

**723PLUS/DSLCTM Network Binding Procedure**  
**LonMakerTM for Windows**



### General Precautions

Read this entire manual and all other publications pertaining to the work to be performed before installing, operating, or servicing this equipment.

Practice all plant and safety instructions and precautions.

Failure to follow instructions can cause personal injury and/or property damage.



### Revisions

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Any unauthorized modifications to or use of this equipment outside its specified mechanical, electrical, or other operating limits may cause personal injury and/or property damage, including damage to the equipment. Any such unauthorized modifications: (i) constitute "misuse" and/or "negligence" within the meaning of the product warranty thereby excluding warranty coverage for any resulting damage, and (ii) invalidate product certifications or listings.



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**Revisions**—Changes in this publication since the last revision are indicated by a black line alongside the text.

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## IMPORTANT

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# Warnings and Notices

## Important Definitions



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

- **DANGER**—Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- **WARNING**—Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION**—Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE**—Indicates a hazard that could result in property damage only (including damage to the control).
- **IMPORTANT**—Designates an operating tip or maintenance suggestion.

### **WARNING**

**Overspeed /  
Overtemperature /  
Overpressure**

The engine, turbine, or other type of prime mover should be equipped with an overspeed shutdown device to protect against runaway or damage to the prime mover with possible personal injury, loss of life, or property damage.

The overspeed shutdown device must be totally independent of the prime mover control system. An overtemperature or overpressure shutdown device may also be needed for safety, as appropriate.

### **WARNING**

**Personal Protective  
Equipment**

The products described in this publication may present risks that could lead to personal injury, loss of life, or property damage. Always wear the appropriate personal protective equipment (PPE) for the job at hand. Equipment that should be considered includes but is not limited to:

- Eye Protection
- Hearing Protection
- Hard Hat
- Gloves
- Safety Boots
- Respirator

Always read the proper Material Safety Data Sheet (MSDS) for any working fluid(s) and comply with recommended safety equipment.

### **WARNING**

**Start-up**

Be prepared to make an emergency shutdown when starting the engine, turbine, or other type of prime mover, to protect against runaway or overspeed with possible personal injury, loss of life, or property damage.

### **WARNING**

**Automotive  
Applications**

On- and off-highway Mobile Applications: Unless Woodward's control functions as the supervisory control, customer should install a system totally independent of the prime mover control system that monitors for supervisory control of engine (and takes appropriate action if supervisory control is lost) to protect against loss of engine control with possible personal injury, loss of life, or property damage.

**NOTICE****Battery Charging  
Device**

To prevent damage to a control system that uses an alternator or battery-charging device, make sure the charging device is turned off before disconnecting the battery from the system.

## Electrostatic Discharge Awareness

**NOTICE****Electrostatic  
Precautions**

Electronic controls contain static-sensitive parts. Observe the following precautions to prevent damage to these parts:

- Discharge body static before handling the control (with power to the control turned off, contact a grounded surface and maintain contact while handling the control).
- Avoid all plastic, vinyl, and Styrofoam (except antistatic versions) around printed circuit boards.
- Do not touch the components or conductors on a printed circuit board with your hands or with conductive devices.

To prevent damage to electronic components caused by improper handling, read and observe the precautions in Woodward manual **82715**, *Guide for Handling and Protection of Electronic Controls, Printed Circuit Boards, and Modules*.

Follow these precautions when working with or near the control.

1. Avoid the build-up of static electricity on your body by not wearing clothing made of synthetic materials. Wear cotton or cotton-blend materials as much as possible because these do not store static electric charges as much as synthetics.
2. Do not remove the printed circuit board (PCB) from the control cabinet unless absolutely necessary. If you must remove the PCB from the control cabinet, follow these precautions:
  - Do not touch any part of the PCB except the edges.
  - Do not touch the electrical conductors, the connectors, or the components with conductive devices or with your hands.
  - When replacing a PCB, keep the new PCB in the plastic antistatic protective bag it comes in until you are ready to install it. Immediately after removing the old PCB from the control cabinet, place it in the antistatic protective bag.



# 723PLUS/DSLCL™ Compatible Network Binding Procedure LonMaker™ for Windows

## Introduction

This application note describes the use of the LonMaker™ \* for Windows® Integration Tool to commission or replace Woodward-supplied devices into an Echelon® network. LonMaker for Windows, release 3, has been used by Woodward to create and test an engineered network system specifically for the 723PLUS/DSLCL Compatible control. The engineered system database and drawings are provided as a CD-ROM kit. The database and drawings together with the LonMaker for Windows Integration Tool and an SLTA-10 Network Interface are needed to commission or replace the 723PLUS/DSLCL Compatible network devices.

### **IMPORTANT**

These instructions are intended to be specific to the 723PLUS/DSLCL Compatible LonMaker network and are not intended to include extensive LonMaker for Windows instructions. Refer to the LonMaker for Windows User's Guide for extensive instructions.

## Requirements

### Computer

The LonMaker for Windows Integration Tool requires a PC that meets the following requirements:

- Microsoft Windows 2000, Windows NT 4.0 (Service Pack 3 required for NT 4.0) Windows 98, or Windows 95. Windows 2000 is recommended.
- Pentium 200 or faster (Pentium II 350 MHz or better recommended)
- 350 Megabytes (MB) free hard-disk space
- 128 MB of RAM (256 MB recommended)
- High resolution display with 256 colors
- CD-ROM drive
- Mouse or compatible pointing device

### Minimum Hardware Requirements: "Turbo Edition"

The LonMaker tool requires a personal computer that meets the following requirements:

- Microsoft Windows XP (Professional, Home, Tablet PC editions), Windows 2003 server, or Windows 2000
- Pentium III, Pentium 4, or better
- 350 megabytes (MB) free hard-disk space
- 512 MB RAM minimum
- 1024 MB page file minimum
- CD-ROM drive
- Super VGA (800 × 600) or higher-resolution display with at least 256 colors
- Mouse or compatible pointing device

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\*—Modbus® is a trademark of Schneider Automation Inc.

