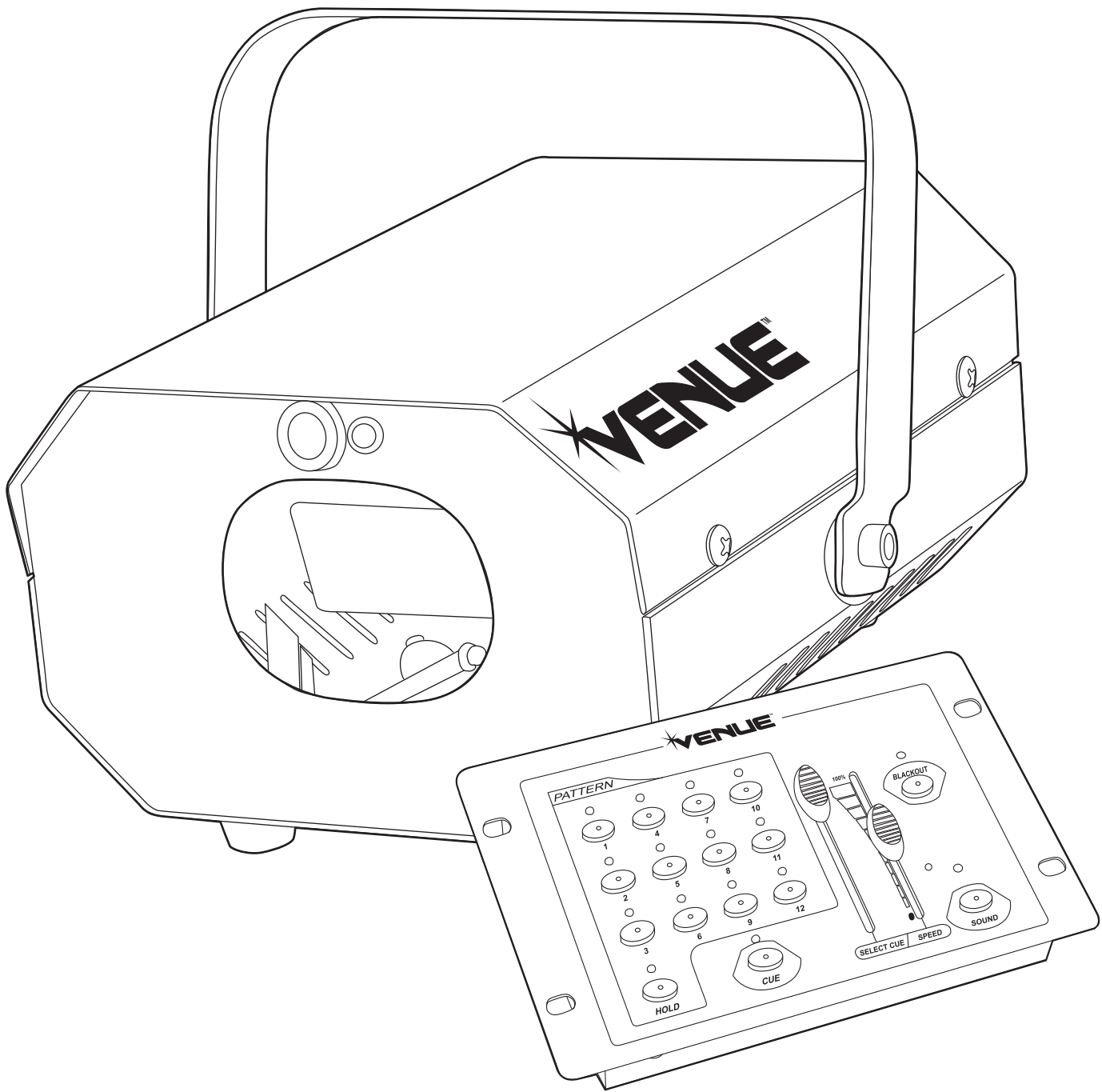




## DUAL LASER PACK & CONTROLLER USERS MANUAL



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# SAFETY INFORMATION

- Never operate this unit if it has a damaged cord or plug.
- Keep the power cord away from heated surfaces.
- For indoor use only. Keep in a cool dry place with a temperature of not more than 95°F.
- Continuous operation of over 4 hours will shorten the life of the laser.
- Do not shake the fixture once it is secured in place.
- The lens at the aperture can collect dirt and dust that will decrease the power output. Clean regularly with a soft, dry cloth.
- Do not remove the warranty sticker.
- Do not dismantle the product. There are no user-serviceable parts.



