

CTR - 24 Series & CTS - 24 Series Owner's Manual - Installation and Operating Instructions

Please read this manual carefully before installation and use

This manual is for two types : CTR-24 Series and CTS-24 Series. Please note the remarks accordingly.

Index :

1. Options
2. Accessories
3. Installation Instructions
4. Wiring Connections
5. Hardware Jumpers Explanation
6. Operating Manual
7. Setting Temperature for Unoccupied Mode (Economy)
8. General
9. Technician Settings
10. Troubleshooting for Technician

1. Options

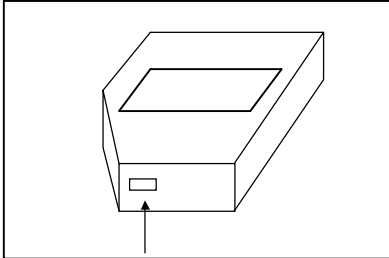
- 1.1. Programmable or non-programmable: to Select, press one button and the program will remain in memory. (no need to reset it again)
- 1.2. External Temperature Sensor - (return air or wall mounted) (CTR Series Only)
- 1.3. High and Low Temperature Alarm - Dry contact (CTR Series Only)
- 1.4. Alarm for High and Low temperature is only indicated red LED. (CTS Series Only)
- 1.5. Hand held remote control with weekly program (CTR Series Only)
- 1.6. Extra receiver - to operate the thermostat from bedroom with the remote (CTR Series Only)
- 1.7. Outdoor temp reading. (CTR Series Only)
- 1.8. Scale in Fahrenheit or Celcius.
- 1.9. Individual cool and heat set points.
- 1.10 Fault indication from system (If connected)
- 1.11 Average Temperature sensing. Please look for details in our web site "Sensors & Accessories"(CTR Series Only)

2. Accessories

- 2.1. Back Plate - 6"L x 4"W x 0.37"H - Part No. WP2.
- 2.2. Wide Back Plate - 6"L x 6"W x 0.37"H - Part No. WP3.
- 2.3. Temperature Sensor with 30 inches lead - Part No. TS01 (CTR Series Only).
- 2.4. Temperature Sensor in decorative box - Part No. RS01 (CTR Series Only).
- 2.5. Two temperature sensors in a decorative box (for averaging) - Part No. RS02 (CTR Series Only).
- 2.6. Duct temperature sensor - Part No. DT01(CTR Series Only).
- 2.7. Outdoor temperature sensor in sealed box - Part No. OT01 (CTR Series Only)
- 2.8. Hand held remote control with weekly program Infra Red - Part No. RT04. (CTR Series Only)
- 2.9 External receiver to use the hand held remote control to another room (more than one can be daisy chained) - Part No. IRR/1.(CTR Series Only)

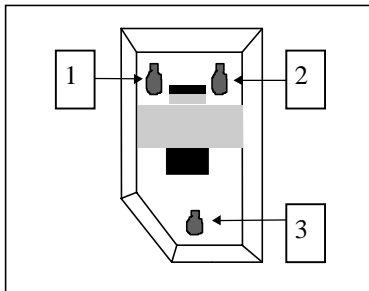
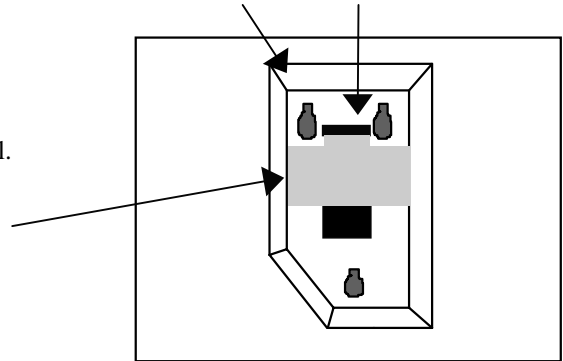
FOR DETAILS ON WHERE TO PURCHASE ACCESSORIES, PLEASE CONTACT SCI FOR YOUR NEAREST LOCATION OR VISIT OUR WEB SITE AT WWW.SCILLC.COM

3. Installation Instructions



3.1. Separate the front panel from back panel by depressing the tongue located in the bottom of the unit.

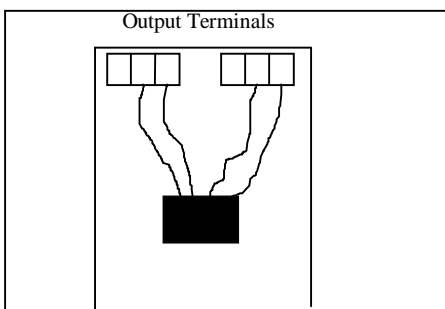
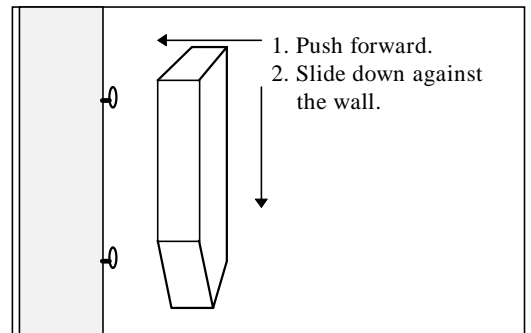
3.2. Gently disconnect the quick connector on the back panel.



3.3. Line the back panel up against the wall or flat surface on which it is to be mounted and drill the appropriate fixing holes.

3.4. Insert screws so they extend approx. 3/16" (3 mm) from wall or surface.

3.5. Align the back panel against these screws, pushing it forward, allowing it to slide downwards to lock into position.



3.6. Make electrical connections to terminals on the back panel as shown on enclosed electrical wiring diagram.

3.7. Reconnect the quick connector into the back panel.

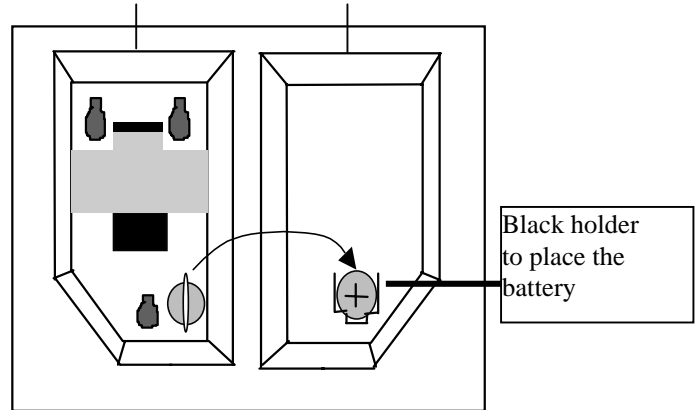
3.8. Connect 24VAC to the thermostat, verify that LCD display is ON. (DO NOT INSERT BATTERY BEFORE THAT)

3.9. Remove battery from back panel by sliding it to the left and out from its white retaining clip and mount it in black holder on front panel; insert it from the top, gently pressing downwards until it snaps into place and is held under the top clip of the holder.

