

Spyro-250™ Effect SY-250



*Colored light whirls and twists.
With audio control for convenience
and DMX control for design precision,
Spyro-250™ leaves traditional effects behind.*

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CAUTION!

Risk of electric shock
Read instructions before installing
or connecting to power

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most innovative effects around.**

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Thank you!



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Spyro-250™ Effect

Description

The Spyro-250™ lighting effect sets any room, whether dance hall, disco, pub or palace, to life. Vibrant specks of light twist and turn in an exciting whirl of color. With strobe, rotation, and nine dichroic colors + white, Spyro-250™ turns any place into a party place.

And with its control mode innovation, Spyro-250™ leaves traditional effects behind. DMX control precision allows you to synchronize changes to music and other professional lighting equipment. Audio control provides the convenience of instant shows. And the MiniMaster™ control mode provides instant effect shows in sync with Geni Nimbus™ series scanners.

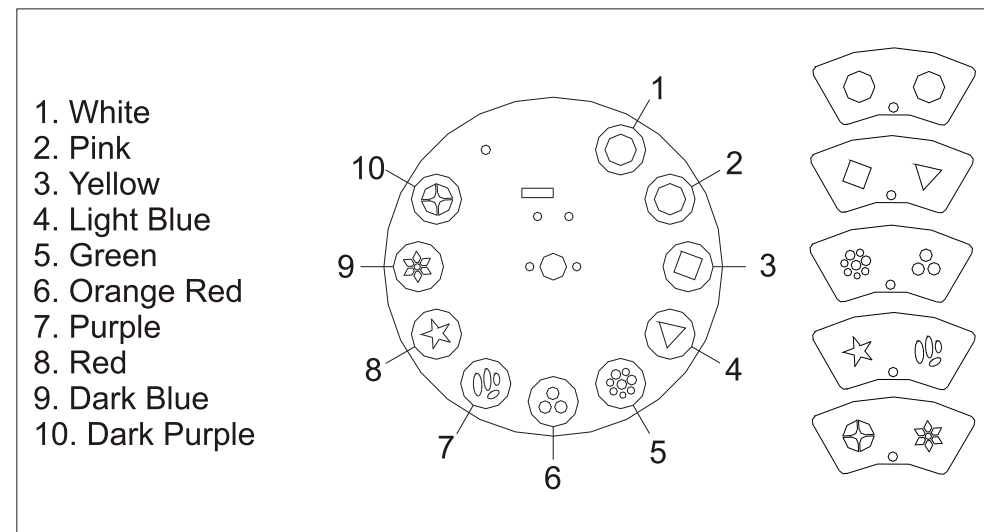
Exhilarating lighting effect and control innovation make Spyro-250™ ideal for disco, display, and mobile use.

Features

- Innovative color flower effect: light whirls and twists
- Nine dichroic colors, plus white
- Eight frequency-per-second (fps) strobe effect
- Rapid, two-way rotation
- Innovative control: audio and standard DMX512 control modes
- Works with MiniMaster16™ controller and Nimbus™ scanners
- Easy-to-use audio program, straightforward DMX addressing
- Built-in assistance functions for convenience, including focus, etc.
- User-friendly function switches offer control options
- Built to perform for a long, long time
- Quality components, axial fan cooling
- Long lamp life assured by:
 - 1) slightly reduced operating voltage
 - 2) automatic lamp shutoff
- Convenient IEC power socket
- Three-pin Canon XLR DMX512 signal cable connection
- Two DMX channels: (1) color and (2) effect rotation

Appendix 2

Spyro-250G™ Gobos



DMX Address Chart

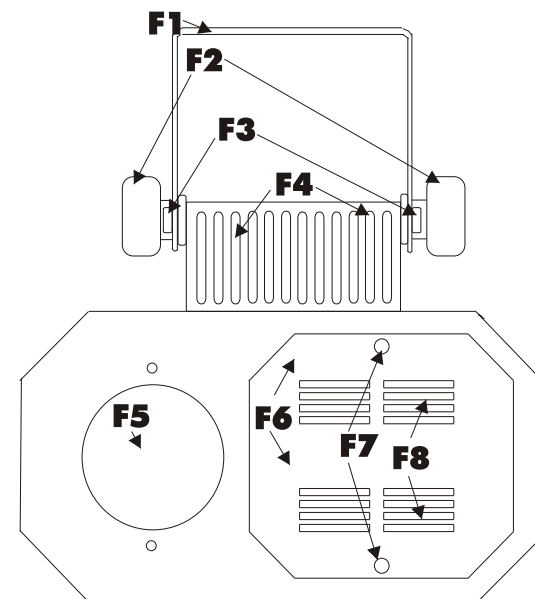
DMX starting addresses and dip switch settings for 28 Spyro-250™ effect units follow. For more information about the DMX512 addressing system, please see the guide *DMX512 Basics*.

