



Stat-Gun Operating Instructions and User Guide

Static Solutions Ltd, Shawfield Road, Carlton Industrial Estate, Carlton,
Barnsley, South Yorkshire,
S71 3HS UK

Tel: +44 (0)1226 280 798 Fax: +44 (0)1226 289 374

Email: info@static-solutions.com, www.stat-gun.com

Web: www.static-solutions.com

Warning: Before operating this piece of equipment read this user guide carefully. Persons not familiar with this user guide must not use the Stat-Gun. Keep this user guide in a safe place for future reference.

The following instructions apply to equipment covered by certificate number Sira 06ATEX5186X.

1 Safety & Applicable Regulations

1.1 Safety Instructions

1.1.1 General

- The operator is responsible for the safety of both himself and other persons in the work area to work safely and comply with all safety requirements.
- Anyone using electrical equipment must have a healthy respect for all safety rules – don't take chances with your life or the lives of others.
- Never use equipment for purposes other than those for which it is intended or for any purpose not recommended by the manufacturer.
- High voltage discharges and other sources of strong electric or magnetic fields may interfere with the proper function of heart pacemakers. Personnel with heart pacemakers should obtain expert advice on the possible risks before using this equipment or being in the vicinity of the equipment during operation.
- Do not place/point the ionising nozzle near the eyes or ears while operating.
- Do not point the laser pointer beam directly at the eyes.

- Do not use attachments with the power charger other than those supplied.
- **IMPORTANT; only use the power charger within a Safe Zone environment.**
- The electrical cable should be checked regularly for damage and replaced if any damage is visible.
- There are no user serviceable parts on the Stat-Gun. Unqualified work could lead to hazardous operating conditions for the user and will void warranties.
- Should the label on the Stat-Gun be broken or removed this will void warranties.
- Do not touch the pins as they may pierce the skin and a faint vibration may cause some people discomfort when the trigger is depressed.

1.1.2 **Compressed Air Safety**

- Normal safety rules apply when connecting/disconnecting compressed air as listed.
- Wear safety glasses.
- Do not fool around with compressed air, pressurised air can damage soft tissue.
- Only use clean, dry, filtered air.

1.1.3 **Electrical Safety**

- Never immerse any part of the Stat-Gun or power charger in water or any other liquids. This product is not waterproof.

1.1.4 **Wiring**

- This product is fitted with a sealed BS1363 plug, fused at 3 amps. If the plug is unsuitable or is damaged it should be disconnected and an appropriate plug fitted. If it is necessary to replace a plug fuse, use only fuses that are approved to BS1362 rated at 3 amps. If in doubt consult a qualified electrician or contact your local Stat-Gun representative.

The wire in the mains lead are coloured in accordance with the following code

BLUE/BLACK – NEUTRAL
BROWN/RED – LIVE

If the colours of the wires in the mains lead of this device do not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured BLUE or BLACK must be connected to the terminal with the letter 'N'.

The wire that is coloured BROWN or RED must be connected to the terminal which is marked with the letter 'L'.

NEVER CONNECT EITHER OF THE WIRES TO THE BIG EARTH TERMINAL MARKED 'E' OR (EARTH SIGN) COLOURED GREEN OR GREEN AND YELLOW.

2 Product Description

2.1 Overview

The equipment comprises of a Class II laser diode with a wavelength of 400-800nm and with a maximum output <1mW, 2 x 3.7V 1000mAh Lithium Polymer cells, an ion generator, air valve with an integral combined air supply line and a dc charger unit. The mains power supply, dc charger, and the air compressor are all designed to be located outside the hazard area.

The Class II laser power rating means the system can be used without the need for special safety equipment, but as with all laser equipment, care should be taken when pointing it at objects and it should not be pointed in the eyes.

