Hunter

350 SERIES
500 SERIES
700E SERIES

HMI

USER MANUALS

CONTENTS

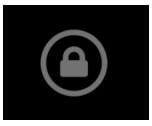
ICONS

EDIT
Signifies the ability to edit a title of the fan or zone.

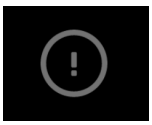
MENU
Provides access to various options specific to a fan or a zone.

SETTINGS
Will allow the user to configure a fan or a zone.

ZONE
Signifies if a fan or series of fans are included in a zone.

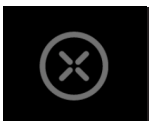


LOCK
Signifies if the fan is locked or unlocked, which will limit certain functionality of the fan.

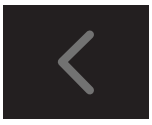


ALERTS
The Fan has experienced an abnormal condition or defect at the component, equipment, or sub-system level which may lead to a failure.

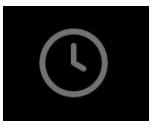
NETWORKS
Signifies data related to the fan's communication network .



FAN MODEL
Indicates the model of the Hunter Indutristial Fan.



BLACK ARROW
Will take the user to the previous page.



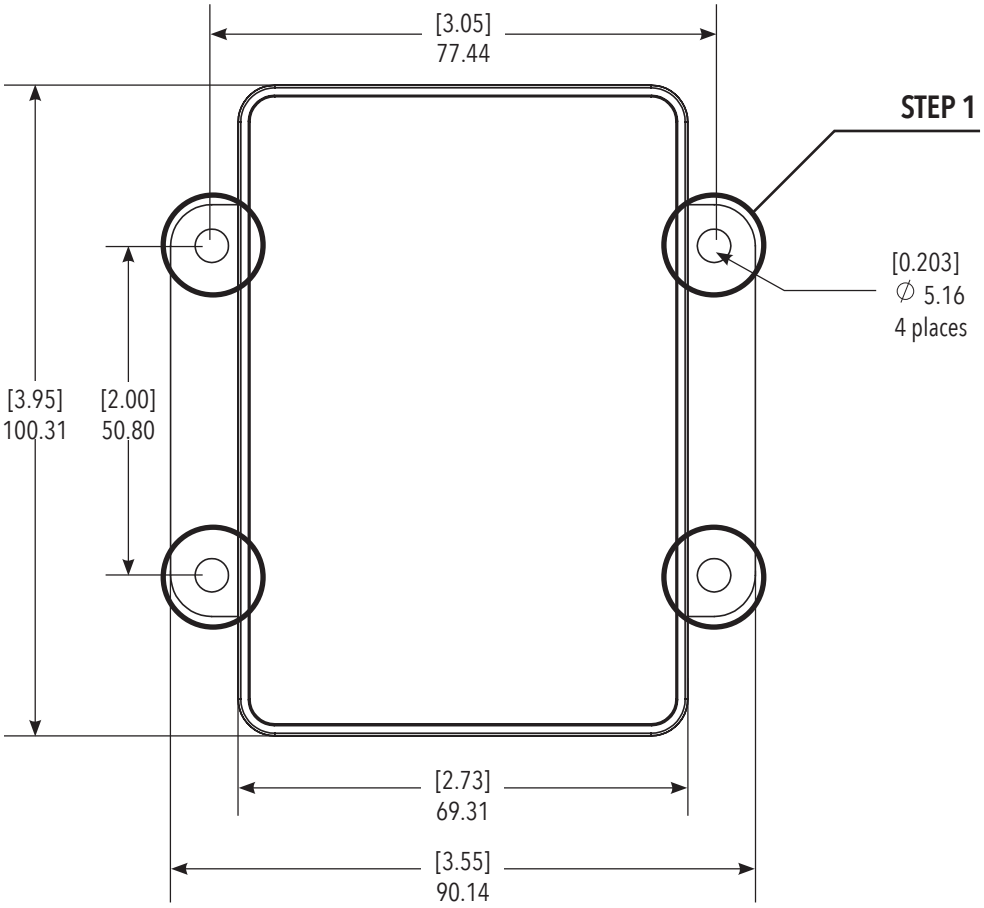
SCHEDULE
Allows the user to schedule a fan or zone's time of operation.

SUMMER MODE
Allows the user to use Environmental Control feature in Summer mode.

WINTER MODE
Allows the user to use Environmental Control feature in Winter Mode.

350 SERIES CONTROLLER MOUNTING

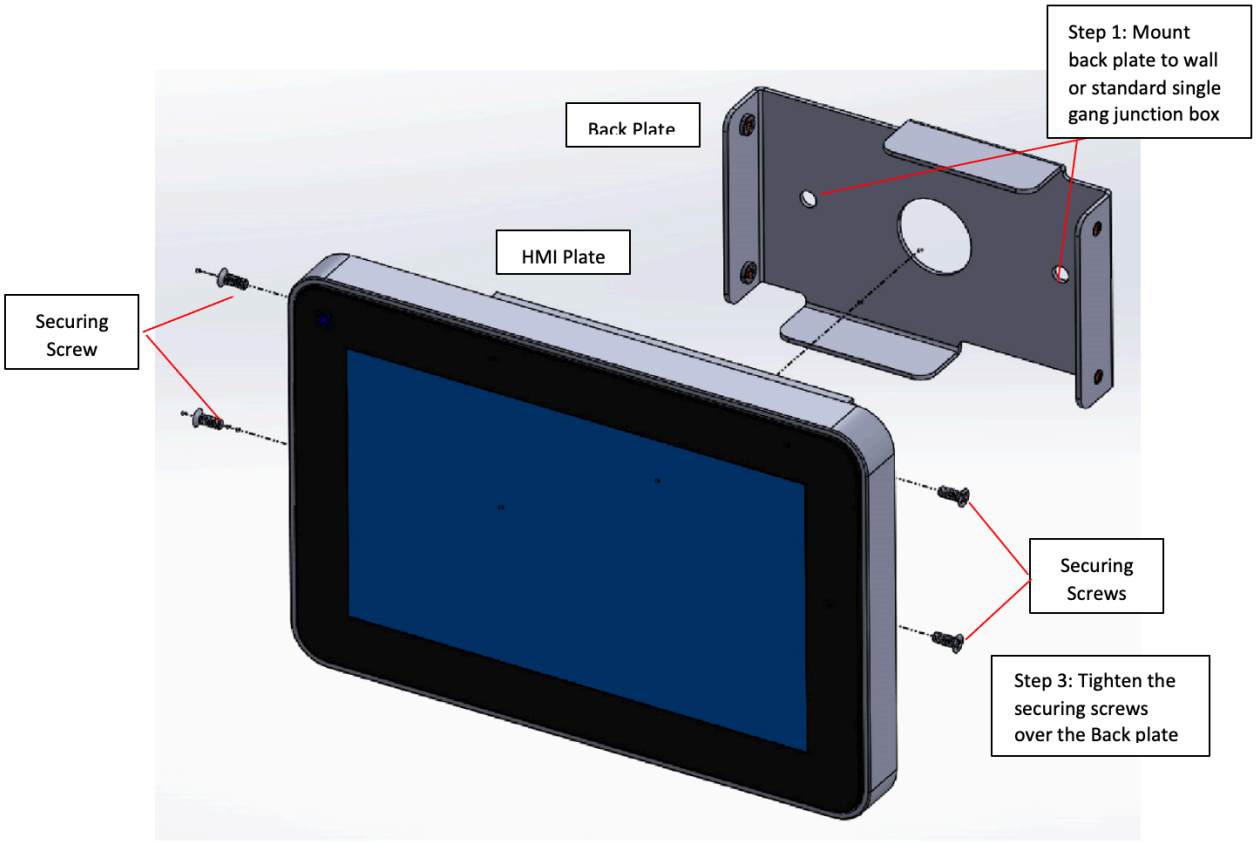
Mountable directly to wall, or by using a standard single gang junction box.



1. Using the mounting bracket as a guide mark the 4 locations the mounting hardware will anchor to the wall or surface. See Step 1 in the above diagram.
2. Attach the mounting bracket to the back of the controller using the provided star washers (qty. 2) and screws (qty. 2).
3. Connect the CAT5 Ethernet cable to the controller
4. Using appropriate anchoring hardware for the surface type, anchor the the mounting bracket and controller to the surface in the 4 locations.

500/700E SERIES CONTROLLER MOUNTING

Mountable directly to wall or to a standard single gang junction box.

