

# USER MANUAL

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MODEL 592 and  
MODEL 594  
**RS-232 to RS-232**  
**Optical Isolators**



**PATTON**  
**Electronics Co.**



An ISO-9001  
Certified Company

Part# 07M592-B  
Doc# 055031UB  
Revised 5/28/98

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

## 1.0 WARRANTY INFORMATION

**Patton Electronics** warrants all Model 592/594 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 592/594 generates and uses 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. The Model 592/594 has 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 the Model 592/594 does cause interference to radio or television reception, which can be determined by disconnecting the RS-232 interface, 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 nonwarranty 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 Services at:

telephone: **(301) 975-1007**  
email: **support@patton.com**  
web address: **http://www.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 592/594. 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 or problems arise during installation or use of this product, please do not hesitate to contact Patton Electronics Technical Services at (301) 975-1007.

### 2.1 FEATURES

- Asynchronous Operation
- Full or Half-Duplex
- **Model 592** Supports Data Rates up to 19.2 kbps
- **Model 594** Supports Data Rates up to 115.2 kbps
- 2000 Vrms/ 2500 V Peak Isolation
- Powered by External AC Wall Mount Transformer
- Miniature Size
- Made in USA

### 2.2 DESCRIPTION

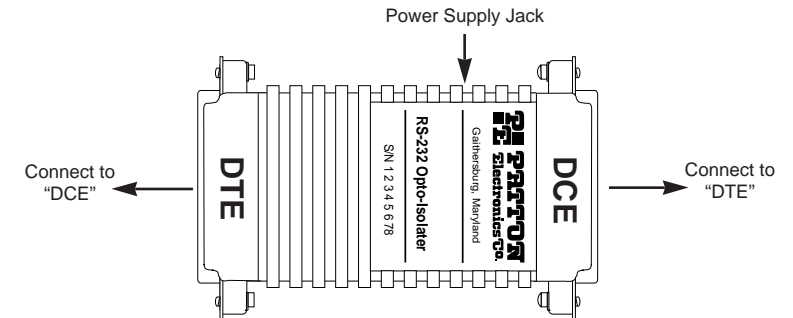
**The Patton Model 592 and 594 RS-232 to RS-232 Optical Isolators** guard your asynchronous data and equipment from the hazards of ground looping. Plugging directly into your DTE hardware, the Model 592/594 provides 2500V peak of DTE/DCE isolation. The Model 592 supports data rates to 19.2 Kbps. Model 594 supports rate up to a quick 115.2 kbps! Power is supplied by an external wall-mount AC transformer.

The Model 592/594's isolation capability not only guards your RS-232 TD and RD signals, it also protects the RTS, CD, CTS, DSR, and DTR control signals as well. The Model 592/594 is easy to install, and is transparent to flow control between connected devices -- you can run hardware *or* software control! A DB-25 female on the DCE side plugs into your DTE device and a DB-25 female on the DTE side connects by cable to your DCE device. The Model 592/594 is made in the USA.

*Warning: This product will not provide complete protection should your equipment or building be subject to a direct lightning hit.*

## 4.0 INSTALLATION

The Model 592/594 requires no configuration. It plugs directly into the DTE and connects to the DCE by a short cable. Power is supplied to the unit by a wall-mount adapter. Refer to the diagram below and follow the instructions to install the Model 592/594.



- 1) Plug the DB-25 female connector labeled "DCE" of Model 592/594 directly into the DB-25 male RS-232 port on your DTE device (PC, terminal, host, etc.). If your DTE device has a connector other than a male DB-25, or if you need greater distance from the RS-232 interface, use *straight through* cable.
- 2) Connect the DB-25 female connector labeled "DTE" on the Model 592/594 to your DCE device.
- 3) Supply power to the Model 592/594 using the wall-mount AC power supply included with the unit. The AC power supply provides 5V dc @ 300mA to the board.

<b>DTE Device Interface (DB-25 Female)</b>	<b>DCE Device Interface (DB-25 Female)</b>
TD (2) -----	(2) TD
RD (3) -----	(3) RD
RTS (4) -----	(4) RTS
CTS (5) -----	(5) CTS
DSR (6) -----	(6) DSR
CD (8) -----	(8) CD
DTR (20) -----	(20) DTR

When installed according to the instructions above, the Model 592/594 is designed to operate transparently—just set it and forget it. There is no ON/OFF switch; the unit is operational as soon as power is supplied.

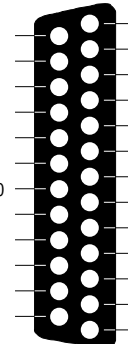
APPENDIX A

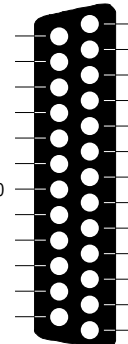
**PATTON MODEL 592/594 SPECIFICATIONS**

<b>Transmission Format:</b>	Asynchronous, full or half duplex
<b>Interface Standard:</b>	EIA RS-232-E
<b>Connectors:</b>	DB-25 female on DCE side (direct connection to DTE equipment); DB-25 female on DTE side (connects by cable to DCE equipment)
<b>Data Rates:</b>	Up to 19.2 kbps (Model 592) Up to 115.2 kbps (Model 594)
<b>Power Supply:</b>	External wall-mount transformer.
<b>Isolation:</b>	2000 Vrms/2500 V Peak Isolation
<b>Dimensions:</b>	3.8"L x 2.1"W x 0.79"H
<b>Temperature Range:</b>	0-60°C (32-140°F)
<b>Altitude:</b>	0-10,100 feet
<b>Humidity:</b>	5 to 95% noncondensing

APPENDIX B

**PATTON 592/594 INTERFACE STANDARDS**

DIRECTION	DB-25 FEMALE CONNECTOR LABELED "DCE"	DIRECTION
To Model 592/4		To Model 592/4 From Model 592/4 To Model 592/4 From Model 592/4 From Model 592/4 From Model 592/4

DIRECTION	DB-25 FEMALE CONNECTOR LABELED "DTE"	DIRECTION
From Model 592/4		From Model 592/4 To Model 592/4 From Model 592/4 To Model 592/4 To Model 592/4 To Model 592/4