

LAZER 150G

PR-5030A

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.

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

Power-cord (1 PCS)

XLR cable with 3-pin plug and socket (1 PCS)

Cable of data refreshes (1 PCS)

CD included this manual (1 PCS)

Laser key (2 PCS)

Urgency laser safety switch + Connector (1 set)

INTRODUCTION

Thank you for purchasing our product LAZER 150, PR-5030A series.

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

The LAZER 150 is an innovative projector with an elegant housing, which is made from high intensity and heat-resistant complex plastic. LAZER 150 complies with CE norms and standards and uses international protocol DMX 512. The LAZER 150 uses 16 DMX channels. Through DMX 512 controller, you can select the pictures and their movement changing methods, so you can get charming and dreamful effect of the various laser pictures. The projector has 3 group of sound activation demo so makes light and sound uniformity come true. You can get impact effect using the music together. The unit has reliable safety equipments. Once the errors occur, the unit will be cut off automatically. It is suitable for application in TV station, discotheque, singing and dancing stage, nightclub, bar, press conference, exhibition, etc.

The projector uses green solid laser lamp for light source. This series also has PR-5031, PR-5032, PR-5033, and PR-5034 and so on according to the differences of the power consumption and colour of their light source. All of the product manuals in the PR-5030A series are same except the differences of the power consumption and colour.

MAIN FEATURES:

1. Professional optical system dustproof technique, so need not periodic clean even if long time

usage.

2. Uses international standard high speed vibratile lens whose scanning speed above 30K, make the

scanning pattern more steady and exquisite.

3. Adopts the latest laser lamp of DPSS.

4. Uses international standard DMX 512 protocol.

5. Laser pictures, picture changing method and picture movement speed can be controlled via DMX

512 controller.

6. Adopts large memory of FLASH to save the pictures. The memory capacity can up to 8Mbit.

7. There are 256 built-in basic pictures and characters, 256 pre-programmed "combination picture

effect", up to 300,000 kinds of actual light beam effects, 10 set of beautiful animation and 32 user

refreshable graphics.

8. Users can convert the standard ILDA format into the laser pictures, compile program and refresh

the 32 user refreshable graphics inside the unit.

9. The 12-bit resolution of the laser picture makes the pictures clearer.

10. Adopts BLANKING technology to produce verisimilitude images.

11. Has multi-laser safety protection function and can cut off automatically if any error occurs.

12. Has 3 sound activation demo to achieve impact effect, single projector can run under sound

activation without controller.

TECHNICAL DATA

Power supply: 90-220V AC 50Hz, wide voltage

Power consumption: 100W / 220V

Output power: 150mW

Beam length: 532nm, Green

Interface: Control: DMX 512

Refresh data: RS-232

Channels: 16

Dimensions: 411mm LONG x 261mm WIDE x 150mm HIGH

Net weight: 16kg



PR-5030A OUTLOOK

SAFETY WARNING

The LAZER 150 PR-5030A belongs to the CLASS III-B laser product, the laser lamp parameter is as follows:

□Maximum output power:150 mW

□Beam length: 532 nm, green therefore

☐ Light spot size: <1.2mm

Note of Safety Use 1: because the energy of this kind of laser is strong enough to result in the permanence injury to persons' eyes, must avoid see the laser beam directly in use process, especially the laser beam stops at a spot can cause eye burns seriously.

Note of Safety Use 2: inside of the projector has automatic laser safety protection circuitry. However, for your safety, it is recommended that install the "Laser urgency switch" in place you can control conveniently, so that you can turn off the laser manually in case of emergency.

Note of Safety Use 3: for your safety, please do not run the projector when cover is open.

