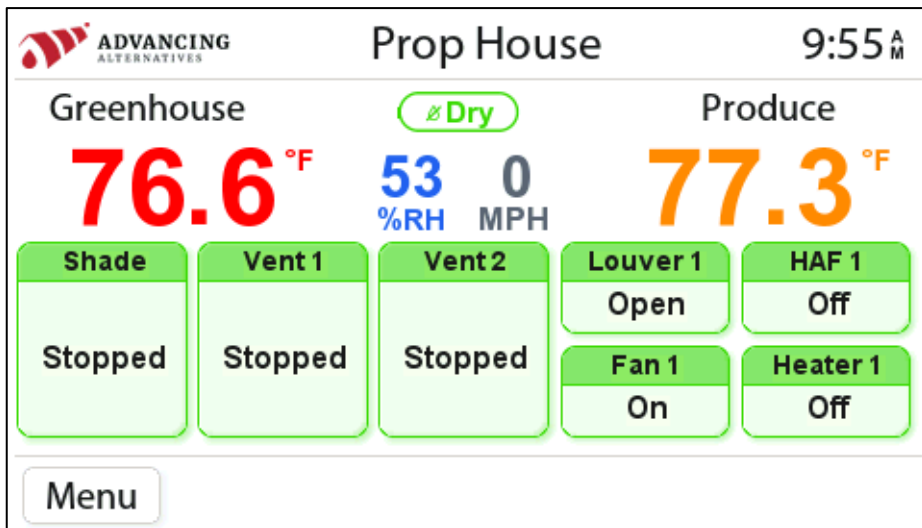


Updated Controller UI – Supplemental Guide



INTRODUCTION

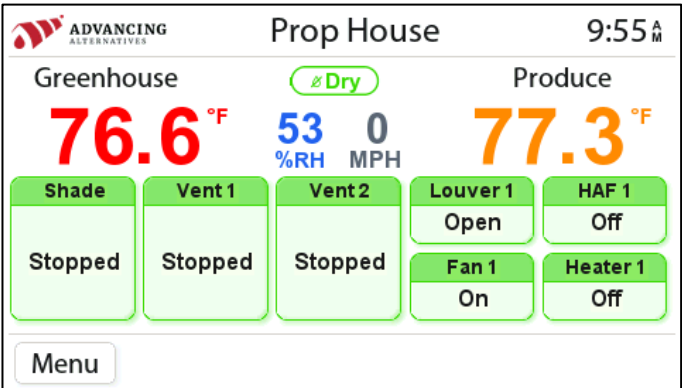
This supplement covers the touchscreen interface introduced with AegisTec and AegisTecPlus software 2.0. It walks through each screen on the controller, from the home screen and initial setup to day-to-day use and optional features such as DIF and dehumidification. It does not cover installation or wiring, which are in the main instruction manual.

Note: The images and wording in this supplement are based on the AegisTecPlus. The AegisTec uses the same interface, and nearly everything here applies to both models, with a few differences. The AegisTec has six relays, while the AegisTecPlus has ten, and the AegisTecPlus offers more sensor input options. Some screens also refer to the controllers by their model numbers: AV430 TEC+ for the AegisTecPlus and AV430 TEC for the AegisTec.

SYSTEM SETUP

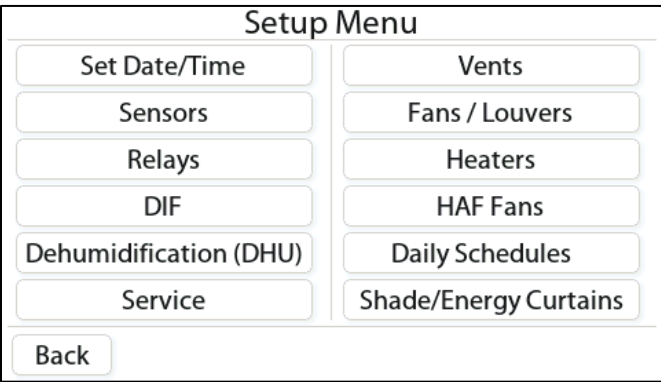
Main Screen

The main screen shows the status of the controlled zones. You can see the temperatures (Zone 1 and, if applicable, Zone 2) and the status of the relays. Other sensors, when enabled, also appear on screen (rain, humidity, wind). To begin setup, touch the Menu button on the bottom left.



Setup Menu

The Setup Menu is your central hub to access your settings and parameters. The following pages will walk through each sub-screen within the Setup Menu, beginning with the Set Date/Time button.



SYSTEM SETUP

Overview

The 12 buttons on the Setup Menu screen will be explained in detail on the following pages. Here is an overview of the 12 buttons.

Button	What It Is For
Set Date/Time	Set date and time.
Sensors	Which sensors are being used, where the second temperature sensor is, units, and small reading corrections.
Relays	Which piece of equipment is wired to each relay.
DIF	Optional scheduled temperature shifts, for example cooler at dawn and warmer in the evening.
Dehumidification (DHU)	Optional humidity relief settings, including a purge using heat and venting together.
Service	Serial number, software version, LCM link, screen brightness, and Factory Reset.
Vents	Open and close temperatures, run and idle times, and rain and wind closing foreach vent.
Fans/Louvers	On and off temperatures for exhaust fans and louvers.
Heaters	On and off temperatures for each heater.
HAF Fans	Temperature spans for horizontal airflow fans.
Daily Schedules	Timed motors and timed relays that run by the clock.
Shade/Energy Curtains	Deploy and retract temperatures and travel times for curtains.

SYSTEM SETUP

Set Date/Time

Set the time and the date. If the screen says **Time synced from LCM** in grey, the clock is set automatically if you have AdvanSync (our online platform). If not, you can uncheck that feature in the Service section. Use the up and down arrows to set the hour, minute, and 24H or AM/PM, and the month, day, and year. When finished, touch the Back button.

