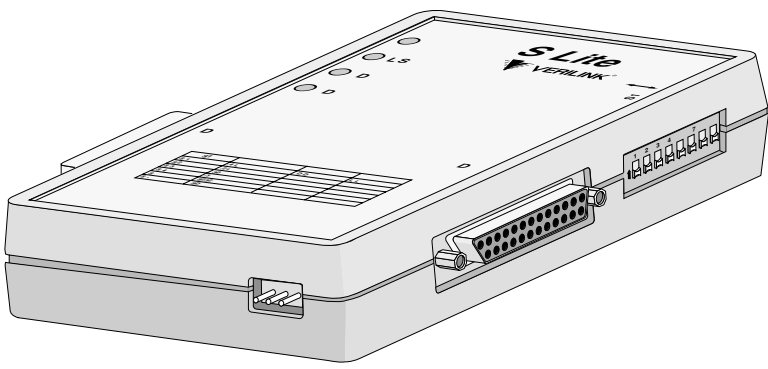


S Lite Serial Data Loopback Device

34-00297.2
June 1999



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2nd Edition, June 1999

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EU Declaration of Conformity

Model Number: S Lite
 Manufacturer's Name: Verilink Corporation.
 Manufacturer's Address: 127 Jetplex Circle
 Madison, Alabama 35758
 USA
 Telephone: (256) 772-3770
 Facsimile: (256) 774-2277

The before mentioned product complies with the following EU directive:

89/336/EEC, "Council Directive of 3 May 1989 on the approximation of the laws of Member States relating to electromagnetic compatibility"

The compliance of the above mentioned products with the Directives and with the following essential requirements is hereby confirmed:

Emissions	Immunity	Safety
EN 55022, Class A, 1995	EN 50082-1, 1992	EN 60950: 1992/A1 + A2: 1993/A3: 1995/A4: 1997

The technical files and other documentation are on file with Mr. Ron Hillis, Certification Manager.

As the manufacturer we declare under our sole responsibility that the above mentioned products comply with the above named directives.



Ron Hillis,
 Certification Manager, Verilink Corporation.

Madison Alabama, 27 May 1999
 Place and Date

Warranty

Verilink's product warranty covers repair or replacement of all equipment under normal use for a five-year period from date of shipment. Replacement products may be new or reconditioned. Any replaced or repaired product or part has a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer. Our in-house Repair Center services on a standard 10-workday-turnaround basis.

Customer Service

Verilink offers the following services:

- ◆ System Engineers at regional sales offices for network design and planning assistance (800) 837-4546
- ◆ Technical Assistance Center for free 24×7 telephone support during installation, maintenance, and troubleshooting at (800) 285-2755 and support@verilink.com
- ◆ Return Materials Authorization (RMA) (800) 926-0085, ext. 2282
- ◆ Maintenance contracts and leasing plans (800) 837-4546, ext. 206
- ◆ Technical Training on network concepts and Verilink products at (800) 837-4546, ext. 346 and training@verilink.com
- ◆ Web site at www.verilink.com
- ◆ FAX-On-Demand at (800) 957-5465

Returning Products

A product must be assigned a Return Materials Authorization (RMA) number before it is sent to Verilink for repair. An RMA number is issued by Verilink Customer Service at (800) 926-0085, ext. 2282.

Safety Precautions

When handling this equipment, follow these basic safety precautions to reduce the risk of electric shock and injury:

- ◆ Follow all warnings and instructions marked on the product and in the manual.
- ◆ Unplug the hardware from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a slightly damp cloth for cleaning.
- ◆ Do not place this product on an unstable cart, stand, or table. It may fall, causing serious damage to the product.
- ◆ This product should be operated only from the type of power source indicated on the marking label and manual. If you are unsure of the type of power supply you are using, consult your dealer or local power company.
- ◆ Do not allow anything to rest on the power cord. Do not locate this product where the cord interferes with the free movement of people.
- ◆ Do not overload wall outlets and extension cords, as this can result in fire or electric shock.
- ◆ Never push objects of any kind into the unit. They may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill liquid of any kind on this equipment.
- ◆ Unplug the equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - ◇ When the power supply cord or plug is damaged or frayed.
 - ◇ If liquid has been spilled into the product.
 - ◇ If the product has been exposed to rain or water.
 - ◇ If the product has been dropped or if the housing has been damaged.

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ABOUT THIS MANUAL

What is a Reference Manual?

This is a reference manual. It provides information about unit installation, configuration, testing and troubleshooting on a function-by-function basis. It is not a user's guide containing step-by-step procedures. This manual contains specific information about a command, menu field, port, etc. Unless otherwise noted, the information in this manual applies only to the Verilink S Lite (also referred to as the unit.)




