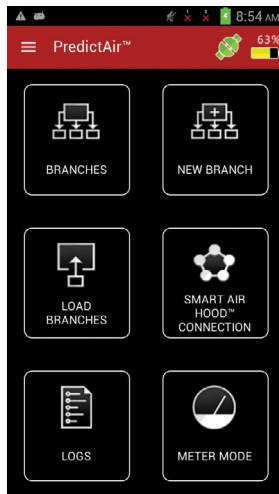




Series SAH SMART Air Hood™ Balancing Instrument - Quick Start Guide for PredictAir™ Application Software

Specifications - Installation and Operating Instructions



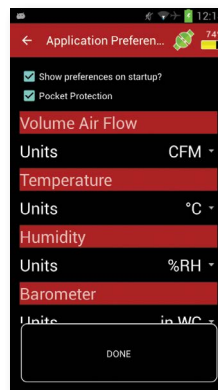
The **SERIES SAH SMART Air Hood™** Balancing Instrument is the most accurate and easy to operate air flow hood on the market. By using the included hood stand and wireless communications to the handheld, a single operator can balance a branch in less time than traditional balancing teams. Besides being lighter than most traditional capture hoods, the ergonomic design makes the Series SAH easy to maneuver, with less physical stress. The rugged polypropylene base hood features patented Quad Flow Design Technology for controlling air flow and minimizing back pressure, which yields superior measurement accuracy. The Wi-Fi direct communication gives reliable communication with a distance of up to 200 yards between the hood and the handheld test instrument. The SMART Air Hood™ Balancing Instrument includes the PredictAir™ Application Software which reduces the number of steps in the air flow balancing process using Predictive Balancing's Express Balance mode. Predictive Balancing is a method of predicting the optimal flow set point for each register and the order in which they should be adjusted.

Please see Bulletin TE-SAH-SW for full instructions for the PredictAir™ Application Software.

I. SETUP

APPLICATION PREFERENCES

When the application is first opened, the following screen will be shown.



Touch to edit the default units of these fields

Touch to save the preferences and go to the app's main page

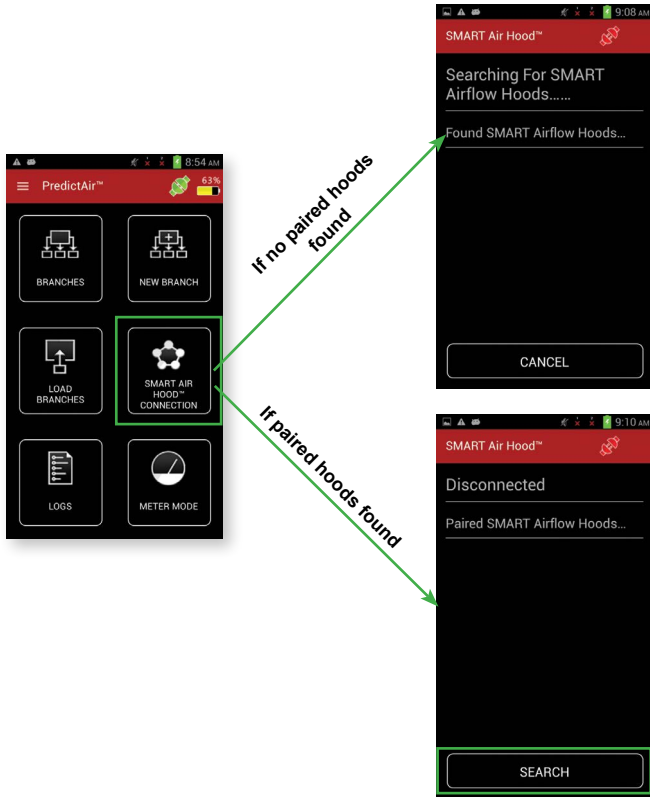
The "Show preferences on startup?" checkbox gives the choice for this screen to continue being shown whenever the application is opened. If it's not checked, then the app will open directly to the main screen.

The "Pocket Protection" option prevents unwanted key presses. When activated, if an object covers the screen then the screen will go black and any buttons become inactive. When the object is pulled away from the screen, then the screen will return back to its previous state. This should protect the work from being interrupted when the device is placed in a pocket or other carrying method.

