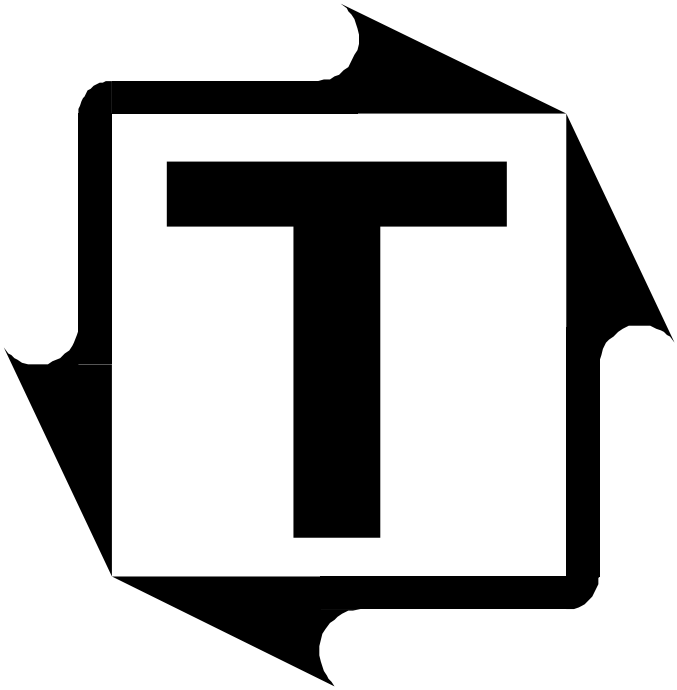

SlimWare
Line Panel
User's Manual

Revision: B

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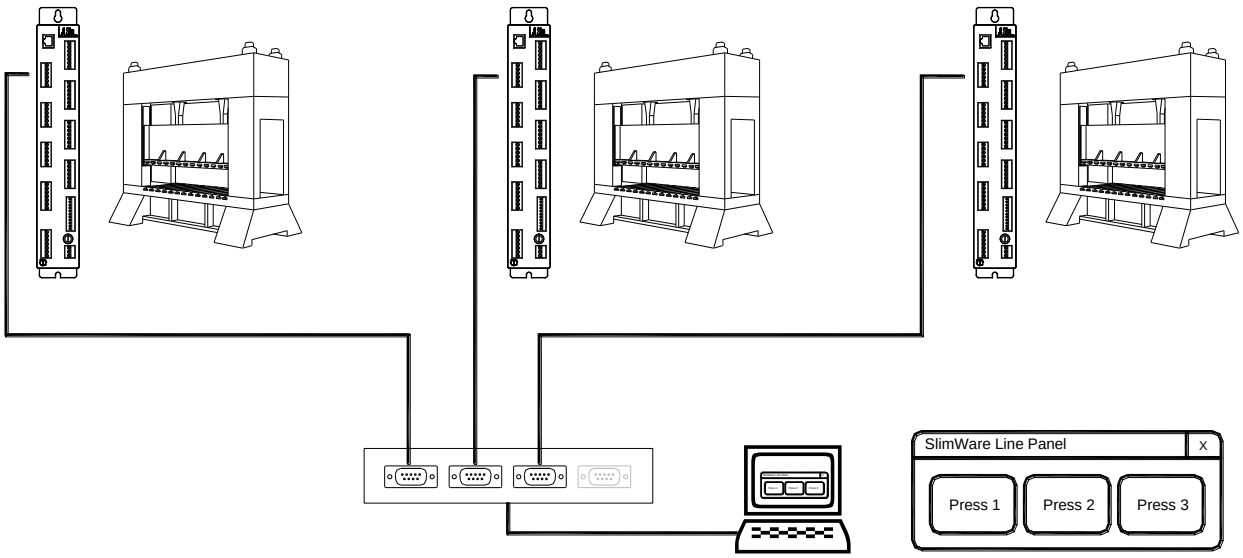
1: Overview

SlimWare Line Panel is an enhanced version of Toledo Integrated Systems' SlimWare 5 tonnage monitoring software. The Line Panel allows a single computer to communicate with a group of SLIM tonnage monitors for situations where a dedicated HMI at every press is not necessary.

The Line Panel manages the SlimWare interface for up to eight presses. It acts as a quick reference of each press's status and allows the user to quickly switch from one press interface to another.

This manual covers the installation, configuration, and usage of the SlimWare Line Panel and the required communication equipment and wiring. For a detailed description of the SLIM tonnage monitor and the SlimWare 5 software, refer to those products' user manuals.



The setup process for the SlimWare Line Panel system is summarized in the following steps:

1) Install SLIM tonnage monitors and tonnage sensors. Refer to SLIM User's Manual.
2) Install communication hardware and wiring.
3) Install SlimWare Line Panel software on press line computer.
4) Configure the Line Panel software for your installation.

2: Communication Hardware Installation

The SlimWare Line Panel controls up to eight SLIM tonnage monitors via RS485 serial communication and requires one dedicated COM port per SLIM. Because most computers have only one, two, or sometimes no serial ports, Toledo Integrated Systems recommends the use of a high-speed USB-to-Multiple COM port adapter. These adapters are available from Toledo Integrated Systems and come in 4-port or 8-port configurations.

Refer to the Appendix at the end of this manual for details regarding the installation and wiring of these adapters.

3: Software Installation

In order to install and run SlimWare Line Panel, the installation computer must meet the following requirements:

- Microsoft Windows XP operating system or later*
- Microsoft .Net Framework 3.5
- One available RS485 serial port per SLIM unit (see the previous section for details).

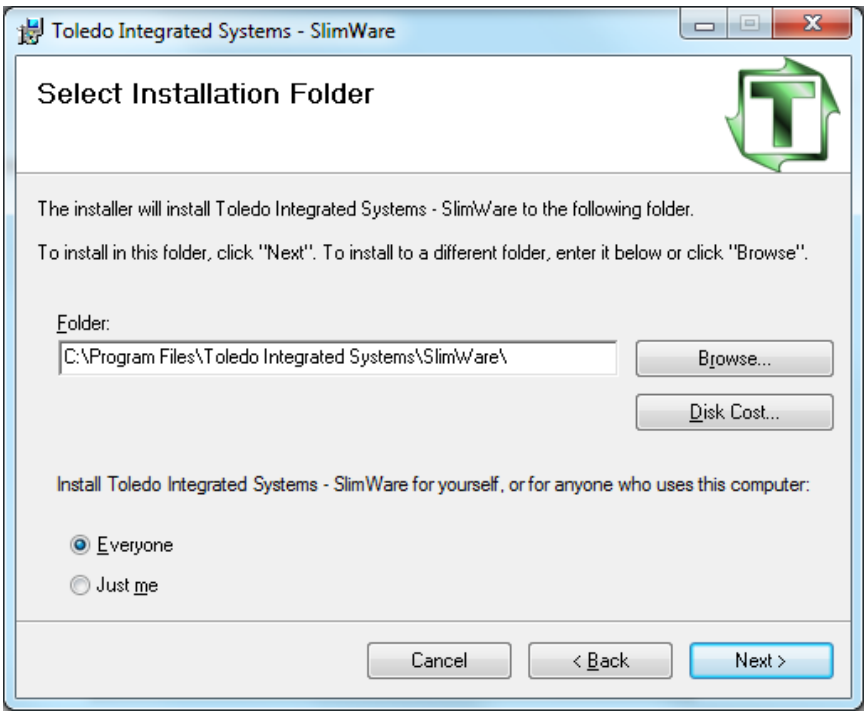
*Installation on Windows 2000 operating system requires addition steps for installation. Contact Toledo Integrated Systems for assistance.

In addition, you must be logged into Windows using an account with sufficient administrative privileges in order to install SlimWare Line Panel.

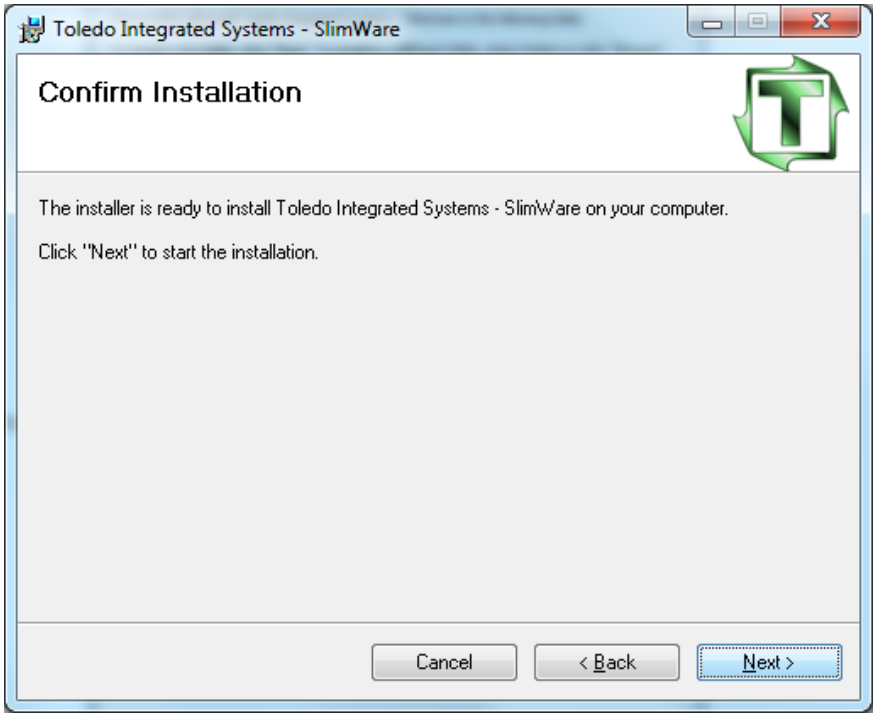
To begin installation, double-click the **setup.exe** installation file from the SlimWare PC. If the required supporting software has not yet been installed, you will be prompted to install them first. The SlimWare Setup Wizard will then start.

Click **Next>**.

On the next screen, specify the installation location and who will use SlimWare.

