

TECHNICAL

Practice

TELECOM SOLUTIONS FOR THE 21ST CENTURY

LSD-2

Line Sharing Device

August 16, 2002

A Smart Line Sharing Device with Inbound Switching Capability

Why pay for a dedicated line for your elevator/emergency phone or alarm panel?

The **LSD-2** Line Sharing Device allows the user to share an existing phone line with an emergency phone or other priority alarm device. This can save hundreds of dollars a year over leasing a dedicated phone line. The **LSD-2** can be used on any C.O. line or analog PABX/KSU station.

An outbound call on the **DEVICE 2 (PRIORITY)** port takes priority over a call in progress on the **DEVICE 1** port. Any call in progress on the **DEVICE 1** port will be disconnected for 2 seconds, returning dial tone to the **DEVICE 2 (PRIORITY)** port. A busy signal is then sent to the **DEVICE 1** port.



For incoming calls the **LSD-2** can route calls to the **DEVICE 2 (PRIORITY)** port using Caller ID, Distinctive Ring, or Call Back. All other calls will be routed to the phone port. Alternatively, the **LSD-2** can be set up so that all inbound calls are routed to the **DEVICE 2 (PRIORITY)** port. *Note:* Caller ID is not passed through the **LSD-2** to the devices.

Important: When the emergency device is in use, the phone line is not available for normal use. Any additional emergency calls will have to be made on another phone line. For this reason the **LSD-2** is not recommended for single line applications.

Features -

- · Routes both incoming and outgoing calls
- Allows an Emergency device to share a phone line with other devices (fax machines, phones, modems)
- · Gives priority to the Emergency devices
- Incoming calls routed to one of two ports by Caller ID, Distinctive Ring or Call Back
- Status LED displays mode of operation
- · Can store up to 12 Caller ID numbers
- Provides a busy signal to the phone port when an Emergency device is in use

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Applications

- Share an existing phone line with an emergency device such as:
 - Emergency phones
 - Area of refuge phones
 - Alarm panels
 - ATM's
 - Card readers
 - Any device that needs instant access to a phone line

http://www.vikingelectronics.com

Specifications

Power: 120VAC / 12VDC 500mA UL listed adapter provided **Dimensions:** 133mm x 89mm x 44mm (5.25" x 3.5" x 1.75")

Shipping Weight: .9 kg (2 lbs)

Environmental: 0° C to 32° C (32° F to 90° F) with 5% to 95%

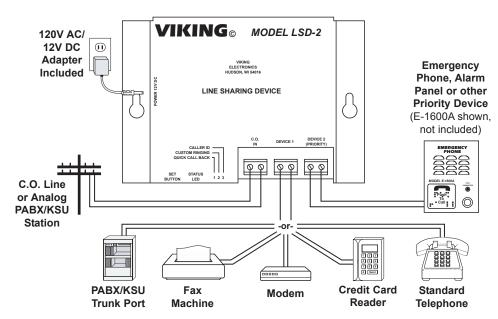
non-condensing humidity **Talk Battery:** 35V DC

Connections: 6 screw terminals

Installation

Step 1.	Connect the incoming phone line or analog PABX station to the terminal positions marked CO IN.	
Step 2.	Connect the standard phones, unused trunk or other non-priority device to the terminal positions marked DEVICE 1 port.	
Step 3.	Connect the Emergency Phone, Alarm Panel or other priority device to the terminal positions marked DEVICE 2 (PRIORITY) port.	
Step 4.	Connect the 12VDC wall adapter to the LSD-2.	

Note: Be sure the LSD-2 has power available at all times. If power is lost, the phone line will be connected to the priority device only.



IMPORTANT: Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges. Contact Panamax at (800) 472-5555 or Electronic Specialists Inc. at (800) 225-4876.

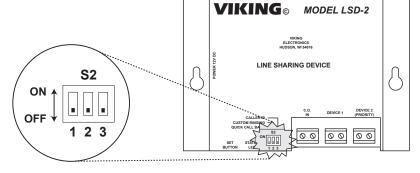
Programming

If all of the switches are in the OFF position, all inbound calls are routed to the DEVICE 2 (PRIORITY) port. Once any of the DIP switches are turned on, inbound calls default to the DEVICE 1 port unless the selected method is detected by the LSD-2. The LSD-2 can use three different methods to determine if an incoming call is to be switched to the DEVICE 2 (PRIORITY) port, instead of defaulting to the DEVICE 1 port. Each of these methods can be switched on or off using the DIP switches located on the front edge of the board. When mixing modes of operation, the LSD-2 uses all the modes that are turned on, and if any of the selected triggers are detected, the incoming call will be routed to the DEVICE 2 (PRIORITY) port. If a selected trigger(s) is not detected, the inbound call will ring through to the DEVICE 1 port.

Note: To force all calls to be routed to the **DEVICE 1** port, simply set DIP switch 3 to the **ON** position, but do not program any caller ID numbers.

Switch	ON/OFF	Description
1	ON	Quick Call Back Mode
1	OFF	Disable Quick Call Back Mode
2	ON	Distinctive Ring Mode
2	OFF	Disable Distinctive Ring Mode
3	ON	Caller ID Mode
3	OFF	Disable Caller ID Mode

Note: When all switches are **OFF**, all inbound calls are routed to the **DEVICE 2 (PRIORITY)** port.



