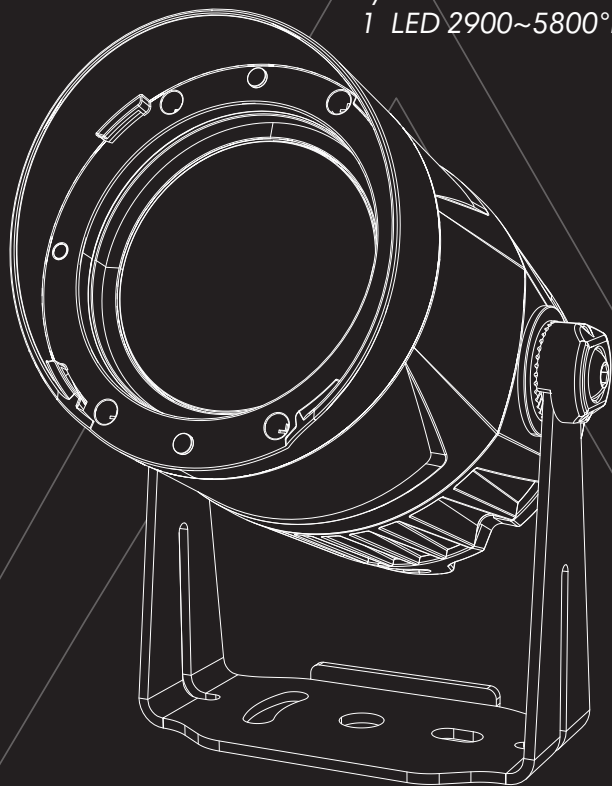# ▽PAR-40DW

Projecteur architectural blanc dynamique IP66
1 LED 2900~5800°K - 40 W - 10°/12°/26°
Dynamic White architectural projector IP66
1 LED 2900~5800°K - 40 W - 10°/12°/26°

Contest △
ARCHITECTURAL LIGHTING

VERSATILE WHITE

1 - Safety information

Important safety information

Any maintenance procedure must be performed by a CONTEST authorised technical service. Basic cleaning operations must thoroughly follow our safety instructions.

This product contains non-isolated electrical components. Do not undertake any maintenance operation when it is switched on as it may result in electric shock.

Symbols used

This symbol signals an important safety precaution.

The WARNING symbol signals a risk to the user's physical integrity. The product may also be damaged.

The CAUTION symbol signals a risk of product deterioration.

Symbols used on the projector

The DMX - RDM symbol indicates that the projector is configurable and controllable in DMX via the RDM (Remote Data Management) protocol.

**IP66
IK07**

The IP66 - IK07 symbols indicate the protection levels of the device:
IP66: Totally protected against dust and protected against strong jets of water from all directions.
**IK07**: Protected against an impact energy of 2 Joules.

 1m

The 1m symbol indicates the minimum distance to be observed between the projector and the illuminated surface.

**+45°C
-20°C**

The -20° / +45° symbol indicates the extreme ambient temperature range in which the projector can operate.

This symbol indicates a risk of burns in the event of contact with the projector in operation. (passive heat dissipation via projector body).
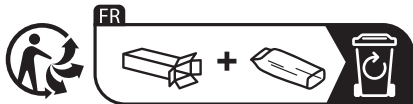
WARNING : This unit contains no user-serviceable parts. Do not open the housing or attempt
any maintenance by yourself. In the unlikely even your unit may require service, please contact your nearest dealer.
In order to avoid any electrical malfunction, please do not use any multi-socket, power cord extension or connecting system without making sure they are perfectly isolated and present no defect.

Instructions and recommendations

1 - Please read carefully :
We strongly recommend to read carefully and understand the safety instructions before attempting to operate this unit.

2 - Please keep this manual :
We strongly recommend to keep this manual with the unit for future reference.

3 - Operate carefully this product :
We strongly recommend to take into consideration every safety instruction.

4 - Follow the instructions:
Please carefully follow each safety instruction to avoid any physical harm or property damage.

5 - Installation :
Installation must be performed by qualified personnel and with certified equipment only. Do not place this appliance on an unstable support, the appliance could fall, seriously injuring a child or an adult and being seriously damaged. Make sure the mounting bracket can hold 10 times the weight of the device. Always use a double hook with a standard safety cable. Have the installation inspected by an expert before commissioning.

6 - Ceiling or wall installation :
Please contact your local dealer before attempting any ceiling or wall installation.

7 - Heat exposure :
It is advisable to keep the product away from sources of heat and flammable materials and liquids. Do not cover the ventilation openings, this could lead to overheating. The appliance cools by natural convection, its surface can be very hot and cause burns. Allow to cool before handling.

8 - Electric power supply :
This product can only be operated according to a very specific voltage. These information are specified on the label located at the rear of the product.

9 - Power cords protection:
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at lugs, convenience receptacles and the point where they exit from the fixture.

10 - Cleaning precautions :
Unplug the product before attempting any cleaning operation. This product should be cleaned only with accessories recommended by the manufacturer. Use a damp cloth to clean the surface. Do not wash this product.

11 - This product should be serviced when :
Please contact the qualified service personnel if :
  - The power cord or the plug has been damaged.
  - Objects have fallen or liquid has been spilled into the appliance.
  - The appliance has been exposed to rain or water.
  - The product does not appear to operate normally.
  - The product has been damaged.

12 - Inspection/maintenance :
Please do not attempt any inspection or maintenance by yourself. Refer all servicing to qualified personnel.

