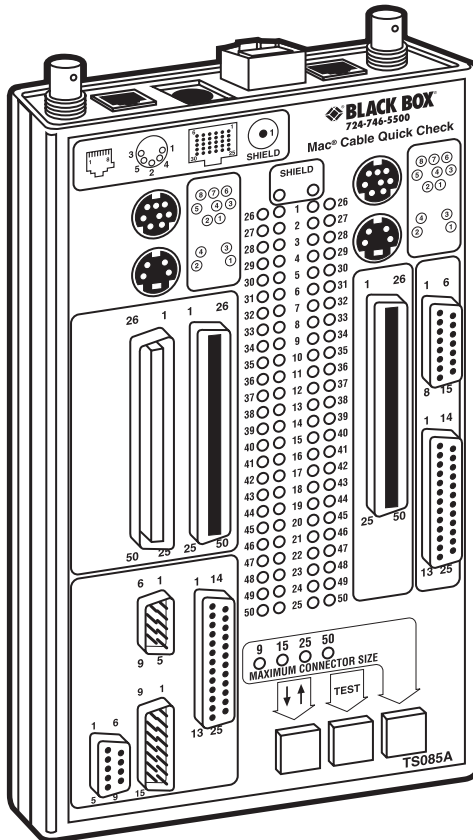




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1000 Park Drive • Lawrence, PA 15055-1018 • 724-746-5500 • Fax 724-746-0746


Mac® Cable Quick Check



**CUSTOMER
SUPPORT
INFORMATION**

Order toll-free in the U.S.: Call **877-877-BBOX** (outside U.S. call **724-746-5500**)
 FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
 Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
 Web site: www.blackbox.com • E-mail: info@blackbox.com

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NORMAS OFICIALES MEXICANAS (NOM) ELECTRICAL SAFETY STATEMENT

INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

1. Specifications

| | |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compliance — | CE |
| Interfaces — | Many Mac interfaces—see the illustration and sample pinouts in Chapter 2 |
| Output Signal — | 8 VDC at 10 mA |
| Maximum Cable Length — | 50-ohm cables: 1000 ft. (304.8 m); 75-ohm cables: 600 ft. (182.9 m) |
| User Controls — | (1) Bottom-mounted ON/OFF slide switch; (3) Front-mounted pushbuttons: Cable selection, test, and reverse |
| Indicators — | (106) Front-mounted LEDs: (100) Wire continuity; (2) Shield continuity; (4) Maximum connector size |
| Connectors — | (6) Top-mounted: (2) BNC female (accept RG58 and RG59 coaxial cables); (2) Hybrid RJ-11/RJ-45 female (accepts cables with either connector type); (1) 5-pin DIN female; (1) HDI-30 female; (13) Front-mounted: (2) 4-pin mini-DIN female; (2) 8-pin mini-DIN female; (2) DB9: (1) male, (1) female; (2) DB15: (1) male, (1) female; (2) DB25 female; (2) 50-pin Centronics female; (1) 50-pin Centronics male; |
| Temperature Tolerance — | 32 to 122°F (0 to 50°C) |
| Humidity Tolerance — | Up to 90% noncondensing |

| | |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power — | From (1) 9-VDC battery (included) |
| Size — | Height: 8.75" (22.2 cm); BNC connectors protrude an additional 0.5" (1.3 cm) from the top of the unit; Width: 5.5" (14 cm); Depth: 1.5" (3.8 cm); some connectors protrude an additional 0.4" (1 cm) from the front of the unit, and the rubber feet protrude an additional 0.4" (1 cm) from the rear of the unit; These dimensions assume that the unit is being held in the hand with its LEDs facing you; if the unit is resting on its rubber feet on a flat surface, substitute height for depth and vice versa |
| Weight — | 1.5 lb. (0.7 kg) |

2. Operation

The Mac® Cable Quick Check is a quick, simple, all-in-one pinning and continuity tester for almost all of the cables you might use with your legacy Apple® equipment, including those cables with DB9, DB15, DB25, 50-pin Centronics®, 4- or 8-pin mini-DIN, 5-pin DIN, HDI-30, BNC, RJ-11, or RJ-45 connectors. In fact, the Quick Check can be used to test almost *any* cable with these connectors! **Section 2.1** describes how to connect your cables and get the Quick Check working. **Section 2.2** identifies each of the Quick Check's connectors and controls. **Section 2.3** is a list of the pinouts and correspondingly lit LEDs you might observe for various cables.

CAUTION!

