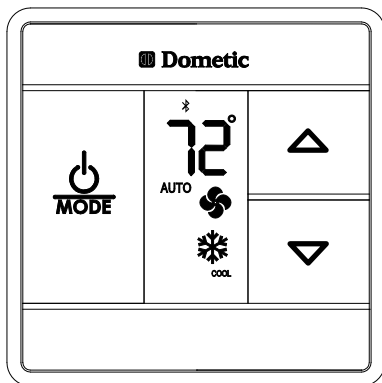


Dometic

OPERATING INSTRUCTIONS

BLUETOOTH® CAPACITIVE TOUCH THERMOSTAT

MODEL
3316420.XXX {
COOL/FURNACE
COOL/FURNACE/HEAT STRIP
COOL/FURNACE/HEAT PUMP



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

Form No. 3316468.000 04/16
(French 3316469.000)
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INTRODUCTION

This Bluetooth® 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.

TABLE OF CONTENTS

INTRODUCTION	2
DOCUMENT SYMBOLS	3
FCC AND IC REGULATIONS.....	3
FAMILIARIZATION	3
A. Features	3
B. System Initialization.....	4
C. Factory Preset Settings	4
D. Quick Reference.....	4
CT THERMOSTAT PROGRAMMING AND OPERATION	5
A. Turning The CT Thermostat On And Off.....	5
B. Switching Between °F and °C.....	5
C. Displaying The Inside Temperature	5
D. Setting The Fan Speed (Fan Mode).....	6
E. Setting The Temperature	6
BLUETOOTH® PROGRAMMING AND OPERATION.....	7
A. Pairing A Mobile Device With A CT Thermostat.....	7
B. Changing The CT Thermostat Name.....	11
C. Setting/Unsetting The Default Device.....	15
D. Connecting To A Different CT Thermostat	18
E. Switching From Fahrenheit to Celsius	20
F. Removing A Paired CT Thermostat From The App	21
G. A Note On CT Thermostat Factory Reset And Lost Pairs.....	21
MODE DESCRIPTION	22
A. Cool Mode	22
B. Furnace Mode	22
C. Heat Pump Mode (Select Models).....	22
D. Heat Strip Mode (Select Models).....	23
SPECIAL FEATURES.....	23
A. Capacitive Touch Interface	23
B. Compressor Time Delay	23
C. Defrost Cycle	23
D. Low Ambient Heat Pump Lock Out.....	23
E. Power Interruption	24
F. LCD Error Code.....	24
GENERAL INFORMATION.....	24
A. Frost Formation	24
B. Reduce Heat Gain	25
C. Disclaimer	25
MAINTENANCE	25
A. Thermostat	25
B. Air Filter	25
C. Return Air Housing	26
D. Fan Motor	26
SERVICE-UNIT DOES NOT OPERATE.....	26

DOCUMENT SYMBOLS



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

FCC AND IC REGULATIONS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

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
- Bluetooth® Connection
- Blue LED Backlight
- Liquid Crystal Display (LCD)
- Auto Fan
- Indoor Temperature Display
- Air Conditioner - Provides additional indoor air circulation during furnace operation

FAMILIARIZATION

B. System Initialization

An installer needs to perform a system initialization.

1. Ensure the CT thermostat is Off.
2. Simultaneously press and hold the **Up** (\blacktriangle) button and the **Mode** (⏻) button for three seconds. LCD will show "--". This completes system initialization.
3. Set the furnace On/Off temperature differential. See "B. Furnace Mode" on page 22.