Unit	Address	Dip Switches	Unit	Address	Dip Switches
Unit 1	1		Unit 15	29	
Unit 2	3		Unit 16	31	
Unit 3	5		Unit 17	33	
Unit 4	7		Unit 18	35	
Unit 5	9		Unit 19	37	
Unit 6	11		Unit 20	39	
Unit 7	13		Unit 21	41	
Unit 8	15		Unit 22	43	
Unit 9	17		Unit 23	45	
Unit 10	19		Unit 24	47	
Unit 11	21		Unit 25	49	
Unit 12	23		Unit 26	51	
Unit 13	25		Unit 27	53	
Unit 14	27		Unit 28	55	

Spyro-250™ Diagrams

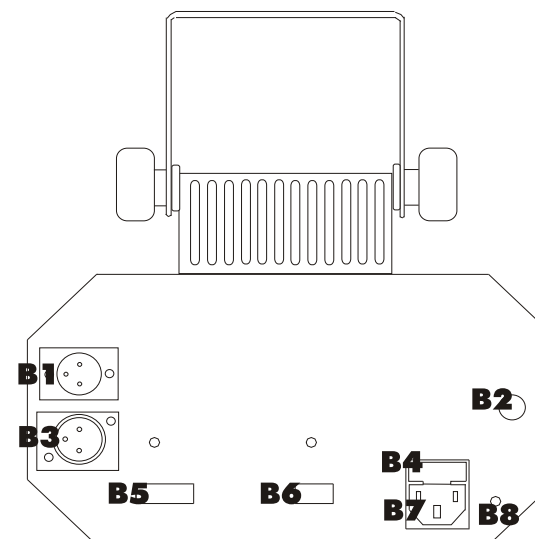
Front View

- F1 - Bracket
- F2 - Bracket Knobs
- F3 - Hexagonal Screw for Attaching Bracket
- F4 - Fan Air Vents
- F5 - Lens
- F6 - Lamp Compartment Plate
- F7 - Screws for Attaching Lamp Compartment Plate
- F8 - Lamp Compartment Air Vents



Back View

- B1 - DMX Canon Connection (DMX Signal In)
- B2 - Built-in Microphone
- B3 - DMX Canon Connection (DMX Signal Out)
- B4 - Fuse Holder
- B5 - DMX Dip Switches
- B6 - Function Dip Switches
- B7 - IEC Power Socket
- B8 - Earth (Ground)





Warning!

Follow standard precautions for all electronic products.

- This appliance must be earthed (grounded). Disconnect from power before removing covers or servicing. Keep case closed while operating.
- Spyro-250™ effect contains no user serviceable parts. Servicing must be conducted by qualified service personnel.
- Lamp and components become hot during operation. Allow time to cool before handling.
- Keep flammable material at least one meter away from unit. Do not operate in wet conditions or near liquids.
- Keep air vents clear to avoid overheating. Never insert objects into air vents.
- Lamp produces hazardous UV light. Do not look directly at lamp when lit. Do not expose skin to uncovered lamp.
- If objects fall on unit, disconnect mains power supply immediately. Have a qualified technician inspect for safety before operating.
- Never remove warning or informative labels from the unit.

Section 1 - Setting Up Inspection

Every Spyro-250™ effect was thoroughly tested at the factory and shipped in perfect condition. Carefully unpack your Spyro-250™ effect and remove the bag with components from the carton. Inspect equipment for shipping damage. If shipping damage has occurred, contact your Geni dealer immediately.

Packing list:

1. Spyro-250™ effect
2. Mains power cord
3. Operating manual

Appendix 1 Setting DMX Addresses

To set DMX addresses, you must know about (1) the relationship between DMX512 dip switches and address values, (2) your equipment, and (3) how to compute DMX addresses. The following is a brief explanation of the DMX512 system. For a more thorough guide, please see the pamphlet *DMX512 Basics*.

1. The relationship between DMX512 dip switches and address values:

Dip Switch	1	2	3	4	5	6	7	8	9
DMX Value	1	2	4	8	16	32	64	128	256

Note that DMX values double progressively: the first DMX dip switch has a DMX address value of 1; The second DMX dip switch has a value of 2; the third DMX dip switch has a value of 4, etc., as shown above.