The Mac Cable Quick Check should *never* be attached to a live electrical circuit. Doing so will damage it.

2.1 Getting Started and Connecting Cables

1. Find the Mac Cable Quick Check's battery compartment and ON/OFF switch. If you hold the Quick Check with its LEDs facing you, its battery compartment is in the rear and its ON/OFF switch is on the bottom. If you place the Quick Check with its feet resting on a flat surface, its battery compartment is on the bottom and its ON/OFF switch is in front.
Remove the cover of the battery compartment; it should contain an unattached standard 9-volt battery. Attach the battery to the Quick Check's power terminals. Test the battery by briefly turning the Quick Check ON; the left-hand "SHIELD" LED and the "MAXIMUM CONNECTOR SIZE" LED labeled "9" should both light.
2. Attach one end of the cable you want to test to one of the "green" connectors (the connectors on the left-hand side of the unit, including those in the solid-green-colored area). The pins/wires at this end of the cable will be represented by the left-hand set of numbered LEDs; the Quick Check will transmit its test signal into this end of the cable.
Attach the other end of the cable to one of the "orange" connectors (the connectors on the right-hand side of the unit, including those in the solid-orange-colored area). The pins/wires at this end of the cable will be represented by the right-hand set of numbered LEDs; the Quick Check will receive its test signal back from this end of the cable.
Note that the connectors at the top end of the unit are divided this way too: The 5-pin DIN, HDI-30, and *left-hand* RJ and BNC connectors are "green" connectors, while the *right-hand* RJ and BNC are "orange" connectors.
Also be aware that non-EMI/RFI-compliant ribbon cables with *plastic-shelled* rather than *metal-shelled* D-subminiature connectors can't be physically attached to the Quick Check (and shouldn't be used anyway).

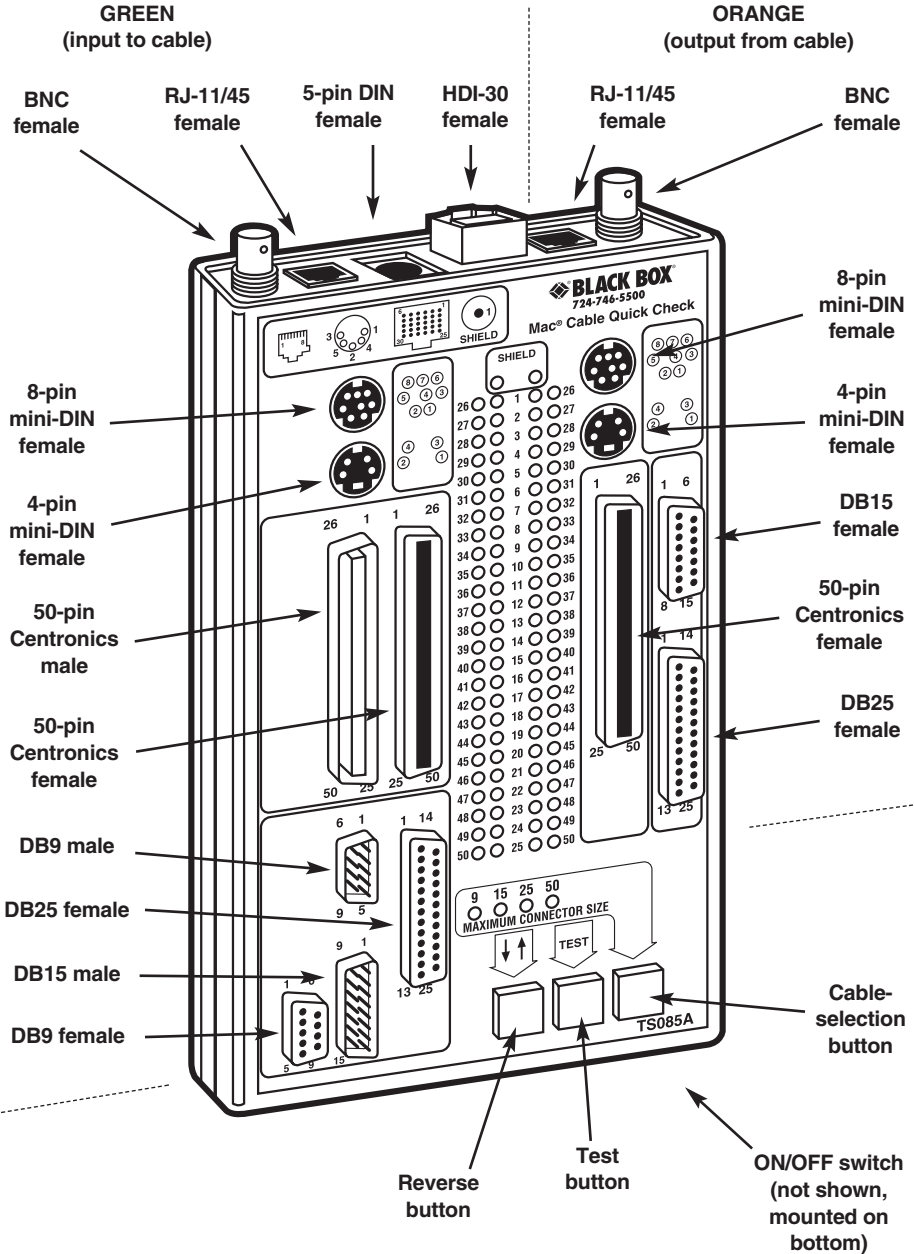
3. If the Quick Check isn't already ON, turn it ON. As mentioned in step 1, the left-hand "SHIELD" LED and the "MAXIMUM CONNECTOR SIZE" LED labeled "9" should both light; if the cable is shielded and the shield is continuous from end-to-end, *both* of the "SHIELD" LEDs will light.
4. Press the cable-selection button (the one with the orange arrow labeled "MAXIMUM CONNECTOR SIZE" pointing to it) to cycle through the maximum connector sizes (in terms of number of pins) until you reach a number equal to or larger than the number of pins in the most highly populated connector on your cable. For example, if you're testing an Imagewriter® cable that has an 8-pin mini-DIN on one end and a DB25 connector on the other, push "MAXIMUM CONNECTOR SIZE" until you reach "25" (the number of pins in the cable's DB25 connector).
5. Press the "TEST" button repeatedly. The Quick Check will begin injecting signals into first the shield and then each of the pins of the "green" end of the cable, one pin at a time, starting with Pin 1 and moving to the next pin each time you press "TEST," until you stop or reverse the test or you reach the highest-numbered pin for your cable selection ("MAXIMUM CONNECTOR SIZE"): Pin 9 for "9," Pin 15 for "15," and so on. (If the cable you're testing doesn't actually have that many pins, obviously the test on the "extra" pins won't be meaningful.)

