

PRILL MANUFACTURING COMPANY DRAWER S SHERIDAN WYOMING 82801

TELEPHONE: (307)672-5801

PRILL MODEL 82 SPACE HEATER INSTALLATION INSTRUCTIONS

1. Determine location for heater. Heater should not be closer to combustible material than:

Rear (vent)	18"
Sides	18"

2. Installing Blower - Blower is packed in the coal hopper. Remove and fasten to back of space heater with 4 - 1/4" nuts, washers and rubber isolators provided. Rubber isolators are to be first, then blower cage feet, and finally, washer and nut. Mount with coiling tubes for motor on top. Wire from control panel to blower may now be connected. Use 2 wire nuts which are provided connecting matching wire color. Green wire to the screw on motor junction box.
3. Installing Thermostat - Install thermostat in convenient location approximately 5 feet from the floor. Run two-wire thermostat wire from thermostat to heater and connect to control panel on back of heater "T" and "T" terminals. Plug unit into 115 volt outlet.
4. Venting - An underwriter's listed all-fuel Class "A" low heat chimney is required through ceiling and roof (through all building construction above ceiling of room where furnace is located). Follow chimney manufacturer's installation instructions. Observe the minimum clearances. If there is a change in direction of the routing of the venting system a cleanout must be provided at that point.

5. Initial Start Up and Lighting -

- a. Looking into the hopper bin be certain auger is seated firmly against transmission mount.
- b. Set thermostat to highest setting.
- c. Turn main switch on back of unit to "ON".
- d. Fill stoker bin with coal. Wait several minutes.
Coal will appear on the burner head within the combustion chamber. Use a small propane torch to ignite the coal.
- e. Adjust air shutter on the combustion blower. Open very slightly initially. If smoke comes from the chimney open shutter more. Observe the burner.
If small cinder particles blow from the burner area close air shutter until blowing stops.
- f. Set thermostat to desired setting.

6. Complete Shutdown - Set thermostat at lowest setting. Turn off main switch on the back of the furnace.

7. Continuation of Operation - This appliance is equipped with a stoker relay controller which assures maintenance of a minimal coal bed for ignition purposes for long periods of time even though the thermostat does not call for heat. A timer on this control is set at the factory before shipment. However, because of variations in burning characteristics of coal it may be necessary to change the length of time this timer controls. The adjustment is simple, refer to the instructions covering the stoker relay.

HOMEOWNERS OPERATING INSTRUCTIONS

IMPORTANT!

ALWAYS SHUT OFF MAIN POWER SWITCH ON PANEL BEFORE CLEANING. (REMEMBER TO TURN IT BACK ON WHEN THROUGH)

1. KEEP COAL BIN CLEAN

It is very important to have a clean coal bin. Keep all foreign objects out of coal.

2. TYPE OF COAL

The PRILL'S units are designed to burn either slack or stocker coal, sub-bituminous B, and they will operate efficiently on lignite, although it will take more fuel.

3. KEEP FILTERS CLEAN

Filters should be cleaned or replaced every 30 days.

4. EMPTY ASH PAN REGULARLY

It is very important that the ASHES BE REMOVED BEFORE THEY RISE UP TO THE LEVEL OF THE STOKER. Get in the habit of taking them out regularly.

5. KEEP YOUR FURNACE CLEAN

A furnace in which the smoke flues are dirty is not efficient or able to properly take away the smoke, and it takes more fuel. There are two places to clean: (a) Clean radiators through ash "clean out", Illustration #1. This should be done as often as necessary. Some customers prefer to clean theirs out once a week in cold weather. You will get much better performance from the furnace when it is kept clean. The task is a simple one; use the small shovel provided by PRILL'S and made especially for the job. Excess air on the stoker can cause more fly ash than is necessary. (b) Clean smoke pipe through "T" pipes or caps once a year.

