



## Installation and Operational Instructions CommStat Series

### Applications:

This series of controls has been designed for homes, condos, rental properties, vacation homes, boats, recreational vehicles, offices, etc. By simply calling a telephone number you can find out the what the room temperature is, if any fault conditions exist, place the control in "economy or comfort" setting.

### Specifications:

Temperature Range: 40F / 90F (7C / 29C)  
Accuracy: +/- 2 F  
Differential: Smart Sensing (see spec sheet)  
Voltage: 24 VAC,  
Load rating: 2 amps Relay Contacts  
Ambient storage temp.: -20F to 135F

### General Installation:

1. Certified HVAC contractor should install this control.
2. All state and local wiring and installation codes must be followed when installing this control.

### Caution:

- a. Make sure the power to the HVAC system and to the controls is turned "OFF".
- b. The system shall be tested to make sure that it is operating properly before and after this control is installed.

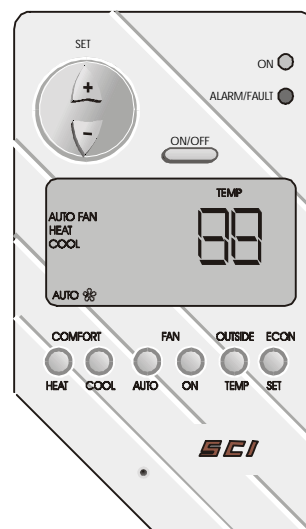
### Mounting:

- a. Separate the front control panel by depressing the tab located in the bottom of the control ( fig. 1).
- b. Carefully disconnect the front panel from the connector located on the base (fig.2).
- c. Remove the battery from the back panel ( slide battery to the left) Install battery in the battery holder located on the front panel ( see fig 3)
- d. Mount the base to the wall or if a mounting plate is being used to the mounting plate. Use the screws as supplied (fig.4).

### Wire the HVAC system to the control as outlined in the wiring directions

#### Connect Front Cover to base:

- a. Reconnect the plug-in connector wire into the mating connector mounted on the back panel (fig.2)
- b. Replace the front panel onto the base by sliding the tabs located on the top front panel into the holes located on the top back panel. Then snap the front panel into the bottom hole (fig 5)



CEM - 24HC11

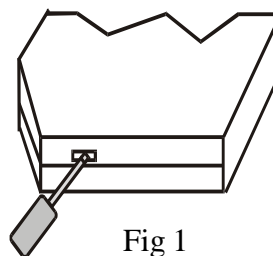


Fig 1

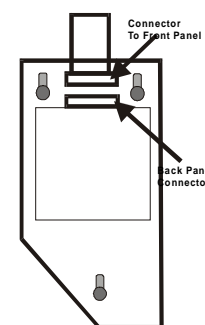


Fig 2

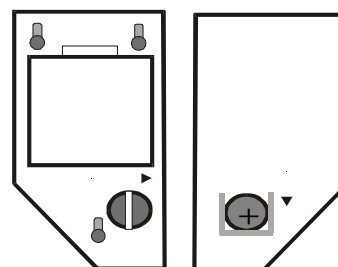


Fig 3

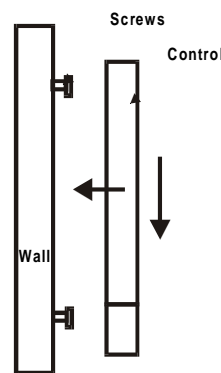


Fig 4

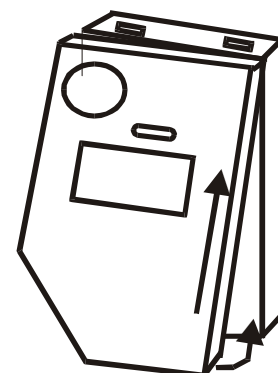


Fig 5



## **Operating Manual:**

### **1. ON/OFF:**

Press ON/OFF button - ON/STBY led will light, the outputs are now activated (to stop press again for 3 seconds).

### **2. LCD SCREEN:**

The LCD in a normal mode should display 3 different stages (one after one):  
Clock, Room Temperature, Set Temperature.

