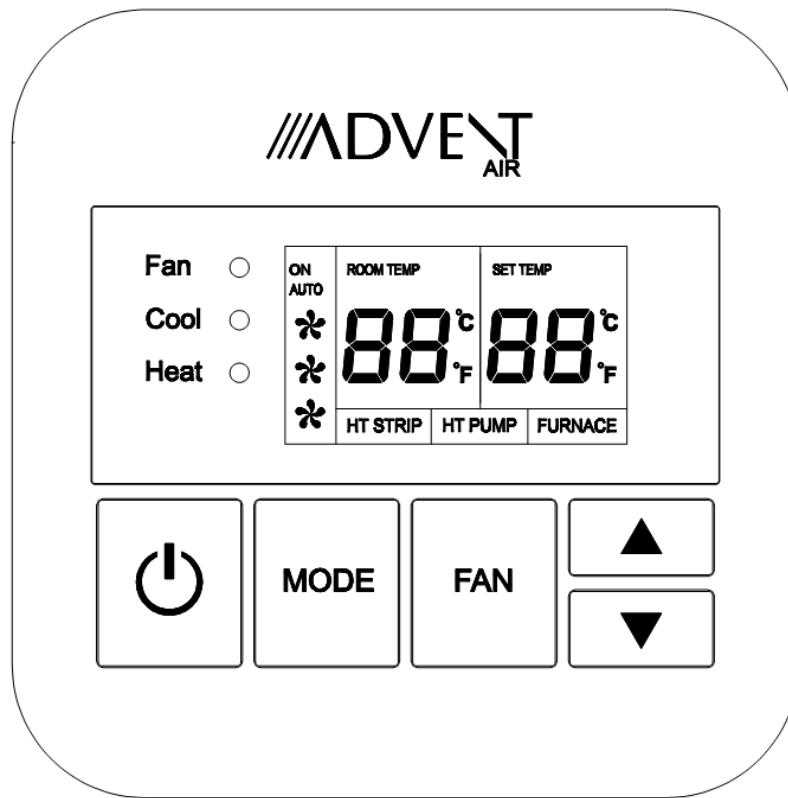









ACTH12 DIGITAL LCD THERMOSTAT MANUAL





FEATURES

- DIGITAL COMMUNICATION
- LIQUID CRYSTAL DISPLAY WITH ROOM & SET TEMPERATURE
- BLUE LED ILLUMINATION
- INDIVIDUAL LED'S FOR EACH MODE
- AUTO / ON FAN
- FAHRENHEIT & CELSIUS DISPLAY
- ROOF TOP FAN CAN BE USED TO PROVIDE ADDITIONAL AIR CIRCULATION DURING FURNACE OPERATION
- UNIVERSAL DESIGN IS COMPATIBLE WITH COOLING, HEAT PUMPS, HEAT STRIPS, & FURNACES (Heat Strips cannot be used on Heat Pump models)


OPERATION

- 1) Press & Hold  for 3 seconds to turn ON/OFF the system.
- 2) Press the  to select the desired mode. Each button press will cycle through the available modes.
- 3) Press the   to select the desired room temperature. Each button press will change the Set Temperature display by one digit.
- 4) Press the  to select the desired fan setting & speed.
- 5) After the last button is pressed the Blue Illumination will remain for 15 seconds and then turn off and enter the sleep mode. The LCD will still display temperatures & fan settings.
- 6) To wake up the Thermostat, press any button for one second and release. You can now make changes to the settings.

TEMPERATURE FORMAT

- 1) Press & hold buttons   together for 3 seconds to change from °F to °C. Press and hold these buttons again for 3 seconds to change back to °F. The Room Temperature range is 32°F to 99°F. The Set Temperature range is 60°F to 86°F.

FAN OPERATION

- 1) Press the  to cycle through the available fan settings and speeds. Each press will change from Auto, On High (3 Fan Icons), On Medium (2 Fan Icons), & On Low (1 Fan Icon).
- 2) In the Auto setting, the Fan will cycle On/Off with the compressor or furnace. The speed of the Fan will be determined by the temperature difference between Room & Set. If the temperature is greater than 4 degrees, the speed is High. If the difference is 3 - 4 degrees, the speed is Medium. If the difference is 2 degrees the speed is Low.
- 3) In the On setting, the Fan will run continuously at the selected speed regardless of compressor or furnace state.

