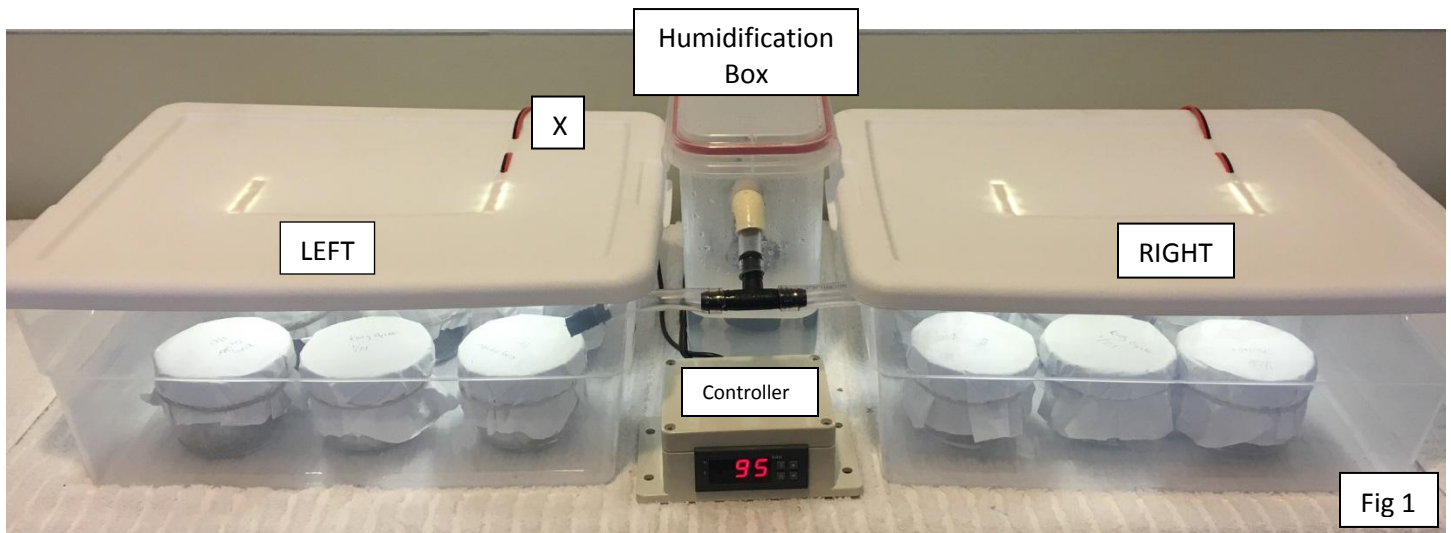




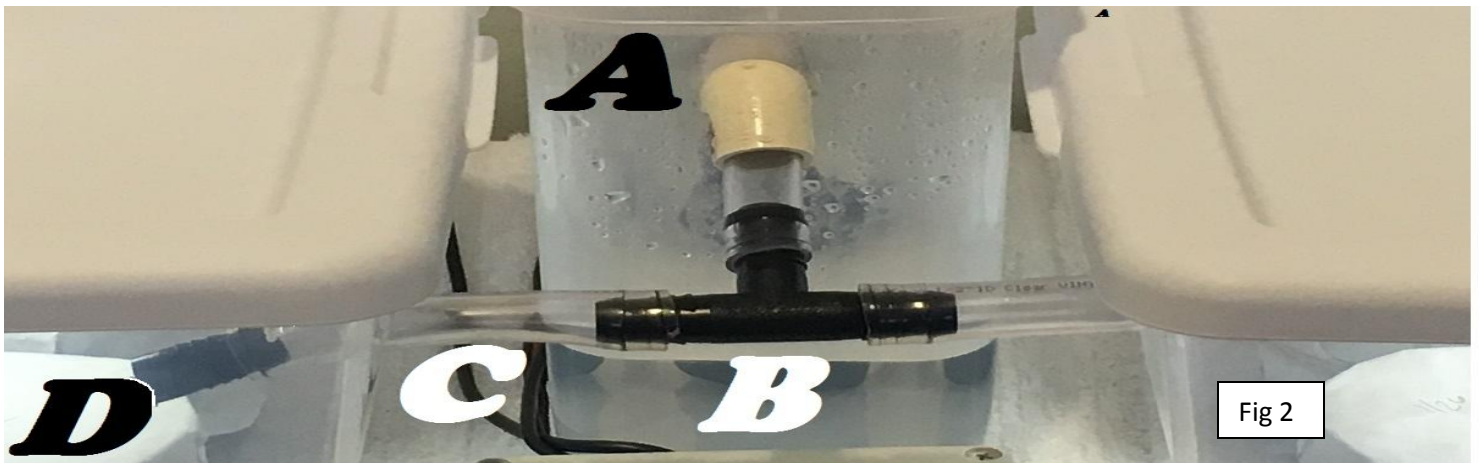
PACKING LIST

- 1- System Controller Unit with attached humidification box and two LED light lids
- 2- Two Clear Tote Boxes (Note Right/Left Marking)
- 3- Twelve Sterilized PF TEK Style media jars
- 4- Air Flow Tubing Kit
- 5- Ultrasonic Humidifier (attached to humidification box)
- 6- Small Bag of Vermiculite



1- Layout clear totes, controller, humidification box and white LED Lids. Make sure to organize and untangle wire layout.

2- Assembly of airflow tubing (Fig 2). Part 'A' is ½" CPVC 45° degree elbow with male side carefully pushed into humidification box as shown and attached to 2 more CPVC fittings inside of the container. Part 'B' is composed of black 'T' fitting with clear tubing on three sides. Place the short leg of the clear tubing into the CPVC fitting – note that the fittings are not intended to be glued in place so that the pieces will separate in case the boxes are impacted instead of breaking. Remove Part 'D' – a black insert from both sides of remaining legs (and save). Insert Part 'C' tubing into the side of Left Tote. Then repeat with remaining tube on Right Side. Re-Insert Part 'D' back into the ends of the tubing now terminating in each tote. Part D only needs to be inserted ½ way into clear tube to prevent the tubes from sliding out of Totes. Be careful when inserting clear tubes into the totes – excessive force could damage tote.



3- The Ultrasonic humidifier rests flatly on the bottom of humidifier box – NEAR THE FRONT OF THE HUMIDIFIER (away from the fan!) - with power supply wire exiting from a hole toward the top of the box. A rubber stopper in the box – with supply wire passing through – prevents leakage. The end of the humidifier power supply wire attaches to the pigtail connector extending 6 inches from the controller box. The humidifier works best with the water supply approximately 1 – 1.5 inches over the top of the black ultrasonic humidifier. If there is too much water in the box - humidification will be greatly reduced. The lack of mist will be readily apparent.