\*—Windows®, Windows NT®, and Visio® are trademarks of Microsoft Corp.

## Software: Plus (LonMaker "Edition")

### LonMaker for Windows: LonMaker 3 Edition (Older Version no longer sold)

Woodward part number: 1796-055

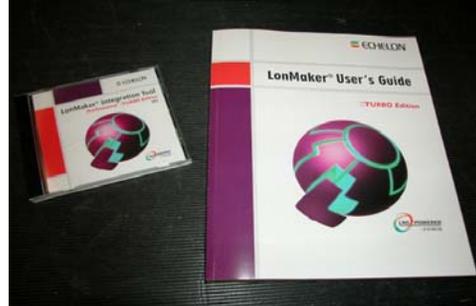
Follow Echelon's instructions for correctly installing the LonMaker for Windows Integration Tool and the LonWorks® SLTA-10 network driver software.



### LonMaker for Windows: LonMaker Turbo Edition

Woodward part number: 1796-055

Follow Echelon's instructions for correctly installing the LonMaker for Windows Integration Tool and the LonWorks SLTA-10 network driver software.



### LonMaker Database/Visio Drawing

Woodward part number: 8928-225

Specific to the 723PLUS/DSLCL Compatible control with capability of 14 DSLCL™ (Digital Synchronizer and Load Control) units, one LSIM (Load sharing Interface Module) unit and 14 723PLUS/DSLCL Compatible Digital Controls.

## IMPORTANT

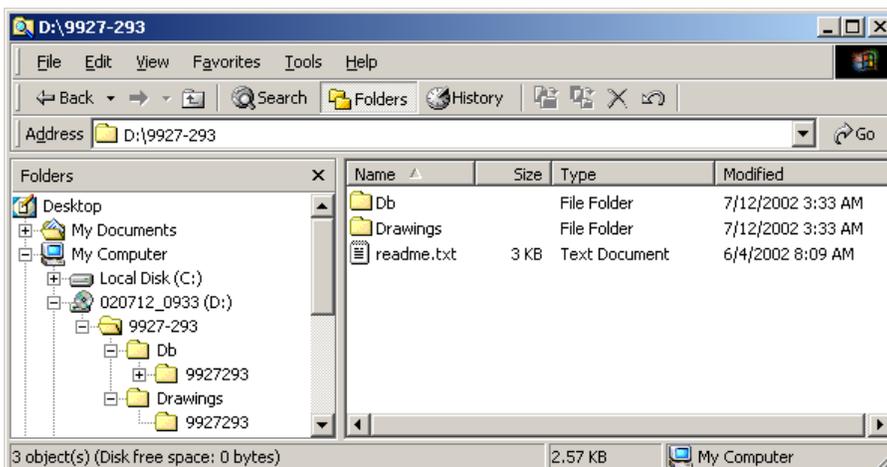
The 8928-225 LonMaker Database/Visio drawing is also designed to commission the 723PLUS/DSLCL/MSLCL Gateway control, and references are included to clarify the commissioning differences.

The "9927293" folders contained under the "Db" and "Drawings" folders on the CD-ROM in kit part number 8928-225 are the actual 723PLUS/DSLCL Compatible LON® Network database and drawing files required by LonMaker for Windows. Copy each "9927293" folder under the "Db" and the "Drawings" folders to C:\LM\Db and C:\LM\Drawings folders respectively.

## IMPORTANT

Even though the folder names (9927293) are the same, the contents are totally different! Be sure to copy each to the correct LonMaker for Windows (LM) folder as described later.

The following screen shows the contents on the CD-ROM kit 8928-225 on Windows Explorer. 9927-293 is the combined database/drawing part number.



## Activating the LonMaker Tool

### IMPORTANT

Activation is needed after Installing the LonMaker Tool; installing Visio; and installing the LonMaker Integration Tool.

Per: LonMaker User's Guide Chapter 2; Installing and Activating LonMaker Tool [Refer to -> Software: Plus (LonMaker "Edition") on previous page.]

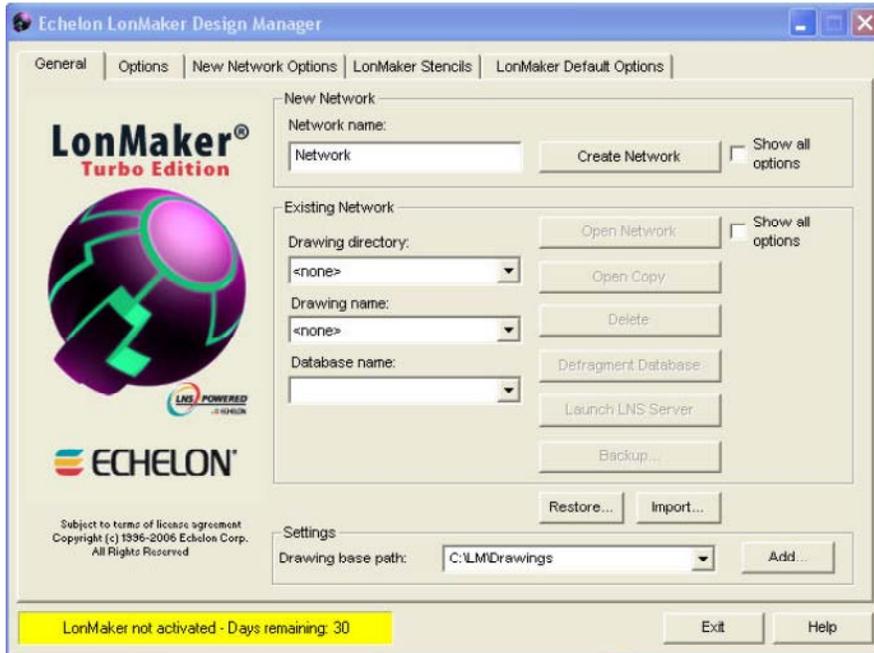
You must activate your copy of the LonMaker tool in order to access all of its features. Until it is activated, the LonMaker tool will run in demo mode for a maximum of 30 days. This means that during the 30-day demo period, you will not be able to open production networks and your demo networks will be limited to six devices. In addition, you will not be able to convert your demo networks into production networks after you activate the LonMaker tool. This means that demo networks are permanently limited to six devices.

