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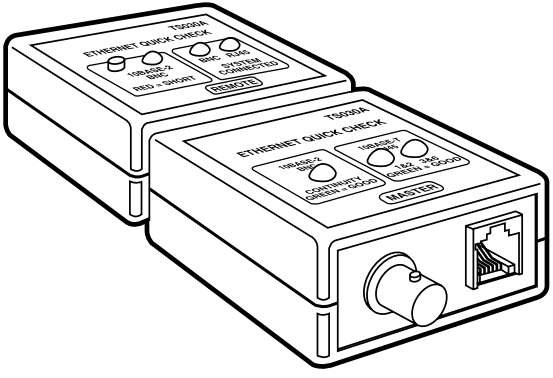
BLACK BOX®
NETWORK SERVICES

SEPTEMBER 1995
TS030A

Ethernet 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**

Thank you for purchasing the TS030A Ethernet Quick Check Tester. Your tester is guaranteed to be of the highest workmanship and free from detects. To keep your tester working properly for years to come, please keep this information in mind during use. 1) This model is intended for testing passive cabling only. Connecting this tester to lines where voltage is present may damage the unit and void the warranty. 2) Using short patch cords or socket savers during testing is recommended, as this will limit the wear on the tester's connectors. Failure due to excessive jack wear is not covered under warranty.

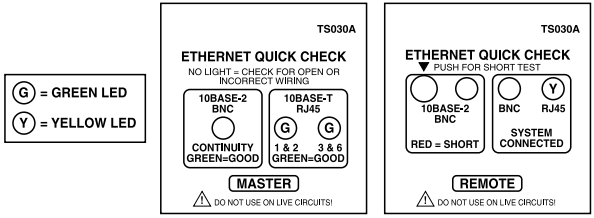
WARNING!

This tester is not intended to be used on live lines. Connecting to live lines may result in damage to the tester and will void any warranty.

General Instructions: The Ethernet Quick Check is intended for verifying the continuity of two-pair unshielded twisted pair (UTP) with RJ45 connectors and coaxial cabling with BNC connectors. In testing UTP cabling, the unit will verify the continuity of the 1,2 - 3,6 pairs used in 10Base-T systems. Near-end crosstalk (NEXT) or full split pairs will not be properly identified with this unit. In coaxial testing, the unit will verify if a thin Ethernet bus contains shorts or opens. The tester can also be utilized for testing coaxial or UTP patch cords as well as premise wiring.

10Base-T Patch Cord Test: Keeping the remote and master sections locked together, insert each end of 8-position (RJ45) patch cord into the two RJ45 jacks. The yellow LED labeled “RJ45” on the remote unit should light indicating that a cable is connected. Next, observe the two green LEDs on the master unit labeled “10Base-T.” If both of these LEDs are green the 1,2 - 3,6 pairs are connected and the patch cord will work in an Ethernet 10Base-T environment. If either of the two LEDs does not light green, the patch cord failed the test and should be discarded.

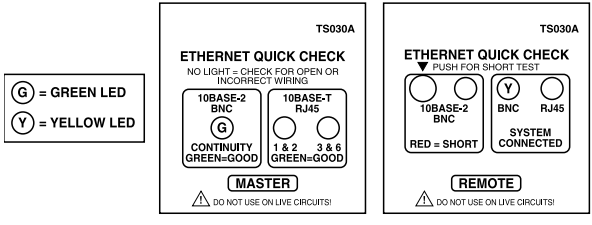
10BASE-T (UTP) Test—Passing Indications



10Base-T Premise Wiring Test: Obtain two 10Base-T patch cords and verify that they are good by following the above instructions. Next, detach master and remote units from each other; they will be used separately for this test. Take the remote unit and plug one end of the first patch cord into the modular jack. Go to the wiring closet or central wiring point and insert the other end of the patch cord into the patch panel port of the cable run to be verified. Take the master unit to the opposite end of the cable run to be verified (example: modular wall plate at an office drop). Plug one end of the patch cord into the master unit jack and the other into the wall plate. Observe the lights on the master unit. If the two green lights labeled “10Base-T” are lit, then the 1,2 - 3,6 pairs are properly connected and Ethernet 10Base-T can run on that line.

10Base-2 Coaxial Patch Cord Test: Insert each end of the coaxial patch cord to master and remote BNC connectors respectively. The yellow LED labeled "BNC" on the remote unit should light indicating that a cable is connected. Next observe the green LED on the master unit labeled "10Base-2". If this LED lights green, the patch cord is good. If this LED does not light, there is either a short or an open in the cable. Press the button on the remote unit and look for a red light signifying a shorted cable. If the red LED does not light, the coaxial cable is open.

10BASE-2 (Coaxial) Test—Passing Indications



10Base-2 Coaxial Bus Test: Disconnect all "T" adaptors from network interface cards, leaving the coaxial bus intact but disconnected from active computers. Go to the first end of the bus and remove the terminator. Connect the Ethernet Quick Check remote unit to this end of the bus. Proceed to the other end of the bus and remove the terminator. Connect the master unit and observe the green LED labeled "10Base-2." If this LED lights green, the bus is intact with no shorts or opens. If the LED does not light, proceed to midpoint of the bus with the master unit and plug it into the "T" adaptor. Continue this process narrowing the bus down to the problem section. Note that a failed bus could be due to defective BNC connectors, "T" adaptors, or coaxial cables.

Battery Installation and Troubleshooting: If the tester is not operating properly, the battery is most likely in need of replacement. Remove the two screws on the bottom of the remote unit. Pull top cover of tester off, trying to keep the slide lock, circuit board, and metal plate intact with the case bottom. Remove the 9V battery and replace (alkaline batteries are recommended for best performance). Reinstall case top and screws. Test performance of the tester by verifying known good patch cords. If the unit still does not operate properly, contact your supplier for assistance.

Modular Jack Pin and Pair Assignments

Handset
USOC 4

RJ-11
USOC 4

RJ-12
USOC 4 (Prs. 1 & 2)
USOC 6 (Prs. 1, 2 & 3)

RJ-45
USOC 8

RJ-45
EIA/TIA-568A

RJ-45
EIA/TIA-568B
AT&T 258A

RJ-45
Ethernet
10BASE-T

RJ-45
8-position
Token Ring

RJ-45
TP-PMD