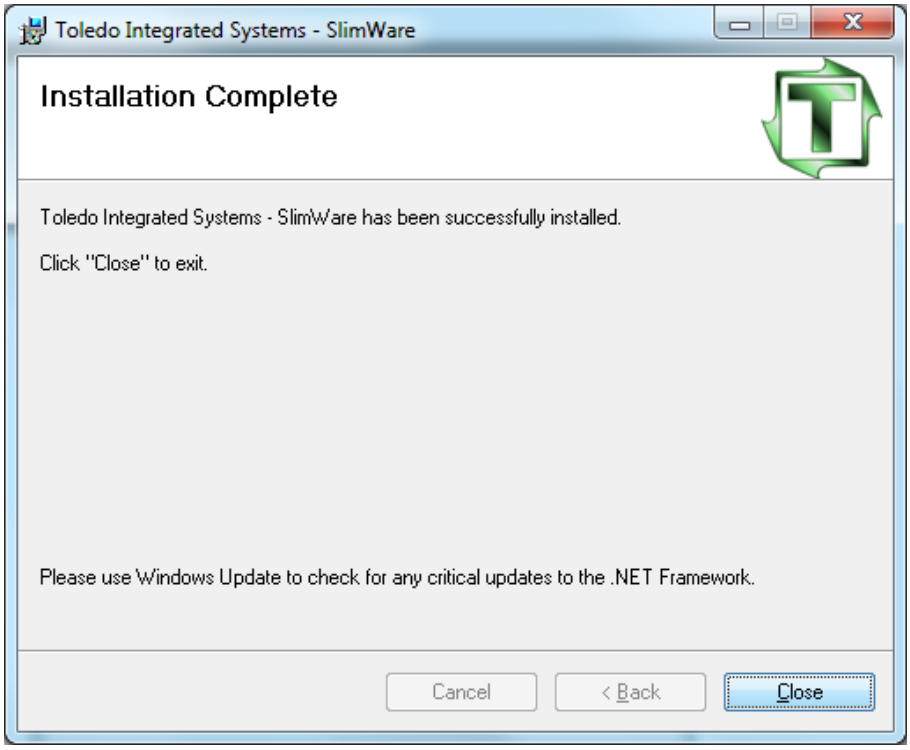


In most cases, you should accept the defaults and click **Next>**.



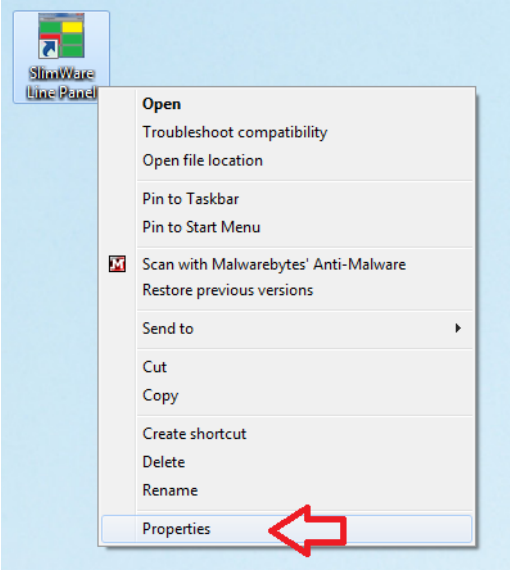
Finally, confirm the installation by clicking **Next>**.

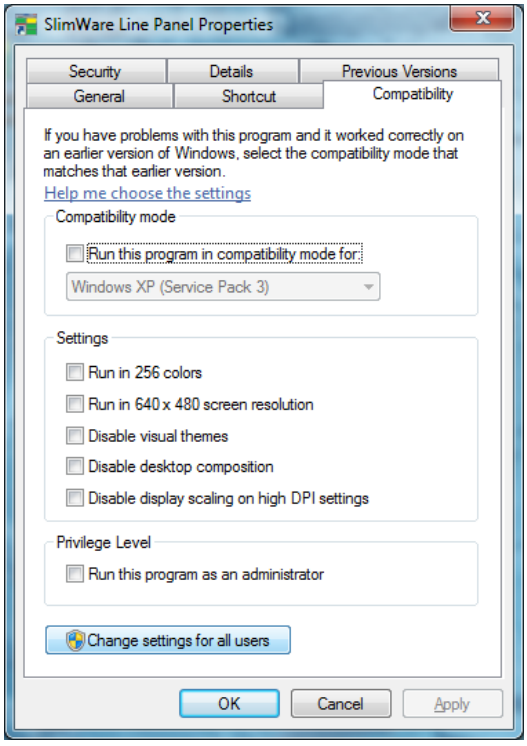
When the installation completes, click **Close** to exit the wizard.

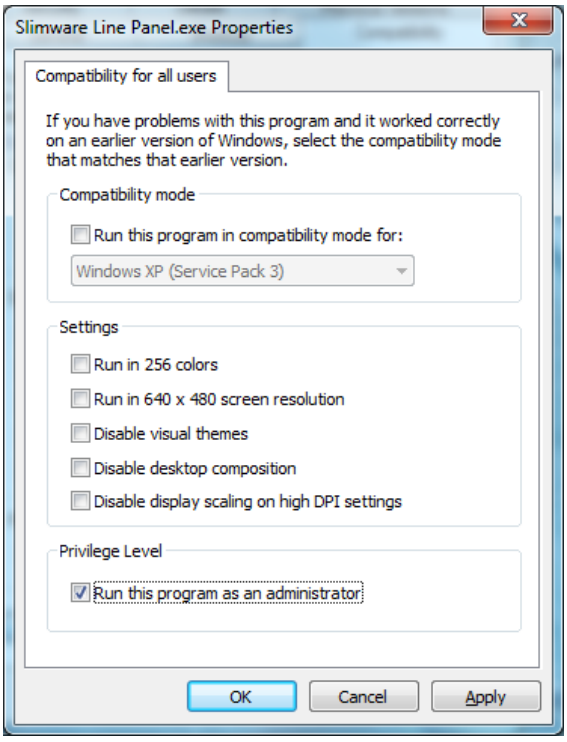


Post-installation note for Windows 7 users:

By default, Windows 7 blocks SlimWare Line Panel's access to required files. To allow access, right-click the SlimWare Line Panel shortcut on the desktop and choose **Properties**.





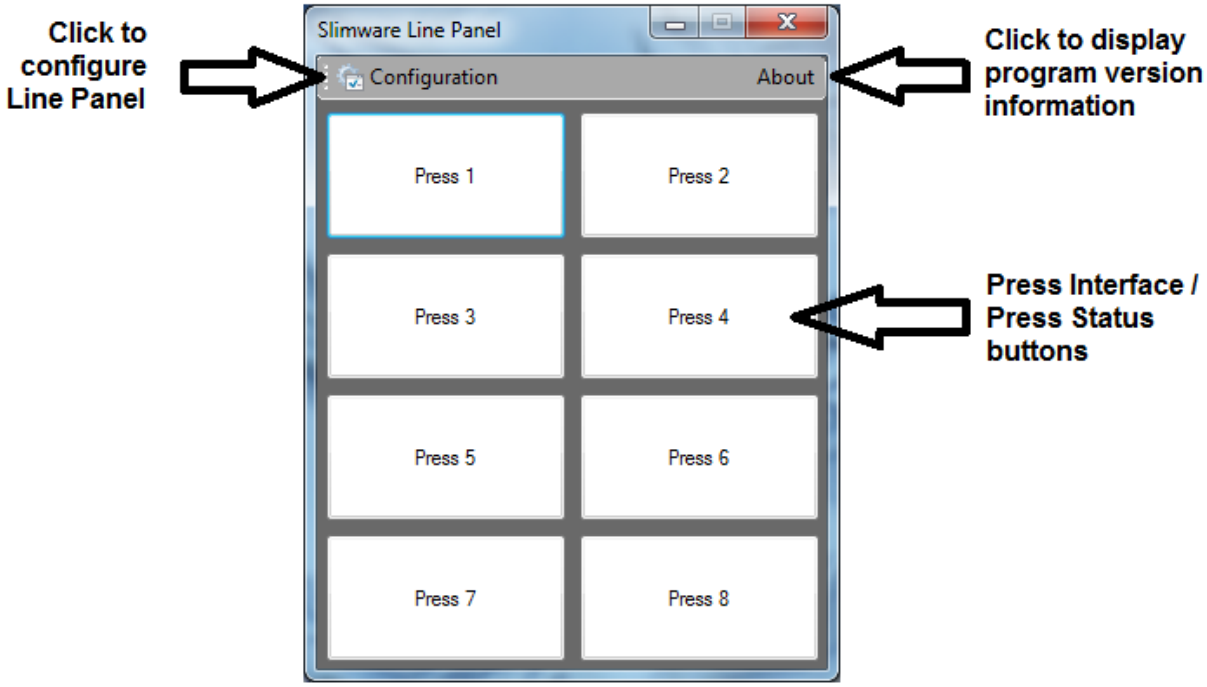


Select the **Compatibility** tab and click the **Change settings for all users** button. In the resulting dialog box, locate the **Privilege Level** section and check the box labeled **Run this program as an administrator**. Click **Apply**, then close the opened dialog boxes.

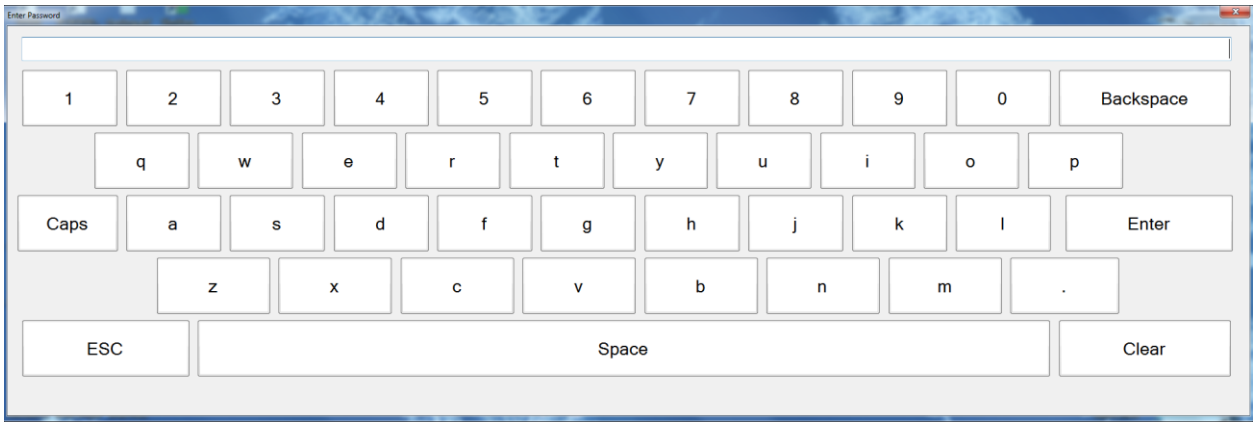
4: Configuration

After installing SlimWare Line Panel, start the program by clicking **Start→All Programs→Toledo Integrated Systems→SlimWare→SlimWare Line Panel**, or by double-clicking the SlimWare Line Panel desktop shortcut.

