

Factory Start-up Checklist for Thermostat

HVAC Contractor: _____ Date: _____
Requested Start-up Date: _____ Project: _____
Qualified Technician _____ Model #: _____
Serial #: _____
Project Address: _____

Customer Name: _____
Customer Contact: _____
Phone: _____ Fax: _____ Email: _____
Customer Address: _____

Note: The above start-up date needs to be scheduled with our office immediately. Allow three weeks lead time to schedule start. The items on all pages must be completed, signed-off and faxed or emailed to our office prior to the start-up date. Please fill out completely.

Proper equipment start-up is critical to customer comfort and equipment longevity. Utilize the following form to ensure that all the Pre-start-up procedures have been completed. The technician should initial each step as it has been completed and fill out the required start-up values. This form will provide the technician confidence that the system was thoroughly evaluated and installed properly. A separate checklist must be prepared and signed for all units to be started on the same date. Additional P.O. amount may be necessary for separate start-up dates. Please contact your Sales Engineer.

Note: The installing contractor's start-up technician must be present when iAIRE's start-up technician arrives on site for proper coordination and instructions on unit operation. The installing contractor is responsible for properly operating the unit after iAIRE's start-up technician leaves the job site.

Startup services require the installer to complete the manufacturers' pre-startup checklist on the next page prior to requesting startup.

**After completing this checklist, please scan and email back to iAIRE
at Support@myiaire.com**

Item	System Testing	Completed
	Inspect unit for damage.	
	Ensure split systems are completely plumbed and wired.	
	Is unit installed with proper clearances?	
	Check terminal screws & wiring for connection & tightness.	
	Ensure filters are installed.	
	If unit is a space temperature device, ensure that wire run is twisted & shielded.	
	Ensure condensate drain is trapped properly and not damaged.	
	Check to ensure all field wiring is complete.	
	Ensure correct voltage is run to the unit.	
	Check supply air fan belt tension is correct.	
	Check blower pulley & wheel are tight on shaft.	
	"Bump" power to ensure correct blower rotation.	
	Make sure outside air damper opens before any testing is started.	
	Test operation of supply fan.	
	Test operation of all compressors.	
	Test operation of condenser fan.	
	Test operation of hot gas reheat.	
	Test operation of heating (if applicable).	
	Verify proper refrigerant charge.	
	Verify proper airflow.	
	Screenshot of BACNet Points.	
	Confirm that all shipping brackets in condenser have been removed.	
	Make unit cycle compressor on and off with controls to confirm operation	

Pictures of: Change Out

Damage

Rework

Major Components

Viconics Version: _____

Solar Board Version: _____

VAV Board Version (if used): _____

Mod Heat Version (if used): _____

	Discharge Air Temp
Cooling Stage 1	°F

Factory Start-up Checklist

Item	Electrical Data		Reading
	Supply Voltage checked.	L1 – L3	volts
	Supply Voltage checked.	L1 – L2	volts
	Supply Voltage checked.	L2 – L3	volts
		Name plate	Measured
	Supply Fan motor amps checked.	amps	amps
	Condenser Fan motor # 1.	amps	amps
	Condenser Fan motor # 2.	amps	amps
	Condenser Fan motor # 3.	amps	amps
	Condenser Fan motor # 4.	amps	amps
	Compressor # 1	amps	amps
	Compressor # 2	amps	amps
	Compressor # 3	amps	amps
	Compressor # 4	amps	amps

Refrigerant			Cooling	Circuits		
Stage	Head Press	Refrigerant Liquid Temp	Cooling Subcool	Circuits Suction Press	Suction Temp	Superheat
1	#	°F	°F	#	°F	°F
2	#	°F	°F	#	°F	°F
3	#	°F	°F	#	°F	°F
4	#	°F	°F	#	°F	°F

Hot Gas		Hot Gas Reheat @ 2% Open		Circuits		
Stage	Head Press	Hot Gas Liquid Temp	Reheat Subcool	Circuits Suction Press	Suction Temp	Superheat
1	#	°F	°F	#	°F	°F