#### **2.1 Real time clock and day:**

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

2.1.1 To adjust the hours: Press clock button, hours digits

will flash, using the set button press (+) to increase and (-) to decrease the hours.

2.1.2 To adjust the minutes press clock button again and adjust the minutes.

2.1.3 To adjust the real day of the week press clock again, the row of the week days will light starting by MON, adjust the day by using the set button, when the real day light (for example TUE if today is Tuesday) press clock again to get out of programing.

### **3. SELECTING MODES:**

Press mode button to switch between 4 modes: **1.COOL, 2. HEAT, 3. COOL/HEAT,**

\* Cool Heat: Automatic change over of heating and cooling by the thermostat

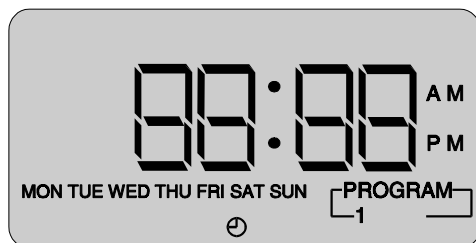
### **4. PROGRAMMING:**

The programs enable 4 different temperature periods/stages (programs) for weekdays Monday - Friday, and another 4 periods for Saturday and another 4 for Sunday.

**Recommendation:** Stage 1: Waking time, Stage 2: Leaving the house,  
Stage 3: Returning to house, Stage 4: Sleeping time.

4.1. Mon.-Fri.

4.1.2. FIRST PROGRAM: Press PROG. button, the LCD will flash. ( Picture 2 ).



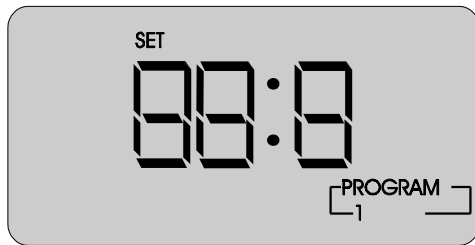
(Picture 2)



4.1.3. Press PROG. again, Hours will flashes, adjust the hours using the (+) and (-) buttons.

Press PROG. again and adjust the minutes in the same way.

Press PROG. again and adjust the temperature. (Picture 3). This Temperature will be the set temperature until the next stage (program).



(Picture 3)

4.1.4 Second program - Leaving the house.

Repeat steps 4.1.3

4.1.5. Third program - Return home.

Repeat steps 4.1.3.

4.1.6. Forth program - Going to sleep

Repeat steps 4.1.3.

## **4.2. Saturday:**

4.2.1. Repeat steps 4.1.3.- 4.1.6.

The LCD will show SAT. during programming.

## **4.3. Sunday**

4.3.1. Repeat steps 4.1.3.- 4.1.6.

The LCD will show SUN. during programming.

4.3.2 Press PROG. again to return to normal LCD.

**IMPORTANT:** If you will not press any button for 13 seconds the LCD will return to normal

## **4.4. Select Function**

A. When programming Mode - Press the SELECT button to advance from Mon.-Fri. to Saturday to Sunday and out.

\* This function will help you correct / change the program faster and also for review purposes.

B. Press and hold the SELECT button to see outside temperature (if outside temperature installed).



## **5. FAN/AUTO FAN function:**

Press Mode button to choose AUTO FAN, the fan will stop when no calls for heat or cool.

## **6. OVERRIDE SET TEMPERATURE:**

Pressing the (+) and (-) buttons will change the set temperature (override) until next program.

## **7. SET**

Press and hold the SET button. A four (4) digit code number password will appear 1 2 3 4. Select a code number which is easy to remember it must be four digits. The code number is changed by pressing the (+) increase or (-) decrease buttons.

Press the SET button again, Fn 3 will be displayed this is the number of rings which you want before the control answers the telephone. It is recommended that you have the telephone ring at least 6 times. This will give you time to answer the telephone and preventing the call from going to the control.

## **8. Phone Operation**

8.1 Dial your phone number, after the announcement prompting you to enter your password, enter your 4 digit password followed by the (#) pound sign.

