FOS technologies
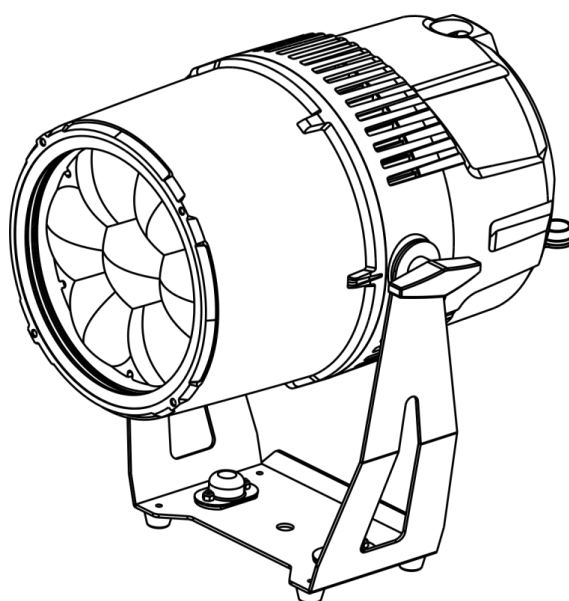
Vortex PAR IP65

This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

User manual

Please read the instructions carefully before use

Please note that as part of our ongoing commitment to continuous product development, specifications are subject to change without notice. Whilst every care is taken in the preparation of this manual we reserve the right to change specifications in the course of product improvement. The publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from them.

Every unit is tested completely and packed properly by the manufacturer. Please make sure the packing and / or the unit are in good condition before installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the unit. Any damage caused by improper use will not be assumed by the manufacturer and / or dealer.

ACCESSORIES

These items are packed together with the projector:

Name	Quantity	Unit	Remark
Power cable (IP65)	1	Pc	
Bracket	1	pc	
XLR cable (IP65)	1	Pc	
This manual	1	Pc	
PowerCON True1 In&Out	1	Set	Optional
Clamp	1	Pc	Optional
Safety cord	1	Pc	Optional

SAFE USAGE OF THE PROJECTOR

When unpacking and before disposing of the carton check there is no transportation damage before using the projector. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.

The projector is for indoor use only, IP20. Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other liquids.

The projector is only intended for installation, operation and maintenance by qualified personnel.

The projector must be installed in a location with adequate ventilation, at least 50cm from adjacent wall surfaces. Be sure that no ventilation slots are blocked.

Do not project the beam onto inflammable surfaces, minimum distance is 1.3m. ◁ 1.3m ⴹ

Avoid direct exposure to the light from the lamp. The light is harmful to the eye.

Do not attempt to dismantle and/or modify the projector in any way.

Electrical connection must only be carried out by qualified personnel.

Before installation, ensure that the voltage and frequency of power supply match the power requirements of the projector.

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards.

Do not connect this device to any other types of dimmer apparatus.

Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

The projector should always be installed with a secondary safety fixing. A safety cord is supplied for this; it should be attached as shown in "installing the projector" section.

Shields and lens shall be changed if they have become visibly damaged to such an extent than their effectiveness is impaired, for example by cracks or deep scratches.

Exterior surface temperatures of the luminaire after 5 minutes operation is 45°C, when steady state is achieved 50°C,

There is no user serviceable parts inside the projector, do not open the housing and never operate the projector with the covers removed.

If you have any questions, don't hesitate to consult your dealer or manufacturer.

Always disconnection from Power before a device's installation, cleaning and maintenance!

POWER SUPPLY-MAINS

Connect the power cord as follows:
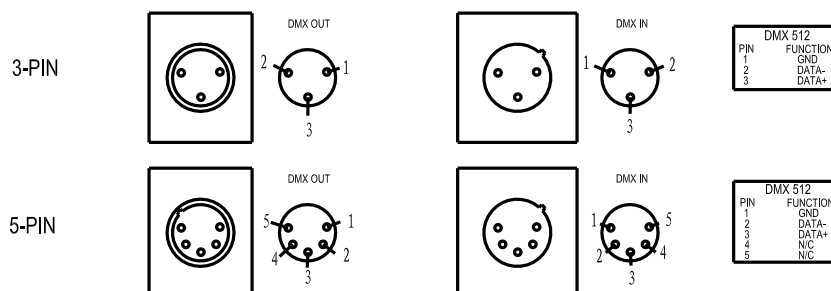   L (live) =brown
    E (earth) =yellow/green
    N (neutral) =blue
Use the plug provided to connect the mains power to the projector paying attention to the voltage and frequency marked on the panel of the projector. It is recommended that each projector be supplied separately so that they may be individually switched on and off.

