





**LION**<sup>®</sup>  
ready for action



# SG1000™ SMOKE GENERATOR



[ USER'S MANUAL





	 <b>WARNING</b>
	<p>Read and understand operator's manual before using this machine.</p> <p>Failure to follow operating instructions could result in death or serious injury.</p>

	 <b>WARNING</b>
	<p><b>Improper use may result in fire or injury.</b></p> <p>Read instructions/safety manual before installing, operating or servicing.</p>

	 <b>WARNING</b>
	<p><b>Risk of electric shock.</b></p> <p>Avoid contact with water. This Smoke Generator is not water proof.</p>

	 <b>WARNING</b>
	<p><b>Wear respiratory protection when prolonged exposure to training smoke or exposure to dense concentrations of training smoke is likely.</b></p>

	 <b>WARNING</b>
	<p><b>Do not use Smoke Generators near known asthmatics or those with respiratory illness. Use only in accordance with applicable laws, codes and norms.</b></p>

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**SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE**

# 1. INTRODUCTION

## **Congratulations on the recent purchase of your new SG1000™ Smoke Generator.**

The SG1000 allows firefighters to conduct training anywhere – no cords required. Expand your training capabilities to include specialized training scenarios in locations without power. The SG1000 is ideal for both firefighter training and workplace fire safety training.

Firefighters can quickly add smoke to upper floors of your training tower, vehicle extrication drills and remote locations. The SG1000 also allows training officers to easily add realism to important fire safety drills, including evacuation training, hazard recognition and response training. Because the SG1000 is cordless and battery operated, it's ideal for training in locations where electrical power is not easily accessible or available.

To ensure premium smoke and unit longevity, LION Smoke Generators are designed to be used only with LION's specially formulated, water based Smoke Liquid. Using a LION Smoke Generator and LION Smoke Liquid together will provide you with the highest quality smoke available.

This user manual describes how to properly operate and maintain the SG1000 for optimal performance.

### **NOTE**

Using smoke liquid other than LION Smoke Liquid, including oil based smoke liquid, may clog the fluid lines and create a hazardous smoke output. Use of smoke liquid other than LION Smoke Liquid will void the warranty.

## FOR YOUR SAFETY

1. Use respiratory protection when in prolonged contact with smoke or when dense concentration of smoke is present.
2. People with respiratory conditions or asthma should avoid exposure to smoke.
3. Do NOT use this appliance without reading the entire "User's Manual."
4. Do NOT alter this appliance in any manner.
5. Always use this appliance on a hard, level, non-combustible surface such as concrete, rock or stone.
6. Only LION Smoke Liquid is approved for use with this product.
7. Keep Smoke Liquid out of reach of children. If Smoke Liquid comes into contact with eyes, immediately rinse with water.
8. Smoke Liquid can be removed from most surfaces with clean water.
9. Smoke Liquid is not for human consumption.



## WARNING

10. Use caution when operating in windy conditions as smoke can travel (e.g., do not use in proximity to roadways; smoke may obscure traffic conditions).
11. The outlet nozzle and face of this appliance will become hot when in operation. To avoid burns, do NOT touch appliance until it has completely cooled for at least 15 minutes.
12. Do NOT attempt to move or store a Smoke Generator until it is completely cooled.
13. This appliance should be thoroughly inspected on a regular basis by trained personnel.
14. Do NOT handle Smoke Generators roughly. Should you drop or bang the Smoke Generator, inspect thoroughly before use.
15. **Serious injury or damage to property** may occur if these guidelines are not followed precisely.

## 2. SPECIFICATIONS

Below is a summary of LION SG1000™ capabilities and technical information.

### GENERAL

The SG1000 is a smoke machine that consists of a Smoke Generator connected to a power unit. Two power units are available. The first power unit is a battery power base that makes the Smoke Generator portable, allowing you to add smoke to any location, or even create smoke as you walk around the training site. The second power unit is a power supply that plugs into wall power. The power units are attached to the Smoke Generator and can be easily detached by the user to change an empty battery or to use the wall powered base instead of the battery pack.

