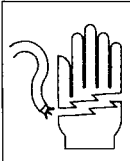


# INSTRUCTIONS AND REPAIR PARTS LIST

## AT10 ADJUSTABLE THERMOSTAT



### ⚠ CAUTION ⚠

AT10 Adjustable Thermostat should be installed by a qualified electrician. Be sure Power Cord Assembly is not connected during this installation. Do not touch either lug of the thermostat if power source is connected. Touch only the adjustment knob. Do not defeat the electrical ground afforded by 3-prong Cord Assembly. Failure to follow these and other safety precautions could result in electrical shock causing serious injury or death!

At Brower, we continually search for better, more economical ways to serve our customers. In that spirit, we have elected to change our thermostat switches away from our 59S Switch series ( a microswitch and wafer) in favor of our new AT10 Adjustable Thermostat. The advantages are:

1. No more wafer replacement. The AT10 Thermostat has a longer life than a wafer.
2. A thermostat which is at least as responsive as a switch/wafer to changes in temperature and we believe more responsive than a switch/wafer design.
3. Less cost to our customers.

Specifications are:

Name: AT10 Adjustable Thermostat  
 UL recognized and CSA Approved (CSA - 120 V A.C. only)  
 Ratings: 120V A.C. 16.7 amperes/240V A.C. 8.3 amperes  
 Description: HT open on rise. Controls heating applications by keeping contacts closed below the set point temperature.  
 Temperature Range: 70 degrees to 120 degrees F (21 degrees C to 49 degrees C). The adjustment turns 180 degrees. Three degrees of turn is approximately equal to one degree F of temperature change. We suggest you find the 180 degree range and set the switch at about the halfway point. Then adjust as necessary to find the appropriate brooding or incubation temperature. Turning the slotted adjustment knob to the right (clockwise) increases temperature.

**NOTE:** Model AT10 is the number for the thermostat itself. Model ATCONV10 is the kit, including the thermostat used to convert our Model UA4T Bulb Brooder. Model ATCONV20 is the kit used to convert our galvanized table top incubators. Model ATCONV30 is the kit used to convert our 6401 and 6401Q Brooders.

### UA4T BROODER MODEL ATCONV10 CONVERSION

UA4T Complete Parts List After Conversion to ATCONV10. See Exhibit A, page 2.

