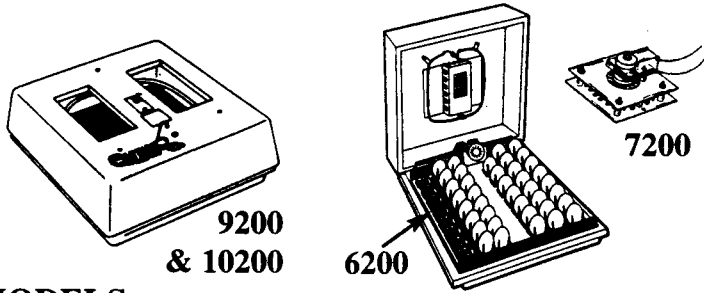




INSTRUCTION MANUAL FOR:

- 9200 STILL AIR INCUBATOR
- 10200 STILL AIR INCUBATOR W/FORCED AIR FAN KIT
- 6200 AUTOMATIC EGG TURNER (sold separately)
- 7200 FORCED AIR FAN KIT (sold separately)



MODELS

9200 STILL AIR INCUBATOR

Features two 4" x 8" viewing windows, thermometer, solid state thermostat, and built-in moisture rings in the base of the incubator. Approximate capacity is 60 chicken eggs, 200 quail eggs, 90 pheasant eggs, 40 turkey or duck eggs.

10200 STILL AIR INCUBATOR WITH FORCED AIR FAN KIT

Includes the #9200 Still Air Incubator plus a Forced Air Fan Kit. Follow the same operating instructions as the #9200 except where noted.

7200 FORCED AIR FAN KIT

Converts the #9200 Still Air Incubator to a circulated incubator. Circulating air helps maintain a uniform temperature. (sold separately)

6200 AUTOMATIC EGG TURNER

Fits into the #9200 and #10200 Incubators. Features snap in large egg cups. (sold separately)

GETTING THE INCUBATOR READY

Take the incubator out of the carton and note its two piece construction. The top should be complete with windows, element, thermostat/indicator light and power cord. Place the wire screen in the incubator bottom and note that one side of both the top and bottom has a molded notch in the rim. Notches should be lined up and used for the exit of the cord when using the #6200 automatic egg turner.

Note: Plug unit into a surge protector to protect against power fluctuations.

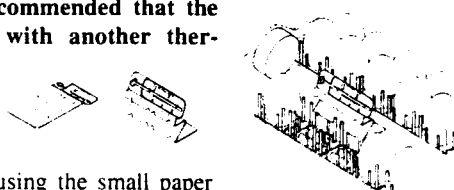
PLACEMENT OF THERMOMETER

Remove thermometer from the bag and place in the center of the incubator bottom.

Note: It is also highly recommended that the thermometer be checked with another thermometer for accuracy.

Open the thermometer bracket and fold it in a "W" shaped stand, then clip the thermometer to the bracket using the small paper clip with the thermometer bulb pointed in the direction of the electrical cord as shown in the illustrations. The thermometer stand should be placed in this spot with or without the #6200 Automatic Egg Turner to enable you to view the temperature from the viewing window. Keep the temperature between 99 and 100 degrees F. This slight variation from this temperature range will not do any damage.

Do Not Let Thermometer Bulb Rest on an Egg!



SUCCESSFUL USE OF YOUR INCUBATOR

Note: The location of your incubator is important to a successful hatch. An area with plenty of fresh air and a stable room temperature some where between 70° and 80° is ideal. A well-ventilated basement could be perfect.

An incubator's function is to bring normal room temperature up to a desired temperature for hatching eggs. If your room temperature is constant and free of drafts, your 9200 incubator will need very few adjustments once set. If your room temperature fluctuates more than a few degrees your incubator will need periodic adjustments. Room temperatures below 65° may not allow your incubator to heat up to 100° degrees. (by installing a 7200 Forced Air Fan you may be able to run your 9200 in cooler temperatures, see back page). Be sure to monitor your incubator regularly.