COOLING OPERATION

In this mode, the compressor will cycle On/Off based on the Room/Set temperature. The Fan will run first and then the compressor will turn on in approximately 3 minutes. If the Fan is set to Auto, the Fan will stop 30 seconds after the compressor stops.

HEAT PUMP OPERATION

In this mode, the compressor will cycle On/Off based on the Room/Set temperature. The Fan will run first and then the compressor will turn on in approximately 3 minutes. If the Fan is set to Auto, the Fan will stop 30 seconds after the compressor stops. If the outdoor temperature is below 38°F, the heat pump will not work. If the system contains a furnace, the Thermostat will activate the furnace when the temperature is below 38°F and use the furnace as the main source for heat. The Fan will continue to run as set. Once the outdoor temperature rises above 45°F, the Thermostat will switch back to the Heat Pump, and no longer use the furnace. If the heat pump runs for more than 20 minutes continuously and the Room temperature is below 64°F, the Thermostat will activate the Furnace and run both heat sources to quickly heat the RV.

HEAT STRIP OPERATION

In this mode, the Heat Strip will cycle On/Off based on the Room/Set temperature. The Fan has a 20 second delay to allow heat buildup. Once the Room temperature reaches the Set temperature, the Heat Strip will shut off and the Fan will run for additional 30 seconds in the Auto setting to blow the residual heat from the ducts. If the Fan is set to On, it will continue to run at the set speed.




FURNACE OPERATION

In this mode, the Thermostat provides a 12VDC trigger to activate the RV Furnace. The Fan may or may not run based on the Fan settings. You can select Auto, On High/Medium/Low, or Off in the Furnace Mode. If Auto is selected the Fan will run for 30 seconds after the Room temperature reaches the Set temperature. If On is selected the Fan will run at the set speed regardless of Room temperature.

THERMOSTAT ERROR CODE TABLE

DISPLAY	CAUSE	SOLUTION
Er	Dip Switch position incorrect	Set Dip switches to correct position on back of Thermostat
E1	Room Temp Sensor Defect	Replace Thermostat
E2	Indoor Coil Temp Sensor Defect	Check wire connections and ensure sensor is properly installed. Replace Sensor
E3	Outdoor Coil Temp Sensor Defect	Check wire connections and ensure sensor is properly installed. Replace Sensor
E4	Outdoor Ambient Temp Sensor Defect	Check wire connections and ensure sensor is properly installed. Replace Sensor
E5	Communication Defect with T-Stat and Relay Kit	Check wire connections at T-Stat and relay kit
Lo	DC voltage is below 10 Volts (+/- 0.5V)	Check wire connections and ensure DC voltage is above 10 volts
dF	Indoor or Outdoor coil is frozen	System is deicing and cannot be used for 35 minutes and will restart automatically

FACTORY RESET

Start with Thermostat in Off mode. Press and hold both   at the same time in the Off mode. Continue to press both buttons and press the  and then release all 3 buttons. LCD will flash On/Off while pressing all 3 buttons. Once the buttons are released the LCD will turn off and the system has been reset to factory settings.

MAINTENANCE

1) **THERMOSTAT:** Use a moist, soft cloth to clean the thermostat. **DO NOT** spray water or solvents on the thermostat.

2) **FROST FORMATION ON INDOOR COIL:**

Under certain conditions, frost may form on the indoor coil. If this should occur, inspect the filter and clean if dirty. Make sure air louvers are not obstructed. Air conditioners / heat pumps have a greater tendency to frost when the outside temperature is relatively low. This may be prevented by adjusting the thermostat control to a warmer setting.

SERVICE

If the unit does not operate:

1. If RV is connected to a generator, check to be sure generator is running and producing the proper power.
2. If RV is connected to shore power, check to be sure supply breaker is sized properly to run air conditioner / heat pump load and it is plugged into power supply.
3. Check your fuse or circuit breaker to see if it is off.
4. After the above checks, call your local service center for further help. This unit must be serviced by qualified service personnel only.