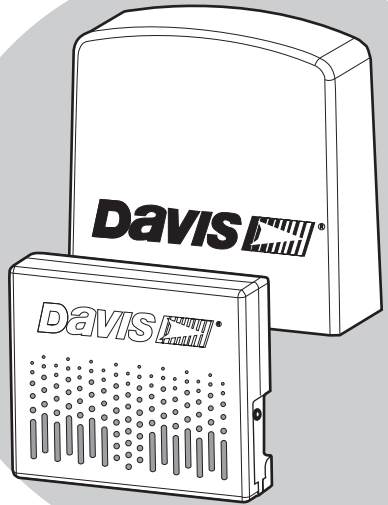


# USER MANUAL

# AirLink™



## Air Quality Sensor

Product number 7210

**Davis** ®

Davis Instruments, 3465 Diablo Avenue, Hayward, CA 94545-2778 U.S.A. • 510-732-9229 • [www.davisinstruments.com](http://www.davisinstruments.com)



## FCC Part 15 Class B Registration Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference, including interference received, including inference that may cause undesired operation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Innovation, Science and Economic Development Canada ICES-003 Compliance Label: CAN ICES-3(B)/NMB-3(B)

Changes or modification not expressly approved in writing by Davis Instruments may void the warranty and void the user's authority to operate this equipment.

Contains: FCCID: 2AC7Z-ESP32WROVERE IC: 21908-ESP32WROVERE

**Information Regarding Exposure to Radio Frequency Energy:** The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

**Davis Instruments, 3465 Diablo Ave., Hayward, CA 94545**

Power Supply Model identifier: DSA-5PF07-05 FUK 050100 or DSA-5PF07-05 FEU 05010

Input voltage:	100-240 VAC	Input AC frequency:	50/60 Hz
Output voltage:	5.0 VDC	Output current:	1.0 A
Output power:	5.0 W	Average active efficiency:	73.77%
Efficiency at low load (10 %):	N/A %	No-load power consumption	0.075 W

## CE EC-Declaration of Conformity

### Directive 2014/53/EU (RED)

**Manufacturer/responsible person:** Davis Instruments  
Compliance Engineer  
3465 Diablo Ave., Hayward, CA 94545 USA

**Declares that the products:**

7210EU, 7210UK, 7210USB

**Comply with the essential requirements of**

2014/53/EU, if used for its intended use. The complete Declaration of Conformity is on our website at <https://www.davisinstruments.com/legal>.

The technical documentation relevant to the above equipment will be held at:

Davis Instruments at 3465 Diablo Ave, Hayward CA 94545.

RoHS Compliant.

# Welcome to AirLink

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AirLink air quality sensor uploads your air quality data directly to the WeatherLink Cloud via Wi-Fi. You'll see your air quality on your phone or tablet with the WeatherLink app, or on your computer on WeatherLink.com.

It can be used as a stand-alone sensor, or added to your current weather station system that is being uploaded to WeatherLink.com via WeatherLink Live or WeatherLink data logger. You may add up to three sensors to your system. It can be mounted indoors on a flat surface such as a counter or table top, or on a wall using the included mounting bracket. It can also be used in a protected outdoor location, mounted vertically and with the included outdoor sensor cover.

AirLink measures airborne particulate matter (PM) by shining a laser through the air. Particles in the air reflect the laser and the sensor uses the reflection to determine the number and size of particles.

You'll get easy access to:

- **Real-time current readings** of particular matter (PM1, PM2.5, and PM10), updated every minute.
- **Color-coded Air Quality Index (AQI)** reading, based on current PM2.5 data. You may choose your preferred Air Quality Index (AQI) from a growing list:
  - United States Air Quality Index
  - Air Quality Health Index (Canada)
  - Metropolitan Index of Air Quality Index (Mexico)
  - Common Air Quality Index (EU)
  - UK Daily Air Quality Index
  - India Air Quality Index
  - China Individual Air Quality Index
  - AIRKOREA (South Korea)
  - Australian Air Quality Index
- **6-hour Air Quality Chart**
- **High AQI**
- **NowCast reading.** NowCast shows the current air quality using the AQI colors and scales. It is calculated using the data for the current hour as well as multiple hours of past data. It uses a heavier averaging weight for recent hours of data and data that is changing rapidly. The NowCast reading is used in lieu of a 24-hour average, to give you a more useful indication of the danger of the air quality over that period.

