PULSE

STAGEPAR-108

(Black order code: STAGEPAR-108B)
(Polished order code: STAGEPAR-108S)

User Manual

Index

1 Safety Instruction

- Keep this device away from rain and moisture!
- Unplug mains lead before opening the housing!
- Never look directly into the light source (sensitive persons may suffer an epileptic shock).
- Never leave this device running unattended.
- Keep away children.
- When installing the device, make sure there is no highly inflammable material within a distance of 0.5m.

2 Introduction

Main feature of this LED PAR is, that it can be used as a 4ch DMX controller.
In this mode 4 LED PARs are connected with XLR cables on their DMX In-/Outputs.
The first LED PAR is set to DMX master mode. Now the LED PAR in master mode sent control signals to the connected slaves. There are different patterns available e.g. all connected LED PARs do the same, each shows different patterns, chaser programs, fade in – fade out patterns and fade over patterns. The steps of the patterns can be controlled by music beat or by a potentiometer. The music sensitivity is controllable. The colour patterns offers a 100% colour mode, a 100% / 50% colour mode, and a 100% / 75% / 50% /25% colour mode. The colours are shown by random.

A 3ch DMX slave mode is supported, for easy connection in a DMX system. All 512channels are supported.

Stand alone modes colour change, fading patterns and fixed colour settings are supported.

2.1 Supported function modes

2.1.1 Modes which support DMX input or DMX output

2.1.1.1 5 channel master mode

In this mode the LED PAR is used as a 4 channel DMX master.
The 5channel master mode is offered to be compatible to the first revision of the LED PAR.
The 5channel master mode uses build in functions of the LED PARs. Which will be
controlled by the DMX signal.

There are different patterns available e.g. all connected LED PARs do the same, each shows
different patterns, chaser programs, fade in – fade out patterns and fade over patterns. The
steps of the patterns can be controlled by music beat or by a potentiometer. The music
sensitivity is controllable. The colour patterns offers a 100% colour mode, a 100% / 50%
colour mode, and a 100% / 75% / 50% /25% colour mode. The colours are shown by random.

2.1.1.2 3 channel master mode

In this mode the LED PAR is used as a 4 channel DMX master.
The 3channel master mode is offered for less consumption of DMX channels e.g. in case of
connected DMX power packs or other DMX receivers.

There are different patterns available e.g. all connected LED PARs do the same, each shows
different patterns, chaser programs, fade in – fade out patterns and fade over patterns. The
steps of the patterns can be controlled by music beat or by a potentiometer. The music
sensitivity is controllable. The colour patterns offers a 100% colour mode, a 100% / 50%
colour mode, and a 100% / 75% / 50% /25% colour mode. The colours are shown by random.

2.1.1.3 5 channel slave mode

In this mode the LED PAR is used as a DMX slave.
The 5channel slave mode is supported if the LED PAR is in use with the first revision of the
LED PAR. The 5channel slave mode uses build in functions, which be controlled by the
DMX signal. An external DMX controller controls the Led PAR.

2.1.1.4 3 channel slave mode

The 3channel slave mode is for use with a standard DMX controller. The LED PAR can be
controller with all 512 channels. Each colour is controlled by one DMX channel. All 512
DMX channels can be used.

2.1.2 Stand alone modes

2.1.2.1 Auto fade mode

There is an auto fade mode available with different fade in/fade out patterns and fade over patterns. Even here a compatible mode is offered for use with the first revision of the LED PAR. The fade in/fade out and fade over time can be set accurate by 9 time settings.

The auto fade mode supports different colour change patterns:
The colour patterns offers a 100% colour mode, a 100% / 50% colour mode, and a 100% / 75% / 50% /25% colour mode. The colours are shown by random.

The compatible mode is for use with the first revision of the LED PAR

2.1.2.2 Auto change mode

The auto change mode supports different colour change patterns.
The colour patterns offers a 100% colour mode, a 100% / 50% colour mode, and a 100% / 75% / 50% /25% colour mode. The colours are shown by random.

The compatible mode is for use with the first revision of the LED PAR

The change speed can be controlled by music or potentiometer.

2.1.2.3 manual mode

In the manual mode each colour can be set to on in steps of ~14%.

