

# INSTRUCTIONS

## PRE-SET models 1502 - 1527 - 1536 - 1550 - 1570 incubators and 220 Volt equals

Notice: The 1502's and similar models' preset thermostat normally has accuracy greater than the thermometer supplied. If the thermometer appears to be off the desired setting at anytime, it is recommended that the thermostat's presetting be used on the first setting of eggs. Only if the eggs do not hatch well should the thermostat be adjusted. It is suggested that a small number of inexpensive eggs be used during the first setting to establish the operator's procedure and the incubators desired operation. (See warranty on last page.)

### LOCATION

The location of the incubator is important to successful operation. A thermostatically controlled room temperature between 75°F to 80°F (24°C to 27°C) degrees with fresh air without drafts is ideal. Room temperatures from 55°F to 90°F (13°C to 32°C) are acceptable but good temperature control in the incubator is obtained when the room temperature is held within a few degrees. A room temperature that changes 10°F (5°C) from day to night could result in a ½ degree change inside the incubator. The back of the incubator where the vents are located should be placed no closer to a wall or barrier than 12 inches (30cm) in order to have free air exchange within the room. Avoid areas of strong sunlight or air ducts that could influence the temperature in the incubator.

### SET UP

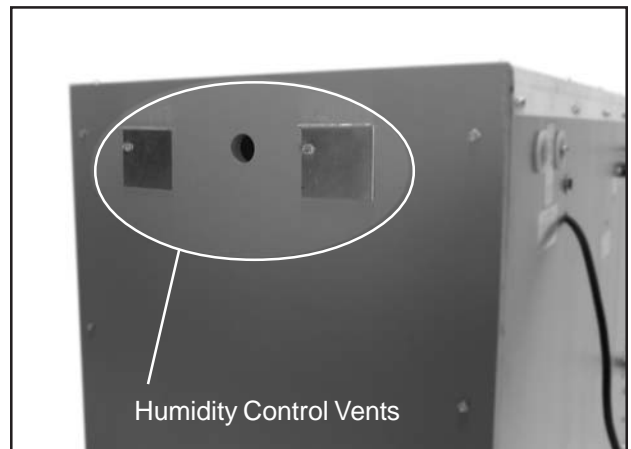
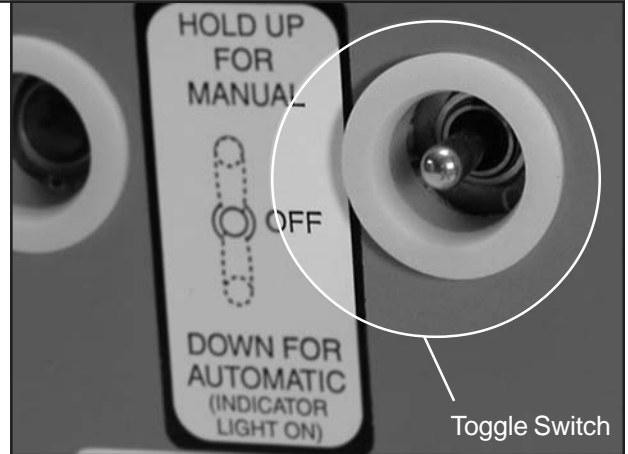
Unpack the incubator and plug the electrical cord into the proper voltage socket. If used in countries other than the USA or Europe the electric plug may have to be removed and a suitable type plug installed. When plugged in, the incubator fan will blow air towards the door and the light near the cord set will shine provided the room temperature is below 94F (34C).

For setting incubators such as the 1502 locate the turner switch on the upper left outside near the rear of the incubator. Toggle this switch to the momentary on position (it will have to be held in this position). With the incubator door open, the trays should be seen to turn slowly while holding the switch in this position. Releasing the toggle switch will return it to the center position, which is the off position for the turner. Using this switch will allow the racks in the incubator to be leveled in order to install or remove the egg trays. Moving the toggle switch to the opposite position will cause the toggle to snap in place. This is the automatic turning position. Be sure that the egg trays are fully pushed in so that they do not obstruct the racks from turning before putting the switch in the automatic position. The switch must be in the automatic position in order for the incubator to turn the eggs every two hours automatically.

**TEST FOR ASSURANCE THAT TURNER IS WORKING:** It is recommended that each week the following test be preformed: Using the toggle switch, run the turner until the trays are level and return the switch to the ON position. Look to see if the trays remain level. If not, then re-level so that they remain level. Put the switch in the ON position. Check the tray level after 3 hours. If trays are not level then the turner is operating properly. If no turning has taken place, then timer may need to be replaced.