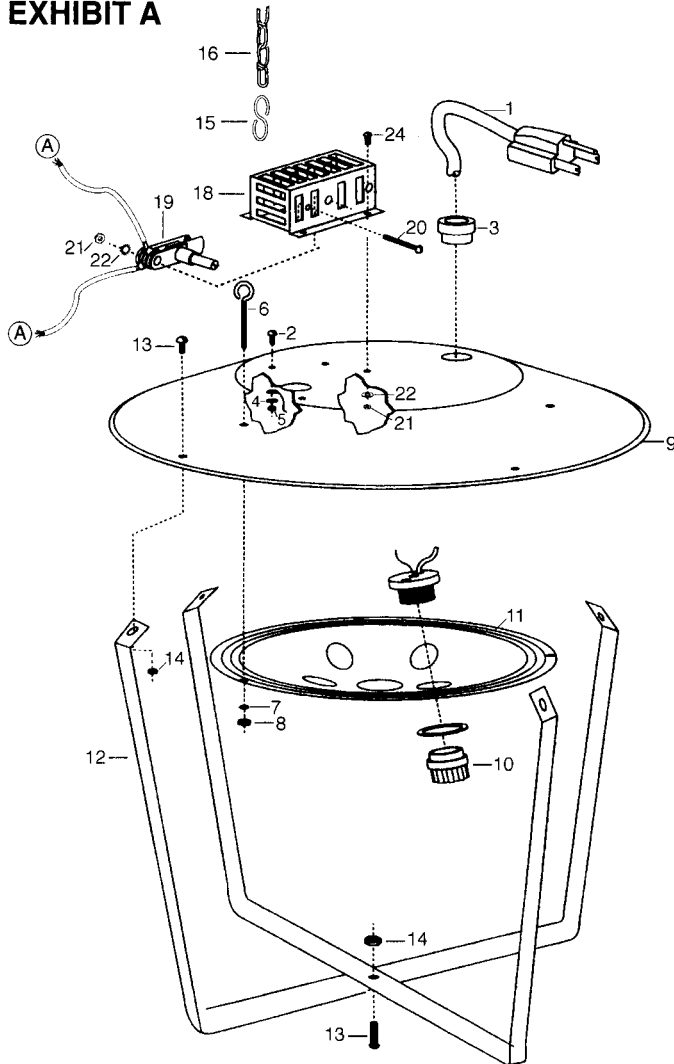
REF. NO.	PART NO.	DESCRIPTION	QUANTITY	<b>ATCONV10 Automatic Conversion Kit for UA4T Brooder Using AT10 Thermostat.</b>			
				ATCONV10 Consists of Ref. Nos. 18-25, Exhibit A			
				REF. NO.	PART NO.	DESCRIPTION	QUANTITY
1	17429	Power Cord Assembly 16-3, 5'6"	1				
2	OF2	6-32 x 3/8 Slotted Round Head Machine Screw, Zinc	1	18	10430	Thermostat Cover, 2 x 3 1/2 x 1 (For I.D. purposes: Cover has 3 holes on one side; there are no holes on the end)	1
3	45020	1240 Black Heyco Bushing	1	19	AT10	Adjustable Thermostat, 120/240V (Includes 2 89-45 202 amp clips and 2-6 inch 85-1132 wire pig tails)	1
4	OF209	#6 External Tooth Lockwasher, SS	1				
5	OF52	6-32 Hex Machine Screw Nut, Zinc	1	20	OF212	6-32 x 1 Machine Screw, Zinc	1
6	OF46	6-32 x 3/4 Eye Bolt, 1/4" ID Eye, Less nut, Zinc	3	21	OF52	6-32 Hex Nut, Zinc	5
7	OF209	#6 External Tooth Lockwasher, SS	3	22	OF209	#6 External Tooth Lockwasher	5
8	OF52	6-32 Hex Machine Screw Nut, Zinc	3	23	45047	#35653 Nylon Connector (not shown)	2
9	10349	Outer Reflector	1	24	OF2	6-32 x 3/8 Machine Screw, Zinc	4
10	45166	Eagle 609 Sign Receptacle	4	25	OM141	Cooler/Warmer Decal	
11	10278	Inner Reflector	1		ISBAT	Instruction Sheet	
12	10276	Guard	2				
13	OF2*	6-32 x 3/8 Slotted Round Head Machine Screw, Zinc	5				
14	OF52*	6-32 Hex Machine Screw Nut	5				
15	43814*	1/4" Open x 11 Ga Hook, Zinc	4				
16	31515*	#3 Tenso Chain x 12-3/16"	3				
17	747611	5/16 x 1 Fiberglass Sleeve	3				



**EQUIPMENT FOR POULTRY • LIVESTOCK • PETS**

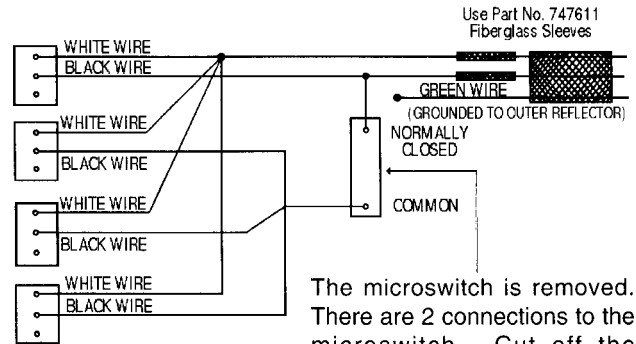
P O BOX 2000, HOUGHTON, IOWA 52631 USA  
 TELEPHONE 319-469-4141 • FAX 319-469-4402