You can access your data on WeatherLink.com or the WeatherLink mobile app. Archive data (used in trends and NowCast) updates at user-selectable intervals every 15, 30 or 60 minutes. More frequent archive update intervals are available with Pro (5, 15, 30, 60), and Pro+ (1,5,15,30,60) tier subscriptions.

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**Note:** If you are adding your AirLink with a currently upgraded system, the AirLink will be automatically upgraded as well.

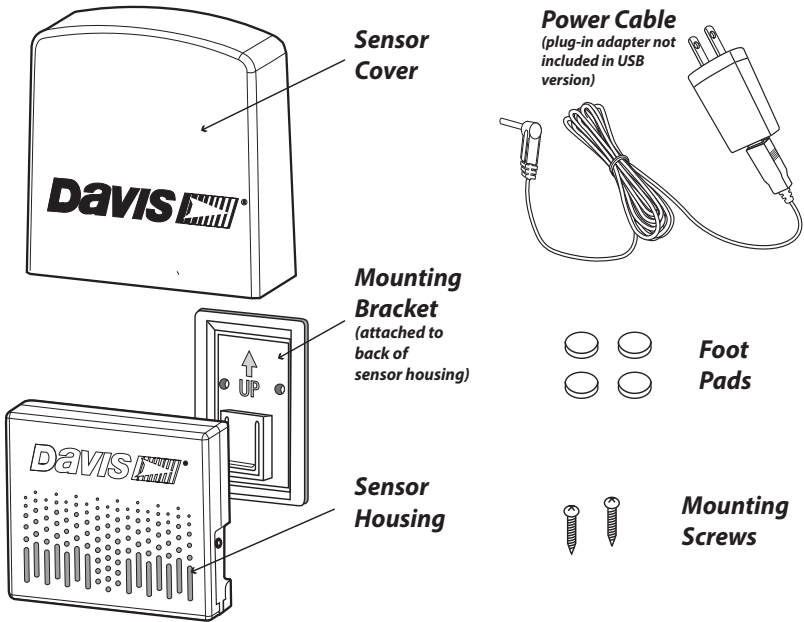
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Use AirLink with Amazon Alexa or Google Assistant. Just ask for your current air quality.

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# Components



## AirLink Installation Requirements & Tools

- Wi-Fi internet connection
- Wi-Fi password
- Phone with Bluetooth enabled
- AC power
- Drill or screwdriver if mounting on a vertical surface

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# Install or open the WeatherLink App

1. If you have already installed the WeatherLink App and created your account, sign in to the app.

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**Note:** Make sure you have the latest version of the app.

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2. If you have not already installed the app and created your account, install WeatherLink mobile app on your phone. Find the app by searching for the Davis WeatherLink app in the iOS App Store or Google Play Store.
3. In the app, create your account on WeatherLink.com.
4. Make sure your phone's "Bluetooth" function is on. With your phone near your AirLink sensor, tap the Account icon:  in the upper right corner of the app's home screen.
5. Tap the **Add** button next to **Devices**, then choose AirLink.



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**Note:** You will use the user name and password you have set up to access your page on WeatherLink.com from your computer as well. You will only have to enter your name and password the first time you open the app unless you log out.

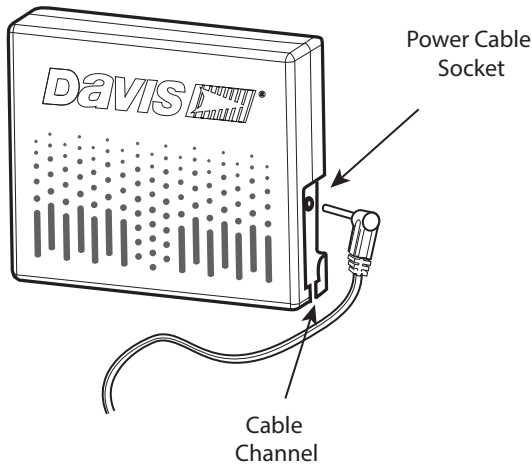
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The WeatherLink app will walk you through powering up and connecting your device as shown in the steps below.