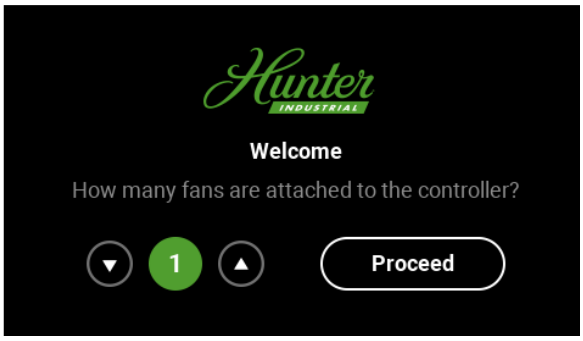


1. The mounting bracket is two pieces. Secure the Back Plate to the wall or to a single gang junction box using appropriate anchoring hardware for the surface type.
2. Place the HMI Plate over the Back Plate aligning the 2 holes on each side of the HMI plate with the holes on the sides of the Back Plate. The plate can be position so that the CAT5e/6 cable can exit the HMI controller from the bottom or the top of the HMI Plate.
3. Using the provided screws (qty. 4) secure the HMI controller to the Back Plate by tightening each of the 4 screws.
4. Insert the male connector of the CAT5e/6 cable into the female connector on the HMI plate. The controller will receive power from the fan's Variable Frequency Drive when power is applied to the fan.

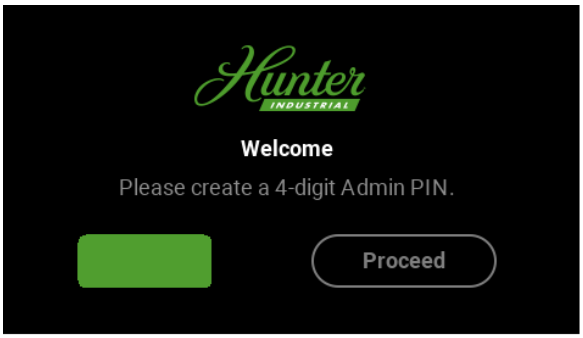
If desiring to have the CAT5e/6 cabling through the back of the mount first remove the 90 degree Ethernet patch cable from the female connector within the HMI Plate. Next, thread the CAT5e/6 cable through the center hole of the back plate and insert the male connector into the female connector on the HMI plate before step 2.

500 & 700E SERIES HMI INITIAL CONFIGURATION

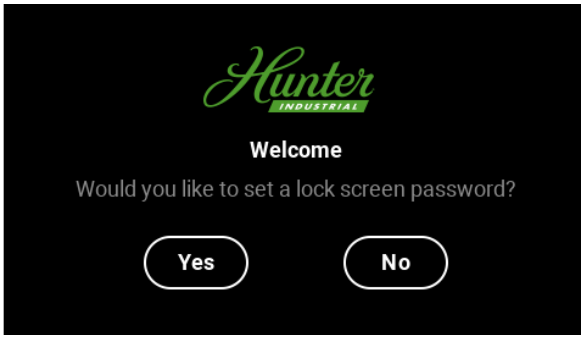
7. After initial boot-up, enter the quantity of fans that are to be on the fan network and controlled by the controller interface



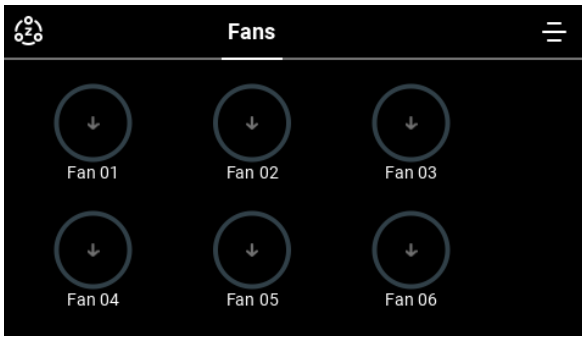
8. Create a 4-Digit Admin Pin. Future input of the Admin Pin grants access to full set-up, configuration, and operation of the fans on the network.



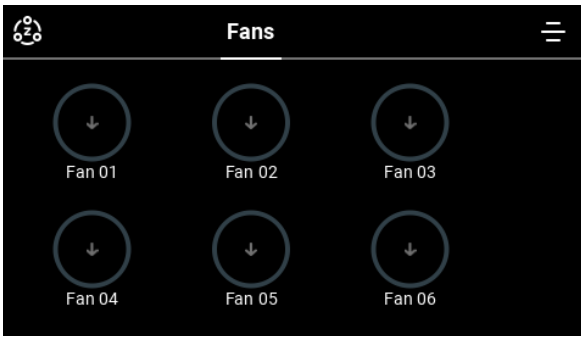
9. Choose whether to have the controller lock when not in use. A 4-digit pin configured by the user unlocks the screen. The Unlock 4-Digit Pin can be different than the 4-Digit Admin Pin.

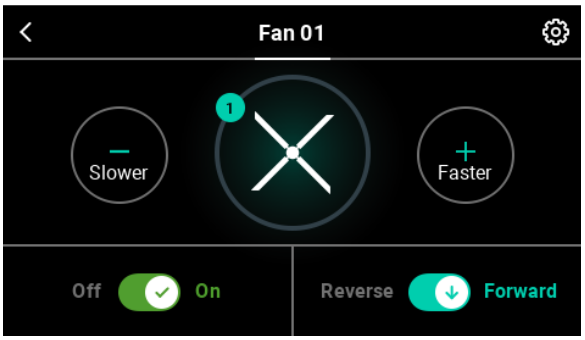


10. The controller will automatically find the quantity of fans that are properly installed on the network. These fans will appear on the **Fan Home Page**.

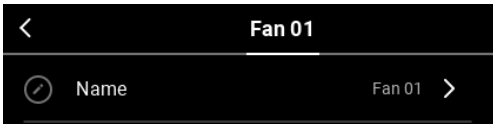


11. Users can configure and name a fan by selecting a fan from the Fan Home Page

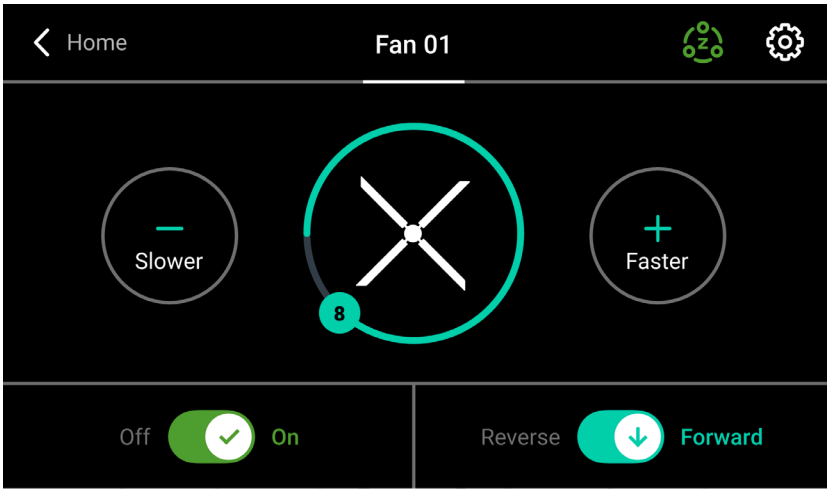




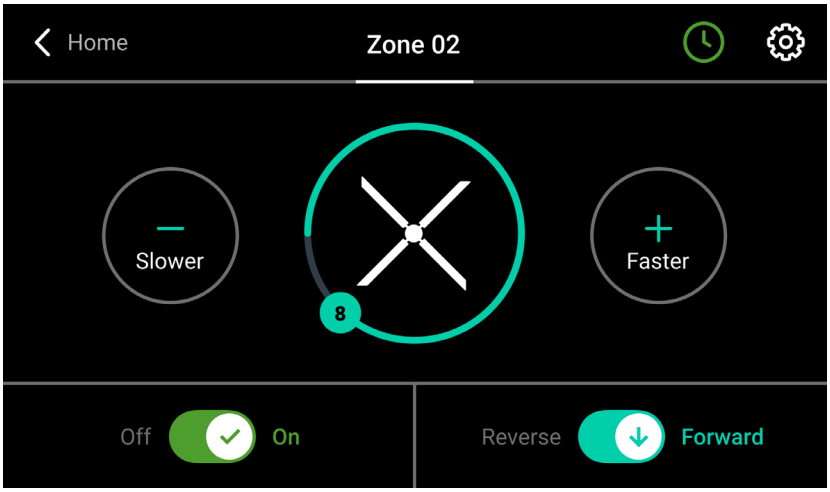
Select  to configure the fan selected

Select  to name the fan. Repeat these steps for each desired fan.