Where to go for Information

The chapters and appendices in this manual are arranged for quick reference. It is not necessary to read previous chapters to understand the subsequent chapters.

- 1 General - This chapter introduces the unit, lists the features, and provides specifications.
- 2 Installation and Configuration - This chapter describes unit installation, port and power connections, and switch settings.
- 3 Testing - This chapter describes the indicators, test switch, and loopbacks.

Conventions

The following table lists the conventions used throughout this manual.

Convention	Description
	<i>Notices</i> call attention to important features or instructions.
	<i>Cautions</i> alert you to personal safety risk, system damage, or data loss.
	<i>Warnings</i> alert you to the risk of severe personal injury.
<i>italics</i>	Italics denote new terms or emphasis.
<u>underline</u>	Default settings are underlined.

1

GENERAL

Introduction

The S Lite™ is a serial data loopback device with the ability to go into remote loop for troubleshooting purposes. The S Lite provides the capability to detect standard V.54 loop commands from the local end to initiate loopbacks from the remote end and to locally initiate remote loop. The customer can then determine if a call to the local postal telegraph authorities is necessary.

The unit has a power bypass mode that allows data to pass through the box when the unit is unpowered. The bypass mode ceases when power is applied to the unit.

The S Lite supports X.21, V.35, EIA-530, and RS-232 interfaces presented from DB-25 connectors. The interface and loop options are chosen from DIP switches. Adapters are available to convert the connectors to the desired pinout.

Features

- ◆ Space-saving design can be desktop or wall mounted
- ◆ 90–256 VAC autoranging power supply
- ◆ DB-25 female DCE and DTE connectors
- ◆ LED status indicators
- ◆ DIP switch configurable
- ◆ Provides V.54 loopback detection on demand
- ◆ Power bypass relays on serial data loopback device to maintain service to the customer if the the serial data loopback device loses power. Automatically terminates bypass mode when power is restored to unit.

Specifications

Interfaces	DCE:	DB-25, female
	DTE:	DB-25, female
Performance Monitor	LED indicators:	Power, Loopback Active, Tx Data, and Rx Data
Loopbacks	Remotely Initiated:	via standard V.54 commands
	Locally Initiated:	via DIP switch
Configuration	Loopback Control:	1 position
	Interface Control:	4 positions
Mechanical	Mounting:	desktop or wallmount
	Dimensions:	1.25" H, 3.5" W, 5.75" D
	Weight:	1 pound
Power Source	External:	Input: 90–256 VAC autoranging Output: 9 VDC
	Industry Standards	Low Voltage Directive
EMC Directive		89/336/EEC
Environmental	Operating Temp:	0° to 50°C (32° to 122°F)
	Storage Temp:	–20° to 70°C (–4° to 158°F)
	Humidity:	95% maximum (non-condensing)



2

INSTALLATION AND CONFIGURATION

Introduction

This chapter contains information and instructions required to prepare the Verilink S Lite for use. Included are initial inspection procedures, mounting instructions, configuration guidelines, connection and powering information.

Safety Summary

This manual contains information and warnings that must be followed to ensure safe operation and retain the equipment in a safe condition.



This WARNING sign denotes a potential hazard to the operator. It calls attention to a procedure or practice that, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a WARNING sign until the indicated conditions are fully understood and met.

Unpacking and Inspection

This unit is carefully packaged to prevent damage in shipment. Upon receipt, inspect the shipping container for damage. If the shipping container or cushioning material is damaged, notify the carrier immediately and make a notation on the delivery receipt that the container was damaged (if possible, obtain the signature and name of the person making delivery). Retain the packaging material until verifying the contents of the shipment are complete and the unit has been checked both mechanically and electrically.

If the contents of the shipment are incomplete or, if there is mechanical damage or defect, notify Verilink. If the shipping container is also damaged, or the cushioning material shows signs of stress, notify the carrier of the damage as well as Verilink. Keep the shipping materials for the carrier's inspection. Verilink will arrange for repair or replacement without waiting for claim settlement.

Supplied Materials

The S Lite is shipped from the factory with the following standard equipment.

- ◆ external AC power supply
- ◆ reference manual or CD
- ◆ adapter cables (if applicable, based on unit or version ordered)
- ◆ adhesive strips

Wallmount Installation

Using Adhesive Strips

- 1 Select a place close to an AC outlet with clearance for the signal and power cables. The indicators and switches should be easily accessible.
- 2 Verify the mounting surface is clean.
- 3 Cut the adhesive strip to the desired length and affix the backing of one piece to the underside of the unit.
- 4 Attach the other adhesive strip to the piece on the underside of the unit.
- 5 Remove the backing to expose the sticky surface.
- 6 Press the underside of the unit firmly against the selected place.

