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# INSTRUCTIONS

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**Short day plants** normally flower in the short days of autumn or winter, and usually require at least 12 hours of darkness to flower. 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 T5 or Agrosun fluorescents are excellent for cuttings because they provide quality light without detrimental intensities. Keep the tubes about 2"–4" away from plant tops.

Using high pressure sodium or metal halide lighting is okay for starting seedlings or cuttings so long as it is kept at least a couple of feet away from plants.

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

When seedlings/cuttings are moved to their next lighted environment after a transplant is complete, be sure not to sunburn them. Unless using fluorescent light systems maintain a distance of about 2–4 feet away until positive response

is evident through growth. At this point the light may be moved closer to increase intensity to the canopy.

### Watering

Seedlings and cuttings should be kept moist, not saturated. Do not allow excess standing water to accumulate in the tray(s).

Too much water is just as undesirable as not enough. Overly saturated conditions can lead to "damping off" or root rot.

### Transplanting

You are ready for transplant when the roots start coming out of the starter cubes and new vegetative growth is evident.



## LIMITED WARRANTY

Hydrofarm warrants the **JSV2T & JSV4T** to be free from defects in materials and workmanship. The warranty term is for one year prorated beginning on the date of purchase. Misuse, abuse, or failure to follow instructions is not covered under this warranty. Hydrofarm will, at our discretion, repair or replace the **JSV2T & JSV4T** covered under this warranty if it is returned to the original place of purchase. To request warranty service, please return the **JSV2T & JSV4T**, with original sales receipt and original packaging, to your place of purchase. The purchase date is based on your original sales receipt.

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INSTRUCTIONS

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**JUMP START<sup>®</sup>**



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GROW LIGHT SYSTEM

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JSV2T  
JSV4T

# INSTRUCTIONS

## PARTS LIST

### Light Stand

- 2 – Upright legs
- 4 – Foot pieces
- 1 – Channel crossbar
- 2 – Two-way elbow connector (pre-installed)

- 2 – Three-way quick connector
- 4 – End insert (pre-installed)

### Bulb

- 1 – T5 HO Hydrofarm fluorescent tube

### Light Fixture

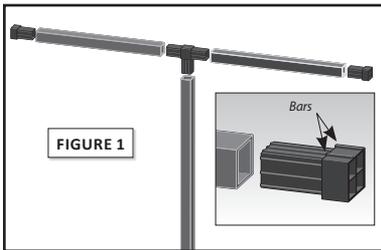
- 1 – 4 ft. or 2 ft. T5 fluorescent fixture

### RECOMMENDED TOOLS

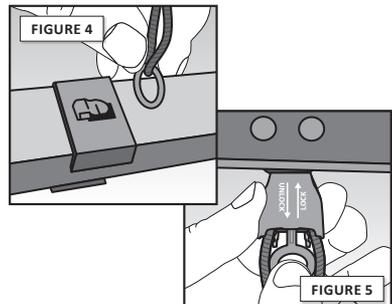
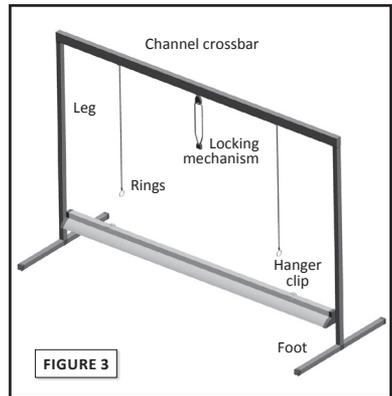
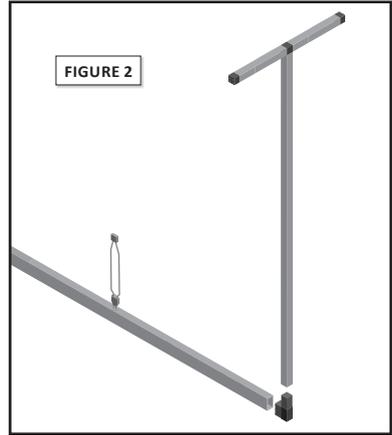
- Rubber mallet  
*(not included)*

## INSTALLATION INSTRUCTIONS

1. For easiest assembly, first install the feet to the legs, using the three-way Quick Connectors as shown in Fig. 1. Ensure that the bars on the end inserts are facing the bottom of the stand, and that the Quick Connectors are completely seated into the legs and feet.



2. Set the crossbar onto a workbench or the floor with the drawstring holes facing up. Secure the open ends of the legs onto the two-way elbow connectors that have been pre-installed on the crossbar as shown in Fig. 2. If they can't be completely seated by hand, a light tap with a rubber mallet will help. Use caution to avoid damaging the frame.
3. Stand the frame up as shown in Fig. 3.
4. Remove packaging materials from fixture. Remove the foam block on the T5 tube. Snap the hanger clips on the back of fixture as shown in Fig. 4. Snap the rings into the hanger clips on fixture. You can now regulate the height of the fixture with the center cord and locking tab.
5. Before adjusting the fixture height, unlock the insert in the locking tab to allow the rope pass through. Lock the insert back firmly into the locking tab to prevent the rope from sliding when the fixture is at the desired height as shown in Fig. 5.



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## INSTALLING THE BULB

1. Inspect each socket end on the lighting fixture to ensure it is ready to receive the pins on the ends of the fluorescent tube.
2. Gently align the pins vertically upon inserting them into each socket and once it is all the way down, gently rotate the bulb to seat the pins into horizontal orientation. You should feel a click upon proper installation.

## IMPORTANT! Fixture Safety Precautions

Take care to install the bulb properly into the sockets before plugging in the unit.

Do not use with dimmers. Avoid direct contact with water.

## SEED STARTING

We recommend 16–18 hours of light per day for germination and establishing healthy seedlings. A grounded timer will help make this cycle automatic.

Always try to keep the fluorescent light 2"–4" above the top of the seedlings for maximum light. When using a humidity dome keep the light as close to the dome as possible, but avoid contact between the bulb and plastic. This will help the seedlings develop in a healthy manner and stimulate foliage and root production. 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 (item # MT10006) to support seed germination and growth through more desirable temperatures.

## FOR GENERAL LIGHTING

- To stimulate vegetative growth, 14–18 hours of light is recommended.
- For supplementing sunlight, 4–8 hours of light per day from your system is recommended.
- To stimulate flowering production (short day plants), 10–12 hours of light is recommended.

## HOURS OF LIGHT AND PLANTS

Plants have an internal mechanism that tracks time. This response is called photoperiodism. Plants respond to the length of light and darkness 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 plants, 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.