



D-Link[®]

**Ethernet Transceivers
Models DE-851, DE-853
DE-854
User's Guide**

One Year Warranty

Thank-you for purchasing a D-Link DE-851/DE-853/DE-854 Ethernet Transceiver (hereafter referred to as the Product). When purchased from D-Link Systems Inc. or an authorized D-Link reseller (hereafter referred to as D-Link), the Product is covered by a one year warranty as described herein.

D-Link warrants that the Product will be free from defects in material and workmanship under normal use for a period of one (1) year from the date of delivery to you. Should the Product not operate as warranted during the applicable warranty period, D-Link shall correct any such defect by repairing or replacing the defective Product.

The repaired product or replacement item will be covered by a ninety-day warranty or by the remainder of the warranty period, whichever is longer.

The Product may be returned to D-Link only if it has a Return Material Authorization (RMA) number. The Product must be shipped prepaid, insured, and in the original shipping package or similar package for safe shipment. The RMA number must be marked on the outside of the shipping package. Any Product returned without an RMA number shall be rejected.

Warranties Exclusive

If the D-Link Product does not operate as warranted above, the customer's sole remedy shall be, at D-Link's option, repair or replacement. The foregoing warranties and remedies are exclusive and are in lieu of all other warranties, expressed or implied, either in fact or by operation of law, statutory or otherwise, including warranties of merchantability and fitness for a particular purpose. D-Link neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale, installation maintenance or use of D-Link's products.

D-Link shall not be liable under this warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by the customer's or any third person's misuse, neglect, improper installation or testing, unauthorized attempts to repair, or any other cause beyond the range of the intended use, or by accident, fire, lightning or other hazard.

Limitation of Liability

In no event will D-Link be liable for any damages, including loss of data, loss of profits, cost of cover or other incidental, consequential or indirect damages arising out the installation, maintenance, use, performance, failure or interruption of a D-Link product, however caused and on any theory of liability. This limitation will apply even if D-Link has been advised of the possibility of such damage.

If you purchased a D-Link product in the United States, some states do not allow the limitation or exclusion of liability for incidental or consequential damages, so the above limitation may not apply to you.

D-Link[®]

Ethernet Transceivers

Models DE-851, DE-853, DE-854

User's Guide

Document No. M-DE85X-1

P/N:6DE85X....02

Printed in Taiwan

Trademarks

Copyright © D-Link Corporation/D-Link Systems Inc.

Contents subject to revision without prior notice.

D-Link is a registered trademark of D-Link Corporation/D-Link Systems Inc.

All other trademarks belong to their owners.

Copyright Statement

No part of this publication may be reproduced in any form or by any means or used to make any derivative (such as translation, transformation or adaptation) without permission from the D-Link Corporation, as stipulated by the United States Copyright Act of 1976.

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Table of Contents

Introduction	1
Description of Transceivers	1
Identifying Components	2
DE-851	3
DE-853	3
DE-854	4
Status Indicators	5
DE-851	6
DE-853	7
DE-854	8
SQE Setting	9
Connections	9
DE-851	9
DE-853	10
DE-854	11
Example Connections	12
Specifications	14
DE-851	14
DE-853	14
DE-854	15

Ethernet Transceiver *Installation Guide*

Introduction

This guide provides basic information for installing and using D-Link's line of Ethernet transceivers, models DE-851, DE-853 and DE-854.

Description of Transceivers

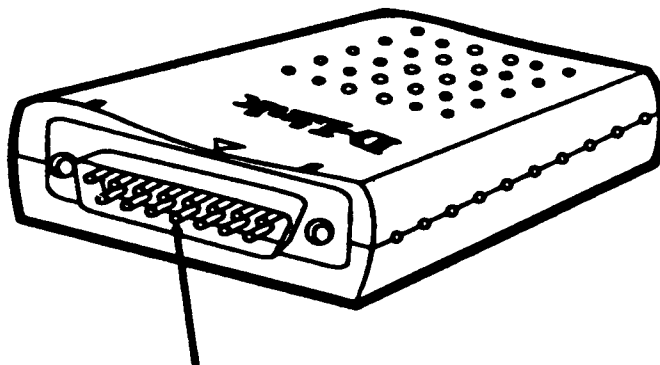
Each transceiver has one Attachment Unit Interface (AUI) connector for connecting to a host and another connector (different for each transceiver model) for linking the host device to the network. The connectors supported by the transceivers are listed in the following table:

Transceiver Model	Connectors		Type of Network
DE-851	AUI	BNC	10BASE2
DE-853	AUI	RJ-45	10BASE-T
DE-854	AUI	FOIRL	10BASE-F

Identifying Components

Refer to the diagrams and explanations in this section to identify all the external physical components of the transceivers.