A. Call Back Mode

To place the LSD-2 in Call Back Mode, move DIP switch 1 to the ON position.

B. Distinctive Ring Mode

To use the Distinctive Ring Mode, first purchase distinctive ringing service from your local phone service provider. Then move DIP switch 2 to the **ON** position. *Note:* In this mode the **LSD-2** detects double or triple custom ringing.

C. Caller ID Mode

Step 1.	Move DIP switch 3 to the ON position.	
Step 2.	Call into the LSD-2 , if a Caller ID is received that is not stored in the unit, the LSD-2 Status LED will go into a fast flash mode.	
Step 3.	3. While the LED is flashing fast, push the SET button. This will store the new Caller ID number into me and re-ring the DEVICE 2 (PRIORITY) port.	
	Note: If more than 12 numbers are attempted to be stored, the LSD-2 will re-ring the DEVICE 1 port. If the Caller ID number is already stored in memory, the LED will not fast flash and the call will be automatically routed to the DEVICE 2 (PRIORITY) port.	
	To clear out the Caller ID memory, press and hold the SET button while powering up the LSD-2 . The status LED will wink off showing that all 12 memory locations have been cleared.	

D. Disconnect Time

The length of time that the **LSD-2** disconnects the **DEVICE 1** port before gaining fresh dial tone for a **DEVICE 2** (**PRI-ORITY**) call, is factory set to 2 seconds. If this is not enough time for the line to return fresh dial tone, the **LSD-2** can be programmed to delay anywhere from 1 to 10 seconds.

Step '	With the LSD-2 sitting in idle state, momentarily press the SET button and wait for the STATUS LED to blink the
	current disconnect time in seconds. If the STATUS LED blinks twice, the disconnect time is set to 2 seconds.
Step 2	2. The STATUS LED remains off for approximately four seconds, during this time you may press the SET button once for
	each second of disconnect time required (Example: five times for 5 seconds). The LSD-2 will confirm by blinking the
	new disconnect time on the STATUS LED.

Important: Be sure that any auto-dialing device on the **DEVICE 2 (PRIORITY)** port is programmable to provide a longer delay time before dialing than the **LSD-2**'s disconnect time, this assures that the unit waits until there is fresh dial tone before dialing.

Operation

A. LED Status

LED Status	Operation
Lit up Power is applied to the LSD-2.	
Flash	The LSD-2 is active.
Flash After Ring	In the Call Back mode, the LED will continue to flash for 20 seconds.
Fast Flash	In the Caller ID mode, the LED will fast flash if a Caller ID number is received that is not in memory.

B. Outbound Calls

When the LSD-2 is idle, the Status LED will be lit solid, and both ports will be connected to the internal talk battery. If a device attached to the DEVICE 1 port goes off-hook, the phone line will be switched to the DEVICE 1 port. If the device attached to the DEVICE 2 (PRIORITY) port goes off-hook, the phone line will be switched to the DEVICE 2 (PRIORITY) port goes off hook while a call is in progress on the DEVICE 1 port, both ports will be switched away from the phone line for two seconds (programmable from 1-10 seconds), returning fresh dial tone to the DEVICE 2 (PRIORITY) port. While the DEVICE 2 (PRIORITY) port is in use, a simulated busy tone is generated to any device attempting to go off-hook on the DEVICE 1 port.

C. Inbound Calls

1. Quick Call Back Method (switch 1 ON)

To use the Quick Call Back mode, call into the **LSD-2** from another phone line, listen for a single ring back tone and hang-up. Wait 6 seconds, then call back to the **LSD-2** within 20 seconds. The **LSD-2** will route the incoming call to the **DEVICE 2** (**PRIORITY**) port instead of defaulting to the **DEVICE 1** port (see **Programming** section **A**).

2. Custom Ring Method (switch 2 ON)

Custom Ring switching relies on "Distinctive" or "Custom Ring" services provided by your local telephone company. Any call with a custom ring cadence will be routed to the **DEVICE 2 (PRIORITY)** port. Inbound calls with standard ring cadence will be routed to the **DEVICE 1** port. The **LSD-2** accepts both double and triple custom ring cadences as custom (see **Programming** section **B**).

3. Caller ID Method (switch 3 ON)

Caller ID switching relies on Caller ID services provided by your local telephone company. Any number programmed into one of the 12 Caller ID memory positions will be automatically routed to the **DEVICE 2 (PRIORITY)** port (see **Programming** section **C**).

4. All Inbound Calls Routed to the DEVICE 2 (PRIORITY) Port

If a priority device, such as an emergency phone, is sharing a line with an "outbound only" device, such as a credit card reader, or "outbound only" trunk, set all switches OFF and all inbound calls will be routed to the **DEVICE 2** (**PRIORITY**) port.

5. All Inbound Calls Routed to the DEVICE 1 Port

If all inbound calls are to be routed to the **DEVICE 1** port, set DIP switches **1 & 2 OFF** and **3** to the **ON** position, but do not program any caller ID numbers.

Product Support Line...715.386.8666

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