4- Controller is adjusted with factory set point to maintain 90% Relative Humidity prior to delivery. To change desired set point: Press and RELEASE the 'S' on the front of controller (which will now show the current set point) then use UP and DOWN arrows to adjust desired set point. Press and RELEASE the 'S' again to return to run mode. If internal settings get changed and RESET is required see Tips & Trouble Shooting Page.

5- Humidity sensor wire will pass between the LEFT lid and LEFT tote. Sensor should be placed on the underside of the lid (inside tote) or high on the back wall or tote in the area of 'X' on Fig 1 – the included adhesive putty can be used to attach.

INOCULATING JARS

1- Numerous techniques are described online and are suitable for use. Search YouTube for 'Mushroomcube' to see a technique we use hundreds of times per year. It is recommended to acquire mushroom cultures/spores and inoculate as soon as possible.

2- Find a clean work table and clean the counter top with suitable antiseptic cleaner. Slide rubber band downward and off the jars to remove protective paper covers. From this point follow standard inoculation procedures for PF Tek Style jars (see below).

Contact mushroomcube@usa.com anytime for questions

Or help with setup.

When fresh cakes are placed in totes it is normal for humidity to soar, possibly to 100%+ (99 or H on controller). Within a couple of days the humidity should begin to drop and the humidifier should activate more often to maintain humidity.

There is also a link to a very basic video of a kit being assembled on YouTube (Search 'Mushroomcube') if you are a 'visual assembler.' The video shows a small piece on tubing being inserted into the humidifier. This is not needed on your system due to an enhancement of the included humidifier.

