

# **SonicBeam II**<sup>™</sup> *American DJ*



## User Instructions



**DMX-512**

*American DJ*  
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## Sonic Beam II<sup>™</sup> Introduction

### Introduction:

Congratulations and thank you for purchasing the Sonic Beam II<sup>™</sup> from American DJ. The new Sonic Beam II<sup>™</sup> is part of American DJ's continuing pursuit for creating high quality affordable intelligent fixtures. The Sonic Beam II<sup>™</sup> features a bright 250 watt lamp. A high quality dichroic gobo/color wheel brings out several brilliant colors. The Sonic Beam II<sup>™</sup> can run as a stand alone fixture, in master/slave mode, or can run via DMX 512 protocol.

### Customer Support:

American DJ<sup>®</sup> provides a toll free customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at [www.americandj.com](http://www.americandj.com) for any comments or suggestions.

Service Hours are Monday through Friday 10:00 a.m. to 5:00 p.m. Pacific Standard Time.

Voice: (800) 322-6337  
Fax: (323) 582-2610  
E-mail: [support@americandj.com](mailto:support@americandj.com)

**Warning!** To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

**Caution!** There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, doing so will void your manufacturer's warranty. In the unlikely event your unit may require service please contact your nearest American DJ dealer.

### **HALOGEN LAMP WARNING!**

This fixture is fitted with a halogen lamp which is highly susceptible to damage if improperly handled. Never touch lamp with your bare fingers as the oil from your hands will shorten lamp life. Also, never move the fixture until the lamp has had ample time to cool. Remember, lamps are not covered under warranty conditions.

## Sonic Beam II™ Introduction

### **Quick Start Stand Alone Mode**

Connect all your units together via the XLR connector. You can connect up to 16 units together in Master/Slave mode. The master unit will run the slaves to the masters built in programs and internal microphone. Plug in all units. When the Sonic Beam II™ is first turned on, it will run through an internal self test where it moves all motors to their zero position. After the self test the units will react to sound, and chase to the several built in programs.

### **FEATURES:**

Sonic Beam II™ features include:

- Single Gobo/Color wheel, with smooth color crossfading stepper motor.
- 14 colored Gobos plus spot, with bi colored gobos and multicolored gobos.
- High Speed Shutter with variable Speed and Bi-color strobe
- 180 degree pan 360 degree barrel rotation.
- Full Micro-stepping, with 3 stepper motors.
- Built in Microphone
- Auto switch to Stand-Alone (Master/Slave) operation when DMX signal is disconnected
- Run up to 16 heads without controller.
- DMX-512 protocol & MIDI capable
- Full Focusing.
- Fan cooled
- Uses 4 DMX Channels.

Improvements and changes in specifications and design to this manual and unit may be made at any time without prior notice.

## Sonic Beam II™ Introduction

### **WARNINGS:**

- Do not spill water or other liquids in to or on to your unit.
- Be sure that the local power outlet match that of the required voltage for your unit.
- Do not attempt to operate this unit if the power cord has been frayed or broken. Please route your power cord out of the way of foot traffic.
- Do not attempt to remove or break off the ground prong from the electrical cord. This prong is used to reduce the risk of electrical shock and fire in case of an internal short.
- Disconnect from main power before making any type of connection.
- Do not remove the top cover under any conditions. There are no user serviceable parts inside.
- Never plug this unit in to a dimmer pack
- Always be sure to mount this unit in an area that will allow proper ventilation. Allow about 6" (15cm) between this device and a wall.
- Do not attempt to operate this unit, if it becomes damaged in any way.
- Never operate this unit when it's cover is removed.
- To reduce the risk of electrical shock or fire, do not expose this unit rain or moisture
- This unit is intended for indoor use only, use of this product outdoors voids all warranties.
- During long periods of non-use, disconnect the unit's main power.
- Always mount this unit in safe and stable matter.

## Sonic Beam II™ Set Up

### Unpacking:

Every Sonic Beam II™ has been thoroughly tested and has been shipped in perfect operating order. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your fixture for any damage. In the case damage has been found please contact our toll free customer support number for further instructions.

### Power Supply:

Before plugging your unit in be sure the source voltage in your area matches the required voltage for your American DJ® Sonic Beam II.™ The American DJ® Sonic Beam II™ is available in a 115v and 230v version. Because line voltage may vary from venue to venue, you should be sure to plug your unit into a matching wall outlet before attempting to operate you controller.

### Data Cable (DMX Cable) Requirements:

Your controller and packs require a standard 3-pin XLR connector for DMX data input and DMX data output (Figure 1). If you are making your own cables be sure to use standard two conductor shielded cable (This cable may be purchased at almost all pro sound and lighting stores). Your cables should be made with a male and female XLR connector on either end of the cable. Also remember that DMX cable must be daisy chained and can not be "Y"ed or split.

