

# *Installation Guide*

Emme Core







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## Emme Core

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# Getting Started

Congratulations! Thank you for purchasing Emme Core, the hub of Emme's Energy and Environmental Management System. Emme Core gives your customers the information to manage their home or work environment and energy usage intelligently with comfort and confidence.

Emme Core has been designed to insure the installation and setup process is simple. This installation guide will walk through the installation in a step-by-step process covering all aspects of the installation and setup.

# Technical Support

If technical assistance is required during the installation and setup process, our Technical Support team is available to answer your questions:

**Technical Support: 1-877-509-1200**

**Email Support: [support@getEmme.com](mailto:support@getEmme.com)**

## Before You Begin

Emme Core is intended to be installed by an HVAC service professional trained in indoor environmental equipment.

This installation guide explains the process for installing Emme Core; please read the entire guide before beginning the install process.

## Tools Needed to Install Emme Core

The following tools are required to install Emme Core:

- #2 Phillips screwdriver
- Small flat-head screwdriver
- Level
- Wire stripper
- Wire nuts (recommended)
- Drill and ¼-inch drill bit

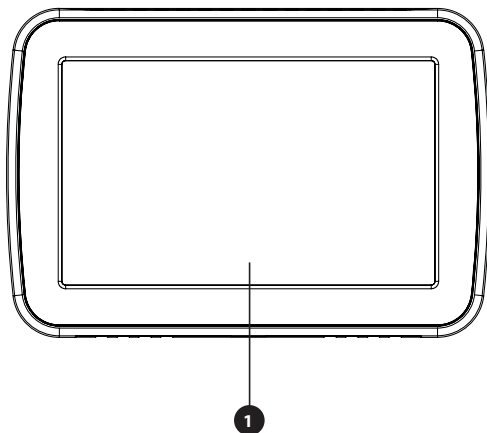
# Emme Core Components

Emme Core consists of two parts; the Display and Control Unit and the Equipment Interface Panel. See Figures 3.1 and 4.1.

## Display and Control Unit Parts

1. **Touch screen**
2. **USB terminal:** connect Emme Core to a USB flash drive to upload software and configuration files.

FRONT



BOTTOM

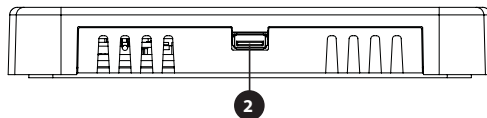
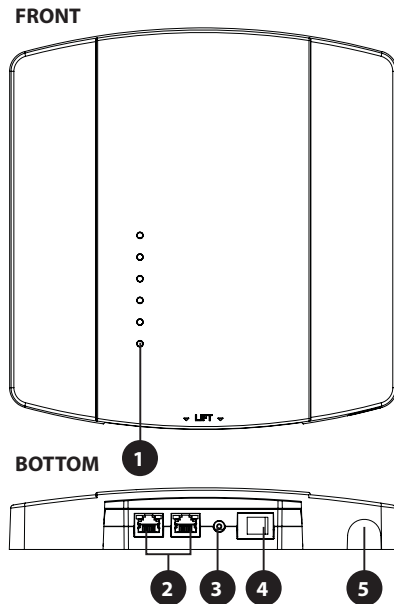


Figure 3.1  
Display and Control Unit parts

## Equipment Interface Panel Parts

1. **Status LEDs:** indicate current equipment conditions.
2. **RJ-45 terminals:** device terminals used for adding supplemental Emme equipment.
3. **DC in terminal:** input for the optional power adapter allowing Emme Core to be powered without HVAC equipment present.
4. **Power switch:** allows the Equipment Interface Panel to be turned on and off.
5. **Cable opening:** provides a clear channel for routing wire into the Equipment Interface Panel.

**NOTE:** The RJ-45 terminals CANNOT be used to connect the Equipment Interface Panel to a router for internet connection.



**Figure 4.1**  
**Equipment Interface Panel parts**

# HVAC System Equipment Compatibility Information

Emme Core is designed to operate with and control, low-voltage, forced-air, heating and cooling systems and most supplemental HVAC equipment. It is not designed to control line-voltage, millivolt, or proprietary-control heating and cooling systems. Emme Core supports 4 stages of heat and 2 stages of cool. It also supports heat pump systems with 2 compressor stages and 2 stages of auxiliary heat. Emme Core also supports humidifiers.

**CAUTION:** Always disconnect power to the HVAC system before installing this product. Failure to do so could result in electrical shock and/or equipment damage.

# HVAC Equipment Supported

Gas/Oil/Electric Heating (up to 4 Stages) . . . . .	YES
Heat Pump (up to 2 Stages) with Auxiliary Heat (up to 2 Stages) . . . . .	YES
Geothermal Heat Pump. . . . .	YES
Dual Fuel Systems . . . . .	YES
Air Conditioning (up to 2 Stages). . . . .	YES
Boilers . . . . .	YES
Central Humidifier . . . . .	YES

**WARNING:** Changes or modifications not expressly approved by the manufacturer could void the manufacturer's warranty.

# Specifications

## Temperature Ranges

### Display and Control Unit

Operating Temperature Range: 32° to 122°F (0° to 50°C)

Programmable Temperature Range: Heat to 96°F and Cool to 48°F

### Equipment Interface Panel

Operating Temperature Range: 32° to 122°F (0 to 50°C)

## Humidity Ranges

### Display and Control Unit

Operating Humidity Range: (non-condensing) 5% to 95%

### Equipment Interface Panel

Operating Humidity Range: (non-condensing) 5% to 95%

## Dimensions

### Display and Control Unit

7.81"W x 5.31"H x 1.14"D (198.4mm W x 134.9 mm H x 28.9mm D)

### Equipment Interface Panel




8.94"W x 9.22"H x 1.43"D (227.1mm W x 234.3 mm H x 36.2 mm D)




## Power

**Power:** 24VAC single-transformer power or optional 24VDC Power Adapter

**NOTE:** Emme Core can be powered by a single-transformer 24VAC system (HVAC system power), or a separate, optional 24VDC Power Adapter. Please see *Step 2. Wiring the Equipment Interface Panel* for details.

# System Operation Indicators

	Ideal (no activity)
	1st Stage Heat
	2nd Stage Heat
	3rd Stage Heat
	1st Stage Cool
	2nd Stage Cool

	Circulation
	Smart Circulation
	1st Stage Auxiliary Heat
	2nd Stage Auxiliary Heat
	No activity because the system is in setup
	No activity because of improper configuration
	A small clock by the upper left of the status icon indicates the system is heating, cooling, or circulating because of SmartRecovery.