3 Overview

3.1 Back view

This picture shows the backside of the LED PAR.
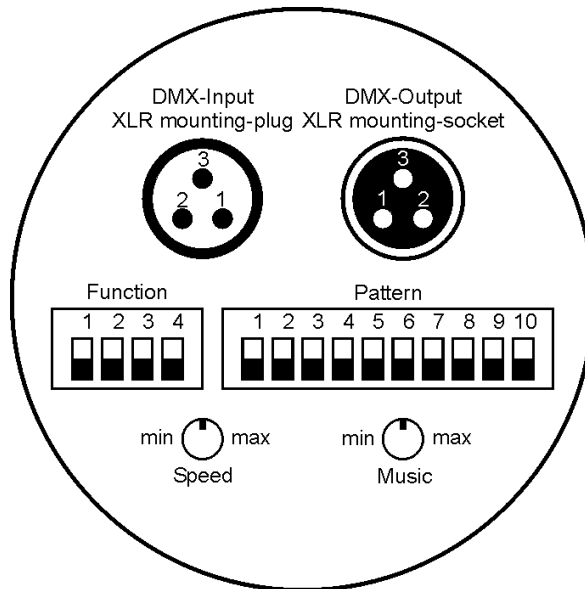
DMX-Input:
In case of external DMX control, the DMX cable is connected here.

DMX-Input pin	Signal
1	Ground
2	Signal "-"
3	Signal "+"

DMX-Output:
Connect here the DMX cable for next unit.

DMX-Output pin	Signal
1	Ground
2	Signal "-"
3	Signal "+"

Function:
This 4 pin dipswitch sets, the function mode of the LED PAR.

Pattern:
The function of this 10 pin dipswitch depend on the selected mode, e.g. in chaser mode the chaser patterns are selected here.

Speed:
Manual speed setting.

Music:
Sensitivity control for the build in microphone.

3.2 DMX operation

3.2.1 Building a serial chain

Connect the DMX-output of the first unit in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next unit until all fixtures are connected.

The last unit of the DMX chain has to be terminated with a resistor. Connect a 120 Ohm resistor between Signal "-" and Signal "+" to DMX-output-socket of the last unit .

3.2.2 LED PAR operates as a DMX master

In the DMX master mode, the LED operates as a DMX controller to the connected units in the DMX chain.

If the LED PAR is used as a DMX master, it must be the first unit in the DMX chain. Unplug the DMX input cable of the LED PAR which operates as a DMX master.

3.2.3 LED PAR operates as a DMX slave

In the DMX slave mode the LED PAR operates as a normal DMX receiver. It is controlled by an external DMX controller.

4 Function Selection

The LED PAR modes may be set by the 4pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	mode
X	0	0	0	auto change
X	0	0	1	auto fade
X	0	1	0	manual mode
X	0	1	1	DMX slave 5ch
X	1	0	0	DMX master 5ch
X	1	0	1	DMX slave 3ch
X	1	1	0	DMX master 3ch
X	1	1	1	No new mode (DMX master 3ch is used)
0	X	X	X	speed control by potentiometer, if selected mode support it
1	X	X	X	speed control by music, if selected mode support it

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information below/above

5   Auto change mode

The LED PAR shows different colours depending on speed selection.
In this mode the LED PAR is used stand alone, the DMX output/input is not used.

5.1   Mode setting

To enable the auto change mode, set the 4 pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	Mode
X	0	0	0	auto change

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information below

5.2   Speed setting

SW4 setup the speed source. Choose the speed source according this table

SW4	SW3	SW2	SW1	mode
0	X	X	X	speed control by potentiometer
1	X	X	X	speed control by music

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information above

5.3 Colour pattern setting

The colour modes may be set by the 10pin dipswitch on the backside of the LED PAR according to the this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	0	0	0	0	0	compatible mode - old pattern style
0	0	0	0	0	0	0	0	0	1	100% colour change
0	0	0	0	0	0	0	0	1	0	100%, 50% colour change
0	0	0	0	0	0	0	0	1	1	100%, 75%, 50%, 25% colour change

0 = dipswitch is set to off
1 = dipswitch is set to on
If another colour pattern is set, always patterns "0000000011" is used.

6 Auto fade mode

The LED PAR shows different fading colours depending on speed selection.
In this mode the LED PAR is used stand alone, the DMX output/input is not used.