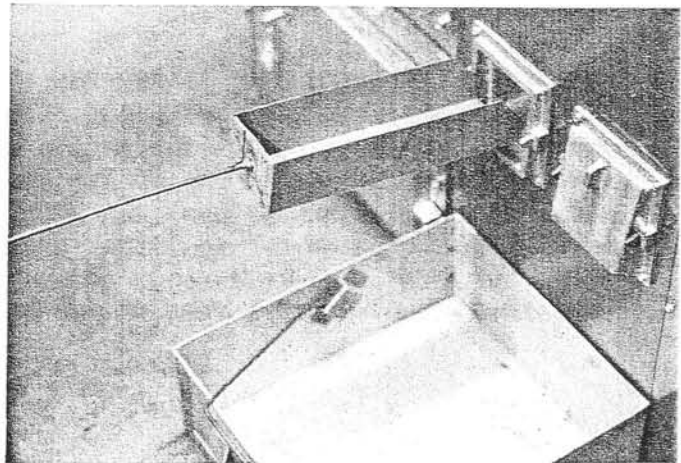


ILLUSTRATION #1

6. COMBUSTION AIR CONTROL ON STOKER

Air is forced into stoker retort from fan on left side of stoker motor. It is controlled by the cover on left side of fan housing, Illustration #2. Air Control is very important. It should be carefully adjusted to burn all coal completely. If the smoke pipe seems too hot, it is usually because there is too much air turned on the stoker. This forces the heat up the chimney and of course, results in a hotter than necessary smoke pipe and excessive fly ash is blown into the flues. Excess air pressurizes the furnace and forces dirt and smoke out the feed door.

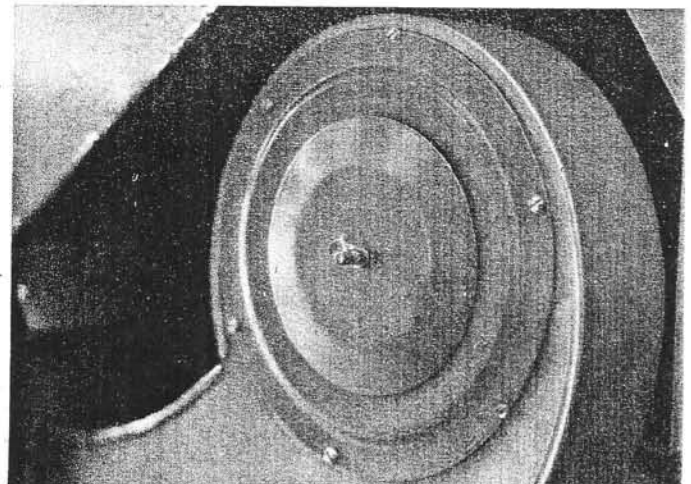


ILLUSTRATION #2

HOMEWONER OPERATING INSTRUCTIONS

7. HOPPER LID (Hopper Models Only)

Always close hopper lid tightly after filling. There is air pressure in the hopper from the forced stoker draft. This pressure has a tendency to force dust out into the furnace room when the lid is open. The rubber seal in the hopper lid is to avoid this dust problem. So we repeat: ALWAYS CLOSE LID AFTER FILLING

8. STARTING THE FIRE AND KEEPING IT LIT

Set thermostat at 72 degrees Farenheit, or higher if testing unit in warm weather. When coal is first put in the stoker, the machine should be run until the coal appears in the burner. Then build a fire with small pieces of cardboard and forced air, placing a small shovelful of coal on the fire. In a very short time the fire should spring into action. The fire is automatically kept lit by the stoker relay which brings the stoker on every hour. One minute on the hour usually keeps the fire going.

9. COAL FEED--UNBURNED COAL IN ASH PAN

The coal feed is regulated by the step pulleys on the motor and transmission, Illustration #3. Too large a fire or too much coal tends to put heat up the chimney or unburned coal in ash pan. To SLOW coal feed use smaller pulley on motor to larger pulley on transmission. For MORE coal reverse procedure. When changing coal feed align pulleys for in-line belt alignment.

