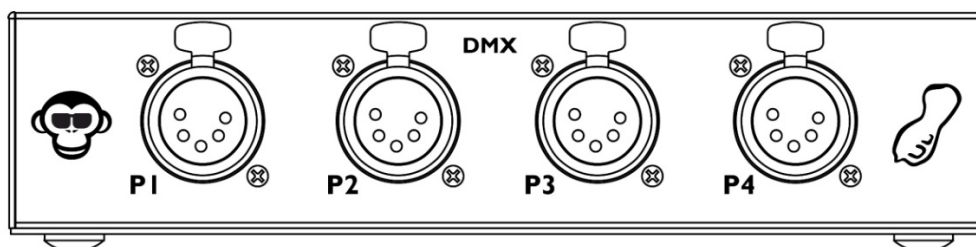




infinity INTELLIGENT LIGHT SHT55008 Peanut Box DMX-Interface User Manual

[Home](#) » [infinity INTELLIGENT LIGHT](#) » infinity INTELLIGENT LIGHT SHT55008 Peanut Box DMX-Interface User Manual 

infinity INTELLIGENT LIGHT SHT55008 Peanut
Box DMX-Interface User Manual



Peanut Box

V1

Product code: 55008

Highlite International B.V. – Veststraat 2 – 6468 EX – Kerkrade – the Netherlands

Preface

Thank you for purchasing this Infinity product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

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Design and product specifications are subject to change without prior notice.

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Contents

- 1 Introduction
 - 1.1 1.1 Before Using the Product
 - 1.2 1.2 Intended Use
 - 1.3 1.3 Product Lifespan
 - 1.4 1.4 Text Conventions
 - 1.5 1.6 Symbols on the Information Label
- 2 Safety
 - 2.1 2.1 Warnings and Safety Instructions
 - 2.2 2.2 Requirements for the User
- 3 Description of the Device
 - 3.1 3.1 Front View
 - 3.2 3.2 Back View
 - 3.3 3.3 Product Specifications
 - 3.4 3.4 Compatibility
 - 3.5 3.5 Recommended Software
 - 3.6 3.6 Dimensions
- 4 Installation
 - 4.1 4.1 Installation Site Requirements
- 5 Setup
 - 5.1 5.1 Warnings and Precautions
 - 5.2 5.2 Setup Examples
 - 5.3 5.3 Supported Control Protocols
- 6 Operation
 - 6.1 6.1 Safety Instructions for Operation
 - 6.2 6.2 Turning On/Off
 - 6.3 6.3 Connecting to the Chimp
 - 6.4 6.4 Connecting to the Chimp OnPC
- 7 Troubleshooting
- 8 Maintenance
 - 8.1 8.1 Preventive Maintenance
 - 8.2 8.2 Corrective Maintenance
- 9 Deinstallation, Transportation and Storage
 - 9.1 9.1 Instructions for Deinstallation
 - 9.2 9.2 Instructions for Transportation
 - 9.3 9.3 Storage
- 10 Disposal
- 11 Approval
- 12 Documents / Resources
- 13 Related Posts

Introduction

1.1 Before Using the Product



Important

Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite

International dealer.

Your shipment includes:

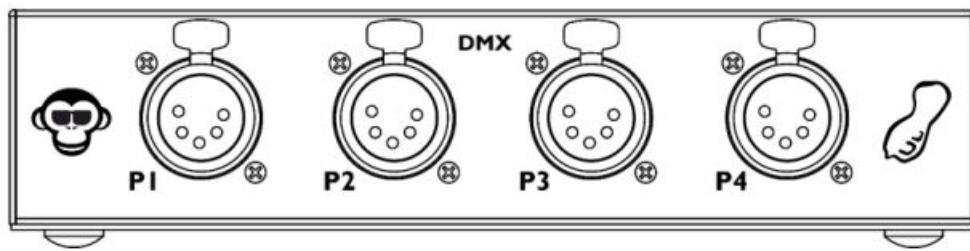


Fig. 01

- Infinity Peanut Box
- AC power adapter 5 V DC (1,2 m)
- User manual

1.2 Intended Use

This device is designed to be used as an addition to the Infinity Chimp devices. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

1.3 Product Lifespan

This device is not designed for permanent operation. Do not switch on and off the device in short intervals. This will reduce the wear and will improve the device's lifespan.

1.4 Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons and interface sliders and fields are in bold lettering, for example "Slide the **Strobe** slider", "Enter the DMX starting address in the **Address** field"
- References: References to chapters and parts of the device are in bold lettering, for example: "Refer to **2. Safety**", "set **the power switch (14)** to on position"
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.5 Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs. Always follow the instructions provided in this user manual.



DANGER Indicates an imminently hazardous situation which, if not avoided, will result in death or

serious injury



WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.



Attention Indicates important information for the correct operation and use of the product.




Important Read and observe the instructions in this document.



Electrical hazard




 Provides important information about the disposal of this product.

1.6 Symbols on the Information Label

This product is provided with an information label. The information label is located on the backside of the device.

The information label contains the following symbols:



 This device shall not be treated as household waste.



This device is designed for indoor use.



Read and observe the instructions in the user manual.

Safety



Important

Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

2.1 Warnings and Safety Instructions



DANGER

Danger for children

For adult use only. The device must be installed beyond the reach of children.

- Do not leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach. Packaging material is a potential source of danger for children.



DANGER

Electric shock caused by short-circuit

This device is delivered with an AC power adapter. Incorrect handling of the AC power adapter may result in hazardous situations.

- Use only the AC power adapter delivered with the device.
- Do not wrap the power cable around the power adapter or any other object. This can damage the internal wires.
- Do not cover the power adapter with anything when it is plugged into the socket-outlet. This may cause overheating.
- Do not expose the power adapter to water or other liquids.