Notice: Do not use the ground lug on the XLR connector. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behavior.

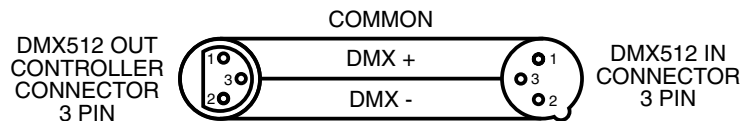
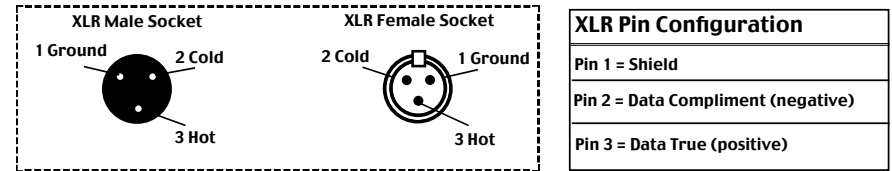


Figure 2

## Sonic Beam II™ Set Up



**Notice:** Be sure to follow figures two and three when making your own cables.

### Special Note: Line Termination.

When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 90-120 ohm 1/4 watt resistor which is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This unit is inserted in the female XLR connector of the last unit in your daisy chain to terminate the line. Using a cable terminator will decrease the possibilities of erratic behavior.



Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX +) of the last fixture.

Figure 4

## Sonic Beam II™ Operating Instructions

### Operating Modes:

You can use the Sonic Beam II™ in three ways:

- Stand alone mode - The unit will react to sound, chasing through the several built in programs. You can also use the optional Sonic Beam II/C Remote Control to set blackout, strobe or slow scan mode.
- Master/Slave mode - You can daisy chain up to 16 units together to get a synchronized light show that will react to sound chasing through several built in programs.
- DMX control mode - This function will allow you to control each individual fixtures traits with a standard DMX 512 controller such as the American DJ Show Designer.™

### Stand Alone Mode:

The Sonic Beam II™ has a sophisticated built-in light show that will run to sound simply plug the fixture in and it will chase through its programs via sound. You can also use the optional Sonic Beam/C Remote Control to set blackout, strobe or slow scan mode.

#### Master-Slave Operation:

1. This function will allow you to link up to 16 units together to run on the master unit's 2 channel internal programs.
2. In Master-Slave operation one unit will act as the controlling unit and the others will react to the controlling units programs. Any unit can act as a Master or as a Slave.
3. Daisy chain your units via the XLR connector on the bottom of the units.
4. Use standard XLR microphone cables to link your units together. Remember that the Male XLR connector is the input and the Female XLR connector is the output. The first unit in the chain (master) will use the female XLR connector only. The last unit in the chain will use the male XLR connector only.
5. To run the 2 channel show, turn every other fixtures dip switch 10 to the on position.  
For example, if you have four units, two on the right and two

## Sonic Beam II™ Operating Instructions

on the left, you might want to set the outside two units to do one thing, and the middle two to do a variation on the same theme. Set dip switch 10 'off' to make the scan work the same and 'on' to select the variation. Even if you only have two units you will probably find that you get a better light show if you set dip switch 10 'on' on the second unit.

6. To run a synchronized light show set all the dip switch on all the fixture to the 'off' position. All fixtures will now run in the same exact pattern.
7. After all the settings have been set, power-up the fixture, they will react to sound.
8. You can also use the optional Sonic Beam/C Remote Control.

If you want to use the optional remote control, connect the Sonic Beam/C™ controller to the first fixture in the line (master).

*Note: The remote control only operates in stand-alone mode. If the remote is connected in DMX mode it will not function. If the unit does not receive an active DMX signal, the unit will automatically react to sound in the MAster/Slave mode. During Master/Slave mode the all dip switches will be ignored except dip switch number 10.*

*Note: Dip switch number 10 will have no effect on the first unit in the Master/Slave line. This is the unit that is generating the light show.*

### DMX Mode:

Operating through a DMX controller give the user the freedom to create his/her own programs tailored to their own individual needs. This function also allows you to use your fixtures as spot lights.

1. This function will allow you to control each individual fixture's traits with a standard DMX 512 controller such as the American DJ® Show Designer™ or the American DJ® DMX Operator.™

## **Sonic Beam II™ Operation Cont.**

2. The Sonic Beam II™ uses four DMX channels to operate; Channel 1 is mirror pan, channel 2 is mirror tilt, channel 3 is gobo/color, and channel 4 is shutter.
3. To run your fixture in DMX mode, plug in the fixture via the XLR connections to any standard DMX controller. - Follow the set-up specifications that come with your DMX controller.

