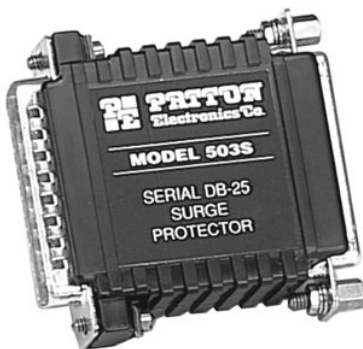


# USER MANUAL

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## MODEL 503S Serial Surge Protector



**PATTON**  
Electronics Co.



Part# 07M503S-D  
Doc# 074201U,  
Rev. E  
Revised 1/21/08

SALES OFFICE  
(301) 975-1000  
TECHNICAL SUPPORT  
(301) 975-1007  
<http://www.patton.com>

An ISO-9001  
Certified Company

## 1.0 WARRANTY INFORMATION

**Patton Electronics** warrants all Model 503S components to be free from defects, and will—at our option—repair or replace the product should it fail within one year from the first date of shipment. This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse or unauthorized modification. If this product fails or does not perform as warranted, your sole recourse shall be repair or replacement as described above. Under no condition shall **Patton Electronics** be liable for any damages incurred by the use of this product. These damages include, but are not limited to, the following: lost profits, lost savings and incidental or consequential damages arising from the use of or inability to use this product. **Patton Electronics** specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

### 1.1 RADIO AND TV INTERFERENCE

The Model 503S Series units generate and use radio frequency energy, and if not installed and used properly—that is, in strict accordance with the manufacturer's instructions—may cause interference to radio and television reception. They have been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection from such interference in a commercial installation. However, there is no guarantee that interference will not occur in a particular installation. If these products do cause interference to radio or television reception, which can be determined by turning off the unit, the user is encouraged to try to correct the interference by one or more of the following measures: moving the computing equipment away from the receiver, re-orienting the receiving antenna and/or plugging the receiving equipment into a different AC outlet (such that the computing equipment and receiver are on different branches).

### 1.2 CE NOTICE

The CE symbol on your Patton Electronics equipment indicates that it is in compliance with the Electromagnetic Compatibility (EMC) directive and the Low Voltage Directive (LVD) of the Union European (EU). A Certificate of Compliance is available by contacting Technical Support.

### 1.3 SERVICE

All warranty and non-warranty repairs must be returned freight prepaid and insured to Patton Electronics. All returns must have a Return Materials Authorization number on the outside of the shipping container. This number may be obtained from Patton Electronics Technical Support: **(301) 975-1007**; **<http://www.patton.com>**; or, **support@patton.com**.

**NOTE:** Packages received without an RMA number will not be accepted.

Patton Electronics' technical staff is also available to answer any questions that might arise concerning the installation or use of your Patton Model 503S. Technical Service hours: **8AM to 5PM EST, Monday through Friday.**

## 2.0 GENERAL INFORMATION

Thank you for your purchase of this Patton Electronics product. This product has been thoroughly inspected and tested and is warranted for One Year parts and labor. If any questions arise during installation or use of the unit, contact Patton Electronics Technical Support at (301)975-1000.

### 2.1 PRODUCT DESCRIPTION

The **Patton Model 503S** guards all pins on the DB-25 serial interface against data loss and damage due to transient surges. The Model 503S employs a solid state circuit using Silicon Avalanche Diodes, and has a combined surge handling capacity of up to 36,000 Watts (1.5kW per wire). Connecting directly between the DB-25 serial port of your hardware (PC, modem or printer) and the serial cable, the Model 503S diverts surge energy to chassis ground through pin 1 and the metal D-shell. For complete protection of your serial line, we recommend that one surge protector be used at each end of the line.

**Warning:** These products will not provide complete protection should your equipment be subject to a direct lightning hit.