## Fuse Replacement:

Disconnect the power plug. Use a screwdriver to unscrew the fuse holder. Take out the burnt fuse and replace it with one of the same type. Replacing the fuse with a different type will cause damage and will void the warranty.

# TECHNICAL SPECIFICATIONS

AC Power:	110VAC 60Hz, Fuse (2A)
Laser:	Wavelength 532nm, 10mW Green
Control System:	High Capacity Micro Processor
Scanner:	Stepper Motor
Working Mode:	DMX, Auto, Sound Active, Master/Slave
DMX Control:	7 Channels
Connector:	3-pin XLR DMX
Size:	L 9.3" x W 6.9" x H 6.4"
Weight:	6.6 lbs. / 3 kg

# FUNCTION INTRODUCTION

**SOUND ACTIVE:** The laser projector is activated by sound. The sound sensitivity is adjustable by the sensor knob. If there is no sound for 7 seconds, laser output is automatically shut off.

**AUTO:** The laser projector runs the built-in programs automatically. When in this mode, the laser cannot shut off automatically.

**DMX CONTROL:** The unit is controllable by any standard DMX 512 controller for laser on/off, static pattern size, dynamic pattern speed, pattern position, scanning speed and more.

# FUNCTION SETTINGS

**SOUND ACTIVE:** Triggered by sound only.

**AUTO MODE:** Default program, not subject to change with external controls.

**SLAVE:** Controlled by Master only.

**DMX MODE:** Controlled by DMX512 console only.

Set the system function with the DIP switch.

DIP switch 0=OFF 1=ON X=OFF or ON

DIP switch CHART										FUNCTION
1	2	3	4	5	6	7	8	9	10	
0	0	X	X	X	X	X	X	X	0	SOUND_ACTIVE
1	0	X	X	X	X	X	X	X	0	AUTO_MODE
0	1	X	X	X	X	X	X	X	0	SLAVE
1	1	X	X	X	X	X	X	X	0	TEST_MODE
SET DMX ADDRESS									1	DMX MODE

## ADDRESS SETTING

In binary systems, there are only two numbers. 0 meaning “OFF” and 1 meaning “ON”. The numbers increase by multiplying the previous value by 2. Positions from DIP switch #1 to DIP switch #9 signify binary value from a lower to higher position.

EG	LOOP	ADDRESS	BINARY
	1	1	10000000
	2	8	00010000
	3	15	11110000

## DMX CONTROL TABLE

:

Channel	Function	DMX512 Value	Detail
CH1	Mode	0~20	Close Laser and scanner head stop.
		21~120	Dynamic Graphics
		121~220	Static Graphics
		221~255	Sound Active Mode
CH2	Pattern Selection	0~255	40 Patterns
CH3	Pan	0~255	Pan Movement
CH4	Tilt	0~255	Tilt Movement
CH5	Scan Speed	0~255	0 → 255 fast → slow
CH6	Speed of Dynamic pattern	0~255	0 → 255 fast → slow
CH7	Size of Static pattern	0~255	0 → 255 small → big

## GENERAL OPERATION

1. If in DMX mode, use the correct DMX address assignment.
2. Connect the projector and DMX512 console with the DMX signal cable. In Stand Alone mode, there is no DMX input required.
3. Once powered on, the laser emits a beam in 2 seconds.
4. The laser can be controlled to play and edit programs by 1) a DMX controller in DMX mode, by 2) default program in auto mode, and 3) in sound active mode if the sound sensitivity knob is correctly adjusted.

