

Telecommunication Peripheral Products
Technical Practice

DLE-300

Advanced
Line Simulator

November 25, 1998

Advanced Line Simulator for Communication, High Speed Data, Caller ID and Classroom Training



The **DLE-300** advanced Line Simulator provides sales people, technicians, engineers, etc. with a cost effective, easy to use method of conducting on-site demonstrations or diagnostics, eliminating the need to locate phone lines and disrupt the customer's phone service.

The Line Simulator provides two way communication between standard analog telecom products such as modems, fax machines, Key Systems, PABX's as well as standard telephones.

The **DLE-300** Line Simulator produces standard or distinctive AC ringing, DC talk battery, caller ID data, precise dial tone, ring back, busy, SIT, reorder tone, and provides CPC on disconnect.

<http://www.VikingElectronics.com>

E-mail...Sales@VikingElectronics.com

Features

- Supports all high speed data
- Produces name and number caller ID data
- Audio input/output for recording voice prompts
- 40V DC talk battery
- Precise call progress tones (dial tone, ringback, busy and reorder)
- Produces special interrupt tones
- Standard and distinctive 20 Hz AC ringing
- Provides CPC breaks after disconnect
- Touch Tone detection
- Ringdown mode (no Touch Tones required)
- 911 trainer mode for classroom training
- One year warranty

Sales...(715) 386-8861

Made in the U.S.A.

Applications

- Point-to-point communications between phones, fax machines, and high speed modems without dedicated telephone lines
- Programming and recording voice products such as voice mail systems, etc.
- Intersystem TIE lines
- Courtesy and/or emergency phones
- Demonstrating telecom equipment at trade shows, meetings, etc.
- Diagnosing phone line dependent equipment with precise characteristics
- 911 trainer for schools and businesses

Specifications

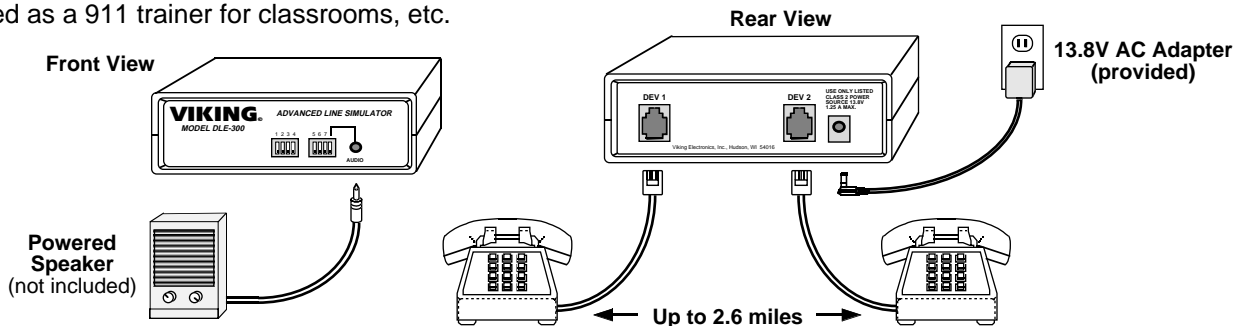
Power: 120V AC/13.8V AC 1.25A, UL listed adapter provided
Dimensions: 127mm x 127mm x 25mm (5" x 5" x 1.5")
Shipping Weight: 1.13 kg (2.5 lbs)
Environmental: 0° C to 32° C (32° F to 90° F) with 5% to 95% non-condensing humidity
Ringer Output: 6.0 REN
Talk Battery: 40V DC
Loop Length: 4.2 km (2.6 miles) maximum - 24 AWG twisted pair
Connections: (2) RJ11 jacks

Installation/Applications

Important: A UPS/surge protector is recommended. The **DLE-300** is NOT protected from power surges and will not operate during power failures.

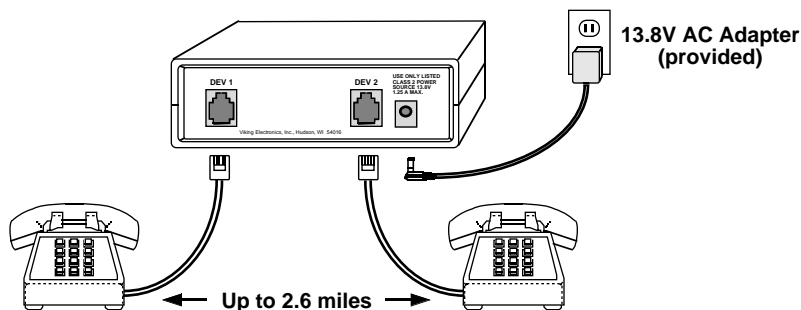
A. Demonstrations and Classroom Training

The **DLE-300** is ideal for on-site product trainings at trade shows and perspective customer sites. It can also be configured as a 911 trainer for classrooms, etc.