# Installing Emme Core

There are 6 steps to installing Emme Core:

1. **Install the Equipment Interface Panel**
2. **Wire the Equipment Interface Panel**
3. **Install the Display and Control Unit**
4. **Wire the Display and Control Unit to the Equipment Interface Panel**
5. **Power on Emme Core**
6. **Configure Emme Core**

## Step 1. Install the Equipment Interface Panel

**NOTE:** Do not mount the Equipment Interface Panel on the air handler, supply plenum, return plenum or anywhere inside the heating or air conditioning equipment. The Equipment Interface Panel should not be mounted on metal.

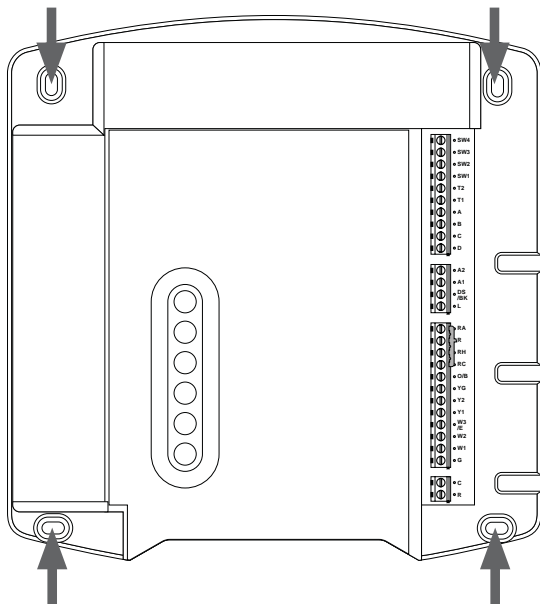
To install the Equipment Interface Panel:

1. In the home air handler location or light commercial building mechanical/equipment room, select a suitable mounting location for the Equipment Interface Panel nearby the air handler. Make sure the surface is flat and clear of obstructions that may interfere with installing the panel. Remove the front cover of the Equipment Interface Panel.
2. Place the back of the Equipment Interface Panel on the intended mounting surface and use it as a template

to mark the location of the mounting holes. See figure 9.1.

3. Use anchors, if necessary, to ensure the back of the Equipment Interface Panel enclosure is secured to the mounting surface (anchors included).
4. Fasten the back of the Equipment Interface Panel to the mounting surface until secure (screws included).

**CAUTION: Do not over-tighten the screws**



**Figure 9.1**  
**Mounting holes indicated by arrows**

## Step 2. Wire the Equipment Interface Panel

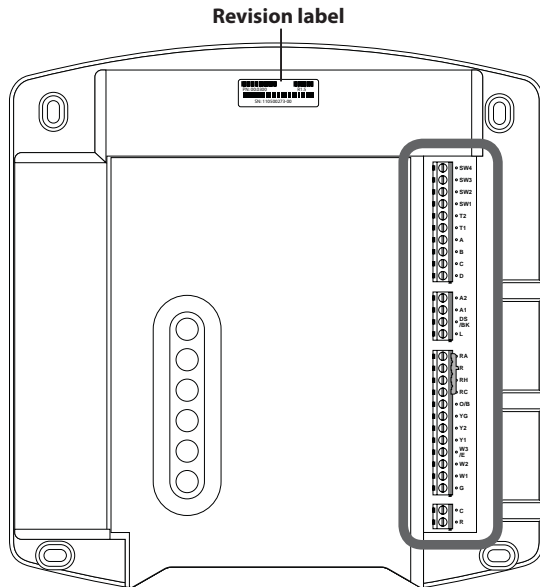
To wire the Equipment Interface Panel:

1. Disconnect the power going to all HVAC equipment.
2. Disconnect the wires going to the existing thermostat.
3. Using wiring Table 12.1 and the sample wiring diagrams on pages 14, 15, and 16 connect the HVAC equipment to the Equipment Interface Panel terminals. For terminal locations see Figure 10.1.

### Terminal Connection Wiring Table

Listed on Table 12.1 are the terminals for connecting the HVAC equipment to the Equipment Interface Panel.

**NOTE:** Revision 1.4 and older Equipment Interface Panel wiring tables can be found online at [www.getemme.com/support](http://www.getemme.com/support). See Figure 10.1 for the location of the revision label.



**Figure 10.1**  
Equipment Interface Panel terminal connection ports

# Equipment Interface Panel Terminals

NOTE: There is a 4-position terminal jumper pre-installed on the EIP board which connects RA, R, RH and RC.

Terminal	Description	HVAC Equipment Terminals
SW4	Dry Contact Input 4	Future Use (TBD)
SW3	Dry Contact Input 3	Future Use (TBD)
SW2	Dry Contact Input 2	Future Use (TBD)
SW1	Dry Contact Input 1	Future Use (TBD)
T2	Thermistor Input	Emme HVAC Plenum Sensor
T1	Thermistor Input	Emme HVAC Plenum Sensor
A	Display and Control Unit Input A (RS485 A)	Emme Display and Control Unit Terminal A
B	Display and Control Unit Input B (RS485 B)	Emme Display and Control Unit Terminal B
C	Display and Control Unit Input C (Ground)	Emme Display and Control Unit Terminal C
D	Display and Control Unit Input D (+12V)	Emme Display and Control Unit Terminal D
A2	24VAC Aux Control 2/ Humidifier Control	24VAC Transformer/Enable Humidifier
A1	24VAC Aux Control 1	Future Use (TBD)
DS/Bk	Dehumidification Control	Dhum Terminal
L	Heat Pump Fault Input/ Emergency Heat	L Terminal/Heat Pump Emergency Heat

Terminal	Description	HVAC Equipment Terminals
RA (Jumpered)	Aux Transformer 24VAC Return/Humidifier Control	24VAC Aux Transformer
R (Jumpered)	Enable 24VAC Power to Air Handler	24VAC Transformer Return
RH (Jumpered)	Primary/Compressor Transformer	24VAC Transformer
RC (Jumpered)	Secondary/Compressor Transformer	24VAC Cool
O/B	Heat Pump Change Over valve	Change Over / O or B terminals
YG	High Speed Circulate Control/SmartCirculation	Air Handler Unit Y Terminal/High Speed Fan Without Compressor
Y2	Enable 2nd Stage Cool to Air Handler or Compressor	Y2 Compressor Terminal/2nd Stage Compressor
Y1	Enable 1st Stage Cool to Air Handler or Compressor	Y1 Compressor Terminal/1st Stage Compressor
W3/E	Enable 3rd Stage Heat to Air Handler	W3/E Terminal/3rd Stage Heat
W2	Enable 2nd Stage Heat to Air Handler	W2 Terminal/2nd Stage Heat
W1	Enable 1st Stage Heat to Air Handler	W Terminal/1st Stage Heat
G	Enable Fan to Air Handler	G Terminal/Fan
C	24VDC Power	C, B, or T Terminals, Varies by Equipment
R	Enable 24VAC to Air Handler to 24VDC Power	R Terminal

**Table 12.1**  
**Equipment Interface Panel terminals and corresponding HVAC equipment terminals**

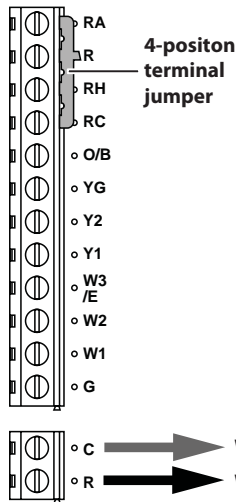
## Wiring Power to the Equipment Interface Panel

There are two methods of powering Emme Core:

- You can power it directly by the 24VAC transformer from the HVAC equipment. See Figure 13.1.
- You can power it from a separate, optional 24VDC power adapter.

