

ENGLISH

LED Dim-1 MKII

V1

Ordercode: A9915041

Table of contents

Warning	2
Safety Instructions	2
Operating Determinations	4
Connection with the mains.....	4
Return Procedure.....	5
Claims.....	5
Description of the device	6
Features	6
Overview	6
Installation	6
Set Up and Operation	7
Control Modes.....	7
Manual Control Mode	7
Analog Mode	7
DMX Control Mode.....	7
DIP switch setting for DMX Mode.....	8
DMX Address Quick Reference Chart	9
DMX Channels	10
1 channel	10
Maintenance	10
Troubleshooting	10
No Light	10
No Response to DMX.....	10
Product Specifications	11
Dimensions	12
Notes	13

Warning



**For your own safety, please read this user manual carefully
before your initial start-up!**

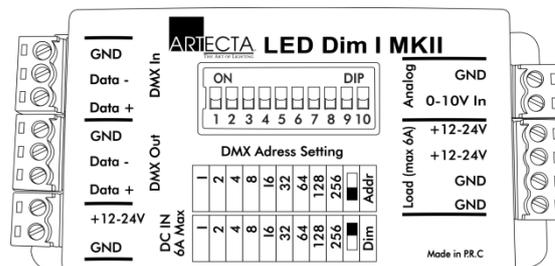


Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:

- Arrecta LED Dim-1 MKII
- User manual



LED Expected Lifespan

LEDs gradually decline in brightness over time. HEAT is the dominant factor that leads to the acceleration of this decline. Packaged in clusters, LEDs exhibit higher operating temperatures than in ideal or singular optimum conditions. For this reason, when all color LEDs are used at their fullest intensity, life of the LEDs is significantly reduced. If improving the lifespan is of higher priority, place care in providing for lower operational temperatures. This may include climatic-environmental and the reduction of overall projection intensity.



CAUTION!

**Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!**



Safety Instructions

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual



**CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!**



Before the initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes contained in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

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

- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never look directly into the light source.
- Never leave any cables lying around.
- Do not open the device and do not modify the device.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this will reduce the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use the device indoors, avoid contact with water or other liquids.
- Only operate the fixture after having checked if the housing is firmly closed and all screws are tightly fastened.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- Always keep the case closed while operating.
- Always allow a free air space of at least 50 cm around the unit for ventilation.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power cord holding it by the plug. Never pull out the plug by tugging the power cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power cord is never crimped or damaged. Check the device and the power cord from time to time.
- If device was dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Artecta device fails to work properly, discontinue the use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Artecta dealer for service.
- For adult use only. The fixture must be installed beyond the reach of children. Never leave the unit running unattended.
- Never attempt to bypass the thermostatic switch or fuses.
- The user is responsible for correct positioning and operating of the LED Dim-1 MKII. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.



CAUTION! Eyedamages!!!
Avoid looking directly into the lightsource!!!
(meant especially for epileptics)!!!



Operating Determinations

- This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- The minimum distance between light output and the illuminated surface must be bigger than 1 meter.
- The maximum ambient temperature $t_a = 40^\circ\text{C}$ must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40°C .
- If this device is operated in any other way than the one described in this manual, the product may suffer damages and the warranty becomes void.
- Any other operation may lead to dangers like short-circuit, burns, electric shock, crash, etc.

You endanger your own safety and the safety of others!

Connection with the mains

Connect the device to the mains with the power-plug.

Always check if the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	PHASE
N	BLUE	BLACK	SILVER	NEUTRAL
	YELLOW/GREEN	GREEN	GREEN	PROTECTIVE GROUND

Make sure that the device is always properly connected to the earth!

Improper installation can cause serious injuries and/or damage of property!



Return Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail offersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:

- 01) Your name
- 02) Your address
- 03) Your phone number
- 04) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any shortcomings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to report and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless agreed otherwise in writing.

Complaints against us must be prepared in writing or sent by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement from which the obligation is resulting.

Description of the device

The LED-Dim 1 MKII is a compact and easy to use LED Dimmer. It can dim a LED channel by means of DMX or analog 0-10V fixtures. The LED-Dim 1 MKII is a constant voltage LED dimmer and can handle a load of 6A-12V or 4A-24V. The power input is supplied by an external (optional) power supply which can vary between 12V and 24V, depending on the connected load. A maximum of up to 6A loads are allowed on a single output. The device supports DMX protocol control system, which can be adjusted by flipping the DIP switches.