Set Date / Time

TIME

10 : 09 AM

^

^

^

^

^

^

DATE

09 - 29 - 2026

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^

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Back

Sensors

The sensor screen lists all the available sensors for the AegisTecPlus.

Sensors

Sensor	Mode	Reading	Unit	Offset
Temp 1	Z1	79.2	°F	- 0.0 +
Temp 2	Z2	80.3	°F	- 0.0 +
Humid	Z1	53	%RH	- 0 +
Wind	On	0	MPH	Configure
Rain	On	Ø Dry		

CancelSave

SYSTEM SETUP

Each sensor must be assigned a mode.

Mode	Meaning	Used For
Z1	Zone 1	Temp and Humidity Sensors
Z2	Zone 2	Temp and Humidity Sensors
Out	Outside	Temp and Humidity Sensors
Off	Off	Temp, Humidity, Wind, and Rain
On	On	Temp, Humidity, Wind, and Rain
Both	Both	Two-zone Humidity

Temp 1 (Temperature 1) is always Zone 1 (Z1). If you select Z1 for Temp 2, it will average with Temp 1 sensor.

Ensure your sensor modes match what is wired into your controller. For example, if you have not wired in a wind sensor (see page 14), make sure the mode for Wind is **Off**.

Offset

The Offset option in the Sensors page allows you to adjust your temperature or humidity reading. This is generally not used, but on occasions where your probe gives you higher (or lower) readings than desired due to its location, you can offset the reading.

If you have a wind sensor attached, touch the **Configure** button.

SYSTEM SETUP

The **Wind Setup** screen allows you to adjust your wind settings. We recommend users leave the Calibration settings in Default. (Users seeking custom calibration settings can set user values for Slope and Offset.)

Wind Setup

Calibration

Inspeed D3

Slope2.73 mph/Hz-+Offset0.53 mph-+

Operation

Averaging window8 min-+Override engages at15 mph-+Override clears at10 mph-+

Back

The *Operation* section allows you to change the Averaging Window, Override engages at, and Override clears at setting for the Wind Sensor.

Averaging window

Defaults to 8 min. This is the amount of time the system calculate the average wind speed.

Override engages at

Defaults to 15 mph. The average wind speed at which the system closes the vents (selected below)

Override clears at

Defaults to 10 mph. The average wind speed at which the system resets the vents to basic operations

Touch the **Back** button to return to the Sensors screen.

SYSTEM SETUP

When you have completed your Sensors setup, touch the **Save** button on the bottom right.

Sensors						
Sensor	Mode	Reading	Unit	Offset		
Temp 1	Z1	79.2	°F	-	0.0	+
Temp 2	Z2	80.3	°F	-	0.0	+
Humid	Z1	53	%RH	-	0	+
Wind	On	0	MPH	Configure		
Rain	On	⌘ Dry				
Cancel				Save		



The next screen will confirm the changes. Review changes and touch the **Confirm** button if accurate. (If not, select Cancel and adjust.)

Apply Changes?	
Two zones: Zone 1 + Zone 2	
Humidity:	Zone 1
Cancel	Confirm

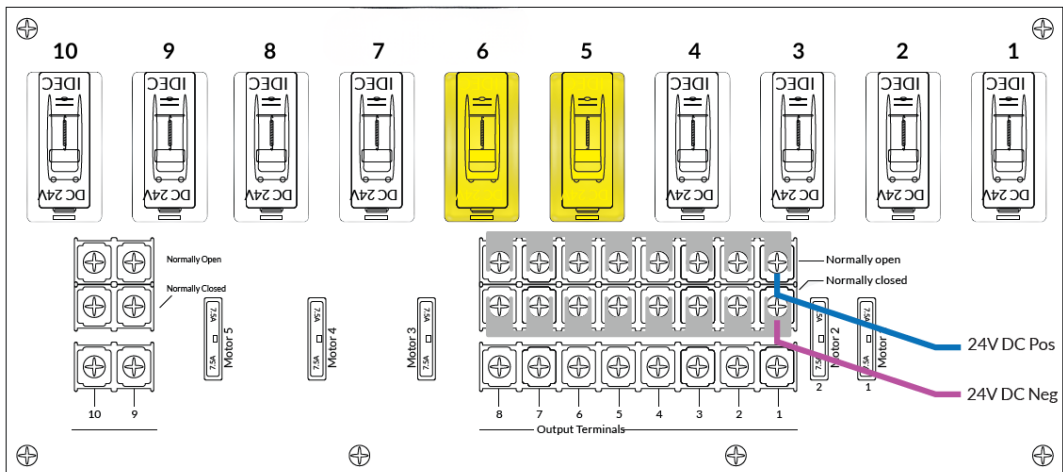


SYSTEM SETUP

Relays

By touching the **Relays** button in the Setup Menu, you will enter the Relay Map screen. The Relay Map screen allows you to accurately “map” your relays to the assets they are controlling. Upon initial startup, the Relay Map shows the ten relay terminals, all reading **(none)**.

The AegisTecPlus has ten relays. You can access your relays by opening the door of the controller and looking on the back of the door. The relays are numbered 1 through 10, starting on the far right. For reference, relays 5 and 6 are highlighted **yellow** in the image below.



We recommend starting 24-volt DC motors (“vents”) on the far right. Motors with open and close features require two relays. See page 10 for more on installing DC motors. Look at the image of the Relay Map screen on the next page and note how many relays are used to Motors.

SYSTEM SETUP

In the image of the **Relay Map** screen below, three motors are being used on relays 1 through 6. **Relays 1 and 2** are being used for "Curtain 1" (a shade and/or energy curtain). **Relays 3 and 4** are being used for "Vent 1" (e.g. a ridge or side vent). **Relays 5 and 6** are being used for "Vent 2."