NOTE: There is a low water sensor in the humidifier that requires minute mineral content in the water to read accurately. Using distilled/deionized water may not have enough mineral content to read accurately and turn off humidifier due to false low water level reading. Clean tap or bottled water should work well (No reverse osmosis/distilled water).



Detailed Mushroom Instructions:

There are Four phases you will be working through in your objective to grow mushrooms: 1) Inoculating your jars 2) Incubating the Jars 3) Birthing Cakes + 'Dunk and Roll' 4) Fruiting Mushrooms

Inoculating Jars:

Inoculating jars is the process of introducing the mushroom spores/culture into the jars to allow the jars to become colonized with the species of mushrooms you desire. The spores/cultures generally arrive in a 10-12cc syringe and can be purchased from a reputable vendor online. If you end up purchasing a syringe that is contaminated your jars will grow the contamination and fail. For your purposes spore syringes and culture syringes are used interchangeably. Spore syringes contains spores in sterile water, spores are like 'seeds' for mushrooms. Culture syringes contain fragments of mushroom tissue suspended in sterile water. Either will begin the process of inoculating your jars – it generally depends on the species of mushroom as to whether your syringe contains spores or culture. Both should be well agitated prior to use to evenly suspend the spores/culture. Search YouTube for 'Mushroomcube' for a technique we like. The traditional technique uses an alcohol burner to heat the needle and sterilize it between each jar instead of the rubbing alcohol-paper towel as shown in the video. Either method works well. The tote used in video to cover your work area is also not 'required' – but the cleaner you keep your work area the higher your odds of success. If you use the flame technique to sterilize the needle use caution as the alcohol in the alcohol burner is quite flammable.

Incubating the Jars:

Once inoculated, the jars can be placed in a clean area to incubate. Most mushroom species do well incubating in a 'room temperature' environment. A few degrees above room temp will speed colonization. Research the needs of your specific species. Incubation can take place in a box or tote. There is no need for humidification, lighting or airflow at this point – so the MushroomCube does not need to be used or running at this point. Allow the jars to incubate for several weeks until all of the jars are completely covered in the white mycelium (COMPLETELY). Then wait 5 more days. If any jars are growing anything other than the white mycelium, they are likely contaminated and should be discarded as to not contaminate the other jars.

Birthing Cakes/Dunk and Roll:

Birthing the cake is simply removing the white contents – 'cake' from the jars. Remove the lid from the jar, turn the glass jar upside down and tap lightly on a firm surface. The cake should easily fall from the jar onto a cleaned surface. The 'Dunk and Roll' technique rehydrates the cakes and increases the yield.

The procedure is divided in two parts:

The Dunk

In this step you will be replacing the water lost during incubation:

1. Rinse off your cakes under tap water, rubbing them softly to dislodge any loose material. Be careful not to break off any pins (baby mushrooms) as they will be part of your next crop. Pins will survive the dunk and roll, so no need to take them off. Just be delicate with them.

2. Submerge the cakes under cold tap water for 12-24 hours inside a clean container. Try to avoid dunking for much longer than 24 hours. Close to 24 hours is ideal as cakes are very dense and need time to absorb the water. You can use a clean Tupperware container or a bucket. You will notice that the cakes actually bob about like corks so you will need to put something heavy on top to keep them fully submerged. This is important as the extra bit of water pressure that comes from being totally submerged aids the rehydration process.
3. There is no need to dunk inside a fridge. As long as your water stays cool you will be fine. The cool temperatures reduce any bacterial growth while you are dunking. Avoid using your refrigerator as they generally harbor many contaminants, so it can be counterproductive. Use some ice to keep water cool if necessary (40-50F is ideal temp to prevent bacterial growth).
4. Once your dunk has finished, re-rinse your cakes under the tap and proceed to 'The Roll'.

The Roll

Rolling your cakes in vermiculite increases the water holding capabilities of the cake.

1. Roll your cakes in dry vermiculite so they are evenly coated with it. You can optionally bake your vermiculite in the oven for an hour at 350F if you think it might not be clean (the bag has been opened for a long time for example) but it is not necessary if the vermiculite is out of a new bag.
2. Place the cakes inside your fruiting chamber
3. Mist your cakes well with clean water making sure you wet all the vermiculite.
4. Maintain fruiting conditions as usual.

