Growell

Growell

Power Adapter Input: 100-240 V ~ 50/60 Hz
Power Adapter Output: 24V 5A

3-Tier Hydroponic Growing System

User Manual

Model: HS07/Z210P-3

If any questions, please feel free to contact us at:
growellservice@outlook.com

Indoor Garden Made Easy

Are you an avid gardener but short on space? Our garden is the perfect solution! With 3 tiers, each equipped with its own control panel for individual grow light control, it enables bulk indoor planting while taking up minimal space. This makes it a seamless fit for your kitchen or living room.

Grow your favorite vegetables, fruits, or culinary herbs all year round, right at your fingertips. Whether it's basil, thyme, sage, parsley, cilantro, cherry tomatoes, rosemary, peppers, flowers, or even strawberries, this versatile garden has got you covered.

Begin your indoor planting journey today and enjoy a constant supply of fresh, pesticide-free vegetables, fruits, and culinary herbs .

Please scan the QR code for the installation video.

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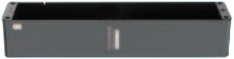
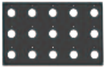
Parts Included



Large Water Tank（1st tier） x 1

Note: The water pump with a 90°elbow has already been installed in this tank.



Grow Deck x 6

Grow Basket x 90
Grow Sponge x 90

Small Water Tank x 2

Water Tank Support Bar x 3

Low Water Alarm*1
(2 AA Batteries required but not included.)

Grow Light (Panel) With Pump Button x 1

Water Supply Pupe x 1

Grow Light (Panel) Without Pump Button x 2

Caster Wheel Without Lock x 3

Caster Wheel With Lock x 2

Small Wrench x 1

Grow Light Clip x 6

（Grow Light Panel）**Hole Cover x 6**

Cable Clipsx5
Self-adhesive x 5
（Manage cables with the cable clips and the self-adhesives)

Tweezers x 1

Measuring Cup x 1

Measuring Pitcher x 1

Plant Food A x 1
Plant Food B x 1

Plant Food A Refill x 10
Plant Food B Refill x 10

Label Holder x 30

Label x 90

Grow Dome x 90

Plastic Pod Hole Cover x 45

Sticky Pod Hole Cover x 90

Warm Tips: The plastic drain pipes have been inserted into the metal support poles. When unboxing, pour the pipes out of the poles.

Long Support Pole x 4 +
Short Support Pole x 4
（Metal, thicker than the drain pipe）

Long Drain Pipe x 1
Short Drain Pipe x 1
（Plastic, thinner than the support poles）

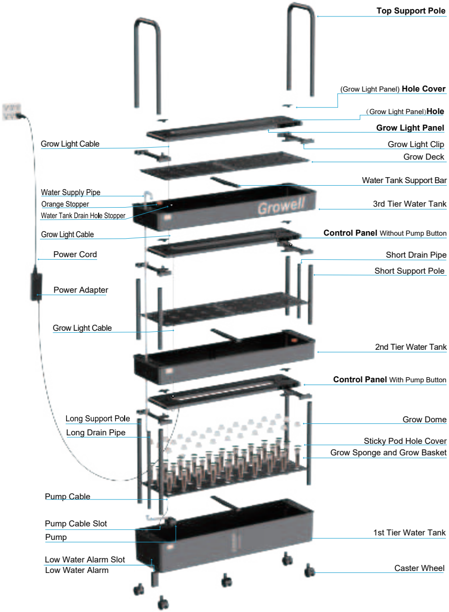
Top Support Pole (U-shaped) x 2

Grow Light Cable x 2

Power Adapter x 1

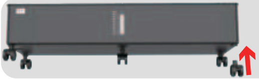
Power Cord x 1

Part Name



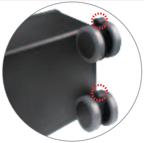
How to Use

1. Set Up the Hydroponic System



Step 1:

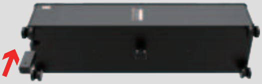
Attach these caster wheels(5 total wheels) to the bottom of the 1st tier water tank(the bottom tier).



Note:
1. Two of the five caster wheels are equipped with a lock. Please install these two on the same side.

2. These wheels come prepared for installation. If you wish to separate the wheels from the casters, the supplied small wrench will help.

Small Wrench Functions:
1. Screw the wheels onto or off of the casters.
2. Adjust the caster “leg” length by loosing or tightening the bolt so that the caster wheels can reach the floor perfectly without any gap or unevenness caused.

