Honeywell

FAQ: HAQ Series Air Quality Monitor

Overview:

Q. Is indoor air quality a problem?

A. Yes. Indoor air quality impacts us all regardless where we live. The Environmental Protection Agency estimates indoor air can have two to five times as many pollutants as outdoor air,* meaning we spend a majority of our time being bombarded by contaminants.

Q. What do you measure, and why do you measure it?

A. We measure the following pollutants and allergens because they are common, and can be drastic in their health effects in concentrations left unchecked**:

- Particulate Matter (PM2.5) – Can cause asthma, respiratory inflammation, aggravated allergies, llung and heart conditions, carcinogenic after long–term exposure.
- Formaldehyde (HCHO) – May cause watery eyes; burning sensations in the eyes, nose, and throat; coughing; wheezing; nausea; skin irritation.
- Total Volatile Organic Compounds (TVOC) –May cause eye, nose, and throat irritation; headaches; loss of coordination and nausea; damage to liver, kidney, and central nervous system.
- Carbon Dioxide (CO2) – May cause lack of concentration; dizziness; headache; visual and hearing dysfunction; unconsciousness..
- Humidity – May cause skin problems; breathing issues; itchy eyes and agrivated allergic reactions.
- IQ% – Indicates the percentage of your total IQ available for use in your environment. Indicates the potential for poor performance of advanced cognitive functions related to one or more of the other measurements. Good indication that one of the other measurements are less than optimal.

Q. Who is this device designed for?

A. Everyone who cares about the air they breathe.

- The device is designed for all consumers who value understanding their surrounding environment. The device can be used to provide information on various environmental factors, allergens and pollutants, along with their effect on the consumers' cognitive abilities.
- Whether you are a busy professional who likes to be in control of your environment, a parent with children preparing for exams or the SATs, or a manager who cares about the productivity of your top employees – the HAQ can help you make sense of your surroundings.

* Environmental Protection Agency: Volatile Organic compounds' Impact on Indoor Air Quality Footnotes
** Environmental Protection Agency: Importance of Indoor Air Quality.

Product:

Q. What is the IQ%?

A. Honeywell developed a proprietary algorithm that can determine the percentage of IQ being used, depending on the quality of the air the person breathes. This does not refer to individual IQ, just to a percentage of total cognitive ability. It varies depending on environmental factors directly impacted by CO2, TVOC, and PM2.5 levels. Excellent air environment can raise cognitive ability, and improve various activities.

Press on the IQ% field on the smartphone app dashboard to see the measurement on a scale, and discussion of the value.
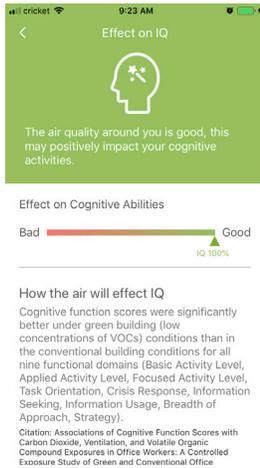
A. How long to fully charge the battery right out of the box/ initial charge?

A. 6 hours

Q. How long does every subsequent charge take?

A. 6 hours

Q. How long does the device run on a full charge/ what is the battery capacity?

**A.** After charging is completed, Normal mode: 14 hours, Sleep mode: 40hours.

Battery capacity: 2600 mAh.

Q. What does it mean when one of the symbols at the bottom of the screen are blinking?

A. It means that the levels of that pollutant have reached elevated levels. If you click on the symbol it will give you a number read out and the arc light at the top will go red as a warning.

Q. Can individualized alarm thresholds be set for the device?

A. Yes! Setting menu can set alarm. Thresholds set as follows:
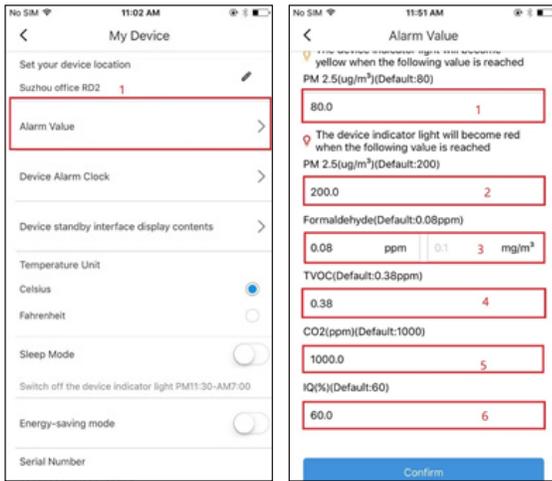
Q. When and why do I calibrate the HAQ.

