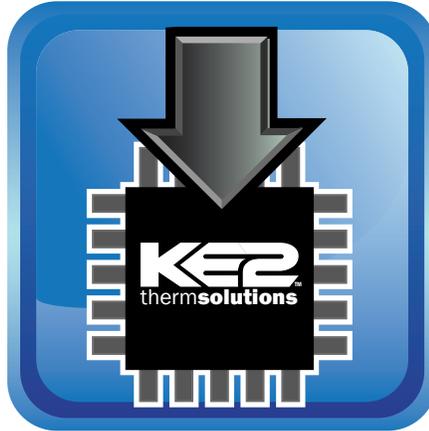




KE2 Bootloader**Guide**

Updating Firmware to Version 4.01





Introduction

Your KE2 Therm controller has the built-in capability to receive firmware updates over Ethernet. To perform this update over the network you will need to place your controller in Bootloader Mode, and then use the Firmware Update Utility provided by KE2 Therm, as described below.

Placing your controller in Bootloader mode suspends normal controller operation & allows the controller to receive a firmware update from the Firmware Update Utility. The Firmware Update Utility runs on your local PC/laptop and will discover any KE2 Therm controller that has been placed in Bootloader Mode. Then you can apply firmware updates to your KE2 Therm controller via your wired network.

Getting Started

To perform a Bootloader Firmware Update for a KE2 Therm controller, you will need:

- The **controller** you wish to update
- 110V/220V **power source** for the controller, as appropriate
- **PC/laptop** to run the firmware update utility
- The **firmware update utility downloaded from www.ke2therm.com**. (See Preliminary Steps on page 3)
- **KE2 Smart Gate** to provide network connection for controller & PC/laptop
- **Ethernet cable(s)**, to provide **wired** network connections between the controller, PC/laptop, & the KE2 Smart Gate, if used.

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Preliminary Steps

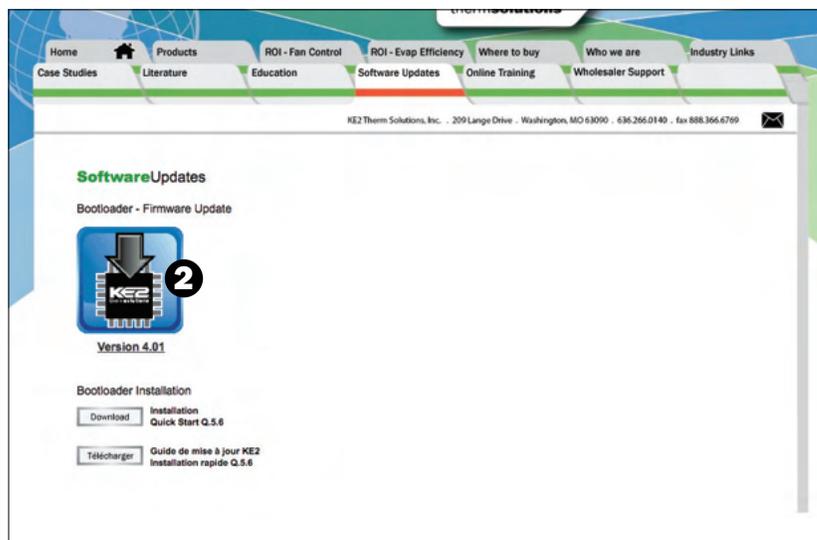
Before you begin the Bootloding process you will need to acquire and extract the program using the following steps:

Download and extract the bootloader program

- 1 Go to www.ke2therm.com and click on the **Software Updates** tab.



- 2 Click on the icon for the Version 4.01 update and download to a location of your choice.

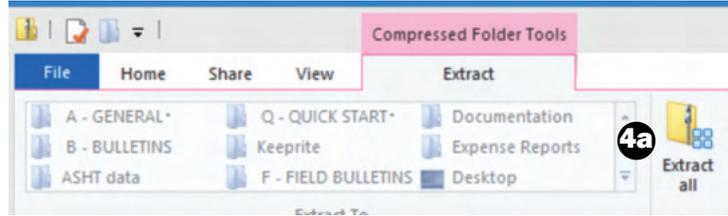


- 3 Find the downloaded zip (archive) file and open

Windows 7 & 8 - double click the zip file

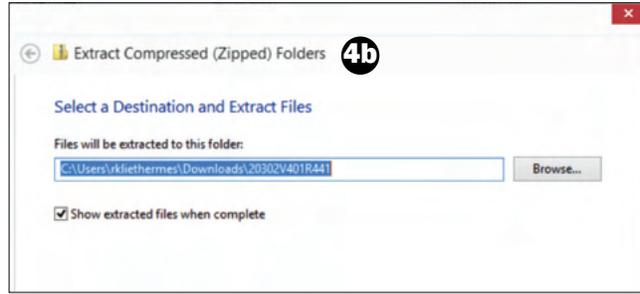
Windows XP - use a zip program such as winzip or 7zip to open the archive (zipped) file