6.1 Mode setting

To enable the auto change mode, set the 4pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	mode
X	0	0	1	auto fade

0 = dipswitch is set to off.
1 = dipswitch is set to on.
X = in this mode there is no speed control by potentiometer or music supported

6.2 Fade speed

The fading speed may be set by the 10pin dipswitch on the backside of the LED PAR according to the this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Fading speed selection
0	0	0	X	X	X	0	0	0	0	10:30min
0	0	0	X	X	X	0	0	0	1	2,5s
0	0	0	X	X	X	0	0	1	0	5s
0	0	0	X	X	X	0	0	1	1	10s
0	0	0	X	X	X	0	1	0	0	20s
0	0	0	X	X	X	0	1	0	1	40s
0	0	0	X	X	X	0	1	1	0	80s
0	0	0	X	X	X	0	1	1	1	160s
0	0	0	X	X	X	1	0	0	0	320s

0 = dipswitch is set to off.
1 = dipswitch is set to on.
X = see table below

If another timing pattern is set, always patterns "000xxx1000" is used.

No speed control by potentiometer or music is supported in this mode.

6.3 Colour pattern setting

The fading patterns may be set by the 10pin dipswitch on the backside of the LED PAR according to the this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	0	X	X	X	X	compatible mode - old pattern style
0	0	0	0	0	1	X	X	X	X	100% colour change, fade in and out
0	0	0	0	1	0	X	X	X	X	100%, 50% colour change, fade in and out
0	0	0	0	1	1	X	X	X	X	100%, 75%, 50%, 25% colour change, fade in and out
0	0	0	1	0	0	X	X	X	X	100% colour change, fade in
0	0	0	1	0	1	X	X	X	X	100%, 50% colour change, fade in
0	0	0	1	1	0	X	X	X	X	100%, 75%, 50%, 25% colour change, fade in

0 = dipswitch is set to off.
1 = dipswitch is set to on.
X = see table above
If another colour pattern is set, always pattern 000110xxxx is used.

7 Manual mode

The LED PAR shows different fixed colours.
In this mode the LED PAR is used stand alone, the DMX output/input is not used.

7.1 Mode setting

To enable the manual mode, set the 4pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	mode
X	0	1	0	manual mode

0 = dipswitch is set to off
1 = dipswitch is set to on
X = in this mode there is no speed control by potentiometer or music supported

7.2 Colour pattern setting

7.2.1 Red Colour

The red colour may be set by the 10pin dipswitch on the backside of the LED PAR according to the this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Red colour brightness
0	X	X	X	X	X	X	0	0	0	0%
0	X	X	X	X	X	X	0	0	1	14%
0	X	X	X	X	X	X	0	1	0	28%
0	X	X	X	X	X	X	0	1	1	42%
0	X	X	X	X	X	X	1	0	0	57%
0	X	X	X	X	X	X	1	0	1	71%
0	X	X	X	X	X	X	1	1	0	85%
0	X	X	X	X	X	X	1	1	1	100%

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see table below

7.2.2 Green Colour

The green colour may be set by the 10pin dipswitch on the backside of the LED PAR according to the following table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Green colour brightness
0	X	X	X	0	0	0	X	X	X	0%
0	X	X	X	0	0	1	X	X	X	14%
0	X	X	X	0	1	0	X	X	X	28%
0	X	X	X	0	1	1	X	X	X	42%
0	X	X	X	1	0	0	X	X	X	57%
0	X	X	X	1	0	1	X	X	X	71%
0	X	X	X	1	1	0	X	X	X	85%
0	X	X	X	1	1	1	X	X	X	100%

0 = dipswitch is set to off.
1 = dipswitch is set to on.
X = see table above or below

7.2.3 Blue Colour

The <u>blue colour</u> may be set by the 10pin dipswitch on the backside of the LED PAR according to the this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Blue colour brightness
0	0	0	0	X	X	X	X	X	X	0%
0	0	0	1	X	X	X	X	X	X	14%
0	0	1	0	X	X	X	X	X	X	28%
0	0	1	1	X	X	X	X	X	X	42%
0	1	0	0	X	X	X	X	X	X	57%
0	1	0	1	X	X	X	X	X	X	71%
0	1	1	0	X	X	X	X	X	X	85%
0	1	1	1	X	X	X	X	X	X	100%

0 = dipswitch is set to off.
1 = dipswitch is set to on.
X = see table above

8 DMX slave 5ch mode

The item is controlled by 5 DMX channels according the table below.
With Dipswitch 1 to 9 the first DMX channel to receive is set.

