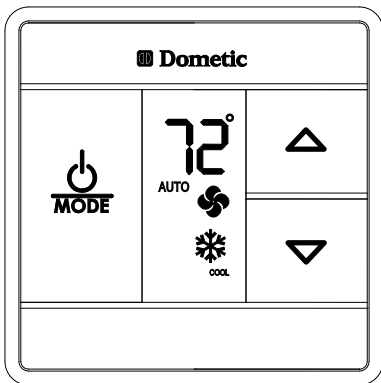




OPERATING  
INSTRUCTIONS

**CAPACITIVE TOUCH THERMOSTAT**

MODEL  
3316410.XXX {  
COOL/FURNACE  
COOL/FURNACE/HEAT STRIP  
COOL/FURNACE/HEAT PUMP



**Read these instructions carefully. These instructions MUST stay with this product.**

**REVISION A**

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# INTRODUCTION

This Capacitive Touch thermostat (hereinafter referred to as “CT thermostat” or “product”) is designed and intended for use in a Recreational Vehicle (hereinafter referred to as RV). Use these instructions to ensure correct installation, function, and operation of product.

Dometic Corporation reserves the right to modify appearances and specifications without notice.

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# DOCUMENT SYMBOLS



Indicates additional information that is **NOT** related to physical injury.



Indicates step-by-step instructions.

# FAMILIARIZATION

To familiarize yourself with the operation of your new CT thermostat, review the following diagrams and accompanying text explaining functional characteristics of this system.

## A. Features

- Capacitive Touch Interface
- Blue LED Backlight
- Liquid Crystal Display (LCD)
- Auto Fan
- Indoor Temperature Display
- Air conditioner can provide additional indoor air circulation during furnace operation.

## B. System Initialization

A system initialization will need to be performed by installer after system installation.

1. Make sure CT thermostat is Off. See "D. Quick Reference" on page (3).
2. Press the **▲** button, and simultaneously press and hold the **⏻ / Mode** button for three seconds. LCD will show "--".  
This completes system initialization.  
Furnace On / Off temperature differential should be set at this time. See "C. "Furnace" - Furnace Mode" on page (7) for more information.

## C. Factory Preset Settings

The CT thermostat is pre-programmed. Review settings below and adjust for personal comfort level.

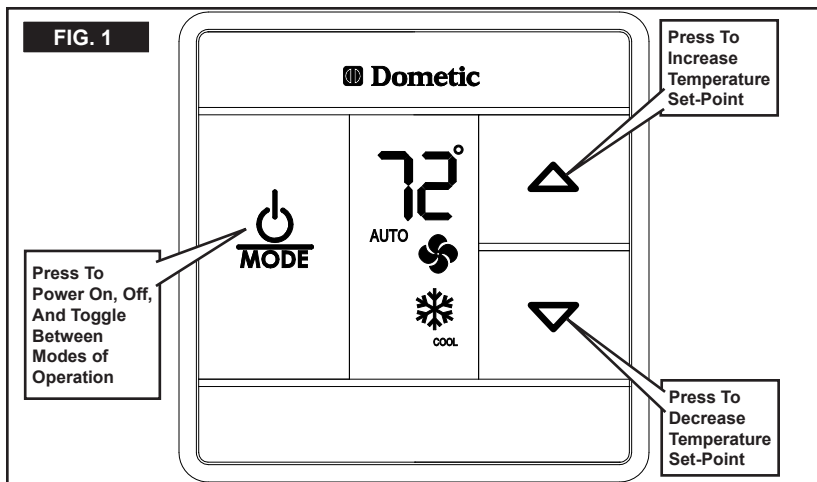
Factory Preset Settings	
Heating	68°F / 20°C
Cooling	72°F / 22°C
Fan Speed	Auto
Mode	Off
Furnace Differential	2°F

## D. Quick Reference

See (FIG. 1) for control button quick reference.

## FAMILIARIZATION

FIG. 1



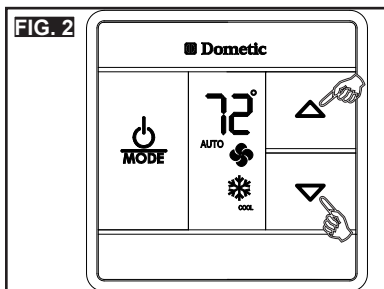
## PROGRAMMING AND OPERATION

### A. On / Off

1. To turn On the CT thermostat, press  $\text{⏻}$  / **Mode** button. To turn Off the CT thermostat press the  $\text{⏻}$  / **Mode** button and toggle through modes until Off is shown in lower right hand of LCD. LCD will remain backlit for approximately 15 seconds, then go out.