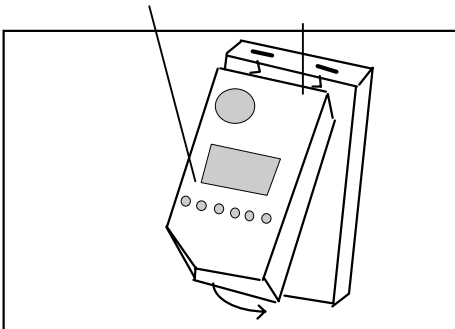
BE CAREFUL WHEN INSERTING THE BATTERY, THE TOP CLIP OF THE HOLDER IS VERY FRAGILE.

The + engraved on battery should be visible.

Back panel Front panel



Back panel Front panel



3.10. Re-assemble front and back cover. Insert the top first then at bottom.

4. Wiring Connections

IF YOU HAVE THE **SUPER** MODEL, MAKE SURE THAT YOU CHOOSE THE RIGHT JUMPER SELECTIONS - PLEASE SEE # 5

- For special types of thermostats the electrical drawing will be added to this manual as an extra page.
- Rc-Rh - If one phase is in use, they must be short - (Default from Factory)

4.1. Connections for 1 heat - 1 Cool - HC11

TO,TO - Outdoor temperature sensor (OT01 see accessories # 2) Option for CTR SERIES only) SEE # 15

T1, T1 - Return Air Sensor (Option for CTR SERIES only) SEE # 14

AUX - Fault input from system

Y1 - Compressor/Cool

Y2 - *Not in use*

W1 - Heat

W2 - *Not in use*

W3 - *Not in use*

G1 - Fan

G2 - *Not in use*

Al, Al - low and high temperature alarm dry contact (ONLY CTR SERIES) SEE # 13

Rc - Phase for Cool

Rh - Phase for Heat

C - Common

14,15,16 - Connection for extra receiver for remote control (ONLY CTR SERIES) (IRR/1) SEE # 16

4.2. Connections for 2 Heat - 2 Cool - HC22

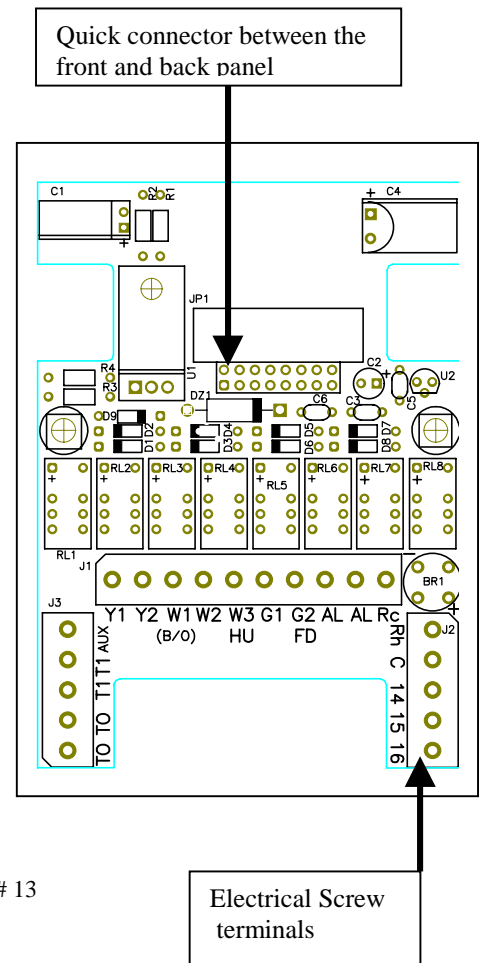
- TO,TO - Outdoor temperature sensor (OT01 see accessories # 2)
(Option for CTR SERIES only) SEE # 15
T1, T1 - Return Air Sensor (Option for CTR SERIES only) SEE # 14
AUX - Fault input from system
Y1 - Compressor/Cool 1
Y2 - Compressor/Cool 2
W1 - Heat 1
W2 - Heat 2
W3 - *Not in use*
G1 - Fan
G2 - *Not in use*
Al, Al - low and high temperature alarm dry contact
(ONLY CTR SERIES) SEE # 13
Rc - Phase for Cool
Rh - Phase for Heat
C - Common
14,15,16 - Connection for external receiver for remote control
(ONLY CTR SERIES) (IRR/1) SEE # 16

4.3. Connections for 3 heat - 2 Cool - HC32

- TO,TO - Outdoor temperature sensor (OT01 see accessories # 2)
(Option for CTR SERIES only) SEE # 15
T1, T1 - Return Air Sensor (Option for CTR SERIES only) SEE # 14
AUX - Fault input from system
Y1 - Compressor/Cool 1
Y2 - Compressor/Cool 2
W1 - Heat 1
W2 - Heat 2
W3 - Heat 3
G1 - Fan
G2 - *Not in use*
Al, Al - low and high temperature alarm dry contact (ONLY CTR SERIES) SEE # 13
Rc - Phase for Cool
Rh - Phase for Heat
C - Common
14,15,16 - Connection for external receiver for remote control (ONLY CTR SERIES) (Part No. IRR/1) SEE # 16

4.4. Connections for Heat Pump 1 stage - HP21

- TO,TO - Outdoor temperature sensor (OT01 see accessories # 2)(Option for CTR SERIES only) SEE # 15
T1, T1 - Return Air Sensor (Option for CTR SERIES only) SEE # 14
AUX - Fault input from system
Y1 - Compressor/Cool 1
Y2 - *Not in use*
W1, (B/O) - Heap pump (to change active cool or heat - See # 5)
W2 - *Not in use*
W3 - Emergency heat (EMH)
G1 - Fan
G2 - *Not in use*
Al, Al - low and high temperature alarm dry contact (ONLY CTR SERIES) SEE # 13
Rc - Phase for Cool
Rh - Phase for Heat
C - Common
14,15,16 - Connection for external receiver for remote control (ONLY CTR SERIES) (Part No. IRR/1) SEE # 16