A. The HAQ CO2 sensor is calibrated at the factory, but may drift over time. To combat this, the HAQ should be calibrated on occasion to account for the drift. Calibration involves exposing the sensor to a known gas source (outdoor air, or indoor air in an unoccupied room - both should equal approximately 400 ppm CO2). The HAQ takes multiple readings, calculates an average, stores the difference between the new average and original factory value in memory (after subtracting 400 from the known gas source), and uses this value as an "offset." This "offset" value is then automatically added or subtracted to any subsequent readings taken by the sensor during use until the next calibration.

Q. What are the steps to recalibrate the device?

A. In the outdoor environment, switch to the CO2 interface, press and hold the middle position of the screen for 3 seconds, and the calibration prompt appears. After 10~15 minutes, when the calibration prompt disappears, the calibration is complete.

Q. What is the optimum placement of the device?

A. Ideally the device should be close to where you or the end consumers are, and should not be near doors, or windows as they affect the air flow around it. Placing it near an open window might give different readings as the air might not have dissipated homogeneously through the room.

For best results we suggest using one device for 1000 – 1500 sq ft of air, or for one room in a house, as walls and doorways act as barriers.

Q. Can I use this in my car?

A. Yes! As long as your battery is charged or as long as you have a connection for a USB cable – you can use this device in your car to understand the in-cabin air quality!

Do note that for data logging you would need an internet connection so it can upload data to the app, you might use your phone as a hotspot, or the device as a standalone monitor.

Q. Can I use this outdoors in my balcony/ garden/ patio/ yard?

A. Yes, again, as long as you have a sufficiently charge battery and/or a socket – the device is useable outdoors. Note though, the readings outdoors will be remarkably different from those indoors.

Connectivity:

Q. What verion Android smartphone do I need to run the app?

A. Android smartphones must be running version 4.4 or later. But the Google Store won't download an app unless compatible with your smartphone.

Q. Can multiple devices be connected to the same app or be registered to the same phone?

A. Yes! You can place multiple devices around your home or a loved one's home that will connect to the app on your phone. Follow the directions on the app to connect multiple devices.
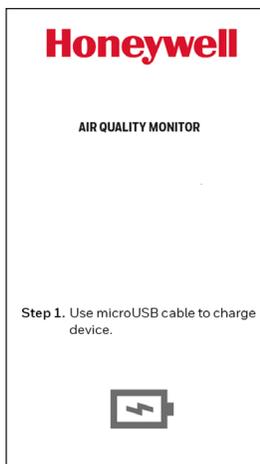
Q. Can the same device's data be read on multiple mobile phones?

A. Yes, just use the same username and password on the additional mobile phones.

Q. How do I connect the HAQ to Wi-Fi with the smartphone app?

A. Follow the instructions in the Quick Start Guide that comes in the box with the HAQ. This will help you download the smartphone app and create a cloud user.
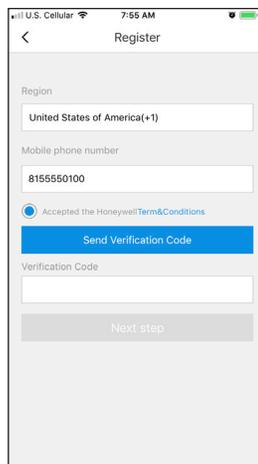
Preliminary - Create a user if you don't already have one

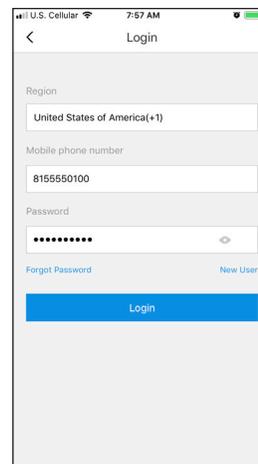|			
Honeywell AIR QUALITY MONITOR **Step 1.** Use microUSB cable to charge device.	**Honeywell** CONNECTED HOME | IAQ Already have an account? Login Register	Register Region — United States of America(+1) Mobile phone number — 8155550100 ○ Accepted the Honeywell Term&Conditions Send Verification Code Verification Code Next step	Login Region — United States of America(+1) Mobile phone number — 8155550100 Password — •••••••• Forgot Password New User Login
1. Follow the Quick Start Guide that came with HAQ to charge the device and download the smartphone app..	2. Open the smartphone app and, if this is your first device, create a user by pressing Register. Otherwise press Login..	3. Select a region, enter your phone number, accept the terms, and press Send Verification Code. Enter that number texted to you, and pressNext Step.	4. Create a password and press Login. From now on these are your credentials when logging in.