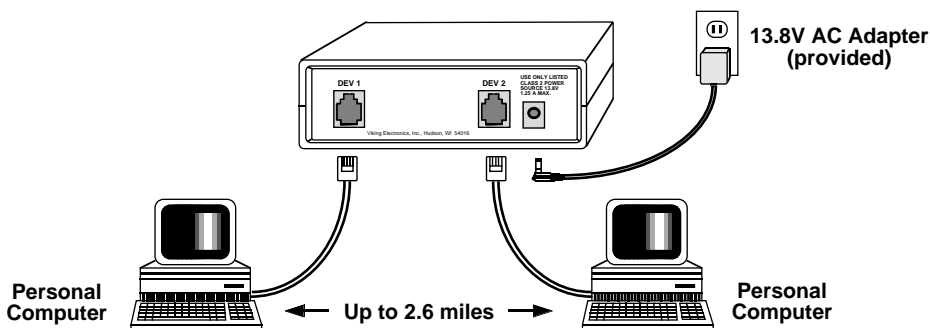
B. Point to Point Communication

The **DLE-300** can be configured as a ringdown circuit for instantaneous point to point telephone communications.



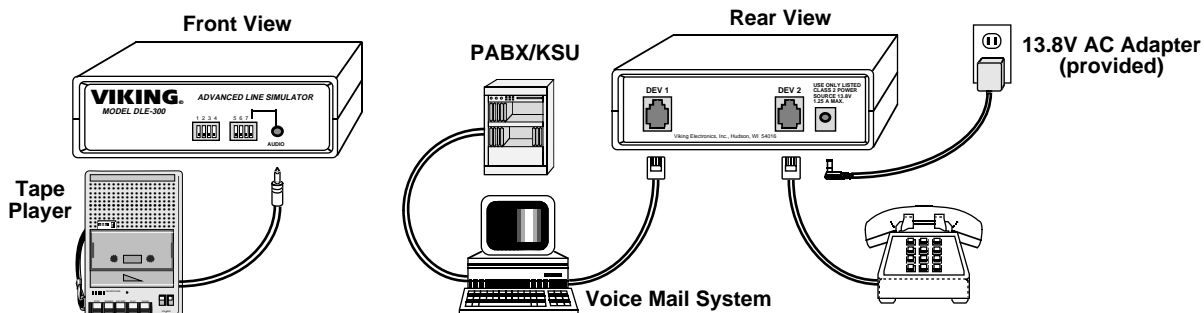
C. High Speed Data Communication

The **DLE-300** will support the data speeds of your supporting peripherals.



D. Programming and Recording Voice Mail Systems and Other Voice Products

Using the **AUDIO** input jack, the **DLE-300** can be used to program and record nearly any voice related product.



Programming

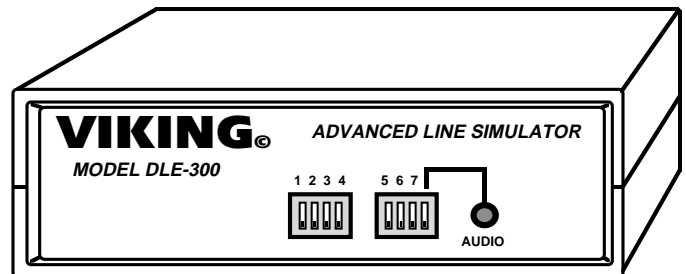
A. DIP Switch Programming

1. Ring Cadences

Switch 1	Switch 2	Ring Cadence
OFF	OFF	Normal (2 seconds on, 4 seconds off)
ON	OFF	Short - long - short
OFF	ON	Short - short - long
ON	ON	Long - long

2. Tones

Switch	Description
3	OFF Standard dial tone
	ON Stutter dial tone
4	OFF Disables special call progress tones
	ON Enables special call progress tones



3. Modes of Operation

Switch	Description
5	OFF Disables 911 mode
	ON Enables 911 mode
6	OFF Disables ring down mode
	ON Enables ring down mode
7	OFF Two second dial tone before ringing (ring down mode)
	ON No dial tone before ringing (ring down mode)
8	OFF High speed data communication
	ON Enables the AUDIO jack

B. Internal Jumpers

Removing internal jumpers may be used to disable specific features (see diagram right).