13 - Operating environment :
Ambient temperature: -20 to +45°C.
Do not operate this product in a non-ventilated, or warm place.

CAUTION
This device is equipped with class 2 LEDs. Avoid staring directly into the beam as serious eye damage is possible.

Recycling your device

• As HITMUSIC is really involved in the environmental cause, we only commercialise clean, ROHS compliant products.
• When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

2 - Features

VPAR-40DW :
- ›LED : 1 x LED 40W Dynamic white 2900~5800°K
- ›Luminosity :
  - • 347 Lm - 400 Lux at 5 m
- ›Symmetrical lenses with 10° aperture
- ›Diffuser filters included for 12° and 26° openings
- ›Power consumption: 42 W
- ›Dimensions: 177 x 144 x 174 mm
- ›Weight: 2 kg

Connections
- ›DMX/Power connections via hybrid IN and OUT cables with IP67 plugs

Features
- › Control by external box VRDM-Control for setting by RDM. Compatible with RDM consoles on certain settings.
- › DMX control protocol on 2 to 4 channels depending on the selected mode
- › Power supply : 110-240 V / 50-60 Hz
- › Selectable refresh rate from 900 Hz to 3600 Hz.
- › Cooling: By convection
- › Finish : Cast aluminum epoxy painted white gray RAL9002
- › Degree of Protection IP66: Resistant to dust and water splashes in all directions.
- › Shock resistance IK06: Protected against a mechanical shock of 2 joules, i.e. a 500g object falling 40cm.
- › Sealed diaphragm depressurization Valve

Package contents :
The packaging should contain the following:
- ›The projector
- ›The user guide
- ›Two 12° and 26° diffuser filters
- ›1m stripped wire cord and IN hybrid plug
- ›Projector OUT cable outlet plug

3 - Product description
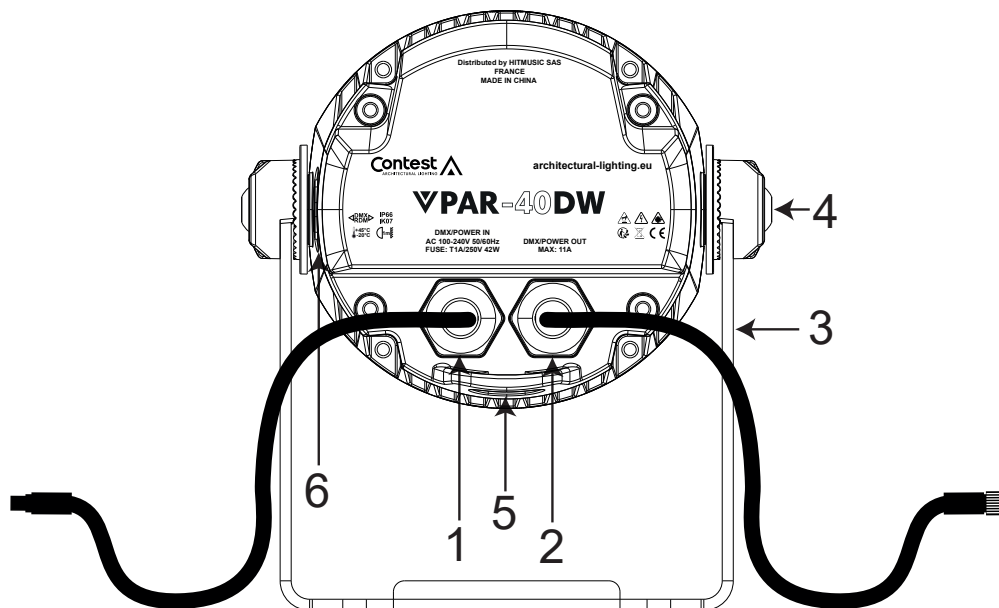
1 | **Power supply input + DMX**

Allows the projector to be connected to the mains via a 40 cm hybrid cord (power supply + DMX) with molded plug.

⚠ CAUTION	**CAUTION !** This appliance must be connected by a qualified technician in accordance with the regulations in force. This device is class 1 and must be earthed.

Power supply :

Make sure that the voltage of the place of service corresponds to the instructions noted on the product.

2 | **Power supply output + DMX**

Connects a projector output via the 40 cm hybrid cord (power + DMX) with molded plug. Please respect the output power limits of the projector see chapter 6. If no projector is connected at the output please use the plug provided.

3 | **Suspension Bracket**

Allows you to hang or place on the ground and to direct the projector.

4 | **Suspension bracket clamping system**

Allows you to adjust the tilt and lock the position of the projector.

5 | **Safety ring**

Connect a double safety sling to this ring.

⚠ CAUTION	**CAUTION !** Make sure the attachment point is properly tightened. It is mandatory to install a safety sling. When installing in a public place, legislation

requires each device to have a double safety hook. This security system must support 10 times the weight of the device so you must provide a sling capable of supporting at least 20 kg minimum.
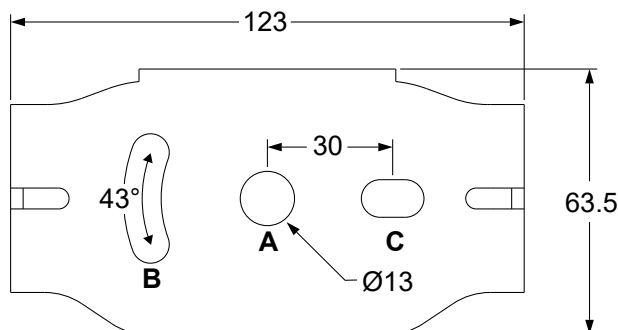
6 | **Decompression valve**

This valve automatically balances the pressure in the projector and thus eliminates the risk of water infiltration by suction. Please do not obstruct this valve.