OPERATING THE FAN OR ZONE



FAN CONTROL PAGE



ZONE CONTROL PAGE

ACTIONS FOR OPERATING A FAN, OR ALL FANS IN A ZONE, ARE THE SAME.

ON/OFF

- The toggle will turn green when in the "on" position.
- The fan must be turned "on" before being able to adjust speed or fan direction.

OPERATING THE FAN OR ZONE

CONTROLLING FAN SPEED

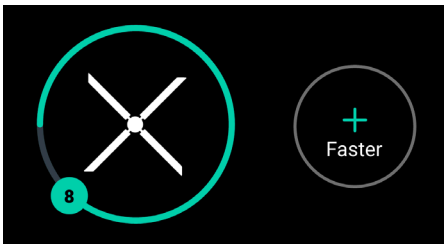
- Control the fan speed (speeds 1-10) by pressing the slower or faster buttons.

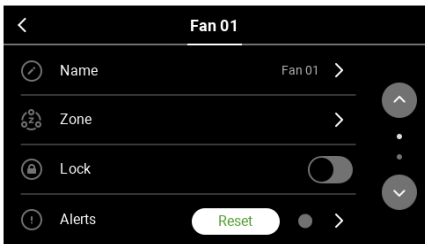
- Number in the circle represents the commanded speed setting.
- Outside band of the fan icon represents the speed at which the fan is at while ramping up or slowing down to the commanded speed.

FAN DIRECTION

- If the fan has experienced an Alert or Fault signified by the item in the red box below, view the alert/fault code by selecting 

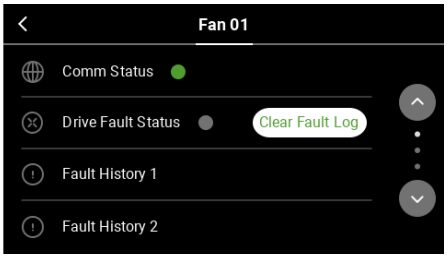
RESET THE FAN AFTER AN ALERT



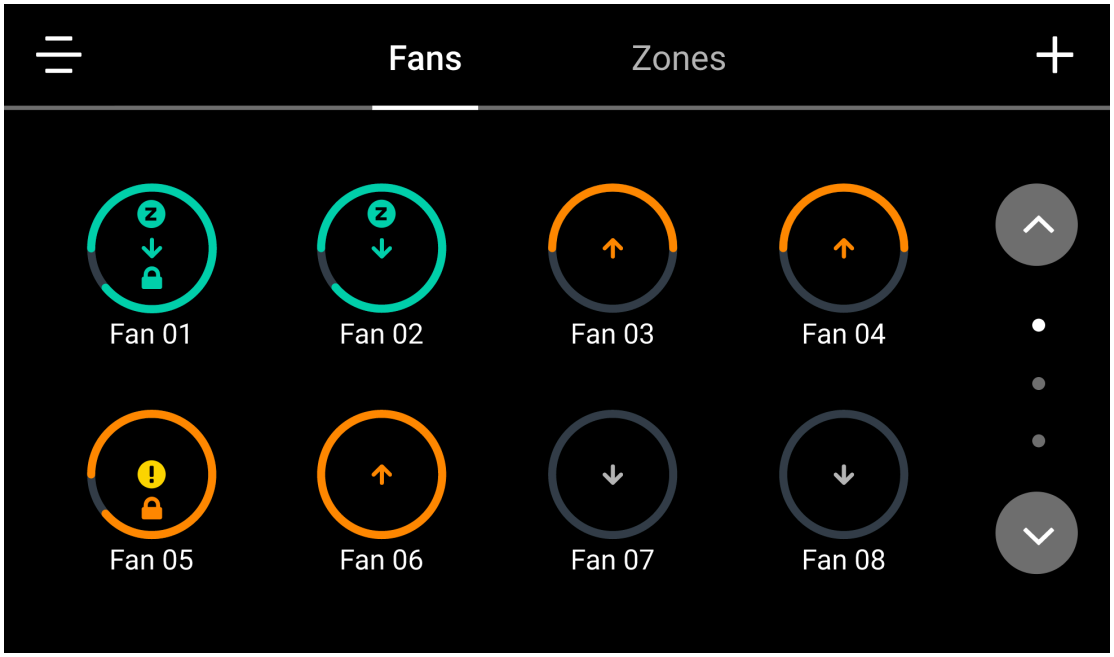


- Select  from the Fan Control Page
- Select the reset button to reset the fan.

- A long-history of alerts (faults) is also maintained, and can be cleared if desired



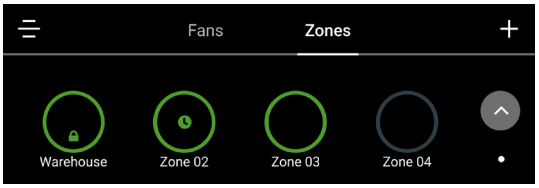
CREATING AND CONFIGURING A ZONE



FAN HOME PAGE

FANS CAN BE ADDED TO A ZONE. FANS IN A ZONE WILL OPERATE IN THE SAME MANNER, DICTATED BY THE ZONE'S SCHEDULE, DIRECTION, AND SPEED SETTING.

- To configure a zone, or add fans to a zone select: 
- Select a zone to configure.

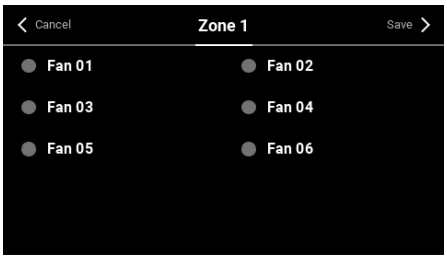


- Select  to configure the zone selected.
- Select  to name the zone.

- Select  to include available fans in a zone.

CREATING AND CONFIGURING A ZONE

- Select the fans to be added to the zone, then click save.

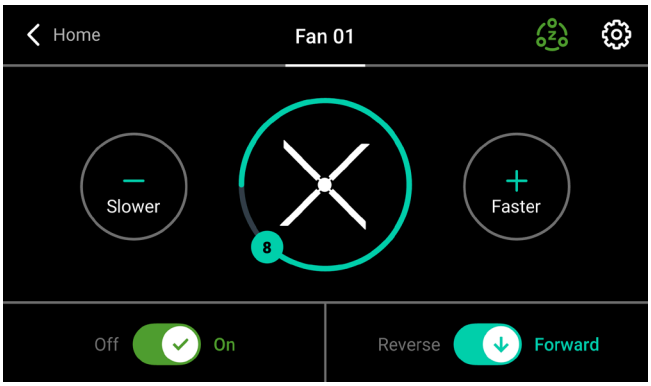


- Select  to configure the zone selected.

- Select  to enable the schedule.

- Select  to lock the fan or zone.

FANS CAN ALSO BE ADDED TO A ZONE FROM THE FAN CONTROL PAGE



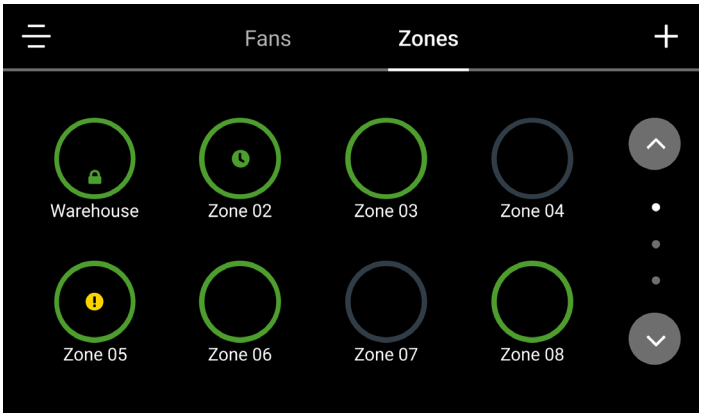
- Select  to configure the fan.

- Select 

- Select which zone to include the fan to.

SCHEDULING A FAN OR ZONE

- Select  from the Fan Home Page to be directed to the Zone Home Page.



- Select zone to schedule.
- Select  to configure the zone selected.
- Select  to schedule the fan or zone's operation.