4 Extract the files to a location of your choice (extracting to the desktop is an easy location to find)

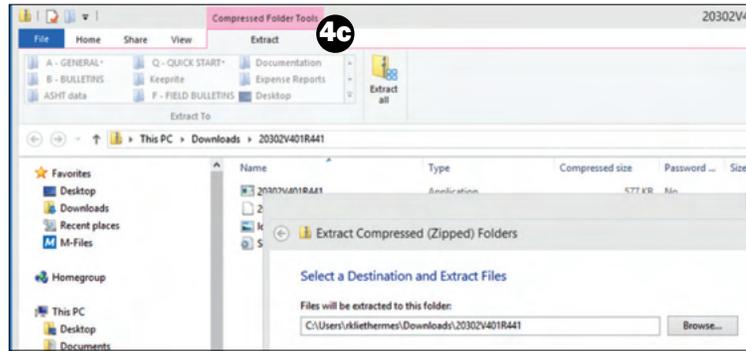


4a **Windows 8** - click "Extract all"

4b **Windows 7** - click on "Extract all files" in the menu bar at the top of the window you opened in step 3



4c **Windows XP** - extract the files using the program you selected in step 3



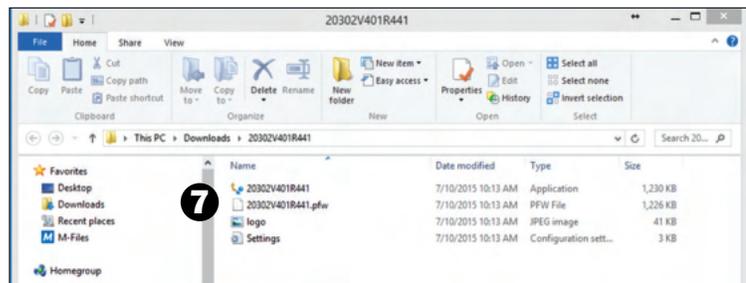
5 Navigate to the newly created folder from Step 4

6 Verify the folder is the standard folder icon and not the icon with a zipper image



7 Open the folder (by double clicking) and verify there are four files in the folder.

8 Remember this location for running the bootloader process



9 Proceed to:

Part1A - if connecting through a KE2 Smart Gate (page 5)

Part 1B - if connecting directly to the KE2 Evap (page 7)



Part 1A - Using a KE2 Smart Gate to connect to the KE2 Evap

1 Plug power cable into the KE2 Smart Gate and the other end into an electrical outlet.

2 Confirm that the **PWR** indicator is **ON**.

3 Connect a Cat5 network cable from the computer to an available Ethernet port on the KE2 Smart Gate.

Note: DO NOT connect to the WAN Port 1 on the KE2 Smart Gate.



