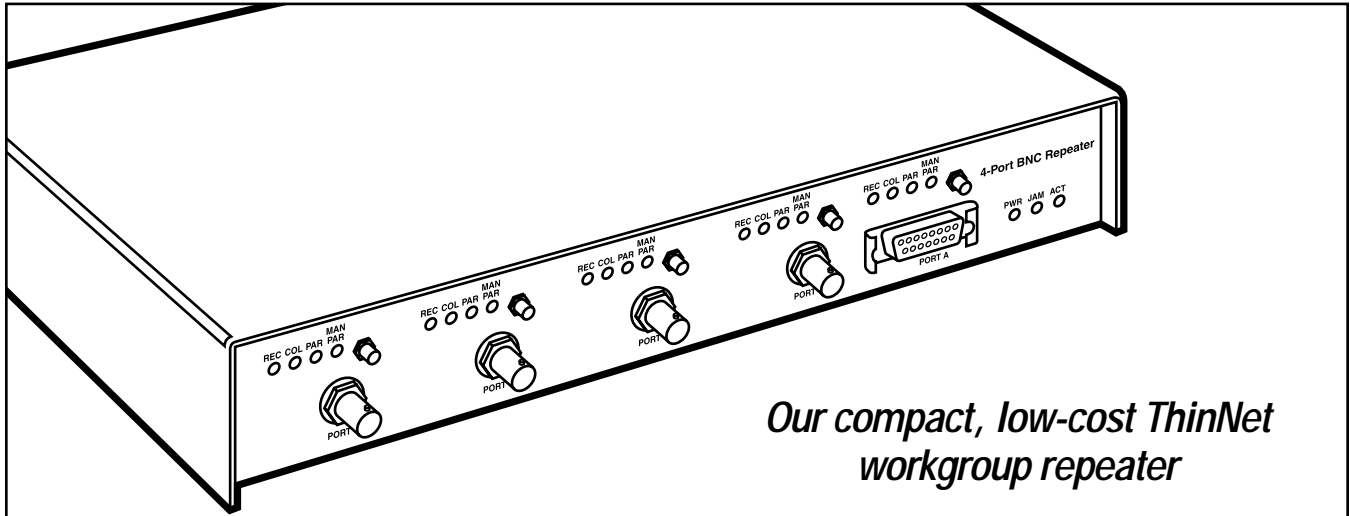# BLACK BOX®
NETWORK SERVICES

4-PORT BNC REPEATER

Our compact, low-cost ThinNet workgroup repeater

Key Features

▶ **Ethernet/IEEE 802.3, 10BASE2, and 10BASE5 compliant.**

▶ **Connects Thicknet and ThinNet segments on one unit.**

▶ **Manual partition switch on each BNC port for easy network repair.**

▶ **Provides internal network-management monitoring.**

▶ **Ensures packet integrity across the network.**

▶ **Internal autosensing power supply.**

The 4-Port BNC Repeater is a compact, low-cost 4-port ThinNet repeater that is fully compliant with Ethernet/IEEE 802.3 standards. The small size of this repeater makes it well-suited for PC workgroups.

All of the unit's ports are functionally equivalent and can be used for the direct connection of the devices with Ethernet interfaces.

Each BNC port has a manual partition switch above it. This switch is particularly useful when you want to troubleshoot partitions of your network. For instance, you can attach a segment of cable to the repeater and test it—without disrupting segments already attached to other BNC ports and on-line. You can also bring segments up on your network without taking your entire network down.

(*NOTE:* T-connectors and terminators are required for each port segment.)

The per-port LED display indicates activity and partition status for individual segment monitoring.

The AUI port, a standard DB15 connector located to the right of the BNC ports, offers additional interfacing capability. You can attach four complete BNC segments via the BNC ports and use the AUI port to attach the repeater to an external transceiver. Accompanying LEDs indicate activity of a DCE device on this port plus the enabling of automatic partitioning.

The BNC Repeater's internal network-monitoring functions constantly monitor each port for signal quality. These functions will automatically disconnect a device that produces excessive collisions or noise. When the error condition is cleared, the device is automatically reconnected.