# MASTER / SLAVE MODES

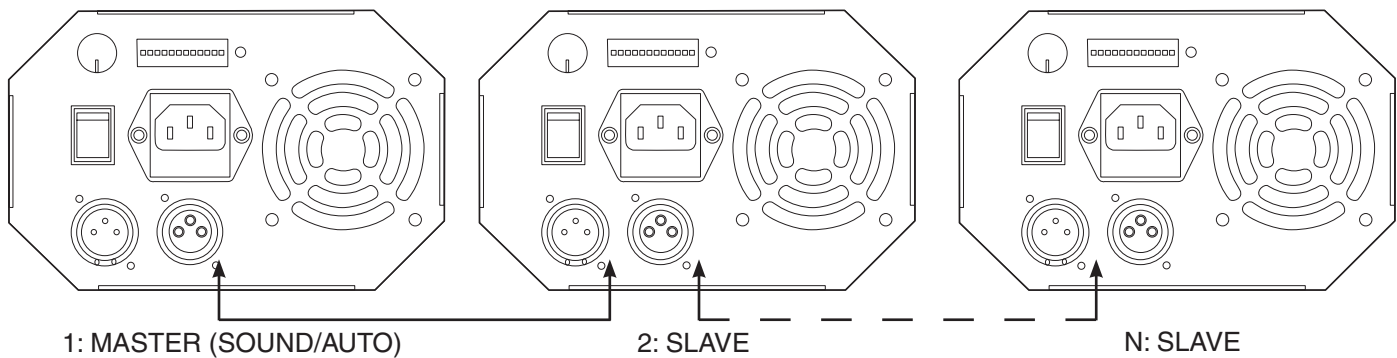
1. Stand Alone via Master or Sound / Master Auto, then no console is needed. Laser will follow sounds or the default program.
2. DIP switch mode settings.

MASTER SOUND: #10-0, #1-0, #2-0  
MASTER AUTO: #10-0, #1-1, #2-0  
SLAVE: #10-0, #1-0, #2-1

3. Use XLR to XLR cable to connect the Master's DMX output with the DMX Input of the first Slave, and then output of the first Slave with input of second Slave until all the Slaves are connected in this way.
4. The projector can be controlled to play shows by default program in Auto mode, and in Master Sound mode if the sound sensitivity knob is kept in the proper position.

## NOTES:

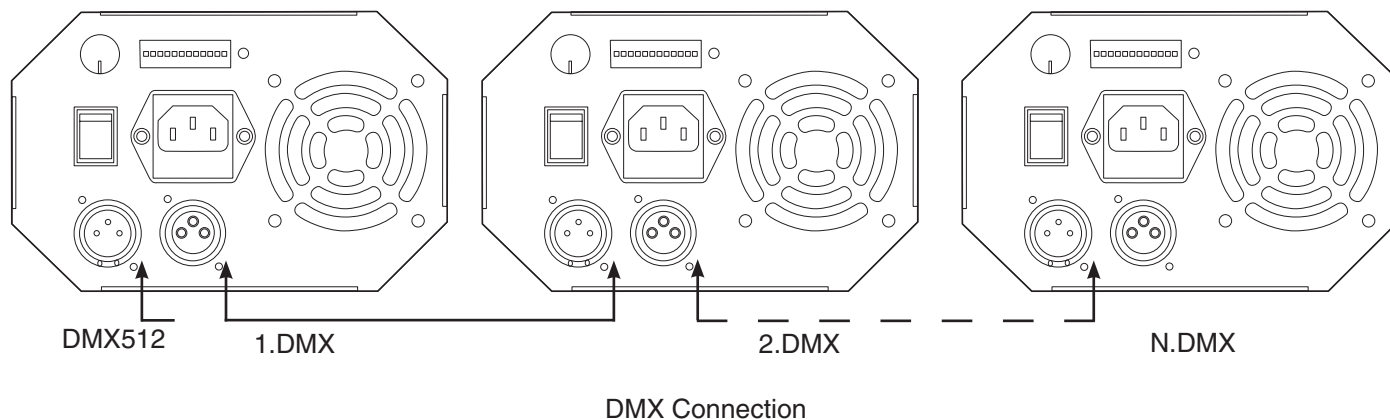
1. Via Master/Slave mode, there should be only one Master and no DMX512 controller.
2. Power on the Slaves, then the Master.



MASTER/SLAVE Connection

# DMX MODE

1. Use a standard DMX512 controller in DMX Mode.
2. Set the DIP switch in corresponding position, that is DMX Mode: #1 through #10.
3. Use XLR-XLR cable to connect DMX512 controller with the DMX input of first projector, and then connect output of the first projector with input of second projector until all the projectors are connected in this way.
4. Two seconds after master is turned on, it emits a beam.



