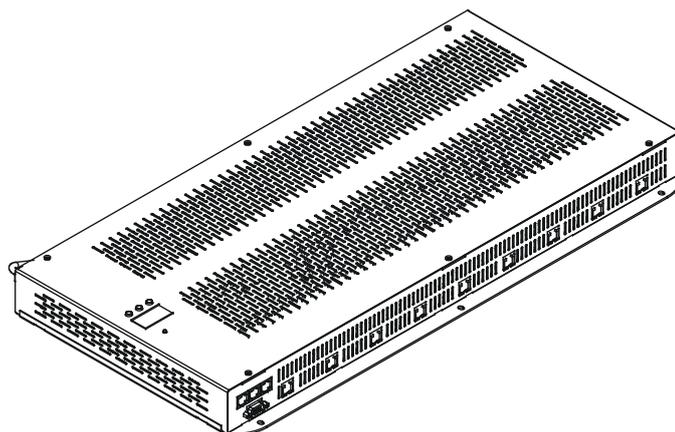




# ArcPower 360



**USER MANUAL**



# ArcPower 360

## Table of contents

<b>1. Safety instructions</b> .....	<b>3</b>
<b>2. Operating determinations</b> .....	<b>3</b>
<b>3. Description of the ArcPower 360</b> .....	<b>4</b>
<b>4. Installation</b> .....	<b>4</b>
4.1. Connection to the mains .....	4
4.2. Mounting the ArcPower 360 .....	5
4.3. Connection cables.....	5
<b>5. Installing instructions</b> .....	<b>6</b>
5.1. DMX operating .....	6
5.2. Master-slave operating.....	8
5.3. Operating via Dynet protocol.....	9
<b>6. ArcPower 360 - Control menu map</b> .....	<b>11</b>
<b>7. ArcPower 360-DMX protocol</b> .....	<b>12</b>
<b>8. Control board</b> .....	<b>15</b>
8.1 Addressing the ArcPower 360 .....	15
8.2 Program running .....	15
8.3 Manual mode .....	16
8.4 Test sequences.....	17
8.5 Stand-alone mode.....	17
8.6 Special functions .....	17
<b>9. Control of the ArcPower 360 via RS-232</b> .....	<b>19</b>
9.1 Wiring an RS-232 serial port .....	19
9.2 Zone number .....	19
9.3 Setting a serial port of PC .....	19
9.4 Zone commands .....	19
<b>10. Technical Specifications:</b> .....	<b>21</b>
<b>11. Replacing the fuse</b> .....	<b>22</b>

**CAUTION!**  
***Unplug mains lead before opening the housing!***

**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 qualified
- 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 warning notes 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.

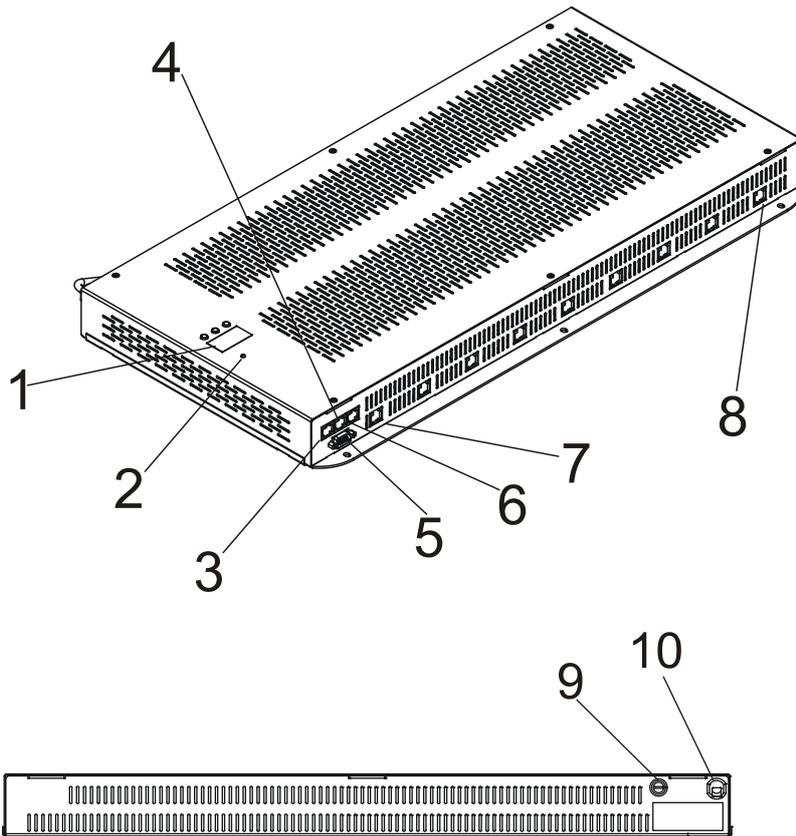
The maximum ambient temperature 40° C must never be exceeded.

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 360

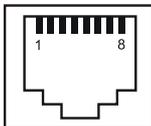


- 1 - Control board Indicator
- 2 - Power indicator
- 3 - DMX Output
- 4 - DMX Input
- 5 - RS 232 Output
- 6 - LED Zone 1 output
- 7 - LED Zone 2 output
- 8 - LED Zone 10 output
- 9 - Fuse holder
- 10 - Power Cord



#### RJ45 socket

Front view of the socket:

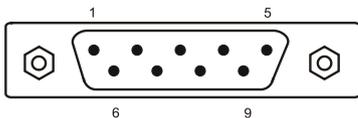


#### DMX Input

- |                             |                             |
|-----------------------------|-----------------------------|
| <b>Pin 1:</b> Not connected | <b>Pin 5:</b> Not connected |
| <b>Pin 2:</b> +12V          | <b>Pin 6:</b> Data +        |
| <b>Pin 3:</b> Not connected | <b>Pin 7:</b> Data -        |
| <b>Pin 4:</b> Not connected | <b>Pin 8:</b> GND           |

#### RS232 Output

Canon 9-pin male  
Front view of the socket:



- Pin 1:** Not connected
- Pin 2:** Received Data
- Pin 3:** Transmitted Data
- Pin 4:**
- Pin 5:** Signal Ground
- Pin 6:**
- Pin 7:**
- Pin 8:**
- Pin 9:** Not connected

#### LED zone Output

- |                           |                           |
|---------------------------|---------------------------|
| <b>Pin 1:</b> Red LED +   | <b>Pin 5:</b> Red LED -   |
| <b>Pin 2:</b> Green LED + | <b>Pin 6:</b> Green LED - |
| <b>Pin 3:</b> Blue LED +  | <b>Pin 7:</b> Blue LED -  |
| <b>Pin 4:</b> White LED + | <b>Pin 8:</b> White LED - |

#### DMX Output

- |                             |                             |
|-----------------------------|-----------------------------|
| <b>Pin 1:</b> Not connected | <b>Pin 5:</b> Not connected |
| <b>Pin 2:</b> Not connected | <b>Pin 6:</b> Data +        |
| <b>Pin 3:</b> Not connected | <b>Pin 7:</b> Data -        |
| <b>Pin 4:</b> Not connected | <b>Pin 8:</b> GND           |

## 4. Installation

### 4.1. Connection to the mains

The ArcPower 360 is equipped with auto-switching power supply that automatically adjusts to any 50/60Hz AC power source from 100-240 Volts.

Carefully prepare the end of the the supply cord and fit a suitable plug. A 3-prong grounding-type plug must be

installed following the manufacturer's instructions. The earth has to be connected!