8.1 Mode setting

To enable the DMX slave 5ch mode, set the 4pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	mode
X	0	1	1	DMX slave 5ch

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information below

8.2 Speed setting

SW4 setup the speed source. Choose the speed source according this table

SW4	SW3	SW2	SW1	mode
0	X	X	X	speed control by potentiometer, if selected function support it
1	X	X	X	speed control by music, if selected mode support it

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information above

8.3 DMX usage for 5ch control

The table shows the DMX value which need to be sent to the LED PAR by an external DMX controller:

Channel 1 value			Function
0	-	63	RGB control, CH2 = red, CH3 = green, CH4 = blue
64	–	127	7 colour fade, CH5 = speed control
128	–	191	7 colour change, CH5 = speed control
192	–	255	3 colour change, CH5 = speed control

Channel 2 value			Function
0	–	255	Red colour 0% – 100%

Channel 3 value			Function
0	–	255	Green colour 0% – 100%

Channel 4 value			Function
0	–	255	Blue colour 0% – 100%

Channel 5 value			Function
0	-	10	no function – no speed
11	-	100	value 11 to 100, fast speed to low speed
101	-	150	no function – no speed
151	-	255	speed control by unit, by music or potentiometer

8.4 Set up of the first DMX receiving channel

The value of dipswitch 1 to 9 is binary coded. To set a wished DMX receiving channel add the different values (see example below of the table):

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	0	0	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	1	0	2
0	0	0	0	0	0	0	1	0	0	4
0	0	0	0	0	0	1	0	0	0	8
0	0	0	0	0	1	0	0	0	0	16
0	0	0	0	1	0	0	0	0	0	32
0	0	0	1	0	0	0	0	0	0	64
0	0	1	0	0	0	0	0	0	0	128
0	1	0	0	0	0	0	0	0	0	256

0 = dipswitch is set to off.
1 = dipswitch is set to on.

Remarks:
In case of all dipswitches 1 to 9 are set to zero, the first DMX receive channel is 1.
I case of only dipswitch 1 is set to on, the first DMX receive channel is 1.

The maximum first receive channel is channel 508.
In case of chosen first receive channel bigger than 508, the maximum receive channel is still 508.

8.5 Examples

8.5.1 Example A, first DMX receive channel is 1

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	0	0	0	0	0	0	0	0	1	1

The item start to receive with the DMX CH1.
The items consumes CH1, CH2, CH3, CH4, CH5.

8.5.2 Example B, first DMX receive channel is 22

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	0	0	0	0	1	0	1	1	0	22

The item start to receive with the DMX CH22.
The items consumes CH22, CH23, CH24, CH25, CH26.

8.5.3 Example C, first DMX receive channel is 272

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	1	0	0	0	1	0	0	0	0	272

The item start to receive with the DMX CH272.
The items consumes CH272, CH273, CH274, CH275, CH276.

8.5.4 Example D, first DMX receive channel is 508

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	1	1	1	1	1	1	1	0	0	508

The item start to receive with the DMX CH508.
The items consumes CH508, CH509, CH510, CH511, CH512.

9 DMX master 5ch mode

In this mode the LED PAR is a DMX controller in 5ch mode. The 5ch mode is build in for controlling the new revision and old revision of the LED PAR. The connected slaves need to be set to a 5ch DMX slave (see chapter 8.3).

9.1 Mode setting

To enable the DMX master 5ch mode, set the 4pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	mode
X	1	0	0	DMX master 5ch

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information below

9.2 Speed setting

SW4 setup the speed source. Choose the speed source according this table

SW4	SW3	SW2	SW1	mode
0	X	X	X	speed control by potentiometer
1	X	X	X	speed control by music

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information above

9.3 DMX usage for 5ch control

The LED PAR in master mode sent DMX data according to the table below. The connected slaves need to be set up to a 5channel salve (see chapter 8.3).

