Designed, Manufactured and Supported in the USA

VIKING PRODUCT MANUAL

COMMUNICATION & SECURITY SOLUTIONS

LSD-2
Line Sharing Device
December 5, 2017

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 Quick Call Back. All other calls will be routed to the **DEVICE 1**. 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.* *Note: With some Central Office equipment, it may take up to 20 seconds to disconnect an incoming call to the non-priority device. The emergency device must be capable of delaying this long before dialing.*

Features

• **Adjustable disconnect time**

• 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 Quick 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

www.VikingElectronics.com
Information: 715-386-8861

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

Specifications

Power: 120VAC / 12VDC 500mA UL listed adapter provided
Dimensions: 5.25" x 3.5" x 1.75" (133mm x 89mm x 44mm)
Shipping Weight: 2 lbs (.9 kg)
Environmental: 32° F to 90° F (0° C to 32° C) with 5% to 95% non-condensing humidity
**Talk Battery:** 40V DC
Connections: 6 screw terminals

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.

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 port or other non-priority device to the terminal positions marked **DEVICE 1**.
Step 3	Connect the Emergency Phone, Alarm Panel or other priority device to the terminal positions marked **DEVICE 2 (PRIORITY)**.
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.
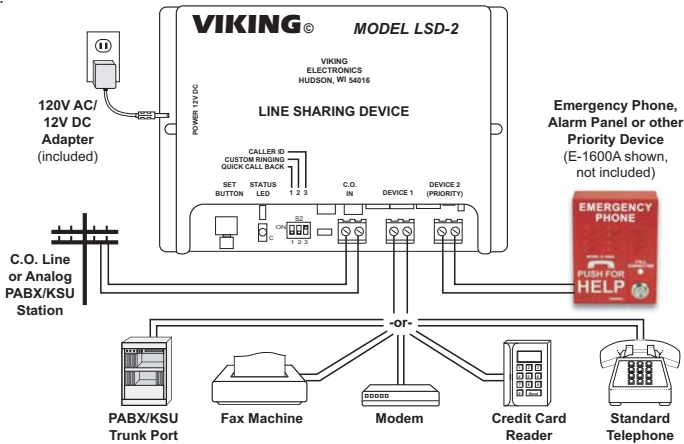

Programming

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. For more information on these modes, see **Operation** section **C**.

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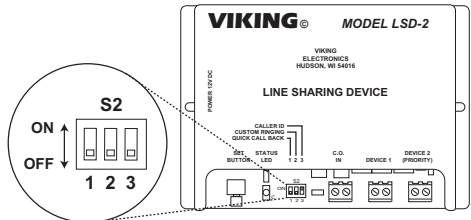
Note: When all switches are OFF, all inbound calls are routed to the DEVICE 2 (PRIORITY) port.

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	While the LED is flashing fast, push the **SET** button. This will store the new Caller ID number into memory 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 (PRIORITY)** 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 20 seconds.

Step 1	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	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**. If the LED flashes fast, the maximum setting has been exceeded.

*Important: Be sure that the auto-dialing device on the **DEVICE 2 (PRIORITY)** port can be programmed to provide a longer delay time than the **LSD-2**'s disconnect time. This assures that the auto-dialing device 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 Quick 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 are connected to an internally generated 40V DC 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. If the device attached 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 1-20 seconds), simulating a two second hang-up. The **LSD-2** then reconnects the **DEVICE 2 (PRIORITY)** port to the phone line. The device attached to the **DEVICE 2 (PRIORITY)** port receives fresh dial tone and is now able to dial out. 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

Anytime Device 2 (Priority) goes back on hook, the LSD-2 will continue to keep the phone line switched to Device 2 for an additional 60 seconds. This allows emergency personnel time to call back to Device 2 if the call had been disconnected.

1. Quick Call Back Mode (DIP 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 Mode (DIP 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 Mode (DIP 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.

Warranty

IF YOU HAVE A PROBLEM WITH A VIKING PRODUCT, CONTACT: VIKING TECHNICAL SUPPORT AT (715) 386-8666

Our Technical Support Department is available for assistance Monday through Friday 8am - 5pm central time. So that we can give you better service, before you call please:
1. Know the model number, the serial number and what software version you have (see serial label).
2. Have your Product Manual in front of you.
3. It is best if you are on site.

RETURNING PRODUCT FOR REPAIR
The following procedure is for equipment that needs repair:
1. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (RA) number. The customer MUST have a complete description of the problem, with all pertinent information regarding the defect, such as options set, conditions, symptoms, methods to duplicate problem, frequency of failure, etc.
2. Packing: Return equipment in original box or in proper packing so that damage will not occur while in transit. Static sensitive equipment such as a circuit board should be in an anti-static bag, sandwiched between foam and individually boxed. All equipment should be wrapped to avoid packing material lodging in or sticking to the equipment. Include ALL parts of the equipment. C.O.D. or freight collect shipments cannot be accepted. Ship cartons prepaid to: **Viking Electronics, 1531 Industrial Street, Hudson, WI 54016**
3. Return shipping address: Be sure to include your return shipping address inside the box. We cannot ship to a PO Box.
4. RA number on carton: In large printing, write the R.A. number on the outside of each carton being returned.

RETURNING PRODUCT FOR EXCHANGE
The following procedure is for equipment that has failed out-of-box (within 10 days of purchase):
1. Customer must contact Viking's Technical Support at 715-386-8666 to determine possible causes for the problem. The customer MUST be able to step through recommended tests for diagnosis.
2. If the Technical Support Product Specialist determines that the equipment is defective based on the customer's input and troubleshooting, a Return Authorization (R.A.) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.
3. After obtaining the R.A. number, return the approved equipment to your distributor, referencing the R.A. number. Your distributor will then replace the product over Viking using the same R.A. number.
4. **The distributor will NOT exchange this product without first obtaining the R.A. number from you. If you haven't followed the steps listed in 1, 2 and 3, be aware that you will have to pay a restocking charge.**

TWO YEAR LIMITED WARRANTY

Viking warrants its products to be free from defects in the workmanship or materials, under normal use and service, for a period of two years from the date of purchase from any authorized Viking distributor. If at any time during the warranty period, the product is deemed defective or malfunctions, return the product to Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI., 54016. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (R.A.) number.

This warranty does not cover any damage to the product due to lightning, over voltage, under voltage, accident, misuse, abuse, negligence or any damage caused by use of the product by the purchaser or others. This warranty does not cover non-EWP products that have been exposed to wet or corrosive environments. This warranty does not cover stainless steel surfaces that have not been properly maintained.

NO OTHER WARRANTIES. VIKING MAKES NO WARRANTIES RELATING TO ITS PRODUCTS OTHER THAN AS DESCRIBED ABOVE AND DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

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Product Support: (715) 386-8666

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