Features

- 3 control modes: DMX, manual and analog
- 3 DMX channels
- DMX control system
- DMX pin inputs and outputs
- Black powder coated housing
- 0-10V LED fixture support

Overview

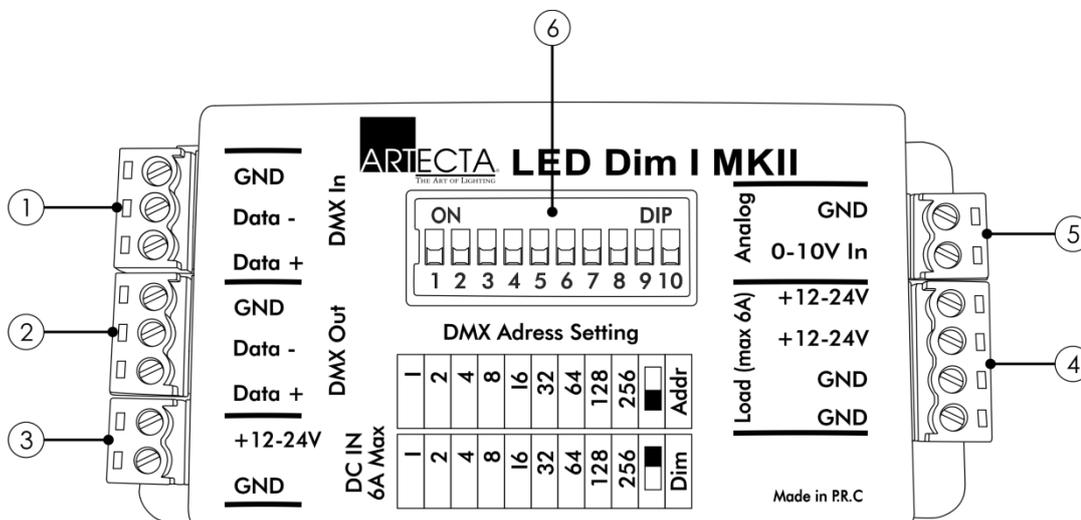


Fig. 01

- DMX 3-pin input connector (DMX In)**
Connect the unit to a DMX controller, using a 3-pin connector.
- DMX 3-pin output connector (DMX Out)**
Connect the unit to another LED dimmer, using a 3-pin connector.
- DC In +12-24V power connector, max. 6A**
Main power supply. Connect the unit using a 2-pin connector.
- Load +12-24V, max. 6A**
Connect the unit to a LED fixture, using a 4-pin connector.
- Analog LED 0-10V connector**
Connect the device to a 0-10V LED fixture, using a 2-pin connector.
- DMX DIP switches**
Use the switches to adjust DMX addresses.

Installation

Remove all packing materials from the LED Dim-1 MKII. Check if all foam and plastic padding is removed. Connect all cables.

Do not supply power before the whole system is set up and connected properly.

Always disconnect from electric mains power supply before cleaning or servicing.

Damages caused by non-observance are not subject to warranty.

Set Up and Operation

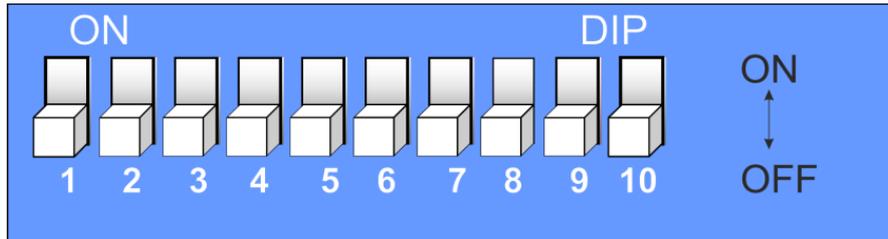
Before plugging the unit in, always make sure that the power supply matches the product specification voltage.

When the power input is **12V DC/6A**, a maximum of **6A** load **is allowed** on a single channel and the maximum of loads distributed over all three channels **must not exceed 6A**.

When the power input is **24V DC/4A**, a maximum of **4A** load **is allowed** on a single channel and the maximum of loads distributed over all three channels **must not exceed 4A**.

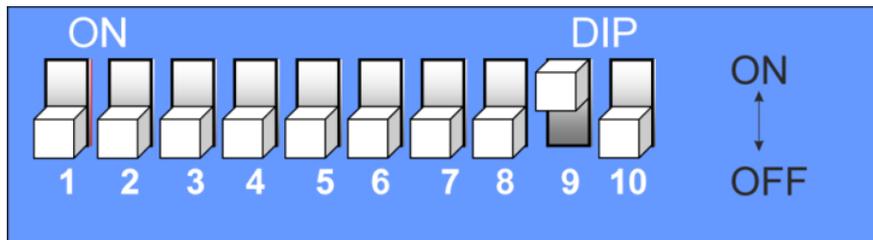
Control Modes

Manual Control Mode



- 01) In Manual control mode, the DIP switch 10 must be switched to **OFF** (see above).
- 02) Set the intensity of the connected LED fixture by flipping the DIP switches from 1 to 8 to **ON**.
- 03) While doing this, you should observe the increase of the light intensity.

