ANOLIS

ArcPower 160 LT (mk2)

ArcPower 160 LT (mk2)

Table of contents

**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOU INITIAL START - UP!**

1. Safety instructions

Every person involved with installation and maintenance of this product has to:
- be qualilfied
- follow the instructions of this manual

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

This product has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warnings written in this manual.

*To prevent from danger of accident ,the device has to be fixed on flat,
non-flammable surface in compliance with the installing instruction included in this
manual.*

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 product.

Always ground the unit.

The electric connection, repairs and servicing must be carried out by a qualified employee.

Do not connect this unit to a dimmer pack.

Use a source of AC power that complies with local building and electrical rules.AC power has to have both overload and short circuit protection

2. Operating determinations

This product was designed for indoor use only.

If the unit has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your unit. Leave the unit switched off until it has reached room temperature.

Avoid brute force when installing or operating the unit.

When choosing the installation-spot, please make sure that the unit is not exposed to extreme heat, moisture or dust.

Only operate the unit after having checked that the housing is firmly closed and all screws are tightly fastened.

The maximum ambient temperature 40° C must never be exceeded.

Operate the unit only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the unit. Most damages are the result of unprofessional operation!
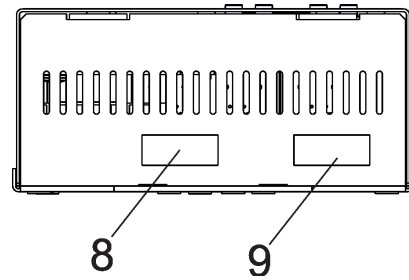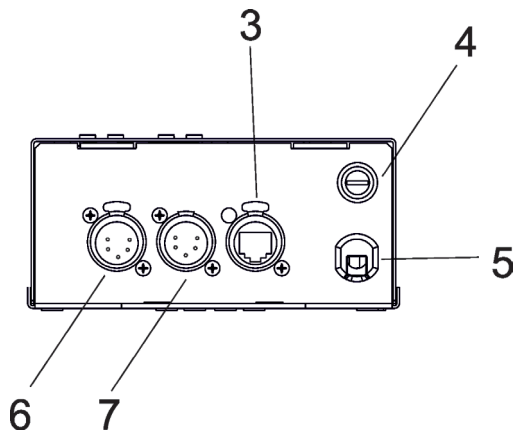
Please use the original packaging if the product is to be transported.
Please consider that unauthorized modifications on the unit are forbidden due to safety reasons!

3. Description of the ArcPower 160 LT (mk2)
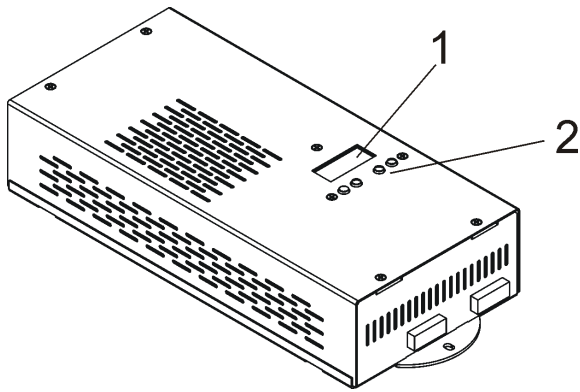
1 - Display
2 - Control buttons
3 - ArtNet Input (RJ45)
4 - Fuse holder
5 - Power Cord
6 - DMX OUT
7 - DMX IN
8 - LED output 1
9 - LED output 2

Ethernet Input

Pin 1: TD+   **Pin 5:** Not connected
Pin 2: TD-   **Pin 6:** RX-
Pin 3: RX+   **Pin 7:** Not connected
Pin 4: Not connected   **Pin 8:** Not connected

RJ45 socket (front view)
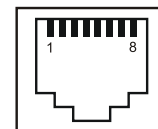
LED Output

Pin 1: Reserved
Pin 2: +24V DC
Pin 3: Red LEDs -
Pin 4: Green LEDs -
Pin 5: Blue LEDs -
Pin 6: White LEDs -

Connector Phoenix IC 2,5/6-G-5,08 (front view)