If you are using the separate, optional 24VDC Power Adapter, see the section **Using the Optional 24VDC Power Adapter**. Please wait until **Step 5: Powering on Emme Core** to plug it into the Equipment Interface Panel to avoid inadvertent power up.

**CAUTION:** Do not apply power to Emme Core until the Display and Control Unit has been installed.



**Figure 13.1**  
4-position terminal jumper in position on the Equipment Interface Panel board. R terminal wired to the air handler R terminal and C to common on the air handler which can be terminals C, B, or T depending on the manufacturer.

**NOTE:** Insure the 4-position jumper that connects R, RA, RH, and RC is not loose, tighten as required.

## Sample Wiring Diagrams

The sample wiring diagrams are for systems using 24VAC HVAC power. If you are powering Emme Core with the optional 24VDC Power Adapter see **Using the Optional 24VDC Power Adapter** for additional wiring information.

### *Heat Only*

R	24VAC Return
C	24VAC Common
W1	1st Stage Heat
YG	Y or Y1 on Air Handler

### *Cool Only*

R	24VAC Return
C	24VAC Common
Y1	1st Stage Compressor Line Set
G	Fan
YG	Y or Y1 on Air Handler

### *1 Stage Heat, 1 Stage Cool*

R	24VAC Return
C	24VAC Common
W1	1st Stage Heat
Y1	1st Stage Compressor Line Set
G	Fan
YG	Y or Y1 on Air Handler

### *2 Stage Heat, 1 Stage Cool*

R	24VAC Return
C	24VAC Common
W1	1st Stage Heat
W2	2nd Stage Heat
Y1	1st Stage Compressor Line Set
G	Fan
YG	Y or Y1 on Air Handler

### *1 Stage Heat, 2 Stage Cool*

R	24VAC Return
C	24VAC Common
W1	1st Stage Heat
Y1	1st Stage Compressor Line Set
Y2	2nd Stage Compressor Line Set
G	Fan
YG	Y or Y1 on Air Handler

### *2 Stage Heat, 2 Stage Cool*

R	24VAC Return
C	24VAC Common
W1	1st Stage Heat
W2	2nd Stage Heat
Y1	1st Stage Compressor Line Set
Y2	2nd Stage Compressor Line Set
G	Fan
YG	Y or Y1 on Air Handler

### *3 Stage Heat, 2 Stage Cool*

R	24VAC Return
C	24VAC Common
W1	1st Stage Heat
W2	2nd Stage Heat
W3/E	3rd Stage Heat
Y1	1st Stage Compressor Line Set
Y2	2nd Stage Compressor Line Set
G	Fan
YG	Y or Y1 on Air Handler

### *Heat Pump-1 Stage Heat, 1 Stage Cool (no aux)*

R	24VAC Return
C	24VAC Common
Y1	1st Stage Compressor Line Set
G	Fan
O/B	Change Over
YG	Y or Y1 on Air Handler

### *Heat Pump-1 Stage Heat, 1 Stage Cool, 1 Stage Aux Heat*

R	24VAC Return
C	24VAC Common
W1	1st Stage Aux Heat
Y1	1st Stage Compressor Line Set
G	Fan
O/B	Change Over
YG	Y or Y1 on Air Handler

### *Heat Pump-1 Stage Heat, 1 Stage Cool, 2 Stage Aux Heat*

R	24VAC Return
C	24VAC Common
W1	1st Stage Aux Heat
W2	2nd Stage Aux Heat
Y1	1st Stage Compressor Line Set
G	Fan
O/B	Change Over
YG	Y or Y1 on Air Handler

### *Heat Pump-2 Stage Heat, 2 Stage Cool, 2 Stage Aux Heat*

R	24VAC Return
C	24VAC Common
W1	1st Stage Aux Heat
W2	2nd Stage Aux Heat
Y1	1st Stage Compressor Line Set
Y2	2nd Stage Compressor Line Set
G	Fan
O/B	Change Over
YG	Y or Y1 on Air Handler

### *2 Wire, Emme HVAC Plenum Sensor*

T1	HVAC Plenum Sensor (either wire)
T2	HVAC Plenum Sensor (either wire)

## Using the Optional 24VDC Power Adapter

If you are not powering Emme Core directly from the 24VAC transformer from the HVAC equipment and are instead using the optional 24VDC Power Adapter, please note the following changes:

- Do Not wire the C (common) Terminal on the EIP
- The R terminal on EIP must be wired to the air handler

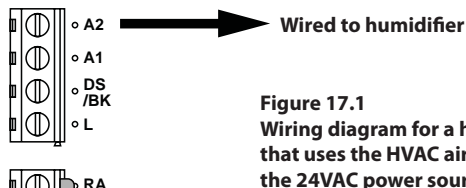
## Wiring a Humidifier

Use the following diagrams and instructions to wire a humidifier to the Emme Core Equipment Interface Panel.

**NOTE: All other wiring for a humidifier should be done in accordance with the humidifier manufacturer's recommended wiring.**

### *Wiring a Humidifier Powered Directly by the Air Handler*

If the humidifier is being powered by the HVAC air handler, see Figure 17.1.

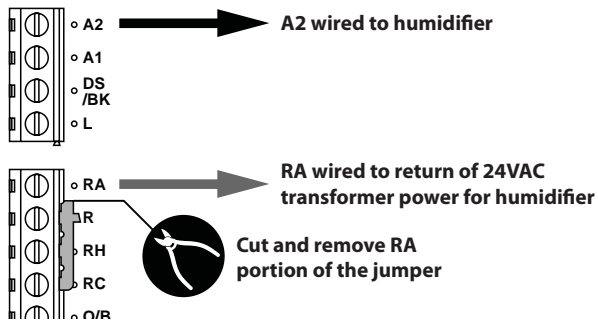


**Figure 17.1**  
**Wiring diagram for a humidifier that uses the HVAC air handler as the 24VAC power source**

## Wiring a Humidifier Powered by a Separate 24VAC Transformer

If the humidifier is being powered by a separate 24VAC transformer, connect the humidifier to the terminals indicated in Figure 18.1.