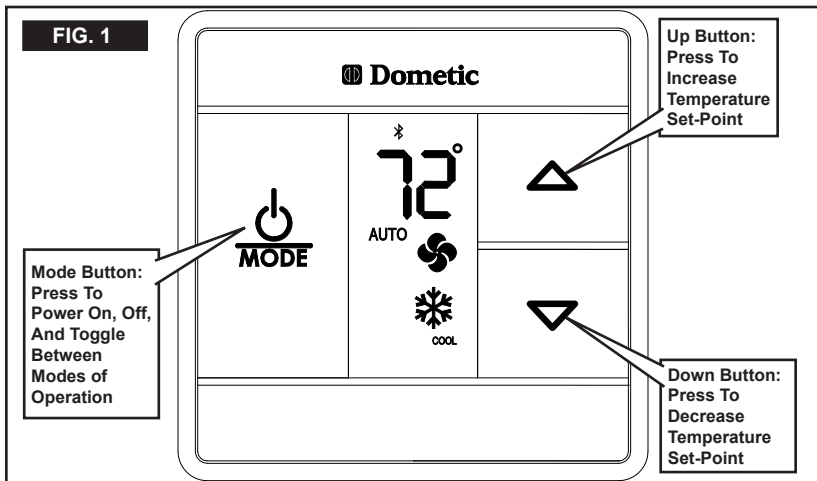
C. Factory Preset Settings

The CT thermostat is pre-programmed to these 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.



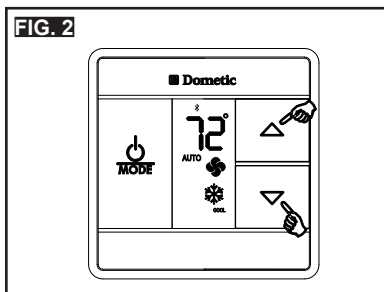
A. Turning The CT Thermostat On And Off

1. Press the **⏻ / Mode** button to turn the CT thermostat on. See FIG. 1.
2. To turn the CT thermostat off, continue pressing the **⏻ / Mode** button until "Off" appears on the LCD. After 15 seconds of illumination, the LCD turns off.

 Dependent upon the systems installed, the Mode options you will scroll through are Off, Fan, Cool, Furnace, Heat Pump, and Heat Strip.

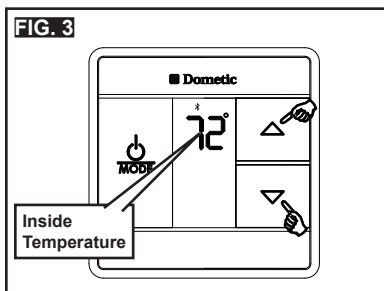
B. Switching Between °F and °C

1. Simultaneously press the **Up (▲)** and **Down (▼)** buttons to toggle the LCD between °F and °C. See FIG. 2.



C. Displaying The Inside Temperature

1. Ensure the CT thermostat is in Off mode. If it is not, press the **⏻ / Mode** button until you reach Off mode.
2. Press either the **Up (▲)** or **Down (▼)** button to display the temperature. See FIG. 3



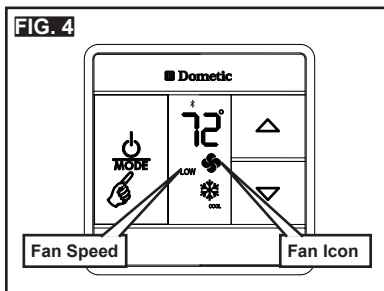
CT THERMOSTAT PROGRAMMING AND OPERATION

D. Setting The Fan Speed (Fan Mode)

Fan mode provides three speed settings:

- Low – Fan operates continuously at a low speed.
- High – Fan operates continuously at a high speed.
- Auto – Fan and compressor cycle on and off and the speed varies based on room temperature and temperature setting on the CT thermostat. When the temperature difference between the room and the CT thermostat is:
 - $>5^{\circ}\text{F}$ (-15°C), the fan operates at a high speed
 - $<4^{\circ}\text{F}$ (-15.5°C), the fan operates at low speed.

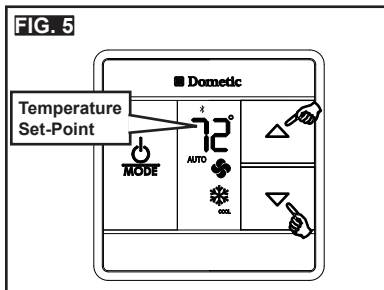
1. Press the **Mode** button until the Fan icon appears.
2. Press the **Up** (\blacktriangle) or **Down** (\blacktriangledown) button until the desired fan speed appears on the LCD. See FIG. 4.



E. Setting The Temperature

The possible modes for setting the temperature are Cool, Furnace, Heat Pump, and Heat Strip. See "Mode Description" on page 22 for more information on these mode settings.

