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OPERATING INSTRUCTIONS
'MULTIQUIP' ELECTRIC INCUBATOR
MODELS E1 - E2 - E3

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W.A. Poultry Equipment
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Operating Environment

For best results, operate in room temperature between 16°C and 28°C. Ensure ventilation of room is ample and no draughts are present. Do not allow sun to shine on the incubator.

Preparation of the Machine

Remove packing and tied parts. Carefully clip angle thermometer in position at front of incubator. Ensure that mercury column is intact.

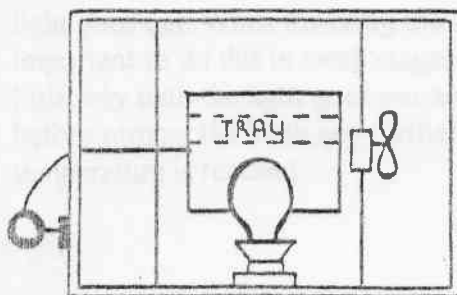
Assemble parts for water supply - follow diagram.

Place water tray or trays inside top of Incubator, fill with water and place metal sliding sections over tray. These slides may be moved to expose water surface as required.

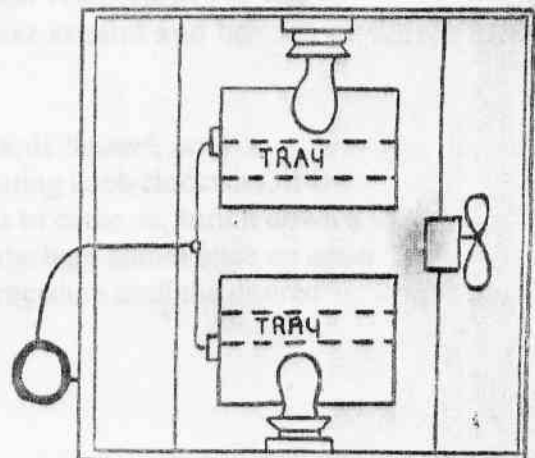
Place the carbon heating globe (s) in the lamp socket (s) inside top of Incubator.

Fill water bowl of wet bulb thermometer and thoroughly rinse and soak wick.
Hang on screws inside door.

Water Supply System



E1



E2

Instructions for using

WET-BULB THERMOMETER

This instrument is for use in Forced Draught Electric Incubators, it is not intended for use in Still-Air Incubators.

Inspect mercury column carefully before using to ensure no small pieces of mercury are separated from main column. Check for broken mercury column regularly.

For accurate wet-bulb reading, the wick must be thoroughly wet and cover the mercury bulb completely. When new it is necessary to soak wick in warm water and squeeze it out a number of times to make the material freely absorbent.

Wick should hang straight down into water in glass bowl, if a loop is allowed to hang over, the water may drip away. Replenish water so that wick never dries out. Wash wick clean frequently and at least after every hatch. Dust and fluff clog the capillary action of the cotton, and it is wise to replace wick after every few hatches. Use only the same wick as supplied with the instrument.

When hanging this wet-bulb thermometer, ensure mercury bulb end is a little lower than bottom end of thermometer. For easy reading, twist thermometer so magnified mercury column is clearly seen in most convenient viewing position.

Relative Humidity Tables

W.B = Wet-Bulb Thermometer Reading F
R.H = Relative Humidity %

AT 99°F		AT 100°F		AT 101°F	
W.B	R.H	W.B	R.H	W.B	R.H
83	51	83	49	84	49
84	53	84	52	85	52
85	55	85	54	86	54
86	59	86	57	87	57
87	61	87	59	88	59
88	64	88	62	89	62
89	67	89	65	90	65
90	70	90	68	91	68
91	73	91	68	92	71
92	76	92	74	93	74
93	79	93	77	94	77
94	83	94	80	95	80

To assemble water supply system, push plastic water tube through hole in left side of incubator and connect to base of plastic cup by placing sealing nut over end of tube. Push tube end tightly onto fitting in base of cup and screw up sealing nut. Place cup in holding bracket and screw bracket to wall of incubator. Cup should sit down firmly in bracket. Ensure plastic water tray sits central inside top of incubator and sealing nut fits tightly. Replenish water by filling cup outside. With turning handle vertical plastic egg trays may be removed or placed in position. Push trays back to full extent - especially when loaded with eggs. The handle moves to left or right to turn eggs. Trays remain in the slanting position. Hatching tray fits on tray runners below turning rack.