### B. Temperature Format °F / °C

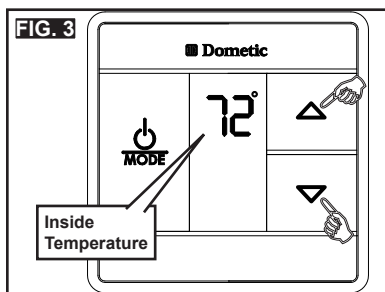
1. Simultaneously press the  $\blacktriangle$  and  $\blacktriangledown$  buttons to toggle between Fahrenheit and Centigrade format. See (FIG. 2).



# PROGRAMMING AND OPERATION

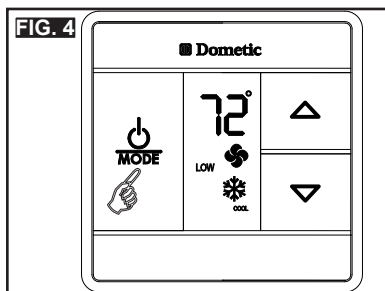
## C. Inside Temperature

1. To display the Inside Temperature, CT thermostat must be in Off Mode. Press either  $\blacktriangle$  or  $\blacktriangledown$  button to display the Inside Temperature. See (FIG. 3).



## D. Mode Selection

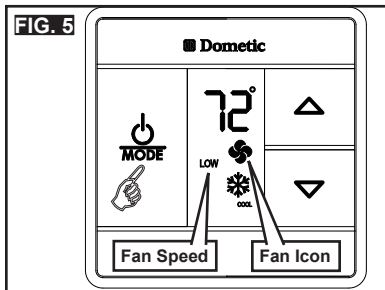
1. Press  $\text{⏻}$  / **Mode** button to advance through available modes. Each successive press will advance to next available mode. See (FIG. 4).  
Dependent upon systems installed, options will be Off, Fan, Cool, Furnace, Heat Pump, or Heat Strip. See "Mode Description" on page (7) for more information.



# PROGRAMMING AND OPERATION

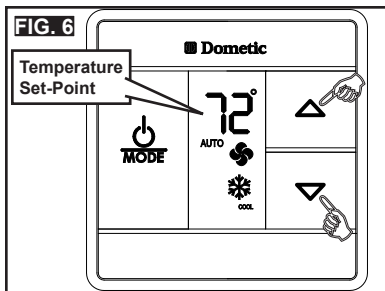
## E. Fan Speed

1. Press **⏻ / Mode** button until Fan icon appears. See (FIG. 5). The LCD will show "Low", "High", or "Auto". Press the **▲** or **▼** button to select desired fan speed. See "B. Auto Fan" on page (8) for more information.



## F. Temperature Set-Point

1. Press **⏻ / Mode** button to change the mode (Cool / Furnace / Heat Pump / Heat Strip) to adjust temperature set-point of selected mode. Temperature set-point is indicated by two digits on LCD. Press **▲** to increase or **▼** to decrease temperature. The maximum set-point for the system is 90°F. The minimum set point is determined by active operating mode. For heating, the minimum is 40°F and minimum for cooling is 55°F. See (FIG. 6).



## MODE DESCRIPTION

### A. “Off” - Off Mode

1. When selected, Off will appear in the lower right hand corner of LCD. The LCD will remain backlit for 15 seconds, then turn off.

### B. “Cool” - Cool Mode

1. In Cool Mode, system will cycle compressor On and Off based on room air temperature and temperature set-point on CT thermostat. Fan will turn on first, followed by the compressor approximately 2 minutes later. There are 3 fan speeds in Cool Mode.
  - a. “Low”: Fan operates continuously at low speed. The compressor cycles On and Off.
  - b. “High”: Fan operates continuously at high speed. The compressor cycles On and Off.
  - c. “Auto”: Fan speed will vary depending on difference between the temperature set-point and room air temperature. The compressor and the fan will cycle On and Off with thermostat. See “B. Auto Fan” on page (8) for more information.

### C. “Furnace” - Furnace Mode

1. There are 3 fan speeds in Furnace Mode.
  - a. “Low”: Fan operates continuously at low speed.
  - b. “High”: Fan operates continuously at high speed.
  - c. “Auto”: Fan is Off.



