HEAT-TIMER®

INSTALLATION AND OPERATION INSTRUCTIONS

SRC Platinum

STEAM HEATING CONTROL

RESET CONTROL FOR STEAM HEATING WITH MOTORIZED VALVE AND VACUUM PUMP

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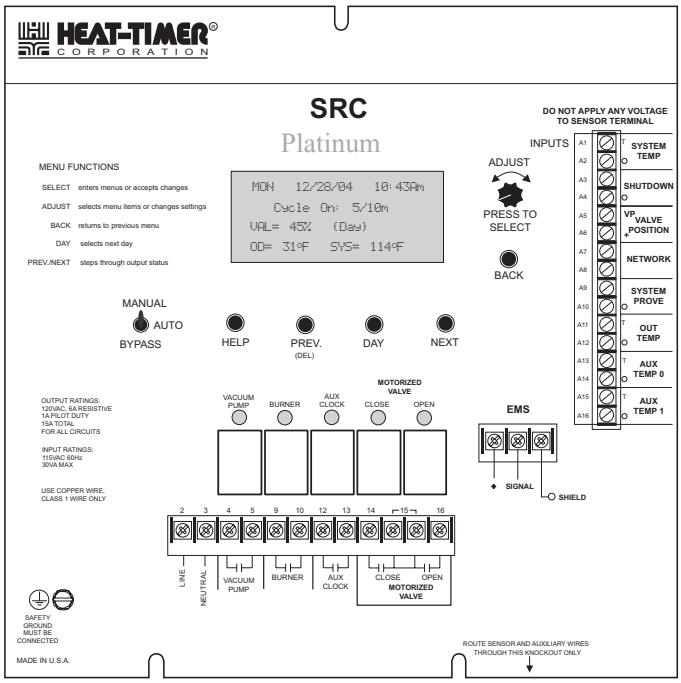

This Preliminary manual attempted to be complete and accurate at the time of publication. Additional upgrades and new features may change SRC Platinum functions. Upgrades to this manual may occur at any time. Contact the factory for further details.

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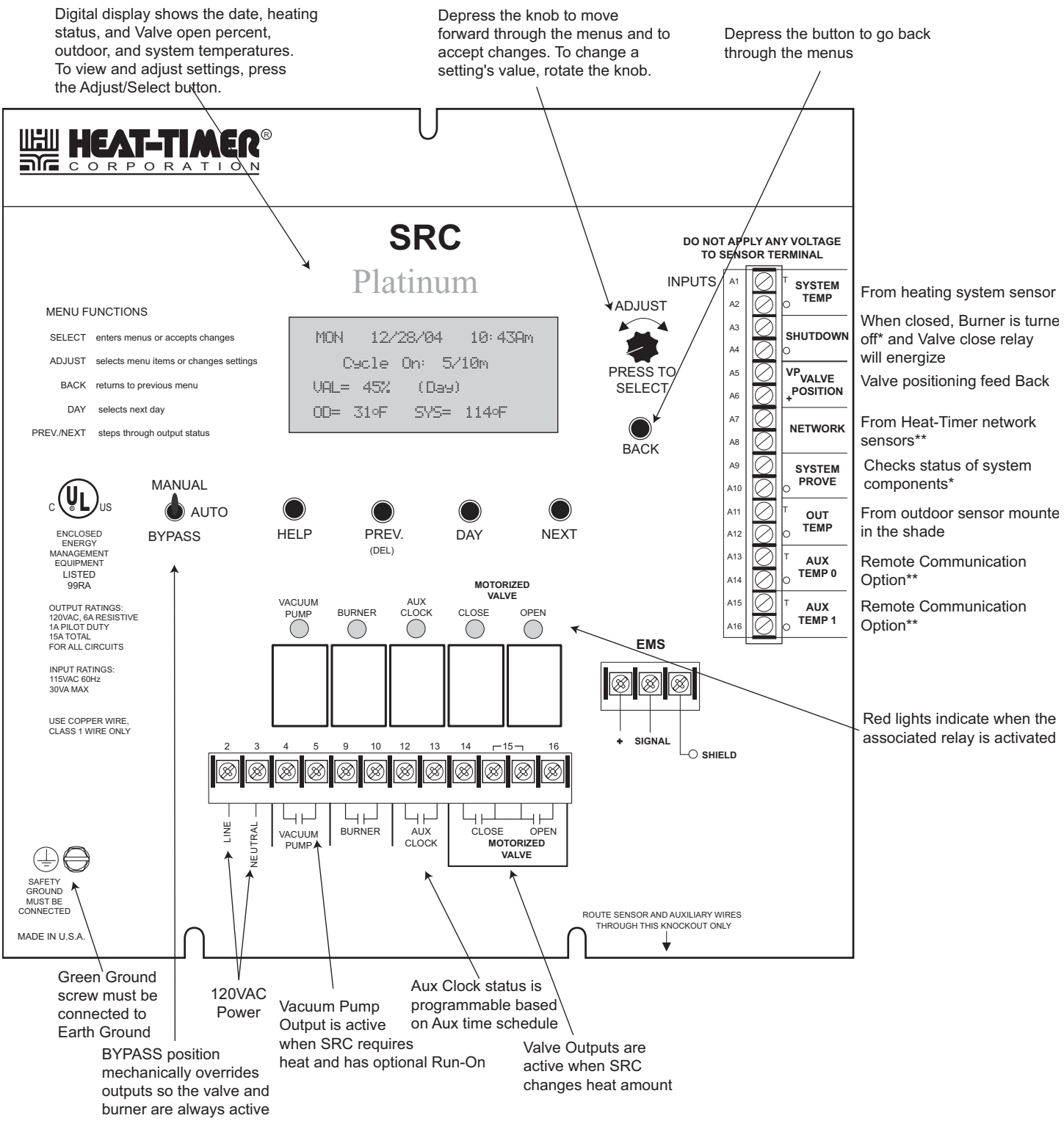
Panel Layout



* DRY CONTACT ONLY

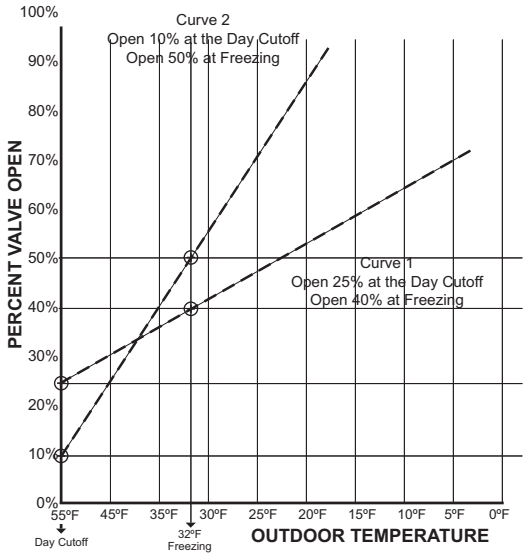
** Only available with the Remote Communications package

Understanding Operation Concept

The SRC Platinum controls a steam heating system to provide a building with comfortable and even heat levels. The control operates a steam boiler, a valve, and a vacuum pump automatically providing the desired heat pattern for a building. The SRC Platinum manages the heat in the building using two ways. First, it varies the percent of a motorized valve opening in response to changes in the outdoor temperature. Second, it changes the On and Off part of a preset cycle length. The building temperature is controlled through the use of a motorized valve, through direct burner operation, and vacuum pump control.

CYCLE PRINCIPLE

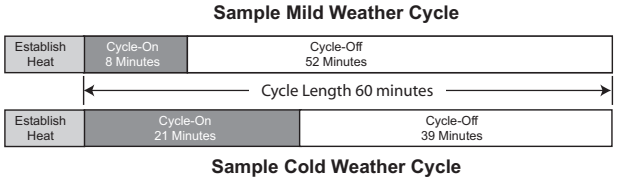
The control operates on the Cycle principle which was created specifically for steam heating systems. The Cycle concept was developed by Heat-Timer to overcome the inabilities of standard thermostatic controls to cope with the unique challenges of steam heating. The temperature of steam can not be regulated as with hydronic systems. In addition, steam heat can not be switched on and off instantaneously as with hot air systems. Instead, it takes time to build up a “head of steam”. Once the system starts heating up, it has momentum which can not be quickly stopped.



Heat-Timer’s theory of steam reset heating is as follows:
Pulse the valve open to a limited valve position, very slowly filling the system with steam and starting a timed heating period. The valve position will be determined by two adjustable points. The first point is the percent the valve should be open when the control starts giving heat (i.e.. at the Day Outdoor Set Point typically 55°F). The second point will be the percent the valve should be open at freezing (i.e.. at 32°F). The time of the heating period will vary according to the Outdoor temperature (OD) and the Heat Adjustment settings. When this timed heating period is over, the valve will close (either partly or fully as adjusted by the operator). This will cause two things to happen. First, as steam turns back into water, all the energy it carries is released in the form of BTUs which are usable heat energy. Second, condensate occupies approximately 1500 times its volume as vapor. When the vapor condenses it forms a natural vacuum in the system which helps move condensate and pulls steam through for the next heat cycle.

CYCLE Length Based on Outdoor Temperature

By monitoring the outside temperature, the SRC Platinum is able to anticipate the heating needs of the building. Each fixed time Cycle period (usually 60 minutes long but adjustable depending on the building response) is divided into a Cycle-ON segment and a Cycle-OFF segment. The length of the ON segment will vary with the outside temperature. The colder it is outside, the longer the ON part of the cycle will be.

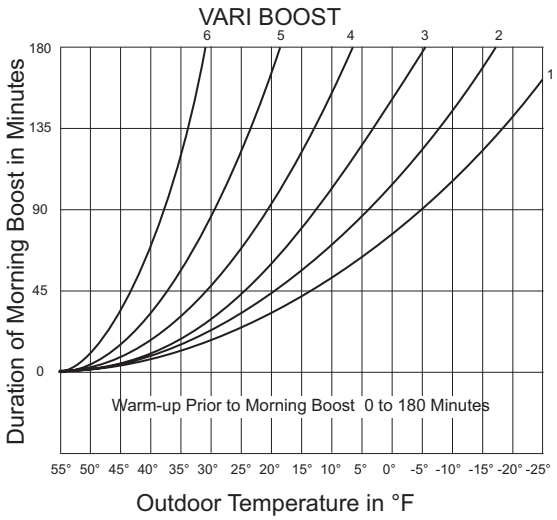


The SRC Platinum constantly checks the Outdoor temperature (OD) by means of a solid state sensor located on the exterior of the building. At the same time, it monitors the System temperature (SYS) of the building by means of a Heating System Sensor (HSS). This Heating System Sensor is located where it will show that heat has reached to the furthest location in the building (or the hardest to heat area). On the basis of this combined data, the SRC Platinum sends instructions to the heating plant to control the heat level in the building.

In addition to adjusting the length of the ON part of a cycle, the Outdoor temperature (OD) acts as a system cutoff. When the Outdoor temperature rises 2°F above an adjustable cutoff temperature, the SRC Platinum will not call for any heat. When the Outdoor temperature drops below the cutoff, the SRC Platinum will automatically begin controlling the heating cycles. Once the heating system has been activated, the heating system sensor will register when heat has reached throughout the building. The combined effect of these two sensors is to provide an even, comfortable level of heat throughout the building.

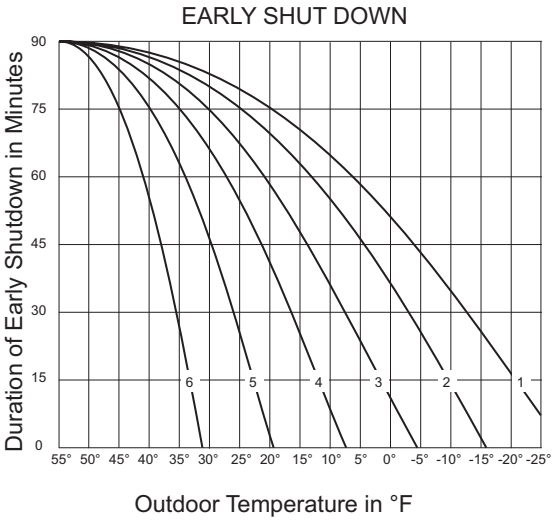
The SRC Platinum is able to maintain two different heat levels. The Day heat level is the higher level of heat that provides comfortable temperatures when the building is occupied or tenants are active. The Night heat level is lower, and can be used to conserve energy when the building is empty or when tenants are asleep. Both heat levels rely on the identical cycle concept, but the lower Night settings provide less heat given the same Outdoor temperature.

Boost, Vari-Boost and Early Shutdown



The boost is designed to return the building to its Normal Day heat level after Night heat level. It does it by increasing the motorized valve opening by 10% above the Day calculated percentage. There are two types of boosts in the SRC Platinum. The manual boost which allows the change of the amount of time required to start the Boost before the Day schedule. The Vari-Boost increases the motorized valve opening as the manual boost. The difference is the initial start time. The Vari-Boost depends primarily on the Outdoor temperature and the Boost Adjustment (boost curve selection.) *See Boost and Early Shutdown.*

Early Shutdown is a feature that allows a commercial building that is not occupied during Night heat level to be shutdown earlier. The SRC Platinum calculates the time period from the last Schedule setting for that day based on Outdoor temperature (OD) and the Boost Adjustment (boost curve selection). The warmer it is outside the earlier the SRC Platinum will shift to Night. At 55°F Outdoor Temperature (OD) the Early Shutdown is the longest of 90 minutes. At -25°F Outdoor Temperature (OD) there is no Early Shutdown or Early Shutdown is 0 minutes. *See Boost and Early Shutdown.*



Sequence of Operation

When the SRC is powered up, the control will energize the Motorized Valve Close relay for a period determined by the Valve Motor time to synchronize the control and valve. When the control first senses a need for heat, the Vacuum Pump, Burner, and Motorized Valve relays will all energize to initialize the system correctly. The Vacuum Pump relay will energize for a Pre-vacuum period of 10 minutes followed by normal operation.

Once the SRC Platinum has initialized the system, and the Outdoor temperature (OD) falls below the Day Cutoff, the control will energize the Burner and the Vacuum Pump for a Pre-Vacuum period (if in Time Mode, will Synchronize the motorized valve by energizing the Close Relay for the total Valve Motor Time.) Following these steps, the SRC Platinum will pulse the Motorized Valve Open and Close relays to establish heat and monitor the System temperature (SYS) till heat is established. Establishing heat is terminated when the System temperature (SYS) reaches the System Setpoint setting. This is done to insure that heat has reached all portions of the building. During Establishing Heat period, the Valve can open to a full 100%. Even if Cutoff setting had a smaller value.