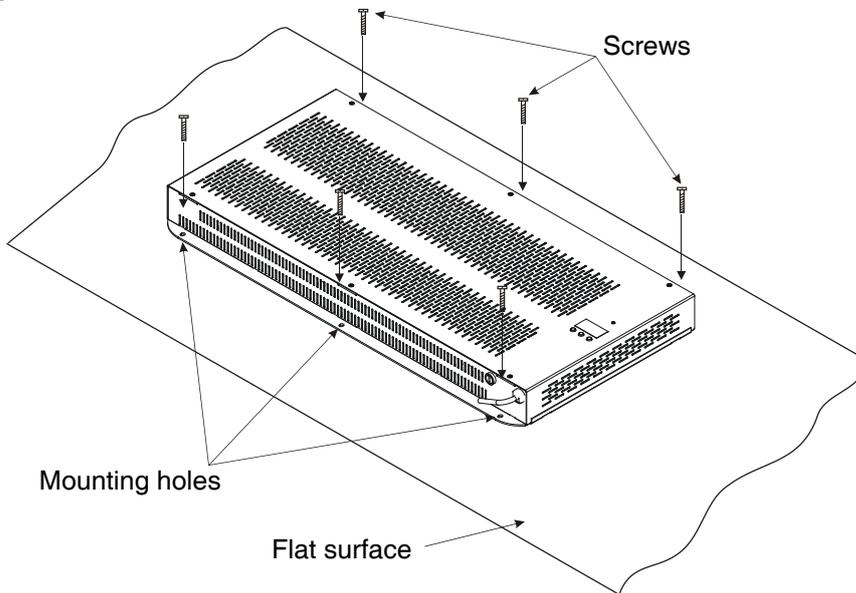
Cord plug connections:

Cable	Pin	International
Brown	Live	L
Light blue	Neutral	N
Yellow/Green	Earth	

**This device falls under protection class I. Therefore the ArcPower 360 has to be connected to a mains socket outlet with a protective earthing connection.**

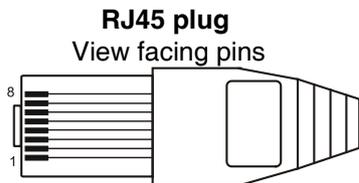
### 4.2. Mounting the ArcPower 360

The ArcPower 360 should be placed on a non-flammable flat surface in any orientation and fixed by the 6 screws. There are 6 mounting holes of diameter 5 mm in housing of the driver. Ensure that installation place is enough ventilated.



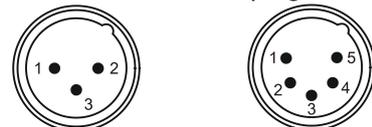
### 4.3. Connection cables

1. The adapter cable RJ45/XLR connects the ArcPower 360 to the DMX controller. If your DMX controller has RJ45 socket for DMX output, use RJ45 patch cable for connection with the ArcPower 360.



- Pin 1: Not used
- Pin 2: Not used
- Pin 3: Not used
- Pin 4: Not used
- Pin 5: Not used
- Pin 6: Data +
- Pin 7: Data -
- Pin 8: GND

**DMX 512 XLR plug (male)**  
Front view of the plug



- Pin 1: GND
- Pin 2: Data -
- Pin 3: Data +
- Pin 4: Not used
- Pin 5: Not used

2.RJ45 patch cables category 5 that connect the ArcPower 360 each other are wired 1:1,that is,pins with the same numbers are connected together.



Pin 1: Not used  
 Pin 2: Not used  
 Pin 3: Not used  
 Pin 4: Not used  
 Pin 5: Not used  
 Pin 6: Data +  
 Pin 7: Data -  
 Pin 8: GND

Pin 1: Not used  
 Pin 2: Not used  
 Pin 3: Not used  
 Pin 4: Not used  
 Pin 5: Not used  
 Pin 6: Data +  
 Pin 7: Data -  
 Pin 8: GND

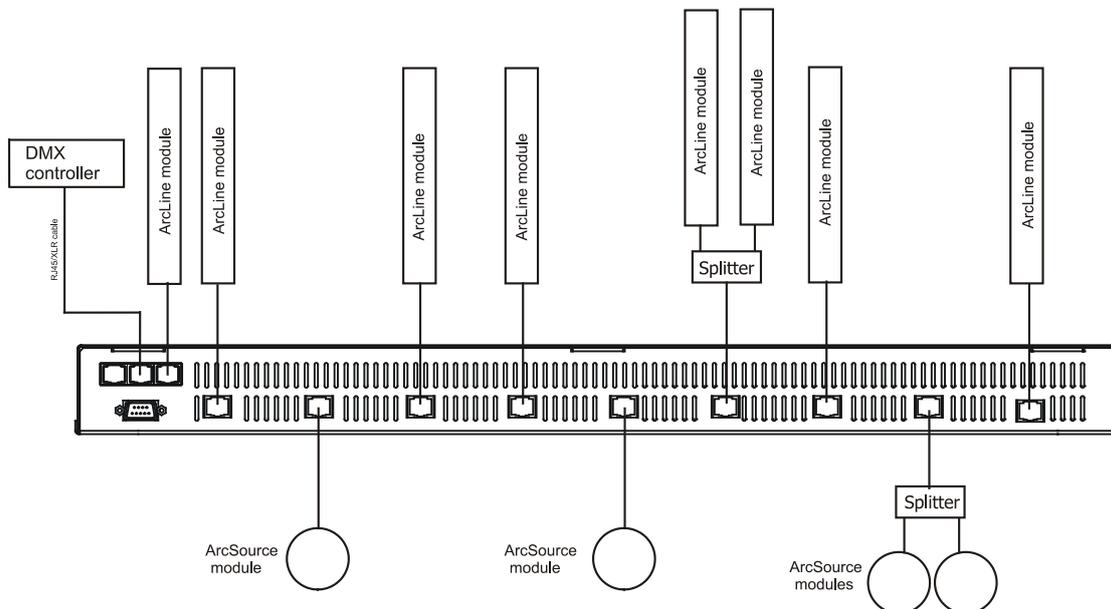
## 5.Installing instructions.

### 5.1.DMX operating

- 1.Unplug from the mains before installation.
- 2.Connect the LED modules to the fixture.
- 3.Connect the DMX controller to the fixture
- 4.Connect the fixture to the mains
- 5.Set the DMX address on the control board of the fixture (see chapter "Control board").

