

Model 5820 Annealing Station



Model 5820 Control IR®

The model 5820 Annealing station controller regulates the voltage supplied to dual opposing infrared heaters mounted in the Annealing station frame. The control also starts and stops the C104 self-contained heat exchanger that is required for the heater operation. The system operates in either a timed or continuous mode and contains interlocks for the cooling and over-temperature conditions.



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The **ControlIR** Model 5820 Annealing station controller is a versatile, easy to use yet powerful controller that provides the following features:

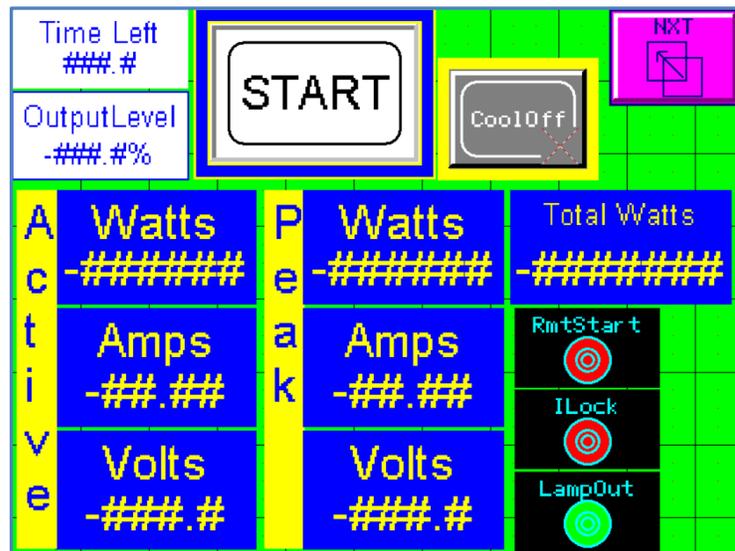
- ✚ Touchscreen for intuitive, quick and informative operator interaction
- ✚ Phase Angle fired load signal
- ✚ Continuous or Timed output mode
- ✚ 0.1 to 999.9 second timer function
- ✚ Idle and Run output levels in timed mode
- ✚ Display of Watts, Amps and Voltage. Instantaneous and Peak during timed mode (optional)
- ✚ Remote (footswitch) start function
- ✚ Remote Interlock



Interface

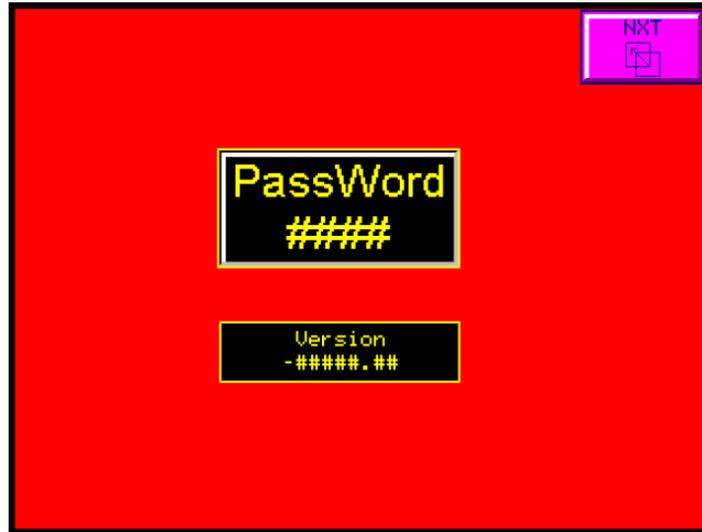
The operator interface is via a LCD Touchscreen controller and simple screen presses and touch keypad entries. The process status is shown on a screen with simple numeric value displays.

NOTE: The following section describes the screens and functions that are available; however all may not be applicable to your controller.