The SRC Platinum will start the On Cycle part of the Heating Cycle and pulse the Motorized Valve relays to reach an optimum opening percent based on the Outdoor temperature (OD), the System temperature (SYS), Cutoff Percent and Freezing Percent. When the calculated time for the Heating Cycle On period elapses, the Off period starts. The Motorized Valve relays will pulse accordingly based on the Off Cycle Percent as part of the On Cycle percentage. After the SRC Platinum terminates the Heating Cycle Off period, it will check the status of the System temperature (SYS). If it is above the System Setpoint, it will start a new Heating Cycle, otherwise it will go through the Establish Heat procedure before starting a new cycle. This will continue till the Outdoor temperature is 2°F above the Day Cutoff. In District Steam mode, and after terminating the Off Cycle time, the SRC Platinum will engage the District Steam Time Delay before stating a new heating cycle.

Initial Pilot Program

Setting an Initial Pilot Program will ease the configuration of the SRC Platinum and will give the opportunity to utilize the features that are to save on energy and give more comfortable heat when needed.

The program should consist of the following:

Identifying the type of heating system,
Selecting the features that your system can utilize,
Making sure you have the right control and accessories,
Installation,
Setting the System Startup,
Setting the System Settings,
Setting the Schedules
Adjusting the Day and Night Heat Adjustments and Valve Trim or Calibration.

Identifying the Type of Heating System

The SRC Platinum can control the heating system through these different methods:

Operation Mode either Direct Boiler control or District Steam

- **Direct Boiler control with or without a 2 Way Motorized Valve and Vacuum Pump.** This involve wiring the SRC Platinum Burner output to the burner. The SRC Platinum can control an On/Off burner. Furthermore, relays must be installed on the Burner Output socket as well as the Motorized Valve and Vacuum Pump relays on the SRC Platinum. On Startup Settings, Boiler or Valve option must be selected from the Operation Mode menu. Additionally, a System Setpoint menu option will be available on the System Settings 2 menu. The SRC Platinum can control either a Time Based or a Positioning Sensor feed back Motorized Valve. This must be selected during Startup or from the Valve Positioning menu.

- **District Steam control with a 2 Way Motorized Valve and Vacuum Pump.** The SRC Platinum can control heat to a building connected to District Steam or when there is a constant header pressure. Relays must be installed on the Motorized Valve and Vacuum Pump socketss on the SRC Platinum. On Startup Settings, District Steam option must be selected from the Operation Mode menu. A District Steam Delay menu option will be available on the System Settings 2 menu. The SRC Platinum can control either a Time Based or a Positioning Sensor feed back Motorized Valve. This must be selected during Startup or from Startup menu.

Motorized Valve with a Time Based Motor or Positioning Sensor Feed Back

- **Time Based Motorized Valve.** This allows the SRC Platinum to control a 2 Way Motorized Valve. If valve is Time Based, meaning the motor has a specific measurable time to open or close. Select Time Based from the Valve Postioning menu at Startup or in Starup menu. With that, the valve motor will be forced to shut close occasionally to synchronize its timing. In addition, a Valve Trim option will be available in the Maintenance menu to assist in fine tuning the valve position.

- **Motorized Valve with Positioning Sensor.** If the Motorized Valve has Posioning Sensor Feed back, the wires can be connected to the A4,A5, and A6 terminals as described later. The Positioning Sensor option must be selected from the Valve Positioning menu at Startup or in Starup menu. A Valve Calibration menu will be available as an option in the Maintenance menu.

Selecting the Features of the System

The SRC Platinum has been designed with steam heating with vacuum pump as the primary purpose. With this in mind, many of the SRC Platinum features can be utilized to ease, enhance and improve your system performance. Some of theses features are listed in this section.

Schedules

- By setting an operating Schedule, Night Cutoff and Night Heat Adjustment, you can save energy while providing comfortable heat to the building. The setting allows the SRC Platinum to reduce the heat based on Night Cutoff setting and a lower operating curve during the night or when building is unoccupied, i.e. office buildings and schools.

- During the day, Day Time settings will change building temperature to depend on Outdoor temperature (OD), Day Heat Adjustment. Each week day can have up to 4 Day Time and 4 Night Time settings. Refer to *Schedules (menu selection),* and *System Settings/Day Heat Adjust (menu selection).*

- During the Night, Night Time settings will change building temperature to depend on Outdoor temperature (OD), Night Heat Adjustment. Refer to *Schedules (menu selection),* and *System Settings/Night Heat Adjust (menu selection).*

Boost

- This feature allows the SRC Platinum to bring the building up to temperature quickly after a night setting. It does it using the Outdoor temperature as a guide. Refer to *System Settings/System Settings 2/Boost Mode (menu selection)*

Early Shutdown ESD

- This feature allows the SRC Platinum to shift to Night Time setting before the last n setting for that day. The Early Shutdown varies based on Outdoor temperature OD. The warmer the Outdoor temperature the earlier the SRC Platinum will shift to Night Setback. Refer to *System Settings/System Settings 2/Boost Mode (menu selection)*

Auxiliary Schedule

- The Aux output relay in conjunction with the Aux Schedule provides output switching based solely on the time setting of the Aux Schedule. The Aux will act as separate time clock which can turn on and off lights, fans, dampers, or other equipment. Refer to *Schedules/Aux Schedule (menu selection)*

Aux Output Relay

- The Aux relay on the SRC Platinum can be configured to either follow the Aux Schedule or the Vacuum Pump operation. This gives the option to activate or deactivate additional equipment based on the SRC Platinum operation or separate schedule. Refer to *System Startup/Aux Relay Mode (menu selection)*

Making Sure You Have the Right Control

If you need the SRC Platinum to do additional tasks that either is not listed or do not know how to configure them, contact Heat-Timer Corp. Sales Department either by Phone (973)575-4004, Fax (973) 575-4052, or by E-mail support@heat-timer.com.

Installation

Before beginning the installation, carefully evaluate your heating system. The SRC Platinum can control the heating system through these different methods:

- Direct Boiler Control with a Vacuum Pump and a 2 Way Motorized Valve.
- District Steam Control with a Vacuum Pump and a 2 Way Motorized Valve.

Mounting the Control Box

Locate an appropriate site

- Near the equipment to be controlled
- Away from excessively high or low temperatures
- At eye level, or where the displays are easily visible
- The surface must be strong enough to hold the weight of the control and the metal enclosure.
- Leave 12" of clearance under the enclosure to allow access to gutter cover screws.

Remove the SRC Platinum from the metal enclosure

- Take off the gutter cover by loosening the screws at its bottom.
- Remove the top center screw holding the panel to the enclosure.
- Loosen the two screws at the bottom of the enclosure.
- Make sure to unscrew any encloser cables. (Primarily used to connect to computers and remote systems.)
- Lift the panel from the enclosure.
- Screw the enclosure to the mounting surface through the holes provided.

Rear of Panel

Activate the Battery

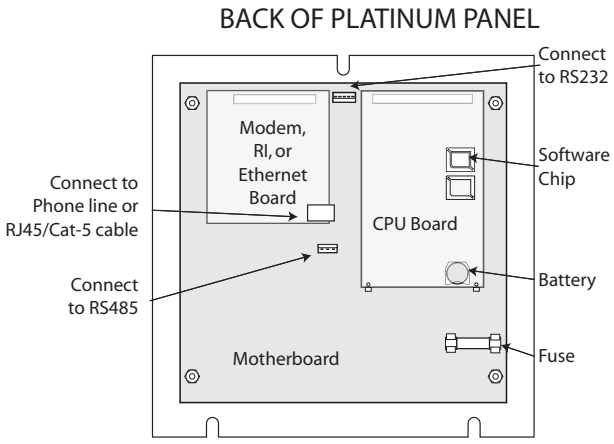
- Turn the SRC Platinum panel over to reveal the piggyback circuit board (CPU board).

> **⚠ CAUTION**
> Do not install the battery unless you plan to power the control at once. If the control is not powered, the battery will lose its charge in 100 days.

Connecting Modem, RS232, RS485, Ethernet or Internet Cables

- All panels will include Motherboards and CPU boards.
- Some panels might include an addition board.
- When connecting a RS232 or RS485 cables, a RI board must exist for this connection to operate.
- Modem, Ethernet or internet connection must have the proper boards. A modem requires RIM board.
- Remember that there is no upgrade to Internet panel. A purchase of a complete SRC-Platinum with RI-Net panel is a must.

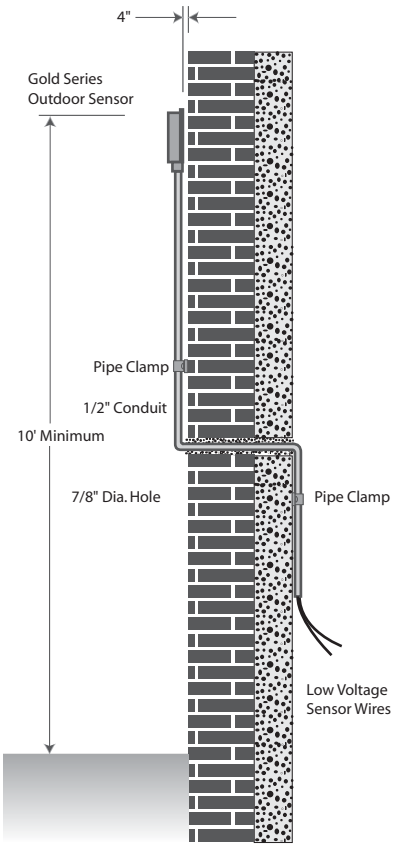
Screw the SRC Platinum back into the enclosure



Install the Sensors

Outdoor Sensor Installation

- Only use the Heat-Timer Gold Series sensor included with the unit (#904025). If you are replacing an earlier model Heat-Timer, it is necessary to upgrade the sensor.
- Locate the sensor in the shade on the north side of the building. The sensor should never be in direct sunlight.
- Be sure the location is away from doors, windows, exhaust fans, vents, or other possible heat sources.
- The sensor should be mounted at least 4 inches away from the building wall and approximately 10 feet above ground level.
- The sensor wires can be extended up to 500' using shielded 2 conductor cable. Do not ground the shield at the sensor.
- Do not run sensor wires in conduit with line voltage wiring.



⚠ WARNING

The SRC Platinum is an operating control only. The boiler must have all safety and limit controls required by code. It is the responsibility of the installer to verify that all the safety and limits are working properly before the SRC Platinum is installed.

⚠ CAUTION

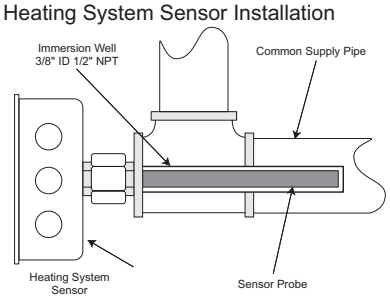
Determining the proper location for the Outdoor Sensor is very important. The SRC Platinum will base the heat on the outdoor temperature information it receives from this location. If the sensor is in the sun, or covered with ice, its reading will be different from the actual Outdoor temperature OD.

Heating System Sensor (HSS) Installation

Locating HSS

- The ideal location for the HSS is on the last radiator in the system to get warm. This radiator is usually the one with the furthest piping distance from the boiler.
- With a one or two-pipe system, the sensor may be located high up on the furthest supply riser.
- With a two-pipe system, the sensor may be located on the furthest return riser. However, the sensor must be above the water line of the boiler (on a dry return).
- Never install the sensor between a condensate receiver and the boiler.

Heating System Sensor Installation



⚠ CAUTION

If the HSS can not sense the system is full of steam, the SRC Platinum will not provide comfortable heat levels. Be sure the HSS is located on a properly vented pipe which can not easily be isolated from the system

⚠ CAUTION

Since Heating System Sensor (HSS) affects the operation of the SRC Platinum when Boiler or Valve Operating Mode is selected from the Startup menu, HSS fault affects the control operation in Boiler or Valve Operating Mode only.

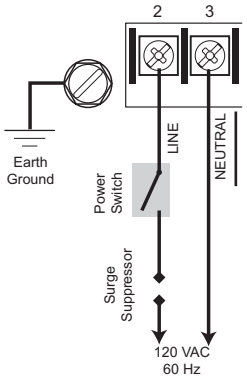
Heating System Sensor (HSS) Installation

- Only use a Gold Series sensor. If you are replacing an earlier model Heat-Timer, it is necessary to upgrade the sensor.
- Install a 3/8"ID 1/2"NPT immersion well (HT #904011 or equivalent).
- Insert the sensor probe of the supplied immersion sensor (HT #904024) into the well, and screw the handy-box into the threaded top of the well.
- The sensor wires can be extended up to 500' using shielded 2 conductor cable. Do not ground the shield at the sensor.
- Do not run sensor wires in conduit with line voltage wiring.

Wiring

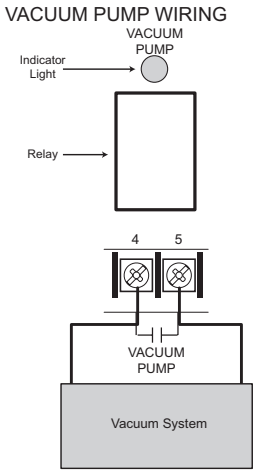
Power Input Wiring

- Bring the power wires through the bottom **left** hand knock out of the enclosure. ***Do not bring wires through sides or the top as this will interfere with servicing the control.***
- Attach 120V 60 Hz to terminals *Line* and *Neutral*.
- Ground terminal must be connected to Ground green screw. DO NOT use the neutral line as earth ground.
- Class 1 copper wire is required by UL.
- Class 1 voltages must enter the enclosure through a different opening from any Class 2 voltage wiring.



Vacuum Pump Output Wiring

- The Vacuum Pump Terminals are dry contacts only. They do not source any power.
- Wire the Normally Open (N.O.) Pump dry contact terminals to the Vacuum System. The N.O. contacts DO NOT source any power.
- Make sure Vacuum Pump relay is installed.
- Vacuum Pump relay energizes 10 minutes before starting to Give heat (Pre-Vacuum).
- Vacuum Pump relay de-energizes one cycle time after the system shuts down.

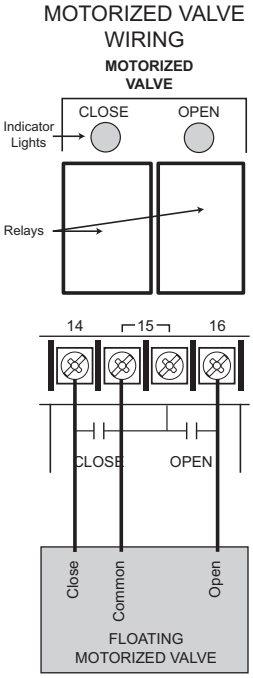


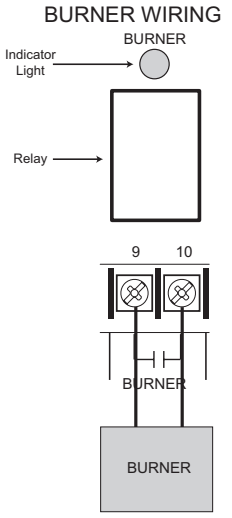
Burner Output Wiring

- With direct burner operation, burner relay must be used. The N.O. contacts do not source any power.
- Burner relay energizes whenever the Outdoor temperature is below the Outdoor Cutoff for that time in the schedule.