# TROUBLE SHOOTING

Problems	Reasons	Remedy
Power indicator light off and no laser	Check if AC power matches specified	Make sure of the specified power or check the power facility
Via Stand Alone mode: power indicator light on, no laser	Set to Slave mode by mistake	Set to Stand Alone mode (Stand Alone Sound Active or Stand Alone Auto)
Via M/S mode, Slave projector not working properly	<ol style="list-style-type: none"> <li>1. The mode setting (only one Master with others set as Slave)</li> <li>2. Check if there is DMX console or not</li> <li>3. Check the connection between Master and Slaves</li> </ol>	<ol style="list-style-type: none"> <li>1. Set the work mode properly</li> <li>2. Disconnect with the DMX signal</li> <li>3. Confirm the connection between Master and Slaves</li> </ol>
Via DMX mode, DMX indicator light off and no laser	<ol style="list-style-type: none"> <li>1. Check if the work mode is set to DMX mode</li> <li>2. Check the XLR-XLR cable's connection and quality</li> </ol>	<ol style="list-style-type: none"> <li>1. Set the work mode to DMX mode properly</li> <li>2. Replace XLR-XLR cables if necessary</li> </ol>
Via DMX mode, DMX indicator flicker, but out of control of the console.	Make sure the DMX console's channel distribution matches with the laser's	Set the console's channel distribution and the laser's DMX address again.
Some patterns are blocked	-----	Power on again and the system should correct itself
If any other problems occur, please contact your dealer.		