The SG1000 can be used to generate smoke by using the **SMOKE** button on the machine, via DMX, via wired remote, or wireless remote.

On the handle of the Smoke Generator there is a **SMOKE** button and a two-colored indication LED light (red and green).

At the back are two XLR connectors for the wired remote control or control by DMX, an **ON/OFF** button, a **CONTINUOUS MODE SELECTOR** button and a density control knob.

Inside a small compartment on the back of the Smoke Generator there are switches that allow for changing the DMX channel, remote control channel selection, Remote Control pairing switch and an indicator light that is used for programming.

The battery in the battery pack utilize Nickel-Metal Hydride (NiMH) cells.

## 2.1 TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS	
<b>Mains Base Supply Voltage</b>	85~264VAC 47~63 Hz
<b>Mains Base Power Consumption</b>	8.5A/115VAC 5A/230 VAC
<b>Battery Base Charger Supply Voltage</b>	110-240VAC
<b>Heater Power</b>	500W
<b>Dimensions</b>	L x W x H = 13.0" x 5.5" x 9.4" (33 x 14 x 24 cm)
<b>Weight with Battery Base</b>	17 lbs (7.7 kg)
<b>Tank Capacity</b>	24 oz (0.7 L)

The SG1000™ is designed to use LION Smoke Liquid. For optimal results, please use only LION Smoke Liquid.

## 3. OVERVIEW OF THE SG1000™ SMOKE GENERATOR

### 3.1 SG1000 CORE UNIT



FIGURE 1: SG1000 CORE UNIT

- A ON/OFF BUTTON**
- B COVER FOR DMX AND REMOTE CHANNEL SELECTION**
- C CONTINUOUS BUTTON**  
To turn continuous smoke mode on or off
- D DENSITY CONTROL KNOB**  
To adjust amount of smoke when in continuous mode
- E DMX AND WIRED REMOTE INPUT**
- F DMX OUTPUT**



## 3.2 SG1000™ SMOKE GENERATOR BATTERY POWER BASE



FIGURE 2: SG1000 BATTERY POWER BASE

- A CHARGING PORT**  
Connection for battery charger
- B AIR INTAKE**

### NOTE

Instructions on the bottom of the charger indicate what the LEDs mean for quick reference.

### ATTENTION

Use your charger only in a dry, well-ventilated location.

CONTINUES >

### 3.2.1 WHAT YOU NEED TO KNOW ABOUT YOUR BATTERY

Your Battery Base utilizes Nickel-Metal Hydride (NiMH) cells, replacing the Lithium Ion battery base for 10 more minutes of run time with no shipping restrictions.

#### NOTE

If you have already used your SG1000™ with a Lithium battery base, you may need to change the settings on the Smoke Generator or send your SG1000 to LION for reprogramming. This insert contains information about your Battery Base that is different from what is included in the main SG1000 manual. **Please read, as you may need to take action before training with your SG1000.**

#### WARNING

READ THE FOLLOWING SAFETY INSTRUCTIONS. FAILURE TO COMPLY WITH THESE PRECAUTIONS MAY RESULT IN SERIOUS INJURY!

- Do not connect the positive terminal of the battery to the negative terminal.
- Do not incinerate or mutilate the batteries, this may cause the batteries to burst and release toxic material.
- Do not expose the battery or charger to water.
- Do not expose the battery to temperatures greater than 120°F (49°C). Store the Battery Base in a cool dry place between -4°F and 86°F (-20°C and 30°C).
- Avoid using the Battery Base in an airtight compartment. The batteries may generate hydrogen gas which could cause an explosion if exposed to an ignition source.
- If the battery makes any noise, becomes excessively hot or leaks, stop use immediately and contact our customer service team.
- When using the battery for the first time or after long term storage, fully charge the battery before use.
  - NiMH batteries slowly lose charge while being stored. Charge the battery immediately before use to get maximum run time. To maximize the life of your Battery Base, go through at least one use-cycle every three months. This consists of charging the Battery Base, using it till the battery is drained and recharging it again.
  - The battery should only be charged with the supplied charger.
  - The performance of the battery will decrease at low temperatures.
- Should the battery die, please dispose of it properly. Always comply with local and federal laws or requirements for disposal of electrical equipment and batteries.