4.5. Connections for Heat Pump 2 stage - HP32

TO,TO - Outdoor temperature sensor (OT01 see accessories # 2)
 (Option for CTR SERIES only) SEE # 15

T1, T1 - Return Air Sensor (Option for CTR SERIES only) SEE # 14

AUX - Fault input from system -

Y1 - Compressor/Cool 1

Y2 - Compressor/Cool 2

W1, (B/O) - Heap pump (to change active cool or heat - See # 5)

W2 - *Not in use*

W3 - Emergency heat (EMH)

G1 - Fan

G2 - *Not in use*

Al, Al - low and high temperature alarm dry contact (ONLY CTR SERIES) SEE # 13

Rc - Phase for Cool

Rh - Phase for Heat

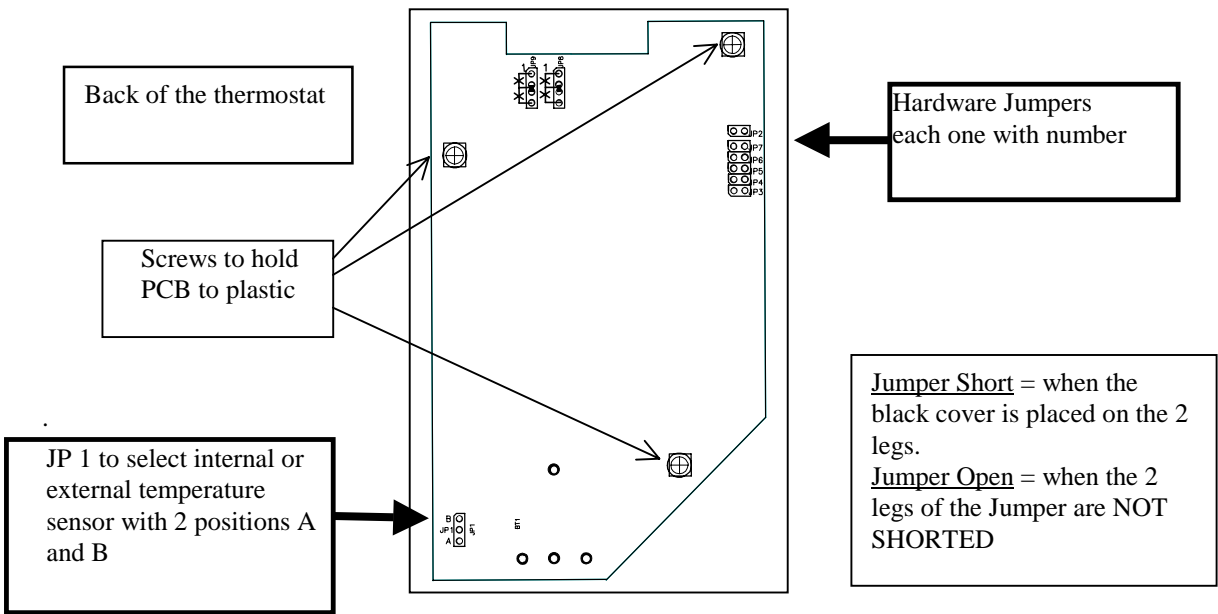
C - Common

14,15,16 - Connection for external receiver for remote control (ONLY CTR SERIES) (Part No. IRR/1) SEE # 16

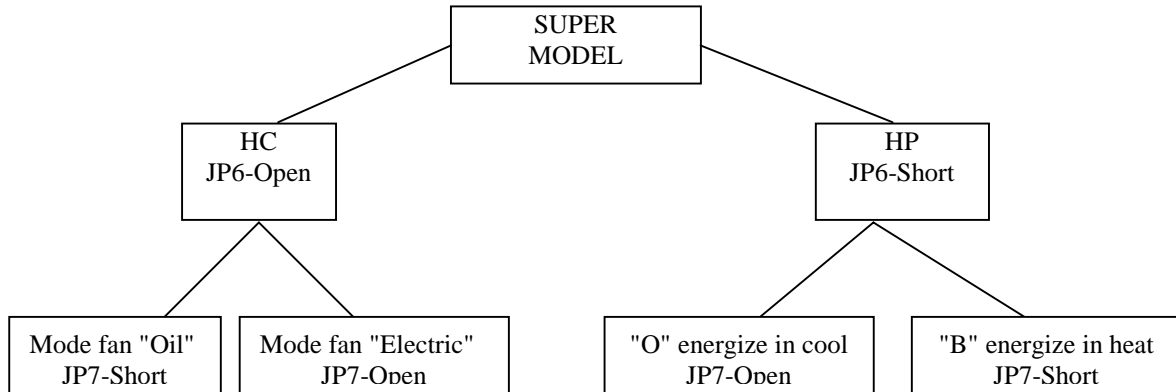
THE EMERGENCY HEAT (EMH) IN HEAT PUMP TYPES IS NOT SELECTABLE - IT WILL SWITCH ON BY REQUEST OF TEMPERATURE.

5. Hardware Jumper Explanations

IMPORTANT - BEFORE MAKING ANY CHANGES IN THE HARDWARE JUMPERS, DISCONNECT ELECTRICITY POWER ON THE MAIN SWITCH.



IF you have the SUPER model , Select the configuration of the thermostat.
- HC - (heat, cool) and Fan mode "Oil" or "Electric".
- HP - heat pump and energize in Cool "O" or in Heat "B".



5.1. JP1 - To select external sensor option, it has two positions A and B.
- Position A = Internal Sensor
- Position B = External Sensor

To connect external sensor – Please see # 13

5.2. JP2 - *Not in use*

5.3. JP3 - Open = Yes 4 minute delay for compressor
- Short = No time delay for compressor

5.4. JP 4 - Open = Clock mode 24 hours.
- Short = Clock mode AM/PM.

5.5. JP 5 - Open = Display temperature in Celsius
- Short = Display temperature in Fahrenheit.

5.6 JP 6 - Open = No heat pump (HC)
- Short = Yes heat pump (HP)

5.7 JP 7 -IF JP 6 OPEN (Set fan mode in "electric" or "oil/gas")
- Open - Electric mode
- Short - Oil/Gas mode

Fan mode "electric", fan will be activated or not, depending on the position of the button "AUTO FAN."