Eggs used for hatching should be fresh and fertile. Do not use eggs over 7 days old. Eggs held for hatching purposes should be turned every day and should be stored in a temperature of approximately 55 degrees, no cooler. If eggs are stored at a temperature of approximately 70 degrees or warmer they will start to incubate, become weak and die. When selecting eggs for hatching, use eggs uniform in size and do not use small or poorly shaped eggs. Avoid eggs with cracked or thin shells. You should not use pullet eggs.

SANITATION OF EGGS

It is very important that before and after each hatch that you sanitize the incubator with an antibacterial soap. Anytime that eggs are handled, your hands should also be sanitized with antibacterial soap. The eggs should be sanitized with an egg disinfectant with one of the many egg disinfectants on the market before incubation begins. The best time to sanitize the eggs is immediately after they are laid and are still cooling, if this is not possible, it is still important to sanitize before placing eggs into the incubator.

TO REGULATE INCUBATOR

Important: Read instructions on regulating carefully.

Turn control knob fully clockwise. The red indicator light will come on and the element begins to heat.

Watch the thermometer as the incubator heats up. As soon as it registers 100 degrees turn the control knob slowly counter clockwise until the red indicator light goes out.

Adjust the control knob, clockwise for more heat, counter-clockwise for less heat until you have it regulated to hold at 100 degrees.

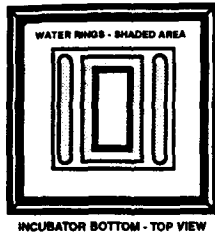
When the desired temperature is reached the indicator light will flicker, this means that a set point is reached and the unit is turning on and off very rapidly to maintain the current set point.

Run incubator several hours to be sure you have it properly regulated before placing eggs in it. Allow plenty of time for the eggs and incubator to heat up again after placing eggs in it.

You may notice that about halfway through the incubation process the temperature may increase. Adjust the thermostat accordingly. This is normal and is caused by the forming embryo generating heat.

HUMIDITY CONTROL

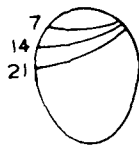
To avoid excessive drying out of the natural moisture in your eggs, water may have to be added to the water rings in the bottom of your incubator. If the room environment where your incubator is placed has good natural moisture content then it may not be necessary to add water. If your climate is dry or room conditions are dry then moisture will be needed.



It is important that you watch the air space in the egg. When testing eggs for fertility, and air space appears too large, provide moisture to incubator. Placing water in the small water ring should meet most humidity needs unless room or climate conditions are extremely dry. If a hygrometer is used during incubation cycle, the relative humidity should be approximately 50% during incubation and increased to 65% during hatch. The size of the air cell is the best guide to proper humidity.

The diagram at right illustrates the approximate air spaces at different stages of incubation, which is the effect of evaporation of water from the egg.

Note: In extremely dry climates additional moisture may be added by placing sponges or jar caps filled with water under the screen.



PLASTIC VENT PLUGS

A Plastic Vent plug is located between the windows toward the front of the incubator top closest to the power cord. The vent plug should remain in place at all times except during hatch under the following conditions:

Note: If the incubator is at 75% capacity, remove the vent plug. (more oxygen may be needed)

If the incubator is more than 25% full of eggs, remove the vent plug the day the chicks start to hatch.

When the incubator is more than 75% full, there will be excessive moisture from the newly hatched chicks and with the large number of chicks, more fresh air is required. Prop one side of top up 1/8" making sure incubator is holding temperature.

Note: A second vent plug is located on opposite end of incubator, furthest from the power cord, and is to be removed only when using a turbo fan.

SETTING AND TURNING EGGS

MANUAL EGG TURNING

Eggs should be placed on the screen laying on their side. Do not crowd the eggs. **Note: Your thermometer bulb should be adjusted so that it is level with the top of the eggs.** Allow at least two to three hours for eggs to warm up to temperature of machine. Do not change regulator while eggs are warming up, and the incubator should not be opened the first day after the eggs are set. **Note: Eggs should be turned two or three times a day, at the same time.** Rotating eggs can be done by removing a few from the center of the incubator and rolling the rest towards the center. Use the palm of your hand. **Note: Make sure your hands have been washed with antibacterial soap.** Gently roll eggs, until you are sure they have been turned. **AVOID SHOCKS AND JARS WHEN TURNING EGGS.** To help you know when eggs have been totally turned, place a small "X" on one side, and an "O" on the other with a soft lead pencil.