1. DMX CH = 0, RGB control
2. DMX CH = RED
3. DMX CH = GREEN
4. DMX CH = BLUE
5. DMX CH = 0, no function, no speed

6. DMX CH = 0, RGB control
7. DMX CH = RED
8. DMX CH = GREEN
9. DMX CH = BLUE
10. DMX CH = 0, no function, no speed

11. DMX CH = 0, RGB control
12. DMX CH = RED
13. DMX CH = GREEN
14. DMX CH = BLUE
15. DMX CH = 0, no function, no speed

16. DMX CH = 0, RGB control
17. DMX CH = RED
18. DMX CH = GREEN
19. DMX CH = BLUE
20. DMX CH = 0, no function, no speed

9.4 Colour pattern setting

The colour patterns may be set by the 10pin dipswitch on the backside of the LED PAR according to the following tables:

9.4.1 Colour patterns

All LED PARs are on and changing colours.

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	0	0	0	0	0	4ch, Pattern 1, all on, all do the same
0	0	0	0	0	0	0	0	0	1	4ch, Pattern 2, all on, all do the same
0	0	0	0	0	0	0	0	1	0	4ch, Pattern 3, all on, all do the same
0	0	0	0	0	0	0	0	1	1	4ch, Pattern 1, all on, every unit has his own pattern
0	0	0	0	0	0	0	1	0	0	4ch, Pattern 2, all on, every unit has his own pattern
0	0	0	0	0	0	0	1	0	1	4ch, Pattern 3, all on, every unit has his own pattern

0 = dipswitch is set to off.
1 = dipswitch is set to on.

9.4.2 Fading in out colour patterns

The colour is fading in and out.

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	0	0	1	1	0	4ch, Pattern 1, all on, all do the same, with fade in and out
0	0	0	0	0	0	0	1	1	1	4ch, Pattern 2, all on, all do the same, with fade in and out
0	0	0	0	0	0	1	0	0	0	4ch, Pattern 3, all on, all do the same, with fade in and out
0	0	0	0	0	0	1	0	0	1	4ch, Pattern 1, every unit has his own pattern, with fade in and out
0	0	0	0	0	0	1	0	1	0	4ch, Pattern 2, every unit has his own pattern, with fade in and out
0	0	0	0	0	0	1	0	1	1	4ch, Pattern 3, every unit has his own pattern, with fade in and out

0 = dipswitch is set to off.
1 = dipswitch is set to on.

9.4.3 Fading over colour patterns

The colour is fading over.

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	0	1	1	0	0	4ch, Pattern 1, all on, all do the same, with fade over
0	0	0	0	0	0	1	1	0	1	4ch, Pattern 2, all on, all do the same, with fade over
0	0	0	0	0	0	1	1	1	0	4ch, Pattern 3, all on, all do the same, with fade over
0	0	0	0	0	0	1	1	1	1	4ch, Pattern 1, every unit has his own pattern, with fade over
0	0	0	0	0	1	0	0	0	0	4ch, Pattern 2, every unit has his own pattern, with fade over
0	0	0	0	0	1	0	0	0	1	4ch, Pattern 3, every unit has his own pattern, with fade over

0 = dipswitch is set to off.
1 = dipswitch is set to on.

9.4.4 Chaser colour patterns

9.4.4.1 One LED PAR of four is on

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	1	0	0	1	0	chaser pattern 1, right to left, same colour each step
0	0	0	0	0	1	0	0	1	1	chaser pattern 1, right to left – left to right, same colour each step
0	0	0	0	0	1	0	1	0	0	chaser pattern 2, right to left, same colour each step
0	0	0	0	0	1	0	1	0	1	chaser pattern 2, right to left – left to right, same colour each step
0	0	0	0	0	1	0	1	1	0	chaser pattern 3, right to left, same colour each step
0	0	0	0	0	1	0	1	1	1	chaser pattern 3, right to left – left to right, same colour each step
0	0	0	0	0	1	1	0	0	0	chaser pattern 1, right to left, new colour each step
0	0	0	0	0	1	1	0	0	1	chaser pattern 1, right to left – left to right, new colour each step
0	0	0	0	0	1	1	0	1	0	chaser pattern 2, right to left, new colour each step
0	0	0	0	0	1	1	0	1	1	chaser pattern 2, right to left – left to right, new colour each step
0	0	0	0	0	1	1	1	0	0	chaser pattern 3, right to left, new colour each step
0	0	0	0	0	1	1	1	0	1	chaser pattern 3, right to left, new colour each step

0 = dipswitch is set to off.
1 = dipswitch is set to on.

