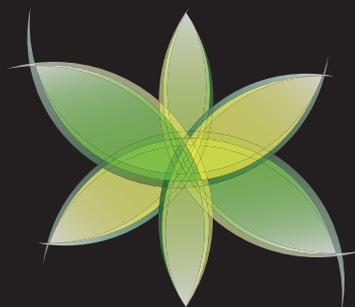




# Heliospectra LX60

*User Manual*



heliospectra



<b>1</b>	<b>Installation</b>	<b>2</b>
	<i>1.1. Unpacking the LX60</i>	<i>2</i>
	<i>1.2. LX60 Overview</i>	<i>3</i>
	<i>1.3. Mounting the LX60</i>	<i>4</i>
	<i>1.4. Network Setup</i>	<i>6</i>

<b>2</b>	<b>Lamp Configuration and Use</b>	<b>7</b>
	<i>2.1. Installing Heliospectra System Assistant</i>	<i>7</i>
	<i>2.2. Accessing the Web User Interface</i>	<i>7</i>
	<i>2.3. Using the Web User Interface</i>	<i>8</i>
	<i>2.3.1 Starting the light and changing intensities</i>	<i>8</i>
	<i>2.3.2 Configuring a Schedule</i>	<i>9</i>

## Disclaimer

---

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Heliospectra AB shall have no liability for any error or damage of any kind resulting from the use of this document.

At Heliospectra AB we aim to continuously improve our product documentation. If you have comments or ideas regarding this document, please contact us at [support@heliospectra.com](mailto:support@heliospectra.com).

## Copyright & Trademarks

---

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of Heliospectra AB.

Windows and Windows XP/Vista/Windows 7/Windows 8 are registered trademarks of Microsoft Corporation. NETGEAR is a registered trademark of NETGEAR Inc. All other trademarks and copyrights are the property of their respective owners.

©2013 by Heliospectra AB. All rights reserved.

## Revision History

---

<i>Revision/Date</i>	<i>Author</i>	<i>Changes</i>
1/2014-06-18	Anthony Gilley	First Version

# 1. Installation

Follow the Instructions to install and setup the Heliospectra LX60.

To install and configure the lamp the reader will need a modern and up to date Web Browser. The LX60 has been tested with Internet Explorer 10, Firefox 20.0.1 and Google Chrome 26.0.1410.64 m.

## 1.1. Unpacking the LX60

The packing list is included in each shipment. It specifies the part numbers and descriptions of each part in your order. Refer to Table 1 Package List for a listing of the contents of the LX60 package.

