Spectrum Collider 600 HD Laser Display Projector

The Spectrum Collider 600 HD Laser Projector is low cost display laser which can be used as a stand alone laser show in Auto Run, Sound to Light or DMX Modes, projecting a series of Animations, Beam Effects and Patterns in colour.

With the addition of optional ILDA PC software the laser can be programmed to incorporate basic logos, text messages and beam effects to enable full control over the laser scanning system.

This laser system is designed for professional use and incorporates many safety features.

Note: For safety reasons we will only supply this Laser projector to professional experienced laser operators.

Specification

Net Weight: 6.5Kg
Dimensions: 430 x 290 x 185mm
Input Power: 100v/250v AC, 60/50Hz.
Power consumption: 20W
Laser: Class 4
Laser power: Red 300mw, Green 60mw, Blue 150mw
Laser wave length: Red 650nm, Green 532nm, Blue 450nm
Operating Modes: Sound active, Auto, DMX512, Master/Slave, ILDA PC
Scanner Speed: 20K
Scanning Angle: Plus-Minus 30 degree
Cool system: Fan Cooled
Warm-up time: Up to 15 minutes
Working temperature: between 10 degree to 35 degree

Features

RGB Laser Projector with over 120 pre-programmed patterns including beam effects and animations
Hanging bracket for easy installation
Key Switch to lock out the laser projector when unattended
Auto Run Mode
Sound to Light Mode
DMX Mode
ILDA PC Controllable (Using optional ILDA PC Software)

Product Overview

The Spectrum Collider 600 HD Laser Projector can be used in the following modes:

Stand Alone Auto Run: In Auto Run mode various pre-programmed animations, set text and multiple patterns or various beam effects that will display in sequence.

Sound to Light Mode: The pre-programmed patterns and beam effects as above will be animated to the beat of the music.

DMX Mode: The Vayron 1.2HD can be connected to a suitable DMX 512 Controller where the various patterns and animations can be accessed. The unit requires 12 x DMX channels.

ILDA Mode: Using the optional ILDA Software which can be installed on a laptop or PC, the Laser Projector can be programmed to display text and graphics. In addition, simple logos and animations can be traced for use as part of a pre-programmed laser show.

Set Up

This is a Class 4 laser display projector and it is vital that the operator is fully familiar with the health and safety regulations associated with laser projectors of this power. It is vital that this laser display projector is sited and operated in accordance with the recommendations in the Health and Safety Executive's HSG95 document. We would highly recommend attending a laser safety course so that as an operator you are fully aware of the safety regulations and responsibilities that are required of you.

This laser projector should not be left unattended at any time whilst in operation. The unit should be powered down, the safety lock engaged and the key removed and kept with the laser operator at all times. Under no circumstances should children or untrained personnel have access to or be allowed to operate the equipment.

The laser projector should be mounted in such a way that it is not possible for persons to look into the laser aperture when the unit is powered up. Please note the various regulations and recommendations on crowd scanning and on no account should a single stationary laser beam be allowed to project into the audience. **IRRIPARABLE EYE DAMAGE** can result from improper use of laser display systems.

IMPORTANT: BEFORE the audience is allowed into the room where the laser show is to be displayed, it is important to run through the various programs that are to be displayed to ensure that under no circumstances the laser beams are allowed to scan the audience in accordance with the health and safety regulations for Laser Displays.

Please ensue that no person is allowed to stand in front of the laser projector until full setup is completed.

Before use, set the dip switches to the required mode of operation and connect the mains lead to a suitable mains supply. In addition, the "Pattern Size" control on the left hand side of the rear panel must be set fully clockwise. This can then be adjusted to decrease the size of the pattern to ensure that the image is never scanned into the audience.

DO NOT: It is against health and safety regulations and dangerous to adjust the pattern down to such a size that a single beam of light is emitted from the laser aperture. If a single beam is projected out of the laser aperture, this would be a severe health risk if projected into an audience and could also be a fire hazard.

Operation

Stand-alone Mode (Animation Only)
Set dip switches **"1" & "2"** to the **"ON"** position on the rear of the laser projector. Turn the key switch to the **"ON"** position and the unit will then run through the various built in animations and patterns.

Stand-alone Mode (Beam Effects Only)
Set dip switch **"1"** to the **"ON"** position on the rear of the laser projector. Turn the key switch to the **"ON"** position and the unit will then run through the various built in beam effects.