## 4 - Attaching the bracket and aiming the projector

The projector can be fixed on a suitable flat surface using three attachment points **A B C**. The notch **B** is used to lock the rotation of the projector in Pan over 43°. Temporary hanging is possible using a clamp fixed through hole **A**.

CAUTION !
Ensure that the anchor points are properly tightened. Use 12 mm stainless screws and check the solidity of the support. It is mandatory to install a safety sling. When installing in a public place, legislation requires each device to have a double safety hook. This security system must support 10 times the weight of the device so you must provide a sling capable of supporting at least 20 kg minimum.

To choose the tilt angle of your projector: loosen the central screw using a 6 mm Allen key and rotate the projector. The notched clamping part allows the projector to be positioned permanently and the marking of the angles provides information on the direction of the beam (see figure opposite).
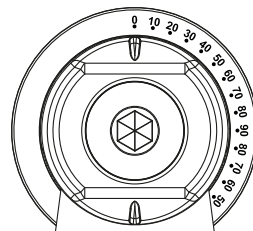
5 - Installation of diffusion filters
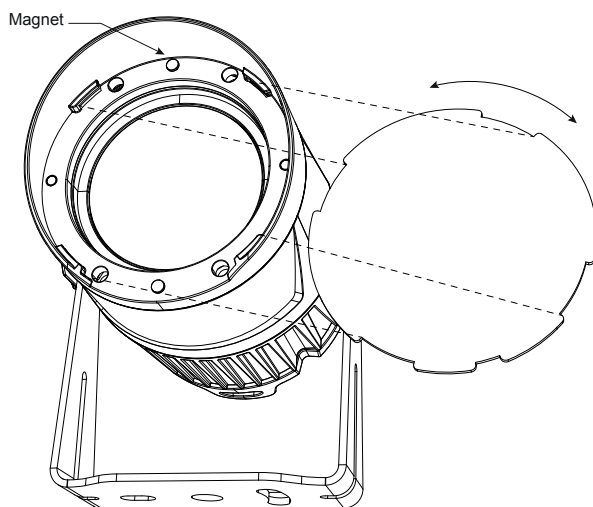
Two diffuser filters are supplied with the fixture: 12° and 26°.
They are attached to the 4 notches on the front of the fixture by turning them a quarter turn to lock the filter in place.
The magnet secures the filter in position.

6 - Connection and wiring

6.1 - IP67 plugs :

CAUTION !
The projector is fitted with molded IP67 hybrid plugs.
These plugs guarantee a good seal of the product. Cutting the plugs will void the projector warranty if water ingress occurs.
The projector is delivered with a bare wire adapter to IP67 IN connector in order to connect to an IP junction box.

CAUTION !
Risk of electic choks
Do not plug or unplug any cables while the system is powered on.

The plugs are equipped with three pins for the power supply and three pins for the DMX signal. The hybrid cable is used for the power supply part in 3 x 1.5 mm² and for the isolated DMX part in a separate sheath. The color code of the corresponding wires is shown in the diagram opposite.

Power : Alimentation	Wire color : Code couleur	DMX	Wire color : Code couleur
L : Live : Phase	Brown : Marron	**1** : Masse	Black : Noir
N : Neutral : Neutre	Blue : Bleu	**2**: Data -	White : Blanc
Ground : Terre	Yellow/green : Jaune/vert	**3** : Data +	Red : Rouge

CAUTION !
The plugs mounted on the projector cables are IP67, so they are waterproof but it is not recommended to leave them in standing water.

Water may be sucked into the interior of the projector due to vacuum caused by temperature changes in the projector. Ensure that the projector is protected against water ingress through the cables by using connectors or junction boxes that meet at least IP66. Create a drip loop before the cable glands or connection points to prevent them from being constantly immersed in water as shown in the figure below.
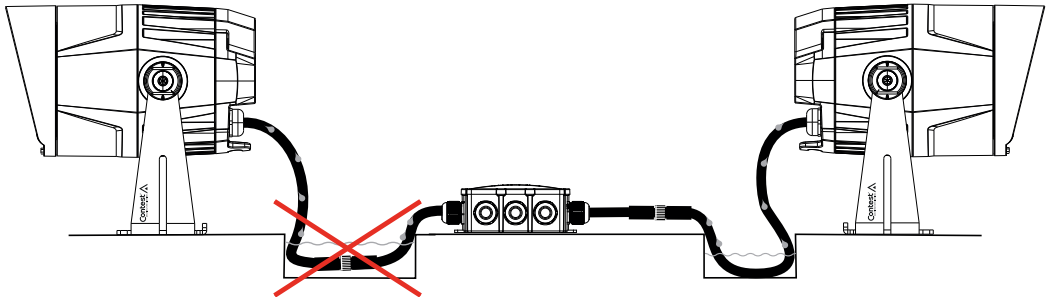
6.2 - Indoor line cabling and product setting adjustments with VC-ADAPT:

Use the VC-ADAPT adapter cable to power your line of indoor projectors or make settings adjustments. This is a 2P+T power plug adapter for power and an XLR plug for DMX. Output is via a hybrid Power + DMX plug.
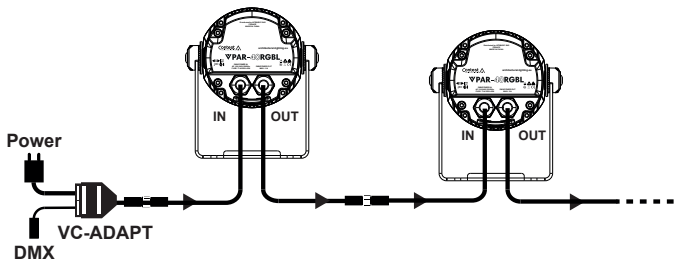
6.3 - Outdoor line wiring with junction box and VC-YHYB adapter :

For outdoor connections that must remain sealed, you can use a junction box and a hybrid Y adapter to distribute the power and the DMX as shown in the figure below.