There are vent holes in the back of the incubator. Three at the top and three at the bottom. The outer vents have moveable covers while the center vents have no covers. For normal operation, the outer vents are closed. **Do not cover the center vents, as constant fresh air exchange is necessary for the development of the eggs.**

The incubator comes with a moisture pan and wick pads. Normally the moisture pan is filled with water and placed on the fan shelf between the runners. The wick pad is added when additional moisture is required usually at time of hatch. If the optional automatic moisture pan is used, place the tank on top of the incubator and attach the hose to the moisture pan nipple. Next thread the shut off clamp on to the hose so that it will be between the quick disconnect and the tank. Attach the hose to the tank nipple and fill the tank with water. Depth of the water in the moisture pan is not important for humidity but may be adjusted by bending the brass float arm slightly.



The thermometer comes with wicks. The purpose of the wicks is explained in the HUMIDITY section. The thermometer is placed in the small hole marked THERMOMETER / HYGROMETER on the upper left outside of the incubator. The thermometer should be pushed fully into its hole with the dial portion on the outside of the incubator. If the hole is snug, avoid twisting the dial while the probe is in the hole as this could loosen the dial and move the 100F-calibrated setting. In the unusual event that the thermometer loses calibration, it can be recalibrated by placing it in a known 100F atmosphere, then hold the base of the probe at the dial with pliers so that the card may be rotated. Align the 100F mark under the pointer and then re-tighten the probe.

## TO REGULATE

Important – do not confuse the word THERMOMETER (the dial which shows temperature) and THERMOSTAT (electronic or wafer switch that controls heat).

The incubator is equipped with an electronic factory pre-set thermostat and a mechanical wafer auxiliary thermostat. **The wafer thermostat is a stand-by thermostat and is not connected to the incubator's heat system. It is used whenever the electronic thermostat is to be by-passed and does not need to be regulated at this time.** Store the wafer and adjusting screw for possible future use.

As the temperature has been pre-set, there is no regulating of temperature to be done. At this time fill the moisture pan with water and close the door of the incubator and check to see that the doors are closed on those vents that have them in the back of the incubator. Allow the incubator to run for half a day to heat up the incubator and verify that it is working properly. If temperatures appear within a few degrees of the normal setting temperature, then the eggs can be placed in the trays and the turner switched to automatic. If a thermometer is being monitored, do not expect highest reading until the next day. **DO NOT MAKE ADJUSTMENTS TO THE ELECTRONIC THERMOSTAT UNTIL AFTER THE EGGS HATCH AND IT IS DETERMINED THAT A CHANGE IS WARRANTED.**

### WHAT TO LOOK FOR WHEN USING A THERMOMETER IN A PRE-SET THERMOSTAT INCUBATOR.

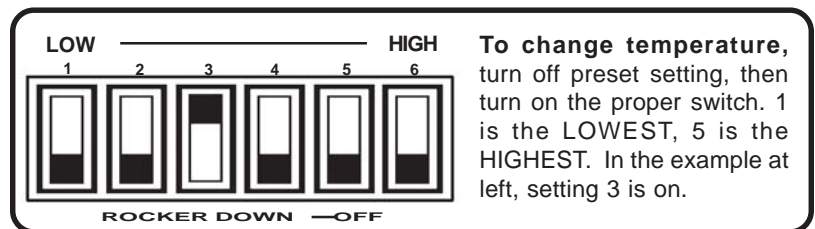
The air flow that the thermometer measures and that the thermostat measure are not the same because they are not in the same exact location. Use the thermometer to see if the thermostat is maintaining the temperature within +/- 3 degrees after the incubator has been running for 24 hours in a room that is between 65 to 80 degrees (F). If the temperature is more than 3 degrees off, first check the accuracy of the thermometer being used then consider changing the thermostat setting or replacing the thermostat. Do not rely on the accuracy of the thermometer unless hatches have been poor due to temperature.

### IF MY INCUBATOR IS PRE-SET THEN WHY DOES THE TEMPERATURE SOMETIMES VARY?

- 1) Some thermometers will change calibration with age. Digital thermometers can change with voltage (weak battery). Thermometers are not always consistent. Some digital thermometers are so accurate that they measure a brief temperature spike coming off the heater.
- 2) Thermometers can give different readings when their location is moved.
- 3) Room temperature changes of many degrees can show up as a temperature change of ½ degrees or more in the incubator. (Stable room temperatures within a few degrees give best results.)
- 4) Humidity pans running out of water or adding a wick pad in the moisture pan can change the thermometer reading. (Evaporating water cools the air.)
- 5) Tray position, egg placement, vent settings, or anything movable that changes position inside of the incubator can change airflow patterns. Some air streams are slightly warmer than others.
- 6) Opening doors, filling moisture pans with different temperature water, putting in new cold eggs can have a temporary change on thermometer readings. Allow up to 24 hours for the temperature to return to its setting.