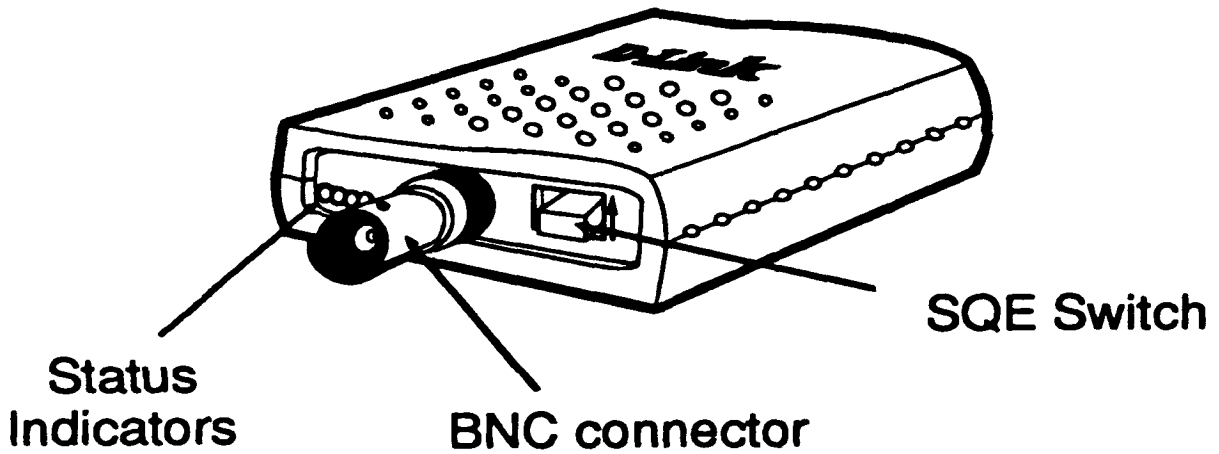
The following diagram shows the AUI connector which is common on all transceiver models.



AUI connector -- common on all transceiver models

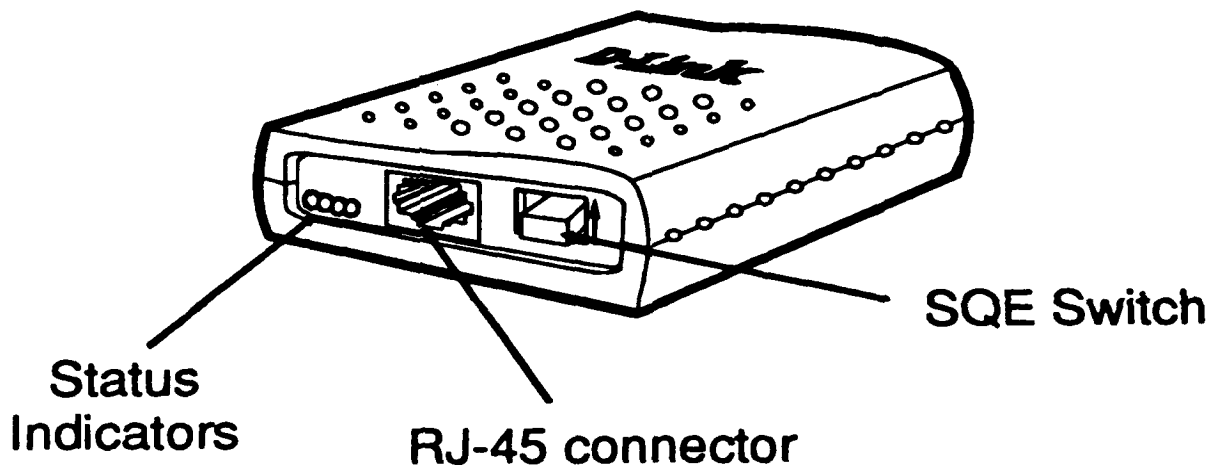
Model-specific diagrams that identify the models' particular connectors are shown in the following sub-sections.