If additional indoor air circulation provided by the air conditioner is **NOT** desired during Furnace Mode of operation, select “Auto” in the Fan Mode to shut the air conditioner fan off. If “Low” or “High” is selected, the air conditioner fan will continue to operate at selected speed.

2. In Furnace Mode system will cycle RV furnace On and Off based on room air temperature and temperature set-point on CT thermostat. CT thermostat can be configured to operate using an On / Off differential of either 1°F or 2°F. This feature is programmed during the system initialization. See “B. System Initialization” on page (3).
3. To set temperature differential, system must be Off. Press ▼ button and simultaneously press and hold ⓪ / **Mode** button for three seconds. Press ▲ button to toggle between “d1” and “d2”, “d1” for 1°F differential and “d2” for 2°F differential.

### D. “Heat Pump” - Heat Pump Mode (Select Models)

1. In Heat Pump Mode, system will cycle compressor On and Off based on room air temperature and temperature set-point on CT thermostat. When system calls for heating there will be a delay of approximately 2 minutes. There are 3 fan speeds in Heat Pump Mode.
  - a. “Low”: Fan operates continuously at low speed. The compressor cycles On and Off.
  - b. “High”: Fan operates continuously at high speed. The compressor cycles On and Off.

## MODE DESCRIPTION

- c. "Auto": Fan speed will vary depending on difference between the temperature set-point and room air temperature. The compressor and the fan will cycle On and Off with thermostat. Compressor shuts off first followed by fan in approximately 15 seconds. See "B. Auto Fan" on page (8) for more information.
2. This mode of operation is a customer option usually selected when temperatures are below 70°F and customer needs warmth in living space rather than cool down. This reverses refrigerant flow in the air conditioner, causing warm air to be dispensed inside rather than cold, and cold air is dispensed outside rather than warm.
3. This mode of operation can cause a dilemma where the outside coil, which is now dispensing cold air can freeze up due to cold air blowing across the coil mixed with outside temperature. A system freeze up can render heat pump inoperable. There is a defrost feature that will prevent this from happening. See "D. Defrost Cycle" on page (9) for more information.

### E. "Heat Strip" - Heat Strip Mode (Select Models)

1. In Heat Strip Mode, system will cycle heat strip On and Off based on room air temperature and temperature set-point on CT thermostat. There are 3 fan speeds in Heat Strip Mode.
  - a. "Low": Fan operates continuously at low speed. Heat strip cycles On and Off.
  - b. "High": Fan operates continuously at high speed. Heat strip cycles On and Off.
  - c. "Auto": Fan operates in low speed and will cycle On and Off with thermostat.


### F. "Fan" - Fan Mode


1. There are 3 fan speeds in Fan mode.
  - a. "Low": Fan operates continuously at low speed.
  - b. "High": Fan operates continuously at high speed.
  - c. "Auto": Fan is Off.

## SPECIAL FEATURES

### A. Capacitive Touch Interface

The capacitive touch interface provides a clean, modern user interface.

 Capacitive touch interface requires skin contact to function, therefore it will **NOT** work through gloves, bandages, etc...

 Moisture, including wet fingers, on the capacitive touch interface can cause sensors to become unresponsive until the water evaporates.

### B. Auto Fan

When auto fan is selected fan speed will vary depending on room temperature and temperature set-point. In auto fan compressor and fan cycle On and Off with thermostat.

When difference is:

- |       |                      |
|-------|----------------------|
| > 5°F | Fan operates on HIGH |
| < 4°F | Fan operates on LOW  |



## SPECIAL FEATURES

### C. Compressor Time Delay

A time delay of approximately 2 minutes occurs anytime compressor is required to begin cooling or heat pump cycle.

### D. Defrost Cycle

During heat pump operation, if outside coil begins to freeze up, a defrost cycle is initiated that temporarily puts heat pump back into air conditioning mode. This reverses the refrigerant flow and melts ice forming on outside coil. Typically this occurs when outside temperatures are below 42°F and repeats every 25 minutes of compressor run time. During this cycle the unit will cease to provide hot air flow temporarily. This is normal and is **NOT** an indication of malfunction.



Defrost cycling **SHALL** continue until measured temperature of Outside Sensor is  $\leq 30^{\circ}\text{F}$  or  $\geq 42^{\circ}\text{F}$ .

### E. Low Ambient Heat Pump Lock Out

All heat pumps are constrained to operation at a temperature range determined by outside conditions. Since all heat pumps lose efficiency at low outside ambient temperatures, the heat pump has a lock out feature that prevents heat pump mode of operation when temperatures fall below 30°F. If system is set in Auto Mode fan will be turned OFF. Fan will remain ON if fan setting is set to Low or High, however compressor will not run and there will be no heat function below 30°F.

