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.

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

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

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

**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.

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

**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.

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![Diagram of LSD-2 setup]

**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.

<table>
<thead>
<tr>
<th>Switch</th>
<th>Position</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ON</td>
<td>Quick Call Back Mode</td>
</tr>
<tr>
<td>1</td>
<td>OFF</td>
<td>Disable Quick Call Back Mode</td>
</tr>
<tr>
<td>2</td>
<td>ON</td>
<td>Distinctive Ring Mode)</td>
</tr>
<tr>
<td>2</td>
<td>OFF</td>
<td>Disable Distinctive Ring Mode</td>
</tr>
<tr>
<td>3</td>
<td>ON</td>
<td>Caller ID Mode</td>
</tr>
<tr>
<td>3</td>
<td>OFF</td>
<td>Disable Caller ID Mode</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Step</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Move DIP switch 3 to the ON position.</td>
</tr>
<tr>
<td>Step 2</td>
<td>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.</td>
</tr>
<tr>
<td>Step 3</td>
<td>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.</td>
</tr>
</tbody>
</table>

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.

A. LED Status

<table>
<thead>
<tr>
<th>LED Status</th>
<th>Operation</th>
</tr>
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<tbody>
<tr>
<td>Lit up</td>
<td>Power is applied to the LSD-2.</td>
</tr>
<tr>
<td>Flash</td>
<td>The LSD-2 is active.</td>
</tr>
<tr>
<td>Flash after Ring</td>
<td>In the Quick Call Back mode, the LED will continue to flash for 20 seconds.</td>
</tr>
<tr>
<td>Fast Flash</td>
<td>In the Caller ID mode, the LED will fast flash if a Caller ID number is received that is not in memory.</td>
</tr>
</tbody>
</table>

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.

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**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).
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.

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**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.

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**Product Support: (715) 386-8666**

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