Motorized Valve Output Wiring

- With a motorized valve, the motor must be of the floating type. If using a pneumatic valve, use the Electro-Pneumatic Transducer (HT #926018-00). Wire Terminal 15 to the Common (Red) of the motor. Wire Terminal 14 to the Close (White) and Terminal 16 to the Open (Black) of the motor.
- 2 Relays are required to control a motorized valve. Both output relays are N.O. contacts that do not source any power.





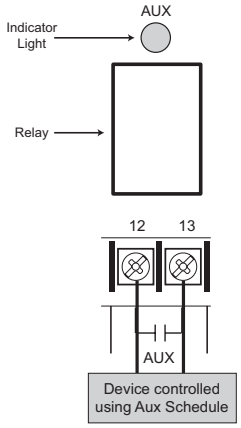
Aux Output Wiring and Multi-Mod Wiring (Optional)

- The Aux outputs are an extra set of contacts which switch based either on a separate schedule or Vacuum Pump operation. These contacts can be used in place of an external time clock. To switch units on or off, use the N.O. dry contacts terminals to open a damper, activate a motor, or connect to a Heat-Timer Multi-Mod control in which can modulate up to 20 modulating burners.
- If there is a need to control additional equipment or building functions on a separate schedule, wire to the Aux terminals and set the Aux Relay Mode in Startup menu to Aux Schedule option.
- Install a relay on the Aux Clock output.
- Wire the terminals marked Aux Clock to the equipment. These terminals do not source power. They act as a dry contact only.
- If connecting to a Multi-Mod, wire these terminals to Multi-Mod A3 and A4 Shutdown terminals. Furthermore, you must set the Aux Relay Mode in Startup menu to Inverse of Pump option.
- When using SRC Platinum with RINet, the Aux Output relay acts a Modem power switch. In this case, Aux Output relay can not be used for anything else.

⚠ CAUTION

Each relay is rated at 1 amp inductive, 6 amps resistive at 120V. The total output of all relays must not exceed 15A.

AUXILIARY WIRING



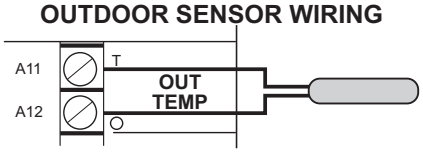
⚠ CAUTION

When connecting SRC to the Internet, Aux output relay acts a Modem power switch. Thus, Aux output relay can not be used for anything else.

Wiring the Outdoor Sensor

- The SRC Platinum is designed to be connected to a HT#904025-00 Outdoor sensor.
- Attach the sensor wires to the Out Temp terminals (A11 and A12). Temperature sensors have no polarity.
- Connect the shield to the right hand O terminal with a circle next to it.
- Outdoor sensor wires can be extended up to 500' by splicing with 18 gauge shielded sensor wire.
- Do not run sensor wire in conduit with line voltage.

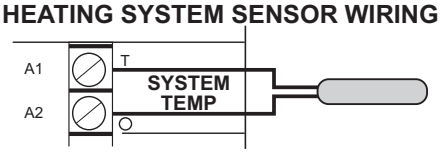
OUTDOOR SENSOR WIRING



Wiring the Heating System Sensor (HSS)

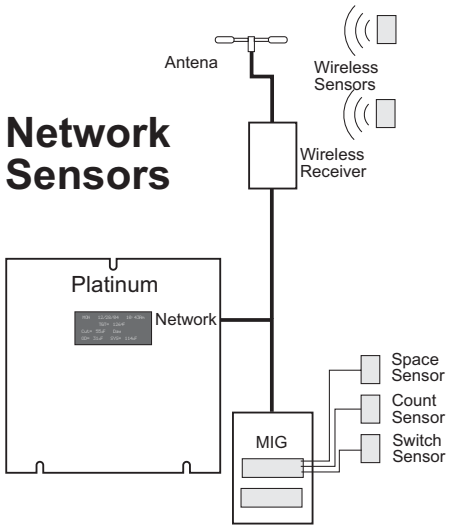
- The SRC Platinum is designed to be connected to a HT#904024-00) temperature sensor for immersion in 3/8"ID well (HT#904011-00 or equivalent).
- Attach the sensor wires to the SYSTEM TEMP terminals (A1 and A2). Temperature sensors have no polarity.
- Connect the shield to the right hand O terminal with a circle next to it.
- Temperature sensor wires can be extended up to 500' by splicing with 18 gauge shielded sensor wire.
- Do not run sensor wire in conduit with line voltage.

HEATING SYSTEM SENSOR WIRING



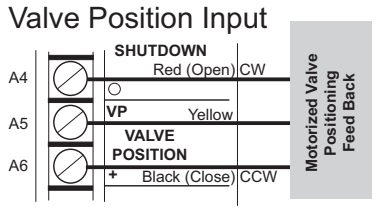
Wiring Network Sensors (Wireless and MIG)

- Remember that network sensors can only be configured remotely through Visual Gold or the Internet.
- The SRC Platinum Network terminals can connect to up to 64 sensors.
- When connecting to multiple sensors, a MIG control can be used handle up to 28 sensors each. Multiple MIG's can be used to connect to one SRC Platinum.
- Wireless sensors can be used with a Receiver and an Antenna to reduce building sensor wiring. The Receiver then can be wired directly to the Network



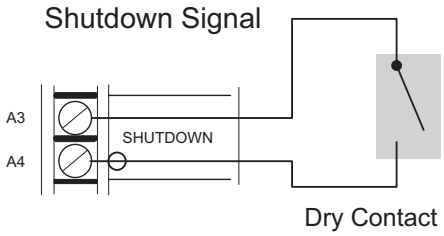
Wiring Valve Positioning (Positioning Sensor Mode)

- Valve Positioning input can be used when a motorized valve with Positioning Sensor feed back is used.
- The Valve Positioning feed back should have 3 wires. Connect the yellow wire to input terminal VP (A5) on the SRC Platinum. The other 2 to A4 and A6.
- Set Valve Positioning Startup Menu to Positioning Sensor.



Wiring Shutdown Terminals (Optional)

- This feature can be used whenever it is desirable to turn off the SRC Platinum from a remote location or another controller.
- A typical use for this feature would be to disable all heat when an Energy Management System (EMS) indicates a building is overheated.
- When the Shutdown feature is enabled by closing a dry contact, the Burner relay will deenergize. The Motorized Valve Close (OUTPUT) relay will energize while the Motorized Valve Open relay will deenergize. The Vacuum Pump relay will continue to be energized for an additional complete Cycle Time.
- The Shutdown signal must be a dry contact only. No voltage can be placed across the SHUTDOWN terminals.
- Bring the wires from the dry contact to the Shutdown terminals marked A3, A4
- Shutdown will affect the SRC Platinum only when in Auto mode.

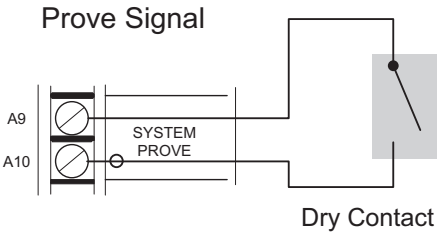


⚠ WARNING

Never apply external voltage to the input terminals. Permanent damage will occur, voiding the warranty.

Wiring Prove Terminals

- The Prove feature checks system components are operational before activating the boiler or opening the motorized valve.
- If the PROVE input terminals are open, the SRC Platinum will enable only the Vacuum Pump relay. The Burner and Motorized valve (OUTPUT) relays will be deenergized when the PROVE input is open.
- If NO external conditions must be met before the OUTPUT relays are energized, DO NOT remove the factory installed jumper across the PROVE terminals.



- The Prove signal must be a dry contact only. No voltage can be placed across the PROVE terminals.
- Bring the two wires from the dry contact to the terminals marked A9 and A10
- Prove will affect the SRC Platinum whether in Manual and Auto.

⚠ CAUTION

The PROVE input terminals must be shorted for SRC Platinum to provide heat. DO NOT remove the factory installed PROVE jumper unless replacing it with a Prove signal.

⚠ WARNING

The PROVE input CAN NOT be used as a safety limit. All equipment must have its own certified limit and safety controls as required by local codes. Any safety interlock MUST be wired back to the boilers or other equipment as required by code.

Wiring Aux Input Terminals (Optional)

- Remember that Aux sensors can only be configured remotely through Visual Gold or the Internet.
- Each Aux terminal can connect to only one temperature sensor.
- You can view Aux sensor values by pressing the Back button on RI, RIM and RINet SRC Platinum panels.

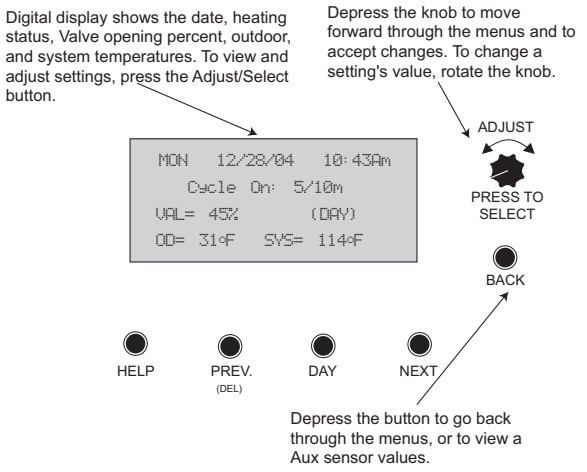
Testing the Sensors

- Power up the SRC Platinum.
- The control will go through a countdown, and then the bottom right of the display marked (SYS) will show the temperature read by the Heating System Sensor (HSS). The bottom left (OD) will show the temperature read by the Outdoor Sensor.
- If the display reads OPEN, SHORT, or an incorrect temperature, follow the troubleshoot procedures at the end of this manual.
- Wireless and MIG sensors readings can only be viewed on Visual Gold or the Internet.

Setting the Control

Display and Changing Settings

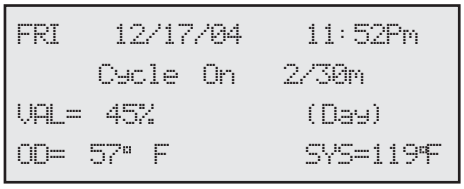
The SRC Platinum comes with a 80 character (20 character per raw x 4 raws) digital display. In addition, to the right of the display a turn (ADJUST) and push (PRESS TO SELECT) knob is used to scroll through settings when turned. When PRESS TO SELECT is pushed, the menu selection or value is selected. A push BACK button is used to go to the previous step on the menus or to display Aux sensor values.



Under the display four additional push buttons exist to assist in other menu functions:

NEXT	goes to next schedule time on schedules,
DAY	switches between different week days when in schedules,
PREV.(DEL)	clears a specific schedule setting,
HELP	when clicked on a specific menu item will provide help instructions.

When powering up the SRC Platinum for the first time, it will take you through an 80 second count down followed by the System Startup Settings then another 10 second boot setup and finally end with the system screen. Once the control is mounted and wired, set up an initial pilot program.

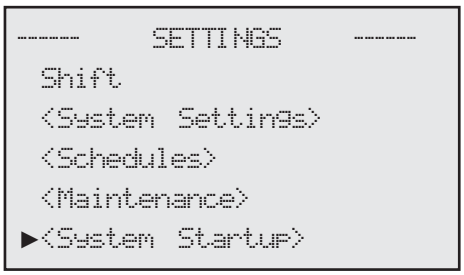


- Set and adjust System Startup Settings
- Set and adjust System Settings
- Set and adjust Maintenance
- Set and adjust Schedules

System Startup Settings

Enter menu by pressing SELECT: *Settings/System Startup*

If entering this menu option after the control has been set, several warnings will display with an option of pressing the Select button to continue. After the warnings the following options will be displayed in this order:

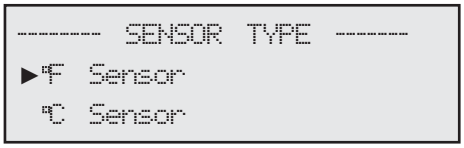


- Sensor Type (°F for Fahrenheit or °C for Celsius.)
- Operation Mode (Boiler or Valve, or District Steam)
- Cycle Length Setting (a range between 10 to 240 minutes)
- Valve Positioning (Positioning Sensor or Time Based)
- Valve Motor Time (a range between 120 to 600 seconds)
- Sensor Fault setting (Output On or Output Off)
- Day Light Saving (Enable or Disable)
- Aux Relay Mode (Aux Schedule, Same as Pump, or Inverse of Pump)

Sensor Type

°F Fahrenheit or °C for Celsius Default: °F Fahrenheit

SELECT *Settings/System Startup/.../Sensor Type*

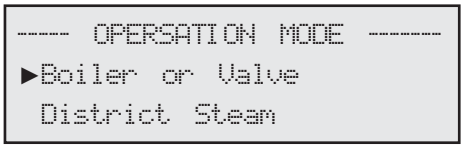


- This option allows you to set the display mode of the sensors and all temperature settings displayed by the SRC Platinum.

Operation Mode

Boiler or Valve, or District Steam Default: Boiler or Valve

SELECT *Settings/System Startup/.../Operation Mode*



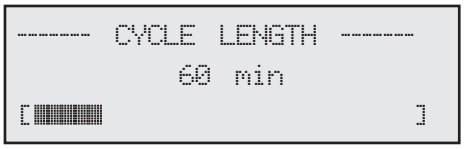
- The SRC Platinum can control the heating of a building by either directly controlling the burner and outputting a valve signal to a motorized valve. With this setting a (SYS) Setpoint setting will be available on the System Settings 2 menu. When the return temperature reaches the (SYS) Setpoint, the SRC Platinum acknowledges that heat has been established and starts the steam cycle.

- If the SRC Platinum was set to District Steam, it will start the heating cycle after an adjustable time delay, Dist Stm Dly that can be set from the System Settings 2 menu. When the SRC Platinum is in the Dist Stm Dly, the Display will show *Steam Time* as the remaining of the Dist Stm Dly.
- After the cycle elapses, a new District Steam Delay period, *Steam Time*, will start and terminate before a new cycle initiates.

⚠ CAUTION
If the Output Mode is set incorrectly, the SRC Platinum will not control the building temperature properly.

Cycle Length Setting

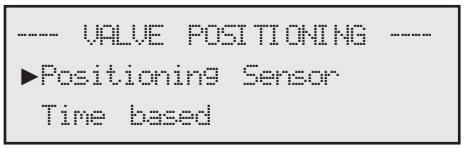
10 to 240 minutes Default: 60 minutes
SELECT *Settings/System Startup/.../Cycle Length*



- This selection allows you to adjust the Cycle length of the control. This setting in conjunction with the Heat Adjustment, (SYS) Setpoint and Outdoor temperature allows the SRC Platinum to calculate the Cycle On and Cycle Off times.
- During the cycle time the SRC Platinum will display cycle status, whether On or Off. In addition, it will display the number of minutes elapsed within the cycle time followed by the total cycle time.
- A good starting point for Cycle Length is 60 minutes for large buildings. The smaller the building the shorter the Cycle Length should be.

