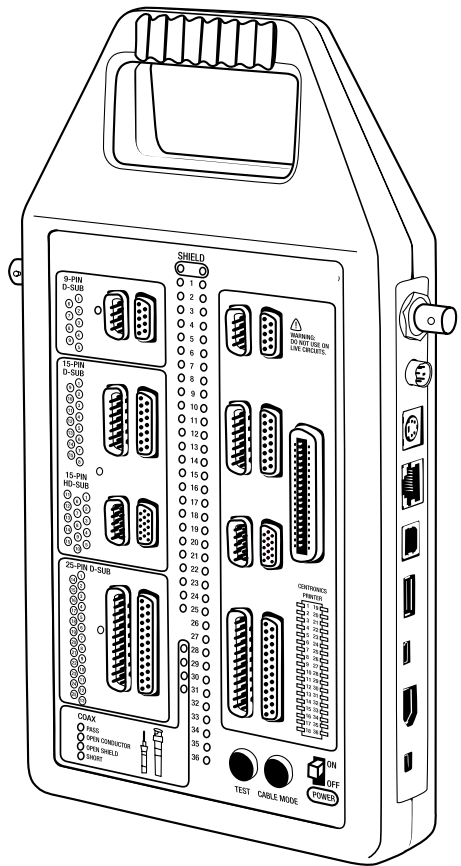# PC Cable Quick Check Pro

1. Specifications

User Controls: (1) Test button, (1) Cable Mode button, (1) Power ON/OFF switch

Connectors: (2) BNC coax, (2) 6-pin mini-DIN female, (2) 4-pin mini-DIN female, (2) RJ-45, (2) 4-pin USB Type B, (2) 4-pin USB Type A, (2) 5-pin mini USB, (2) 6-pin FireWire®, (2) 4-pin FireWire, (2) DB9 male, (2) DB9 female, (2) DB15 male, (2) DB15 female, (2) HD15 male, (2) HD15 female, (2) DB25 male, (2) DB25 female, (1) Centronics®

Indicators: (168) LEDs: (1) Power, (2) Shield, (72) Centronics pins 1–36, (50) DB25 pins 1–25, (9) DB9 male pins 1–9, (15) DB15 pins 1–15, (15) HD15 pins 1–15, (4) Coax: Pass, Open Conductor, Open Shield, Short

Size: 11.8" H x 6.4" W x 11.5" D (30 x 16.3 x 29.2 cm)

Weight: 1.8 lb. (0.8 kg)

2. Overview

2.1 Introduction

The PC Cable Quick Check Pro checks continuity and wiring configuration for DB9, DB15, DB15 HD, DB25, Centronics, 6-pin mini-DIN PS/2®, 4-pin mini-DIN S-Video, 4- and 6-pin 1394 FireWire, USB, Mini USB, RJ-11, RJ-12, and shielded and unshielded RJ-45 telephone cables up to 50 feet (15.2 m) long.

2.2 What's Included

Your package should include the following items. If anything is missing or damaged, contact Black Box at 724-746-5500.

- PC Cable Quick Check Pro

- 9-volt battery

- This users' manual

2.3 The PC Cable Quick Check Pro Illustrated

The PC Cable Quick Check Pro (see Figure 2-1) has several connectors on its left and right sides. Each side contains a BNC coax, a 6-pin mini-DIN female, a 4-pin mini-DIN female, an RJ-45, a 4-pin USB Type B, a 4-pin USB Type A, a 5-pin mini USB, a 6-pin FireWire, and a 4-pin FireWire connector. The tester's front panel contains pairs of serial connectors, including DB9, DB15, HD15, and DB25, plus one Centronics connector. Attach each end of the cable you want to test to both sides of the tester, or to both matching connectors on the front panel. It accurately tests cables up to 50 feet (15.2 m) long.

NOTE
The RJ-45 connectors also test RJ-11 and RJ-12 cables.

