

cps®

IAQPRO SmartAir™ Professional Indoor Air Quality Meter



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CPS Link™



Version 4.3
or higher

QUICK START AND TROUBLESHOOTING GUIDE (English)

Latest updates: www.cpsproducts.com

CPS® link™ Wireless Technology
Patent # 9,043,161

 Bluetooth®   **ICES-003**

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GENERAL SAFETY & STORAGE INSTRUCTIONS

Please read, follow and understand the contents of this entire manual, with special attention given to warning statements.

FOR USE BY PROFESSIONAL OPERATORS ONLY.

WARNING: The SmartAir is NOT a life-safety device and does NOT provide absolute values for all indoor airborne solids, liquids or gases that may be detected. It does NOT replace the capability of existing Smoke Alarms, Carbon Monoxide Alarms, Heat Detectors or any other dedicated life safety devices intended for use in residential or commercial environments.

The SmartAir does NOT provide audible alarms for CO₂, VOC's, PM_{2.5}, PM₁₀, Relative Humidity, Temperature, Building Pressure or Dew Point.

STORAGE NOTE: THIS DEVICE IS A PRECISION INSTRUMENT AND IT IS STRONGLY RECOMMENDED TO ALWAYS STORE IT INSIDE UNDER NORMAL TEMPERATURE AND HUMIDITY CONDITIONS. **If the IAQPRO has been stored in temperature extremes, it must be placed indoors, unplugged in NORMAL TEMPERATURE AND HUMIDITY conditions for 6 to 8 hours before being powered ON.**

QUICK START INSTRUCTIONS



SETTING THE tVOC SENSOR BASELINE (time required approximately 24 hrs., 5 mins)

- User must set the tVOC sensor baseline PRIOR TO INITIAL USE.
- Follow instructions below or connect unit to CPS Link App for online guidance.
- Unit does NOT need to be connected to app during the initial 24 hrs. time period (Step 1 - 2).
- Unit must be connected to CPS Link app to complete Step 3.

Step 1: (Time required for this step – 24 hrs.) Select a secure location **INDOORS**, plug unit into power source to turn ON and allow it to run for 24 consecutive hours. Light bar will initially turn RED, then alternate Green/Red during this time period.

Step 2: (Time required for this step - approximately 5 mins) Relocate the unit to a secure, dry location **OUTDOORS** with access to power (do not locate in direct sunlight). It is OK to disconnect the unit from the INDOOR power source while relocating it to the OUTDOOR location. Power unit ON and wait for 5 mins.

Step 3: Open the CPS Link App on your smart device and select the IAQPRO icon to connect unit. Once connected, online guidance screens will appear prompting completion of Step 1 & 2 above. Swipe right to advance to the SET BASELINE screen. Press the SET BASELINE option to save tVOC baseline and complete setup.





CONDUCT AN INDOOR AIR QUALITY TEST

The tVOC sensor requires a stabilization period when powered ON (the light bar will flash Green/Yellow during this process). The stabilization period can last between 5 to 60 minutes depending on the combination of storage conditions and time (minutes, days, weeks) the unit was powered OFF. SmartAir unit can be powered ON during travel between jobs to minimize jobsite stabilization time using available automobile USB power connections or other readily available portable power devices.

- a. For more accurate readings and to generate an Indoor Air Quality Test Report, start a 30-minute test (default setting).
 - Choose the “TESTS” icon (upper right of screen), then.
 - Choose the “Air Quality” option (lower left of screen).
 - Choose a “Standard Test” (30 minutes) or “Custom Test”.
 - If “Standard Test” selected, touch “Start Test” button to begin. A new screen will appear, and the timer counts backwards from 30 minutes.
 - To conduct a test shorter or longer than 30 minutes, select “Custom Test.” Enter the desired test period (minimum of 5 min to a maximum of 23 hrs, 59 mins, 59 seconds), then press “Start Test”.
- b. The light bar on the SmartAir housing will display a color indicating the range (see chart at right) within which the highest reading for ONE of these values (PM 2.5, PM 10, tVOC or CO2) is found.
- c. For more detailed information about any item being measured, see the Information Section in the app.
- d. Users are encouraged to pair the SmartAir to a mobile device using the CPS Link app for more detailed information about the quality of indoor air.