**NOTE:** If the humidifier is powered by a separate 24VAC power transformer, cut the 4-position jumper between the RA and R terminal. Remove the RA portion and leave the jumper in the R, RH, and RC terminals. See Figure 18.1

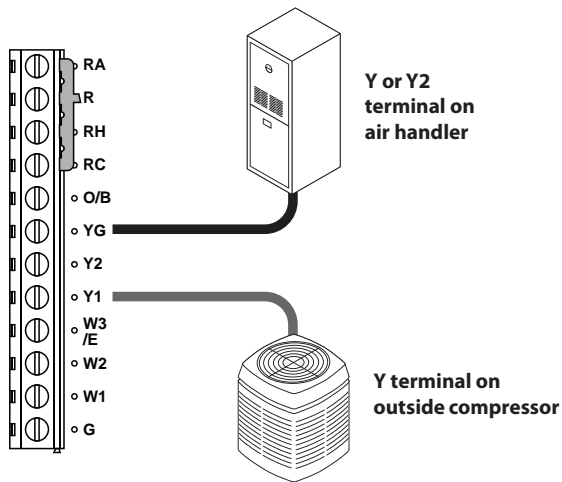


**Figure 18.1**  
Wiring diagram for a humidifier with a separate 24VAC power source/transformer

## Wiring Smart Circulation

Wiring Emme Core for Smart Circulation will allow Emme Core, when used with Emme Wireless Temperature Sensors, to run the highest speed fan (normal air conditioner fan speed) to balance temperatures. See Figure 19.1.

The sample wiring diagrams on pages 14, 15 and 16 include the wiring for SmartCirculation (note YG to air handler).



**Figure 19.1**  
**Smart Circulation wiring diagram. If an air conditioner or heat pump is not present, omit the connection of Y1 on the Equipment Interface Panel to Y on the outside compressor.**

## Step 3. Install the Display and Control Unit

The ideal mounting height is near eye level based on the user's accessibility requirements.

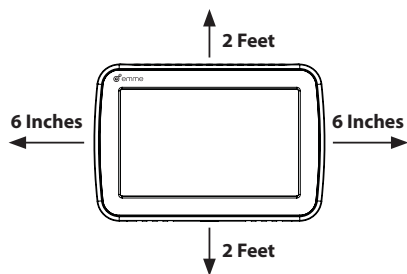
**CAUTION:** When mounting multiple Display & Control Units on the same wall leave adequate room between the Display & Control Units for accurate temperature sensing and air flow. See Figures 21.1 and 21.2.

### **Do Not Install the Emme Core Display and Control Unit:**

- Close to heat sources such as incandescent lights or heating and cooling supply registers
- In the path of direct sunlight
- On exterior, non-insulated or poorly insulated walls
- In a kitchen near equipment that will potentially produce high heat or humidity
- In an area that restricts or reduces air flow.

## *General Clearance Rules When Installing Multiple Emme Cores*

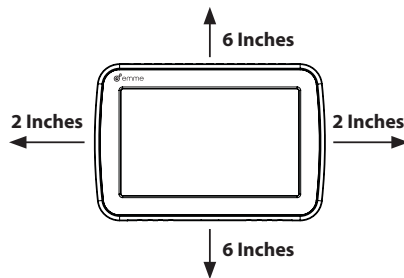
Leave at least six inches between the side of the Display and Control Unit and any other object (walls, other displays, etc) and two feet above the top and below the bottom of the Display and Control Unit housing. See Figure 21.1.



**Figure 21.1**  
**Emme Core Display and Control Unit mounted without Wireless Temperature Sensors**

## *Installing Multiple Emme Cores that Will Never Use the Display and Control Unit as a Reference Temperature*

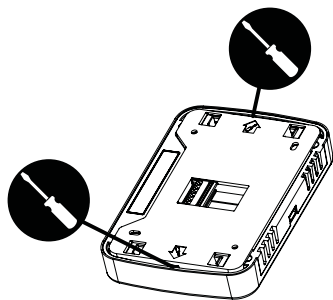
Leave at least two inches between the side of the Display and Control Unit and any other object (walls, other displays, etc) and six inches above the top and below the bottom of the Display and Control Unit housing. See Figure 21.2. Please contact Emme Technical Support if these guidelines cannot be followed.



**Figure 21.2**  
**Emme Core Display and Control Unit clearances if the internal temperature sensor will never be used**

## Mounting the Display and Control Unit Back Plate

1. Remove the front cover of the Emme Core Display and Control Unit. If necessary, insert a flat-head screwdriver into one of the slots and gently twist. See Figure 22.1.

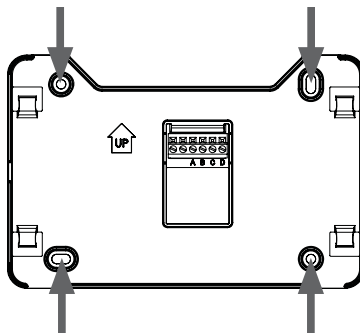


**Figure 22.1**  
Insert a flat-head screwdriver into one of the slots and twist gently

2. Remove the cardboard gasket used for shipping purposes.
3. Place the Display and Control Unit back plate on the mounting surface; make sure that all wires can be inserted through the opening. Also make sure

the surface is flat and clear of obstructions that may interfere with installing the Display and Control Unit.

4. Using the Display and Control Unit back plate as a template, mark the location of the mounting holes on the mounting surface. See Figure 22.2.

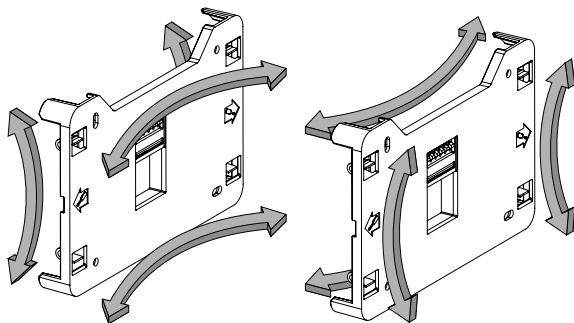


**Figure 22.2**  
Display and Control Unit back plate with mounting holes

5. Use anchors, if necessary, to ensure the Display and Control Unit back plate is secured to the mounting surface (anchors included). Insert screws and anchors of the correct size.

6. Fasten the Display and Control Unit back plate to the mounting surface (screws included) until secure.

**CAUTION:** Do not over-tighten the screws used to mount the Display and Control Unit back plate to the mounting surface. Over-tightening any or all of the screws could prevent the display from properly connecting to the back plate. This may cause the touch-screen to become unresponsive. See Figure 23.1. If the mounting surface is very uneven, you may need to level the surface or relocate the Display and Control Unit.