1. Press the **Mode** button until you see your desired mode on the LCD.
2. Press the **Up** (\blacktriangle) and **Down** (\blacktriangledown) buttons until you reach your desired temperature setting. The maximum temperature setting is 90°F (32°C). The minimum for heating is 40°F (4.4°C) and 55°F (13°C) for cooling. See FIG. 5.



A. Pairing A Mobile Device With A CT Thermostat

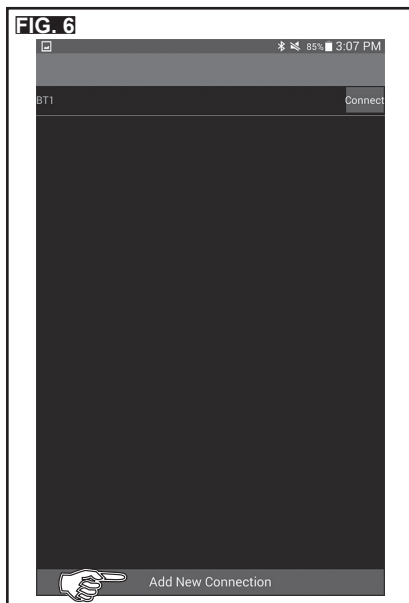
Before you begin, ensure you are standing within 3' (1 m) of the CT thermostat you wish to pair your mobile device with. Do not touch the CT thermostat for 15 seconds to ensure the backlight is off. Confirm the Bluetooth® icon is blinking slowly (flashes at 2 second intervals).



If the Bluetooth® icon is illuminated, this device is already connected to an app. Disconnect the other mobile device in order to connect to this CT thermostat.


If the Bluetooth® icon is not visible the Bluetooth® radio may have gone to sleep to conserve power (after 5 days of system inactivity). Press any button to wake the Bluetooth® system and ensure the icon is blinking slowly.

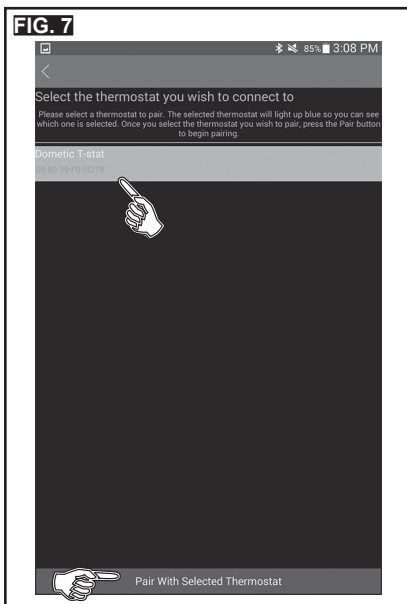
1. Open the Dometic Climate Control App on your mobile device and go to the pair management screen. If no CT thermostats are paired with the mobile device this will be indicated with a pop-up. Press **OK** the clear the pop-up and display the Pair Management screen.
 - a. If you already have CT thermostats paired with the mobile device the app will attempt to connect to the last used thermostat or the default thermostat (see "C. Setting/Unsetting The Default Device" on page 15). Press **Cancel** while connecting is in progress to show the Pair Management screen
 - b. If a paired thermostat is connected, the main screen displays. Select the Settings menu and then press **Disconnect** to show the Pair Management screen.
2. Press **Add New Connection**. See FIG. 6.




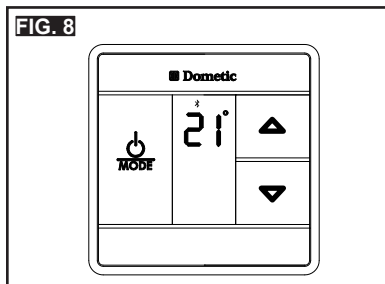
BLUETOOTH® PROGRAMMING AND OPERATION

3. Select one of the available CT thermostat devices on the list that displays on the screen. The app will attempt to connect to the CT thermostat and turn the display backlight on to confirm the app is communicating with the correct CT thermostat. When the CT thermostat backlight is lit, it is communicating with the mobile device. To start pairing with the selected CT thermostat, press **Pair With Selected Thermostat**. See FIG. 7.

 If the backlight on the CT thermostat you wish to pair with does **NOT** come on within 10 seconds, select a different CT thermostat from the list.