Valve Positioning

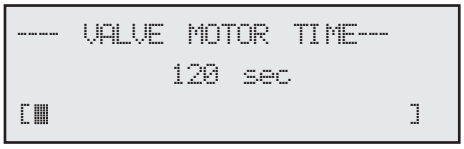
Positioning Sensor or Time Based Default: Positioning Sensor
SELECT *Settings/System Startup/.../Valve Positioning*



- If the SRC Platinum is controlling a motorized valve with a specific motor time, Time Based should be selected. A Valve Motor Time will follow this option in the Startup menu allowing the selection of motor time. A Valve Trim menu option will be available in the Maintenance menu when this option is selected.
- When Time Based is selected, the SRC Platinum will synchronize the motor occasionally for accuracy.
- When controlling a motorized valve with a sensor positioning feed back, Positioning Sensor must be selected. The valve feed back must be wired to A4, A5, and A6 input terminals for the control to operate properly. A Valve Calibration menu, as an option of the Maintenance menu, will allow the adjustment and fine tuning of the valve.
- No synchronization will occur if Positioning Sensor option was selected.

Valve Motor Time (Available with Time Based Valves)

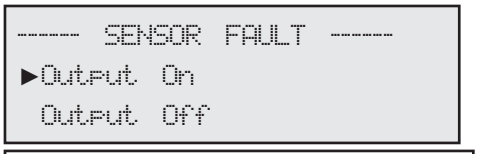
120 to 600 seconds Default: 120 seconds
SELECT *Settings/System Startup/.../Valve Motor Time*



- This selection is only available when Positioning Sensor is selected from the Valve Positioning menu. It allows for the adjustment of the SRC Platinum to match the valve motor time. In addition, this time will be used in the valve synchronization.

Sensor Fault

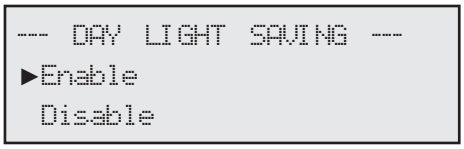
Output On or Output Off Default: Output On
SELECT *Settings/System Startup/.../Sensor Fault*



- The Heating System Sensor fault affects the SRC Platinum in Boiler or Valve Operating Mode only.
- This selection determines the status of the Boiler and Motorized Valve Outputs when either the Outdoor Sensor or System Sensor is at fault, sensor reading will blink with either OPEN or SHORT. Also, the Display second line will show SENSOR FAULT. (This message will not show if System Sensor fails while in District Steam mode.)
- When Output On is selected and a sensor is at fault, the Vacuum Pump and Burner relays will energize. In addition, the Motorized Valve will open to 100% .
- When Output Off is selected and a sensor is at fault, the Burner relay will deenergize while the Vacuum Pump relay will deenergize after a full cycle time elapses. The Motorized Valve Close relay will energize till valve is fully closed then deenergize.

⚠ CAUTION
Since Heating System Sensor (HSS) affects the operation of the SRC Platinum when Boiler or Valve is selected as an Operating Mode from the Startup menu, HSS fault affects the control operation in Boiler or Valve Operating Mode only.

Day Light Saving

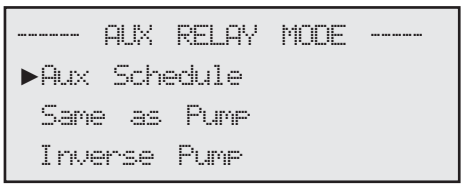


Enable or Disable Default: Enable

SELECT *Settings/System Startup/.../Day Light Saving*

- Enable this feature in areas where Day Light Saving is observed to account for the time changes without having to manually change the time twice a year.

Aux Relay Mode



Aux Schedule, Same as Pump, Inverse Pump Default: Aux Schedule

SELECT *Settings/System Startup/.../Aux Relay Mode*

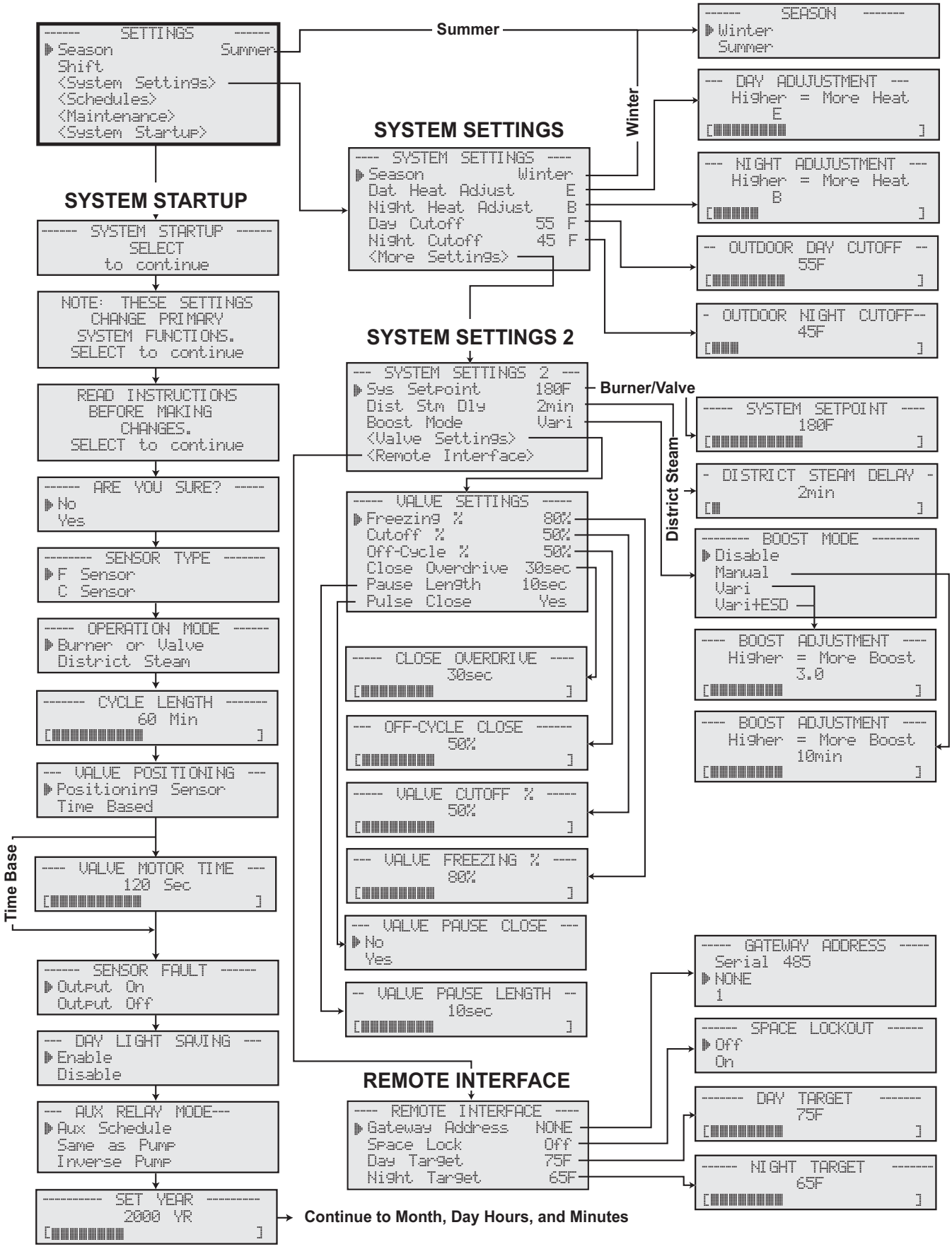
- Adjusting this feature to Aux Schedule allows the SRC Platinum to control the Aux relay output based on the Aux Schedule. The relay will energize at Close Time and deenergize at Open Time.
- When Same as Pump option is selected, the Aux output relay will behave the same as the Vacuum Pump relay.
- When Inverse Pump option is selected, the Aux output relay will behave the opposite of the Vacuum Pump relay.
- Remember that the Vacuum Pump relay energizes for 10 minutes, Prevacuum, prior to valve opening. As well, it energizes for a full cycle time after Burner relay deenergize.

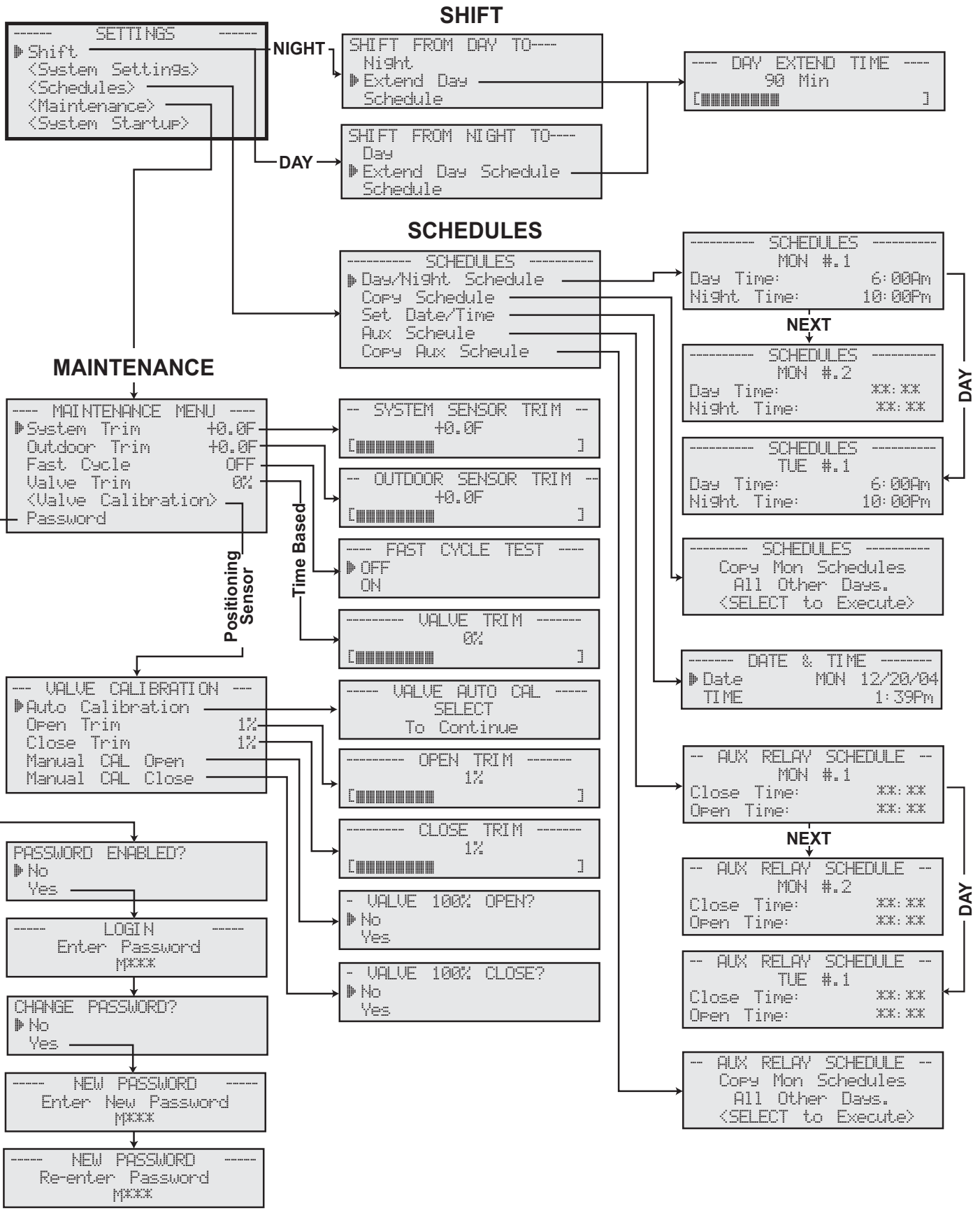
Date and Time Setting

Year, Month, Day, Time

SELECT *Settings/System Startup/.../Set Year*

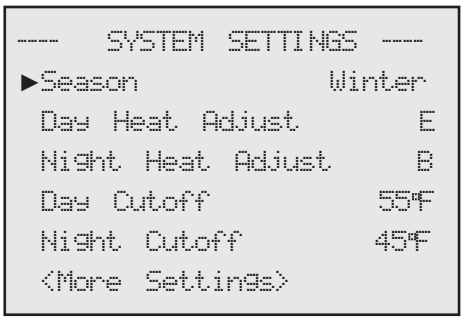
- Entering the correct date and time assures that the SRC Platinum will make its changes correctly.
- Use the Select and Adjust button to change date and time values.

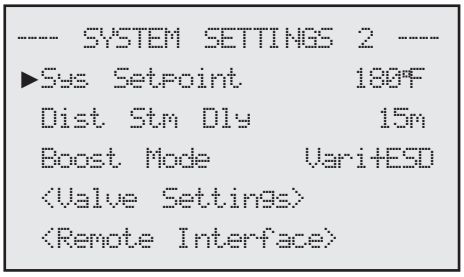

SETTINGS
Season Summer
Shift
<System Settings>
<Schedules>
<Maintenance>
<System Startup>
Summer
Winter
SEASON
Winter
Summer
SYSTEM SETTINGS
SYSTEM SETTINGS
Season Winter
Dat Heat Adjust E
Night Heat Adjust B
Day Cutoff 55 F
Night Cutoff 45 F
<More Settings>
DAY ADJUSTMENT
Higher = More Heat
E
NIGHT ADJUSTMENT
Higher = More Heat
B
OUTDOOR DAY CUTOFF
55F
OUTDOOR NIGHT CUTOFF
45F
SYSTEM STARTUP
SYSTEM STARTUP
SELECT
to continue
NOTE: THESE SETTINGS
CHANGE PRIMARY
SYSTEM FUNCTIONS.
SELECT to continue
READ INSTRUCTIONS
BEFORE MAKING
CHANGES.
SELECT to continue
ARE YOU SURE?
No
Yes
SENSOR TYPE
F Sensor
C Sensor
OPERATION MODE
Burner or Valve
District Steam
CYCLE LENGTH
60 Min
VALVE POSITIONING
Positioning Sensor
Time Based
Time Base
VALVE MOTOR TIME
120 Sec
SENSOR FAULT
Output On
Output Off
DAY LIGHT SAVING
Enable
Disable
AUX RELAY MODE
Aux Schedule
Same as Pump
Inverse Pump
SET YEAR
2000 YR
Continue to Month, Day Hours, and Minutes
SYSTEM SETTINGS 2
SYSTEM SETTINGS 2
Sys Setpoint 180F
Dist Stm Dly 2min
Boost Mode Vari
<Valve Settings>
<Remote Interface>
Burner/Valve
District Steam
SYSTEM SETPOINT
180F
DISTRICT STEAM DELAY
2min
BOOST MODE
Disable
Manual
Vari
Vari+ESD
VALVE SETTINGS
Freezing % 80%
Cutoff % 50%
Off-Cycle % 50%
Close Overdrive 30sec
Pause Length 10sec
Pulse Close Yes
BOOST ADJUSTMENT
Higher = More Boost
3.0
BOOST ADJUSTMENT
Higher = More Boost
10min
CLOSE OVERDRIVE
30sec
OFF-CYCLE CLOSE
50%
VALVE CUTOFF %
50%
VALVE FREEZING %
80%
VALVE PAUSE CLOSE
No
Yes
VALVE PAUSE LENGTH
10sec
REMOTE INTERFACE
REMOTE INTERFACE
Gateway Address NONE
Space Lock Off
Day Target 75F
Night Target 65F
GATEWAY ADDRESS
Serial 485
NONE
1
SPACE LOCKOUT
Off
On
DAY TARGET
75F
NIGHT TARGET
65F