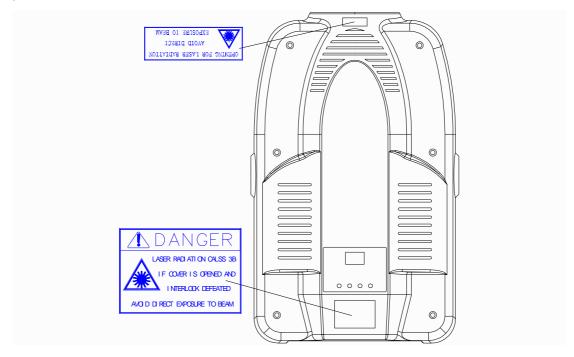
Note of Safety Use 4: please take off the laser key if non-use, in case of other people unfamiliar with the projector turn it on and then lead to harm.

Note of Safety Use 5: the safety standard in every country and area is different. Please contact local laser official to know correlative regulations before actual usage of the projector.

SAFETY PROTECTION FUNCTIONS

The laser safety protection measures of this product LAZER 150 PR-5030A are implemented according to the relative European items. These measures are as below:

- ▲ the cover open protection: open the plastic shell if there is current flows, the laser will be cut off automatically.
- ▲ laser key switch: the laser can be switch on when key is under on circumstance; the key cannot pull out at the same time.
- ▲ external urgent and safe switch: switch off the laser manually if error occurs.
- ▲ laser indication device: there are laser indication devices at the side of key switch and on the socket, used to indicate "the laser is ready".
- ▲ laser safety marks: there are marks on the head of the unit at several places comply with the Europe standard.



▲ the laser safety protection panel: if the laser beam scans in a small spot may have safety-hidden trouble. The panel will be closed within 25 ms compulsorily.

SAFE USAGE OF THE PROJECTOR

KEY WORD: LASER SAFETY USAGE

The following points are important for safety as well as for the smooth installation and performance of the unit

When unpacking and before disposing of the carton, check there is no transportation damage before using the projector. Keep the carton well for future possible transportation. 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 fluids, or metallic objects.

The projector is not designed or intended to be mounted directly on to inflammable surfaces.



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 surfaces. Be sure that no ventilation slots are blocked.

Do not project the beam onto inflammable surfaces, minimum distance is 3m. ☐ 3m €

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 dimmer pack.

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.

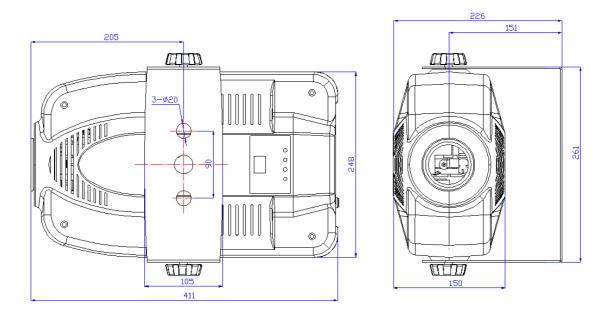
The projector should always be installed with a secondary safety fixing. A safety cord is supplied for this and it should be attached as shown in "installing the projector" section.

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

Always disconnect from the mains, when the device is not in use or before cleaning it or before attempting any maintenance work.

If you have any questions, do not hesitate to consult your dealer or manufacturer.

INSTALLING THE PROJECTOR

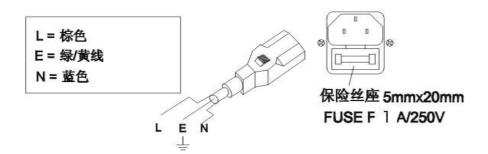


Always ensure that the projector is firmly anchored to avoid vibration and slipping whilst functioning. Always ensure that the structure to which you are attaching the projector is secure and is able to support a weight of LAZER 150. For safety, the projector should have a secondary fixing with a safety chain through the holes on the underside of the unit.

WARNING: The projector should NEVER be lifted or carried by the yoke.

POWER SUPPLY - MAINS

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.

