



**FRAME**

### PVC Frame Materials

3/4" schedule 40 PVC pipe:

Length	Number Needed
4'	4
20"	4
10"	4
4"	8

Total of about 29' of PVC pipe

Connectors:

T's	12
L's	4
Hooks or screw eyes	4 to 6

### Other Materials

- 2 (or 3) 4' long shop light fixtures
- Fabricated sheet metal pan  
**OR**
- Plywood pan with thick plastic liner
- Heavy duty electrical timer
- 4 (or 6) cool white, warm, or full spectrum fluorescent bulbs
- Surge protector power strip  
**OR**
- GFI-protected outlet
  - \*Outlet box
  - \*Outlet box faceplate with gasket
  - \*2 machine screws (1 1/2" to 2" long)
  - \*2 locking nuts
  - \*3-prong extension cord

### Tools for Assembly

- PVC cutters or hacksaw
- Electric drill and drill bits
- Optional GFI outlet tools
  - \*Wire cutters/strippers
  - \*Needle-nose pliers
  - \*Screwdriver
  - \*Adjustable wrench

### **Directions for assembly of PVC frame:**

1. Cut PVC segments to correct lengths
2. Drill pilot holes for hooks at the ends of the 4' segments, 1" inch from the edges. Be sure that the holes line up so both will be on the bottom of the pipe. Insert the screw eyes or hooks into the pilot hole.
3. Taking care not to jam the pieces too tight together, attach connectors to PVC segments.
4. Assemble the structure as illustrated. Leave out the 4" segments if you are attaching the GFI outlet to the unit.

If you are using a power strip rather than the GFI outlet assemble the entire frame.

### **Directions for wiring the GFI-protected outlet:**

1. Gather the outlet, outlet box, outlet face plate, extension cord, the 4" PVC segment, machine screws and nuts.
2. Drill holes through the back of the outlet box and 4" PVC pipe to attach the box to the pipe. Fit machine screws through the holes and attach nuts.
3. Cut the female end off the extension cord and strip outer wire cover about 2". Strip inner wire cover to about ½".
4. Feed the stripped extension cord end up through the bottom hole of the outlet box. Attach the stripped wires to the outlet wire connections, matching wire cover color to the matching color terminals.
5. Attach the wire outlet into the outlet box.
6. Attach the outlet faceplate to the outlet and the outlet box.
7. Insert the 4" PVC segment (with electrical outlet now attached) into the Indoor Light Garden frame structure.

### **Completing the indoor light garden assembly:**

1. Install fluorescent tubes into shop light fixtures.
2. Attach chains to the light fixtures and hang from screws eyes or hooks.
3. Plug the light fixture electrical cords into the GFI-protected outlet or power strip.
4. Plug the outlet cord into the heavy duty timer. Plug the timer into the nearest electrical outlet and then turn the timer 'ON'. If your lights do not turn on, unplug the main cord and press the GFI 'reset' button or switch on the power cord. Try plugging the main cord in again.
5. Place the "pan" at the base of the frame.

### **Other options:**

- Use three shop light fixtures instead of two for more uniform light coverage.
- Make a wood tray to fit on the bottom of the frame, rather than the metal tray. You can use ¼" plywood with a fir strip or molding tacked on the outer edges as a lip. Line the wood tray with thick plastic film.

### **Tips on using your indoor light garden:**

- Keep the lights as close to the seedlings as possible, without letting the leaves actually touch the light tube surface. Move the lights up or down by adjusting the length of the chain. Heavy duty paper clips can be used as an extra chain link if needed.
- Water your plants in a tub or tray outside of the light garden tray. Let the plants drain a few minutes before returning them to the indoor light garden.
- Never allow plants to stand in water.
- Flowering plants, like African violets will respond better to a full-spectrum type light tube.
- Seedling and vegetable growth is satisfied with inexpensive cool white tubes.