The Preferences can otherwise be located in the main menu by sliding a finger from the left edge of the screen towards the right, pressing the menu button, or pressing the 3 lines at the top of the page and selecting "App Preferences".

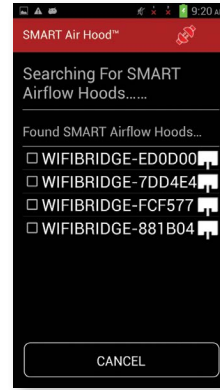
CONNECTING TO THE HOOD

Once the handheld instrument is on, open the PredictAir™ Application Software. From the main application screen, press the **SMART AIR HOOD™ CONNECTION** button to connect to the air flow hood.

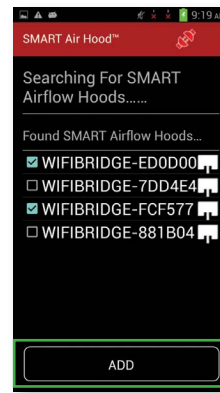


If no paired hoods are found the app will start searching for a hood to allow connection, otherwise press the **SEARCH** button to search for hoods to allow pairing.

As the app discovers hoods, they will be added to the list under “Found SMART Airflow Hoods”.

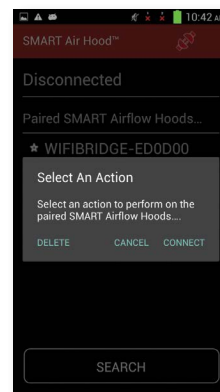


Select the hood that is to be paired. **Note:** More than one line can be selected to pair multiple hoods at the same time.



Once the desired hood(s) are selected, press the **ADD** button.

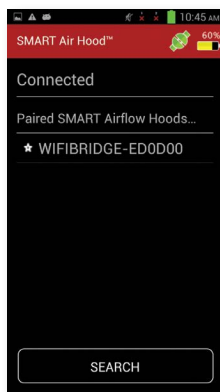
To connect to the desired hood press the hood's name in the Paired SMART Airflow Hoods list. This will bring up a dialog box that allows for the choice to connect, delete, or cancel the action.



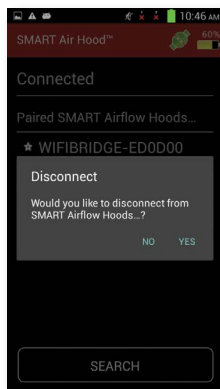
Press "CONNECT" to start the process of establishing the link between the handheld device and the hood. This will bring up a dialog box while the process of establishing the connection is performed. Pressing the cancel or back button will return to the paired screen without establishing a connection.



Once the connection is established, the dialog will automatically close. This will return the application back to the paired devices screen with a green icon and white star (default hood) indicating the hood has been connected to the handheld.



To disconnect from the current hood press on the white star. The Disconnect dialog comes up, which allows for the hood to be disconnected. If "No" is selected, the dialog will be closed without any other action being taken. If "Yes" is selected, the hood will be disconnected, but still paired.



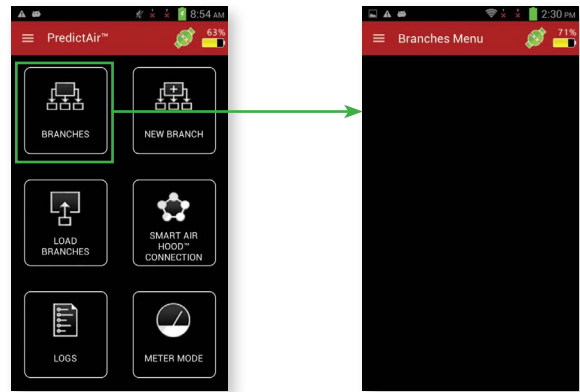
If a different hood is pressed, the Connection dialog box will appear. If "Connect" is selected, the first hood is disconnected and the second hood is connected. If "Delete" is selected, that hood will be removed from the Paired SMART Airflow Hoods list.

Press the handheld's **BACK** button to return to the main screen.