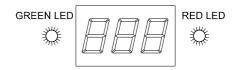


IMPORTANT

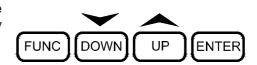
It is essential that each projector is correctly earthed; otherwise, hardware inside the projector may cause unexpected damage.

OPERATION

The unit uses standard DMX 512 controller. With the touch-switches and the digital display screen, DMX start address can be easily set and the various setup options may be configured.



The display shows the DMX start address after the projector is switched on (if you have already set the DMX start address and saved it, the screen will display the last setting).



TO SET THE DMX START ADDRESS

Press the UP or DOWN buttons and the display will show the DMX start address.

Confirm your choice by pressing the ENTER button, this will save and set the DMX start address.

The display will show the latest setting each time the projector is powered up.

To control the projector with a DMX controller the DMX start address must be set.

Ensure that none of the Stand-Alone options is set or they will interfere with correct DMX operation.

SETUP OPTIONS - PROJECTOR CONFIGURATION

To browse through the various Setup Options, press the FUNC button consecutively. There are 11 Option codes (1~B), and each code has a specific function. The functions provided are listed in the following table.

SETUP OPTIONS			
CODE	DE CHOICE FUNCTION		
1	N	No pan mirror	
'	Υ	Pan mirror	
2	N	No tilt mirror	
2	Υ	Tilt mirror	
	1	Run sound activation demo 1	
3	2	Run sound activation demo 2	
	3	Run sound activation demo 3	
	N	Stop sound activation demo	
4	Υ	Self test enable	
4	N	Self test disable	
		Without DMX512, built-in DEMO program enable	
5	Υ	Connect DMX512, Run sound activation demo 1, 2,	
		3, and built-in DEMO program according to music	
	N	Built-in DEMO program disable	
6		Not used	
7		Not used	
8		Not used	
9		Not used	
Α		Not used	
В		Not used	

When under functional operation, the display format of the digital display screen is:



Once you have selected the desired operation code, press the key $\overline{\text{UP}}$ or $\overline{\text{DOWN}}$ to select "y" (means ON) or "no "(means OFF). N = NO, Y = YES.

Press the key ENTER to save the selected function and configuration. If the display is showing "y", then the setting has been enabled. In the same way, if it was showing "n" when you pressed ENTER the option has been disabled. The Red LED will flash during this operation.

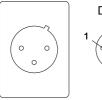
During function set operation, Green LED will flash one time when press ENTER to indicate the set is valid. The Red LED will be lit when DMX512 signal is normal.

Note:

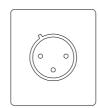
- 1. The codes 3, 4 and 5 should be set "no" When operation.
- 2. When under sound activation, can use controller to adjust or set 3-Y condition.
- 3. When use DMX512 controller, codes 4, 5 and 6 should be set "no".
- 4. Adjust 1-Y and 2-Y to select suitable display direction according to the actual installation direction.

XLR CONNECTORS AND TERMINATOR

XLR CONNECTORS









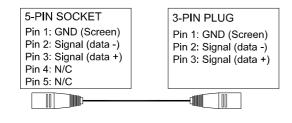
DMX512
PIN FUNCTION
1 GND
2 DATA 3 DATA +

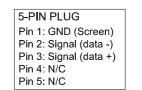
Connection between controller and projector and between one projector and another must be made with 2 core screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 3-pin XLR plugs and sockets which are included with the projector. The XLRs are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

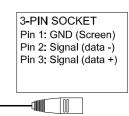
Note: care should be taken to ensure that none of the connections touches the body of the plug or each other. The body of the plug is not connected in any way. The LAZER 150 accepts digital control signals in standard DMX512 (1990) format.

5-PIN AND 3-PIN CONVERSION

LAZER 150 uses 3-pin XLR plug / socket. If your controller uses 5-pin XLR plug / socket, you should convert 5-pin plug / socket into 3-pin socket / plug as shown below.



