VIVOSUN

Grow Hub

USER MANUAL

Love what you grow™

Welcome to **VIVOSUN**

Thank you for choosing VIVOSUN. We are committed to product quality and friendly customer service. If you have any question or suggestion, please don't hesitate to contact us.

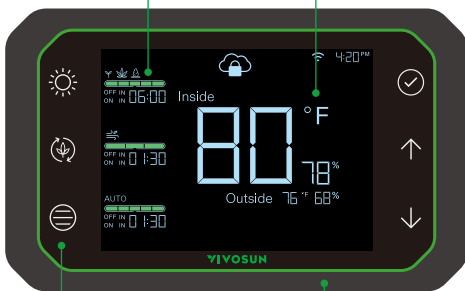# CONTENTS

KEY FEATURES

COMPLETE HUB

Monitor and control all devices like lights and fans, no need for multiple controllers.

DUAL SENSORS

Dual Temp.&RH sensors monitor inside/outside of grow environment.

WI-FI & APP CONTROL

Wi-Fi enabled with VIVOSUN App, monitor and control remotely.

SIMPLE TO USE

Simple interface, touch button, special design for growers from beginners to experts.
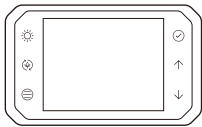
EASY INSTALLATION

Creative magnetic mounting for installing wherever you want.
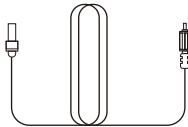
SMART & PROFESSIONAL

Smart auto mode and professional grow recipes for plants from seed to harvest.
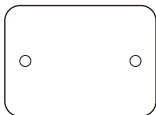
PRODUCT CONTENTS

Smart Controller
x 1pc

Temperature
Humidity Sensor
(3m)

Expansion Screws
x 2pcs

Iron Plate
x 1pc

Cable Tie
x 3pcs

Wire Tie
x 1pc

SMART GROW SYSTEM

The VIVOSUN Smart Grow System includes the VIVOSUN GrowHub Controller, the VIVOSUN App, the AeroZesh, and a number of forthcoming smart devices that can be controlled through the GrowHub Controller and App.

More intelligent IoT equipment like a smart clip-on fan, temperature and humidity sensors, and LED grow lights will be released soon.
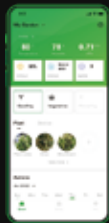
AeroLight

AeroZesh

Clip-on Fan

GrowHub Controller

VS LED Light

INSTALLATION & CONNECTION

INSTALLATION

1. Tent Mount

Remove the tape cover from the iron plate and paste the plate on the INSIDE surface of your tent where you want the controller located. Then you can place the Smart Controller on the OUTSIDE surface of your tent where the iron plate located through the built-in magnet on its back.

Tent

Iron Plate

Smart Controller
(with Magnet)

Iron Plate

Smart Controller
(with Magnet)
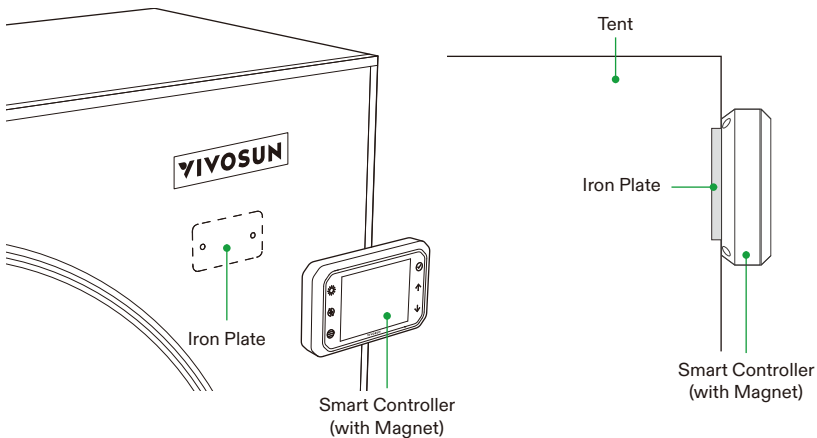
INSTALLATION & CONNECTION

INSTALLATION

2. Wall Mount

In this option you will be drilling holes into the surface of the place you plan to mount the GrowHub Controller. Measure the distance between the holes on iron plate and then mark out the contact points on the surface you plan to drill the holes. Drill the holes into the surface with your electric drill. Push in the plastic expansion pipes. Press the iron plate against the wall, lining the holes in the plate up with the new holes in the surface. Insert the screws through the iron plate and tighten them into place. Now, place the Controller directly onto the iron plate by magnetic force.