The equipment is prepared for operation by connecting a clean air supply after charging. When the trigger of the gun is operated, compressed air blows through the gun, activating the reed switch and turning on the high voltage power. Positive and negative voltage is applied to two internal corona wire pins near the outlet of the gun, creating a stream of ionised air. This stream leaves the air outlet and combines with the static charge on the target material to eliminate charge imbalances rapidly. Any particulates attracted by static electricity to the target surface are released by the neutralisation of the charge and blown away by the flow of the air to leave a contamination-free surface, ready for painting.

The design and components of the ionising gun are specified to ensure the device operates safely, and cannot generate a spark of sufficient energy to cause an explosion in a volatile or flammable

atmosphere, whilst delivering an ionising air stream in normal operation.

If physical damage occurs to the ionising gun, it may compromise the safety of the device. A service inspection is therefore vital before the device is used again in a hazardous environment.

To ensure trouble-free operation, the Stat-Gun should be stored and operated in accordance with the operating instructions provided. In particular, it should be kept free of contamination from paint and physical damage. It is recommended to return the Stat-Gun to the charger unit in a non-hazardous environment.

2.2 Electrical and Pressure Specification

Input voltage	- 115/240v, 60/50Hz selectable
Fuse rate	- 500mA (T) Anti-surge (20mm)
Output voltage	- Positive: 6.5kV maximum - Negative: 5.8kV maximum
Operating current	- <80 mA nominal
Short circuit current	- 1.2mA
Airline	- 14psi (1 bar) minimum - 140psi (9.8 bar) maximum - Clean, dry, filtered air

3 Equipment Unpacking and Checking

- 3.1 The Stat-Gun is normally delivered by a Stat-Gun trained/approved distributor.
- 3.2 In cases where the Stat-Gun has been couriered to the customer, the Stat-Gun will be supplied in one box containing the ionising gun and dc charger unit.
- 3.3 Inspect the package on arrival for evidence of damage which could have affected the product. Consult a Stat-Gun representative without delay on the action to be taken. Do not install or use a damaged product.
- 3.4 If the package is undamaged, check that the documentation and label description agrees with the advice note and notify the person responsible for the product that the equipment has arrived.

4 Installation

- 4.1 It is essential to check that the equipment supplied be used for the intended application of neutralising static electricity.
- 4.2 Normal conditions relating to the use of electrical products are assumed. The equipment must not be exposed to any abnormal conditions outlined below, unless Static Solutions has specifically agreed this in writing. Extreme or corrosive environments and cyclic thermal and mechanical conditions must be avoided.
- 4.3 The Stat-Gun must be kept clean and dry to maintain maximum efficiency of operation. Operators must take normal precautions for the safe use of mains powered equipment e.g. avoid ingress of water/liquid to the unit and ensure any electrical maintenance is only carried out by a suitably qualified person/an authorised electrician. Where flammable solvents are in use it is important to remove all possible ignition sources. Static electricity is an obvious risk but ignition can also result from contact with lighted cigarettes, non-certified electrical equipment, naked flames, and heating appliances.
- 4.4 The Stat-Gun is manufactured from Polycarbonate Lexan which is UL94V0 rated and UV stabilised, Multiflex A 1004 Z4141 thermal plastic elastomer 65 shore A which is UL94V-2 rated and UV stabilised and various other synthetic materials. The performance of these materials with respect to attack by aggressive substances that may be present in the hazardous area will be assessed and taken into account before installation.
- 4.5 Air/Gas Connection – any air or gas supply used in conjunction with this equipment and related attachments must be completely clean, filtered and dry.

5 Operating Instructions

5.1 Quick Use Guide

After the Stat-Gun has been installed (see section 4), to start using proceed as follows

- Ensure air (pressure 2–3 bar) is attached to connector.
- Move to surface to be painted and blow over 150mm-450mm above surface in regular movements as if you were spraying – same distance, same action.
- Release trigger and return to charging unit.

