

# Kessil®

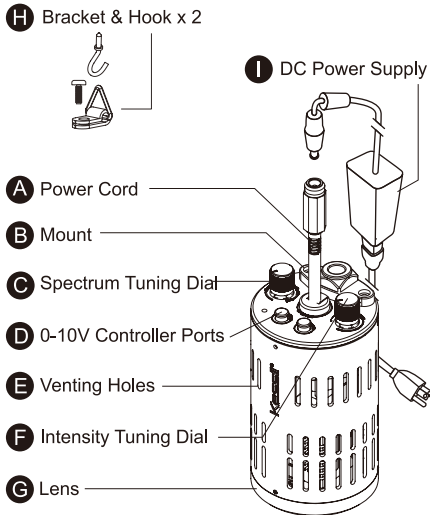
Join the Spectral Revolution

## H160 Tuna Flora

OWNER'S MANUAL



### PARTS DIAGRAM



### PRODUCT SPECIFICATIONS

Illuminator	
Power Consumption	40W maximum
Input Voltage	19-24 VDC ± 5%
Listed Power Supply	
Input	100-240 V~ 50-60 Hz
Output	19 V $\overline{\text{---}}$ , maximum 3.42A
	24 V $\overline{\text{---}}$ , maximum 2.10A

### INSTALLATION GUIDE

1. Remove contents from package.
2. Install H160 to optional mounting accessories\*
3. Connect Power Cord (A) to the specified DC Power Supply (I).
4. Plug the Power Supply into an outlet with the correct specifications (see product specifications for more information).
5. Using the H160's Intensity Tuning Dial (F) and Spectrum Tuning Dial (C), set the light to the desired setting. H160 has four specifically designed spectrums (BLUE, GROW, BLOOM, RED) (see [kessil.com](http://kessil.com) for detailed spectrum information and application)
6. The ports beneath the dials can be connected to an external 0-10V controller. Please consult your controller's owner's manual for more information.

\* The H160 can be used with two brackets and metal Hooks (H), and the A-Series Gooseneck. . The H160 should be hung at least 4 inches above the plants/tank.

### SAFETY INSTRUCTIONS

1. **DO NOT** use a power supply that is outside the specifications. This is a fire hazard and may lead to unit failure.
2. **DO NOT** use outdoors. This unit is intended for indoor use only.
3. **DO NOT** expose unit to an extremely humid environment or submerge unit in water. This may lead to unit failure.
4. **DO NOT** block Venting Holes (E). This may cause unit to overheat.
5. **KEEP** Lens (G) away from sharp objects. This may break the Lens (G) and lead to unit failure.
6. **DO NOT** cover or place objects on the DC Power Supply (I). It should not be contained in an airtight space.

### INSTRUCTIONS DE SECURITE

1. N'utilisez PAS une source d'alimentation qui est en dehors des spécifications. Ceci constitue un risque d'incendie et peut entraîner une défaillance de l'unité.
2. NE PAS utiliser à l'extérieur. Cette unité est destinée à une utilisation en intérieur uniquement.
3. NE PAS exposer l'appareil à un environnement extrêmement humide ou immerger l'appareil dans l'eau. Cela peut entraîner une défaillance de l'unité.
4. NE BLOQUEZ PAS les trous de ventilation (E). Cela pourrait provoquer une surchauffe de l'appareil.
5. GARDEZ l'objectif (G) à l'écart des objets tranchants. Cela pourrait casser la lentille (G) et entraîner une défaillance de l'unité.
6. NE PAS couvrir ou placer d'objets sur l'alimentation CC (I). Il ne devrait pas être contenu dans un espace hermétique.



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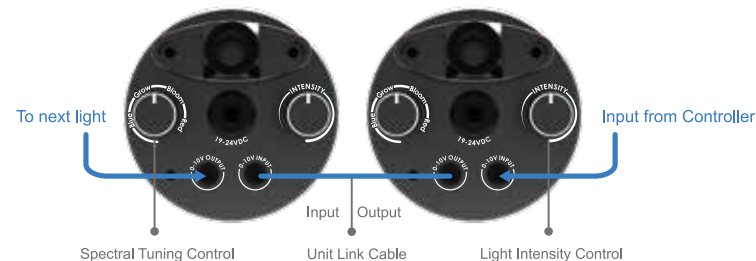
**Kessil Lighting**  
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Kessil.com

## MAINTENANCE

1. Keep the air Venting Holes (E) and fan clear of dust. To clean the fan, unplug the unit and insert the tip of a CO2 dust blower (or similar dust blower) in one of the Venting Holes (E) on the unit's housing. Hold and spray. You can also gently vacuum the light through the venting holes.
2. Keep the Lens (G) clean. If the Lens (G) becomes contaminated with water, dust, or other particles, unplug the unit and clean the lens with isopropyl alcohol. Wet a cotton swab or a napkin in isopropyl alcohol, gently wipe the surface of the lens, and let it dry.

## TROUBLESHOOTING GUIDE

Problem	Solution
<b>Light doesn't turn ON</b>	Make sure the unit is connected to the power supply and the power supply is connected to an outlet with the correct specifications.
	Make sure electrical power is available to the AC outlet being used.
	Make sure the power supply has the correct specifications.
<b>Light is flickering</b>	Make sure the unit is operating within the specified operating temperature range (below 104°F or 40°C). If unit overheats, it will automatically shut down.
	Make sure you are using a power supply with the correct specifications.
	Make sure to operate the unit in a room at 104°F / 40°C or lower to prevent overheating.
	Make sure the fan is operating properly.



## Controllability

Multiple H160 lights can be controlled either manually or by a single external 0-10V controller.

### CABLES

- Available cables:
- Control Cable (Please consult kessil.com for list of available cables and compatible controllers).
  - Unit Link Cable (male/male with 3.5 mm stereo jack).
  - Control Extension Cable (6' long male/female with 3.5 mm stereo jack).

### STARTING A CHAIN

Connect two or more lights with the Kessil Link Cable, as shown to the above.

### CONTROL METHODS

- There are two ways to control a chain of lights:
- With an external controller;
  - Without external controller (Tuning Controls on first light control all other lights in chain).

Each light has its own independent power supply. Any number of lights can be daisy chained together without degradation of signal. However, in longer chains a slight delay in response may occur. Manual tuning is disabled when input cable is plugged in.