SCHEDULING A FAN OR ZONE

- A fan or a zone is able to have three (3) scheduled Actions of operation per day
    - ◊ An Action = start, stop, or a change in fan(s) speed or direction.
- Select the day of the week the fan or zone is to perform the scheduled Action
- Select the fan Action: on/off, forward/reverse.
- Set the start time desired for the fan(s) Action to begin.
- Set the desired fan(s) speed for the scheduled time.
- The fan(s) will now follow this scheduled operation until the next Action is scheduled to begin.

Notes:

- *Scheduling a single fan requires including the fan into a zone, and then scheduling the zone.*
- *Fans must be unlocked to modify schedules or zones.*

700E SERIES CONTROL WITH ENVIRONMENTAL CONTROL

The 700E Environmental Control setting allows facilities to control the fans automatically using temperature and humidity inputs within the environment. The product features two control methods based on seasons, which can be set by the customer.

The Winter Mode default setting is based on air destratification. Lighter hot air rises to the ceiling space as surrounding heavy cooler air falls to the floor space. The thermal gradient from floor to ceiling creates distinct strata layers with different average temperature. With the help of high-volume airflow set in the fan's reverse direction, hot air can circulate and mix with cooler air to the floor level.

The Summer Mode default setting is based on heat index (apparent temperature). The heat index is calculated from the sensor's temperature and relative humidity reading at the floor/occupancy level. With the help of high-volume airflow in forward direction, air mixing including humidity, can be established to create a more comfortable environment.

The Environmental Control package is implemented to work in a zone of fans for a maximum of 2 zones for each HMI control. Each zone can be configured to enable automated fan operation up to 30 fans. When using the Environmental Control feature Zones 1 and 2 are dedicated as the automated zones. Remaining Zones can be configured to operate from a user defined schedule if desired.

Each zone requires 2 sensors: 1 sensor is installed at the floor level and 1 sensor at the ceiling level. Each zone is provided a static IP Address.

COMPONENT LIST:

STANDARD

HMI

JSMART707 Static IP: 192.168.1.60

Zone 1:

Fan 1 Static IP: 192.168.1.61

Fan 2 Static IP: 192.168.1.62

ENV Sensor Floor 1 Static IP: 192.168.1.101

ENV Sensor Ceiling 1 Static IP: 192.168.102

ADDITIONAL

Zone 2:

Fan 3 Static IP: 192.168.1.63

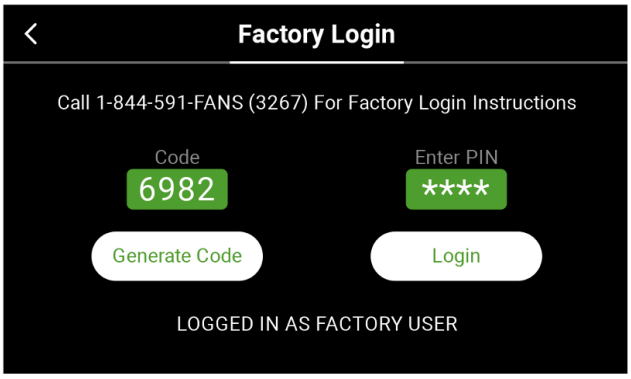
Fan 4 Static IP: 192.168.1.64

ENV Sensor Floor 2 Static IP: 192.168.1.103

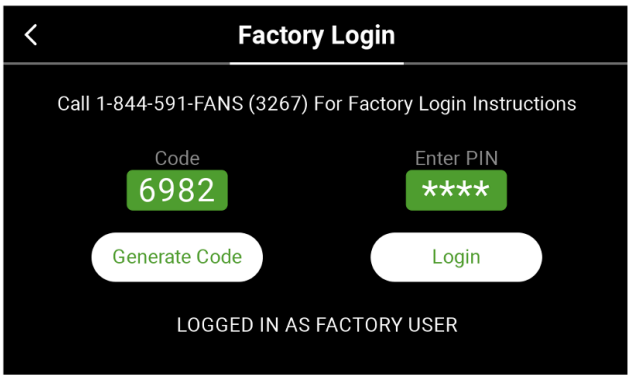
ENV Sensor Ceiling 2 Static IP: 192.168.104

TO ENABLE ENVIRONMENTAL CONTROL IN SOFTWARE IN PRODUCTION:

1. Login as Factory user:

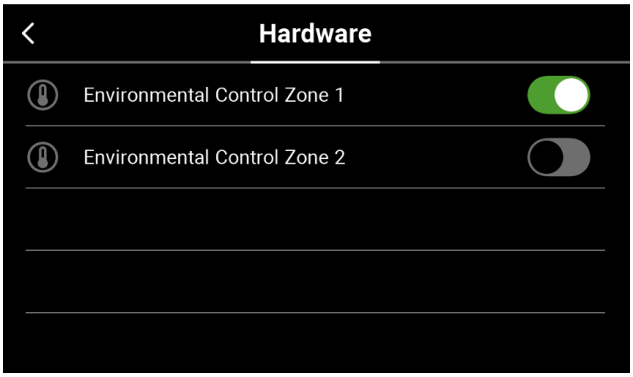


2. A **Hardware** option will show up on the menu when enabled as Factory User:

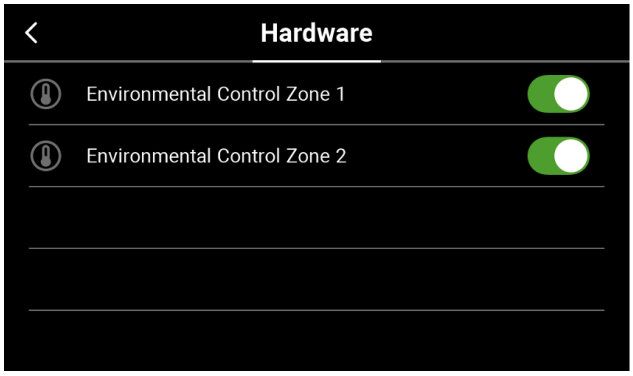


3. Click on Hardware option to Enable Environmental Control Package:

If only one set of sensors is purchased, enable only Zone 1.



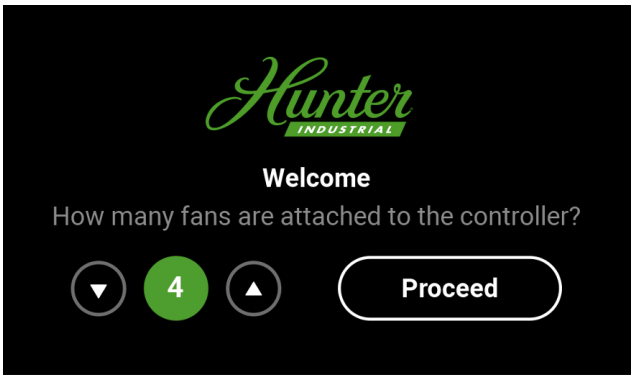
If two sets of sensors are purchased, enable both Zone 1 and Zone 2



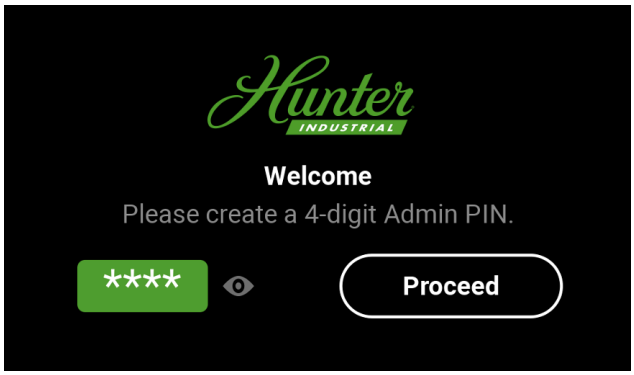
SET UP INSTRUCTIONS: SCREEN BY SCREEN

1. Hunter Loading Screen

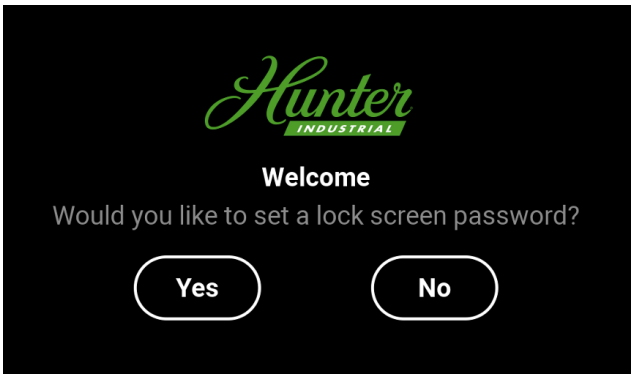
2. Hunter Start Up Screen: How many fans?



