

## Instruction Manual

# Supplementary Manual for HD220-W/HD330-W Wireless Dual Output Programmable Humidity Controller

Version 1.1 (June, 2021)

## 1. Overview

Auber's HD220-W is a two-stage programmable humidity controlling device with Wi-Fi network connection capability, which allows its users to monitor and control humidity remotely from a smart phone or a tablet. Once set up, users can access the humidity data and change parameter settings even he/she is thousands of miles away from the device.

This guide provides instruction on how to use the AuberSmart app to connect to the HD220-W/HD330-W controller. For basic operations of the controller, please check the main manual of HD220/HD330.

## 2. Wireless connection

### 2.1. Specifications

Frequency Range	2.412 GHz - 2.484 GHz
Standards	802.11b/g/n
Output Power	802.11b: 16dBm 802.11g: 14dBm 802.11n: 13dBm
Receiving Sensitivity	802.11b < -78dBm 802.11g < -68dBm 802.11n < -66dBm
Data Rates	11M@802.11b, 54M@802.11g, MCS7@802.11n
Security	Encryption Standards: WEP/WEPA/WPA2 Encryption Algorithms: WEP64/WEP128/TKIP/AES
Wi-Fi Type	STA/AP

### Note

This device complies with Part 15 of the FCC Rules. Operation is subjected to the two following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. HD220-W contains radio module. FCC ID: 2ACDZ-3301-SBSL.

### 2.2. Requirements

- Users must have a smart phone/tablet with AuberSmart app installed (available for Android 4.4 or above and for iOS 10).
- Users must have a 2.4Ghz Wi-Fi network, the network's name (SSID) and the password.
- During the initial set up, users' smart phone/tablet must connect to the designated Wi-Fi network.
- The device HD220-W must be under the good coverage of the designated Wi-Fi network all the time.

### 2.3. Wireless connection indicator

There is a blue LED indicator that shows the status of the wireless connection. It is located at the lower right corner of the display window. Different blinking frequencies indicate different communication status.

**Fast blinking (4Hz):** initializing/reset wireless connection.

**Slow blinking (0.5Hz):** wireless signal out-of-range; device lost wireless connection.

**Short single or multiple pulses:** device is communicating with user's phone/tablet.

### 2.4. Initial set up

When the device is first power up, the wireless connection indicator will blink fast, which means the device is not connected to any Wi-Fi signal yet. Users can configure the device from his/her smart phone/tablet with the AuberSmart app is installed. The indicator will stop blinking after wireless connection is set up successfully or if the user has not set up the wireless connection during the first 30 minutes. Users will have to reset the Wi-Fi module manually when he/she wants to re-configure the wireless connection.

### 2.5. Reset wireless connection

If this controller was configured to a Wi-Fi signal and was later taken to a new place that is under a different Wi-Fi signal, the wireless module must be reset and re-configured for this new router.

- 1) Place the device under the coverage of the new Wi-Fi signal. When the device is powered up, the blue indicator will start blinking slowly (0.5Hz) due to the original Wi-Fi signal being out-of-range.
- 2) On the device, hold both the SET key and Mute key for 2 seconds until the blue LED start fast blinking (4Hz).
- 3) If the device is still on your device list, go into your AuberSmart app and select "delete this device". Then proceed to add a new device. A step by step instruction can be found in section 4.

### Note:

After resetting the wireless connection, other users need to delete the device from Device List and add it back to their AuberSmart app. However, users do not need to reset the Wi-Fi module on the device. If other users do not delete the device and re-configure it, they may still be able to connect to the device when their phones and device are both connected to the original Wi-Fi network. But they will not be able to connect the device once when they leave the Wi-Fi network.

## 3. Getting started

- 1) Download and install the latest AuberSmart app through Google Play store or iOS Appstore. The Android version app can also be downloaded as an apk installation file from Auber's website.
- 2) Take the device to a location that is under the coverage of a Wi-Fi network signal and make sure you have access to the Wi-Fi network name (SSID) and password. Power up the device and you should see the blue indicator start blinking.
- 3) Make sure you have turned on the Wi-Fi connection in your smart phone/tablet, and are connected to the Wi-Fi signal that you have the password. You can go to "Settings", then "Wi-Fi" in your phone/tablet to set it up.
- 4) Add a new device. Open the AuberSmart app, at "Device list" page, click the plus icon "+" on the top right corner to add a new device (see Figure 1).
- 5) On the Add Device page (Figure 2), enter your current Wi-Fi network name (SSID) and password. If the SSID does not show up automatically or correctly, please manually enter the SSID. Once you have entered

these information, click “Connect Device”. This step may take up to 1 minute.

- 6) The new device should have been added to the Device List (shown in Figure 3). The model number of the device, current program step, and current probe reading will be displayed. Multiple devices can be added to AuberSmart app.