1   2   3   4   5   6

Reserved +24V R- G- B- W-
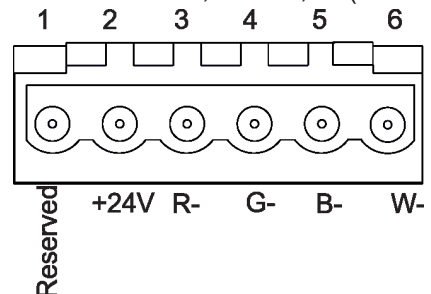
DMX IN/Out

1 - Shield
2 - Signal (-)
3 - Signal (+)
4 - Not connected
5 - Not connected

XLR sockets (front view)
Out   In
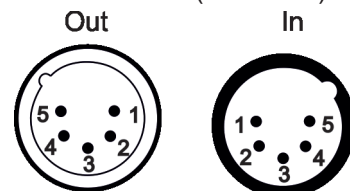
4.Installation

4.1.Connection to the mains

The ArcPower 160 LT (mk2) is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.
If you install a cord cap on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions.
The cores in the power cable are coloured according to the following table.

Core (CE)	Core (US)	Connection	Plug Terminal Marking
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	⏚

> **This device falls under protection class I.Therefore the ArcPower 160 LT (mk2) has to be connected to a mains socket outlet with a protective earthing connection.**

4.2.Mounting the ArcPower 160 LT (mk2)

The ArcPower 160 LT (mk2) should be be placed on a non-flammable flat surface in any orientation and fixed by the two screws.There are two mounting holes of diameter 5 mm in housing of the driver. Ensure that instalation place is enough ventilated.

Screw

Screw

Mounting hole

Flat surface
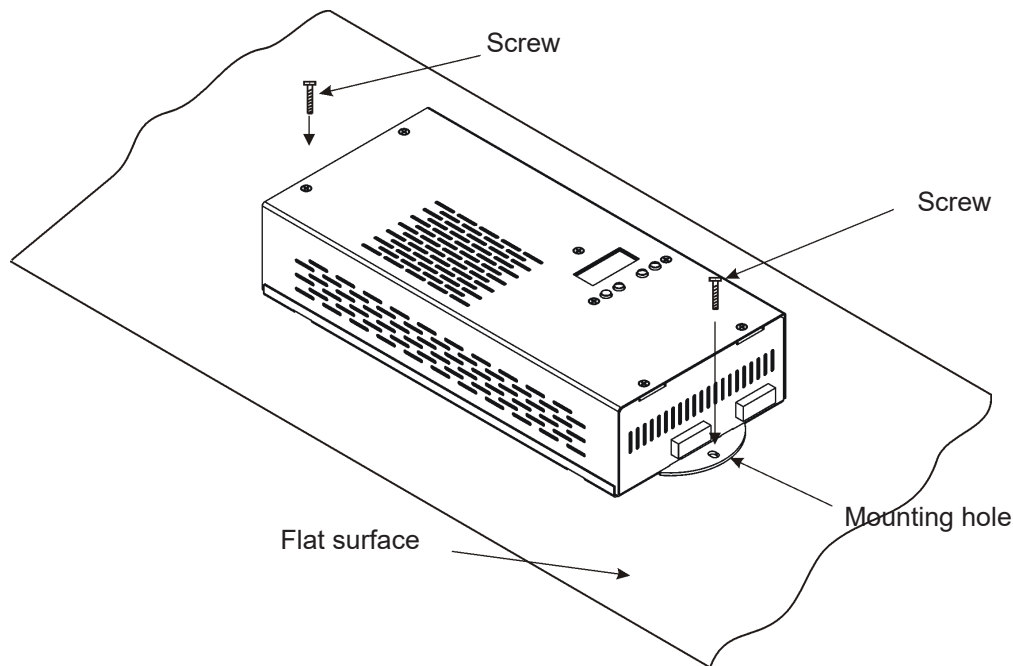
> **Warning!**
> **Maximum cable length between one LED zone output of the ArcPower 160 LT (mk2) and connected LED module is 20 metres.**