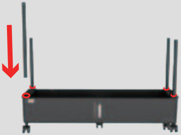


Step 2:

Pop in the low water alarm.

Low Water Alarm

Note:
1. 2 AA batteries required but not included.
2. It will beep when water level is low.

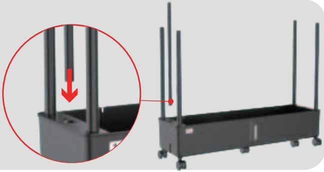


Step 3:

Insert the 4 long support poles.

Step 4:

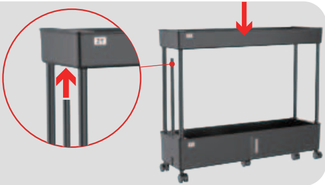
Insert the long drain pipe.

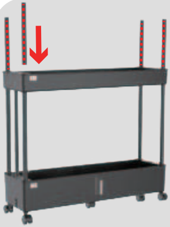


Step 5:

Install the 2nd tier water tank.

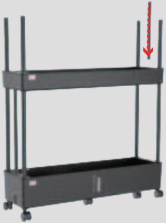
Note:
After installing the 2nd tier water tank, please push the long drain pipe up until it is firmly attached to the 2nd tier water tank.





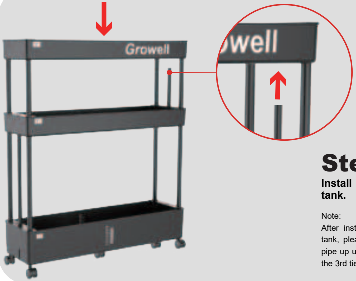
Step 6:

Insert 4 short support poles.



Step 7:

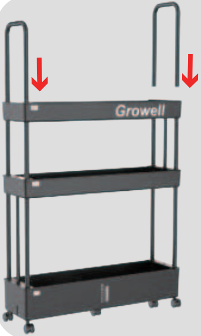
Insert a short drain pipe.



Step 8:

Install the 3rd tier water tank.

Note:
After installing the 3rd tier water tank, please push the short drain pipe up until it is firmly attached to the 3rd tier water tank.

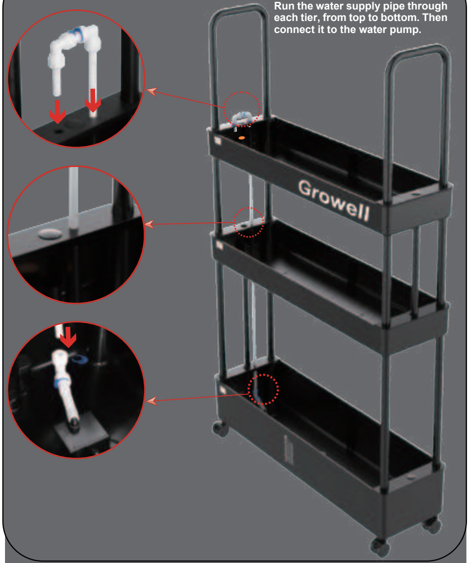


Step 9:

Install the 2 top support poles.

Step 10:

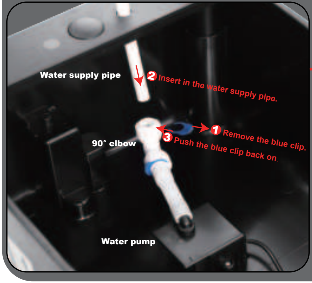
Run the water supply pipe through each tier, from top to bottom. Then connect it to the water pump.



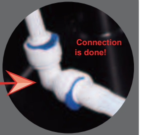
Tips:

1. Please refer to page 7 for detailed instructions on how to connect the water supply pipe to the water pump.
2. Please turn to page 8 for the sequential steps after step 10.

How to connect the water supply pipe to the water pump?



Water supply pipe
② Insert in the water supply pipe.
90° elbow
① Remove the blue clip.
③ Push the blue clip back on.
Water pump

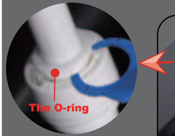


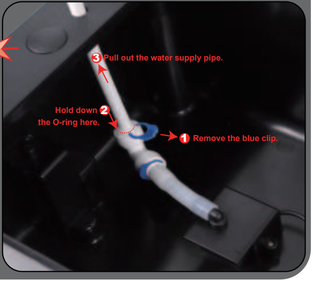
Tips:

1. After unboxing,the water pump with a 90° elbow on it has already been installed in the 1st tier water tank, as shown in the picture on the left.

