



An ITW Company

SS-50 Super Service Static Neutralizing Bars & Power Supplies

INSTALLATION AND OPERATING INSTRUCTIONS

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TABLE OF CONTENTS

1. SAFETY WARNINGS	1
2. INTRODUCTION	2
Receipt of Equipment.....	2
Return Shipments	2
3. SPECIFICATIONS	3
4. INSTALLATION	4
Grounding	4
Mounting Static Neutralizing Bars	4
Mounting Power Supplies.....	4
Installing High Voltage Cables	4
5. OPERATION	5
6. TROUBLESHOOTING	6
7. MAINTENANCE	7
8. REPLACEMENT PARTS	8
9. WARRANTY	8

1. SAFETY WARNINGS



NOTE! – Statements identified with a **NOTE** indicate precautions necessary to avoid potential equipment failure.



CAUTION! – Statements identified with a **CAUTION** indicate potential safety hazards.



NOTE! – This equipment must be correctly installed and maintained. Adhere to the following notes for safe installation and operation.

1. Read instruction manual before installing or operating equipment.
2. Only qualified service personnel are to perform installation and repairs.
3. All equipment must be properly grounded, including the machine frame to which the equipment is mounted.



CAUTION! – ELECTRICAL SHOCK HAZARD

Always disconnect power supply before connecting or disconnecting static neutralizing equipment. Avoid touching static neutralizing bar when power supply is energized.



CAUTION! – FIRE HAZARD

Do not install or operate equipment in close proximity to any flammable solvents.

2. INTRODUCTION

The SS-50 Super Service static neutralizing bar features high pin density and Teflon insulation. The high pin density, along with emitter pins being direct coupled to the power supply output provides effective static elimination even at high web speeds. The Teflon insulation allows for easy cleaning of aggressively sticky contaminants.

Receipt of Equipment

1. Carefully remove the equipment from its carton.
2. Inspect contents for damage that may have occurred during shipment. If any damage has occurred, the local carrier should be notified at once. A report should be forwarded to Simco-Ion, 2257 North Penn Road, Hatfield PA 19440, and (215) 822-6401.
3. Empty the carton to ensure that small parts are not discarded.

Return Shipments

Prior to returning goods, contact a Simco-Ion Customer Service Representative for a Return Authorization Number. This number should be included on the packing list. All correspondence should also reference the Return Authorization Number. Any item being returned should be shipped prepaid and packed to provide adequate protection.

3. SPECIFICATIONS

	SS-50
Operating Voltage	5 kV AC
Humidity	70% RH max, no dewing permissible
Dimensions	1/2"W x 19/32"H
Mounting Studs	6-32
Enclosure	Anodized Aluminum
Inner Bar Material	Teflon
Emitter Point	Stainless Steel (Type 303)

	H164	H264	H254	N164S	N264S
Input Voltage	120V	230V	230V	120V	230V
Frequency	60 Hz	60 Hz	50 Hz	60 Hz	60 Hz
Output Ports	2	2	4	4	4

4. INSTALLATION

Grounding

1. It is essential that the machine frame be grounded either through well-grounded electrical conduit or by heavy copper wire connecting the frame to a water pipe.
2. The static neutralizing bar's metal casing must be grounded to avoid operator shock and to ensure proper operation. Grounding is inherent when metal mounting clamps and support brackets are attached to the machine frame. If the static bar must be mounted from wooden or other non-conductive materials, install a wire to connect the mounting bracket of a static bar to a metal part of the grounded machine frame or a well-grounded electrical conduit or water pipe.
3. The power supply is grounded when plugged into a 3-prong electrical outlet. If a grounded outlet is not available, either bolt the power supply to a well-grounded metal machine frame or connect a heavy copper wire from the ground terminal of the power supply to a well-grounded electrical conduit or water pipe.

Mounting Static Neutralizing Bars

1. Place each static bar so that it extends across the width of the material to be neutralized.
2. The bar's ionization points must face the material to be neutralized.
3. For optimum performance, mount static bars 1/4" to 1" away from the material to be neutralized.
4. There must be a background of free air space in order for the static bar to neutralize static charges properly.
5. Static bars may be located above and/or below a web.
6. Locate static bars after the material has received its static charge. If the material is subject to ongoing friction, additional bars may be needed.
7. Use mounting brackets provided with each static bar, locating each so that no ionization points are covered.

Mounting Power Supplies

1. Mount power supplies to the machine frame (preferably away from operator contact) or to a nearby wall or post.

Installing High Voltage Cables

1. Route the high voltage cables attached to each static bar along the machine frame or wall to the power supply.
2. Cable supports are used to guide the cables back to the power supply. All cables must be kept a minimum of 1/4" away from machine frame and parts, walls and ceilings. If this is not possible, encase cables in plastic insulating tubing (available from Simco-Ion).
3. Install spring-loaded cable connectors on the free end of each cable, as described on SL instruction sheet 5200086.