8.2 to access the menu enter \* 0 #

8.3 The Menu

8.3.1 \* 1 # Turn System On

8.3.2 \* 2 # Turn System Off

8.3.3 \* 3 # Set Cooling Temperature (only when Cool Mode is selected)

Enter the temperature followed by the (#) pound sign

8.3.4 \* 4 # Set Heating Temperature (only when Heat Mode is selected)

Enter the temperature followed by the (#) pound sign

8.3.5 \* 5 # Select Operating Mode

Auto    1 #    (Auto Heat /Cool)

Fan     2 #    (Fan Only)

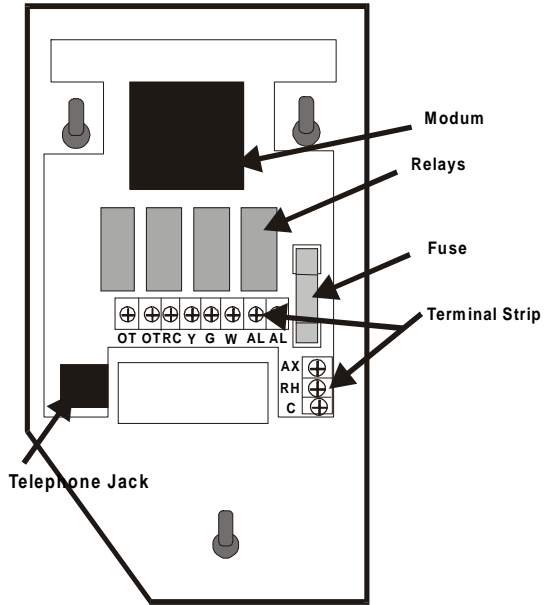
Cool    3 #

Heat    4 #

8.3.6 \* 9 # End of session



## Wiring Instructions for CommStat models CEM24-H1, CEM24-HC11, CEM24-HP21



Jumper Pins  
CEM24HC11 & H11  
JP3 Not Used  
JP4 Remove for  
Gas or Oil Heat  
Jp5 NOT used

Jumper Pins  
CEM24-HP21  
JP3 Not Used  
JP4 Remove for O Cool  
Jumper for B Heat  
Jp5 not used

Caution: If you are replacing an existing control make sure that you record the wire colors.

Terminal	Function	Actual Color
RH	24VAC Heat	-----
RC	24VAC Cool	-----
C	Common	-----
W	Heat	-----
Y	Cool	-----
G	Fan	-----
AL	Alarm (Dialer)	-----
AL	Alarm (Dialer)	-----
S1/OT	Outside Sensor	-----
S1/OT	Outside Sensor	-----
AX	Fault Input(N.O.)	-----
B/O	Reversing Valve	-----
	Heat Pump Only	-----

Note: If One Transformer is used short RH & RC

### CEM24-H1

OT — Outdoor Sensor  
OT — Outdoor sensor

W — Heat Relay  
AL — Alarm (Dialer)  
AL — Alarm (Dialer) — Dry Contacts  
AX — Fault from System — RH  
RH — Heat Transformer — N.O.  
C — Common of Heat Transformer

### CEM24-HC11

OT — Outdoor Sensor  
OT — Outdoor sensor  
RC — To Cool Transformer  
Y — Cool Relay  
G — Fan Relay  
W — Heat Relay  
AL — Alarm (Dialer)  
AL — Alarm (Dialer) — Dry Contacts  
AX — Fault from System  
RH — Heat Transformer — RH  
C — Common of Heat Transformer — N.O.

If system has single transformer Jumper RC & RH

### CEM24-HP21

OT — Outdoor Sensor  
OT — Outdoor sensor  
RC — Jumper to RH  
Y — Compressor  
G — Fan Relay  
B/O — Reversing Valve  
W — Aux. Heat Relay  
AL — Alarm (Dialer)  
AL — Alarm (Dialer) — Dry Contacts  
AX — Fault from System — RH  
RH — Transformer — N.O.  
C — Common

**Model No. System**  
CEM24-HC11/PR Heat Cool Programmable