Fruiting:

Fill humidification chamber to appropriate water level and replace lid. Plug system in and set humidity – 90% is a good starting point (and the factory setpoint). After the 'dunk and roll' place 6 cakes in each tote. A good initial misting with water/spray bottle is a good way to get the mycelium started off right. System may initially take an hour to achieve set point. The LED lights remain on during fruiting as they use very little power and help signal mushrooms to fruit. If convenient, you can mist the cakes with clean water/spray bottle 1-3x per day for maximum yields. After the initial flush (harvest) you can redo the 'dunk' part of the 'dunk and roll'. This rehydrates the cakes and allows them to have another flush of mushroom (3+ flushes are likely). Avoid directly misting the sensor. If the sensor gets wet, it will show an error code. Remove sensor from tote and wave briskly through the air for 1-2 minutes. When the reading returns to a number (0-99) you can replace sensor into the tote.

ADVANCED OPTIONS: You can collect the spores from some of your healthiest specimens to keep your system producing without having to continue purchasing more syringes. The jars from your kits can be refilled/sterilized and used numerous times. You can also make media trays using inexpensive 'turkey trays' that hold much greater quantities of growing media. After your initial run, you have many options to expand your production at considerable savings.

If you have additional questions or need help with setup

please contact mushroomcube@usa.com

Tips & Trouble Shooting Page

WHY DO I SEE AN 'H'?: It's normal for the system to show an 'H' (99+ Humidity) instead of a number (0-99) for a few days upon setup or placing new cakes into the system. In testing, high humidity is good for yields – you can still do some misting with a spray bottle if it is convenient (avoiding the sensor).

WHAT IS THE RED LED ON THE SIDE OF CONTROLLER?: The red LED is active when the mister is receiving power. It should only be lit next to the small 'H' on the left side of display. If it is ever lit next to the 'D', the settings have been changed to 'opposite mode' and you will need to do a factory reset.

SHOULD THE FAN ALWAYS BE SPINNING?: Yes, it is always pushing fresh air through the system. It can be hard to see and you may have to touch it to tell. If it is not spinning contact us for diagnosis/replacement.

WHY AM I NOT SEEING ANY MIST?: When the mister is active, you should see 1) A red LED lit next to the small 'H' on the left side of the controller 2) The black ultrasonic mister in the humidifier will be flashing multiple colors [if it is only flashing RED.. see bottom of second page] 3) Water level should be 1-1.5" above the top of the ultrasonic mister (too high will impair function).

SHOULD I USE A HEATING MAT? Generally, no. They heat the cakes more efficiently (conduction) than the surrounding air (convection). This causes a vapor pressure differential that can dry the cakes-- picture a lake steaming in the early morning. They also tend to get too hot even with thermostats. If one must be used, it is best to raise the totes above the mat 1" to allow airflow. You may also want to consider using moistened perlite in the bottom of the fruiting totes to help offset the moisture loss. It is preferable to heat the environment (room) if needed with home heating or a space heater. In general, room temperatures will work fine (67F-77F) with the cooler end slowing things down to some degree.

Factory Reset (Only required if settings have been changed):

The controller will NOT properly reset if the display is showing an 'H' instead of a number (0-99). In order to reset, remove the sensor from tote and wave through room air briskly for 1-2 minutes until the number is below 90. Leave the sensor outside of totes (room air) during reset process so it does not return to 'H' during the reset. If the below instructions are not going well, contact us for a short video link of the process.

FACTORY RESET (Note the difference between HOLD and Press and RELEASE):

- 1) Press and HOLD the 'R' button for 10 seconds – It will beep – this resets the memory.
- 2) Press and HOLD the 'S' until you see 'HC' on the controller face. Immediately press and RELEASE 'S'.
Quickly use arrows to display 'C' on the controller face. Immediately press 'R' to complete this step.
*If you take more than 6 seconds between inputs in step 2, it will exit programming (repeat step 2)
*If you see letters other than 'H', 'C' or 'HC' you are in the wrong menu – start again at step 1.
- 3) Press and RELEASE the 'S'. Use the arrows to move set point to 90. Press and RELEASE the 'S' to return to run mode. Internal settings will stay intact even with extended power outage.