TURNING THE EGGS WITH THE #6200 AUTOMATIC EGG TURNER

The #6200 Automatic Egg Turner is sold separately and fits into the #9200 Still Air Incubator. The unit is made of ABS plastic, and galvanized steel. The large egg cups are made of polyethylene which snaps out for easy cleaning. The #6200 Automatic Egg Turner features individual plastic cups, #6201 which are included with the incubator, holds 47 large eggs. The #6202 small egg cups can be ordered separately and holds 118 small eggs such as quail. The turner makes one complete revolution every four hours. It is very important to make sure the egg cups are securely fastened to the egg racks, make sure peg on egg cups is entered in hole on egg rail. Then press center of egg cup until you hear it snap into place. This prevents the eggs or egg cups from falling off and getting caught under the motor arm or between egg racks. This will cause the motor to jam thus, stripping its gears. The egg racks must not be moved by hand. **Failure to adhere to these warnings will void warranty. Note: Cup should not be placed on end of the rack, close to the motor.**

Place the #6200 Automatic Egg Turner on the bottom of the incubator making sure that it sits flat on the wire floor. The power cord exiting the motor should be lined up with the side of the incubator bottom that has a notch molded in. Using a serrated knife, cut out the remainder of the notch, which will allow the electric cord from the motor to exit out the incubator. (On 200/240 volt model, attach plug required by country standards.)

Note: Proper temperature reading is particularly important when using the automatic egg turner. When using the turner, the eggs are sitting up higher and are closer to the heating element. It is, therefore, very important your temperature reading be taken at the top of the eggs. If you are reading the temperature at the bottom of the eggs it may be 2-3 degrees warmer at the top which will overheat the top of the eggs.

NOTE: THE #6200 AUTOMATIC EGG TURNER RUNS VERY SLOWLY-COMPLETING ONE TURNING CYCLE AT A 30° ANGLE SIDE TO SIDE, EVERY 4 HOURS. DO NOT TURN BY HAND. PLUG IN TURNER AND RUN 1-2 HOURS BEFORE PLACING EGGS IN THE TURNER. SET THE EGGS IN THE RACK SMALL END DOWN.

NOTE: Do Not Put Goose Eggs in the Automatic Turner!

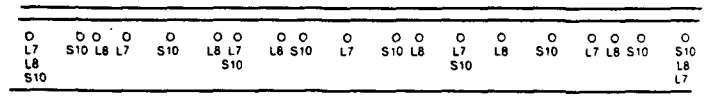
SMALL EGG CUPS

Your #6200 Automatic Turner has also been designed to be used with #6202 smaller egg cups. These egg cups hold 2 eggs per cup and are packaged 59 to a bag. They are designed to be used with smaller eggs such as quail, and are sold separately. Set the eggs in the cups small end down.

ATTACHING CUPS TO EGG RACKS

The #6201 large egg cups snap easily into the #6204 egg cup bar and can be spaced to accept either 7 or 8 cups. The 8 cup spacing will allow you to place 47 eggs in the turner. The 7 cup spacing, designed to give you added room for even larger eggs, will allow for 41 eggs to be placed in the turner. (Remember, a cup should not be placed next to the motor.)

The diagram below represents the #6204 egg cup bar and shows the placement of the #6201 egg cup for either 7 or 8 cup spacing and the #6202 small egg cup which has 10 cup spacing.



**L7 = #6201 Large egg cups with 7 cup spacing
L8 = #6201 Large egg cups with 8 cup spacing
S10 = #6202 Small egg cups with 10 cup spacing**

#7200 FORCED AIR FAN KIT

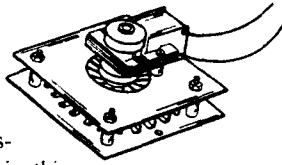
The #7200 converts the #9200 Still Air Incubator to a circulated air incubator.

