



Atmos
Heat Pump

**INTERFACE KIT
K03085**

SETUP GUIDE

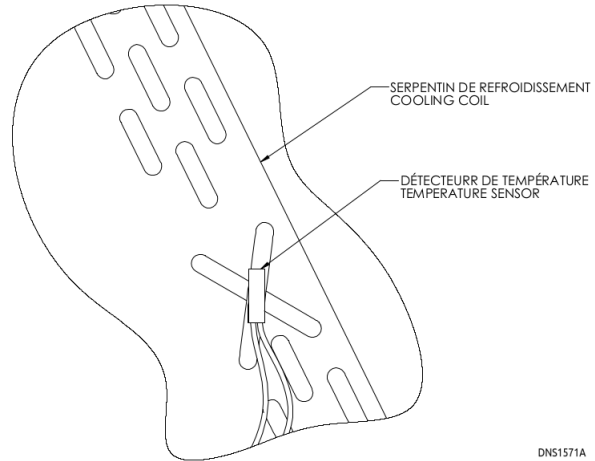
⚠ WARNING

Turn off the breaker of both indoor and outdoor units before installation.

For all steps, refer to the complete manual of the thermostat, the furnace and the outdoor unit.

1 Temperature Sensor Installation

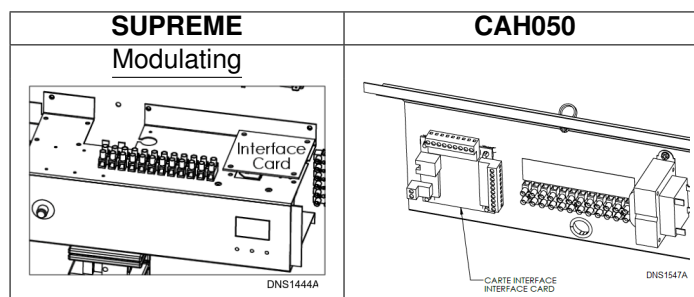
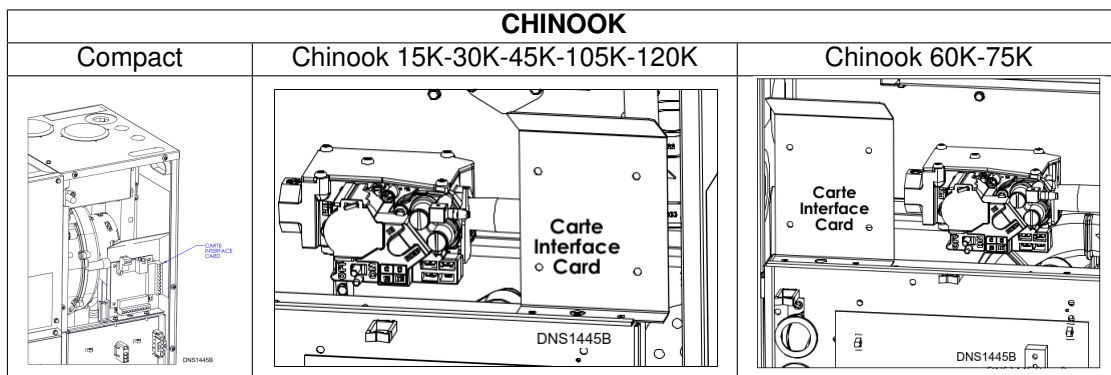
1. Attach the provided temperature sensor to the evaporator coil at mid-height on the cross-over.
2. Get the wire through the opening of the 3/8" refrigerant line.
3. Cut the connector and skin the conductors. Add wire length if necessary.
4. Connect the two conductors to T1 and TC on the interface board. The polarity is not important.



DNS1571A

2 Interface Board Location

For Dettson furnaces, install the interface board at the proposed location using the provided spacers. Use the provided deflector in Chinook gas furnaces, or for non-Dettson furnaces.