**Power
16A (3500W maxi)**

DMX

1x IpBox-p4 box
2x VC-Start1/3 cord
1x FastCon-1333POW
1x FastCon-1333DMX

VC-YHYB

CAUTION !
The sum of the powers of the different lines must not exceed the power of the Power input (3500 W)
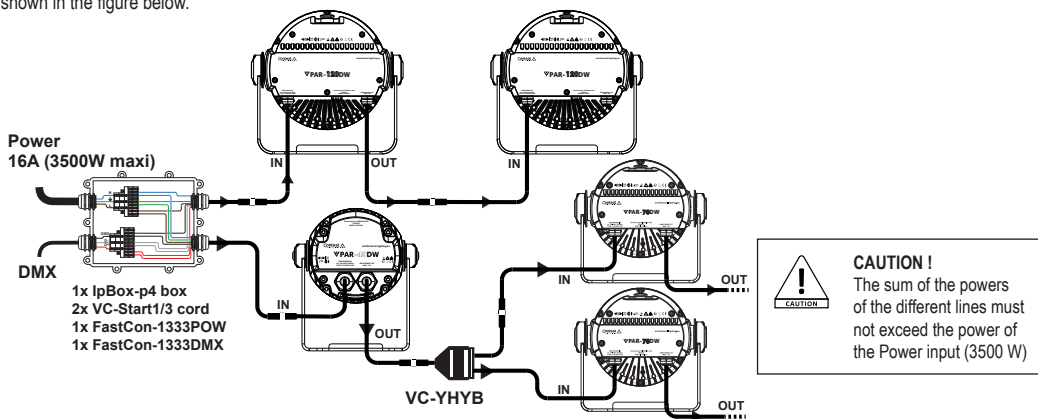
6.4 - Projector chains :

Wiring a group of projectors is simple.
Projectors can be connected directly to each other between the projectors' IP IN/OUT cords for close-range use.
VC-JUMP cords can also be used to increase the distance between two projectors.
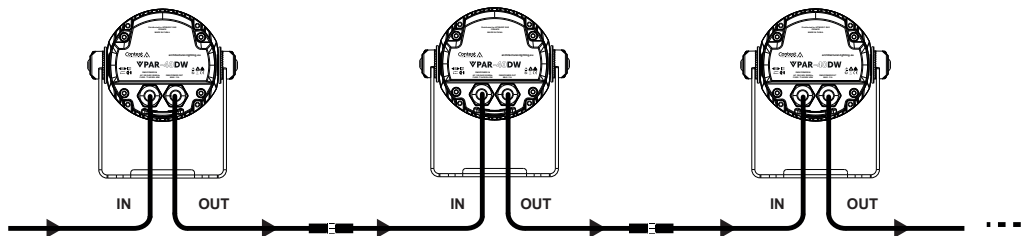
VC-JUMP hybrid cords for linking projectors are available in lengths from 1m to 10m.

CAUTION !
The sum of the power ratings of the different lines must not exceed the power rating of the Power input (3500 W).
The power rating per line is limited to the specifications of each of the devices, see table in the following paragraph.

6.5 - Line lenght :

The maximum number of spotlights on a single line depends on the length of the line and the cross-section of the power cable.
A "line" is defined as the length from the supply point of the first fixture to the last.
Multiple Versatile projectors can be mixed on the same line.
See the table below for the number of Max spotlights according to line length.

PROJECTOR	Qty on 10 m	Qty on 20 m	Qty on 30 m	Qty on 50 m	Qty on 100 m
VCOB-60DW	31	30	20	11	5
VCOB-120DW	14	14	10	6	2
VBAR-50DW	32	32	23	13	6
VBAR-100DW	19	19	12	7	3
VPAR-40DW	32	32	30	18	8
VPAR-70DW	27	26	17	10	4
VPAR-120DW	16	16	10	6	2
VPAR-150DW	11	11	8	5	2
VCOB-60RGBL	31	30	20	11	5
VCOB-150RGBL	12	12	8	5	2
VBAR-50RGBL	32	32	23	13	6
VBAR-100RGBL	19	19	12	7	3
VPAR-40RGBL	32	32	30	18	8
VPAR-70RGBL	27	26	17	10	4
VPAR-120RGBL	16	16	10	6	2
VPAR-150RGBL	11	11	8	5	2
VPANEL-200RGBL	9	9	6	3	1
VH2O-90	22	21	13	7	3
Avaible power on each line	2300 W	2216 W	1477 W	886 W	443 W

6.6 - Line length examples

The examples given below are calculated for the VCOB-60 projector. To perform calculations for other projectors, refer to paragraph 6.5.