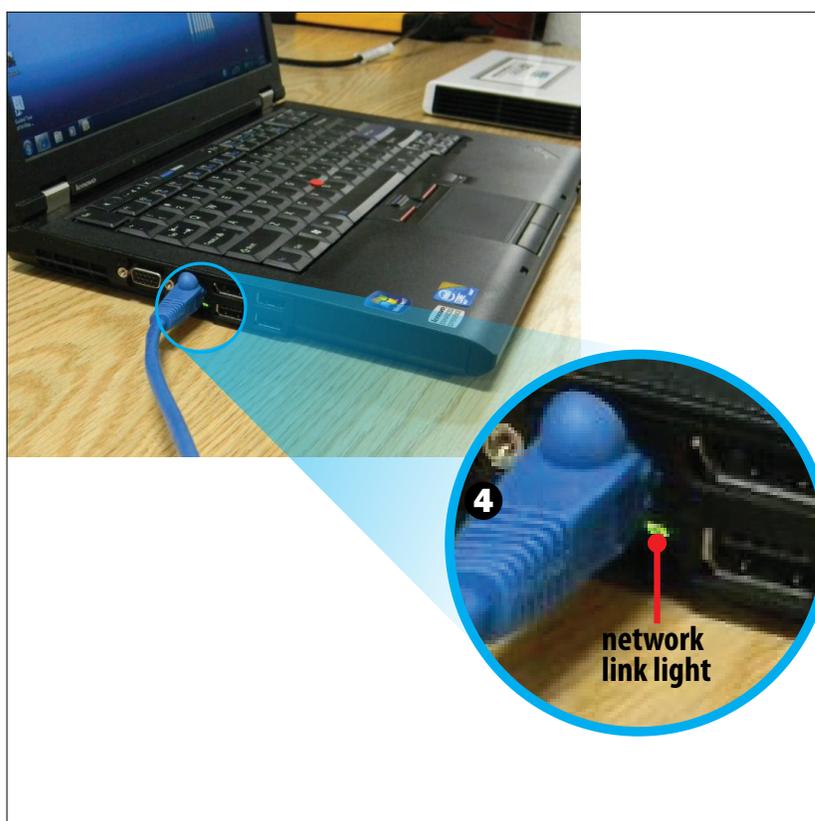
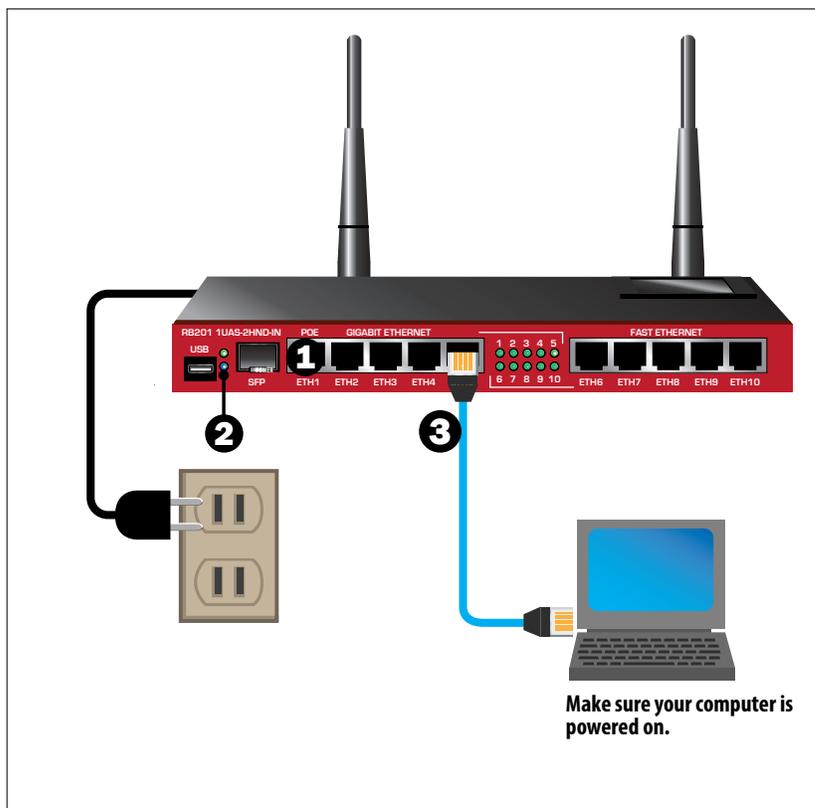
Note: DO NOT attempt to connect **WIRELESSLY** to the KE2 Smart Gate for Bootloader Firmware Updates, use wired Cat5 connection only.

4 Confirm that you have network link light active on your PC/laptop.

Note: it is advisable to run your laptop off of line power, not battery power, to prevent unwanted shutdown or sleep while the Bootloader Firmware Update is in process.

Ensure the wireless radio on the PC/laptop is turned OFF and that the KE2 Smart Gate is the device with an Ethernet connection.

KE2 Therm recommends temporarily disabling any firewall during the bootload process.