9.4.4.2 Two LED PAR of four is on

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	1	1	1	1	0	chaser pattern 1, right to left, new colour each step
0	0	0	0	0	1	1	1	1	1	chaser pattern 1, right to left – left to right, new colour each step
0	0	0	0	1	0	0	0	0	0	chaser pattern 2, right to left, new colour each step
0	0	0	0	1	0	0	0	0	1	chaser pattern 2, right to left – left to right, new colour each step
0	0	0	0	1	0	0	0	1	0	chaser pattern 3, right to left, new colour each step
0	0	0	0	1	0	0	0	1	1	chaser pattern 3, right to left – left to right, new colour each step
0	0	0	0	1	0	0	1	0	0	chaser pattern 1, right to left, every unit has his own pattern, new colour each step
0	0	0	0	1	0	0	1	0	1	chaser pattern 1, right to left – left to right, every unit has his own pattern, new colour each step
0	0	0	0	1	0	0	1	1	0	chaser pattern 2, right to left, every unit has his own pattern, new colour each step
0	0	0	0	1	0	0	1	1	1	chaser pattern 2, right to left – left to right, every unit has his own pattern, new colour each step
0	0	0	0	1	0	1	0	0	0	chaser pattern 3, right to left, every unit has his own pattern, new colour each step
0	0	0	0	1	0	1	0	0	1	chaser pattern 3, right to left – left to right, every unit has his own pattern, new colour each step

0 = dipswitch is set to off.
1 = dipswitch is set to on.

9.5 Examples

9.5.1 Example A

This example shows how to set up four LED PARs to be controlled in 5ch DMX master mode.

Connection:

MASTER	SLAVE1	SLVAE2	SLAVE3
UNIT1	UNIT2	UNIT3	UNIT4

Master setup:
Master unit, UNIT1, need to be set by this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	1	0	0	1	0	chaser pattern 1, right to left, same colour each step

SW4	SW3	SW2	SW1	Mode
0	1	0	0	DMX master 5ch, speed control by potentiometer

The items consumes ch1, ch2, ch3, ch4, ch5.

SLAVE1:
SLAVE1, UNIT2, DMX start channel 6:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	1	0		0	0	1	1

The item start to receive with the DMX channel 6.
The items consumes ch6, ch7, ch8, ch9, ch 10.

SLAVE2:
SLAVE2, UNIT3, DMX start channel 11:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	1	0	1	1		0	0	1	1

The item start to receive with the DMX channel 11.
The items consumes ch11, ch12, ch13, ch14, ch15.

SLAVE3:
SLAVE3, UNIT4, DMX start channel 16:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	1	0	0	0	0		0	0	1	1

The item start to receive with the DMX channel 16.
The items consumes ch16, ch17, ch18, ch19, ch20.

9.5.2 Example B

This example shows how to set up eight LED PARs to be controlled in 5ch DMX master mode. The patterns are still send out for 4channels.

Connection:

MASTER   SLAVE1   SLVAE2   SLAVE3   SLAVE 4   SLAVE 5   SLAVE6   SLAVE8

UNIT1   UNIT2   UNIT3   UNIT4   UNIT5   UNIT6   UNIT7   UNIT8

Master setup:
The master unit, UNIT1, need to be set by this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	1	0	0	1	0	chaser pattern 1, right to left, same colour each step

SW4	SW3	SW2	SW1	Mode
0	1	0	0	DMX master 5ch, speed control by potentiometer

The items consumes ch1, ch2, ch3, ch4, ch5.

SLAVE1:
SLAVE1, UNIT2, DMX start channel 6:

10 Pin Dipswitch										4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	1	0	0	0	1	1

The item start to receive with the DMX channel 6.
The items consumes ch6, ch7, ch8, ch9, ch10.

SLAVE2:
SLAVE2, UNIT3, DMX start channel 11:

10 Pin Dipswitch										4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	SW4	SW3	SW2	SW1
0	0	0	0	0	0	1	0	1	1	0	0	1	1

The item start to receive with the DMX channel 11.
The items consumes ch11, ch12, ch13, ch14, ch15.

SLAVE3:
SLAVE3, UNIT4, DMX start channel 16:

10 Pin Dipswitch										4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	SW4	SW3	SW2	SW1
0	0	0	0	0	1	0	0	0	0	0	0	1	1

The item start to receive with the DMX channel 16.
The items consumes ch16, ch17, ch18, ch19, ch20.