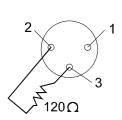




DMX TERMINATOR

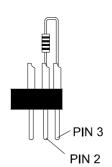
In the Controller mode or Master/Slave mode, the DMX output has to be connected with a DMX terminator at the last fixture in the chain. This prevents electrical noise from disturbing and corrupting the DMX control signals.

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 120 Ω(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.



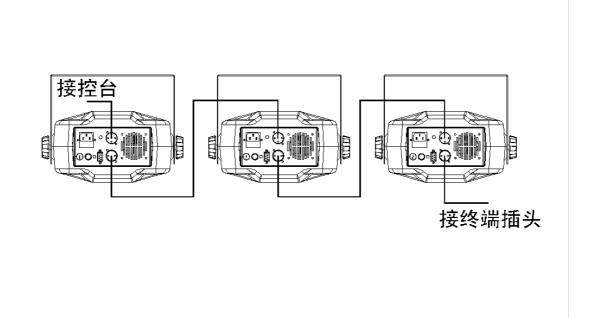
DMX512 CONTROL

Each LAZER 150 must be given a DMX start address so that the correct projector responds to the correct control signals. This DMX start address is the channel number from which the projector starts to "listen" to the digital control information being sent out from the controller. The LAZER 150 has 16 channels, so set the No. 1 projector's address 001, No. 2 projector's address 017, No. 3 projector's address 033, No. 4 projector's address 049, and so on.

Certainly, you may use formulation: address = channels x (projector No. -1) +1

For example, for the No. 5 projector's start address, you should calculate according to formulation: 16 \times (5 - 1) +1 =65, so you set the No. 5 projector start address 065. (How to set DMX start address please refer to "Operation" section.)

Connect the controller's output to the first fixture's input, and connect the first fixture's output to the second fixture's input. The rest may be deduced by analogy. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.



DMX CONTROL CHANNEL FUNCTIONS

The LAZER 150 uses 16 DMX channels. They are listed in the following table.

CHANNEL	DMX VALUE	DESCRIPTION
	0-37	Unit OFF
	38-74	Unit ON, animation
1	75-110	Unit ON, geometric picture
Unit ON/OFF	111-147	Unit ON, effect
	148-184	Unit ON, sound activation 1
	185-221	Unit ON, sound activation 2
	222-255	Unit ON, sound activation 3

Term explanation:

Animation: a program made by a group of constant pattern.

Geometric picture: static picture, users can edit moving effect via DMX512 controller.

Effect: pictures have had movement parameters, users cannot edit.

The following channels are only for channel 1 value 64-127, animation

The following channels are CHANNEL	DMX VALUE	DESCRIPTION
	0-25	Animation 1
	26-51	Animation 2
	51-76	Animation 3
	76-102	Animation 4
2	102-127	Animation 5
Animation Selection	127-153	Animation 6
Selection	153-178	Animation 7
	178-204	Animation 8
	204-229	Animation 9
	229-255	Animation 10
3		Not used
	0-25	Animation movement 1 (fastest)
	26-51	Animation movement 2
	52-77	Animation movement 3
	78-103	Animation movement 4
4	104-129	Animation movement 5
Animation movement	130-155	Animation movement 6
	156-181	Animation movement 7
	182-207	Animation movement 8
	208-233	Animation movement 9
	234-255	Animation movement 10 (slowest)
	0-15	Full range 1/16
	16-31	Full range 2/16
	32-47	Full range 3/16
	48-63	Full range 4/16
	64-79	Full range 5/16
	80-95	Full range 6/16
	96-111	Full range 7/16
5	112-127	Full range 8/16
X Range adjust	128-143	Full range 9/16
	144-159	Full range 10/16
	160-175	Full range 11/16
	176-191	Full range 12/16
	192-207	Full range13/16
	208-223	Full range14/16
	224-239	Full range15/16
	240-255	Full range 100%