5.2 LED Guide



White LED – Microprocessor Access for Factory Data Transfer

Red LED – Needs to be charged

Yellow LED – Power On, currently ionising with laser on

Green LED – Charging Cycle complete

When the Stat-Gun's charge reaches its lower limit, the ionisation is automatically switched off and the red LED will flash brightly. The Stat-Gun will then need to be placed in the charger unit which is not to be sited within a Zone 1 environment and the red LED will be illuminated constantly until it is fully charged, when the green LED will then illuminate to indicate the completion of the charging cycle.

Once the Stat-Gun is fully charged it can remain on the charger unit indefinitely without damage to the integral lithium ion batteries, as the charge converts to a trickle charge once the batteries are full.

It is advised that the Stat-Gun be placed in the charger unit when not in use, and generally overnight.

If the LEDs do not light up, the batteries will be flat. Place the Stat-Gun into the charger unit until the Green LED lights up. If no LEDs light up when the Stat-Gun is placed into the charger unit ensure that the recharge connection points at the rear of the Stat-Gun are able to make contact with the charger pins within the charger unit. If the recharge connection points on the Stat-Gun are covered with paint or other contaminates, gently clean the recharge connection points by using an abrasive pad. Once the contaminate is cleaned from the surface, replace in the charger unit.

5.3 Best Paint Tips

- Use your Stat-Gun the same way as you would your spray gun, same pressure, same distance.
- If you use a tack rag, use it BEFORE you ionise and NOT at the same time.
- Ionise thoroughly, using the laser pointer to show where you have ionised, not forgetting doorjambs, swage lines etc.
- Paint immediately after ionising.

- Ionise between coats for optimum results.
- Don't touch the vehicle after you've ionised. If you do, it is ESSENTIAL you ionise again thoroughly.
- Don't hurry the process; take your time for optimum results.

5.4 Troubleshooting

- No air coming out of gun when you squeeze trigger?
 - Is air connected?
 - Is air switched on?
 - Is airline kinked?
- Particles still sticking to the surface – no ionisation
 - Check air as above
 - Check the LEDs on the top of the gun, is it charged?
- LEDs are not lit
 - Batteries could be flat, place in charger unit until green LED comes on.
 - Check the recharge connection points are not covered in contaminates, if so, gently clean with an abrasive pad.

If no solution can be found and gun will still not work, contact your local Stat-Gun agent.

5.5 Damage or Loss

If the gun or power supply are lost or damaged, call your local Stat-Gun representative, details of which will be on the power supply and/or supply paperwork.

6 Cleaning

- 6.1 Wipe the Stat-Gun and charger unit with a soft lint free cloth and a mild, non-abrasive cleaner if necessary.
- 6.2 **Do not use solvent cleaners.**
- 6.3 Do not attempt to clean inside the nozzle.
- 6.4 Never place objects or liquids of any kind through nozzle orifice.
- 6.5 Gently clean the pins of the Stat-Gun with a soft hair brush regularly in order to minimise the accumulated of material on the ionising pins.
- 6.6 Gently clean the recharge points on the Stat-Gun with an abrasive pad to remove any build up of contaminate.

7 Certification



- 7.1 The equipment may be used with flammable gases and vapours with apparatus groups 2 and with temperature class T4.




- 7.2 The equipment is only certified for use in ambient temperatures in the range -20°C to +40°C and should not be used outside this range.
- 7.3 Installation shall be carried out by suitably-trained personnel in accordance with the applicable code of practice e.g. EN 60079-14:1997.
- 7.4 Inspection and maintenance of this equipment shall be carried out by suitable trained personnel in accordance with the applicable code of practice e.g. EN 60079-17.
- 7.5 Repair of this equipment shall be carried out by suitably trained personnel in accordance with the applicable code of practice e.g. EN 60079-19.
- 7.6 The certification of this equipment relies upon the following material used in its construction:-
- Polycarbonate Lexan – V-0 rated UV stabilised
 - TPE - Multiflex A1004Z4141 - 65 Shore A V-2 Rated - UV stabilised

8 Warranty

The standard warranty is twelve months and the recommended working life (RWL) is dependent on use and maintenance.