Limitation of 31 VCOB-60 projectors on a cable length of 10 m
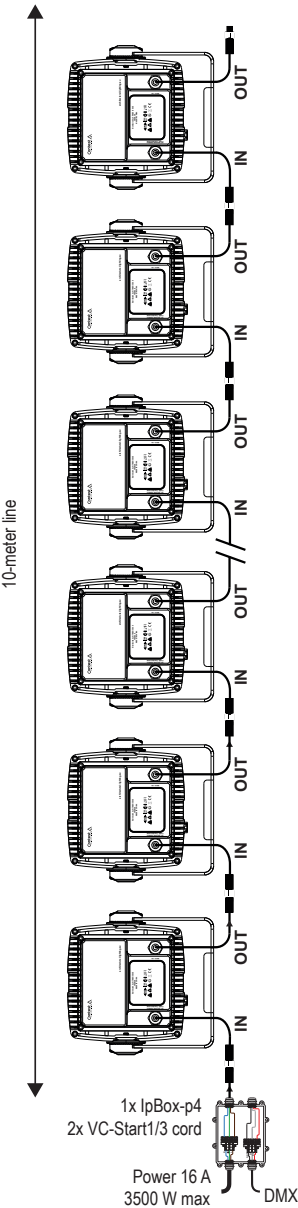
Limitation of 11 VCOB-60 projectors on a cable length of 50 m

10-meter line

50-meter line

OUT
IN

1x IpBox-p4
2x VC-Start1/3 cord

Power 16 A
3500 W max   DMX

1x IpBox-p4
2x VC-Start1/3 cord

Power 16 A
3500 W max   DMX
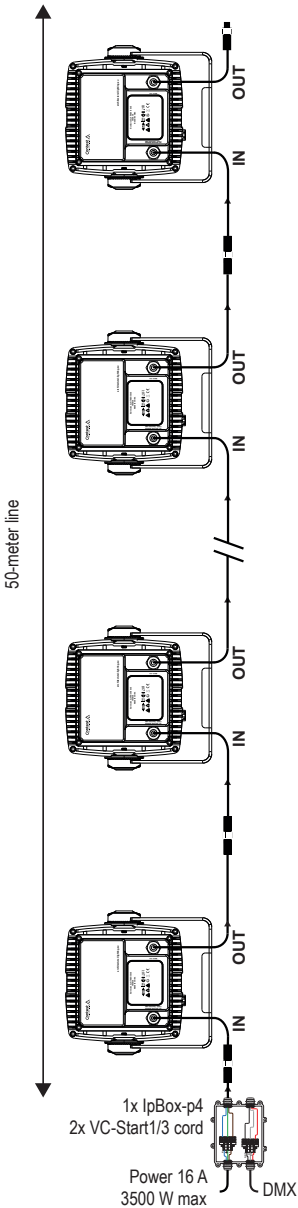
If you need more spotlights, you can use line boosters.

Example with the DMX Splitter/VRDM-Split Booster box. This box is equipped with a 16 A power input that allows power to be fed back into the additional line.
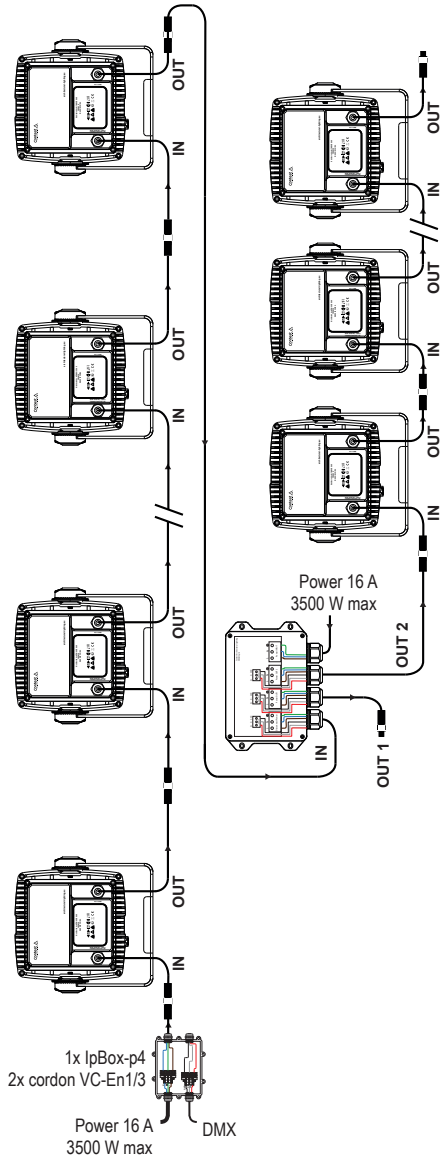
Example with the IpBox-p6 box. This box is equipped with a 16 A power input that allows power to be fed back into the additional line.

OUT

IN

OUT

IN

OUT

IN

OUT

IN

OUT

IN

OUT

IN

OUT

IN

Power 16 A
3500 W max

OUT 2

IN

OUT 1

1x boîte IpBox-p6
1x cordon VC-End/3
3x cordons VC-Start1/3
1x FastCon-1333POW
1x FastCon-1333DMX