## Connect Device to Wi-Fi with smartphone app

There are two ways to connect to the network: SmartLink, and AP mode. The Smartlink connection method is shown in the the following "Part 1." The duration is 50 seconds.

If the connection fails, it will enter the AP mode network, as shown in the Part 2.

Part 1- SmartLink
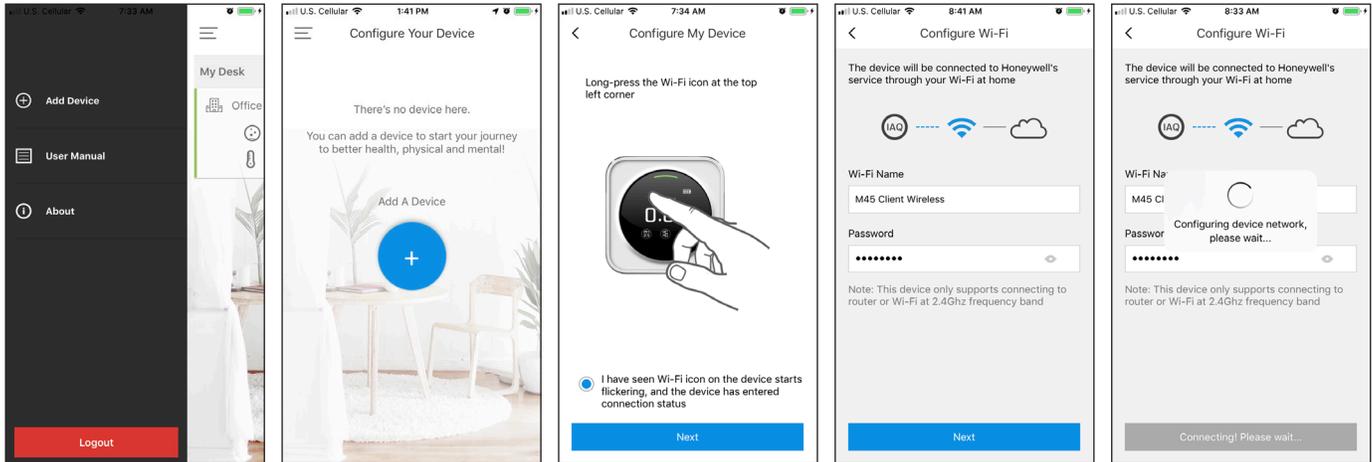
1. If adding or modifying a device to an existing user, press menu icon (upper left) and select Add Device. Otherwise, continue with 2..

2. Press plus (+) icon to add device.

3. Long-press the WiFi icon on device and when blinking press radio button and next.

4. Verify or complete the WiFi name.
Provide the WiFi password.
Press Next..

5. The app configures the device for the network.. If there is a problem, jump to Step 1 of Part 2.
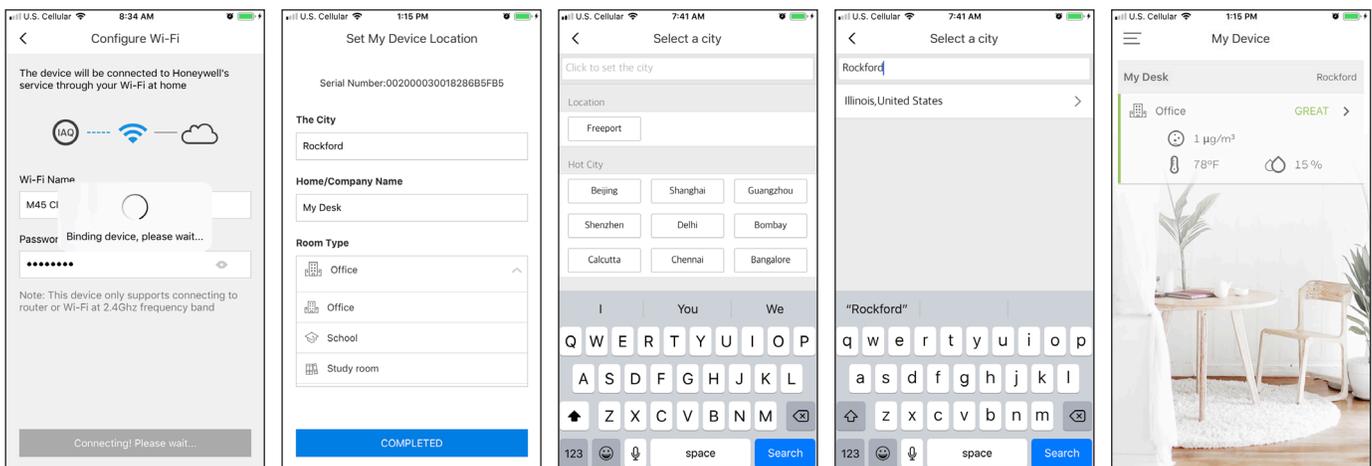
6. The app binds the device serial number to your user. Wait for connect..