Fan mode "oil/gas", this option is used when the heating system is different from the A/C unit. (i.e., furnace)

In this option the fan will work:

- FAN ON position: the fan will work continuously.
- AUTO FAN position: the fan WILL NOT WORK continuously.

5.8 JP 7 -IF JP 6 SHORT (Set heap pump energized in cool or heat)
- Open - Heat pump energized in cool "O".
- Short - Heat pump energized in heat "B".

5.9 How to Change the Jumpers

To change JP 1, 3, 4, 6, 7.

- Disconnect power.
- Change the position of the jumper
- Reconnect power

To Change JP 5 (display on Celsius or Fahrenheit).

- Disconnect power to the thermostat.
- Change the position of Jumper 5.
- Take the back up battery out, see the installation chapter, See # 3.8
- Wait 15 minutes
- Reconnect the power to the thermostat (without the battery)
- Check that the display is working well (if not repeat all the above steps)
- Replace the battery.

AFTER CHANGING JP 5, THE THERMOSTAT WILL LOSE ALL THE INFORMATION STORED IN THE MEMORY, INCLUDING THE PROGRAMMING.

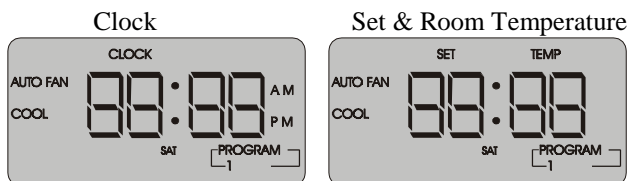
6. OPERATING MANUAL:

6.1. ON/OFF:

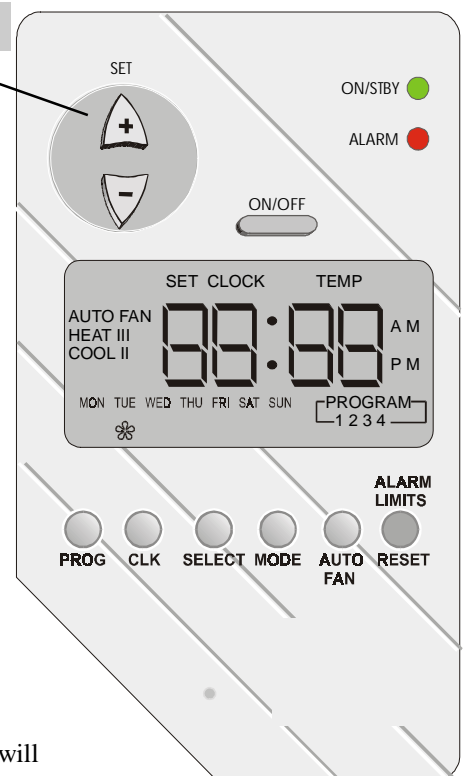
Press ON/OFF button - ON/STBY LED will light and the outputs are now activated (to turn off, press and hold ON/OFF for 3 seconds).

6.2. LCD SCREEN:

The LCD will display two modes in sequence. Clock, Set & Room Temperature.



SET BUTTONS



6.3 Real time clock and day:

To set Real time clock and day of the week follow these steps:

- 6.3.1 To adjust the hours: Press clock button; the hour digits will flash.
Use the set button press (+) to increase and (-) to decrease the hours.
- 6.3.2 To adjust the minutes: Press clock button; adjust the minutes.
- 6.3.3 To adjust the selected day of the week, press clock again.

The row of week days will flash.

Adjust the day by pressing the set button (eg. if Saturday selected, SAT will show in display, etc).

Press clock again to return to normal display.

6.4. SELECTING MODES:

Press mode button to switch between the four modes: **1. COOL, 2. HEAT, 3. COOL/HEAT (Auto-change over), 4. FAN ONLY.**

6.5. SET TEMPERATURE

Press the SET buttons (+) or (-); the temperature will flash, change with the set buttons (+) or (-).

In auto change mode, press the set buttons (+) or (-), COOL and TEMPERATURE will flash, set your cooling temperature with (+) or (-) buttons.

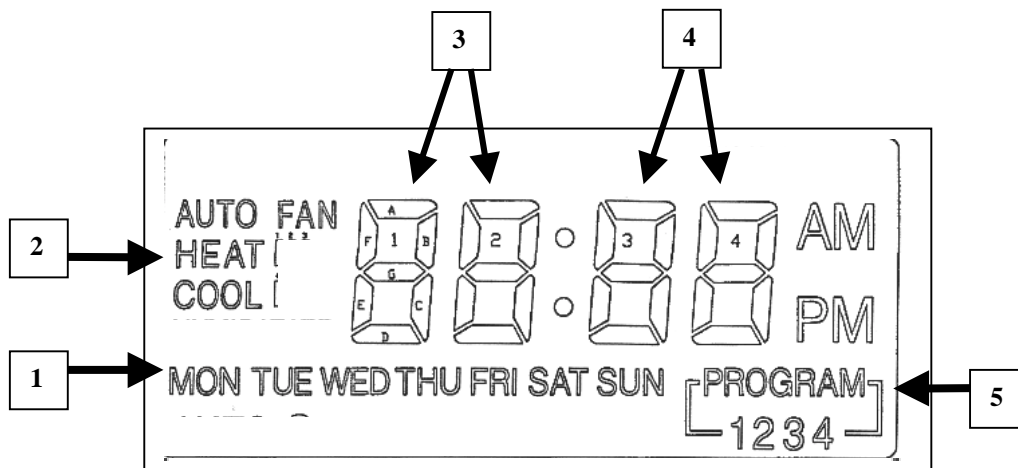
After three seconds, the HEAT and the TEMPERATURE will flash, set you heating with (+) or (-) buttons.

The HEAT SET must be at least 1 degree less than the COOL SET. The controller will not let you enter the wrong setting. In auto-change mode if the heat set is more than the cool, the system will continually jump from cooling to heating.

