

Models RV and RVE Quick Start Guide

This quick start document is intended to help with getting the initial unit startup completed, but does not replace the IOM. Please read the IOM for all safety information and precautions before performing any work on the equipment. Complete pre-start checks and blower start-up prior to this procedure.

Fans

1. Verify that discharge air sensor has been installed at least three duct diameters downstream of the discharge.
2. Verify proper phasing of incoming power. **See Fig. 1 and Fig. 2**
3. Energize the unit supply and optional exhaust fan:
 - a. Connect terminal R to terminal G.
(Start sequence: Dampers/Energy Wheel → Exhaust Fan → Supply Fan → Heating/Cooling)
4. Verify blower operation:
 - a. Check rotation: To reverse the rotation, disconnect and lockout the power, then interchange any two power leads going to the motor.
 - b. Check motor amp draw: Compare to motor nameplate FLA - reduce airflow if amp draw is greater than FLA.
 - c. Check excessive noise and vibration.
 - d. If excessive noise and vibration are observed, reference IOM for proper fan alignment.
5. Verify energy wheel operation (optional)
 - a. Rotation (speed may vary depending on wheel operation mode)
 - b. Amp draw

Cooling Start Up (Optional)

1. Install a refrigerant manifold gauge set onto each refrigeration circuit.
 - a. Note: For the high side connection utilize the liquid line service valve.
2. Press the program key 
3. Scroll down to SERVICE screen , press enter.
4. Scroll down to b. OVERRIDES, press enter.
5. Insert password (1000), press enter.
6. Scroll down to e. CONTROL LOOPS, press enter.
7. Scroll down to Cooling Override, press enter.
 - a. Set cooling control to Manual, press enter.
 - b. Set cooling percentage to 100%, press enter.
8. For units with hot gas reheat, scroll down to Hot Gas Reheat Override, press enter.
 - a. Set Loop control to Manual, press enter.
 - b. Set reheat percentage to 0%, press enter.
9. Restrict the condensing coil until the high side pressure = 450 psig, not to exceed 525 psig.
10. Verify operation and rotation of all condensing fans.
11. Allow the cooling system to operate for 10-15 minutes for the system to stabilize.
12. Measure the circuit A subcooling.
 - a. Proper subcooling is 10-12°F.
 - b. If subcooling is below 10°F and sight glass is not clear, add refrigerant to obtain 10-12°F subcooling.
 - c. If subcooling is above 12°F, remove refrigerant to obtain 10-12°F subcooling.
13. Measure the circuit A superheat.
 - a. Proper superheat is 7-9°F.
 - b. If superheat is below 7°F, adjust the TXV clockwise.
 - c. If superheat is above 9°F, adjust the TXV counter-clockwise.
14. If circuit is equipped with hot gas reheat, change the reheat percentage to 100% for 5 minutes (reference step 8). After 5 minutes, change the reheat percentage to 0% and repeat steps 11 -13.
15. If more than one circuit, repeat steps 11-14 for the remaining circuit(s).
16. Measure and record the compressor amp draw and compare to nameplate RLA.

Heating Start Up (Optional) (Password=1000)

1. Press the program key 
2. Scroll down to SERVICE screen , press enter
3. Scroll down to COMMISSIONING, press enter
4. Scroll down to IG Furnace, press enter
5. You are now in the furnace commissioning sequence; follow the step by step procedures to set up each furnace.

Commissioning Sequence

1. Adjust outlet pressure on the combination valve.
 - a. Connect manometer to outlet pressure tap on combination valve. **See Fig. 3**
 - b. Adjust outlet pressure using outlet pressure adjustment screw. **See Fig. 5**
2. Adjust the High Fire setting on the modulating valve
 - a. Connect manometer to test port on burner manifold
 - b. Press and hold button #1 until the LED lights solid red on the mod valve. Release button and observe pressure on manometer. **See Fig. 4**
 - c. Adjust mod valve by pushing button #1 to increase the pressure and button #2 to decrease the pressure. **See Fig. 6**
 - d. Save the High Fire setting by simultaneously pressing button #1 and #2 until the LED turns off.
3. Adjust Low Fire setting on mod valve
 - a. Press and hold button #2 until LED blinks RED. Release button and observe pressure on manometer. **See Fig. 4**
 - b. Adjust low fire setting by pushing button #1 to increase or button #2 to decrease the pressure. **See Fig. 7**
 - c. Save the Low Fire setting by simultaneously pressing button #1 and #2 until the LED turns off.
4. Repeat steps 2 & 3 for high turndown furnaces.
5. Continue through Commissioning Menu to verify proper furnace operation.

Indicator Light Diagnostics	
Run	GREEN
Restart Delay	 GREEN
Reverse Delay	 RED
Unbalance/Single Phase	 RED
High/Low Voltage	RED

Fig. 1
Phase Monitor Indicator Lights



Fig. 2
Typical Phase Monitor

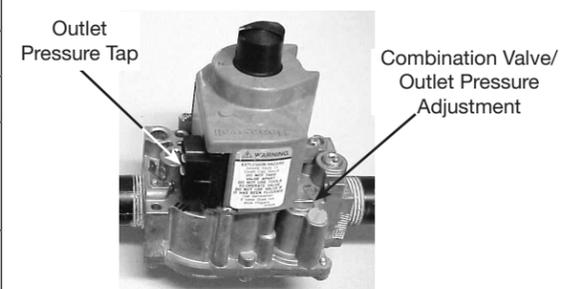


Fig. 3 Combined Regulator Valve

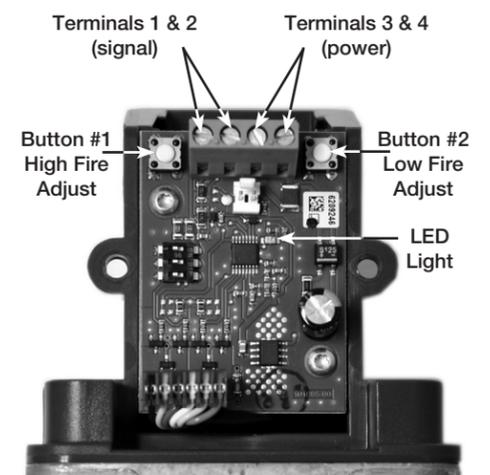


Fig. 4
EXA Modulating Gas Valve
(with cover removed)

Fig. 5 Outlet Pressure Settings	
Natural Gas	5 in. wg
LP Gas	11.5 in. wg

Fig. 6 High Fire Settings	
Natural Gas	3.5 in. wg
LP Gas	10.0 in. wg

Fig. 7 Low Fire Settings	
Natural Gas	0.3 in. wg
LP Gas	1.0 in. wg

For additional information, see Installation, Operation and Maintenance (IOM) Manuals.



Model RV(E) IOM



Indirect Gas-Fired
Furnace IOM



Microprocessor
Controller IOM