2. The connection of any water supply pipe end and any 90°elbow end is the same, as shown in the picture on the left.

How to disconnect the water supply pipe from the water pump?





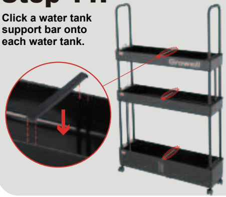
③ Pull out the water supply pipe.
Hold down ② the O-ring here.
① Remove the blue clip.

Tips:

The disconnection of any water supply pipe end and any 90°elbow end is the same, as shown in the picture on the right.

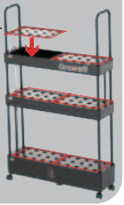
Step 11:

Click a water tank support bar onto each water tank.



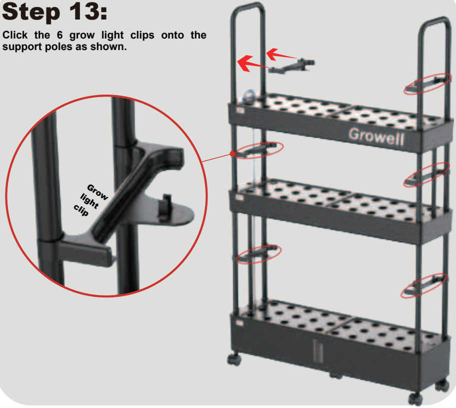
Step 12:

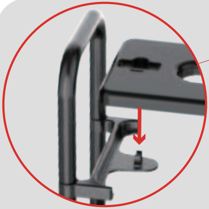
Install the grow deck.

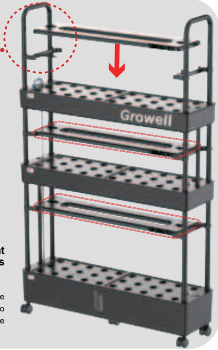


Step 13:

Click the 6 grow light clips onto the support poles as shown.



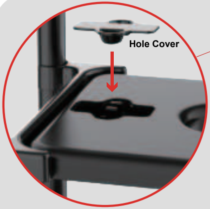




Step 14:

Click a grow light panel onto each “grow light holder”, which is formed by two grow light clips per tier.

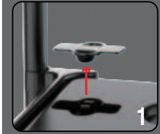
Note: When installing the grow light panels, place the one with the pump button on the first tier (i.e., the bottom tier). The other two panels (without the pump button) can be installed randomly on the remaining tiers. Make sure all control panels face forward.



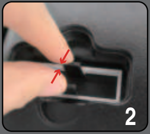
Step 15:

Cover the two holes on top of each grow light panel with two hole covers.

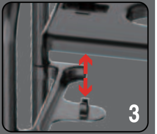
How to remove the grow light panel?



Lift the hole cover



Pinch to release the grow light panel



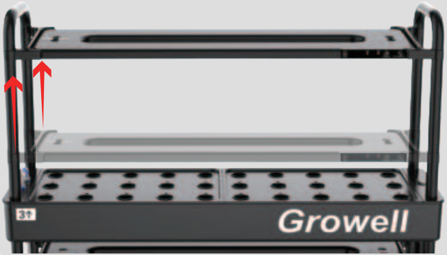
Separate the grow light panel from the grow light clip

Step 16:

Slide both ends of one grow light clip up or down a bit using both hands. Then, adjust the other clip on the same tier to match the first one, ensuring both clips are level.

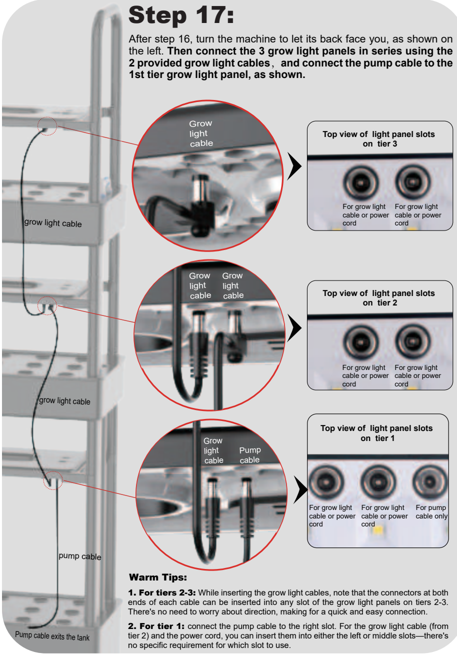
Warm Tips:

1. The height(from grow deck to grow light panel) is adjustable, which meets the growth needs of various plants.
2. Generally, please keep the plants’ top about 4 - 6 inches away from the grow light throughout the entire growing process. But we highly recommend plant growers adjust the light panel height based on different plant species/properties and their actual growing stage. Being too far, the plants may get leggy, while staying too close may result in leaf edge scorch.