**Warning!**  
**Accidental connection DMX 512 Input/Output to non-DMX 512 device (e.g.Ethernet network Hub) can damage the ArcPower 360.**  
**Maximum total cable length between one LED zone output of the Arcpower 360 and all its connected LED modules is 80 metres.**

### Single ArcPower 360 installation:

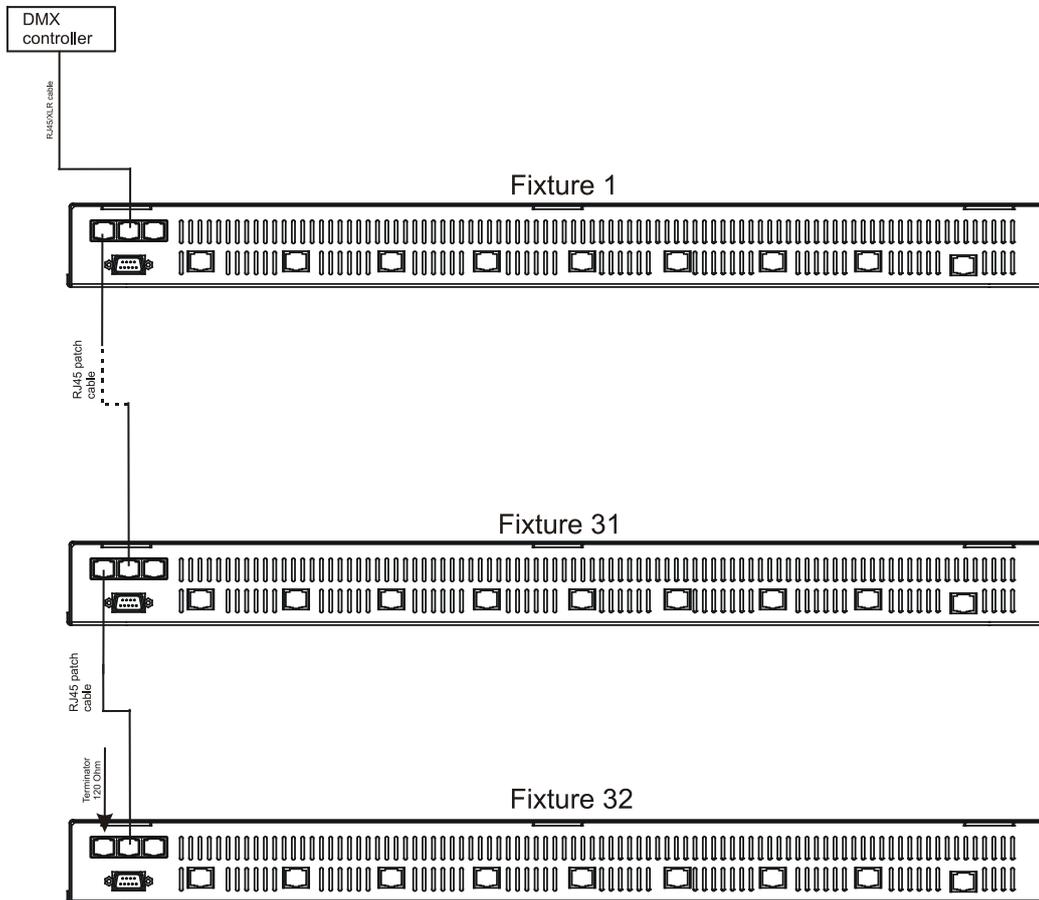


**Multiple ArcPower 360 installation:**

Connect the DMX output of the first ArcPower 360 with the DMX input of the next ArcPower 360. Always connect one output with the input of the next ArcPower 360 until all fixtures are connected. In this way, up to 32 fixtures can be chained together.

At the last ArcPower 360 the data link has to be terminated with a terminator. A termination plug is simply a RJ45 connector with a 120 Ω resistor between pins Data (-) and Data (+). Plug terminator in the DMX output of the last ArcPower 360.

Maximum number of LEDs connected to the one zone of the ArcPower 360 is 36 in RGB mode (12 Leds per colour) and 42 in RGBW mode.



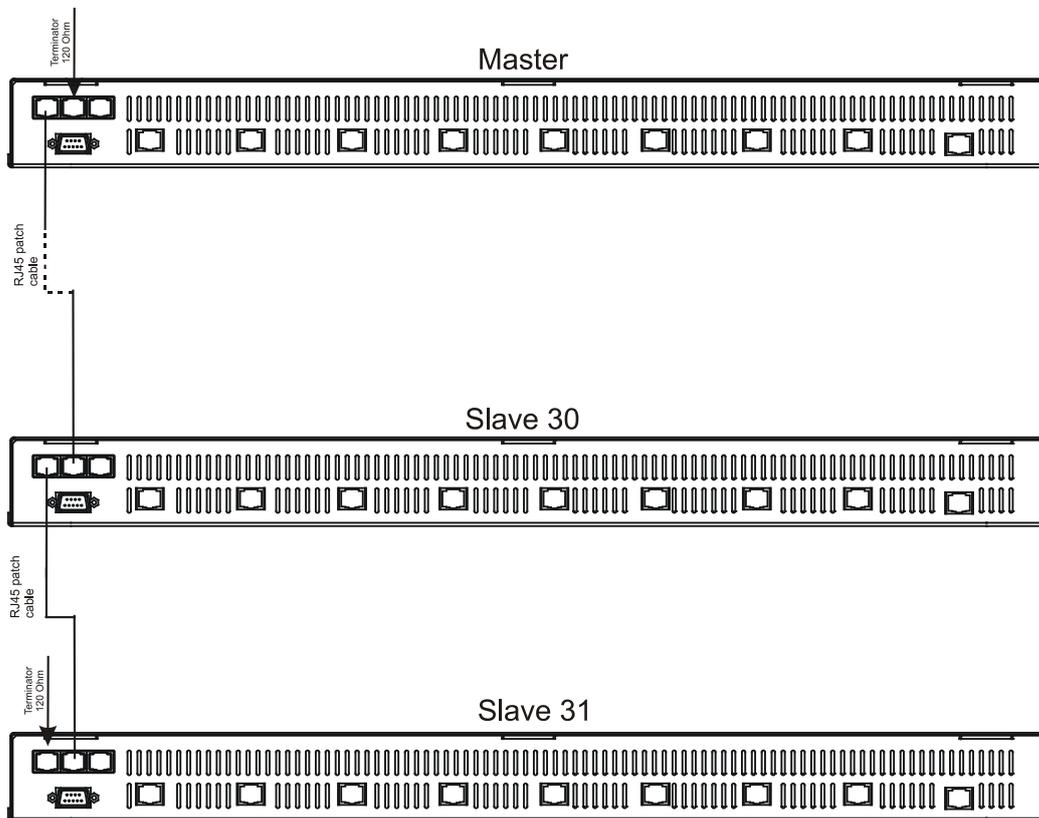
Maximum possible number of LED modules connected to the one zone of the ArcPower 360:

Model	total LEDs	Red LEDs	Green LEDs	Blue LEDs	White LEDs	Max.number of connected modules
ArcLine 12 RGB	12	4	4	4	-	3
ArcLine 24 RGB	24	8	8	8	-	1
ArcLine 36 RGB	36	12	12	12	-	1
ArcLine Optic 12 RGB	12	4	4	4	-	3
ArcLine Optic 24 RGB	24	8	8	8	-	1
ArcLine Optic 36 RGB	36	12	12	12	-	1
ArcSource 3 RGB	3	1	1	1	-	12
ArcSource 6 RGB	6	2	2	2	-	6
ArcSource 12 RGB	12	4	4	4	-	3
ArcSource 7 RGBW	7	2	2	2	1	6

**Note: You cannot combine RGB and RGBW modules (e.g. ArcSource 6 RGB and ArcSource 7 RGBW) each other as white LEDs will not light.**