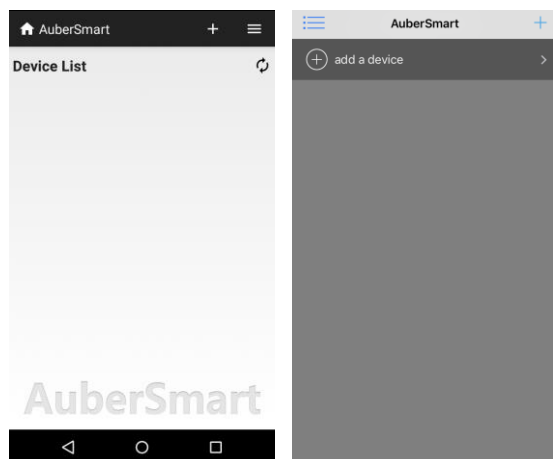


Figure 1. Device List page of AuberSmart (left: Android version; right iOS version).

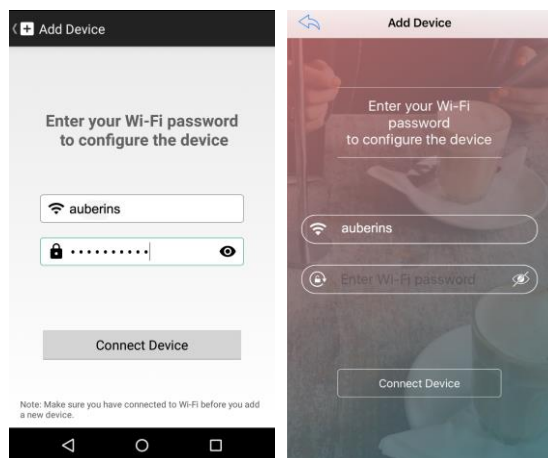


Figure 2. Add Device page. (Left: Android version; right iOS version).

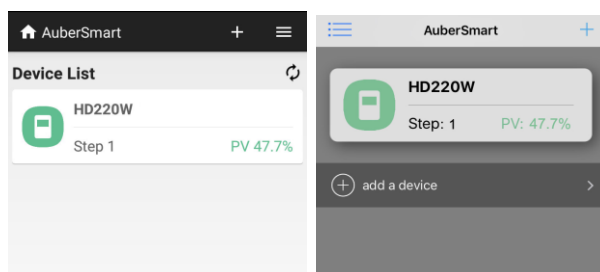


Figure 3. When the device is added successfully, the app will return back to Device List page. (Left: Android version; right iOS version).

- 7) To view the detailed information about the device, tap on the device name/info. To rename this device or delete it from the device list, long tap on the device name/info. To refresh the information, tap the refresh button on the top right corner.

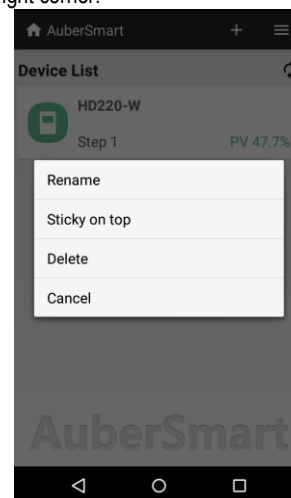


Figure 4. Available operations when long tap on the device tab.

- 8) To exit the app, tap the return button twice on your Android phone; or tap the top right corner to bring up the menu list and select “Exit” (see Figure 5).

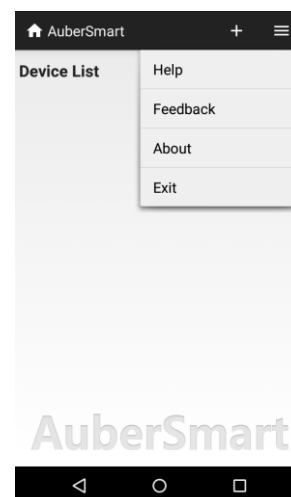


Figure 5. Menu list.

#### 4. Navigating AuberSmart app

The AuberSmart app is constructed in three main layers: device list, device information page, and settings.

##### 4.1 Device list page

The Device List page show a list of devices that has been paired with this smart phone/tablet. This gives users a quick view of the current status of devices on this list. Users also can add new devices or remove added devices from this page.

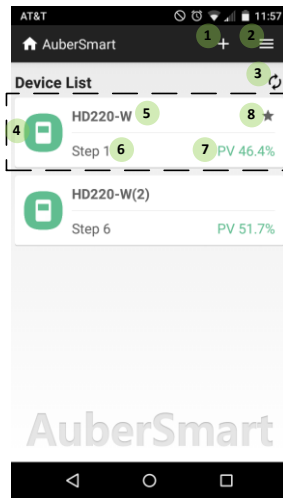


Figure 7. Device List page.