Step 17:

After step 16, turn the machine to let its back face you, as shown on the left. **Then connect the 3 grow light panels in series using the 2 provided grow light cables, and connect the pump cable to the 1st tier grow light panel, as shown.**


grow light cable
grow light cable
pump cable
Pump cable exits the tank
Grow light cable
Top view of light panel slots on tier 3
For grow light cable or power cord
For grow light cable or power cord
Grow light cable
Grow light cable
Top view of light panel slots on tier 2
For grow light cable or power cord
For grow light cable or power cord
Grow light cable
Pump cable
Top view of light panel slots on tier 1
For grow light cable or power cord
For grow light cable or power cord
For pump cable only

Warm Tips:

1. For tiers 2-3: While inserting the grow light cables, note that the connectors at both ends of each cable can be inserted into any slot of the grow light panels on tiers 2-3. There's no need to worry about direction, making for a quick and easy connection.

2. For tier 1: connect the pump cable to the right slot. For the grow light cable (from tier 2) and the power cord, you can insert them into either the left or middle slots—there's no specific requirement for which slot to use.

2. Prepare the Seed Pods

Warm Tips:

1.During the early stage the plants grow quite slowly, which is normal. As they sprout more leaves for increased photosynthesis, they will grow faster and faster.
2. Please plant what is local to your area (also known as local provenance) and plant in season.
3. Before planting, please confirm that the seeds are suitable for the current ambient temperature.
4. Seeds not included.

Step 1

Soak the seeds in water for 6 hours and the sponges for 5 minutes.

Tips: The soaking time varies depending on the seed types.

Step 2

Insert a soaked sponge in each basket.

Step 3

Put 1-3 seeds into each sponge in the basket.

Tips: 1. For larger seeds, use a knife to cut and expand the seed hole of the sponge for a better fit. 2. During the seedling period, keep those that grow well in the pod and pull out or cut off those with poor growth, leaving only one plant that grows the best in each pod.

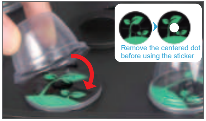
Step 4

Put the basket into the pod hole of the grow deck.

Step 5

Cover each pod hole with a sticker and a dome.

Warm Tips:
1. The stickers have the pod holes sealed, which helps lock moisture in and prevent algae and pests. 2. The domes help keep the heat and moisture inside, create a better environment for taking root, and protect the early seedlings from insect damage.



Remove the centered dot before using the sticker

Step 6

Cover the unused pod holes with the pod hole covers to prevent insects from entering and green algae from growing.

Step 7

Label your plants with the tags and/or the labels.

Basil
March 27
Name: Basil
Date: March 27

Step 8

Add fresh water to the water tank. Ensure the water level is above a quarter of the sponge at the bottom, but do not overfill the tank.

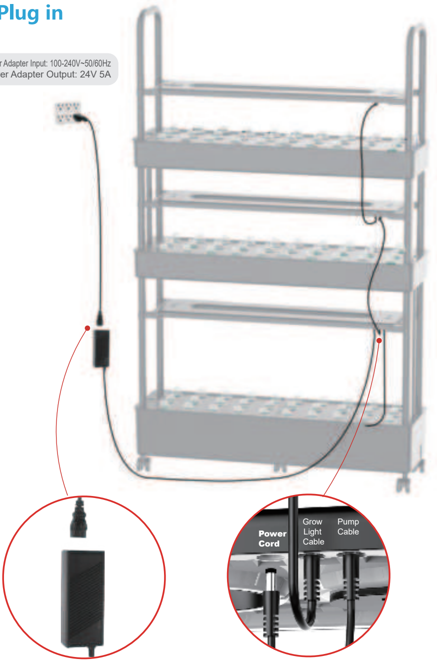
Warm Tips:
1. Max load of the whole hydroponic growing system: 40L(24Lx1+8Lx2).
2. During the seeding stage, adding nutrient solution or not is not a big deal. If necessary, add once only.