KE2 Bootloader Guide

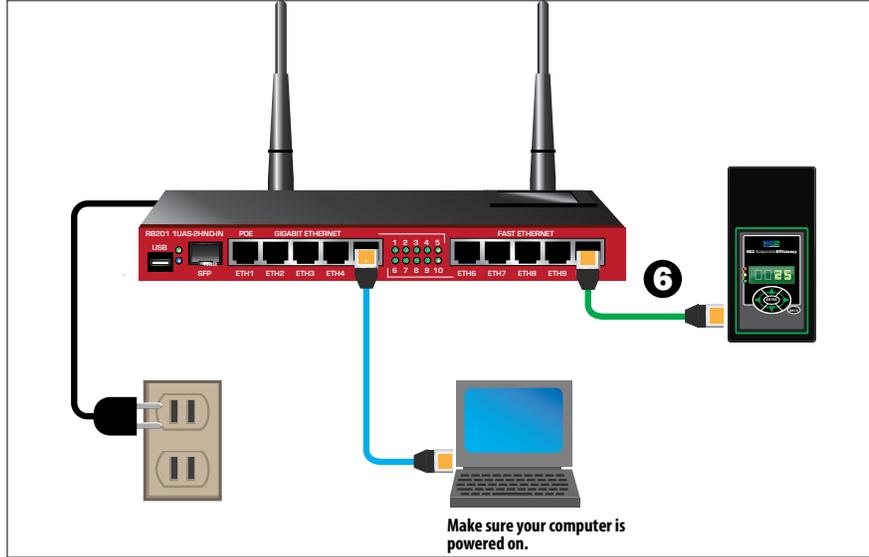
Updating Firmware to Version 4.01

5 Your PC/laptop will get an IP address from the KE2 Smart Gate

6 Connect one end of an Ethernet cable to the controller, the other end to an available Ethernet port on the KE2 Smart Gate.

Note: DO NOT connect to the WAN Port 1 on the KE2 Smart Gate.

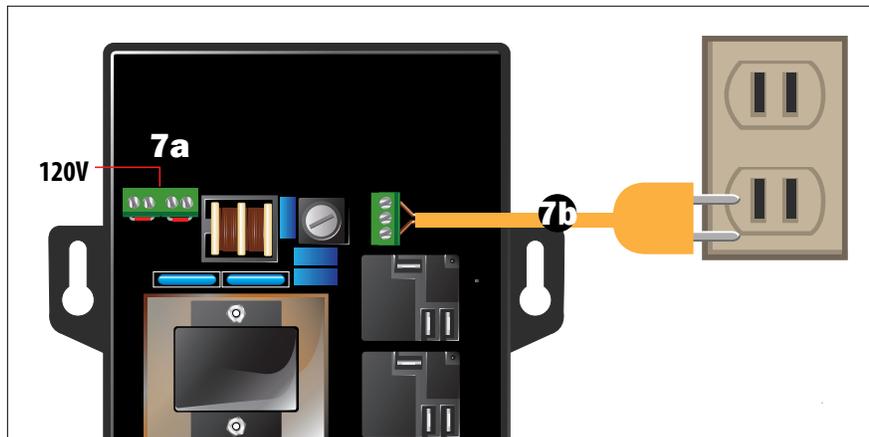
If the controller is already installed on a system, skip to step 8.



7 Connect power (120 or 208/240) to the controller if it is not already installed on a system.

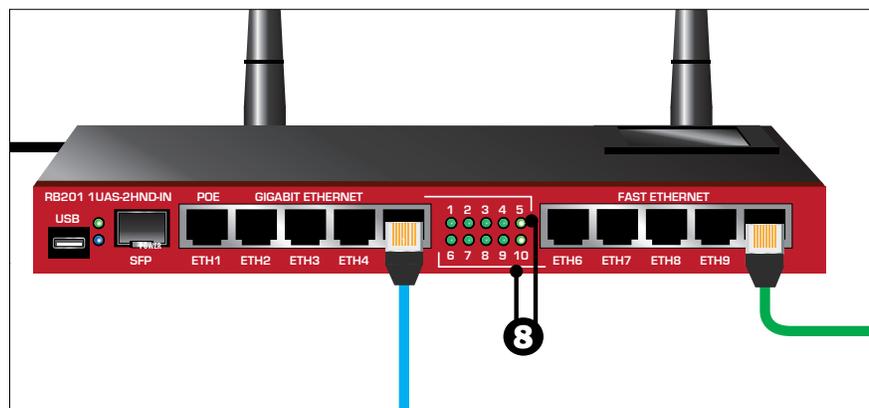
7a Verify the voltage jumper is set for 120V (default is 208/240).

7b Attach the power connector to the controller and the other end of the power cord into the wall socket.



8 confirm that the link lights are ON that correspond to the two ports you used on the KE2 Smart Gate.