As you test each of these pins, the corresponding left-hand numbered LED will light, and if a wire/short/jumper connection exists between that pin and one or more pins on the "orange" end of the cable, the right-hand numbered LED(s) for the pin(s) on the "orange" end will light. If no LEDs light on the right-hand side at the same time an LED lights on the left-hand side, either no wire connection exists between the "green" pin and anything on the "orange" end, or the wire connection has been broken.

Note that, in order to save battery life, the LEDs will go dark a few seconds after you stop pressing the "TEST" button. To continue the test from where you stopped, just resume pressing "TEST."

At any time, you can reverse the test (move it backward through the pins from higher-numbered to lower) by holding down the "reverse" button (the one marked with the opposing arrows) while you press "TEST."
6. Compare the patterns of LEDs that light with the correct pinning for that cable. Some sample pinouts and LED patterns are shown in **Section 2.3** (but don't use these as the definitive reference for your cable).
7. When you finish testing, turn the Quick Check OFF.

2.2 The Quick Check Illustrated: Controls and Connectors



2.3 Pinouts for Some Apple Cables

Here are sample pinouts and LED patterns for several cables that you can test with the Mac Cable Quick Check, shown horizontally rather than vertically to save space. In these pinouts, “S” stands for “shield” and unused pins aren’t shown.

NOTES

These pinouts should be regarded as *examples only*. They are *not* guaranteed to be accurate and should *not* be the only reference used to determine whether a cable is good or bad. Also, keep in mind that pinouts might vary from cable to cable depending on the manufacturer and application.

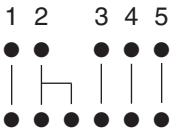
This list of pinouts is also *not* comprehensive. Even if a cable isn’t listed here, you should be able to test it with the Quick Check if the Quick Check supports its connectors.

If you’re unsure of what the pinning should be for a given cable, consult with the cable’s manufacturer and/or a standard reference for that type of cable.

