

Infinity® 26 Air Conditioner with Greenspeed® Intelligence
Infinity® 24 Heat Pump with Greenspeed® Intelligence

Version 10.00 Release Notes

June, 2022

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General



This document is provided in conjunction with the “bex” file [GSPD1000.bex](#) and the “bin” files [VFDxA029.bin](#), [VFSxA036.bin](#), which comprises the executable code for the following Carrier Infinity® 26 Air Conditioner with Greenspeed® Intelligence and Carrier® 24 Heat Pump with Greenspeed® Intelligence numbers:

- 24VNA624A0030050
- 24VNA624A0031050
- 24VNA636A0030050
- 24VNA636A0031050
- 24VNA648A0030050
- 24VNA648A0031050
- 24VNA660A0030040
- 24VNA660A0031040
- 25VNA424A0030050
- 25VNA424A0031050
- 25VNA436A0030050
- 25VNA436A0031050
- 25VNA448A0030050
- 25VNA448A0031050
- 25VNA460A0030040
- 25VNA460A0031040

This software is ONLY compatible with these model outdoor units.

Detailed instructions on uploading this software into the Infinity 26/24 air conditioner and heat pump are included in this document. The software release package is available through this link:

http://cacbdpapps.net/marketing/eula/Infinity_24_Greenspeed_V1000_eula.html

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Notices for Common Microcontroller Software Interface Standard (CMSIS)

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Revision History

Version 10.00 – (June 2022)

Version 10.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

- Updated indoor airflow control to prevent indoor coil freeze during cooling mode operation in susceptible conditions such as low humidity and arid environments.
- Resolved an issue where diagnostic code (13-82) "System Control Upgrade Recommended" was incorrectly activated when paired with a system control model SYSTXCCITC01-C
- Resolved an issue where diagnostic code (53-01) "OST Open" was incorrectly activated when replacing the PCM in AC units built without an OST sensor. An OST sensor will need to be added to any AC unit to resolve the 53-01 code if it has not been manufactured with PCM 10.0 software. In other words, a field software update (SD Card or STA) to the PCM V10.0 will not resolve a 53-01 fault code.

Version 9.02 – (December 2021)

Version 9.02 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

- Removed the 2 hours lockout associated with diagnostic code (85-54) "VFD System Lockout - DC Over Volt" and changed the designation from malfunction to fault.
- Resolved instances where the following faults could prematurely progress to the malfunction status before meeting the occurrence and timing requirements:
 - 32-55
 - 33-55
 - 36-55
 - 61-53
 - 81-53, 81-54
 - 82-53, 82-55, 82-56, 82-57
 - 83-55, 83-56
 - 85-53, 85-54
 - 86-46
 - 87-53
 - 88-55, 88-71, 88-73, 88-74, 88-75, 88-76, 88-78, 88-79

Version 9.01 – (September 2021)

Version 9.01 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

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Major Updates:

- Modified airflow parameters to deliver 400 cfm/ton on maximum indoor airflow setting with 26/24VS outdoor units. System airflow cfm is determined by outdoor delivered capacity.

Version 9.00 – (August 2021)

Version 9.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

Major Updates:

- Implemented heating mode charge compensation to reduce occurrences of (31-58) “Compressor High Pressure Limit” in systems experiencing charge imbalance due to differences between indoor and outdoor coil sizes and short line set lengths.

Defect fixes:

- Modified activation threshold for diagnostic code (64-41) “EXV-H Phase Open” to prevent nuisance trip due to power dropout.

Version 8.00 – (July 2021)

Version 8.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

Major Updates:

- Implemented a strategy where the heat pump can indicate defrost mode operation when a transition from cooling to heating occurs and the compressor remains in active operation. This change will result in the heat pump shutting down when changing between cooling and heating mode.

Version 7.00 – (March 2021)

Version 7.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

Major Updates:

- Modified (41-13) “Defrost Timeout” to reduce occurrence. Lowered various defrost termination temperatures and adjusted defrost termination timeouts
- Support alternative sourcing of microcontroller

Defect fixes:

- Fixed defect where 2700 RPM startup did not complete even when 18F discharge superheat was achieved. This caused defrost to run at 2700 RPM instead of the expected 3000 RPM
- Fixed defect where a shutdown in cooling and subsequent startup in low ambient heating could fail to switch the reversing valve to the heating position. Forced outdoor fan off

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until pressure differential recovers and valve switches. Symptom of this problem is (61-13) or (61-53) “Reversing Valve Timeout Lockout”.