9 Go to Part 2.

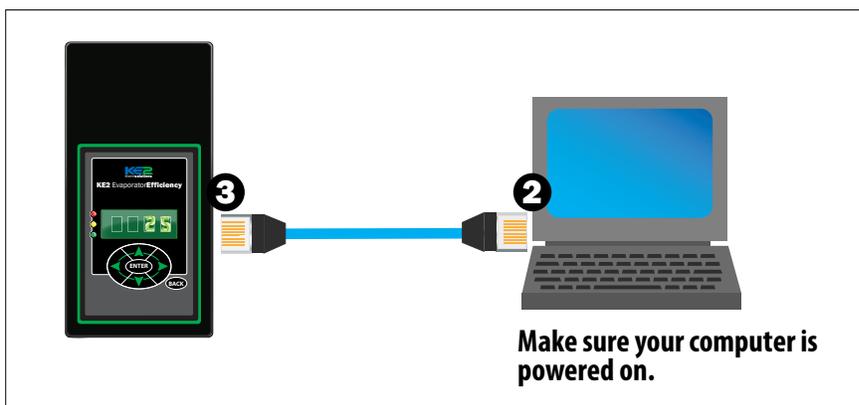


Part 1B - Connecting a computer directly to the KE2 Evap

1 To connect directly to a controller, first set your computer's IP address to a static address by following instructions in document Q.5.11 How to: Change to Static IP Address

2 Connect an Ethernet cable to your computer.

3 Connect the other end of the Ethernet cable to the controller's Ethernet port

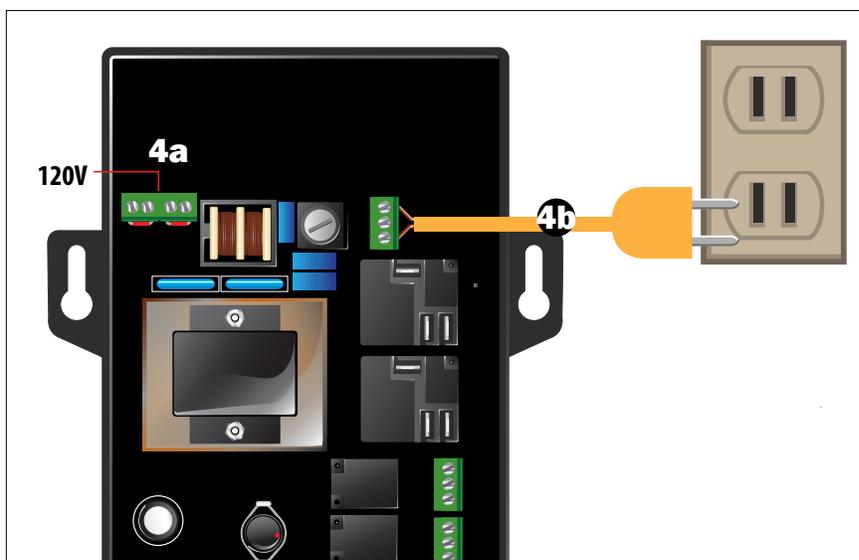


If the controller is already installed on a system, skip 4.

4 Connect power (120 or 208/240) to the controller if it is not already installed on a system

4a Verify the voltage jumper is set for 120V (default is 208/240V).

4b Attach the power connector to the controller and the other end of the power cord into the wall socket.



- 5** Verify the network link light is active on your PC where you plugged in the ethernet cable.



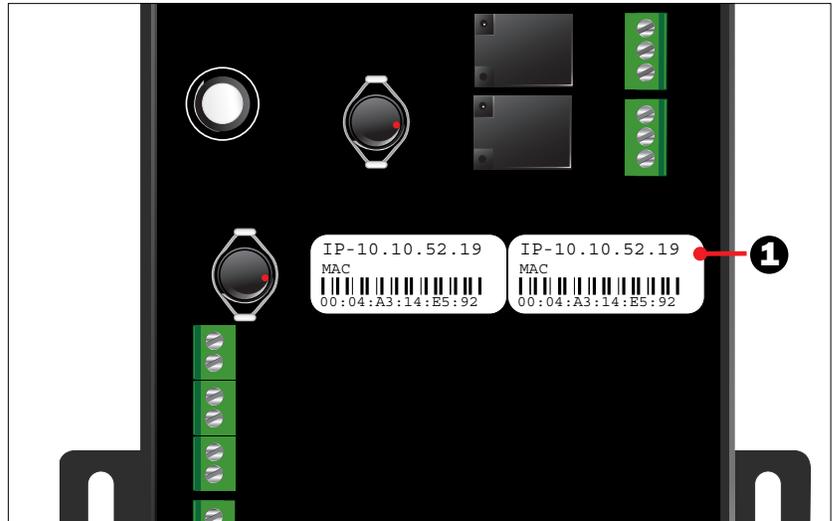
- 6** Go to Part 2.