## Set Up Your AirLink

### Power and Connect

1. Plug the AC adapter into the socket on the side of the AirLink, and plug the adapter into the wall.

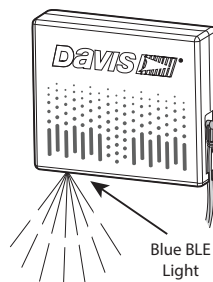


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**Tip:** There is a cable channel in which to run the cable.

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2. The blue LED will begin flashing indicating that the device is ready to connect to the phone app.
3. With AirLink “awake,” and your phone next to it, follow the prompts to connect AirLink to the internet.

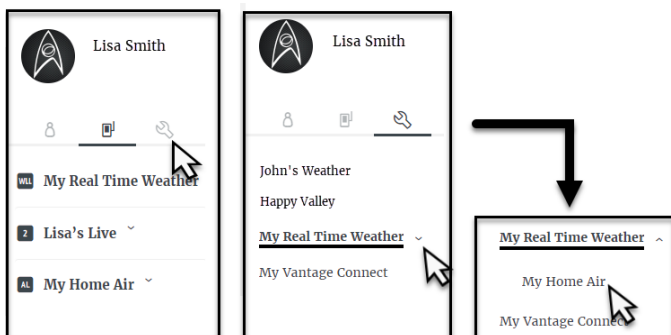


**Tip:** *If the device doesn't find your Wi-Fi network, make sure you have entered the correct password and that you are connecting AirLink to a 2.4 GHz network. It will not connect to a 5 GHz network. Then try repeating these steps.*

4. The LED will go solid when the phone is connected to the AirLink.

## Configure

1. When you are prompted to do so, enter a name for your AirLink, such as “Downtown Hayward Air Quality.” Remember that this name will be visible to all WeatherLink users if you make your station “public.” (The Device ID and activation date will be entered automatically.)
2. In the next screen, a map opens with the location of your station. You can change this by moving the pin. Tap **Save**.
3. In the next screens, select your Wi-Fi network and enter the network password. Tap **Connect**.
4. Your air quality data will now appear in the opening “snapshot” screen of the WeatherLink app, and on your bulletin page on WeatherLink.com. Your AirLink’s name will appear in the list of your devices under your account.
5. To edit your AirLink’s device information (name, indoor or outdoor use, or location), open your WeatherLink.com page and click the wrench icon under your name on the right hand side of the bulletin. (If your AirLink is part of an existing system, click the  next to the system’s name to open it.) Click the name of your AirLink to open the Device Info page, where you can edit the name, location, and elevation. Click Device Settings to edit environment. After editing, click Save.



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## Mount Your AirLink

AirLink can be mounted inside or in a protected area outside where AC power is available. Good airflow through the sensor is important.

### **Using on flat surface such as a counter or tabletop:**

1. Adhere the foot pads to the feet.
2. Slide the mounting bracket down and off the sensor housing.
3. Place the sensor on the surface, with the Davis logo facing upward. The raised feet on the underside of the sensor housing will ensure air flow through the sensor.

### **If installing on a vertical surface, inside or outside:**

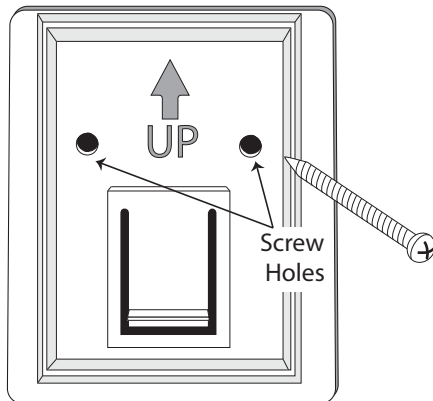
**Installing the sensor outside:** Choose a shaded and protected spot. In the Northern Hemisphere, a north-facing (south-facing in the Southern Hemisphere) wall or under an eave is a good choice. Don't install the sensor near outdoor exhaust vents for air conditioning, hot water heaters, dryers, or kitchen/bathroom vents.

