



User Manual

BARTLETT Instrument Company
1032 Avenue H, Fort Madison, IA 52627
1-(319)-372-8366
information@bartinst.com

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Headgrower

Welcome

This manual is for the Headgrower platform. This manual should be used in conjunction with the user manual for your particular controller. Screenshots are from both the phone/tablet app and the Desktop website.

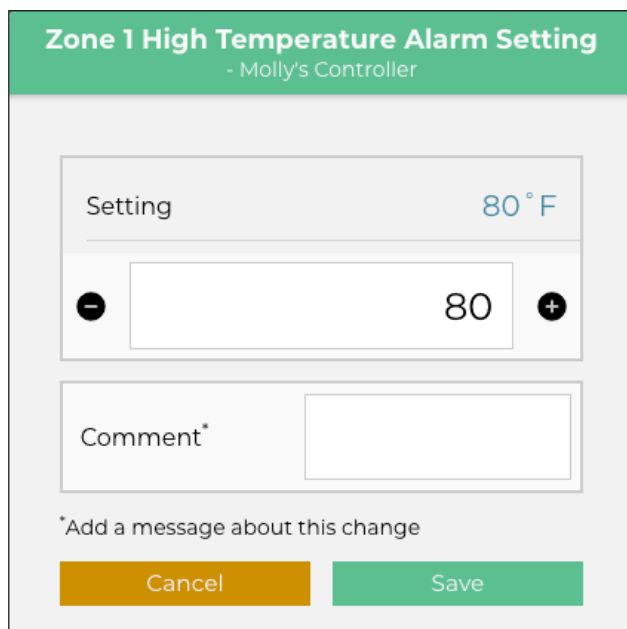
General

Across the Headgrower platform, we use color to indicate status. These are base colors you will see throughout and their meanings.

-  All good: no settings are changing and the temperature is within the valid range given the controller settings
-  Something is changing: temperature adjusting or settings are synching. Up or down arrows indicate cooling or heating.
-  Needs attention: An alarm / alert is active or the controller is offline.

Settings change forms will vary with the setting that you are changing. Overall, each form will have a label for each setting you are changing that will include the current value. Then the form will have an input where you can update the setting as well as a comment section.

Each settings change is audited and can be viewed by admins and editors of a controller. The audit log will have the setting, value updated, comment and the email of the user that changed the setting.



Zone 1 High Temperature Alarm Setting
- Molly's Controller

Setting 80° F

Comment*

*Add a message about this change

High Temperature Alarm Setting Form

My Controllers

After logging in, you will see a list of controllers based on your user permissions. Each controller shows the controller status bar, name, model and controller information. The controller information depends on the model:

- ClimateBoss, GHK or RWL controllers: information will be broken out by zone and show the current temperature and status indicator
- WeatherBoss or Wind/Rain alarm: will show if an alarm is active
- TimeBoss: no specific information broken out at this time

The screenshot shows the 'My Controllers' page with a list of controllers. Callouts on the left point to the 'Back' button, 'Model' column, 'Zones' column, and 'Name*' column. Callouts on the right point to the 'Settings' button and a 'Click for Details' link. A detailed view of a controller is shown on the right, displaying an alert for 'HIGH1' and temperature information for 'Zone 1'.

My Controllers

Model	Zones	Name*
TimeBoss TB-TMR		
DBP bench CB-GHK	ZONE 1 ZONE 2	
Greenhouse 2 CB-RWL	ZONE 1	
WeatherBoss CB-WR		
New 3140D CB-RWL	ZONE 1	
ClimateBoss Louver/fan in 30X96 house CB-GHKC		

Zone 1 Stage DAY

Alert
The alarm for HIGH1 has sounded

Current Temp **77°F**
Set 65°F

Max 77°F
Min 76°F
Clock 10:09
[Reset Min/Max](#)

Alarm Indicator 255

Controller Status

Clicking on a controller from the list takes you to the detailed status page. This page will have different information based on your controller model, configuration, settings and status. This manual will highlight key sections, iconography and actions you can take.

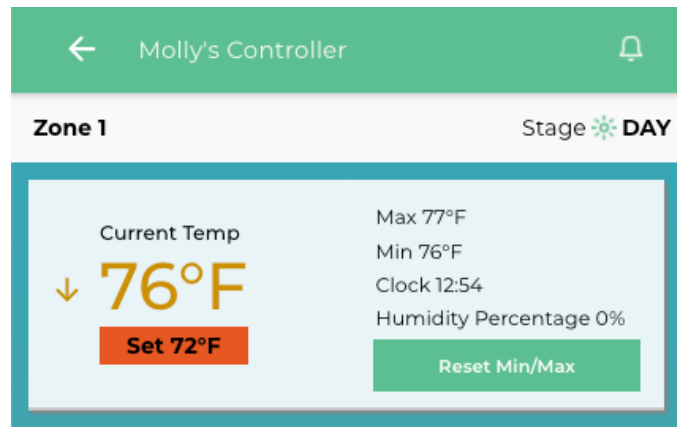
ClimateBoss Status (cont.) - General Status

Just below the controller name, the status page shows high level status information.