IMPORTANT
It is essential that each projector is correctly earthed and the electrical installation conforms to all relevant standards.

CONTROL CONNECTION

Connection between controller and projector and between one projector and another must be made with a 2 core-screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 5 pin (which are included with the projector) or 3 pin XLR plugs and sockets. The XLR's are connected as
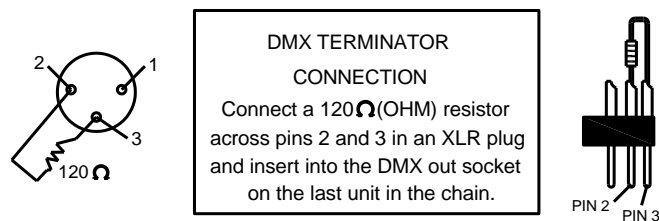
shown in the figure above.

Note: care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. The body of the plug is not connected in any way. The projector accepts digital control signals in protocol DMX512 (1990).

Connect the controller's output to the first fixture's input, and connect the first fixture's output to the second fixture's input and connect the rest fixtures in the same way. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.

DMX TERMINATOR

In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.

The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.

DMX TERMINATOR
CONNECTION
Connect a 120Ω(OHM) resistor across pins 2 and 3 in an XLR plug and insert into the DMX out socket on the last unit in the chain.

PIN 2   PIN 3

SETUP OPTIONS-PROJECTOR CONFIGURATION

Press button UP or DOWN if you want to browse through the various Setup Options.

Press button ENTER to save your settings or enter the next menu.

Press button UP or DOWN to shift.

Press button Menu will return to the upper menu one by one. If you stay for minutes defaulted will show display status automatically.

STAND-ALONE MODE

Operate the projector without connecting a controller, enable the master mode in the operation panel, the projector will run in Stand-Alone mode automatically.

DMX address can be set without limitations.

MASTER/SLAVE MODE

Many projectors can run synchronously in the Master/Slave mode by linking them with each other. Select one projector as the master with setting options at any mode of master's modes enabled and make the other projectors as the slaves with setting options slave mode enabled and their DMX start address "001".

Using XLR-XLR cables, Connect the first fixture's output to the second fixture's input, and connect the second fixture's output to the third fixture's input and connect the rest fixtures in the same way. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.

After powered, the group will run in synchronous Master/Slave Mode.

OPERATION MENU

Level 1	Level 2	Description
DMX512	Channel	6CH / 13CH
	DMX Address	001-512
Settings	Display Mode	Always On / 10s Off / 20s Off / 30s Off
	Screen Lock	On / Off Unlock password [↑ ↓ ↑ ↓ ENTER]
	No Signal	Blackout / Hold
Manual	Manual Dimming	R/G/B/W/Z/R (Red,Green,Blue,White,Zoom,Rotate)
	Auto	Jump / Fade / Pulse / Combined
Message	Temperature	
	Version	
	RDM UID	
	Language	

Remark:

In the synchronous control of multiple projectors parameters can be transmitted from the master including: DMX mode, display setting, operation mode(user memory data included)

6 Channel modes

channel	Function	DMX value	Description
CH1	Red	0	Close
		1-255	Red (0%--100%)
CH2	Green	0	Close
		0-255	Green (0%--100%)
CH3	Blue	0	Close
		1-255	Blue (0%--100%)
CH4	White	0	Close
		1-255	White (0%--100%)
CH5	Zoom	0-255	Zoom narrow → wide
CH6	Rotate	0-127	0~360 degrees index
		128-191	Rotate clockwise
		192-255	Rotate counterclockwise