Warm Tips:

Before adding water, please check and ensure the drain hole of each water tank(except the 1st tier tank) is securely sealed with a white stopper.

3. Plug in

Power Adapter Input: 100-240V~50/60Hz
Power Adapter Output: 24V 5A



4. Start to Use - Button Operations

Warm Tips:

1.The hydroponic growing system has 3 tiers, each with its own control panel. These panels control the grow lights individually.

2. There is only one pump button, located on the control panel of the 1st tier (bottom tier), which controls the entire water circulation system (pump) on or off. The other control panels don't have a pump button. Therefore, please first turn on the 1st tier grow light panel to access and operate the pump button.

3. Please find the control panel on the front side of each grow light panel.

If you don't want to bother programming, then this is for you!

1 **After plugging in and powering on the grow light panel(s) of this garden, the light(s) and pump will automatically turn on.** The light will work in the growing mode it was in before unplugging. The pump will pump water constantly. **Therefore, what's needed is to plug in and power on the grow light panel(s), nothing more!**

2 **If you want to change the growing mode,** turn to the next page for button operations.
2 growing modes available: vegetables mode, and flowers & fruits mode.

3 **If you want to change the lighting duration:** turn to the next page for button operations.
Each growing mode has 2 lighting duration options to better suit your needs:
16H Option: ON for 16h first, and then off for 8h, and the cycle repeats like this.
22H Option: ON for 22h first, and then off for 2h, and the cycle repeats like this.

4 **(4)If you want to set when the light starts and ends everyday, do as below:**
(Note: The light turns on every day at the time you first plugged in your garden.)

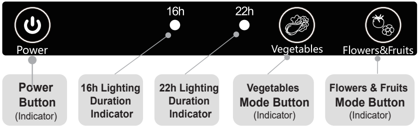
- Provided that the 16H lighting duration option has been selected: If you plug it in at 7:00 am, it will turn on at 7:00 am every morning and off at 11:00 pm every night.

- Provided that the 22H lighting duration option has been selected: If you plug it in at 7:00 am, it will turn on at 7:00 am every morning and off at 5:00 am the next day.

To change the start time, please unplug your garden and then plug it back in at the time you want it to be on everyday.

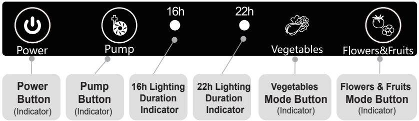
If you want to turn off(or on) the pump, or enter/exit sleep mode, also please turn to page 17 and 18 for instructions.

View of the control panels on tiers 2-3


Power
16h
22h
Vegetables
Flowers&Fruits
Power Button (Indicator)
16h Lighting Duration Indicator
22h Lighting Duration Indicator
Vegetables Mode Button (Indicator)
Flowers & Fruits Mode Button (Indicator)

View of the control panel on the 1st tier

(the bottom tier)

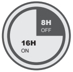
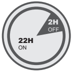

Power
Pump
16h
22h
Vegetables
Flowers&Fruits
Power Button (Indicator)
Pump Button (Indicator)
16h Lighting Duration Indicator
22h Lighting Duration Indicator
Vegetables Mode Button (Indicator)
Flowers & Fruits Mode Button (Indicator)

Button Indicator Lights

(The buttons also serve as indicators.)

Power Button Indicator	🔴 Red: The machine is plugged in. 🟢 Green: The machine is plugged in, and the corresponding grow light panel is powered on, either in work mode or sleep mode.
Pump Button Indicator	🔵 ON(blue): The pump turns on(constant flow). ⚫ OFF: The pump turns off.
Vegetables(or Flowers&Fruits) **Mode Button Indicator**	🔵 ON(blue): When the mode is selected. ⚫ OFF: When the mode is not selected. **For example:** When both the vegetable mode button indicator and the 16-hour lighting duration indicator light up, it means the 16-hour vegetable mode is selected. The grow light will operate in vegetables mode, initially turning on for 16 hours and then off for 8 hours in a cycle.
Warm Tips:	**How can you tell if a grow light panel is in sleep mode?** Here are the cues: The grow light on this tier is off, and both lighting duration indicators are off, while one of the two work mode button indicators remains on.