Mounting Hole

You can also hang your GrowHub Controller directly on the screws without using the iron plate. First, measure a center distance of **74mm** and drill an expansion screw on each point. Next, hang the GrowHub Controller directly on the screws by sliding the **slotted hanging holes** over the screws and then allowing the GrowHub Controller to hang down.
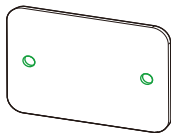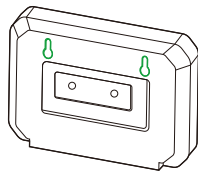
Slotted Hanging Holes
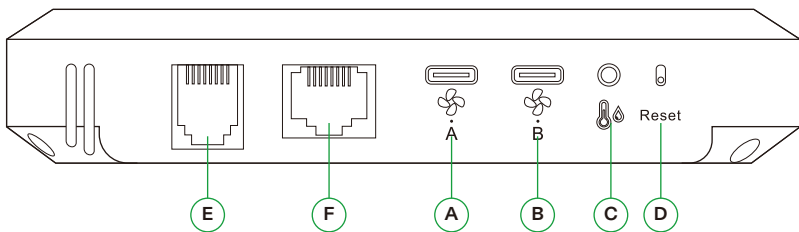
INSTALLATION & CONNECTION

CONNECTION

A / B	Type C interface (A&B): AeroZesh/Clip-on Fan
C	2.5mm AUX interface: Temperature/Humidity Sensor
D	Reset
E	RJ11 Network interface: Grow light VS series (VS1000/1500/2000/3000/4000)
F	RJ45 Network interface: AeroLight

INSTALLATION & CONNECTION

SYSTEM CONNECT

GrowHub

VS series Light

Temperature/
Humidity Sensor

Clip-on Fan

AeroLight

AeroZesh
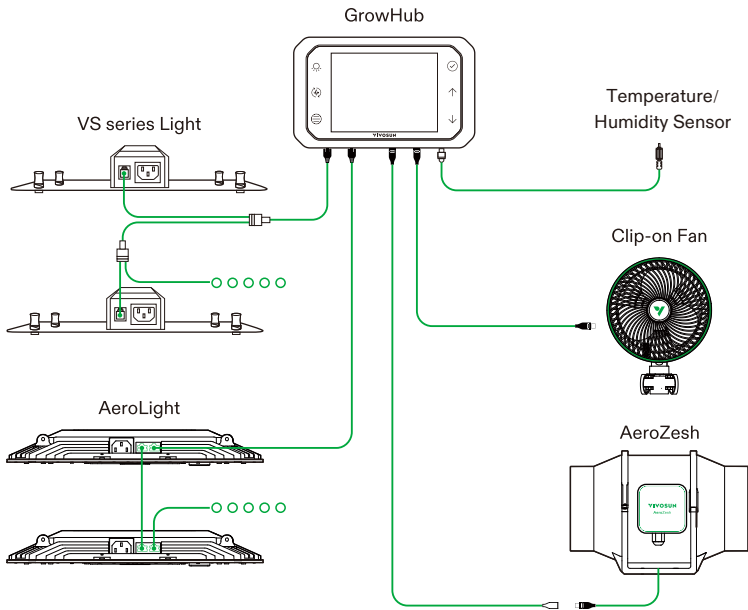
CONTROL INTERFACE

Grow Light Button

Select the grow light device to control, switch between different modes: manual, cycle, and different grow spectrum.

Circulation Fan Button

Select the circulator fan device to control, switch between different modes: manual, cycle.

Duct Fan Button

Select the duct fan device to control, switch between different modes: manual, cycle, auto.
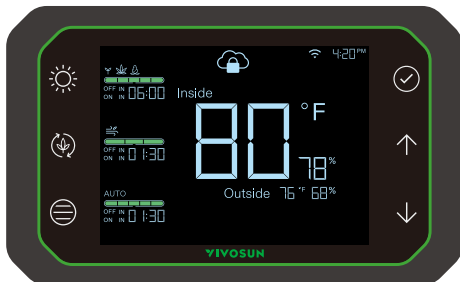
Confirm Button

Confirm the settings for different devices, temperature/humidity sensor, time, etc. Long press for unlocking from APP recipe control.