## EXHIBIT A



## EXHIBIT C

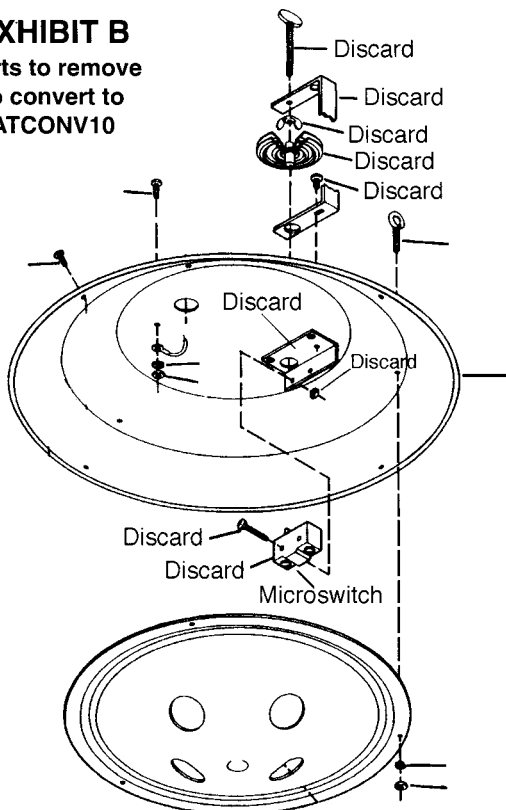
This is the wiring diagram before the new thermostat is installed  
**UA4T WIRING DIAGRAM**



The microswitch is removed. There are 2 connections to the microswitch. Cut off the terminals. Strip the ends one half inch. Connect these two wires to the 2 pigtails attached to the new thermostat. (marked A).

## EXHIBIT B

Parts to remove to convert to ATCONV10



- STEP 1. Do not attempt to make this repair unless you are a qualified electrician. Make sure power source is disconnected. Review Exhibits A, B, and C.
- STEP 2. Remove thumb screw and wing nut, wafer bracket and wafer from the top of the outer reflector (see Exhibit B).
- STEP 3. Remove the inner reflector (Ref. No. 11) from the outer reflector (Ref. No. 9) being careful not to loosen the electrical wire connections inside between the outer and inner reflectors.
- STEP 4. Remove the two electrical wires connected to the microswitch. Cut the terminals off on these two wires. Strip the ends back one half inch.
- STEP 5. Remove the microswitch.
- STEP 6. You can leave the bracket in place which is used to attach the microswitch. However, we recommend that you drill out the 2 rivets which hold the bracket in place and remove the bracket.
- STEP 7. Place thermostat cover (Ref. No. 18) on top of outer reflector and thread the pig tails from the new thermostat through the large hole in the top of the outer reflector. Position the thermostat cover so that the pig tails are not pinched and mark the 4 holes of the cover. Drill 4 new holes in the outer reflector. Use a 1/8 inch drill bit.
- STEP 8. Attach the cover to the outer reflector using 6-32 x 3/8 machine screws, lockwashers and nuts (Ref. Nos. 21, 22 and 24).
- STEP 9. Attach one pig tail from the new thermostat to one of the wires formerly connected to the microswitch (which you stripped). Attach the other pig tail to the other loose wire. It does not matter which black wire is connected to which black wire. Add 1 wire nut to each connection. The green wire is the ground wire. There is no reason to remove the green wire--leave it in place. See Exhibit C.
- STEP 10. Re-assemble the inner reflector to the outer reflector.