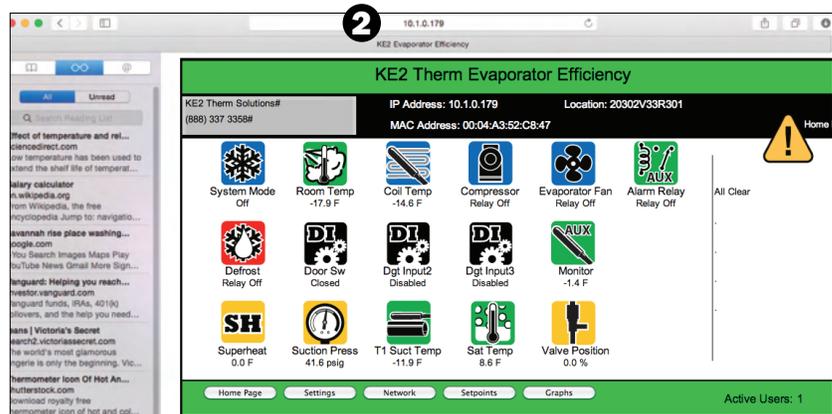
Part 2
Turn on the controller

1 Note the preconfigured IP address on your controller

NOTE: If the controller's IP address has been changed by the end user, the new address must be used. The current IP address may be verified under the Variables menu on the front panel.



2 Open a web browser (e.g. Internet Explorer, Firefox) and enter the KE2 Evap IP address into the address bar. The main page of the controller will come up on the screen.



3 Click on **Setpoints** to view the current system setpoints



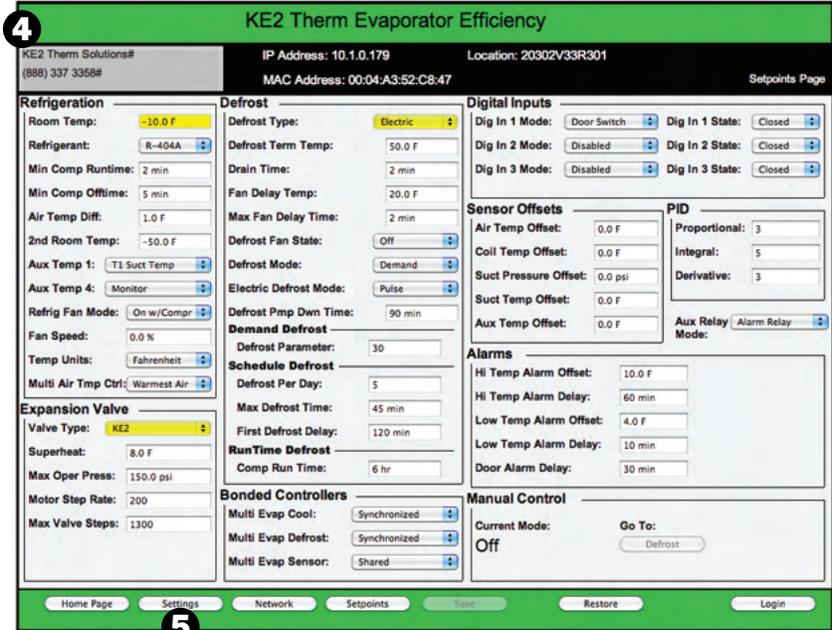


4 To quickly re-program the controller after bootloading the new firmware, collect a screenshot of the Setpoints page and the Settings page.

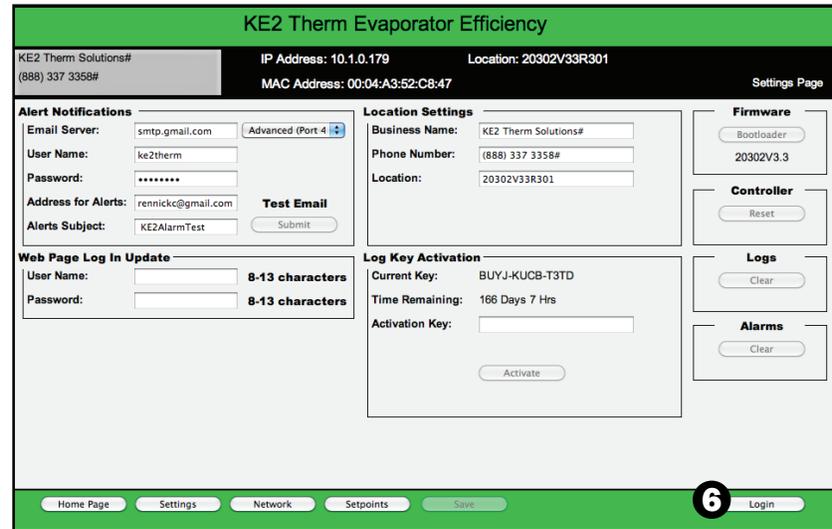
These screens can be easily captured by pressing the **ALT + PRTSC** key on the computer, and pasting this image into a MS Word document.

