



MIDWEST GROW KITS

Midwest Grow Kits Revision 9.0; 2020-2021

Ultimate Kit Set Up Guide

****Please watch the Mushroom Growing Videos or read the Mushroom Grow Guide prior to setting this kit up. The Mushroom Grow Guide along with all of our guides can be found by visiting these links.**

**Guides Library Page: <https://www.midwestgrowkits.com/guides.html>
Video Grow Guides: <https://www.midwestgrowkits.com/videogrowguide.html>**

(Text included with videos)

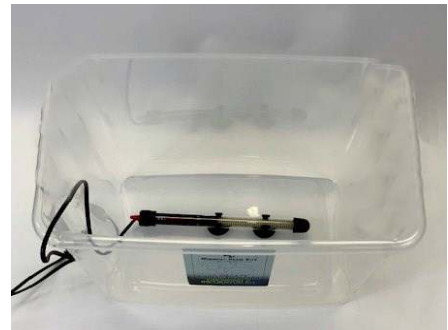
Before setting this kit up, you should have already injected your spores into the jars using one of the methods in the growing guide. Now you are ready for the incubation period!

Please Note:

The Ultimate kit uses a "Forced Air" system with filtration. It differs from other kits which recommend a "shotgun" style fruiting chamber, which is simply a container with many holes drilled. This system is superior because it allows growing in any environment, even the dirtiest attic, closet or basement, while providing optimal air exchange!

**This kit can be used for both incubation period and for fruiting. Follow these simple setup instructions!
Items not included: Extension cord and water**

- Start by placing your fully submersible aquarium heater on the bottom and use the suction cups to secure it. (**The aquarium heater must always be fully submerged in water when plugged in to work properly!)
- Next add water to one of the containers with around 6-7 gallons. (Regular tap water is fine). The water level should be about 60% full. Double check that the heater is secure and the suction cups are firmly in place on the bottom.
- The Ultimate Kit is designed with two containers that fit together. The aquarium heater heats the water in the lower container and provides even heat to the upper incubating/fruiting container. This setup can be used in temperatures as low as 50 degrees.



» The picture on the right is an example of the proper water level and placement of the aquarium heater. Please ensure both suction cups are firmly planted on the bottom and heater is attached like shown.



» Next, plug in the aquarium heater and adjust the blue dial on the heater to around 28-30 degrees Celsius (82F-86F) to start. Float the other container in the water, place the digital thermometer inside the clear bin and close the lid. Every room or growing environment is different, so start with a warmer setting and adjust down from there. You want to reach a steady 76F-77F (24C-25C) degrees. This may take anywhere from 4-6 hours or longer depending on the outside temperature and the water temp in which you started with.

****New for 2020/2021! Upgraded 200W stainless steel aquarium heater! ****

» During this initial process, stir the water every few hours to help disperse the heat. You may get it too hot at first, just simply turn back the knob to lower the temperature. Once you have achieved your desired incubation temperature, the heater will maintain that and you are ready to add your inoculated jars to the tub.



» Once you get the temp set correctly and steady, add your inoculated jars and close the lid. That's all that is needed for the first 3-4 weeks, or until fully colonized. Water will evaporate, so every week add some water to maintain proper water levels.

» The jars only need small amount of gas exchange while incubating. So we recommend leaving the foil on loosely and opening up the lid every few days to allow some fresh air to enter.

- » The jars should incubate in the dark or until they are around 75% colonized. When they are 75% colonized, we recommend adding light to help trigger the fruiting process when they are 100% colonized. (Adding light too soon can trigger them to pin too early and start growing mushrooms before they have finished colonizing.) Use a blanket or large towel and cover the entire kit to keep in the dark in a light room.



YOU'RE FINISHED WITH THE INITIAL SETUP!

Now sit back and wait for them to colonize. (23-35 days average. Some strains are faster than others)

Look for the signs of germination around day 6-10. Then you will see white rhizomorphic growth (spider web growth) for the next few weeks.

■ Tip

Not all jars will colonize at the same speed. This is very common and no need to worry. We usually recommend waiting until all jars are fully colonized before setting up the fruiting chamber, but you can fruit and colonize at the same time if needed. Sometimes you have a slow jar, so just set up the kit in the next steps for fruiting and place that slow jar on the other side. The humidity from the perlite will not hurt the jar. A fully colonized cake can remain in the jar for up to 30-45 days after its 100% colonized without affecting the life or production of mushrooms.

■ Tip

Usually the bottom is the last 5-10% of the jar to colonize. To speed this up, you can flip the jar upside down and gently tap the bottom of the jar to dislodge the cake from the glass. Leave the jar upside down until it finishes colonizing.

These next steps should be done after the jars are 100% colonized and are ready to start the fruiting process.

- » Connect the hose to the air pump. Make sure the side with the white HEPA filter particle (inside the hose) is closest to the air pump. Then insert the other end in the hole in the side of the clear container. The blue hose should point down inside the clear container about 1 inch.



» Set up the timer to go on for 60 minutes twice per day. Once in the morning and once in the evening. This is a good starting point and may be adjusted to suit your own growing conditions. The more cakes there are growing the more often you need to run the air pump system.

» The goal is to achieve humidity levels between 90-99% while adding fresh air/oxygen to the cakes during fruiting. Carbon dioxide will escape through the holes near the handles. There is no need to drill additional holes. This setup has been tried and tested for more than 11 years!

» You are now ready to add your perlite! The perlite goes on the bottom of the inner chamber after you birth the jars. Perlite evaporates water and this is what creates the high humidity levels needed.

» Remove the sticker that covers the hole in the lid.