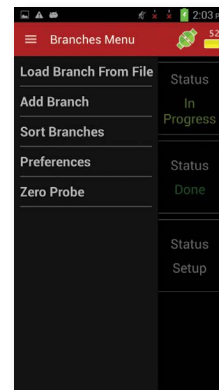
II. PREDICTIVE BALANCING

BRANCHES

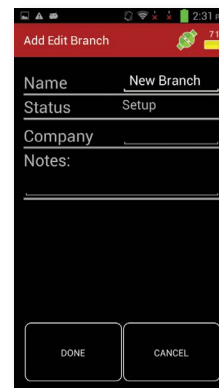
To access the Branches menu, press the **BRANCHES** button from the main screen.



Sliding a finger from the left edge of the screen towards the right, clicking the menu button, or clicking the 3 lines at the top of the page will open the Branches Menu.



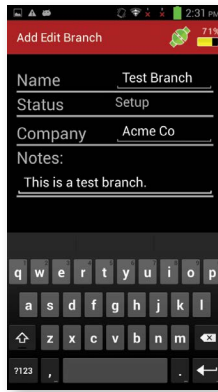
Press **ADD BRANCH** from the menu. This will open up the Add Edit Branch screen.



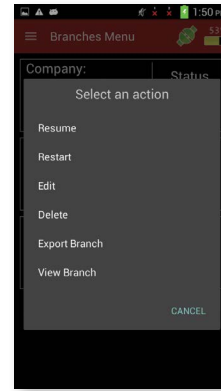
If a different hood is pressed, the Connection dialog box will appear. If "Connect" is selected, the first hood is disconnected and the second hood is connected. If "Delete" is selected, that hood will be removed from the Paired SMART Airflow Hoods list.

Press the handheld's **BACK** button to return to the main screen.

Fill in the desired information for the branch. The status is a static field and is not editable.



Press the branch that was just created. A menu will appear.



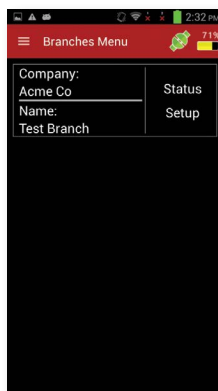
To hide the keyboard press the back button (This will hide the keyboard and not exit the current screen).



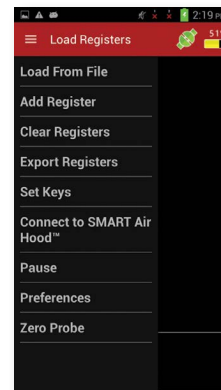
Press the **START** option. This will take you to the LOAD REGISTERS screen. This screen will be used to load all the registers in the branch.



Press the done button to create the branch.

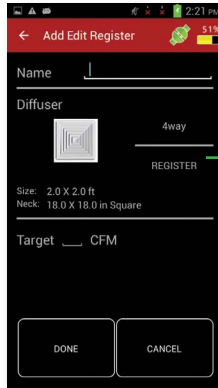


Since this is a new branch, no registers have been loaded. Open the menu by sliding a finger from the left edge of the screen towards the right, pressing the menu button, or pressing the 3 lines at the top of the page.

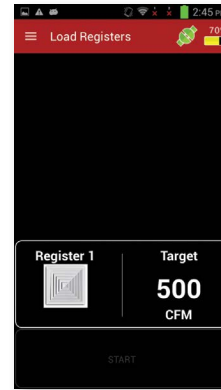


Press the **ADD REGISTER** option in the menu. This will bring up the ADD EDIT REGISTER screen to create a new register.

There should now be a register in the register list.



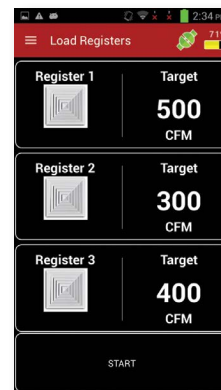
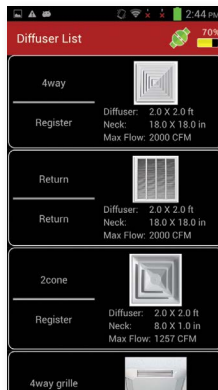
Touch to change diffuser



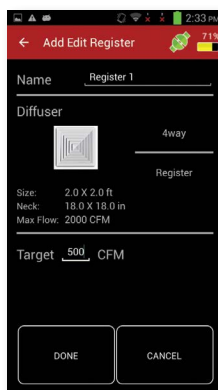
Fill in the register's information.