SLAVE4:
SLAVE4, UNIT5, DMX start channel 1:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	0	0	1		0	0	1	1

The item start to receive with the DMX channel 1.
The items consumes ch1, ch2, ch3, ch4, ch5.

SLAVE5:
SLAVE5, UNIT6, DMX start channel 6:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	1	0		0	0	1	1

The item start to receive with the DMX channel 6.
The items consumes ch6, ch7, ch8, ch9, ch10.

SLAVE6:
SLAVE6, UNIT7, DMX start channel 11:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	1	0	1	1		0	0	1	1

The item start to receive with the DMX channel 11.
The items consumes ch11, ch12, ch13, ch14, ch15.

SLAVE7:
SLAVE7, UNIT8, DMX start channel 16:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	1	0	0	0	0		0	0	1	1

The item start to receive with the DMX channel 16.
The items consumes ch16, ch17, ch18, ch19, ch20.

10 DMX slave 3ch

The 3channel slave mode is for use with a standard DMX controller. The LED PAR can be controller with all 512 channels. Each colour is controlled by one DMX channel. All 512 DMX channels can be used. Dipswitch 1 to 9 sets the first channel to receive.

10.1 Mode setting

To enable the DMX slave 3ch mode, set the 4pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	mode
X	1	0	1	DMX slave 3ch

0 = dipswitch is set to off
1 = dipswitch is set to on
X = in this mode there is no speed control by potentiometer or music supported

10.2 DMX usage

1. DMX CH = RED
2. DMX CH = GREEN
3. DMX CH = BLUE

10.3 Set up of the first DMX receiving channel

The value of dipswitch 1 to 9 is binary coded. To set a wished DMX receiving channel add the different values (see example below of the table):

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	0	0	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	1	0	2
0	0	0	0	0	0	0	1	0	0	4
0	0	0	0	0	0	1	0	0	0	8
0	0	0	0	0	1	0	0	0	0	16
0	0	0	0	1	0	0	0	0	0	32
0	0	0	1	0	0	0	0	0	0	64
0	0	1	0	0	0	0	0	0	0	128
0	1	0	0	0	0	0	0	0	0	256

0 = dipswitch is set to off.
1 = dipswitch is set to on.

Remarks:
In case of all dipswitches 1 to 9 are set to zero, the first DMX receive channel is 1.
I case of only dipswitch 1 is set to on, the first DMX receive channel is 1.

The maximum first receive channel is channel 510.
In case of chosen first receive channel bigger than 510, the maximum receive channel is still 510.

10.4 Examples

10.4.1   Example A, first DMX receive channel is 1

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	0	0	0	0	0	0	0	0	1	1

The item start to receive with the DMX CH1.
The items consumes CH1, CH2, CH3.

10.4.2   Example B, first DMX receive channel is 22

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	0	0	0	0	1	0	1	1	0	22

The item start to receive with the DMX CH22.
The items consumes CH22, CH23, CH24.

10.4.3   Example C, first DMX receive channel is 272

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	1	0	0	0	1	0	0	0	0	272

The item start to receive with the DMX CH272.
The items consumes CH272, CH273, CH274.

10.4.4   Example D, first DMX receive channel is 510

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	First DMX receive channel
0	1	1	1	1	1	1	1	1	0	510

The item start to receive with the DMX CH510.
The items consumes CH510, CH511, CH512.

11 DMX master 3ch

This mode has the same functions as the "DMX master 5ch" mode, chapter 9. The difference is the using of the DMX channels. In this mode only 3 DMX channels for controlling one unit are used. In this mode other units than a LED PAR can be connected e.g. a power pack, LED PARs of different companies which support control of a DMX master.

11.1 Mode setting

To enable the DMX master 3ch mode, set the 4pin dipswitch on the backside of the LED PAR according to the this table:

SW4	SW3	SW2	SW1	mode
X	1	1	0	DMX master 3ch

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information below/above

11.2 Speed setting

SW4 setup the speed source. Choose the speed source according this table

SW4	SW3	SW2	SW1	mode
0	X	X	X	speed control by potentiometer, if selected mode support it
1	X	X	X	speed control by music, if selected mode support it

0 = dipswitch is set to off
1 = dipswitch is set to on
X = see information above

11.3 DMX usage for 3ch control

The LED PAR in master mode sent DMX data according to the table below. The connected slaves need to be set up to a 3 channel salve (see chapter 10).