Relay Map

1	Curtain 1 (dep)	2	Curtain 1 (ret)
3	Vent 1 (close)	4	Vent 1 (open)
5	Vent 2 (close)	6	Vent 2 (open)
7	Louver 1	8	Fan 1
9	HAF 1	10	Heater 1

Back

Label

Test

You can modify the Relay Map by touching any relay. For example, if you touch Relay 9 ("HAF 1") you are taken to the **Assign Relay 9** screen

Assign Relay 9

HAF Fan	Vent (pair)
Fan	2-Stage Fan (pair)
Louver	Louver (pair)
Timed Relay	Timed Motor (pair)
Heater	Curtain (pair)

Back

Unassigned

SYSTEM SETUP

The options listed within the Assign Relay screen are as follows:

HAF Fan – Circulating fan (requires one relay and an interface box for AC voltage to power fan)

Fan – AC fan (requires one relay and an interface box for AC voltage to power fan)

Louver and Louver (pair) – A framed assembly of angled slats designed to allow airflow and light while blocking rain, sunlight, debris, and views.

Note that there are two louver options: **Louver** and **Louver (pair)**. A **Louver** (one relay) is for a stall motor that simply requires an on/off function. When voltage is present the louver opens, when there is no voltage it closes. **Louver (pair)** is for a louver that requires *both* an open and close signal – for example a 24-volt DC louver motor.

Timed Relay – A versatile option that allows you to send a low-voltage signal to an external relay for a set amount of time during a given window.

Heater – A heating device (requires one relay and is generally wired as a “dry contact” on relays 9 or 10; see page 13)

Vent (pair) – A dual-relay motor used to open and close adjustable ventilation systems, such as roll-up side curtains, ridge vents, curtain partition walls, or shade/energy curtains. (Requires two relays to manage the separate open and close signals.)

2-Stage Fan (pair) – A circulating or exhaust fan with two distinct speed settings that requires two relays to control high and low speeds independently.

Timed Motor (pair) – A motor that uses two relays to control timed open and close operations (such as automated curtains or vents managed on a schedule).

SYSTEM SETUP

Curtain (pair) – A shade and/or energy curtain system that requires two relays to control the separate open and close signals. It can be configured to operate as a shade curtain, an energy curtain, or both combined.

Within the Assign Relay screen, you will note that some options say **(pair)** in parentheses. These are assets that require two relays – typically a motor (DC or AC) with open/close functions, a curtain system, or a 2-Stage Fan.

(Note that AC motors require an AC motor box and cannot be wired directly into the controller.)

Advancing Alternatives uses the term **vent** to refer to a motor that features open and close functions. This is typically a roll-up side curtain, a ridge vent, a curtain partition wall, or a shade/energy curtain.

Important: Always ensure that the option you select in the software matches what is **physically wired** to the controller. For example, if you assign a fan to Relay 8, but nothing is actually wired into the corresponding #8 terminal on the controller, nothing will happen when that relay triggers.

After you have assigned your relays, you can test the relays by clicking the **Test** button. This lets you tap a cell to run that relay for a moment and confirm the right motor moves. This allows you to confirm you have mapped them correctly.

Relay Map	
1	Curtain 1 (dep)
2	Curtain 1 (ret)
3	Vent 1 (close)
4	Vent 1 (open)
5	Vent 2 (close)
6	Vent 2 (open)
7	Louver 1
8	Fan 1
9	HAF 1
10	Heater 1
Back Label Test	



SYSTEM SETUP

After you have tested your relays, you can Label the individual relays if desired. To do so, touch the **Label** button.

Next, select a Relay you want to rename. Enter the name and touch Enter.

0/9

q	w	e	r	t	y	u	i	o	p
a	s	d	f	g	h	j	k	l	
Shift	z	x	c	v	b	n	m		
?123	Space	Bksp	Clr						
Cancel				Enter					

Vents

Touching the **Vents** button brings you into the Vents screen. Each vent assigned to a relay pair will appear in this screen. In this example, Vent 1 and Vent 2 are listed.

Vents								
Vent	Open	Close	Zone	Run	Idle	Rain	Wind	DHU
Vent 1	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐
Vent 2	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐
Back								

SYSTEM SETUP

Each vent you assigned has a row. Tap the temperatures to open the Temps screen Open is the temperature the vent starts opening at and Close is where it starts closing.

Vent 1 Temps

Open

75°F

-

+

Close

70°F

-

+

Back

After you set the temperature for Open and Close, click the Back button. On the Vents screen, The Zone button puts the vent in Zone 1 or Zone 2 (Zone 2 only exists if Temp 2 is set to Z2). Leave the DHU box empty unless you set up dehumidification (see below).

Vents

Vent	Open	Close	Zone	Run	Idle	Rain	Wind	DHU
Vent 1	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐
Vent 2	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐

Back

SYSTEM SETUP

Touch the button under the Run and Idle options to access the Vent timing screen for each vent.

Vents

Vent	Open	Close	Zone	Run	Idle	Fall	Wind	DHU
Vent 1	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐
Vent 2	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐

Back

Run is how long the motor runs on each step and **Idle** is the pause between steps. The program is designed to open the vent in stages. As the temperature rises, the motor runs for the set run time and then waits for the set idle time before reacting to the temperature (it will either open more, do nothing, or start to close).

Vent 1 Timing

Run

30_s

-

+

Idle

5:00

-

+

Back

SYSTEM SETUP

Touch the box under Rain and Wind to access the Vent Panic Close screen.