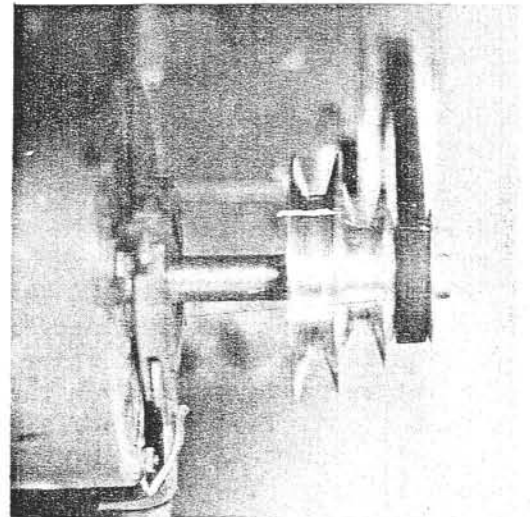


ILLUSTRATION #3

10. TRANSMISSION LUBRICATION

Check oil level in transmission every 6 months. Add 90 weight gear oil as required, obtainable from any service station or bulk oil dealer. Keep oil level with bottom of plug A, Illustration #4.

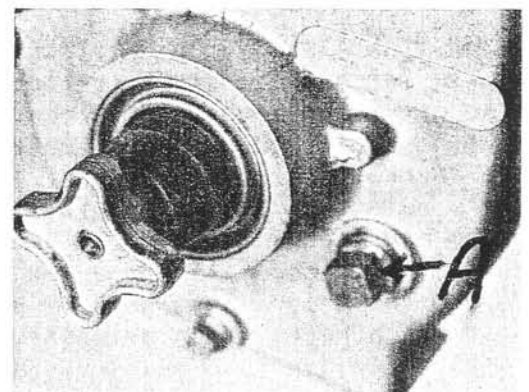


ILLUSTRATION #4

HOMEOWNER OPERATING INSTRUCTIONS

11. LUBRICATION AND STOKER MOTOR CARE

The motor on the PRILL'S stoker carries a manufacturer's guarantee against defective materials and workmanship for a period of twelve months. Improper or defective wiring or low voltage, oversize heater elements and failure to lubricate motor properly will void motor guarantee. Oiling instructions are on the motors.

12. BLOWER MOTOR CARE AND LUBRICATION

The same general guarantee and instructions apply here. Fan bearings are sealed bearings and DO NOT require lubrication.

13. REPLACEMENT OF SHEAR PIN

Unscrew knob A from end of transmission and you will find the shear pin C connecting the splined nut B and drive washer D, Illustration #5. Shear pin is 1/8"x3/4" long. Extra shear pins are enclosed in instruction envelope in plastic bag.