2. Your equipment. Since each Spyro-250™ effect has two channels, each starting addresses advances two places. In this example, we have no other DMX equipment in front of Spyro-250™, so the first effect unit's starting address should = 1; The second unit's starting address should = 3, etc. List the DMX starting values, and set DMX dip switches appropriately. (Make sure the fourth function dip switch is off.)
3. Set DMX dip switches to appropriate DMX starting addresses. Begin with the highest dip switch value possible and work down from there. For a DMX starting address of 19, for example, activate DMX dip switch #5 (with a value of 16), then work down, activating dip switch #2, (with a value of 2), and dip switch #1 (with a value of 1). Use a ballpoint pen or a toothpick to flip DMX dip switches to the appropriate address settings.

For convenience, Spyro-250™ effect starting addresses for 28 units and corresponding DMX dip switch settings are shown on the following page.

Product Specifications

Model: Spyro-250

Dimensions: 260x230x169mm (LxWxH)

Weight: 7.85 kg

Lamp: 24V/250W ELC GX5.3

Voltage: 120V~60Hz

Power consumption: 300VA

Fuse: T5A/250V 20mm

Lamp transformer: 115V/22.5V

PC board transformer: 115/10V/8V

Signal: USITT DMX512

Signal connection: 3-pin XLR

Addressing: Standard DMX512 9-pin binary

Channels: 2

Termination: Built-in (Manual)

Model: Spyro-250

Dimensions: 260x230x169mm (LxWxH)

Weight: 7.85 kg

Lamp: 24V/250W ELC GX5.3

Voltage: 230V~50Hz

Power consumption: 300VA

Fuse: T3.15A/250V 20mm

Lamp transformer: 230V/22.5V

PC board transformer: 230V/8V/10V

Signal: USITT DMX512

Signal connection: 3 pin XLR

Addressing: Standard DMX512 9-pin binary

Channels: 2

Termination: Built-in (Manual)

CE Approved

Note: Spyro-250™ effect is also available with gobos attached to the color wheel. The model with gobos is called Spyro-250G™. See Appendix 2 for details.

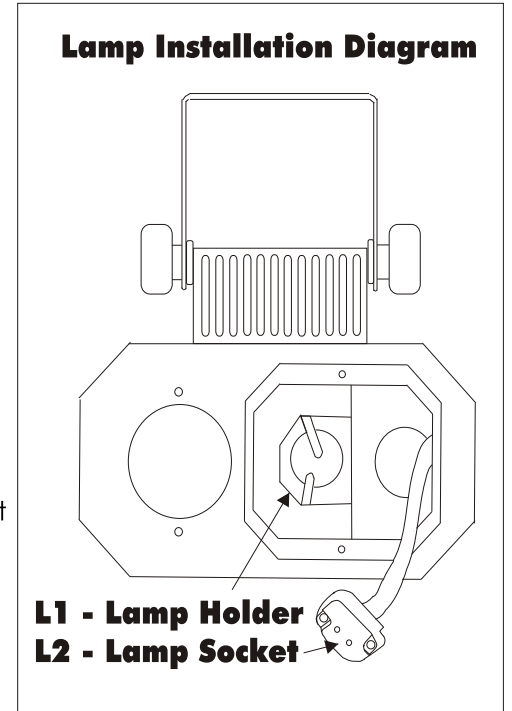
Lamp Installation

Caution! Lamp and metal components get hot during operation.

Always allow unit to cool before re-lamping or opening unit cover.

1. Loosen the two screws (F7) on the lamp cover (F6). (Diagram shown on page 4.) Remove lamp compartment cover (F6).
2. Remove lamp from packaging. Read lamp instructions. Do not touch lamp bulb with bare hands, as this could shorten the lamp life. Grasp the outside of the lamp's cup-shaped reflector. (Lamp not included with effect.)
3. Slide the lamp's cup-shaped reflector into the lamp holder (L1). (Diagram on right.)

4. Note that the lamp stem has two pegs. And the lamp socket (L2) has two small holes. Gently insert the lamp stem pegs into the holes in the lamp socket (L2).
5. Put lamp cover (F6) into place, with the flange (the metal protrusion on the lamp compartment cover) inside the unit on the lens side. Fasten both screws (F7) firmly.