Vents

Vent	Open	Close	Zone	Run	Idle	Rain	Wind	Lead
Vent 1	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐
Vent 2	75°F	70°F	Z1	30s	5:00	1:40	1:40	☐

Back



Select the amount of time (in minutes and second) the vent closes for a rain or high wind event. See either to 0 if the vent should ignore it. If Vent 1 needs to close before any other vents, it is the “Lead” vent and you can check the Lead box.

Vent 1 Panic Close

Rain

1:40

-

+

Wind

1:40

-

+

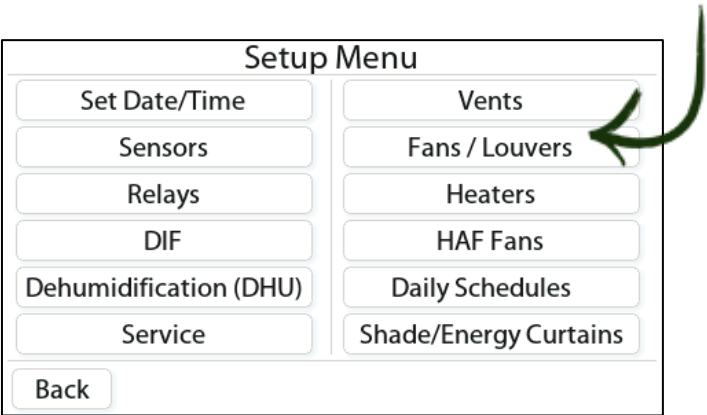
Lead

☐

Back

SYSTEM SETUP

Fans/Louvers



Setup Menu

Set Date/Time	Vents
Sensors	Fans / Louvers
Relays	Heaters
DIF	HAF Fans
Dehumidification (DHU)	Daily Schedules
Service	Shade/Energy Curtains

Back

Touching the **Fans/Louvers** button brings you into the Fans/Louvers screen.

Fans / Louvers

Fan	Off	On	High	Cutoff	Zone	DHU
Fan 1	72°F	75°F		--	Z1	☐
Louver 1	Open 75°F	Close 70°F			Z1	☐

Back

SYSTEM SETUP

Tap the Fan to enter the fan setting screen and set **Off** and **On** temperatures.

Fan

Off

72°F

-

+

On

75°F

-

+

High Temp Cutoff:

Off

Back

You can also select a High Temp Cutoff by toggling the High Tem Cutoff from **Off** to **On**. If the Cutoff temperature is reached, the fan will shut off until the temperature goes back below the Cutoff.

Fan

Off

72°F

-

+

On

75°F

-

+

High Temp Cutoff:

On

Cutoff

85°F

-

+

Back

SYSTEM SETUP

If you select a 2-Stage Fan, you select the **Off** setting, the **On Low**, and the **On High** temperature.

Fan

Off

72°F

-

+

On Low

75°F

-

+

On High

78°F

-

+

High Temp Cutoff:

Off

Back

The Louver screen allows you to set an Open and Close temperature for the Louver.

Louver

Open

75°F

-

+

Close

70°F

-

+

Back

SYSTEM SETUP

Note: A **Louver** and a **Louver (pair)** differ in how they are controlled. A Louver (pair) uses two relays, one to send the open signal and one to send the close signal. A Louver uses a single on/off signal and is typically driven by an AC stall motor, which opens when voltage is applied and closes when voltage is removed. Because the AegisTecPlus controller cannot output AC voltage, AC-driven louvers require an interface box.

Heaters

Within the Heaters screen, tap a heater's On/Off button and enter the **On** (the heater starts) and **Off** temperature (it stops). The Zone box assigns the Heater to a specific zone.

Heaters

Heater	On/Off	Zone	DHU
Heater 1	68-72	Z1	

Back

SYSTEM SETUP

HAF Fans

Horizontal airflow fans run within a temperature span, **Low** to **High**. The factory setting is two spans, 68 to 72 and 60 to 65. The Mode button switches between 1-Span, 2-Span, and Link, which ties the HAF to a heater so it runs whenever that heater runs.

HAF Fans

HAF	Mode	Temp Spans		Zone	DHU
HAF 1	2-Span	68-72	60-65	Z1	☐

Back

Shade/Energy Curtains

A shade or energy curtain is a motorized fabric screen that draws across the greenhouse. A shade curtain blocks sunlight to keep the house from overheating on bright days. An energy curtain holds heat in on cold nights by trapping a layer of air between the fabric and the roof. Some greenhouses use one curtain for both jobs. The AegisTecPlus runs each curtain off zone temperature: it deploys the curtain when the temperature crosses one setpoint and retracts it when the temperature crosses back past a second setpoint.

SYSTEM SETUP

Open **Shade/Energy Curtains** if you assigned a curtain. The **Role** button sets what the curtain is for. **Shade** deploys when it gets hot, **Energy** deploys when it gets cold, and **Both** does both.

Each role has two temperatures: a **Deploy** setpoint and a **Retract** setpoint. Tap the Shade or Energy temperatures to change them. In the example below, Shade is set to 80–75, so the curtain deploys when the zone reaches 80° and retracts when it cools back to 75°. Energy is set to 50–55, so the curtain deploys when the zone drops to 50° and retracts when it warms back to 55°. The gap between the two numbers keeps the curtain from opening and closing over and over when the temperature hovers near a single setpoint. Temperatures for a role the curtain isn't using appear grayed out.

Shade/Energy Curtains

Curtain	Role	Shade	Energy	Timing	Zone	DHU
Curtain 1	Both	80-75	50-55	6m/ 30s	Z1	

Back

The timing button allows you to set the deploy travel time in minutes and the vent-gap retract time in seconds. The retract feature only operates during shade event, and allows the vent to fully close and then open briefly to vent hot air.

SYSTEM SETUP

Daily Schedules

The Daily Schedules screen allows you to enter settings for a timed motor or a timed relay. The screen opens on the Motors list. Below is an example of a controller with a Timed Motor assigned to one of the relay pairs.