The SlimWare Line Panel will appear.

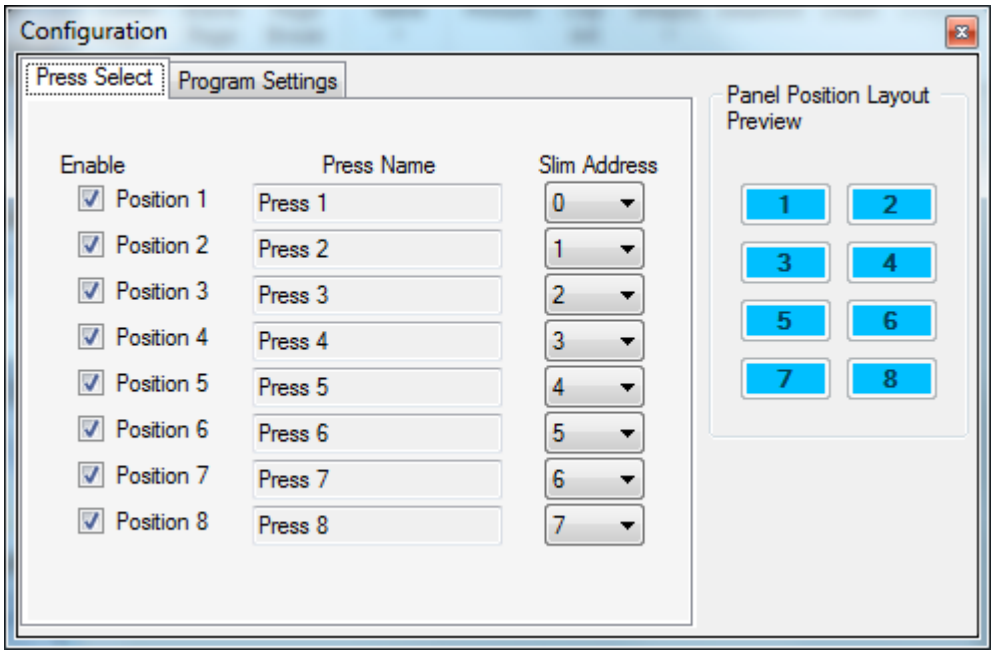


To get started, click the **Configuration** button. The Line Panel's configuration is password-protected. You must enter the SlimWare master password in order to make changes. By default, the master password is "**m**". This can be changed later from SlimWare (refer to the SlimWare User's Manual for instructions on changing the password).



Press Select Configuration:

The SlimWare Line Panel can control up to eight SLIM tonnage monitors, each monitoring its own press. The SLIMs/presses are represented by buttons on the Line Panel, which are assigned to certain positions. When you open the Line Panel Configuration, the first item that you see will be the **Press Select** tab.



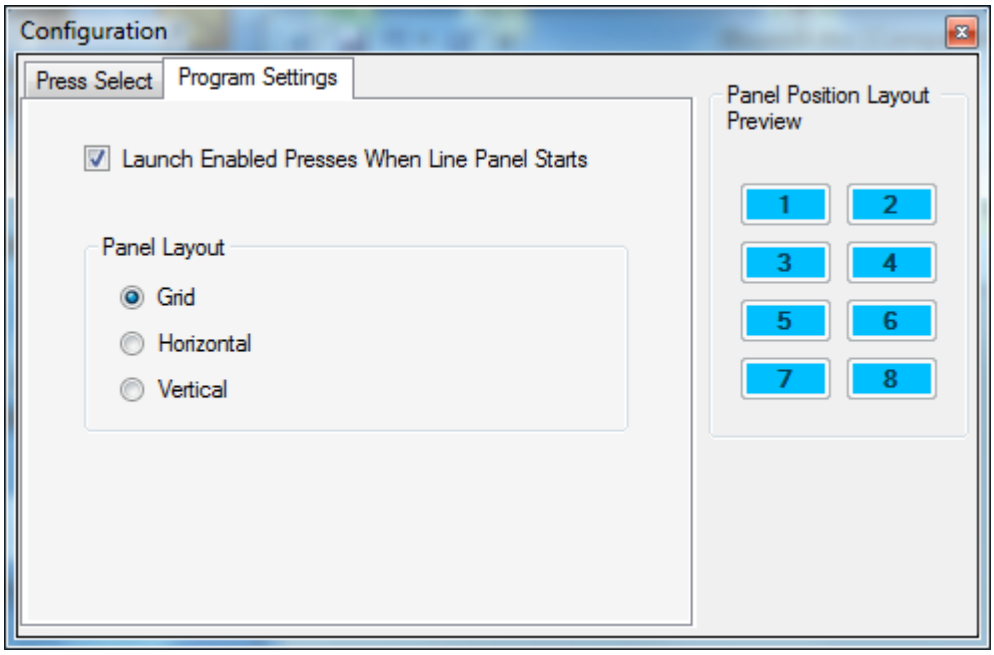
This tab allows you to select which press is configured for each position. The eight panel positions are represented in the **Panel Position Layout Preview** for reference on the right side of the configuration dialog.

The Press Select options are explained below:

- **Enable**
  Check each box to include the corresponding position in the Line Panel. Uncheck any position that you wish to exclude from the Line Panel. For instance, if your press line consists of 5 presses, uncheck positions 6, 7, and 8. Note that you do not need to select the positions in any certain sequence. Choose the combination of positions that best represents the layout of your press line.
- **Press Name**
  The name of the press for the corresponding panel position. This name is displayed here for reference only. You may assign the name from within SlimWare (see the Configuration Walkthrough Example for details).
- **Slim Address**
  This is the unique communication address assigned to the SLIM that is installed on the corresponding press. Each SLIM on the press line must be configured for a different address. The address is assigned from within SlimWare (see the Configuration Walkthrough Example for details).

Program Settings Configuration:

The **Program Settings** configuration tab allows you to customize the appearance and startup behavior of the SlimWare Line Panel program.



The Program Settings options are explained below:

- **Launch Enabled Presses When Line Panel Starts**
  Check this box if you want the SlimWare interface for each enabled press to launch automatically when the Line Panel program is started. If you prefer to start the desired press interfaces manually, leave this box unchecked.
- **Panel Layout**
  Allows you to choose a panel position layout that best represents the appearance of your press line. The choices are:

Grid:

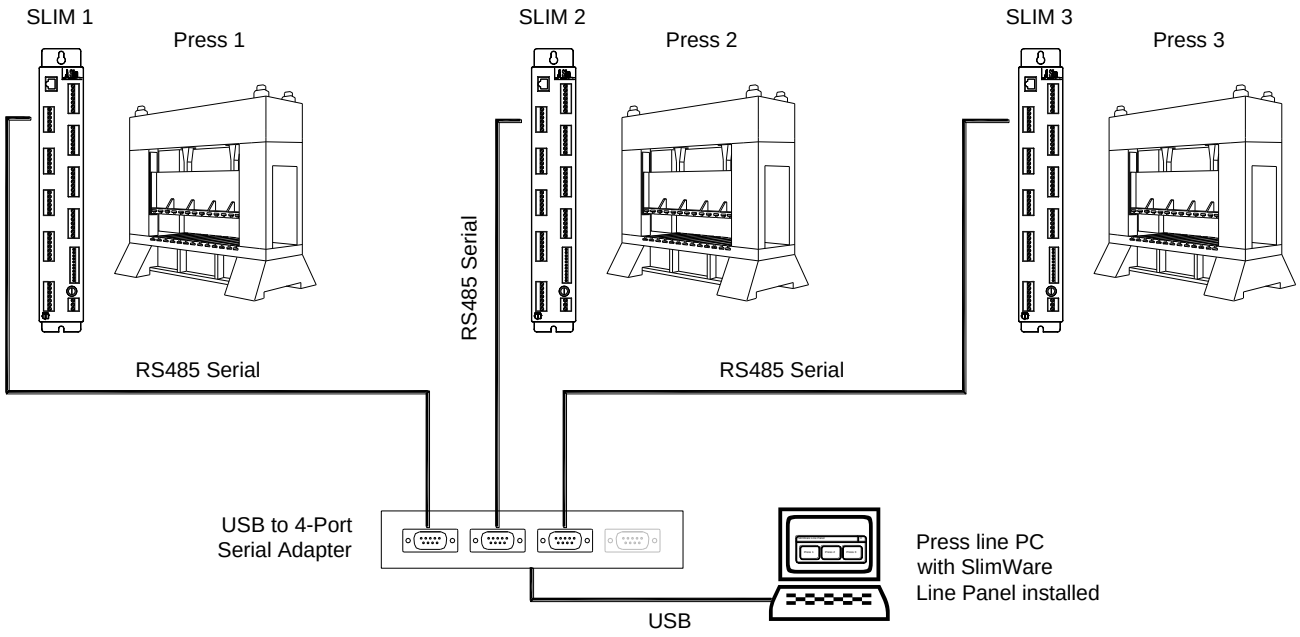
Vertical:

Horizontal:

5: Configuration Walkthrough Example

In order to demonstrate the SlimWare Line Panel software configuration, consider the following example:

A press line has three stamping presses in close proximity with a SLIM tonnage monitor and load cells installed on each. A single press line computer is connected to a USB-to-Serial adapter with 4 DB9 serial ports. The first serial port is wired to the RS485-1 port of the SLIM on Press 1, the second serial port is wired to the RS485-1 port of the SLIM on Press 2, and the third serial port is wired to the RS485-1 port of the SLIM on Press 3.



Next, we will begin configuring SlimWare Line Panel on the press line PC.

1) **Record serial port information.**
Go to the press line PC and open the Windows Device Manager. Under the Ports section, look for the group of COM ports that installed when the USB to Serial adapter was connected. If unsure, disconnect the USB plug of the adapter and plug it back in while watching the ports in Device Manager to see which ports reappear. The lowest COM port number in this group should correspond to the adapter's first port, the second lowest should correspond to the adapter's second port, and so on.

