

# Innovative Line Sharing Solutions

A multi-line sharing solution that can **Save you thousands of dollars per year by reducing your telephone line costs!**

Plug and Play installation – No programming, software or network required!



## Multi-Line Sharing Switches by



Made in USA

# 3i innovative ideas inc. Voice and Line Sharing Solutions

3i's mission is to develop, manufacture and market innovative telecommunications products that provide simple and cost-effective solutions to otherwise complex problems.

3i's first mission was to design and manufacture a series of unique multi-line sharing switches that would allow a business to share a maximum quantity of IST devices (modems, fax/modems, fax machines, credit card terminals, etc ... ) with the minimum quantity of telephone lines to support the IST'S.

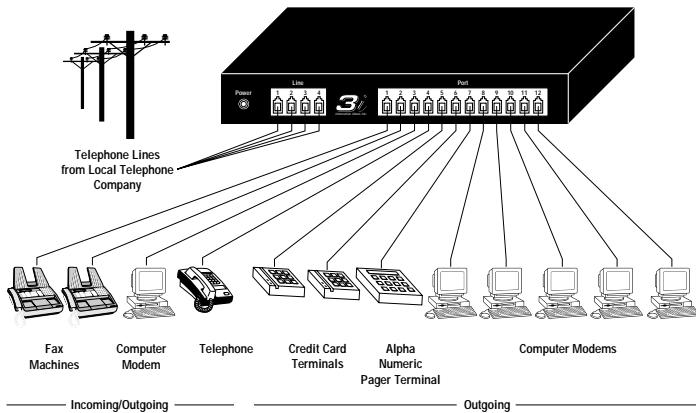
3i set forth four primary features the Multi-Line Sharing Switch (MLSS) product line must have to provide the maximum benefit to the business customer:

1. It must provide a cost savings to the customer.
2. It must be easy to install, program and use.
3. It must be expandable.
4. It must transmit data at the highest level of speed allowable present and future on a business telephone line.

3i offers three versions of the MLSS. Two plug and play versions which are factory preprogrammed for most applications - no programming, software or computer network is required. The programmable MLSS models provide unlimited flexibility in call handling and call routing.

## Applications

### Sharing Dedicated Telephone Lines



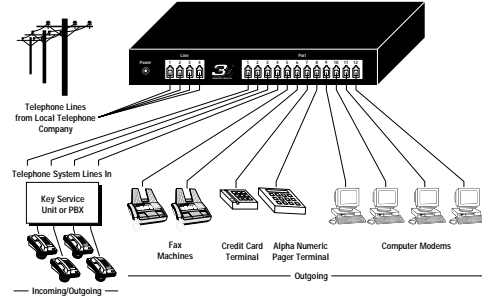
#### Application

To allow a maximum quantity of Industry Standard Telephone (IST) devices such as fax machines, modems, fax/modems, credit card terminals, and telephones to share a minimum quantity of telephone lines, thus saving a company the installation costs and monthly line charges associated with dedicated telephone lines. Many IST devices are utilized only once or several times during the business day and/or week; therefore, a dedicated telephone line connected 24 hours, seven days per week exclusively to each IST device is not required.

#### Customer Profile

Any business that presently utilizes dedicated telephone lines or expensive extensions on their telephone system to operate two or more industry standard telephone (IST) devices. Any company with at least two (2) or three (3) office employees utilizing fax machines, computer modems, credit card terminals, and/or any other IST device can benefit from the line sharing and cost savings features of the MLSS.

### Sharing Lines with Existing Telephone System



#### Application

To allow industry standard telephone (IST) devices such as fax machines, modems, fax/modems, and credit card terminals to share telephone lines with a company's telephone system, thus saving a company the installation costs and monthly line charges associated with dedicated lines. Many IST devices are utilized only once or several times during the business day and/or week; therefore, a dedicated telephone line connected 24 hours, seven days per week exclusively to each IST is not required.

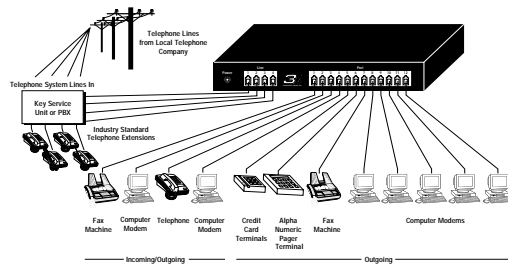
#### Several options exist, depending on a company's situation:

1. A company can share all or some of its telephone system lines with the MLSS.
2. A company can share some of its "dedicated" telephone lines and some of its "dedicated" telephone lines with the MLSS.
3. A company can install its "old dedicated lines" onto the telephone system, and then share these lines with the telephone system and the MLSS.

#### Customer Profile

Any business that presently utilizes dedicated telephone lines or expensive extensions on their telephone system to operate two or more IST devices. In this application, the MLSS installs in front of the company's telephone system. The MLSS is compatible with most telephone systems: analog or digital, 1A2, Electronic Key, or PBX.

