

USER MANUAL

MODEL 400 Coax to Twisted Pair Adapter (BALUN)



Part# 07M400-C
Doc# 019051UC
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SALES OFFICE
(301) 975-1000
TECHNICAL SUPPORT
(301) 975-1007
<http://www.patton.com>

1.0 WARRANTY INFORMATION

Patton Electronics warrants all Model 400 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 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 Service at **(301) 975-1007**. *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 Model 400. 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 Support at (301) 975-1007.

2.1 FEATURES

- Two different formats available for coax connection:
 - BNC male or female
 - BNC male or female on 6" coax pig tail
- Seven different formats available for twisted pair connection:
 - RJ-11 jack
 - RJ-45 jack
 - Terminal block
 - RJ-11 jack/terminal block
 - RJ-45 jack/terminal block
 - Twisted pair pig-tail with RJ-11 plug
 - Twisted pair pig-tail with RJ-45 plug
- Transparent to data and protocol
- No AC power or batteries required (passive)
- Full AC or DC isolation up to 500 volts between link and data

2.2 DESCRIPTION

Use twisted pair telephone line instead of coax cable for your IBM 3270 computer system: Most IBM 3270 computer systems are connected together using coax cables with twist-type BNC connectors. These cables are fairly expensive to purchase and costly to install. On the other hand, most buildings are already wired for telephone systems, and it is quite easy to use this existing telephone wiring to connect computer equipment.

With a pair of Patton Electronics Model 400 baluns, any IBM 3270 Type A equipment can be interconnected over single-pair telephone wire at distances up to 1200 feet! This can result in significant savings!

3.0 INSTALLATION

Patton's Model 400 units are easy to install and should give you years of trouble-free service. Here are a few simple instructions to help you get things hooked up right.

- A. Since these units work in pairs—you must have one unit at each end of your twisted pair cable run.
- B. If your twisted pair cable is unterminated, follow these installation steps:
 1. Obtain a small flat head screwdriver. Insert the blade in the slot on the side of the Model 400's case. Twist gently to pop the case open.
 2. Strip about 1 inch of the outside insulation from the twisted pair cable. Strip 1/4 inch of insulation from each wire.
 3. Insert the wire ends into the screw terminals and tighten down the screws in the terminal block onto the exposed wires.
 4. Bring the wire out of the side of the case and snap the two case halves shut.
 5. Connect the Model 400s to the controller/computer and the remote peripheral.
- C. If your twisted pair cable is terminated with RJ-11 or RJ-45 plugs, follow these steps:
 1. If the twisted pair cable is terminated into plugs, check to see that the pin configuration of the twisted pair cable is not crossed from end to end. **The cable should be wired straight through.**
 2. If the Model 400s are being connected to telephone jacks by way of modular jumper cables, check to see that the polarity is not reversed as the wires pass from the Model 400s to the wall plates, and through the building's wiring network.

<u>RJ-11</u>	<u>SIGNAL</u>	<u>RJ-45</u>	<u>SIGNAL</u>
1-----	No Connection	1-----	No Connection
2-----	Ground	2-----	No Connection
3-----	TIP	3-----	Ground
4-----	RING	4-----	TIP
5-----	Ground	5-----	RING
6-----	No Connection	6-----	Ground
		7-----	No Connection
		8-----	No Connection

Note: If the distance from the Model 400 to the wall plate is greater than 12 feet, Patton Electronics recommends that the jumper cables be of 22, 24 or 26 gauge twisted pair wire, rather than flat silver cable.

3. Once all wiring is determined to be straight through, connect the Model 400s to the controller/computer and the remote peripheral.
- D. If your twisted pair cable is terminated to wall jacks, check to see that the pin connections are straight through from end to end. If so, connect the Model 400 (pig-tail version) to the controller/computer and the remote peripheral.



1 - Blue
2 - Yellow
3 - Green
4 - Red
5 - Black
6 - White



1 - Blue
2 - Orange
3 - Black
4 - Red
5 - Green
6 - Yellow
7 - Brown
8 - Slate

AT&T standard modular color codes

APPENDIX A SPECIFICATIONS

Connectors: Male or female BNC for RG62 A/U (93 ohm) coax connections; RJ-11/45 jack, terminal block, RJ-11/RJ-45 plug on 6 foot twisted pair pig-tail for twisted pair connection

Applicable Hardware: IBM 3274 Type A controller, IBM 3178, 3278 terminals (plus other "clone" equipment)

Range: 1500 feet on 22 gauge wire, 1200 feet on 24 gauge wire (lengths may vary with actual hardware used)

Transmission Protocol: Transparent to user

Data Bandwidth: 500 Kbps - 5 Mbps

Link-to-Data Isolation: 500 volts AC/DC

Operating Temperature: 32° to 130°F

Storage Temperature: 0° to 185°F

Humidity: To 95% non-condensing

Dimensions: 1.75"l x 1.0"d