Repeat the process until all the registers are added (There has to be at least two registers to proceed).

Touching the diffuser will allow you to choose a diffuser from a list.



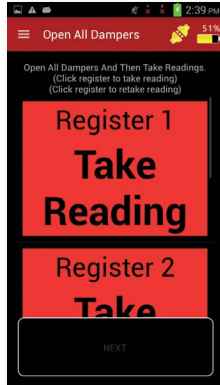
Once all the information for the register is entered, press the DONE button to create the register. If UHH2's back button is pressed the register will not be created and you will be returned to the REGISTER LIST screen.



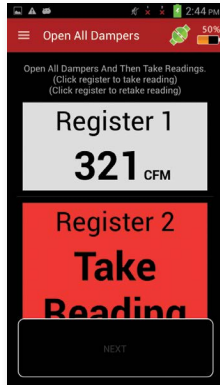
BALANCING PROCEDURE

The **START** button will start the balancing process. The **START** button will only be enabled if there are two or more registers in the register list.

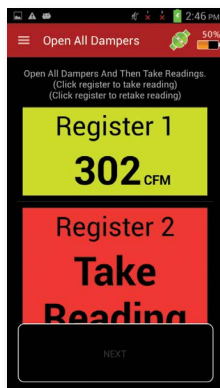
The first step of the balancing procedure is to take an initial sweep of all registers within the selected branch with all dampers open.



Red indicates that a reading still needs to be taken from the register. After selecting the register to measure, its button will turn from red to white, indicating that it is the active register.

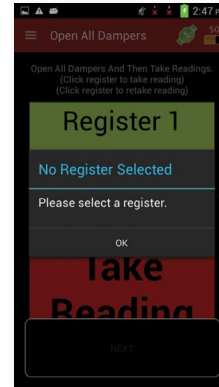


Press the register button again to store the reading, at which point it will change from white to green, indicating that a value has been stored for that register.



Repeat this procedure until all of the registers have been measured. Pressing on a register again allows for a retaking of that register if needed.

To enter data for a register that cannot be measured by the hood use the "Manually Enter Data" in the slide out menu. A register needs to be selected to enter data manually.

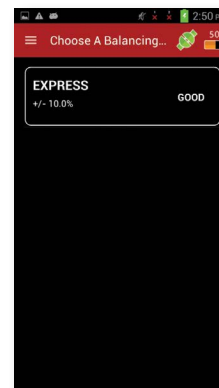


If a register is selected and "Manually Enter Data" is pressed, then a dialog will appear that allows for a value to be entered for the register.



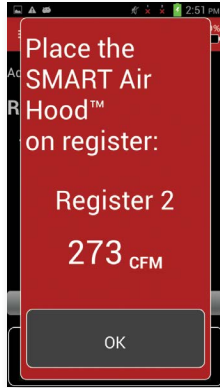
Once all of the registers have been measured, the **NEXT** button at the bottom will become enabled. Press and hold that button until the balance method selection screen appears.

Select a balancing method.

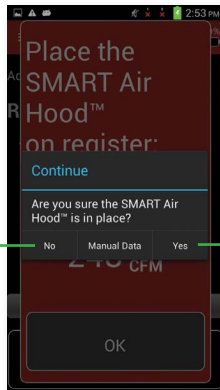


Repeat this procedure until all of the registers have been measured. Pressing on a register again allows for a retaking of that register if needed.

Pressing on the **EXPRESS** button starts the Express balancing method, which starts with the Place the Smart Hood dialog box. As shown in the below example, the app will direct you to the register to measure:



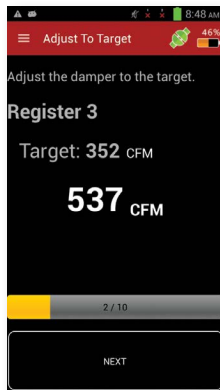
Press and hold the **OK** button to bring up the dialog box asking to confirm that the hood is correctly placed.