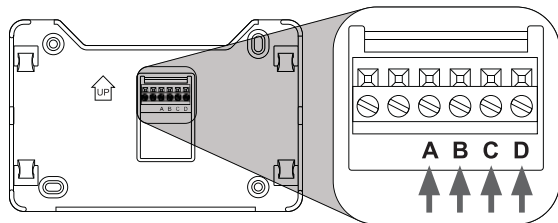
**Figure 23.1**  
**Do not warp or distort the Display and Control Unit back plate by over-tightening the screws on an uneven mounting surface**

## Step 4. Wire the Display and Control Unit to the Equipment Interface Panel

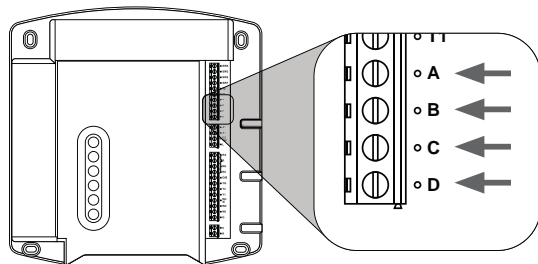
Four wires are required to connect the Display and Control Unit to the Equipment Interface Panel. If the Display and Control Unit is replacing an existing thermostat, you may use the existing thermostat wires (if at least four conductors are available). Please re-strip wires before connecting them to the Display and Control Unit.

**NOTE:** Do not leave exposed copper conductors on any unused wires.

1. Connect the wires between the Display and Control Unit and the Equipment Interface Panel using terminal ports A, B, C, and D on the display back plate and A, B, C and D on the Equipment Interface Panel. Use the wire color to ensure a correct match, for example a red wire could go from A to A. See Figures 24.1 and 24.2.

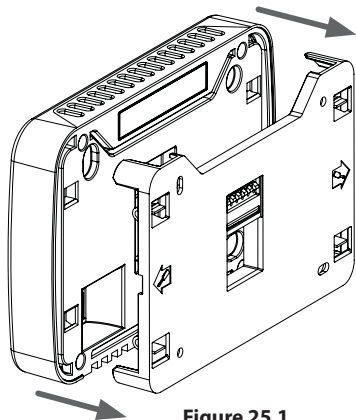


**Figure 24.1**  
**Display and Control Unit to Equipment Interface Panel connections**



**Figure 24.2**  
**Equipment Interface Panel to Display and Control Unit connections**

Attach the front cover of the Display and Control Unit to the back plate. Ensure the pins on the circuit board connect with the pin connection ports on the terminal block. See Figure 25.1.



**Figure 25.1**  
Front cover connecting to back plate

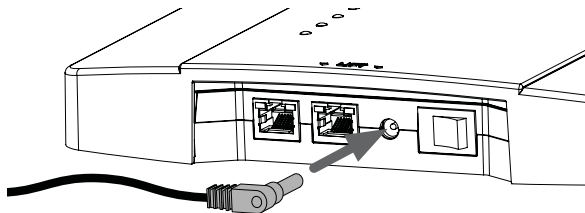
## Step 5. Power On Emme Core

Once you have completed the wiring of the Display and Control Unit and the Equipment Interface Panel you can apply power to Emme Core.

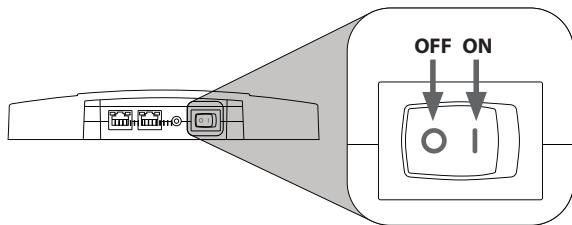
Restore power to the air handler and all additional HVAC equipment. If you are using the separate, optional 24VDC power adapter, insure the power adapter cord is plugged into the DC in terminal on the bottom of the Equipment Interface Pane. See Figure 26.1

Insure that the power switch on the bottom of the Equipment Interface Panel is in the ON position. This switch is used to power on/off Emme Core. See Figure 26.2.

**CAUTION:** Do not apply power to Emme Core until the Display and Control Unit has been installed.



**Figure 26.1**  
Plug in the optional 24VDC power adapter using the DC in terminal on the bottom of the Equipment Interface Panel



**Figure 26.2**  
Power switch for the Equipment Interface Panel

## Trouble Shooting Power Problems

If Emme Core does not power up or it re-enters the start-up sequence multiple times, verify the following:

- All wiring is correct. In particular verify that the wiring to the Display and Control Unit (A, B, C, and D) and to the return and common (R and C) are correct.
- All wire connections are secure.
- Electrical load on the 24VAC transformer is not exceeded. You can verify this by adding up the electrical consumption of each device connected to the transformer and ensuring it does not exceed 24VAC.

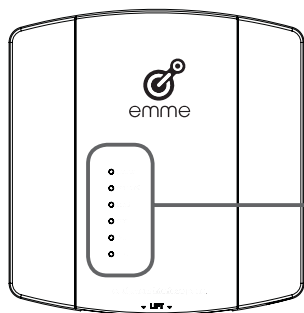
If problems persist, connect Emme Core to an alternative power source to verify operation.

**NOTE:** If the Emme display fails to boot correctly after troubleshooting, wait 4 to 5 minutes before cycling the Equipment Interface Panel power on and off. If problems persist, call Emme Technical Support at 1-877-509-1200.

## Equipment Interface Panel Status LEDs

The Emme Equipment Interface Panel has six LEDs to display the status of the system. See Figure 27.1.

If you have wired the Display and Control Unit and the Equipment Interface Panel correctly, when Emme Core is powered on the power and communication LEDs will be lit. The Heat, Cool, Fan and Aux LEDs will be lit when one of those cycles is engaged.



**Figure 27.1**  
LED status indicators

**Status LEDs**

**Note:** Status LEDs should be off or solid blue. A red light or blinking red/blue light may indicate an error. See *LED Progress and Error Indicators*.

*The Status LEDs Indicate the Following:*

**Power:** This LED monitors the power supply of the Equipment Interface Panel

On	Power is connected to the Equipment Interface Panel and is within approximate voltage range.
Off	Power is disconnected or has dropped below an acceptable voltage.
Blinks alternatively red/blue	Equipment Interface Panel has missing or corrupt firmware.

**Note:** The Power LED will blink red/blue for a few seconds during power-on and after reset while the system performs a self-check, this is normal.

**Connect:** This LED monitors the communication between the Display and Control Unit and the Equipment Interface Panel.

On	The two devices are communicating properly.
Off	The Display and Control Unit and the Equipment Interface Panel are not communicating with each other.

**Heat:** This LED monitors the operation of the heating cycles.

On	There is currently a heating cycle.
Off	There is not currently a heating cycle

**Cool:** This LED monitors the operation of the cooling cycles.

On	There is currently a cooling cycle.
Off	There is not currently a cooling cycle.