Prior to activation, the **LonMaker Product Activation** dialog will appear each time you start the LonMaker Design Manager or open a LonMaker drawing. This dialog reminds you that your LonMaker tool has not yet been activated, and it will state the number of days that your LonMaker tool will continue to function.



Click **Run Activation Wizard** in the **LonMaker Product Activation** dialog to begin the activation process or click **Continue** to keep running the LonMaker tool in demo mode.

The LonMaker license status box in the bottom left-hand corner of the LonMaker Design Manager also indicates that your copy of the LonMaker tool has not been activated and the number of days your LonMaker tool will continue to function.



To activate your LonMaker tool, create and send an activation request to your license administrator, and then enter the activation key that the license administrator sends to you as described in the following sections.

## Creating and Sending an Activation Request

You can request one free activation key for each copy of the LonMaker software that you license. You can also purchase additional LonMaker credits with your activation request. There is no minimum order.

To create and send an activation request, follow these steps:

1. Start the LonMaker Design Manager or open a LonMaker drawing. The **LonMaker Product Activation** dialog appears.



2. Click **Run Activation Wizard**. The LonMaker Activation wizard appears.



If you click Continue, you can still access this dialog and begin the activation process by completing the following steps:

- From the LonMaker Design Manager, double-click anywhere on the LonMaker license status box at the bottom left-hand corner, or right-click the title bar or taskbar button and then click **Activate LonMaker** on the shortcut menu.
- In the LonMaker drawing, open the **LonMaker** menu, click **Activate LonMaker**, and then click **Run Activation Wizard** in the **LonMaker Product Activation** dialog.

3. The number of credits included with your copy of the LonMaker tool (64 for the Professional Edition or 5 for the Standard Edition) appears in the **Included Credits** box. To purchase additional credits, enter the number credits in the **Additional Credits** box. Click **Next**. The **Activation Information** dialog appears.



4. The wizard displays the **PC Key** (also called the activation code), which uniquely identifies your copy of the LonMaker tool and the computer running the LonMaker tool, and the **Serial number** of your LonMaker tool. Click **Copy to Clipboard**.
5. An activation request form is created that includes your request to activate your copy of the LonMaker software, the PC key (activation code), and the serial number.
6. Send the activation request form to your license administrator via e-mail, fax, or mail.
- To e-mail the activation form, copy it to an e-mail message using your e-mail application and then e-mail it to the e-mail address at the top of the request form. You should receive an activation key within one business day.
  - To fax or mail the activation request form, copy it to a text file, print it, and then fax to the fax number or mail to the address on the activation request form.

**If you are purchasing additional credits, make sure you provide your purchase order or credit card information in the activation request.**

## Entering an Activation Key

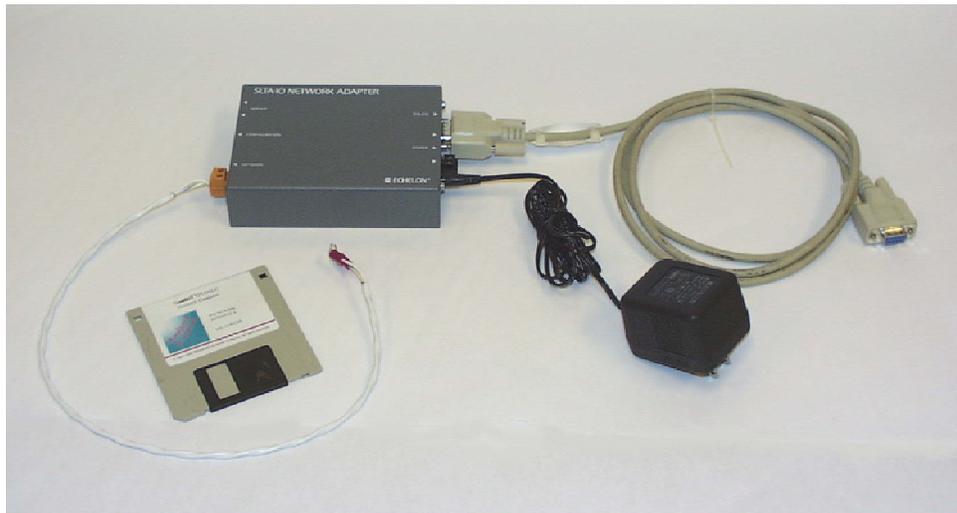
Once you receive your activation key from your license administrator, follow these steps to activate your copy of the LonMaker tool:

1. Start the LonMaker Design Manager or open a LonMaker drawing. The **LonMaker Product Activation** dialog appears.
2. Click **Run Activation Wizard**. The LonMaker Activation wizard appears.
3. Click **Next**. The **Activation Information** dialog appears.
4. Enter the activation key in the **Activation Key** box.
5. Click **Finish**. The following dialog appears, informing you that your LonMaker tool has been activated.



6. Click **OK**.
7. Exit and then re-open the LonMaker Design Manager to begin using your activated LonMaker tool. Any additional credits purchased will be applied.

## Hardware



Serial LonTalk<sup>®</sup> Adapter (SLTA-10) and associated cables (Woodward part number 8923-492).

### IMPORTANT

There is a Woodward “Starter Kit” that contains all the needed software and hardware (part numbers 1796-055, 8928-225, and 8923-492)—Starter Kit number 8923-1007.

