



INCUBATOR & ACCESSORY INSTRUCTION MANUAL

Little Giant® Incubators and accessories are intended for general poultry hobbyists and are NOT recommended for professional or commercial use or for the incubation of exotic birds.

WARNING

- This product must be used with a Ground Fault Circuit Interrupter (GFCI) protected outlet
- DO NOT connect the product to an outlet with an extension cord
- DO NOT expose the product's electrical parts to water
- Keep hands clear of fan blades when operating a unit with the fan kit installed

The 9200 Still Air Incubator and 10200 Circulated Air Incubator are intended for general poultry hobbyists and are not recommended for professional or commercial use or for the incubation of exotic birds.

WARRANTY: Miller Manufacturing products are warranted to the original purchaser to be free from defects in material and workmanship under normal use and service. Miller's obligation under this warranty shall be limited to the repair or exchanges of any part or parts, which may thus prove defective under normal use and service within 30 days from the date of shipment by Miller to the original purchaser, and which Miller examination shall disclose to its satisfaction to be thus defective. Purchaser must deliver any part or parts to Miller Manufacturing, 1450 West 13th Street, Glencoe, MN 55336, for examination.

DISCLAIMER: Due to the numerous factors relating to the hatching of eggs, Miller Manufacturing makes no warranty whatsoever in respect to the number of eggs that will hatched using the 9200 Still Air Incubator, 10200 Circulated Air Incubator or 6300 Automatic Egg Turner.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND ALL OTHER OBLIGATIONS OR LIABILITIES ON OUR PART. WE NEITHER ASSUME NOR AUTHORIZE ANY OTHER PERSON TO ASSUME FOR US, ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF MILLER PRODUCTS OR ANY PART THEREOF WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATION, ABUSE OR MISUSE. WE MAKE NOT WARRANTY WHATSOEVER IN RESPECT TO ACCESSORIES OR PARTS NOT SUPPLIED BY US.

Visit www.miller-mfg.com to view the instructional videos on these products.

9200 Still Air Incubator

Features two 4" x 8" viewing windows. Comes complete with thermometer, solid state thermostat and built-in water channels in the base of the incubator. Approximate capacity without 6300 Automatic Egg Turner is 46 chicken eggs, 118 quail eggs, 90 pheasant eggs and 40 turkey or duck eggs.

10200 Circulated Air Incubator

Features fully-installed Circulated Air Fan Kit to help keep temperature uniform inside the incubator. Features two 4" x 8" viewing windows. Comes complete with thermometer, solid state thermostat and built-in water channels in the base of the incubator. Approximate capacity without 6300 Automatic Egg Turner is 46 chicken eggs, 118 quail eggs, 90 pheasant eggs and 40 turkey or duck eggs. Follow the same operating instructions as the Model 9200 Still Air Incubator except where noted.

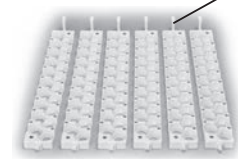
9200 Still Air Incubator	For chicken, quail, pheasant, turkey and duck eggs
10200 Circulated Air Incubator	For chicken, quail, pheasant, turkey and duck eggs
7200 Circulated Air Fan Kit	For chicken, quail, pheasant, turkey and duck eggs
6300 Automatic Egg Turner	For chicken, quail and pheasant eggs
6302 Quail Rails	For quail and other small eggs



7200 Circulated Air Fan Kit
Converts the 9200 Still Air Incubator into a Circulated Air Incubator. Helps improve hatch conditions by circulating a constant flow of warm air. Sold separately.

6300 Automatic Egg Turner

Features motorized egg turner with six large egg rails holding up to seven eggs each. Safely turns eggs to prevent the yoke from settling to one side and to exercise the embryo. This eliminates turning the eggs by hand which is the most demanding and time consuming part of egg incubation. The Automatic Egg Turner fits both the 9200 and 10200 incubators. Turkey and duck eggs will not fit in the Automatic Egg Turner. Sold separately.



6302 Quail Rails
Replaces standard large egg rails included with the 6300 Automatic Egg Turner. These rails are specifically designed for quail and other small eggs. 120 egg capacity. Sold separately.