First, you can see the zone and the current controller stage information.

Next you see the current temperature, the status (refer to the General section), clock, minimum / maximum temperatures and humidity percentage.

In this section the information is all view only, with the exception of the Reset Min / Max button.



Current Temp: 76° F

Status: Changing

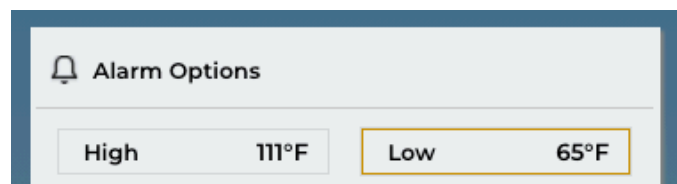
Indicator: COOL on, temperature decreasing

If there is an active alarm for the zone, Headgrower will show the alert and alarm information in the general status section.

This general status section will be at the top of each configured zone (e.g. Zone 1, Zone 2, Heat 3)

ClimateBoss Status (cont.) - Alarm Options

This section shows the current high and low temperature alarm settings. Press either button to configure the alarms.



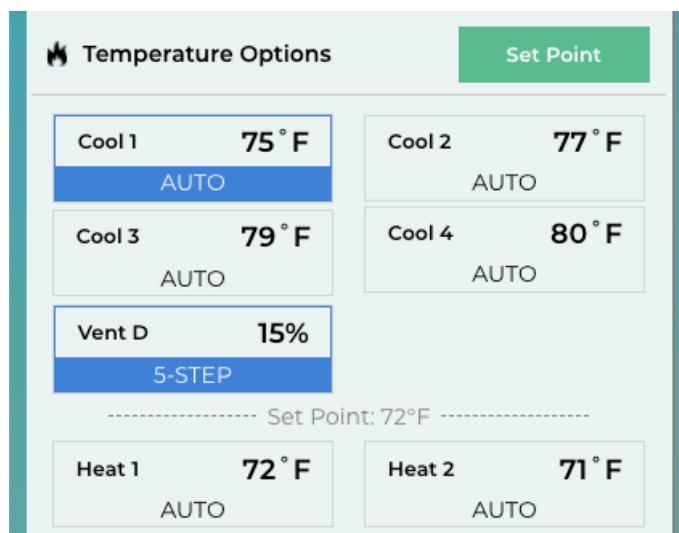
Low Alarm Setting Change Syncing

ClimateBoss Status (cont.) - Temperature Options

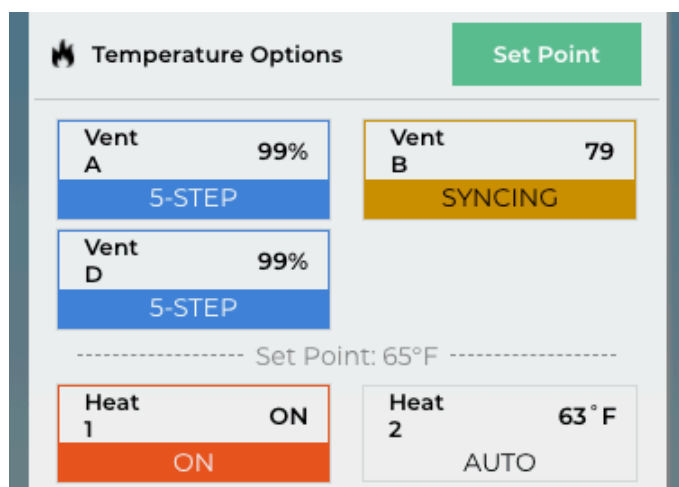
The Temperature Options section shows you the each output's status and setting. Each output is a button you can click to change the settings. If the output is currently running it will be highlighted by the border color; blue for COOL outputs and red for HEAT outputs.

Between the COOL and HEAT outputs you can see view only Set Point information in light gray. To edit the set point, click the Set Point button at the top right of the section.

