

## LinkSim™



Portable impairment simulation with dual T1E1 interfaces



Simulates a variety of communication links



Delay insertion and error introduction



Supports T1E1, RS232, V.35, RS422/530, X.21, HSSI



Control speeds, delays, errors and signals



### Overview

The GL's LinkSim™ simulates a variety of communications links, inserting delays and inserting errors such that the user can determine what effects these impairments will have on their systems.

The LinkSim™ includes six pairs of interfaces - RS232, RS422/RS530, V.35, X.21, HSSI, and T1E1. It can introduce propagation delays in either or both directions. Propagation delays can be up to 1.999 seconds per direction for speeds up to 2.048 Mbps and up to 500 milliseconds for speeds from 8.192M to 50 Mbps. The LinkSim™ can inject logic, ones, zeros, timing slips, bit, burst, frame, BPV, CRC, FDL, signaling, block, C-Bit and P-Bit errors in either or both directions.

### Main Features

- Simulates a variety of communications facilities
  - leased line with modems on each end
  - DDS line with CSU/DSUs on each end
  - T1 line with T1 CSUs on each end
  - satellite facility with modems on each end
  - 2.048 Mbps facility with DTUs (Digital Terminating Units) on each end
- Supports T1E1, RS232, V.35, RS422/RS530, X.21, HSSI
- Supports 78 data rates from 1,200 to 50M bps
- Inserts delays up to 1.999 second in each direction
- Inserts errors and timing slips in each direction
- Delays, errors and speeds can be different in each direction
- All operating parameters, including interfaces, speeds, delays, errors and control signals are illustrated on a single screen.
- Parameters are selected by scrolling through values stored in the LinkSim™.

### Applications

- Testing protocols and error correction techniques
- Checking new equipment prior to field installation
- Measuring performance and reliability in various operating environments

Please visit <http://www.gl.com/linksim.html> for more details.



## GL Communications Inc.

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## Specifications

### Speed

Base Unit Speed 78 standard speeds from 1,200 bps to 8.192 Mbps

### Interfaces (two each)

RS 232 DB25P 25-pin female connector  
RS 530/RS 422 DB25P 25-pin female connector  
V.35 34-pin Winchester female connector  
X.21 DB15P 15 pin female connector  
T-1 and E-1 (G.703) RJ48C 8 position modular in parallel with bantam and dual BNCs.  
HSSI 50 pin HSSI connectors

### Physical Dimensions

Dimension 3.5" (8.9 cm) h x 10" (25.4 cm) w x 12" (30.5 cm) d  
Weight 12 lbs (5.5 kg)

### Environmental

Operating Temperature 0 to 50° C, 32 to 122° F  
Relative Humidity 0 to 95% non-condensing

## Miscellaneous

Propagation Delay Up to 1.999 second per direction for speeds up to 2.048 Mbps  
Up to 0.5 seconds (500 ms) per direction for speeds to 50 Mbps  
Delay is selectable in 1 millisecond increments

RTS/CTS Delays Up to 999 millisecs in 1 millisecond increments

Errors Logic (bit) errors, Ones, Zeros, Burst errors, Block errors,  
Framing errors, BPVs, CRCs, C-Bit errors, P-Bit errors,  
Error seconds and Slips

Error Frequency 1x10e1 to 1x10e12 bits, Random Secs, Manual  
Gap up to 99999999 bits, Gap up to 99999999 milliseconds  
9999 Blocks

Timing Internal, external and locked  
External clock – TTL level

Control Signals Request To Send (RTS), Clear To Send (CTS)  
Data Set Ready (DSR), Carrier Detect (CD)  
Data Terminal Ready (DTR)

Power 90 - 230V AC  
50 to 60 Hz  
7.2 watts 25 BTU/hr

Propagation Delay Up to 1.999 second per direction for speeds up to 2.048 Mbps  
Up to 0.5 seconds (500 ms) per direction for speeds to 50 Mbps  
Delay is selectable in 1 millisecond increments

### Buyers Guide

[LTS101](#) - LinkSim™ Portable Dual T1E1 Data Simulator for delay/error insertion with full color display

### Related Hardware

[LTS001](#) - LinkTest™ SINGLE Hand Portable Single T1E1 Test Set

[LTS002](#) - LinkTest™ SINGLE+ Portable Single T1E1, T3E3 Test Set

[LTS003](#) - LinkTest™ DUAL Portable Dual T1E1, T3E3 Test Set with full color display

\*Specifications are subject to change



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