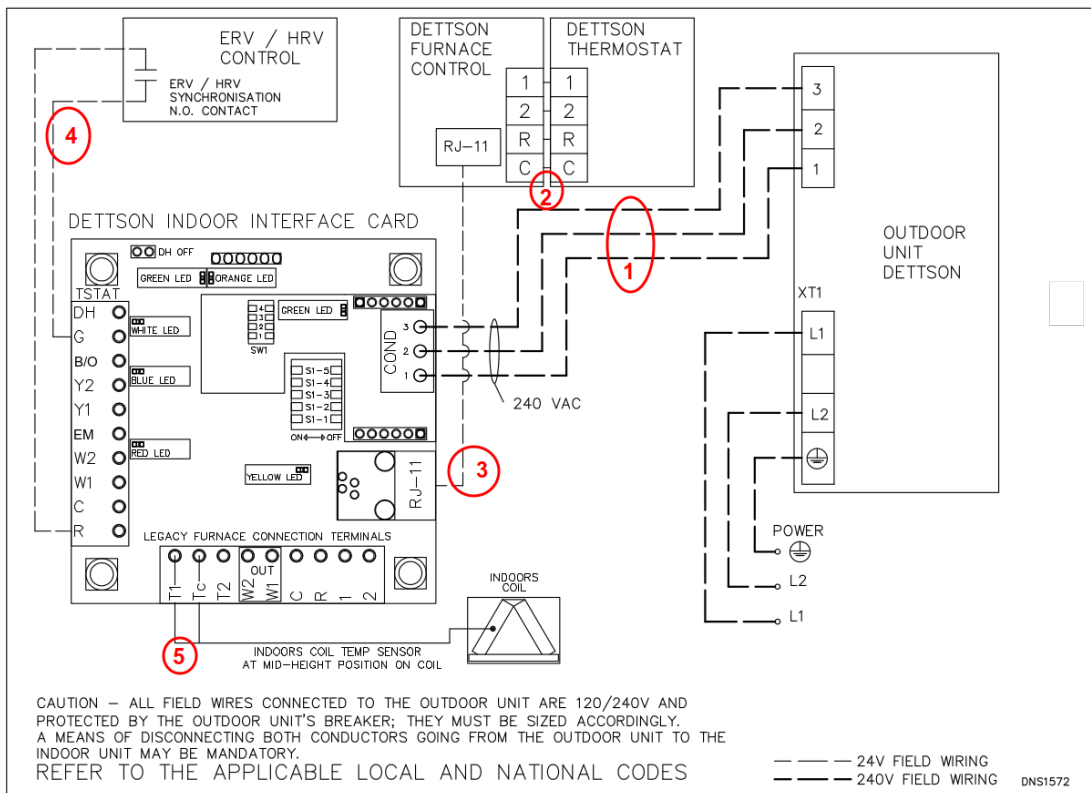
3 Wiring

3.1 OPTION 1 - Communicating System

Setup with Modulating Chinook or Supreme

1. Connect **COND-1**, **COND-2** and **COND-3** on the interface board to the **1**, **2** and **3** respectively on the outdoor unit.
2. Connect the thermostat wires **1**, **2**, **R** and **C** to the furnace.
3. Connect the RJ-11 wire (A00443) between the interface and the furnace control board.
4. Optional ERV/HRV interlock:
 - (a) Connect the ERV/HRV unit (dry contact) between the **R** and **G** terminals on the interface board.
 - (b) The desired airflow can be adjusted through the thermostat settings.
5. The temperature sensor must be properly installed on the indoor coil (section 1) and connected between **T1** and **TC**.

In this configuration, the interface board will gather information from both the outdoor unit and the furnace in order to adjust the fan speed to the capacity of the outdoor unit.



Balance point adjustment

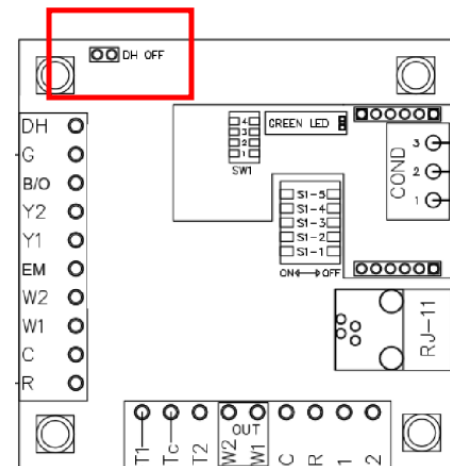
Refer to the thermostat manual to adjust the balance point (temperature below which auxiliary heat will be used).

