

JUMP START™ T5

JumpStart Grow Light System™ ASSEMBLY INSTRUCTIONS

PARTS LIST

Light Stand
 2 – upright legs
 2 – 18" long foot pieces
 1 – channel crossbar
 2 – #10 Philips head screws
 2 – #10 flat washers
 2 – #10 split lock washers

Bulbs
 1 – T5 HO Hydrofarm
 fluorescent tube
Light Fixture
 1 – 4 ft. or 2 ft. T5
 fluorescent fixture

RECOMMENDED TOOLS
 Philips screwdriver, Pliers

- To attach each foot (18" pieces with black caps) insert the foot piece onto the leg piece just in between the two locator ribs. (See Figure 1) From under the foot piece thread in the #10 screw through the washers and tighten with your Philips screwdriver.
- Insert legs into crossbar. You may need to use a rubber mallet to seat fully. Use caution to ensure you don't damage frame. (See Figure 2, 3)
- Stand your Jump Start up. We recommend positioning it over a chair or surface as shown so you can set the fluorescent fixture on it in preparation to hang it. (See Figure 4)

Figure 1

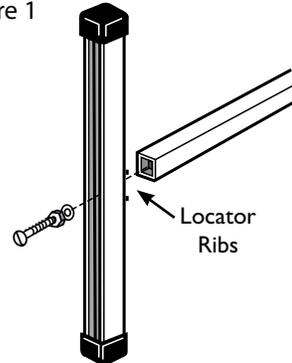


Figure 2

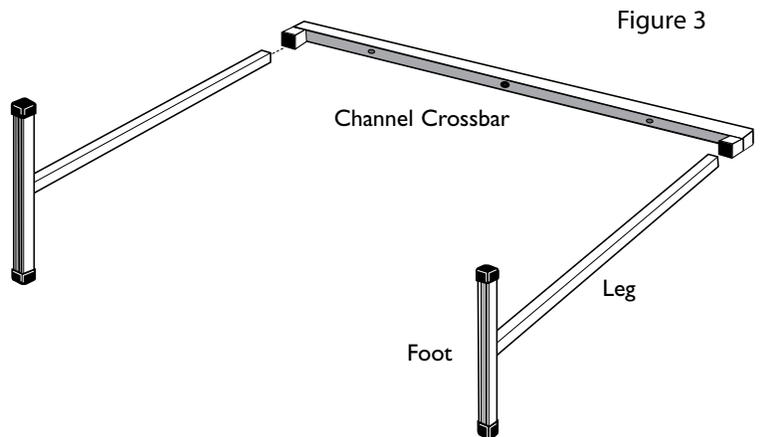
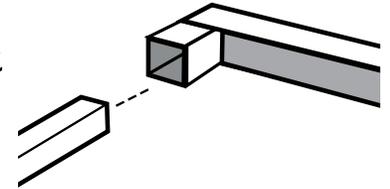


Figure 3

IMPORTANT NOTE

- Before installing the fluorescent tubes, remove cardboard and inspect each socket end on the fixture to be sure it is ready to receive the pins on the tube ends. Gently align the pins vertically upon inserting in each socket and once all the way down, gently rotate to seat the pins into horizontal orientation. You should feel a slight bump upon proper location.
- Set the fixture under the channel as shown and reach into the channel and pull down the hanger cables. Attach hanger style clips to fixture at locations designated on fixture. Clip rings into hanger clips on light fixture. Plug the power cord of the fixture into a 120V electrical outlet. We recommend a grounded timer to make your light automatic.
- You can raise and lower your light fixture by using the pull cord. Raise or lower the fixture to desired height then use locking mechanism to secure. (See Figure 4)