Up Button

Increase the value of your current setting (dimming, fan speed, time, calibration, etc). Long press to switch between °F and °C.

Down Button

Decrease the value of your current setting (dimming, fan speed, time, calibration, etc). Long press to quick shut down all devices.

CONTROL INTERFACE

1. GREEN BARS
Light dimming level or fan speed level, 0-100%.

2. SPECTRUM
Displays the current light spectrum:Seedling ⅄ , Veg 🌿 or Flower ♨ .

3. ALERT ICON
Indicates system abnormal like higher temperature or humidity than settings.

4. RECIPE LOCK
Indicates system controlled by VIVOSUN app's "Recipe mode" and local controls are locked.

5. OFF IN/ON IN XX:XX
Time count down from current status. Format: HH:MM.

6. WI-FI ICON
Indicates Wi-Fi connection. Disappear when controller disconnected.

7. NATURAL BREEZE
A special mode of air circulation with auto fan speed changes.

8. CURRENT TIME
Displays the current time; automatically adjusts when connected to Wi-Fi.

9. AUTO MODE
Smart auto control mode for duct fan, based on environmental Temp. & RH.

10. CYCLE TIME
Setup on/off time for light and fans, format: HH:MM.
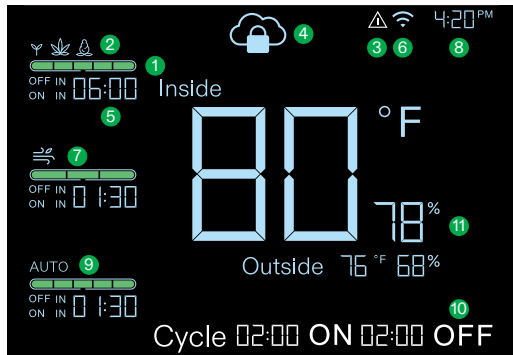
11. TEMPERATURE & HUMIDITY
Displays Temp. & RH inside/outside of grow environment received from dual sensors.

OPERATION

A. FIRST TIME SET UP

First, connect the VIVOSUN GrowHub Controller to a **running** VIVOSUN AeroLight, a duct fan, or an adaptor (not included) to turn on the Controller. The Controller is powered by electricity provided by a device. You will now need to set up the clock first by pressing the ↑↓ and ✓ to confirm. The time display area will flashes on the screen every time the controller powered on to indicate the current time setup.

The clock will automatically adjust to the current time when it connects to your Wi-Fi.

Press any button to wake up the screen or press the confirm button ✓ to return to the main screen.

1. Calibrating Time

Long press ✓ for 3 seconds to enter the calibration setting. Press ↑↓ to change hour and minute, press ✓ to confirm.

Note: Time will automatically setup when connected to Wi-Fi each time and the manual calibration of time will be skipped.
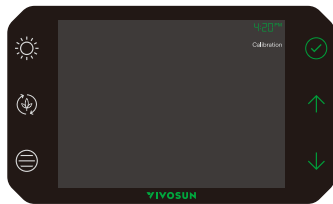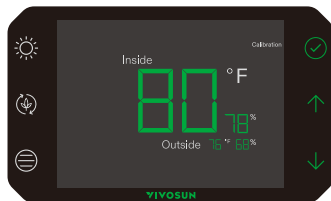
OPERATION

2. Calibrating Humidity and Temperature

Long press ⊘ for 3 seconds to enter the calibration setting. Press ⊘ to skip and choose from inside temperature and humidity to outside temperature and humidity settings. Press ↑ ↓ and ⊘ to adjust and confirm calibrated values.
Note: Inside temperature/humidity calibration will be skipped if the Temperature/Humidity sensor is not plugged in.

3. Adjusting Screen Brightness

Long press ⊘ for 3 seconds to enter calibration mode. Press ⊘ to skip through the menu and choose the "screen brightness"setting. Press ⊘ and ↑ ↓ to adjust and confirm appropriate brightness level.
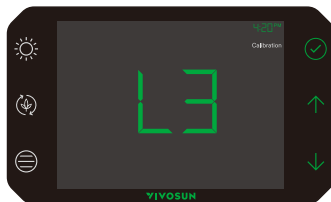
OPERATION

4. Switching Between Temperature Units (°F/°C)

Long press ↑ for 3 seconds to switch between °C and °F.

