

General Information

From time to time, new operating software is updated for the EasyFire pellet stove. TC80 upgrade includes improved thermostat operation. The software is permanently burned onto a computer ROM memory chip. Changing the software is easily accomplished with common tools provided care is taken not bend any "legs" during the installation.

Installation of this software should be accomplished by a qualified technician familiar with electronic and mechanical equipment. This installation does not require changing any high voltage connections.

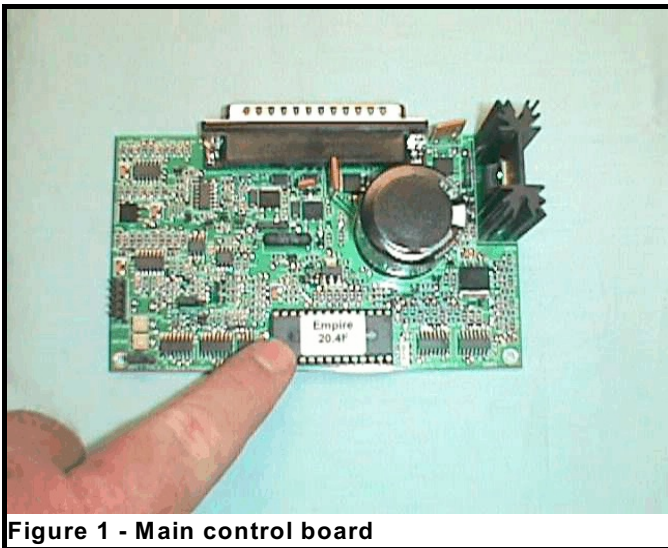


Figure 1 - Main control board

WARNING - ELECTRIC SHOCK POTENTIAL
All repairs must be accomplished with the 120VAC and 12 DC power disconnected from stove.

INCLUDED IN THIS KIT:

Qty	P/N	Description
1	11191	EF - Autolite Software - TC80T50
1	140806	Installation manual

Removal of old software

- 1) Disconnect all power to stove.
- 2) Remove control board access panel located on lower right side of pedestal (EF Freestanding or lower side frame on insert).
- 3) Find software chip on lower left side of board (**Figure 1**). Note label direction and position of small dot in upper right corner.
- 4) Using small flat blade screw driver carefully insert under chip between base. Lift chip a small amount then go to other side and complete same (**Figure 2**). Continue until chip is free of socket base.

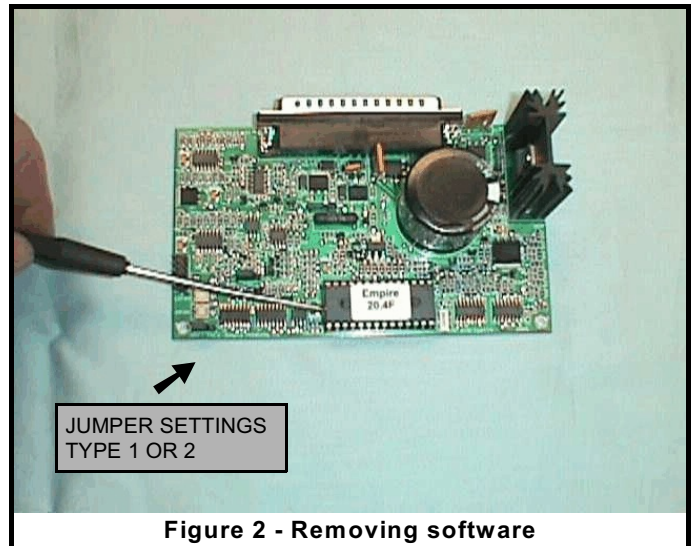


Figure 2 - Removing software

Installation of new software

- 1) Carefully layout new software noting the label direction and small dot on upper right corner (**Figure 3**).
- 2) Starting at the lower row of pins, carefully align each pin into top of socket.
- 3) Apply slight pressure down on chip and align top row of pins into socket (*Note: Pin placement is important for proper stove operation*).
- 4) With all pins carefully aligned with socket, push slightly on each side of chip slowly working into socket. *Make sure you support the circuit board with your other hand so it does not bend.*
- 5) After chip is seated into socket confirm no pins have been bent and all pins are firmly into socket.
- 6) Re-apply power and confirm the green LED light on main board is slowly flashing. If not check chip and pin placement.

Starting and operating new control system

All control function remain the same. The stove will require proper settings. Two key adjustments are required including Jumper and Fan Speed (**Figure 2**).

Jumper 1 Setting - #1 for EF3801/4001B

#2 for EF5001 & U.

Jumper 2 Setting - Altitude as required.

Fan Speed Setting if required - Adjust Low on "Low" switch selection in run mode. View fire with Feed Trim @ 3:00 o'clock - 2" flame over burn pot after 15 minutes.

Adjust High on "High" switch selection. View fire with flame active and blowing ash out of pot 6" flame.

After adjustments re-install all cover plates.