## Creating a Network

When an Echelon network is created, each device on the network has to know which devices it is talking to and what information it is receiving or sending. Binding is the process of installing and connecting the correct network inputs and outputs of devices on an Echelon network. For our purposes, binding is required because the DSLC information and commands must be made available on a serial network. The binding process must be performed at the initial start-up (commissioning) of a system, and also any time a device on the network is replaced (re-commissioned). The binding process is explained in detail under "Installing a Network".

In the power generation 723PLUS/DSLCL Compatible application, the DSLC information and commands are transmitted through the 723PLUS. The 723PLUS functions as a unit gateway to convert the systems DSLC Echelon information into Modbus<sup>®</sup> serial data.

We have considered two network situations with the 723PLUS control:

1. One unit 723PLUS/DSLCL pair on each engine. The maximum capability is 14 engines on one network plus an LSIM option to provide DSLC load sharing with compatible analog systems. The 723PLUS is the engine speed control and a gateway for only the mating DSLC information to a Modbus network for monitoring and commands. The 723PLUS choices for this situation are 8280-412, 8280-413, 8280-466, or 8280-467. Other custom applications may also apply.
2. One master 723PLUS/DSLCL/MSLCL Gateway connected to a maximum of 14 DSLCL controls and one MSLCL. The 723PLUS/DSLCL/MSLCL Gateway control is a gateway only for the entire system DSLCL and MSLCL information to a Modbus network for monitoring and commands. In this situation, a separate control (such as a 2301D, etc.) is used as the engine speed control. The 723PLUS choices for this situation are 8280-416 and 8280-417.

Each 723PLUS will only be a gateway for those devices which are connected by the Echelon network. The unit 723PLUS/DSLCL Compatible control is only connected to a mating DSLCL control. The master 723PLUS Gateway control is connected to the entire DSLCL and MSLCL control system.

### **IMPORTANT**

**Be sure to install (commission) the correct 723PLUS device(s) using the LonMaker for Windows Integration Tool. Install *either* the unit 723PLUS (U723 01, U723 02, etc.) control(s) or the master 723PLUS Gateway control (Mstr723\_1 and Mstr723\_2). The network must be comprised of one or more unit 723PLUS DSLCL Compatible controls or one master 723PLUS Gateway control. Do not attempt to mix these 723PLUS network devices. The DSLCL devices are installed for either network situation. The MSLCL is only installed for the master 723PLUS Gateway network situation.**

The LonMaker for Windows Integration Tool is a software package which includes a Visio graphical interface that is used to create and install an Echelon network. The network connections between devices (binding) have been created and tested beforehand by Woodward and are provided on a CD-ROM kit, part number 8928-225. Commissioning the network devices while the LonMaker for Windows tool is attached and Onnet completes the LON network binding process. The SLTA-10 Network Interface connects the PC to the Echelon network.

**IMPORTANT**

**The older SLTA/2 network interface will not work with LonMaker for Windows since it is not LNS-compatible.**

LonMaker for Windows also defines the communication medium (twisted pair, fiber optics, etc.). All of the Woodward controls communicate over twisted pair at 1.25 MBaud. LonMaker for Windows provides for subdividing the devices into logical groups (subsystems) to organize the network installation. LonMaker for Windows stores its information in a database on your hard drive.

Woodward has created one LonMaker for Windows database/drawing for the unit 723PLUS/DSLC Compatible and the master 723PLUS/DSLC/MSLC Gateway situations as previously described. The network drawing has one subsystem for each engine-generator set, one subsystem for the Gateway, and one subsystem for the MSLC and LSIM controls. All of the network connections are made for up to 14 engine generators.

With the database and drawing already created, the only function that remains to be done on-site is the actual commissioning of the network devices.

## Installing the Network

LonMaker for Windows, Release 3, and the SLTA-10 network interface driver must be installed on the PC that will be used to commission the network. Follow the Echelon instructions for correctly installing the LonMaker for Windows Integration Tool and the LonWorks SLTA-10 network driver software. Folders "LM" and "LonWorks" are created when LonMaker for Windows is installed.

The database and drawing must be present in the "LM" folder to allow LonMaker for Windows to open the network and commission or replace the network devices. The 8928-225 CD-ROM kit contains the LonMaker for Windows database and Visio drawing for both the unit 723PLUS/DSLC Compatible and the master 723PLUS/DSLC/MSLC Gateway networks. To complete preparations for commissioning the unit 723PLUS/DSLC Compatible or the master 723PLUS/DSLC/MSLC Gateway network, the database and drawing must be copied from the CD-ROM and pasted into the "LM" folder.

To do this, boot up your PC and insert the CD-ROM, part number 1796-1028 from the disk kit 8928-225, into your CD-ROM drive. Run Windows Explorer and view the contents of the CD-ROM. Open folder 9927-293 to find two folders named "Db" and "Drawings". Each of these folders contains a sub-directory named 9927293. Even though the name is the same, the contents of each are totally different. The names are the same because LonMaker for Windows requires the same Network Name for the database and drawing. The Network Name assigned for the unit 723PLUS/DSLC Compatible and the master 723PLUS/DSLC/MSLC Gateway network is 9927293.

1. Open the "Db" folder on the CD-ROM and copy the contents (9927293).
2. Open the C:\LM\Db folder. Paste the contents (9927293) into this Db folder.