3.2 OPTION 2 - Legacy 24V System

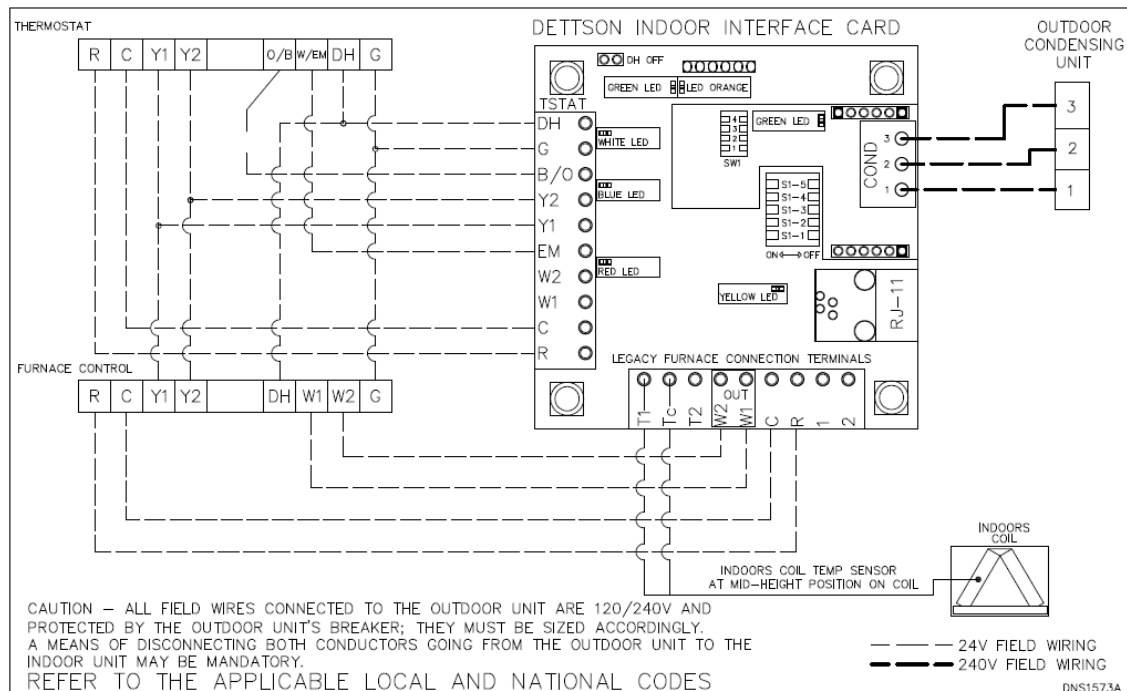
Setup with non-modulating furnaces

1. Connect **COND-1**, **COND-2** and **COND-3** on the interface board to the **1**, **2** and **3** respectively on the outdoor unit.
2. Connect the thermostat wires as shown on the diagrams.
3. Make sure to properly connect the heat singals:
 - (a) Output **W1** and **W2** of the thermostat to the **W1** and **W2** inputs of the interface board.
 - (b) For single-stage thermostats, connect to **W2** on the interface board.
 - (c) If using a thermostat with heat pump control (**O/B** signal), make sure it is configured to match the thermostat signal (dip switch **S1-5**).
 - (d) **W1 out** and **W2 out** of the interface board goes to **W1** and **W2** of the furnace.
4. If the **DH** signal is connected, remove the DH jumper on the interface board (located near the **DH** terminal).
5. The temperature sensor must be properly installed on the indoor coil (section 1) and connected between **T1** and **TC**.
6. Adjust the balance point using the dip switches **S1-2**, **S1-3** and **S1-4** on the interface board.

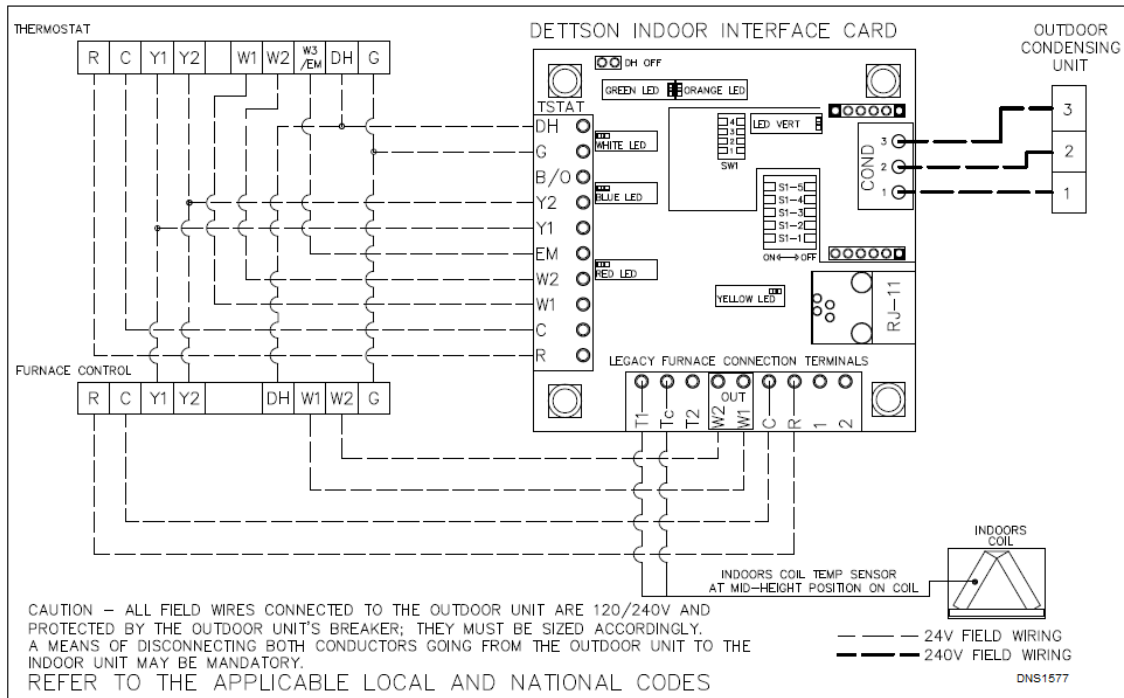
Heat Pump Signal	
S1-5	Signal
OFF	B
ON	O