The options here in this section will vary by controller. For example, the first picture is of a ClimateBoss GHK (Louver/Fan) model with the additional cool in the auxiliary board. The second is a ClimateBoss RWL (Natural Vent) model with the auxiliary board configured as 2 HAF, 1 Aux. As you can see, this section will depend on the type of controller you have and the settings you have configured.



Cool 1 and Vent D running



Vent A and Vent D running
Vent B setting syncing
Heat 1 manually ON

ClimateBoss Status (cont.) - Temperature Options

Below the output settings you will see a button labeled Adjust Program. When you press this button, you will see a form that shows you each stage, its set point and start time. At the top of this form is a graph that visualizes the stages. The graph will adjust as you change the form to visualize how the start and set points relate.

At the top of each stage is the current setting value and input options to change both the set point and start time. You can click the +/- buttons for the set point or simply enter a value.

After you edit a value, the form will update to show the previous value striked through and the new value in blue.

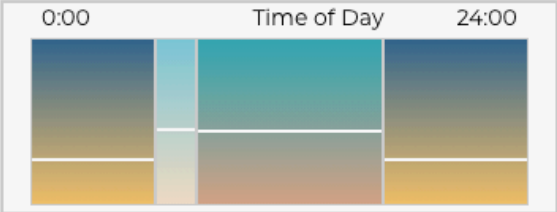
DIF	Set Point (°F)	Start Time	
Current	77°F	06:00	
	New: 81°F		
-	81	+	06:00

At the bottom of this form, there is - as usual - a comment section to outline what changes have been made.

Adjust Program

Zone 1 Program Settings

- Molly's Controller



Note: Time settings apply to Zone 1 and Zone 2.
Times should be entered in 24 hour format.

DIF	Set Point (°F)	Start Time	
Current	77°F	06:00	
-	77	+	06:00

DAY	Set Point (°F)	Start Time	
Current	76°F	08:00	
-	76	+	08:00

NITE	Set Point (°F)	Start Time	
Current	58°F	17:00	
-	58	+	17:00

Comment*

*Add a message about this change

CancelSave

ClimateBoss Status (cont.) - Timer / Mister Options

The ClimateBoss uses two stage timers. At the top of each timer, view the current mode at the top right (Timer, Mister and Shade - for Timer 1 only).

If active, you will see the time remaining for the stage. You will also see each stage configuration - the start and run times. You can click the start and run times to edit the settings.

Below the stages, buttons will show for manual intervention. These will vary by the current status. The options are Start, Run, Disable and Abort.

Timer 1 (only) can be configured in a Shade mode. There are additional shade settings you can configure for this timer. The readonly settings are shown with a gray background - these settings can be changed at the controller only. All other settings can be pressed and edited from Headgrower.

For Mister mode, you will see an On time and Cycle time for each stage and the Idle time. Each of these can be edited by pushing the value. (See image to the right)

If you have a light sensor configured, you will be able to see the light sensor information in this section. If you do not, you will see a message.

Your light sensor is not enabled. Please configure it on your controller.

The screenshot shows the 'Timer 1 Options' interface in 'Shade' mode. At the top right, it says 'Mode: Shade'. Below this, there are two stage configuration tables. Stage A has a 'Start' time of 8:00 and a 'Run' time of 6:00. Stage B has a 'Start' time of 14:00 and a 'Run' time of 0:08. To the left of these tables, it says 'Time Remaining 0:34'. Below the stage tables, there are 'Disable' and 'Abort' buttons. A message states: 'Your light sensor is not enabled. Please configure it on your controller.' Below this is a section titled 'Shade Settings' with several controls: 'Shade Mode' is ON, 'Open Time' is 100, 'Extend' is On, 'Retract' is On, 'Slow Retract' is ON, 'Temp Set Point' is 70, 'Step Percentage' is 25, and 'Pause' is 2.

Timer 1 Options		Mode: Shade	
🕒 Time Remaining 0:34	Stage A		Stage B
	Start 8:00	Run 6:00	Start 14:00 Run 0:08
Disable Abort			
Your light sensor is not enabled. Please configure it on your controller.			
☁️ Shade Settings			
Shade Mode	ON	Slow Retract	ON
Open Time	100	Temp Set Point	70
Extend	On	Step Percentage	25
Retract	On	Pause	2

Timer 1: Shade Mode
Stage A running

The screenshot shows the 'Timer 2 Options' interface in 'Mister' mode. At the top right, it says 'Mode: Mister'. Below this, there are two stage configuration tables. Stage A has a 'Start' time of 3:00 and a 'Run' time of 1:00. Stage B has a 'Start' time of 4:00 and a 'Run' time of 0:02. To the right of these tables, there are 'Disable' and 'Abort' buttons. Below the stage tables, there is a table with 'On' and 'Cycle' times for Stage A, Stage B, and Idle. At the bottom, there are three boxes showing 'Light Value 3107', 'Daily Light Integral 0.88', and 'Light Set Point 0.'.