9 Product Labels

<p>SIRA 06ATEX5186X</p> <p> II 2 G D</p> <p>EEx 0.24 mJ Ex mbe II T4 Rated Output Voltage: +6.5kV -5.8kV Rated Output Current: 20 µA IP54</p> <p> 0518</p>	<p>Clear Area for Serial Number Barcode, which includes year of construction</p> <p>STAT-GUN Static Solutions Ltd S71 3HS United Kingdom Tel: +44 (0)1226 280 798</p>
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<p> STATIC SOLUTIONS</p> <p>STAT-GUN CHARGER</p> <p>Prim. -230V AC 50Hz Sec. -9V AC</p> <p>Input Rating 100mA Charging Temp: 0°C to +40°C</p> <p>FOR USE IN NON-HAZARDOUS AREAS ONLY</p> <p> </p>	<p>Static Solutions Ltd S71 3HS United Kingdom Tel: +44 (0)1226 280 798</p> <p>Clear Area for Serial Number</p>
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10 Replacement/Return

If you have any questions relating to the Stat-Gun and/or charger unit, please contact your local Stat-Gun representative, details of which will be on the charger unit and/or supply paperwork or Static Solutions Ltd, Shawfield Road, Carlton Industrial Estate, Barnsley, South Yorkshire, S71 3HS tel: +44 (0)1226 280 798, fax: +44 (0)1226 289 374, e-mail: info@static-solutions.com, web: www.static-solutions.com

11 Maintenance and Servicing

Should the Stat-Gun fail to operate to the normal working standard please contact us. Under no circumstance should any maintenance or servicing be carried out on the Stat-Gun by the customer. Only qualified engineers at Static Solutions Ltd should maintain and service the product.



**STATIC
SOLUTIONS**

**PLEASE DO NOT LEAVE THE STAT-GUN IN THE
SPRAY BOOTH DURING THE BAKE CYCLE**

High temperatures may damage the electronics



www.stat-gun.com



1 **QUALITY ASSURANCE NOTIFICATION**

- 2 **Equipment and protective systems intended for use in
potentially explosive atmospheres Directive 94/9/EC**
- 3 Notification No. SIRA 06 ATEX M358
- 4 Equipment, protective system or components as listed in the schedule attached to this notification.
- 5 Applicant **Static Solutions Limited**
Shawfield Road
Carlton Industrial Estate
Carlton
Barnsley
South Yorkshire S71 3HS
- 6 Manufacturer As above
- 7 Sira Certification Service being a Notified Body No. 0518 for Annexes IV and VII in accordance with Article 9 of Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, notifies to the applicant that the manufacturer has a quality system which complies with the requirements of Annex VII of Directive 94/9/EC.
- 8 This notification is based upon Sira Report No. 55A/25749 issued on 04 October 2011. This notification can be withdrawn if the manufacturer no longer satisfies the requirements of Annex VII.
Results of periodical re-assessment of the quality system form part of this notification.
- 9 This notification is valid until 27 October 2012 and can be withdrawn if the manufacturer does not satisfy the quality assurance re-assessment.
- 10 According to Article 10 [1] of directive 94/9/EC the CE marking shall be followed by the identification number 0518 of Sira Certification Service as the notified body involved in the production control stage.

Date of Initial Issue: 18 October 2006
Date of Current Issue: 24 April 2012
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Certification Manager

Sira Certification Service
Rake Lane • Ecclestone • Chester CH4 9JN • UK

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QUALITY ASSURANCE NOTIFICATION

SCHEDULE

Explosion protection concepts for which the manufacturer has been assessed

- e Increased Safety
- m Encapsulation
- D Dust Ingress Protection
- b Control of Ignition Sources

Equipment categories for which the manufacturer has been assessed

Spray Guns and Ancillary Equipment

Certificates included within the scope of this Notification

As acknowledged by Sira Certification Service

Notification No: SIRA 06 ATEX M358
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