OPERATION

B. LIGHT CONTROL ☼

Press any button to wake up the screen or press the confirm button ⊘ to return to the main screen. Then, press the ☼ to enter device screen of the light control.

1. Spectrum Tuning

Default is Veg spectrum ⚘. Long press ☼ for 3 seconds to activate the spectrum selection. Press ↑↓ and ⊘ to change and confirm between Seedling ⚘, Veg ⚘ and Flower ⚘.
Note: The spectrum tuning function only supports the VIVOSUN AeroLight at this time.
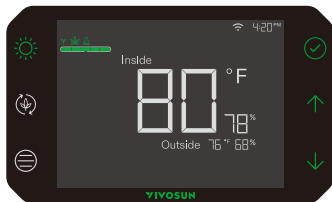
2. Light Dimming

Press ↑ and ↓ to dim the light. Includes 5 levels, from 0 to 100%, indicated by the green bar. You can dim the light during ON/OFF cycle mode or in manual mode.
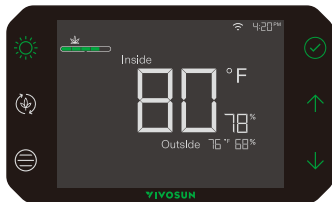
OPERATION

3. ON/OFF Cycle Mode

Press the ☼ button to enter the ON/OFF cycle mode; the ON time will flash at the bottom. Press ↑ ↓ to adjust the ON time, and the OFF time will be calculated automatically on a 24-hour cycle. Press ⊘ to confirm and jump to the Start time setting. Next, press ⊘ to start the ON/OFF cycle. "OFF IN XX:XX" or, "ON IN XX:XXX" will be displayed corresponding to which cycle you are currently in.

Note: In the ON/OFF Cycle mode, the dimming level cannot be set to 0 (OFF).

4. Manual Mode

Press ☼ to switch between manual mode and ON/OFF cycle mode.

OPERATION

C. CIRCULATION FAN CONTROLS 🌿

Press any button to wake up the screen, or press the confirm ⊘ button to return to the main screen. Next, press 🌿 to enter the circulation fan control screen.

1. Fan Speed and Natural Breeze

Press ↑ ↓ to adjust the fan speed from 0 (OFF) to max (100%). The green bar will indicate the current speed level. Press ↑ after reaching max to switch to Natural Breeze mode, which automatically changes fan speed from min to max. You can adjust the fan speed during ON/OFF cycle mode or manual mode.

2. Manual mode
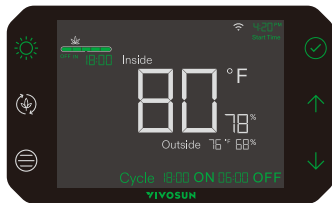
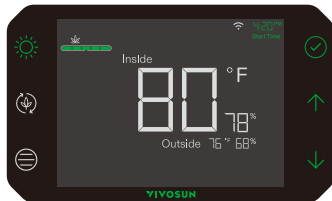Press 🌿 to switch between manual mode and ON/OFF cycle mode.

OPERATION

3. ON/OFF Cycle Mode

Press ⊕ to enter the ON/OFF cycle mode, and the ON time flashes at the bottom. Press ↑ ↓ to adjust the ON time and the OFF time. Press ⊘ to confirm and jump to the Start time setting. Then press ⊘ to start the ON/OFF cycle and "OFF IN XX:XX" or "ON IN XX:XX" will display.
Note: The ON/OFF cycles restart every 24 hours beginning at the same time of each day you choose in the Start time setting. One cycle is up to 24 hours. The fan speed level cannot be set to 0 (OFF) in the ON/OFF Cycle mode.
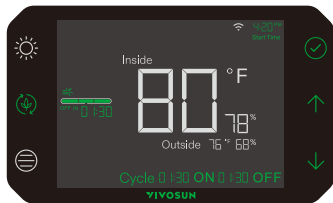
OPERATION

D. DUCT FAN CONTROL ☰

Press any button to wake up the screen, or press the confirm ⊘ button to return to the main screen. Next, press ☰ to enter the duct fan control screen.