Timer 2 Options		Mode: Mister	
	Stage A		Stage B
	Start 3:00	Run 1:00	Start 4:00 Run 0:02
Disable Abort			
	On	Cycle	
Stage A	6	2	
Stage B	12	3	
Idle	80	0	
Light Value 3107 Daily Light Integral 0.88 Light Set Point 0.			

Timer 2: Mister mode
Status: Not Running

ClimateBoss Status (cont.) - Dehumidification Options

If you have dehumidification settings configured, you will see this section on your status page. At the top right, the Start button is a manual start of the vent.

Below the heading, you can see each setting and status. Each can be pressed to adjust the setting.

The top left, Vent Mode, box shows if the vent is configured to **Off**, **Timed** or **Humidity**.

Click the **Dehumidification Setup** button to adjust which outputs to apply the dehumidification settings towards.

☀ Dehumidification Options

Start

Vent Mode	Humid	Start Time (hh:mm)	0:00
Fan 1 Cycle Time	3m	Heat Time	8m
Fan 2 Cycle Time	0m	Repeat	OFF
Enabled in DIF	OFF	High Temp	Use Cool 2
Enabled in DAY	ON	Set Point	0%
Enabled in NITE	OFF	Low Temp	Use Heat 1

Change Dehumidification Setup

ClimateBoss Status (cont.) - Heat 3

The Heat 3 section can be seen here. It shows the current temperature as well as the set point. From this section you can adjust set point and see the Heat 3 status.

Heat 3

Stage ☀ DAY

Current Heat

254°F

Set 50°F

🔥 Temperature Options

Set Point

Heat 3

N/A

ClimateBoss Status (cont.) - Humidity

You may also see the current humidity percentage on your status page. Click the set point button to adjust.

💧 Humidity Options

Set Point

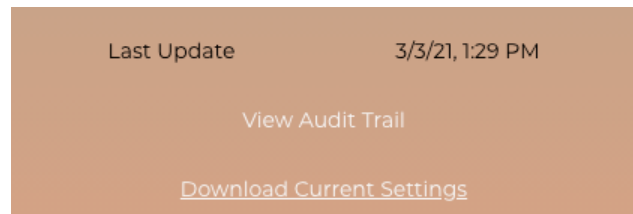
Current Humidity

0%

Set 0%

ClimateBoss Status (cont.) - Summary Section

At the bottom of the controller status page some summary information can be found. First, you can see the latest time Headgrower received an update from the controller.



There are also two links in this section.

View Audit Trail: This takes you to a screen which shows the settings changes for this controller. This will show for only users with admin and editor permissions.

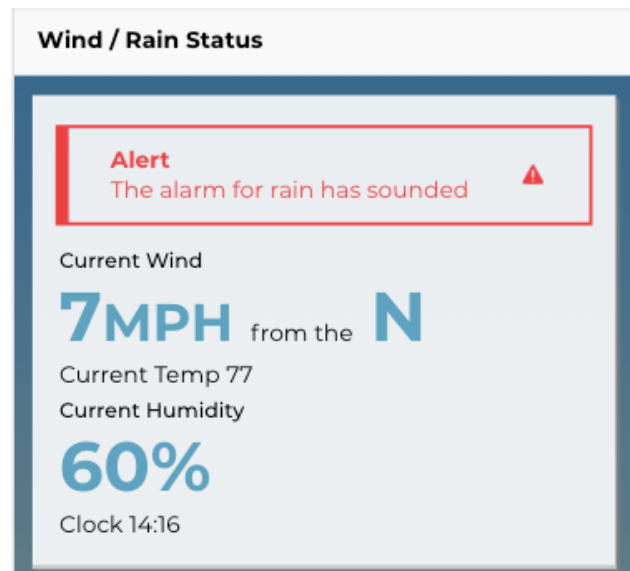
Download Current Settings: This allows a user to download a file of the current controller settings. This will show for only users with admin and editor permissions.

WeatherBoss Status - Current Status

The current status for the WeatherBoss shows:

- Wind speed
- Wind Direction
- Outside Temperature
- Humidity Percentage
- Clock Time

Additionally, it will show an alert if the WeatherBoss has an alarm for wind, rain or both.