**Circulation:** This LED monitors the operation of the circulation cycles.

On	There is currently a circulation cycle.
Off	There is not currently a circulation cycle.

**Aux:** This LED monitors the auxiliary equipment cycles.

On	There is currently an auxiliary equipment cycle.
Off	There is not currently an auxiliary equipment cycle.

## *LED Progress and Error Indicators*

During normal operation, the Power LED should always be solid blue. A red, or blinking red/blue, light could indicate an error.

**LED blinking red/blue:** If this state persists for more than a few seconds, the Equipment Interface Panel has missing or corrupt firmware.

**LED solid red:** The Equipment Interface Panel is being reset. If this state persists for more than a few seconds, the Equipment Interface Panel has a major malfunction and should be replaced.

## **Step 6. Configure Emme Core**

### **Navigating the Emme Core Display and Control Unit**

Once the Display and Control Unit and the Equipment Interface Panel are powered and working properly, you can begin configuring the system.

Emme Core uses touch-screen technology, making it easy to navigate. All you have to do is touch the buttons, icons and lists using your finger tip or knuckle.

**NOTE:** To prevent potential damage to the Display and Control Unit touch-screen, never use sharp objects to touch the screen (i.e., pens, pencils, screwdrivers, etc.)

At any time, press the status bar (found on the top of the screen). This saves any action and takes you back to the Main screen.

If you need to enter data in the form of text or letters, you will be presented with a keyboard. See figure 30.1.



**Figure 30.1**  
**Keyboard screen**

## Setup

The remainder of the installation process is completed using the Emme Core Display and Control Unit.

## Configuring System Information

We will now walk through the steps of a typical installation.



### **1** On the Home Screen Press *setup*

You may need to scroll  
right to view this option



## 2 Enter a Facility Type

There are two facility options: *Residential* and *Commercial*

## For Residential Facilities:

If you are installing Emme Core in a home or residence continue below. If you are installing in a commercial facility skip to *For Commercial Facilities* on page 33.



## 3 Press Edit to the right of System Name:



## 4 Enter the System Name

When finished, press *ok*.



**5** Press *Edit* to the right of *Location*:



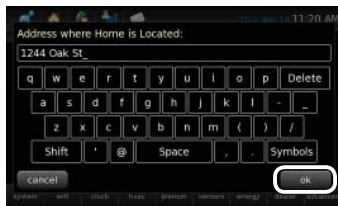
**6** Enter the First Name

When finished, press *ok*.



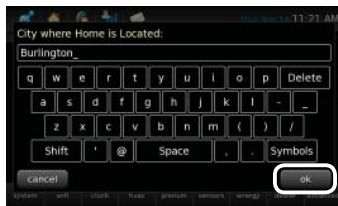
**7** Enter the Last Name

When finished, press *ok*.



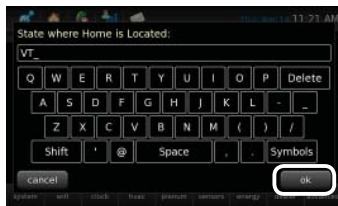
**8** Enter the Street Address

Use the *Symbols* button to display numbers and other symbols on the keyboard. When finished, press *ok*.



**9** Enter the City

When finished, press *ok*.



**10** Enter the State

When finished, press *ok*.



## 11 Enter Zip Code

Required for weather to display and for proper heat pump management. When finished, press *ok*.

Skip to *Configuring WiFi* on page 35 if you have completed the process for a residence or home.

## For Commercial Facilities:

If installing in a commercial facility continue here:

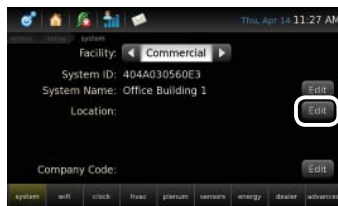


## 3 Press *Edit* to the right of *System Name*:



## 4 Enter System Name

When finished, press *ok*.



## 5 Press *Edit* to the right of *Location*:



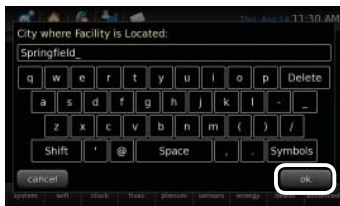
## 6 Enter the Facility Name

When finished, press *ok*.



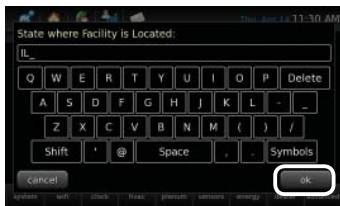
## 6 Enter Street Address

Use the *Symbols* button to display numbers and other symbols on the keyboard. When finished, press *ok*.



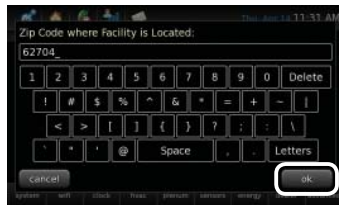
## 7 Enter City

When finished, press *ok*.



## 8 Enter State

When finished, press *ok*.



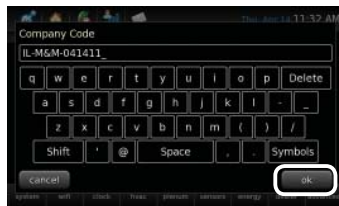
## 9 Enter Zip Code

Required for weather to display and for proper heat pump management. When finished, press *ok*.



## 10 Press *Edit* to the right of *Company Code*:

If you do not have a *Company Code* go to Configuring WiFi.



## 11 Enter Your *Company Code*

When finished, press *ok*.

A company code is only issued by Emme; if you need a company code, please contact Emme Technical Support at 1-877-509-1200. All systems with the same company code are grouped together and can be managed from the Emme portal. It is important to note that a company code is different than a dealer code, which will be discussed later.

## Configuring WiFi

The WiFi screen allows you to connect Emme Core to the client's WiFi network to enable remote access and other functions that require internet access. Connecting Emme Core to a WiFi network is required for proper functioning.

### *Supported WiFi Encryption Protocols*

Emme Core supports the following wireless router encryption protocols:

- Clear/No Security: with SSID being broadcast
- WEP: 40/64 and 104/128, but only key 0
- WPA: Pre-shared keys; TKIP
- WPA2: Pre-shared keys; Both TKIP and CCMP/AES

## Incompatible WiFi Encryption Protocols

Emme Core does not support the following wireless router encryption protocols:

- Clear/No Security: with SSID broadcast disabled/not broadcast
- WEP: 232/256 and above
- WEP: 40/64 and 104/128; if keys 1, 2 or 3 are required.
- WPA: "Enterprise" - all EAP/PEAP types, RADIUS, Certificate-based, etc.
- WPA2 "Enterprise" - all EAP/PEAP types, RADIUS, Certificate-based, etc.