1. CPC signal

Remove shunt **JP1** to disable CPC signal.

2. Caller ID

Remove shunt **JP2** to disable all "Caller ID" data.

3. Ring Count

Remove shunt **JP3** to disable the maximum ring count.

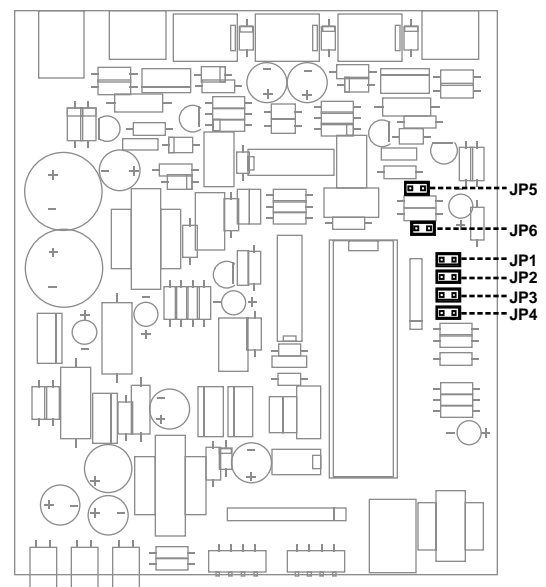
4. Reorder

Remove shunt **JP4** to change the 10 seconds of reorder tone (fast busy) that are given when the other phone hangs up, to 10 seconds of continuous dial tone.

5. Attenuation

The two device ports are directly connected together offering no signal loss between the devices. Move shunt from **JP5** to **JP6** to attenuate the audio volume between the devices by 9 db (typical of most C.O. lines).

DLE-300 Circuit Board



Operation

A. Normal Operation (all DIP switches OFF)

An off hook device is given dial tone. Any Touch Tone will break dial tone and two and a half seconds after a phone number is dialed, the **DLE-300** will ring the opposite port up to 10 times. Caller ID information is sent after the first ring. When the other device answers, the call is connected. The unit provides a CPC break and 10 seconds of reorder tones when either device hangs up.

B. Ring Down Mode (DIP switch 6 ON)

In this mode, the **DLE-300** does not require Touch Tones to be dialed to ring the other telephone device. An off hook condition on either port will trigger 2 seconds of dial tone and the opposite port will begin ringing. No caller ID data is sent.

Note: To eliminate dial tone, set DIP switch 7 to ON.

C. Special Call Progress Tones (DIP switch 4 ON)

In this mode, the **DLE-300** may be activated to provide busy, reorder, S.I.T. and special continuous test tone. The tones are keyed off of the last digit dialed (see the chart to the right).

Example: 5 5 5 - 1 2 3 4

Last Digit Dialed	Special Call Progress Tones
1	Busy
2	Reorder
3	S.I.T (Special Interrupt Tone)
4	1004 Hz @ -20dBm Test Tone
5	Silence
6	Standard ringback
7	Standard ringback
8	Standard ringback
9	Standard ringback
0	Standard ringback

D. Caller ID

Multi-message caller ID data is sent after the first ring. The information sent is keyed off of the second to last digit dialed. See the chart to the right.

E. 911 Mode (DIP switch 5 ON, DIP switch 6 OFF)

The **DLE-300** features a 911 mode for classroom training, etc. In this mode, the **DLE-300** will only allow calls to ring that have dialed 911. Any other number dialed will receive a busy signal. While in 911 mode, "911 Emergency" will be sent as the caller ID data whenever 911 is dialed.

Second to last Digit Dialed	Caller ID Data Sent
1	715-386-8861, Viking Electron
2	Number withheld, Viking Electron
3	Number unavailable, Viking Electron
4	715-386-8861, name withheld
5	715-386-8861, name unavailable
6	Number and name withheld
7	Number and name unavailable
8	No data sent
9	No data sent
0	No data sent

F. Audio Jack (DIP switch 8 ON)

A 3.5mm audio jack is provided for an audio connection to the simulated lines. This is ideal for recording voice prompts on voice mail systems, recording, or amplifying the voice path. This connection is bi-directional so audio may be uploaded or downloaded.

Note: Keep DIP switch 8 OFF when the **AUDIO** jack is not required for the best standard operation.

Product Support Line...(715) 386-8666

Fax Back Line...(715) 386-4345

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