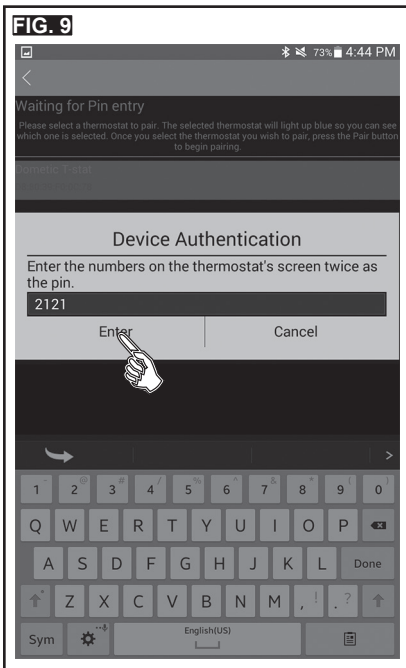
4. Press the  / **Mode** button on the CT thermostat until OFF mode is selected. A 2-digit PIN displays. FIG. 8 shows a 2-digit pin of "21" as an example:



BLUETOOTH® PROGRAMMING AND OPERATION

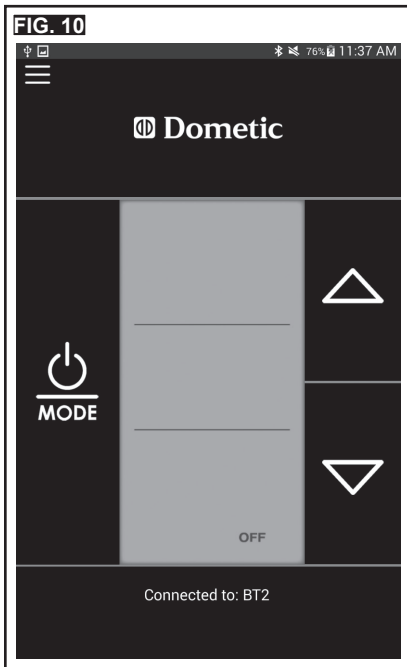
 Steps 5-6 **MUST** be completed within 15 seconds. Otherwise, the pairing process **MUST** be repeated from step 2.

5. Enter this 2-digit code twice in the app and press **Enter**. FIG. 9 shows "2121".



BLUETOOTH® PROGRAMMING AND OPERATION

- Upon successful connection, the app displays an interface similar to your CT thermostat. See FIG. 10.



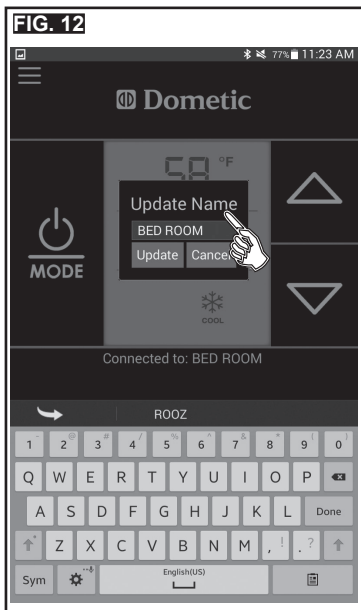
- It is recommended to re-name the CT thermostat at this point. See "B. Changing The CT Thermostat Name" on page 11 for more information.

B. Changing The CT Thermostat Name

You can either change the name of the CT thermostat while connected (from the Main screen) or while disconnected (from the Pair Management screen).

Renaming a device from the Main screen:

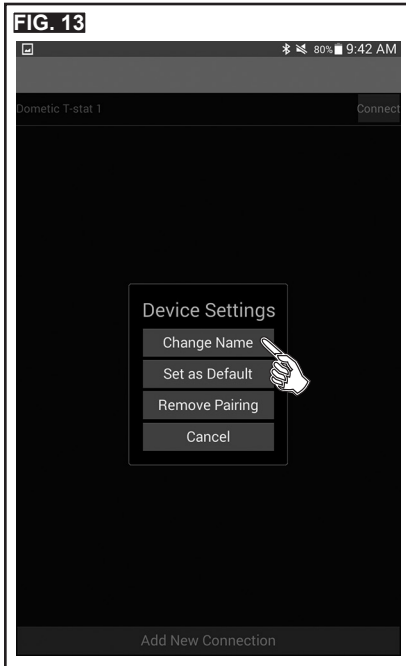
1. Select the Settings menu (upper left) and press **Change Name**. See FIG. 11.
2. Enter any name which makes it easy for you to identify the system controlled by the CT thermostat. For example "Bed Room" or "Living Room". See FIG. 12.
3. Press **Update** to change and save the new name. See FIG. 12.