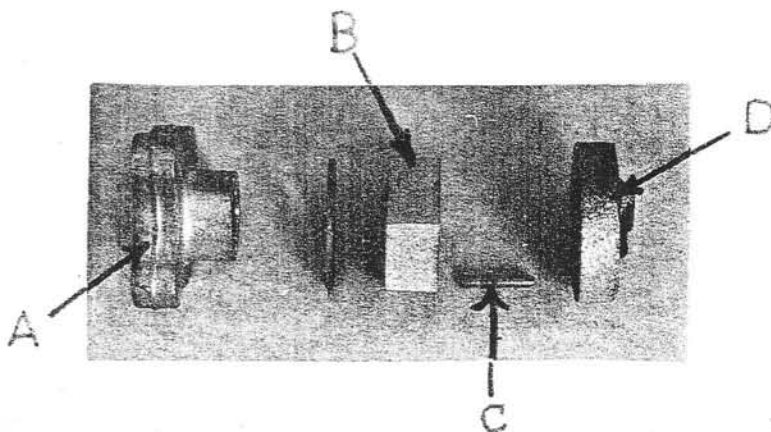
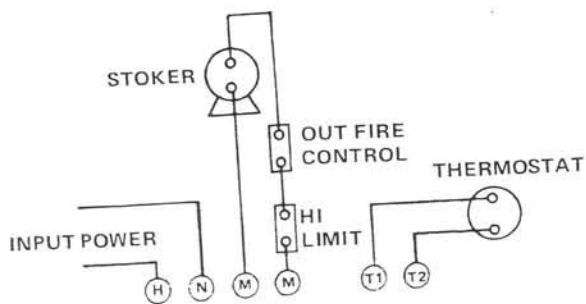
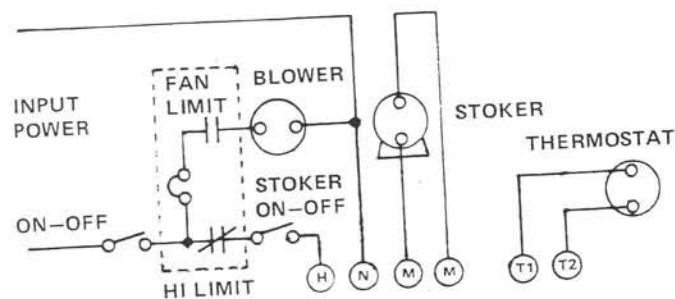


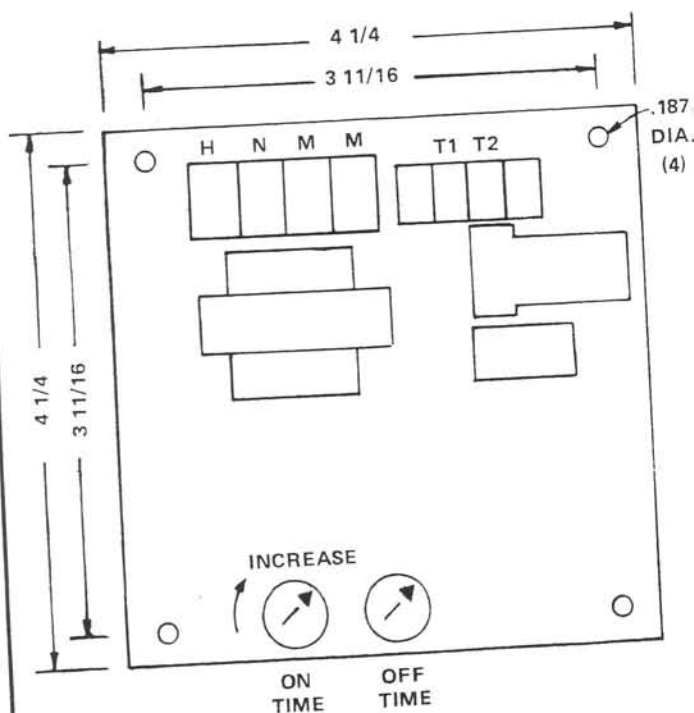
ILLUSTRATION #5



WIRING DIAGRAM
FOR DIRECT CONTROL

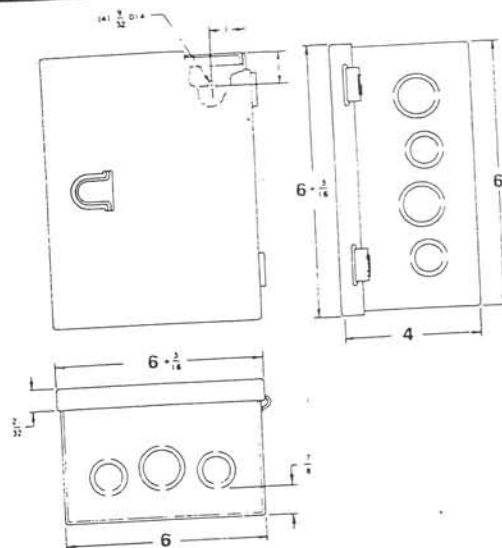


WIRING DIAGRAM
USING FAN AND LIMIT CONTROL



SHOULD ON OR OFF TIME REQUIRE ADJUSTMENT,
ROTATE POTENTIOMETER DIAL TO DESIRED
SETTING - SMALL CHANGES RECOMMENDED.