### F. Power Interruption

In the event power to air conditioner or control is interrupted, system will restart with previous set-points once power is restored.

### G. LCD Error Code

When system determines one of the faults listed has occurred, an error code will be displayed on LCD.

Error Code:

- E1 Loss of communication between CT thermostat and module board. LCD will cycle between E1 and previous mode setting. System will shut down.
- E2 Open circuit or out of range Indoor Temperature Sensor. Heating and cooling operation will be locked out. Fan operation can continue to operate.
- E3 Shorted Indoor Temperature Sensor. Heating and cooling operation will be locked out. Fan operation can continue to operate.
- E4 Open circuit or out of range Outdoor Temperature Sensor (select models). Heat Pump operation will be locked out. Air Conditioner, Fan, and Furnace operation can continue to operate.
- E5 Open Circuit or out of range Freeze Sensor. Air Conditioner mode of operation will be locked out, but displays the last temperature set-point.

## GENERAL INFORMATION

### A. Frost Formation On Cooling Coil

1. Frost on a small portion of the coil is not unusual. Under certain conditions, ice may form on the evaporator coil. This is indicated by very cold output at very low air speed and the icing can be seen through the air inlet hole with the filter removed. If this should occur, inspect the filter and clean if dirty. Make sure air vents are open and not obstructed. Units have a greater tendency to frost when the outside temperature is relatively low. This may be prevented by adjusting the thermostat set-point to a warmer temperature. Should frosting continue, operate on any FAN ONLY setting until the cooling coil is free of frost; then resume normal operation. If frost condition persist, contact your local service center for assistance.

### B. Heat Gain

The ability of this air conditioner to maintain the desired inside temperature depends on the heat gain of the RV.

Some preventative measures taken by the occupants of the RV can reduce the heat gain and improve the performance of the air conditioner. During extremely high outdoor temperatures, the heat gain of the RV may be reduced by:

1. Parking the RV in a shaded area
2. Using window shades (blinds and/or curtains)
3. Keeping windows and doors shut or minimizing usage
4. Avoiding the use of heat producing appliances

Operation on High Fan/Cooling mode will give optimum or maximum efficiency in high humidity or high outside temperatures.

Starting the air conditioner early in the morning and giving it a "head start" on the expected high outdoor ambient will greatly improve its ability to maintain the desired indoor temperature.

For a more permanent solution to high heat gain, accessories like Dometic outdoor patio and window awnings will reduce heat gain by removing the direct sun. They also add a nice area to enjoy company during the cool of the evening.

### C. Condensation

The manufacturer of this unit will not be responsible for damage caused by condensation forming on ceilings, windows, or other surfaces. Air contains water vapor which condenses when temperature of a surface is below Dew point. During normal operation this unit is designed to remove a certain amount of moisture from the air, depending on the size of the space being conditioned. Keeping doors and windows closed when this air conditioner is in operation will greatly reduce the chance of condensation forming on interior surfaces.

## MAINTENANCE

### A. Air Filter

1. Periodically (a minimum of every 2 weeks of operation) remove the return air filter located behind the return air vent grille and wash it with soap and warm water, let dry and then reinstall.



**NEVER** run unit without return air filter in place. This will plug the unit evaporator coil with dirt and may substantially degrade the performance of the unit over time.

### B. CT Thermostat

1. Clean CT thermostat with a dry soft cloth.



Do **NOT** spray water directly on CT thermostat. Do **NOT** use solvents for cleaning.



If a moist soft cloth is needed to clean the CT thermostat surface, the sensors may become unresponsive. If this happens, it will be necessary to allow the water enough time to evaporate for sensors to regain responsiveness.

## SERVICE - UNIT DOES NOT OPERATE

If your unit fails to operate or operates improperly, check the following before calling your service center.

- If RV connected to motor generator, check to be sure motor generator is running and producing power.
- If RV connected to power supply by a land line, check to be sure line is sized properly to run unit load and it is plugged into power supply.
- Check your fuse or circuit breaker to see if it is open. Insure fuse is not burnt, or circuit breaker is "ON" and not activated.
- After the above checks, call your local service center for further help. This unit must be serviced by qualified service personnel only.

When calling for service, always give the following:

- Unit model and serial number found on the identification label located on base pan of unit bottom. Return air vent grille must be removed from ADB to view.
- ADB model and serial number found on rating plate located on ceiling template. Observe this rating plate through the filter opening.