BLUETOOTH® PROGRAMMING AND OPERATION

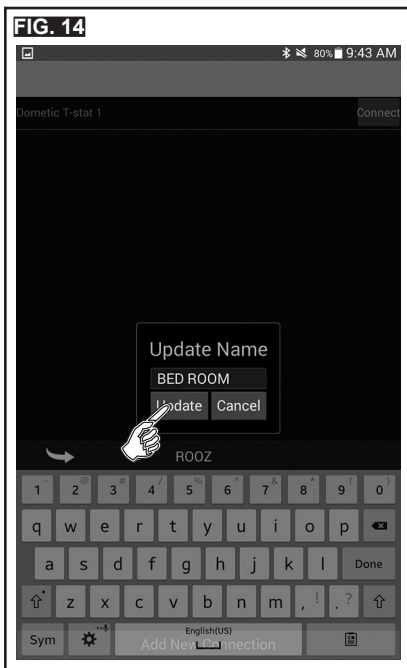
Renaming a device from the Pair Management screen:

1. Touch the line for the CT thermostat you wish to re-name.
2. Press **Change Name**. See FIG. 13.

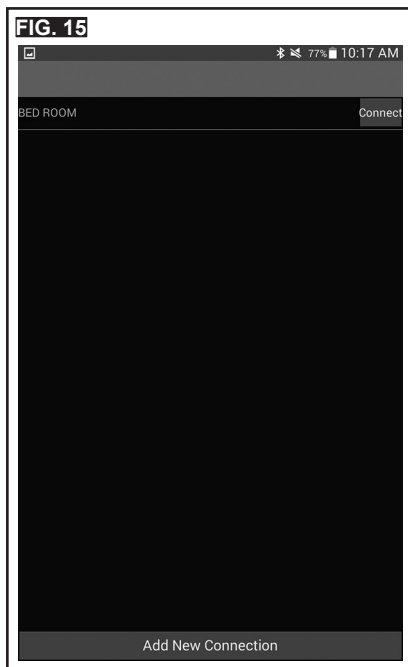


BLUETOOTH® PROGRAMMING AND OPERATION

3. Enter any name which makes it easy for you to identify the system controlled by the CT thermostat. For example "Bed Room" or "Living Room". Press **Update** to save the new name. See FIG. 14.



4. The new name appears on the screen. See FIG. 15.

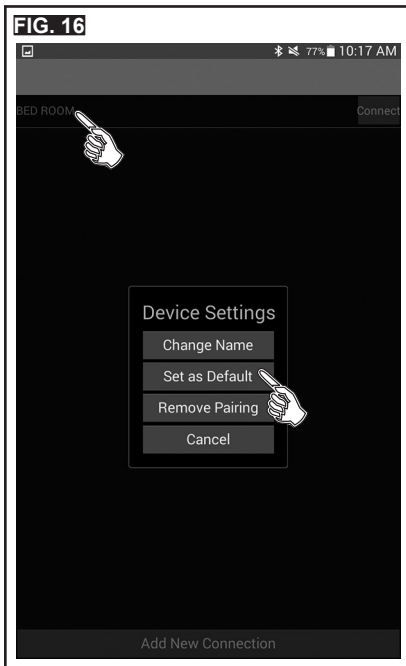


C. Setting/Unsetting The Default Device

Assuming at least one paired device exists, the app normally reconnects to the last connected CT thermostat when the app launches. If you wish to override this behavior you can set a default device. The default device is the only CT thermostat that the app will try to connect to automatically regardless of the last connected CT thermostat. Only one default CT thermostat can be set per mobile device.