Heating					
Heating Source			Draft Fan Press. (IN. WG)	(Low)	(High)
Inlet Pressure (IN. WG)			Electric Heater Amps (All Stages)	amps	
Manifold Pressure (IN. WG)	(Low)	(High)	Steam Heat Press. (IN. WG)		
CO ₂ In Flue Gas (%)	(Low)	(High)	Hot Water Temp.	°F	
CO In Flue Gas (PPM)	(Low)	(High)			

Refrigerant Suction		Heat Pump Pressures	Refrigerant Discharge	
Circuit A	PSIG		Circuit A	PSIG
Circuit B	PSIG		Circuit B	PSIG

Default Settings Table:

Programmer Checklist

Setup Option	Sub-Option	Page	Menu Options	Default Setting	Actual Setting
<u>Network</u>	-	1/1	Onboard Prot.	None	
			Optional Prot.	None	
			Wired Protocol	BAC MSTP	
	BACnet Network	1/2	COM Address	254	
			Network Units	Imperial	
			Network Lang.	English	
			Baud Rate	Auto	
			BACnet Status	Offline	
			BACnet PRate	4	
			BACnet Network Code	86253	
<u>Configuration</u>	-	1/11	UI16 Config.	None	
			UI17	None	
			UI19	None	
			UI20	RS	
			Setpoint Func.	Attach SP	
			Mode Button	Normal	
	-	2/11	Fan Cont. Heat	On	
			Fan Delay	On	
			Standby Mode	Absolute	
			Standby Diff.	4.0° F	
			Power-Up Delay	10 Seconds	
			Occupancy Source	Motion	
	-	3/11	Standby Time	0.5 hrs	
			Unoccupied Time	0.0 hrs	
			Temp. Occ. Time	2.0 hrs	
			Temp. Sensor	Internal	
			Deh. Hysteresis (*1)	2% RH	
			Dehum. Function (*2)	Enable	
	-	4/11	Cooling CPH (*3)	4	
			Heating CPH (*4)	4	
			Frost Protection	Off	
			B01 Aux. Configuration	No	
			Anti Short Cycle	2 Minutes	
			Min Supply Heat	64.0° F	
	-	5/11	Prop. Band	3	
			Heat Stages	2	
			Cool Stages	2	
			Econo. Config.	Off	
			Changeover SP	55.0° F	
			Mech. Cooling	Off	

*See Notes on Page 9



Default Settings Table (cont'd) :

Programmer Checklist

Setup Option	Sub-Option	Page	Menu Options	Default Setting	Actual Setting
<u>Configuration</u> (cont'd)	-	6/11	Heat Lockout	120.0° F	
			Cool Lockout	-40.0° F	
			Discharge HL	120.0° F	
			Discharge LL	45.0° F	
			SH Lockout	32.0° F	
			FA Range	0 CFM	
	-	7/11	Econo. Min. Pos.	0%	
			Econo. Max. Pos.	100%	
			Min. Fresh Air	0 CFM	
			Max. Fresh Air	0 CFM	
			Min. CO ₂	800 PPM	
			Max. CO ₂	1200 PPM	
	-	8/11	Application	Rooftop	
			High BP	90.0 ° F	
			Low BP	-12.0° F	
			Comfort Or Economy	Comfort	
			Reversing Valve	0	
			Comp. Interlock	Off	
	-	9/11	Main Password	0	
			User Password	0	
			Schedule Menu	Enabled	
			USB Access	Enabled	
			Smart Recovery	Off	
	-	10/11	Calibration Temp.	0.0° F	
			Calibration OS Temp.	0.0° F	
			Calibration Humidity	0.0% RH	
			RH Sensor	Internal	
			CO ₂ Source	Local	
	Reinitialization	11/11	Erase All?	No	
			Are You Sure?	No	
<u>Setpoints</u>	-	1/2	Unoccupied Cool	80.0° F	
			Standby Cool	78.0° F	
			Occupied Cool	74.5° F	
			Occupied Heat	71.5° F	
			Standby Heat	69.0° F	
			Unoccupied Heat	62.0° F	
	-	2/2	Default Heat	72.0° F	
			Min. Deadband	3.0° F	
			Max. Heating	90.0° F	
			Min. Cooling	54.0° F	
			Supply Air SP	55.0° F	
			Dehum. SP	50% RH	