SHIFT
SETTINGS
Shift
<System Settings>
<Schedules>
<Maintenance>
<System Startup>
NIGHT
DAY
SHIFT FROM DAY TO----
Night
Extend Day
Schedule
SHIFT FROM NIGHT TO----
Day
Extend Day Schedule
Schedule
---- DAY EXTEND TIME ----
90 Min
SCHEDULES
---------- SCHEDULES ----------
Day/Night Schedule
Copy Schedule
Set Date/Time
Aux Scheule
Copy Aux Scheule
---------- SCHEDULES ----------
MON #.1
Day Time: 6:00Am
Night Time: 10:00Pm
NEXT
---------- SCHEDULES ----------
MON #.2
Day Time: **:**
Night Time: **:**
DAY
---------- SCHEDULES ----------
TUE #.1
Day Time: 6:00Am
Night Time: 10:00Pm
--------- SCHEDULES ---------
Copy Mon Schedules
All Other Days.
<SELECT to Execute>
MAINTENANCE
---- MAINTENANCE MENU ----
System Trim +0.0F
Outdoor Trim +0.0F
Fast Cycle OFF
Valve Trim 0%
<Valve Calibration>
Password
-- SYSTEM SENSOR TRIM --
+0.0F
-- OUTDOOR SENSOR TRIM --
+0.0F
Time Based
---- FAST CYCLE TEST ----
OFF
ON
-------- VALVE TRIM -------
0%
Positioning Sensor
--- VALVE CALIBRATION ---
Auto Calibration
Open Trim 1%
Close Trim 1%
Manual CAL Open
Manual CAL Close
----- VALVE AUTO CAL -----
SELECT
To Continue
--------- OPEN TRIM -------
1%
---------- CLOSE TRIM -------
1%
- VALVE 100% OPEN?
No
Yes
- VALVE 100% CLOSE?
No
Yes
------- DATE & TIME -------
Date MON 12/20/04
TIME 1:39Pm
-- AUX RELAY SCHEDULE --
MON #.1
Close Time: **:**
Open Time: **:**
NEXT
-- AUX RELAY SCHEDULE --
MON #.2
Close Time: **:**
Open Time: **:**
DAY
-- AUX RELAY SCHEDULE --
TUE #.1
Close Time: **:**
Open Time: **:**
-- AUX RELAY SCHEDULE --
Copy Mon Schedules
All Other Days.
<SELECT to Execute>
PASSWORD ENABLED?
No
Yes
------ LOGIN ------
Enter Password
M***
CHANGE PASSWORD?
No
Yes
------ NEW PASSWORD ------
Enter New Password
M***
------ NEW PASSWORD ------
Re-enter Password
M***

System Settings

Enter menu by pressing SELECT: *Settings/System Settings*
The System Settings and System Settings 2 menus allow for adjusting and fine tuning the system for enhanced comfort and more fuel savings.





- Season (Winter or Summer)
- Day Heat Adjust
- Night Heat Adjust
- Day Cutoff
- Night Cutoff
- System Setpoint
- District Steam Delay
- Boost and Early Shutdown (ESD)
- Valve Settings
- Remote Interface (Can be utilized with Remote Communication Only)

Season

Winter or Summer Default: Winter
SELECT *Settings/Season* when in Winter setting
SELECT *Settings/System Settings/Season* when in Summer setting

⚠ CAUTION

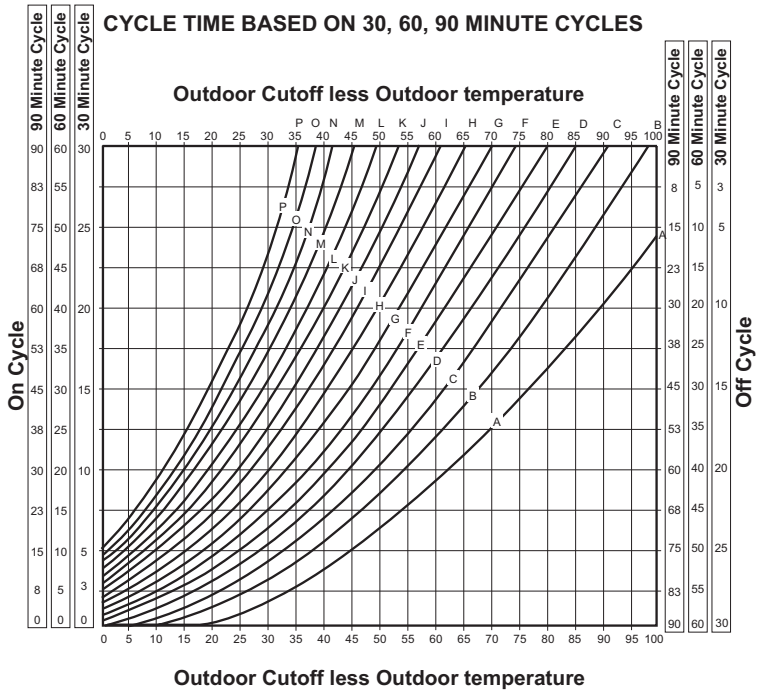
DO NOT turn power off to the SRC Platinum when heating season is over. If you do so, the battery will run down and will have to be replaced. Instead switch to Summer.

- The SRC Platinum will turn off the Vacuum Pump relay when it is in Summer setting. In addition the burner will be off and the motorized valve will be fully closed. When in Winter setting the SRC Platinum will activate the Vacuum Pump relay whenever the Outdoor temperature (OD) falls below the cutoff setting (Day/Night). Therefore during the heating season this setting must be set to Winter. When the heating season is over, it is a good practice to switch the SRC Platinum to Summer setting.

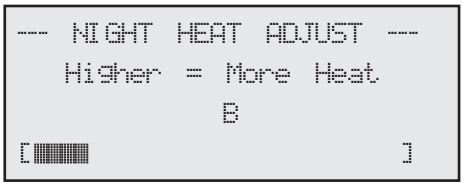
Day Heat Adjust

A to P Default: E
SELECT *Settings/System Settings/Day Heat Adjust*

- The duration of the Cycle On and Cycle Off varies based on Outdoor temperature and Cutoff Temperature, and Heat Adjust settings.
- The graph shows the Heat Adjust curves for a 60 minutes heat cycle. If Day Heat Adjust setting was E and Day Cutoff setting was 60°F and when Outdoor temperature is at 20°F the Cycle On time will be 20 minutes for a 60 minute Cycle Time. The remaining 40 minutes of the cycle will be the Cycle Off time.
- To find out Cycle On time for a different cycle time, divide your current heat cycle time by the standard 60 minute cycle. That will be the ratio you should use with this graph. If we used the previous example but with a 30 minute Cycle Time, that will give us 10 minutes for the Cycle On time and 20 minutes for the Cycle Off time. A 90 minutes Cycle time will give a 30 minutes Cycle On and 60 minutes Cycle Off if using the same criteria.
- During the Day Time schedule the SRC Platinum will follow the Day Heat Adjust curve.



Night Heat Adjust

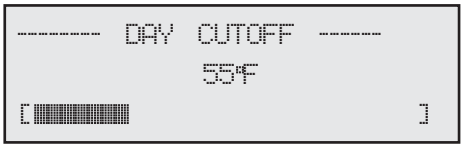


A to P Default: B

SELECT *Settings/System Settings/Night Heat Adjust*

- The Night Heat Adjust allows the SRC Platinum to follow that curve during the Night Time schedule.

Day Cutoff

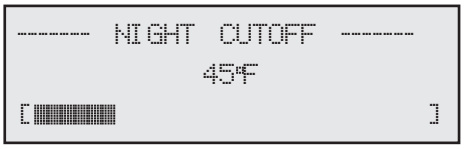


20°F to 100°F Default: 55°F

SELECT *Settings/System Settings/Day Cutoff*

- When the Outdoor temperature falls below this setting during Day Time schedule, the SRC Platinum will give heat by energizing the Burner and Vacuum Pump relays followed by the Motorized Valve Open relay after the valve synchronization and Prevacuum periods.
- The valve open % curve is the line between this setting at the Cutoff % and the Freezing % at 32°F during the Day Time schedule.

Night Cutoff

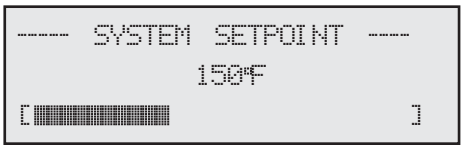


20°F to 100°F Default: 45°F

SELECT *Settings/System Settings/Day Cutoff*

- When the Outdoor temperature falls below this setting during Night Time schedule, the SRC Platinum will give heat by energizing the Burner and Vacuum Pump relays followed by the Motorized Valve Open relay after the valve synchronization and Prevacuum periods
- The valve open % curve is the line between this setting at the Cutoff % and the Freezing % at 32°F during the Night Time schedule..

System Setpoint (Available for Boiler or Valve Operation Mode)

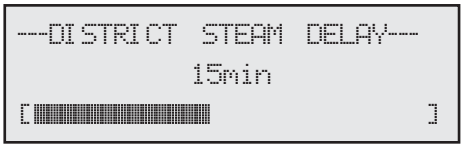


70°F to 250°F Default: 150°F

SELECT *Settings/System Settings/More Settings/Sys Setpoint*

- The System Setpoint is available when the SRC Platinum is in the Boiler or Valve operation mode. It allows the SRC Platinum to start the heating cycle when Heating System Sensor temperature reaches this setting. This informs the SRC Platinum that heat has been established to all parts of the building.
- The SRC Platinum monitors this setting before starting any heating cycle. If the System temperature (SYS) is below this setting the valve will open till heat is established. If the System temperature (SYS) is above this setting the following heating cycle will start immediately.

District Steam Delay (Available for District Steam Operation Mode)

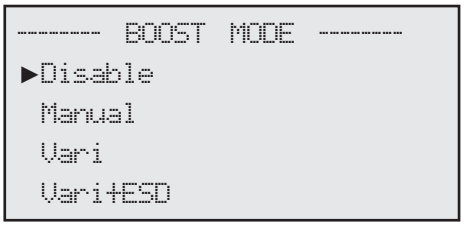


0 to 30 minutes Default: 15 minute

SELECT *Settings/System Settings/More Settings/Dist Stm Dly*

- The District Steam Delay is available when the SRC Platinum is in the District Steam operation mode. It uses this period prior to starting any heating cycle to establish heat to all parts of the building.

Boost and Early Shutdown (ESD)



Disable, Manual, Vari, and Vari+ESD Default: Vari

SELECT *Settings/System Settings/More Settings/Boost Mode*

The morning Boost is designed to return the building to comfortable ambient temperatures after the cooler Night Time period. The SRC Platinum will accomplish this by opening the valve 10% more than the Day Time setting. If you do not want a Boost on a day of the week, simply program the #1 Day Time schedule to **:**, and use the #2 Day Time program for any Normal (Day) settings.

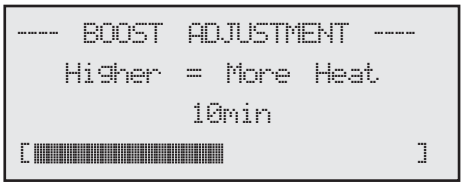
To set up the morning Boost, you must set the type of Boost and the amount of Boost. There are three types of Boost: Manual, Vari and Vari with ESD.

Boost/Manual

0 to 120 minutes Default: 10 minutes

SELECT *Settings/System Settings/More Settings/Boost Mode/Manual*

- The Manual Boost begins earlier than the #1 Day Time schedule. In this case, the Boost Adjustment is the number of minutes before the Day Time setting the Boost will start.

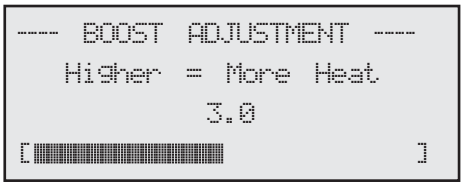


Boost/Vari

0.1 to 6.4 Default: 3.0

SELECT *Settings/System Settings/More Settings/Boost Mode/Vari*

- The Vari Boost begins earlier than the #1 Day Time schedule. In this case, the Boost Adjustment is the curve number that reflects the number of minutes before the Day Time setting the Boost will start based on a specific Outdoor (OD) temperature.
- If the temperature at the Day Time #1 is cold, then increase the Boost Adjustment by 1.0 and wait for several days before adjusting the Boost again.

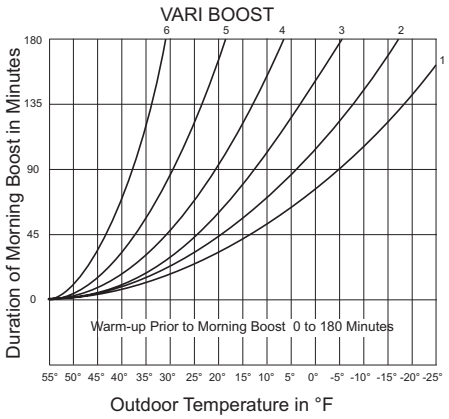


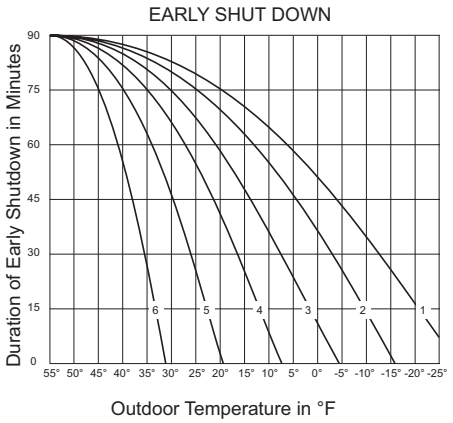
Boost/Vari with Early Shutdown

0.1 to 6.4 Default: 3.0

SELECT *Settings/System Settings/More Settings/Boost Mode/Vari+ESD*

- This should be used in commercial buildings where the building will be unoccupied in the Night Time setting. A Vari-Boost as described above is run. In addition, the SRC Platinum will switch into the Night Time mode earlier than the latest n setting for that day. The warmer it is outside, the earlier the SRC Platinum will shift into Night Time. The maximum amount of Early Shutdown ESD is 90 minutes.
- The Early Shutdown follows Vari Boost curve number.