DE-851

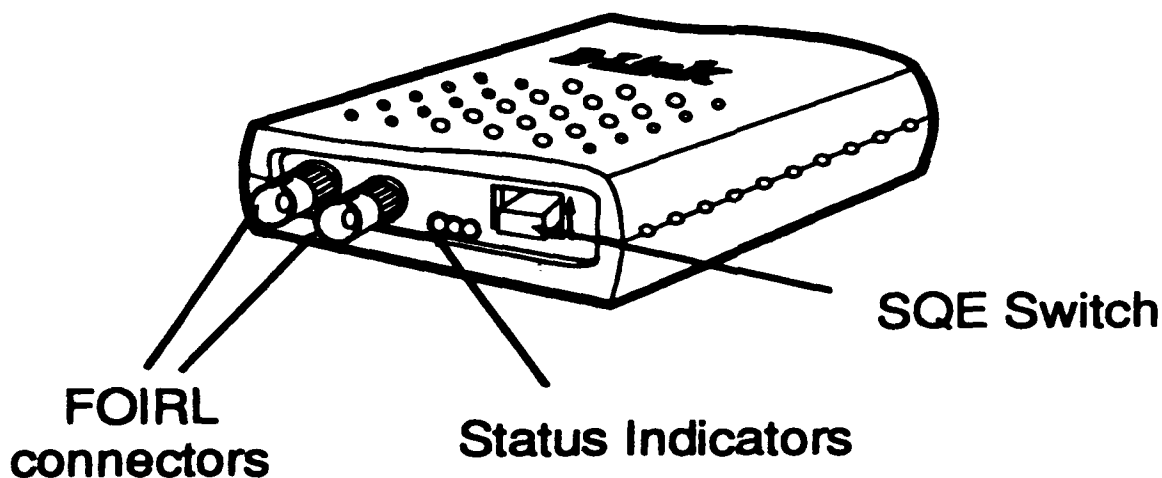


1. **BNC connector:** this connector exists only on model DE-851.
2. **Status Indicators:** refer to the section "Status Indicators" in this manual for details.
3. **SQE switch:** refer to the section "SQE Settings" in this manual for information on this switch.

DE-853



1. **RJ-45 connector:** this connector exists only on model DE-853.
2. **Status Indicators:** refer to the section "Status Indicators" in this manual for details.
3. **SQE switch:** refer to the section "SQE Settings" in this manual for information on this switch.

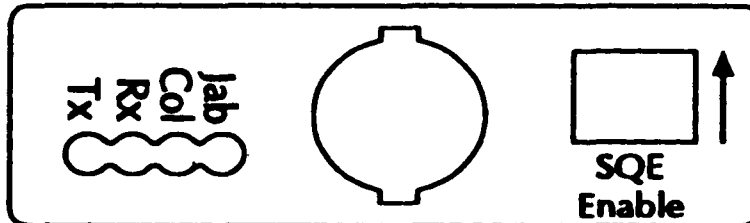
DE-854

1. **FOIRL connectors:** these connectors exist only on model DE-854. The two connectors act as a single unit, one connector for the line-in signal and one for the line-out signal.
2. **Status Indicators:** refer to the section "Status Indicators" in this manual for details.
3. **SQE switch:** refer to the section "SQE Settings" in this manual for information on this switch.