## HOW TO CHARGE THE BATTERY BASE

1. Plug the battery charger into the wall. The LED will illuminate green.
2. Plug the charging port into the back of the battery base and turn the connector 1/8-turn clockwise to lock in place. The cooling fan on the charger will turn on and the LED will turn red. The LED will turn green when the battery is charged. To disconnect the charger from the Battery Base, pull the yellow lock tab back and turn the entire connector 1/8-turn counterclockwise, then pull the entire connector free of the Battery Base.
3. If the charger LED blinks red while plugged into wall power and the Battery Base, contact our Service Department for assistance.
4. If the battery is hot after use, allow it to cool down in a well ventilated place out of direct sunlight before recharging.

### **How to change the settings from Lithium to NiMH (this is only necessary if you previously used a Lithium Battery Base with your SG1000™):**

This procedure can be followed for SG1000 with firmware versions 20 or newer only and software versions 2.1.7 or newer. If the firmware is older than version 20, the SG1000 top will need to be returned to us for reprogramming. To change the settings, you will need an iOS device with WiFi capabilities. If you do not have access to an iOS device, contact customer service for assistance.

1. Turn on your SG1000 and wait 1 minute before connecting to the WiFi network named “Prop Network”.
2. Open a web browser and enter “sg1000-xxxx.net/support/” where “xxxx” is the last four digits of the serial number indicated on the back of the SG1000 top. If this does not work, try without the dash, “sg1000xxxx.net/support/”. If you are not able to connect to your SG1000, contact us for assistance.
3. The “Customer Troubleshooting” website will appear. Scroll to the bottom of the website and change the SG1000 battery type to “NiMH”. If you do not see this option at the bottom of the page, contact our Service Department for assistance to change the settings.

Turn the power off on the SG1000 and then back on again. Your SG1000 is now ready to use with your new NiMH Battery Base.

#### 4. Technical Specifications

Run Time at Max Output	30 Minutes
Charge Time	~4 hours
Charge Amperage	6 Amps
Charger Supply Voltage	100-250VAC 50/60Hz
Charger Maximum Current Draw	1000mA (220V full load)

#### 3.3 SG1000™ SMOKE GENERATOR WALL POWER BASE



FIGURE 3: SG1000 WALL POWER BASE

- 1 POWER SWITCH**
- 2 POWER CORD CONNECTION**
- 3 FUSE HOLDER**  
The SG1000 uses a 5x20mm 10A-T HRC fuse
- 4 COOLING AIR VENTS**

## 4. USING THE SG1000™ SMOKE GENERATOR

### 4.1. CONNECTING THE SMOKE GENERATOR TO THE BASE

Engage the slots on the bottom rear of the Smoke Generator using the tabs on the rear of the base and slide the Smoke Generator forward slightly (see *Figure 4*).

With the locking handle in the middle position, push down on the front of the Smoke Generator (see *Figure 5*).

The seam between the Smoke Generator and the base will line up when the Smoke Generator and base are properly engaged (see *Figure 6*).

Push down the locking lever until it meets the base. This locks the Smoke Generator to the base (see *Figure 7*).

Carefully pick up the Smoke Generator and make sure the Smoke Generator is secured to the base.