How an Incubator Works

The function of an incubator 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 Little Giant® incubator will need very few adjustments once regulated. If your room temperature fluctuates more than a few degrees your incubator will need periodic adjustments. Humidity levels will be affected differently depending on the region of the country in which it is being used. The incubator should be monitored regularly while it is in use.

Troubleshooting Tips for Incubator Use

Problem	Possible Cause / Recommended Solution
Indicator light does not come on	The unit may not be plugged in, or there may not be power to the outlet in which it is plugged.
Indicator light flickers	This is normal – the unit is adjusting to temperature changes or variations.
Loss of power	Erratic power source or loose wire. Check to be sure the unit is plugged in.
Incubator did not heat to 100°F	The room may be too cold or drafty. Be sure the room in which the incubator is used has a consistent ambient temperature between 65° - 72°F, and the incubator is not located near any drafts.
Incubator dried out	The room may be excessively dry. Be sure to add water to the water channels and add a damp sponge if necessary to increase moisture.
Temperature & humidity are too low during hatch	Replace the vent plug(s)

Washing the Automatic Egg Turner - Do not place motor in dishwasher

Disassembly

Place complete Automatic Egg Turner on a flat surface. Slide power cord horizontally to remove from notch in base. Loosen two screws connecting the motor to base and remove. Slide motor upward, releasing the white plastic lever from T-bracket of connecting rod. Turn connecting rod so offset arms rest in a horizontal position and egg rails are vertical. Lift offset arm to release connecting rod from notches.

Lift individual egg rails by offset arms while still in a horizontal position from offset arm notch in base and pull slightly to release the pin from the corresponding hole in the base. Repeat with all six trays until you are left with an empty base.

Place egg rails and base in dishwasher, run and dry.

Assembly

Select one of the six egg rails and attach the position cover to the egg rail location nearest the offset arm end by inserting the circular

pins on the position cover into the aligning holes on the egg rail (large egg rails only). Once in place, press cover firmly into holes.

Attach egg rail with cover to the motor end of the base. The motor location is recognizable by the two holes in the extended plastic end. Holding the egg rail vertical, with the offset arm in a horizontal position, insert the round pin on the end of the rail into the corresponding hole in the base. With the egg rail still vertical rotate the egg rail downwards so the offset arm end pivot slides into the corresponding notch in the base. Repeat with remaining five rails until all six are aligned with the base.

Once all egg rails are in the base, keep all egg rails vertical and offset arms in a horizontal position. Bring the connecting rod into position by holding it parallel to the base and slightly above the offset arms. The T-shaped end of the connecting rod should align with the motor location.

Lower the connecting rod so each egg rail offset arm slips into

place into the corresponding notch in the connecting rod.

Carefully rotate the six egg rails while holding the offset arms in the notches in the base and connecting rod until all offset arms are in a vertical position and the egg rails are level. Place flat object (book or magazine) on the level egg rails to retain position for motor installation.

Slide the white plastic lever on the side reverse of the power cord on the motor down into the T-shaped bracket at the end of the connecting rod. When in place, the two holes at the base of the motor should align directly with the two holes in the projecting plastic of the base. Insert two screws through the frame and tighten into holes in motor flange to secure.

Line up the power cord exiting the motor with the side of base that has a notch molded in it. Find the larger groove in power cord and slide into the notch in the base.



How To Use Your Little Giant® Incubator & Accessories

Due to different hatching requirements, it is recommended that you hatch only one species of egg per hatch. For example, it is not recommended that you attempt to hatch chicken and quail eggs at the same time in the same incubator. Please refer to your local library, consult a local college or university agriculture department or the internet for additional hatching information.

Step 1: Choosing the Proper Location for Your Incubator

Install your incubator in a room that has a stable temperature. Avoid setting your incubator in drafty areas like near a window, in a garage or on a porch. Avoid direct sunlight. The ideal room temperature is 70° F.

The Little Giant® 10200 Circulated Air Incubator and 9200 Still Air Incubator outfitted with a 7200 Circulated Air Fan Kit (sold separately) can operate in room temperatures between 60°F – 80°F. The 9200 Still Air Incubator without a 7200 Circulated Air Fan Kit can operate in a room temperature between 65°F – 72°F.

