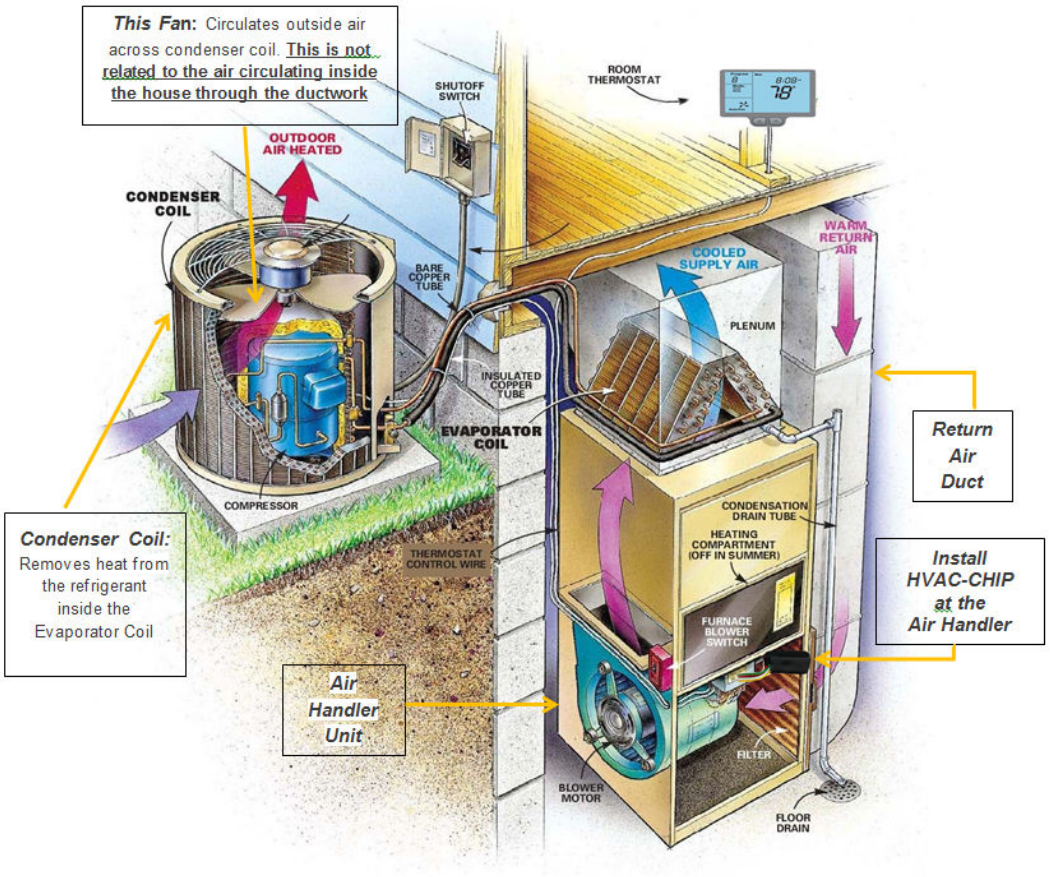
Installation of *CWS-8THEM-0006*

HVAC Energy Saving Device (HVAC-CHIP)

Rev F. April 2015

Website: www.hvac-chip.com

PATENT PENDING



INSTALL THE HVAC-CHIP ON THE 24 VOLTS SECTION OF THE AIR-HANDLER UNIT. SEE LOWER RIGHT CORNER OF PICTURE ABOVE

Air Handler Unit is a large metal box containing a blower, heating or cooling elements, filter racks or chambers, sound attenuators, and dampers. Air handlers usually connect to a duct work ventilation system. In residential homes, it is usually located in the garage and/or in the attic. In commercial buildings, it is typically located on the roof with the compressor.

Conventional HVAC Air Handler. Wiring Instructions

STEP 1: Turn OFF power to the main HVAC or Heating/Cooling System by switching the breaker to OFF.

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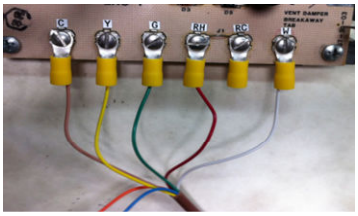
STEP 2: Use a screwdriver to remove the screws and remove the front metal cover of the Air Handler Unit.

STEP 3: Locate the 24 Volts Panel Terminal Block (or Bus Bar) which is usually on the PCB (Printed Circuit Board) right behind the metal cover. If there is no PCB, identify the wires from the thermostat and to the solenoids by its color coding.



STEP 4: Take a photo or make a sketch of the wire connections. Make sure those connections are clear and readable. This will help you reconnect the wires later.

STEP 5: The HVAC-CHIP works with Conventional, Heat Pump, Gas or Electric HVAC systems.

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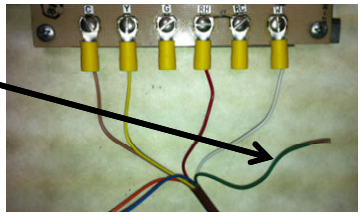
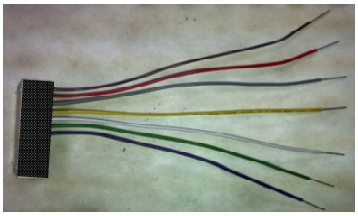
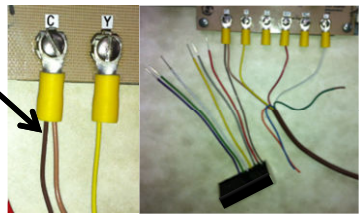
A. Disconnect the **Green** wire from terminal **"G"** (blower fan wire). Note that this disconnected green wire comes from the thermostat. Internal to the air handler unit, the **"G"** terminal goes to the blower fan solenoid.