# DMX ADDRESS QUICK REFERENCE CHART

DMX DIP SWITCH SET 0 = OFF 1 = ON X = OFF or ON					#	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1		
					#	0	0	0	0	1	1	1	1	0	0	0	0	0	1	1	1	1
					#	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	1
					#	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
#	#	#	#	#																		
1	2	3	4	5																		
0	0	0	0	0	3	6	96	12	16	19	22	25	28	32	35	38	41	44	48			
1	0	0	0	0	2	4		8	0	2	4	6	8	0	2	4	6	8	0			
0	1	0	0	0	1	3	6	97	9	1	3	5	7	9	1	3	5	7	9			
1	1	0	0	0	2	3	6	98	13	16	19	22	25	29	32	35	38	41	45			
0	0	1	0	0	3	4	6		0	2	4	6	8	0	2	4	6	8	0			
1	0	1	0	0	4	3	6	99	13	16	19	22	25	29	32	35	38	41	45			
0	1	1	0	0	5	5	7		1	3	5	7	9	1	3	5	7	9	1			
1	0	0	1	0	6	3	6	10	13	16	19	22	26	29	32	35	38	42	45			
0	0	0	1	0	7	6	8	0	2	4	6	8	0	2	4	6	8	0	2			
1	0	1	0	0	8	3	6	10	13	16	19	22	26	29	32	35	38	42	45			
0	1	1	0	0	9	7	9	1	3	5	7	9	1	3	5	7	9	1	3			
1	1	1	0	0	1	3	7	10	13	16	19	23	26	29	32	35	39	42	45			
0	0	0	1	0	2	8	0	2	4	6	8	0	2	4	6	8	0	2	4			
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1	1	0	1	0	5	1	4	7	10	13	17	20	23	26	29	33	36	39	42			
0	0	1	1	0	6	0	2	4	6	8	0	2	4	6	8	0	2	4	6			
1	0	1	1	0	7	1	4	7	10	13	17	20	23	26	29	33	36	39	42			
0	1	1	1	0	8	1	4	7	10	14	17	20	23	26	30	33	36	39	42			
1	0	0	1	0	9	2	4	6	8	0	2	4	6	8	0	2	4	6	8			
0	0	0	1	0	1	3	5	7	9	1	3	5	7	9	1	3	5	7	9			
1	0	1	1	0	2	4	7	10	14	17	20	23	26	30	33	36	39	42	46			
0	1	1	1	0	3	5	7	9	1	3	5	7	9	1	3	5	7	9	1			
1	0	0	1	0	4	1	4	7	11	14	17	20	23	27	30	33	36	39	43			
0	1	0	0	1	5	1	4	7	11	14	17	20	23	27	30	33	36	39	43			
1	1	1	1	0	6	5	7	9	1	3	5	7	9	1	3	5	7	9	1			
0	0	0	0	1	7	1	4	8	11	14	17	20	24	27	30	33	36	40	43			
1	0	0	0	1	8	1	4	8	11	14	17	20	24	27	30	33	36	40	43			
0	1	0	0	1	9	1	5	8	11	14	17	21	24	27	30	33	37	40	43			
1	1	0	0	1	1	5	8	11	14	17	21	24	27	30	33	37	40	43	46			
0	0	1	0	1	2	5	8	11	14	18	21	24	27	30	34	37	40	43	46			
1	0	1	0	1	3	5	8	11	14	18	21	24	27	30	34	37	40	43	46			
0	1	1	0	1	4	2	4	6	8	0	2	4	6	8	0	2	4	6	8			
1	1	1	0	1	5	2	5	8	11	15	18	21	24	27	31	34	37	40	43			
0	0	0	1	1	6	3	5	7	9	1	3	5	7	9	1	3	5	7	9			
1	0	0	1	1	7	2	5	8	12	15	18	21	24	28	31	34	37	40	43			
0	1	0	1	1	8	1	3	5	7	9	1	3	5	7	9	1	3	5	7			
1	0	0	1	1	9	2	5	8	12	15	18	21	24	28	31	34	37	40	44			
0	1	0	1	1	1	3	5	9	12	15	18	21	25	28	31	34	37	41	44			
1	1	0	1	1	2	4	6	8	0	2	4	6	8	0	2	4	6	8	0			
0	0	1	1	1	3	5	9	12	15	18	22	25	28	31	34	38	41	44	47			
1	0	1	1	1	4	6	8	0	2	4	6	8	0	2	4	6	8	0	2			
0	1	1	1	1	5	7	9	1	3	5	7	9	1	3	5	7	9	1	3			
1	1	1	1	1	6	8	0	2	4	6	8	0	2	4	6	8	0	2	4			
0	0	1	1	1	7	8	0	2	4	6	8	0	2	4	6	8	0	2	4			
1	0	1	1	1	8	0	2	4	6	8	0	2	4	6	8	0	2	4	6			
0	1	1	1	1	9	1	3	5	7	9	1	3	5	7	9	1	3	5	7			
1	1	1	1	1	1	3	6	9	12	15	19	22	25	28	31	35	38	41	44			
0	0	1	1	1	2	4	6	8	0	2	4	6	8	0	2	4	6	8	0			
1	1	1	1	1	3	6	9	12	15	19	22	25	28	31	35	38	41	44	47			
0	1	1	1	1	4	0	2	4	6	8	0	2	4	6	8	0	2	4	6			
1	1	1	1	1	5	1	3	5	7	9	1	3	5	7	9	1	3	5	7			

DIP Switch Position

DMX Address



# LASER CONTROLLER

This controller is specially designed for the Dual Laser Pack. With this controller, you can easily run your system in Auto or Sound Active mode. Please read this manual carefully before operating.

## WHAT IS INCLUDED

1pc Laser-C controller  
1pc 9~12V DC power adapter  
1pc 10M DMX cable (to connect this controller with laser projector)

## FEATURES

12 hold buttons  
10 cues/preprograms  
Sound activation button  
Blackout  
Scan Speed/Cue Select slider  
Static Size/Dynamic Speed slider

## OPERATING INSTRUCTIONS

In order to use this control to operate your laser system, set the laser projectors to DMX mode and set to channel one. Connect the system using 3-pin DMX cables.

## HOLD

The HOLD button will activate the Hold Static/Dynamic Pattern function. In this mode, you can select 6 static patterns and 6 dynamic patterns.

- a. Press the HOLD button and the LED will light up.
- b. Press a pattern button (1 to 6) to select static pattern. Once a pattern is selected, you can adjust scan speed and pattern size by moving the Scan Speed (Cue Select) slider and Static Size (Dynamic Speed) slider respectively.
- c. Press pattern button (7 to 12) to select dynamic pattern. When dynamic pattern is selected, you can adjust scan speed and dynamic speed by moving the Scan Speed (Cue Select) slider and Static Size (Dynamic Speed) slider respectively.