Version 6.00 – (January 2021)

Version 6.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

Major Updates:

- Implemented sump heat using VFD stator heat
- Implemented Indoor Coil Freeze Protection
- Improved coordination with system control for outdoor unit heating immediately after defrost cycle to reduce cold blow
- Implemented ALT/OST sensor for an AC unit as well as (53-01) “OST Open” and (53-02) “OST Shorted” diagnostics
- Improved compressor envelope management in regard to changes in maximum discharge pressure. Made it less sensitive to 35-11 “Compressor High Compression Limiting” diagnostic

Defect fixes:

- Resolved an issue where the reversing valve did not switch on entrance to defrost because of startup control in low suction pressure mode, or because compressor envelope management was holding the compressor speed below 2700 RPM
- Resolved an issue where defrost did not properly terminate when
 - Outdoor fan failed to turn off after a reversing valve switch
 - A malfunction occurs during heat pump defrost
 - A 50 PSI differential (DP-SP) is not achieved to support reversing valve transition within a 10-minute (61-13) timeout diagnostic
- Resolved an issue where compressor restart was delayed awaiting a proper coil / ambient temperature difference (after defrost)
- Resolved an issue where a 3T VFD with a 4/5T PCM model plug did not properly flag (25-63) “VFD System Lockout - Model Mismatch”
- Resolved an issue where status code recall would sometimes show currently active diagnostic codes instead of previous active codes.
- Resolved an issue where an abrupt power down could corrupt the diagnostic record
- Resolved an issue where diagnostic code (17-06) “Lost BTM Communication” was incorrectly activated
- Adjusted compressor speed and indoor airflow which caused diagnostic codes (31-11) and (31-58) “Compressor High Pressure Limit” to activate for some equipment combinations
- Resolved an issue where diagnostic code (32-59) “Low Pressure Lockout” was incorrectly activated
- Resolved an issue where diagnostic code “(39-15) “Unexpected Fan Shutdown” was incorrectly activated
- Resolved an issue where diagnostic codes defect of false (66-41) “VFD Control Relay Open Lockout”, (66-42) “VFD Control Relay Shorted Lockout”, (82-13) “VFD Reset with

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- Power Dropout” and (88-15) “VFD Internal Fault – Unexpected Reset” were incorrectly activated
- Resolved an issue where diagnostic code (81-58) “VFD System Lockout – Wiring Error” was incorrectly activated
- Resolved an issue where diagnostic codes (86-06) “VFD System Fault - Communication”, or (82-13) “VFD Reset with Power Dropout” were incorrectly activated

Version 5.00 (November 2020)

Version 5.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

Defect fixes:

- Fixed defect that may occur in heat pump system during defrost when system could become “stuck in defrost” mode for up to 4 hours.

Version 4.00 (August 2020)

Version 4.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

Major Updates:

- Implemented (Silencer System II™).
- Enhanced matrix display and STATUS LED display.
- Implemented compressor reverse wiring diagnostic and modified various diagnostic messages for consistency with service manual.
- Enhanced logic for model plug discrimination.
- Enhanced cooling capacity and indoor airflow to improve dehumidification control.
- Enhanced VFD temperature control and diagnostic.
- Modified 5 EXV diagnostics to be local.
- Allow reprogramming of the VFD in presence of various VFD active diagnostics.

Defect fixes:

- Reduced opportunity for high pressure during furnace transition to heating.
- Fixed defect of shutdown on 3T HP before or after defrost on code 85-xx or 82-xx
- Fixed defect related to loss of suction superheat at subzero ambient temperature
- Fixed defect where (83-57) “VFD Compressor Lockout - Current 1” was erroneously set

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Version 3.00 (April 2020)

Version 3.00 software includes the following updates to the Infinity® 24 Heat Pump and Infinity® 26 Air Conditioner controls:

Major Updates:

- Enhanced communication stability with system control.
- Enhanced the reporting of diagnostic codes to system control and service technician mobile application.
- Enhanced reliability of EXV positioning.

Defect fixes:

- Reduced false diagnostic codes and adjusted recovery time for several diagnostics.
- Fixed defect for compressor speed control with low suction pressure during startup
- Fixed defect for outdoor fan slow ramp during startup/shutdown, as well as the fan starting after the compressor
- Fixed defect for stuck in startup compressor speed, and stuck in suction pressure control after defrost
- Fixed defect preventing VFD reprogramming in fault conditions.
- Fixed defect regarding reprogramming "serial flash erase error"
- Fixed defects for charging pump down, evacuation, and sub-cooling
- Fixed defect in incorrect fan speed control when outside temperature is above 115°F

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Installation Instructions

Finding the Current Software Version

Before starting the software installation process, the current software version may be determined as follows:

Press **menu** on the Main screen,



and then the down-arrow to go to the second menu screen.