Buttons	Operations The words "press" throughout the user manual mean short press (the button).
Power	Power button indicator: Red: The machine is plugged in. Green: The machine is plugged in, and the corresponding grow light panel is powered on, either in work mode or sleep mode. **Press the power button on tier 1** to turn on (or off) the grow light panel on tier 1. The grow light on that tier will then illuminate, and the pump will activate accordingly. **Press the power button on tier 2(or tier 3)** to turn on (or off) the grow light panel on tier 2(or tier 3). The grow light on that tier will then illuminate.
Pump	Pump button indicator : ON when pump turns on(constant flow). OFF when pump turns off. **When the 1st tier grow light panel is powered on, press the pump button to turn the pump on or off, thereby activating or deactivating the entire water circulation system(i.e., the pump).** **The pump will turn on when:** Case 1: When you plug in the machine or power on the 1st tier grow light panel (the pump turns on by default in this case). Case 2: When you manually turn it on by pressing the pump button. Regardless of how the pump is activated, it will continuously pump water, ensuring a constant oxygen supply for the roots. 1 The pump will permanently turn off when you manually turn it off in any of the two growing modes(i.e., non-sleep mode). So please think twice before doing so to prevent rotten roots due to a lack of oxygen caused by a non-working pump. 2 If the pump doesn't pump water, it may be right in the OFF state, you can press the pump button to turn it on.

Vegetables Mode	**In the power-on state of a grow light panel, press the vegetables mode button on the same tier to select or cycle through "16H Vegetables", "22H Vegetables", and sleep modes.**	**2 growing modes are available. Each mode has 2 lighting duration options(16H/22H), as shown below:** **Option 1:** 16h lighting duration **(Recommended for most plants)**  Light on for 16h first, and then off for 8h. The cycle repeats. **Option 2** 22h lighting duration  Light on for 22h first, and then off for 2h. The cycle repeats. **Tips:** For heliophilous plants(heliophilous vegetables, flowers/fruits, or herbs), please choose the 22H lighting duration option, which can promote plant growth and even help flowers bloom more gorgeously.
Flowers & Fruits Mode	**In the power-on state of a grow light panel, press the Flowers & Fruits mode button on the same tier to select or cycle through "16H Flowers & Fruits", "22H Flowers & Fruits", and sleep modes.**	

Enter/Exit Sleep Mode

Enter sleep mode:
While the grow light panel is on, press either the 'Vegetables' or 'Flowers & Fruits' mode button on the same tier until the grow light turns off. This indicates that the panel on that tier has entered sleep mode(The pump, i.e., the water circulation system will remain in its original state and will not be affected).

Tips: If you manually turn off the pump in sleep mode, the pump will automatically turn on when exiting sleep mode, so you don't have to worry about forgetting to turn it back on.

How can you tell if a grow light panel is in sleep mode?
Here are the cues: The grow light on this tier is off, and both lighting duration indicators are off, while one of the two work mode button indicators remains on.

Exit sleep mode:

1 Just wait and the relevant grow light panel will automatically exit sleep mode(i.e., the grow light will automatically turn on) after 10 hours to sustain plant growth(go back in the previous growing mode but start another light cycle, default 16-hour lighting duration option) rather than continue the incomplete one before entering sleep mode).

2 If you manually exit sleep mode, the grow light will turn on immediately(go back in the previous growing mode but start another light cycle, default 16-hour lighting duration option) rather than continue the incomplete one before entering sleep mode).

How to Manually Exit Sleep Mode:

Method 1: If the grow light panel entered sleep mode from the vegetables (or flowers & fruits) mode, press the vegetables (or flowers & fruits) mode button on the panel until the grow light turns on. This indicates that the panel has exited sleep mode and a new light cycle has begun (default 16-hour lighting duration).

Method 2: If the grow light panel entered sleep mode from the vegetables (or flowers & fruits) mode, press the power button on the panel to turn off the panel. Then, press the power button again. The panel will then operate in vegetables mode (or flowers & fruits) and start a new light cycle (default 16-hour lighting duration).

Power-off Memory Function

Case 1: If there's a power outage while you're away (e.g., on vacation), the grow light panel will automatically resume the growing mode it was in before the outage when power is restored. However, it will start a new light cycle with the default 16-hour lighting duration setting. Any panel that was off will remain off. Additionally, the pump will also automatically turn on once power is back.