GREEN	Good
YELLOW	Satisfactory
DARK YELLOW	Moderate
ORANGE	Poor
RED	Severe

CREATING A CUSTOMIZED REPORT AND PROPOSAL (JOB)

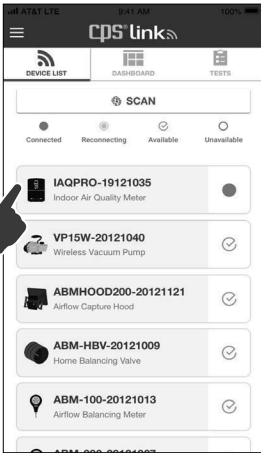
The SmartAir is a compact, professional, Indoor Air Quality monitor used for measuring various aspects of indoor air (temperature, static pressure, dew point, relative humidity, volatile organic compounds, carbon dioxide, and particulate matter PM2.5 and PM10). After placement on an interior residential surface, detailed air quality data can be obtained by pairing this meter to a mobile device running the CPS Link app. The app will summarize air quality conditions and send a homeowner a friendly report with recommended solutions (if problems found). Technicians may enter repair costs into the report by using their paired smart device.

Technicians may then review this report on screen, print or email the report as a PDF. The SmartAir is great for documenting the quality of indoor air and recommending additional products or services that technicians can provide to resolve indoor air quality problems.

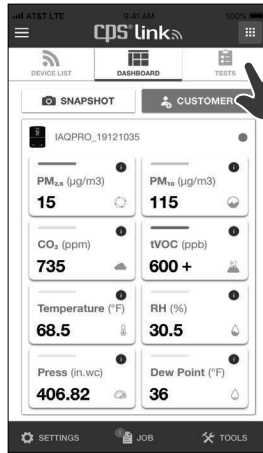
- a. **Generating a Customizable Report and Proposal** - after running an indoor air quality test choose view results at the bottom of the dashboard.



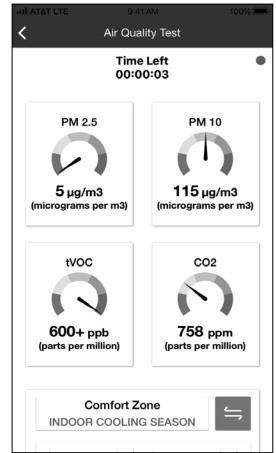
- b. A screen will appear showing the “Air Quality Issues.” Choose “Continue” at the bottom. This will take you to the “Causes and Solutions” screen.
- c. A screen will appear showing the “Causes and Solutions.” Here you can fill in your information (Contractor Information) if you have not already done so in the “Profile” section found under the Main Menu.
- d. Next you can either select a customer or enter a new customer’s information by choosing the “Select Customer” button. (Customers can be entered under the Main Menu / Tools / My Customers. To enter a new customer, select “ADD NEW” in the bottom right corner).
- e. **Customize Causes and Solutions** – By choosing the **+** icon next to a cause or solution you can add in custom causes and solutions not included in CPS Link.
- f. **Enter Pricing for Services** – You can choose a solution by clicking the circle next to that solution which will add a **✓** icon next to that solution and enable you to enter a price for that product and/or service.
- g. **Saving and Sending out Proposal** - Once you have entered your pricing information choose “Continue” located at the bottom. This will bring up your proposal. At the bottom of the proposal you can choose to email or view the proposal. It also gives you the option to choose “Done” which will save the proposal to your “Job” folder under the main menu so you can view or send it at a later date.



Device Selection Screen
(Step 3)



Dashboard Screen
(Starting An Air Quality Test)



Air Quality Tests In Progress



Indoor Air Quality Issues	Potential Causes	Recommended Solutions
Hot or Cold Temperatures in Rooms	Unbalanced HVAC System	Install Home Balancing Kit in all supply grilles
	Building Envelope Excessive Leaking	Perform blower door test Perform leak inspection of all potential leak sources (windows, doors, chimney, wall insulation)
	Missing or Damaged Insulation	Perform thermal imaging inspection to determine sources of insufficient insulation
High Humidity Level	Return and/or Supply Duct Leaks	Perform leak inspection and repair all leaks in ductwork
	Oversized AC Unit/Short Cycling	Calculate appropriate equipment size and adjust accordingly
	Building Envelope Excessive Leaking	Perform blower door test Perform leak inspection of all potential leak sources (windows, doors, chimney, walls insulation)
High PM_{2.5} (0-2.5 microns)	Dirty Ductwork	Clean and sanitize ducts
		Add whole home UV/anti-bacterial system
	Organic Growth on Coils/ in Air Handler	Clean and sanitize cooling coils, condensate drain pan/ lines and interior of air handler cabinet
		Add UV light and antimicrobial tabs to condensate drain pan
Return Duct Leaks, Contaminate Infiltration	Perform leak inspection and repair all leaks in ductwork	
Dirty Supply Grilles	Clean supply grilles	
High PM_{10.0} (2.5-10.0 microns)	Poor Filtration	Add return filters with MERV rating (≥ 12)
		Add local HEPA filtration to remove particles > 3 microns
High tVOC Level	VOC Contaminants	Remove contaminants inside home or garage
	EPA reports that on average, 60% of VOC's enter the home through an attached garage	Improve ventilation inside home or garage
		Add garage ventilation fan to exhaust/create negative pressure Seal garage/mud door from home
	Mechanical equipment issues	Inspect gas appliances and heaters for leaks
High CO₂ Level	Insufficient returns	Add or increase size of return registers in bedrooms
	Inadequate ventilation	Add ERV or HRV to exchange stale air with fresh air
High Or Low Building Pressure	Negative air pressure in summer	Inspect windows, doors or other openings in the building envelope for air leaks
	Negative air pressure in winter	
	Positive air pressure in summer	
	Positive air pressure in winter	