2.3.1 APPLE IIC CABLES

Apple IIC to Imagewriter II serial printers —
5-pin DIN male to 8-pin mini-DIN male

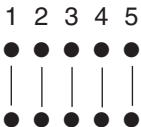
5-PIN DIN M (green)



8-PIN MINI-DIN M (orange)

Apple IIC to Hayes® compatible modems and similar serial peripherals —
5-pin DIN male to DB25 male

5-PIN DIN M (green)



DB25 M (orange)

MAC® CABLE QUICK CHECK

Apple IIc and Laser 128 series to parallel printers/peripherals— DB25 male to DB25 male

Wired straight-through (shield to shield, Pin 1 to Pin 1, etc.), so LEDs should light one-for-one for shield and Pins 1 through 25.

2.3.2 MACINTOSH 128/512K SERIAL CABLES

Macintosh® 128/512K to Imagewriter I serial printers — DB9 male to DB25 male

DB9 M (green)

S 1 3 5 7 9

● ● ● ● ●

| | | | |

● ● ● ● ●

S 1 7 3 20 2

DB25 M (orange)

Macintosh 128/512K to modems and Imagewriter II serial printers — DB9 male to 8-pin mini-DIN male

DB9 M (green)

S 3 4 5 6 8 9

● ● ● ● ● ● ●

| | | | | | |

● ● ● ● ● ● ●

S 4 8 5 2 6 3

8-PIN MINI-DIN M (orange)

2.3.3 MACINTOSH AND MACINTOSH POWERBOOK (PRE G3™)

2.3.3.A Keyboard and Mouse

Apple Desktop Bus™ (ADB™) cable — 4-pin mini-DIN male to 4-pin mini-DIN male
 Wired straight-through (shield to shield, Pin 1 to Pin 1, etc.), so LEDs should light one-for-one for shield and Pins 1 through 4.

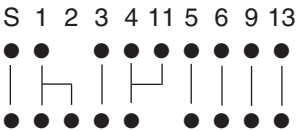
2.3.3.B Video

Macintosh video-extension cable — DB15 male to DB15 male

Wired straight-through (shield to shield, Pin 1 to Pin 1, etc.), so LEDs should light one-for-one for shield and Pins 1 through 15.

Macintosh to Mitsubishi® DiamondScan® monitor — DB15 male to DB25 male

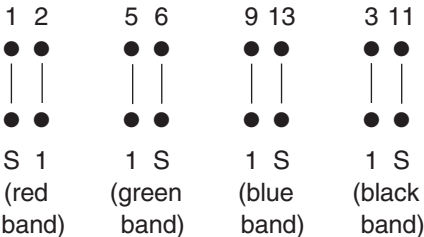
DB15 M (orange)



DB25 M (green)

Macintosh to RGBS monitor — DB15 male to four BNC male

DB15 M (orange)

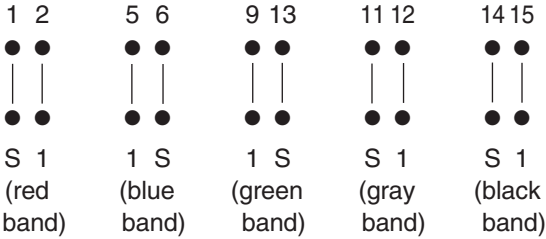


(4) BNC M (green)

MAC® CABLE QUICK CHECK

Macintosh to RGBHV monitor — DB15 male to five BNC male

DB15 M (orange)

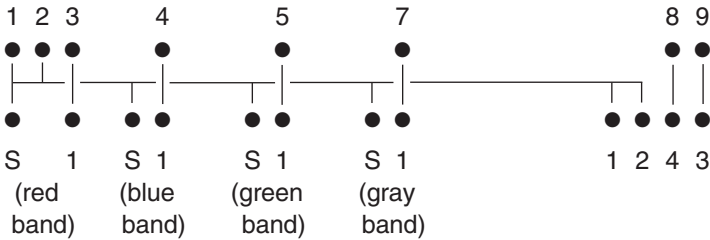


(5) BNC M (green)

Nuvista® Targa video applications —

DB9 male to four BNC male and 4-pin mini-DIN male

DB9 M (orange)



(4) BNC M (green)

and 4-PIN MINI-DIN M (green)

2.3.3.C Serial

Macintosh to Imagewriter I serial printers — 8-pin mini-DIN male to DB25 male

Can be tested either green to orange or orange to green.

8-PIN MINI-DIN M

S 2 3 4 8 5



S 20 3 7 2

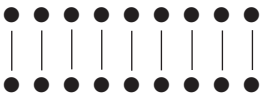
DB25 M

Macintosh to Imagewriter II, Laserwriter® II, Stylewriter®, HP® Deskwriter®, and other serial printers/peripherals — 8-pin mini-DIN male to 8-pin mini-DIN male

Can be tested either green to orange or orange to green.