FIGURE 4: SG1000 BASE TABS



FIGURE 5: PUSH DOWN ON THE SG1000



FIGURE 6: SG1000 SEAM ALIGNED

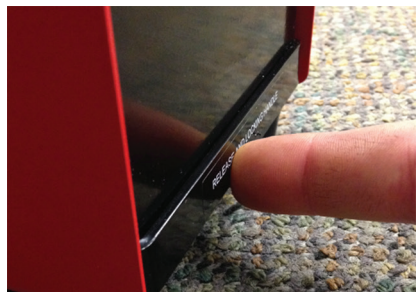


FIGURE 7: PUSH DOWN THE LOCKING LEVER

## 4.2 DISCONNECTING THE BASE

Remove the base by lifting the lever on the bottom front of the base (see *Figure 8*).

Lift the handle to the horizontal position. This will force the Smoke Generator apart from the base (see *Figure 9*).

Lift the Smoke Generator away from the base and slide it back to disengage the Smoke Generator from the base (see *Figure 10*).



FIGURE 8: LIFTING THE LEVER

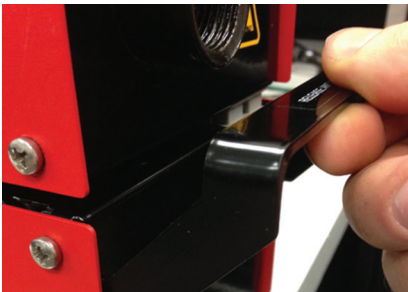


FIGURE 9: LIFT HANDLE TO FORCE SG1000™ APART



FIGURE 10: LIFT AWAY FROM THE SG1000 BASE

### 4.3 SETTING UP THE SMOKE MACHINE

Place the machine with the four rubber feet on a stable foundation. The smoke outlet has to be free from obstruction. Objects should be at a distance of at least two meters from the smoke outlet to prevent them from being damaged. The smoke can be extremely hot when leaving the machine. Smoke may condense when blown against an object at close distance, leaving a residue.

### 4.4 FILLING THE SMOKE LIQUID TANK

Fill the tank with LION Smoke Liquid. Never fill the tank completely to the top edge; make sure that the level remains below the neck. To avoid spillage, use a funnel. Wipe off any spilled liquid.

#### ATTENTION

Spilling liquid on the machine may damage it.

### 4.5 USE WITH BATTERY BASE

Make sure the battery is fully charged before use.

Turn the machine on using the **ON/OFF** button on the back of the Smoke Generator. Hold down the **ON/OFF** button for approximately three seconds until you hear a click. The green light above the switch will remain on when you release the button to indicate that the machine is turned on.

If the green light turns off when you release the button, try turning the machine on again, holding the **ON/OFF** button longer.

#### 4.6 USE WITH WALL POWER BASE

Connect the power supply into a grounded outlet. Turn the power switch on the base to the “on” position. The light in the switch will turn on. This indicates that power is being supplied to the Smoke Generator. However, the Smoke Generator will not work until it is turned on as well.

Turn the Smoke Generator on using the **ON/OFF** button on the back of the unit. Hold down the **ON/OFF** button for approximately three seconds until you hear a click. The green light above the switch will remain on when you release the button to indicate that the machine is turned on.

#### 4.7 TURNING THE SMOKE GENERATOR ON AND OFF

Turn the machine on using the **ON/OFF BUTTON** (Letter **A** in *Figure 11*, below) on the back of the Smoke Generator. Hold down the **ON/OFF BUTTON** for approximately three seconds until you hear a click. The green light above the switch will remain on when you release the button to indicate that the machine is turned on.

If the green light turns off when you release the button, the Smoke Generator is NOT on. Try turning the machine on again, holding the **ON/OFF BUTTON** longer.

To turn the SG1000™ off, press and hold the **ON/OFF BUTTON** until the LED above the **CONTINUOUS BUTTON** starts to blink. Release the **ON/OFF BUTTON** and the unit will turn off.



FIGURE 11: SG1000 CORE UNIT



## 4.8 MAKING SMOKE

The Smoke Generator can make smoke three ways:

- On-Demand using the button on the handle.
- Continuously using the Continuous Mode.
- Using an external controller.