7. PROGRAMMING:

The control is a 5-1-1 programmable; weekdays Monday through Friday, Saturday and Sunday have individual programs. There are four program events per day: 1 (Morning), 2 (Day), 3 (Evening), 4 (Night)

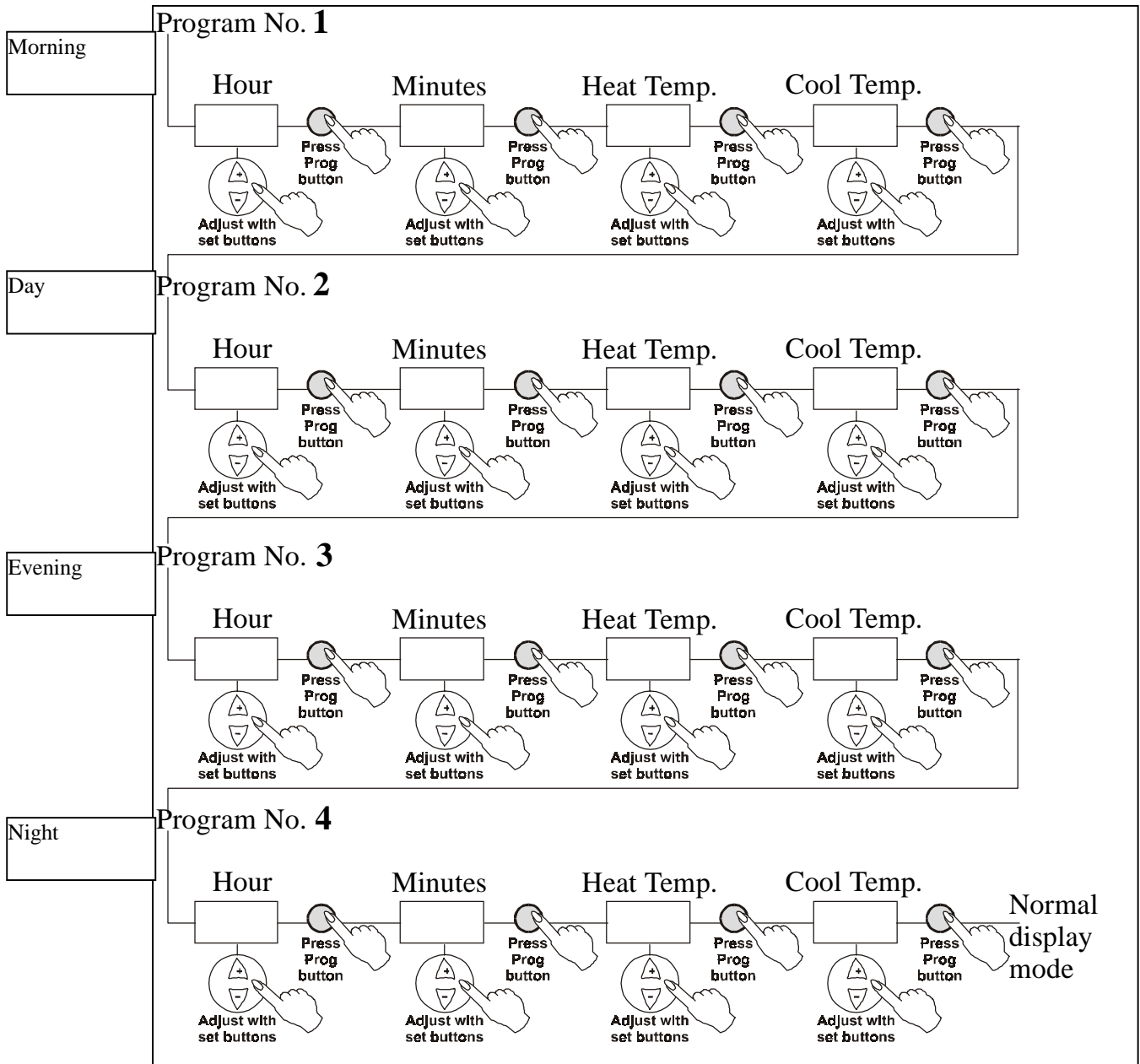
Before programming your thermostat, you should be familiar with the display of the unit.



Thermostat Display

1. Days of the week: (when setting the program.). It will display the period that you are setting. Sample; when display shows: MON-TUE-WED-THU-FRI, you are setting the week days program. (The program will repeat on each of these days).
2. MODE, (HEAT/COOL), will be displayed what your are setting the individual temperatures (See # 6.5)
3. Hours digits.
4. Minutes digits.
5. Number of events that you are setting or the current event.

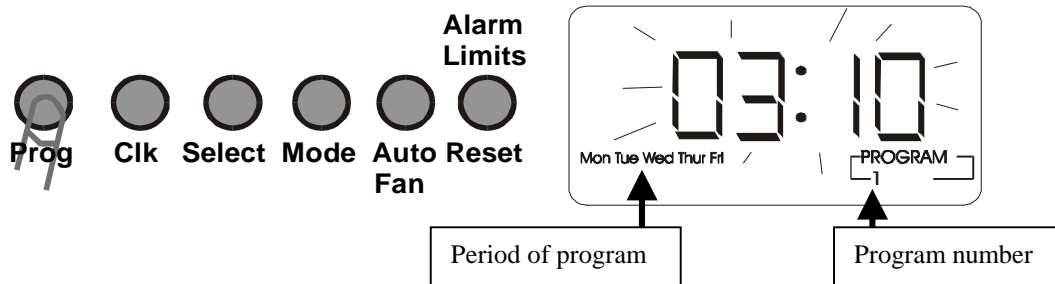
- The following chart will help you make the program.
- We recommend that you fill out the chart BEFORE setting the weekly program.
- On the chart, select a cooling and a heating temperature. This will keep a safe differential between Heat and Cool for auto change over.
- The display will show the program (weekday, Saturday or Sunday) and the event (1, 2, 3, 4)
- During programming, the display will return to normal display if no selections are made in 15 seconds.
- The controller keeps a safe differential of at least 1 degree between Heat set and Cool set. (Heat is always less than Cool).