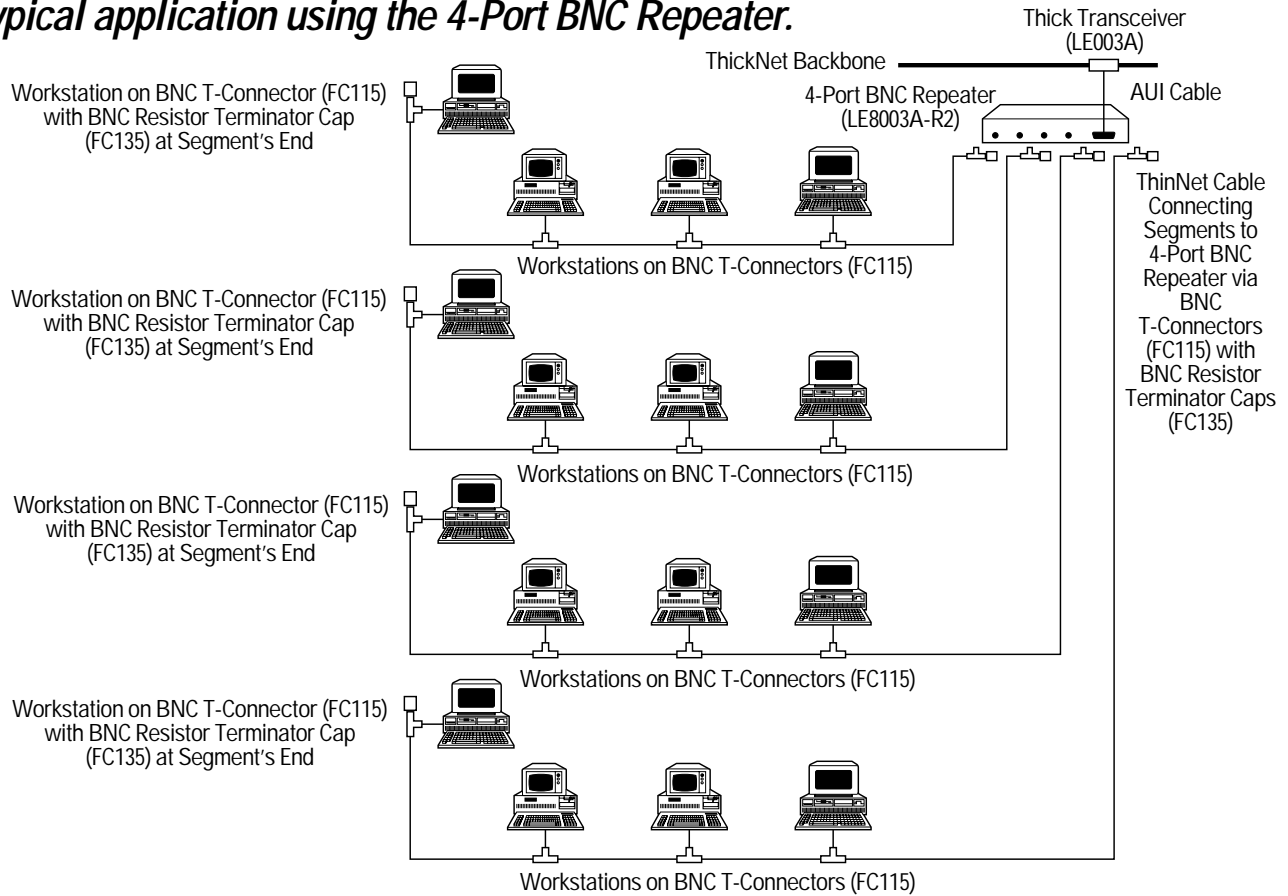The integrity and signal quality of the connected segments are also actively monitored internally.

Whenever a collision is detected on a port, the repeater generates a 96-bit jam packet, which is subsequently transmitted to all other ports on the segment.

The repeater completely retimes and restores the full-amplitude wave form for each retransmitted packet. A full-length preamble is also generated. This ensures packet integrity across the total network.

Packets that exceed the maximum legal length for Ethernet/IEEE 802.3 packets are automatically truncated. This prevents a device from blocking the network by transmitting a continuous data stream or extra-long packet.

The 4-Port BNC Repeater's compact size and low power consumption enable the unit to be installed in a normal office environment. It's self-configuring, and no installation tools are required.

A typical application using the 4-Port BNC Repeater.

Workstation on BNC T-Connector (FC115)
with BNC Resistor Terminator Cap
(FC135) at Segment's End

Thick Transceiver
(LE003A)

ThickNet Backbone

4-Port BNC Repeater
(LE8003A-R2)

AUI Cable

ThinNet Cable
Connecting
Segments to
4-Port BNC
Repeater via
BNC
T-Connectors
(FC115) with
BNC Resistor
Terminator Caps
(FC135)

Workstations on BNC T-Connectors (FC115)

Workstation on BNC T-Connector (FC115)
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Workstations on BNC T-Connectors (FC115)

Specifications

Maximum Segment:
ThinNet (BNC): 185 m;
AUI cable: 50 m;
Thicknet backbone: 500 m

Connectors:
ThinNet (BNC):
(4) BNC receptacles for use
with RG58 ThinNet cable;
Thicknet (AUI): (1) DB15 female
connector with slide latch

Indicators: (1) Power, (5) Collision,
(5) Activity, (5) Partition,
(5) Manual Partition

Approvals: UL®, cUL, CE, VCCI, FCC
Class A

MTBF: 156,258 hours

Temperature Tolerance:
Operating: 0 to 50°C;
Storage: -20 to +70°F

Humidity Tolerance: 5 to 90%,
noncondensing

Power: 20 watts maximum,
90–250 VAC, 50–60 Hz

Size: 4.3 x 17 x 22.6 cm

Weight: 2.3 kg

Black Box offers the best warranty program in the
industry—Fido Protection®. For more information,
request **FaxBack 22512**.

▼ Ordering Information

ITEM	CODE
4-Port BNC Repeater	LE8003A-R2

For each BNC port segment (*), you'll need…

BNC T-Connector (Jack-Plug-Jack, F-M-F)	
Single	FC115
10-Pack	FC115-10PAK
BNC Resistor Terminator Cap, RG58 Cap, 50-Ohm	
Single	FC135
10-Pack	FC135-10PAK

(*NOTE: Segment must be terminated at both the port and its end.)

For optimum performance, order…

ThinNet Cable (NEC CL2 & CL2P)

PVC	
3-m	LCN300-0010
6.1-m	LCN300-0020
Custom Lengths	LCN300

*NOTE: Other lengths and dual-ThinNet versions
available. For ordering information, call Tech Support.*