Using Screws

- 1 Select a place close to an AC outlet with clearance for the signal and power cables. The indicators and switches should be easily accessible.
- 2 Vertically place two #6 screws 3-13/32 inches apart at the selected place. Leave the screws out about an eighth of an inch.
- 3 Place the upright unit over the screws until the holes engage and slide the unit down until it locks.

Connections

The S Lite has female DB-25 connectors for the DCE and DTE interfaces, and a power connector. The following paragraphs describe these connections.

DCE and DTE Connections

Table 2-1 shows the pinout for the DCE and DTE connectors.

Table 2-1 DCE and DTE Connector Pinout

Pin	DCE and DTE	Pin	DCE and DTE
1	Shield Ground	14	TXD B
2	TXD A	15	TXC A
3	RXD A	16	RXD B
4	RTS A	17	RXC A
5	CTS A	18	LL
6	DSR A	19	RTS B
7	Signal Ground	20	DTR A
8	DCD A	21	RL
9	RXC B	22	DSR B
10	DCD B	23	DTR B
11	SCTE B	24	SCTE A
12	TXC B	25	TM
13	CTS B		

Power Plug the connector from the power supply into the unit. Plug the transformer into an appropriate outlet. This applies power to the unit. Units require an AC IEC interconnect power cord.

Configuration

This section describes the configuration of the S Lite. This unit is configured using DIP switches S1. Refer to Figure 2-1 for switch locations.

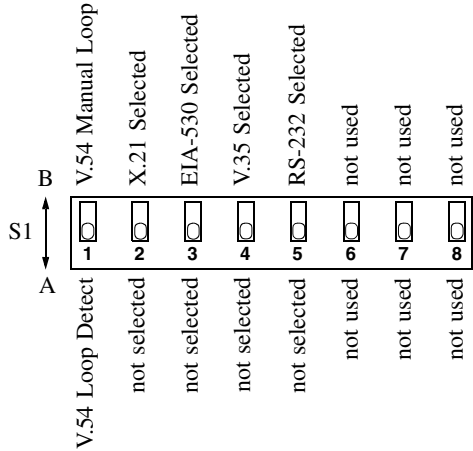


Figure 2-1 Verilink S Lite Configuration Switches

Configuration Switch S1

This switch provides the following configuration parameters.

V.54 Loop

Position 1 is used to set the unit to detect remotely initiated V.54 loop commands (A) or manually initiate a loopback (B). See page 9 for more information. The default is V.54 Loop Detect (A).

Interface

Positions 2, 3, 4, and 5 are used to select an interface (see Figure 2-1).



Only one of these switches can be in position B at a time.



Disconnect the DCE and DTE cables from the unit before selecting an interface.

Not Used

Positions 6, 7, and 8 are not used.

Power Bypass

The S Lite can operate in a power bypass mode where the S Lite passes the signal from the network to the equipment and vice versa whether in a powered state or not.

The power bypass mode uses relays that switch the network and equipment connections. When the unit is powered and stable, the relays have the network and equipment connections switched into the S Lite's internal circuitry. When the unit loses power, the relays switch the network connection to a direct connection path to the equipment connection. When power is reestablished the relays switch the network and equipment connections back into the S Lite's internal circuitry.

3

TESTING

Introduction

This chapter describes the diagnostic and test features of the Verilink S Lite. The unit is controlled manually using DIP switches (the DIP switches are discussed on page 7).

Indicators

The unit indicators show power, loop status, and data activity.

Power This green indicator shows that power is applied to the unit.

Loop Test This indicator show the loop status of the unit. Amber indicates the unit is in loop mode. When the indicator is Off, the unit is not in loopback.

Tx Data This green indicator shows the unit is transmitting data.

Rx Data This green indicator shows the unit is receiving data.

V.54 Loop

This section describes loops that can be initiated on the S Lite.

Manual Loop

This loop is activated by setting DIP switch S1-1 to the B position. This loop is unidirectional and returns the DCE receive data to the DCE transmit data. The loop functions as shown in Figure 3-1.

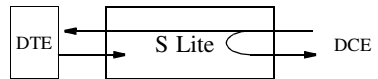


Figure 3-1 V.54 Loop

Detect Mode

The unit is RDL compatible.

This loop is activated by the receipt of the V.54 loop command. This loop is unidirectional and returns the DCE receive data to the DCE transmit data. The loop functions as shown in Figure 3-1.

The loop up code is 2048 ± 100 bits of V.54 loop-up pattern. When this is detected, the unit is looped. The loop down code is 8192 ± 100 bits of V.54 loop-down pattern followed by 64 ones.