1. Fan Speed Adjustment

Press ↑ ↓ to adjust the fan speed from 0 (OFF) to max (100%). The green bar will indicate the current speed level. You can adjust the fan speed during ON/OFF cycle mode or manual mode.
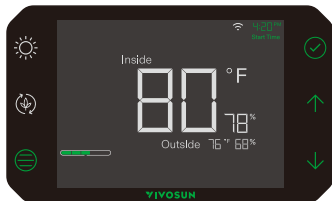
2. Manual Mode

Press ☰ to switch between manual mode, ON/OFF cycle mode, and Auto mode.
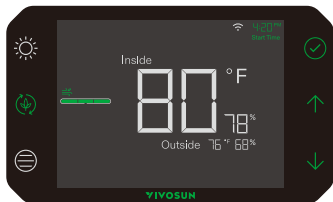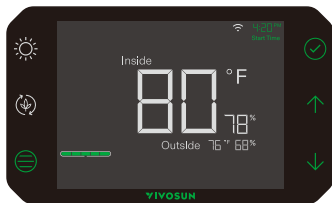
OPERATION

3. ON/OFF Cycle Mode

Press the ⊜ button to enter the ON/OFF cycle mode; the ON time will flash at the bottom. Press ↑ ↓ to adjust the ON time and the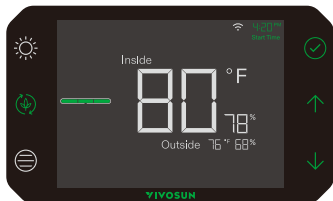 OFF time. Press ⊘ to confirm and jump to the Start time setting. Next, press ⊘ to start the ON/OFF cycle. "OFF IN XX:XX" or, "ON IN XX:XXX" will be displayed corresponding to which cycle you are currently in.

Note: The ON/OFF cycles restart every 24 hours beginning at the same time of each day you choose in the Start time setting. One cycle is up to 24 hours. The fan speed level cannot be set to 0 (OFF) in the ON/OFF Cycle mode.
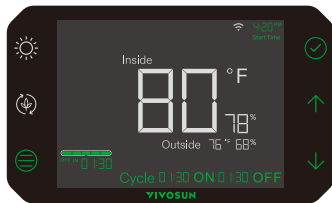
4. Auto Mode

Press ⊜ to enter Auto Mode—when you do, "AUTO" will flash. Press ⊘ to confirm and Auto Mode will begin. Auto Mode automatically controls the duct fan based on the temperature and humidity inside and outside the grow space.

Note: The default maximum temperature and humidity are at 82 °F and RH 75%. The minimum temperature and humidity triggers are set to OFF (no trigger).
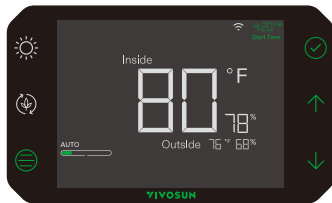
OPERATION

Auto Mode - Working Logic

Settings of the thresholds between the Comfort Zone and duct fan working zone can be changed via the VIVOSUN App (the default maximum temperature and humidity are at 82 °F and RH 75%; the minimum temperature and humidity triggers are set to OFF). You can also set the duct fan working mode within the comfort zone in the VIVOSUN App, choose to keep it OFF, or run at minimum speed level. When the temperature/humidity reaches certain threshold, the duct fan will turn ON or increase speed level. The further it exceeds the higher fan speed level will be.

The alarm icon ⚠ will flash if the inside temperature or humidity is out of the comfort zone and the duct fan keeps in working zone for more than 1 hour.
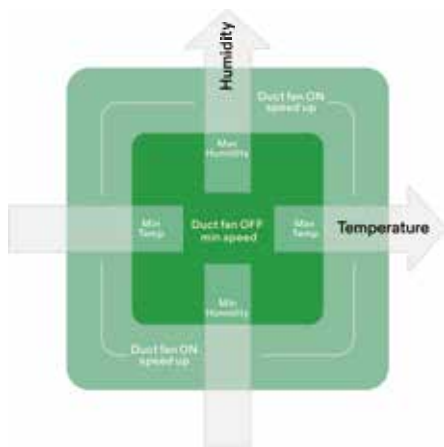
■ Duct Fan Working Zone   ■ Comfort Zone

OPERATION

Auto Mode - Temperature (example)

| Duct fan ON / speed up | Duct fan OFF / min speed | Duct fan ON / speed up |

Fan Speed Level chart with values:

Temperature(°F)	55	56	58	61	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96
Fan Speed Level	5	5	5	4	4	3	2	1	1	1	1	1	1	1	1	2	3	4	4	5	5	5

Temperature(°F)

■ Fan Speed Level
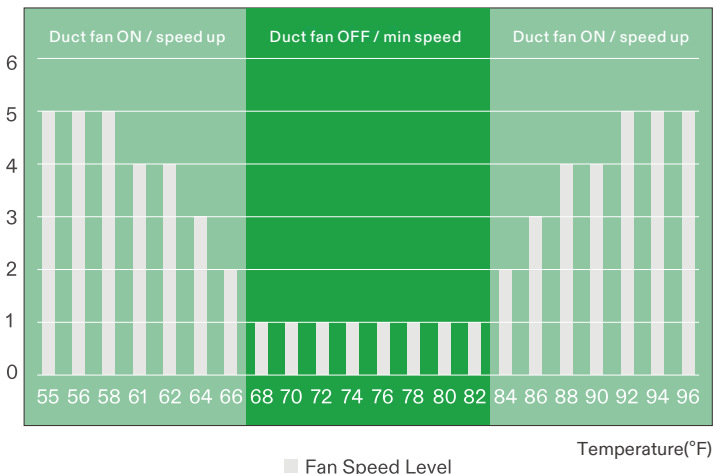
Above is an example of the duct fan running condition at the Auto Mode settings (Max Temp. = 82°F, Min Temp. = 68°F) responding to the inside temperature change. When the inside temperature reaches certain threshold, the duct fan will turn on or increase speed level, and the further it exceeds the higher fan speed level will be.

OPERATION

Auto Mode - Humidity (example)
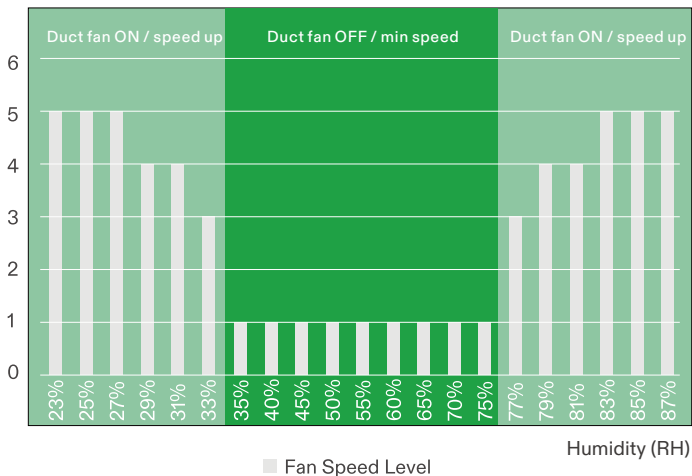
Above is an example of the duct fan running condition at the Auto Mode settings (Max Humidity = 75%, Min Humidity = 35%) responding to the inside humidity change. When the inside humidity reaches certain threshold, the duct fan will turn on or increase speed level, and the further it exceeds the higher fan speed level will be.

OPERATION

5. Advanced Auto Mode

Use the VIVOSUN App to switch to the duct fan to the Advanced Auto Mode, in which the temperature and humidity outside your grow space will also be adopted to the control of the duct fan and you can setup the Min and Max temperature and humidity. If the outside temperature or humidity is worse than the inside, the duct fan will not increase speed even if the temperature or humidity inside your grow space is out of the setting range. Meanwhile, the alarm icon will flash to notify that the outside environment is inappropriate.

Please download the VIVOSUN App to learn more.

OPERATION

E. RECIPE MODE

When the VIVOSUN App Recipe Mode is running, ☁ will display and all local controls are locked to ensure the grow recipe is not interrupted.

To unlock the controller, long press ⊘ for 3 seconds in the main screen.

Note: When you unlock the device it will automatically end any Grow Recipes currently running.
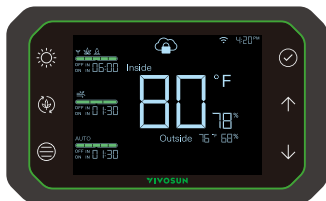
F. ONE CLICK STOP

Light up the screen (press any button) and enter the main screen (press ⊘ if in the device screen). Then long press ↓ for 3 seconds to stop all devices(light, circulation fan and duct fan).

Note: Using the "One Click Stop" function WILL NOT cut off the power of each device.