5.ArcPower 160 LT (mk2) - DMX protocol

Version 1.2

| Mode/Channel								Value	Function	Type of control
1	2	3	4	5	6	7	8			
ZONE 1										
1	1	1	1	1	1	1	1	0-255	**Red LEDs 1** Red LEDs saturation control (0-100%)	proportional
-	-	-	-	2	2	2	2	0-255	**Red LEDs 1 fine** Red LEDs saturation control fine	proportional
2	2	2	2	3	3	2	3	0-255	**Green LEDs 1** Green LEDs saturation control (0-100%)	proportional
-	-	-	-	4	4	4	4	0-255	**Green LEDs 1 fine** Green LEDs saturation control fine	proportional
3	3	3	3	5	5	5	5	0-255	**Blue LEDs 1** Blue LEDs saturation control (0-100%)	proportional
-	-	-	-	6	6	6	6	0-255	**Blue LEDs 1 fine** Blue LEDs saturation control fine	proportional
-	-	4	4	-	-	7	7	0-255	**White LEDs 1** White LEDs saturation control (0-100%)	proportional
-	-	-	-	-	-	8	8	0-255	**White LEDs 1 fine** White LEDs saturation control fine	proportional
ZONE 2										
4	1	5	1	7	1	9	1	0-255	**Red LEDs 2** Red LEDs saturation control (0-100%)	proportional
-	-	-	-	8	2	10	2	0-255	**Red LEDs 2 fine** Red LEDs saturation control fine	proportional
5	2	6	2	9	3	11	3	0-255	**Green LEDs 2** Green LEDs saturation control (0-100%)	proportional
-	-	-	-	10	4	12	4	0-255	**Green LEDs 2 fine** Green LEDs saturation control fine	proportional
6	3	7	3	11	5	13	5	0-255	**Blue LEDs 2** Blue LEDs saturation control (0-100%)	proportional
-	-	-	-	12	6	14	6	0-255	**Blue LEDs 2 fine** Blue LEDs saturation control fine	proportional
-	-	8	4	-	-	15	7	0-255	**White LEDs 2** White LEDs saturation control (0-100%)	proportional
-	-	-	-	-	-	16	8	0-255	**White LEDs 2 fine** White LEDs saturation control fine	proportional

6.ArcPower 160 LT (mk2) - Control menu map

Default settings=Bold print

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
DMX Addr	Set DMX Address	0001-0512				
	IP Address	Default Address	Set Address			
		Custom Address	IP Adr 1	0-255		
			IP Adr 2	0-255		
			IP Adr 3	0-255		
			IP Adr 4	0-255		
			Set Address			
	Network mask	Net M. 1				
		Net M. 2				
		Net M. 3				
		Net M. 4				
		Set Net M.				
Info	Software Version					
	IP Addr.					
	RDM UID					
	MAC Adr.					
	DMX In					
	Temp					
	Power					
Personality	DMX Press	Mode 1				
		Mode 2				
		:				
		Mode 8				
	DMX Input	artNET				
		Wired DMX				
	Ethernet Settings	Ethernet Mode	ArtNet			
			gMA I			
			gMA II			
			sACN			
		ArtNet Settings	Net	**0**-127		
			Sub-Net	**0**-15		
			Universe	**0**-15		
		MANet Settings	MA Uni	1-256		
			MA S. ID	1-32		
		sACN Uni	1-63999			
		IGMP rep	Off, 1s...10 s			
	Display Settings	Disp Off Timer	**Off,** On			
		Display Lightnes	0-**100**%			
		Display Contrast	0-**100**%			
	Fan Mode	**Auto**				
		Silent				
	DMX Hold	**On**, Off				
	Default Settings	Set Defaults				
Manual	R L 1	0-255				
	R L 1 F	0-255				
	:	0-255				
	W L 2 F	0-255				
Test						

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Stand Alone	Auto Run	Off				
		Test				
		User 1				
		User 2				
	Program Play	User 1				
		User 2				
	Program Edit	User 1	S.Count	1-40		
		User 2	Step 1	R L 1	0-255	
				R L 1 F	0-255	
				:		
				W L 2	0-255	
				W L 2 F	0-255	
				Step Tim.	0-25.5sec	
				Copy To Next		
			:			
			Step 40			
Special Settings	Softwaee Update	**No**,Yes				

7.Control board

The control panel situated on the top cover of the ArcPower 160 LT (mk2) allows DMX addressing and setting the fixture behaviour.

```
DMXA
0001
```
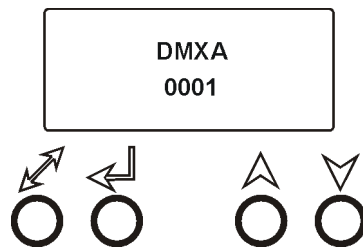
Control elements:

[ENTER] button- enters menu,confirms adjusted values and leaves menu.

[UP] button and[DOWN] button- moves between menu items on the the same level, sets values.

[ESCAPE] button- leaves the menu without saving value.