## 4.9 ON-DEMAND SMOKE PRODUCTION

Press the button on the handle of the Smoke Generator to make smoke. The Smoke Generator will produce smoke as long as the button is pressed. You may notice that there is a short delay as the Smoke Generator heats up. The smoke production may also be inconsistent until it has reached optimal operating temperature.

## 4.10 CONTINUOUS MODE SMOKE PRODUCTION

Turn on Continuous Mode by pressing the **CONTINUOUS** button (Letter **C** in *Figure 11*, page 14) for approximately 2 seconds until the light above the button illuminates. Press the smoke button on the handle to start smoke production. Press the smoke button again to stop smoke production.

The smoke intensity is adjustable by turning the knob next to the continuous button (Letter **D** in *Figure 11*, page 14). Continuous mode can be turned off by pressing the button (Letter **C** in *Figure 11*, page 14) for approximately two seconds until the light above the button goes out.

## 4.11 PRODUCING SMOKE USING AN EXTERNAL CONTROLLER

There are several external controllers that can be used with the Smoke Generator:

- Wireless Remote.
- DMX interface.
- Wired Remote.
- Custom external controller using XLR connectors.

## 4.12 WIRELESS REMOTE

The optional wireless remote control can be configured to operate up to 8 Smoke Generator 1000s and/or Smoke Generator 4000s.

A combination of two modes can be used to control Smoke Generators using the Wireless Remote. The first mode is **GROUP MODE** and the second mode is **BURST MODE**. Group Mode allows you to control two sets of Smoke Generators independently on one remote using the On-Demand (**SMOKE**), Continuous (**AUTO**), and Continuous Maximum (**CONT**) modes. Burst Mode allows you to control eight sets of Smoke Generators using On-Demand Mode only.

## 4.13 GROUP MODE

When you select Group Mode, the remote can control two sets of Smoke Generators independently on one remote. The two sets are designated Group A and Group B. Multiple Smoke Generators can be programmed as Group A or as Group B.

When you select Group Mode, four buttons are available for the following functions:

**SMOKE** – triggers the On-Demand mode where smoke is produced as long as the button is held down.

**AUTO** – machine makes continuous smoke at the level which is set by the “density” control (4).

**CONT** – machine makes smoke continuously at maximum level.

**STOP** – machine stops making smoke.



## 4.14 BURST MODE

When Burst Mode is selected, between 1 and 8 Smoke Generators can be programmed to emit a burst of smoke, as long as the corresponding button is pressed.

#### 4.15 SETTING THE WIRELESS REMOTE MODES

The first step when using a new remote with a SG1000™ is to “randomize” the ID of the remote.

Each remote comes from the factory with the same ID code. This ID code is what the receiver in the smoke machine will remember when the remote is paired. It is important to randomize the remote's ID before pairing. This prevents accidental pairing with a smoke machine if two remotes have the same ID.

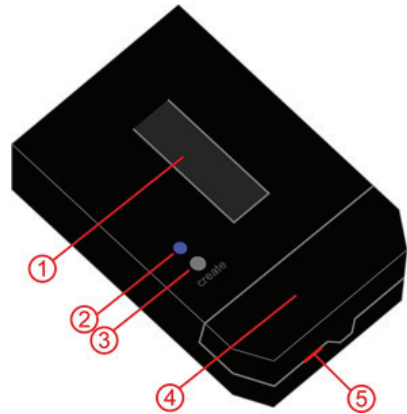
To randomize the ID, push the button hidden in a small hole in the remote (**ITEM 3** in the figure below).

Use a tool such as a paperclip, needle, or tweezers. Once the button is pressed, a blue LED light (**ITEM 2** in the figure below) will begin blinking on the back of the remote for a few seconds. Once this happens, press any button on the front of the remote to randomize the ID.

When the blue LED stops flashing, the process is complete and the remote now has a random ID.



- 1 BELT CLIP**
- 2 BLUE INDICATOR**
- 3 CREATE BUTTON**
- 4 BATTERY COVER**
- 5 OPENING POSITION FOR BATTERY COVER**



Now you can set the modes for the Remote Control.