8-PIN MINI-DIN M

S 1 2 3 4 5 6 7 8



S 2 1 5 4 3 8 7 6

8-PIN MINI-DIN M

Macintosh to IBM® compatible PC (null-modem cable) — 8-pin mini-DIN male to DB9 female

8-PIN MINI-DIN M (orange)

S 1 2 3 4 8 5



S 6 8 1 4 2 5 3

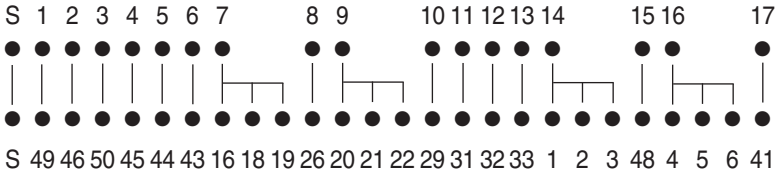
DB9 F (green)

2.3.3.D SCSI

Macintosh to SCSI-1 disk drives and/or other peripherals— DB25 male to 50-pin Centronics male

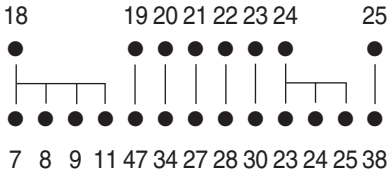
Can be tested either green to orange or orange to green.

DB25 M



50-PIN CENTRONICS M

DB25 M, continued



50-PIN CENTRONICS M, continued

SCSI-1 bus cable — 50-pin Centronics male to 50-pin Centronics male

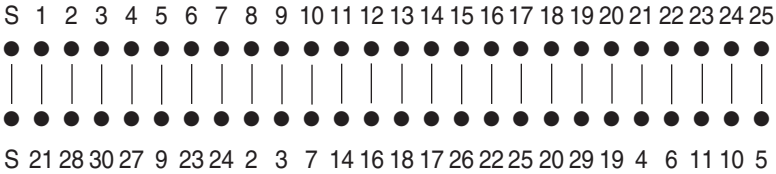
Largely wired straight-through (shield to shield, Pin 1 to Pin 1, etc.), so most LEDs should light one-for-one. *However:*

(a) Pins 9 and 10 are tied together on both ends. So when *either* Pin 9 or Pin 10 on the green end is tested, *both* Pin 9 and Pin 10 will light on the orange end.

(b) Pins 10, 13 through 15, 17, 35 through 37, 39, 40, and 42 are not used.

**Macintosh to Macintosh PowerBook for SCSI Mode transfers —
DB25 male to HDI-30 male**

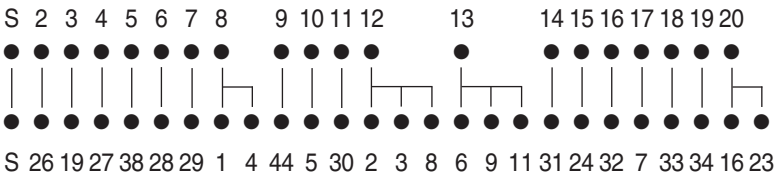
DB25 M (orange)



HDI-30 M (green)

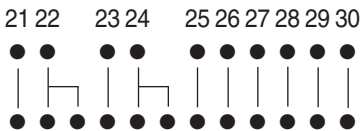
**Macintosh PowerBook to SCSI-1 disk drives and/or other peripherals —
HDI-30 male to 50-pin Centronics male**

HDI-30 M (green)



50-PIN CENTRONICS M (orange)

HDI-30 M (orange), continued



16 23 49 21 22 43 18 25 41 48 45 46 47 50

50-PIN CENTRONICS M (green), continued

3. Troubleshooting

3.1 Calling Black Box

If you determine that your Mac Cable Quick Check is malfunctioning, *do not attempt to alter or repair the unit*. It contains no user-serviceable parts. Contact Black Box Technical Support at 724-746-5500.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem;
- when the problem occurs;
- the cables (and any other components) involved in the problem; and
- any particular situation that appears to create the problem or make it worse.

3.2 Shipping and Packaging

If you need to transport or ship your Mac Cable Quick Check:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the Quick Check for repair or return, make sure you include everything you received with it. Before you ship, contact Black Box to get a Return Authorization (RA) number.