	Main Screen		Device Screen	
Buttons	Press	Long Press	Press	Long Press
☼	Grow Light Device Screen	Spectrum Selection	Mode switch between Manual/Cycle	Spectrum Selection
🌱	Circulation Fan Device Screen		Mode switch between Manual/Cycle	
⊜	Duct Fan Device Screen		Mode switch between Manual/Cycle/Auto	
⊘		Exit recipe mode; Calibration Setting Screen	Confirm & Return main screen	
↑		Switch Temp °C and °F display	Light dimming/ Fan speed level up	Light dimming/ Fan speed level up
↓		One click stop	Light dimming/ Fan speed level down	Light dimming/Fan speed level down

VIVOSUN APP

With the VIVOSUN App, you can check and control your GrowHub from anywhere in the world—whether you are on your couch, visiting your family, or traveling abroad.

1. Check the temperature, humidity, VPD and status of all your grow devices controller by your GrowHub in real time.
2. Remote control the devices by manually, cycles, temperature and humidity tirggers.

What Else Is In The VIVOSUN App?

1. Grow Recipes: Enable you to set how your lamp, circulation fan, and duct fans operate through different stages of growth so you can apply various settings of your GrowHub by simply changing the "stage." The VIVOSUN App also provides recipes recommended by professional growers-you can use VIVOSUN's recipes by just clicking the "apply" button to start your grow.

VIVOSUN APP

2. All temperature, humidity, VPD of your tents and all devices running logs will be tracked by VIVOSUN app which allows you to have a whole picture of what happened in your tent.

3. Get alerts via notifications to your phone when your grow space reaches temperature or humidity levels out of your setting ranges.

VIVOSUN APP

4. Reminders can be set to help you manage your scheduled waterings, feedings, and other activities for your plants.
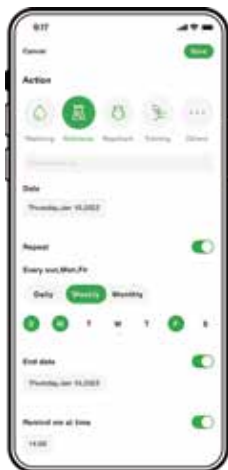
5. The Grow Diary allows you to create notes with photos, record environmental data, and log devices during your plants' growth as well as share your experiences with others easily.

VIVOSUN APP

How to connect your VIVOSUN GrowHub Controller to the VIVOSUN App:

Step 1:

Step 2:

VIVOSUN APP

How to connect your VIVOSUN GrowHub Controller to the VIVOSUN App, continued:

VIVOSUN APP

1. Search "VIVOSUN" in the Apple App Store or in the Google Play Store to download the VIVOSUN App.
2. Scan the QR Code to download the VIVOSUN App.

FAQS

Q: Can I use the GrowHub controller without Wi-Fi connected or VIVOSUN APP?

A: Yes, you can use your GrowHub controller offline or without the VIVOSUN APP to control your LED lights, circulation fans and duct fans with basic functions. However, after connecting your GrowHub to Wi-Fi, you can use the VIVOSUN APP to visit your grow environmental data remotely in real time and acquire more functions such as grow plan setup, historical data visit, and more detailed functions setup.

Q: How many components can I hook up to one controller?

A: For one GrowHub controller (E42), you can hook up **12** AeroLights (with RJ45 Daisy-Chain), **8** VS series lights (with RJ11 Daisy-Chain), **2** duct fans or clip-on fans (AeroZesh or others with Type-C), and **1** Temperature/Humidity sensor.

Q: Can I connect more than one of the same type of equipment to my GrowHub? (E.g., can I have two fans connected to two different outlets?)

A: Yes. The app allows for more than one of the same piece of equipment (e.g., lamps, fans, lights) to be assigned to more than one outlet—usually, two outlets.

FAQS

Q: How does the controller get power?

A: The VIVOSUN GrowHub Controller receives its power from an AeroLight and/or an AeroZesh through the control cable (RJ45 or type-C). No additional power cable is needed. However, if you connect a GrowHub Controller to a VS series light (VS1000, VS2000, VS4000, etc.) or other compatible lights or duct fans without an AeroLight or an AeroZesh as well, an adaptor (coming soon) is needed to power the GrowHub Controller.

Q: What other components can I use with the GrowHub?