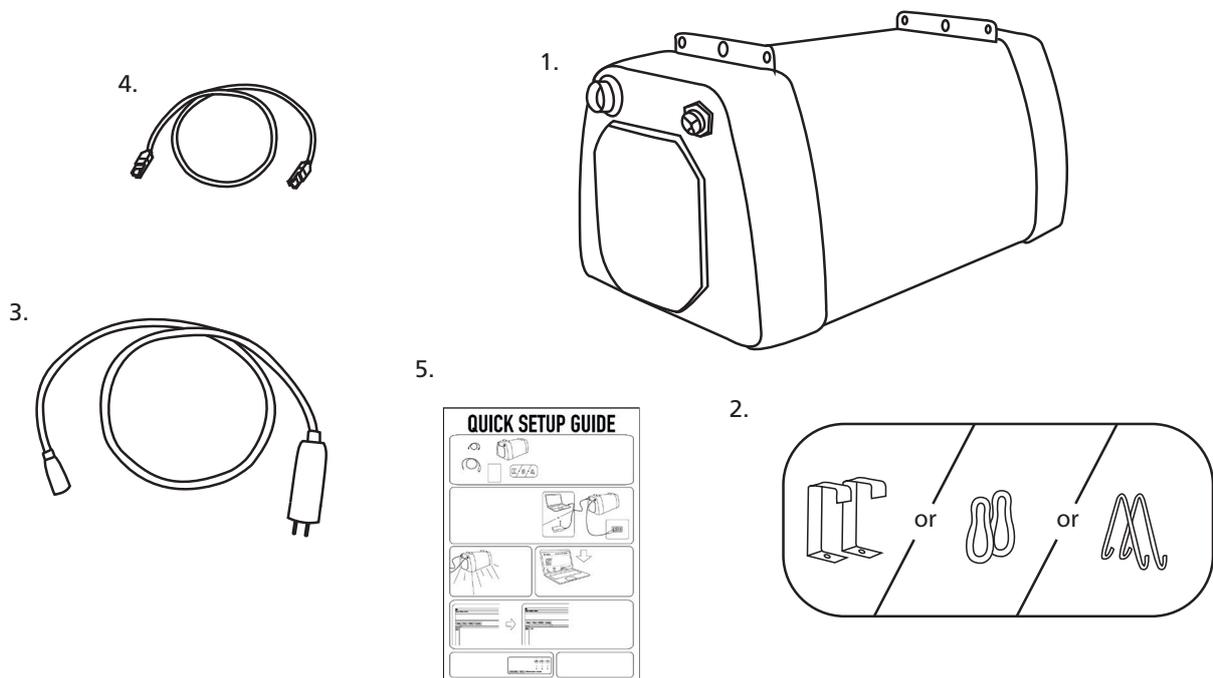


Table 1 Package List

#	Description	Amount
1	Heliospectra LX60 lamp unit	1
2	Hangers	2
3	Power cord	1
4	Ethernet cable	1
5	Quick Setup Guide	1

Before continuing with installation:

1. Verify that all parts in each LX60 package have been received.
2. If any part is missing, contact your customer service representative.

**NOTE!** When unpacking the LX60 make sure to have a sturdy surface to work on. Damage to the unit can occur if dropped.

## 1.2. LX60 Overview

Figure 1 LX60 Main Connectors provides an overview of the LX60 lamp unit.



Figure 1 LX60 Main Connectors

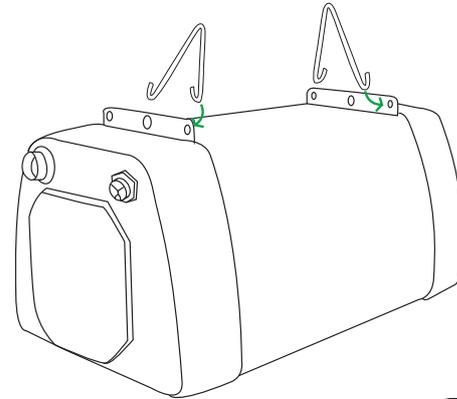
### Legend:

1. Mounting bracket
2. Ethernet port
3. Power socket
4. Air duct attachment
5. Heat sink and air inlet
6. Fans and air intake (not shown)
7. Indicator LED (not shown)

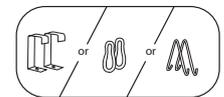
### 1.3. Mounting the LX60

For proper operation the LX60 must be mounted horizontally from a support structure. The support structure needs to be sturdy enough to support the weight of lamps and any additional equipment. It must also allow for air to flow freely into the unit (an additional fan duct is available upon request; contact your Heliospectra sales representative for more information).

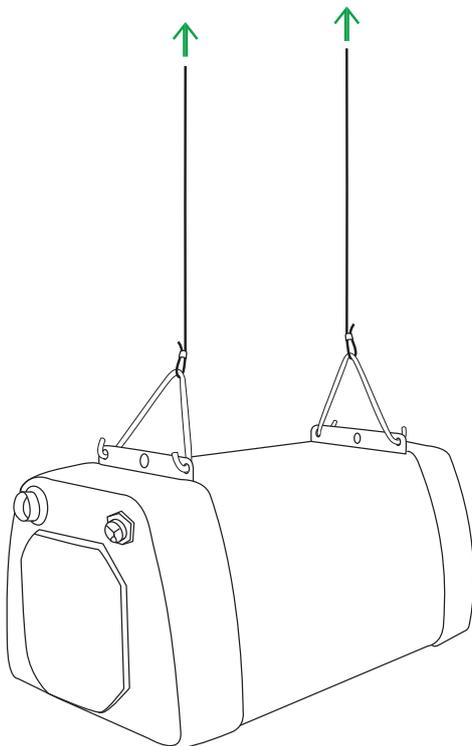
Follow the instructions to mount the LX60:



1. Hangers to the mounting bracket (1).

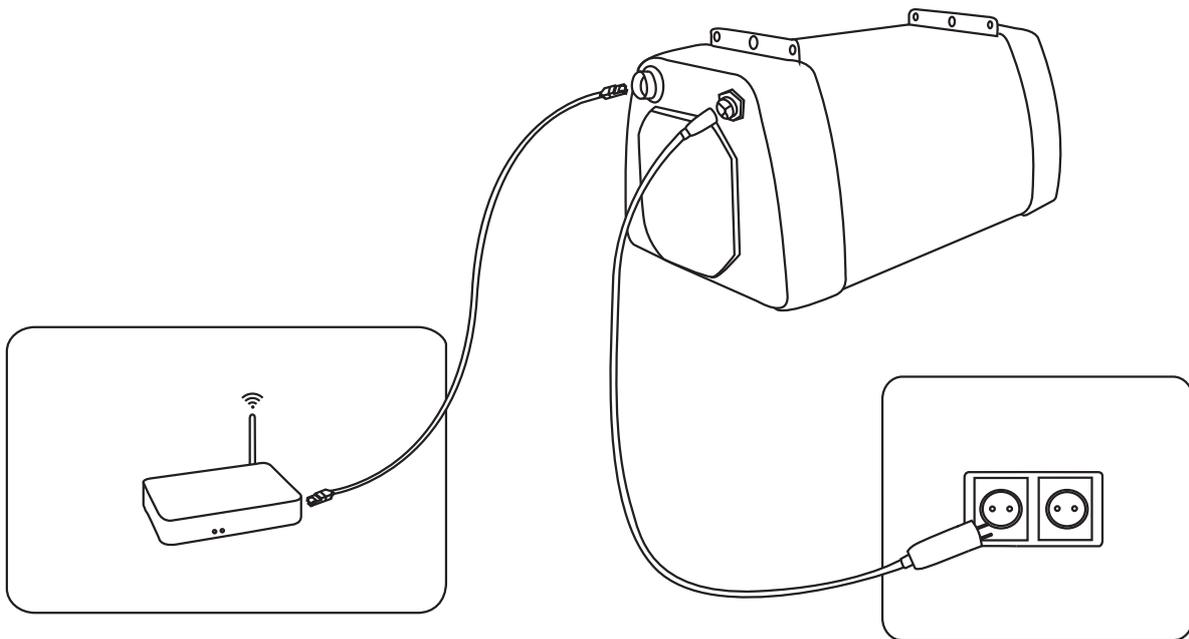


The bracket has multiple hanging options including wire hangers, hooks and M6 bolts. When using M6 bolts verify that the bolt goes approximately 6 mm into the mounting holes and do not use excessive force when tightening the bolts.



2. Use chains or cables to suspend the lamp levelly from the support structure.
3. If other mounting hardware is used make sure that the bolts go all the way in the mounting holes (6 mm).
4. Verify that the unit is securely fastened.

**NOTE!** Verify that the air inlet (5) and outlet (6) are not covered and that air is allowed to flow freely around the unit. Otherwise, overheating may occur and cause the unit to dim to counteract heat buildup.



5. Connect the supplied Ethernet cable to the Ethernet port (2).
6. Connect the Ethernet cable to a free port in the switch.  
(see Example Setup for more information)
7. To power up the lamp, connect the supplied power cord to the power socket (3), and then connect the cord to a grounded 120V/230V, 50/60Hz power outlet.  
The indicator LED (7) (see Figure 1) will flash orange for approximately 15 seconds and then flash green. The lamp unit is now ready for use.

**NOTE!** If the indicator LED does not flash green after 60 seconds, verify that all cables are securely attached and that the unit and switch are powered on. Also verify that DHCP is enabled in your network. If the problem persists, power cycle the lamp by removing and reinserting the power cable.

8. Repeat steps 1–7 to mount additional lamp units.

**NOTE!** For proper performance of the LX60 the ambient air temperature shall be no higher than 40 °C (104 F).

The duct attachment allows for separating the cooling air from the plant growth environment. No more than two lamps may be connected in series. The cooling air to the first lamp shall have a temperature of no more than 21 °C (70 F).

#### 1.4. Network Setup

By default, the LX60 lamp uses the Dynamic Host Configuration Protocol (DHCP) to automatically receive an IP address from a router in the network. This is a commonly available feature in computer networks. The IP address is used when configuring and monitoring the lamp, see chapter 2 *Lamp Configuration and Use*.

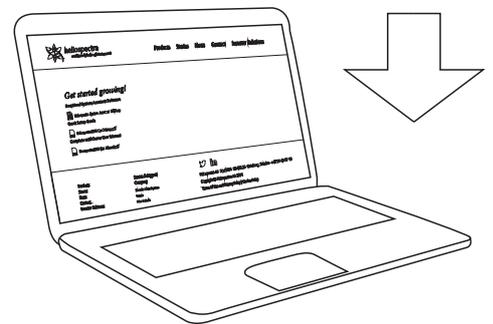
## 2. Lamp Configuration and Use

This chapter covers the basics of accessing and configuring a schedule for the LX60 lamp. For detailed information about lamp configuration options, refer to the Heliospectra LX60 Reference Manual (navigate to [www.heliospectra.com](http://www.heliospectra.com); then click **Service and Support** > **Product Documentation**).