1. DMX CH = RED
2. DMX CH = GREEN
3. DMX CH = BLUE

4. DMX CH = RED
5. DMX CH = GREEN
6. DMX CH = BLUE

7. DMX CH = RED
8. DMX CH = GREEN
9. DMX CH = BLUE

10. DMX CH = RED
11. DMX CH = GREEN
12. DMX CH = BLUE

11.4 Colour pattern setting

Same settings as in the "DMX master 5ch" mode, chapter 9.4.

11.5 Examples

11.5.1   Example A

This example shows how to set up four LED PARs to be controlled in 3ch DMX master mode.

Connection:

MASTER	SLAVE1	SLVAE2	SLAVE3
UNIT1	UNIT2	UNIT3	UNIT4

Master setup:
The master unit, UNIT1, need to be set by this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	1	0	0	1	0	chaser pattern 1, right to left, same colour each step

SW4	SW3	SW2	SW1	Mode
0	1	1	0	DMX master 3ch

The item show ch1, ch2, ch3.

SLAVE1:
SLAVE1, UNIT2, DMX start channel 4:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	0	0		0	1	0	1

The item start to receive with the DMX ch4.
The items consumes ch4, ch5, ch6.

SLAVE2:
SLAVE2, UNIT3, DMX start channel 7:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	1	1		0	1	0	1

The item start to receive with the DMX CH7.
The items consumes ch7, ch8, ch9.

SLAVE3:
SLAVE3, UNIT4, DMX start channel 10:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	1	0	1	0		0	1	0	1

The item start to receive with the DMX CH10.
The items consumes ch10, ch11, ch12.

11.5.2   Example B

This example shows how to set up eight LED PARs to be controlled in 3ch DMX master mode. The patterns are still send out for 4channels.

Connection:

MASTER SLAVE1 SLVAE2 SLAVE3 SLAVE 4 SLAVE 5 SLAVE6 SLAVE8

UNIT1   UNIT2   UNIT3   UNIT4   UNIT5   UNIT6   UNIT7   UNIT8

Master setup:
The master unit, UNIT1, the master unit, need to be set by this table:

SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1	Colour pattern selection
0	0	0	0	0	1	0	0	1	0	chaser pattern 1, right to left, same colour each step

SW4	SW3	SW2	SW1	Mode
0	1	1	0	DMX master 3ch

The item show ch1, ch2, ch3.

SLAVE1:
SLAVE1, UNIT2, DMX start channel 4:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	0	0		0	1	0	1

The item start to receive with the DMX ch4.
The items consumes ch4, ch5, ch6.

SLAVE2:
SLAVE2, UNIT3, DMX start channel 7:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	1	1		0	1	0	1

The item start to receive with the DMX CH7.
The items consumes ch7, ch8, ch9.

SLAVE3:
SLAVE3, UNIT4, DMX start channel 10:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	1	0	1	0		0	1	0	1

The item start to receive with the DMX ch10.
The items consumes ch10, ch11, ch12.

<u>SLAVE4:</u>
SLAVE4, UNIT5, DMX start channel 1:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	0	0	1		0	1	0	1

The item start to receive with the DMX ch1.
The items consumes ch1, ch2, ch3.

<u>SLAVE5:</u>
SLAVE5, UNIT6, DMX start channel 4:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	0	0		0	1	0	1

The item start to receive with the DMX ch4.
The items consumes ch4, ch5, ch6.

<u>SLAVE6:</u>
SLAVE6, UNIT7, DMX start channel 7:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	0	1	1	1		0	1	0	1

The item start to receive with the DMX ch7.
The items consumes ch7, ch8, ch9.

<u>SLAVE7:</u>
SLAVE7, UNIT8, DMX start channel 10:

10 Pin Dipswitch											4 Pin Dipswitch			
SW10	SW9	SW8	SW7	SW6	SW5	SW4	SW3	SW2	SW1		SW4	SW3	SW2	SW1
0	0	0	0	0	0	1	0	1	0		0	1	0	1

The item start to receive with the DMX ch10.
The items consumes ch10, ch11, ch12.

12 Technical Specifications

36 LEDs, 3W

Number of LEDs	36, 3W
Power supply	230Vac~50HZ
Dimensions	PAR 64
Weight	3Kg