Do not use the power adapter:

- If it shows signs of overheating, for example the plastic is damaged.
- If the AC input pins show signs of corrosion or overheating.
- If the power cable is damaged or shows signs of material fatigue.



Attention

Power supply

Before connecting the AC power adapter to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the AC power adapter.



Attention

General safety

- Do not switch the device on and off in short intervals. This decreases the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue the use immediately.



Attention

This device shall be used only for the purposes it is designed for.

This device is designed to be used as an addition to the Infinity Chimp devices. This device is not suitable for households.

Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households.
- This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.



Attention

Do not expose the device to conditions that exceed the rated IP class conditions.

This device is IP20 rated. IP (Ingress Protection) 20 class provides protection against solid objects greater than 12 mm, such as fingers, and no protection against harmful ingress of water.

2.2 Requirements for the User

This product may be used by ordinary persons. Maintenance and installation may be carried by ordinary persons. Service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the installation, service and maintenance of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and to avoid hazards associated with the installation, service and maintenance of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

Description of the Device

The Peanut Box is designed to be used as an addition to the Infinity Chimp. It expands your setup with 4 additional universes (DMX, Art-Net and sACN). The device also activates the SMPTE timecode input for timecode shows (if you use the Chimp OnPC or the Chimp 100).

3.1 Front View

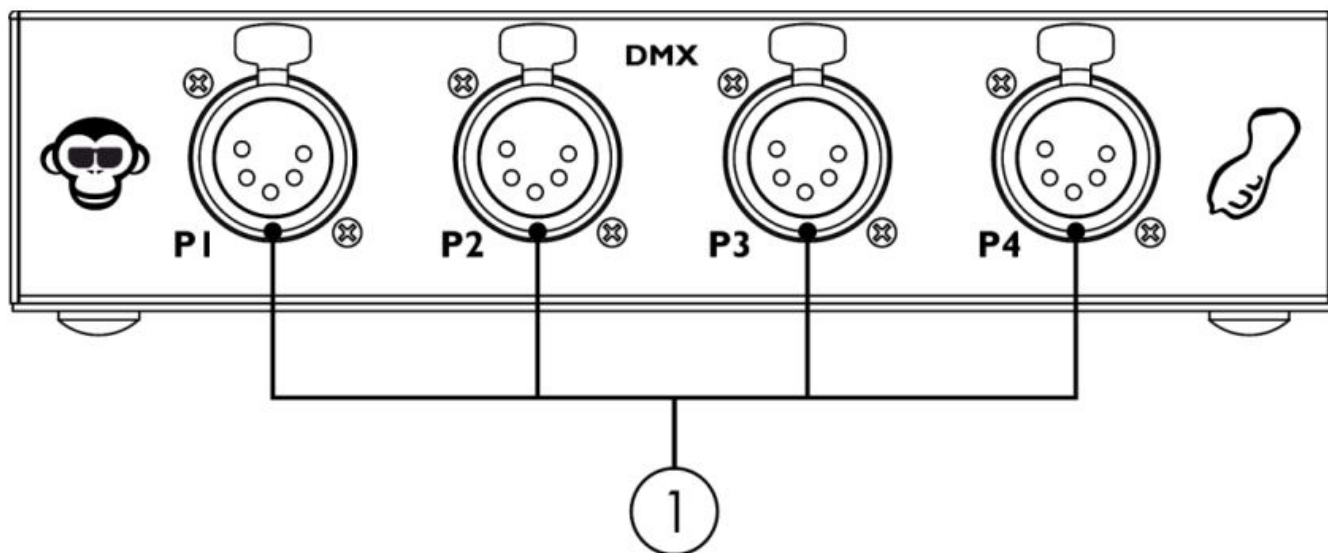


Fig. 02

01) 4 x 5-pin DMX signal connector OUT

3.2 Back View

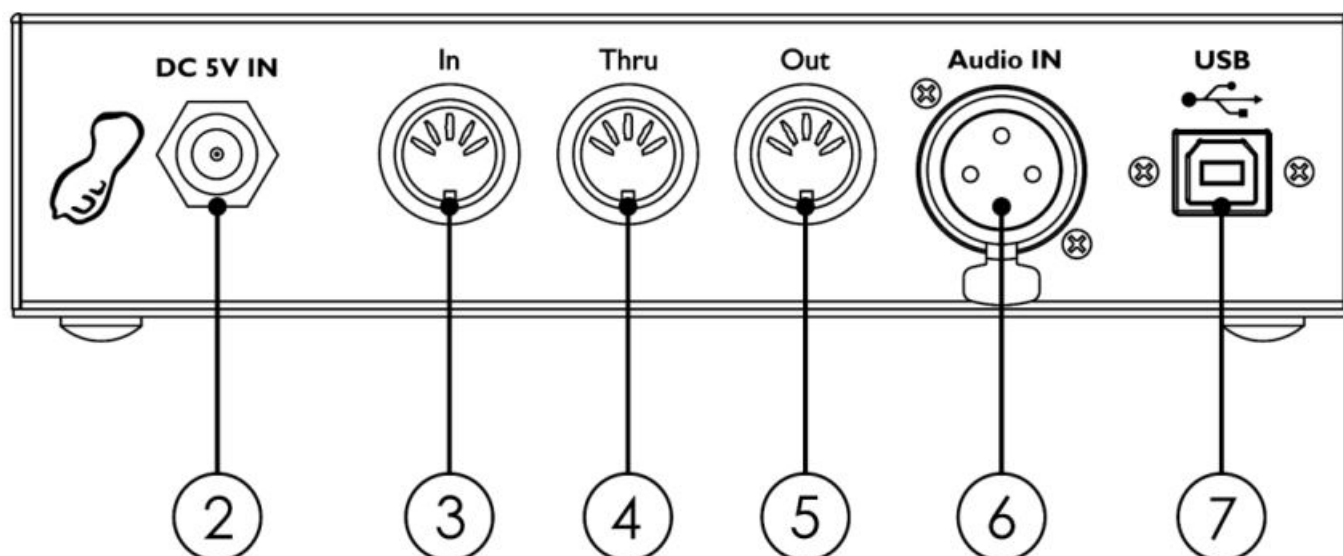


Fig. 03

02) DC connector, 5 V DC

03) 5-pin DIN MIDI connector IN

04) 5-pin DIN MIDI connector THRU

05) 5-pin DIN MIDI connector OUT

06) 3-pin XLR audio connector IN

07) USB-B connector OUT

3.3 Product Specifications

Model:	Peanut Box
--------	------------

Electrical:	
Input voltage:	5 V DC, 1 A
Power consumption:	5 W

Physical:	
Dimensions:	174 x 137 x 42 mm (L x W x H)
Weight:	0,8 kg

Operation and control:	
Control:	DMX, PC software
DMX channels:	2048
Universes:	4
Power connector IN:	Low voltage DC plug
DMX connector OUT:	4 x 5-pin XLR connector
Data connector IN:	USB
MIDI connector:	5-pin DIN connectors IN/THRU/OUT
Audio triggers:	6
OSC (Open Sound Control):	Yes
Control protocols:	sACN, Art-Net, SMPTE timecode

AC power adapter:	
Input voltage:	100–240 V AC, 50/60 Hz
Input current:	0,3 A
Output voltage:	5 V DC
Output current:	1000 mA

Construction:	
Housing:	Metal
Color:	Black
IP rating:	IP20

Thermal:	
Ambient temperature t_a :	From -5 °C to 40 °C

3.4 Compatibility



Attention

The Peanut Box is designed to be operated **ONLY** with the Chimp 100, Chimp 300 or Chimp OnPC software.

The Peanut Box is delivered without the Chimp devices. You need to purchase these devices separately.

Product code: [55004](#) (Inifinity Chimp 100.G2)

Product code: [55014](#) (Inifinity Chimp 300.G2)

Product code: [55004set01](#) (Inifinity Chimp 100.G2 Tourpack)

Product code: [55014set01](#) (Inifinity Chimp 300.G2 Tourpack)

Product code: [55031](#) (Inifinity Chimp Tourpack)

3.5 Recommended Software

You can download Chimp OnPC software from our website www.highlite.com.