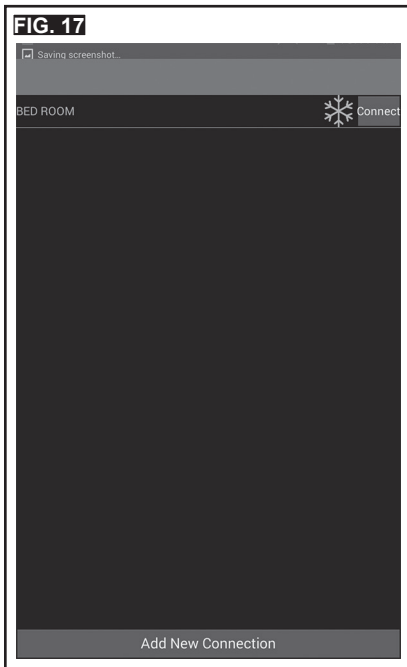
To set the default device:

1. Disconnect from the CT thermostat to display the Pair Management screen.
2. Choose the paired CT thermostat you want to make the default device.
3. From the pop-up menu select **Set as Default**. See FIG. 16.



BLUETOOTH® PROGRAMMING AND OPERATION

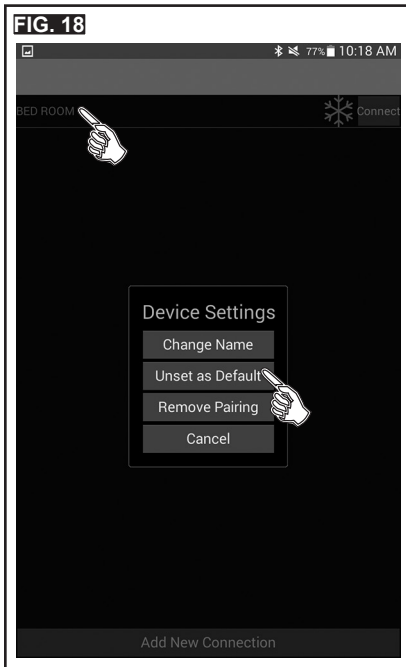
4. A snowflake icon will appear beside the name of the CT thermostat in the Paired Management screen to show that it is now selected as the default. See FIG. 17.



BLUETOOTH® PROGRAMMING AND OPERATION

To unset a default device:

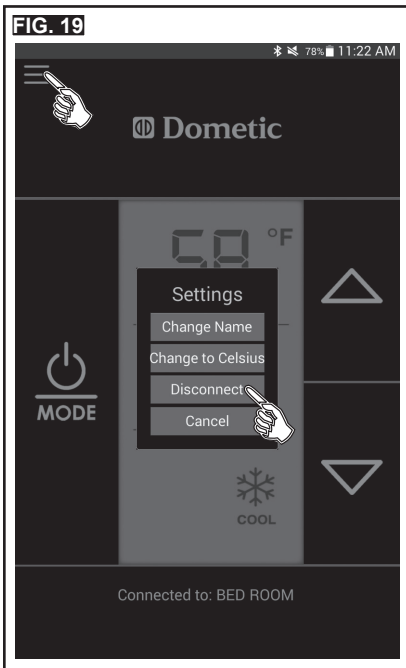
1. Disconnect from the CT thermostat to display the Pair Management screen.
2. Choose the CT thermostat with the snowflake icon.
3. From the pop-up menu press **Unset as Default**. See FIG. 18.



4. The snowflake icon disappears from the CT thermostat.

D. Connecting To A Different CT Thermostat

1. To connect to a different CT thermostat (up to four maximum), select the top-left corner of the app to access the Settings menu. See FIG. 19.
2. Press **Disconnect** to disconnect from the currently-connected CT thermostat. See FIG. 19.





BLUETOOTH® PROGRAMMING AND OPERATION

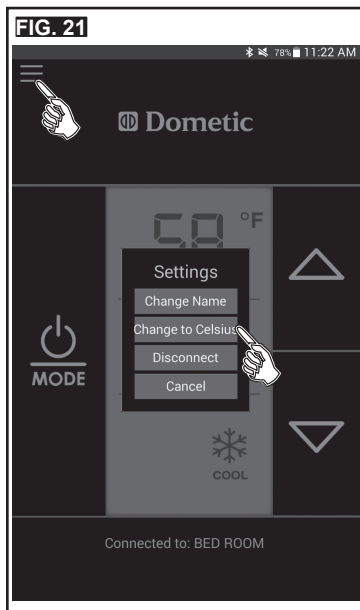
3. Either press **Connect** to choose an already configured CT thermostat (See FIG. 20) or follow the steps in "A. Pairing A Mobile Device With A CT Thermostat" on page 7 to add a new connection.