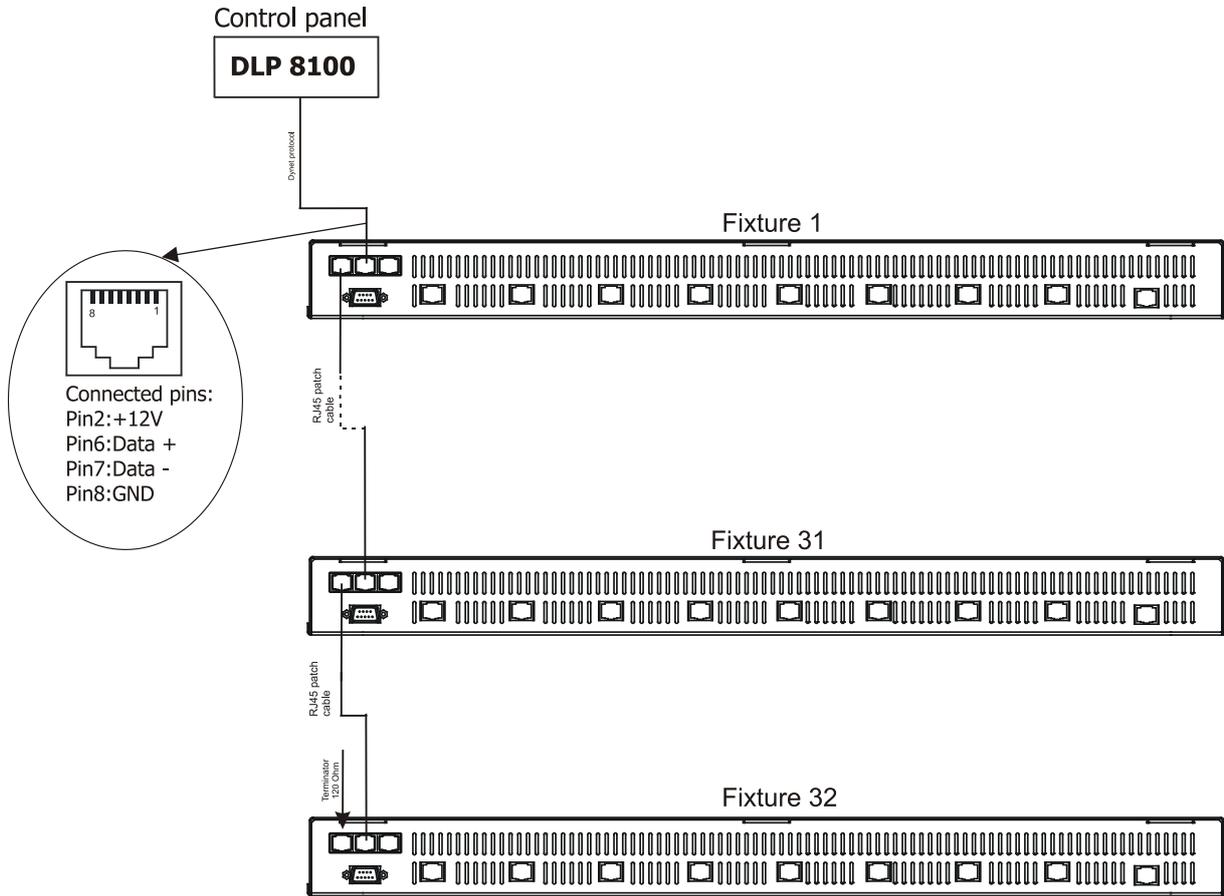
## 5.2. Master-slave operating

1. Unplug from the mains before installation.
2. Connect the LED modules to the fixtures.
3. Connect the DMX output of the master fixture in the data-chain with the DMX input of the first slave. Always connect output with the input of the next slave until all slaves are connected. Up to 32 fixtures can be connected in master/slave chain
4. Insert the termination plug (with 120 Ohm) into DMX input of the master fixture and into the DMX output of the last slave fixture in the link in order to ensure proper transmission on the data link.
5. Connect the fixtures to the mains.
6. See chapter "Stand-alone mode" in order to set the fixture as a master or slave.



### 5.3. Operating via DyNet protocol

1. Unplug from the mains before installation.
2. Connect LED modules to the fixtures.
3. Connect first fixture to the control panel which uses DyNet protocol (e.g. DLP 8100)
3. Connect the DMX output of the first fixture in a data link with the DMX input of the second fixture. Always connect output with the input of the next fixture until all fixtures are connected. Up to 32 fixtures can be connected in data chain.
4. Insert the termination plug (with 120 Ohm) into DMX output of the last fixture in order to ensure proper transmission on the data link.
5. Connect fixtures to the mains
6. Select the DyNet protocol on all fixtures (menu "SPE"----> "Prt" ----> "dYn").



A description of each byte in DyNet protocol is the following:

Byte 0: 1C - hexadecimal Logical Message (fixed value)  
Byte 1: 01 - Area  
Byte 2: 00 – Channel level  
Byte 3: 80 - Channel  
Byte 4: ff – Channel Offset  
Byte 5: 00 – Fade Rate  
Byte 6: FF (fixed value)  
Byte 7: 1C Checksum

**Area** - (0 to 255), as set on the Arcpower to give a unique address for each Arcpower unit (i.e. DMX base address)

**Channel Level** - (0 to 255), level - 01=100%, FF=0%

**Channel** - (80 to 83), 80= channel 1, 81= channel 2, 82= channel 3, 83= channel 4, (see Channel Offset if more than 4 channels)

**Channel Offset** - (0-255), default (FF)- channel offset in blocks of 4: (FF = CH 1-4, 00 = CH 5-8, 01 = CH 9-12, etc up to 3E = CH 253-256 )

**Fade Rate** - (0-255), fade rate with 1 second resolution (0= 0 seconds, 255= 255 seconds)

**Checksum** - (0-255), checksum Byte - used to ensure the integrity of the packet.  
Negative two's compliment of the preceding 7 bytes.

Example 1:

0x1C,0x10,0x00,0x80,0xff,0x05,0xff,0x52

This would control channel 1 (i.e. Red) of Arcpower unit, address 16 to a Level of 100% with a fade of 5 seconds.

Example 2:

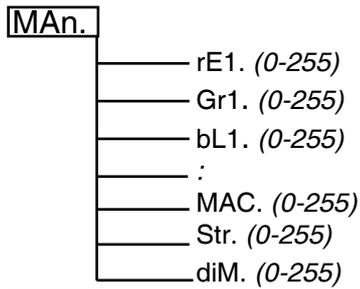
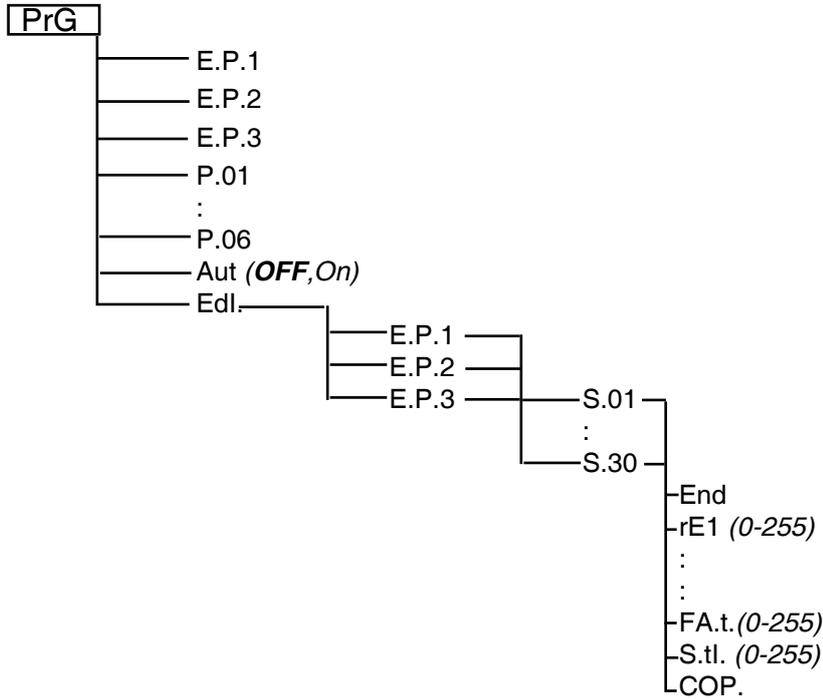
0x1C,0x05,0xCC,0x82,0xff,0x0A,0xff,0x52

This would control channel 3 (i.e. Blue) of Arcpower unit, address 5 to a level of 20% with a fade of 10 seconds.