The purpose of the #7200 is to keep the temperature uniform throughout the unit.

When using the #7200 forced air fan kit, disregard the hatching temperatures as stated in this instruction manual. Instead, operate at one constant temperature of 99.5 degrees for all different sizes of eggs and all climates. This will allow greater ease of operation and increased hatch.

Because of the heat generated by the #7200 Forced Air Fan, incubators with fans installed will operate below the 65 degrees limit. However, also because of the heat generated, the fan should not be used where the room temperature rises above 88 degrees.

Note: The #7200 circulates the air, it does not regulate the temperature.

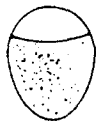


FERTILITY TESTING

If the eggs which you are testing are white, clear shelled eggs they can be tested on the third or fourth day of incubation. If eggs are dark shelled, you want to wait until the seventh or eighth day.



Fertile
7th Day



Infertile
7th Day



Stale
7th Day

Testing is done to make sure the embryo is developing properly and at the same time you can check moisture content. Testing is done by candling the egg. A candler can be made by placing a light bulb or other strong light source under a box or can with a hole that is slightly smaller in diameter than the egg. Light will pass through the hole and into the egg. If a cloudy spot or mass is observed then a live growing embryo is present. If the contents of the eggs allows light to pass uniformly through it, then it can be assumed the egg is not fertile, and it should be removed from the incubator. Your second fertility test can be done around the fourteenth day of incubation. Some of the embryos that looked healthy during your first test may have weakened and died. These along with any eggs that show signs of blood spots should be removed from incubator.

HATCHING

Discontinue turning eggs and do not open incubator except to remove chicks three days before total incubation and hatching time. Chicks can be removed from the incubator when they are completely dry, but may be left in the incubator for up to 24 hours. Remove chicks from the incubator only once a day, because every time you open the incubator you permit the warm moist air to escape. Some eggs may hatch late so you may want to allow a couple of extra days beyond the normal 21 day period. If chicks hatch out a day early, it indicates temperature was a little too high, so on next setting lower temperature by a 1/2 degree F. for the entire incubation period.

If you are using the #6200 Automatic Egg turner, it must be removed from the incubator or eggs moved to a separate incubator for hatching. Do not attempt to hatch eggs while the turner is in the incubator, as the slow turning egg racks could crush the chicks.

Lay eggs on wire floor with small end pointed slightly down.

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. Feed and water should be partially in heated area. Temperature should be reduced 5° degrees each week until down to 70° degrees. Some types of chicks need a temperature around 70° degrees until they are nearly grown. 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 your feed dealer for proper feed for type of chicks you have hatched.

IMPORTANT THINGS TO REMEMBER

Do not bother the regulator unless it is absolutely necessary.

Do not overcrowd hatching eggs inside the incubator.

Do not get eggs dirty when handling. Hand perspiration or other foreign materials stops up the pores of the shells. Wash hands with anti-bacterial soap.

Clean the bottom of your incubator with anti-bacterial soap after each hatch. DO NOT SCRUB. This will cause damage to your incubator.

Total Incubation and Hatching Time

Chicken- 21 days
Quail - 23 days
Cortunix -17 to 18 days
Pheasant - 23 days
Chukar- 23 days
Turkey - 28 days
Duck - 28 to 33 days
Goose - 28 to 30 days

Parakeet -18 days
Parrot - 28 days
Dove- 14 days
Myna- 14 days
Finch - 14 days
Button Quail -16 days
Valley Quail - 21 to 22 days
Swan - 30 to 37 days

PHEASANT

- Stored eggs should be placed in trays of bran and turned daily until ready to be placed in incubator.
- Incubation takes 23 to 24 days.
- Temperature 100°F.
- Humidity approximately 60%.
- Turn eggs three times daily up to the 21st day or same time A.M. and P.M. if turned only twice daily.
- Raise humidity to 70% for hatch.
- Allow chicks to remain in incubator until dry.