Touch **service** icon.

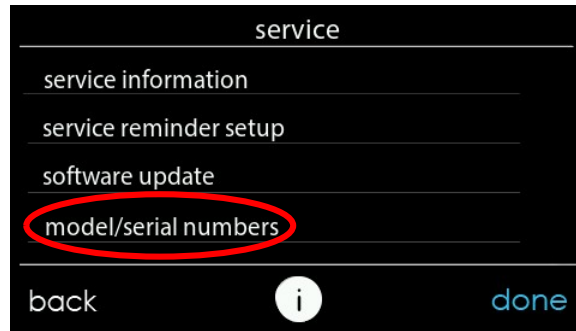


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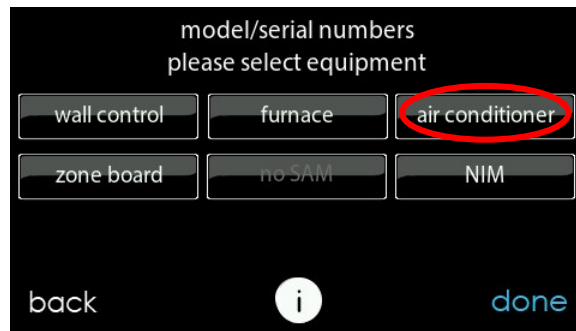
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Touch **model/serial numbers** on the resulting screen.

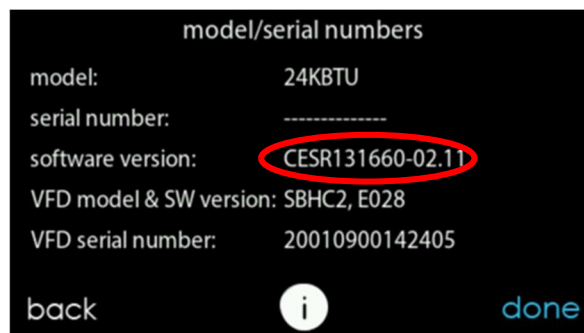


Touch **air conditioner** or **heat pump** on the resulting screen.



View the Software Version number.

Software Version 131660-02.11, for example, is the software version 2.11.



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Downloading the Software Update

Software updates are provided over-the-air (OTA), or uploaded manually using a microSD memory device. The following instructions apply to the manual update process.

You will obtain best results using a MicroSD card that is between 4GB and 32GB in size, and formatted as a FAT32 device. Any other formatting (NTFS, exFAT, etc.) will result in an error of “please insert MicroSD card.”

To perform a control software update, follow these steps:

- Click on this link to obtain the updated software:

http://cacbdpapps.net/marketing/eula/Infinity_24_Greenspeed_V1000_eula.html

If the link does not work properly, copy the link into your browser web address window and open the link.

NOTE: You may NOT distribute the software itself. You may only distribute the link to the software, or this document.

- Read the End User License Agreement (EULA).

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- At the bottom of the EULA, choose “Yes” if you accept the agreement. If you do not wish to accept the agreement, you will not be able to download the software update.

NOTE: EACH user must accept the EULA each time the software is downloaded. You may NOT distribute the software itself. You may only distribute the link to the software, or this document.

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I agree to the terms of this License Agreement and desire to access the software.*

Yes

No

- Use the Download link provided in the EULA document to download the software update package.