Indoor Air Quality Issues	Potential Causes	Recommended Solutions
High Or Low Dew Point	In the summer, condensation forms on ducts, air diffusers, walls or ceilings.	Keep the dew point at 30 to 40 F during the heating season, and below 55 F during the cooling season to provide a reasonable compromise between the competing interests of energy, comfort, and building durability.
	In the winter, condensation forms inside exterior walls	

TROUBLESHOOTING GUIDE

Condition	Possible Solution
Light Bar	
Light bar doesn't turn on	Ensure power cord plugged into wall outlet that is receiving power.
What do light bar colors indicate?	See label on back of SmartAir housing for color explanations (or see # 3b in Quick Start Instructions above) Flashing Red - SmartAir is in start up mode. Alternating Green/Red - SmartAir sensor baseline not set up. See "Set tVOC Sensor Baseline" instructions. Alternating Green/Yellow - Wait 5 to 60 minutes for tVOC sensor to warm up
CPS Link App	
CPS Link App crashes	Ensure mobile device is Bluetooth compatible, and Bluetooth setting ON in mobile device Delete the CPS Link app from your mobile device. Then reinstall the latest CPS Link app (from App Store or Google Play) on your mobile device.
Can't pair phone or tablet to SmartAir	From App Store or Google Play, download the latest CPS Link app on your mobile device and pair it to the Smart Air. Mobile device must be ≤ 150 ft (46m) from CPS SmartAir Reset SmartAir by unplugging and plug in. Then pair to mobile device
Remote Operation	
Can't connect with mobile device	Mobile device must be ≤ 100 ft (30m) from SmartAir (direct line of sight) Charge mobile device battery
Low Or High Temperature Or Humidity Readings	If SmartAir has been stored in temperature extremes, it must be placed indoors, plugged in NORMAL TEMPERATURE AND HUMIDITY conditions for 6~8 hours before being powered ON.

TROUBLESHOOTING GUIDE Cont'd

Connection Status

How do I know when the IAQPRO SmartAir is paired to my mobile device?

A blue dot is visible in the upper right corner of the Performance Screen or Test Screen

VOC sensor doesn't seem to provide accurate readings

User must set tVOC Sensor Baseline PRIOR TO INITIAL USE (See Quick Start Instruction Guide)

If the SmartAir is turned OFF after conducting tests at various locations on a jobsite, the VOC sensor will need to warmup each time after being powered OFF. The warmup period may last 5 to 60 minutes (depending on the amount of time the SmartAir was turned off). See Quick Start Guide or Owner's Manual for detailed instructions.

LOCATIONS

CPS PRODUCTS, INC. U.S.A.

3600 Enterprise Way, Miramar, Florida 33025, USA
Tel: 305-687-4121, 1-800-277-3808 Fax: 305-687-3743
E-mail: info@cpsproducts.com
Website: www.cpsproducts.com

CPS PRODUCTS N.V

Krijgsbaan 241, 2070 Zwijndrecht, Belgium
Tel: (323) 281 30 40
E-mail: info@cpsproducts.be

CPS PRODUCTS CANADA LTD.

1324 Blundell Road Mississauga, ON, L4Y 1M5
Tel: 905.615.8620 Fax: 905.615.9745
E-mail: info@cpsproducts.com
Website: www.cpsproducts.com

CPS AUSTRALIA PTY. LTD.

109 Welland Avenue, Welland, South Australia 5007
Tel: +61 8 8340 7055,
E-mail: sales@cpsaustralia.com.au



For the latest version of this Guide (or the complete Owner's Manual),
or other product information:

www.cpsproducts.com