E. Switching From Fahrenheit to Celsius

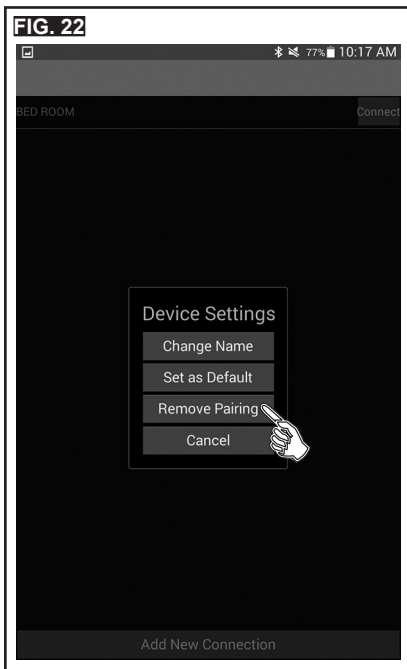
-  Display units can only be changed while a CT thermostat is connected.
-  The displayed temperature units will only be changed on the mobile device, and **NOT** on the CT thermostat device itself. To change the CT thermostat device display see instructions for changing the display units on the CT thermostat.

1. Select the top-left corner of the app to access the Settings menu. See FIG. 21.
2. Choose **Change to Celsius/Fahrenheit**.



F. Removing A Paired CT Thermostat From The App

1. Disconnect from the CT thermostat to display the Pair Management screen.
2. Choose the CT thermostat you wish to remove from the app and press **Remove Pairing** to remove the CT thermostat from the app. See FIG. 22.



G. A Note On CT Thermostat Factory Reset And Lost Pairs

On CT thermostats equipped with Bluetooth® control the system initialization feature also resets the Bluetooth® system and removes all known mobile device pairs from the CT thermostat. Also if more than four mobile devices are connected with a CT thermostat, the CT thermostat only remembers pairing information on the four most recent devices paired.

Any mobile devices that were paired with a CT thermostat that undergoes a system initialization or pair removal, will need to be paired again with the CT thermostat. The app will automatically remove device pairs from its paired list if it detects that it is no longer paired with the CT thermostat on a connection attempt. This is indicated by a pop-up message in the app.

See the instructions for performing a CT thermostat factory reset.

MODE DESCRIPTION

A. Cool Mode

In Cool Mode, the system cycles the compressor On and Off based on room air temperature and temperature set-point on the CT thermostat. The fan turns on first, followed by the compressor approximately 2 minutes later. There are three fan speeds in Cool Mode:

- "Low": Fan operates continuously at low speed. The compressor cycles On and Off.
- "High": Fan operates continuously at high speed. The compressor cycles On and Off.
- "Auto": Fan speed varies depending on the difference between the temperature set-point and room air temperature. The compressor and the fan cycle On and Off with the CT thermostat.

B. Furnace Mode

There are three fan speeds in Furnace Mode:

- "Low": Fan operates continuously at low speed.
- "High": Fan operates continuously at high speed.
- "Auto": Fan is Off.



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

In Furnace Mode the system cycles the RV furnace On and Off based on room air temperature and temperature set-point on the CT thermostat. CT thermostat can be configured to operate using an On / Off differential of either 1°F (-17 °C) or 2°F (-16.6 °C). This feature is programmed during the system initialization.

To set the temperature differential, the system must be Off. Press the **Down** (▼) button and simultaneously press and hold the **Mode** button for three seconds. Press the **Up** (▲) button to toggle between "d1" and "d2", "d1" for 1°F (-17 °C) differential and "d2" for 2°F (-16.6 °C) differential.