The modes are set using switches located behind the flap labeled “CH. SELECT” on the back of the Smoke Generator (Letter **B** in the figure below). The switches are easily controlled with a paper clip or other small implement.



FIGURE 12: SG1000™ SMOKE GENERATOR CORE UNIT

Behind the flap there are two sets of switches, a “Learn” button, and an indicator light.

- 1 **DMX channel selection** sets the channel when using a DMX controller.
- 2 The **remote channel selection** sets the mode when using a wireless remote controller.
- 3 The **remote Learn switch** is used to pair a wireless controller with a SG1000™ Smoke Generator.
- 4 The **RC Mode Indicator light** gives feedback when using external controllers.

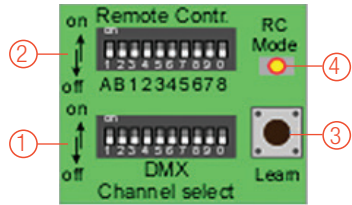


FIGURE 13

#### 4.16 PAIRING THE REMOTE TO THE SG1000™ SMOKE GENERATOR

Up to 40 remotes can be paired to one SG1000. To pair a remote control:

- With the Smoke Generator on, briefly press the **LEARN** button (ITEM 3 in the figure above) until the “RC MODE” LED (ITEM 4) flashes.
- Then briefly press any button on the remote control.
- Briefly press the **LEARN** button again, the “RC MODE” LED will go out.

#### 4.17 DELETING REMOTE PAIRING MEMORY

To un-pair a remote control with the Smoke Generator, the remote memory needs to be erased. To erase the memory:

- Press the **LEARN** button and hold it down until the RD Mode indicator light goes out. This will take approximately 10 seconds.
- Release the **LEARN** button as soon as the “RC MODE” LED goes out.
- The “RC MODE” LED then lights up for two seconds to indicate that the memory is cleared.

#### 4.18 WIRELESS REMOTE MODE SELECTION

Select the desired mode by setting the switches in the Channel Selection compartment. The switches are on when they are away from you and off when they are towards you. Changes to the switches will only take effect the next time the unit is turned on. Changing the switches while the unit is on and without restarting has no effect.

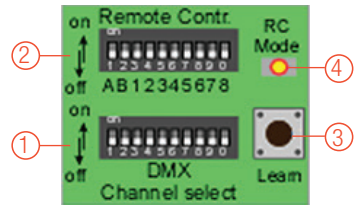


FIGURE 14

#### 4.19 GROUP MODE SELECTION

With switch “A” or “B” in the on position, the group A and/or B buttons on the remote will work.



If the “A” button is turned on, the top set of buttons will control the Smoke Generator.

If the “B” button is turned on, the bottom set of buttons will control the Smoke Generator.

## 4.20 BURST MODE SELECTION

Switches 1 through 8 can be turned on for the SG1000™ Smoke Generator to be controlled by that corresponding button on the remote.

Group Mode will override Burst Mode, so make sure you do not have a conflict when selecting the modes.

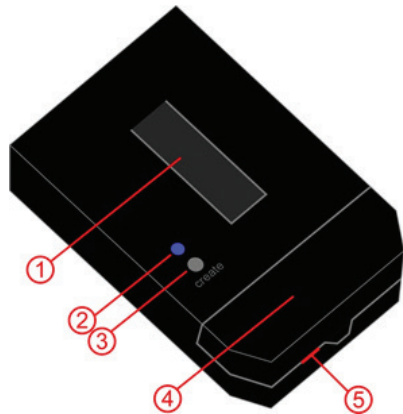


## 4.21 REPLACING THE BATTERY IN THE WIRELESS REMOTE

If the range of the wireless remote control is greatly decreased, the battery should be replaced. To replace the battery:

- Remove the battery cover (**ITEM 4** in the figure below) using a flat screwdriver in the location shown (**ITEM 5** in the figure below).
- Remove the battery (CR2032) from the holder and insert a new battery.