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**Note:** If using outdoors, mount only on a vertical surface and with the outdoor sensor cover. Do not use on a flat surface or without the cover.

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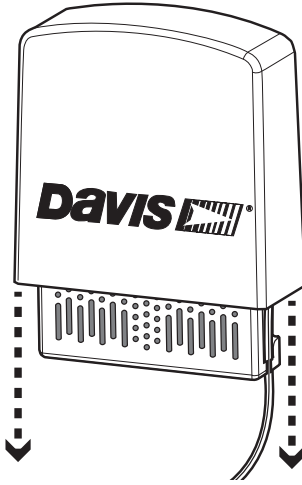
1. Slide the mounting bracket down and off the back of the sensor housing.
2. Use the bracket as a template to mark screw holes, then use a drill create pilot holes in the mounting surface. Use the included screws to mount the bracket to the wall.



3. Slide the sensor housing down onto the bracket. It will click into place.

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4. If installing outside: slide the sensor cover over the sensor housing.





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# Maintenance

Accurate air quality readings require free air flow over the sensor. If your readings stop or seem wrong, check the sensor housing for leaves, insect webs or nests, and any other debris. You can use a vacuum hose or compressed air to clean the debris from the sensor housing.

If large insects are a problem in a sensor mounted outside, you may install a screen over the sensor. The sensor's accuracy is rated without the screen, so be aware that using the screen may reduce accuracy.

The screen is located in a storage area inside the sensor housing.

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**Note:** It is important to avoid damaging the device with a discharge of static electricity when you touch the board. You should ground yourself before opening the case by touching any conductive material, such as metal, that is either touching the floor or touching a series of items leading to the floor.

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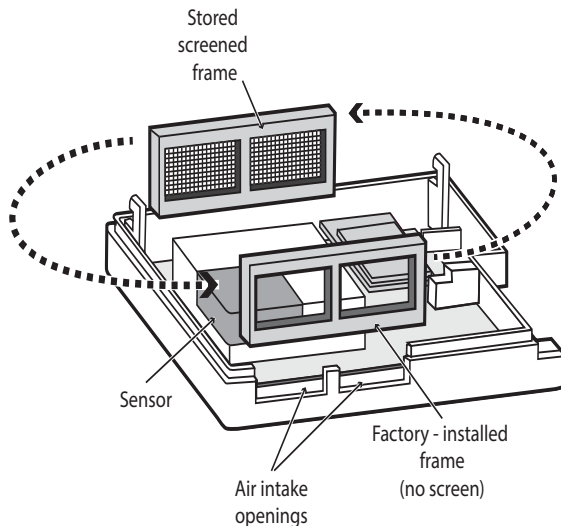
1. Unplug the AC-power cable.

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**Note:** Unplugging the AC adapter will cause any stored archive data to be lost. Since data is uploaded as soon as it is generated when connected to Wi-Fi, this will only be a problem if the device has not been connected to Wi-Fi for some time.

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2. Remove the two screws on the back of the sensor housing.
3. The screen is stored above the green PCBA board. Remove the factory-installed frame (no screen) that surrounds the air intake openings, and replace it with the screened frame.