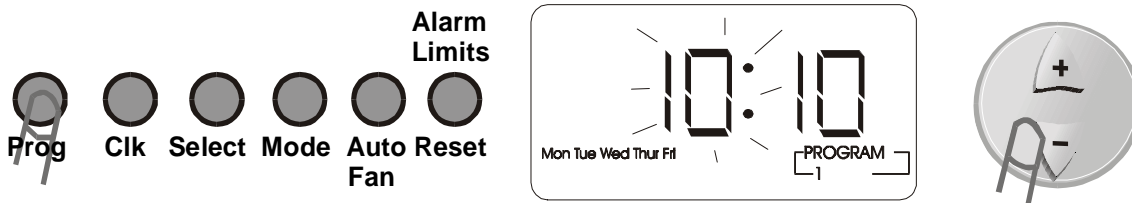
7.1. How to Set the Program

Pressing the PROG button does all Programming selections

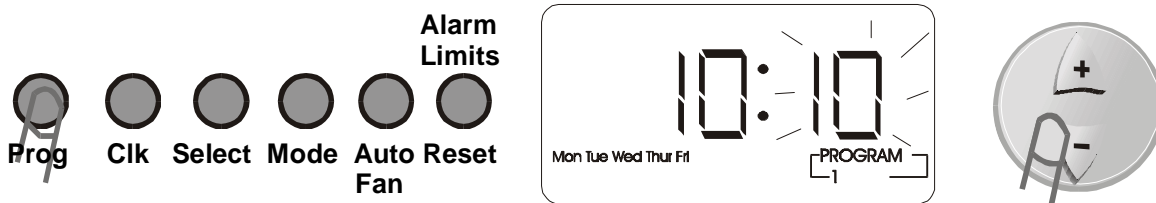
7.1.1 Press **Prog** Button: the hours and minutes will flash. This shows that you are entering the **Prog** mode.



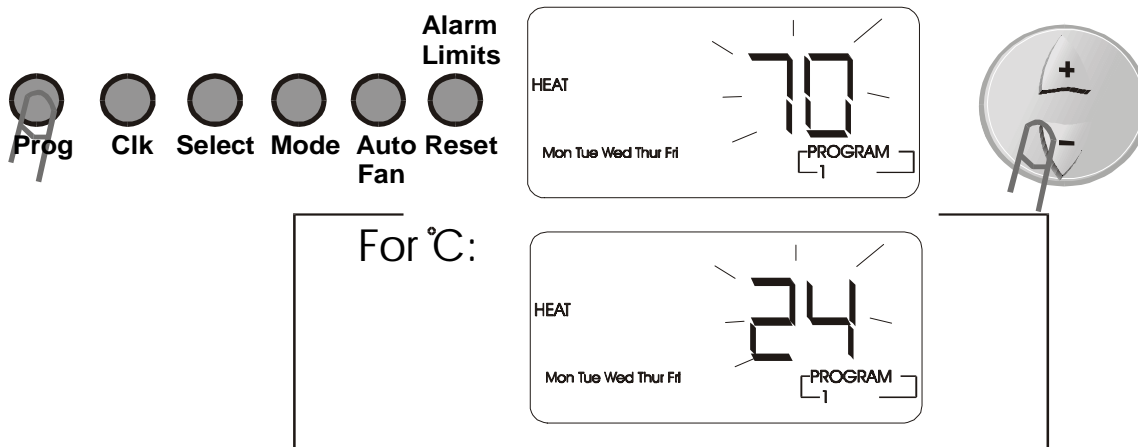
7.1.2 Press **Prog** button, the hours on display will flash, change the hours with the set buttons + to increase - to decrease.



7.1.3 Press **Prog** button again, the minutes on display will flash, change the minutes with the set buttons + to increase - to decrease.

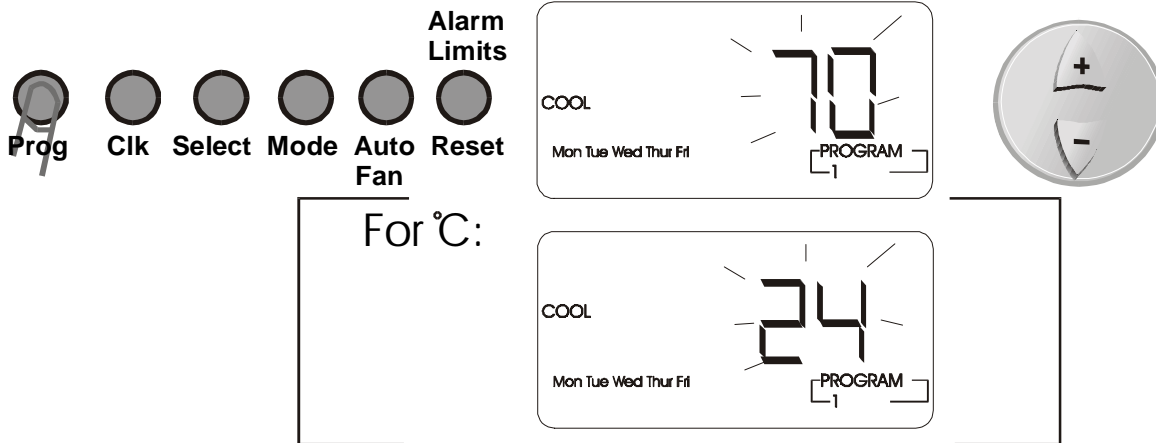


7.1.4 Press **Prog** button again, heat and temperature on display will flash, change the heat set with the set buttons + to increase - to decrease .



7.1.5 Press **Prog** button again, cool and temperature on display will flash, change the cool set with the set buttons + to increase - to decrease

The controller keeps a safe differential of at least 1 degree between Heat set and Cool set (Heat is always less than Cool).



7.1.6: To set the time and temperature for the other programs repeat steps 7.1.2. to 7.1.5.

7.1.7. Press Prog button to return to normal display.

7.2. Weekly Program Mode and Manual Mode.

You can change between Weekly program and Manual program; by pressing and holding (3 seconds) the PROG button in normal display. In weekly program the clock symbol and Program, in brackets, will be displayed. The clock symbol and Program, in brackets, will not be displayed in Manual Mode.

7.3. Review the Prog

You can review the program or change part by entering into the program mode and step quickly through by pressing CLOCK button.

8. FAN/AUTO FAN function:

Press the FAN button to select AUTO FAN, press again to cancel. In AUTO FAN the fan will only run when calling for heat or cool.

9. OVERRIDE SET TEMPERATURE:

At anytime you may change the temperature by pressing the set buttons. The new temperature will be retained until the next prog start. If the thermostat was in prog mode, then the number of the prog. will disappear until the next prog.



10. UNOCCUPIED MODE (Set back mode)

Unoccupied mode overrides the set point temperature and uses set economy temperatures for heat and cool when you leave home or office for any period of time - vacation, unexpected event - and the system will work in SET BACK mode.