Even though the thermometer reading may change ½ to 1 degree, the temperature at the thermostat has not. Slight variations in temperature readings (within 1.5 degrees F.) usually do not affect the hatch. Determining how well the eggs are hatching is the best indicator as to when and how thermostat settings should be changed.

In the event of an electronic thermostat failure, the electronic unit can be unplugged inside of the incubator and the heat system plugged into the wafer thermostat. To regulate the wafer thermostat, screw the wing nut onto the L shaped adjusting screw. Place the adjusting screw into the hole for the wafer thermostat from the outside and screw it into the bracket located on the inside. After a few turns, place the wafer into the bracket inside of the incubator and screw it onto the end of the adjusting screw so that it is snug. Adjust the temperature by turning the adjusting screw clockwise to decrease temperature and counter-clockwise to increase. After adjusting, lock screw in position by tightening with wing nut. Make adjustments so that the temperature on the thermometer is between 99F and 100F degrees. The wafer thermostat has a range of about 78F to 110F (25C to 44C).



In the event of a sudden temperature spike, re-toggle the current set switch

## POOR HATCH OR NO HATCH

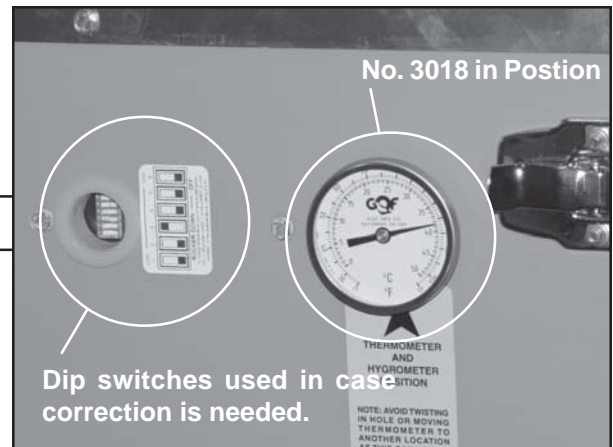
There are many factors involved with the hatching process and any one can hamper or stop chick development. Old eggs, infertile eggs, damaged or dirty eggs, poor flock health, and eggs not properly turned during incubation are some of the factors. Some chicks may only partially emerge from the shell. These chicks after time may be assisted out of the shell but due to their weak condition often do not survive. It is not unusual in a large batch of eggs to have a few of these even with good hatches.

Check the unhatched eggs. Take note of the exact number of days it took to hatch any eggs or note the number of days for any eggs to pip the shell. Check unhatched eggs for chick development and note the number of these eggs in the batch. If all or most of the eggs have no development (clear inside) then the microscopic embryo had died before or at time of incubation or the egg was never fertile. If 70% to 100% of the developed eggs hatched then there is little adjustment that can be done with humidity or temperature to improve this. If many of the unhatched eggs are developed or partially developed into chicks and if eggs were of good quality and properly handled then perhaps adjustments in temperature or humidity may be required.

If eggs hatched on time, then begin any adjustments with the humidity first. Review the section under MOISTURE for adjustments. Make only one adjustment and then test it on a setting of eggs before making any other adjustments.

If eggs have been determined to hatch late or pip late (one day or more), first check for too much humidity then look for too low of a temperature setting. If eggs pip or hatch early (one day or more) then look for too high of a temperature. Eggs hatching early or late due to temperature are probably within one degree of the proper temperature setting.

The No. 1502 cabinet incubator is preset at the factory for about 100F to 100.5F. If this setting must be changed, there are switches located in the access hole in the thermostat. The diagram below shows which switches to change in order to adjust the preset temperature. The maximum adjustment up or down from the preset temperature will be no more than ½ to 1 degree.