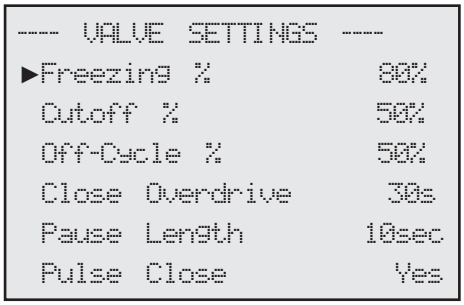




Valve Settings

SELECT *Settings/System Settings/More Settings/Valve Settings*

The SRC Platinum is designed to control the building heat through the operation of a motorized valve. This menu provides the means for setting the valve opening at different heating stages. In addition, it provides the means to change valve response time.



Freezing % / Valve Opening at 32°F

50 to 100% Default: 80%

SELECT *Settings/System Settings/More Settings/Valve Settings/Freezing %*

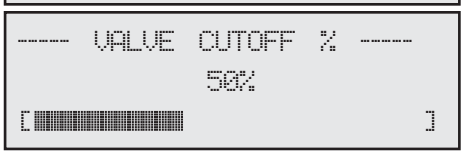
- This setting tells the SRC Platinum the percent the valve opening should be at when Outdoor temperature is 32°F.
- This value is used in conjunction with the Cutoff % to set the valve opening percent curve.
- The limits for the Freezing % and the Cutoff % change dynamically. In other words, The Freezing % upper limit will not change below the Cutoff %.

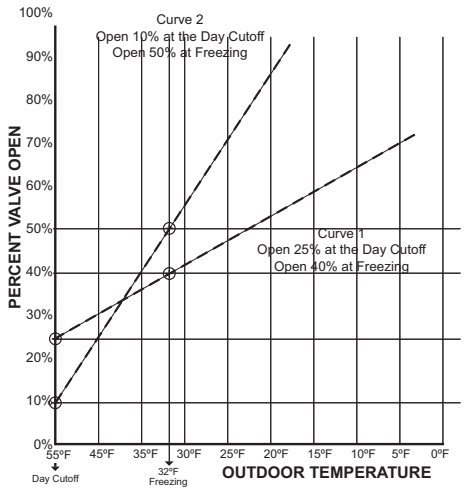
Cutoff % / Valve Opening at Cutoff Temperature

0 to 100% Default: 50%

SELECT *Settings/System Settings/More Settings/Valve Settings/Cutoff %*

- This setting tells the SRC Platinum the percent the valve opening should be at when Outdoor temperature is the Cutoff setting for that time.
- This value is used in conjunction with the Freezing % to set the valve opening percent curve.
- The limits for the Freezing % and the Cutoff % change dynamically. In other words, The Cutoff % upper limit will not change above the Freezing %.



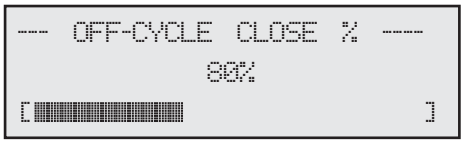


Off-Cycle % / Valve Opening During Cycle Off

0 to 100% Default: 80%

SELECT *Settings/System Settings/More Settings/Valve Settings/Off-Cycle %*

- This setting tells the SRC Platinum the percent the valve closing should be in the Off-Cycle as a percent of the opening when in the On-Cycle.
- If during the On-Cycle the valve was at 50% and the Off-Cycle % was set to 80% that will close the valve to 10% (Close 80% of the 50%. The valve will close 40%.)

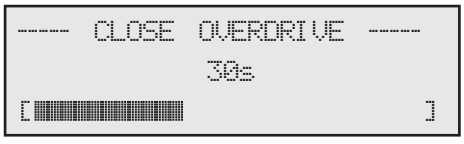


Close Overdrive

0 to 90 seconds Default: 30 seconds

SELECT *Settings/System Settings/More Settings/Valve Settings/Close Overdrive*

- It is the amount of additional time the SRC Platinum will energize the Motorized Valve Close relay to guarantee a full closure.



Pause Length

0 to 60 seconds Default: 10 seconds

SELECT *Settings/System Settings/More Settings/Valve Settings/Pause Length*

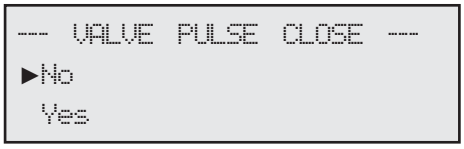
- It determines the amount of time the SRC Platinum will pause in between valve opening and closing during the heating cycle.

Pulse Close

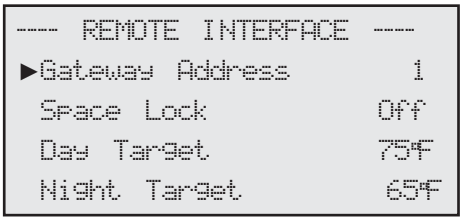
No, Yes Default: Yes

SELECT *Settings/System Settings/More Settings/Valve Settings/Pause Length*

- It allows the SRC Platinum to pulse the Close relay at the Pause length intervals instead of driving the valve close continuously.



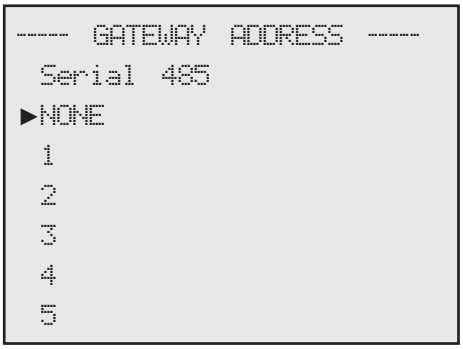
Remote Interface



SELECT *Settings/System Settings/More Settings/Remote Interface*
The SRC Platinum can be controlled remotely. This allows the SRC Platinum to monitor additional sensors that can be used for monitoring and turning alarms On or Off.

The SRC Platinum using a communication package (RI, RIM, RI-Net) and a computer with Visual Gold software or internet access (for RI-Net only) can configure a large number of sensors that can be used either in calculating the heat required or for monitoring several building and equipment functions. Using this feature allows setting alarms, warnings and analysis.

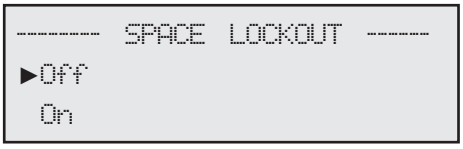
Gateway



Serial 485, None, 1 through 21 Default: None
SELECT *Settings/System Settings/More Settings/Remote Interface/Gateway Address*
When connecting to the SRC Platinum using an RI (Remote Interface) or RIM (Modem) a Gateway option will be present on the Remote Interface menu list. The Gateway is to configure the connection to the SRC Platinum using a direct cable connection (RS232 or RS485 Cables) or a modem connection by dialing into the SRC Platinum RIM through a modem.

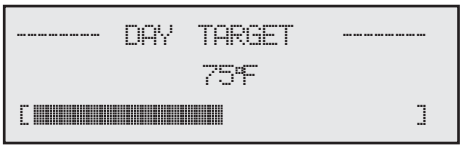
When connecting multiple SRC Platinums to a Heat-Timer TGC Gateway, the numbers 1 through 21 will be used to identify each SRC Platinum.

Space Lock



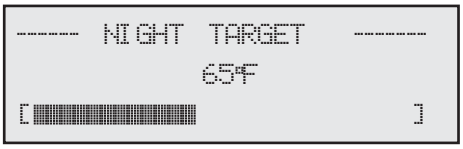
On or Off Default: Off
SELECT *Settings/System Settings/More Settings/Remote Interface/Space Lockout*
The Space Lockout is required to be set to On to be able to use Space sensors for Day Target and Night Target. This option can be set when the SRC Platinum has any of the communication packages.

Day Target



55°F to 85°F Default: 75°F
SELECT *Settings/System Settings/More Settings/Remote Interface/Day Target*
The Day Target is the space temperature the SRC Platinum will try to reach during the Boost period when coming out of the Night Time setting.

Night Target



50°F to 80°F Default: 65°F
SELECT *Settings/System Settings/More Settings/Remote Interface/Night Target*
The Night Target is the space temperature the SRC Platinum will try to reach during the Early Shutdown ESD period when switching from the Day setting.

Schedules

Enter menu by pressing SELECT: *Settings/Schedules*
The SRC Platinum has two levels of heat. The Day level is used when a building is occupied, and people are active. The Night level is used when a building is not occupied, or when people are sleeping.

The SRC Platinum can have up to four Normal and four Night Setback periods for each individual day of the week. The SRC Platinum will show which period is it in on the 3rd line of the display. Every time the SRC Platinum updates the clock time, it checks the Day/Night program. If there is a matching Day/Night time programmed, it sets the heat level accordingly, otherwise the heat level is not changed. This means you do not have to program every day of the week. If an office building is unoccupied all weekend, simply set the last programmed #4 setting (8:00 PM on Friday). Then, set all the Saturday and Sunday programs to **:** (using the DEL button). The control will stay in Night Setback until it reaches a Day setting (6:00AM on Monday).

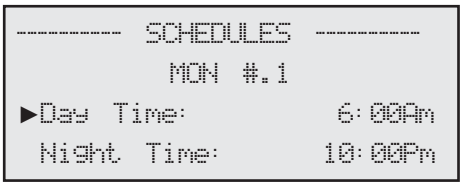
⚠ CAUTION

The SRC Platinum will ignore any Time setting that reads **:**.

The #1 setting for any Day Time is used by the Boost. The last #n setting is used by the Early Shutdown ESD feature.

Day/Night Schedule

SELECT: *Settings/Schedules/Day Night Schedule*
Use this setting to set up to 4 Day Time and 4 Night Time settings per each day of the week. The Day Time settings allows the SRC Platinum to follow the Day Heat Adjustment and the Day Cutoff settings. If the Boost feature is being used, it uses the Day Time on the 1st setting of that day as a Boost calculation starting point. The actual Vari Boost start time varies depending on the Outdoor Temperature OD.



The Night Time settings allows the SRC Platinum to follow the Night Heat Adjustment and Night Cutoff settings. Moreover, if the Early Shutdown feature is being set, it uses the Night Time setting on the 1st setting of that week day as an Early Shutdown calculation starting point. In this case, the actual Early Shutdown start time will vary depending on the Outdoor temperature OD.

In this area of the menu 3 buttons will take effect. The NEXT button will allow the scroll between the 4 different settings of a specific week day. The DAY button will allow the scroll between all week days. The PREV.(DEL) button will erase the Day Time and Night Time settings for a specific day schedule (i.e.. 1st Day Time and Night Time schedule on Tuesday).

Schedule Example

Schedule		Day of Week						
		MON	TUE	WED	THU	FRI	SAT	SUN
#1	Day	6:00AM	6:00AM	6:00AM	6:00AM	7:00AM	**:**	**:**
	Night	10:00PM	10:00PM	10:00PM	10:00PM	11:00AM	**:**	**:**
#2	Day	**:**	**:**	**:**	**:**	1:00PM	8:00AM	**:**
	Night	**:**	**:**	**:**	**:**	4:00PM	4:00PM	**:**
#3	Day	**:**	**:**	**:**	**:**	**:**	**:**	**:**
	Night	**:**	**:**	**:**	**:**	**:**	**:**	**:**
#4	Day	**:**	**:**	**:**	**:**	6:00PM	**:**	**:**
	Night	**:**	**:**	**:**	**:**	10:00PM	**:**	**:**

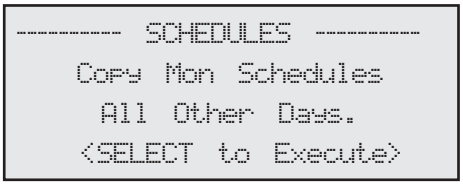
Monday through Thursday: Vari-Boost begins before 6 am and ends at 6 am
Day temperature level is maintained from 6 am to 10 PM
Night temperature level is maintained from 10 PM until the Vari Boost the following morning

Friday:	Vari Boost begins before 7 am and ends at 7 am Day temperature level is maintained from 7 am to 11 am Night temperature level is maintained from 11 am to 1 PM Day temperature level is maintained from 1 PM to 4 PM Night temperature level is maintained from 4 PM to 6 PM Day temperature level is maintained from 6 PM to 10 PM Night temperature level is maintained from 10 PM until 8 am Saturday morning
Saturday:	No Vari Boost due to the #1 is not programmed Day temperature level is maintained from 8 am to 4 PM Night temperature level is maintained from 4 PM into Sunday
Sunday:	Night temperature level is maintained all day Sunday, ending at the Vari Boost Monday morning

Copy Schedule

SELECT: *Settings/Schedules/Copy Schedule*

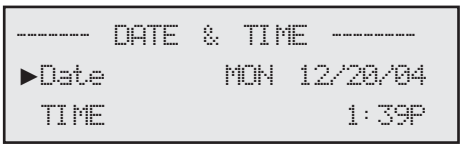
To reduce the need for setting each week day time schedule, this feature has been made to allow the copying of the MON Day Time and Night Time schedule settings to all of the reset of the days.



Set Date and Time

SELECT: *Settings/Schedules/Set date & Time*

In the startup process of the SRC Platinum, the Date and Time will need to be set. If the Date or Time needs to be adjusted, this area of the menu allows that. Selecting Date will allows you to set the year followed by the month then finally the days. Adjust the time by selecting Time from the menu and then scrolling through the hours followed by the minutes.

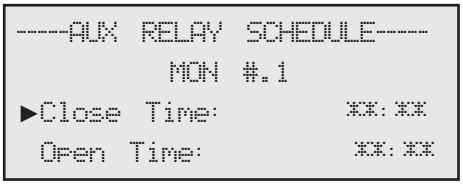


Remember that the battery is the only backup for the Date and Time. If no power is supplied to the SRC Platinum and there was no battery or battery had no power, date and time values will be lost and will need to be readjusted.

Aux. Schedule

SELECT: *Settings/Schedules/Aux Schedule*

Use the Aux Schedule setting to set up to 4 Close Time and 4 Open Time settings per each day of the week to control the status of the Aux/Clock Relay. The Aux schedule works independently from the Day and Night Schedule. The Close Time setting closes the Aux/Clock relay allowing activation or deactivation of an external device or control. The Open Time opens the Aux/Clock relay allowing activation or deactivation of an external device or control.

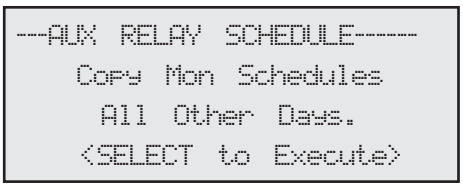


In this area of the menu 3 buttons will take effect. The NEXT button will allow the scroll between the 4 different settings of a specific week day. The DAY button will allow the scroll between all week days. The PREV.(DEL) button will erase the Close Time and Open Time settings for a specific day schedule (i.e.. 1st Close Time and Open Time schedule on Tuesday).

Copy Aux Schedule

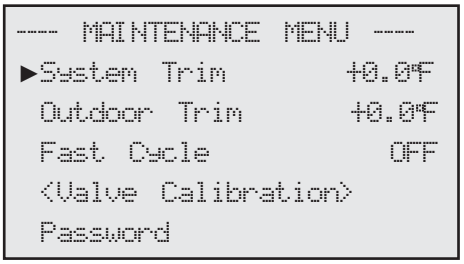
SELECT: *Settings/Schedules/Copy Aux Schedule*

To reduce the need for setting each week Aux Time schedule, this feature has been made to allow the copying of the MON Close Time and Open Time schedule settings to all of the reset of the days.