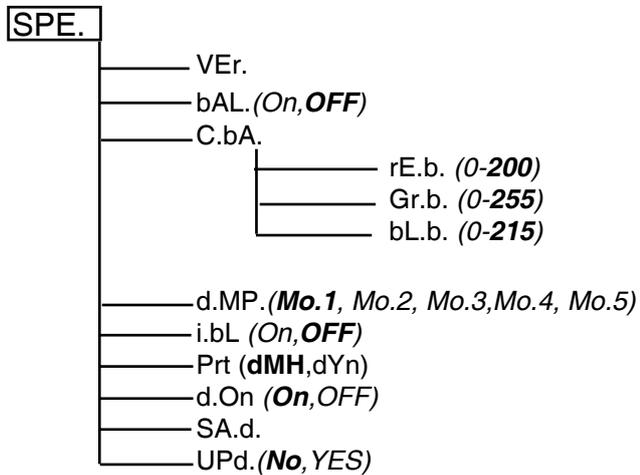
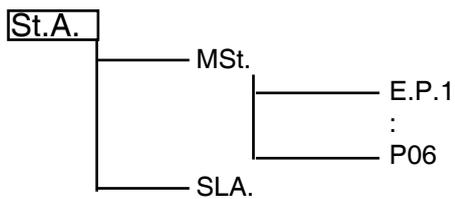
## 6.ArcPower 360 - Control menu map

Default settings=**Bold print**

**001** (001-470)



**tSt**



## 7.ArcPower 360-DMX protocol

Version 2.0 (software version 5.1 and higher)

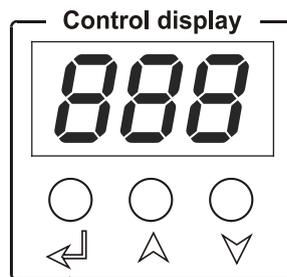
Mode/Channel					Value	Function	Type of control
1	2	3	4	5			
<b>ZONE 1</b>							
1	1	1	1	1	0-255	<b>Red LED 1</b> Red LED saturation control (0-100%)	proportional
2	2	2	2	2	0-255	<b>Green LED 1</b> Green LED saturation control (0-100%)	proportional
3	3	3	3	3	0-255	<b>Blue LED 1</b> Blue LED saturation control (0-100%)	proportional
-	4	4	-	4	0-255	<b>White LED 1</b> White LED saturation control (0-100%)	proportional
<b>ZONE 2</b>							
4	5	5	1	1	0-255	<b>Red LED 2</b> Red LED saturation control (0-100%)	proportional
5	6	6	2	2	0-255	<b>Green LED 2</b> Green LED saturation control (0-100%)	proportional
6	7	7	3	3	0-255	<b>Blue LED 2</b> Blue LED saturation control (0-100%)	proportional
-	8	8	-	4	0-255	<b>White LED 2</b> White LED saturation control (0-100%)	proportional
<b>ZONE 3</b>							
7	9	9	1	1	0-255	<b>Red LED 3</b> Red LED saturation control (0-100%)	proportional
8	10	10	2	2	0-255	<b>Green LED 3</b> Green LED saturation control (0-100%)	proportional
9	11	11	3	3	0-255	<b>Blue LED 3</b> Blue LED saturation control (0-100%)	proportional
-	12	12	-	4	0-255	<b>White LED 3</b> White LED saturation control (0-100%)	proportional
<b>ZONE 4</b>							
10	13	13	1	1	0-255	<b>Red LED 4</b> Red LED saturation control (0-100%)	proportional
11	14	14	2	2	0-255	<b>Green LED 4</b> Green LED saturation control (0-100%)	proportional
12	15	15	3	3	0-255	<b>Blue LED 4</b> Blue LED saturation control (0-100%)	proportional
-	16	16	-	4	0-255	<b>White LED 4</b> White LED saturation control (0-100%)	proportional
<b>ZONE 5</b>							
13	17	17	1	1	0-255	<b>Red LED 5</b> Red LED saturation control (0-100%)	proportional
14	18	18	2	2	0-255	<b>Green LED 5</b> Green LED saturation control (0-100%)	proportional
15	19	19	3	3	0-255	<b>Blue LED 5</b> Blue LED saturation control (0-100%)	proportional
-	20	20	-	4	0-255	<b>White LED 5</b> White LED saturation control (0-100%)	proportional
<b>ZONE 6</b>							
16	21	21	1	1	0-255	<b>Red LED 6</b> Red LED saturation control (0-100%)	proportional
17	22	22	2	2	0-255	<b>Green LED 6</b> Green LED saturation control (0-100%)	proportional
18	23	23	3	3	0-255	<b>Blue LED 6</b> Blue LED saturation control (0-100%)	proportional
-	24	24	-	4	0-255	<b>White LED 6</b> White LED saturation control (0-100%)	proportional

Mode/Channel					Value	Function	Type of control
1	2	3	4	5			
<b>ZONE 7</b>							
19	25	25	1	1	0-255	<b>Red LED 7</b> Red LED saturation control (0-100%)	proportional
20	26	26	2	2	0-255	<b>Green LED 7</b> Green LED saturation control (0-100%)	proportional
21	27	27	3	3	0-255	<b>Blue LED 7</b> Blue LED saturation control (0-100%)	proportional
	28	28	-	4	0-255	<b>White LED 7</b> White LED saturation control (0-100%)	proportional
<b>ZONE 8</b>							
22	29	29	1	1	0-255	<b>Red LED 8</b> Red LED saturation control (0-100%)	proportional
23	30	30	2	2	0-255	<b>Green LED 8</b> Green LED saturation control (0-100%)	proportional
24	31	31	3	3	0-255	<b>Blue LED 8</b> Blue LED saturation control (0-100%)	proportional
-	32	32	-	4	0-255	<b>White LED 8</b> White LED saturation control (0-100%)	proportional
<b>ZONE 9</b>							
25	33	33	1	1	0-255	<b>Red LED 9</b> Red LED saturation control (0-100%)	proportional
26	34	34	2	2	0-255	<b>Green LED 9</b> Green LED saturation control (0-100%)	proportional
27	35	35	3	3	0-255	<b>Blue LED 9</b> Blue LED saturation control (0-100%)	proportional
-	36	36	-	4	0-255	<b>White LED 9</b> White LED saturation control (0-100%)	proportional
<b>ZONE 10</b>							
28	37	37	1	1	0-255	<b>Red LED 10</b> Red LED saturation control (0-100%)	proportional
29	38	38	2	2	0-255	<b>Green LED 10</b> Green LED saturation control (0-100%)	proportional
30	39	39	3	3	0-255	<b>Blue LED 10</b> Blue LED saturation control (0-100%)	proportional
-	40	40	-	4	0-255	<b>White LED 10</b> White LED saturation control (0-100%)	proportional
<b>Common channels for all Zones</b>							
						<b>Macro selection</b>	
					0-7	No function	step
					8-15	Macro 1	step
					16-23	Macro 2	step
					24-31	Macro 3	step
					32-39	Macro 4	step
					40-47	Macro 5	step
					48-55	Macro 6	step
					56-63	Macro 7	step
					64-71	Macro 8	step
					72-79	Macro 9	step
					80-87	Macro 10	step
					88-95	Macro 11	step
					96-103	Macro 12	step
					104-111	Macro 13	step
					112-119	Macro 14	step
					120-127	Macro 15	step
					128-135	Macro 16	step
					136-143	Macro 17	step
					144-151	Macro 18	step
					152-159	Macro 19	step
					160-167	Macro 20	step
					168-175	Macro 21	step
					176-183	Macro 22	step