7. Complete information with device location. (See 7A and 7B for help selecting City.) Pick a pre-selected room type, or enter one of your own. Press Completed.

7A. If you don't see your city in the selection, type it in the city field.

7B. City names can appear in more than one location. Pick the one appropriate for you. Or try a nearby larger city..

8. My Device screen appears. Select the new device..

Part 2 – AP Mode (if Part 1 fails)
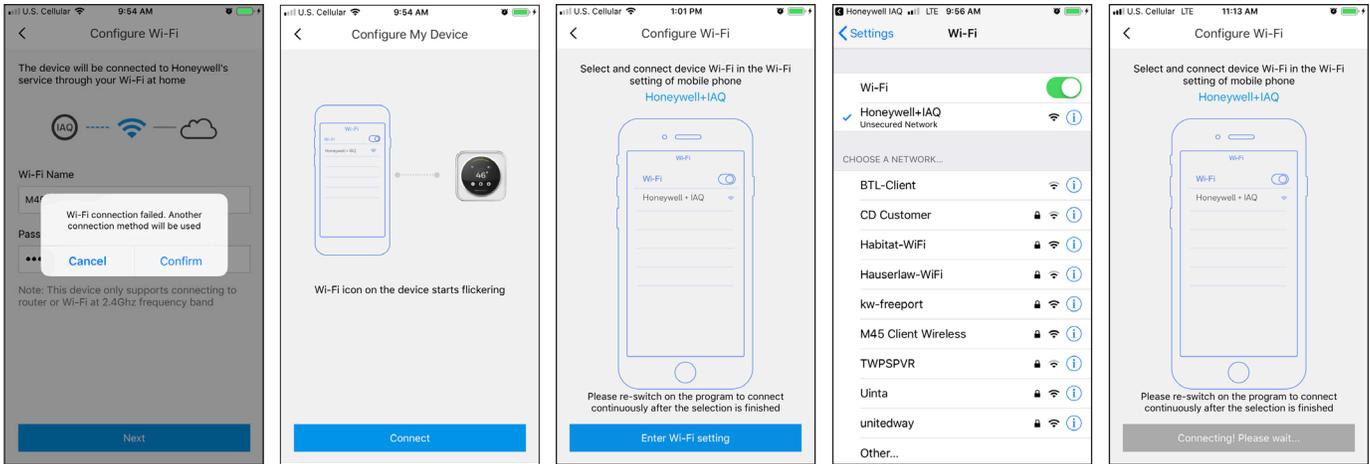
1. Press confirm..

2. Press Connect..

3. Press enter Wi-Fi Setting.

4. Select "Honeywell+IAQ"

.5. Return to app screen and wait for Connecting to "Honeywell+IAQ" sucessful.

Press next, and continue 7-8 of Part 1.

Data

Q. Can data be viewed from a laptop / computer in addition to being viewed from the mobile app?

A. No, unfortunately we currently only interface with the smartphone app, but we are working on building an API.

Q. Where is the data collected and stored?

A. Device data is stored securely in the Honeywell cloud. The app shows trending data for one day, or one month..

Q. In case of a network disturbance or once the device loses connectivity, does the device store the data?

A. No, the device has no memory storage on its own

Q. How often is the device data uploaded to the cloud?

A. The device checks in with the cloud once every minute. In energy saving mode this frequency drops to once an hour.

Q. How long does the device's data stay in the cloud? / What is the maximum history that can be viewed in the app?

A. Raw data for 7 days, hourly average for 1 month, daily average for 1 year. But the last day and last month are viewable in the app. If you are a business that is looking for more insights – please contact us directly.

Applications:

Q. Is there possibility of an API for enterprise customers?

A. Yes, we are developing an API that enables businesses to pull data from our cloud. More details will be provided soon, so stay tuned.

For more information

Honeywell serves its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office. To learn more about Honeywell's sensing and switching products, call +1.815.235.6847 or 1.800.537.6945, visit sensing.honeywell.com, or e-mail inquiries to info.sc@honeywell.com.

Honeywell Sensing and Internet of Things

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