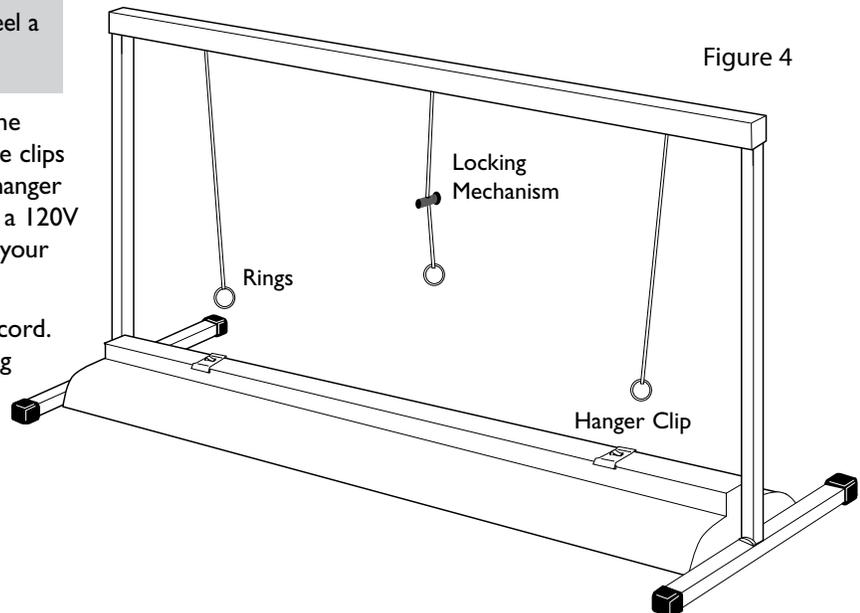


Figure 4

IMPORTANT Fixture Safety Precautions

- Take care to seat bulb properly when installing.
- Do not use with dimmers.



HYDROFARM

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Seed Starting

We recommend 16 - 18 hours of light per day for starting seeds and growing seedlings. We recommend a grounded timer to help make this cycle automatic.

Always try to keep the fluorescent light 2 - 4" above the top of the seedlings for maximum light. This will help the seedlings develop in a healthy manner. If you have the light too far away, the seedlings may grow spindly, trying to reach for the distant light.

We also recommend a Seedling Heat Mat to improve seed germination and seedling growth.

For General Lighting

- For growing plants, 14-18 hours per day of light is usually recommended.
- For maintaining houseplants or supplementing sunlight, 4-8 hours per day of light is recommended.
- For flowering plants (short day), 10-12 hours per day of light is recommended.

Hours of Light and Plants

There is a mechanism in plants which tracks time. This response is called photoperiodism. Plants respond to the length of light and darkness that they receive. Different plants may respond in different ways, such as rosette growth of lettuce versus bolting, bulb formation of onions versus leaf and stem formation, flowering of chrysanthemum, and so forth. The right mix of light and dark causes flower, fruit and seed production.

Plants are classified in regard to photoperiodism as long day plants, short day, and day neutral plants. It is actually the length of darkness that initiates the response by the plant. Many texts will relate photoperiod as short night and long night plants. To avoid confusion we will use length of day as the criteria.

Long day plants are those that require a minimal dark period in order to flower. Plants that normally flower in late spring or summer are generally considered to be long day plants. Long day plants generally require at least 16 hours of light to trigger flowering. Plants in this category remain vegetative when days are short. The general recommendation for lighting of long day plants is to increase lights from approximately 12-14 up to 16-18 hours per day over the normal life cycle of the plant.

Short day plants usually require at least 12 hours of darkness to flower. Plants that normally flower in the short days of autumn or winter are generally known as short day plants. Plants on this schedule usually require 16-18 hours of light for the vegetative cycle and approximately 12 hours of light to initiate bloom cycle.

Day neutral plants do not respond to the length of light or dark periods. Most vegetables are day neutral. These plants may respond to other factors such as temperature or days to maturity. Generally plants in this category can be grown with 12-16 hours of light.

Plants with precise photoperiod requirements have what is referred to as a photocritical point. Disrupting the dark cycle with light, by turning on a lamp or allowing street light through a window, can cause plants to remain in the vegetative stage. Exact photoperiod has not been established for all plants. Consult your local nursery or garden book if you are unsure of the photoperiod response for the plants you wish to grow.

Additional Helpful Hints

LIGHTING: Cuttings prefer light that is not too strong. Hot, direct sunlight is not recommended. Full spectrum fluorescents are excellent for cuttings because they provide quality light. Keep the tubes about 2"- 4" away from plant tops.

Using high intensity lighting is okay for starting seedlings or cuttings as long as it is kept a couple of feet away.

If you are attempting to start new plants from cuttings, give them 16-18 hours of light a day.

When seedlings/cuttings are moved to their next lighted environment, be sure not to sunburn them. Gradually increase exposure over a few days.

WATERING: Seedlings and cuttings should be kept moist, not wet. Do not allow excess standing water. Too much watering is just as undesirable as not enough. Overly moist conditions can lead to damping off or root rot.

TRANSPLANTING: You can transplant when the roots start coming out of the starter cubes and new vegetative growth shows.