Effect Installation


1. For best results, hang Sypyro-250™ effect from a firm truss. Allow at least one meter on all sides for proper cooling.
2. Bolt bracket (F1) to a 16-kg rated or stronger clamp and fasten securely to truss. Adjust projection angle and tighten bracket knobs (F2). Tighten hex screws (F3) as necessary.
3. Set Function and Dip switch settings for the control mode of your choice. See the following for details. "Daisy chain" the units as explained in the guide *DMX512 Basics*.
4. Make sure that your power supply and the product power specifications are the same. Plug mains power cord into IEC socket (F7), then plug into an appropriate power source.

Section 2 - Control Modes

Audio Control for One Unit





1. Use a ballpoint pen or toothpick to flip Function dip switch #1 to the on position: . Turn all other Function and DMX dip switches off.
2. Provide power as explained in the *Effect Installation* section, and turn on the music.
3. Spyro-250™ lighting effect will project a light show that changes in sync with the music.

Audio Control for Four or More Units

1. First unit: Turn on Function dip switches #1 and #2: . Turn on DMX dip switch #1. (See diagram below right.) Keep other DMX and Function dip switches off.
2. Second Unit: Turn on DMX dip switch #1 and #2. Keep other DMX and Function dip switches off.
3. Third Unit: Turn on DMX dip switch #1 and #3.
4. Fourth Unit: Turn on DMX dip switches #1, #2, and #3.

5. Envision following units (5, 6, 7, 8, etc.) as repetitions of the first, second, third and fourth units. Units 5, 9, 13, etc., would have the same DMX dip switch address settings as the first unit. Units 6, 10, 14, etc., would have the same DMX dip switch setting as the second unit. See diagram at right.

DMX Dip Switch Settings (Audio Control, 4+ Units)

Unit 1, 5, 9, 13, etc.	
Unit 2, 6, 10, 14, etc.	
Unit 3, 7, 11, 15, etc.	
Unit 4, 8, 12, 16, etc.	

Activate function dip switches #1 and #2 on the first unit only.

6. Activate the DMX signal terminator, Function dip switch #6, on the last unit in a series of units.
7. Provide power as explained in the *Effects Installation* section.
8. Turn on music. Spyro250™ effects will change to the beat of the music in an interesting, automatic light show.

Trouble-shooting

The following tips are provided to help users solve basic problems. Always refer servicing to qualified technicians.

Problem: Lamp is not lit and fan is not operating.

Solution:

1. Check mains for proper power connection and supply.
2. Disconnect power cord. Use a flat-head screwdriver to pry open the fuse holder (B4). Check the fuse. If the fuse is discolored, rather than clear, replace it. A replacement fuse is provided in the plastic box-shaped cover in the fuse holder (B4).

Problem: Lamp is not lit, but fan is operating.

Solution:

1. Let unit cool. Disconnect power. Check the lamp. If the lamp is discolored or broken, replace it with a new lamp of the appropriate type.
2. If lamp is not burnt or broken, re-insert it. Close the case, tighten both screws, and reconnect power. If the lamp still does not light, refer servicing to a qualified technician.

Problem: Effects do not change according to DMX512 slider positions.

Solution:

1. Check DMX512 dip switch settings. Make sure unit is addressed properly. Make sure that Function dip switches are set properly.
2. Disconnect DMX512 signal cords. Turn on Function dip switch #1, activating the one-unit audio show. Turn on some music. If the audio show operates properly, the DMX signal cable or connector is suspect. Replace the original DMX signal cable.

Problem: Function dip switches have been set for audio mode, but unit does not respond to music.

Solution:

1. Make sure that the appropriate audio Function dip switches are activated. Turn up the music volume.
2. Refer servicing to a qualified technician.

Lamp Relay

Innovative GENI design extends Spyro-250™ lamp life. First, the voltage entering the lamp is slightly low. This does not noticeably affect lamp output, but it does extend lamp life. Second, an automatic relay shuts off the lamp if it isn't used. Under DMX512 control, if the color channel is at zero for more than five seconds, the lamp shuts off. Under audio control, if no sound signal is given for more than five seconds, the lamp shuts off. In both cases, the lamp lights when the signal is restored. Either move your color slider (in DMX control) or turn on the music (in audio control) to activate the lamp.

Maintenance

Warning: Disconnect power and let unit cool before handling. Never open unit when in use. Keep away from water and other liquids.

To maintain maximum brightness, clean the unit regularly with a damp cloth or glass cleaner. Do not use alcohol or solvents.

1. Wipe mirror and lens clean regularly.
2. Keep internal optical path free from dust or cobwebs.
3. Clean internal parts once a year with a brush and strong vacuum cleaner once a year.

Lamp Removal

Follow the directions below to remove lamps when they have burnt out. Disconnect power and let unit cool before handling.