- (1) Add a new device.
- (2) App menu button.
- (3) Refresh device list.
- (4) Device quick-view. Short tap it to view the device information page; long tap it to bring up a quick action menu.
- (5) Device name.
- (6) Current program step number.
- (7) Current probe reading.
- (8) Device sticky to the top of the list.
- (9) Quick action menu.
- (10) App menu.

#### 4.2 Device information page

The device information page shows the current device status, past data collection, and allows users to change program running status. This page can be divided into four sections: A) quick access bar, B) data plot, C) device working status, and D) program details.

##### A. Quick access bar

- (1) Return back to the Device List page.
- (2) Change program status to Run/Pause/Stop. This action is password protected.
- (3) Mute alarm buzzer.
- (4) Configuration button. Go to Device Settings and App Preferences. These options are password protected.

##### B. Data plot

- (5) Plot legend.
- (6) Plot time scale selection. Plot's time scale can be changed between 2 hours, 6 hours, 24 hours, 7 days, or 30 days (see Figure 9).
- (7) Humidity data plot. Tap on the plot to check information on specific data points (see Figure 10).

##### C. Working status

- (8) Current humidity reading.
- (9) Set value at current step.
- (10) Current program step.
- (11) Progress bar.

##### D. Program status

- (12) Program status. Show whether the program is running/paused/stopped
- (13) Step time. It shows how much time has passed in the current step and how much is the total time of the current step.

- (14) Total time shows the total passed time and total time of the entire program.
- (15) Device run time shows how much time has passed since the device was powered on.

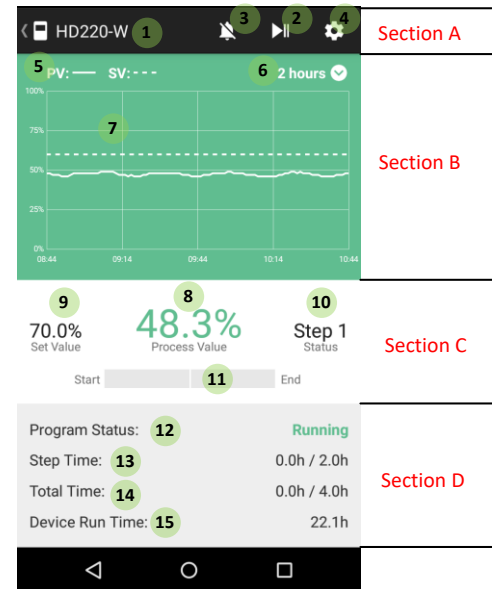


Figure 7. Device information page.

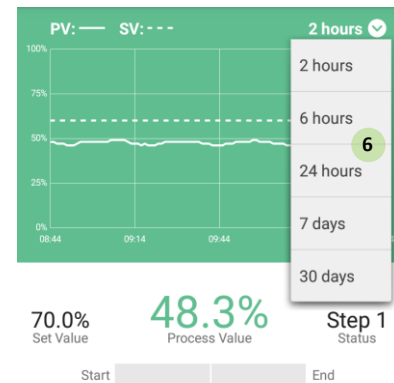


Figure 9. Change the time scale of the data plot.

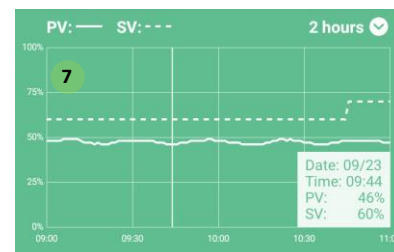


Figure 10. Check a data point on the plot.

#### 4.3 Device settings and app preferences

To check or change the device settings or app preferences, click on the Configuration button on the Quick Access Bar of the Device Info page.

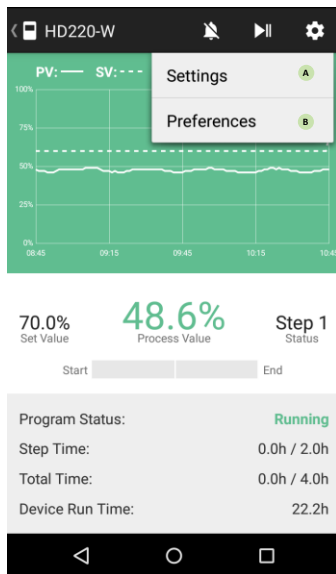


Figure 11. Press the configuration button to go to settings or preferences.

#### A. Settings

These parameters, which can also be accessed from the device, are relevant to how the device should operate. All parameters and program settings of the device can be changed from the app and are synchronized to the device. Settings are password protected, but users can change password to any personal 3-digit code. Users can also choose to save the code to avoid entering the code every time they try to access the parameter settings.