OUT

IN

OUT

IN

OUT

IN

OUT

IN

OUT

IN

OUT

IN

OUT

IN

Power 16 A
3500 W max

1x IpBox-p4
2x cordon VC-En1/3

Power 16 A
3500 W max

DMX

1x IpBox-p4
2x cordon VC-En1/3

DMX
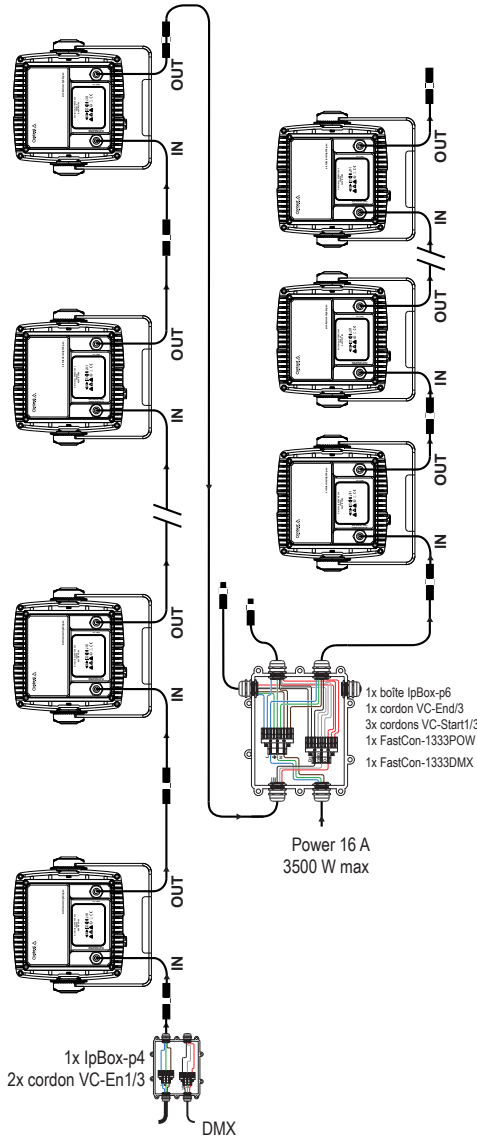
6.7 - Use with VRDM-Split Splitter - H11546

The VRDM-Split is a DMX RDM splitter 1 x IN 2 x OUT IP66. It allows the incoming DMX signal to be reboosted to two RDM-compatible DMX outputs. It has a Hybrid Power/DMX input from which the DMX signal is extracted to be split into two separate, isolated and protected lines. The Hybrid input power supply will be disconnected and a new Power IN power supply will be injected into the two Hybrid outputs.

CAUTION !
The sum of the powers of the different lines must not exceed the power of the Power input (3500 W). The power per line is limited to the characteristics of each of the devices, see table in the section on chaining of projectors.

VRDM-Split

IN   **OUT**   **IN**   ← **Power IN**

OUT1   **OUT2**

1x VRDM-Split
1x VC-End1/3
2x VC-Start1/3

IN

OUT

IN

OUT

Contest Architectural Lighting
VRDM-Split

D+ D- GND   D+ D- GND   D+ D- GND
DMX-IN   DMX-OUT1   DMX-OUT2

L N ⏚   L N ⏚   L N ⏚   L N ⏚
Disconnect   Power OUT1   Power OUT2   Power INPUT
Power

Hybrid
POWER+ DMX IN

Power IN
16A (3500W max)

Hybrid
Power + DMX OUT1

Hybrid
Power + DMX OUT2

The Hybrid Power+DMX IN input on the left is used to recover the DMX signal which will be filtered, divided and protected.
The power supply will be disconnected from the circuit via the Disconnect Power connector.
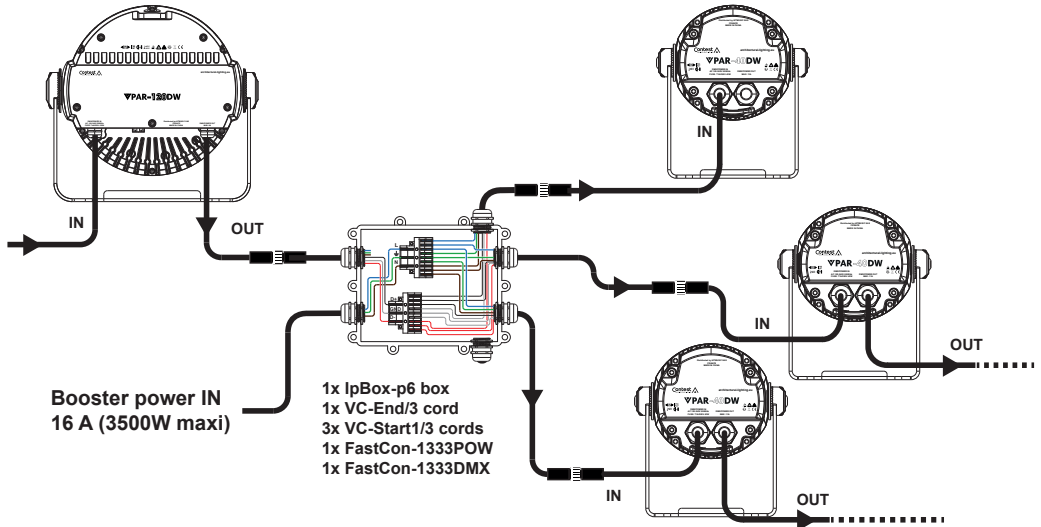The Power IN input on the right is used to supply the splitter and to re-inject the supply into the outputs.
Outputs OUT1 and OUT2 therefore have a reboosted DMX signal and power supply to start new lines.
Note :
In this case, the VRDM-Split is used in a Hybrid 1 x IN, 2 x OUT configuration.