Motor	Window A	Window B	Travel	Rain	Wind
Motor 1	Off	Off	2m	N/A	N/A

Back

Timers

A timed motor has two daily windows, **Window A** and **Window B**, each with a start and end time and an Enable button, plus a **Travel** time for how long the motor travels. Options for rain and wind include N/A, Dep (deploy), and Ret (retract).

The button at the bottom right switches to the Timers list. Both screens have the same title, so check the column headings to see which one you are on.

SYSTEM SETUP

A timed relay has two daily windows, Window A and Window B, each with a start and end time and an Enable button.

Timer	Window A	Window B	On	Off	Int
Timer 1	Off	Off	3s	3:00	☐

The timed relay also has **On** time and **Off** time (in seconds or minutes) and an **Int** (interval) box: ticked, it repeats on and off; unticked, it runs once per window.

SYSTEM SETUP

DIF

The DIF is short for temperature difference: the day temperature minus the night temperature. Growers use it to control how tall plants get without chemical growth regulators. When days run warmer than nights (a positive DIF), stems stretch. When days run cooler than nights (a negative DIF), plants stay shorter and more compact. Plants are most sensitive to this in the first few hours after sunrise, so a common approach is a short cool period at dawn rather than a cooler day overall. This is often called a morning drop. Results vary by crop, and some respond much more strongly than others.

DIF Schedules

Z1 DIF1

Disabled

Z2 DIF1

Disabled

Z1 DIF2

Disabled

Z2 DIF2

Disabled

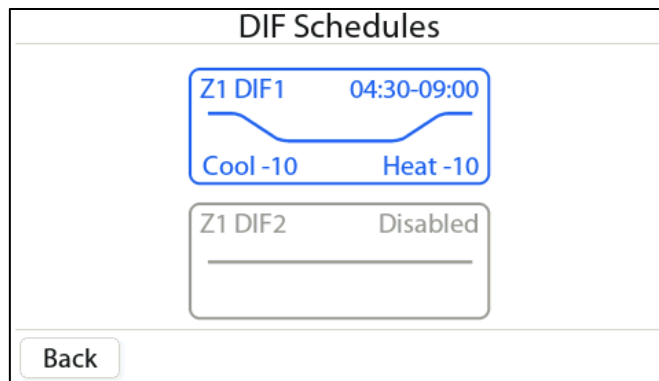
Back

DIF shifts your temperature setpoints up or down for part of the day, on a schedule. A typical setup uses a cooler period at dawn to hold plant height and a warmer period in the evening. Nothing about your equipment changes. For those hours, the controller treats every affected setpoint as a few degrees different from what you entered.

SYSTEM SETUP

How a Schedule is Shaped

Start and **End** set the window when the full shift is in effect. **Lead in** and **Lead out** are ramps on either side of that window. During lead in, the shift builds a little each minute until it reaches full strength at **Start**. During lead out, it fades a little each minute after **End** until it's gone. This keeps the equipment from seeing a sudden jump in setpoints.

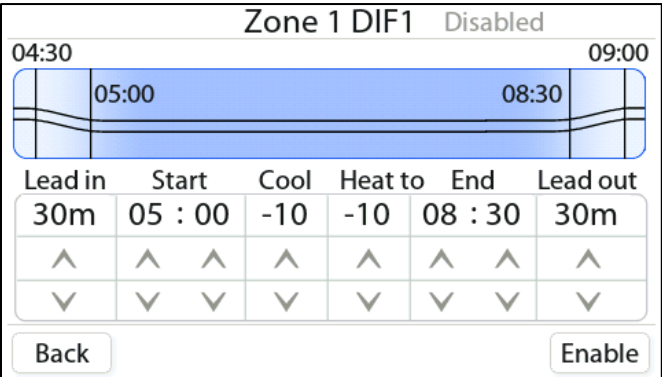


The pictured morning schedule, **DIF 1**, runs from 05:00 to 08:30, with 30-minute lead in and lead out and both Cool and Heat set to -10 . **Lead in** begins at 04:30, and the DIF box appears on the home screen and blinks. By 04:45 the shift has reached -5 , halfway through the ramp.

At 05:00 the schedule hits **Start**, the full -10 shift takes effect, and the box goes solid. The shift holds at -10 until 08:30. During that time, a vent set to open at 75 opens at 65, and a heater set to come on at 68 comes on at 58. At 08:30 the schedule hits **End** and **Lead out** begins, easing back to -5 by 08:45 and to 0 by 09:00. The DIF box disappears a minute after **Lead out** finishes.

SYSTEM SETUP

The card on the DIF screen shows the full window, ramps included (04:30 to 09:00 in this example), so you can see at a glance when the schedule is active.



Setting Up Your DIF

Open DIF from the menu. Each zone has two schedules, and each schedule has its own card, so a single-zone controller shows two cards and a two-zone controller (with Temp 2 set to Zone 2) shows four. Each card shows the schedule's full window and whether it is enabled. Tap a card to open its editor.

The editor has six columns. From left to right, they are Lead in (10 to 120 minutes, in steps of 10), Start (hours and minutes, with minutes in steps of 10), Cool and Heat (–30 to +30 degrees), End, and Lead out. Tap an arrow to change a value by one step, or hold it to scroll quickly. The graph at the top of the screen redraws as you make changes. The sloped ends are the lead in and lead out, and the flat middle is the time between Start and End.

SYSTEM SETUP

Changes save as you make them. There is no Save button, and a running schedule picks up changes within a second.