Case 2: Even when the power outage happens in sleep mode, the moment the power is back on, the garden will also automatically turn on the light in the growing mode it was in before entering the sleep mode(The pump will also automatically turn on once the power is back on).

5. When Seeds Germinate

5.1 Remove the Domes

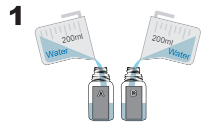
Observe the seeds for 7-10 days. Once germinated, remove the domes immediately to avoid getting leggy. However, please keep the stickers on throughout the growing process.

5.2 Add Nutrient Solution

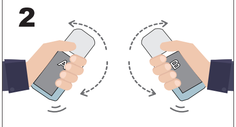
When the seeds germinate, add both A and B nutrient solutions to the tank once a week, per the mixing instructions on the next page.

Note: During the growth period, keep the tank filled with the nutrient solution water only. Please check the mixing ratio in the mixing instructions. Generally, add nutrient solution once a week.

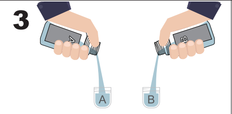
5.3 A+B Plant Food Mixing Instructions



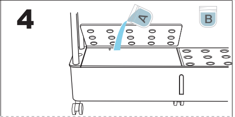
Fill both A and B bottles(with solid plant food in) to the 200ml scale line with water.



Then shake well to get A/B nutrient solution.



Pour A and B nutrient solutions into their corresponding bottle caps, which can be used as measuring cups.



Add both A and B nutrient solutions to the water tank (or a pitcher) simultaneously mixing them with water in the water tank(or in the pitcher) **at the ratio instructed below.**

Application:
The nutrient solution is suitable for growing vegetables/green plants/fruits/herbs and so on.

Tips:
The instructions on when and how often to add nutrient solution are just for your reference. We warmly encourage customers to experiment with the frequency of nutrient solution refills and mixing ratios to find the optimal formulas for their specific plant species and growth stages.

Notes: The amount of solid fertilizer in the refill bag is half that in the bottle. Once the fertilizer in either the A or B bottle is used up, the solid fertilizer from A or B refill bag can be added to the corresponding bottle for mixing. When mixing, add 100ml of water to each bottle, which is half the amount used before).

(Water)	(Nutrient Solution)
1L	5ml A+5ml B
5L	25ml A + 25ml B
10L	50ml A + 50ml B
15L	75ml A + 75ml B
20L	100ml A + 100ml B
25L	125ml A + 125ml B
30L	150ml A + 150ml B
35L	175ml A + 175ml B
40L	200ml A + 200ml B

Additional Notes

1. Nutrient particles have a storage life of 5 years in unopened bottles, if stored at the ambient temperature without exposure to sunlight.
2. Well-mixed nutrient solution has a storage life of 5 months without exposure to sunlight.
3. If there are some suspended solids, it's normal.
4. Keep it beyond the reach of children and pets.

Planting Tips

Germination

The three primary factors that regulate seed germination are water, temperature, and oxygen, among which water is critical during the germination stage. To improve success with seed germination, please: 1.Put on the sticker and humidity dome. 2.Please keep the water level between the 22-24L lines (throughout the growing process).

Pruning/Harvesting

Prune the leaves or the branches:

1. Prune the plants rather than raise the grow light panel to achieve a more compact and healthy garden.
2. Plants compete for light. Trim the taller plants, or they will block the light for everything else.
3. Trim the spreading leaves or branches when plants crowd out each other.
4. Remove dead or diseased branches and maintain plant health.

Note: Prune often to maintain a healthy garden, but never trim more than 1/3 of each plant at a time.

5. The success rate of transplanting plants is the highest during the seedling stage. When to transplant a larger plant(more branches and leaves), please partially prune the branches and leaves before transplanting, thus reducing transpiration and water/nutrient loss to increase the survival rate of plants.

Prune the roots:

1. Prune your roots(lightly) when they get tangled around the pump or in the tank.
2. Trim the rotten roots.

Advantages of Pruning:

1. Maintain a healthy garden and yield a bigger harvest.
2. Stimulate new branches growing;
3. Facilitate air circulation and light penetration or even light distribution so that every plant can properly flourish.
4. Control the size and shape of plants for a limited space and a specific purpose.

Be brave to prune! Trim your plants often to enjoy frequent small harvests as they grow and have larger harvests when they mature.

Tips: When the plant is ripe for being harvested, cut the plant from the base with scissors and clean up or replace the grow sponge.