## GALVANIZED INCUBATOR MODEL ATCONV20 CONVERSION

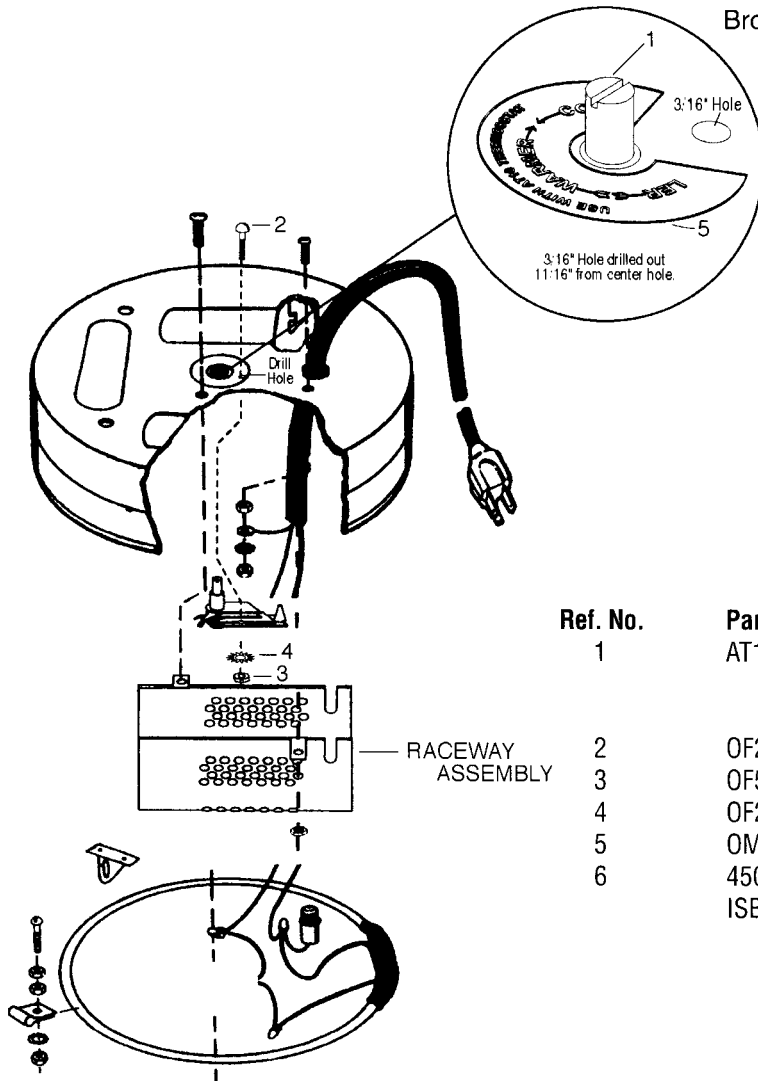
### EXHIBIT D

Exhibit D shows retrofit application for Brower's galvanized steel incubators. These are:

Brower Model No. 845 50-Egg Incubator. Also sold as Model 11400-3 or Sears Model 77180.

Brower Model No. 846 100-Egg Incubator. Also sold as Model 11670-3 or Sears Model 77182.

ATCONV20 Consists of Ref. Nos. 1-6, Exhibit D.

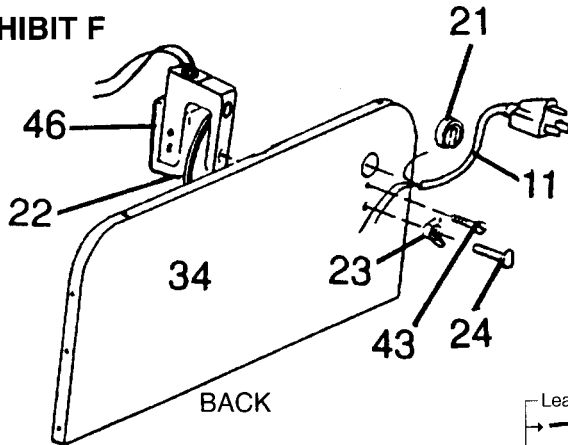


Ref. No.	Part No.	Description	Quantity
1	AT10	Adjustable Thermostat 120/240V (Includes 2 89-45 202 amp clips and 2-6 inch 85-1132 wire pig tails)	1
2	OF212	6-32 x 1 Machine Screw, Zinc	1
3	OF52	6-32 Hex Machine Screw Nut, Zinc	1
4	OF209	#6 External Tooth Lockwasher, SS	1
5	OM141	Cooler/Warmer Decal	1
6	45047	#35653 Nylon Connector (not shown)	2
	ISBAT	Instruction Sheet	1