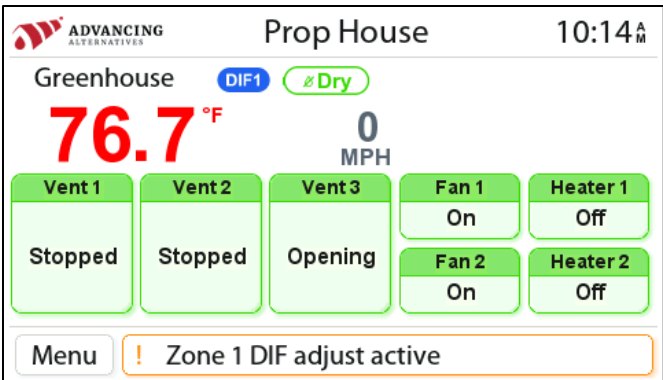
To turn the schedule on, press Enable at the bottom right. The top right of the screen then reads Enabled, and the button changes to Disable. Enable does nothing if Start and End are set to the same time.

A Few Things to Know

Schedules can run past midnight, so an evening schedule can run from 22:00 to 02:00. If End is earlier than Start, the controller reads the schedule as crossing midnight. If both schedules in a zone overlap, DIF 1 runs and DIF 2 waits. The two shifts never add together. The shift uses whatever temperature unit the controller is set to. If you switch between °F and °C, re-enter the Cool and Heat values.

What You See While It Runs

When a schedule is active, a **DIF box appears on the home screen** next to the Dry or Rain box for that zone. The box is blue for a cooling shift and red for a warming shift. It blinks during lead in and lead out and stays solid at full shift. The alert banner also shows "Zone 1 DIF adjust active" (or Zone 2). Tap the banner to open Active Status for more detail.



SYSTEM SETUP

The setpoints on the equipment screens do not change while DIF is running. They still show the values you entered, which is why the banner is there to tell you a shift is in effect.

What DIF Doesn't Override

Manual control always takes priority over DIF. A device you have switched to Open, On, or Off stays that way. Wind and rain protection also take priority. A dehumidification purge runs its equipment on its own sequence, with two exceptions: its Heat to target follows the heater shift, and when it checks whether cooling is holding a vent open, it uses the shifted Open temperature. Min temp is never shifted.

Dehumidification

High humidity leads to condensation on leaves and glazing, which encourages disease such as botrytis (grey mould). It's usually worst in the evening, when the house cools and the air can no longer hold the moisture it carried during the day. The dehumidification routine brings humidity down by exchanging damp inside air for drier outside air in short, repeated cycles called purges.

Why It Heats First

Warm air holds more moisture than cool air. Relative humidity (RH) measures how full the air is compared to what it could hold at its current temperature, so warming the air lowers its RH even though the water is still there. Heating before each exchange does two things. It lowers the RH the plants feel right away, and it means the air leaving through the vents carries as much moisture as possible. On a site running the routine with a heater, indoor RH has been held 15 to 20 points below outdoor RH on typical nights.

SYSTEM SETUP

Without a heater, the routine still works, but only by trading inside air for outside air. That helps when the outside air is drier, but it can never bring the house below outdoor humidity, and every exchange costs house temperature. For that reason, the no-heater mode has a temperature floor and a pause between cycles.

Each cycle drops humidity only a few points, so on a damp night the controller may keep cycling for hours. That is normal.

What Equipment Is Involved

Equipment joins a purge when its DHU box is checked on its setup screen. Vents, fans, louvers, heaters, HAF fans, and shade or energy curtains all have a DHU box. Timed motors don't take part. Anything not checked keeps doing its normal job.

Vents

Vent	Open	Close	Zone	Run	Idle	Rain	Wind	DHU
Vent 1	76°F	72°F	Z1	5s	3:00	1:40	1:40	☒
Vent 2	80°F	76°F	Z1	20s	5:00	1:40	1:40	☒
Vent 3	85°F	81°F	Z1	20s	5:00	1:40	1:40	☐

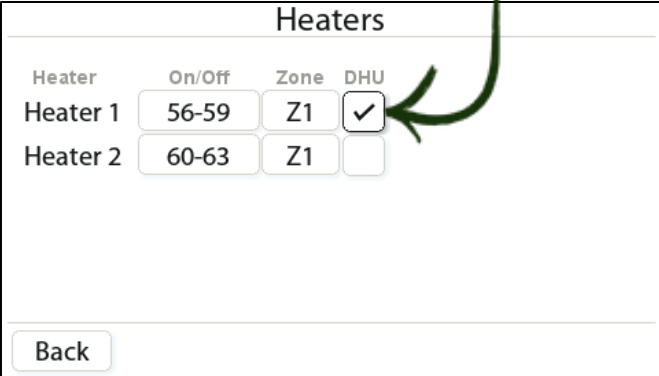
Back



Vents are the main exchange path. Use a roof vent wherever you can. Moist air collects up high, and a side vent opens down low, where it moves far less moisture. Exhaust fans do the same job in houses without roof vents, or alongside them. A 2-stage fan uses only its low stage. A louver paired to a fan follows that fan automatically, so check the fan, not the louver.

SYSTEM SETUP

Heaters provide the warm-up, and checking a heater is what puts the routine into heater mode.



Heater	On/Off	Zone	DHU
Heater 1	56-59	Z1	☒
Heater 2	60-63	Z1	☐

Back

HAF fans run through the whole purge to keep the air mixed, so the sensor reads the true house average. If a curtain is closed beneath your roof vents, checking it lets the curtain open a gap before the vents open so moist air can reach them. It returns to roughly where it was afterward. The return is timed rather than measured, so a small amount of drift from cycle to cycle is normal.

A purge needs at least one vent, fan, or louver. Heat and air movement alone don't move moisture out, so if only heaters and HAF fans are ticked, a purge will not start.