**NOTE:** It is very rare to encounter the above incompatible WiFi encryption protocols in the residential and small business markets.

## Configuring WiFi



### 1 Press the *wifi* Button

The *wifi* screen should appear.



### 2 Press *Change Wireless Network*



### 3 Select the Network

Select the network to connect to from the list of options. When the correct network is selected, press *connect*.



### 4 Enter the Password

When finished, press *ok*.

**NOTE:** The WiFi password is case sensitive; ensure the password is entered correctly, using any letters, numbers or symbols required

## Setting the Time Zone and Clock

By default, the automatic clock is updated using the WiFi connection. If network access is not available, the clock can be set manually.

### *Configuring the Automatic Clock*

When connected to the internet, Emme Core periodically updates the time to ensure it is accurate within one second. However, the correct time zone must be selected in order for the time to be accurate for a specific location.



### 1 Press the *clock* Button

The *clock* screen should appear.



## 2 Select the Correct Time Zone

*Configuring the Manual Clock (Do Not Configure if Using the Automatic Clock)*

When disconnected from the internet Emme Core may lose or gain one to two seconds per month depending upon conditions.



## 1 Press the *clock* Button

The *clock* screen should appear.



## 2 Select the Correct Time Zone

This is done to ensure the time will be correct if the system is connected to the internet at a later time.



## 3 Press *Set Date & Time*



## 4 Press *Set Date & Time Manually*



## 5 Set the Correct Time

Use the selector to set the correct time. When you are finished press *Set Now*.

## Defining the HVAC Equipment

The HVAC screen allows you to configure Emme Core to control the correct HVAC equipment.

### Supported HVAC Equipment Types

No HVAC

Furnace & A/C

Heat Pump (including dual fuel)

Furnace Only

A/C Only

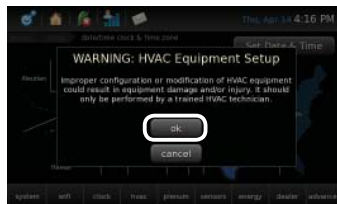
**Table 39.1**  
HVAC equipment type options

## Configuring a Furnace or Air Conditioner



## 1 Press the *hvac* Button

The *hvac* screen should appear.



## 2 Read the Disclaimer

See **WARNING** below. When you are finished press *ok*.

**WARNING:** Improper configuration/modification of HVAC equipment could result in equipment damage and/or injury. It should only be performed by a trained HVAC technician.



### 3 Select the HVAC Equipment Type

See Table 39.1 for available options.



### 6 Select the Correct Cooling Stages



### 4 Select the Heating Stages

**REQUIRED:** All select boxes must have entries or the system will not operate. If the select box is blank, and the item is not being used, select *None*.



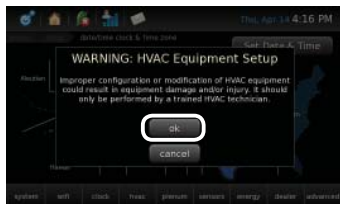
### 5 Select the Correct Fuel Type

## Configuring a Heat Pump or Dual Fuel System



### 1 Press the *hvac* Button

The *hvac* screen should appear.



### 2 Read the Disclaimer

See **WARNING** below. When you are finished press *ok*.

**WARNING:** Improper configuration/modification of HVAC equipment could result in equipment damage and/or injury. It should only be performed by a trained HVAC technician.



### 3 Select Heat Pump



### 4 Select the Change Over Condition



### 5 Select the Number of Stages For the Heat Pump



## 6 Select the Aux Heat Source

Depending on your configuration, your screen may appear different. If there are select boxes missing, it is not an indication of improper setup.



## 7 Select the Number of Stages for Aux Heat



## 8 Select the Heating Fuel Type



## 9 Select the Compressor Lockout Setting

**NOTE:** All select boxes must have entries or the system will not operate. If the select box is blank, and the item is not being used, select *None*.

## Adding a Plenum Sensor or Humidifier

The Plenum screen allows you to configure Emme Core to control a humidifier and receive information from an Emme Plenum Sensor.



**1** Press the *plenum* Button



**2** If an Emme Plenum Sensor is Installed, select *Have Sensor*

Refer to the *Quick Setup Guide* included with the sensor for installation instructions. Leave as *No Sensor* if one is not installed.



**3** If a Humidifier is Installed, Select the Activation Setting

Refer to the installation instructions that are included with the humidifier for proper setup. If a humidifier is not installed, leave as *None*.

## Adding Wireless Sensors

The Sensors screen allows you to configure Emme accessory sensors such as a Wireless Temperature Sensor or an Outdoor Temperature Sensor. No input is needed on this screen to complete a basic Emme Core installation. If you are installing an accessory sensor, use the *Quick Setup Guide* included with the sensor.



**1** Press the *sensor* Button



**2** If Installing a Sensor, Refer to the *Quick Setup Guide* Included With the Sensor

The Display and Control Unit is included on the sensors list and will display the current temperature.

## Adding +Energy

The energy screen provides step-by-step instructions for linking one or more +Energy electricity monitors to Emme Core. If you are installing +Energy, refer to the +Energy Installation Guide for complete instructions.



**1** Press the *energy* Button



**2** If Installing +Energy, Refer to the *Installation Guide* Included with the Electricity Monitor

## Entering Dealer Contact Information

The *Dealer* screen allows you to record your contact information so it will be easily accessible by the owner. The contact email is independent from, and not associated with, your username and password to the Emme Dealer Portal. The Dealer Code allows an HVAC company to view all Emme systems installed by that company to be viewed via the Dealer Portal. If you do not have a Dealer Code it can be left blank. A Dealer Code can only be issued by Emme. If you would like to receive a Dealer Code, please contact Emme Technical Support at 1-877-509-1200.

**NOTE:** The email address must be entered as a valid email address (example: name@company.com) and it is limited to what characters are available on the display keyboard screen.



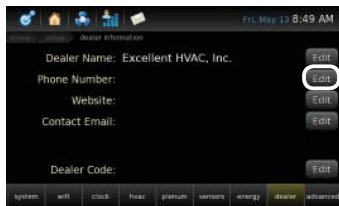
**1** Press the *dealer* Button



**2** To the right of *Dealer Name*: press *Edit*.



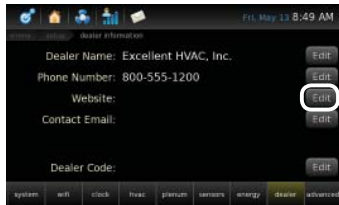
**3** Enter the Dealer Name  
When finished, press *ok*.