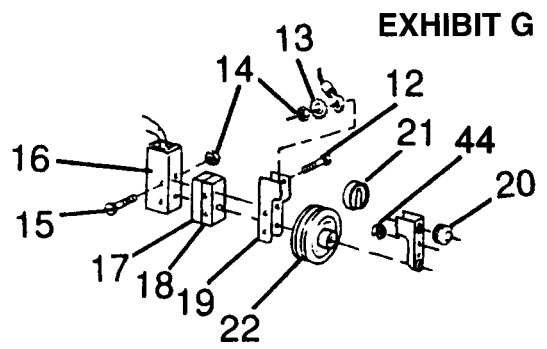
- STEP 1. Do not attempt to make this repair unless you are a qualified electrician. Make sure power source is disconnected. Review Exhibit D.
- STEP 2. Remove the raceway assembly.
- STEP 3. Remove the wafer, adjustment screw and wing nut.
- STEP 4. Remove the microswitch from the switch bracket assembly. Remove the microswitch cover. Remove the 2 wires connected to the microswitch. Cut off the ends of the wires and strip back 1/2 inch.
- STEP 5. Drill out the rivets which hold the switch bracket assembly to the incubator cover. Use a 3/16" drill bit.
- STEP 6. Position the AT10 thermostat in center hole of incubator to see how the new installation will go together.
- STEP 7. You need to drill a 3/16" hole out 11/16" (center of center hole to center of drilled hole).
- STEP 8. Attach thermostat to cover using the 6-32 x 1 machine screw, nut and external tooth lockwasher (Ref. Nos. 2, 3 and 4).
- STEP 9. Attach the 2 pig tails of the thermostat to the two wires you disconnected from the microswitch (and stripped). Add wire nuts to the 2 connections you have just made.
- STEP 10. Replace the raceway assembly.
- STEP 11. Remove old decal from around center hole. Add new OM141 decal around center hole. Note that the AT10 thermostat works in the opposite direction as your wafer thermostat.