ON TIME PRESET TO 2 MINUTES
OFF TIME PRESET TO 30 MINUTES



ENCLOSURE

- NOTE: 1. TIMING SHALL CONTINUE DURING SHORT POWER OUTAGES. SHOULD LOSS OF POWER BE EXTENDED, 'ON' TIME WILL BE INITIATED WHEN POWER RETURNS TO MAINTAIN FIRE. THERMOSTAT ACTIVATION WILL TURN STOKER ON AND RESTART 'OFF' TIME TO SAVE UN-NEEDED FUEL WHEN THERMOSTAT OPENS.
2. ALL WIRING MUST COMPLY WITH LOCAL CODES AND ORDINANCES.
3. USE WITH 2 WIRE 24 VOLT THERMOSTAT.

SPECIFICATIONS:

VOLTAGE INPUT: 115 VAC 50 OR 60 HZ OR
208/230 V-50 OR 60 HZ

OUTPUT ELECTRICAL RATING:

7802D-120: 30 AMP-3/4 HORSEPOWER
7802D-230: 30 AMP- 1 1/2 HORSEPOWER

ON TIME RANGE: 1 TO 4 MINUTES ADJUSTABLE
OFF TIME RANGE: 1 TO 60 MINUTES ADJUSTABLE

TO ORDER:

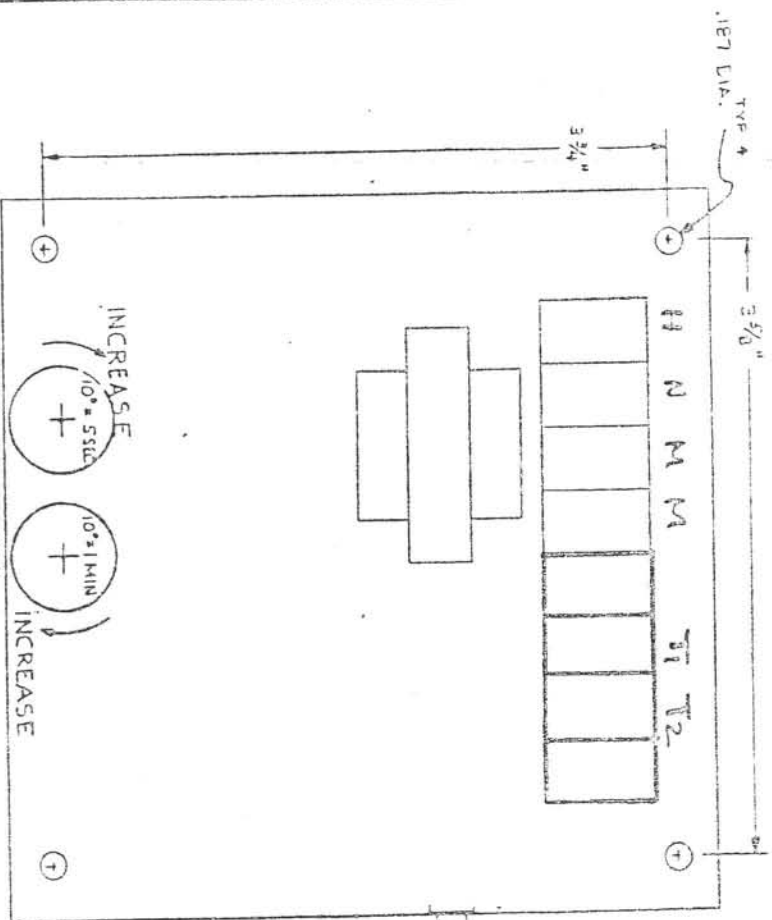
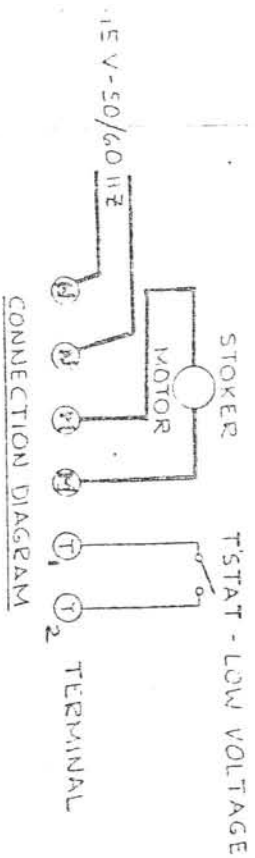
SELECT PART NUMBER 7802D-120 - 0