3.6 Dimensions

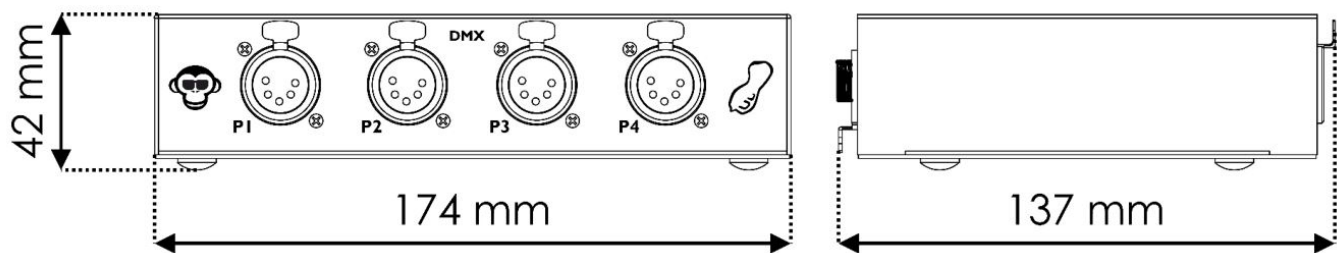


Fig. 04

3.6.1 Mounting Dimensions

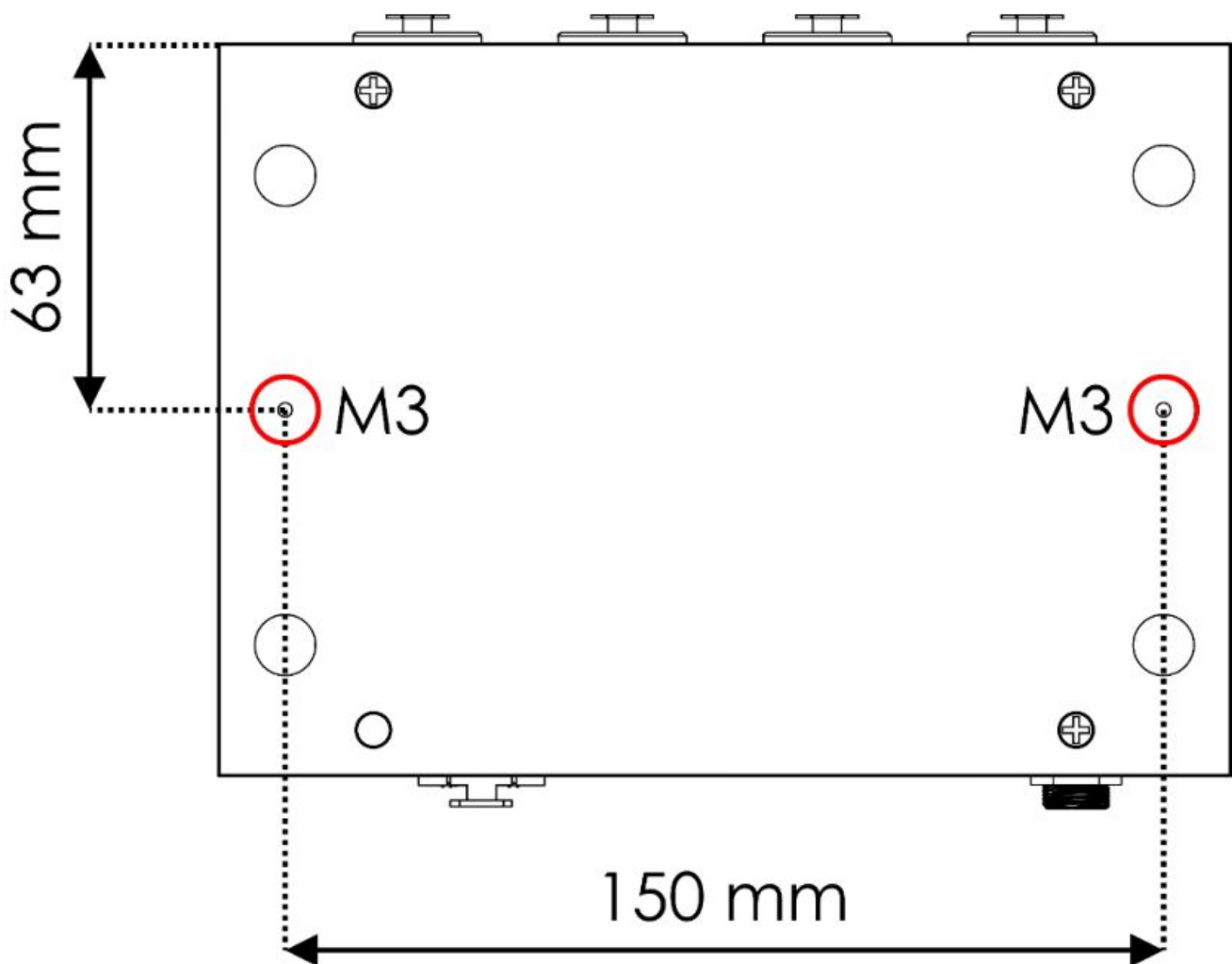


Fig. 05

Installation

4.1 Installation Site Requirements

- The device can be used only indoors.

- The device can be positioned on a flat surface or be mounted to a 19-inch rack with 2 x M3 screws. See **3.6.1. Mounting Dimensions** on page 9 for more information.
- The minimum distance to other objects must be bigger than 0,5 m.
- The maximum ambient temperature $t_a = 40\text{ °C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C .

Setup

The Peanut Box functions as an addition to the Infinity Chimp devices. It can be used only with the Infinity Chimp consoles or with a PC with Chimp OnPC software installed.

5.1 Warnings and Precautions



Attention

Connect all data cables before supplying power.

Disconnect power supply before connecting or disconnecting data cables.