Status Indicators

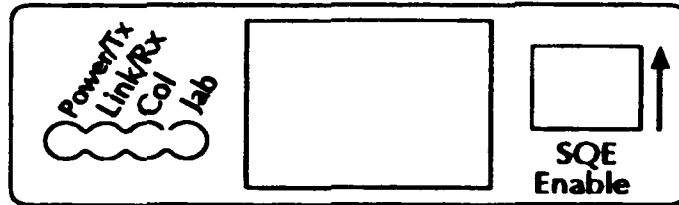
This section describes the LED status indicators for each transceiver model. Included in each model-specific section below is a diagram showing the main transceiver panel that contains the indicators and a table that summarizes the indicator properties. Listed below are the abbreviations used when referring to the indicators:

Abbreviation	Indicator
Jab	Jabber
Col	Collision
Tx	Transmit
Rx	Receive
Power/Tx	Power/Transmit
Link/Rx	Link/Receive

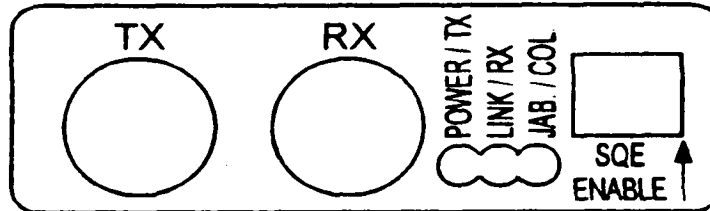
DE-851**DE-851 Indicator Summary**

Indicator	Indicator Color	Description
Jab	Yellow	Lights when abnormal Ethernet frames are detected on the network. May be due to a malfunctioning Ethernet interface card.
Col	Yellow	Lights when a collision is detected on the network.
Rx	Green	Lights while the transceiver is receiving data.
Tx	Green	Lights while the transceiver is transmitting data.

DE-853



DE-853 Indicator Summary		
Indicator	Indicator Color	Description
Power/Tx	Green	Lights continuously when the unit is powered ON. (Power is supplied through the AUI connection.) Blinks while the unit is transmitting.
Link/Rx	Green	When ON, indicates a positive data link. When flashing, the unit is receiving data.
Col	Yellow	Lights when a collision is detected on the network.
Jab	Yellow	Lights when abnormal Ethernet frames are detected on the network. May be due to a malfunctioning Ethernet interface card.

DE-854**DE-854 Indicator Summary**

Indicator	Indicator Color	Description
Power/Tx	Green	Lights continuously when the unit is powered ON. (Power is supplied through the AUI connection.) Blinks while the unit is transmitting.
Link/Rx	Green	When ON, indicates a positive data link. When flashing, the unit is receiving data.
Col/Jab	Yellow	Lights when a collision is detected on the network. When ON for more than 0.5 sec., indicates jabber condition. See Jabber explanation for DE-853.

SQE Setting

Signal Quality Error (SQE) provides the "heart beat" signal for data collision detection on Ethernet networks. If the transceiver's host is a repeater or hub, this switch should be set to OFF; if the host is a computer with an Ethernet interface card, the SQE switch should be set to ON.

Connections

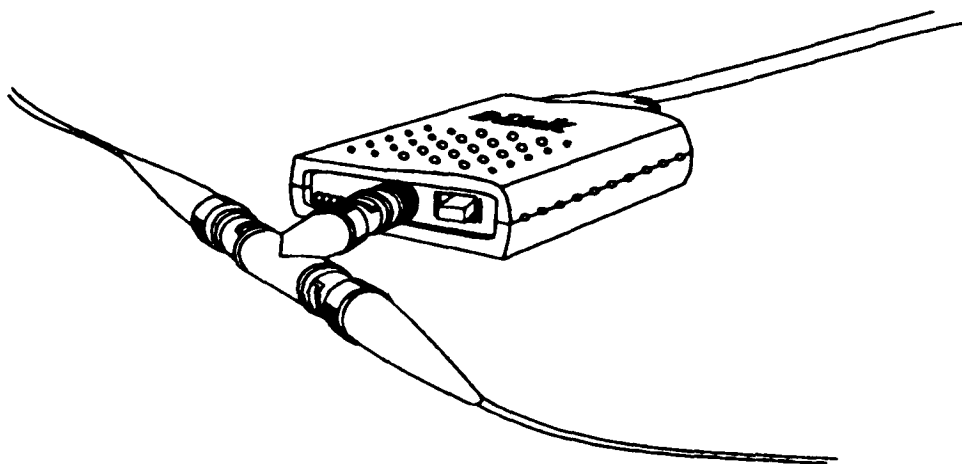
This section describes the general connection schemes for the three Ethernet transceivers. Shown below are diagrams of each transceiver with appropriate cables connected.