For additional assistance, contact technical service -

csepi@sierraproductsinc.net

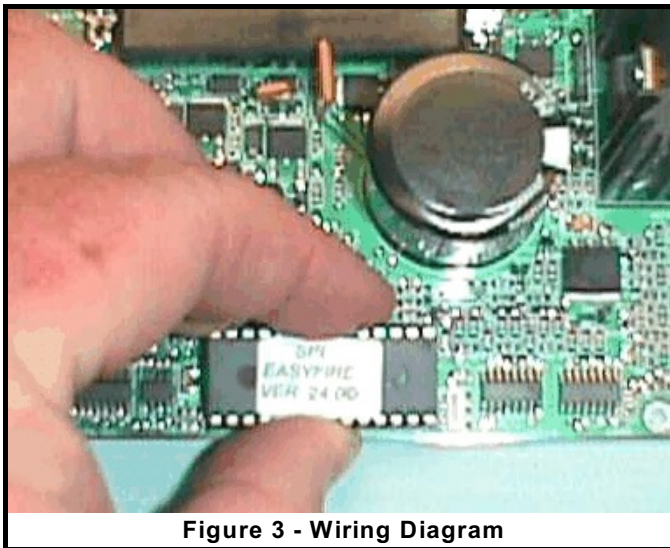


Figure 3 - Wiring Diagram

Start Up Operation

Timers allow for fixed feed amounts during 20 minute start up cycle. Timing for ignitor - 8 minutes, fan is started at 3.5 volts after 1 minute and the feed is turned on for 1 minute at 10.5 volts. If unit under 40°C Fan on @ 3.5 volts. This fan voltage continues until T2 reaches 40°C. If unit over 40°C fan on Low. Additional fuel added at 4 minutes at low feed. Operation confirmed with T2 rise of 12°C in 20 minutes. If no rise noted, cycle ignitor off at 8 minutes and fan on for 20 minutes. No start confirm requires reset of button to Off to continue.

T-1 = Electronic temperature sensor used to monitor flue back pressure and operating temperature.

T-2 = Electronic temperature sensor used to monitor manifold temperatures during start up and normal operation.

Normal Operation

Fan settings Low, Medium, High - Low operation a fixed fan voltage and feed based on trim. Medium and High will cycle to lower setting when T1 temps cycle temps reached. Shut down is confirmed by temp reduction or Off button activation. Both run 25 minutes fan shut down or until unit is cool. Shut down from fuel out requires reset of Off button. Thermostat operation functions only when AC power has been confirmed. Thermostat start operation functions only when AC power has been confirmed (autolite system requires AC power to function).

"Fan" setting is used for manual lighting of heater when AC power is off. "Clean" setting is used to increase fan speed to blow ashes from burn pot and fan housing.

Abnormal Operation

High temp is monitored by both T1 and T2. When either gets above 120°C the feed is stopped until the stove cools to below 120°C. This condition is indicated by a solid red High Temp LED. However, if T1 rises quickly and then stays at least that hot for another 16 seconds the red LED (light emitting diode) flashes rapidly and the stove begins an auto shutdown. Pressing Off then one of the run modes will clear this condition after T1 gets low enough.

AC power input, fan motor, and feed motor operation is checked continuously. Fan and feed motor checked for open condition will require recycle of control system. If onboard circuit breaker has been activated it will require removal of AC and battery power to reset.

Battery operation is available when AC power is Off. Thermostat functions are disabled and unit will cycle between Low to High depending on switch setting. Battery charging provide a low 1.5 amp rate and is switched off at 13.2 volts. Battery LED light is flashed when charging and is steady when the battery is fully charged.

Clean mode operation is limited to 100 seconds. If exceeded, will require an Off cycle to clear.

Indicator Light Summary

LED lights are installed on the main control board and switch board. These lights are designed to indicate various operating conditions.

Main board LED Light (Green) - This light verifies main board power and flashes green when AC or Battery power is present. A flashing light will confirm AC power and main board fuse is functioning.

Switch Board LED Lights

High Temp/Block Flue - Red - High temperature conditions result in a Red Light Indication.

Flashing Red LED indicates a blocked flue and a T-1 fast temperature rise which then stays at least that hot for another 16 seconds. This indicates a flue system malfunctioning. Blockage or a positive pressure on the flue system will trigger this type of indication.

Solid Red LED indicates a high temperature condition of either T-1 or T-2 (120°C). LED will stay red until heater cools as fan continues to operate.

Fast Flashing LED indicates a motor jam on either the feed system or fan system. Requires unplugging the unit to clear. Check motors for proper operation before continuing to run unit.

Battery LED indicates battery status with three indications - Clear no battery present, Green - Battery connected, and Red - Battery connected improperly (leads reversed). A steady green light indicates a fully charged battery. A slow flashing green LED - Indicates a charging battery. A fast flashing green LED indicates heater operating on battery and AC power "Off".

Customer Service & Replacement Parts

Replacement parts are available from your local dealer or on-line @ www.sierraproductsinc.net . or call or write:

Customer Service
Sierra Products, Inc.
5061 Brooks St. Ste. B,
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