VOLTAGE-120V OR 230V
NOTE: 230 VOLT MAY BE USED
ON 208 VOLT

ENCLOSURE
O-OPEN
E-ENCLOSED

STC SPECIAL
TIMER
CORPORATION

P.O. BOX 1000 DAYTON, MINN. 55327 PHONE 612/441-4320



SHOULD ON OR OFF TIME REQUIRE
ADJUSTMENT, USING A SMALL PHILIPS
SCREWDRIVER, ROTATE POTENTIOMETER TO
DESIRED SETTING. SMALL CHANGES RECOMMENDED.

NOTE: TIMING SHALL CONTINUE DURING SHORT
POWER OUTAGES. SHOULD LOSS OF
POWER BE EXTENDED, ON TIME WILL
BE INITIATED WHEN POWER RETURNS
TO MAINTAIN FIRE. THERMOSTAT
ACTIVATION WILL TURN STOKER ON
AND RESTART OFF TIME TO SAVE
UNNEEDED FUEL TO MAINTAIN FIRE.

STOKER CONTROL - SOLID STATE

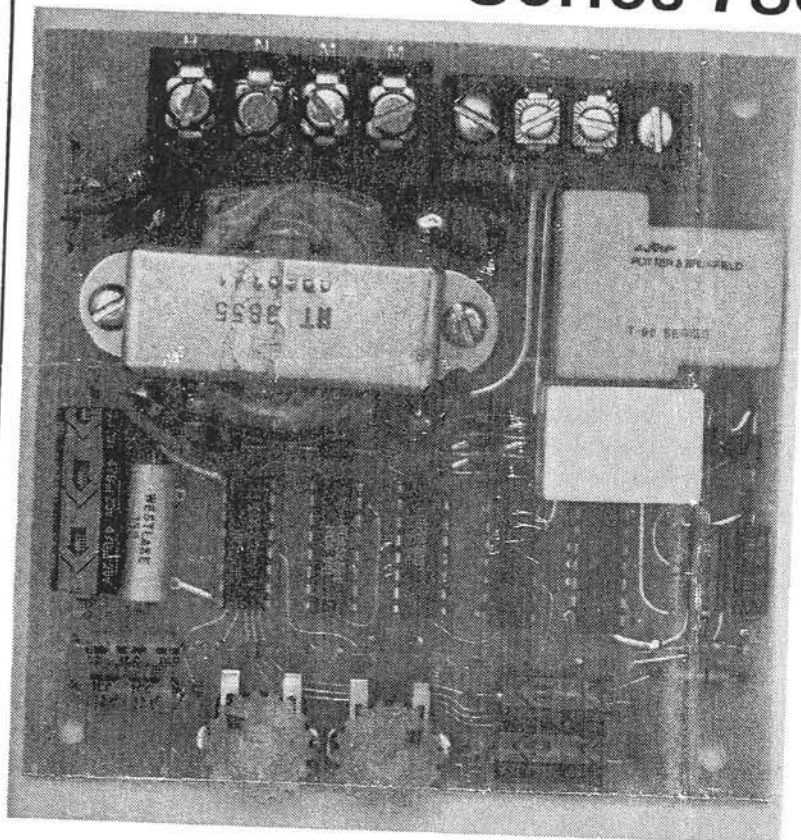
INPUT: 115 V AC
OUTPUT: 115 VAC
RATING: 3/4 H.P.
ON TIME: 1.5 TO 4 MINUTES
OFF TIME: 15 TO 60 MINUTES