WeatherBoss Status - Settings and Drop Off

In the WeatherBoss, two wind and rain alarms can be configured. Each have the following settings that show and can be configured by pressing the setting information:

- High Activation Speed
- Low Activation Speed
- Activation Delay
- Drop Off Speed
- Drop Off Delay

Additionally you can view and edit the direction each activation setting (high or low) is enabled for. You can press the direction to switch which activation setting will be applied. In the example, the high activation speed will trigger an alarm for wind from the N, NW, W, SW and S direction. The low activation speed will be triggered from the E, NE and SE.

The screenshot shows two sections of the WeatherBoss interface. The top section, 'Wind 1 Settings', has a title bar with a cloud icon. It contains three rows: 'High Activation Speed' set to '25MPH', 'Low Activation Speed' set to '15MPH', and 'Activation Delay' set to '0:05'. Below these is a 3x3 grid of directional buttons: NW, N, NE, W, (empty), E, SW, S, SE. Green horizontal bars are above NW, N, W, and SW. Red horizontal bars are above NE, E, and SE. The bottom section, 'Wind 1 Drop Off', has a title bar with a cloud icon. It contains two input fields: 'Drop Speed' set to '10MPH' and 'Delay' set to '1:00'. At the bottom is a large green button labeled 'Cancel'.

WeatherBoss Status - Light Settings & Summary Information

This last section is a view only section to see light sensor information. Here you can see the light value and the daily light integral. Additionally you can view the latest update for the WeatherBoss as well as a link to the audio trail of changes.

The screenshot shows the 'Light Settings' section of the WeatherBoss interface. It has a title bar with a sun icon. Below the title bar are two grey boxes: 'Light Value' with the value '3108' and 'Daily Light Integral' with the value '8.71'. At the bottom, there is a yellow bar containing the text 'Last Update' followed by '3/3/21, 2:22 PM' and a link 'View Audit Trail'.

TimeBoss

The TimeBoss uses two stage timers. These timers are the same style that is used in the ClimateBoss controllers.

At the top of each timer, view the current mode at the top right (Timer, Mister and Shade - for Timer 1 only).

If active, you will see the time remaining for the stage. You will also see each stage configuration - the start and run times. You can click the start and run times to edit the settings.

Below the stages, buttons will show for manual intervention. These will vary by the current status. The options are Start, Run, Disable and Abort.

Timer 1 (only) can be configured in a Shade mode. There are additional shade settings you can configure for this timer. The readonly settings are shown with a gray background - these settings can be changed at the controller only. All other settings can be pressed and edited from Headgrower.

For Mister mode, you will see an On time and Cycle time for each stage and the Idle time. Each of these can be edited by pushing the value. (See image to the right)

If you have a light sensor configured, you will be able to see the light sensor information in this section. If you do not, you will see a message.

Your light sensor is not enabled. Please configure it on your controller.

Timer 1 ☁️

Stage A		Stage B	
Start	Run	Start	Run
8:00	6:00	14:00	0:08

Start Stop Disable Abort

Light Value 3108 Daily Light Integral 10.39 Light Set Point 0

Shade Settings

Shade Mode	ON	Slow Retract	ON
Open Time	100	Temp Set Point	70
Extend	Off	Step Percentage	25
Retract	On	Pause	2

Timer 1: Shade Mode
Stage A running

Timer 2 ☁️

Stage A		Stage B	
Start	Run	Start	Run
3:00	1:00	4:00	0:02

Disable Abort

	On	Cycle
Stage A	6	2
Stage B	12	3
Idle	80	0

Light Value 3108 Daily Light Integral 10.77 Light Set Point 0.

Timer 2: Mister mode
Status: Not Running

Controller General Settings

The controller's general information page has both read only and editable information about the controller.

You can view the following read only information about your controller:

- Model
- Firmware version
- Headgrower ID
- Last Updated Time (when the controller last sent a message to the Headgrower platform)

The screenshot shows the 'Test House' settings page in the Headgrower platform. The left sidebar displays a summary for 'Test House' (CB-GHKC) with two zones: ZONE 1 at 76°F and ZONE 2 at 76°F. The main content area shows various settings for the controller. Read-only information includes the Model (CB-GHKC), Firmware (181), ID (Headgrower ID), and Last Updated time (5/6/21, 10:22 AM). Editable settings include 'In Use' (a toggle switch), 'Download Current Settings' (a button), 'Import Settings File' (with 'Choose File', 'No ...open', and 'Import' buttons), 'Name' (set to 'Test House'), 'Thermistor Fail Mode' (a toggle switch), 'Time Log Interval (minutes)' (set to 10), 'Controller Time' (set to 10:21), 'Heat / Cool Delay Time' (set to 1), and 'On to Auto Time' (set to 0:10). Each setting has a 'Save' button.