C. Heat Pump Mode (Select Models)

In Heat Pump Mode, the system cycles the compressor On and Off based on room air temperature and temperature set-point on the CT thermostat. When the system calls for heating there will be a delay of approximately 2 minutes. There are three fan speeds in Heat Pump Mode:

- "Low": Fan operates continuously at low speed. The compressor cycles On and Off.
- "High": Fan operates continuously at high speed. The compressor cycles On and Off.
- "Auto": Fan speed varies depending on the difference between the temperature set-point and room air temperature. The compressor and the fan will cycle On and Off with the CT thermostat. Compressor shuts off first followed by the fan in approximately 15 seconds.

This mode of operation is a customer option usually selected when temperatures are below 70 °F and the user needs to warm the living space. 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.

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 the heat pump inoperable. There is a defrost feature that prevents this from happening. See "C. Defrost Cycle" on page 23 for more information.

MODE DESCRIPTION

D. Heat Strip Mode (Select Models)

In Heat Strip Mode, the system cycles the heat strip On and Off based on room air temperature and temperature set-point on the CT thermostat. There are three fan speeds in Heat Strip Mode:

- "Low": Fan operates continuously at low speed. Heat strip cycles On and Off.
- "High": Fan operates continuously at high speed. Heat strip cycles On and Off.
- "Auto": Fan operates in low speed and will cycle On and Off with the CT thermostat.

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. Compressor Time Delay

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

C. Defrost Cycle

During heat pump operation, if the outside coil begins to freeze up, a defrost cycle is initiated that temporarily puts the heat pump back into air conditioning mode. This reverses the refrigerant flow and melts ice forming on the outside coil. Typically this occurs when outside temperatures are below 42 °F (5.5 °C) 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 the outside sensor is ≤ 30 °F (-1 °C) or ≥ 42 °F (5.5 °C).

D. 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 (-1 °C). If system is set in Auto Mode fan will be turned off. The fan will remain on if the fan setting is set to Low or High. However, the compressor will not run and there will be no heat function below 30 °F (-1 °C).

SPECIAL FEATURES

E. Power Interruption

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

F. LCD Error Code

When the system determines one of the faults listed has occurred, an error code displays on the 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

1. On Cooling Coil
 - a. 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 control knob to a warmer setting (counter clockwise). 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.
2. On Outdoor Coil While Heating
 - a. Operation at low outdoor temperatures causes low coil temperatures. This can result in ice forming on the outdoor coil in certain conditions. This is indicated by reduced heat output and could fully stop fan rotation in extreme conditions. To avoid this, the system controls turn off the compressor if outdoor temperature drops below 42° F (5° C) and returns heating when the temperature raises 5° F (-15° C).

GENERAL INFORMATION

B. Reduce 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:

- Parking the RV in a shaded area
- Using window shades (blinds and/or curtains)
- Keeping windows and doors shut or minimizing usage
- 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. Disclaimer

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. Thermostat

1. Clean the 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.

B. Air Filter

1. Periodically (a minimum of every 2 weeks of operation) remove the air filter located behind the return air grille and wash it with soap and 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.

MAINTENANCE

C. Return Air Housing

1. Clean housing with a soft cloth dampened with water and a mild detergent.



NEVER use furniture polish, solvents, scouring pads or powders.

D. Fan Motor

1. The blower motor is factory lubricated and requires no service.

SERVICE-UNIT DOES NOT OPERATE

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

- If the RV is connected to a motor generator, make sure the motor generator is running and producing power.
- If the RV is connected to a power supply by a land line, make sure the line is sized properly to run unit load and that it is plugged into the power supply.
- Check the 120 Vac fuse or circuit breaker. Make sure the fuse is not burnt or that the circuit breaker is "ON" and not activated.
- Check the 12 Vdc fuse or circuit breaker. Make sure the fuse is not burnt or that the circuit breaker is "ON" and not activated.

After the above checks have been made, and unit still does not operate, please visit www.eDometic.com to locate a service center near you. This product **MUST** be serviced by a qualified service technician. When contacting a service center, always give the following:

- Unit model and serial number. This information can be found on the identification label located on the unit base pan. Remove the return air filter to view the identification label.
- Air Distribution Box (if equipped) model and serial number. This information can be found on the rating plate located on the ceiling template. Remove the return air filter to view the rating plate.
- Electronic Control Kit (if equipped) part number and serial number. This information can be found on the identification label located on the side of the electronic control box. Remove the return air filter to view the identification label.