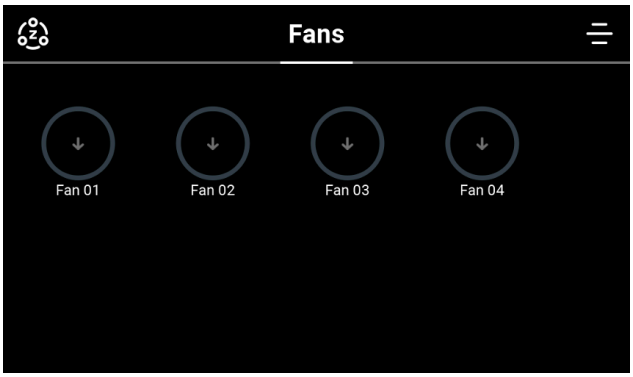
3. Hunter Start Up Screen: Admin PIN Creation



4. Hunter Start Up Screen: Lock Screen Password

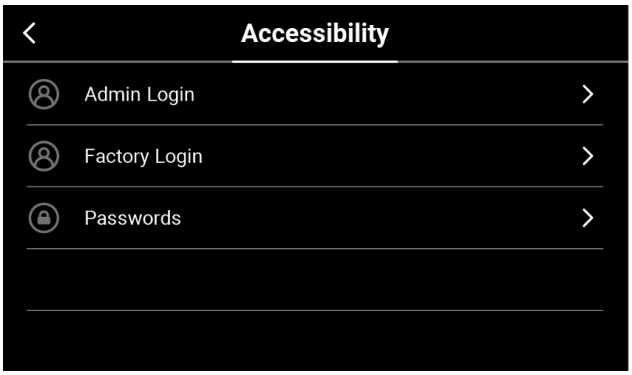


5. Fans Screen

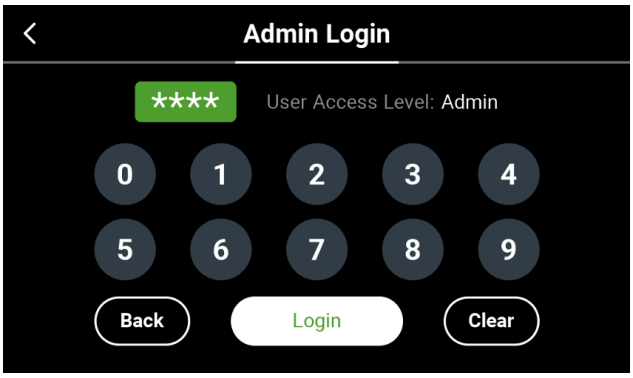


6. Go to Setting Screen: 

7. Setting --> Accessibility 

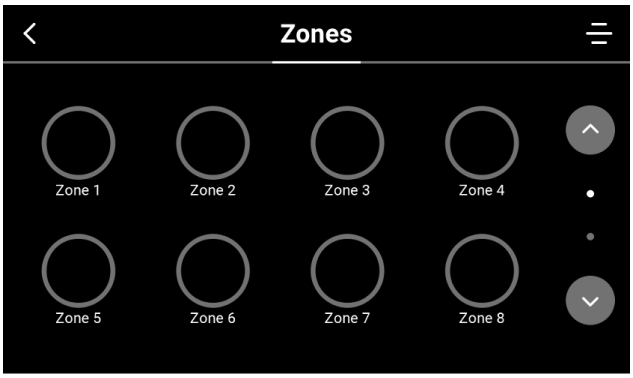


8. Enter ADMIN access level using created PIN: 

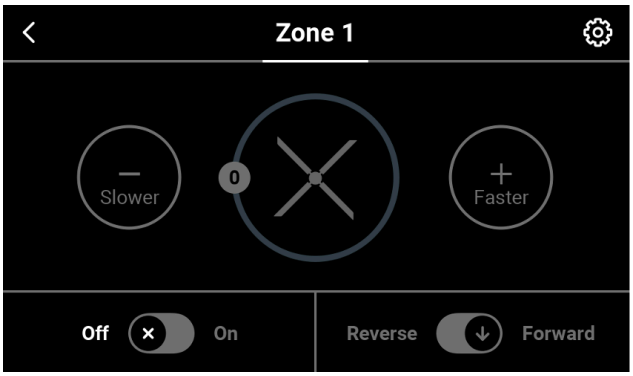


9. Configure Zones 

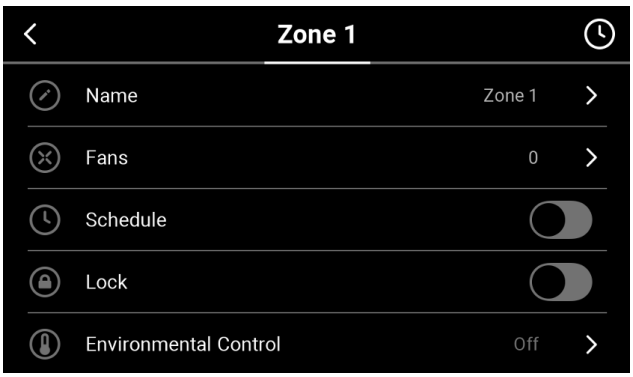
(note: must be in ADMIN access)