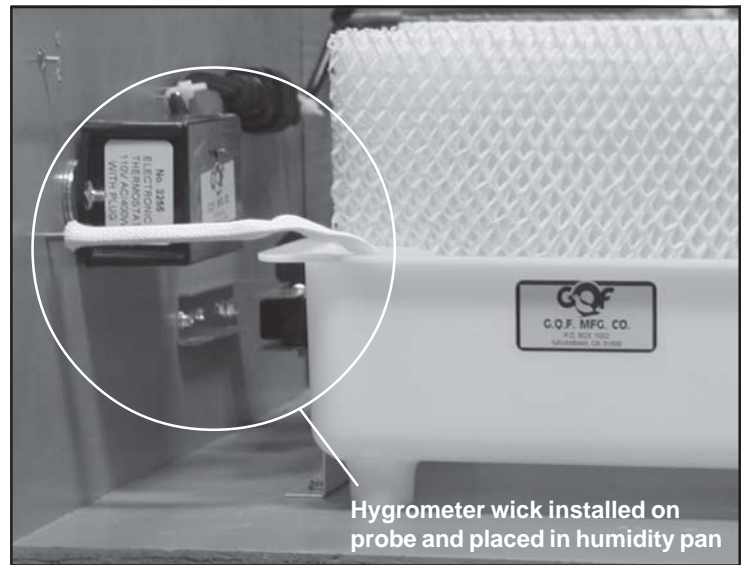
## VENTILATION & HUMIDITY

For most eggs such as poultry and game birds, the outer vents should be kept closed, and the incubator's moisture pan filled with water until a few days before scheduled hatch. The center vents should be left open at all times. During the last couple of days, add a wick pad to the water pan to increase humidity and do not change vent settings. This procedure is simple and works for most locations and eggs. It avoids the complexities of the methods to follow.

It is necessary for the egg to lose some of its moisture during incubation; however, the purpose of supplying water in an incubator is to prevent excessive drying out of the natural moisture in the egg. The rate of evaporation from the egg is determined by the type of egg, pore density and size and the humidity of the air. Methods of determining the proper rate of evaporation are by judging the size of the air sack in the egg, the hygrometer reading, or by weighing the egg with a scale. **Humidity is adjusted in the incubator by adjusting the vents (opening the vents decreases humidity) or changing the surface area of the water (add wick pads to increase or cover part of the pan to decrease humidity).**

Weighing the egg with a very accurate scale is the best way of establishing proper humidity. Most types of eggs should lose about 12% to 14% of their weight during incubation. Raise humidity if too much weight is being lost, reduce humidity if weight loss is too little. By using the known weight of the egg before incubation, multiply this number by the desired percentage of weight loss to get the desired weight loss. Divide this figure by the number of days for incubation and it will yield the average desired weight loss per day. Compare the desired weight on a given day to the actual weight for that day. The egg maybe +/- one percentage point of the desired percent.

The incubator is supplied with a dial thermometer, which can be used as a hygrometer. To do this, first establish the proper setting on the thermostat by using the dial thermometer. Do not move the thermometer to any other location as it may affect its calibration. The thermometer/hygrometer comes with two wicks. Wet one of the wicks which is a cloth tube about 6" long. Place the thermometer probe down the center of the wick by several inches and place the other end of the wick into the water of the moisture pan. Close the door of the incubator and allow about 30 minutes for it to return to its temperature of 99.5F, which has already been set on the thermostat. Because of the evaporation of water from the wick, the thermometer now reads lower than the 99.5 setting (probably in the 83F to 86F range). Make any adjustments to humidity as described in the previous paragraph. **Do not use the hygrometer for more than 6 hours as the wick may crust over with minerals from the water and give an incorrect high reading.** Once the humidity level is established, it is not likely to change very much, so remove the wick and return it to the thermometer function. Re-check in the same way for proper hatching levels.