7.1 DMX Addr *(Fixture addressing)*

Set DMX Address - use this menu item to set the DMX start address of the fixture, which is defined as the first channel from which the ArcPower 160 LT (mk2) will respond to the DMX controller.

IP address - select this menu item to set desired IP address. IP address is the Internet protocol address.The IP uniquely identifies any node (fixture) on a network. There cannot be 2 fixtures with the same IP address on the network!

> **Default Address.** This address is derived from fixture´s MAC address and cannot be changed. Confirm the item **"Set Address"** to select this address.

> **Custom Address.** IP address consists of four decimal numbers, each ranging from 0 to 255, separated by dots, e.g., 172.16.254.1. Each part represents a group of 8 bits (octet) of the address.
> The following items **"IP Adr 1"**, **" IP Adr 2", " IP Adr 3", " IP Adr 4"** allow to set each part (number) of the address. After setting desired IP address, confirm the item **"Set Address"** to save this address.

Network mask - select this menu item to set desired network mask. A network mask is a 32-bit mask used to divide an IP address into subnets and specify the networks available hosts.
The following items **"Net M.1"**, **"Net.M.2", " Net.M.3", " Net.M.4"** serve for seting of each part (number) of the net mask.
After setting desired network mask, confirm the item **"Set Net M."** to save adjusted values.

7.2 Info *(Fixture information)*

Use this menu to read useful information about the fixture.

Software version - select this menu item to read software version of the fixture.

IP Addr - this menu item shows the current IP address.

RDM UID - select this menu item to read the RDM UID.

MAC Addr - select this menu item to read the MAC address.

DMX In - the menu allows to read DMX values of each channel received by the fixture.

Temp - temperature inside the fixture. If the temperature exceeds certain limit, the cooling fan in the fixture will start to run (if the fan mode "Auto" is set).

Power - current input power to connected LED modules.

7.3 Personality

Use this menu to modify the ArcPower 160 LT (mk2) operating behavior.

DMX Preset - Use the menu item to select desired channel mode.
> **Mode 1** - 6 control channels
> **Mode 2** - 3 control channels
> **Mode 3** - 8 control channels
> **Mode 4** - 4 control channels
> **Mode 5** - 12 control channels
> **Mode 6** - 6 control channels
> **Mode 7** - 16 control channels
> **Mode 8** - 8 control channels

DMX input - use the menu item to set ArtNet universe.
> **artNET** - RJ 45 input is used for data receiving
> **Wired DMX** - XLR input is used for data receiving

Ethernet Settings - use the menu to set Ethernet operation
> **Ethernet Mode**
>> **Artnet** - Fixture receives Artnet protocol
>> **gMAI** - Fixture receives MANet I protocol
>> **gMA2** - Fixture receives MANet 2 protocol
>> **sACN** - Fixture receives sACN protocol
>
> **ArtNet Settings** - use the menu item to set parameters for ArtNet operation.
>> **Net** - this option allows to select a network (0-127)
>> **Sub-Net** - this option allows to select a subnet (0-15).
>> **Universe** - this option allows to select an Universe (0-15).
>> ArtNet is a proprietary protocol for transmitting DMX512 (with RDM) over UDP/IP.
>> Up to sixteen DMX512 universes can be accessed through one IP subnet.
>> The Universe is a single DMX 512 frame of 512 channels.
>
> **MANet Settings** - Use this menu to set parameters for MANet operation.
>> **MA Uni** - MANEt universe. The value of this item can be set in range 1-256.
>> **MA. S. ID** - MANet session ID. The value of this item can be set in range 1-32.
>
> **sACN Uni.** - sACN universe. The value of this item can be set in range 1-32000.
> **IGMP rep.** - the item allows you to set "refresh" time (1sec-10sec. or off) for IGMP protocol.

Display Settings - this menu allows to change the display settings.
> **Display Off Timer** - if this item is on, the background of display will be switched off 2 minutes after last pressing any button on the control panel.
> **Display Lightness** - select this menu item to adjust the display intensity (0-100%).
> **Display Contrast**- select this menu item to adjust contrast of the display (0-100%).

Fan Mode - use the menu item to set desired fan mode:
> **Auto** - The fan starts running according to inside temperature of the fixture and connected load.
> **Silent** - The fan starts running immediately after switching the fixture on and runs permanently with min. speed.

DMX Hold - if this item is on, the last received DMX values are held in the fixture in case, that DMX data receiving was interrupted (e.g. disconnected DMX controller). In other words, last colour on LED modules lights until receiving DMX data will be restored.