10. Configure Zone 1

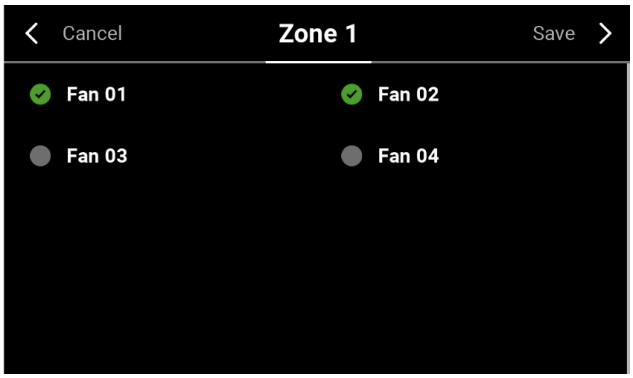


11. Zone 1 Setting 

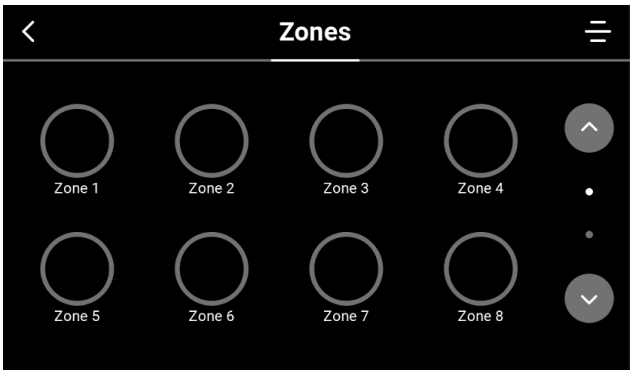


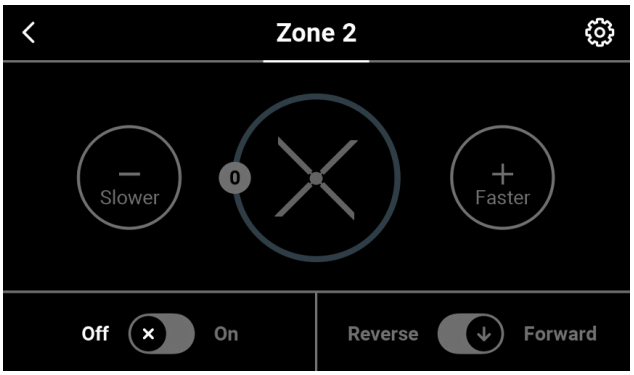
12. Zone 1 Fans grouping 

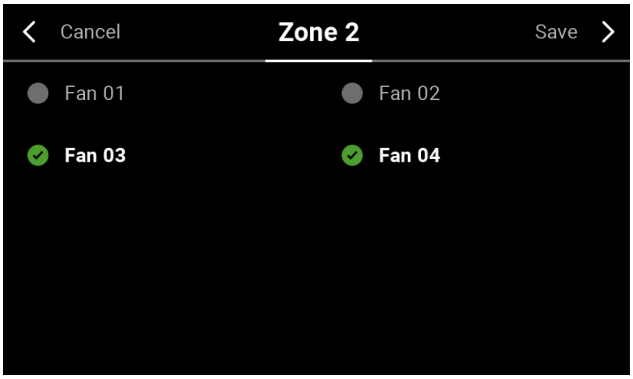
Select applicable FANS and SAVE



13. Zone 2 Fans Grouping and Save

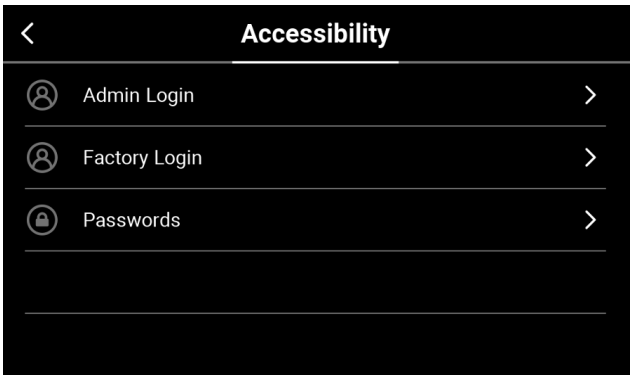




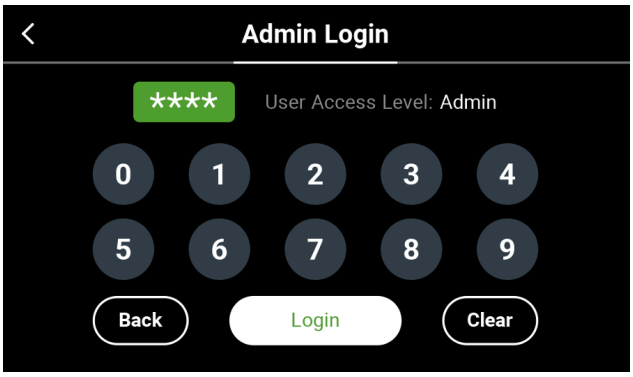


TO START OR STOP ENVIRONMENTAL CONTROL, AS SIMILAR AS SCHEDULE.

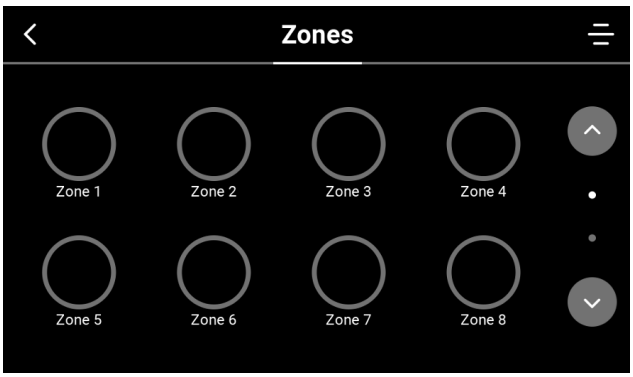
1. ADMIN access. Setting --> Accessibility 



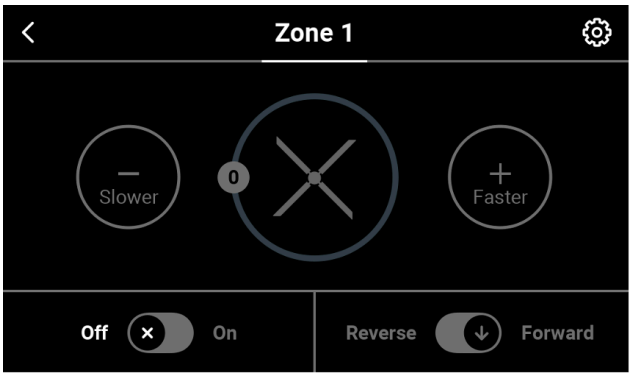
2. Enter ADMIN access level using created PIN: 

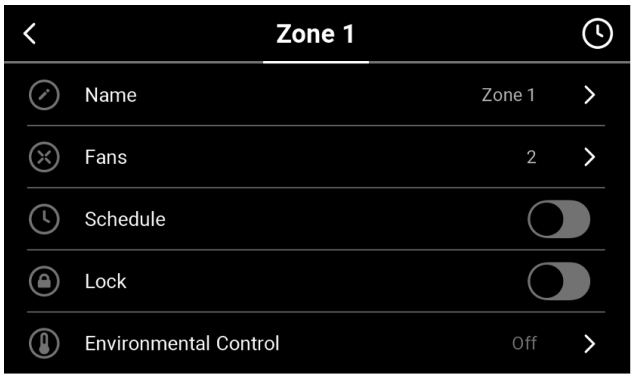


3. Go to Zone Screen



4. Select Zone 1 and Setting

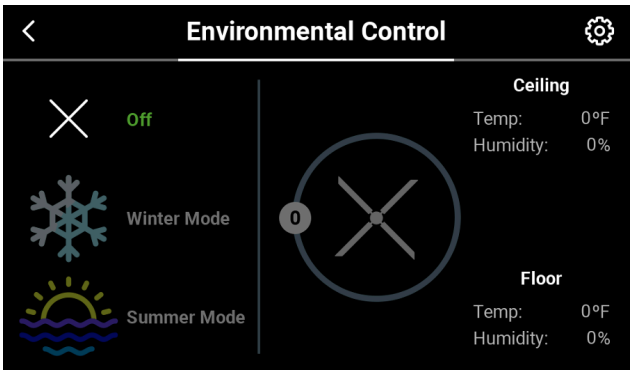




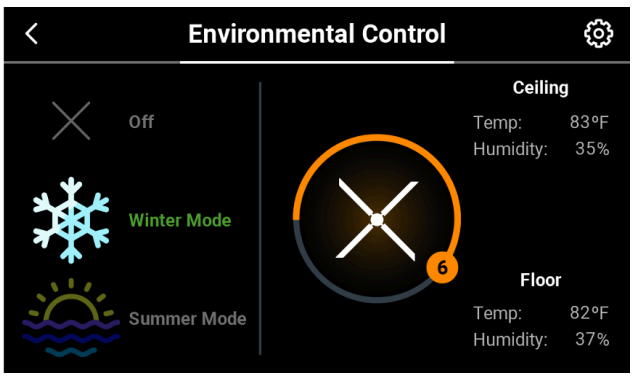
5. Enable Environmental Control in Zone 1

6. Select Control Mode: Winter Mode/Summer/Off. And default setting will start.

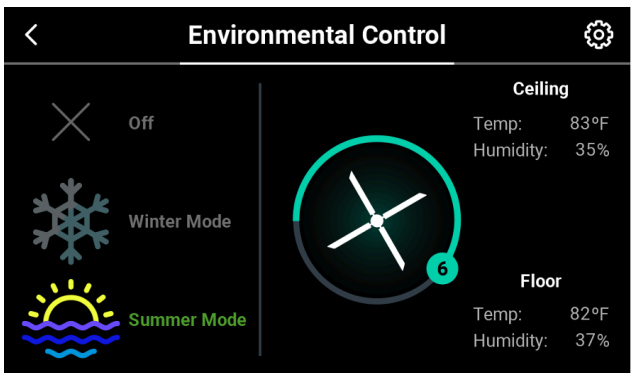
OFF



WINTER MODE

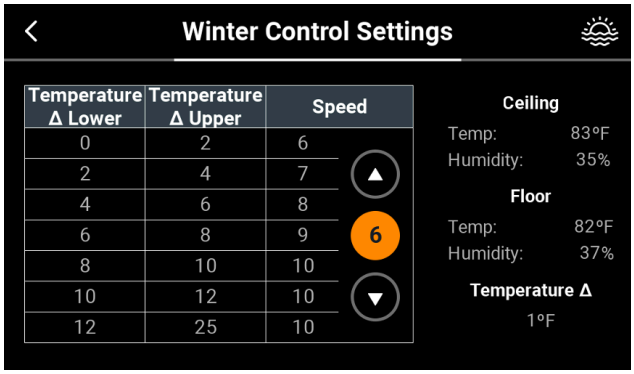


SUMMER MODE



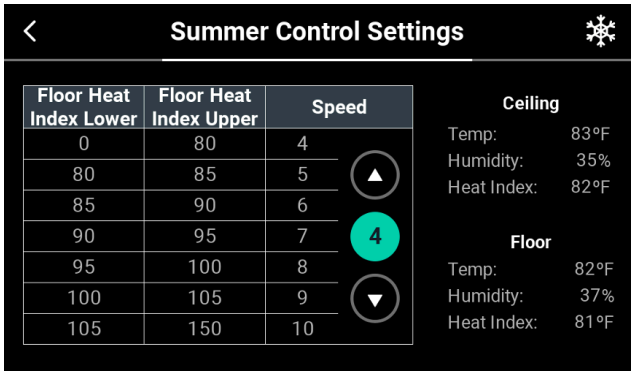
Click on Setting to view and change default setting

WINTER CONTROL SETTINGS:



Winter default setting is based on air destratification. Lighter hot air rises to the ceiling space as surrounding heavy cooler air falls to the floor space. The thermal gradient from floor to ceiling creates distinct strata layers with different average temperature. With the help of high-volume airflow set in the fan's reverse direction, hot air can circulate and mix with cooler air to the floor level. Speed 6 in reverse is equivalent to Speed 3 in the forward direction due to mechanical limitation. For every two-degree temperature delta, the speed is incremented/decremented by 1. The default starting speed is 6 in reverse direction. This default can be changed using the up/down arrows in the speed table.