	0-15	Full range1/16
	16-31	Full range2/16
	32-47	Full range3/16
	48-63	Full range4/16
	64-79	Full range5/16
	80-95	Full range6/16
	96-111	Full range7/16
6	112-127	Full range8/16
Y Range adjust	128-143	Full range9/16
	144-159	Full range10/16
	160-175	Full range11/16
	176-191	Full range12/16
	192-207	Full range13/16
	208-223	Full range14/16
	224-239	Full range15/16
	240-255	Full range 100%

The following channels are only for channel 1 value 128-191, geometric picture. PR-5030A stores 256 static pictures that divided into 16 groups through channel 2 to choose the group number; every group is made up of 16 pictures and through channel 3 to choose a picture and through other channel to edit dynamic effect such as zoom in, rotate, move, write, etc. You can also edit static effect such as corner.

CHANNEL	DMX VALUE	DESCRIPTION
	0-15	Picture group 1
	16-31	Picture group 2
	32-47	Picture group 3
	48-63	Picture group 4
	64-79	Picture group 5
	80-95	Picture group 6
2	96-111	Picture group 7
Picture Group	112-127	Picture group 8
Selection	128-143	Picture group 9
(16 groups)	144-159	Picture group 10
	160-175	Picture group 11
	176-191	Picture group 12
	192-207	Picture group 13
	208-223	Picture group 14
	224-239	Picture group 15
	240-255	Picture group 16
	0-15	Picture 1
	16-31	Picture 2
	32-47	Picture 3
	48-63	Picture 4
	64-79	Picture 5
	80-95	Picture 6
3	96-111	Picture 7
Picture	112-127	Picture 8
Selection	128-143	Picture 9
(16 pieces)	144-159	Picture 10
	160-175	Picture 11
	176-191	Picture 12
	192-207	Picture 13
	208-223	Picture 14
	224-239	Picture 15
	240-255	Picture 16
4		Not used
5	0-15	Full range1/16

V Donna Adlinat	40.04	Full range 2/16
X Range Adjust	16-31	Full range2/16
	32-47	Full range3/16
	48-63	Full range4/16
	64-79	Full range5/16
	80-95	Full range6/16
<u> </u>	96-111	Full range7/16
	112-127	Full range8/16
	128-143	Full range9/16
	144-159	Full range10/16
	160-175	Full range11/16
	176-191	Full range12/16
	192-207	Full range13/16
	208-223	Full range14/16
	224-239	Full range15/16
	240-255	Full range 100%
	0-15	Full range1/16
	16-31	Full range2/16
	32-47	Full range3/16
	48-63	Full range4/16
	64-79	Full range5/16
	80-95	Full range6/16
	96-111	Full range7/16
6	112-127	Full range8/16
Y Range Adjust	128-143	Full range9/16
	144-159	Full range10/16
	160-175	Full range11/16
	176-191	Full range12/16
	192-207	Full range13/16
	208-223	Full range14/16
	224-239	Full range15/16
	240-255	Full range 100%
	0-15	Pan rotation without direction change
	16-31	•
	32-47	
	48-63	
	64-79	Normal rotation from slow to fast
	80-95	
7	96-111	
Pan Rotation	112-127	
on Sixteen	128-143	Pan rotation without direction change
	144-159	<u> </u>
	160-175	
	176-191	
	192-207	Reverse rotation from slow to fast
	208-223	
	224-239	
	240-255	
8	0-15	Tilt rotation without direction change
Tilt Rotation	16-31	
on Sixteen	32-47	
	48-63	
	64-79	Normal rotation from slow to fast
	80-95	
	96-111	
	112-127	
	128-143	Tilt rotation without direction change
	144-159	Reverse rotation from slow to fast
	160-175	1.0vorso rotation nom siow to last
	176-173	
	192-207	
	208-223	
	200-223	