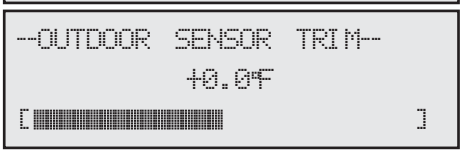
Maintenance

Enter menu by pressing SELECT: *Settings/Maintenance*
The Maintenance menu gives access to sensor trimming and Password protection. Fast Cycling, Valve Trim and Valve Calibration are used by maintenance individuals to adjust and fine tune the operation of the SRC Platinum.



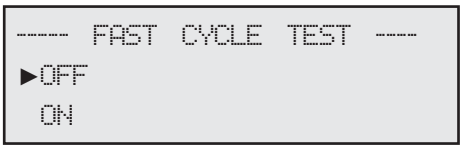
System and Outdoor Sensor Trim

SELECT: *Settings/Maintenance/System Trim*
SELECT: *Settings/Maintenance/Outdoor Trim*
The Heat-Timer thermistor type sensors are very accurate, and normally require no calibration. Sometimes it may be desirable to make small adjustments to the displayed value for either the Outdoor temperature (OD) or the System temperature SYS. The Trim setting can adjust the displayed value by ± 5°F. Do not use the Trim setting to make the Outdoor temperature sensor match that reported on the radio or TV. Outdoor temperature can vary widely over a broadcast range. Only trim the outdoor sensor based on an accurate thermometer reading taken where the sensor is located.



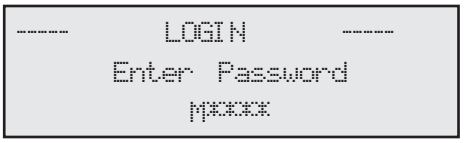
Fast Cycle Test

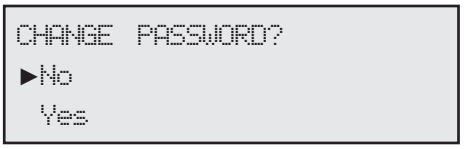
OFF, ON Default: OFF
SELECT: *Settings/Maintenance/Fast Cycle* When in Off
SELECT: *Settings/Cancel Fast Cycle* When in On
The Fast Cycle test allows for the troubleshoot of the SRC Platinum. This affects all time based functions except for the motorized valve time



Password

SELECT: *Settings/Maintenance/Password*
The Password is provided to prevent unauthorized users from making changes to SRC Platinum settings. Setting up the Password feature is not recommended as it slows down access, makes servicing more difficult, and can disable the system if management or ownership should change. The Password feature is not active unless a user enables it. If you choose to enable the Password, DO NOT forget the Password. Write it down and store it in a safe location known to at least one other authorized user. When the Password is enabled, none of the settings can be changed without entering the Password. Once the Password is entered, you can make multiple changes. The Password will expire 15 minutes after the last change has been made.





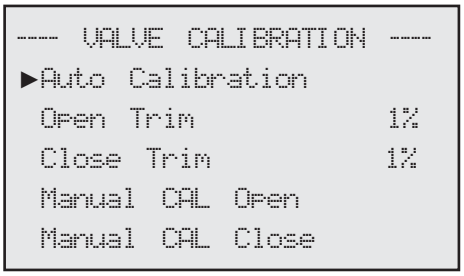
Using the Default Password

- The SRC Platinum has a built in default Password - SRCX.
- Enabling the default Password will prevent most unauthorized users from adjusting the settings, but will not prevent Heat-Timer service personnel, or anyone else with access to this manual, from adjusting the panel.
- To enable the default Password, enter the Maintenance menu, select Password, and follow the prompts to enable the Password.
- At the Login screen, you will have to enter the Password. Turn the Adjust knob until the desired letter is shown. Then press the Select to move on to the next letter.
- Enter SRCX into the Login screen.
- When completed, select No to the prompt "*Change Password?*"

Valve Calibration (for Valves with Positioning Sensors)

SELECT: *Settings/Maintenance/Valve Calibration*

When the SRC Platinum is controlling a Motorized Valve with Positioning Sensor feed back, and when Positioning Sensor option is selected from the Valve Positioning Startup menu, this menu option will allow for calibration of the valve operation.

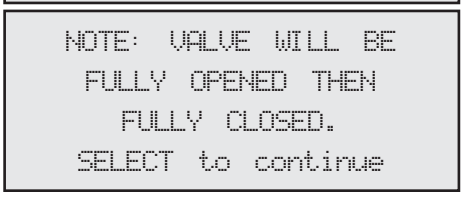


Auto Calibration

SELECT: *Settings/Maintenance/Valve Calibration/Auto Calibration*

This selection automatically sets the valve open and close perimeters. Thus, eliminating the need for manual calibration using two individuals at the control and at the valve locations.

Upon selecting this option, the Motorized Valve Open relay will pulse until the Positioning Sensor feed back stabilizes. Then, the Motorized Valve Close relay will do the same. This will allow the SRC Platinum to register the upper and lower readings from the valve Potentiometer.



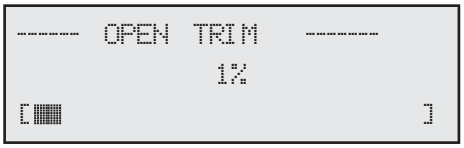
Open and Close Trim

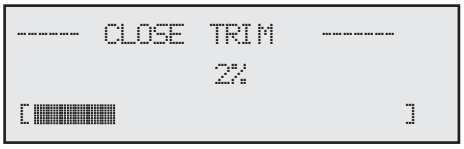
0% to 5% Default: 1%, 2%

SELECT: *Settings/Maintenance/Valve Calibration/Open Trim*

SELECT: *Settings/Maintenance/Valve Calibration/Close Trim*

This option allows for linkage and operation variation when the valve is being fully opened or fully closed by the SRC Platinum. The Close Trim value is important to set if the Close Overdrive has been set to 0 seconds.



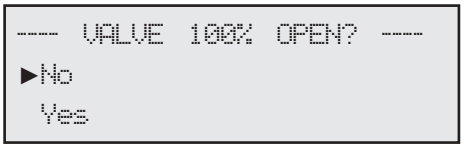


Manual CAL Open

No, Yes Default: No

SELECT: *Settings/Maintenance/Valve Calibration/Manual CAL Open*

This option allows for the registering of the valve open position in the SRC Platinum memory. This will be the position that the display will show as 100% valve open. In addition, this value combined with the close position value will determine the rest of the valve opening percentages.

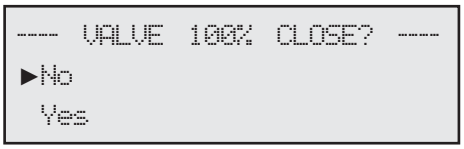


Manual CAL Close

No, Yes Default: No

SELECT: *Settings/Maintenance/Valve Calibration/Manual CAL Close*

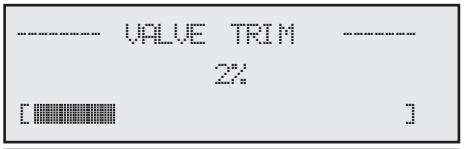
This option allows for the registering of the valve close position in the SRC Platinum memory. This will be the position that the display will show as 0% valve close.



Valve Trim (for Valves with Time Based Motors)

SELECT: *Settings/Maintenance/Valve Trim*

When the SRC Platinum is controlling a Motorized Valve with a Time based Motor this menu option will allow for fine tuning of the valve opening to match the actual valve. Before adjusting the Valve Trim, make sure to synchronize the valve by switching to Summer. In addition, check if Valve Motor Time setting matchesactual valve setting. After, synchronizing, recheck valve opening %. If incorrect, adjust Valve Trim in small increments. After adjusting the Valve Trim, make sure to synchronize the valve again.



⚠ CAUTION

When in Time Based Valve Positioning mode, and valve opeing % does not match actual valve %, synchronize the valve before adjusting Valve Trim.

Valve Synchronization (for Valves with Time Based Motors)

When the SRC Platinum is controlling a Time Based motorized valve, the Startup menu Valve Positioning must be set to Time Based. A Valve Trim menu option will show on the Maintenance menu allowing for fine tuning of the valve operation. In addition, the SRC Platinum will synchronize the valve fully closed by energizing the Motorized Valve Close relay for the complete Valve Motor Time in addition to the Close Overdrive time. The synchronization will take effect in the following situations:

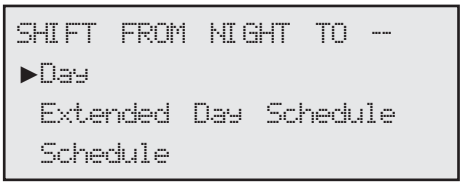
- When the SRC Platinum starts up.
- When switching the SRC Platinum from Winter to Summer.
- When the SRC Platinum is in Winter and the Outdoor temperature increases above the Cutoff.
- Before the end of the 5th heating cycle.
- Thirty minutes after satisfying 5 set points when switched to Manual.

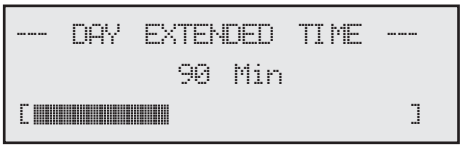
Shift

Enter menu by pressing SELECT: *Settings/Shift*

The Shift selection allows you to manually shift from any setting into Night, Day, Extended Day Schedule, or programmed Schedules. This can be used to temporarily override the programmed schedule. A typical example where the shift would be used is in a school where an event has gone into overtime. Instead of reprogramming the control to keep it from going into the Setback mode, simply select the Shift followed by the Shift option. The amount of time the SRC will hold the shift is:

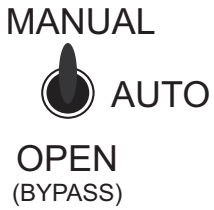
- Shifting from Day to Night - The control will stay in the Night mode until either the control is shifted again, or until the next programmed Day mode time. The Display will show Night Shift to indicate this status.
- Shifting from Night to Day - The control will stay in the Day mode until either the control is shifted again, or until the next programmed Night mode time. The Display will show Day Shift to indicate this status.
- Shifting to Extended Day - The control will stay in the Day mode for an adjustable amount of time (adjustable between 60 to 240 minutes), and then revert automatically back to the scheduled program. This prevents a user (without a programming password) from putting the SRC Platinum in Day mode for an extended period of time when it is programmed for Night. When the control is manually shifted to Day. The Display will alternate between the Day Ext and the Extended Time balance remaining in minutes indicating the Extended Day mode.





Auto/Manual/Open (Bypass)

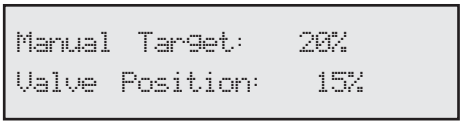
The switch must be in the AUTO position for the SRC Platinum to control the Vacuum Pump, Burner, and the Motorized Valve. In the Open/Bypass position, the Vacuum Pump, Burner and Motorized Valve Open relays will run constantly. That will leave the burner to run on its limits and the motorized valve will be fully open. In the Manual position, the Vacuum Pump and Burner will run constantly. The Adjust dial knob will control the valve opening percentage.



When the SRC Platinum is in the Open/Bypass position, no normal functions will be executed. The display will change to read the total amount of time the control has been in Bypass(Open). The display will show the number of days, hours, and minutes the SRC Platinum has been in Open/Bypass.

The Bypass (Open) switch directly connects the Normally Open contacts 4 to 5, contacts 9 to 10, and contacts 15 to 16. Therefore, if there is no heat, test the Vacuum Pump, and Boiler or Motorized Valve by putting the control in Open. If the units do not run, the problem is not with the SRC Platinum panel.

The Manual position activates the Vacuum Pump and Burner relays. But allows the adjustment of the Valve opening manually using the Adjust turn knob. Remember that the Pulse Close, Pause Length will still take effects in this mode.



Troubleshooting

When there is a problem with heat in a building, the first place people look is at the heating control. And the heating control may be the problem, but so may be other system components, or perhaps the heating control is not adjusted properly. To help determine and correct the problem, simply follow the troubleshooting guide that best describes your heating situation:

The troubleshoot diagrams in the following pages represent these issues:

- No Heat, Low Heat.
- Too Much Heat
- Valve Troubleshoot.

In addition to these basic problems, you may have intermittent problems. If you

Sometimes have No Heat, too Little Heat or too Much Heat

The SRC Platinum may not be programmed correctly. Check through all the settings of the clock to make sure the Day and Night Setback modes are when you want them to be. Go through all four settings for each day of the week, making sure any unused settings display **:**. Pay special attention to the AM and PM, since if these are incorrect, the program will be 12 hours off. Refer to *Schedules/Day and Night Schedule (menu selection)*

Have too Little Heat or too Much Heat Only at the 1d Time, adjust your Vari Boost. The Vari Boost changes with Outdoor temperature (OD), and is therefore recommended if there is too little heat, increase the Boost Adjustment, it there is too much heat, reduce the Boost Adjustment. Refer to *System Settings/ System Settings 2/Boost Mode/Vari (menu selection)*

Have too Little Heat Before the Last Setback Program, you may not wish to use the Early Shutdown feature. Simply select the Vari Boost instead of Vari Boost+ESD. Refer to *System Settings/ System Settings 2/Boost Mode/Vari (menu selection)*

Have too Little Heat or too Little Heat Only in Parts of the Building, then check the heating system components. Check that there is no air trapped in the system, and that the vacuum pump is working properly.