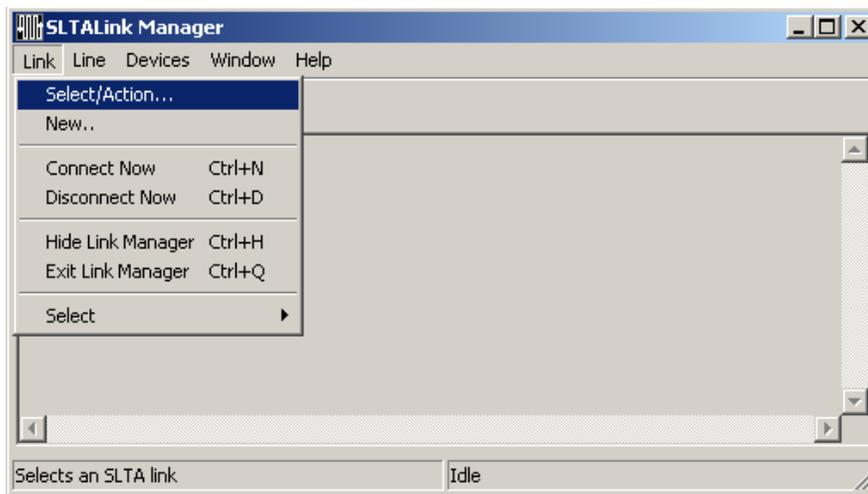
Then,

1. Open the "Drawings" folder on the CD-ROM and copy the contents (9927293).
2. Open the C:\LM\Drawings folder. Paste the contents (9927293) into the Drawings folder.

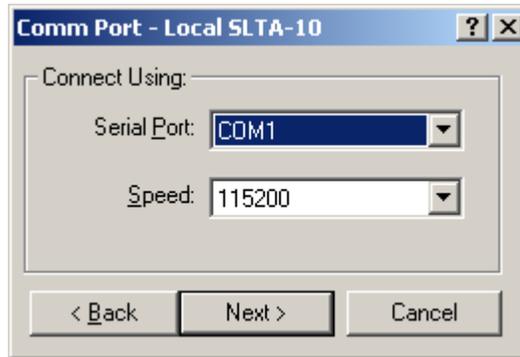
When this is properly completed, the Database Path C:\LM\Db\9927293 will show a db folder, a recovery folder, and other miscellaneous folders and files. The drawing path C:\LM\Drawings\9927293 will show a 9927293.vsd drawing file and a log file.

## Connecting the SLTA-10 Network Adapter

Connect the SLTA-10 to the serial port of your computer with the serial cable provided. Set the SLTA-10 configuration DIP switches 1, 2, 3, and 5 "OFF" (down). Set configuration DIP switches 4, 6, 7, and 8 "ON" (up). The SLTA-10 software is defaulted to work on Com Port 1 at 115200 bps. To change the SLTA-10 software settings, open the Link Manager from the Windows "Start, Programs, Echelon SLTA-10 Network Adapter, SLTALink Manager." The Link must be disconnected to make changes. Select "Link, Disconnect Now" if necessary. At the following screen, choose "Link, Select/Action".



This opens the SLTALink Selection screen. Select "Edit". At the Link Description screen select "Next" and the following screen appears.



The Serial Port and Speed settings may be changed by dropdown menu at this screen. Select "Next" and "Finish" to apply the changes or select "Cancel" to ignore any changes. If the Speed setting is changed, the SLTA-10 configuration DIP switches must be changed to match the new Speed setting. Follow the table adhered to the SLTA-10 Network Adapter.

Use LON cable to connect the SLTA-10 "Network" terminal connector to any point on the physical 723PLUS/DSLCL Compatible network. Connect the power supply, and power up the SLTA-10.

## IMPORTANT

The older SLTA/2 network interface will not work with LonMaker for Windows since it is not LNS-compatible.

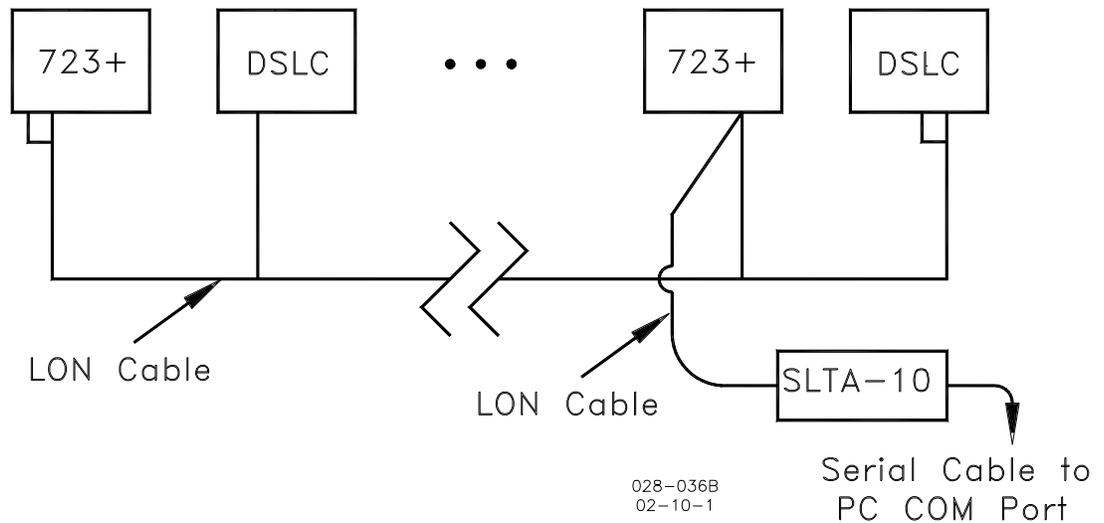
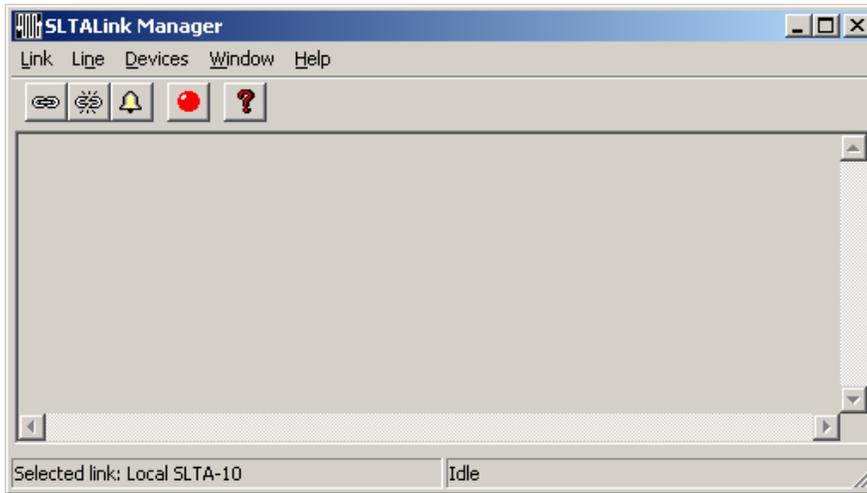