- 1 BELT CLIP**
- 2 BLUE INDICATOR**
- 3 CREATE BUTTON**
- 4 BATTERY COVER**
- 5 OPENING POSITION FOR BATTERY COVER**



Note the polarity of the battery. Insert the new battery with the “+” visible to the user.

## 4.22 WIRED REMOTE

With the optional wired remote control, you can operate the machine remotely. As long as the button is pressed, the machine produces smoke in the amount set using the knob next to the **CONT** button. The machine continues to smoke as long as the button is pressed. The wired remote control uses the DMX input. When using the wired remote, the DMX channel needs to be off. The DMX channel is off when the channel selection is set to 0.

## 4.23 DMX INTERFACE

The Smoke Generator can be controlled using a DMX device such as a light board. Set the desired DMX channel and connect the DMX cable(s) to the rear panel of the machine. The DMX channel can be between 1 and 512.

The value set for this channel determines how much smoke is created:

<b>DMX value</b>	<b>Result</b>
<b>0 – 38</b>	no smoke
<b>39 – 215</b>	smoke, density between 10% and 100%
<b>216 – 255</b>	smoke, maximum density



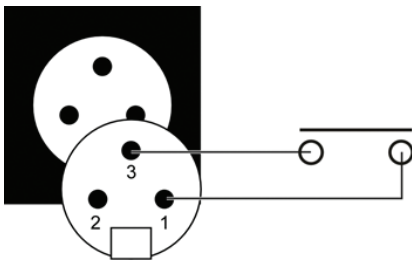
Switch positions for selection of the DMX channel

Switch	1	2	3	4	5	6	7	8	9	0
Value:	1	2	4	8	16	32	64	128	256	512
<b>Channel:</b>										
DMX OFF	0	0	0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	0	0	0	0
2	0	1	0	0	0	0	0	0	0	0
3	1	1	0	0	0	0	0	0	0	0
4	0	0	1	0	0	0	0	0	0	0
etc.										
508	0	0	1	1	1	1	1	1	1	0
509	1	0	1	1	1	1	1	1	1	0
510	0	1	1	1	1	1	1	1	1	0
511	1	1	1	1	1	1	1	1	1	0
512	0	0	0	0	0	0	0	0	0	1

#### 4.24 OTHER METHODS OF MAKING SMOKE

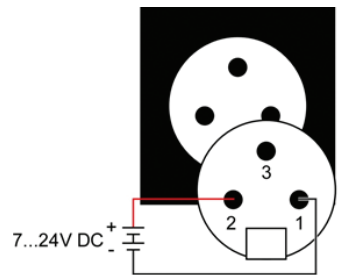
Smoke can also be triggered by shorting pins 1 and 3 together on the XLR connectors on the back of the machine as indicated in Diagram A below.

Similarly, smoke can be triggered by applying between 7 and 24VDC between pins 1 and 2 as indicated in Diagram B below.



Connector XLR 3p female

DIAGRAM – A



Connector XLR 3p female

DIAGRAM – B

#### 4.25 USING THE SG1000™ SMOKE GENERATOR WITH A BULLSEYE™ SYSTEM OR ATTACK™ SYSTEM

The SG1000 is designed to automatically communicate and work together with a BullsEye system and/or ATTACK system when in WiFi range. **The SG1000 will not automatically work with a BullsEye system with a serial number beginning with 0705.** Older BullsEye system owners will need to manually add smoke to the evolution.

When the SG1000 and BullsEye system are linked, you can create smoke manually or automatically.

#### 4.26 HOW TO LINK THE SG1000 SMOKE GENERATOR WITH A BULLSEYE SYSTEM OR ATTACK SYSTEM

1. Turn on the BullsEye/ATTACK system and the SG1000.
2. After approximately 30–60 seconds, the BullsEye/ATTACK system and SG1000 will automatically communicate with each other.
3. To confirm that they are communicating, the LED on the handle of the SG1000 will slowly blink green. Using the BullsEye/ATTACK system remote, you will be able to adjust the smoke level or trigger a smoke burst.
4. If the two are not communicating, the LED on the handle of the SG1000 will be a steady green. If you are using an iPad control, it will display “NO LINK”.