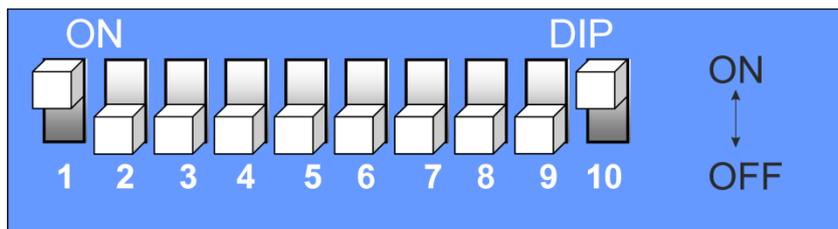
Analog Mode



- 01) In Analog mode, the DIP switch 10 is flipped **OFF** while the DIP switch 9 is flipped **ON**.
- 02) Use the Analog Mode to operate 0-10V LED fixtures.
- 03) The intensity depends on the voltage on the analog input:
 - 0V = 0% intensity
 - 5V = 50% intensity
 - 10V = 100% intensity

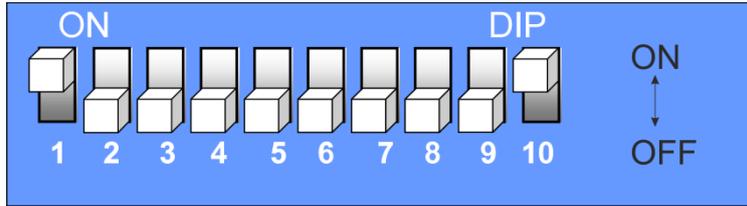
DMX Control Mode

- 01) In DMX control mode, DIP switch 10 must be switched to **ON** (see below).
- 02) Now it is possible to adjust DMX addresses (by flipping the other DIP switches) and the intensity of the dimmer (using a light controller).



DIP switch setting for DMX Mode

DMX products must have their own unique address to receive DMX signals. Addresses on the controller are set by flipping the appropriate DMX DIP switches.

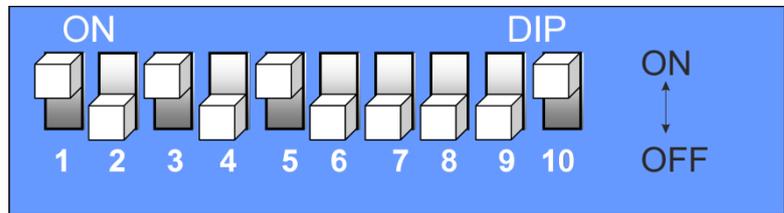


You need to know that DMX address settings are the sum of the DIP switch values. The values, alongside with the corresponding switches, can be found on the frontside of the device and in the quick reference chart (see page 8).

Example 1

LED Dim-1 MKII **Address Value** **DMX DIP Switches "ON"**
 21 #1 , #3, #5

Switch	Value
#1	1
#3	4
#5	<u>16</u> +
Total sum	21



Example 2

- 01) If you want to give a LED Dim-1 MKII a DMX address 133, you first have to find the number 133 in the DMX Address Quick Reference Chart (see page 8).
- 02) Then look at the left side (DIP Switches #1-#5) horizontally from 133. In the table you will see that #1=ON, #2=OFF, #3=ON, #4=OFF, #5=OFF.
- 03) Finally, look at the upper side of the table (DIP Switches #6-#9) vertically from 133. In the table below you will see that #6=OFF, #7=OFF, #8=ON, #9=OFF.

DMX Address Quick Reference

DMX DIP SWITCH SET					#9	0	0	0	0	0	0
0=OFF					#8	0	0	0	0	1	1
1=ON					#7	0	0	1	1	0	0
					#6	0	1	0	1	0	1
#1	#2	#3	#4	#5							
0	0	0	0	0	32	64	96	128	160		
1	0	0	0	0	1	33	65	97	129	161	
0	1	0	0	0	2	34	66	98	130	162	
1	1	0	0	0	3	35	67	99	131	163	
0	0	1	0	0	4	36	68	100	132	164	
1	0	1	0	0	5	37	69	101	133	165	
0	1	1	0	0	6	38	70	102	134	166	

DMX Channels

1 channel

Channel 1 – Dimmer Intensity

0-255

Dimmer intensity from black to brightest (0 to 100%)

Maintenance

The LED Dim-1 MKII requires almost no maintenance. However, you should keep the unit clean.

Disconnect the mains power supply and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.

Keep connections clean. Disconnect electric power and then wipe the connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

No Light

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

If the light effect does not operate properly, refer servicing to a technician.

01) Power supply. Check if the unit is plugged into the appropriate power supply.

02) If you are unable to determine the cause of the problem, do not open the LED Dim-1 MKII, as this may damage the unit and the warranty will become void.

03) Return the device to your Showtec dealer.

No Response to DMX

Response: Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.

01) Check the DMX setting. Make sure that DMX addresses are correct.

02) Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.

03) Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products? If not, take the controller in for repair. If it indeed operates properly, take the DMX cable and the light effect to a qualified technician.

Product Specifications

Model:	Artecta LED Dim-1 MKII
Power supply:	12-24V DC
Load @ 12V:	Max 1 x 6A (72W)
Load @ 24V:	Max 1 x 4A (96W)
Housing:	Black powder coated housing
DMX In:	3-pin terminal
DMX Out:	3-pin terminal
Analog 0-10V:	2-pin terminal
12/24V DC input:	2-pin terminal
Ingress protection rating:	IP20
Operating Temperature:	0 °C to +40 °C
Dimensions:	90 x 40 x 20 mm (LxWxH)
Weight:	120 g

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



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