Setup Option	Sub-Option	Page	Menu Options	Default Setting	Actual Setting
<u>Display</u>	-	1/3	User HMI	0	
			Color	Orange	
			Main Display	Temp.	
			Standby Screen	No	
			Lock Screen	No	
			Contrast	-2	
	-	2/3	Language	English	
			Units	F	
			Low Backlight	60%	
			Night Backlight	5%	
			RH Display	Disabled	
			CO ₂ Display	Disabled	
	-	3/3	Fan Status	Enabled	
			System Status	Enabled	
			Help Button	Enabled	
<u>Service View</u>	-	1/10	Room Temperature	89.5° F	
			UI20 Temperature	-40.0° F	
			Outdoor Temperature	-40.0° F	
			Supply Temperature	40.0° F	
	-	2/10	Effective Occ.	Occupied	
			PI Cool Demand	100%	
			PI Heat Demand	0%	
			Cool Dem. Limit	0%	
			Heat Dem. Limit	0%	
			Econo. Demand	0%	
	-	3/10	UI16 Binary	Not Activated	
			UI17 Binary	Activated	
			UI19 Binary	0.0 Vdc	
			Airflow Level	0 CFM	
	-	4/10	Window Alarm	Off	
			Service Alarm	Off	
			Filter Alarm	Off	
			CO ₂ Alarm	Off	
			Low Air Alarm	Off	
	-	5/10	Frost Alarm	Off	
			Recovery	Off	
			Local Motion	No Motion	
			Deh. Status	Off	
			Room Humidity	77% RH	

Programmer Checklist

Default Settings Table (cont'd) :

Setup Option	Sub-Option	Page	Menu Options	Default Setting	Actual Setting
<u>Service View</u> (cont'd)	-	6/10	UO9 Configuration	Analog	
			UO10 Configuration	Analog	
			UO11 Configuration	Analog	
			UO12 Configuration	Analog	
	-	7/10	UI19 Type	Voltage	
			UI20 Type	Voltage	
			UI22 Type	Therm.	
			UI23 Type	Therm.	
			UI24 Type	Voltage	
	-	8/10	CO ₂ Eff. Source	None	
			CO ₂ Err. Code	0x0000	
			CO ₂ Level	0 PPM	
			CO ₂ FW Rev.	-	
			CO ₂ S/N	-	
	-	9/10	Eff. System Mode	Cool	
			Eff. Setpoint	71.5° F	
<u>Test Outputs</u>	-	1/2	BO1 Aux. Out	Off	
			G Fan Status	On	
			Y1 Status	On	
			Y2 Status	On	
			W1 Status	Off	
			W2/OB Status	Off	
	-	2/2	UO10 Analog	0.0 Vdc	
			UO11 Analog	0.0 Vdc	
			UO12 Binary	Off	
<u>Language Selection</u>	-	1/4	French	Disabled	
			Spanish	Disabled	
			Chinese	Disabled	
			Russian	Disabled	
			Arabic	Disabled	
			Czech	Disabled	
	-	2/4	Danish	Disabled	
			Dutch	Disabled	
			Finnish	Disabled	
			German	Disabled	
			Hebrew	Disabled	
			Hungarian	Disabled	