#### 4.27 WHAT TO DO IF THE SG1000 SMOKE GENERATOR WON'T COMMUNICATE WITH A BULLSEYE SYSTEM OR ATTACK SYSTEM

1. Make sure the SG1000 and BullsEye/ATTACK system are within WiFi range. To see if this is the problem, bring the SG1000 and BullsEye to the same room and restart the power on each of them. If the SG1000 links, the equipment was previously out of range.
2. If the devices don't automatically communicate when in range, contact **your distributor or LION** for assistance.

## 5. INDICATORS ON THE HANDLE AND ERROR CODES

### GREEN

Constant on	Normal mode; stand alone or wired/wireless control
Flashing slowly	WiFi is in control of smoke production
Flashing quickly	DMX is in control of smoke production

### RED

Flashing slowly	Smoke Liquid tank is empty
Flashing quickly	Battery is low

### ALTERNATING GREEN AND RED

System error (overheating or heater malfunction)	Smoke generator shuts off after 4 seconds
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## 6. SERVICE

The Smoke Generator is designed so that only minimal service needs to be performed.

### 6.1 WATER

The SG1000™ Smoke Generator is water-resistant, not watertight. Some residual moisture or incidental splashing should not cause damage, but use caution when using the generator during firefighter training sessions. Always ensure that the generator does not get wet during training operations. Do NOT cover the equipment with a tarpaulin. This may result in a hazardous situation due to built-up heat from the generator that cannot dissipate. Smoke ducting kits are available and can be used to put smoke into areas where hose lines are used.

Pay close attention to the weather when operating the equipment outside to avoid unnecessary exposure to water. The warranty does not cover damage caused by exposure to water.

### 6.2 HEATER

Contact **your distributor or LION** if you suspect the heater is broken.

### 6.3 CLEANING UP SPILLED LIQUID SMOKE

If you spill any Smoke Liquid on or near the machine, it can be cleaned with a cloth moistened with water.

### 6.4 MAIN POWER CORD

If you are experiencing problems with your power cord, contact LION for a replacement.

## 7. IMPORTANT POINTS

- The generator can be used horizontal or at an angle of up to 30°.
- Make sure that the outlet of the Smoke Generator is at least 2 feet (.6 m) away from objects.
- Do not place anything on the Smoke Generator. Make sure the ventilation slots and the outlet are free at all times.
- Never use the Smoke Generator in extreme heat.
- Do not get the Smoke Generator wet.
- Connect the power only to a grounded outlet.
- To ensure that no significant residue remains after using the Smoke Generator, you should stop generating smoke when the visibility is decreased sufficiently and ventilate the area after use.
- Do not use the Smoke Generator in areas with sensitive electronic equipment, food, or other objects that would be damaged by smoke residue.
- Use only LION brand Smoke Liquid with the SG1000™ Smoke Generator. Use of other fluids will void the warranty. Use of other smoke fluids can also be harmful to health when used in the SG1000.
- The SG1000 produces “dry smoke”. This smoke consists of aerosols, tiny droplets of liquid smoke. If the air is saturated, the smoke can condense and precipitate. When used under normal conditions and with LION Smoke Liquid, it will not leave appreciable residue behind.

### **Important considerations for clean and safe use:**

- Stop the production of smoke when the visibility is decreased in the relevant space to the desired distance.
- Do not limit visibility to less than 20 inches (51 cm), otherwise residue may be left behind.
- Ventilate the area well during and after exercise.
- If natural ventilation is not possible, use an exhaust fan.
- The smoke mixes with the surrounding air. High concentrations of smoke can significantly reduce the percentage of oxygen in the air.

## **8. WARRANTY INFORMATION**

Contact LION for information on the warranty.

## 9. CONTACT INFORMATION

### LION

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