Step 2: Installation and Set Up

Unpack your incubator. The top half should be complete with windows, element, thermostat, indicator light and power cord. Place the wire screen in the bottom of the incubator. Line up the L and R imprints on the housing top handles to the corresponding L and R imprints on the housing bottom for proper fit. This allows for proper cord exit when using the 6300 Automatic Egg Turner.



Install the 7200 Circulated Air Fan Kit if purchased separately. Assembly instructions for the 7200 are included with the Circulated Fan Kit. The Circulated Air Fan Kit converts the 9200 Still Air Incubator to a Circulated Air Incubator. The fan kit helps keep the temperature uniform throughout the incubator. The fan circulates the air. It does not regulate the temperature.

The 6300 Automatic Egg Turner is sold separately and fits either incubator. Six large egg rails are included with the Automatic Egg Turner.

IMPORTANT: DO NOT MOVE THE EGG RAILS BY HAND. The egg turner rails move very slowly. It takes 4 hours to complete a 30° side to side cycle. This movement may not be detected by the naked eye.

Unpack the Automatic Egg Turner from the box. Holding the Egg Turner over the Incubator, line up the power cord exiting the motor with the side of the incubator bottom that has a notch molded in it. Place the Egg Turner in the Incubator so it fits flat on all four corners over the wire mesh floor. Plug the power cord into a GFCI protected outlet.

Calibrate the thermometer with one known to be accurate.

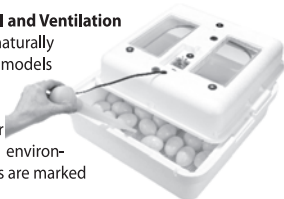
Step 3: Incubator Regulation

Before beginning a hatch, you need to regulate the incubator temperature. Turn the control knob fully clockwise. The red indicator light will come on and the element will begin to heat. Watch the thermometer as the incubator heats up. As soon as it registers to the temperature recommended for the species you are hatching, turn the control knob counter clockwise slowly until indicator light shuts off. Adjust the control knob counter clockwise to decrease heat and clockwise to increase heat until you have it regulated to hold at the desired temperature. The red indicator light may flicker off and on during this process. This is normal and indicates that the incubator is adjusting to changes in both internal and external air temperatures.

Run the incubator for 6-8 hours. At the end of this time, make sure the desired temperature was maintained. If so, you are ready to incubate!

Step 4: Humidity Control and Ventilation

Water will help keep eggs naturally moist. The 9200 and 10200 models have six water channels in the base that you can fill as needed for the species your hatching and your specific environment. These water channels are marked



with numbers 1 through 6 on one side and it is that side where water can easily be added without having to remove eggs, screen or turner.

When adding water simply lift the top with the handles and slide it away from you. This will aid in keeping heat and humidity in the incubator rather than tilting cover or completely removing it.

Please refer to your local library, consult a local college or university agriculture department or the internet for additional hatching information regarding humidity levels.

Check water channels daily, adding lukewarm water as needed. If the room where your incubator is placed has good natural moisture content, you may add water less frequently than if your climate or room conditions are dry.

Good ventilation is important in the hatching process. Air exchange is needed during embryo development and should be increased as chicks start to hatch.

Remove one of the red plastic vent plugs on the top of the incubator. One is located between the windows, closest to the power cord. The second is located at the opposite end of the incubator, furthest from the power cord.

If your incubator has a fan kit, evaporation may occur at a more rapid rate. If so, you may need to add water more frequently.

Step 5: Maintain Sanitary Conditions

Embryos are extremely susceptible to disease from bacteria. Hand perspiration or other foreign materials block the pores of the shells and can permeate the egg, resulting in bacterial growth. Always wash hands with anti-bacterial soap before handling eggs. Avoid excess handling of eggs. Avoid breathing on eggs, particularly if you have a cold or are ill. Eggs should be held in a cool location between 50°F – 55°F until you are ready to incubate. Do not refrigerate.