The tester also has 168 LEDs, a Test button, a Cable Mode button, and a Power ON/OFF switch.
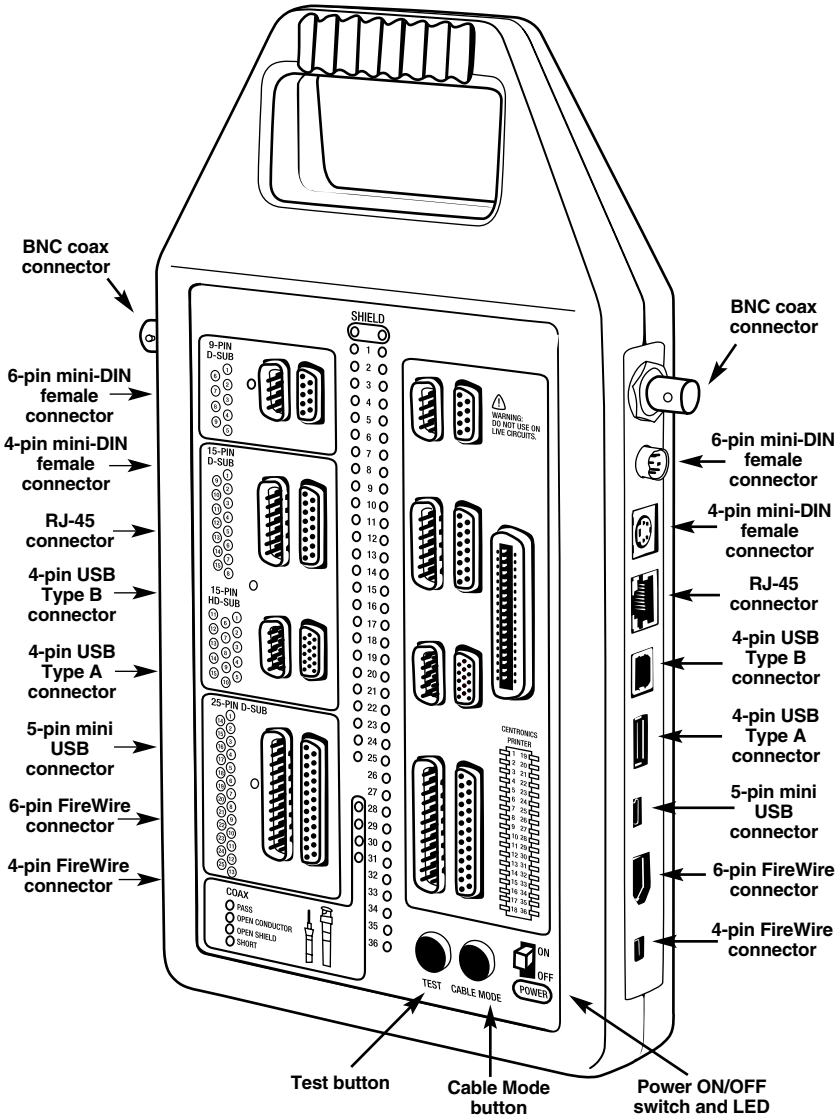
Figure 2-1. Identifying the PC Cable Quick Check Pro's connectors.

NOTE

The tester has matching connectors on its left and right sides. In the illustration above, only the connectors on the right side are shown. The tester also has matching serial connectors (but only one Centronics conector) on its front panel and LEDs for each connector's pins.

3. Operation

1. Make sure the 9-volt battery is installed and the switch is ON. (The battery compartment is located on the back of the tester.) When replacing the battery, use only a standard 9-volt.

2. Connect the cable you want to test to the corresponding connectors on the tester's left- and right-hand sides or front panel.

3. Press the Cable Mode button repeatedly until the red LED next to the chosen connector indicates that the proper connector size is selected.

4. To begin testing, press the Test button and hold it for 5 seconds. If you prefer to use the tester manually, simply step through the testing process by pressing Test for each pin.

NOTE
The tester automatically powers off after 30 seconds of non-use.