There are several controller settings that can be changed from the Headgrower General Settings page. These settings are dependent on controller type. To read details about each of these settings and how they affect your growing, please refer to your specific controller manual.

Settings may include:

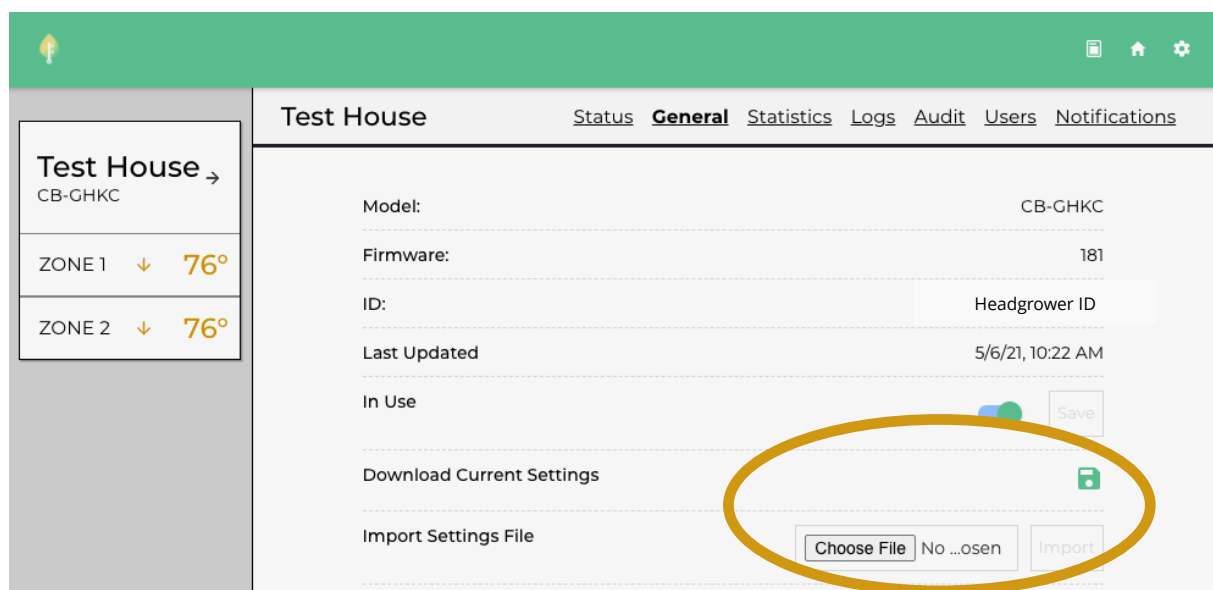
- Thermistor Fail Mode
- Controller Name
- Time Log Interval
- Heat / Cool Delay Time
- On to Auto Time
- Not in Use
 - This is a way to mark a house as not in use. By doing so, no users will receive notifications while marked as not in use. It will also be displayed accordingly to indicate to the user.
 - This setting is only editable for controllers connected directly. If your controllers are connected via CIS, please adjust it there.

Download & Import / Copy Settings

On the General Settings page there are two functions for users that assist in quickly and easily adjusting all controller settings. These are the Download Current Settings and Import Settings File functions.

To download the controller's current settings, you can press the Save button icon (floppy disk). This will save a JSON file to your computer with all of the current settings for that controller.

