



# MIDWEST GROW KITS

## ULTIMATE KIT SET UP GUIDE

Midwest Grow Kits Revision 5.1; 2018

**\*\*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: <http://www.midwestgrowkits.com/guides.html>**

**Video Grow Guides: <http://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 filling the larger 10 gallon container with around 6-7 gallons of water (regular tap water is fine). The water level should be about 60-70% full.



- ⇒ Place 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 to work properly!)



⇒ Next, plug in the aquarium heater and adjust the red dial on the heater to around 86-92 degrees to start. Float the clear 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 76-80 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.

⇒ The heater light will turn on and off as it warms the water, this is normal. 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 indirect 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.)



## YOU'RE FINISHED WITH THE FIRST STEPS!

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)**\*\*\*

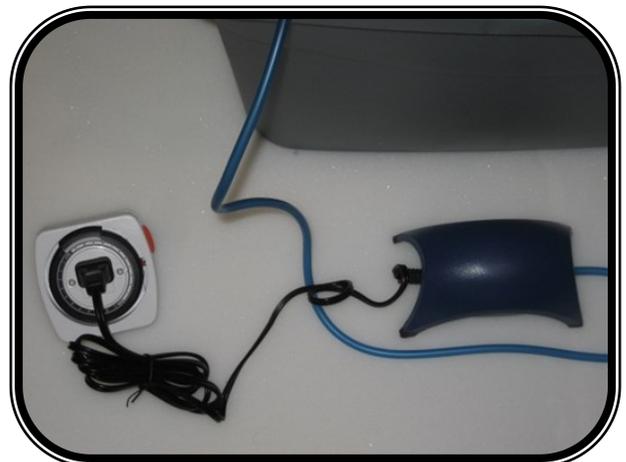
Usually the bottom is the last 5-10% of the jar to colonize. To speed this up, you can flip the jar upside down and gently tap the bottom of the jar to dislodge the cake from the glass. Leave the jar upside down until it finishes colonizing.

***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 1-2 inches.



- ⇒ 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!



⇒ The next step is to add the perlite. The perlite goes on the bottom of the inner chamber after you birth the jars.



⇒ 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.



**\*\*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.

***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.



## 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. 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.
- ⇒ Use of the round battery LED light is optional and is provided for closet growers who need an internal battery light source.
  - Simply peel and stick the LED light to the inside of the lid or one of the sides. Make sure the surface is dry before installing.

## 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.
- ⇒ Position the light anywhere. As long as the cakes are illuminated you have enough light. (some people like to rotate positions of the light every few days to keep the mushrooms growing in all directions.)
- ⇒ You can make your own lamp holder on something nearby or lay it across the top like the photo below.

\*\*Remember, light only triggers growth and adding more light does not increase growth like plants.



## Additional Tips and Advice

- It may take a few days to regulate the settings to obtain optimal fruiting and incubating temps and humidity levels. Light will enter on the sides and will be more than enough to initiate pinning & fruiting.
- Growing temperatures vary by strain, but for the most popular varieties, the incubation temperature range we recommend is 76-81 degrees. Fruiting temperatures should be a few degrees lower than your incubating temps. Temperatures lower than 74 will slow down the growth but will not harm the cakes.
- Don't add the perlite until after you birth the cakes. Use the container to achieve optimal growing and colonizing temperatures
- This kit can hold up to 18 jars or 2 spawn bags. Grow them close together!
- After you birth the cakes, do not place them directly on the perlite. Use the jar lids or put down a small piece of foil to keep them up off the damp perlite. It doesn't matter which end of the cake faces up or down.
- You can add a half cup of hydrogen peroxide directly to the perlite every week to keep the perlite free of bacteria.
- You will need to add water to the Perlite every 4-5 days as it evaporates. When pouring water in, avoid the cakes.
- Remember to order more jars once you birth the cakes and put them on the perlite. Therefore, you can have a continuous supply of mushrooms.
- Want a bigger grow next time? Easily convert this kit into a bulk grow using 2 spawn bags and our casing mix! See our bulk casing guide at <http://www.midwestgrowkits.com/guides.html>
- Need growing help? Email us at [mgkhelp@gmail.com](mailto:mgkhelp@gmail.com) or call us (800) 921-4717 Mon-Fri 11am-5PM Central Time.

**\*\*Tip\*\* Do not leave your Thermometer/Humidity Gauge in the fruiting chamber all the 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 each day for a few hours to improve the accuracy and extend the life of the batteries. You can safely remove the lid anytime to check on your growing mushrooms during this time.**

**Your harvest should look similar to this!**