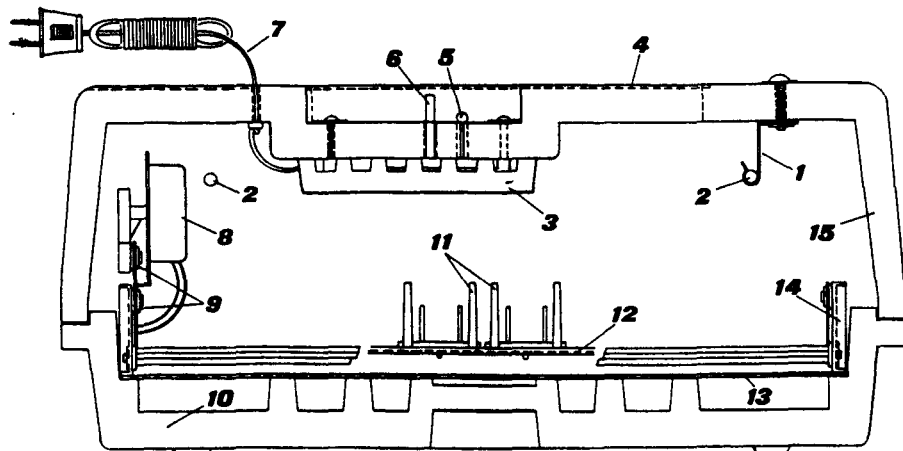
BOBWHITE QUAIL

- Turn eggs daily until ready to place in incubator.
- Incubation takes approximately 23 days.
- Temperature 100°F.
- Humidity approximately 65%.
- Turn eggs three times daily up to the 21st day or same time A.M. and P.M. if turned only twice daily.
- Raise humidity to 70% for hatch.
- Allow chicks to remain in incubator until dry.

CORTUNIX QUAIL

- Turn eggs daily until ready to place in incubator.
- Incubation takes 16 to 17 days.
- Temperature 100°F.
- Humidity about 65%. Check by size of air cell in eggs.
- Turn eggs three times daily up to the 14th day or same time A.M. and P.M. if turned only twice daily.
- Raise humidity to 70% for hatch.
- Allow chicks to remain in incubator until dry.

When using the #7200 "Forced Air Fan" kit, operate at one constant temperature of 99.5°F for all different sizes of eggs. The #7200 "Forced Air Fan" kit is recommended when hatching all types of quail eggs.



PART NO. DESCRIPTION

- 1. #5201 - Element Clip
- 2. #5202 - Element
- 3. 920003 - Electrical Cover
- 4. #5203 - (2) 4"x8" Viewing Windows
- 5.& 6. 920007 - Solid State Heat Control and Indicator Light
- 7. #5205 - 5ft. Power Cord
- 8. #6205 - 115 V 60 HZ Motor
- 9. #6206 - Push on Clips
- 10. #5210 - Incubator Bottom
- 11.a. #6201 - Large Egg Cup
- b. #6202 - Small Egg Cup
- 12. #6204 - Egg Cup Bar
- 13. #5209 - Wire Screen
- 14. #6203 - ABS Frame Set

EGG HATCHING - TROUBLESHOOTING TIP SHEET

EMBRYO DEVELOPMENT

- Day 8 - feather follicles appear
- Day 10 - beak starts to harden - digits separated
- Day 13 - scales and claws appear - body fairly well covered with down
- Day 16 - scales, claws, and beak becoming firm and horny
- Day 19 - yolk sac nearly completely enclosed in body cavity