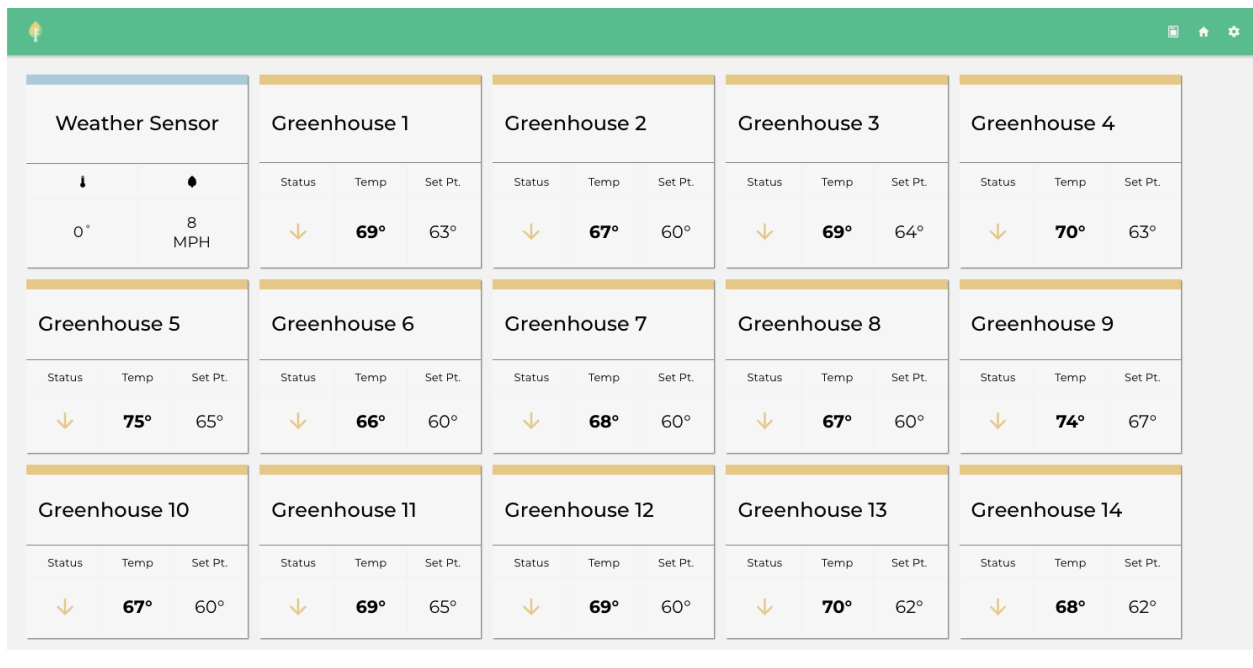
To import settings, select the downloaded JSON file and then click the Import button. You can import any downloaded settings file, from the current controller or from a different controllers. Please not, if some settings do not apply or if the format is incorrect those settings will be disregarded.



Dashboard View

Headgrower provides users the option of showing their houses in a dashboard view or a list view. Below is an example of what the dashboard looks may look like.

Users can temporarily view the dashboard by clicking the leftmost icon on Headgrower Desktop. For a more permanent view, users can toggle the dashboard view as their default view. To do so, go to the Settings page and ensuring the **Default to Dashboard** checkbox is checked and saved.



The dashboard view displays a grid of 14 greenhouse cards and one weather sensor card. Each card shows the current status, temperature, and set point. The weather sensor card is located in the top left, and the greenhouse cards are arranged in three rows of five, with the last row containing only four cards.

Weather Sensor		Greenhouse 1			Greenhouse 2			Greenhouse 3			Greenhouse 4		
Status	Temp	Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.
↓	8 MPH	↓	69°	63°	↓	67°	60°	↓	69°	64°	↓	70°	63°

Greenhouse 5			Greenhouse 6			Greenhouse 7			Greenhouse 8			Greenhouse 9		
Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.
↓	75°	65°	↓	66°	60°	↓	68°	60°	↓	67°	60°	↓	74°	67°

Greenhouse 10			Greenhouse 11			Greenhouse 12			Greenhouse 13			Greenhouse 14		
Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.	Status	Temp	Set Pt.
↓	67°	60°	↓	69°	65°	↓	69°	60°	↓	70°	62°	↓	68°	62°

Graph(s) & Data

Headgrower snapshots current controller status and settings once every minute. This data is saved for 2 weeks and can be accessed by the user on Headgrower in the Logs table. If you would like to save data for greater than 2 weeks, the current recommended method is to download the data (using the Download Data button shown under the Logs graph) and save it locally.



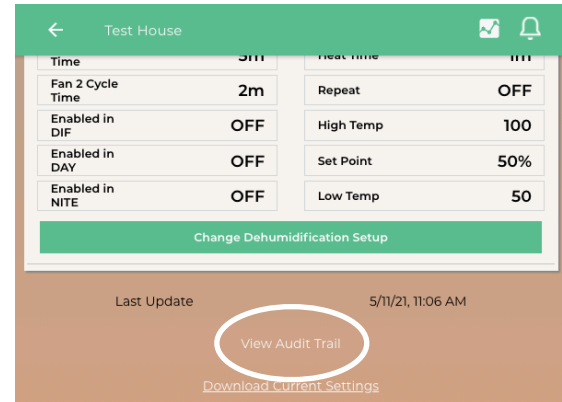
Changes Audit

Changes made in Headgrower are audited by site and by controller. You can view these changes in a few ways on the app and desktop.