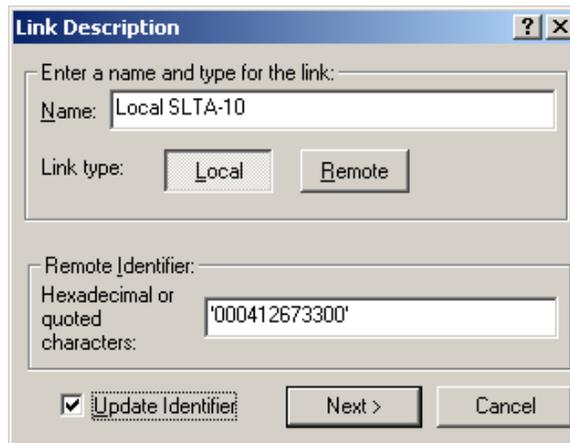
Figure 1. LON Network

Start the SLTALink Manager from the Windows “Start” menu. The following screen appears.



If the SLTALink Manager is not connected, a red status light will be displayed. Click the “Link” icon to connect the SLTA-10 Network Adapter to the 723PLUS DSL/ Compatible network. The red status light will change to green if the connection is made and status messages (“Connected to COM1 at 115200 bps on device 1”, etc) appear in the message block. Check the wiring connections, DIP switch settings and SLTA-10 power if this does not connect properly.

If the message “Remote identifier does not match the link value” appears in the message block, it can be ignored for a local connection. However, to update this identifier and clear the message, choose “Link, Select/Action, Edit” and check the “Update Identifier” on the Link Description screen as shown below, then “Next” twice, then “Finish”.



## LonMaker “3” Edition Setup

### Opening the 723PLUS/DSL/MSLC Gateway Network

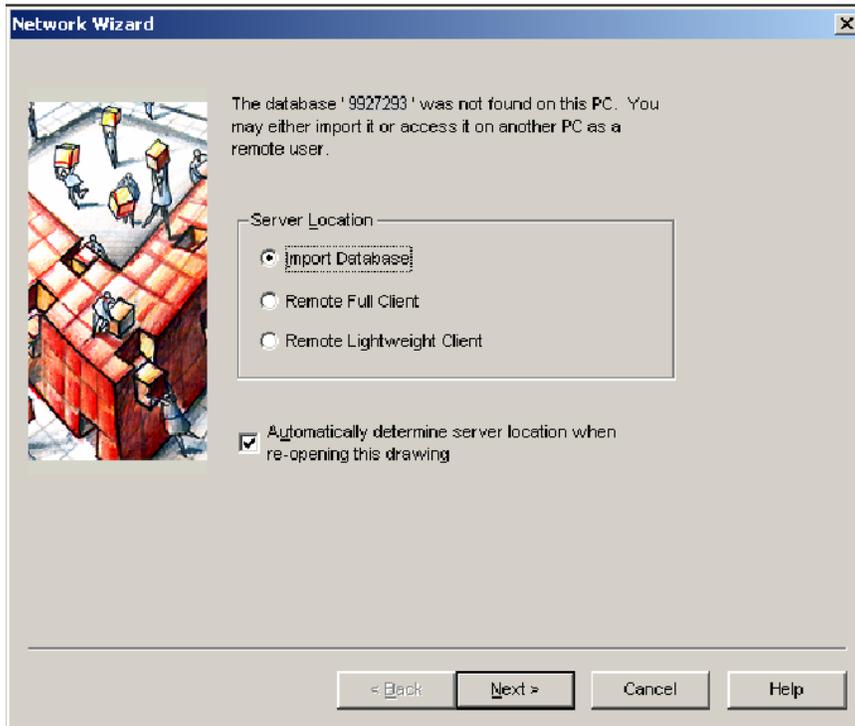
From the Windows “Start” menu select “Program”, then “LonMaker for Windows” to open a network. The following screen appears.



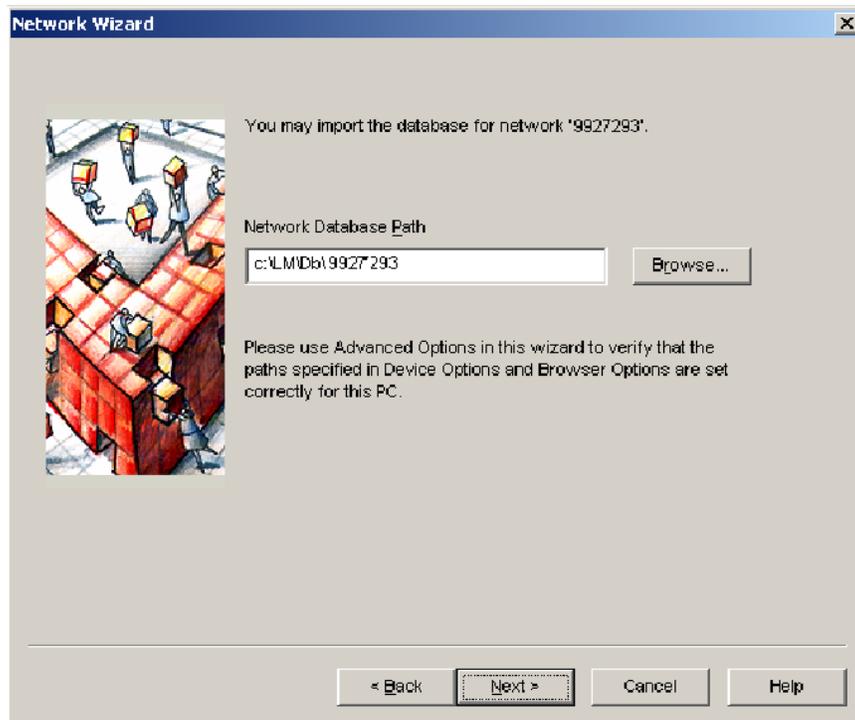
Check all settings and if necessary, select c:\m\drawings as the Drawing Base Path, 9927293 for the Drawing Directory, and 9927293.vsd as the Drawing Name. Select 9927293 as the Database Name. 9927-293 is the Woodward part number for the unit 723PLUS DSL/MSLC Gateway LON database/drawing software.