Access Screen

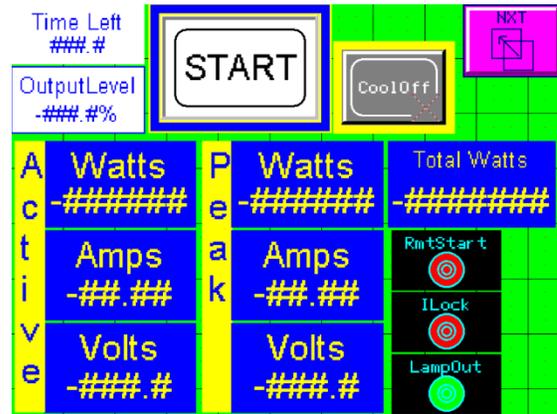
The screen shown at the right allows the user to enter a password to allow access to additional restricted screens. The defined password is listed on the last page of this document. This screen also lists the version number of the software in the controller and should be available when calling in for technical support.



Status Screen

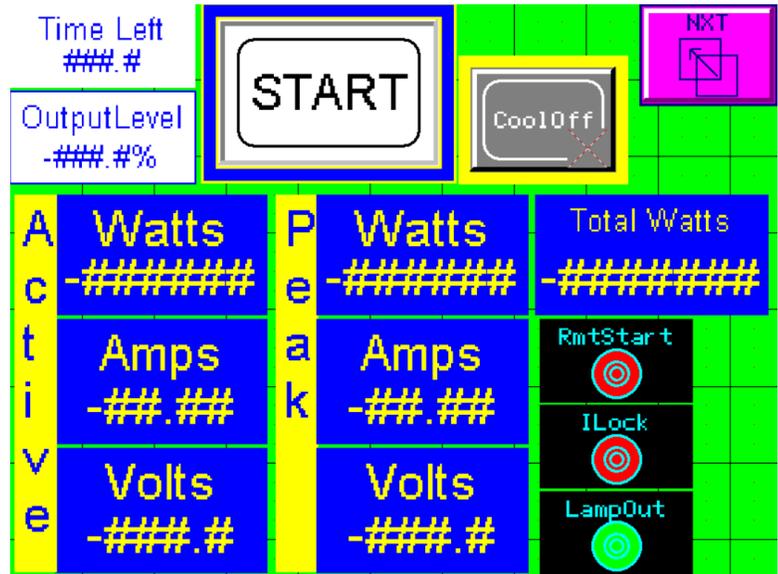
The screen shown at the right is the main operation screen for the basic controller. The following items are found on this display:

- **Time Left** – In timed mode, displays the amount of time remaining in the running cycle. In continuous mode this value will be 0.0 SEC
- **Output Level** – Displays the output level being applied to the connected load. This is in percent of output.
- **START** – Pressing the START button will apply power to the load, provided the cooling is on and all interlocks are satisfied. In continuous mode the power will be on until the button is pressed again, in timed mode the timer will be started and the power will revert to the Idle% when the timer completes.



Status Screen - continued

- Cool On/Off** – Pressing this button will turn on or off the attached cooling pump. The pump must be on and sufficient flow before operation is allowed. NOTE: When the pump is turned off it will continue to run to allow the heaters to cool and then automatically turn off. This is indicated by a blinking indicator in the switch button. Cooling must be on for heater operation and the start button activating the process.

