



## 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 room temperature, 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 control is turned "OFF".
- b. The system shall be tested to make sure that it is operating properly before and after this control is installed.

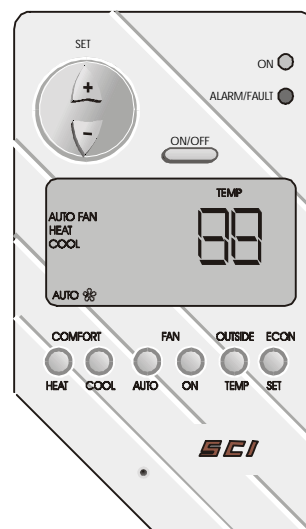
### Mounting:

- 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

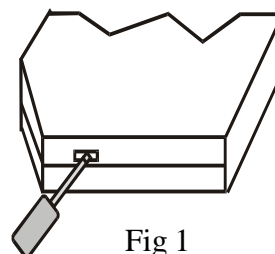


Fig 1

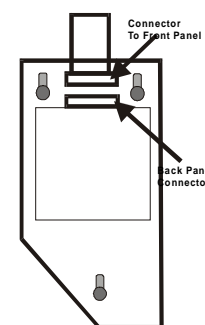


Fig 2

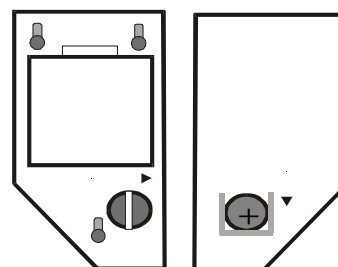


Fig 3

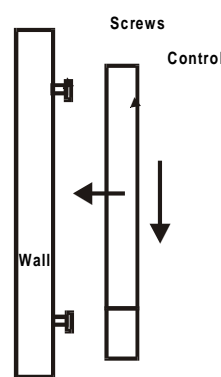


Fig 4

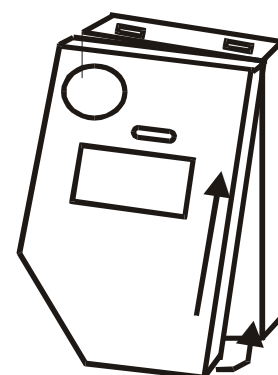


Fig 5



### **Display Function:**

1. "Green" LED light indicates power "on".
2. The LCD displays "actual" room temperature.
3. When system is in the heat or cool mode "heat" or "cool" is displayed.
4. The "Alarm / Fault LED will light when the "system" alarm is activated.
- 4a. The "Alarm / Fault" LED will flash when the Hi or Lo alarm is activated.

### **Programming CommStat:**

1. Press the "Econ / Set" button (10 seconds). The display will show Economy Heat "EH 50". The set point is changed by pressing the (+) increase or (-) decrease buttons. Set your desired Economy Heat (away) temperature (maximum setting 65 F.
2. Press the "Econ / Set" button. The display will show the Economy Cool "EC 85". The set point is changed by pressing the (+) increase or (-) decrease buttons. Set your desired Economy Cool (away) temperature Minimum cool is 81 F.
3. Press the "Econ / Set" button. The display will show the Comfort Heat "CH 50". The set point is changed by pressing the (+) increase or (-) decrease buttons. Set your desired Comfort Heat (arrive) temperature.
4. Press the "Econ / Set" button. The display will show the Comfort Cool "CC 74". The set point is changed by pressing the (+) increase or (-) decrease buttons. Set your desired Comfort Cool (arrive) temperature.
5. Press the "Econ / Set" button. The display will show the High Alarm "HA 81". The set point is changed by pressing the (+) increase or (-) decrease buttons. Set your desired High Alarm temperature.
6. Press the "Econ / Set" button. The display will show the Low Alarm "LA 40". The set point is changed by pressing the (+) increase or (-) decrease buttons. Set your desired Low Alarm temperature.
7. a. Press the "Econ / Set" button. The display will show the Answering Machine Selection "tA d1". To suppress the Greeting press the (+) to display "tA d1", this will allow Answer Machine to operate without the CEM Greeting to be heard. After the Answering Machine "beep" enter your four digit password.  
b. For answering machine function, set the CEM to answer at the same number of rings as the answering machine.  
c. To announce the Greeting press (-) to display "tA d0". This will allow the Greeting to be heard.

8. Press The "Econ / Set" button. A four (4) digit code number 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.

9. Press The "Econ / Set" button. "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 prevent the call from going to the control.

### **Operating Instructions:**

1. To turn control "on" Press "On/OFF" button. Green LED will light . To turn control "off" press the same button (hold for 3 seconds). Control will "beep" and green light will turn off. LCD display will remain on.
2. CommStat can be placed in "Comfort Heat or Cool" by two methods: A) Dial the telephone number to which the CommStat is connected too and press "2" for "Comfort Heat" or "1" for Comfort Cool. B) Press the Comfort "Heat" or "Cool" button located on the CommStat.
3. To place CommStat can be placed in "Economy" mode (heat & cool) by two (2) methods A) Dial the telephone number to which the CommStat is connected and press "0" for "Economy "Heat" & "Cool". B) Press the Economy "Econ / Set" button located on the CommStat.

Note: You can override the setting by pressing the "+" button to raise the temperature setting or press the "-" button to lower the setting. The programmed temperatures will not be changed. This is only a temporary override of set points.

### **Fan:**

The fan can be placed in "on" which will allow fan to run continuously or "auto" which only allows fan to run when system is calling for heat or cool. Press "Auto" or "On" button. Display will show "Auto Fan" when in auto mode, in "on" mode the display will not indicate but you will hear the fan running.

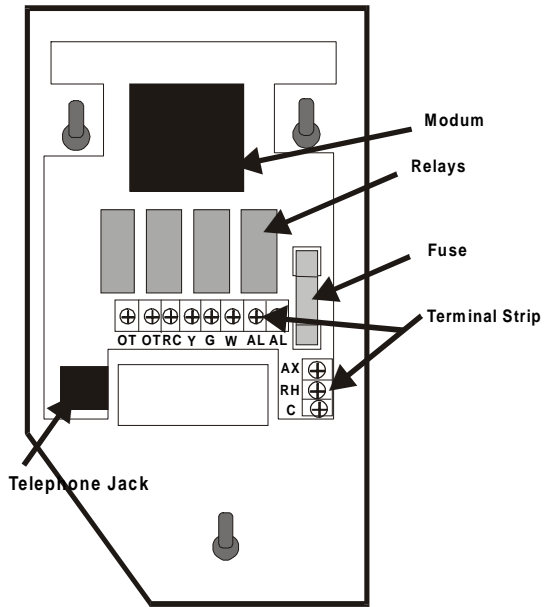
### **Outside Temperature:**

If the remote sensor (Catalog no. SOA-501) is connected to the CommStat and placed outdoors, when the "Outside" button is pressed, it will show the outdoor temperature reading.

## **Technical HotLine 1-800-663-8107**



## 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