Stand Alone Sound Active Mode
Set all the dip switches to the **"OFF"** position on the rear of the laser projector. When music is detected, the Laser Projector with run through the various beam effects in response to the sound detected. By adjusting the Sound Sensitivity control on the right hand side of the rear of the laser projector, the various beam effects can be made to change to the beat of the music.

DMX Mode

Set dip switch "10" to the "ON" position to place in DMX Mode.

Next set the DMX address as required in accordance with the dip switch values detailed below.

DMX Switch Values
Switch 1=1, 2=2, 3=4, 4=8, 5=16, 6=32, 7=64, 8=128 & 9=256.

Examples: To set DMX Address 17: Switch numbers 5 & 1 "ON"

DMX Address 50: Switch numbers: 6, 5 & 2 "ON"

DMX Protocol Table

Note: This unit is a 12 Channel DMX 512 unit.

Channel	DMX Value	Function
1 (Control Mode)	000 – 049	Sound Control
	050 – 099	Auto Beam
	100 – 149	Auto Animation
	150 - 255	DMX
2 (Colour Select)	000	Laser Off
	001 - 255	Colour Change
3 (Pattern Select)	000 - 255	Select Patterns
4 (Vertical Movement)	000 - 127	Manual
	128 - 191	Fast Up to Down
	192 - 255	Fast Down to Up
5 (Horizontal Movement)	000 - 127	Manual
	128 - 191	Fast Left to Right
	192 - 255	Fast Right to Left
6 (Horizontal Rotate)	000 - 255	Slow to Fast
7 (Vertical Rotate)	000 - 255	Slow to Fast
8 (Rotate)	000 - 127	Manual
	128 - 191	Anti-Clockwise
	192 - 255	Clockwise
9 (Zoom)	000	Static
	001 - 085	Small to Large
	086 - 170	Large to Small
	171 - 255	Auto Zoom
10 (Pattern Size)	000	Standard Size
	001 - 255	Small to Large
11 (Spot & Line)	000 - 255	Line to Spot
12	000 - 022	Slow to Fast

(Pattern Speed)		

ILDA Mode

IMPORTANT: Before connecting the ILDA Signal Cable, switch off the laser projector and remove the power cord otherwise damage to the laser projector could result.

The Unit will automatically switch to ILDA control mode when the ILDA Signal cable is connected and the power turned back on.

ILDA PC software (available separately) can then be used to add custom mate patterns, graphics and logo's. Refer to the instructions that come with your ILDA Software.

IMPORTANT

To prevent unauthorised use of the laser projector, it is a Health and Safety requirement that when not in use the key operated Interlock Switch must be turned off and the Key removed from the unit.

This unit should be installed and operated by a competent person who is aware of the health and safety regulations put in place for the safe operation of laser display equipment. We strongly recommend that the operator completes a laser safety course before operating this unit.

Important Laser Safety Information

WARNING: DO NOT LOOK DIRECTLY INTO THE LASER APERTURE WHILE POWER IS APPLIED TO THE UNIT, OTHERWISE IRREVERSIBLE EYE DAMAGE COULD RESULT.

This is a Class 4 Laser projector and has the potential to damage eyesight if not used correctly. Please follow the following instructions which are designed for your safety and that of your audience.

Laser Lighting Effects are safe to watch providing they are installed and operated correctly. The following information is based on the current UK health and safety guidelines for the safe use of lasers when used for public displays purposes and should be used as a guide only.

We would recommend reading the official health and safety guidelines set out by the Health and Safety Executive: HS(G)95 *The Radiation Safety of Lasers Used for Public Display Purposes.*

Installation of Laser Equipment

The laser projector should be mounted in a stable position where it cannot be interfered with by anyone other than the operator. It should be monitored at all times during its operation by a dedicated responsible laser operator.

The projector should be placed so that the laser beams that are projected from the laser aperture are 3m away from the audience in all directions.

Before installation care should be taken to consider the direction and movement (scanning) of the laser beams, paying particular attention to beams that are likely to be aimed into the audience. This includes any reflected beams from mirrors and other shiny surfaces. These can be just as hazardous.

The laser beams should not contact the audience at any time during the show. Stationary laser beams should **not** be aimed into the audience at any time and should be avoided.

Important: We would highly recommend that the operator of any laser equipment used for public display purpose attend a training course on laser safety.

Please contact your local college or University for further details.