Step 6: Mark and Set the Eggs

If using the 6300 Automatic Egg Turner:
Set eggs in the turner with the small end of the egg facing down. Do not put goose or other large eggs in the turner. They are too large for the egg cups and may come in contact with the heating element or fall out of the cups. Do not place an egg in the hole closest to the motor. Do not overload the Automatic Egg Turner. You will note that with the Automatic Egg Turner, the eggs sit up higher and are closer to the heating element.

Place the thermometer with the permanently attached plastic holder so it lays flat on the top of the eggs below a window, to assure the temperature reading is taken at the top of the eggs and so you can view the temperature reading through the window.

If you are not using the 6300 Automatic Egg Turner:
Using a lead pencil, lightly place a small "x" on one side of each egg, and an "o" on the other side. Do not use pen or markers as they may contaminate the eggshell. This mark will help you identify when eggs have been turned.

Place the eggs in the incubator so they lay sideways on the wire screen. Do not overcrowd eggs.

Place the thermometer with the permanently attached plastic holder so it lays flat on the top of the eggs below a window, to assure the temperature reading is taken at the top of the eggs and so you can view the temperature reading through the window.

Allow at least 2-3 hours for the eggs to warm up to the temperature of incubator. Do not adjust the control knob during this time. Do not open the incubator the first day after the eggs are set.

Step 7: Turning the Eggs

Turn the eggs at least 2-3 times per day, every day at the same time. Avoid shocking and jarring the eggs. Eggs can be rotated by removing a few from the center of the incubator and rolling the rest toward the center. Using the palm of your hand, gently roll the eggs until they have been turned. Continue to turn eggs until 3 days prior to total incubation and hatching time.

Step 8: Test Egg Fertility

Fertility testing is done to make sure the embryos are developing properly and to test that humidity conditions are acceptable. Fertility testing should be conducted at two different times.

FERTILITY TESTING		
	White, clear-shelled eggs	Dark-shelled eggs
Phase 1	3rd or 4th day of incubation	7th or 8th day of incubation
Phase 2	14th day of incubation	14th day of incubation

Testing is done by candling all eggs in the incubator. A candler can be made using a shoe box or can. Make a hole with a diameter of about 25% the size of the egg (about the size of a quarter) in the top of the box or can. Set the egg on this hole. Now place a strong light source (e.g., flashlight) under the box or can. Light will pass through the hole, into the egg, so that it is illuminated.

- If you observe a cloudy spot or mass a live, growing embryo is present
- If the contents of the egg allow light to pass through it uniformly, then it can be assumed the egg is not fertile. Remove it from the incubator.

Some of the embryos that looked healthy during your first fertility test may have weakened and died by the second fertility test. These eggs and any eggs that show signs of blood spots should be removed from the incubator.

Step 9: Hatching Eggs

When you have 3 days remaining until hatch, stop turning the eggs. If you have an Automatic Egg Turner, unplug it and remove it from the incubator. Carefully place eggs on the wire screen and remove both red vent plugs from the top of the incubator to increase ventilation.

Increase the humidity level, see Step 4. This allows the chick to rotate freely while breaking the shell during hatching.

Do not open incubator except to remove chicks. Chicks can be removed from the incubator when they are completely dry. Some chicks may hatch late, so continue to run the incubator for a few extra days beyond the normal hatch period.

Bird	*Estimated Days for Hatching	Hatching Temperature (°F)
Chicken	21	99.5
Bobwhite Quail	23	99.5
Cortunix Quail	17-18	99.9
Pheasant	23-28	99.5
Chukar	23-24	99.5
Turkey	28	99
Duck	28	99.5
Goose	28-34	99
Guinea	28	99.5

*For more information on incubating, refer to your local library, consult a local college or university agriculture department or the internet.

Step 10: Post Hatch

When chicks are removed from the incubator, they must have a place that is warm and dry. Contact your local library, consult a local college or university agriculture department or the internet for information on brooding, feeding and watering.

After all chicks have been removed from the incubator, rinse the bottom with anti-bacterial soap. Do not scrub, as this will cause damage to the incubator.

The Automatic Egg Turner base and trays can be washed in a dishwasher after it has been properly disassembled.