5. The cable configuration is required to confirm the wiring configuration. Standard cable applications and wiring configurations are listed in **Chapters 5** and **6**, or you can consult your manufacturer's manual.

6. If you have a custom cable and need to determine the scheme, use a "known good cable" and record the pinout for your reference.

4. Cable Configuration

NOTE

Cable configurations are provided for sample reference only. Contact the cable manufacturer for specific configuration schemes.

Cable Applications	HD15 M	HD15 F	DB9 M	DB9 F	DB15 M	DB15 F	DB25 M	DB25 F	Centronics	RJ-45 UTP & STP	USB	6-Pin Mini-DIN	4-Pin Mini-DIN
Cable for IBM® AT® to HP® LaserJet® and most HP plotters; Version 1							X	X					
Cable for IBM AT to HP LaserJet and most HP plotters; Version 2				X			X						
Cable for IBM XT™ and PS/2 serial port to HP LaserJet Plus, II, III, 7475A, and most plotters except HP 7550 (IBM PCs and compatible)							X	X					
RS-232 null-modem cable		ANY COMBINATION					X	X					
Two different configurations for IBM printer cable used with IBM XT/AT, PS/2, and compatible to standard parallel printers (IBM PCs and compatible)							X		X				
IBM AT and compatible to modem cables				X			X						
Null-modem cable				X			X						
Star Micronics® DP8340 to IBM AT cable				X						X			
Star Micronics DP8340 to Wyse® terminal cable							X			X			

Cable Applications	HD15 M	HD15 F	DB9 M	DB9 F	DB15 M	DB15 F	DB25 M	DB25 F	Centronics	RJ-45 UTP & STP	USB	6-Pin Mini-DIN	4-Pin Mini-DIN
Star Micronics SP312 to IBM AT cable							X	X					
VGA (PS/2) monitor cable for use with data switches; this cable is used for connecting computers with VGA cards to video data switches; pin #9 is removed	X X												
PS/2												X	
S-Video													X
Star Micronics SP312 printer cable, SP312 to Wyse terminal cable							X X						
Star Micronics SP312 to IBM AT printer cable				X			X						
IBM PS/2 and VGA cards NEC Multisync monitor cable; connects the IBM PS/2 or other VGA cards to NEC Multisync monitors (IBM PCs and compatible)	X		X										
IBM PS/2 and VGA card to Sony® 1302 monitor cable; connects the IBM PS/2 or other VGA cards to the Sony 1302 and 1303 monitors	X		X										

Cable Applications	HD15 M	HD15 F	DB9 M	DB9 F	DB15 M	DB15 F	DB25 M	DB25 F	Centronics	RJ-45 UTP & STP	USB	6-Pin Mini-DIN	4-Pin Mini-DIN
Connects IBM PS/2 and VGA cards to Mitsubishi® Diamond Scan® and Thompson Ultrascan monitor	X						X						
Extension cable for standard XT, AT, monitors			X	X									
Standard monitor cable (IBM PCs and compatible)			X X										
Extension cable for VGA/IBM, PS/2 monitors	X	X											
Cable for connecting parallel ports on two computers							X X						
LAN data cables										X X			
USB cables												X	
FireWire													X

5. Wiring Configuration Reference

Table 5-1. Cable for IBM AT to HP LaserJet printers and most HP plotters.

DB25 Male Connector Pin	DB25 Female Connector Pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	not connected
15	not connected
16	not connected
17	not connected
18	not connected
19	20
20	not connected
21	22
22	not connected
23	not connected
24	not connected
25	not connected

Table 5-2. Cable for IBM XT and PS/2 serial port to HP LaserJet, Plus, II, III, 7475A, and most plotters except HP 7550. (Includes most IBM PCs and compatibles with 286, 386, 486, Pentium®, or Celeron processors.)

DB25 Male Connector Pin	DB25 Female Connector Pin
1	8
4	6
2	3
3	2
5	20
6	20
7	7
8	4
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	not connected
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
20	5
21	not connected
22	not connected
23	not connected
24	not connected
25	not connected

*Table 5-3. RS-232 null-modem cable.