## **Sonic Beam II™ Focusing**

1. To focus the Sonic Beam II™ it is best to first turn down the music so the mirror stops moving.
2. Loosen the thumb screw on the front of the unit that hold the lens in place.
3. Adjust the focus by moving the lens up and down, until you reach proper focus.
4. Tighten the thumb screws after you achieve your desired focus.

## **Sonic Beam II™ Lamp Replacement**

Lamp Replacement: Caution! Never open the unit when in use. Always disconnect the main power before attempting to replace the lamp. Remember always replace with the same type lamp and fuse.

1. Be sure to follow the proper procedures when handling halogen bulbs.
2. Lamp replacement has been made simple by incorporating the use of a removable lamp tray and thumb screws.
3. Loosen the thumb screw on rear cover.
4. Remove the tray.
5. Remove and replace the bulb.
6. Reassemble.

## **Sonic Beam II™ Cleaning**

Due to fog residue, smoke, and dust cleaning the internal and external optical lenses must be carried out periodically to optimize light output.

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing.
2. Use a brush to wipe down the fan grill.
3. Clean the external optics with glass cleaner and a soft cloth every 20 days.
4. Clean the internal optics with glass cleaner and a soft cloth every 30-60 days.
5. Always be sure to dry all parts completely before plugging the unit back in.

Cleaning frequency depends on the environment in which the fixture operates (i.e. smoke, fog residue, dust, dew).

## **Sonic Beam II™ Operation Precautions**

1. Be sure not to obstruct the cooling vents and keep the unit in a well ventilated area.
2. Take Caution, never to open the fixture when in use!
3. Always disconnect the main power before servicing or replacing the lamp.
4. Always replace with the exact same lamp and fuse.

## Sonic Beam II™ Trouble Shooting

Listed below are a few common problems the user may encounter, with solutions.

### ***No light from the unit;***

1. Check if the 'Power On' (red) LED is lit and the fan is running. If not, there is no main supply.
2. Check the fuse in the back panel.
3. Check if lamp is lit. The user should be able to see some light escape through the fan. If power is present but the lamp is not lit, lamp may need to be replaced.

*Note: The unit has been designed to shut the lamp down after 60 seconds of inactivity. This is a way of extending lamp life, be assured this is not a problem with the fixture.*

### ***Unit not responding to DMX;***

1. If the Green LED on the top of the unit is flashing, the unit is definitely receiving DMX
2. Check the dip switch settings.
3. If the DMX LED is not lit, check that the DMX cables are connected properly and are wired correctly (pin 3 is 'hot'; on some other DMX devices pin 2 may be 'hot'). Also, check that all cables are connected to the right connectors; it does matter which way the inputs and outputs are connected.
4. If it is a bad connection, the Green LED may flash when cables are wiggled (but remember it may also be the unit sensing audio!)
5. If DMX connectors are fairly short, ordinary microphone cables may be used. For longer runs, this may cause

## Sonic Beam II™ Trouble Shooting Cont.

data transmission problems (which will show up as random or incorrect movements) for best result, use proper balanced data transmission cable.

### ***Unit does not respond to sound;***

1. Check to see if the unit is receiving DMX (the green LED should be off).
2. Tapping the microphone should cause the LED to flash (quiet or high pitched sounds will not activate the unit). If the green LED does not flash to sound there may be an internal problem.

### ***Unit blacks out in stand alone mode;***

1. Some of the units' built-in patterns include special effects such as blackout sweeps. When connecting two units up, only one is ever blackened out at once, and the blackout 'swaps' between the units.

***If problems are not resolved;*** Contact your American DJ® dealer for service.

## Sonic Beam II™ Product Registration

The Sonic Beam II™ comes with a 1 year limited warranty. We recommend filling out the warranty registration card that came with your fixture to validate your warranty. You may also register your product on-line at [www.americandj.com](http://www.americandj.com).

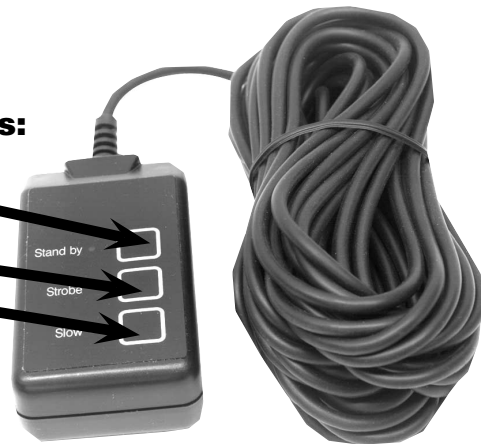
## Sonic Beam II™ Optinal Remote

The Sonic Beam/C controller may be purchased separately allowing you to control the main unit, and any others connected to it, while it is in stand alone mode. You can set the unit to black out, strobe, or to slow scan-mode. If you have more than one unit, make sure the remote control is plugged into the first unit in the daisy chain. The remote control will not have any effect if the unit is in DMX mode. When the unit is in blackout mode, the light will come on next to the blackout button. When the unit is in slow-scan mode, the light will come on next to the button. Strobe mode is only effective while the button is held down.