(To set temperature for unoccupied mode See # 13.6)

10.1 To set the thermostat to work in Unoccupied Mode.

- Switch on the thermostat
- Press and hold AUTO FAN button (3 sec.) until buzzer "beeps" , EC (Economy) will appear in the display. When returning home (office) press and hold (3 sec.) the AUTO FAN button until buzzer "beeps" and SET TEMP returns to normal.

In Unoccupied Mode, none of the buttons function except **Reset**.

The green LED will light to show that the thermostat is working but the system may be turned off because there is no demand.

11. Reset Button and Alarm Condition (red LED light)

In case the room temperature goes higher or lower than the set alarm (SEE # 13), the alarm LED will flash and the alarm output will be activated (alarm output for CTR SERIES only).

Press and hold the **Reset** button to clear the alarm.

The alarm will clear by itself if the temperature returns to the normal level.

12. SELECT Button - View Outdoor Temperature (For CTR SERIES only)

Press and hold SELECT button to view the outside temperature. (If connected)

13. Technician settings

These settings permit changes to the following :

- High temperature limit
- Low temperature limit
- High temperature alarm (For CTR SERIES only)
- Low temperature alarm (For CTR SERIES only)
- How to connect external sensor
- How to connect outdoor sensor.
- How to connect extra receiver.

13.1 Enter code for technician

Press **alarm limit** button; the display will show (Fig.1):



Your code is 55. Enter your code by using the set buttons (+,-).

(Fig.1)

13.2 Set High temperature limit - HL:

Press **alarm limit** button again the display will show (Fig.2):



Fig. For °F

Adjust the high limit temperature using the set button (this will limit the Max. range of adjusting set temperature). Range 36°-90°F (4°C-39°C).

Press Alarm limit again.

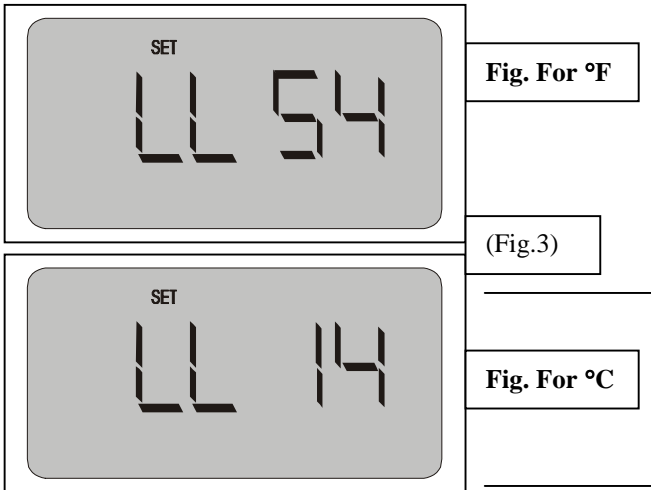
(Fig.2)



Fig. For °C

13.3 Set Low temperature limit - LL:

Press ALARM/LIMIT button again the LCD will show (Fig.3):



Adjust the low temperature limit using the set button (this will limit the Min. range of adjusting set temperature). Range 35°- 89°F (2°C-38°C). The controller will not allow you to adjust low temperature to be higher than high temperature.

Press Alarm limit again.

13.4 Set High temperature alarm - HA:

Press ALARM/LIMIT button again, the LCD will show (Fig.4):



Adjust the temperature using the set button (from 36°-93°F) (4°C-46°C) so when ambient temperature is reached, the alarm activates (red light flashes and dry contact alarm, if available, activates).

Press Alarm limit again.

13.5 Set Low temperature alarm - LA:

Press ALARM/LIMIT again for low temperature, the LCD will show (Fig.5):

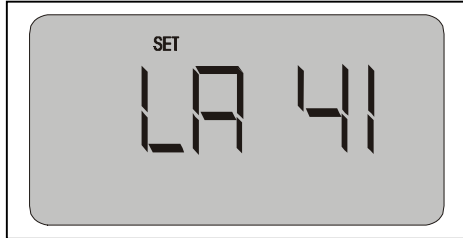


Fig. For °F

(Fig.5)

Adjust the temperature you want (35°-92°F) (2°C-44°C).
 The unit will not allow you to adjust low temperature alarm to be higher than high temperature alarm.

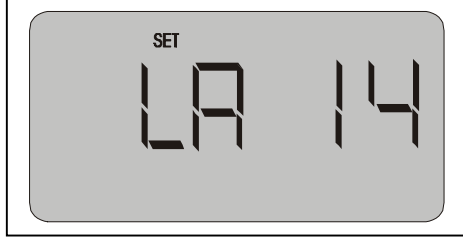


Fig. For °C

Press Alarm limit again.

13.6 Press again to set Economy Mode for cooling (your setting for unoccupied mode) 75°-90°F (24°C-31°C). Press again and set Economy Mode for heating (your setting for unoccupied mode) 36°-60°F (5°C-15°C)

14. Connection of External Sensor (CTR Series Only)

IMPORTANT - THE EXTERNAL SENSOR MUST BE SCI TYPE

N.T.C. Sensor; Temperature ~ Resistance Characteristics

Temp °C	7.2	10.0	12.8	15.6	18.3	21.1	23.9	26.7	29.4	32.2
Temp °F	45	50	55	60	65	70	75	80	85	90
Res. k	115.8	100.9	88.1	77.1	67.7	59.6	52.5	46.4	41.2	36.6

- 1. Disconnect power to the thermostat 24 Vac.
- 2. Move Jumper 1 to position B. see # 5.9
- 3. Connect the temperature sensor to T1-T1 terminals.
- 4. Reconnect power 24 Vac.

15. Connection of Outdoor Sensor (CTR Series Only)

To purchase the outdoor sensor temperature please contact your near distributor, or visit our web site www.scillc.com.

This sensor come with a an eremitic box, so it will resist rain and snow.

Cable 2 wires needed to connect in between the Sensor and the thermostat.

2 terminals in the thermostat , TO, TO these must be connected to 2 terminal in the sensor box. These 2 terminals do not have plus and minus.

16. Connection of External Receiver (CTR Series Only)

To purchase the outdoor temperature sensor, please contact your nearest distributor, or visit our web site at www.scillc.com.

This option will give you the convenience of changing the setting of your thermostat from not only the thermostat itself, but Garage, Office, Bedroom, Kitchen, etc. It can be connected to more than one, in daisy chain.