Cooling always comes first. The routine never takes over equipment that cooling is using: a vent that cooling wants open stays open, and a fan running for cooling keeps running. If cooling is holding a checked vent open, the routine doesn't run at all. A fan's High Temp Cutoff is also respected, so a purge won't force a fan on when the zone is at its cutoff.

SYSTEM SETUP

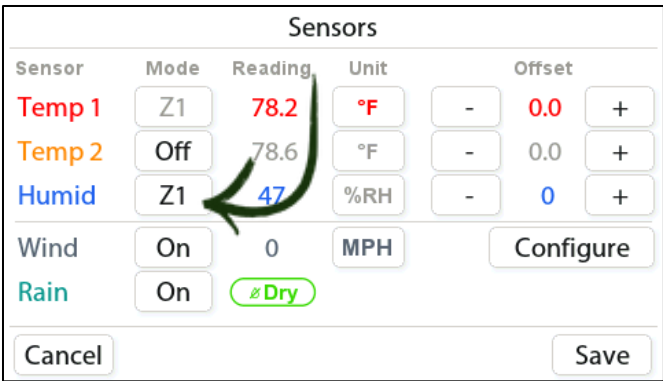
Zones

Only equipment in the same zone as the humidity sensor takes part. For example, a heater in Zone 2 will never join a Zone 1 purge. HAF fans are the exception and always qualify. If one humidity sensor represents the whole house, set it to **Both**, and equipment in either zone takes part together.

There is only one humidity sensor input, so you can't run separate humidity targets in two zones. If one zone has the worse humidity problem, put the sensor there and check that zone's equipment.

Setting it up

First, open **Sensors** and set the Humid row to Zone 1, Zone 2, or Both. If it's set to Off, dehumidification can't run.



Sensor	Mode	Reading	Unit	Offset
Temp 1	Z1	78.2	°F	- 0.0 +
Temp 2	Off	78.6	°F	- 0.0 +
Humid	Z1	47	%RH	- 0 +
Wind	On	0	MPH	Configure
Rain	On	≠ Dry		

Cancel Save

Next, open each equipment screen and check the DHU box for everything you want taking part. Check that each one is in the same zone as the sensor.

SYSTEM SETUP

Then open **Dehumidification (DHU)**. The **Devices** column on the right lists everything enrolled. If something you expect is missing, check its DHU box and its zone. A listed device that's switched to manual sits out until you return it to Auto.

Dehumidification					
Trigger	80%RH	-	+	DEVICES Vent 1 Heater 1	
Release	70%RH	-	+		
Heat to	72°F	-	+		
MaxHeat	30 min	-	+		
Run	30 s	-	+		
Hold	2 min	-	+		
Back					

The screen has six settings. Four are always the same.

Trigger is the humidity that starts a purge, and **Release** is the humidity that ends it. The factory values are 80% and 70%. The gap between them keeps the routine from switching on and off rapidly, and Release always stays at least one point below Trigger.

Run is how many seconds each motor movement lasts: a vent opening, a vent closing, or a curtain opening its gap and returning. The factory value is 30 seconds. A longer Run opens the vents wider and makes a bigger curtain gap. Keep it shorter than your vents' full travel time if you don't want them driven fully open. Many vents need 10 to 20 seconds of travel just to clear the baseboard overlap.

Hold is how long the vents stay open during each cycle. The factory value is 2 minutes.

SYSTEM SETUP

The middle two rows change depending on whether a heater is enrolled. Each pair keeps its own values, so checking or unchecking a heater changes which numbers you see but not the numbers themselves.

With a heater enrolled, the rows read **Heat to** and **MaxHeat**. **Heat to** is the temperature the heaters warm the house to before the vents open (factory 72°F). Set it below your vents' Open setpoints. If the warm-up pushes the house into cooling territory, the routine stands down, so a **Heat to** above the Open setpoint just wastes fuel. **MaxHeat** caps how long any single warm-up can run (factory 30 minutes), so the heaters don't run forever chasing a target they cannot reach.

With no heater enrolled, the rows read **Min temp** and **Pause**. (See image below.)

Dehumidification				
Trigger	80%RH	-	+	DEVICES Vent 1
Release	70%RH	-	+	
Min temp	55°F	-	+	
Pause	20 min	-	+	
Run	30 s	-	+	
Hold	2 min	-	+	
Back				

Min temp is the floor. No exchange starts while the zone is at or below it, and an exchange in progress ends early if the zone drops to it. **Min temp** only stops the routine from cooling the house further. It is not a heating setpoint. **Pause** is how long the routine waits between cycles (factory 20 minutes), and during a pause all equipment returns to normal control. There is no automatic cold-night adjustment, so set these for the season. On a cold night, a short **Run** and **Hold** with a long **Pause** removes a little air often. A mild night can take a wider gap and a shorter Pause.

SYSTEM SETUP

Temperatures on this screen follow the controller's display unit, so a controller set to Celsius takes Celsius values.

Choosing Trigger and Release

The factory 80/70 values are conservative. They engage before the 85% range where botrytis takes hold, without burning extra heating fuel. For botrytis-prone ornamentals grown at high density, such as poinsettias, geraniums, and mums, we suggest tightening to roughly 75/65. For edema-prone crops, ivy geranium especially, consider a slightly higher Release rather than a lower one. Dehumidification does not control powdery mildew. For leafy greens, check with your extension agent before drying nights aggressively.

What You See While It Runs

With a heater enrolled, each cycle goes like this: the vents close and the heaters warm the house to Heat to (or until MaxHeat runs out), the curtain opens its gap, the vents open and hold, then the vents close, the curtain returns, and heating starts again. There is no pause between cycles on a heater site. At the factory settings, the exchange portion of each cycle takes about three minutes, or about four with a curtain taking part.