### Sharing Extensions with Existing Telephone System



#### Application

To allow a maximum quantity of industry standard telephone (IST) devices such as fax machines, modems, fax/modems, credit card terminals, and telephones to share industry standard telephone extensions with a company's telephone system, thus saving a company the installation costs and monthly line charges associated with dedicated lines.

Many IST devices are utilized only once or several times during the business day and/or week; therefore, a dedicated telephone line or telephone extension connected 24 hours, seven days per week exclusively to each IST device is not required.

#### Customer Profile

Any business that presently utilizes dedicated telephone lines or industry standard telephone extensions on their telephone system to operate two or more IST devices. In this application, the MLSS connects directly to a telephone system's industry standard telephone extension ports (if available). The MLSS is compatible with most telephone systems, analog or digital, as long as the telephone system provides industry standard telephone (IST) extensions.

The MLSS can benefit any business that needs to add IST devices and their telephone system is at or near its capacity, and/or the price of the MLSS is much less than adding additional expansion cards to their telephone system.

# 3i Multi-Line Sharing Switches

## Plug and Play MLSS

3i offers two versions of the Plug and Play MLSS. The Incoming/Outgoing Multi-Line Sharing Switches are designed to allow both incoming and outgoing calls. The Outgoing Multi-Line Sharing Switches are designed for applications where only outgoing calls are necessary.

### Plug and Play Installation

3i's MLSS does not require programming, software or a computer network. Installation is simple and easy - connect the modular cords from the IST devices and telephone lines to the MLSS, and plug the AC transformer into an electrical outlet and installation is complete.

### Outbound Calling

Any IST device connected to a port on the MLSS can access dial tone to make an outbound call. The quantity of IST devices that can be in use simultaneously is equal to the quantity of telephone lines connected to the MLSS.

### Inbound Calling

Incoming calls to the first line ports of the MLSS are passed directly through to the first IST ports. Therefore, the quantity of IST devices that can accept incoming calls is equal to the quantity of telephone lines connected to the MLSS. (Incoming/Outgoing Versions) **Example:** Four (4) IST devices (Ports 1-4) can receive incoming calls if four (4) telephone lines are connected to the MLSS.

### Expandability and Networking

Each of 3i's Multiple-Line Sharing Switches are able to be expanded or networked together to provide additional IST device ports, telephone line ports or both. All models of the 4 x 12 Multi-Line Sharing Switch are expandable with the corresponding 4 x 12 expansion kit allowing a 4 x 12 MLSS to expand into an 8 x 24 MLSS.

Networking two or more MLSS's together satisfies the requirements of large applications. For example, two 824 MLSS's networked together can provide an 8 line by 40 device solution.

3i's MLSS can be configured in any combination of lines and IST devices that a company desires. **Example:** An 824 MLSS can be configured 3 lines by 20 devices or 8 lines by 12 devices. Simply plug in the telephone lines and IST devices and the MLSS handles the rest!

### Data Transmission Speed

3i's MLSS has been designed to transmit data at the highest level of speed allowable present and future on a business telephone line.

### Power Failure Transfer

3i's MLSS provides straight through connections of all lines on power-off. Line port one will connect directly through to IST port one. Line port two will connect directly through to IST port two, etc. The quantity of telephone lines connected to the MLSS determines the quantity of straight through power fail connections available.

### Surge Protection

3i's MLSS meets or exceeds all FCC Part 68 requirements for surge protection on the telephone lines. The electrical transformer is UL listed; however, an electrical surge protector is recommended to protect against electrical surges and spikes.

## Programmable MLSS

3i's programmable line of Multi-Line Sharing Switches has all of the features of the plug and play models plus the following:

### Outbound Calling

Each IST port can be programmed to allow outbound calling on all or selected lines in any outbound calling sequence.

### Inbound Calling

Each line port can be programmed to direct ringing to any IST port, or to answer the incoming call and listen for CNG (Fax) tone or DTMF tones to direct the call to any IST port. All IST ports can accept incoming calls.

### Call Routing

Each IST port can be programmed to forward incoming calls to another IST port on a ring no answer (RNA) or busy condition. This is a great feature for modem and fax pooling.

### Menu Driven Programming

3i's MLSS is programmed using a standard ASCII serial terminal. A simple serial connection from the MLSS to a PC with communications software provides the communications link. The programming is provided in an easy to follow menu driven format. Programming can be uploaded and downloaded to disk for backup purposes.

### Remote Programming

3i's MLSS can be programmed from any remote location using a Hayes compatible modem. Connect the telephone line cord from the modem into any of the MLSS's IST ports, and connect the serial DB9 connectorized cable from the modem to the MLSS and you're ready to program the MLSS from anywhere in the world! The greatest feature is that you do not need a dedicated telephone line. The remote programming modem shares the telephone lines that are already connected to the MLSS!

### Non-Volatile Memory

The MLSS retains its programming during power outages and while the MLSS is electrically unplugged. When the electrical power comes on, the MLSS is ready to go.