DB25 Male/Female Connector Pin	DB25 Male/Female Connector Pin
1	1
2	3
3	2
4	┐
5	│
6	│
8	┘
7	7
8	4
9	not connected
10	not connected
11	12
12	11
13	not connected
14	not connected
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
20	not connected
21	not connected
22	not connected
23	not connected
24	not connected
25	not connected

Table 5-4. Configuration #1 for IBM printer cable with IBM XT, AT, PS/2, and compatibles to standard parallel printers. (Includes most IBM PCs and compatibles with 286, 386, 486, Pentium, or Celeron processors.)

DB25 Male Connector Pin	Centronics Connector Pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	32
16	31
17	36
18	33
19	16
20	17
21	19
22	20
23	21
24	22
25	23
	24
	25
	26
	27
	28
	29
	30

*NOTE: For Table 5-3, since connectors are the same at both ends of the RS-232 null-modem cable, make sure the cable is not reversed.

Table 5-5. Configuration #2 for IBM printer cable with IBM XT, AT, PS/2, and compatibles to standard parallel printers. (Includes most IBM PCs and compatibles with 286, 386, 486, Pentium, or Celeron processors.)

DB25 Male Connector Pin	Centronics Connector Pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	32
16	31
17	36
18	33
19	19
20	21
21	23
22	25
23	27
24	29
25	30
	26
	27
	28
	29
	30
	31
	32
	33
	34
	35
	36

Table 5-6. IBM AT and compatibles to modem cables.

DB25 Male Connector Pin	DB9 Female Connector Pin
1	not connected
2	3
3	2
4	7
5	8
6	6
7	5
8	1
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	not connected
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
20	4
21	not connected
22	9
23	not connected
24	not connected
25	not connected

Table 5-7. Null-modem cable.

DB25 Male Connector Pin	DB9 Female Connector Pin
1	not connected
2	2
3	3
4	
5	
6	
8	
20	
7	5
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	not connected
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
21	not connected
22	not connected
23	not connected
24	not connected
25	not connected

Table 5-8. IBM AT and compatibles to modem cables.

DB9 Female Connector Pin	RJ-45 Connector Pin
1	7
2	4
3	2
4	3
5	6
6	1
7	5
8	8
9	not connected

Table 5-9. VGA (PS/2) monitor cable for use with data switches.

HD15 Male Connector Pin	HD15 Male Connector Pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	not connected
10	10
11	11
12	12
13	13
14	14
15	15

NOTE

This cable is used for connecting computers with VGA cards to video data switches. Pin #9 is removed. Since connectors are the same at both ends of the cable, make sure the cable is not reversed. (Includes most IBM PCs and compatible regardless of processor: 286, 386, 486, Pentium, or Celeron.)

Table 5-10. Star Micronics SP312 printer cable, SP312 to Wyse terminal.

DB25 Male Connector Pin	DB25 Male Connector Pin
1	1
2	2
3	3
4	not connected
5	20
6	4
7	7
8	14
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	not connected
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
20	not connected
21	not connected
22	not connected
23	not connected
24	not connected
25	not connected

NOTE

Since connectors are the same at both ends of the cable, make sure the cable is not reversed.

Table 5-11. Star Micronics SP312 to IBM AT printer cable.

DB25 Male Connector Pin	DB9 Female Connector Pin
1	Shield
2	2
3	3
4	6
5	not connected
6	not connected
7	5
8	not connected
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	1
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
20	8
21	not connected
22	not connected
23	not connected
24	not connected
25	not connected

Table 5-12. IBM PS/2 and VGA cards NEC Multisync monitor cable. Connects the IBM PS/2 or other VGA cards to NEC Multisync monitors.

HD15 Male Connector Pin	DB9 Male Connector Pin
1	1
2	2
3	3
4	not connected
5	not connected
6	6
7	7
8	8
9	not connected
10	9
11	9
12	not connected
13	4
14	5
15	not connected

Table 5-13. IBM PS/2 and VGA cards Sony 1302 monitor cable, connects the IBM PS/2 or other VGA cards to Sony 1302 and 1303 monitors.