Touch to close the dialog without storing the reading

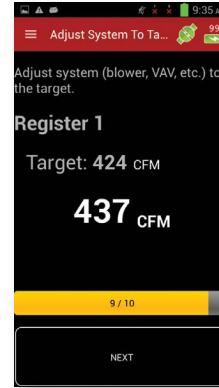
Touch to close the dialog and take a pre-adjust reading

If the **YES** button on the hood placement confirmation dialog was pressed then the app will bring up the Adjust to Target screen.



While in this screen, the damper needs to be adjusted to match the target. Press and hold the **NEXT** button to bring up the next screen which will guide you to the next register to measure and adjust. Once all registers except the key register are adjusted the app will require a post reading from all the registers. The app will guide you through the post reading process.

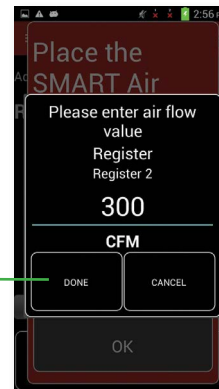
The last register measured will be the key register after which the adjust system (shown below) will come up requesting to adjust the branch's flow source to the given target.



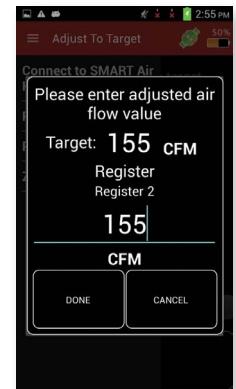
Press and hold to go to the Final Reading screen

Note: Throughout the balancing process the UHH2 can be removed from the pole and taken with you as you balance the branch.

"Manual Data" will bring up the Manual Data screen similar to the initial sweep manual entry dialog. After the manual data is entered, another dialog will appear. This manual entry dialog asks for the air flow of the register after adjusting (if it can be adjusted). The dialog includes the target air flow that the register needs to reach to balance the system.

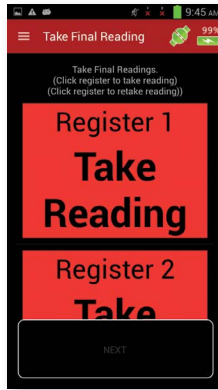


Touch to enter as the adjusted value for that register

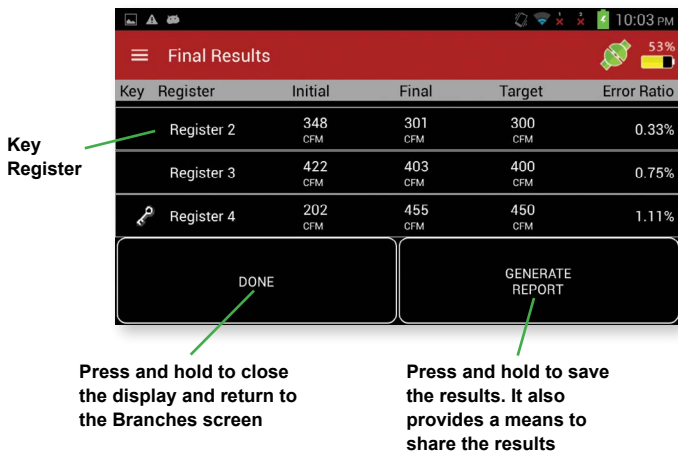


If the **CANCEL** button is pressed, then a Pause Balancing screen will be brought up. Pressing the **PAUSE** button in the pause dialog will store the current location and data within the selected balancing method and return back to the Branches screen.

The options and controls of the Final Reading screen are the same as in the Initial Readings screen. This screen is to gather readings to calculate the error ratio of the balancing process which is displayed on the next screen.



Once all of the registers are measured, press and hold the **NEXT** button, to bring up the Final Results screen. This screen displays how accurate the balancing method was.



The final readings can be retaken, for accuracy, by opening the slide out menu. Select **RETAKE READINGS** and you will be redirected to the **FINAL READING** screen to retake any readings you need to take.