#### B. Preferences

These additional settings are only available on AuberSmart app, not on the device itself.

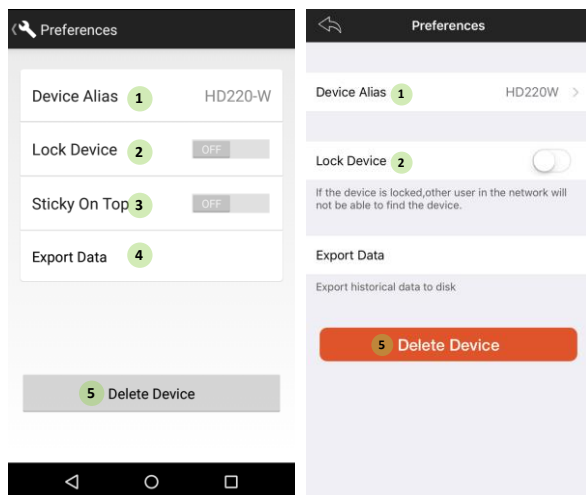


Figure 12. Preferences setting page.

- 1) Device Alias. Users can rename the device in order to differentiate it from other devices.
- 2) Lock Device. This setting determines whether a new user can find and add this device to his/her AuberSmart app. When this feature is turned on, other users of AuberSmart App won't be able to connect to the

device. But users that have already established the connection won't be affected. By default, this feature is set to "off".

- 3) Sticky On Top (not available for iOS). When this feature is set to "on", this device will stay on top of the device list.
- 4) Export Data. Humidity data recorded on the device can be downloaded as a CSV file on user's phone or tablet.
- 5) Delete Device. By tapping on this button, users can remove this device from AuberSmart app.

#### 5. FAQs (regarding wireless connection)

- 1) Can I add more than one HD220-W to AuberSmart app?

Yes. You can add multiple devices to AuberSmart app. For example, if you have two devices under the coverage of the same wireless network, you have the ability to add both devices to your AuberSmart at the same time.

- 2) Can multiple smart phones or tablets connect to the same device?

Yes. A device (HD220-W) can connect with more than one smart phone or tablet.

- 3) How can I prevent other AuberSmart app users from adding my device?

First of all, the other user must know your Wi-Fi password in order to add the device. Secondly, you can choose to "Lock" the device so new users won't be able to add the device even if they have the Wi-Fi password. Please note that this "Lock Device" feature won't block users that are already connected with the device.

- 4) How can I prevent other users from changing my settings on the device?

The parameter settings and app preferences are password protected. Users who do not know the password won't be able to access the parameter or preference settings. However, changing parameter settings from the device itself doesn't require password.

- 5) My device picked up other people's wireless signal instead of mine.

The device automatically picks up the strongest Wi-Fi signal around it. You can manually input the Wi-Fi signal's name (SSID). Or you can move the device to a location that is closer to your Wi-Fi router during the initial set up. Once the connection is established, you can move the device back to where it was as long as it is under the coverage of the same Wi-Fi signal.

- 6) Can I access the device info without Wi-Fi network?

Once your phone/tablet has successfully connected with the device, you can access the device via cellular signal.

- 7) Can I access the device info from a Wi-Fi network that is different from my home Wi-Fi network?

If you are connecting the device for the first time, your phone/tablet and the device must be under the coverage of the same Wi-Fi network. Once your phone/tablet has successfully connected with the device, you can access the device from a different Wi-Fi network as long as it has internet access.

- 8) I can see and access the device from AuberSmart app when I was home, but when I was away from home I cannot connect to it.

Please try 1) delete the device from the app, 2) reset the Wi-Fi module by holding the SET and Mute key, and 3) add the device again.

Possible reasons for this: You may have added the device while the device was configured to your home Wi-Fi network. And later the device was reset and configured to another Wi-Fi network.

Then the device was reset and configured to your home Wi-Fi network again by someone else, not by you. In that case, you can connect to the device while you are connecting to your home Wi-Fi network, but you won't be able to connect to the device when you are not using your home Wi-Fi (i.e., using cellular signal or using a different Wi-Fi network).

- 9) After I installed the app and added my device, my phone constantly shows "connection error".

You probably didn't exit your AuberSmart App properly and it is still running in the background. To exit the app, tap return button (for Android user) or tap the app menu and select "exit".

- 10) Where does the AuberSmart save exported data?

The default file path is  
"/storage/emulated/0/Android/data/com.auberins/files/".

- 11) Can I use HD220-W without internet?

Yes. HD220-W is a standalone unit that functions as the normal HD220 that doesn't have wireless connection capability. You can use its front keypad to control it.

(End)

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