HD15 Male Connector Pin	DB9 Male Connector Pin
1	3
2	4
3	5
4	not connected
5	not connected
6	1
7	1
8	1
9	not connected
10	1
11	not connected
12	not connected
13	8
14	9
15	not connected

Table 5-14. IBM PS/2 and VGA cards to Mitsubishi Diamond Scan and Thompson Ultrascan monitor.

DB25 Male Connector Pin	HD15 Male Connector Pin
1	not connected
2	not connected
3	not connected
4	not connected
5	not connected
6	not connected
7	not connected
8	not connected
9	not connected
10	not connected
11	1
12	2
13	3
14	not connected
15	5
16	6
17	7
18	8
19	not connected
20	10
21	11
22	not connected
23	13
24	14
25	not connected

Table 5-15. Extension cable for standard XT, AT monitors. (Includes most IBM PCs and compatibles with 286, 386, 486, Pentium, or Celeron processors.)

DB9 Male Connector Pin	DB9 Female Connector Pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Table 5-16. Standard monitor cable. (Includes most IBM PCs and compatible regardless of processor: 286, 386, 486, Pentium, or Celeron.)

DB9 Male Connector Pin	DB9 Male Connector Pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Table 5-17. Extension cable for VGA/IBM PS/2 monitors.

HD15 Male Connector Pin	HD15 Female Connector Pin
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	not connected
10	10
11	11
12	12
13	13
14	14
15	15

Table 5-18. Cable for connecting parallel ports on two computers.

DB25 Male Connector Pin	DB25 Male Connector Pin
1	1
2	15
3	13
4	12
5	10
6	11
7	7
8	not connected
9	not connected
10	5
11	6
12	4
13	3
14	14
15	2
16	16
17	17
18	not connected
19	not connected
20	not connected
21	not connected
22	not connected
23	not connected
24	not connected
25	25

Table 5-19. Star Micronics DP 8340 to Wyse terminal cable.

DB25 Male Connector Pin	RJ-45 Connector Pin
1	2
2	3
3	4
4	not connected
5	8
6	5
7	7
8	6
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	not connected
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
20	not connected
21	not connected
22	not connected
23	not connected
24	not connected
25	not connected

Table 5-20. Star Micronics SP312 to IBM AT cable.

DB25 Male Connector Pin	DB25 Female Connector Pin
1	1
2	3
3	2
4	6
5	not connected
6	not connected
7	7
8	not connected
9	not connected
10	not connected
11	not connected
12	not connected
13	not connected
14	8
15	not connected
16	not connected
17	not connected
18	not connected
19	not connected
20	5
21	not connected
22	not connected
23	not connected
24	not connected
25	not connected

Table 5-21. 10BASE-T/100BASE-T crossover cable.

RJ-45 Connector Pin	RJ-45 Connector Pin
3	1
6	2
1	3
4	4
5	5
2	6
7	7
8	8
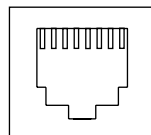
Figure 5-1. RJ-45 connector.

Table 5-22. Systimax SCS Category 5 data cables (UTP).

RJ-45 Connector Pin   RJ-45 Connector Pin

```
1----------------------------------------------------------1
2----------------------------------------------------------2
3----------------------------------------------------------3
4----------------------------------------------------------4
5----------------------------------------------------------5
6----------------------------------------------------------6
7----------------------------------------------------------7
8----------------------------------------------------------8
```

Table 5-23. 10BASE-T data cables (UTP).

RJ-45 Connector Pin   RJ-45 Connector Pin

```
1----------------------------------------------------------1
2----------------------------------------------------------2
3----------------------------------------------------------3
6----------------------------------------------------------6
```

NOTE

Pins 4, 5, 7, and 8 are not connected.

Table 5-24. Token Ring data cables (UTP).