## 6401/6401Q BROODER MODEL AT30 CONV CONVERSION

**EXHIBIT F**



**EXHIBIT G**

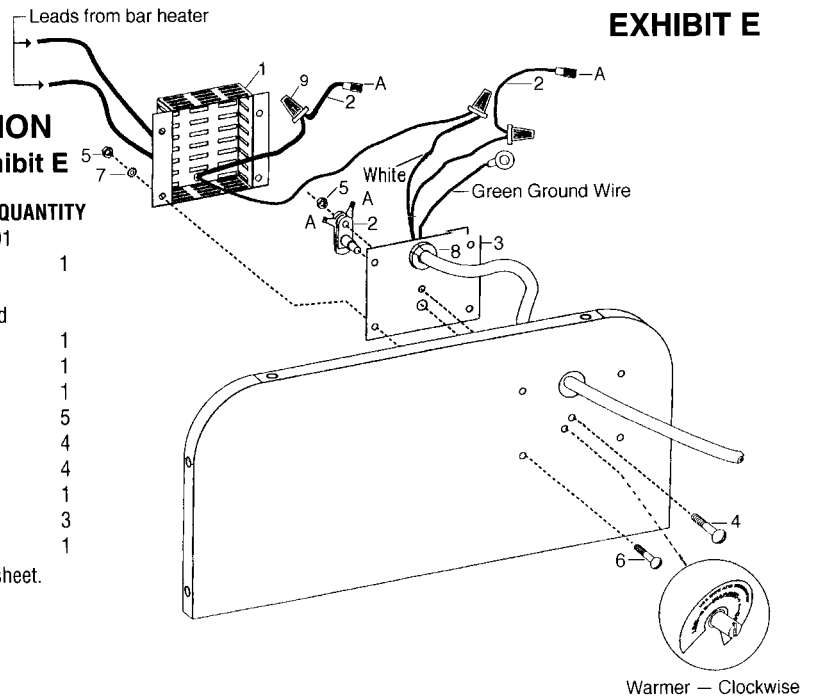


**EXHIBIT E**

### 6401/6401Q BROODER CONVERSION ATCONV30 Consists of Ref. Nos. 1 - 9, Exhibit E

REF. NO.	PART NO.	DESCRIPTION	QUANTITY
1	11442	Thermostat cover with bushing, 6401 3 9/16 x 3 15/16 x 1 15/16	1
2	AT10	Adjustable Thermostat, 120/240V (Includes 2 89-45 202 amp clips and 2 - 6 inch 85-1132 wire pigtails)	1
3	11443	Adapter Plate, 4" x 4 3/4"	1
4	OF212	6-32 x 1 Machine Screw, Zinc	1
5	OF52	6-32 Hex Nut	5
6	OF367	6-32 x 1/2 Machine Screw, Zinc	4
7	OF209	#6 ETH Lockwasher, SS	4
8	45037	G2F Insulated Strain Relief clip	1
9	45047	#35653 Nylon Connector	3
10	OM141	Cooler/Warmer Decal	1

NOTE: Exhibits F & G are from the 6401/6401Q instruction sheet.



- STEP 1. Remove the wing nut and thumb-screw (Ref. Nos. 23 and 24 Exhibit F).
- STEP 2. Remove the heater switch assembly (Ref. No. 46 Exhibit F) from the back.
- STEP 3. Remove the Ref. No. 12 - 3/8" slotted round head screw (Exhibit G).
- STEP 4. Remove the 2 Ref. No. 15 - 1 1/4" slotted round head screws (Exhibit G).
- STEP 5. Spread the bracket (Ref. No. 19) open. Cut the black wire on the Ref. No. 11 power cord (next to the clear connector).
- STEP 6. Remove Ref. No. 16 switch box cover; Ref. No. 19 switch bracket and Ref. No. 21 strain relief clip.
- STEP 7. Disconnect the green ground lead from the Ref. No. 34 back.  
NOW REVIEW EXHIBIT E.
- STEP 8. Strip insulation from power cord where you cut it.
- STEP 9. Slide Ref. No. 11 power cord through the large hole in the Ref. No. 3 adapter plate and lock it in place using the Ref. No. 8 strain relief clip (Exhibit E).
- STEP 10. Slide both bar heater wires through the bushing on the Ref. No. 1 thermostat cover (Exhibit E).
- STEP 11. One black wire lead from the bar heater is attached directly to the white lead from the Ref. No. 11 power cord. Make

- sure the connection is secured with a wire nut connector.
- STEP 12. Attach a pigtail from the new thermostat to the other black lead from the bar heater. Use nylon connector.
- STEP 13. Attach a second pigtail from the new thermostat to the black wire from power cord. Use nylon connector.
- STEP 14. Align Ref. No. 3 adapter plate with the back such that the power cord goes through the largest hole in the back. Review again the orientation of Ref. No. 3 adapter plate in Exhibit E. Drill 5 - 1/8 inch holes in the back to accommodate the adapter plate and to accommodate the screw that retains the thermostat.
- STEP 15. Drill 1 - 7/16 inch hole to accommodate the Ref. No. 2 thermostat adjustment.
- STEP 16. Attach the Ref. No. 2 thermostat to both the adapter plate and to the back using the Ref. No. 4 1" screw and Ref. No. 5 nut.
- STEP 17. Connect the lugs--one from the bar heater and one from the power supply to the thermostat. Either lug can be connected to either side of the thermostat.
- STEP 18. Attach the thermostat cover and the adapter plate to the back using 4 each Ref. No. 6 screws, Ref. No. 7 shakeproof washers and Ref. No. 5 nuts.

**BE SURE TO ATTACH THE GREEN GROUND WIRE. SANDWICH THE GROUND BETWEEN THE ADAPTER PLATE AND THE BACK.**