Frequently Asked Questions 402
3/29/06

1. **Q. With Dual Fuel application a call for heat only tries to bring on the furnace but my gas is not hooked up yet; it's chilly inside.**

1. A. For dual fuel you need to cut a jumper on the back of the control PCB. If you are set up for dual fuel and do not cut the jumper, all signals go to the furnace. Once you've cut the jumper, the control will run the outdoor unit above the ODT set point and will be looking to cycle off the ODU and bring on the indoor heat when either the ODT tells it to or when the indoor temperature drops far enough below the set point.

2. **Q. There is no mention of operation of the heat pump below thermal balance point. To improve justification of dual fuel heat pump utilization in lower outdoor ambient conditions a heat pump thermostat must include a sequence of operation that allows operation below thermal balance point, to a selectable economic balance point.**

2. A. A Selectable balance point gives the user additional justification for dual fuel heat pump utilization at lower outdoor temperatures. The ACONT402 does allow operation below the thermal balance point providing the option for a selectable economic balance point.

In fact, this control has both an economic balance point for the HP and a lockout temperature above which the furnace isn't allowed to operate which will make it superior to any product out in the market today (including Aprilaire's 8570). See Installer's Guide for more info (Installer Set Up 43 & 44).

3. **Q. In heat pump mode, Aux heat won't turn on when temperature is manually raised. "Wait" icon stays on. In Emergency Heat Mode Aux heat will come on as expected**.

3. A. A ten minute inhibit applies after load value exceeds 110. It could take 15-20 minutes for Aux heat to energize

4. **Q. Will the 402 control have a BK wire for modulating the blower for two speed systems and continuous fan?**

4. A. Yes, but it will also be for single speed systems with variable speed blowers as well.

5. **Q. Does the 402 series use the outdoor sensor to inhibit the change-over to gas?**

5. A. A sufficient load value can initiate a call for indoor heat regardless of the ODT set point and outdoor temperature. Outdoor temperature below the ODT set point will cause a change-over to indoor heat.

6. **Q. The presentation says 5 heat stages on the 402 / XR2. What does this mean?**

6. A. 5H/2C application;
This could be a 2 compressor heat pump application. That is, 2 stages of compressor heat with 3 stages of auxiliary heat.

7. Q. On the A/TCONT400 series of thermostats, can you run the outdoor sensor leads with the rest of the 24 volt power leads?
7. A. [CLG] Yes, for the A/TCONT400 series, using two uncommitted wires for the outdoor sensor in the same 24V cable as the control wires is OK. But don't try to connect the outdoor sensor with only one wire by using B as the other wire for the sensor. Not only is the accuracy of the reading not guaranteed, but voltage transients on the 24V wires can damage the comfort control.

8. Q. The filter timer was discussed and those present were split on the preference of elapsed time or blower run time. What is planned? Both?
8. A. [CLG] The A/TCONT200 and 400 series controls have both; Calendar days and Run-time days. The factory default is 30 Calendar days.

9. Q. "Defeat Equipment Time Delay" installer option does not work for second-stage compressor operation but does defeat the Minimum Equipment Off Time for the first-stage compressor. Shouldn't the second stage compressor MEOFT be defeated as well?
9. A. Yes, but the software revision to defeat the MEOFT for second-stage will come at a later date.

10. Q. Can the 402 set up as a dual fuel control work in a non-restricted mode with no outdoor sensor hooked up?
10. Yes. Once selections are made and the JP1 jumper is cut, the control will request capacity from the heat pump first, then if Load Value is high enough after the INHIBIT has expired the furnace will come on and the heat pump will cycle off. Stages of furnace will cycle based on LV. Selections 40 – 49 are not available if Outdoor Sensor is not selected (Selection = 0, or None)

11. Q. In the 402 Installer Guide all the HP wiring diagrams do not show bringing X2 back in from OD unit for defrost tempering.
11. A. What you noticed is correctly expressed in the Installer Guide.
For HP applications, the control knows you are in the heat mode by the absence of "O" from the stat. So, when an "O" signal appears, the control knows the OD unit is in Defrost. Staging of "W" is by demand if multiple stages are available and wired appropriately.