» Mix with filtered water to get a moist mix. Don't over saturate either. This provides the humidity needed. You want it wet enough so it's moist when you push down on it, but you don't want to see any standing or pooling water. You can simply add water like shown here or use the wetting instructions in the grow guide, either method works fine.



It's time to remove your cakes from the jars!

We recommend waiting an extra 2-3 days after they appear fully colonized to make sure the center is 100% colonized.



■ **Tip** You can add hydrogen peroxide to the perlite to help keep it clean. You may add a cup of regular over the counter peroxide to the perlite every week if desired. Peroxide breaks down into water & oxygen after 48 hours, so it is very safe to use. This can also be added to the outer tub as well to keep the water from becoming stagnate. Do not use any other chemicals, as they may corrode the heater.

■ **Tip** Do not leave the thermometer/humidity Gauge in the fruiting chamber for extended periods of time. The high humidity can cause failure over time. We advise placing it in the fruiting chamber when you are making adjustments and let it dry out first to improve the accuracy and extend the life of the unit. You can safely remove the lid anytime to check on your growing mushrooms during this time. As long as you see water droplets on the side or lid when you open it, you are over 90% humidity!

Time to add your cakes!

- » Remove cakes from the jars. You may need to tap the bottom of the jars to dislodge any stubborn cakes.
- » Here is an example of jars on top of the perlite. The top row have been dunked and rolled. (See Mushroom Grow Guide) The bottom row have been double end cased, which is adding moist vermiculite to just the top and bottom. The two jars on the right side have been dunked but no extra vermiculite added. In our experience there isn't one particular method that is better than the next, but adding vermiculite does help the cake last longer between dunks without drying out.

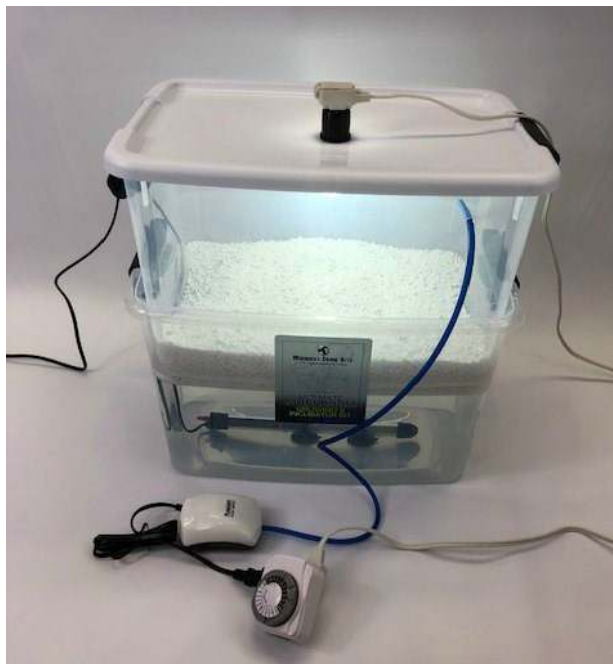


Adding Light!

- » The Ultimate Kit includes our new 36-diode custom dual spectrum HP LED Grow light that is the closest thing to actual sunlight we have found. We also include one battery LED light, operating at 6,000k. The battery light is optional and mainly used by closet growers without electricity available.
- » Mushrooms are very different than plants. They use light only as a trigger mechanism to know when to produce mushrooms and what direction to grow. The lights provided in our kit provide the essential spectrum of daylight needed for growth.
- » During the fruiting stage, we recommend they get around 8-12 hours of light per day.

Using the Plug in 110v LED 36-Diode Grow Light

- » Use an extension cord and connect the outlet adapter to the cord.
- » Screw in the bulb and connect the power.
- » Remove the sticker covering the hole in the lid and insert the light bulb into the hole. It should look like the picture to the right.



- » Light should be on 8-12 hours a day. Some people prefer to add an additional timer for added convenience.



How to convert your kit to Bulk Growing!

Bulk growing, or sometimes called monotub is another style of growing. It involves colonizing a whole grain substrate like our spawn bags or 5-grain Jars and breaking up the substrate and mixing it with a casing mix to create one giant bed of mycelium. This method has become more popular in recent years. All of our growing kits can be easily converted to this style of growing. Please start by reading the Bulk Growing Guide & Spawn Bag Guide in our Guides Library. See the link on Page 1 of this guide.

- » You will need either 2 Spawn bags or 3 Quick Colonizing 5grain Jars and 1 bag of the 5lb Bulk Casing Mix. Start by injecting your spawn bags or Jars and incubating at 74-76 degrees (few degrees less than 1/2 pint Jars). Follow the Spawn Bag Guide and allow them to become fully colonized.
- » Next, cut a black trash bag and line the bottom of the fruiting chamber to block any light from entering on the bottom. See picture on the right.



- » Follow the Bulk Casing Guide on adding your colonized grain and Casing Mix.
- » Run the Air Pump system for 1 hour on 4 times per day during this stage.
- » Place a blanket or towel over the entire kit to keep everything in the dark for the first 7-10 days while the mix recolonizes.

- After the mix recolonizes and you see lots of white poking through the top of the mixture, turn on the lighting system and run the light for 12 hours per day. (Remove the blanket)
- Once you see mushroom pins, increase the air pump system to 30 mins on and 30 mins off. Enjoy your harvests!
- If you want to expand your growing capacity with this kit, you can use both containers as fruiting chambers. The powerful aquarium heater we include can warm water in sizes up to 110 Quarts. You can purchase a large container at any local store and place the aquarium heater and water in the bottom and just rotate them sideways and float both containers side by side.

Bulk Grow Pinning in the Ultimate Kit



Ultimate Kit with Jars Week 6!



Need growing help? Email us at support@midwestgrowkits.com or call us (800) 921-4717 Mon-Fri 11am-5PM Central Time.