Default setting - select this option to set fixture personalities to the default (factory) values.

7.4 Manual

Use the menu to control all fixture channels by means of the control panel. List of menu items depends on selected DMX mode (If you want to control "fine" channels of effects, DMX mode 2/4/6/8 has to be selected in the menu DMX Preset (menu Personality)).

"R L 1" - a red LEDs saturation - zone 1

"R L 1 F" - a red LEDs saturation fine - zone 1
"G L 1" - a green LEDs saturation - zone 1
"G L 1 F" -a green LEDs saturation fine - zone 1
"B L 1" - a blue LEDs saturation - zone 1
"B L 1 F" - a blue LEDs saturation fine - zone 1
"V L 1" - a white LEDs saturation - zone 1
"V L 1 F" - a white LEDs saturation fine - zone 1
"R L 2" - a red LEDs saturation - zone 2
"R L 2 F" - a red LEDs saturation fine - zone 2
"G L 2" - a green LEDs saturation - zone 1
"G L 2 F" - a green LEDs saturation fine - zone 2
"B L 2" - a blue LEDs saturation - zone 2
"B L 2 F" - a blue LEDs saturation fine - zone 2
"V L 2" - a white LEDs saturation - zone 2
"V L 2 F" - a white LEDs saturation fine - zone 2

7.5 Test

The test sequence is based on changing colours R-->G-->B-->W in a loop. Every colour will light for 2 seconds.

7.6 Stand Alone

The fixtures on a data link are not connected to the controller but can run pre-set programs which can be different for every fixture.

Auto Run - this function allows you to select the program which will be played after switching the fixture on. Selected program will be played continuously in a loop.

      Off - the option is deactivated.
      Test - the test sequence will run.
      User 1- the user program 1 will run.
      User 2 - the user program 2 will run.

Program Play - By enter to this menu a overview of programs is offered, from which the program to be run can be selected.

      User 1- the user program 1 will run.
      User 2 - the user program 2 will run.

Program Edit - The fixture offers 3 freely editable programs (User 1-User 2) each up to 40 steps.
Every program step includes a step time - it is a total time occupied by the step in the program.
To program.
1. Use the UP/DOWN buttons to select a program you want to edit (User 1 - User 2) and press ENTER button.
2. Use the UP/DOWN buttons to select a desired program step ("Step 01" - "Step 40") and press ENTER.
Now you can browse the following items:
"S. Count" - a total number of program steps (value 1-40). This value should be set before starting programming (e.g. if you want to create program with 10 steps, set S. Count=10).
"R L 1" - a red LEDs saturation - zone 1
"G L 1" - a green LEDs saturation - zone 1
"V L 1" - a white LEDs saturation - zone 1
"R L 2" - a red LEDs saturation - zone 2
"G L 2" - a green LEDs saturation - zone 1
"B L 2" - a blue LEDs saturation - zone 2
"V L 2" - a white LEDs saturation - zone 2
"S.tim." - step time, value (0-25.5) seconds
"Copy To Next". – this item duplicates the current prog. step to the next prog. step.
3. After having set all channels in the current program step, press the ESCAPE button to go by one menu level back and select another program step.

8. Special Settings

Software Update - Using this function you can update software in the fixture.
The following are required in order to update software:
- PC running Windows /7/8/10 or Linux
- DMX Software Uploader
- Flash cable RS232/DMX P/N.13050624 (if you want to use a serial port of PC)
- Robe Universal Interface (if you want to use an USB port of PC)

Note: Software update should be executed by a qualified person. If you lack qualification, do not attempt the update yourself and ask for help from your Anolis distributor.
DMX address, user programs and all items in the menu "PerS" will be set to their default (factory) values.

