GPS Air

Start-up Checklist
GPS-iMOD

Complete 1 Checklist Per Power Supply

EQUIPMENT + INSTALLER DATA

MODEL VERIFICATION

- [ ] 1. Record Manufacturer: GPS
- [ ] 2. Record Model Number: GPS-iMOD
- [ ] 3. Record Serial Number of Power Supply:
- [ ] 4. Number of Bars: Length:

INSTALLATION DATA

- [ ] 5. Record Name of Install Company and Technician:
- [ ] 6. Record Date of Installation/Startup:
- [ ] 7. Record HVAC Unit ID:
- [ ] 8. Record Incoming Power Level to GPS-iMOD Power Supply:
- [ ] 9. Record Voltage Output at Power Supply HV Output Post:
- [ ] 10. Record Voltage Output at iMOD Bar Emitters:
- [ ] 11. Total Finned Height of cooling coil(s) in inches:

INSTALLATION

IMOD SECTION INSTALLATION

- [ ] 1. Confirm the iMOD is mounted downstream of all filters in the unit.
- [ ] 2. Confirm the ionization bar sections are fully seated with no gap between them.
- [ ] 3. Confirm the carbon fiber brushes are pointing towards the floor of the air handler and perpendicular to the airflow.
- [ ] 4. Confirm each end of the bar, and at least every third section (i.e. every 18"), is affixed to the mounting surface with either a magnet or screw and magnet (as a spacer to maintain proper ground reference gap between 1/8” – 1/2"). Other spacers fitting the width requirements are acceptable.

- [ ] 5. Confirm all sections are aligned and facing the same direction.
- [ ] 6. Confirm once snapped together, the 6" sections were never disconnected, as this can damage the iMOD Bar.
- [ ] 7. Confirm there is an end cap mounted on the last iMOD section of each complete bar to be installed.
- [ ] 8. Confirm there is at least 1/8" between ALL carbon fiber brushes and any metallic or conductive surface, including wiring.
- [ ] 9. Confirm the iMOD Bar(s) are located in the direct path of the airstream entering the cooling coil and verify it has not been mounted behind or within an airflow obstruction. If located behind an obstruction the corrective action is to lower the iMOD Bar down into the airflow.
- [ ] 10. Confirm the ground reference is tall enough to extend down and just cover the text on the side of the iMOD Bar. (See 'iMOD Mounting' section of Installation, Operation & Maintenance Manual).
- [ ] 11. Confirm the sidewall of the iMOD Bar is within 1/2" of the face of the coil, but no closer than 1/8" of the coil. Note: A mounting magnet can be used on the side face as a spacer.
- [ ] 12. Confirm and document the total finned height of the coiling coil in inches.
- [ ] 13. Confirm one bar is being utilized per single coil up to 60" in vertical height. If the height of the cooling coil is >60" a second bar is required. A drain pan split signifies the need for a second bar.
- [ ] 14. When mounting additional bars on a coil surface greater than 60" tall (as opposed to the bar at the top of the coil) or when otherwise necessitated, confirm that a 1-1/2" x 1/8" angle or suitable alternate is installed that spans the width of the coil to mount the bar that is suspended across the coil. Angle is used to support and provide a ground reference for the bar. (See 'iMOD Mounting' section of Installation, Operation & Maintenance Manual).
- [ ] 15. Confirm the angle iron is grounded with a wire back to the iMOD Power Supply.
- [ ] 16. Confirm iMOD Bar covers the entire finned length of coil to the nearest 6" without exceeding the length of the coil.
- [ ] 17. After bar installation, confirm once again the bar sections are fully seated together and there are no visible gaps between them.
- [ ] 18. Use a soft cloth with isopropyl alcohol and wipe any debris off the GPS-iMOD outer bar and spaces between needle housings.