CAUSES OF HATCHABILITY PROBLEMS

Observation	May be caused by:	Observation	May be caused by:	Observation	May be caused by:
Irregular blastodisc (infertility)	Too many or too few males Frozen combs or wattles Old Males Mites Birds too crowded Diseased breeding flock Inactive Males	Eggs pipped and alive	Low humidity Old eggs Improper position at setting Improper turning Low temperature	Chicks too small	Small eggs Humidity too low, 1-19 days Thin, porous shells Eggs produced in hot weather
Doughnut-shaped blastodisc	Old Eggs Chilled or overheated eggs Improper fumigation Improper holding conditions	Hatch late	Eggs not cooled prior to incubation Temperature too low, 1-19 days Humidity too low, 1-19 days Incorrect thermometer Large eggs Old eggs Temperature too low in hatcher Variable room temperature	Crippled chicks	Variation in temperature, 1-21 days
Blood rings or embryos dead in the first five days	Improper incubator temperature Bacterial contamination Nutritional deficiency Failure to turn eggs either during holding or incubation Lack of ventilation	Hatch early	Temperature too high, 1-19 days Incorrect thermometer Small eggs Humidity too high, 1-19 days Leghorn eggs vs meat-type eggs	Mushy chicks	Unsanitary incubator conditions
Dead embryos 2nd week of incubation	Temperature too high Temperature too low Egg not turned Inadequate breeder ration Too much CO ₂ in air (not enough ventilation)	Air cell too large	Humidity too low, 1-19 days Small eggs	Unhealed navel, dry	Humidity too high, 20-21 days Temperature too low, 20-21 days Inadequate breeder ration Humidity not lowered after hatching completed
Dead embryos at transfer	Incubator temperature Lack of turning Nutritional deficiency	Fully developed embryo dead with beak not in air cell	Temperature too high, 19th day Humidity too high, 19th day Inadequate breeder ration	Chicks cannot stand	Improper temperature, 1-21 days Humidity too high, 1-19 days Breeder ration inadequate
Fully developed chicks-eggs not pipped. Yolk may be unabsorbed, dies 18-21 days	Incubator temperature too high Lack of turning Low humidity in incubator Too high temperature in hatcher Humidity too high or too low in hatchery Lack of ventilation Lack of vigor on breeding flock Nutritional deficiency Bacterial infection	Trays not uniform in hatch or chick quality	Inadequate air circulation Eggs in different sizes Eggs of different breeds Eggs of different age when set Disease or stress in some breeder flocks	Unhealed navel, wet and odorous (Mushy chicks)	Omphalitis Unsanitary hatchery and incubators
Eggs pipped but chicks dead in shell	Improper temperature Improper humidity Inadequate ventilation 20-21 days Excessive fumigation Eggs set in improper position Inadequate breeder ration Thin shelled eggs Bacterial penetration Diseased flock	Sticky chicks (shell, down sticking to chicks)	Humidity too low, 20-21 days Temperature too high, 20-21 days Down collections not adequate Eggs transferred too late Improper egg turning	Soft chicks (abdomen)	Humidity too high, 1-19 days Temperature too low, 1-19 days
		Sticky chicks (albumen sticking to chick down)	Temperature too low, 20-21 days Inadequate air in hatcher Air speed too low, 20-21 days Humidity too high, 20-21 days Old eggs Improper fumigation	Closed eyes	Loose down in hatcher Down collectors not adequate Over fumigation during hatch Temperature too high, 20-21 days Humidity too low, 20-21 days
		Chicks too large	Large eggs Humidity too high, 1-19 days Temperature too low Poor ventilation	Chick dehydrated	Humidity too low, 20-21 days Eggs set too early Chicks left in hatcher too long after hatch complete
				Malpositions	Continuous light in hatcher Inadequate breeder ration Lack of turning Nutritional deficiencies Old eggs Eggs set upside down
				Fully developed embryo dead with beak in air cell	Temperature too high, 20-21 days Humidity too high, 20-21 days Inadequate breeder ration Incubator air circulation poor
				Exploders	Bacterial contamination of eggs and their contents Dirty flats or other equipment Washing eggs Sweating of eggs Incubator contamination

THE 9200 AND 10200 INCUBATORS ARE INTENDED FOR HOBBIEISTS AND ARE NOT RECOMMENDED FOR PROFESSIONAL OR COMMERCIAL USE.

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DISCLAIMER DUE TO THE NUMEROUS FACTORS RELATING TO THE HATCHING OF EGGS, MILLER MFG. CO. MAKES NO WARRANTY WHATSOEVER IN RESPECT TO THE NUMBER OF EGGS THAT WILL BE HATCHED USING THE #9200 INCUBATOR OR THE #6200 AUTOMATIC EGG TURNER.

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