erithacus	28	37.5	58-63	25	37.2
Quebec	23-24	37.7	63	20	37.2

Peacock	28-29	37.5	58-63	25-26	37
Ptarmigan	21-23	37.5	58-63	18-20	37.2
Raven	20-21	37.5	58-63	17-18	37.2
Pheasant	24-25	37.7	57-62	21	37.2
GoldenPheasant	23	37.5	58-63	20	37.2
Different peasant	23-28	37.7	57-62	20-25	37.2
dove	17-19	38	61	14	37.2
Quail	23	37.5	52-57	21	37.2
Japanese Quail	17-18	37.7	57-62	15	37.2
Swan	33-37	37.5	58-63	30-33	37.2
Turkey	28	37.5	52-57	25	37
Australian ostrich	49-50	36.3	24-35	47	36.3