It is possible to use the VRDM-Split simply by entering with a DMX IN signal to 2 x DMX OUT and supplying the box with power IN only.
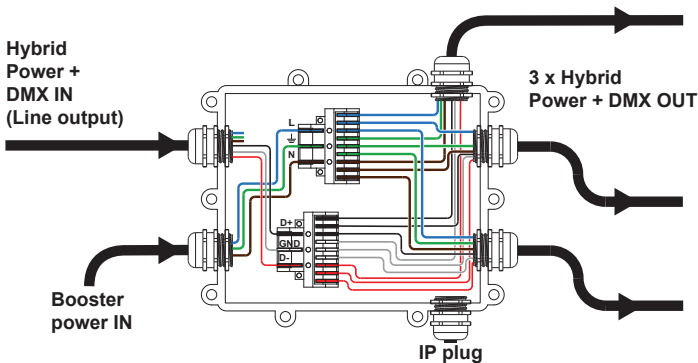It is also possible to mix the two combinations for more flexibility.

6.8 - Power supply booster :

To overcome the lack of power of the line or the voltage drop due to a long cable length, it is necessary to be able to boost the power supply. To do this, you will need to use a junction box and separate the DMX coming out of the hybrid cable at the end of the line and isolate the power supply. A new mains power supply can then be injected into one or more chains of projectors on hybrid connectors at the outlet of the box as shown in the figure below.

IN   **OUT**

IN

IN   **OUT**

IN   **OUT**

Booster power IN
16 A (3500W maxi)

1x IpBox-p6 box
1x VC-End/3 cord
3x VC-Start1/3 cords
1x FastCon-1333POW
1x FastCon-1333DMX

CAUTION !
The sum of the powers of the different lines must not exceed the power of the Power input (3500 W). The power per line is limited to the characteristics of each of the devices, see table in the section on chaining of projectors.

Hybrid
Power +
DMX IN
(Line output)

3 x Hybrid
Power + DMX OUT

L
L
N

D+
GND
D-

Booster
power IN

IP plug

CAUTION !
Outgoing power supply
OUT to be isolated from the
Booster power supply IN

7 - Setting

7.1 - Different operating modes:

The projectors can be used in **DMX** and **Stand-Alone** mode.

> 1 - Using the projectors in **DMX** mode is extremely simple; you just need to choose the right address and the right DMX mode.
> 2 - Using the projectors in **Stand-Alone** mode.

There are several ways to use one or more projectors in Stand-Alone mode:

> - **Master/Slave network**

The main projector should be configured as "Master" in "Slave mode" and the others as "Slave" (default value).
It will then be sufficient to make the beam adjustments in "Stand-Alone Mode" (Dimmer/Flash/CCT/Presets/UserMacro).
To validate all the parameters, press the "Mode" button until you return to the VRDM-Control "Menu".
The "Slave" projectors will then synchronize with the "Master" projector.

> - **Use of projectors in stand-alone mode "single"**

Using the projectors in "Single" mode allows each of the projectors to be set with different colors even if these projectors are in a Master Slave network.
Each of the individual projectors must be configured in "Single" in "Slave mode".
It will then be sufficient to make the beam adjustments in "Stand-Alone Mode" (Dimmer/Flash/CCT/Presets/UserMacro).
To confirm all the settings, press the "Mode" button until you return to the VRDM-Control "Menu".
The "Single" projectors will then light up according to the settings of each one.

If a DMX signal is received by stand-alone projectors, the DMX will take priority.
When the DMX signal is lost, the projectors will switch back to stand-alone.

7.2 - Macro creation

It is possible to create programs with changes in shades of white.
The projector must be in "Master" or "Single" mode, see previous paragraph.

To do this, go into "Edit User Macro" mode and make the various settings.
"Play Time" Duration of steps
"Play Fade" Fade time between steps (0 for no fade).
"Edit Step NB" Number of steps in the sequence.
"Edit Steps" allows you to set the parameters for each step in the sequence.

Once the Macro has been created, go to "Stand-Alone Mode", "User macro" and select "Yes".
To validate all the parameters, press the "Mode" button until you return to the VRDM-Control "Menu".
The "Master/Slave" and/or "Singles" projectors will then light up according to the settings of each one.

7.3 - "Copy proj settings" mode

This mode allows you to copy some or all of the settings of a projector to the projectors connected to the same line.
Simply configure the projector and go to "Setting mode" "Copy proj settings" and select the settings to be copied.
To confirm the copying of the elements, press the 'Mode' button until you return to the VRDM-Control "Menu".

7.4 - VRDM-CONTROL menu

MENU					
RDM	Products List	Label:	"Product Name"	The name of the product connected to the box	
		Model:	"Product Name"	The name of the product connected to the box	
		Manufacturer:	Hitmusic SAS	The name of the manufacturer	
		Firmware:	V1.00	Firmware version	
		DMX Address:	001 (XXX)	DMX address 001 start (XXX) end	
		DMX Personality:	CH list	Number of used channels	
		DMX Slots:			
		Identify:	ON (By default) / OFF	Allows you to flash the selected projector in order to identify it among the other projectors	
		Temperature:	…	Internal temperature of the projector	
		Fixture Menu	NO DMX	Blackout	
				Freeze (By default)	
				Stand-Alone	
			Slave mode	Single	
				Master	
				Slave (By default)	
			Stand-Alone Mode	Master Dimmer	Values from 000 to 255
				Flash	Values from 000 to 255
				CCT adjust	Values from 000 to 255
				CCT prests	Presets/Macro
					Fade Speed
				USER macro	YES / NO
			Edit User Macro	Play Time	Time : de 00 à 99
				Play Fade	Fade : de 00 à 99
				Edit step NB	Step NB : de 1 to 20
				Edit Steps	Edit Step : de 10 to 20
					Dimmer
					Flash
					CCT adjust
			Setting Mode	Dimmer curves	Linear
					Exponential (By default)
					Logarithmic
					S-Curve
				White Balance	WW
					CW
				PWM Frequency	900Hz
					1200Hz (By default)
					2400Hz
					3600Hz
				Temperature	°C (By default)
					°F
				Time info	…
				Copy proj settings	DMX ADDRESS
					DMX personality
					NO DMX
					Slave Mode
					Stand Alone Mode
					Edit User macro
					Dimmer Curve
					White Balance
					PWM Frequency
					All Parameters
				DFSET	OFF
					ON