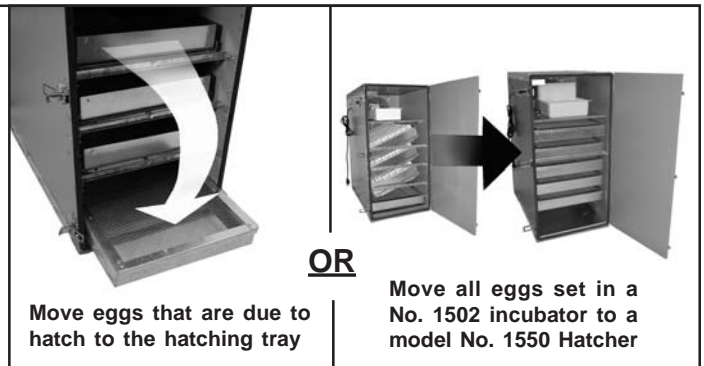


Hygrometer wick installed on probe and placed in humidity pan

## HATCHING

About three days before the expected hatch date move the eggs from the turning tray(s) and lay them in the hatching tray(s) in their natural, unsupported position. It is recommended to use a separate hatcher such as the Model 1550 as temperatures are usually ½ to 1F degree cooler for hatching with increased humidity. The 1502 incubator has a hatching tray in the bottom, which will allow for hatching eggs while newer eggs are being turned in the setting trays. If all eggs in the 1502 are to hatch, then the turning trays can be leveled and the eggs placed on the wire floors of the setting trays. Small chicks such as quail may require a cover over the trays similar to the hatching tray cover. Covers are not used for large chicks. For hatching, set the incubator to 99.5F (37C) and add a wick pad to the moisture pan. A second pad maybe added to the pan if higher humidity is desired. This setting should meet the needs of most types of eggs. A hygrometer reading from 88F to 93F (31C to 34C) is desired. In the 1502 incubator with other eggs not ready to hatch, lower the temperature ½ F and add one wick pad for the few days of the hatch. **If possible, avoid opening the door during the hatch as this removes warm, moist air resulting in a slowed or damaged hatch.** As soon as the hatch is completed return the 1502 to its normal temperature and humidity settings.

**If eggs hatch a day or two early, decrease the temperature ½ degree during the entire incubation period on the next setting. If the eggs hatch a day or two late then increase the temperature ½ degree. For poor hatches that hatch on expected day, consider an adjustment in humidity settings.**



Move eggs that are due to hatch to the hatching tray

OR

Move all eggs set in a No. 1502 incubator to a model No. 1550 Hatcher



Humidity Pan with wick pad

## BROODING

Remove chicks to the brooder within 24 hours after hatching as soon as they are dry. If some of the eggs are late hatching, removal of chicks should be done quickly as possible to prevent chilling of un-hatched eggs. If some eggs appear hatchable, continue the hatch for a day or two more. Chicks hatching a few days beyond expected date are usually weak and may not survive. Discard eggs that are over four days beyond hatch date.

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 100F (37C) for small birds like quail or 95F (34C) for larger birds like chickens. Maintain this temperature for the first week and then lower it 5 degrees (F) each week there after down to normal room temperature. If temperatures are a little too warm the chicks will move to the cooler parts of the brooder on their own. Place food on a flat surface near the feeder. Avoid slick surfaces like cardboard, plastic or flat newspaper as young chicks have difficulty standing on them. Water should be available in a proper drinker for the type chicks. Small birds such as quail can easily drown in large drinkers so rocks or marbles may need to be used at first if the drinker is not made especially for them. The GQF catalog has suitable brooders, feeders and drinkers. GQF Vitamins Plus is also recommended for the first seven days to improve survivability.



**G.Q.F. has many types of brooders, feeders, and waterers available**

## CLEANING AND SERVICING

If practical, the incubator maybe wiped down with a disinfectant such as Tek-Trol. Even a mild detergent maybe used and the trays placed in strong sunlight to dry. There is aluminum clean out pan on the floor of the incubator, which should be cleaned after each hatch. Moisture pans and tanks should also be cleaned from time to time. Hygrometer wicks and wick pads may begin to turn brown from mineral stains. These maybe used again by placing the stained portion into the water. Wicks and pads can only be used a few times and then must be replaced.

Cleaning and repairs in the rear of the incubator can be done by first unplugging the incubator from the power and then removing the screws from the back panel. Carefully wipe away any feather dust with a moist sponge. Replacement parts are available from GQF. The fan motor is sealed and does not require oiling. Thermostats and turner parts should give long service but parts are available when needed.



Tek-Trol, available from G.Q.F. can be used to sanitize incubators and hatchers.

## ACCESSORIES



No. 0243

### EGG RACK POSITIONERS FOR CABINET INCUBATORS

Plastic egg rack positioners offer the most efficient system for gathering, spray disinfectant treating and storing of eggs. At time of setting eggs, just remove loaded egg rack positioners from storage area to the incubator setting trays.

**No. 0243 - SET OF 6 QUAIL EGG RACKS**, each No. 1502 setting tray will hold 2 egg racks (248 quail eggs) for a total of 744 eggs per incubator (racks single stacked). Molded posts on each rack permits double stacking for a total of 1488 quail eggs. (Caution: GQF HATCHING trays hold a maximum of 250 quail eggs).



No. 0246

**No. 0245 - SET OF 6 PHEASANT EGG RACKS**, each rack holds 59 eggs, for a total of 354 eggs per 1502 incubator.

**No. 0246 - SET OF 6 UNIVERSAL EGG RACKS**, each rack holds 45 bantam to chicken sized eggs, for a total of 270 eggs per 1502 incubator.

**No. 0248 - SET OF 6 EXTRA-LARGE EGG RACKS**, each rack holds 30 extra large eggs (Turkey, Duck, etc.), for a total of 180 eggs per 1502 incubator.