For our example, the adapter's first port will be COM5, the second port will be COM6, and the third port will be COM7.

Document the Windows Com Port #'s on the **Configuration Record worksheet** located in the Appendix.

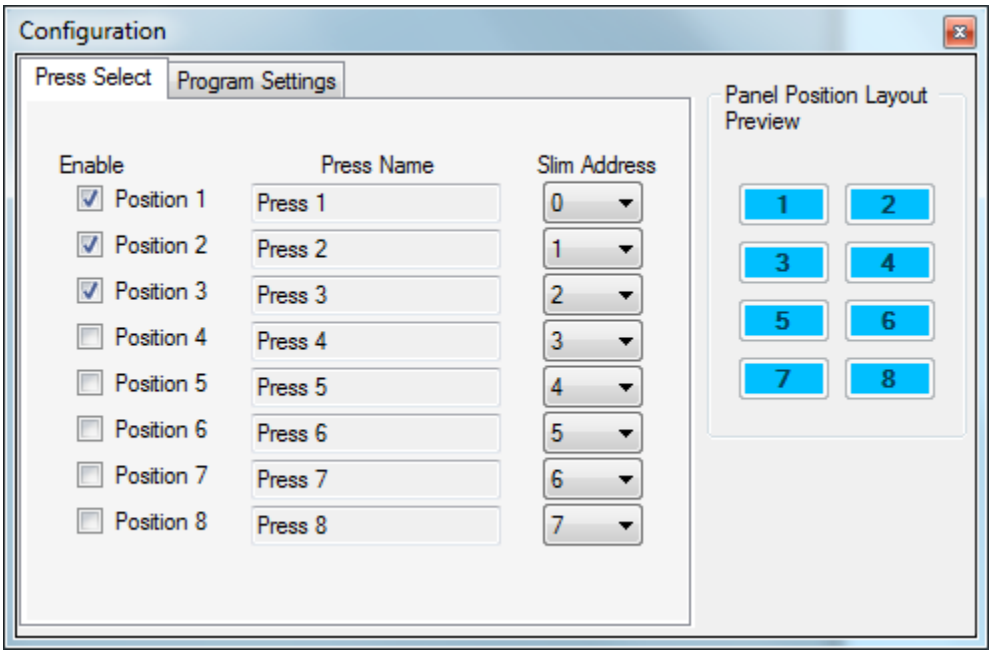
2) **Start the SlimWare Line Panel.**
The default Line Panel user interface will appear.

3) **Open the Line Panel Configuration.**
Click the Configuration button on the Line Panel's menu bar. The password entry keyboard appears. You must enter the SlimWare master password to gain access to the configuration dialog. The default SlimWare master password is "**m**". Click the keypad's "**m**" button, followed by the "**Enter**" button. The configuration dialog will appear.

4) Disable any unused presses.

The Line Panel buttons each represent a SLIM/press. The configuration dialog designates a layout "position" to each button, which can be previewed on the right side of the dialog. Uncheck any unused positions.

For our example, we have three SLIMs/presses, so we should uncheck positions 4-8.



Note that the press names listed are read-only. These can be configured later.

5) Configure Slim Addresses.

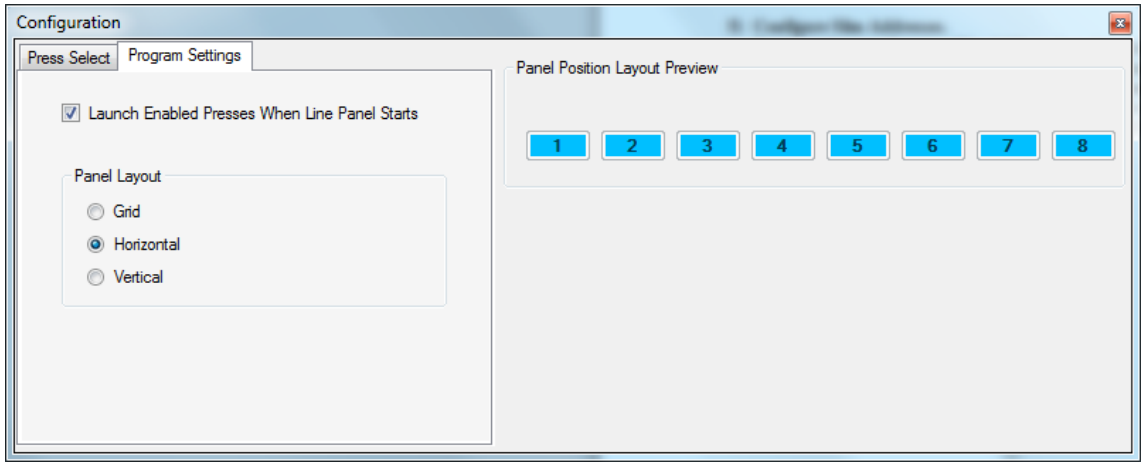
Next to each press name there is a **Slim Address** drop-down box that allows you to select a unique communication address of 0-31 for each SLIM tonnage monitor. Just remember to set each address to a different number to avoid any conflicts. Unless you have a good reason to configure them otherwise, you should just leave the first press configured for address 0, the second press configured for address 1, and the third press configured for address 2.

Document the SLIM Addresses on the **Configuration Record worksheet** located in the Appendix.

6) Configure Program Settings.

Click the **Program Settings** tab of the configuration dialog. Here, you can choose if you prefer to have the Line Panel automatically launch the SlimWare interface for each enabled press when the Line Panel starts. If you leave this option unchecked, you will have to click each press's button to launch its interface.

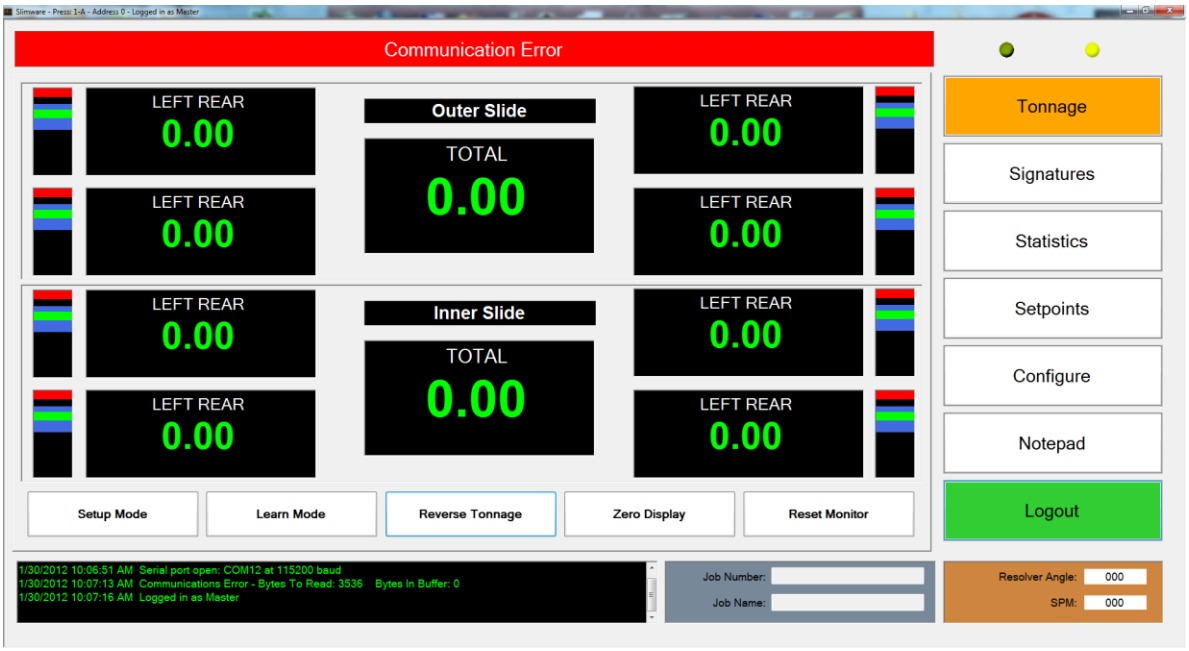
On the **Program Settings** tab, you may also choose a panel button layout to better match the physical layout of the press line. The panel layout preview changes as you click on the various layouts. For our example, we will choose the horizontal layout.



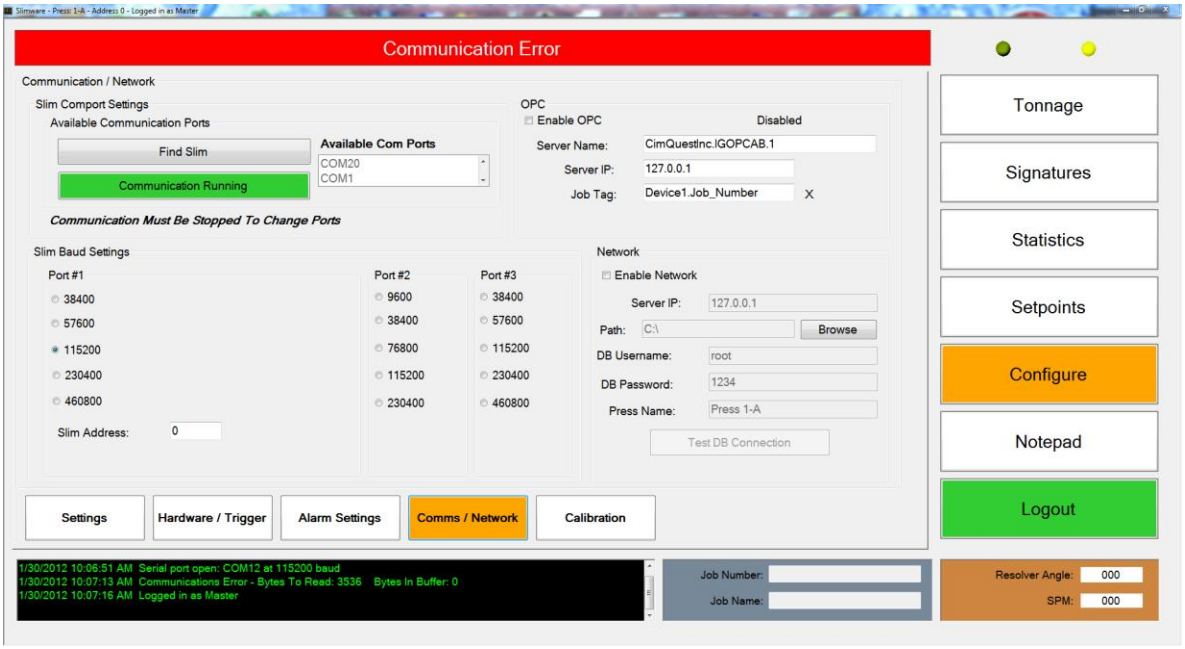
This completes the Line Panel configuration. Click the "X" in the upper-right corner of the configuration dialog to close it. The Line Panel will now resemble the following figure.