VPAR-40DW projector is configured using the remote RDM control box VRDM-CONTROL. This box makes it possible to deport the control part of the projector in order to make all the adjustments (settings) of the projector via the DMX cord by RDM protocol.
The menu is different depending on the type of projector, the functions are as follows:
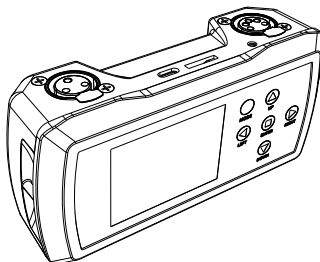
	In case of loss of DMX signal either Blackout mode or stays on the last value or launches the Stand-Alone program	
	Allows to have an autonomous color per projector	
	Master Projector controls the Slaves	
	Projector controlled by the Master	
	Dimming from 0 to 100%	
	Flash speed from slow to fast	
	CCT setting	
	Show all Presets list	
	Speed from 0% to 100%	
	Determines the duration of a step	
	Determines the fade time between each stage of the user program	
	Determines the stage number of the user program	
	Setting of each stage	
	Allows you to choose the type of dimmer curve. See details in next paragraph	
	Values from 000 to 255	Adjust white balance
	Values from 000 to 255	
	Allows you to choose the LED oscillation frequency to avoid Flicker effects in video. The higher the frequency, the better the refresh rate, but the brightness may be degraded.	
	Choosing the type of display for the internal temperature of the projector	
	Displays the elapsed time in hours since the first power on	
	NO / YES	
	NO / YES	
	NO / YES	
	NO / YES	
	NO / YES	
	NO / YES	
	NO / YES	
	NO / YES	
	NO / YES	
	NO / YES	
	ON /OFF	Enables return to default projector settings
	ON /OFF	Allows you to return to the default values for all the projectors on the line

7.5 - Detail of the 4 DimCurve modes

DimCurv modes allow you to define the behavior of the dimmer.
Below 4 diagrams show you the evolution of the output level according to the chosen mode and the DMX level of the dimmer channel.

Mode 1 : Linear

Mode 2 : Exponential

Mode 3 : Logarithmic

Mode 4 : S-curve
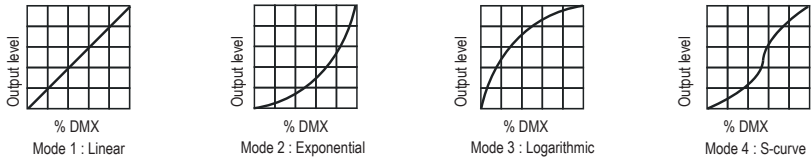
8 - The different DMX modes

As soon as a DMX signal is present on the DMX IN input, the projector automatically switches to DMX mode.

8.1 - 2 channels mode A

Channels	Values	Action
1	**Color presets**	
	000-011	2900K
	012-022	3000K
	023-033	3200K
	034-044	3400K
	045-055	3600K
	056-066	3800K
	067-077	4000K
	078-088	4200K
	089-099	4400K
	100-110	4600K
	110-121	4800K
	122-132	5000K
	133-143	5200K
	144-154	5400K
	155-165	5600K
	166-176	5800K
	177-255	5900K
2	**Dimmer**	
	000 - 255	Intensity from 0 to 100%

8.2 - 2 channels mode B

Channels	Values	Action
1	**CCT setting**	
	000 - 255	CCT with increasing value
2	**Dimmer**	
	000 - 255	Intensity from 0 to 100%

8.3 - 3 channels mode

Channels	Values	Action
1	**CCT setting**	
	000 - 255	CCT with increasing value
2	**Dimmer**	
	000 - 255	Intensity from 0 to 100%
3	**Shutter**	
	000 - 031	LED off
	032 - 063	LED on
	064 - 095	Strobe effect with increasing speed
	096 - 127	LED on
	128 - 159	Pulse effect chaining
	160 - 191	LED allumée
	192 - 223	Random strobe effect with increasing speed
	224 - 255	LED on

8.4 - 4 channels mode

Channels	Values	Action
1	**CCT setting**	
	000 - 255	CCT with increasing value
2	**Dimmer**	
	000 - 255	Intensity from 0 to 100%
3	**Shutter**	
	000 - 031	LED off
	032 - 063	LED on
	064 - 095	Strobe effect with increasing speed
	096 - 127	LED on
	128 - 159	Pulse effect chaining
	160 - 191	LED on
	192 - 223	Random strobe effect with increasing speed
	224 - 255	LED on
4	**Color presets**	
	000-003	No fuction
	004-011	2900K
	012-022	3000K
	023-033	3200K
	034-044	3400K
	045-055	3600K
	056-066	3800K
	067-077	4000K
	078-088	4200K
	089-099	4400K
	100-110	4600K
	110-121	4800K
	122-132	5000K
	133-143	5200K
	144-154	5400K
	155-165	5600K
	166-176	5800K
	177-255	5900K

9 - Dimensions

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10 - Notes