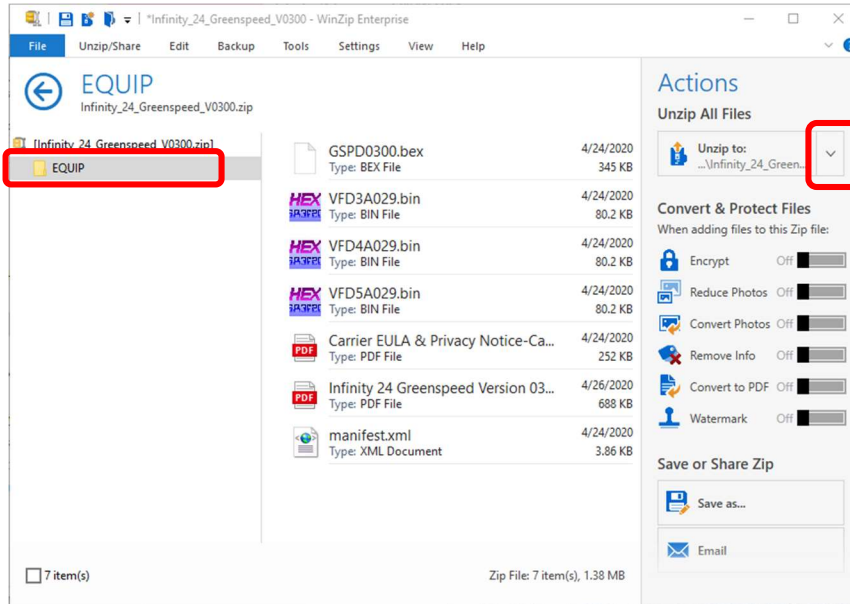
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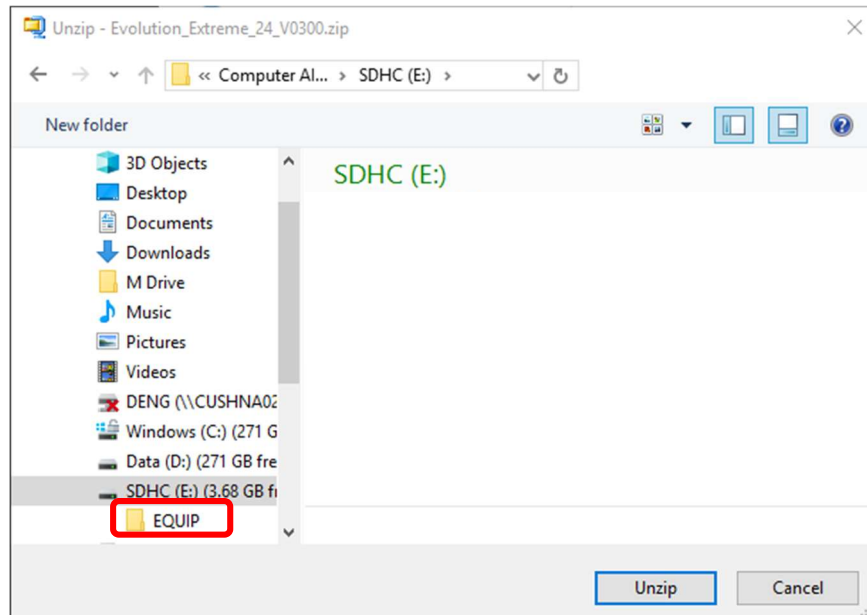
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- Once the file has been downloaded, open it in WinZip. Select the **EQUIP** folder, then the **Unzip to** action.

NOTE: The names of the files in the images below are examples, and will change with the latest version numbers.



- Choose the MicroSD memory device as the location to which to extract the folder from the zip file. This will create a new **EQUIP** folder, or over-write the existing **EQUIP** folder and any files contained within it. Click **Unzip**.



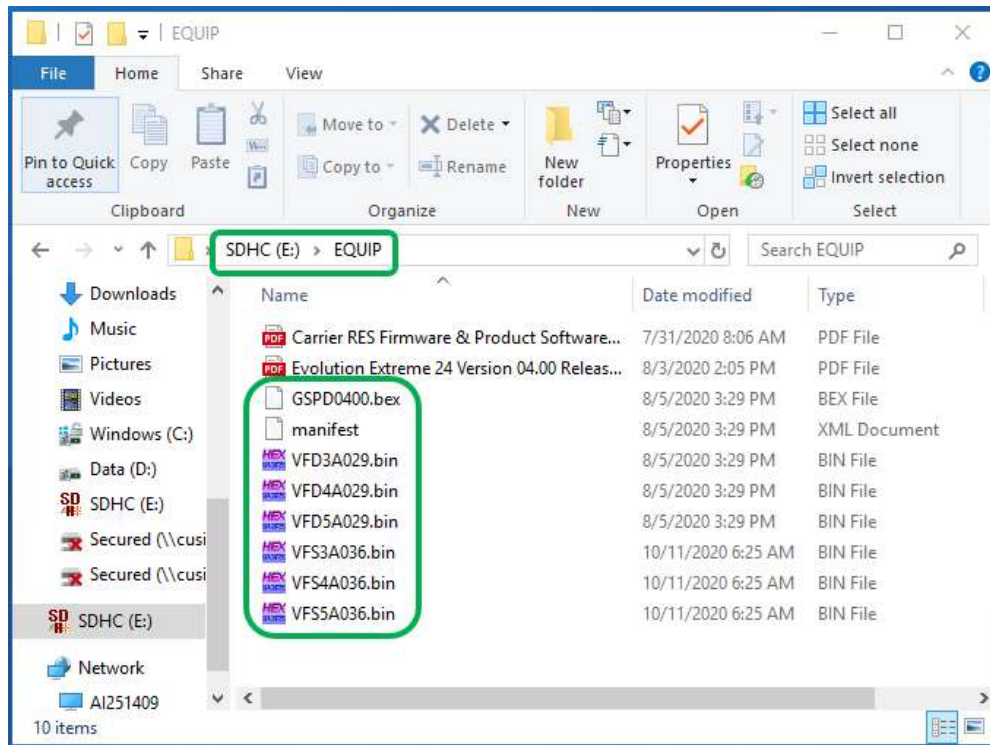
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- Verify that the files, including the [manifest.xml](#), [GSPD1000.bex](#), [VFSxA036.bin](#) and [VFDxA029.bin](#) files, have been extracted into the EQUIP folder of the MicroSD device.