WIRING AND GROUNDING

- [ ] 1. Confirm the power supply enclosure is properly mounted with sheet metal screws.
- [ ] 2. Confirm all electrical connections are secure.
- [ ] 3. Confirm plastic nuts on high voltage (HV) cables are tightened and secured.
- [ ] 4. Confirm the access to the power supply is properly sealed.
- [ ] 5. Confirm any excess HV cable (if present) has been routed in a serpentine path and no amount of the cable has been bundled or coiled.

- [ ] 6. Confirm HV cable(s) are not run alongside any other cable type and that any non-iMOD related cables have not been tie wrapped to the iMOD Bar.
- [ ] 7. If the HV cable is secured to a conductive surface, confirm it utilizes a minimum of a 2" tall non-conductive standoff located at an interval of every 18” along the length of the HV cable.
- [ ] 8. If HV cable penetrates a wall, confirm that an appropriate non-conductive grommet is used and no modification or damage to the HV cable has taken place.
- [ ] 9. Confirm that the HV cable does not come into contact with any electrical conduit, or mechanical/plumbing piping. Additional stand-offs or EPDM piping insulation can be used to prevent contact points.

ELECTRICAL AND CONTROLS

- [ ] 1. Unit shall not be powered up until all electrical & control verification steps have been completed. *Follow all local and national electrical and building codes.*
- [ ] 2. Confirm the power supply is grounded via the factory installed power cord, or unit grounding lug to electrical earth ground.
- [ ] 3. Confirm there are NO high voltage wires and control wires pulled through the same ports of the iMOD Power Supply.
- [ ] 4. Measure and record incoming voltage to power supply at the electrical receptacle or incoming connection point.
- [ ] 5. Confirm the voltage selector switch has been set to the correct position to match the incoming power source.
- [ ] 6. Is there an iDETECT-P installed? ○ Yes ○ No

  If an iDETECT-P is installed:
  - [ ] A. Confirm it is connected with 18/4 shielded cable.
  - [ ] B. Confirm the shielded cable is properly grounded only at the power supply end.
  - [ ] C. Confirm the jumper in the power supply is removed.

- [ ] 7. Is the GPS-iMOD power supply's binary output being monitored by an existing BMS/BAS? ○ Yes ○ No

  If tied into BMS/BAS:
  - [ ] A. Confirm it is connected with 18/4 shielded cable.
  - [ ] B. Confirm the shielded cable is properly grounded only at the power supply end.
  - [ ] C. Confirm the jumper in the power supply is removed.

UNIT STARTUP

- [ ] 1. Power on the unit.
- [ ] 2. Confirm the iMOD is powered continuously and not configured to cycle with the blower duty.
- [ ] 3. Once powered on, confirm the green power "ON" and "PLASMA ON" LEDs are illuminated.
- [ ] 4. Measure output at Power Supply High Voltage Post and confirm it is above it's minimum target level of 4kV.

- [ ] 5. Measure Voltage at iMOD Bar emitters and confirm it is above it's minimum target level of 4kV.
- [ ] 6. Visually confirm there is no dust or dirt on the carbon fiber brushes after they were cleaned with isopropyl alcohol during installation.
- [ ] 7. If an iDETECT-P sensor is installed, confirm it is on and ionization is present. This is indicated by green (energized) and blue (electrical field) LEDs being illuminated.
- [ ] 8. With the GPS-iMOD operational, verify ion density output. Confirm it meets the minimum combined polarity target of 100M ions/cc using the AIC2 ion meter ions/cc for each polarity measured 1" away with air handler fan off (no airflow).

For instructions on how to measure emitter voltage, scan the QR code.

Voltage Measurement

For the latest applicable version of the iMOD installation manual, visit www.gpsair.com/downloads or scan the QR code.

GPS-iMOD IOM

Register your products at www.gpsair.com/product-registration or scan the QR code.

By registering your order, the standard limited warranty on eligible products from your purchase is automatically extended to 3 years, at no additional cost.

REGISTER