The Database Name selection may not be available. If not, leave this selection blank. Select “Open Network”.

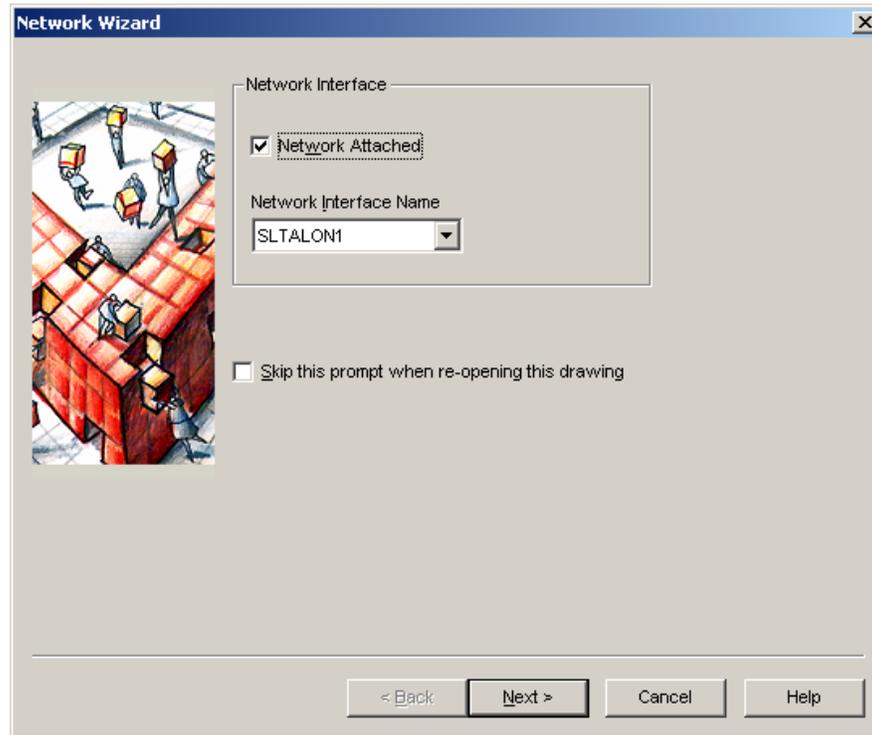
The following prompt may appear. If not, skip to the “Network Interface” screen below. Should this prompt appear choose “Import Database”.



Select “Next” and the following screen will appear. Browse and select the “Network Database Path” for database 9927293.



The following screen appears when “Open Network” is selected or “Next” should the above “Import Database” screens appear. Check the “Network Attached” box and select the “SLTALON1” Network Interface Name.



Network Wizard

Network Interface

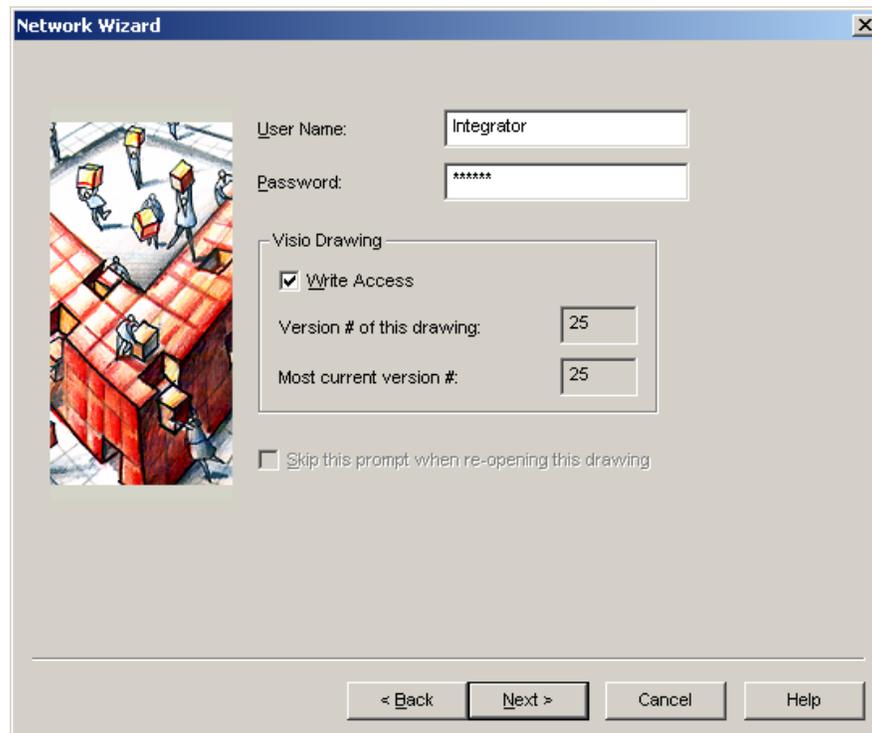
Network Attached

Network Interface Name  
SLTALON1

Skip this prompt when re-opening this drawing

< Back   Next >   Cancel   Help

Select “Next.” The following screen appears. Type in “Integrator” for the User Name and “integr” for the Password. Both the user name and password are case sensitive. Integrator privileges permit opening a “read only” network system drawing and database to commission, replace or monitor the network devices.