Do this for each screen you want to capture.

5 Click the **Settings** button.



6 Click **Login** to get to the password screen.

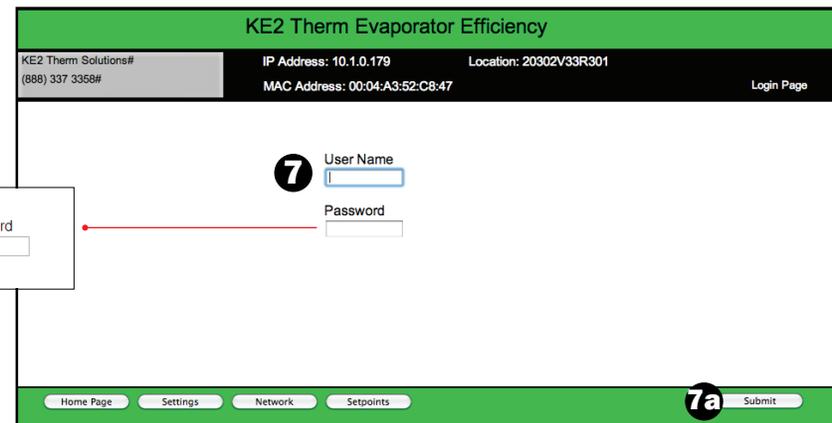


7 **Type in Password and User Name.**
Version 3.3
Default Password: ke2admin
Default User Name: ke2admin

Version 3.2 and Prior
Default Password is 2222

7a Press **Enter** or click the **Submit** button.

Version 3.2 and prior





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8 Note the current firmware revision number.

9 Click the **Bootloader** button, (Version 2.021 and older the button is labeled **Flash**.)

KE2 Therm Evaporator Efficiency

KE2 Therm Solutions# (888) 337 3358# IP Address: 10.1.0.179 Location: 20302V33R301
MAC Address: 00:04:A3:52:C8:47 Settings Page

Alert Notifications
Email Server: smtp.gmail.com Advanced (Port: 4)
User Name: ke2therm
Password: *****
Address for Alerts: rennick@gmail.com Test Email
Alerts Subject: KE2AlarmTest Submit

Location Settings
Business Name: KE2 Therm Solutions#
Phone Number: (888) 337 3358#
Location: 20302V33R301

Firmware
Bootloader
20302V3.3

Controller
Reset

Web Page Log In Update
User Name: 8-13 characters
Password: 8-13 characters

Log Key Activation
Current Key: BUYJ-KUCB-T3TD
Time Remaining: 166 Days 7 Hrs
Activation Key:
Activate

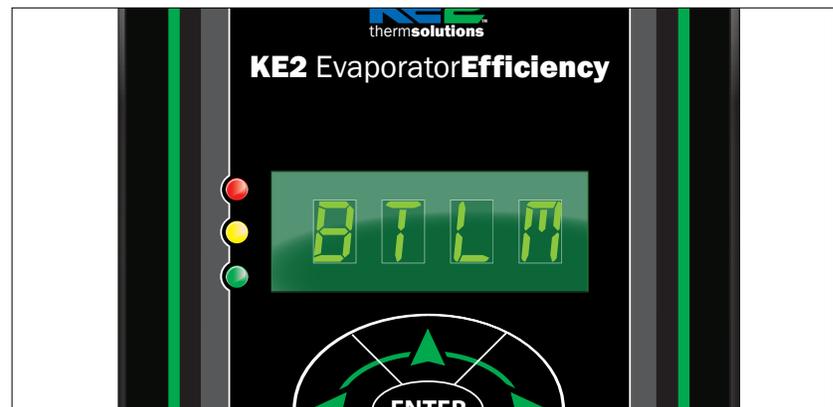
Logs
Clear

Alarms
Clear

Home Page Settings Network Setpoints Save Login

10 If a verification screen pops up, click on **Yes**

11 The controller will go to Bootloader Mode (on later firmware versions, the web page will display red background and say controller is in boot-loader mode)