5.2 Setup Examples

5.2.1 Chimp 100/300 Setup

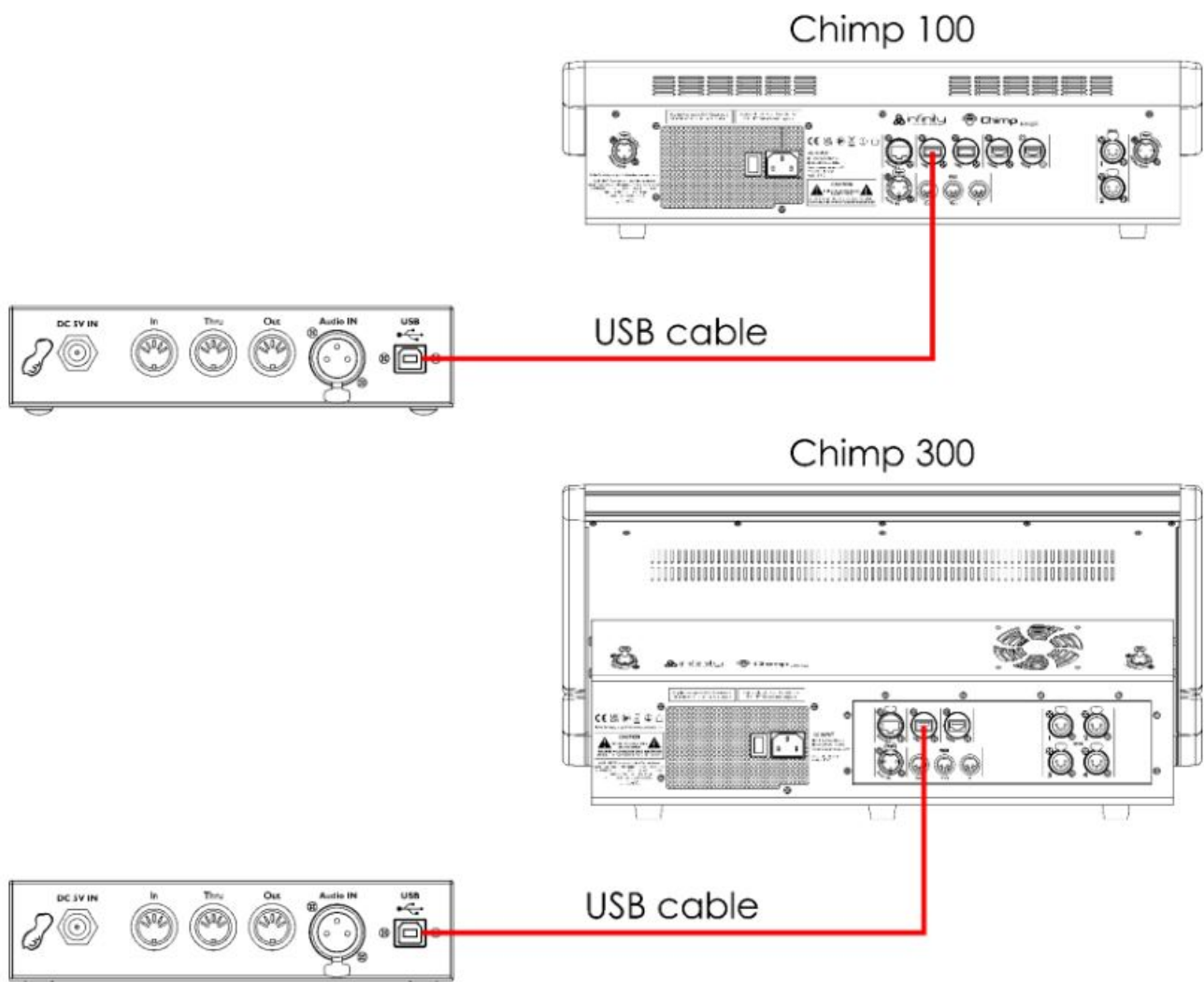


Fig. 06

5.2.2 Chimp OnPC Setup

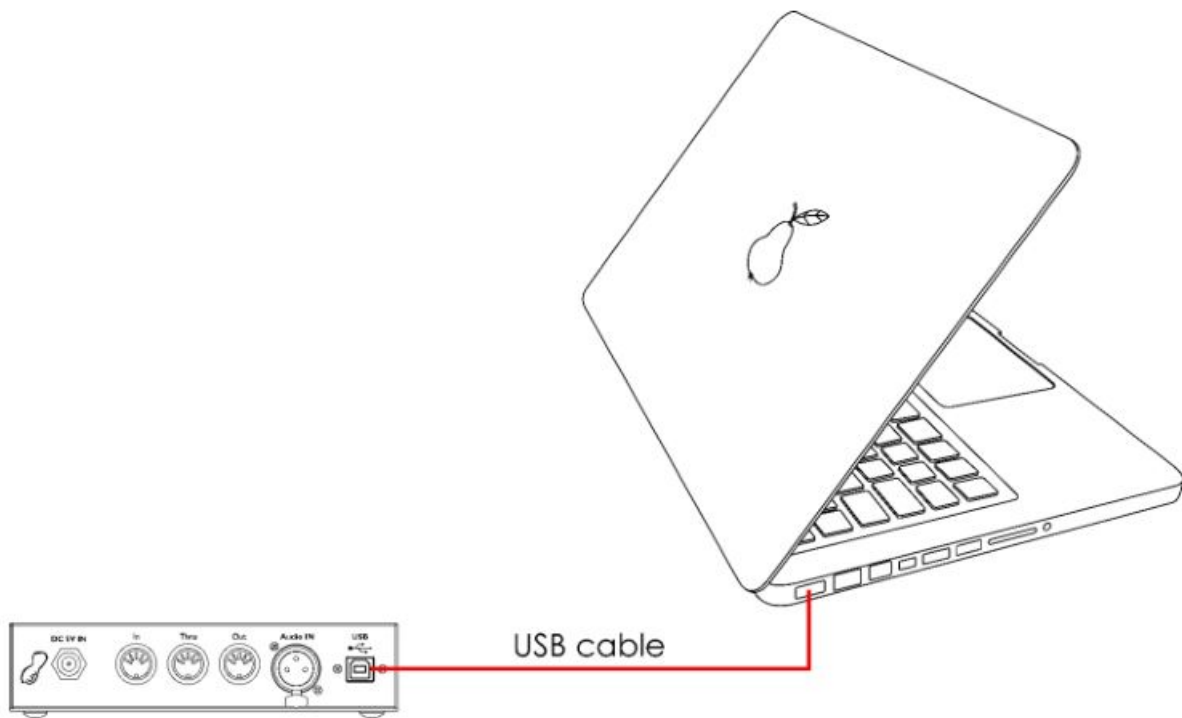


Fig. 07

5.3 Supported Control Protocols

The Peanut Box supports DMX via Art-Net, sACN and SMPTE timecode.

Art-Net is a protocol that uses TCP/IP to transfer large amount of DMX-512 data over an Ethernet network. Art-Net 4 can support up to 32768 universes. Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd. sACN (streaming Architecture for Control Networks), also known as ANSI E1.31, is a protocol for sending DMX-512 data over IP networks developed by ESTA (Entertainment Services and Technology Association). It supports up to 63999 universes and uses multicasting. SMPTE timecode is a set of standards to label frames of video with a timecode. The system is developed by SMPTE (Society of Motion Picture and Television Engineers). SMPTE timecode is typically represented in 32 bits using binary-coded decimal.

For more information about the protocols, refer to the user manuals of the Chimp consoles.

5.3.1 DMX Connection

5.3.1.1 DMX-512 Protocol

You need a DMX serial data link to run light shows of one or more devices using an Infinity Chimp console or Chimp OnPC software

The Peanut Box has 5-pin DMX signal OUT connectors.

The pin assignment is as follows:

- 5-pin: pin 1 (ground), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C)

Devices on a serial data link must be daisy-chained in a single line. The number of devices that you can control on one data link is limited by the combined number of the DMX channels of the connected devices and the 512 channels available in one DMX universe.

To comply with the TIA-485 standard, no more than 32 devices should be connected on one data link. In order to connect more than 32 devices on one data link, you must use a DMX optically isolated splitter/booster, otherwise this may result in deterioration of the DMX signal.

Note:

- Maximum recommended DMX data link distance: 300 m
- Maximum recommended number of devices on a DMX data link: 32 devices

5.3.1.2 DMX Cables

Shielded twisted-pair cables with 5-pin XLR connectors must be used for reliable DMX connection. You can purchase DMX cables directly from your Highlite International dealer or make your own cables.