	224 220	
	224-239	
	240-255	7 retation without direction above
	0-15	Z rotation without direction change
	16-31	
	32-47	
	48-63	
	64-79	Normal rotation from slow to fast
	80-95	
9	96-111	
Z Rotation	112-127	
on Sixteen	128-143	Z rotation without direction change
	144-159	
	160-175	
	176-191	
	192-207	Reverse rotation from slow to fast
	208-223	
	224-239	
	240-255	
10 Z Initial Angle	0-255	Anti-clockwise 2.8 degrees when move 2 DMX value
	0-15	Zoon in and out without change
	16-31	
	32-47	
	48-63	
	64-79	Zoon in range from small to large
	80-95	
4.4	96-111	
11	112-127	
Zoom In and Out on Sixteen	128-143	Zoon in and out without change
on Sixteen	144-159	•
	160-175	
	176-191	
	192-207	Zoon out range from small to large
	208-223	
	224-239	
	240-255	
12	0-127	Normal movement increment increases
Pan Movement on 128	128-255	Reverse movement increment decreases
13	0-127	Normal movement increment increases
Tilt Movement on 128	128-255	Reverse movement increment decreases
14	0-85	Rotate and zoom in/out round the figure centre
Rotation Centre/Write	86-171	Rotate and zoom in/out round the picture centre
□□3□□	172-255	Under write circumstance
	0-15	Scanning speed is 24K
	16-31	Scanning speed is 23K
	32-47	Scanning speed is 22K
	48-63	Scanning speed is 21K
	64-79	Scanning speed is 20K
	80-95	Scanning speed is 19K
	96-111	Scanning speed is 18K
15	112-127	Scanning speed is 17K
Scanning speed	128-143	Scanning speed is 16K
	144-159	Scanning speed is 15K
	160-175	Scanning speed is 14K
	176-191	Scanning speed is 13K
	192-207	Scanning speed is 12K
	208-223	Scanning speed is 12K Scanning speed is 11K
	224-239	Scanning speed is 11K
	240-255	Scanning speed is 10K
16	0-25	Strobe closed
Strobe	26-51	Strobe closed Strobe 1 (slow)
Silobe	52-77	Strobe 2
	UZ-11	00000 2

78-103	Strobe 3
104-129	Strobe 4
130-155	Strobe 5
156-181	Strobe 6
182-207	Strobe 7
208-233	Strobe 8
234-255	Strobe 9 (fast)

Warning: when use DMX512 to control, some of picture under the edit effect may result in laser safe protection panel moving but without laser projection. That is the value of channel 4 or 15 is too large or the value of channel 5 or 6 is too small. Only need to adjust them to a suitable value, the operation will become normal.

The following channels are only for channel 1 value 192-255, effect selection. PR-5030A stores 256 pieces of "picture combination effect" which have had movement parameter and divided into 16 groups. Every group has 16 "picture combination effect", through channel 2 to choose a group and through channel 3 to choose a "picture combination effect" in the group. "Picture combination effect" is different from common picture and it is designed specially and cannot be edited.

CHANNEL	DMX VALUE	DESCRIPTION
	0-15	Display picture group 1
	16-31	Display picture group 2
	32-47	Display picture group 3
	48-63	Display picture group 4
	64-79	Display picture group 5
	80-95	Display picture group 6
2	96-111	Display picture group 7
Display picture	112-127	Display picture group 8
group selection	128-143	Display picture group 9
	144-159	Display picture group 10
	160-175	Display picture group 11
	176-191	Display picture group 12
	192-207	Display picture group 13
	208-223	Display picture group 14
	224-239	Display picture group 15
	240-255	Display picture group 16
	0-15	Display picture 1
	16-31	Display picture 2
	32-47	Display picture 3
	48-63	Display picture 4
	64-79	Display picture 5
	80-95	Display picture 6
2	96-111	Display picture 7
3 Diaplay picture	112-127	Display picture 8
Display picture selection	128-143	Display picture 9
Selection	144-159	Display picture 10
	160-175	Display picture 11
	176-191	Display picture 12
	192-207	Display picture 13
	208-223	Display picture 14
	224-239	Display picture 15
	240-255	Display picture 16
		15/04