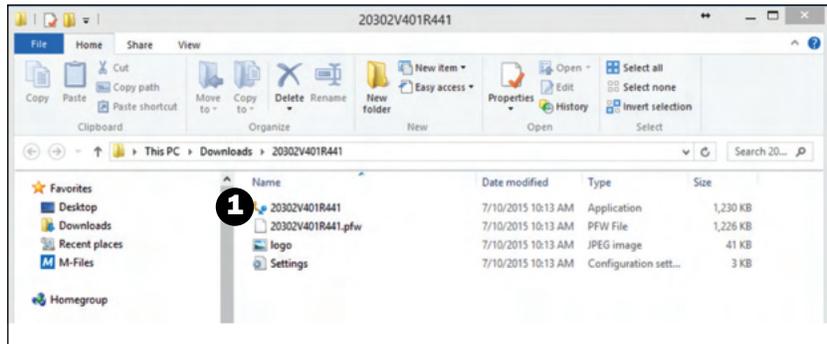




Part 3 Launch & Execute the Firm- ware Update Utility

1 Double click to launch the **Firmware Update Utility** from the folder you created in the preliminary steps.

Make sure you have the **four files necessary to complete the update.**



2 **Windows 8** - Click **Run anyway**



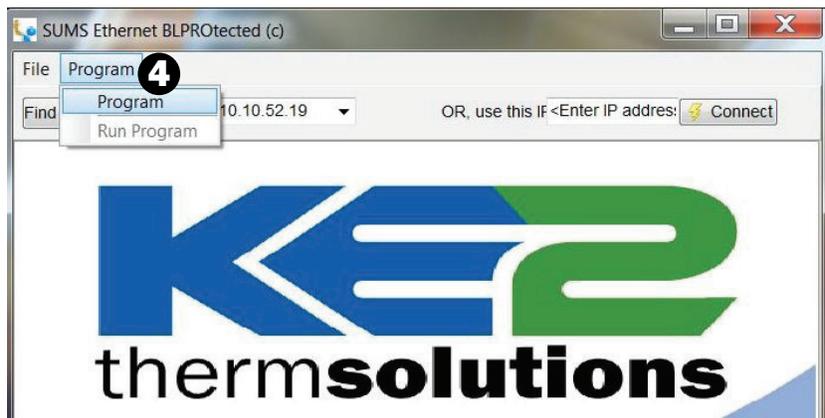
3 Confirm that the **Firmware Update Utility** has located the controller, at the controller's preconfigured IP address.

If you receive a message from your PC's firewall, make sure you allow it.

If you receive a message that no controllers are in boot-loader mode, press FIND ALL DEVICES.



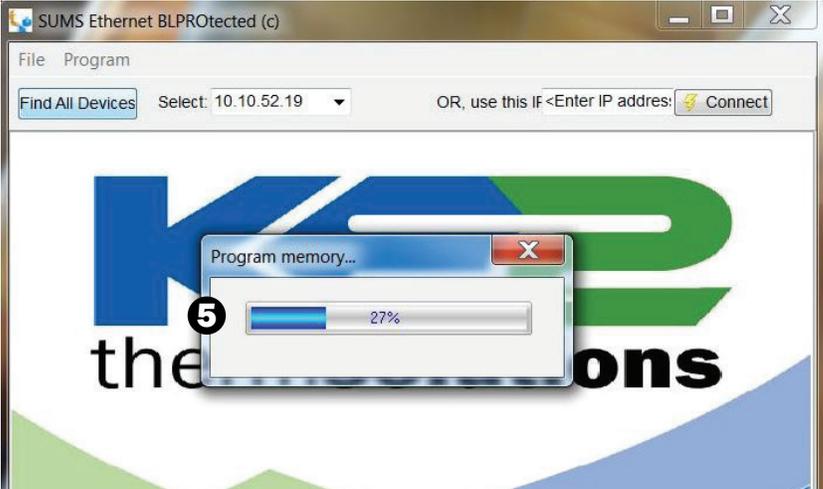
4 Select **PROGRAM/PROGRAM**.





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5 Observe the programming process.



6 Once the programming process has completed, click **OK**



7 You will now see another message telling you Congratulations! Click **OK** again.



Part 4 Confirm the firmware update is installed properly

1 Refresh the web browser for the controller web page.

Use **Cntl + F5** to ensure web pages load correctly.

2 Using the screenshots collected from Part 2 Step 4, Login and change any values on the Setpoints and Settings pages that were changed to defaults during the bootload process.

Note: the controller will be in Intro mode after bootloading, the same as if you installed it for the first time. If no setpoints need to be changed, click **Save** on Setpoints to accept default values, and allow the controller to begin operating.