The AUI drop cables shown in the diagrams may or may not be used in your connections. In some cases the transceiver can be connected directly to the host device. An example diagram of such a connection is shown in the following "Example Connections" section.

DE-851

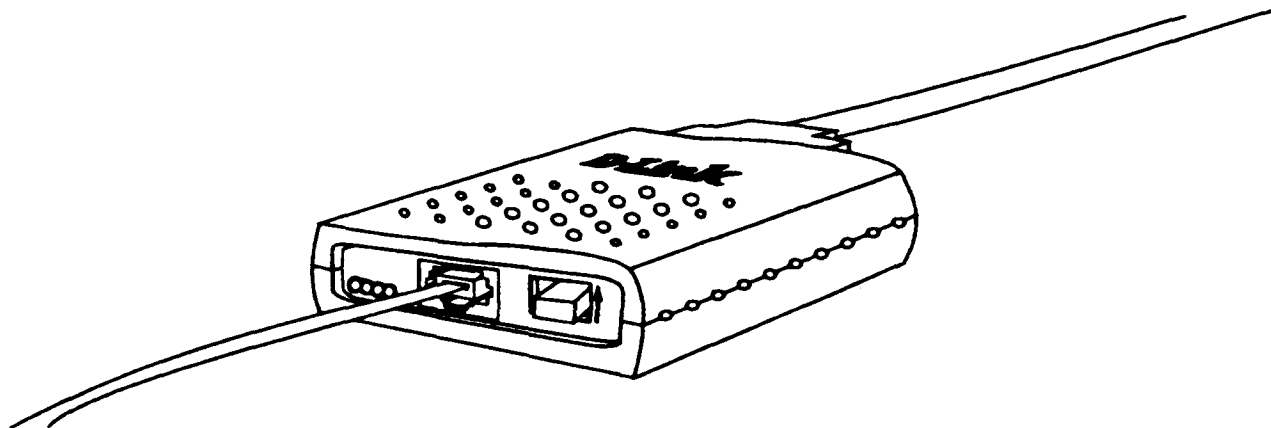
The DE-851 Ethernet transceiver is used for AUI-to-BNC connections. The diagram below shows in the foreground 10BASE-2 thin Ethernet cables

connected to a "T" connector which is attached to the transceiver. The AUI drop cable in the background connects to an AUI host device, possibly a hub or Ethernet network interface card.



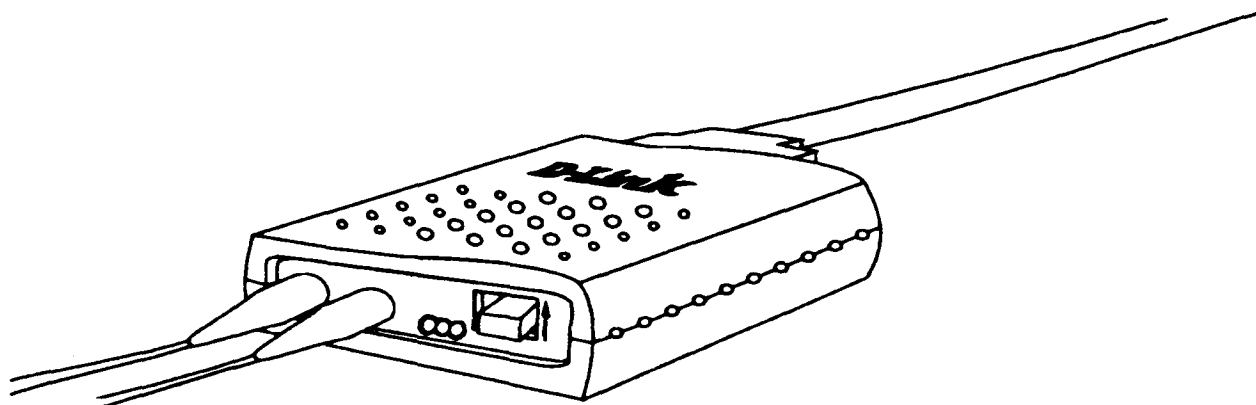
DE-853

The DE-853 Ethernet transceiver is used for AUI-to-RJ45 connections. The diagram below shows in the foreground a 10BASE-T unshielded twisted-pair cable connected to the transceiver. The AUI drop cable in the background connects to an AUI host device, possibly a hub or Ethernet network interface card.