### 2.2 SURGE PROTECTION BENEFITS

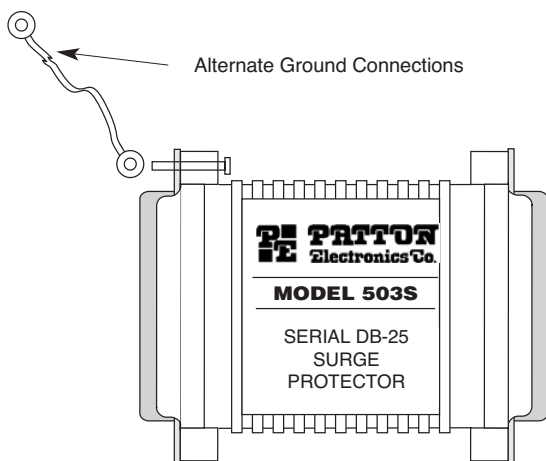
The method of surge protection used in the 503S adds four benefits to your system.

1. **High Surge Capability .** The 503S handles up to 36k Watts (1500 Watts per wire) of surge energy.
2. **Quick Response.** The 503S feature a response time of 500 nsec, with transient surges being clamped at 27 Volts.
3. **Low Impedance.** Connect the 503S directly to RS-232 ports with minimal load to your system — about the same as a gender changer.
4. **“Fail Safe” Design.** Unlike some other surge suppressors, the 503S fails short to ground should your system experience an excessive surge.

### 3.0 INSTALLATION

Patton's Model 503S is simple to install, and requires no user configuration. Follow these installation steps.

1. Turn your equipment's power switch off and disconnect the power cord from the wall outlet.
2. Unplug (disconnect) the existing connection between the serial cable and your DB-25 serial port.
3. Install the Model 503S between the serial cable and the DB-25 serial port. If the D-shell is not connected to chassis ground, use the grounding wire (included) to make an alternate frame ground connection. Proper grounding is essential to the operation of the Model 503S.



**Figure 1.** How to Connect the Patton Model DB-25 to Your PC, Modem or Printer

## APPENDIX A

### PATTON MODEL 503S SPECIFICATIONS

<b>Lines Protected:</b>	Protects 24 lines on the DB-25 serial interface
<b>Power Handling:</b>	Peak combined power handling up to 36kW; 1.5kW per wire; 10 x 1000 $\mu$ Sec in Compliance to IEC 801-5, Level 3, 2 kV
<b>Clamp Voltage:</b>	27 Volts
<b>Grounding:</b>	Surge energy diverted to chassis ground through pin 1 and metal D-shell. Alternate ground connection for Model 503P provided by external grounding wire.
<b>Capacitance:</b>	less than 500pF
<b>Cable Length Burden:</b>	less than 9.1' (2.8m)
<b>Surge Capacity:</b>	IEC 801-5, Level 3, 2kV



Dear Valued Customer,

Thank you for purchasing Patton Electronics products! We do appreciate your business. I trust that you find this user manual helpful.

We manufacture one of the widest selections of data communications products in the world including CSU/DSU's, network termination units, powered and self-powered short range modems, fiber optic modems, interface converters, baluns, electronic data switches, data-line surge protectors, multiplexers, transceivers, hubs, print servers and much more. We produce these products at our Gaithersburg, MD, USA, facility, and can custom manufacture products for your unique needs.

We would like to hear from you. Please contact us in any of the following ways to tell us how you like this product and how we can meet your product needs today and in the future.

Web:	<a href="http://www.patton.com">http://www.patton.com</a>
Sales E-mail:	<a href="mailto:sales@patton.com">sales@patton.com</a>
Support E-mail:	<a href="mailto:support@patton.com">support@patton.com</a>
Phone - Sales	(301) 975-1000
Phone - Support	(301) 975-1007
Fax:	(301) 869-9293
Mail:	Patton Electronics Company 7622 Rickenbacker Drive Gaithersburg, MD 20879 USA

We are committed to a quality product at a quality price. Patton Electronics is ISO 9001 certified. We meet and exceed the highest standards in the industry (CE, UL, etc.).

It is our business to serve you. If you are not satisfied with any aspect of this product or the service provided from Patton Electronics or its distributors, please let us know.

Thank you.

Burton A.Patton  
Vice President

P.S. Please tell us where you purchased this product:

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