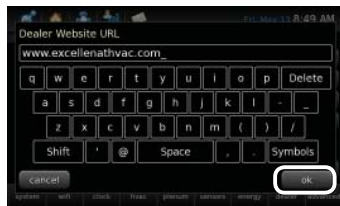
**4** To the right of *Phone Number*: press *Edit*



**5** Enter the Dealer Phone Number  
When finished, press *ok*.

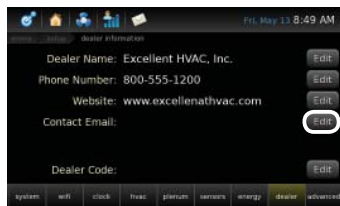


**6** To the right of *Website*: press *Edit*



## 7 Enter the Dealer Website Address

When finished, press *ok*.

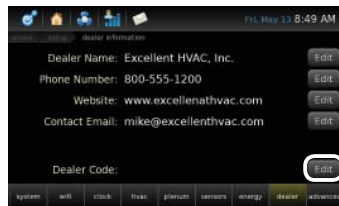


## 8 To the right of Contact Email: press *Edit*



## 9 Enter the Dealer Contact Email Address

When finished, press *ok*.

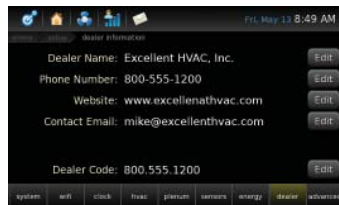


## 10 To the right of Dealer Code: press *Edit*



## 11 Enter Your Dealer Code

When finished, press *ok*.  
If you don't have a code leave it blank.

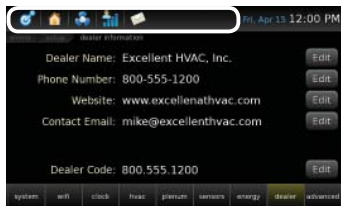


## 12 Verify Contact Information

Edit information as needed.

# Configuring Equipment Reminders and Advanced Control

Installation is almost complete. The last step is to setup equipment reminders and ensure that the advanced HVAC controls are set for the customers preferences.



**1 Press the Status Bar to Return to the Main Screen**



**2 Press the hvac button**



**3 Press Equipment Reminders**



**4 Schedule the Air Filter Reminder**



**5 Schedule the Humidifier Pad Reminder**

If a humidifier is not configured, you will not see this option. When you are finished, press *Done*.



## 6 Press *Smart Circulation Fan Control*



## 7 Schedule the *Minimum Circulation per Day Time*



## 8 Enable *Smart Circulation*

Check if you want Smart Circulation enabled. When you are finished press *Done*.



## 9 Press *Multistage Control*

This option may not be available if Emme Core is controlling single stage equipment.



## 10 Select the *Stage Activation Criteria*

When you are finished press *Done*.



## 11 Press *Smart Recovery Control*



## 12 Set Smart-Recovery

Leave checked, or un-check if you want SmartRecovery disabled.



## 13 Select the Maximum Recovery Time

When you are finished press *Done*.



## 14 Installation is Now Complete

Press *Done* to return to the Main Screen.

# Installation is Complete!

The following information is useful to know, but not required during a typical installation.

## Updating Software

By default, Emme Core automatically updates the software if a newer version is available. If the system is not connected to the internet or automatic updating is disabled this update process will not happen. To update the software do the following:



## 1 Press the *setup* Button



## 2 Press the *advanced* Button



## 3 Press *Software Updates*



## 4 Press *update now*

If it says *Up-to-date* next to *Available Update*: it is already using the most current software.

# Disabling or Enabling Automatic Software Updates

By default, Emme Core automatically updates the software if a newer version is available. To disable automatic updates do the following:

**WARNING:** The disabling of automatic updates may lead to loss of functionality over time. Therefore disabling automatic updates is strongly discouraged.



## 1 Press the *setup* Button



**2** Press the *advanced* Button



**3** Press *Software Updates*



**4** Uncheck *Automatically update as available*

To enable automatic updates check *Automatically update as available*.

## Touch Screen Test

The touch screen test allows you to plot a trace on the touch screen. To perform a touch screen test, do the following:



**1** Press the *setup* Button



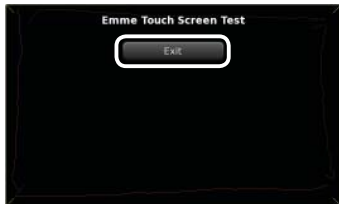
**2** Press the *advanced* Button



### 3 Press *Touch Screen Test*



### 4 When you slide your finger across the screen you will see a trace



### 5 Press *Exit* when you are done.

## Temperature Calibration

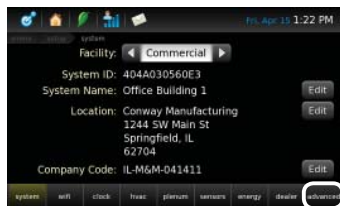
The Emme Core temperature is calibrated at the factory and is very accurate. There may be instances when you want to adjust the temperature depending upon the installation location. To adjust the temperature do the following:

**WARNING:** Changing the temperature calibration can adversely affect system performance. It should be used in limited circumstances under controlled conditions

**NOTE:** The maximum temperature calibration deviation from factory default is 4 degrees up or down.



**1** Press the *setup* Button



**2** Press the *advanced* Button



**3** Press *Temperature Calibration*



**4** Press *Adjust Down or Adjust Up*

Adjusting is done in 10th of a degree increments.

# Setting the Temperature to the Factory Default

If the Emme Core temperature reading is incorrect and you want to set it back to the factory default, do the following:



**1** Press the *setup* Button



**2** Press the *advanced* Button



**3** Press *Temperature Calibration*



**4** Press *Reset to Factory Calibration*

After resetting the calibration look for *Factory Calibration* in small type below the *Current Temperature At Display*:. This indicates the display is back to factory calibration.

# Advanced Commands

In order to trouble-shoot problems, an Emme technician may have you enter an “advance command”. An “advanced command” can provide additional information of a technical nature. In a typical installation, it should not be needed. To get to the advanced command keyboard, do the following:



**1** Press the *setup* Button



**2** Press the *advanced* Button



**3** Press *Advanced Command*



**4** Enter the *advanced command* and press *ok*

For more information on advanced commands contact Technical Support at 1-877-509-1200.

## Touch Screen Calibration

In certain cases the Emme Display and Control Unit can lose touch-screen calibration. When this happens the selected area will be offset from the actual touch point leading to erratic behavior.

**WARNING:** Before calibrating a touch screen you must call Technical Support at 1-877-509-1200

## Programming Emme Core

For more information regarding programming Emme Core please refer to the *Emme Core User Guide*.

## Technical Support

If assistance is required, our Technical Support team is available to answer your questions:

**Technical Support: 1-877-509-1200**

**Email Support: [support@getEmme.com](mailto:support@getEmme.com)**





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