If you use XLR audio cables for DMX data transmission, this may lead to signal degradation and unreliable operation of the DMX network.

When you make your own DMX cables, make sure that you connect the pins and wires correctly as shown in Fig. 08.

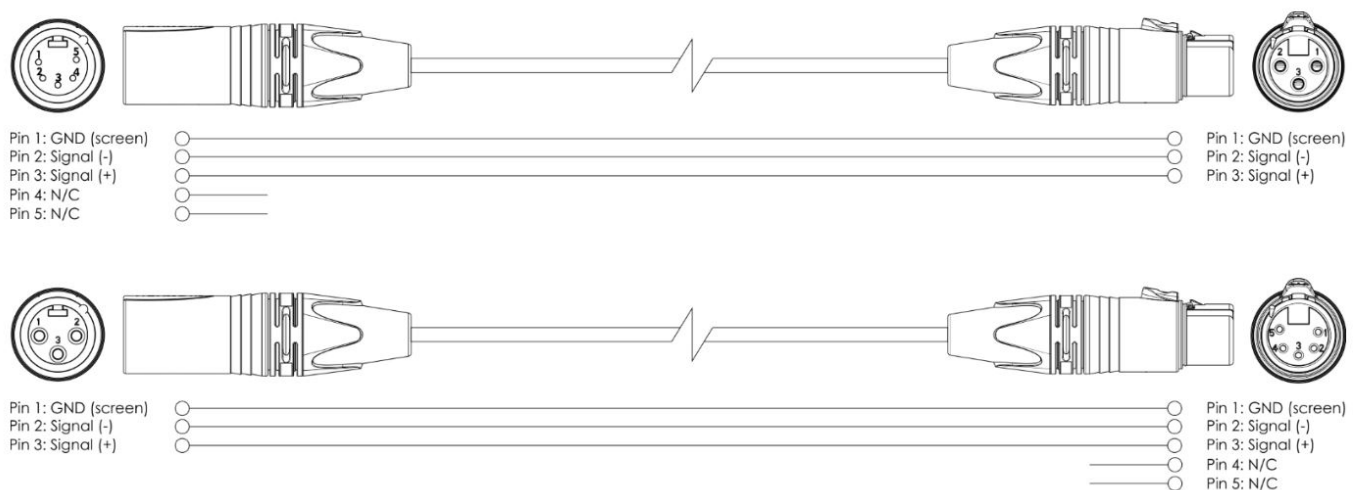


Fig. 08

5.3.2 Universe Numbering

The number of devices that you can control on one data link is limited by the combined number of the DMX channels of the connected devices and the 512 channels available in one DMX universe.

After the limit of 512 channels is reached, the next device should be set to a universe with a higher number.

There are 512 channels (1–512) in one universe. 16 consecutive universes (0–15) make up one sub-net. 16 sub-

nets (0–15) make up one net. There are in total 128 nets (0–127).

Note:

- In Art-Net, universes are called Port Address and number from 0 to 32767. There are 32768 unique numbers.
- In sACN, universes number from 1 to 63999. There are 63999 unique numbers. The values of 0 and 64000 to 65535 are reserved for future expansion according to the standard.

15-bit Port Address	Net (0–127)	Sub-net (0–15)	Universe (0–15)
0	0	0	0
1	0	0	1
2	0	0	2
...
31	0	1	15
32	0	2	0
33	0	2	1
...
126	0	7	14
127	0	7	15

15-bit Port Address	Net (0–127)	Sub-net (0–15)	Universe (0–15)
128	0	8	0
...
255	0	15	15
256	1	0	0
257	1	0	1
...
32766	127	15	14
32767	127	15	15

Note:

If you are using an Art-Net controller that supports Art-Net I or Art-Net II, the Art-Net net must be set to 0. The net number is available in Art-Net 3 and higher versions of the Art-Net protocol.

For more detailed information about Art-Net, refer to the user manuals of the Chimp consoles.

5.3.3 SMPTE

SMPTE time is coded with Binary Coded Decimal. Four bits are assigned to every tenth decimal numeral. The first 26 bits in each frame are assigned to the time information. Then, there are 32 bits of user data and the synchronization word (final 16 bits). The synchronization word is to identify the frame's boundaries and is: 0011 1111 1111 1101.

MIDI (Musical Instrument Digital Interface) is an interface used when working with different data formats. One of the ways it can work with time is called MTC (MIDI Time Code).

The MIDI time code message consists of 32 bits (the last 8 bits are unused or are set to 0). Each Time Code component is coded by one byte.

Byte 0

0rrhhhhh: Rate (0–3) and hour (0–23).

rr=00: 24 fps

rr=01: 25 fps

rr=10: 29.99 fps

rr=11: 30 fps

Byte 1

00mmmmmm: Minute (0–59)

Byte 2

00ssssss: Second (0–59)

Byte 3

000fffff: Frame (0–30)

When time code is repeated, it is divided into 8 x 4-bit pieces and one part is transmitted by every quarter frame. Each quarter frame has the byte status of 0xF1. There are 7 data bits (3 bits are the quarter frame identifiers and 4 bits contain the time portion).

Piece	Data byte	Explanation
0	0000 ffff	Frame number lsbits
1	0001 000f	Frame number msbit
2	0010 ssss	Second lsbits
3	0011 00ss	Second msbits
4	0100 mmmm	Minute lsbits
5	0101 00mm	Minute msbits
6	0110 hhhh	Hour lsbits
7	0111 0rrh	Rate and hour msbit

The time expands with the transmission of a single SMPTE frame, that takes place in 2 frames (8 x ¼).

While mapping SMPTE to MTC, every second frame will be in MIDI time code. It takes for the master device about 2–4 frames to process this data, depending on when the scan begins.