Shielded cable; 3 wires needed to connect between the receiver and the thermostat. 3 terminals must be connected in the thermostat 14, 15, 16 and to the same numbers in the receiver. The minus of the shielded must be connected to 16.

17. To Replace Battery:

Leave controller under 24V open the front cover (see installation instructions) replace battery (3V lithium battery -200MAH)

18. RT04 - Hand held remote control - (option for CTR SERIES)

General

This remote control is Infrared, which means it must be pointed at the thermostat (or extra receiver) to operate. Every time you change a parameter in the Remote Control, you must send it to the thermostat by pressing "ON/SEND" and make sure that the thermostat "beeps" back it has received the information.

Operating Manual

Fan:

Press FAN button to change between: FAN ON (⊗) or AUTO FAN (A).
Press ON/SEND button to send information to the thermostat.

Mode:

Press MODE button to change between: COOL, HEAT, AUTO CHANGE and FAN ONLY.
Press ON/SEND button to send information to the thermostat.

Set Temperature:

Cool Mode: Press the set buttons (+) or (-). COOL & digits will flash, select the desired temperature. Press ON/SEND button to send information to the thermostat.

Heat Mode: press the set buttons (+) or (-). HEAT & digits will flash, select the desired temperature. Press ON/SEND button to send information to the thermostat.

Auto Change Mode: Press the set buttons (+) or (-) COOL and SET TEMPERATURE will flash, set cooling with (+) or (-) buttons.

Press SELECT button, the HEAT and the SET TEMPERATURE will flash. Set heating with (+) or (-) buttons. Press SELECT button again or Press ON/SEND button to send information to the thermostat.

The HEAT SET must always be at least 1 degree less than the COOL SET. The controller will not let you enter a wrong setting. (Set Temperature See # 6.5)

Real Time Clock and Day:

Press SELECT button: CLOCK SET will flash. Press (+) or (-) buttons, the hours will flash. Use the set button, press (+) to increase and (-) to decrease the hours.

Press SELECT button again, the minutes will flash. Use the set button, press (+) to increase and (-) to decrease the minutes.
Press SELECT button again, the week day will flash. Adjust the day by pressing the set buttons (eg. if Saturday selected SAT will show in display etc).

Press SELECT button again to exit from program or Press ON/SEND button to send information to the thermostat.

Programming:

To set the Program times and Temperature settings for the week:

The remote is 5-1-1 programmable; weekdays (Monday to Friday), Saturday, and Sunday can be programmed differently.

There are 4 program events per day; 1 (Morning), 2 (Day), 3 (Evening), 4 (Night)

To enter programming: Press and hold SELECT button for three seconds.

PROGRAM (flashing) and the days Mon-Fri will appear on display.

Press (+) or (-) buttons, PROGRAM 1 & START (flashing) will appear in display.

Press SELECT button, the hours will flash. To change the **hours** press (+) to increase, (-) to decrease.



Press SELECT button, the minutes will flash. To change the **minutes** press (+) to increase, (-) to decrease.

Press SELECT button; Cool (flashing) & Temperature will appear on display, To change the **Temperature**, Press (+) to increase, (-) to decrease.

Press SELECT button; Heat (flashing) & Temperature will appear on display, To change the **Temperature** Press (+) to increase, (-) to decrease.

The controller keeps a safety differential of at least 1 degree between Heat set and Cool set (Heat is always less than Cool). Note: After choosing the heat set, you cannot reduce the cool set to less than the heat set.

Press SELECT button: **PROGRAM 2 & START** (flashing) will appear in display.

Press (+) or (-) buttons and adjust the hours, minutes and temperature the same way as in PROGRAM 1

Press SELECT button: **PROGRAM 3 & START** (flashing) will appear in display.

Press (+) or (-) buttons and adjust the hours, minutes and temperature the same way as in PROGRAM 1

Press SELECT button: **PROGRAM 4 & START** (flashing) will appear in display.

Press (+) or (-) buttons and adjust the hours, minutes and temperature the same way as in PROGRAM 1

SEND will blink, press ON/SEND button to send the information to the thermostat.

PROGRAM (flashing) and **SA (Saturday)** will appear in display

Adjust the programming for Saturday the same way as programming MON to FRI.

SEND will blink, press ON/SEND button to send the information to the thermostat.

PROGRAM (flashing) and **SU (Sunday)** will appear in display

Adjust the programming for Sunday the same way as programming MON to FRI.

SEND will blink; press ON/SEND button to send the information to the thermostat.

The **TIMER** will blink; using the (+) or (-) buttons, Select **TIMER ON** or **OFF**. If you changed between **TIMER ON** or **OFF**, the **SEND** will blink. Press **SEND/ON** button to send the information to the thermostat. If you did not change between them, press the **SELECT** button to end programming. (Programmable or non-programmable).

REVIEW - If you want to review your program or to change part of it, simply enter the programming (press and hold (3sec.) **SELECT** button). You can Select between **MON-FRI**, **SAT**, **SUN** programming and **TIMER** on or off by pressing the **SELECT** button. If you want to enter programming, press (+) or (-) button when appropriate indication appears and continue as previously explained.

19. Troubleshooting for Technician

19.1. The display does not light

The unit is not getting 24 Vac

Check the wiring connections, Rh (Phase for heat), Rc(Phase for cool), C(common).

If you are using one phase for cool and heat, check that the short between Rc, Rh and common is tight.

19.2. Temperature in the room (display) dropped to 32°.

The temperature sensor is sensing an **OPEN CIRCUIT**.

Relace the jumper **JMP1**, if the temperature returns to normal, there is a problem with the external sensor.

- 19.3. Temperature in the room (display) rises to 87°
The temperature sensor is sensing a SHORT CIRCUIT.
- 19.4. Cool stages do not switch on
Check the Rc connection.
- 19.5. Heat stages do not switch on
Check the Rh connection.
- 19.6. The unit does not respond to buttons and "EC" appears in the display.
The unit is in Unoccupied Mode.
To return to normal mode , please see #F.
- 19.7. In heat mode, unit sends cool air.
The Auto Fan is not ON.

SCI - Systems Controls & Instruments can offer a WIDE range of products for the HVAC industry such as :

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Your suggestions or comments regarding these units would be appreciated.

At our web site, you can find technical details regarding the units, as well as , operating manuals, electrical drawings, Etc.

The company reserves the right to change the specifications any time without prior notice.