RJ-45 Connector Pin   RJ-45 Connector Pin

```
3----------------------------------------------------------3
4----------------------------------------------------------4
5----------------------------------------------------------5
6----------------------------------------------------------6
```

NOTE

Pins 1, 2, 7, and 8 are not connected.

Table 5-25. ISDN data cables (UTP).

RJ-45 Connector Pin   RJ-45 Connector Pin

```
1----------------------------------------------------------1
2----------------------------------------------------------2
7----------------------------------------------------------7
8----------------------------------------------------------8
```

NOTE

Pins 3, 4, 5, and 6 are not connected.

Table 5-26. 4-pin telephone cable.

RJ-11 Connector Pin   RJ-11 Connector Pin

```
3----------------------------------------------------------3
4----------------------------------------------------------4
5----------------------------------------------------------5
6----------------------------------------------------------6
```

NOTE

Pins 1, 2, 7, and 8 are not connected.

Table 5-27. 2-pin telephone cable.

RJ-11 Connector Pin	RJ-11 Connector Pin
4---4	
5---5	

NOTE
Pins 1, 2, 3, 6, 7, and 8 are not connected.

Table 5-28. Standard USB cable.

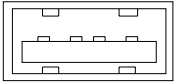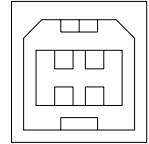| USB Type A Connector Pin	USB Type B Connector Pin
1---1	
2---2	
3---3	
4---4	

Figure 5-2. USB Type A connector.

Figure 5-3. USB Type B connector.

Table 5-29. Serial bus cable.

USB Type A Connector Pin	USB Type A Connector Pin
4---4	
3---3	
2---2	
1---1	
Shield--Shield	

Table 5-30. USB polarized cable.

USB Type B Connector Pin	USB Type B Connector Pin
1---1	
2---2	
3---3	
4---4	
Shield--Shield	

Table 5-31. Serial bus cable.

USB Type A Connector Pin	Mini USB Type B Connector Pin
1---1	
2---2	
3---3	
4---4	
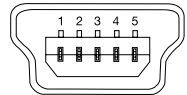
Figure 5-4. Mini USB Type B connector.

Table 5-32. S-Video cable.

4-pin mini-DIN Connector Pin	4-pin mini-DIN Connector Pin
1---1	
2---2	
3---3	
4---4	

Figure 5-5. 4-pin mini-DIN connector.

Table 5-33. PS/2 mouse extension cable.

6-pin mini-DIN Connector Pin	6-pin mini-DIN Connector Pin
Shield--Shield	
1--1	
2--2	
3--3	
4--4	
5--5	
6--6	

Figure 5-6. 6-pin mini-DIN connector.

Table 5-34. FireWire cable.

1394 FireWire 4-Pin Connector Pin	1394 FireWire 4-Pin Connector Pin
Shield--Shield	
1--1	
2--2	
3--3	
4--4	

Figure 5-7. 1394 FireWire 4-pin connector.

Table 5-35. FireWire cable Type 1.

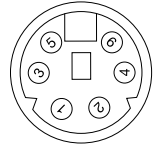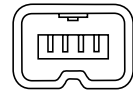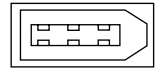| 1394 FireWire 6-Pin Connector Pin	1394 FireWire 4-Pin Connector Pin
1--3	
2--4	
3--5	
4--6	
not connected ---1	
not connected ---2	

Figure 5-8. 1394 FireWire 6-pin connector.

Table 5-36. FireWire cable Type 2.

1394 FireWire 6-Pin Connector Pin	1394 FireWire 4-Pin Connector Pin
Shield--2	
3--3	
4--4	
1--5	
2--6	
not connected ---1	

Table 5-37. FireWire cable.

1394 FireWire 6-Pin Connector Pin	1394 FireWire 6-Pin Connector Pin
Shield--Shield	
1--1	
2--2	
3--3	
4--4	
5--5	
6--6	

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