For more detailed information about MIDI and SMPTE, refer to the user manuals of the Chimp consoles.

Operation

6.1 Safety Instructions for Operation



Attention

This device must be used only for the purposes it is designed for.

This device is designed to be used as an addition to the Infinity Chimp devices. This device is not suitable for households.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

6.2 Turning On/Off

This device is delivered with an AC power adapter. Before connecting the AC power adapter to the socket-outlet, make sure that the power supply matches the input voltage specified on the information label on the AC power adapter.

To turn the device on, follow the steps bellow:

01) Connect the AC power adapter to the device. Use only the AC power adapter delivered with the device.



Attention

Power supply

After connecting the adapter to the device, turn the metal ring around the power plug clockwise to secure the power plug in position. If you do not do this, the plug will not fully enter the housing and the device will not turn on.

02) Connect the AC power adapter to the socket-outlet.

6.3 Connecting to the Chimp

The Peanut Box needs to be connected to the Chimp before it becomes functional.



Attention

Software compatibility

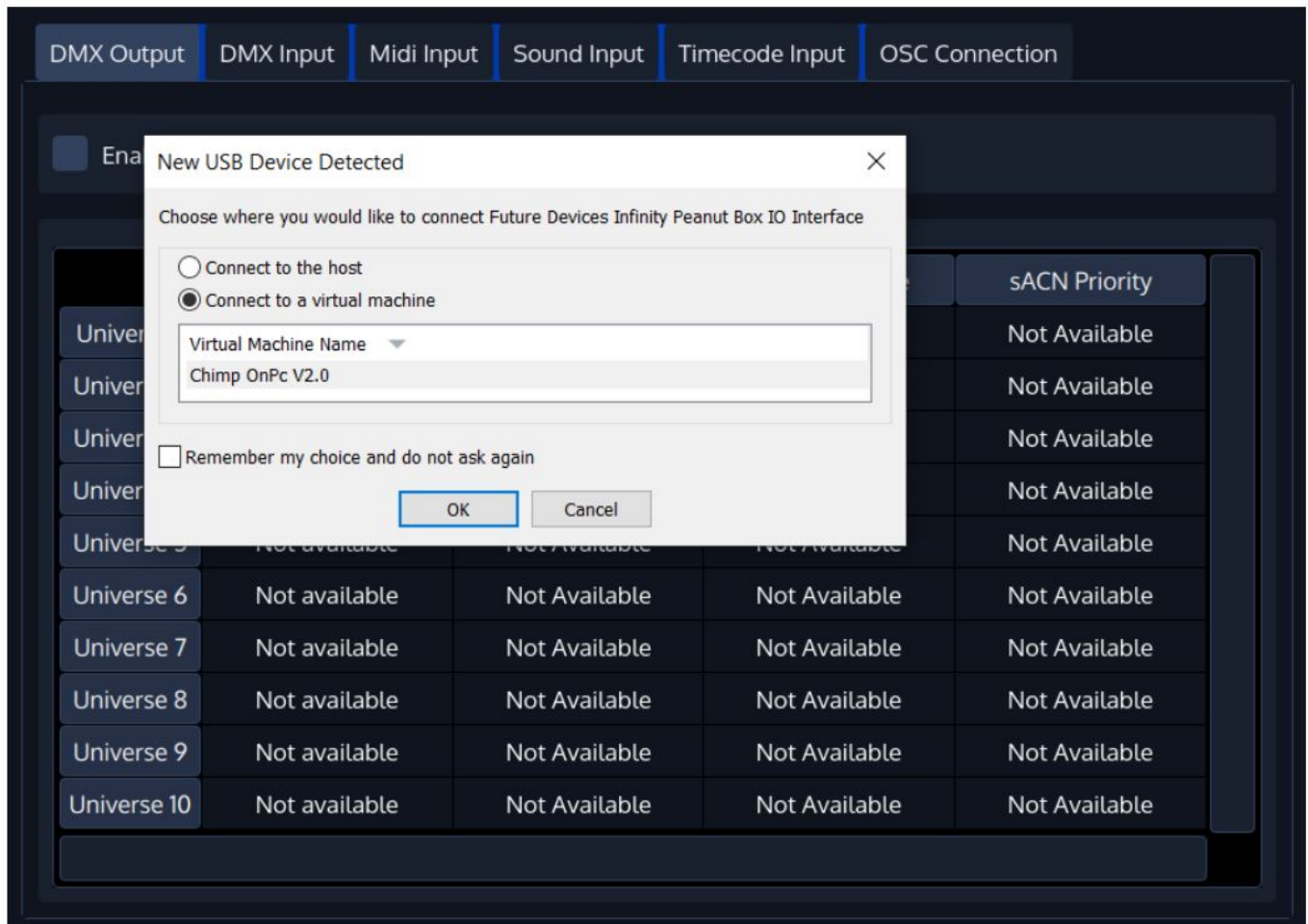
The Chimp's software version must be 2.0 or higher for the Peanut Box to work. The Peanut Box is not supported by older software versions.

Use a USB cable to connect the **USB connector (07)** on the Peanut Box with the USB connector on the rear panel of your Chimp console.