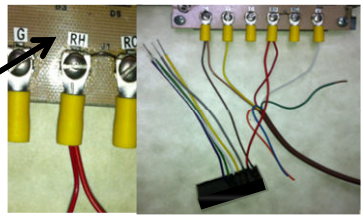
B. Prepare the HVAC-CHIP for connection by straightening out the wires.



A. Add the **Brown** wire of the HVAC-CHIP to the existing wire at terminal **"C"** which is the 24V common wire.



D. Add the **Red** wire of the HVAC-CHIP to the existing wire at terminal **"RC"** or **"RH"** of the 24V red wire.



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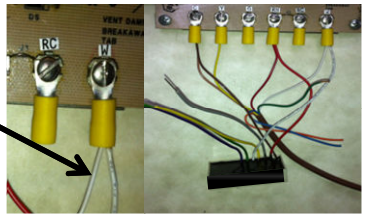
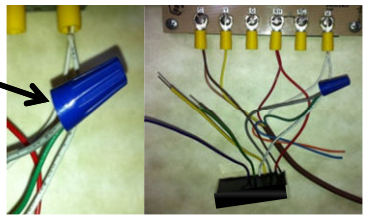
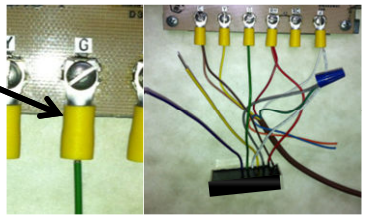
E. Add the **White** wire of the HVAC-CHIP to the existing wire at the **"W"** terminal or the white wire of the thermostat wiring.



F. Use a wire nut, connect the **Green** wire (previously disconnected in the step (A) to the **Gray** wire of the HVAC-CHIP. *This just means that the HVAC-Chip's Gray wire is now directly connected to the thermostat's green terminal.*

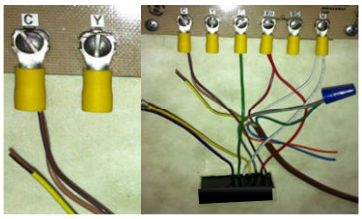


H. Connect the **Green** wire of the HVAC-CHIP to that **"G"** terminal. Note that only one wire is on this terminal. *This means that the HVAC-Chip's Green wire is now directly connected to the blower fan solenoid wire.*

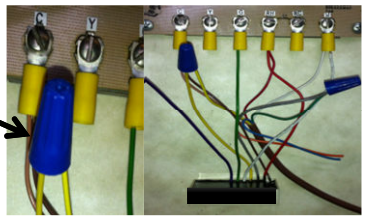


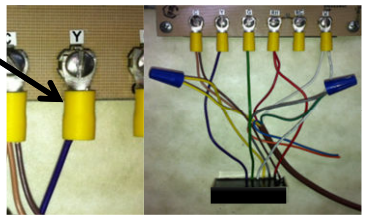
I. Disconnect the original **Yellow** wire from terminal **"Y".**

J. Use a wire nut to connect the **Yellow** wire of the HVAC-CHIP to the original **Yellow** wire (previously disconnected in the step G). *This means that the HVAC-Chip's yellow wire is now directly connected to the thermostat yellow or compressor wire.*



K. Connect the **Purple** wire of the HVAC-CHIP to the **"Y"** terminal. Note that only one wire is connected to this terminal. *This means that the HVAC-Chip's purple wire is now directly connected to the compressor solenoid wiring.*





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Heat Pump Air Handler. Wirings Instructions.

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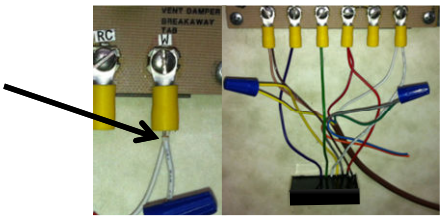
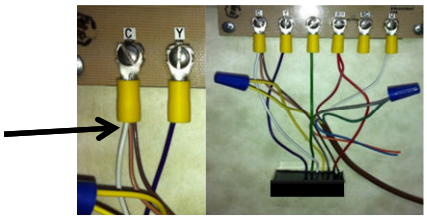
A. Follow the steps for conventional HVAC air handler wiring connection except for the **White** wire of the HVAC-CHIP. *Do not connect the **White** wire from the HVAC-CHIP to this **"W"** terminal.*



B. Instead, connect the **White** wire of the HVAC-CHIP to the common terminal **"C"** (Brown wires) as shown on the right. *Note that after this connection is done, there should be 3 wires on this terminal. This connection is only for Heat Pump mode.*



CWS-8THEM-0006 will stop compressor run 5 minutes for every 30 minutes of continuous compressor run time.

STEP 6: Installation is completed. Be sure the connections are correct and tight . Turn the power back ON.

Run the "TEST INSTRUCTIONS" listed in www.hvac-chip.com to ensure the connections are done correctly.

Application Note:

The patent pending CWS-8THEM-0006 is suitable for application in dry climate and in hot dry regions where the air conditioning compressor does not shut down and keeps running continuously for 30 minutes or more trying to reach the set temperature. It is also suited for applications where the blower ventilation fan must continue to run all day long to meet state regulations for commercial and industrial buildings. This is in additional to extending the fan run time after the compressor or heater cycles off.

The fan extension is based on an intelligent feedback algorithm and not based on the current compressor run time. It is based previous compressors on cycles and off cycles to predict how long the fan should be extended to maximize the energy savings.

Disclaimer: *CWS-8THEM-0006 must be connected and operated in accordance to the instructions set forth in this Installation Manual. CWS shall not be liable for any misuse, misconnection or wrong connection which may cause equipment failure or personal injury or patent infringement.*