With no heater enrolled, the vents open, hold, and close, and then the routine pauses with all equipment back under normal control. After the pause, if humidity is still above Release, the next cycle starts.

While a cycle is running, the status banner reads **Humidity purge active**. During a no-heater pause the banner goes away and every tile shows its normal state, but the routine is still engaged and waiting. The tiles show what the purge is doing in real time. A vent reads Opening, Stopped, and Closing as the purge drives it, and HAF fans read On throughout. A heater reads Off while the vents are open. The heater returns to its normal setpoints when the purge ends.

SYSTEM SETUP

With DIF

When a DIF schedule is running, **Heat to** shifts by the same amount as your heaters. During a –10 window, a Heat to of 72 changes to 62. The check for whether cooling is holding a vent open also uses the shifted Open setpoint. Min temp is never shifted. The Dehumidification screen always shows the unshifted values, so check the DIF box on the home screen to see whether a shift is in effect. Trigger, Release, MaxHeat, Run, Hold, and Pause are not affected by DIF.

When It Won't Run

The routine deliberately stands down when purging would be useless or harmful. If nothing is happening, check these first.

Rain stops it completely, as long as the rain sensor is on. Outside air during rain is saturated, so exchanging it would bring moisture in. If the rain sensor is off, this protection doesn't exist.

High wind always wins. Wind-protected vents leave the purge and close, and a curtain stops where it is and finishes returning after the wind passes. The purge carries on with whatever is left, such as fans, louvers, and HAF fans.

The routine also waits or stops when cooling is holding a checked vent open, when every checked fan or louver is already running for cooling or held off by its cutoff, or when the house is at or below Min temp on a no-heater site. It won't start if no vent, fan, or louver is checked, if the humidity sensor is set to Off, or if equipment is in a different zone from the sensor. A device in manual never takes part. The routine also sits out while Relay Test is open and waits briefly after power-up for the sensor readings to settle.

SYSTEM SETUP

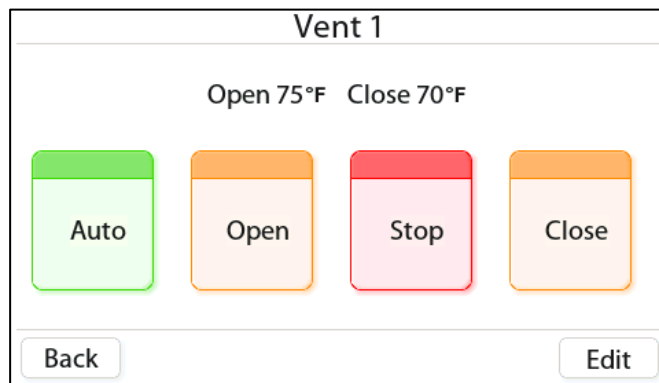
The Night It Can't Win

When the outside air is as wet as the inside, such as in fog, heavy dew, or light drizzle that doesn't trip the rain sensor, the routine keeps cycling, but humidity stalls near the outdoor level. You can't exchange your way below the moisture in the outside air, and only the heater warm-up creates any margin. There is no automatic cutoff for this. The signs are cycles repeating all night, humidity barely moving, and either the heaters burning fuel or, without a heater, the house slowly cooling until Min temp stops it. On those nights, the options are to raise Release, let it run, or simply disable the humidity sensor for the evening.

USING THE CONTROLLER

Manual Control

Tap any equipment tile on the home screen to open its control screen. It has a large Auto button and the manual options for that equipment, such as Open, Stop, and Close for a vent, or On and Off for a fan. A manual setting stays in effect until you return to this screen and press Auto. The tile on the home screen shows whether the equipment is in Auto or manual.



Alerts

When something needs attention, such as a sensor fault, a red banner appears below the readings on the home screen. Tap the banner to open **Active Status**, which lists each alert. Tap an alert for more detail.

History

When something needs attention, such as a sensor fault, a red banner appears below the readings on the home screen. Tap the banner to open **Active Status**, which lists each alert. Tap an alert for more detail.

USING THE CONTROLLER

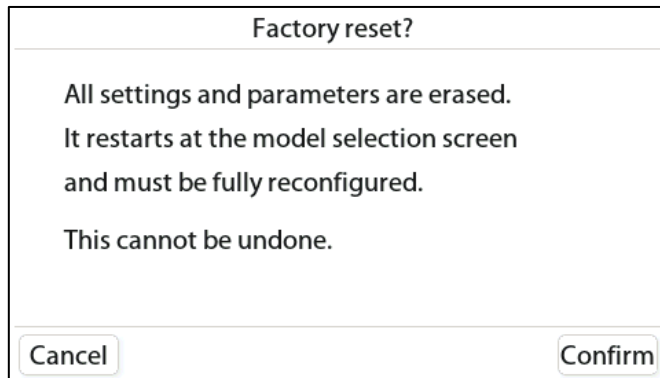
Naming Things

To rename the controller or a zone, tap its name on the home screen. To rename equipment, open **Relays**, press **Label**, and tap the relay you want to rename. Equipment names can be up to nine characters.

The on-screen keyboard has a **Shift** key and a separate layer for numbers and symbols. Press **Enter** to save the name, or **Cancel** to leave it unchanged.

Factory Reset

The **Service** screen has a **Factory Reset** button. To prevent accidental resets, you have to press and hold it for three seconds, and the controller then asks you to confirm. If you confirm, every setting is erased and the controller restarts at the Controller Model screen. This cannot be undone, and you would need to set up the controller again from scratch. Only use Factory Reset if Advancing Alternatives support asks you to.





Innovate. Grow. Advance.

Thank you for choosing Advancing Alternatives. We want every customer to be fully satisfied, so if something isn't right with your controller or this manual, please let us know and we'll work with you to fix it.

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Sincerely,

The Advancing Alternatives Team