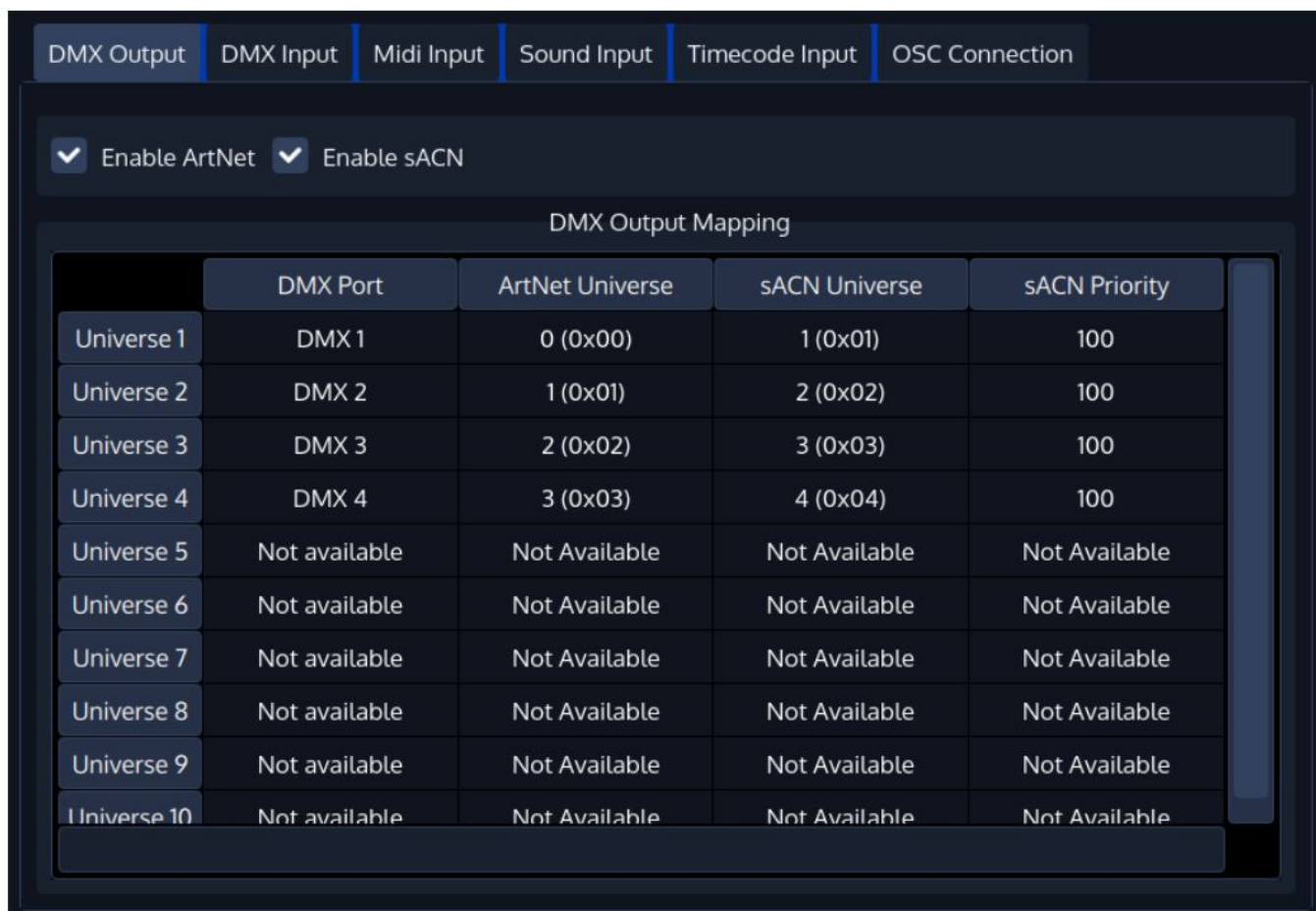
6.4 Connecting to the Chimp OnPC

The Peanut Box needs to be connected to the Chimp OnPC and activated before it becomes functional.

01) Use a USB cable to connect the **USB connector (07)** on the Peanut Box with the USB connector on your PC (with Chimp OnPC software installed). The PC screen will show:



02) Select “Connect to a virtual machine” and click on “OK” to confirm. The PC screen will show:



The Peanut Box is active and the Chimp OnPC recognizes 4 additional DMX universes.

Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts.

Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

Problem	Probable cause(s)	Solution
The device does not function at all	The metal ring around the power plug is loose	<ul style="list-style-type: none"> Tighten the metal ring around the power plug
The device does not appear on the list of available devices on the Chimp's display (or on the PC screen)	The device is not properly connected to the Chimp/PC Your Chimp's software version is lower than 2.0	<ul style="list-style-type: none"> Check if the USB cable is properly connected to the Chimp/PC Replace the USB cable Install the newest software version

Maintenance

8.1 Preventive Maintenance



Attention

Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- The safety devices are not damaged.
- There are no deformations on housings, fixations and installation points.
- The lens is not cracked or damaged.

8.1.1 Basic Cleaning Instructions

To clean the device, follow the steps below:

- 01) Disconnect the device from the electrical power supply.
- 01) Remove the dust collected on the external surface with a soft brush.



Attention

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.
- Make sure that the connections are fully dry before connecting the device to the power supply and to other devices.

8.2 Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

Deinstallation, Transportation and Storage

9.1 Instructions for Deinstallation

If trussing systems are used, deinstallation must be carried out only by instructed or skilled persons.

- Always observe the national and site-specific regulations during deinstallation and derigging of the device.
- Wear personal protective equipment in compliance with the national and site-specific regulations.

9.2 Instructions for Transportation

- Use the original packaging to transport the device, if possible.
- Always observe the handling instructions printed on the outer carton box, for example: "Handle with care", "This

side up", "Fragile".

9.3 Storage

- Clean the device before storing. Follow the cleaning instructions in chapter **8.1.1. Basic Cleaning Instructions** on page 17.
- Store the device in the original packaging, if possible.

Disposal

Correct disposal of this product



Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

Approval



Check the respective product page on the website of Highlite International (www.highlite.com) for an available declaration of conformity.



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Documents / Resources

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[Manuals+.](#)