Troubleshooting Poor Temperature Regulation

• This page lists problems that may affect the temperature performance of your LUX thermostat with suggested resolutions.

• For more detailed information please refer to the instructions that came with your thermostat.

Model	CAG1500
Problem	Resolution
No fan function in heat mode	Move the switch or jumper on the circuit board to its ELECTRIC POSITION for electric heat, OR set the units fan control appropriately to ELECTRIC or another appropriate setting.
Fan On continuously	Move Fan switch from ON to Auto. Remove the "G" wire. If fan continues to run, then either the system is mis-wired, or the problem is in the system, not the thermostat.
Indicates incorrect room temperature	Refer to thermostat manual to verify that your temperature set point is what you expect it to be. Refer to your thermostats manual for calibration. Use this feature to adjust the displayed temperature up to +5°F(3°C) or -5°F(3°C) degrees.
Heats or cools more than 5 degrees past its displayed set temperature	Refer to thermostat manual to verify that your temperature set point is what you expect it to be. Remove thermostat body from the wall, leave the backplate in place. Verify that Heating and cooling switch off within a few minutes. If the thermostat is battery powered only, replace its batteries with fresh Duracell® or Energizer® alkaline batteries. Set unit to heat mode. Adjust set temperature to at least 5 degrees below room temperature. Then adjust set temperature upward one degree at a time. Listen carefully for a soft click from the thermostat. This click should be heard near room temperature. Refer to your unit's manual to decrease the units swing setting to a narrower setting. Verify that your units placement and mounting are optimum per the installation section of its manual. Refer to wiring to verify that it is according to the wiring diagram for your system.
No heat or cooling when	Note that in Cool Mode the thermostat may not activate a

expected	cooling stage until its compressor protection time has elapsed this may be a long as 5 minutes. Refer to thermostat manual to verify that your temperature set point is what you expect it to be. Replace the batteries with fresh Duracell® or Energizer® alkaline batteries. Press reset with small Phillips screw driver. It may be necessary to reconfigure some settings after a reset. Set unit to heat mode. Adjust set temperature to at least 5 degrees below room temperature. Then adjust set temperature upward one degree at a time. Listen carefully for a soft click from the thermostat. This click should be heard near room temperature. Adjust set temperature down one degree at a time. Again listen carefully for a soft click from the thermostat near room temperature. The brass contacts in your thermostat may need to be cleaned and/or tightened. Each contact is comprised of a pin protruding from the rear of the thermostats circuit board, and two V shaped contacts on its wall plate. These contacts are located above each screw terminal. Insert a small regular screw driver at one side of a "V" contact. Turn the screw driver to slightly bend the top of each "V" contact toward its mate. Refer to the wiring troubleshooting guide to verify that your thermostat is wired correctly. Insure you are using the correct wiring diagram for your heating/cooling system.
Advanced Trouble Shooting	If your system is a low voltage system having 24VAC or less, and you are technically inclined, you may jump terminals as given below out to detect a malfunction in your system.
Fan Test	FAN TEST: If your system has a fan, test it first. If the system is Heat only, or if there is a jumper between the "RH" and "RC" terminal of your thermostat, then with the power ON at the fuse box, touch the "G" wire to the "RH" terminal. The fan should come on immediately and stay on. The rush of air is usually easily heard. If the system is Cool only, or if the system is Heat and Cool and there are separate wires to "RH" and "RC", and there is no jumper between them: then with the power ON at the fuse box, touch the "G" wire to the "RC" terminal. The fan should come on immediately and stay on. If the fan does not come on it is an indication that there is a problem with your system. Check any breaker o fuses that fed the 24VAC transformer that powers your system.