7) Launch the SlimWare interface for Press 1.

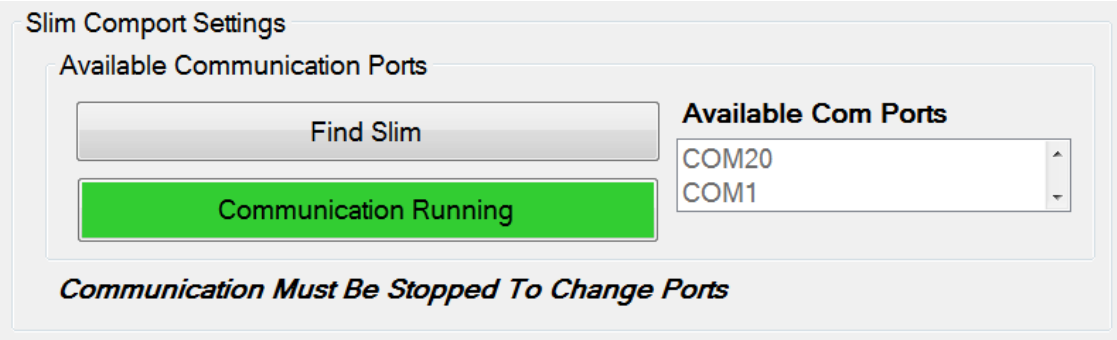
Click the Line Panel's **Press 1** button. The SlimWare interface program will launch and minimize to the Windows task bar. Click the SlimWare button on the task bar to view it, or click the Line Panel's Press 1 button again. Typically, after a short delay, SlimWare will report a communication error. We will next configure SlimWare with the proper settings to establish communication.



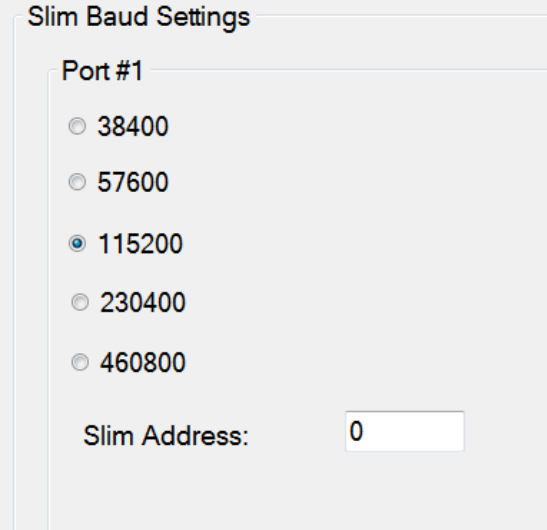
8) Establish communication with Press 1's SLIM tonnage monitor.
In SlimWare, click the **Configure** button on the right edge of the screen to enter the configuration page. Next, click the **Comms/Network** button near the bottom of the screen. You should see the following.



Click the green **Communication Running** button, then select the Com Port that is assigned to Press 1 (COM5 in our example) from the **Available Com Ports** list. Click the yellow **Communication Not Running** button to open the Com Port. If communication does not start, click the **Find Slim** button and wait until communication is established.

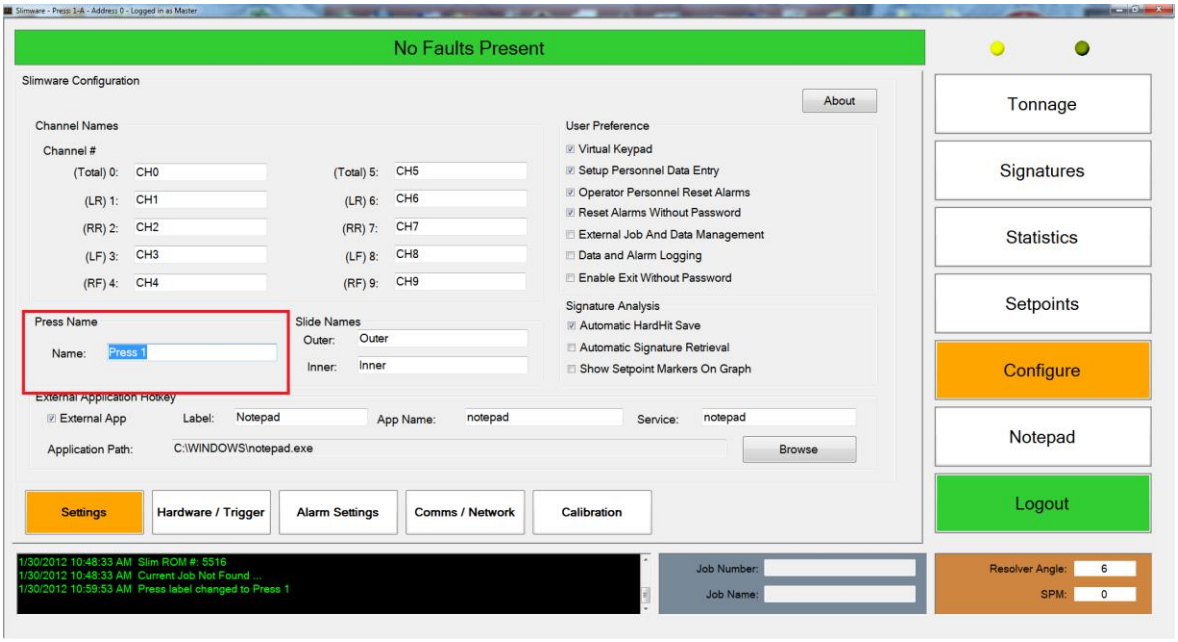


9) Assign Slim address.
While still on SlimWare's **Comms/Network** page, set the **Slim Address** to 0.



10) Assign the press name.

While SlimWare's **Configure** button is selected, click the **Settings** button near the bottom of the screen, then locate the **Press Name** section. Click the press name, then enter "Press 1". This is the name that will appear in the Line Panel's Position 1 button.



Document the Press Name on the **Configuration Record worksheet** located in the Appendix.

11) Check the status for Press 1 in the Line Panel.

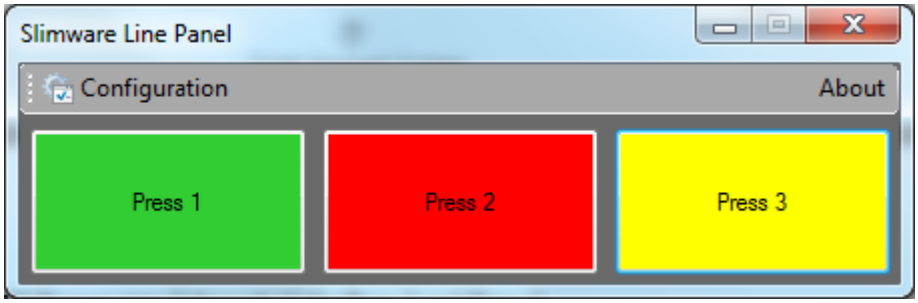
To verify that everything is configured correctly, look at the Press 1 button in the Line Panel. It should be green, red, or yellow, reflecting the current SLIM status. If it is still white, communication has not been successfully established and you should repeat the setup process. The button's name should also reflect the name you entered in step 10.

12) Repeat steps 7 through 11 for Press 2 and Press 3.

Refer to the following when setting up the remaining presses.

	Press 2	**Press 3**
Step 7	Click **Press 2** button.	Click **Press 3** button.
Step 8	Select **COM6** Com port.	Select **COM7** Com port.
Step 9	Set Slim Address to **1.**	Set Slim Address to **2.**
Step 10	Set name to "**Press 2**".	Set name to "**Press 3**".
Step 11	Check status of Press 2's button.	Check status of Press 3's button.

When finished, the Line Panel should look similar to the following example (each button's color may vary depending on the corresponding SLIM's status).