13 Channel modes

channel	Function	DMX value	Description
CH1	Dimmer	0	Close
		1-255	Total Dimmer
CH2	Red	0	Close
		1-255	Red (0%--100%)
CH3	Green	0	Close
		0-255	Green (0%--100%)
CH4	Blue	0	Close
		1-255	Blue (0%--100%)
CH5	White	0	Close
		1-255	White (0%--100%)
CH6	Zoom	0-255	Zoom narrow → wide
CH7	Rotate	0-127	0~360 degrees index
		128-191	Rotate clockwise
		192-255	Rotate counterclockwise
Ch8	Strobe	0-9	Strobe closed
		10-100	Pulse strobe from slow to fast
		101-170	Random strobe from slow to fast
		171-255	Strobe from slow to fast
Ch9	Auto	0-9	No function
		10-50	Color jump
		51-100	Color fade
		101-150	Color pulse
		151-200	Auto loop
		201-255	No function
CH10	Auto Speed	0-255	From slow to fast
CH11	CTC	0-255	From warm white to cool white
CH12	Virtual Color Wheel	0-10	Empty
		11-19	Color 1
		---	---
		240-249	Color 24
		250-255	Color 25
CH13	Dimmer Mode	0-50	Dimmer mode 1
		51-101	Dimmer mode 2
		102-152	Dimmer mode 3
		153-203	Dimmer mode 4
		204-255	Dimmer mode 5

DMX PROTOCOL
MAINTENANCE

If the projector does not function, check the fuses on the power socket of the projector, they should only be replaced by fuses of the same specification. Should these be damaged call a qualified technician before replacement. The projector has thermal protection device that will switch off the projector in case of overheating, should either of these operate, check that the fans are not blocked, and if they are dirty clean them before switching on the projector again. Check that the fans are operational, if not call a qualified technician.

Any maintenance work should only be carried out by qualified technicians.

KEEPING THE PROJECTOR CLEAN

To ensure the reliability of the projector it should be kept clean. It is recommended that the fans should be cleaned every 15 days. The lens and dichroic colour filters should also be regularly cleaned to maintain an optimum light output. Do NOT use any type of solvent on dichroic colour filters.

Cleaning frequency depends on the environment in which the fixture operates: damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. A soft cloth and typical glass cleaning products should be used in cleaning. It is recommended to clean the external optics at least once every 20 days and clean the internal optics at least once every 30 / 60 days.

Do not use any organic solvent, e.g. alcohol, to clean the reflector mirror, dichroic colour filters or housing of the apparatus.

TROUBLESHOOTING

PROBLEM	ACTION
The projector doesn't switch on	➢ Check the fuse on the power socket. ➢ Replace the lamp.
The lamp comes on but the projector doesn't respond to the controller	➢ Make sure that the projector is correctly configurated. ➢ Replace or repair the DMX cable.
The projector only functions intermittently	➢ Make sure the fan is working and not dirty.
Defective projection	➢ Check the lenses are not broken. ➢ Remove dust or grease from the lenses.
The project image appears to have a halo	➢ Make sure the lamp is installed correctly. ➢ Carefully clean the optical group lenses and the projector components.
The beam appears dim	➢ Check the optics is clean. ➢ Replace with a new lamp of the specified type and rating.

TECHNICAL DATA

Light Source: 7 x 40W RGBW 4in1 LEDs

Average LED lifetime: 50,000 hrs.

Beam Angle: 5-30°

DMX Mode: 6-channel, 13-channel

Control Modes: DMX-512, RDM, Master-slave, Stand Alone

DMX Functions: Auto programs, Color macro, Master Dimmer, Dimmer Mode, RGBW, Strobe

Control: 4 TOUCH buttons with OLED display

Strobe: 0~20Hz

Operating Voltage: AC 110V - 240V, 50 - 60 Hz

Power: 300W

Connections: IP65 Seetronic DMX data in/out, PowerCON true1 Power in/out

Housing: Material Rugged Die-Cast Aluminum

Cabinet Color: Black

Protection: IP65

Cooling: Convection+quiet fans

Operating Temperature: -15 - 45 °C

Installation: Special Yoke / Floor Stand

DIMENSIONS