4. Put the unscreened frame into the empty storage slot and close the sensor housing.

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# Troubleshooting

**? *When setting up my AirLink, I don't see AirLink in the list of devices to set up in the WeatherLink app.***

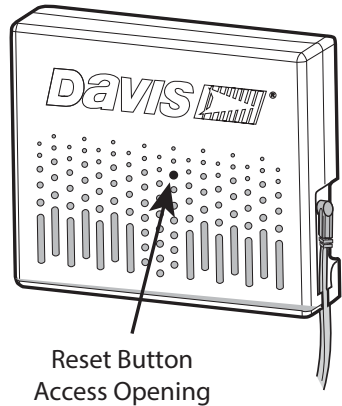
You may have an older version of the app. Please download the latest version from iOS App Store or Google Play Store

**? *Can I use AirLink with my Davis weather station?***

You can use AirLink with an existing Davis system that is uploading to the WeatherLink Cloud. Your air quality will appear on your WeatherLink.com bulletin page as well as on your WeatherLink app. (It will not appear on your Vantage Pro2 or Vantage Vue console.)

**? *The blue LED on my AirLink does not come on.***

The BLE may have “gone to sleep.” To reset, insert a paper clip into the reset button access on the front of the sensor housing. If the LED still does not come on, make sure your AirLink is connected to AC power. (Unplugging the device from AC power will also reset it. See note on page 7 about possible archive data loss from power loss.)



**? *My AirLink will not connect to the internet.***

Check to make sure you entered the correct Wi-Fi password. You may have entered the wrong password: repower the AirLink and try reconfiguring Wi-Fi in the app.

**? *There is no air quality data on my WeatherLink.com page and app.***

Make sure the sensor is powered up and connected to the internet.

**? *Can I change my archive rate?***

The archive rate is the rate at which archive data is permanently stored on the WeatherLink Cloud. (It does not affect the update rate for current conditions.) The default setting for AirLink's archive rate is 15 minutes. You can change this to 1 or 5 minutes by purchasing an annual device upgrade subscription for your AirLink. You can select 30- or 60-minute archive rates without upgrading.

You can change your archive rate on the WeatherLink app or on WeatherLink.com.

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**Note:** If you are using AirLink with a WeatherLink Live or EnviroMonitor system that has already been upgraded, it will also be upgraded. No need to purchase another.

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# Contacting Davis Technical Support

For questions about installing or operating your AirLink please contact Davis Technical Support. We'll be glad to help.

- Online**            **[www.davisinstruments.com](http://www.davisinstruments.com)**  
See the Weather Support section for copies of user manuals, product specifications, application notes, software updates, and more.
- E-mail**            **[support@davisinstruments.com](mailto:support@davisinstruments.com)**
- Telephone**        (510) 732-7814  
Monday - Friday, 7:00 a.m. - 5:30 p.m. Pacific Time.

# Specifications (See [www.davisinstruments.com](http://www.davisinstruments.com) for more information)

Operating Temperature .....	14° to +140°F; -10° to +60°C
Storage Temperature .....	-40 - +176°F; -40 - +80°C
Current Draw.....	Average: 100 mA; Peak 500mA
Housing Material .....	Rugged ABS Plastic
AC Adapter (not included with 7210USB) .....	5 VDC, 1000 mA
Wi-Fi Frequency Range	
US Model.....	2412-2462 MHz, 802.11b/g/n
EU/UK/USB Models.....	2412-2472 MHz, 802.11b/g/n
BLE Frequency Range.....	2402-2480 MHz

## Particulate Matter Sensor

Particle Range of Measurement .....	0.3 ~ 1.0 µm; 1.0 ~ 2.5 µm; 2.5 ~ 10 µm
Particle Resolution .....	1 µg/m <sup>3</sup>
Accuracy .....	±10 µg/m <sup>3</sup>
Update Interval .....	1 minute

## Inside/Outside Relative Humidity

Resolution and Units .....	0.1%
Range .....	0.1% to 100% RH
Accuracy .....	±2%
Update Interval.....	1 minute

## Inside/Outside Temperature

Resolution and Units.....	Current Data: 0.1°
Range .....	-40° to +140°F (-40° to +60°C)
Sensor Accuracy.....	±0.5°F (±0.3°C) (typical)
Update Interval .....	1 minute

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## AirLink™

Product Number 7210, 7210EU, 7210UK, 7210USB Document Number: 07395.384 Rev. B 9/10/20  
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