MOUNT STOKER CONTROL ON FOUR
INSULATING STANDOFFS USING NO. 6
OR NO. 8 MOUNTING HARDWARE.

DAYTROL CO		BOX 1000
DAYTON, MINNESOTA		
MODEL 31	DATE 1/77	REV. 1000
STOKER CONTROL 7802A		780208
FIELD CONN DIAG		

FUEL SAVER STOKER CONTROL

Series 7802D



- 100 % SOLID STATE TIMING
- LOW COST
- COMPACT SIZE
- RELIABLE
- SAVES FUEL
- SENSES POWER OUTAGES
- TRANSIENT PROTECTED
- ADJUSTABLE 'ON' TIME
- ADJUSTABLE 'OFF' TIME
- ISOLATED THERMOSTAT
- HIGH (30 AMP) CURRENT
- INFINITE ADJUSTMENTS

THE SPECIAL TIMER CORPORATION STOKER CONTROL NO. 7802D, USING THE LATEST TECHNOLOGY, ALLOWS THE STOKER TO MATCH FUEL, FIRE AND CONDITIONS TO UTILIZE OPTIMUM OPERATING EFFICIENCY. THE STOKER 'ON' TIME AND 'OFF' TIME CAN BE EASILY ADJUSTED FOR VARYING FUELS AND EQUIPMENT.

A LOW VOLTAGE THERMOSTAT ACTIVATES A SOLID STATE CIRCUIT WHEN CALLING FOR HEAT. WHEN THE THERMOSTAT IS SATISFIED AND OPENS THE CIRCUIT, THE 'OFF' TIME IS AUTOMATICALLY RESTARTED SAVING UN-NEEDED FUEL AND IN SOME CASES ELIMINATING OVER HEATING.

SHOULD NUISANCE POWER OUTAGES OCCUR, THE MEMORY CIRCUIT WILL HOLD THE CONTROL IN A TIMING MODE. IF THE OUTAGE IS OF LONG DURATION, THE CONTROL WILL SENSE THIS AND INITIATE THE 'ON' TIME WHEN POWER RETURNS TO MAINTAIN FIRE, THEN CONTINUE ITS CYCLE.

ELECTRICAL CONNECTIONS ARE SIMILAR TO MOST EXISTING STOKER CONTROLS AND ITS SMALLER SIZE MAKES IT EASY TO REPLACE OR RETROFIT EXISTING SYSTEMS.

THE 7802D MEASURES 4¼ INCHES LONG BY 4¼ INCHES WIDE BY LESS THAN 2 INCHES HIGH.

STC SPECIAL
TIMER
CORPORATION

P.O. BOX 1000 DAYTON, MINN. 55327 PHONE 612/441-4320

ADDENDUM
OPERATING INSTRUCTIONS
RE - BIO MASS

For those who are going to use bio mass as a fuel in our furnaces or boilers please adhere completely to the following instructions:

START UP: Use exactly the same procedures as outlined in our start up procedures. Bio mass ignites very readily.

SHUT DOWN: When it becomes necessary to shut down one of our furnaces or boilers using bio mass as a fuel, turn all switches to an off position. Then completely remove all burning fuel from the burner head and place in the ash pan. This procedure should be followed if the unit is going to be shut down for any length of time over two hours. Then to start unit up again, simply follow the start up procedures.