To update software in the fixture:
I. Installation of the DMX Software Uploader.
       1. DMX Software Uploader program is available from the Anolis web site at WWW.anolis.cz.
       2. Make a new directory (e.g. Anolis Uploader) on your hard disk and download the software to it.
       3. Unpack the program to the directory.
II. Fixture software updating.
       1.Determine which of your ports is available on your PC and connect it:
       - with the DMX input of the fixture if you are using the flash cable RS232/DMX
       - with the DMX output of the Robe Universal Interface if you are using the USB cable.
       Disconnect the fixture from the other fixtures in the DMX chain. Turn both the computer and
       the fixture on. Make sure the lamp is switched off (only if the fixture involves a lamp).
       2. Switch the fixture to the updating mode by selecting the "Software Update" item and
        then selecting "Yes".
       Note: If you do not want to continue in software update, you have to switch the fixture off and on
       to escape from this menu.
       We recommend canceling all running programs before starting the Software Uploader.
       3. Run the Software Uploader program. Select desired COM and then click on the Connect button.
       (Select COM if the serial port is used or Robe Universal Interface if the USB port is used).
       If the connection is OK, click on the "Start Uploading button" to start uploading. It will take several
       minutes to perform software update.
       If the option "Incremental Update" is not checked, all processors will be updated (including
       processors with the same software version).
       If you wish to update only later versions of processors, check the "Incremental Update box".
       Avoid interrupting the process. Update status is being displayed in the Info Box window.
       When the update is finished, the line with the text "The fixture is successfully updated" will appear in
        this window and the fixture will reset with the new software.
Note: In case upload process is interrupted (e.g. power loss), the fixture stays in "Updating mode" and you will have to repeat the software update again.

9.Technical Specifications

Power supply
Input voltage: 100-240 V AC, 50-60 Hz
Fuse:T 3.15 A
Max. power consumption: 180W

DMX IN/OUT
Locking 5-pin XLR connectors (male/female)

Ethernet
RJ45

LED Output
Max. output voltage: 24V DC
Number of LED output zones: 2
Max.load per zone: 30W per colour channel (each zone contains four colour channels: R,G,B,W)
Over-load protection for each colour channel
Connector: Phoenix Contact IC 2,5/6-G-5,08

Maximum cable length between LED zone output and connected LED module
20 metres

DMX channels
Mode 1: 6 channels
Mode 2: 3 channels
Mode 3: 8 channels
Mode 4: 4 channels
Mode 5: 12 channels
Mode 6: 6 channels
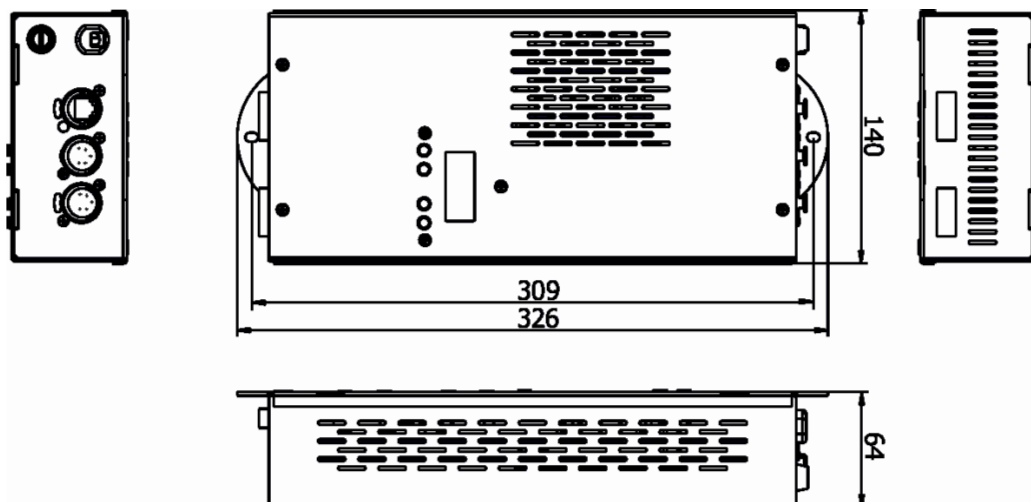Mode 7: 16 channels
Mode 8: 8 channels

Control and programming
Protocol: USITT DMX-512, RDM,ArtNet, MaNet I/II, sACN
Four DMX modes for RGB light source
Four DMX modes for RGBW light source
2 user programs up to 40 steps each
Manual control of all DMX channels via 2-row LCD display & 4 buttons

Operating temperature range
-10° / +40°C (+14°F / +104°F)

Dimensions(mm)

Weight
1.7 kg

Protection factor
IP20

Accessories
2 x Screw terminal board IC 2,5/6-ST-5,08 (Phoenix contact)

10. Replacing the fuse

1.Before replacing the fuse, disconnect the ArcPower 160 LT (mk2) from power!
2.Unscrew the fuse holder on the rear side of the ArcPower 160 LT (mk2) with a fitting screwdriver from the housing (anti-clockwise).
3.Remove the old fuse from the fuse holder.
4.Install the new fuse in the fuse holder.
5.Replace the fuse holder in the housing and fix it.