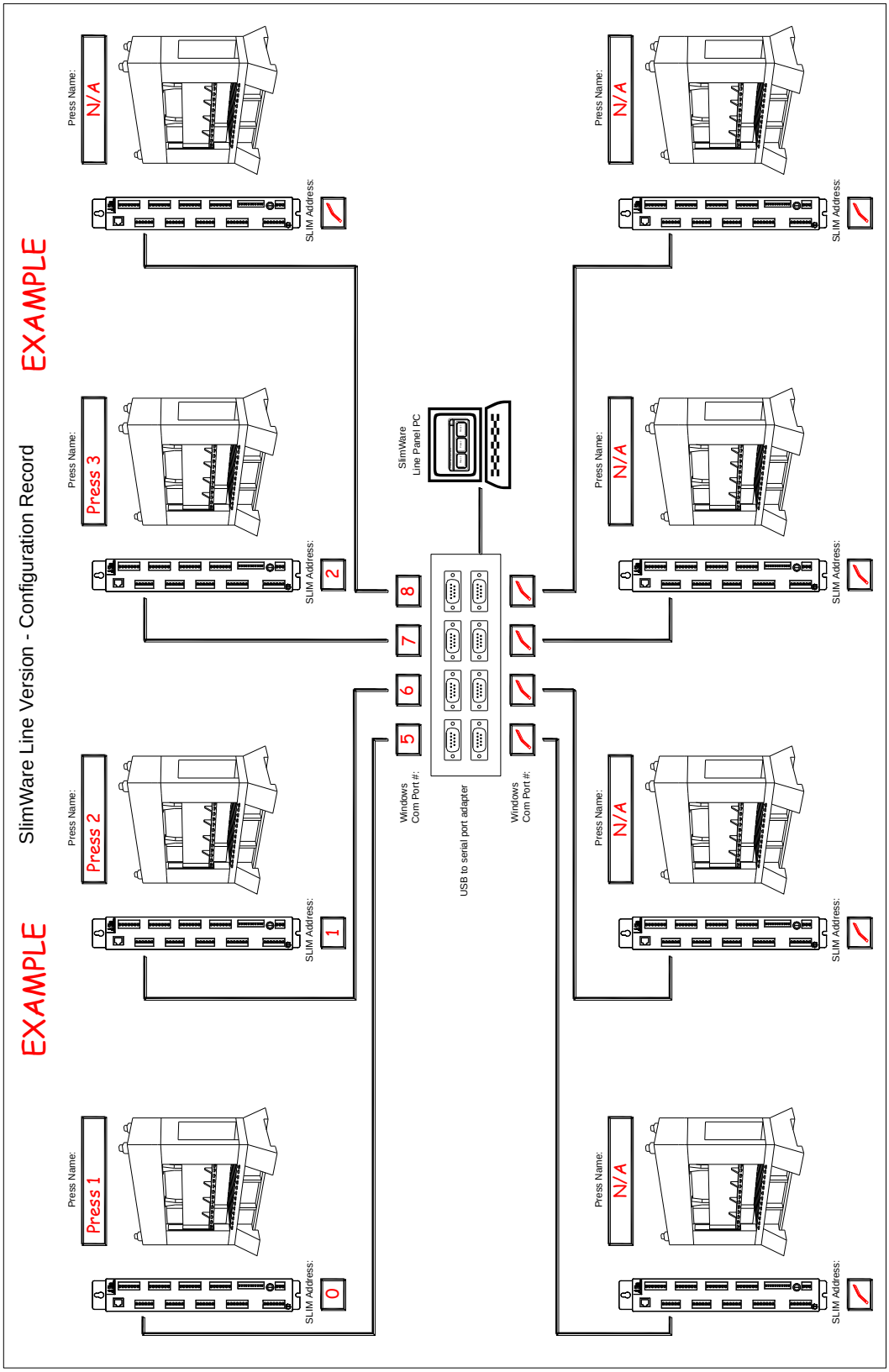


13) Verify that the Configuration Record is fully documented.

Verify that all Windows Com Port #'s, Press Names, and Slim Addresses are documented in the **Configuration Record worksheet**. A sample worksheet for our three-press example can be found on the following page.

14) SlimWare Line Panel Configuration complete!

This completes the Line Panel configuration. Refer to the Line Panel Operation section for further details about using the Line Panel.

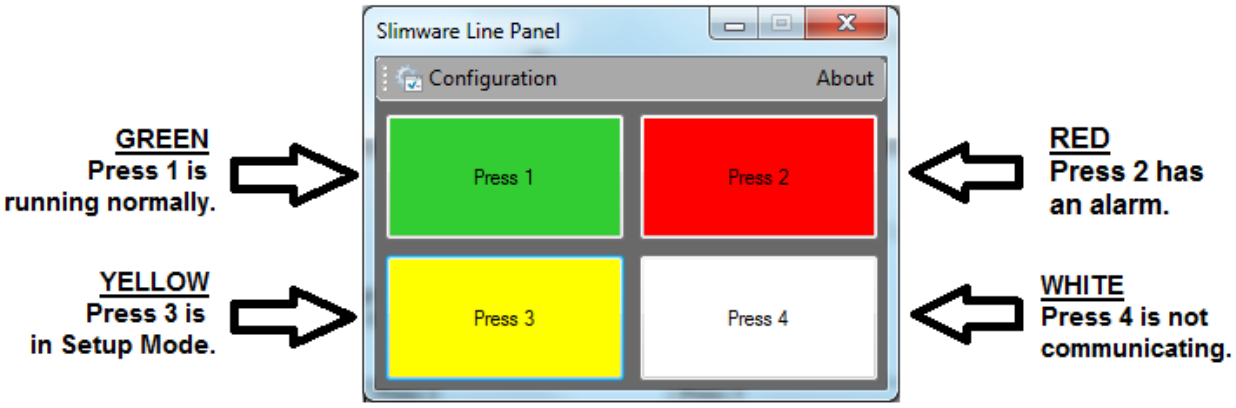

EXAMPLE
SlimWare Line Version - Configuration Record
EXAMPLE
Press Name:
Press 1
SLIM Address:
0
Press Name:
Press 2
SLIM Address:
1
Press Name:
Press 3
SLIM Address:
2
Press Name:
N/A
SLIM Address:
Press Name:
N/A
SLIM Address:
Press Name:
N/A
SLIM Address:
Press Name:
N/A
SLIM Address:
SlimWare
Line Panel PC
USB to serial port adapter
Windows
Com Port #:
5
6
7
8
Windows
Com Port #:

6: Line Panel Operation

Once the SlimWare Line Panel has been properly configured, you will need to understand how to interpret and use it properly.

Press Status:

The SlimWare Line Panel gives the user a quick visual indication of the status of each SLIM tonnage monitor on the line. It accomplishes this through the color of the press buttons.



- **GREEN**
  The press status is normal. No alarms are present and the SLIM is running in its normal mode of operation.

- **YELLOW**
  The SLIM is in Setup mode. No alarms are present but most alarm setpoints are bypassed until the SLIM is removed from Setup mode.

- **RED**
  An alarm has occurred and the press is currently stopped.

- **WHITE**
  The SLIM is not communicating with the Line Panel. This can be due to a configuration or wiring problem, or it could simply mean that the SlimWare interface for this press is not currently running.

Accessing Press Information:

Operation of the SlimWare Line Panel is simple. To view the information for a press, click its button on the Line Panel. If the SlimWare interface is running, it will come to the foreground. If the SlimWare interface is not currently running, it will launch and minimize itself to the task bar.

For a detailed description of SlimWare, refer to the SlimWare User's Manual.

SlimWare Data Storage:

The SlimWare Line Panel stores its data, such as signatures, data logs, and jobs in a similar manner to the standard SlimWare software, with one key difference. The SlimWare Line Panel creates separate directories within its SlimWare folder for each SLIM tonnage monitor based on the SLIM address.

For example, the standard version of SlimWare stores its created jobs in the following location:

C:\Program Files\Toledo Integrated Systems\SlimWare\Job

However, the Line Panel version of SlimWare uses the following location for a SLIM at address 2:

C:\Program Files\Toledo Integrated Systems\SlimWare**2**\Job

This applies for most data, including the **ExtData** directory, which is used for automated job loading and other functions. Refer to the External Configuration Files section of the SlimWare User's Manual for details.

7: Appendix

- **SlimWare Line Version Configuration Record**
- **SlimWare Line Version 4 port Wiring Detail**
- **SlimWare Line Version 4 port Hardware Detail**
- **SlimWare Line Version 8 port Wiring Detail**
- **SlimWare Line Version 8 port Hardware Detail**

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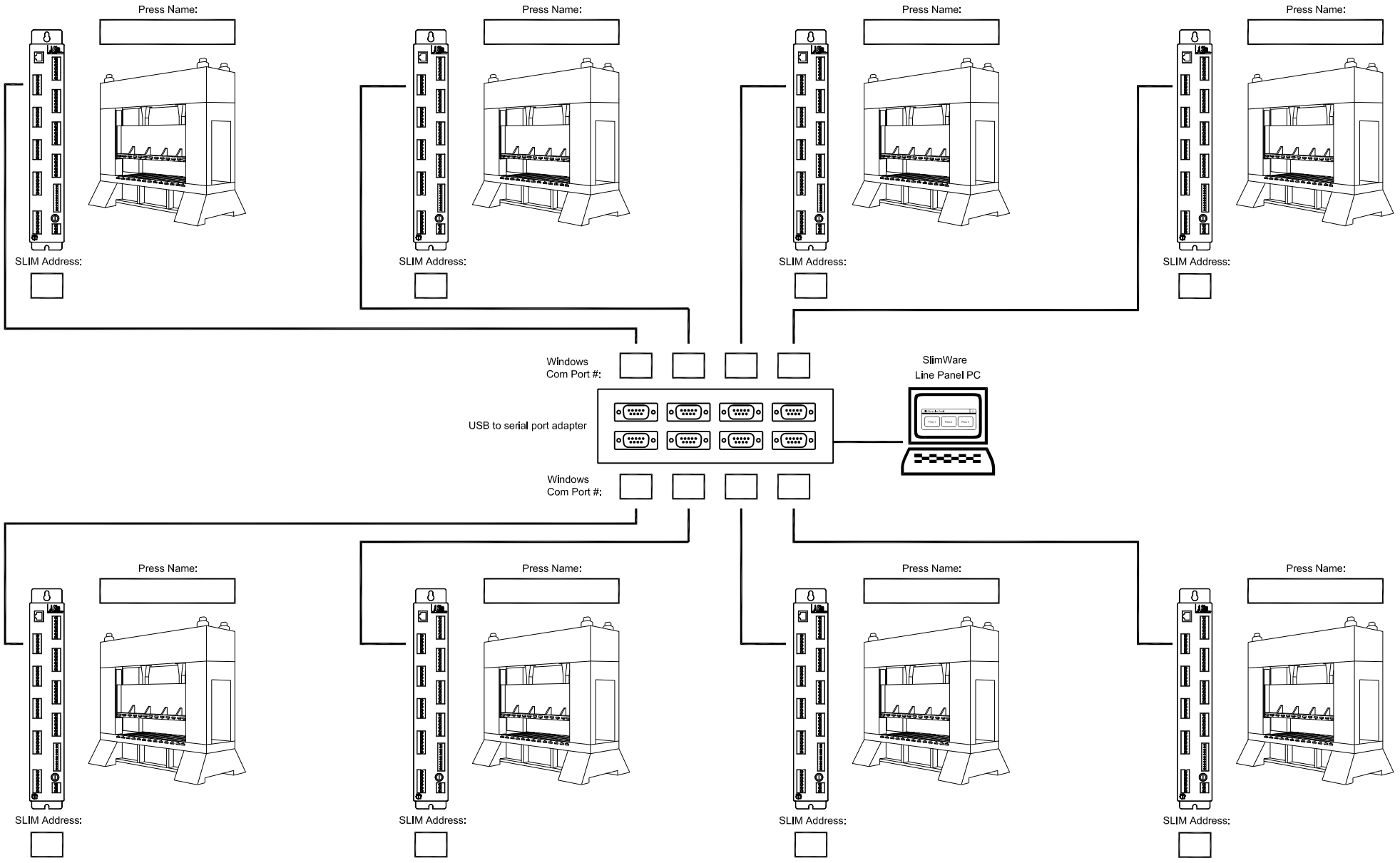
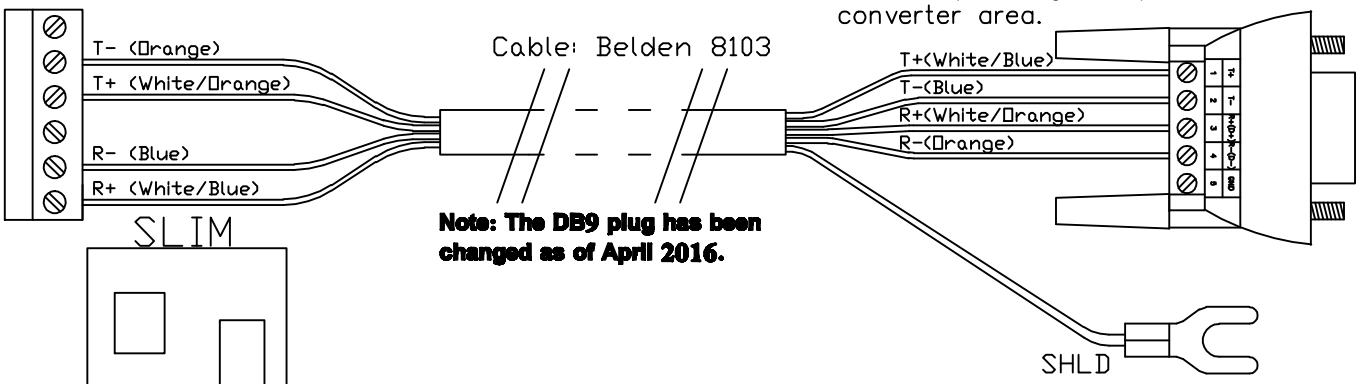
SlimWare Line Version - Configuration Record