A: The GrowHub controller can support lights with RJ11 or RJ45 port, duct fans with Type-C port. However not all devices (lights or fans) with those ports can be controlled with the GrowHub with complete functions, and certain devices may require an additional adaptor for the GrowHub. We suggest using the VIVOSUN devices to connect to the GrowHub for complete functions and best experience. Please contact us for more information about the third-party device support.

FAQS

Q: What kind of Wi-Fi router do I need? Is the VIVOSUN GrowHub compatible with 5GHz Wi-Fi networks?

A: The VIVOSUN GrowHub will connect to **2.4GHz Wi-Fi networks only**. Most routers enable Wi-Fi networks for both 2.4GHz and 5GHz networks under the same name but with "2.4GHz" or "5GHz", you need to choose the 2.4GHz Wi-Fi signal for the GrowHub in pairing process.

Q: My GrowHub Controller does not connect to Wi-Fi when I pair it with my App, what should I do?

A: First, ensure the Wi-Fi network is 2.4GHz. The VIVOSUN GrowHub will connect to **2.4GHz Wi-Fi networks** only. Next, pleasure check whether the password the Wi-Fi network is filled in correctly. If you still cannot finish the pairing process, please message our support email and provide the login email you use for the VIVOSUN app, so we can provide a tailored solution for you.

Q: What happens if my GrowHub Controller is offline?

A: If your GrowHub Controller is offline (i.e., no Wi-Fi connection or you do not have internet access), the controller will still operate by the last settings programmed or by the last Grow Recipe. You can still operate the GrowHub directly on the Controller but you will not be able to control or read live data through the VIVOSUN App. The VIVOSUN GrowHub will connect to the internet automatically when your Wi-Fi connection is again available.

FAQS

Q: What happens if there is a power outage? Do I need to reconfigure the Controller?

A: If your GrowHub Controller was connected to Wi-Fi and the VIVOSUN App before the power outage it will automatically reconnect to your Wi-Fi and continue executing your settings as if it had never lost power. If your GrowHub was not connected to Wi-Fi and the VIVOSUN app before the power outage, the time on the controller will need to be calibrated first, and the controller will run the previous settings automatically.

Q: Can I reset the VIVOSUN Grow Hub for troubleshooting?

A: Yes, use a pin to poke the reset key on the controller and it will reset to the factory setting.

Q: Why my data on dashboard in APP is not same with the data shows in GrowHub's screen?

A: The live data will update every minute. You can also slide the page down to refresh the data.

Q: Can I temporarily override the setting during a recipe?

A: Yes. You can temporarily override the recipe by change to manual mode on the app or GrowHub controller. To override on the app, you need to stop the current recipe (Plan mode) before you change to the manual mode. To override recipe mode on the GrowHub, you need to unlock the recipe mode first.

FAQS

Q: Does the app work with iPhone or Android devices? Tablets?

A: The VIVOSUN app can work on both iPhone and Android devices including Tablets. You can download app in the Apple store for IOS (iPhone or iPad) or Google Play for Android devices.

Q: Will the app alert me if there is an issue?

A: Yes. The VIVOSUN app will send notifications to your phone when devices have issues or environmental conditions are out of setting ranges.

Q: Can I use the App if I am outside of the United States?

A: Yes. The VIVOSUN app can connect your GrowHub controller from cloud, which means you can use the app to visit and control your devices globally wherever Internet is accessible.

Q: How old is the data I can access in VIVOSUN APP?

A: VIVOSUN app will display historical data up to one-year-old data.

FAQS

Q: Is the VIVOSUN App free? Is there any subscription fee for the App?

A: The VIVOSUN App is free to download and use. Everyone can use the VIVOSUN App without restriction.

Q: Are you planning on adding new features? If so, can I benefit from them?

A: To make sure our customers love what they grow, our team is constantly improving the product based on our customers' feedback (please check our community forum). All our customers benefit from those improvements via free app updates or OTA (Over-The-Air) firmware updates. All free of charge.
When we release new features, we will make sure to communicate to our entire community, so don't worry, you won't miss them.

Q: How do I get technical assistance?

A: If you have any issues or questions, please contact our support email which can be found on our Amazon listing (Important information section), the VIVOSUN app, or on our website, and please include the email you use to log into VIVOSUN app. Also you can contact us directly via Amazon. You can check our knowledge base and our forum on our website: www.VIVOSUN.com.

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