NOTE: The names of the files in the images below are examples, and will change with the latest version numbers.



Next, eject the MicroSD from the PC and go on to the installation, below.

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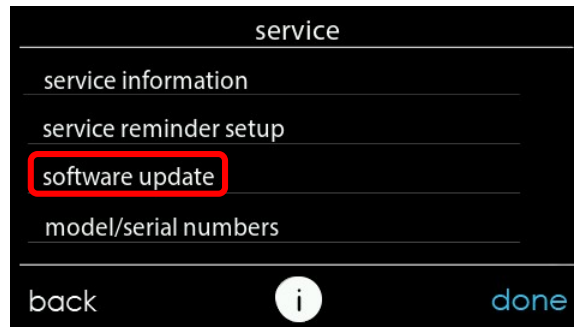
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Installing the Software Update

- From the **MENU** screen, select the **service** icon.



- Select **software update**. If this option does not appear, your dealer will need to install your software. Contact your dealer for assistance.



- Select **update software using MicroSD card**.



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- Select **air conditioner software** or **update heat pump software** update



- Plug the MicroSD card into the bottom of the control.

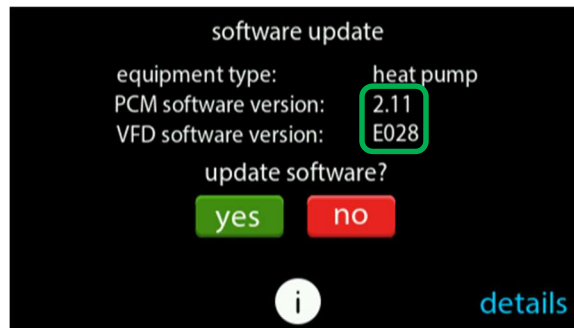
If this screen continues to appear, recheck the device and formatting. See the download section.



- If the .bex file is stored properly on the MicroSD device, this screen will appear. If the screen says, "Please insert MicroSD Device", remove the MicroSD device and re-insert. If it still does not show the screen, below, go back to the download part and retry.

NOTE: The names of the files in the images below are examples, and will change with the latest version numbers.

Press **yes** to continue with the software upgrade. The upload to the air conditioner or heat pump may take a long time, up to 45 minutes. During this time, the air conditioner or heat pump will continue to operate as normal.

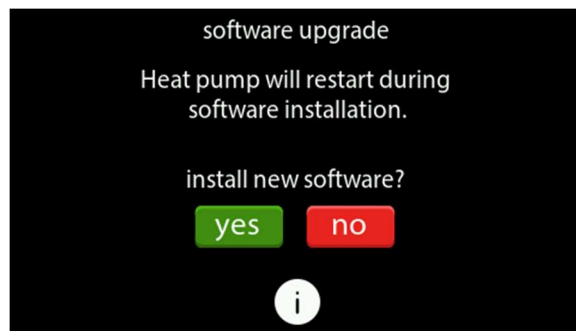


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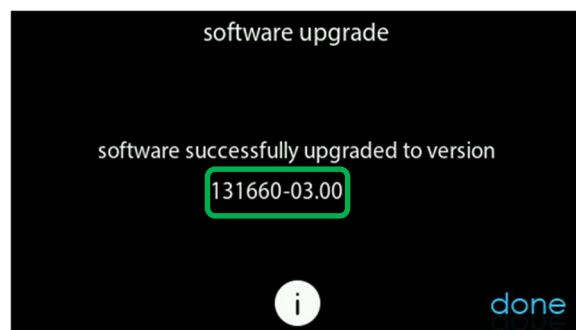
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- When the software is downloaded to the air conditioner or heat pump, the following screen will appear. Press **yes** to install the new software. The air conditioner or heat pump control will restart to complete the installation. This should only take a few minutes.



- When the software upgrade is complete, a "successful" message will appear.



- This completes the software upgrade process.
You may want to confirm the new software version, as described above.