### AUTMOTATIC INCUBATOR HUMIDITY

Consists of 5 Gal. reserve tank, connecting hose, with quick disconnect coupling and constant level humidity pan with 2 humidity pads, for increased humidity at time of hatch. For all GQF Cabinet Incubators.

**No. 3030 - Automatic Incubator Humidity**  
**No. 4502 - Pkg. 2 Extra Humidity Pads**  
**No. 4510 - Pkg. 10 Extra Humidity Pads**

### CLEAR ACRYLIC DOOR FOR ALL CABINET MODEL INCUBATORS AND HATCHERS

CLEAR ACRYLIC DOOR gives full frontal view of interior of incubator, to permit checking of hatching progress, tray turning, water level, etc.

**No. 3065 - Clear Acrylic Door** 31 1/4" x 15 1/2" x 1/2" - Sold as an accessory for customer's installation only.



**ORDER ACCESSORIES BY PHONE: 912-236-0651 - OR - ON THE INTERNET AT WWW.GQFmfg.COM**

# GENERAL INCUBATOR OPERATING INSTRUCTIONS FOR SEVERAL SPECIES OF BIRDS

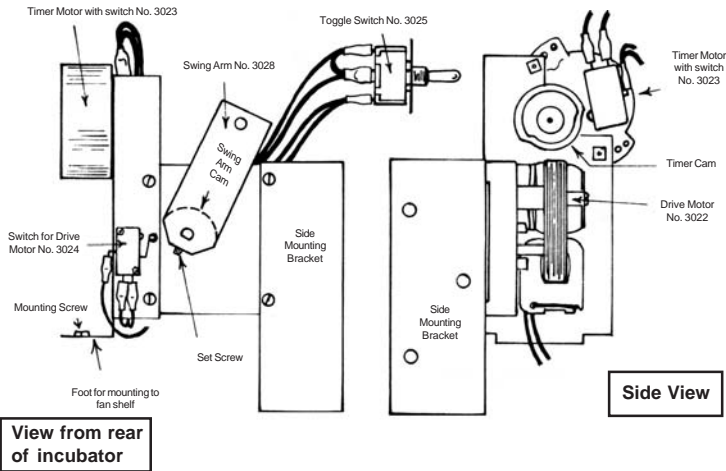
Requirements	Bobwhite Quail	Coturnix Quail	Ostrich	Emu	Rheas	Duck	Muscovy Duck	Goose	Guinea	Pheasant	Peafowl	Chicken, Bantam	Turkey	Chukar Partridge	Grouse	Pigeon
Incubation period (days)	23-24	17	42-48	43-50	35-40	28	35-37	28-34	28	23-28	28-30	21	28	23-24	25	17
Temperature (F)	100	100	96.5-97	96.5-97	96.5-97	100	100	100	100	100	100	100	100	100	100	100
Humidity (wet bulb, F)*	84-86	84-86	70	70	85-87	84-86	84-86	86-88	83-85	82-84	83-85	85-87	83-85	80-82	82-86	84-86
Final day of egg rotation	21	15	38-40	44-46	30-33	25	31	25	25	21	25	19	25	21	22	15
Temperature during final 3 days of incubation (F)	99.5	99.5	96-96.5	96-96.5	98.5	99.5	99.5	99.5	99	99.5	99.5	99.5	99.5	99.5	99.5	99.5
Humidity during final 3 days of incubation (wet bulb, F)	90-94	90-94	75	75	88-90	90-94	90-94	90-94	90-94	92-95	90-94	90-94	90-94	90-94	90-94	90-94

\* % Weight loss: Total weight loss from beginning to end of Incubation should be 12%-15% for most eggs

$$\% \text{ Weight Loss} = \frac{\text{Original wt.} - \text{Present wt.}}{\text{Original wt.}} \times 100\%$$

$$\text{Average Daily Wt. Loss Required} = \frac{\text{Original wt.} \times .14}{\text{Incubation Period}}$$