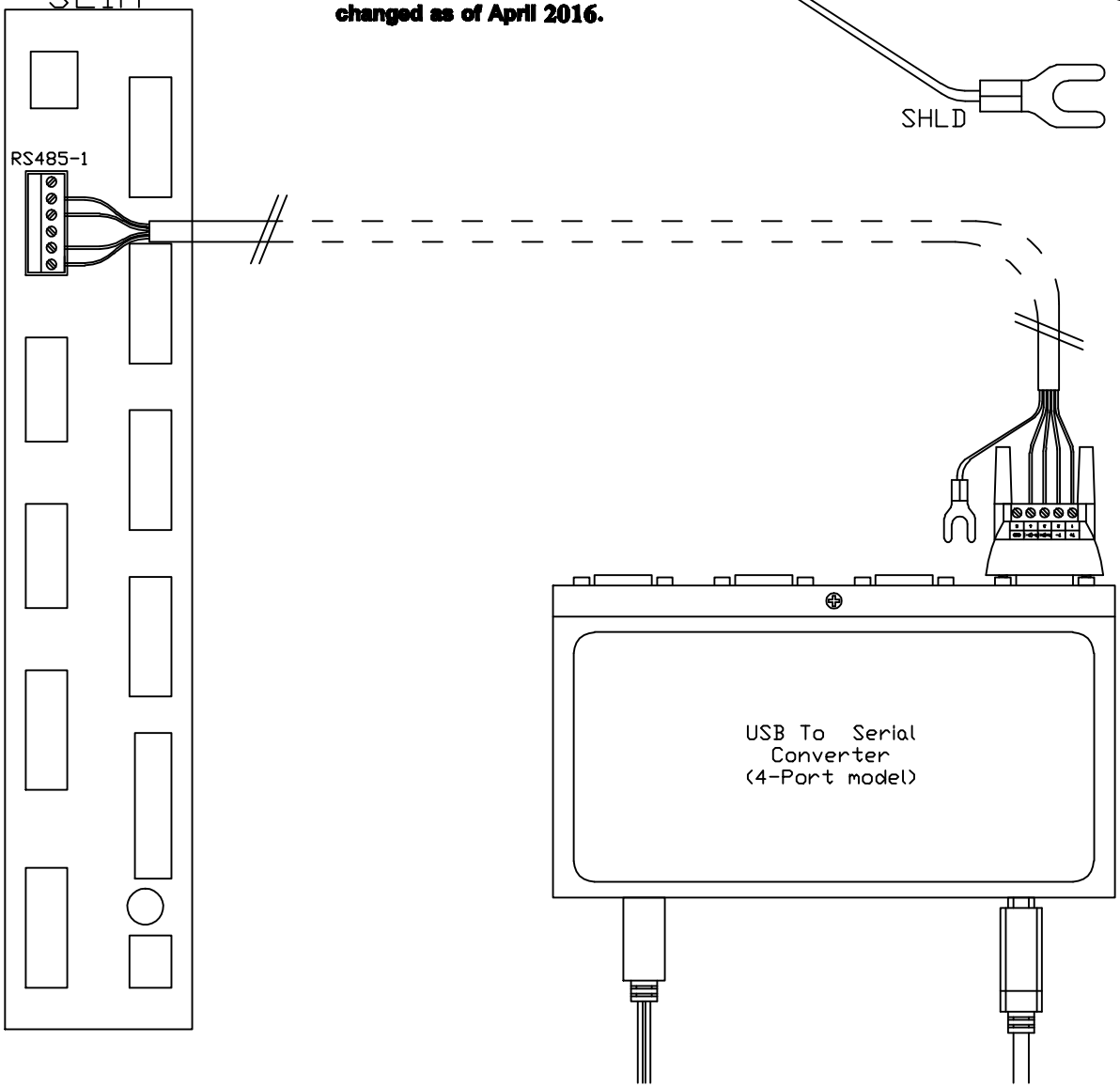
Wire the SLIM plug as shown for RS485(4 wire) connection. Cut the shield so that it will not make contact with anything.

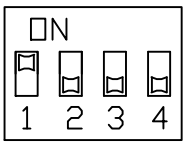
Wire the converter plug as shown for RS485(4 wire) connection. Connect the shield to a wire lug and secure the lug on a metal chassis (earth ground) around the converter area.



SLIM

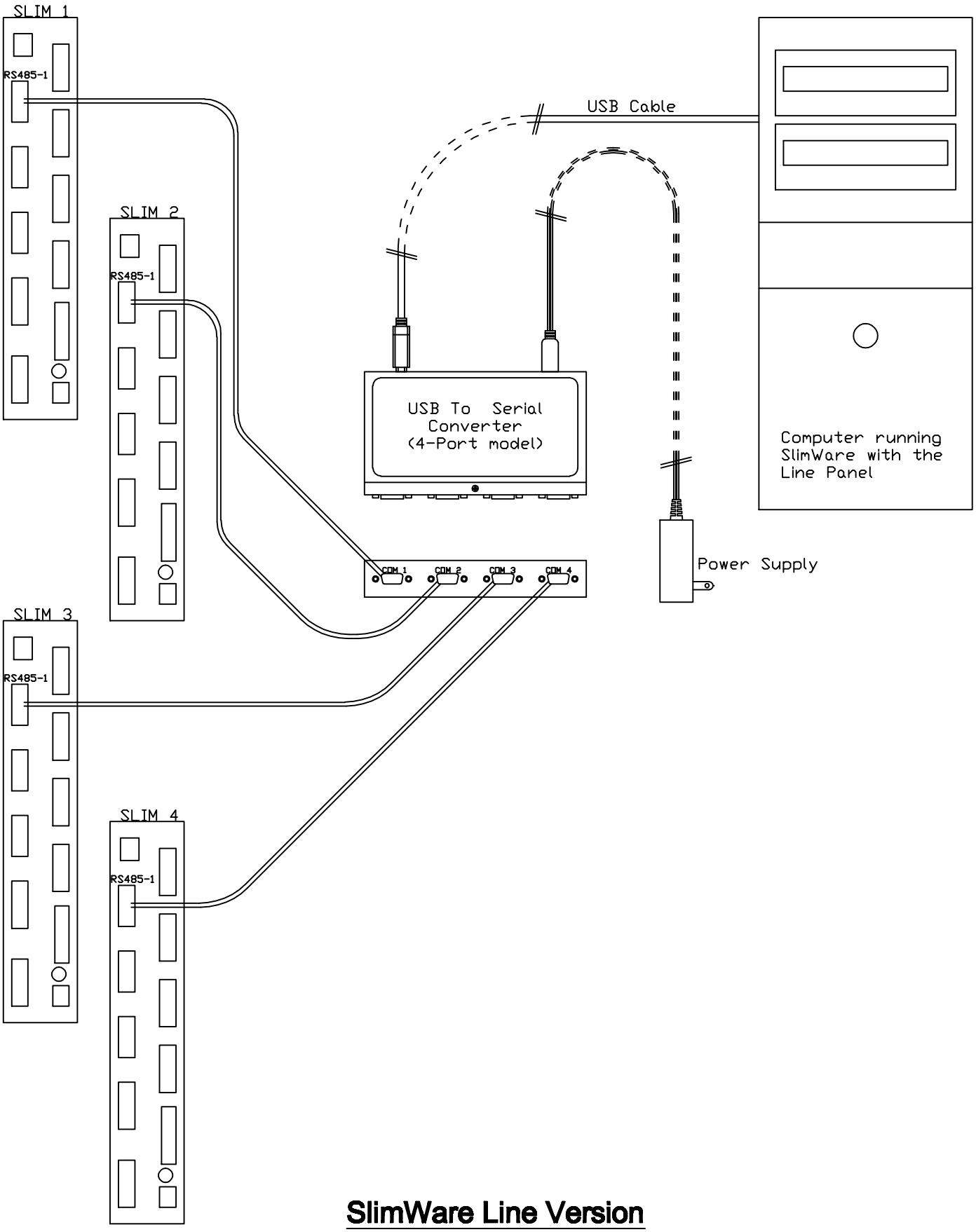
Note: The DB9 plug has been changed as of April 2016.