Mode/Channel					Value	Function	Type of control
1	2	3		4			
-	-	41		-	184-191 192-199 200-207 208-215 216-223 224-231 232-239 240-247 248-255	Macro 23 Macro 24 Macro 25 Macro 26 Macro 27 Macro 28 Macro 29 Macro 30 Rainbow effect with variable speed	step step step step step step step step proportional
-	-	42		-	0-31 32-63 64-95 96-127 128-143 144-159 160-191 192-223 224-255	<b>Shutter/Strobe</b> Shutter closed Shutter open Strobe-effect from slow to fast Shutter open Opening pulses in sequences from slow to fast Closing pulses in sequences from fast to slow Shutter open Random strobe-effects from slow to fast Shutter open	step step proportional step proportional proportional step proportional step
-	-	43	4	5	0-255	<b>Dimmer</b> Dimmer intensity from 0% to 100%	proportional

## 8. Control board

The control panel situated on the top cover of the ArcPower 360 allows DMX addressing, calling Built-in programs and setting the fixture behaviour



### 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. In order to leave the menu without saving value, press [UP] and [DOWN ] at the same time.

After switching on the ArcPower 360 ,the display shows the initial DMX address:



Use [UP],[DOWN] to browse through the menu. To select a function or submenu,press [ENTER].

### 8.1 Addressing the ArcPower 360



The fixture can be operated in the two modes:**DMX mode**-fixture is controlled via DMX 512 by an external DMX controller

**Stand-alone mode** - fixture uses Built-in programs and is able to control other fixtures in the master/slave chain.

See the chapter "Stand-alone mode" for detail description.

For DMX mode, it is important to define the starting DMX address from which the ArcPower 360 will respond to the DMX controller

#### Setting the DMX start channel for DMX operating:

1. Connect ArcPower 360 to the mains.
2. Browse through the menu by pressing the [UP] and [DOWN] buttons until the display shows current address "001".Confirm by pressing [ENTER] button and "001" will start to flash frequently.
3. Use the [UP] and [Down] buttons to select the desired address.
4. Confirm by pressing [ENTER].

After having addressed ArcPower 360, you may now start operating ArcPower 360 via your DMX controller.

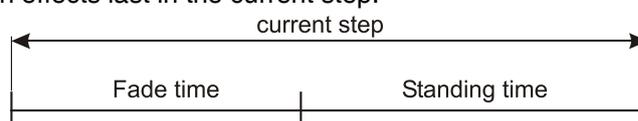
### 8.2 Program running



By entering this menu a complete overview of all programs is offered,from which the program to be run can be selected by pressing [ENTER].Selected program runs in a loop.The fixture includes 6 built-in programs (P.01-P.6) and 3 free editable programs (E.P.1-E.P.3),each up to 30 steps.

If item "Aut" is On,the fixture in DMX mode will remember last running program and this program will run after switching on the fixture.

Each program step has a fade time - the time during which effects go to the current step and a Standing time-the time,during which effects last in the current step.



Programming procedure:

1. Enter "Edl." menu
2. Press [UP] or [DOWN] to select the desired program which you wish to edit and press [ENTER].
3. Press [UP] or [DOWN] to select the desired program step ("S.01" - "S.30") and press [ENTER].
4. Press [UP] or [DOWN] to select the desired item and press [ENTER]-button. Now you can edit by using [UP] or [DOWN] buttons the DMX values selected item (the list of items depends on selected DMX mode):

"End" - a total number of the program steps (value 1-30). This value you must set before start programming (e.g. if you want to create program with 10 steps, set "End"=10).

"rE1" - a red LED 1 saturation, value 0-255 ..... "r10" - a red LED 10 saturation, value 0-255  
 "Gr1" - a green LED 1 saturation, value 0-255 ..... "G10" - a green LED 10 saturation, value 0-255  
 "bL1" - a blue LED 1 saturation, value 0-255 ..... "b10" - a blue LED 10 saturation, value 0-255  
 "Vh1" - a white LED 1 saturation, value 0-255 ..... "V10" - a white LED 10 saturation, value 0-255

**Following items are common for all zones:**

- "MAC" - a macro selection, value 0-255
- "Str" - a strobe, value 0-255
- "dim" - a dimmer, value 0-255
- "FA.t." - fade time, value 0-255\*
- "S.tl." - standing time, value 0-255\*
- "COP." - copying the current prog. step to the next prog. step.  
 Press [ENTER]-button to confirm adjusted value.

5. Repeat steps 3 and 4 for next prog. step. If you want to copy current program step to the next prog. step, select option "COP." and confirm it by pressing [ENTER].

\*Both Fade time and Standing time use the same conversion table in order to convert DMX value to the time value:

DMX	Time [sec.]	DMX	Time [min.]						
1	0.1	50	4.2	105	18.4	160	42.7	215	77
2	0.4	55	5	110	20.2	165	45.4	220	80.7
5	2.5	60	6	115	22	170	48.2	225	84.4
10	10	65	7	120	24	175	51	230	88.2
15	22.5	70	8.2	125	26	180	54	235	92
20	40	75	9.4	130	28.2	185	57	240	96
25	62.5	80	10.7	135	30.4	190	60.2	245	100
30	90	85	12	140	32.7	195	63.4	250	104
35	122.5	90	13.5	145	35	200	66.7	255	108
40	160	95	15	150	37.5	205	70		
45	202.5	100	16.7	155	40	210	73.5		

Exact expression of the time value follows the formula: time[sec.]=(DMX value)<sup>2</sup>/10.

### 8.3 Manual mode



This menu gives access to the control of the fixture channels by means of the control buttons. Use [UP] and [DOWN] buttons until the display shows "MAN." menu. Press [ENTER] button and by using [UP] and [DOWN] buttons select desired effect, press [ENTER] and and by using [UP] and [DOWN] buttons adjust desired DMX value for selected effect. Confirm by [ENTER].

"rE1" - a red LED 1 saturation, value 0-255 ..... "r10" - a red LED 10 saturation, value 0-255  
 "Gr1" - a green LED 1 saturation, value 0-255 ..... "G10" - a green LED 10 saturation, value 0-255  
 "bL1" - a blue LED 1 saturation, value 0-255 ..... "b10" - a blue LED 10 saturation, value 0-255  
 "Vh1" - a white LED 1 saturation, value 0-255 ..... "V10" - a white LED 10 saturation, value 0-255

"MAC" - a macro selection, value 0-255  
 "Str." - a strobe, value 0-255  
 "dim." - a dimmer, value 0-255

## 8.4 Test sequences

**TST**

Use the item to run a special demo-test sequences without an external controller, which will show you some possibilities of using the fixture.

## 8.5 Stand-alone mode

**SLA**

Select this menu to set fixture behaviour in stand-alone mode without an external controller.