Precautions for Planting

1. It is possible to hear an abnormal sound when the pump works without water or for the first time, as there is air in the pump. The abnormal sound will disappear when the air gets fully discharged after 3-5 minutes of continuous working. Do not run the pump with an empty tank.

2 .Please always keep the water in the tank clean. Impurities in the water tank will impact the operation of the water pump. If the water pump makes a noise or stops working after a long period of use, take out the water pump and remove the filter cover to check whether anything is jamming inside.

3. During the seedling period, keep the water level above the bottom one-quarter of the sponge, but not too high. If the water level is too low, refill it promptly to prevent the sponge from drying out, which can affect seed germination. If the water level is too high, the seed may become waterlogged and moldy. Once the plant has more branches and leaves and the root system is developed, maintain the water level so it just touches the plant's roots or stays between the 22L and 24L water level lines throughout the growing process.

4. Generally, keep the plants' top about 4 - 6 inches away from the grow light. But we highly recommend plant growers adjust the height of the grow light based on different plant species/properties and their actual growing stage. Being too far, the plants may get leggy, while staying too close may result in leaf edge scorch.

5. Plants are seasonal, periodic, and regional. The characteristics of different plants are different, which are related to temperature, light, and humidity. Planting a plant that is suitable for the local place and the current season helps achieve the best results.

6. In the process of planting, if dead plants or bad-growth plants appear, remove them in time to avoid root erosion and bacterial breeding, which affects the growth of other plants. If rotten roots show up, please clean and disinfect the water tank to prevent affecting the next planting.

Special notes:

1: Do not assemble the product once plugged in.
2: Keep the grow light panel safe from getting wet.
3: Do not disassemble or modify the product without permission.
4: Check the water in the tank periodically. Please keep it clean and change it when necessary.
5. When emptying the water tanks for cleaning or changing water, please:
  (1): Remove all the grow light panels.
  (2): Remove the small white stopper in the bottom of each tier water tank(except the 1st tier tank) to let water drain into the 1st tier water tank.
  (3): Then pour water out of the 1st tier water tank.
6. If the plant roots are entangled with the water pump, prune them to separate.

Specification

Model Number	**HS07/Z210P-3**
Water Tank Capacity	**24+8 x 2 L**
Recommended Water Level	**22-24L** (Please keep the water level between the 22-24L lines throughout the growing process.)
Power	**92.7W**
Power Adapter	Power Adapter Input: 100-240V ~ 50/60Hz Power Adapter Output: 24V 5A

Sunlight Bionic Light Tray

RED

light promotes the photosynthesis, germination, flowering, and fruiting of the plants, and stimulates the formation of anthocyanins, plastids (including chloroplasts), and chloroplasts.

BLUE

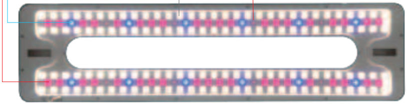
light has a strong inhibitory effect on the growth of plants, especially on stems However, blue light is beneficial to the growth of plant leaves and plays a major role in the phototropism of plants.

White

Adjust and soften the light.

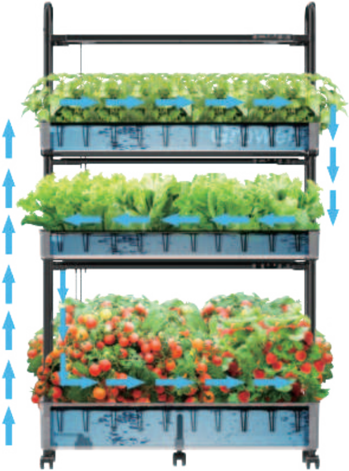
FAR RED LIGHT

If the plant is exposed to far red light, the plant will "feel" as if it is blocked from the direct sunlight by another higher plant, so the plant will "work harder" to break through the barrier and grow higher.

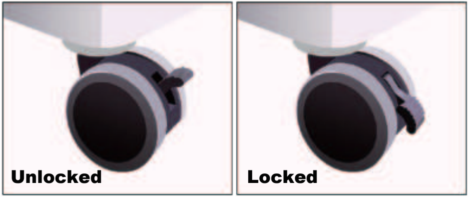


Please choose a growing mode(i.e., light mode) according to what you plant to get the biggest harvest.

360 ° Water Circulation System



The Wheels with Lock



PLANT CARE

Name	Sowing Date	Watering Date	Add Nutrient Solution Date	Picking Date	Remarks