DE-854

The DE-854 Ethernet transceiver is used for AUI-to-FOIRL connections. The diagram below shows in the foreground 10BASE-F cables connected to the transceiver. Note that the FOIRL cable that connects to the Rx connector on one transceiver must connect to the Tx connector on the device at the other end of the cable. The AUI drop cable in the background connects to an AUI host device, possibly a hub or Ethernet network interface card.

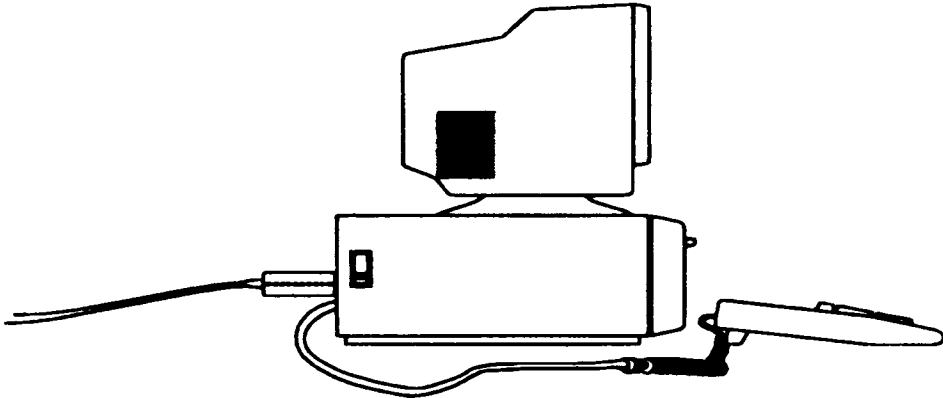


Example Connections

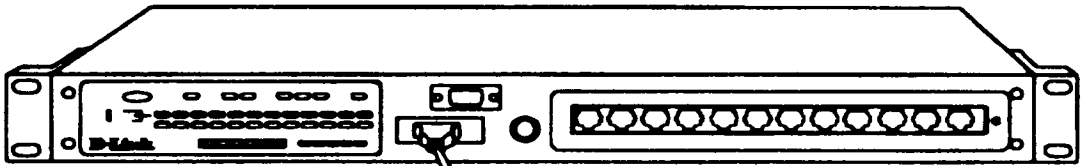
D-Link Ethernet transceivers may be used for many different types of Ethernet connections. At least one of the two devices to be linked must have a D-type 15-pin female connector. Depending on the connector type of the other device, choose one of the Ethernet transceivers described herein.

The following diagrams illustrate the various connection environments where Ethernet transceivers may be used.

The following diagram shows a transceiver connected directly to an interface card in a desktop computer. (The Ethernet card itself is not visible here.) With such a connection, there is no need for an AUI drop cable.



An Ethernet transceiver connected directly to an Ethernet interface card.



AUI drop cable →



A DE-854 transceiver connected to a hub. Note the use of the AUI drop cable.

Specifications

DE-851

- AUI D-type 15-pin male connector for host connection
- BNC connector for 10BASE2 thin Ethernet connection
- Indicators: Jabber, Collision, Receive, Transmit
- SQE enable/disable switch
- Transceiver-to-host max. drop cable length: 50 meters
- Transceiver-to-transceiver min. distance: 0.5 meters
- Transmission rate: 10 Megabits/second
- Operating temperature: 0 - 55 Celsius
- Humidity: 10% - 90% (non-condensing)

DE-853

- AUI D-type 15-pin male connector for host connection
- RJ-45 connector for 10BASE-T unshielded, twisted-pair connection (connection to hub)
- Indicators: Power/Transmit, Link/Receive, Collision, Jabber