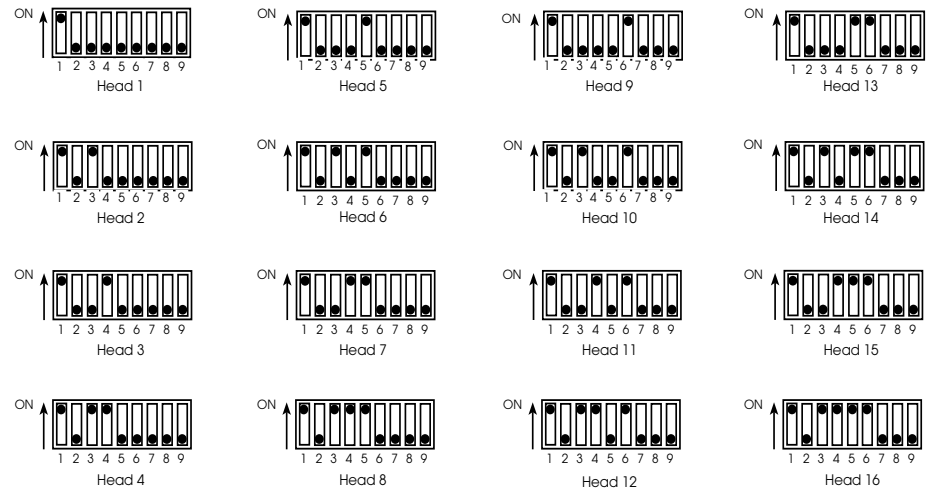
The Sonic Beam II may be controlled by a wide range of controllers; ie. Show Designer™, DMX Operator™, Scene Setter™ or by the Sonic Beam II/C basic controller.

### Sonic Beam II/C features:

- Stand by (Black out)
- Strobe
- Slow Scan
- 30 ft. cable



## Sonic Beam II™ DMX Settings



## Sonic Beam II™ DMX Settings

Sonic Beam II / Swivel Beam II DMX CONFIGURATION							
DMX RANGE	CHANNEL 1		CHANNEL 2		CHANNEL 3	CHANNEL 4	
0 ~ 255	PAN		TILT		COLOR	GOBO	SHUTTER
	Swivel Beam II	Sonic Beam II	Swivel Beam II	Sonic Beam II			
255	[Icon]	[Icon]	STOPPED	[Icon]	⚡⚡⚡		⚡⚡⚡
250			[Icon]				
240			[Icon]				
230			[Icon]				
220			[Icon]				
210			[Icon]				
200			[Icon]				
190			[Icon]				
180			[Icon]				
170			[Icon]				
160			[Icon]				
150			[Icon]				
140			[Icon]				
130	[Icon]		STOPPED				
120			[Icon]				
110			[Icon]				
100			[Icon]				
90			[Icon]				
80			[Icon]				
70			[Icon]				
60			[Icon]				
50			[Icon]				
40			[Icon]				
30			[Icon]				
20			[Icon]				
10			[Icon]				
0	[Icon]	[Icon]	STOPPED	[Icon]	BLACKOUT	GOBO 4 GOBO 5 GOBO 6 GOBO 7 GOBO 8 GOBO 9 GOBO 10 GOBO 11 GOBO 12 GOBO 17 GOBO 16 GOBO 15 GOBO 14 GOBO 13 GOBO 12 GOBO 11 GOBO 10 GOBO 9 GOBO 8 GOBO 7 GOBO 6 GOBO 5 GOBO 4 GOBO 3 GOBO 2	OPEN BLACKOUT

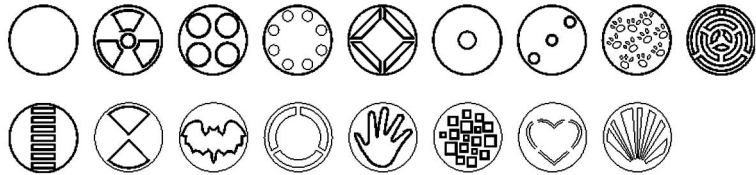
## Sonic Beam II™ Specifications

### Model: Sonic Beam II™

#### SPECIFICATIONS:

Working Position:	Any safe working position
Voltage:	120V
Lamp:	ZB-ELC/3 24v 250w 300Hr.
Weight:	18 lbs.
Dimensions:	17.25" x 5.5" x 6.5"
Fuse:	7A GMA

## Sonic Beam II™ Gobo Layout



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