SUMMER CONTROL SETTINGS:

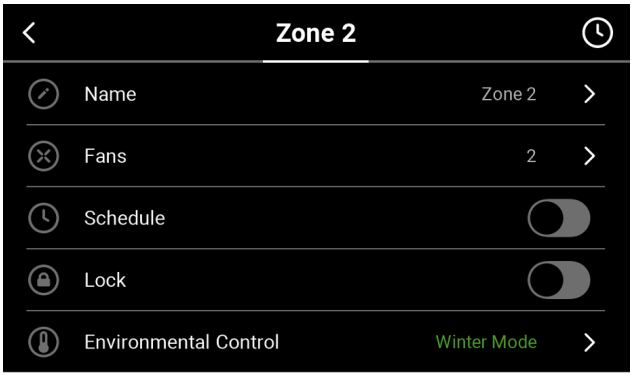


Summer default setting is based on heat index (apparent temperature). The heat index is calculated from the sensor's temperature and relative humidity reading at the floor/occupancy level. With the help of high-volume airflow in forward direction, air mixing including humidity, can be established to create a more comfortable environment. For every 5 Heat Index units, the fan speed is incremented/decremented by 1 speed. The default starts at speed 4 in forward direction. This default can be changed using the up/down arrows in the speed table.

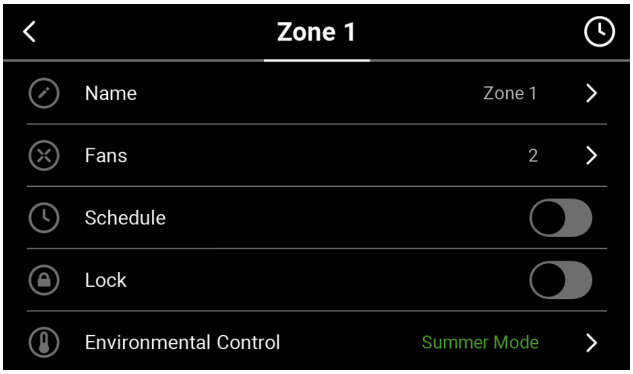
ENVIRONMENTAL CONTROL STATUS PAGE.

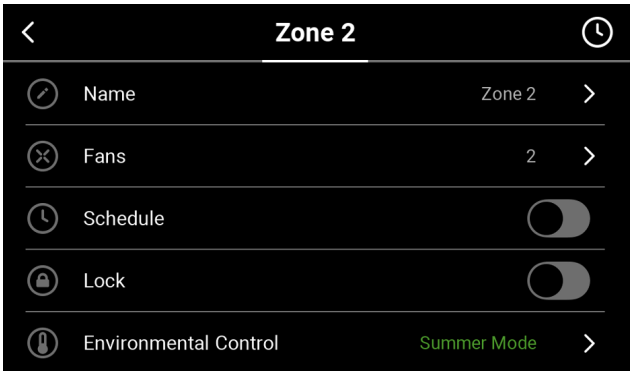
1. Zone Edit Screen

Winter Mode status in Zone Edit Screen

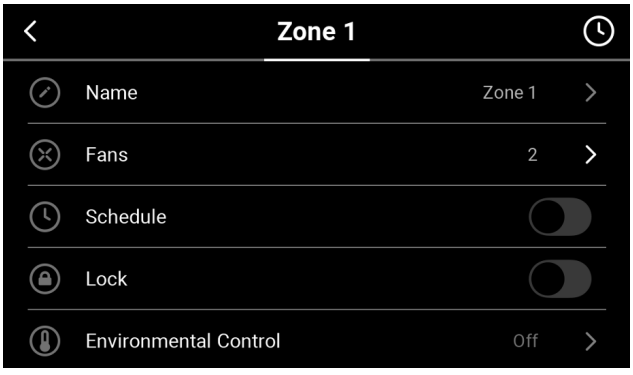


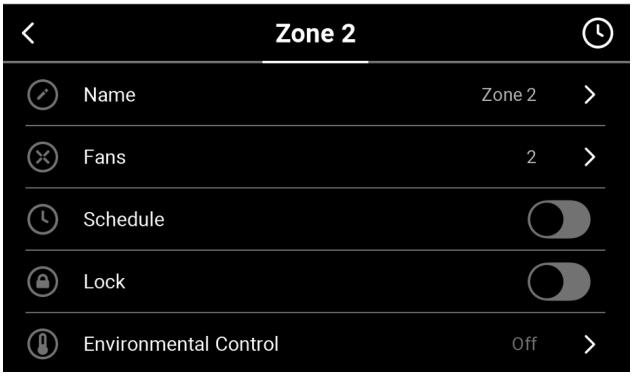
Summer Mode status in Zone Edit Screen





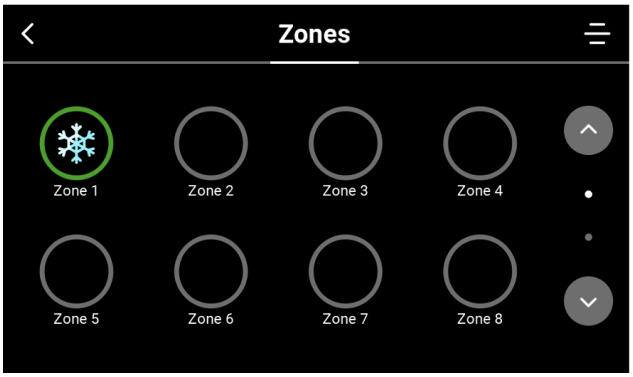
OFF Mode status in Zone Edit Screen



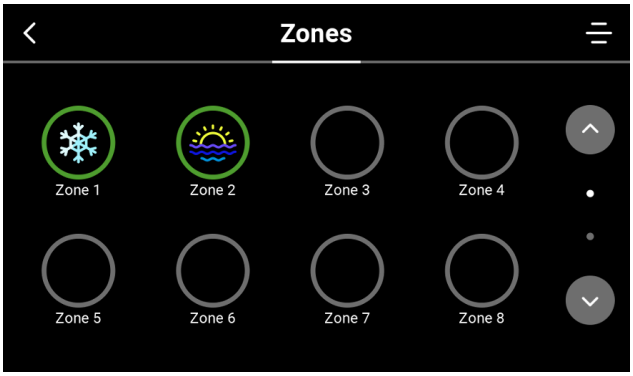


2. ZONES Overview Screen

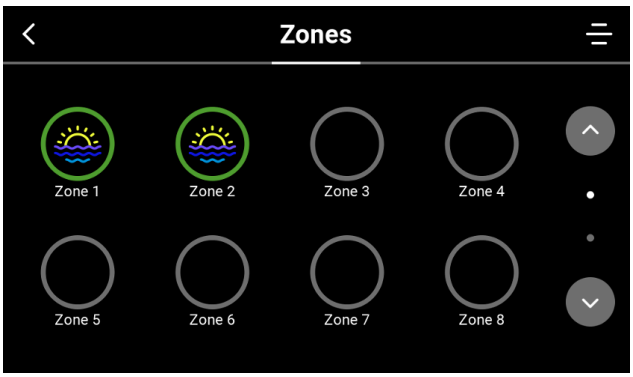
Zone 1 is active in Winter Mode



Zone 1 is active in Winter mode, and Zone 2 is active in Summer mode.