1. Loosen two screws (F7) on the lamp compartment cover (F6). Pull compartment cover (F6) off. (Shown on page 2.)
2. Gently slide the cup-shaped lamp reflector out of the lamp holder (L1). (Shown on page 4.)
3. Grasp the lamp reflector cup (L1) and lamp socket (L2). Pull the lamp reflector cup straight out, away from the lamp socket.
3. Dispose lamps properly. Keep used lamps away from children and animals.

DMX512 Control

Each Spyro-250™ effect has two channels. The first channel controls color, rotation, and strobe. The second channel controls rotation speed and direction. To use DMX512 control, you must:

1. Set DMX512 dip switch settings and link canon signal cables to each unit as explained in the guide *DMX512 Basics*. DMX dip switch address settings are explained and shown in *Appendix 2*.
2. Connect power as explained in the *Effect Installation* section. Make sure that your power source and the unit power voltages are the same.
3. Refer to the Spyro-250™ effect DMX channel control diagram below for programming positions. Channel positions on your DMX controller produce effects as indicated below.


Spyro-250™ DMX Channel Control Diagram





Channel 1 Color		Channel 2 Effect Rotation	
Strobe	192 - 255		255
Rainbow	160 - 191	Slow	
Dark Purple	144 - 159	Counter-clockwise	
Dark Blue	128 - 143	Fast	132
Red	112 - 127		131
Peach Pink	96 - 111		
Orange	80 - 95	Fast	
Green	64 - 79	Clockwise	
Blue	48 - 63	Slow	
Yellow	32 - 47		8
Pink	16 - 31		
White	01 - 15		
Off	0	Closed	0 - 7

For example, when using a DMX512 controller on channel one, from position 64 to 79, a green-colored effect will be projected. On channel two, at position 254, the effect will rotate slowly in a counterclockwise direction.

MiniMaster16™ Control

Spyro-250™ effects operate with the MiniMaster16™ controller, presenting an instant light show either alone or accompanying Nimbus™ series scanners. From four to 64 units, either scanners or effects, can be used with the MiniMaster16™ controller. Instructions for operating Spyro-250™ effects with the MiniMaster16™ controller follow.













1. Set the fourth Function dip switch on each Spyro-250™ effect to the on position: . This adjusts Spyro-250™ effect channels to match MiniMaster's program.
2. Set Spyro-250™ effect DMX dip switch settings as shown below.
3. Choose one of two audio input sources, either a microphone built into MiniMaster16™ controller, or an exterior source signal from an amplifier. MiniMaster's built-in microphone is activated when power is connected and no line is plugged into the *Line In* socket on the back panel of the controller. MiniMaster's exterior source signal is activated when a 1/4-inch (6.3mm) stereo jack is connected to the *Line In* socket on the controller's back panel.
4. Connect power as explained in *Effect Installation* and turn on the music. Spyro-250™ effect projections will change to the music.

DMX Dip Switch Settings for Use with MiniMaster16™		
Spyro-250™ Effects	Starting Address	DMX Dip Switches
1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41, 45, 49, 53, 57, 61	1	
2, 6, 10, 14, 18, 22, 26, 30, 34, 38, 42, 46, 50, 54, 58, 62	5	
3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43, 47, 51, 55, 59, 63	9	
4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64	13	

Section 3 - General Use

Function Dip Switch Settings

The following functions are designed to enhance user convenience. Simply flip the appropriate function dip switch as shown to activate the desired function.

Function Dip Switch Chart	
<p>#1 Off  Normal DMX operation, for use with a DMX controller</p>	<p>#1 On  Activates audio control mode</p>
<p>#2 Off  One-unit audio control mode when Function dip switch #1 is activated</p>	<p>#2 On  Four-unit audio control mode, when Function dip switch #1 is activated</p>
<p>#3 Off  Normal DMX operation, for use with a DMX controller</p>	<p>#3 On  Activates focus assistance function; A white light appears for easy focusing.</p>
<p>#4 Off  Color effects occupy the first DMX channel; Rotation effects occupy the second DMX channel. This is standard.</p>	<p>#4 On  Color effects occupy the first DMX channel; Rotation effects occupy the third DMX channel. For use only with MiniMaster16™ controller.</p>
<p>#5 Off  Not presently used</p>	<p>#5 On  Not presently used</p>
<p>#6 Off  Normal operation; This is standard.</p>	<p>#6 On  DMX signal termination; Activate this on the last unit in a series of DMX equipment. This keeps the DMX signal free from interference.</p>