

Jiffy Plant Stand From PVC Pipe

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If you could build a basic plant stand for \$20, and then add lights and trays, wouldn't it be worth it? Commercial vendors sell comparable stands made out of metal for as much as \$266. With a little bit of time spent following these instructions, a substantial PVC pipe plant stand could be yours.

MATERIAL LIST

All the following parts are commonly available at large hardware/home building stores:

- 8 Ten foot $\frac{3}{4}$ " White PVC Pipes
- 34 PVC $\frac{3}{4}$ " Tee Connectors
- 4 PVC $\frac{3}{4}$ " 90 Degree Elbow connectors
- 1 Can of PVC Adhesive
- 6 - 1-5/8" Diameter White Wheels (Optional)
- 6 - $\frac{3}{4}$ " Wheels Sockets (Optional)
- 4 - 2'x4' Egg Crate for Ceiling Fluorescent Lights (Optional)
- 1 Heavy Duty light timer (Optional)
- 5 - 2' x 4' White Plastic Ceiling Fluorescent Light Covers (Optional)

Additional items can be purchased from a number of AVM advertisers such as Indoor Gardening Supplies:

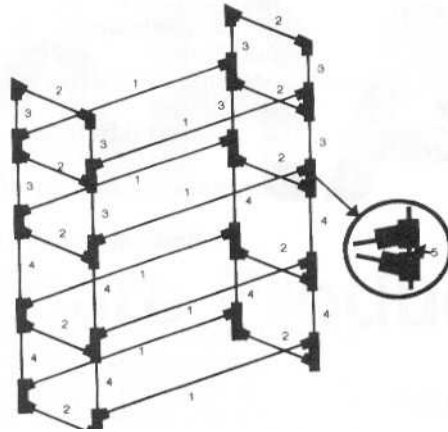
- 4 - 48" double Fluorescent Plant Lite Fixtures with Chains (IGS Model #PLD42WS-C)
- 16 Standard 11" x 22" x 2 $\frac{1}{2}$ " Perma-Nest Plant Trays

TRAYS

I use two different approaches on trays. Several of my stands use four standard 11" x 22" x 2 $\frac{1}{2}$ " Perma-Nest Plant Trays per shelf covered by a 2' x 4' white egg crate that you use for covering ceiling fluorescent fixtures. I do community wick watering in this arrangement. My other stands use a 2' x 4' white translucent plastic ceiling fluorescent fixture covers I spray paint black. The black reflects less light than leaving them white so my leaves don't tend to hug the pots by growing down to the stand. I use this arrangement to hold individual plant reservoirs made from plastic containers such as margarine containers. In both cases, I use the hanging fluorescent light fixtures under the shelves to support the trays with water or the plastic shelf individual watering containers. I also put the white plastic 2' x 4' sheet under the green trays if I use the community watering system to catch water under the trays if I spill it.

LIGHTS

I prefer professional built two (2) light units with low power ballasts such as those sold by Indoor Gardening Supplies of Detroit, Michigan. The Sylvania Wide Spectrum lamps are 11 inches apart, and the light fixtures can be daisy-chained together by plugging them into one another. After the last light, plug the string into a heavy duty 24 hour timer.



CONSTRUCTION

Cut the ten foot lengths of PVC pipe into the following lengths:

- Item 1: 8 - 48" (for the wider part of the shelves)
- Item 2: 10 - 21 1/16" (for the sides of the shelves)
- Item 3: 8 - 12 3/4" (for top 2 levels to provide closer spacing for minis/semis.)
- Item 4: 8 - 15 1/2" (for bottom 2 levels for standards)
- Item 5: 16 - 1 3/8" (Connectors for the shelf members)

ASSEMBLY

Step 1: Glue PVC Tee Connectors to both ends of all the Item 1s and eight of the Item 2s. Make sure both the PVC Tee Connectors are parallel to each other.

Step 2: Using Item 5 connectors, glue the long and short lengths of shelf supports made in Step 1 together to form a rectangular shelf. I suggest doing this job by placing both pieces against a square wall in your house.

Step 3: Glue PVC 90 Degree Elbow Connectors to two of the Item 2s for the top light support. Make sure both the PVC 90 Degree Elbow Connectors are parallel to each other.

Step 4: Using eight Item 4s, connect the bottom, second, and third shelf together. DON'T GLUE. I use pressure to keep the shelves together and not glue. In that way, I can take the shelves apart for transport or for making further adjustments on the distances between lights and plants.

Step 5: Using eight Item 3s, connect the fourth shelf and top light support together. DON'T GLUE. I use pressure to keep the shelves together and not glue. Again, in this way, I can take the shelves apart for transport or for making further adjustments on the distances between lights and plants.