- **SQE enable/disable switch**
- **Transceiver-to-hub max. cable length: 100 m**
- **Transceiver-to-host max. cable length: 50 m**
- **Transceiver-to-transceiver min. distance: 0.5 meters**
- **Transmission rate: 10 Megabits per second**
- **Operating temperature: 0 - 55 Celsius**
- **Humidity: 10% - 90% (non-condensing)**

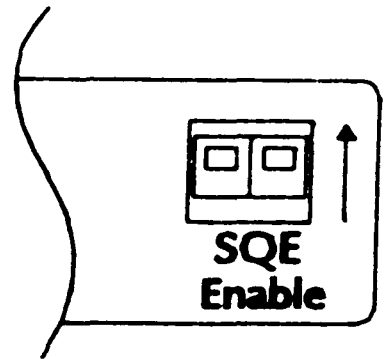
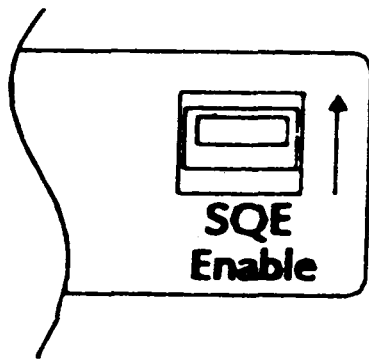
DE-854

- **Standard: IEEE 802.3 FOIRL**
- **AUI D-type 15-pin male connector for host connection**
- **Two ST FOIRL connectors for 10BASE-F fiber optic connection**
- **Indicators: Power/Transmit, Link/Receive, Jabber/Collision**
- **SQE enable/disable switch**
- **Transceiver-to-transceiver max. cable length: 2.0 Km**
- **Transceiver-to-transceiver min. cable length: 0.5 meters**
- **Transceiver-to-host max. cable length: 50 m**
- **Transmission rate: 10 Megabits per second**
- **Operating temperature: 0 - 55 Celsius**
- **Humidity: 10% - 90% (non-condensing)**

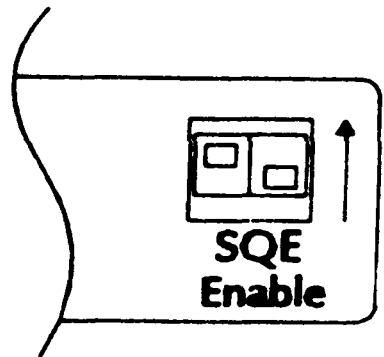
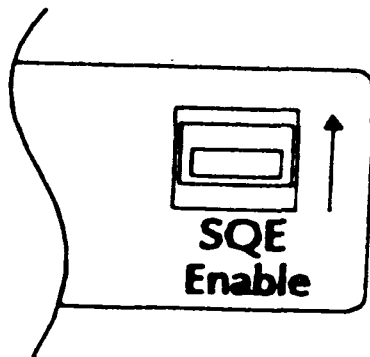
SQE SETTING

There are two kinds of SQE switches on this product. Please according to your switch type, follow the picture below to set SQE switch as you wish.

**SQE
Enable**



**SQE
Disable**



D-Link®

**U.S.A.
Canada**

TEL:(1-714)455-1688

TEL:(1-905)828-0260

U.K.

TEL:(44-81)203-9900

Germany

TEL:(49-6196)643011

France

TEL:(33-1)45.05.11.55

Singapore

TEL:(65)336-2972

Taiwan

TEL:(886-2)916-1600

FAX:(1-714)455-2521

FAX:(1-905)828-5669

FAX:(44-81)203-6915

FAX:(49-6196)28049

FAX:(33-1)45.05.11.66

FAX:(65)336-2829

FAX:(886-2)914-6299

5, Musick, Irvine CA 92718, U.S.A.

2180, Dunwin Drive, Unit 6, Mississauga, Ontario L5L 1C7, Canada

Denmark House, Staples Corner, the Broadway, London NW9 7BW. U.K.

Auf Der Krautweide 32, 65812 Bad Soden, Germany

9, Avenue Bugeaud 75016 Paris, France

111, North Bridge Road #11-00, Peninsula Plaza, Singapore 0617

2F. NO.233-2, Pao-Chiao Rd., Hsin-Tien, Taipei, Taiwan R.O.C.