NOTE! – N-type power supplies do not require spring-loaded cable connectors.

4. Ensure that the power supply is de-energized, and then remove the protective plastic plug from the power supply high voltage connection by gently prying with an insulated screwdriver.
5. Insert the cable (with spring loaded connector attached) into the power supply high voltage connection. Screw in the knurled plug to secure the cable.



NOTE! – FINGER TIGHTEN ONLY.

5. OPERATION

Before energizing any power supply:

1. Ensure that all power supplies are properly grounded.
2. Ensure that all static bars are properly grounded.
3. Ensure that all static bars have been properly located, positioned and installed.

After the above checks have been performed, simply energize each power supply to operate the static neutralizing bars.

6. TROUBLESHOOTING



NOTE! – Only qualified service personnel are to perform trouble-shooting tasks.

If equipment fails to function properly:

1. De-energize the power supply.
2. Ensure all ground connections are intact.
3. Check that all cable connections are tight.



NOTE! – FINGER TIGHTEN ONLY.

4. Energize the power supply (if equipped with an ON/OFF switch, ensure that it is in the ON position).
5. Use a Tension Voltage Detector (Simco-Ion #4050556) to verify the presence of high voltage at the ionization points. If any points are not working, check the area for metallic fragments or other contamination.
6. If none of the points are working, either the bar or the power supply is defective. To identify which is not working:
 - De-energize the power supply.
 - Disconnect all static bars from the power supply by unscrewing the knurled plugs and gently pulling out each high voltage cable.
 - Connect an insulated test wire to the power supply's ground stud.
 - Energize the power supply.
 - Slowly insert the free end of the test wire into one of the high voltage receptacles. As the insulated wire approaches the contact within the terminal, a spark should occur and arcing should be heard. If a spark occurs and arcing is heard, then the static bar is faulty. Otherwise, the power supply is faulty. If either is faulty, contact Simco-Ion Customer Service or your local Simco-Ion Representative.

7. MAINTENANCE



NOTE! – Only qualified service personnel are to perform maintenance tasks.



NOTE! – Never use hard or sharp objects to scrape ionization points.



CAUTION! – **ELECTRICAL SHOCK HAZARD**

De-energize all power supplies before performing any maintenance tasks.



CAUTION! – **FIRE HAZARD**

Never energize a power supply with any trace of alcohol remaining on the equipment.

Dust or dirt around the ionization points will reduce the effectiveness of the static bar. The ionization points must be cleaned periodically to prevent deposits from accumulating:

1. De-energize all power supplies before performing any maintenance tasks.
2. Use dry compressed air to remove loose particulate from the static bar. If it is very dirty, it may be necessary to remove the static bar from its mounting and turn it upside-down while using compressed air to clean. A soft brush with plastic bristles may be used as well.
3. Press a soft pencil eraser onto each point and gently twist to remove any buildup from the ionization points.
4. Wipe ionization points and bar insulation with isopropyl alcohol applied to a clean dry cloth to remove ink or resistant coatings. Allow alcohol to dry before re-energizing bar.



NOTE! – The alcohol must not contain additives.



NOTE! – Do not pour alcohol directly onto the bars, and do not soak the static bar or any of its components in alcohol.



CAUTION! – **FIRE HAZARD**

Ensure all traces of alcohol have been removed and the static bar is completely dry before energizing the power supply.

8. REPLACEMENT PARTS

5050252	SS-50 Bar mounting kits (contains 2 brackets and hardware)
5050002	SLCC HV Connector Kit
4800061	Plastic Insulating Tubing
4670204	Cleaning Brush
4050556	Tension Voltage Detector

9. WARRANTY

This product has been carefully tested at the factory and is warranted to be free from any defects in materials or workmanship. Simco-Ion will, under this warranty, repair or replace any equipment that proves, upon our examination, to have become defective within one year from the date of purchase.

The equipment being returned under warranty should be shipped by the purchaser to Simco-Ion, 2257 North Penn Road, Hatfield PA 19440, transportation prepaid and insured for its replacement cost. Prior to returning any goods for any reason, contact Simco-Ion Customer Service at (215) 822-6401 for a Return Authorization Number. This number must accompany all returned items.

This warranty does not apply when the equipment has been tampered with, misused, improperly installed, altered, has received damage through abuse, carelessness, accident, connected to improper line voltage, or has been serviced anyone other than an authorized factory representative.

The warranty does not apply when Simco-Ion parts and equipment have been energized by other than the appropriate Simco-Ion power supply or generator, or when a Simco-Ion power supply or generator has been used to energize other than Simco-Ion parts and equipment. Simco-Ion makes no warranty, expressed or implied, nor accepts any obligation, liabilities, or responsibility in connection with the use of this product other than the repair or replacement of parts stated herein.

Simco-Ion

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