**Diagram of incubator turner.**  
Complete turner is item No. 3021



## TURNER PROBLEM CHECK LIST

PROBLEM	CHECK FOR:
Turner fails to turn automatically but will turn manually.	1—TEST FOR ASSURANCE THAT TURNER IS WORKING as shown on Page 1 of Incubator Instructions. 2—Remove back of incubator. DO NOT TOUCH ANY PART OF TURNER WHILE INCUBATOR OR TURNER IS PLUGGED INTO POWER. Check to see if turner light comes on when switched to Automatic. If not, check for loose wires or connections at toggle and other switches. Check all slip on connections for good contact. If Timer Cam marks do not show signs of rotating in 30 minutes or if Timer Switch seems defective, No. 3023 Timer with Switch will need to be replaced.
Turner fails to turn on manual or automatic	1—Check to be sure trays inside have not been pushed all the way to back or some other obstruction that has jammed the trays. 2—Be sure incubator and turner is plugged into outlet that has electric current and that pilot light is on when switched to automatic. 3—Remove back of incubator. DO NOT TOUCH ANY PART OF TURNER WHILE INCUBATOR IS PLUGGED INTO POWER. Check for loose wires, loose connection rods or jammed tray.
Turns constantly when switched to automatic	1—Switch for Drive Motor is loose and has moved away from Swing Arm Cam. Loosen screws holding Switch, push switch closer to Cam and while holding it closer to Cam, tighten screws. Avoid over tightening as you could break switch housing.

## CONVERSION OF WET/DRY BULB READINGS TO PERCENT OF RELATIVE HUMIDITY

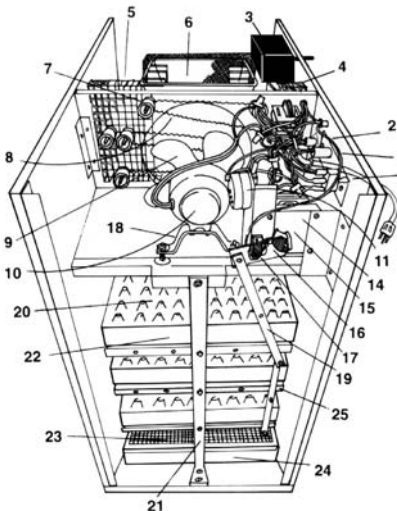
		DRY BULB TEMPERATURES									
		85	90	95	96	97	98	99	100	101	102
WET BULB	68	41	31	23	22	21	19	18	17	16	15
	69	44	34	25	24	23	21	20	19	18	17
	70	47	36	28	26	25	23	22	21	20	18
	71	50	39	30	28	27	25	24	23	21	20
	72	33	41	32	30	29	27	26	25	23	22
	73	56	44	34	33	31	30	23	27	25	24
	74	60	47	37	35	33	32	30	29	27	26
	75	63	50	39	37	36	34	32	31	29	28
	76	66	53	42	40	38	36	34	33	31	30
	77	70	55	44	42	40	38	37	35	33	32
TEMPERATURES	78	73	58	47	45	43	41	39	37	36	34
	79	77	62	49	47	45	43	41	39	38	36
	80	80	65	52	50	48	46	44	42	40	38
	81	84	68	55	53	51	49	47	45	43	41
	82	80	71	57	55	53	51	48	46	44	43
	83	92	74	60	58	55	53	51	49	47	43
	84	96	78	63	61	58	56	54	51	49	47
	85	100	81	66	64	61	59	56	54	52	50
	86		85	69	67	64	61	59	57	54	52
	87		89	72	70	67	64	62	59	57	55
88		92	76	73	70	67	65	62	60	57	
89		96	79	76	73	70	67	65	62	60	
90		100	82	79	76	73	70	68	63	63	
91			86	82	79	76	73	71	68	65	
92			89	86	83	79	76	74	71	68	
93			93	89	86	83	80	77	74	71	
94			96	93	89	86	83	80	77	74	
95			100	96	93	89	86	83	80	77	

NOTE: The above chart is for sea level readings. A general rule of adjustment would be to add 1 to the percent value shown in the body of the chart for each 2500 feet of elevation above sea level.

\*To obtain lower wet bulb readings, recommended for ratite eggs, we recommend using an inexpensive room dehumidifier, available at Sears, WW Grainger and other outlets.