Synchronous operation of multiple fixtures requires that they must be connected on a data link and one of them is set as a master ("MSt") and the rest as the slaves ("SLA"). Only one fixture can be set as the master. The slaves mimic the behavior of the master. Effect actions are triggered by an internal timer of the master fixture.

**Important!:** Disconnect the fixtures from the DMX controller before master/slave operating, otherwise data collisions can occur and the fixtures will not work properly!

**MSt.** --- **Master.** Enter this menu if you want to set the the fixture as a master. Use [UP] and [DOWN] buttons to select desired program and press [ENTER] to confirm selection.

**SLA.** --- **Slave.** Enter this menu if you want to set the the fixture as a slave.

**To run a master/slave operation, switch on all drivers at the same time or switch on the slaves as first and then the master fixture.**

The master fixture starts simultaneous program start in the other slave fixtures. All fixtures are synchronized in every prog.steps. The fixtures run their programs repeatedly (e.g. if master runs its program "P05", all slaves will be executed program "P05" too).

**Note:** If the master runs its editable program ("EP1, EP2 or EP3"), all slaves will execute their own editable programs ("EP1, EP2 or EP3") according the master, but both fade time ("FA.t.") and standing time ("S.tl.") for each step will be taken from the master's step (slaves' times are eliminated in each step). The same rule is for the master dimmer channel concerning the slaves.

## 8.6 Special functions

**SPE**

Use this menu for special services.

**Ver.** --- **Software Version.** Select this function to read the number of the fixture software.

**bAL.** --- **Balance.** Select this function to enable (On) or disable (OFF) the white balance which is set in "White colour balance" menu below. If this function is set OFF, ArcPower 360 will use maximum value (255) of saturation for red, green and blue channel.

**C.bA.** --- **White colour balance.** Using this menu you can set white balance:

1. Browse through the menu by pressing the [UP] and [DOWN] buttons until the display shows "C.bA." menu. Press [ENTER] button and "rE.b." will appear on the display.
2. Press [ENTER] button again and use [UP] and [DOWN] buttons to adjust the new maximum value required for the red channel. Confirm your choice by pressing [ENTER]. Use the [UP] and [Down] buttons to select next colour.
3. Repeat step 2 for green channel "Gr.b." and for blue channel "bL.b".

**d.MP.** --- **DMX presetting.** The function makes possible to select from 3 DMX modes. Use [UP] and [DOWN] buttons to select desired channel mode ("Mo.1-4") and press [ENTER] to confirm selection.

**i.bL.** --- **Initial blink.** If this function is on, ArcPower 360 makes auto-calibration (All LEDs light on 100% for short time) after switching it on. If this function is set off, you have to set manually every colour on max. brightness after switching on the driver before starting regular operating. This action should last min. one second. In this moment, the ArcPower 360 finds out the load connected to its LED output and makes auto-calibration.

**Prt --- Protocol selection** - Selects a required communication protocol.

dMH - the fixture will communicate using DMX 512 signal.

dYn - the fixture will communicate using the DyNet protocol.

**d.On. --- Display permanent on** - If this item is set On, the fixture's display lights permanent. If this item is OFF, the display will be extinguished 2 minutes after last button pressing.

**SA.d. --- Safe as default** - If you press this item, the current DMX value for each effect will be saved to driver's memory. These values will be used in the following cases:

- break of receiving DMX
- after switching the driver on without receiving DMX

**UPd. --- Software update** - Using this function you can update software in the fixture via PC and serial link.

The following are required in order to update software:

- PC running Windows 95/98/2000/XP or Linux
- DMX Software Uploader
- Flash cable RS232/DMX (No.13050624)

**Note1:** Software update should execute a qualified person. If you lack qualification, do not attempt the update yourself and ask for help your ANOLIS distributor.

**Note 2:** DMX address, programs and all settings will be set to their default values.

### **To update software in the fixture:**

#### **1. Installation of DMX Software Uploader:**

1. DMX Software Uploader program is available from the ANOLIS web site at [WWW.anolis.cz](http://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 from the archives. Program file has name: DSU\_name of corresponding fixture\_SoftwareID. SoftwareID describes the versions of fixture software included in DMX Software Uploader. Higher number means later software versions.

#### **2. Fixture software updating:**

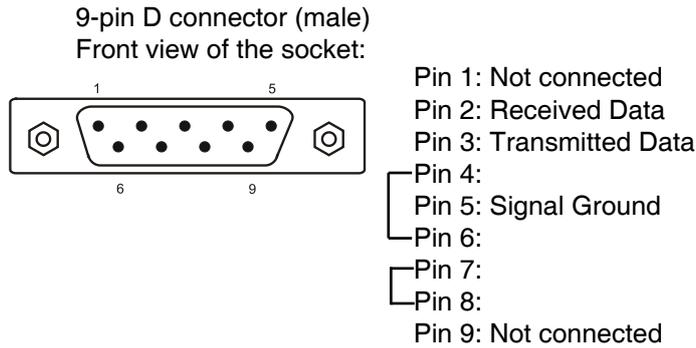
1. Determine which of your COM port is available on your PC and connect it with to the DMX input of the fixture using the Flash cable. Do not extend this cable! Disconnect the fixture from the other fixtures in DMX chain! Turn on the computer and the fixture.
2. Switch the fixture to the update mode by selecting the option Software update in menu Special Functions on the fixture control panel: SPE-->UPd-->yES. (From this option you cannot return back to the main menu. If you do not want to continue in software update, you have to switch off and on the fixture to leave this option!)
3. It is recommended that you exit all programs before running the Software Uploader.
4. Start the Software Uploader program. Select desired COM and then click Connect button. If the connection is OK, click Start Uploading button to start uploading. It will take several minutes to perform software update. All processors will be updated (including processors with the same software version).  
If you wish to update only later versions of processors, enable the Incremental Update check box. Avoid interrupting the process. Update status is being displayed in the list 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 the case of interruption of the upload process (e.g. power cut), the fixture remains in the update mode and you have to repeat the software update again.

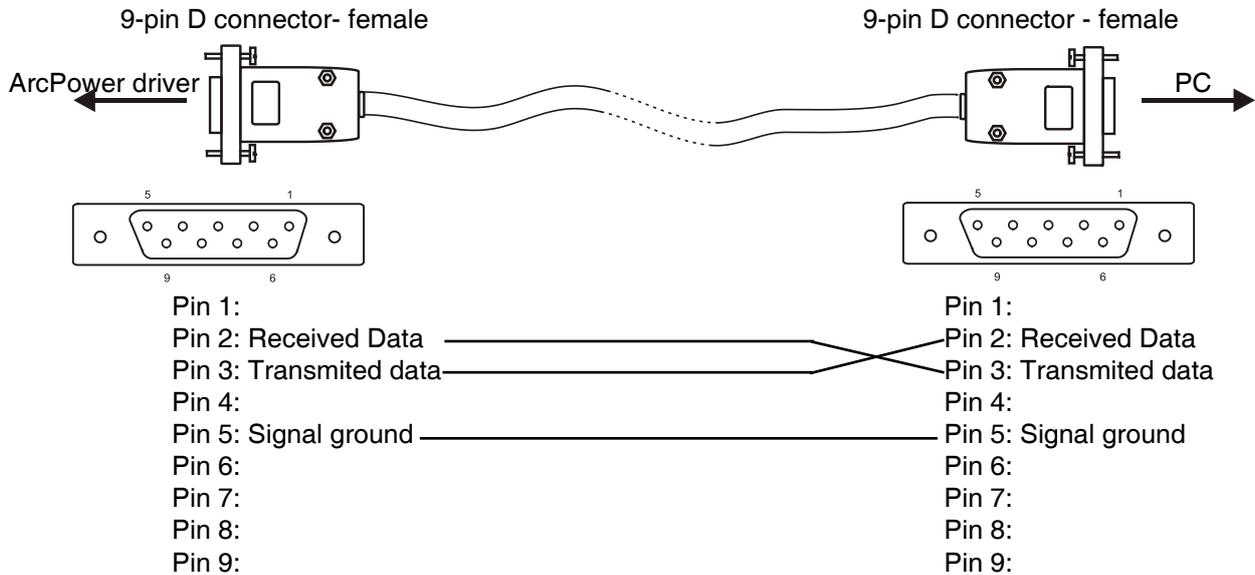
For example: The fixture was switched off before finishing software upload. After switching the fixture on again, the fixture is still in the update mode and the display is dark. Restart the Software Uploader program and repeat software update from your PC.