### 2.1. Installing Heliospectra System Assistant

The Heliospectra System Assistant is an administrative standalone tool for the LX60, enabling easy identification of and access to configuration and monitoring functions of individual lamps in the network. Follow the instructions to install the Heliospectra System Assistant to the control computer:

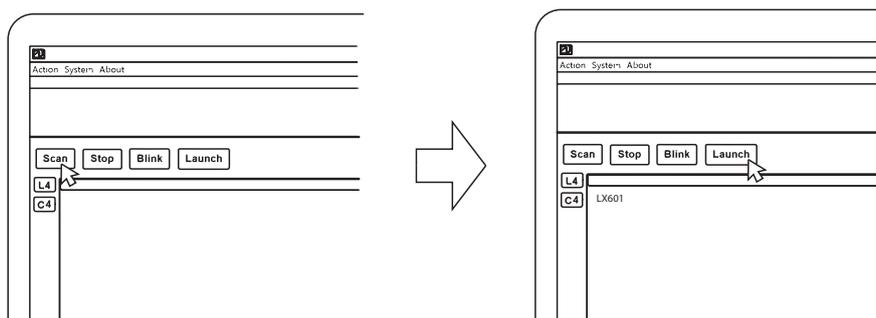
1. Download the Heliospectra System Assistant Windows executable from the support section at [www.heliospectra.com/getstarted](http://www.heliospectra.com/getstarted) or contact your Heliospectra representative. It is recommended to save the installation package to the desktop.
2. Once downloaded double click the file to start the tool.



### 2.2. Accessing the Web User Interface

The LX60 lamp is configured and monitored through its Web User Interface (web UI). Follow the instructions to access the web UI for a lamp:

1. Start the Heliospectra System Assistant from the control computer.
2. Click **Scan**. A list of available lamps on the network is shown.
3. Select a check box adjacent to the lamp to configure or monitor.
4. Click **Launch**.
5. A web browser window with the chosen lamp web UI will open.



## 2.3. Using the Web User Interface

The Web UI of the LX60 is made up tabs providing information, operation and configuration options, each described in the following sections. All pages in the web UI also contain the following general information:

- The current **Status** of the lamp is shown on the top left-hand corner of the page.
- The current **System Time** and **Name** of the lamp (if configured) is shown on the top right-hand corner of the page.
- **General information** for the lamp, such as **model**, **CPU firmware version**, **driver firmware version**, **MAC** and **IP address** is shown on the bottom of the page.

Click the **Show Description** link next to a web UI element to find out more information about its use.

### 2.3.1 Starting the light and changing intensities

Follow the instructions below to starting and manipulating the individual wavelength's intensities.

1. In the web UI, click the **Operation** tab.
2. In the **Intensities (1-1000)** field, set the desired intensity levels for each wavelength.
3. Tick the **Real time update** box underneath the intensities (1-1000) field.
4. You can easily turn the light to maximum intensity by clicking the **All 1000**. Turn the light off by clicking **All 0**.

400	490	231
▽	▽	▽
▽	▽	▽
▽	▽	▽

Real time update  Lock ratio

### 2.3.2 Configuring a Schedule

The LX60 can execute and repeat up to 150 light events per day. A light event is a setting change of one or more of the light channels in the lamp. For example, a schedule could comprise the following light events:

- At 07.00, set 450 and 5700K LEDs to full power (1000 units). Set the 660 nm LED to 500 units.
- At 11.00, add set the 450 nm LED to 600 units output.
- At 23.00, turn off all light channels (0 units).

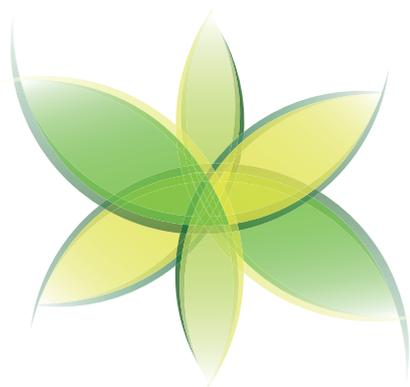
#### 2.3.1.1. Adding Light Events to a Schedule

Follow the instructions to add light events to a schedule:

1. In the web UI, click the Operation tab.
2. In the Intensities (1-1000) field, set the desired intensity levels for each wavelength.
3. Click Add to schedule. The intensity values are copied to the first schedule row.
4. In the Schedule field, enter a start time for the light event in the HH:MM:SS field.
5. Click the  button to add the light event to the schedule. A new light event row is added to the schedule.
6. Repeat steps 2-5 to add additional light events to the schedule.

Light events can also be edited and removed once added to the schedule:

- Click the  button next to a schedule event row, then confirm by clicking OK in the popup to remove the row.
- Click Edit next to an event row to update start time and intensities for an individual light event. Click Save to update the settings.
- Click Delete schedule, then confirm by clicking OK in the popup to remove all light events from the schedule.
- Click Start schedule to start the current schedule. Click Stop schedule to stop the current schedule.



**heliospectra**