## INCUBATION TROUBLESHOOTING CHART

Symptoms	Probable Causes	Suggestions
Many clear eggs. No blood (Determined by candling, then broken out appearance)	1. Infertility. Too few males, too many males, males too old, inactive, or frozen combs 2. Embryo died early 1-2 days	1. Use young, vigorous males. 2. Do not hold eggs longer than 14 days. Keep at temperatures of 50°-55°F. in moist atmosphere. Gather often.
Slight blood rings	3. A. Improper temperature B. Fumigation 4. Improper care of eggs before setting	3. A. Check accuracy of thermometer, Check thermostat, heating element, current supply. Check operating temperature against instructions. B. Do not fumigate at high concentrations during the first 5 days of age. 4. See suggestions (2) above.
Many dead germs	5. Temperature too high or too low 6. Improper turning of eggs 7. Improper feeding of flock 8. Breeding (low hatchability inherited) 9. Improper ventilation, insufficient oxygen	5. See suggestion (3) above. 6. Turn two times daily - same time morning & evening 7. Check vitamin and mineral content of breeder mash. 8. Avoid close inbreeding 9. Increase ventilation of incubator and incubator rooms, avoid draft
Pipped eggs not hatching Hatch non-uniform Hatching too early Hatching too late Sticky Hatch	10. Insufficient moisture 11. Too much moisture 12. Too low temperature 13. Too high temperature	10. Increase humidity during incubation (wet bulb 82°-86°) add wick pad last 3 days (wet bulb 90°-92°) during hatching time 11. See (3) above and see "Hatching" page 3 12. See (3) above and see "Hatching" page 3 13. See (3) above and see "Hatching" page 3
Cripples and Malpositions	14. Temperature too high 15. Too low moisture 16. Improper turning or setting 17. Hatching trays too smooth	14. See (3) above and see "Hatching" page 3 15. See (10) above 16. See (6) above. Set eggs large end up. 17. Use wire bottom trays or crinoline
*Very large, soft-bodied weak chicks Mushy chicks. Dead on trays, bad odor	18. Low average temperature 19. Poor Ventilation 20. Navel infection in incubator	18. See (3) above and see "Hatching" page 3 19. See (9) above 20. Careful cleaning and fumigation of incubator between hatchings.
Rough navels	21. High temperature or wide temperature variations. 22. Low Moisture	21. See (3) above 22. See (10) above
Temperature reading not constant	23. Incubator in unheated room or barn where temperature varies 24. Improper adjustment of thermostat (can be caused by someone tampering with adjusting knob)	23. Keep Incubator In room with uniform temperature and where temperature is never below 50°. 24. Readjust thermostats. Make slight adjustments with adjusting knob and wait 15 minutes for temperature to stabilize.
Incubator fails to heat (Continue hatch if begun. Hatch may occur later than expected because of temperature drop.)	25. Thermostat failure 26. Improper setting of thermostat 27. Power failure, incubator unplugged or poor plug connection 28. Loose wire connection	25. switch to back up thermostat 26. Turn adjusting knob to increase heat until pilot light comes on. 27. If fan is not running, electricity is not getting to incubator check fuses and plug connections. 28. Remove back of incubator and check for loose wires.
Fan Rattles	29. Blade bent 30. End play in motor shaft	29. Remove and straighten blade or replace with new blade 30. Place block under back legs of Incubator
Hygrometer reading above 94°	31. Dry wick on hygrometer	31. Wash calcium deposits from wick or replace with new wick.



Reference Number	Catalog Number	Reference Number	Catalog Number
1 - POWER CORD.....	No. 3048	14-DRIVE MOTOR.....	No. 3022
2 - PILOT LIGHT.....	No. 3017	15 - AUTOMATIC TURNER.....	No. 3021
3 - Pre-Set ELEC. THERMOSTAT.....	No. 3256	16 - SWING ARM WITH CAM.....	No. 3028
4 - Aux. THERMOSTAT.....	No. 3124	17 - ROLLER Switch for Drive Motor...No.	3024
5 - HEATER GUARD		18 - FAN MOUNT.....	No. 3026
6 - MOISTURE PAN/PAD(S).....	No. 4500	19 - CONNECTING BAR.....	No. 3041
7 - PORCELAIN INSULATOR		20 - QUAIL EGG POSITIONERS.....	No. 0205
8 - HEAT ELEMENT.....	No. 3014	21 - BACK SUPPORT.....	No. 3042
9 - FAN BLADE.....	No. 3013	22 -1502 SET. TRAY - 24.5" x 12.75"....	No. 3067
10-FAN MOTOR.....	No. 3011	23 -1550 TRAY CVR.-25" x 14.25".....	No.3068
11- TIMER WITH SWITCH.....	No. 3023	24 -1550 HATCH TRAY - 24.5"x14".....	No. 3066
12-TURNER LIGHT.....	No.3017	25 -1502 SETTING TRAY RACK/23".....	No. 3069
13-TURNERTOGGLE SWITCH.....	No.3025		

### LIMITED WARRANTY

GQF Mfg. Co., Inc. guarantees against defect for a period of 1 year from date of purchase. Notify GQF Mfg. Co. of any defective Items, giving catalogue number and name of Item and Just what is wrong with Item. Send copy of invoice showing date of purchase. GQF Mfg. Co. will send replacement or notify regarding return. Returning of items without written permission will be at owner's expense.

Whereas GQF Mfg. Co. has no control over usage of equipment supplied, It assumes no responsibility for losses or damage from their equipment other than replacement of defective parts. No guarantee on hatchability of eggs. Do not expose electrical parts to water. Installation of electrical parts should be done by qualified electrician.