Wiring with thermostat for heat pump control



Wiring with conventional thermostat

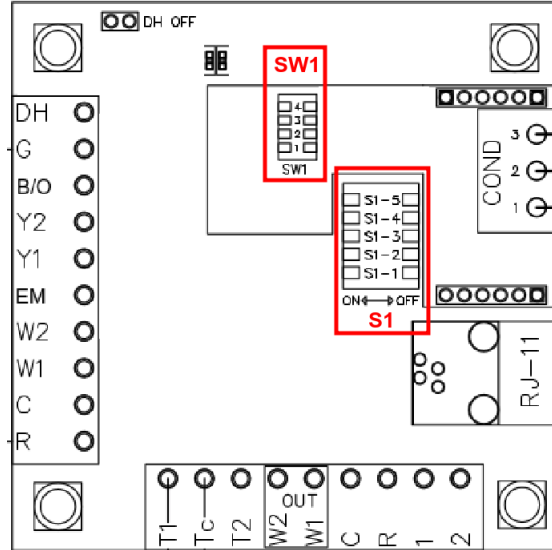


Balance point adjustment

S1-2	S1-3	S1-4	Balance Point
OFF	OFF	OFF	-30°C (-22°F)
OFF	OFF	ON	-20°C (-4°F)
OFF	ON	OFF	-15°C (5°F)
OFF	ON	ON	-10°C (14°F)
ON	OFF	OFF	-5°C (23°F)
ON	OFF	ON	0°C (32°F)
ON	ON	OFF	5°C (41°F)
ON	ON	ON	HP heat only

4 Settings

Location of DIP Switches



4.1 Capacity adjustment

The capacity of the outdoor unit connected to the interface board must be selected using the dip switches **SW1**.

SW1-1	SW1-2	SW1-3	SW1-4	Capacity (btu/h)
ON	OFF	OFF	OFF	9k
OFF	ON	OFF	OFF	12k
ON	ON	OFF	OFF	18k
OFF	OFF	ON	OFF	24k
ON	OFF	ON	OFF	30k
OFF	ON	ON	OFF	36k

4.2 Mode A/C only

To run the outdoor unit in “Air Conditioner” mode (no heat), turn ON the dip switch **S1-1**.

S1-1	Mode
OFF	AC & HP
ON	AC only

4.3 Zoning System

When installed with the Dettson Smart Zoning System, the airflow limitation per zone can be disabled by turning the dip switch **S1-5** to ON. **This is not recommended.**

5 Troubleshooting

5.1 Testing the Unit

Once everything is correctly installed, turn the power and:

1. The Green LED on the interface board should be blinking once every two seconds.
2. The Orange LED on the interface board should be blinking once every two seconds.
3. The communicating thermostat will find the heat pump.
4. Set the thermostat to “COOL” mode and adjust the set point to a lower value than the actual room temperature.
5. The Blue LED on the interface board should turn on and both the furnace and the outdoor unit should start within 5 minutes.

5.2 LED Codes

Green LED

There are two green LEDs.

The upper green LED should blink steadily, otherwise it indicates an error code from the outdoor unit.

The lower green LED, along with the orange LED next to it, will indicate the current error code (see table on next page).

Orange LED

The orange LED, along with the green LED next to it, will indicate the current error code (see table on next page).

Yellow LED

In communicating mode, the yellow LED should be blinking by short bursts. If not, there is a communication issue with the furnace. RJ-11 cable and wires 1 and 2 should be checked.

In legacy mode (24V), this LED should stay off.

Blue LED

The blue LED will turn on when there is a call for cooling from the thermostat.

Red LED

The red LED will turn on when there is a call for heating from the thermostat.

White LED

The white LED will turn on when there is a call for ERV fan or dehumidification. In communicating mode, this LED will blink when there is a dehumidification call.

Error Codes

Green LED	Orange LED	Status
Off	Off	No power (check R & C)
Off	Blink	Outdoor fan speed control error
Off	Rapid	Compressor protection error
Off	On	IPM protection
Blink	Off	Communication error with indoor unit
Blink	Blink	Normal operation
Blink	On	Communication error with outdoor unit
Rapid	Off	Low pressure protection
Rapid	Blink	Compressor high temperature (overheat)
Rapid	Rapid	Voltage protection
Rapid	On	Current protection
On	Off	Outdoor condenser temperature sensor error
On	Blink	Outdoor ambient temperature sensor error
On	Rapid	Outdoor condenser high temperature
On	On	Compressor exhaust temperature sensor error