## CUE

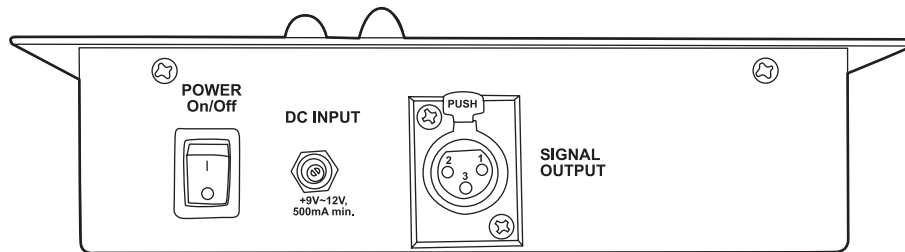
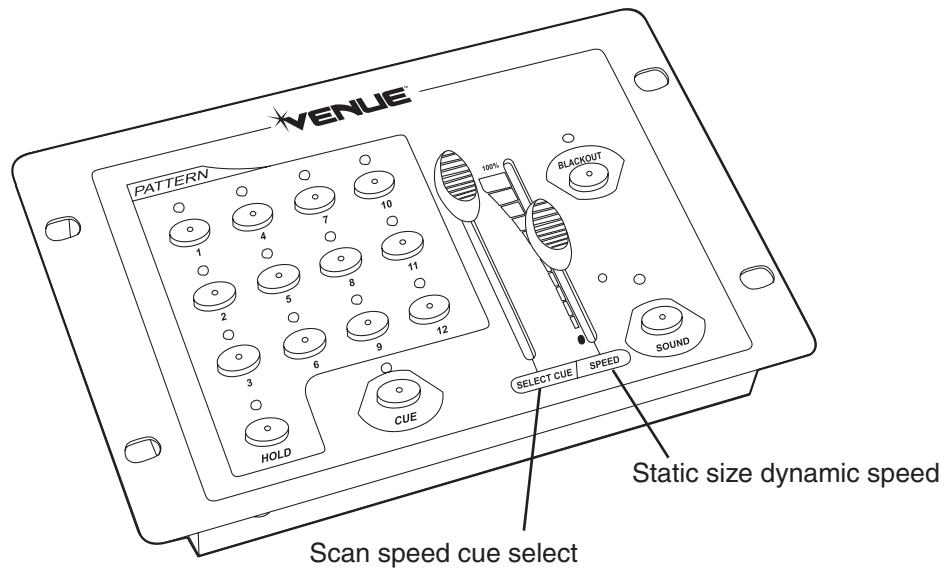
In this mode, 10 preprograms are available. You can run these preprograms in Auto or Sound Activation mode.

- a. Press the Cue button and the LED lights up.
- b. Move Scan Speed/Cue Select slider to select the desired preprogram.
- c. Adjust dynamic speed by moving Static Size/Dynamic Speed slider.
- d. To run the preprograms to sound, press the Sound button. In sound mode, dynamic speed is not adjustable.

## Specifications

Power Input: DC 9V~12V 500mA  
Weight: 1.7kg / 3.75 lbs.  
Size: 8.3" x 5.5" x 2"

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# IMPORTANT SAFETY INSTRUCTIONS



This symbol is intended to alert the user to the presence of non-insulated “dangerous voltage” within the products enclosure.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.



Apparatus shall not be exposed to dripping or splashing. Objects filled with liquids, such as vases, shall not be placed on the apparatus.



1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be kept for future reference.
3. Read and understand all warnings listed on the operating instructions.
4. Follow all operating instructions to operate this product.
5. This product should not be used near water, i.e., bathtub, sink, swimming pool, wet basement, etc.
6. Only use dry cloth to clean this product.
7. Do not block any ventilation openings, it should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
8. Do not install this product near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Do not break the ground pin of the power supply cord.
11. Only use attachments specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, exercise caution when moving.
13. Unplug this apparatus during lightning storms or when unused for a long period of time.
14. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation ports or any other openings.
15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way.
16. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
17. When a mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