### Security

3i's MLSS provides several levels of security. Only authorized employees with the user programmable password can access the MLSS for programming purposes. Unauthorized calls to modems and other devices can be protected by restricting incoming access.



**306MLSS**



**412MLSS**



**824MLSS**

# Specifications

## Plug and Play – Outgoing

Product No.	Initial Size Lines x IST's	Optional Expansion	Mounting Options
412MLSS-O	4 x 12	412EXP-O*	Desk/Wall
412EXP-O	4 x 12	**	N/A
824MLSS-O	8 x 24	**	Desk/Wall
1236MLSS-O	12 x 36	**	Desk/19" Rack
1648MLSS-O	16 x 48	**	Desk/19" Rack

\* Expanding the 412MLSS-O with the 412EXP-O Expansion Module provides a total capacity of 8 lines and 24 devices.

\*\* All models of the MLSS can be networked together to provide additional IST device ports, telephone line ports or both.

## Plug and Play – Incoming/Outgoing

Product No.	Initial Size Lines x IST's	Optional Expansion	Mounting Options
306MLSS	3 x 6	**	Desk/Wall
412MLSS	4 x 12	412EXP*	Desk/Wall
412EXP	4 x 12	**	N/A
824MLSS	8 x 24	**	Desk/Wall
1236MLSS	12 x 48	**	Desk/19" Rack
1648MLSS	16 x 48	**	Desk/19" Rack

\* Expanding the 412MLSS with the 412EXP Expansion Module provides a total capacity of 8 lines and 24 devices.

\*\* All models of the MLSS can be networked together to provide additional IST device ports, telephone line ports or both.

## Programmable

Product No.	Initial Size Lines x IST's	Optional Expansion	Mounting Options
306MLSS-P	3 x 6	**	Desk/Wall
412MLSS-P	4 x 12	412EXP-P*	Desk/Wall
412EXP-P	4 x 12	**	N/A
824MLSS-P	8 x 24	**	Desk/Wall
1236MLSS-P	12 x 48	**	Desk/19" Rack
1648MLSS-P	16 x 48	**	Desk/19" Rack

\* Expanding the 412MLSS-P with the 412EXP-P Expansion Module provides a total capacity of 8 lines and 24 devices.

\*\* All models of the MLSS can be networked together to provide additional IST device ports, telephone line ports or both.

## Power Requirements

Wall mount AC adapter  
9 VDC 1.0 amp, 115 VAC, 60 Hz, UL Listed 81J1, E81356, CSA  
1236MLSS & 1648MLSS utilize two wall mount AC adapters

## Size

306MLSS 2.45"H x 6.20"W x 10.20"D  
412MLSS 2.45"H x 11.45"W x 10.20"D  
824MLSS 4.25"H x 11.45"W x 10.20"D  
1236MLSS 5.25"H x 19"W x 10.20"D  
1648MLSS 7.0"H x 19"W x 10.20"D

## Weight

306MLSS, 4 lbs.  
412MLSS, 5 lbs.  
824MLSS, 8 lbs.  
1236MLSS, 11 lbs.  
1648MLSS, 14 lbs.

## Status Indicators

Power-on LED  
Telephone line-in-use LED for each port  
IST device-in-use LED for each port

## User Connections

RJ11 modular jacks for telephone lines  
RJ11 modular jacks for Industry Standard Telephone (IST) devices  
2 RJ11 modular jacks for serial RS232 interface  
Mini-jack for power supply

## Warranty

One Year limited warranty

## Agency Approvals

FCC Part 68 registered  
FCC Part 15 registered  
Ringer equivalence 0.7B  
UL Listed 81J1, E81356, CSA – Power Supply

## Savings Analysis

<b>STEP 1</b>	Line Installation Charge (This is the price your local telephone company charges for the installation of one new telephone line.)	\$ _____
<b>STEP 2</b>	Quantity of Lines Saved (The amount of lines that you do not need to order from your local telephone company because you are using 3i's MLSS.)	_____
<b>STEP 3</b>	Line Installation Charges Saved(Multiply: Step 1 x Step 2)	\$ _____
<b>STEP 4</b>	Monthly Line Charge (This is the monthly line charge, plus all taxes and associated charges that your local telephone company charges each month for the use of one line.)	\$ _____
<b>STEP 5</b>	Monthly Line Charge Saved(Multiply: Step 2 x Step 4)	\$ _____
<b>STEP 6</b>	Yearly Line Charge Saved (Multiply: Step 5 x 12)	\$ _____
<b>STEP 7</b>	First Year Savings (Add: Step 3 + Step 6)	\$ _____
<b>STEP 8</b>	Line Sharing Equipment Price (The price you are paying for 3i's MLSS)	\$ _____
<b>STEP 9</b>	Break-Even Factor (Divide: Step 8 divided by Step 7)	_____
<b>STEP 10</b>	Months to Pay Back - Break-Even (Multiply: Step 9 x 12)	_____
<b>STEP 11</b>	Yearly Savings After Break-Even (Multiply: Step 5 x 12)	\$ _____ Yearly Savings

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