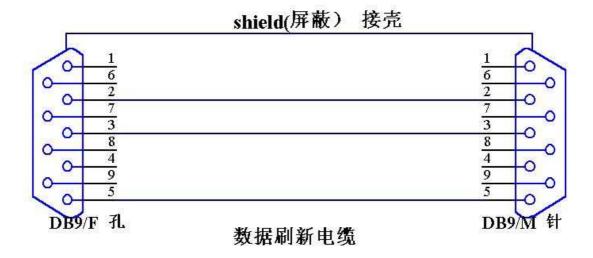
4	Not used		
	0-15	Full range1/16	
	16-31	Full range2/16	
	32-47	Full range3/16	
	48-63	Full range4/16	
	64-79	Full range5/16	
	80-95	Full range6/16	
	96-111	Full range7/16	
5	112-127	Full range8/16	
X Range Adjust	128-143	Full range9/16	
	144-159	Full range10/16	
	160-175	Full range11/16	
	176-191	Full range12/16	
	192-207	Full range13/16	
	208-223	Full range14/16	
	224-239	Full range15/16	
	240-255	Full range 100%	
	0-15	Full range1/16	
	16-31	Full range2/16	
	32-47	Full range3/16	
	48-63	Full range4/16	
	64-79	Full range5/16	
	80-95	Full range6/16	
	96-111	Full range7/16	
6	112-127	Full range8/16	
Y Range Adjust	128-143	Full range9/16	
	144-159	Full range10/16	
	160-175	Full range11/16	
	176-191	Full range12/16	
	192-207	Full range13/16	
	208-223	Full range14/16	
	224-239	Full range15/16	
	240-255	Full range 100%	

OPERATION FOR DATA REFRESH

- 1. Connect the power cord and cable of data refresh with the unit, and the other end of the cable of data refresh connecting with a personal computer. **Note:** The power must be cut off before this operation.
- 2. First, turn on the computer power, and then the unit's power.
- 3. Don't run the data refresh program until the red LED near the unit's screen is blinking. Set the computer's interface of COM1 or COM2 according to the cable of data refresh you have connected.
- 4. Running LASERDANCE 5.0 software, refer to user manual of relative software.

Note: During transmitting the data, the power of the unit cannot be off; otherwise, some components inside the unit may be damaged! Wait until appear the dialog box for complete transmitting, and then you turn off the unit.

- 5. After turning off the unit's power, pull the data refresh cable out of the unit. Connect the DMX512 cable to the unit for operation.
- 6. The data refresh cable is made up of DB9/M and DB9/F plugs and 3 core screened cable as shown below.



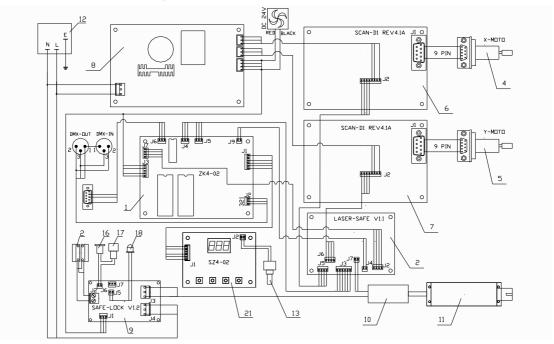
MAINTENANCE

Because the unit is a precise device integrated with optics, mechanism and electronics, please pay attention to the following points when use the unit normally.