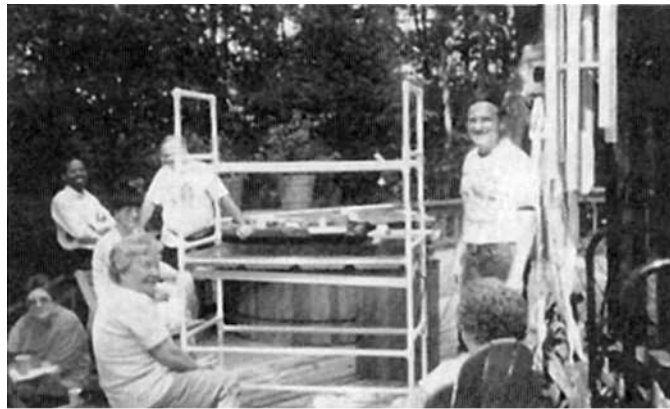
Step 6: Using chained light fixtures, support trays of plastic shelves with the light fixtures. Plug them together daisy-chain style and into the timer. Connect to AC.

SUPPORTING THE BOTTOM SHELF

When I use Perma-Nest Trays, I divide the long pipes on the bottom shelf in half and install PVC Tee Connectors (with optional wheels) to support the trays. If I only use a plastic shelf, I support the middle center line of the plastic shelf at both ends and in the middle so that plants on their reservoirs don't bend the shelf.

CLEANING THE STAND

Depending how neat you are, you may want to clean off the black printing on the PVC pipes. This is not as easy as it sounds. You'll need to use lacquer thinner or acetone with a piece of fine steel wool. Work on the marks until they come off. Do this outdoors since the cleaner is very flammable, and wear a face mask such as a 3M No. 7251 Permissible Chemical Cartridge for Organic Vapors which you should be using when you spray pesticides on your African violets. This mask is available in the same hardware/home building stores where you bought the material, paint specialty stores, or in your larger garden stores that sell large quantities of pesticides.



TOTAL [\[1\]](#)

When you add the cost of the plant stand materials (apx \$20), the lights (apx \$75 x 4 = \$300), egg crate (apx \$10 x 4 = \$40), plastic covers or shelves (\$10 x 5 = \$50), and Perma-Nest Plant Trays (apx \$5 x 16 = \$80), you pay \$490 which is less than a pre-made stand when you add all the extras that don't come with it. Doing it yourself allows several unique options. For example, if you get shop lights for about \$10 per unit with standard cool white fluorescent bulbs and decide to use just plastic shelves without the Perma-Nest Plant Trays, you can build a plant stand that costs \$20 + 4 times \$10 (shop light) + 5 times \$10 (plastic shelves) = \$50, or \$110. If you select shop lights, you must make the vertical supports (Items 3 & 4) longer to accommodate the extra thickness of the lights. Good luck with your project.

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A Quick and Easy Plant Stand

By Mary Ann Swizer

Chesterfield, MO

Several years ago some of my friends started growing *Streptocarpus* and I decided I wanted to try my hand at it too. But my plant stands were already full of African violets and I didn't want to part with any of them. What was I to do? The only logical conclusion was to get another plant stand. But I was busy and didn't want to take the time to build one of wood.

While cruising the hardware store I found my solution: steel shelving.

I brought a four-shelf unit that resembles a baker's rack for about \$100, on sale. It stands 74" high and the shelves are 48" by 18". It is a sturdy unit; the manufacturer boasts that each shelf will hold up to 500 pounds. Easy, no tool assembly is advertised. Actually a hammer and a

scrap block or wood is needed. And, while you could assemble it by yourself, it is much better to have a helper. It goes together in about a half an hour or less. You decide the distance between shelves.

I bought a black unit, but the units are also available in chrome or white. These are nice looking units that don't need to be relegated to the basement. They would look good in a kitchen or den. You can also buy shelves individually. So you could add a shelf to the unit. My shelves were spaced far apart because I wanted to grow tall *Streptocarpus* with the pots on reservoirs. For growing African violets you could add a shelf, and have four lighted shelves instead of three.

I hung shop light fixtures from the wire rack shelves using "S" hooks and chains. Lots of light falls through to the shelf below since the shelves are wire racks. I soon found that I was spilling when watering and the water was falling on the light fixture below. Concluding that this was not good, I bought light-weight clear plastic sheeting at the fabric store and cut it to fit the shelves. Now the light passes through, but spilled water doesn't.

I had read that *Streptocarpus* need more light than African violets, so I bought a roll of a product called "Lumen Booster Mylar" and hung it on the wall behind the plant stand. This Mylar, which is related to as "mirror on a roll" is 4 feet wide and 1 mil thick. I purchased it at a garden center. I really like the mirror effect. It makes it look like you have twice as many plants. After using the Mylar behind the *Streptocarpus* for a year, I decided that the African violets looked sad against the concrete basement wall. So they got Mylar too! My basement violet room looks very cheerful now. As always, it is important to rotate your plants once a week to achieve good symmetry.

In the photo you will notice that I grow my *Streptocarpus* on reservoirs using the wick watering method. I know that some experts recommend watering from the top. But since I travel frequently, wick watering is best for me. It is important that your plants fit your lifestyle.

In conclusion, I recommend that you give these shelves a try if you want an easy to assemble unit that is nice looking.



[\[1\]](#) Note: The prices shown in the Jiffy Plant Stand article are from 1995 and may be higher or lower at this time.