Set the dip switches for the associated comports as shown to select RS485(4 wire).
Note: ON is in the up position.
1 = ON
2 = OFF
3 = OFF
4 = OFF

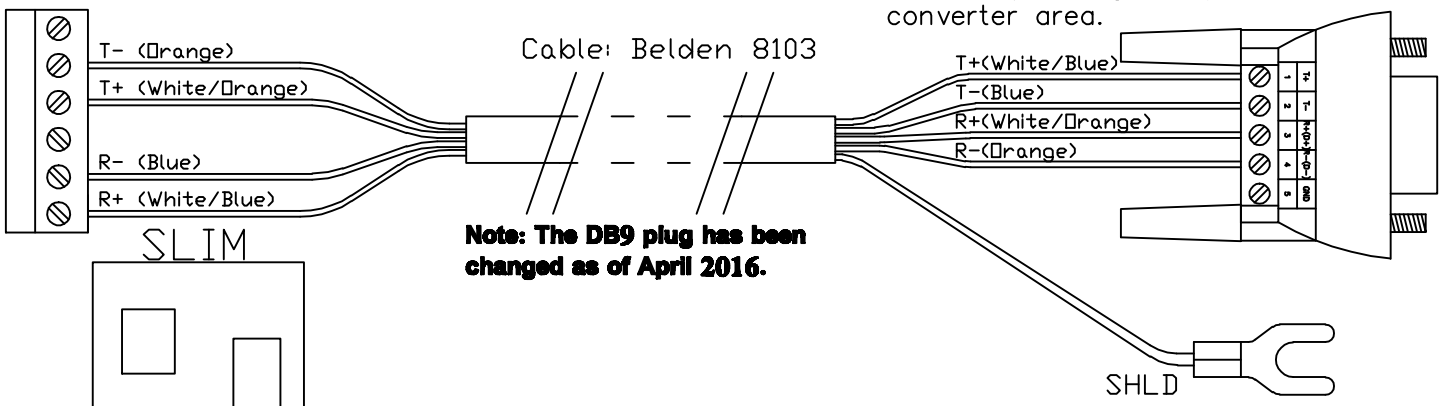
SlimWare Line Version
Wiring detail



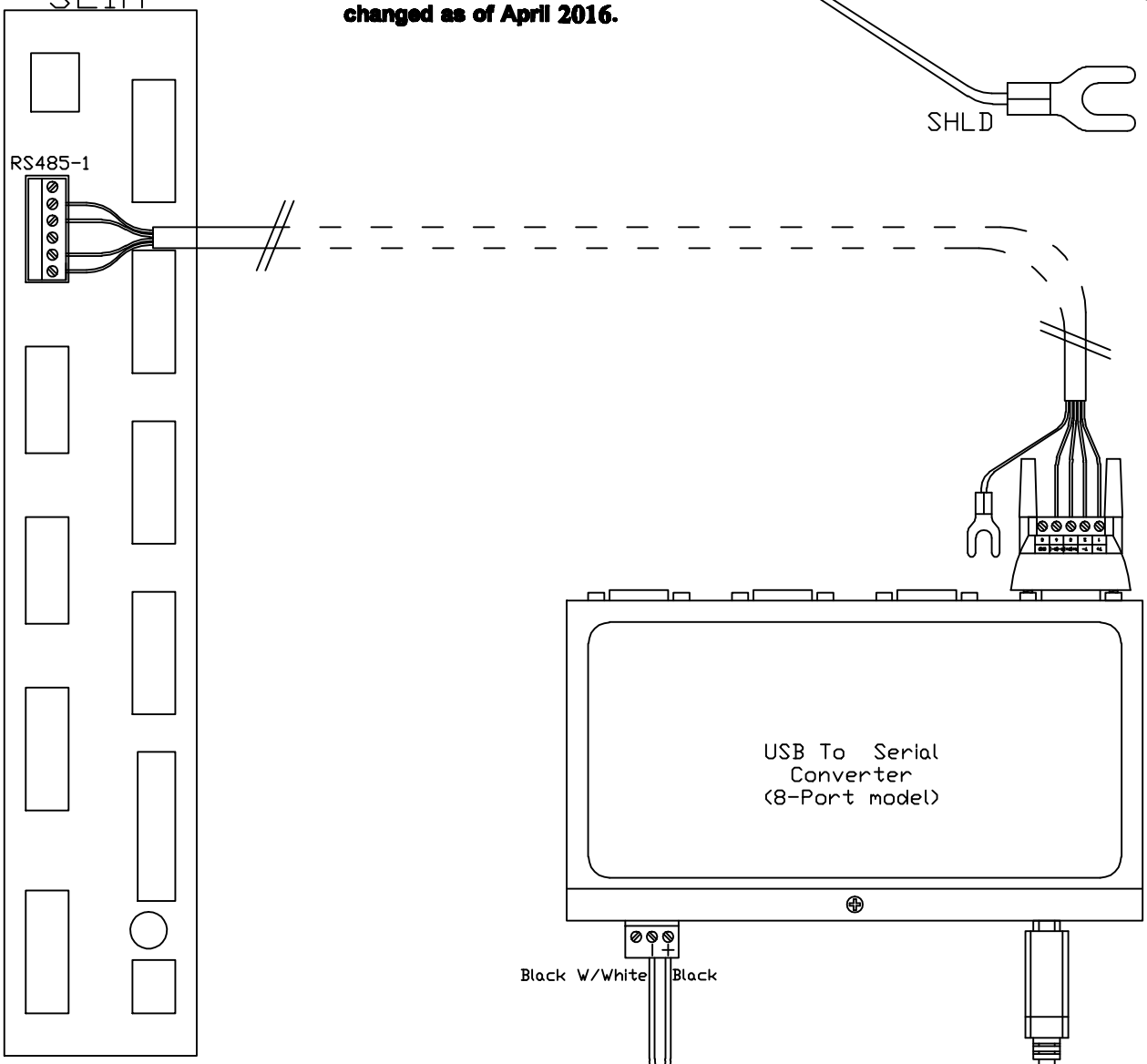
SlimWare Line Version
Hardware detail

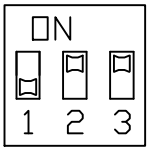
Wire the SLIM plug as shown for RS485(4 wire) connection. Cut the shield so that it will not make contact with anything.

Wire the converter plug as shown for RS485(4 wire) connection. Connect the shield to a wire lug and secure the lug on a metal chassis (earth ground) around the converter area.



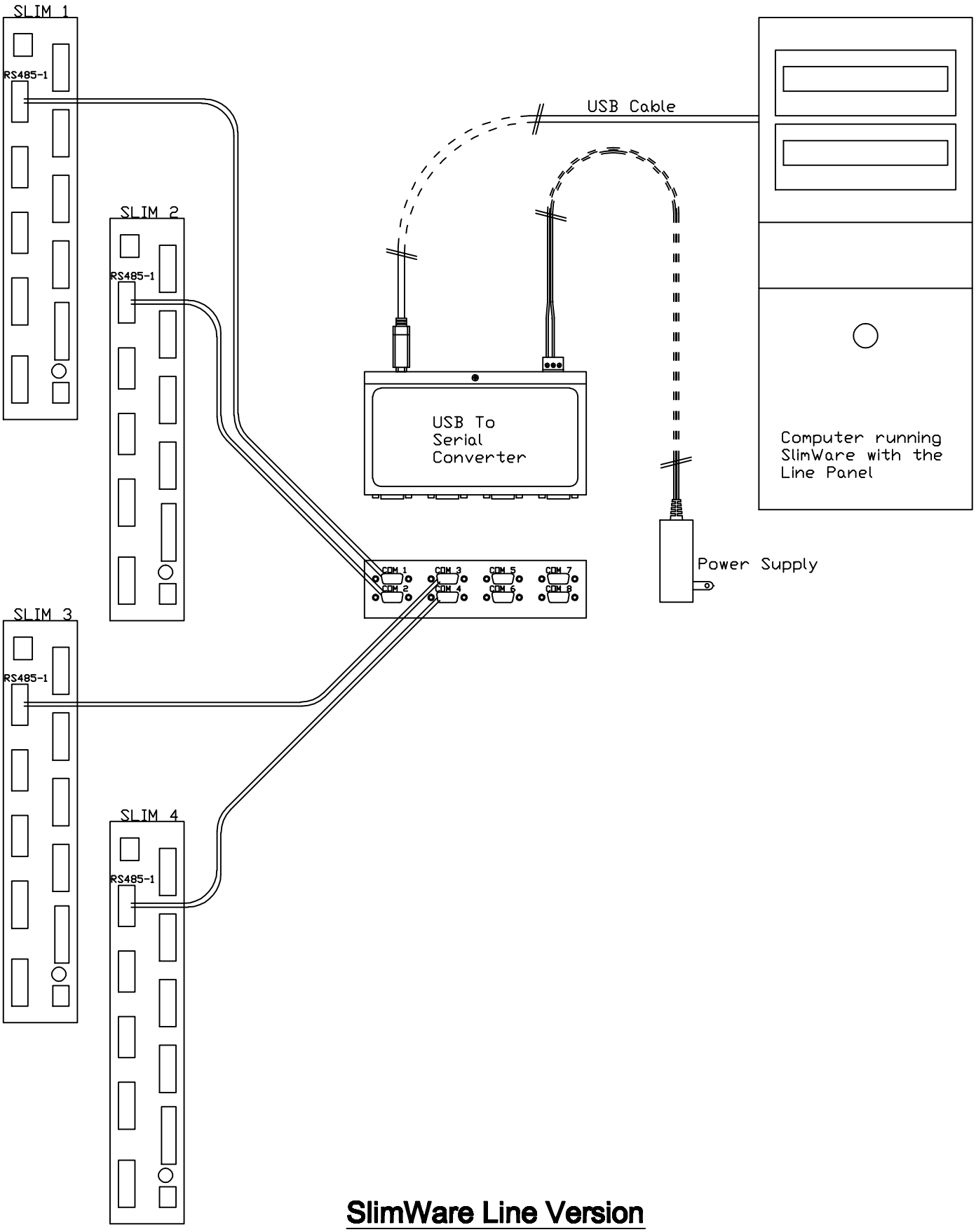
Note: The DB9 plug has been changed as of April 2016.





Set the dip switches for the associated comports as shown to select RS485(4 wire).
Note: ON is in the up position.
1 = OFF
2 = ON
3 = ON

SlimWare Line Version
Wiring detail



SlimWare Line Version
Hardware detail