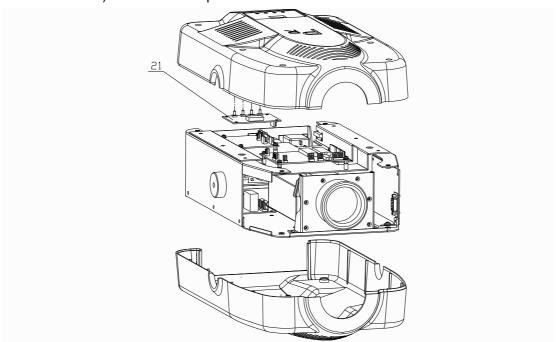
- 1. When use a fog machine, do not eject the fog to the unit directly, minimum distance is 1m. It is recommended to use a fan to blow strong fog away from the unit, or to use a dry ice machine to produce the fog.
- 2. Please use the special cleaning products in cleaning the optics inside the unit. The operation must be completed by qualified personnel.
- 3. The scanner drive PCB and scan head inside the unit are used by couple. They must be changed together. The operation must be completed by qualified personnel.

ELECTRICAL DIAGRAM

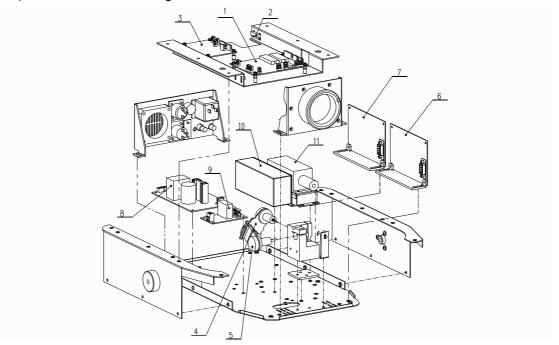
a) PR-5030A circuit diagram



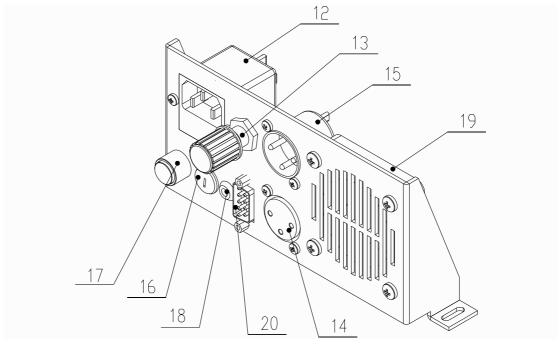
b) PR-5030A shape



c) PR-5030A assemblage



d) PR-5030A back nog



Assembly Spec

Item	Name	Description
1	Main-board	ZK4-02 V1.0
2	Reed Switch&Magnet	50V/1A
3	Safe board	LASER-SAFE V1.1
4	X-scanner moto	/
5	Y-scanner moto	/
6	X scanner serve amplifier	SCAN-D1 V4.1A
	board	
7	Y scanner serve amplifier	SCAN-D1 V4.1A
	board	
8	Multi-outputs switching	IN□AC85~250V OUT□±
	regulator	24V/1A,5V/1A
9	Inter-lock board	SAFE-LOCK V1.2
10	Laser power	/
11	laser	532nm,150mw
12	EMI Filter	115/250VAC 1A
13	Potentiometer	10KΩ/0.5W□ gain adjust
14	Panel socket	3 poles
15	Panel plug	3 poles
16	Key Switch	/
17	Laser Emergency Stop	/
	connector	
18	Laser Standby	Red□φ3 LED
19	Fan	DC 24V/0.15A
20	Data Port	DB9/M
21	Display board	SZ4-02 V1.0

NOTICE

- 1. If peripherals or cable is damaged, please purchase it that is PR or LASER Company provided for change.
- 2. This software tests normally in the environment of win98, winxp and win2000. We do not provide the function guarantees if it is not under these operation systems.
- 3. This software does not include destructive program like wood horse, virus, and back door and so on. Please use it securely. If user's system has infected virus, we do not guarantee the program can use normally.
- 4. Please keep the projector clean, excessive smoke and bad exterior ambient may degrade use life of the projector and power attenuation of the lamp.

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