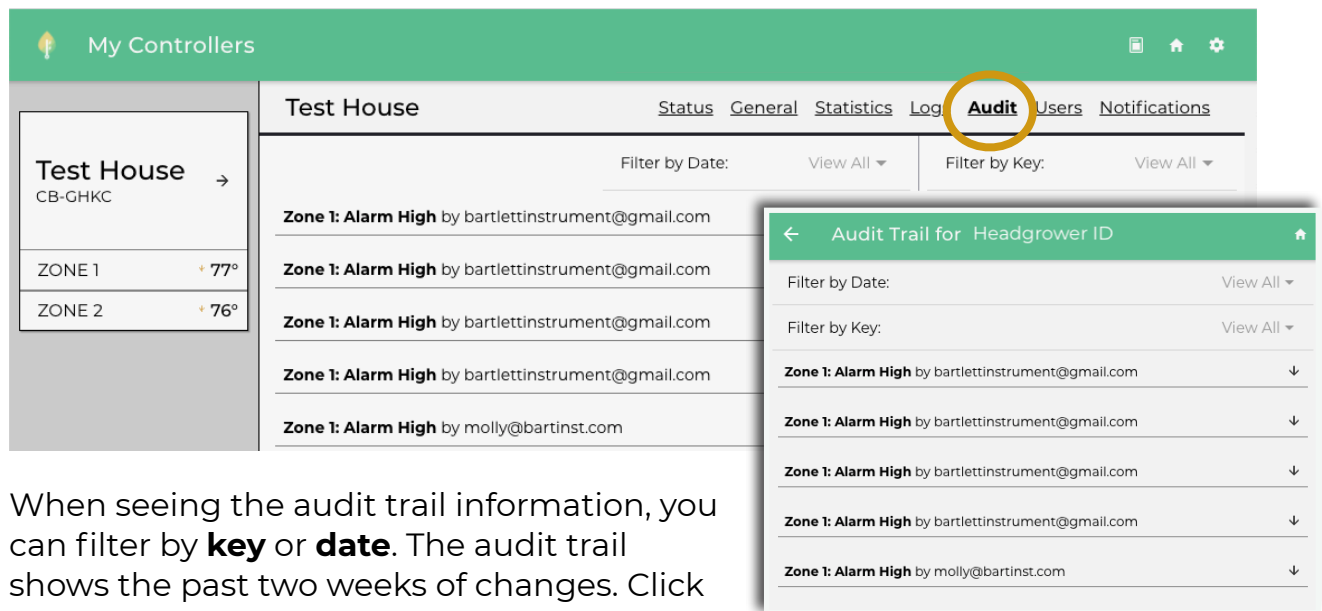
How to get to the audit trail:

- First go to the controller status page
- Second,
 - On the desktop: Click the [Audit](#) tab
 - On a small screen: Scroll to the bottom of the page and click [View Audit Trail](#)

After navigating to the audit trail page, you will see one of the below pages:



Small Screen Audit Trail Link



When seeing the audit trail information, you can filter by **key** or **date**. The audit trail shows the past two weeks of changes. Click on any of the audit trail changes to see what value the setting was changed to and the comment added by the user.

Notifications

Headgrower

← Settings

General Information

Headgrower Version2.2.9

Username:loggedinuser@test.com

C.I.S Site ID:Site ID

C.I.S Registration Date:02-04-2019

User Access→

Legal→

Contact→

Getting Started→

Subscription→

Notifications→

All Sent Notifications→

Manage Sites→

Logout

User Preferences

Temperature ScaleFahrenheit

Toggle Dark Mode

Default to Dashboard

Save Settings

Sent NotificationsFilter by Date

Communications ErrorMay 11, 2021 11:46 AM

Communications ErrorMay 11, 2021 11:46 AM

Communications ErrorMay 11, 2021 11:46 AM

Details:-TimeBoss is not reporting.

View Status

Messaged:firstuser@test.com, loggedinuser@test.com

Communications ErrorMay 11, 2021 11:46 AM

Communications RestoredMay 11, 2021 11:28 AM

Greenhouse AlarmMay 9, 2021 7:52 AM

Greenhouse AlarmMay 9, 2021 7:42 AM

Greenhouse AlarmMay 9, 2021 7:33 AM

Greenhouse AlarmMay 9, 2021 7:29 AM

Greenhouse AlarmMay 9, 2021 7:24 AM

Greenhouse AlarmMay 9, 2021 7:19 AM

Greenhouse AlarmMay 9, 2021 7:12 AM

Greenhouse AlarmMay 9, 2021 7:05 AM

Greenhouse AlarmMay 9, 2021 6:47 AM

Greenhouse AlarmMay 8, 2021 10:48 PM

Greenhouse AlarmMay 8, 2021 10:21 PM

Greenhouse AlarmMay 8, 2021 10:17 PM

Greenhouse AlarmMay 8, 2021 9:57 PM

Greenhouse AlarmMay 8, 2021 9:57 PM