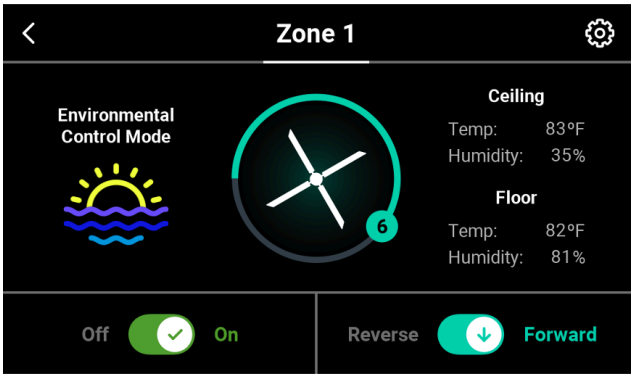
Zone 1 &2 are active in Summer mode



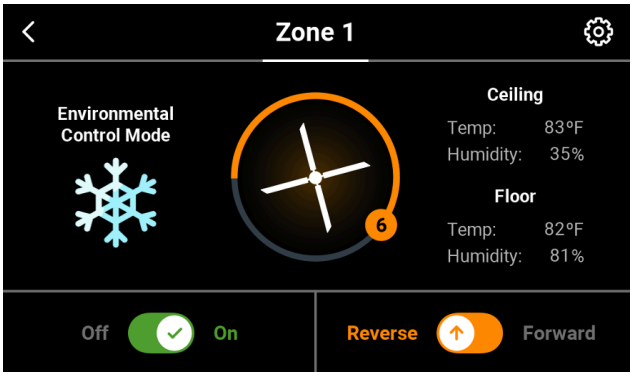
3. ZONE Main Screen

Zone 1 Main Screen Status

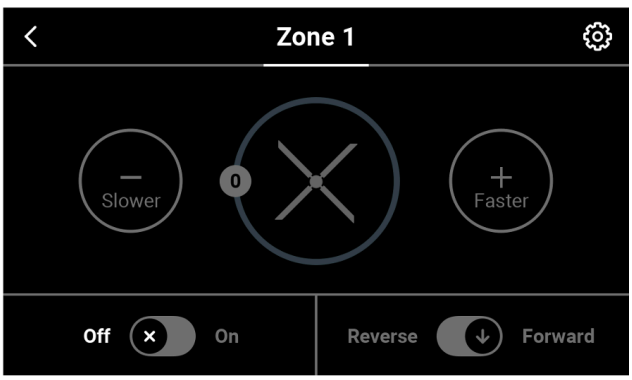
SUMMER – Ideal for warmer seasons



WINTER – Ideal for cooler seasons

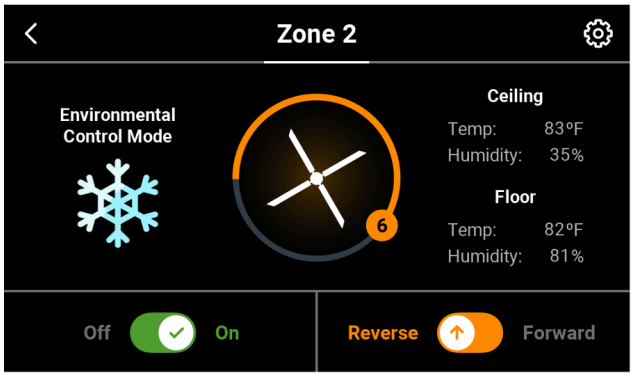


OFF

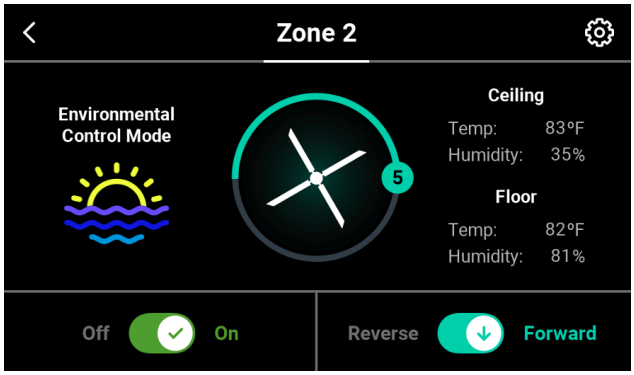


Zone 2 Main Screen Status

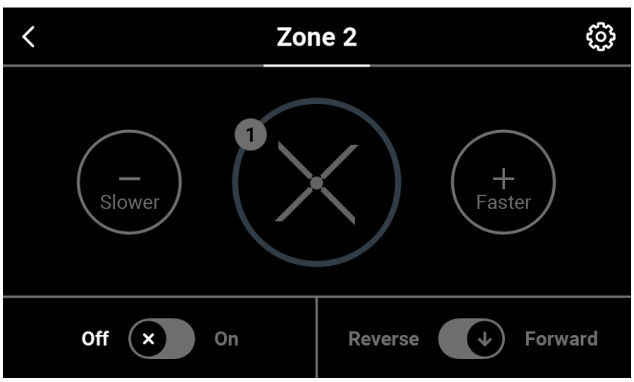
WINTER – Ideal for cooler seasons and destratifying the air



SUMMER – Ideal for warmer seasons



OFF



TROUBLESHOOTING

Follow all safety practices and instructions during the installation, operation, and servicing of the fan. Failure to apply these safety practices could result in death or serious injury. If you do not understand the instructions, please call our Technical Service Department at 1-844-593-FANS (3267) for guidance.

COMMUNICATION METHODS	CITY & ETJ RESIDENTS
Fan will not start, or HMI controller is blank	Verify that the fan's circuit breaker has power and that it is on.
	Verify that the VFD is plugged in and has power.
	Verify that the HMI controller has power across the 110V plug's blades.
	Check for secure plug connections across the system. Each connection should be checked to ensure fully engagement.
	Check for loose wiring connections. Each termination should be firmly tightened.
Fire Relay Fault	If the fire alarm went off, once that system resets, the fault should clear.
	If the fire alarm did not go off, cycle the power by flipping the circuit breaker off for a minimum of 3 minutes.
Over Voltage Alert	Contact Technical Support.
Under Voltage Alert	Verify the input power. It should be within 10% of the rated voltage.
	Check for loose wiring connections. Each termination should be firmly tightened.
Over Current Alert	Inspect the system installation for unauthorized ground in the wiring.
Motor is pulling excessively high amps	Make sure the motor voltage is a match for the supply voltage.
	Make sure that correctly sized fan blades have been installed.

TROUBLESHOOTING

Alerts may occur that cause stoppage of the fan(s). Some Alert instances can be remedied by resetting the VFD from the HMI control. The following Alerts may be remedied via reset:

ALERT CODE	DESCRIPTION OF ALERT
E.OC1	Overcurrent trip during acceleration
E.OC2	Overcurrent trip during constant speed
E.OC3	Overcurrent trip during deceleration or stop
E.OV1	Regenerative overvoltage trip during acceleration
E.OV2	Regenerative overvoltage trip during constant speed
E.OV3	Regenerative overvoltage trip during deceleration or stop
E.THT	Inverter overload trip
E.THM	Motor overload trip
E.FIN	Fin overheat
E.IPF	Instantaneous power failure
E.UVT	Undervoltage
E.ILF	Input phase loss
E.OLT	Stall prevention
E.BE	Brake transistor alarm detection
E.GF	Output side earth (ground) fault overcurrent
E.LF	Output phase loss
E.OHT	External thermal relay operation
E.PTC	PTC thermistor operation
E.OPT	Option fault
E.OP1	Communication option fault
E.OP2	Communication option fault
E.PE	Parameter storage device fault
E.PUE	PU disconnection
E.RET	Retry count excess
E.PE2	Internal board fault

TROUBLESHOOTING

ALERT CODE	DESCRIPTION OF ALERT
E.CPU	CPU fault
E.CTE	Operation panel power supply short circuit, RS-485 terminal power supply short circuit
E.P24	24VDC power output short circuit
E.CDO	Output current detection value exceeded
E.IOH	Inrush current limit circuit fault
E.SER	Communication fault (inverter)
E.SAF	Fire Relay fault
E.AIE	Analog input fault
E.PID	PID Signal Fault
E.1	Option fault
E.5	CPU fault
E.6	CPU fault
E.7	CPU fault
E.13	Internal circuit fault

For situations or concerns that are not covered in this manual, please call our Technical Service Department at 1-844-593-FANS (3267)

180 Threet Industrial Street
Smyrna, TN 13167

1-844-591-FANS (3267)
TECHNICAL DEPARTMENT: 1-844-593-FANS (3267)

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