Turn fan by hand to ensure it is free and not touching anywhere. Place incubator firm and level. Ensure top lid sits snugly and door closes tightly.

Electricity Supply

In certain parts of Australia, surges and spikes of electricity may cause damage to the incubator controls. This may also happen during electrical storms or when the power supply is interrupted.

It may be an advantage to fit a 'surge and spike protector' to your power point. These are available from most electrical stores at a modest cost.

Regulating Temperature

It will be necessary to lower the regulator when you first receive the incubator as control is set high at the factory to prevent damage to the regulator during transit, especially in summer.

When switched on at power point, light will be observed through circular pilot hole above thermometer. This light should keep on until desired temperature is reached then turn off.

Turn the regulating knob to '*raise*' to turn light on should this go out before desired temperature is reached. **Take care not to allow temperature to rise above 102°F, otherwise regulating capsule may over expand and be damaged.**

When desired temperature is reached, turn knob towards '*lower*', until light goes out. When lowering the temperature regulating knob clockwise, it is important to do this in small stages. Wait for the light to come on, turn it down a little way until the light goes out and then wait until the light comes back on again before turning the knob any further. Carry out this procedure until the desired temperature is reached.

A temperature differential of about ½°F occurs between 'on and 'off' positions, adjust knob until desired average temperature is reached - the point halfway between highest and lowest temperatures at the 'on' and 'off' position. Allow incubator to operate for a few hours without eggs to ensure temperature is correctly adjusted and settled down.

Remember that the incubator can only increase the temperature. It cannot reduce temperature, therefore, ensure that the temperature of the incoming air is lower than the desired temperature of the incubator.

When new eggs are set into incubator, do not adjust temperature, if thermometer reads too low. Temperature will gradually rise to pre-set conditions as eggs warm up. It may be necessary to fine turn after a couple of hours.

Temperature & Humidity

The following average temperature and humidities have been found satisfactory, but operators may find variations up to ½°F up or down, best according to type of eggs, climate and other conditions.

	Hen	Turkey	Pheasant	Quail
Temperature	99¼°F	99°F	99°F	99¼°F
Wet Bulb (Set)	86°F	86°F	86°F	86°F
Wet Bulb (Hatch)	92°F	92°F	92°F	92°F

Humidity is adjusted by moving the metal slides on water tray to expose more or less water surface. As a guide, if about half of water surface is left exposed, a wet bulb reading around 86°F may be expected. Once set, very little variation occurs, unless climate becomes very dry or very humid. Replenish water as required. Models since late 1976 are fitted with outside water cup for refilling moisture tray. Follow assemble diagram to ensure correct assembly of plastic parts. A shallow water tray may be placed under hatching tray/s if additional humidity is required.

Note:

Ensure power is disconnected when refilling water tray from inside. When top of lid is lifted, or whenever attending to incubator.

Follow your incubator instructions for best humidity to operate your machine. A little experimenting will soon show whether a slight increase or decrease during setting and/or hatching period will give better quality hatches.

Forced draught incubators are usually operated at slightly higher humidity for Duck, Turkey, Pheasant and Geese eggs. If the water bowl is loose, bend the rounded metal holder to hold the bowl tight.

Setting & Hatching

All models take settings of Hen eggs each week (each 8 days for Turkey or 28 days Duck eggs). Commence by filling tray or trays in top most position. As each fresh lot is set, move the previous settings down one stage. Transfer Hen eggs into hatching tray on 18th day, 24th day for Turkey or 28th day Duck eggs, and 14th to 15th day for Quail eggs. **Eggs are not turned in the hatching tray.**

Eggs may be candled to remove infertile and unhatchable eggs, at any convenient time - usually at 7th and 18th day for Hen eggs.

Turning of Eggs

Turn eggs at least twice per 24 hours and more often if convenient, by moving lever from one side to the other. Turn each setting tray back to front each second day (*to reverse position*).

Egg trays are left in the slanting position, left or right.

Hygiene

Place paper towel on hatching tray bottom before eggs are transferred. These keep floor clean and are suitable for baby chicks to walk upon (*newspaper is too slippery*).

After each hatch, clean out fluff and shell pieces, wash hatching tray and water pan with a suitable sanitiser - disinfectant, and fumigate the incubator. Machine must be thoroughly dried out after disinfectant and prior to use.