

BLTCONTROL Logic

- 1 **Mechanical Setup.** This panel is intended to be used to control a BioHeat USA add-on wood boiler installed in parallel with a fossil fuel boiler.
 - 1.1 Back-up burner (oil or Gas) with **TT** terminals for control.
 - 1.2 On wood boiler, draft fan provides combustion air
 - 1.3 Circulator **C-1** transfers heat from wood boiler or thermal storage tank to heating zones.
 - 1.4 Zone valve **ZV-1** (when used) opens when there is a call for heat and wood heat is being used.

- 2 **Controls External to the panel.**
 - 2.1 As required, emergency cut-off switch and Fire-o-matic thermal sensor to de-energize panel.
 - 2.2 Wood boiler control panel, heating zone control panel, back-up burner controls. See operation information for each of these.
 - 2.3 Aquastat on thermal storage tank set approximately 140°F (60°C) (user controlled) and is connected open on rise.

- 3 **Controls in the panel, operation sequence, and technical information**
 Refer to wiring diagram and field wiring diagram.
 - 3.1 Top switch provides on/off control.
 - 3.2 Transformer provides 24 VAC power. Secondary is fused at 2 amps. 28 VA is available for 24 VAC auxiliary power needs.
 - 3.3 Whenever the multi-zone relay panel end switch closes, Relay **CR1** and green indicator *Zone ON* turns on. Zone **ZV-1** opens and circulator **C-1** operates. See below for function of relay **CR2**.
 - 3.4 Bottom switch is the mode selector switch which operates this system in one of three modes- Auto Back-up/Wood Only/Back-up Only.
 - 3.5 Auto Back-up mode. Whenever the temperature in the thermal storage tank drops below the setting of the tank aquastat, relay **CR2** turns on by closing the **TT** terminals on the back-up burner and turning off relay **CR1**. Yellow *back-up on* indicator turns on, **ZV-1** closes and **C-1** turns off.
 - 3.6 Wood only mode. Back-up burner will not operate.
 - 3.7 Back-up only mode. In this mode, relay CR-2 energizes, yellow indicator turns on, and the back-up burner turns on, if one of the heating zones is calling for heat.

Field wiring diagram for Tarm Solo control panel

4-7-08

NOTE:

All wiring must comply with current National Electrical Code and any other applicable codes. Refer to schematic included with panel.
 120 volt line voltage wiring shall be a code-approved type 14 gauge minimum. Low voltage wiring shall be 18 or 20 gauge thermostat wire.

120 VOLT TERMINAL STRIP (IN PANEL)

