



Control Systems Inc.



# CPU-0550 Stand-Alone Boiler Control

Boiler Staging • Mixing • Pump Sequencer • Differential Setpoint • Dual Setpoint



## More Features. Less Controls.

Introducing the simplest, most intuitive control available to the hydronic industry, the CPU-0550. The unique design means minutes to learn, minutes to setup. This control covers a wide variety of applications from a single unit, reducing the number of different controls on your shelf.

The CPU-0550 stand alone outdoor reset control accomodates staging, mixing, differential setpoint and pump sequencer applications in a condensed package with extensive flexibility.

## Features

- Boiler run time rotation
- Multiple applications
- Up to 3 On/Off boilers or single modulating boiler
- Multiple pump selections
  - DHW
  - Boiler Pump
  - System Pump
- Easy to wire with color coded and keyed terminals
- Full graphic multi-color display

## Benefits

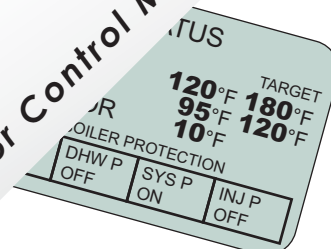
- Easy to program
- Intuitive programming menus
- Multiple mixing options
  - injection
  - floating action valve
  - 0-10VDC
- Spend less time in the field with step by step setup.
- All system info displayed on the main screen.

## Contact Information

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Flip for Control Modes!





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## CPU-0550 Control Modes

### Mixing Mode

This mode is used when running mixing pumps or valves. Mixing configurations include PMIp, Modulating, and Floating Action Valve. When in Pulse Modulated Injection (PMIp) or Floating Action Valve the control will run single modulating or On/Off boiler. In all modes the control will run the system pump.

STATUS			
HD DHW		TARGET	
BOILER	<b>120°F</b>	<b>180°F</b>	
SYSTEM	<b>95°F</b>	<b>120°F</b>	
OUTDOOR	<b>10°F</b>		
BOILER PROTECTION			
STG1	DHW P	SYS P	INJ P
ON	OFF	ON	OFF

### Boiler Mode

This mode is used when running boilers only. The boiler configurations available in this mode are single modulating, On/Off boiler, two stage On/Off boiler and three stage On/Off boiler. With single boiler operation the control will run the boiler pump and DHW pump.

STATUS			
HD DHW		TARGET	
BOILER	<b>105°F</b>	<b>161°F</b>	
DHW	<b>95°F</b>	<b>150°F</b>	
OUTDOOR	<b>10°F</b>		
STG1	BLR P	DHW P	SYS P
ON	ON	OFF	ON

### Differential Setpoint Mode

This mode is used when running a differential setpoint. In this mode, the control will also send a modulating signal output based on how far the control is from the differential. This can be used to run a pump in modulating applications for constant flow.

STATUS			
HD		TARGET	
DIFF	<b>21°F</b>	<b>10°F</b>	
SETPNT 1	<b>78°F</b>		
SETPNT 2	<b>99°F</b>		
MOD	PMP1	PMP3	PMP3
40%	ON	ON	OFF

### Pump Sequencer Mode

This mode is used to provide pump control for two pumps and maintain the feed water flow through the system. This control allows the system to sequence and cycle pumps, override pumps and turn the pump off when the outdoor temperature goes above a certain value (WWSD)

STATUS			
HD		TARGET	
HOURS	<b>3H</b>	<b>50H</b>	
CYCLES	<b>45</b>	<b>80</b>	
OUTDOOR	<b>50°F</b>		
	PMP1	PMP3	ALARM
	ON	ON	OFF

### Dual Setpoint Mode

This mode is used when one or two independent setpoints are needed. Each setpoint is set up individually and each has its own thermistor input and relay outputs: Each setpoint has its own normally open and normally closed contacts (which can be used for heating and/or cooling).

STATUS			
SETPNT 1	<b>154°F</b>	TARGET	<b>180°F</b>
SETPNT 2	<b>133°F</b>		<b>120°F</b>
NC 1	NC 2	NO 1	NO 2
ON	OFF	OFF	ON

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