Temperature Sensor Chart

TEMPERATURE (in Degrees °F)	Value (in Ohms)
-30	117720
-20	82823
-10	59076
0	42683
10	31215
20	23089
25	19939
30	17264
35	14985
40	13040
45	11374
50	9944
55	8714
60	7653
70	5941
80	4649
90	3667
100	2914
110	2332
120	1879
130	1524
140	1243
150	1021
160	842
170	699
180	583
190	489
200	412
210	349
220	297
230	253
240	217
250	187

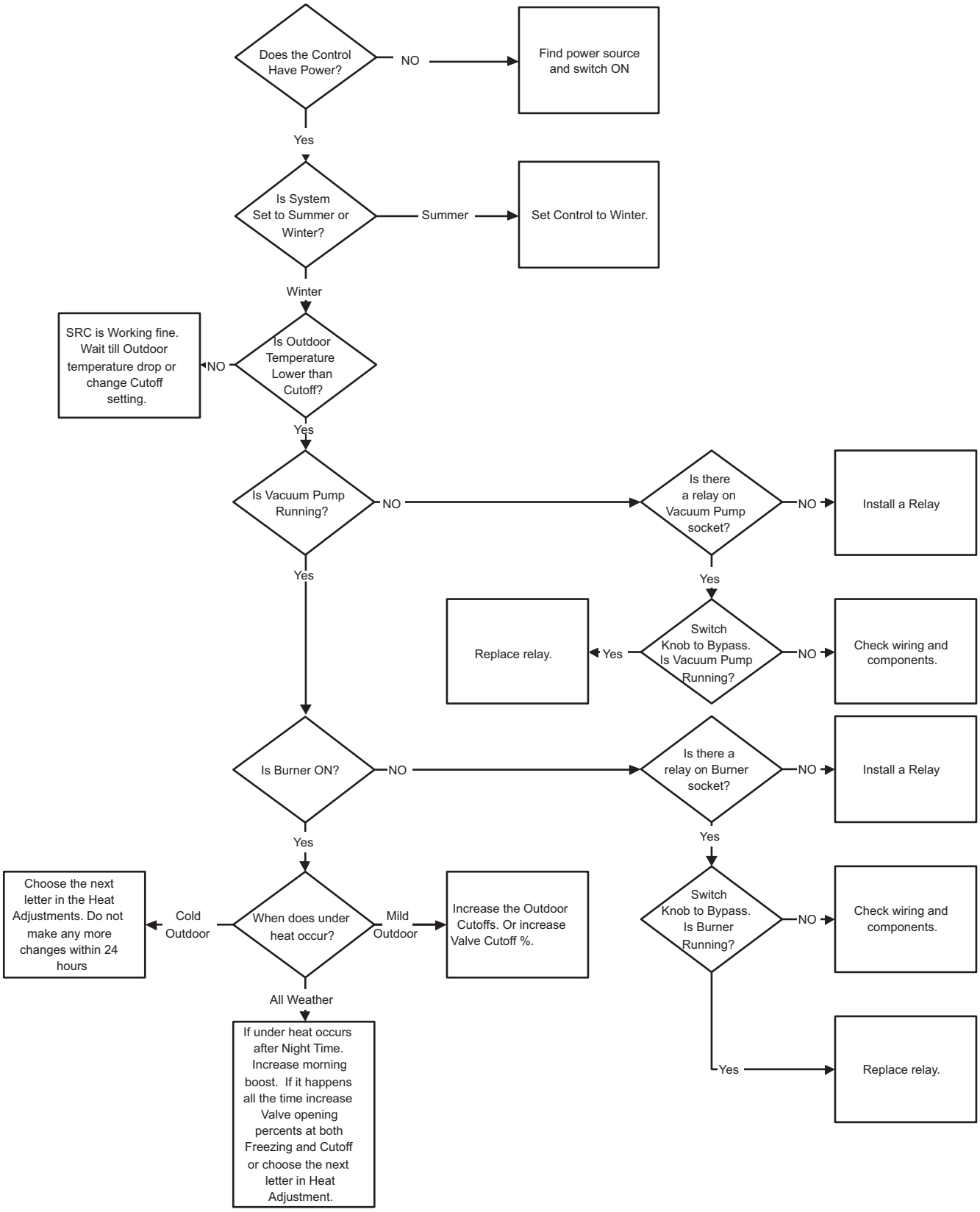
Testing the Sensors

The SRC Platinum sensors record the temperature where they are located. Before assuming a sensor is not working, it is important to get an accurate reading at the sensor location. If the outdoor sensor is affected by sun, exhaust fans, open doors, or windows, the reading may vary significantly from the actual outdoor temperature. Similarly, if the heating system sensor (HSS) does not appear to be reading correctly, check if it is located correctly.

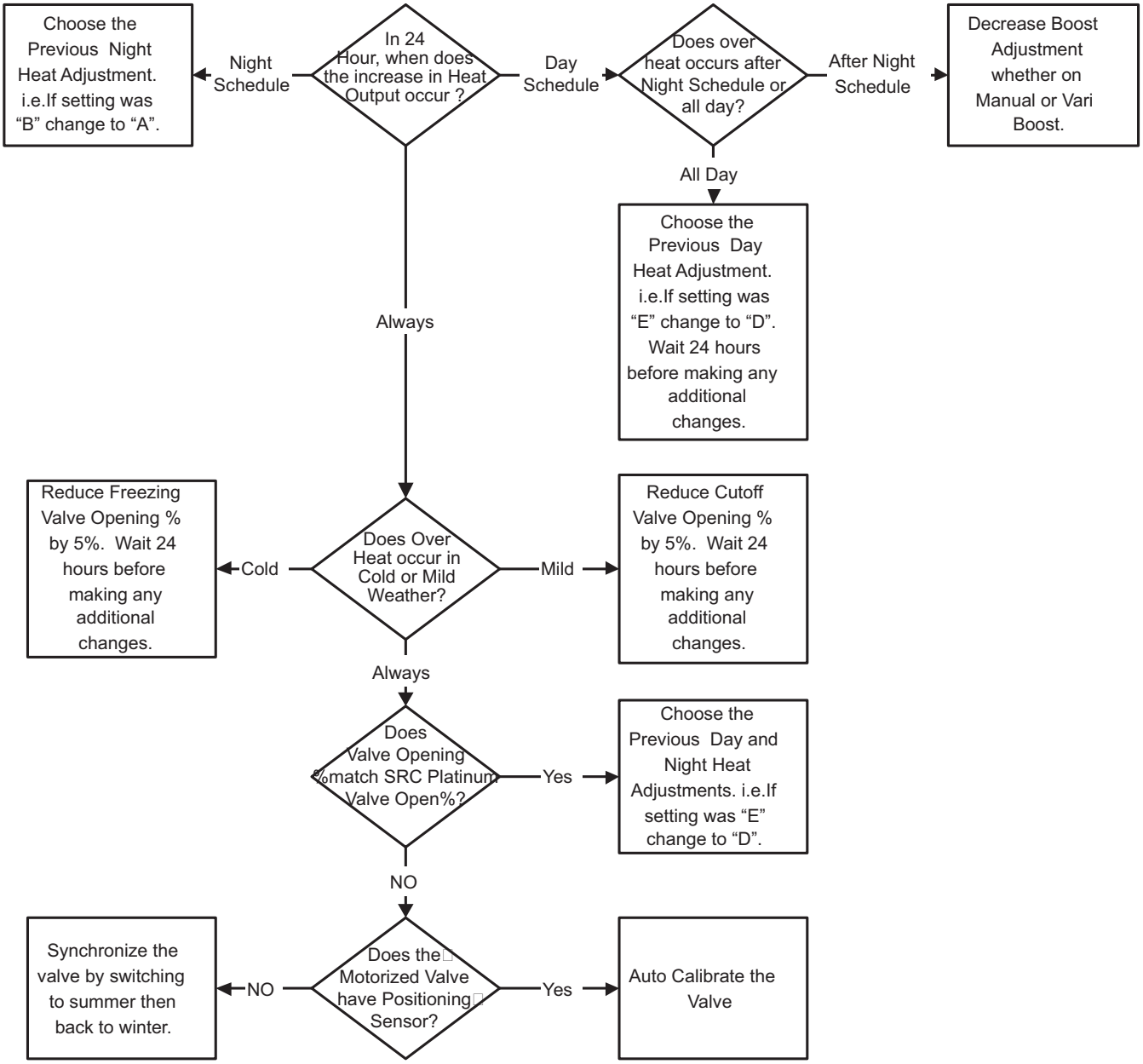
To perform the test, you will need a digital multi-meter capable of reading resistances. The Heating System Sensor and Outdoor Sensor temperatures are constantly displayed on the SRC Platinum. Remove the outdoor sensor wires from the Out Temp terminals (A11 and A12), or the heating system sensor wires from System Temp terminals (A1 and A2). Use the multi-meter to take a resistance reading across the detached wires going to the sensor. If the reading shows:

- OPEN or resistance is higher than the values on the adjacent chart - Check the wires going to the sensor. They may have been broken or become disconnected. If the wires are fine, check the resistance at the sensor itself. If the resistance is still open, the sensor has been damaged and needs to be replaced.
- SHORT or resistance is lower than the values on the adjacent chart - Check the wires going to the sensor. They may have become shorted together in the run of the wire. If not, check the resistance at the sensor itself. If there still is no resistance, the sensor has been damaged and needs to be replaced.
- Resistances from 187 ohms to 117720 ohms - Find the temperature that corresponds to the resistance value on the chart. If the sensor appears to be outputting correctly, check that the wires were properly connected to the SRC Platinum inputs. If the sensor is not outputting correctly, take another reading at the sensor itself. If this is correct, the problem is in the wiring between the sensor and the SRC Platinum. Otherwise, the sensor has been damaged, and should be replaced.

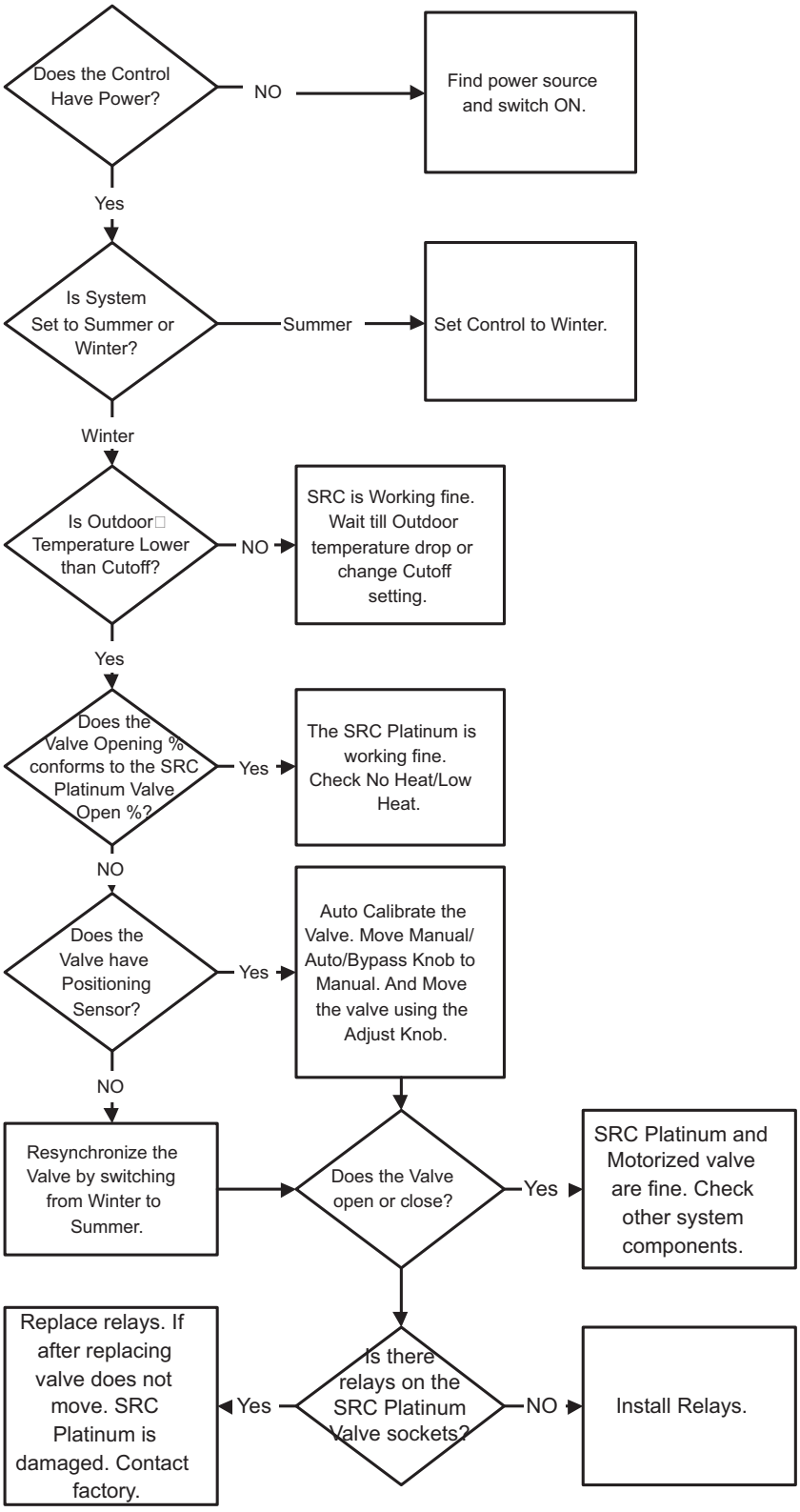
No Heat, Low Heat



Too Much Heat



Valve Troubleshoot



Specifications

Voltage Input: 120 VAC 60 Hz
Power Consumption: 30 VA Max
Heating Modes: Boiler or Motorized Valve, District Steam
Heating Cycle Length: 10 to 240 Minutes
Vacuum Pump Output: 1 S.P.S.T. (N.O.)
Burner Output: 1 S.P.S.T. (N.O.)
Motorized Valve Output: 2 S.P.S.T. (N.O.)
Motorized Valve Positioning Modes: Positioning Sensor, Time Based.
Motorized Valve Motor Time: 120 to 600 Seconds.
Motorized Valve Positioning Calibration: Manual, Auto.
Motorized Valve Syncronization: When switched from Winter to Summer and during startup.
Every 5 cycles, when switched from Winter to Summer and during startup.
Auxiliary Output: 1 S.P.S.T. (N.O.)
Output Relay Ratings: 1 Amp inductive, 6Amp resistive at 120 VAC 60 Hz, 15A total for all circuits
Temperature Display: Fahrenheit or Celsius.
Display: 80 character Alphanumeric (4 raws with 20 characters each)
Sensor Ranges: Outdoor temperature sensor - minus 35°F to 250°F
Heating system sensor - minus 35°F to 250°F
Network Sensor Input: Up to 64 Sensors (Use only Nueron Sensors, MIG, Wireless Receivers)
Day and Night Outdoor Cutoff Ranges: 20°F to 100°F
Day Heat Adjustment Curves: A to P
Night Heat Adjustment Curves: A to P
Vacuum Pump Pre-Vacuum: 10 minutes
Vacuum Pump Post-Vacuum: 1 complete cycle time.
Schedules: 4 DAY and 4 NIGHT settings per day
Aux Clock Schedule: 4 OPEN and 4 CLOSE settings per day
Morning Boost and Early Shutdown:
Manual Boost - Time adjusting from 0 to 90 minutes - Valve opens an additional 10%
Vari-Boost - Self-adjusting from 0 to 180 minutes - Valve opens an additional 10%
Early Shutdown - Self-adjusting from 0 to 90 minutes
Power Backup: Lithium coin battery, 100 days minimum 5 year replacement
Remote Communications: 1 RS232 and 1 RS485 (RI controls) using Visual Gold Software or an EMS system using XML, Modem (RIM Controls) using Visual Gold, or Ethernet (RI-Net only) using a web Browser.
External Inputs: 1 Network Input, 2 Aux Inputs, Positioning Sensor Input, Shutdown Input, and Prove Input.
Fast Cycle: Capable (Allows minutes to turn to seconds during troubleshoots)
Password: Capable.
Season: Winter and Summer.
Enclosure: NEMA 1
Dimensions: 5-⅛" x 13" x 13"
Weight: 14 pounds