	If problem persists, contact qualified service personnel for aid in determining the fault.
Heat Test	To test gas or oil heating systems, take the "W" wire off its terminal. With the power ON at the fuse box, touch the "W" wire to the "RH" terminal for a couple of minutes and the heater should come on and stay on until the wire is removed.
Cooling Test	To test cooling, remove the "G" and "Y" wires. Connect them together with the "RC" for several minutes to observe operation. The system should come on and stay on. If the cooling fails to come on, or comes on and off, the problem is in the system.
Heat Pump Test	To test a heat pump system with an "O" wire, three wires must be connected together with the power terminal. The power terminal is "R". "RH" and "RC" with a jumper between them may also be consider to be a single "R" terminal. With the power ON at the fuse box, connect the "O", "Y" and "G" wires to the "R" terminal for a couple of minutes and the unit should provide cool air. Wait at least 5 minutes and repeat this test without the "O" wire. The unit should provide Heat. To test a heat pump system with a "B" wire, three wires must be connected together with the power terminal. The power terminal is "R". "RH" and "RC" with a jumper between them my also be consider to be a single "R" terminal. With the power ON at the fuse box, connect the "B", "Y" and "G" wires to the "R" terminal for a couple of minutes and the unit should provide warm air. Wait at least 5 minutes and repeat this test without the "B" wire. The unit should provide cool air.
For further assistance:	Contact your HVAC service company or our Technical Assistance Line if not resolved.

Wiring Information and Troubleshooting

- This page provides general guidance for wiring your LUX 24VAC electronic thermostat. For more detailed information please refer to the instructions that came with your thermostat.
- Please make specific note regarding LOW VOLTAGE and LINE VOLTAGE directions. Do not install LINE VOLTAGE wires to a LOW VOLTAGE control. Improper installation of a "C" wire may cause damage to your system.
- Do no install a wire labeled "TC" from the previous thermostat to any of our controls. Installation of a "TC" wire may cause damage to your system.
- Do NOT wire by color of the wire, wire by the LETTER designation to which the wire was attached on the previous control.
- If there were no letter designations on your old thermostat, contact our Technical Assistance Department for assistance.

Model	CAG1500
Problem	Resolution
ALL	Never connect a low voltage thermostat to line voltage.
Two wires control a heat only system	Connect one wire to W and the other to RH.
Two wires control a cool only system	Connect one wire to RC and the other to Y.
Three wires for forced air heat only system, where the previous thermostat did not have a clock or timer	The previous R, RH or RC wire is the 24-volt transformer wire. Connect it to RH. Leave jumper connecting RH to RC. Connect the forced air heat system to W, and the fan wire to G.
Three wires for a heat only, forced water system that did NOT have a clock or timer	This system has a 3 wire zone valve. The CAG1500 does not support 3 wire zone valves. Please use our TX9100E, TX500U, TX1500U, TX9100U, or TX9600TS models for this style of heating application.
Three wires control a heat only, forced water system that DID have a clock or timer	Tape off and do NOT install any clock or timer wire. Often they are labeled C or TC. Install the remaining two wires, one to RH and the other to W.
Four wires control a heat only system, and two of the wires operate clock or timer. The other two wires operate the heater	Tape off and do NOT install any clock or timer wire. Often they are labeled C or TC. Install the remaining two wires, one to RH and the other to W. The jumper connecting RH to RC may remain or be removed.
Two wires control heating AND cooling	Currently no Lux controls are compatible with this system.
Three wires control heating and cooling. One wire operates heat, one operates cooling and the third provides 24 VAC	Connect the 24-volt power wire to RH. Install a jumper connecting RH to RC. This jumper is usually pre-wired. connect the heat wire to W, and the cooling wire to Y.
Three wires control a cooling only system. One wire operates the compressor, one operates the fan and the third provides 24 VAC	Connect the 24-volt power wire to RC. Connect the cooling wire to Y and the fan wire to G.
Four wires control a heating and cooling, electric, gas or oil, forced air system that is NOT a heat pump	Connect the 24 VAC transformer wire to RH or RC. Install a jumper connecting RH to RC, this jumper is often prewired. Connect the heat wire to W, the cooling wire to Y. and the fan wire to G.
Four wires control a Single Stage Heat Pump. They were labeled: G, Y, R or RH or RC, and either B or O was used	Do not connect wires to both B and O. Connect the reversing valve wire to B or O, just as the previous thermostat. Install a jumper wire from RH to RC. Connect 24 VAC wire to RH too. Install a second jumper wire from W to Y. Connect compressor wire to Y and the fan wire to G.
More than 4 wires are connected to the old thermostat	Contact our Technical Assistance Line.