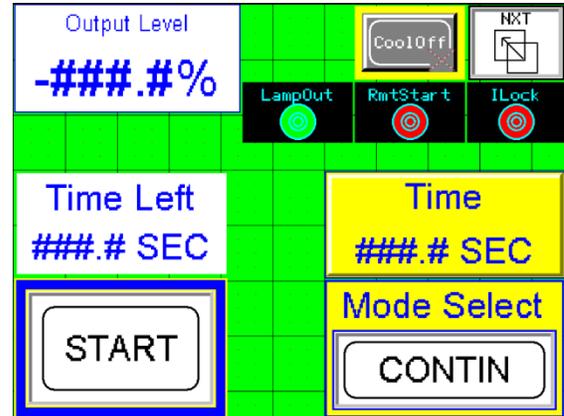


- Active Watts, Amps, Volts** – Displays the measured value of watts, amps and volts during an active cycle. This will only update during a cycle unless the 'IdleMon' parameter is enabled on the cycle definition screen.
- Active Watts, Amps, Volts** – Displays the peak value of watts, amps and volts during the previous cycle.
- Total Watts** – Displays the totalized watt/seconds from the previous cycle.
- RmtStart** – Displays the status of the remote start foot switch, when active the indicator will display as a pink color.
- ILock** – Displays the status of the system safety interlocks. The system requires that the attached chiller be on, sufficient cooling water flow, over-temperature thermostat in a normal condition and the remote interlock switch be closed before operation. This will indicate in a green color when all is ready.
- NXT** – Moves to the next screen
- Lamp out indicator** – green when both lamps are heating , red when one of the lamps has failed.

Timer Setup Screen

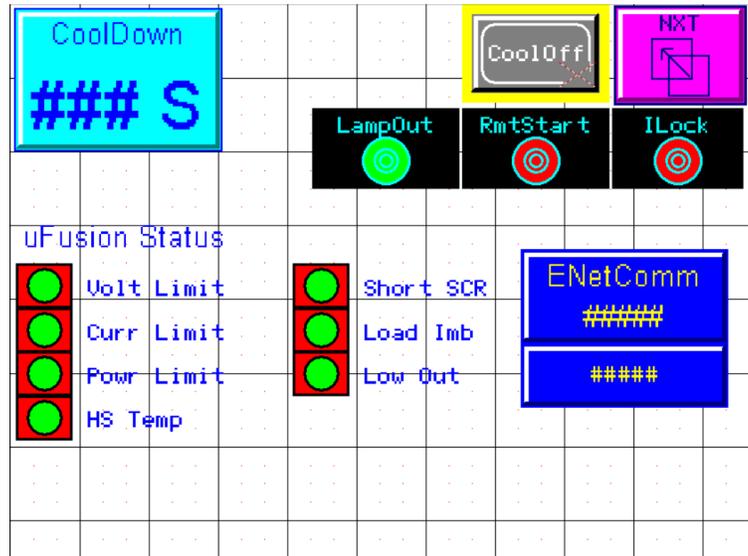
The setup shown at the right is used to configure timer parameters for the system. This screen requires a proper password entry before access is allowed. The following items are found on this display:

- **Output Level** – Displays the output level being applied to the connected load. This is in percent of power.
- **Time Left** – In timed mode, displays the amount of time remaining in the running cycle. In continuous mode this value will be 0.0 SEC
- **START** – Pressing the START button will apply power to the load. In continuous mode the power will be on until the button is pressed again, in timed mode the timer will be started and the power will revert to the Idle % when the timer completes. When running the button will display “Active”.
- **Cycle Time** – Time the output will be in RUN mode, defined in seconds.
- **Idle Level** – Defines the output level when in TIMED mode and not running a cycle. **
- **Run Level** – Defines the output level when a cycle is active. **
- **Mode Select** – If desired the system will run in a non-timed or continuous mode by selecting CONTIN, for a TIMED mode operation select TIMED.
- **IdleMon** – This button can be used to display watts, amps and volts when the system is not running a cycle.
- **Cool On/Off** – Pressing this button will turn on or off the attached cooling pump. The pump must be on and sufficient flow before operation is allowed. NOTE: When the pump is turned off it will continue to run to allow the heaters to cool and then automatically turn off. This is indicated by a blinking indicator in the switch button.
- **RmtStart** – Displays the status of the remote start foot switch, when active the indicator will display as a pink color.
- **ILock** – Displays the status of the system safety interlocks. The system requires that the attached chiller be on, sufficient cooling water flow, over-temperature thermostat in a normal condition and the remote interlock switch be closed before operation. This will indicate in a green color when all is ready.
- **NXT** – Moves to the next screen



Setup Screen

The setup screen shown is used to define the time the system operates the cooling system during a shutdown and provides some diagnostic status of the settings for the communications to the digital power controller. The settings should not be made without consulting the factory and prior documentation of the existing values. This screen requires a proper password entry before access is allowed.



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Password –

The top secret password for Setup screen access is 9009. The password to access factory function setup is 9559.