Setup Option	Sub-Option	Page	Menu Options	Default Setting	Actual Setting
<u>Language Selection (cont'd)</u>	-	3/4	Indonesian	Disabled	
			Italian	Disabled	
			Japanese	Disabled	
			Norwegian	Disabled	
			Polish	Disabled	
			Portuguese	Disabled	
	-	4/4	Slovak	Disabled	
			Swedish	Disabled	
			Turkish	Disabled	
<u>Clock- Schedule</u>	Clock	1/2	Time Format	AM-PM	
			Time	10:43 AM	
			Year	2000	
			Month	Jan.	
			Day	6	
			Weekday	Saturday	
		2/2	Time Source	None	
	Schedule	1/1	Occupied 1	--:--	
			Unoccupied 1	--:--	
			Occupied 2	--:--	
			Unoccupied 2	--:--	
			Occupied 3	--:--	
			Unoccupied 3	--:--	
	Options	1/1	Occupancy Cmd	Occupied	
			Schedule Type	7 Days	
<u>ADR</u>	-	1/1	Permission	Off	
			Shed Status	Off	
			Shed Demand	Off	
			Shed Offset	4.0° F	
			Shed Override	Off	

Setup Option	Sub-Option	Page	Menu Options	Default Setting	Actual Setting
<u>Lua</u> (Custom menu containing VFD speed setpoint and HGRH min. and max.)	-	2/4	Program Cmd	Run	
			Program Status	Running	
			Program Error	No Error	
	-	3/4	VFDSPD %	95	
			HGRH Min. %	2	
			HGRH Max. %	75	
			SatOffsetDeg (*5)	3	
			DehClgOffset (*6)	0	
			SatPBand	-	
	-	4/4	OatHumid %	0	
			Param. H AV226	0	
			Param. I AV227	0	
			Param. J AV228	0	
			Param. K AV229	0	
			Param. L AV230	0	

*** NOTES:**

- 1:** Dehumidification deadband. Dehum Enables at setpoint then stays active to Dehum SP – Deh. Hysteresis
- 2:** Enable = Hot Gas Reheat Enable - Disable = Hot Gas Reheat Disable
- 3:** Number of maximum cycles per hour
- 4:** Number of maximum cycles per hour
- 5:** Hot gas reheat or “dehumidification” = “active”. This is the DAT setpoint offset from room temperature. If SAToffsetDeg = 1 and room temperature setpoint = 75, when in dehumidification discharge air setpoint will be equaled to 75degF minus 1, thus 74 degF. Setpoint to be 0 to 10 deg offset.
- 6:** This is how far past setpoint it will still enable and keep dehumidification active. This allows to enable and stay in dehumidification below room temperature setpoint.

Programmer Checklist

Compressor VFD Control Validation									
Compressor VFD Parameters									
Circuit 1	P100	P101	P102	P103	P104	P110	P140	P160	P161
Circuit 2	P100	P101	P102	P103	P104	P110	P140	P160	P161
Modulating Heat:					Heat Type:				
Modulating Heat Min: ° F					Modulating Heat Max: ° F				



Programmer Checklist

NOTES:

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Factory Start-up Checklist

Post Start-up Maintenance Requirements to Maintain Manufacturer's Warranty

The Manufacturer's warranty covers PARTS ONLY. Fault diagnosis, labor costs, consequential costs, and maintenance costs are NOT covered. Warranties are those of the Manufacturer Only. Proper maintenance is crucial to maintaining the useful life of equipment and preventing premature component failures resulting in unnecessary warranty parts costs to the Manufacturer, and Labor costs to you, the Mechanical Contractor. Immediately upon start-up, a routine maintenance program must be initiated ensuring compliance with the manufacturer's Weekly, Monthly, Quarterly, Semi-Annual, and Annual Operation & Maintenance Instructions and Requirements/records to maintain warranty.

Checklist Signatures:

Installing Contractor Signature : _____

Printed Name : _____

General Contractor Signature : _____

Printed Name : _____

iAire Startup Mechanic Signature : _____

Printed Name : _____

Email: _____

Phone: _____ Date: _____

Trained on Controls : _____

Printed Name: _____

**After completing this checklist, please scan and email back to
iAIRE at Support@myiaire.com**