Troubleshooting the Display

- Problems that may be identified from the display of your programmable thermostat are listed here with suggested resolutions.
- For more detailed information please refer to the instructions that came with your thermostat

Model	CAG1500
Problem	Resolution
No display after replacing batteries	Install fresh AA size Duracell® or Energizer® alkaline batteries with proper polarity (+ and -)!
Display will not change	Peel protective plastic label from display.
Display blurred and unreadable	Peel protective plastic label from display. Press the small white HW RESET button on the circuit board.
Time alternates with Room temp	This is normal operation which cannot be changed.
Blank or fading display	If the thermostat is battery powered only, replace its batteries with fresh AA size Duracell® or Energizer® alkaline batteries. Be sure that they are installed with their polarity (+ and -) correct. Clean battery contacts with a pencil eraser and pry out the spring contact slightly to insure a clean, firm connection. Press the small white HW RESET button on the circuit board.
Displays "LO BATT", "REPLACE", or battery symbol	Replace thermostat batteries with fresh AA size Duracell® or Energizer® alkaline batteries. Be sure that they are installed with their polarity (+ and -) correct. Clean battery contacts with a pencil eraser and pry out the spring contact slightly to insure a clean, firm connection.
Displays wrong room temperature.	See Temperature Regulation
Thermostat is locked or cannot adjust display	Press the NEXT button three times then press the HOLD button once, this key sequence locks and unlocks your thermostat.
You want to change the displayed temperature scale from °F to °C or from °C to °F	A jumper comprised of two small pins on the units circuit board and a black shorting device control the CAG1500 displayed temperature scale. Place the shorting device over both pins to use the Fahrenheit scale and over only one pin (either one) to use the Celsius scale. Press the small white HW RESET button on the circuit board.

You want to change clock format from 12Hr Standard Time to 24Hr Military Time or from 24Hr Military to 12Hr Standard Time	A jumper comprised of two small pins on the units circuit board and a black shorting device control the CAG1500 displayed time format. 12Hr or 24Hr military time may be selected. Place the shorting device over both pins to use 12Hr time and over only one pin (either one) to use 24Hr time. Press the small white HW RESET button on the circuit board.
Displays wrong day or time	Rotate the Speed Dial® to SET DAY/TIME. The day will flash, use UP key to correct day. Press NEXT. The time will flash. Use UP and DOWN keys to go to correct time. Rotate dial back to RUN.
Displays no set temperature	The system switch must be in the HEAT or COOL position. Then if no program temperature is visible, press the small white HW RESET button inside on the rear of the circuit board.
Shows "888" on display	Press the small white HW RESET button inside on the rear of the circuit board.
Shows "OL" on display	"OL" means Out of Limits. The sensor is reading outside the thermostats display limit of 32°F to 95°F. When the temperature returns to within these limits the temperature display will reappear. If actual room temp is not outside these limits, there may be a malfunction. Press the small white HW RESET button on the circuit board.
Shows "OVERRIDE" on display	"Override" appears on the display when the set temp is raised or lowered from the program temperature. Overrides are terminated at the next scheduled program period when the unit will revert to the program temperature and the "Override" indicator will be extinguished.
Display will not light	Some display backlights are difficult to see in a lighted room. Check the backlight in a darkened area. If the thermostat has batteries installed, replace them with fresh Duracell® or Energizer® alkaline batteries. Clean the contacts holding the batteries in place with a pencil eraser.
For further assistance:	Contact your HVAC service company or our Technical Assistance Line if not resolved.