## 9. Control of the ArcPower 360 via RS-232

### 9.1 Wiring an RS-232 serial port



#### RS-232 cable:

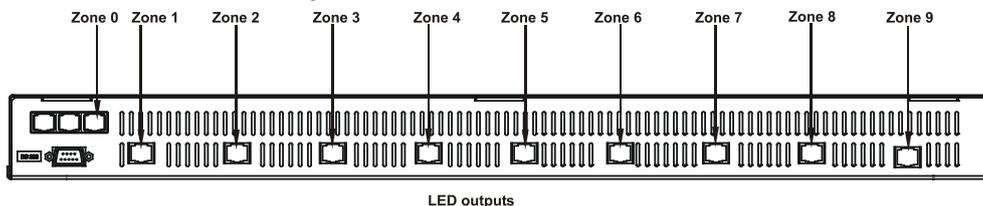


The maximum cable length according to the standard is 15 metres or the cable length equals to a capacitance of 2500 pF.

### 9.2 Zone number

The number of the zone distinguishes individual zones of the ArcPower 360 which is controlled via RS-232 interface.

The sequence of the zones is following:



### 9.3 Setting a serial port of PC

The serial port of your personal computer should be configured as follows:  
9600 Baud, 8 Data Bits, Non Parity, One Stop Bit, No Flow Control Required.

### 9.4 Zone commands

The ArcPower 360 uses the 3 types of the zone commands which can be used in a suitable software running on PC.

All zone commands stated below have to be sent to the ArcPower 360 in ASCII codes.

### Type 1: Selection of the preset colours

The syntax of the command is:

**zone Z red;**  
**zone Z green;**  
**zone Z blue;**  
**zone Z white;**  
**zone Z yellow;**  
**zone Z cyan;**  
**zone Z magenta;**  
**zone Z blackout;**

**Z** .....means number of the zone (0-9)

**red/green/blue/white/yellow/cyan/magenta**....determines colour

**blackout**.....closes light output

**;**.....means end of character sequence

Examples: zone 3 green;  
          zone 0 blackout;

### Type 2: Colour mixing-RGB

The syntax of the command is:

**zone Z r,g,b;**

**Z**..... means number of zone (0-9)

**r** .....means DMX value of the red colour(0-255)

**g** .....means DMX value of the green colour (0-255)

**b** .....means DMX value of the blue colour (0-255)

**;** .....means end of character sequence

**,** .....values of colours have to be separated by a comma.

Examples: zone 0 234,126,165;  
          zone 1 5,18,28;

### Type 3: Colour mixing-RGBW

The syntax of the command is:

**zone Z r,g,b,w;**

**Z**..... means number of zone (0-9)

**r** .....means DMX value of the red colour(0-255)

**g** .....means DMX value of the green colour (0-255)

**b** .....means DMX value of the blue colour (0-255)

**w** .....means DMX value of the white colour (0-255)

**;** .....means end of character sequence

**,** .....values of colours have to be separated by a comma.

Examples: zone 0 156,145,171,211;  
          zone 1 5,18,28,148;

## 10. Technical Specifications:

### Power supply:

Input Voltage: 100-240 V AC, 50/60 Hz

Fuse: T 8 A H

Max. Power Consumption: 840 VA

### Input:

Control: DMX 512 or Dymet protocol

DMX connection: RJ45

RS 232 connection: 9-pin D connector

### Output:

Max. Output Voltage: 48V DC

Max. Output current: 350mA per colour

Max. load per zone : 36 x 1W LED's in RGB mode, 42 x 1W LED's in RGBW mode

Total load : 360 x 1W LED's in RGB mode

420 x 1W LED's in RGBW mode

### Maximum total cable length between one LED zone output and all its connected LED modules:

80 metres at max. load .

### DMX channels:

Mode 1: 30 channels

Mode 2: 40 channels

Mode 3: 43 channels

Mode 4: 4 channels

Mode 5: 5 channels

### Control and programming:

Protocol: USITT DMX-512

Two DMX protocol mode for RGB light sources

Three protocol modes for RGBW light sources

Control options: DMX, Auto-trigger

Operation modes: Master/Slave, Stand alone

Programs: 6 Built-in programs and 3 user editable programs up to 30 steps each

Display: 3 digit LED

White colour balance adjusting

Manual control of all DMX channels with LED control panel

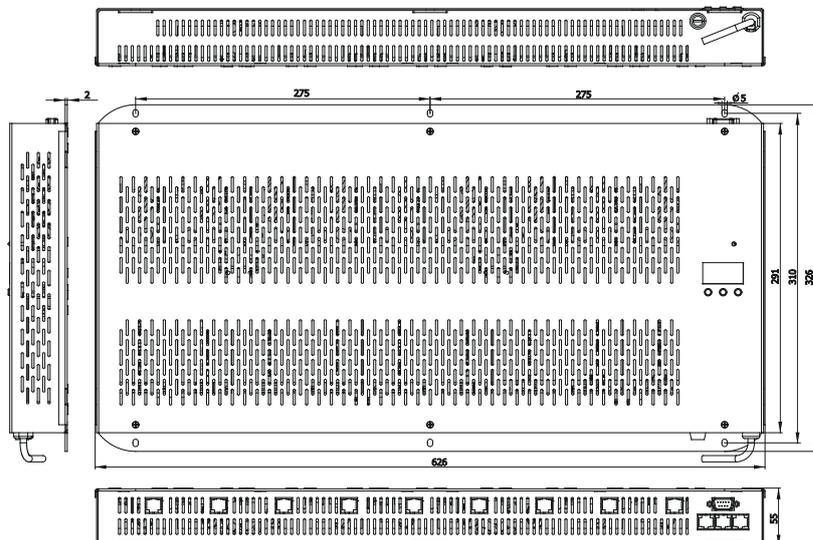
### Total heat dissipation:

1876 BTU/h (calculated)

### Max. surface temperature:

60°C

### Dimensions(mm):



**Weight:**

6.3 kg

**Operating temperature:**

-10°C/+40°C

**Accessories:**

Cable joiner (No.13050691).....10 pcs

**Optional accessories:**

Adaptor RJ45/DMX 3 pin.....No.13050730

Adaptor RJ45/DMX 5 pin.....No.13050731

## 11. Replacing the fuse

**1. Before replacing the fuse, unplug mains lead!**

**2.** Unscrew the fuse holder on the rear side of the ArcPower 360 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.