Network Wizard

User Name: Integrator

Password: \*\*\*\*\*

Visio Drawing

Write Access

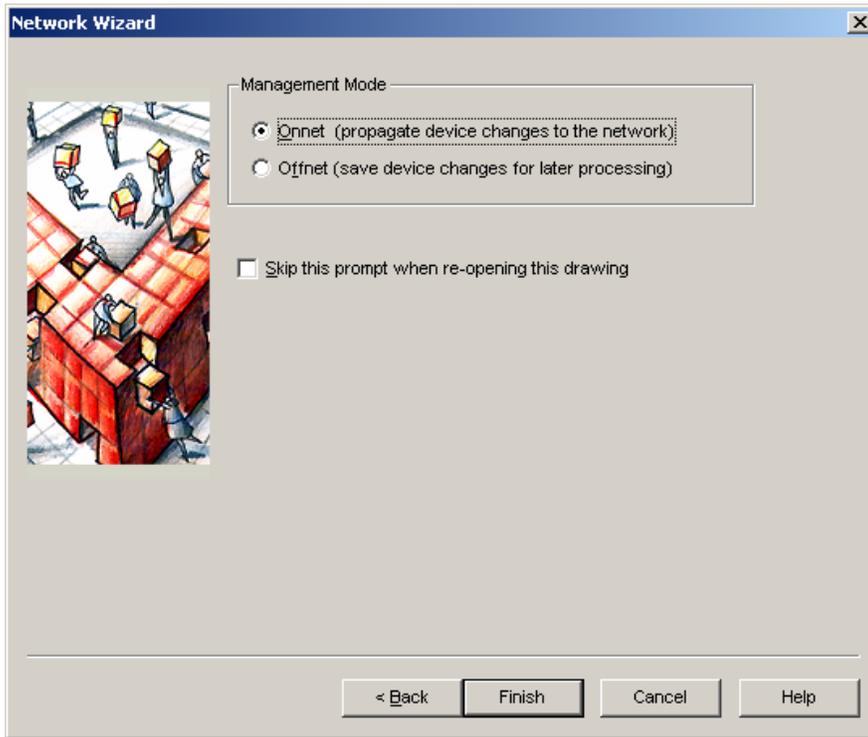
Version # of this drawing: 25

Most current version #: 25

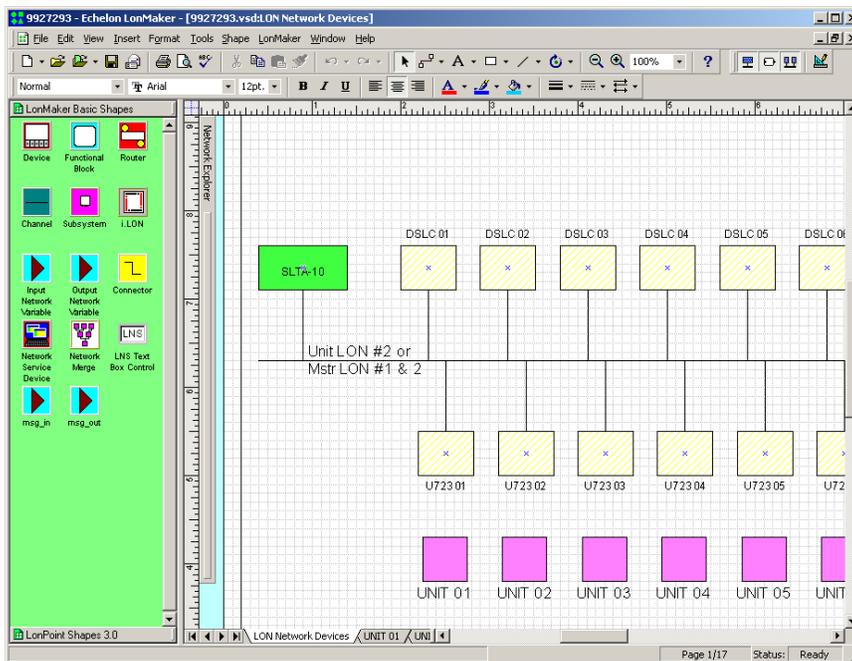
Skip this prompt when re-opening this drawing

< Back   Next >   Cancel   Help

Select "Next." The following screen appears. Check "Onnet" to continue with the commissioning process. Onnet mode is necessary to activate the network device LON communication once commissioned (installed).

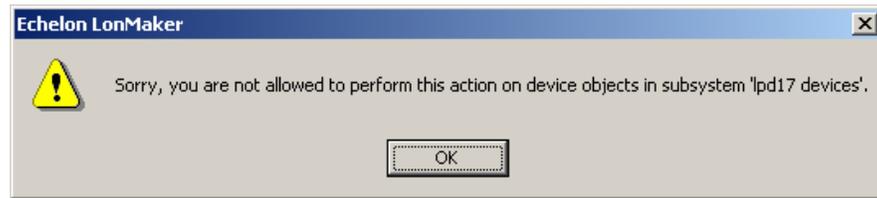


Select "Finish". The following 9927293.vsd drawing opens. The "LON Network Devices" drawing sheet is shown. The 723PLUS/DSLCL Compatible LonMaker network devices are commissioned or replaced from the "LON Network Devices" drawing sheet.



After a device is commissioned, the color changes on the drawing sheet. Devices that have been commissioned are shown with a solid green color. Devices that have not yet been commissioned are shown with a light yellow crosshatch. The drawing above shows that the SLTA-10 network interface adapter has been commissioned, but the remaining “LON Network Devices” devices have not been commissioned.

Subnets identify additional drawing sheets for each Unit, Gateway, and MSLC\_LSIM control. These drawing sheets define the function blocks and connections for each device. These are “read only” and cannot be changed except by persons with network “Administrator” privileges. These sheets are not used for commissioning or replacing devices. Write privileges to add or modify network devices or connections between devices are reserved for Woodward Administrators. The following message is typical when changes are attempted without proper authorization.

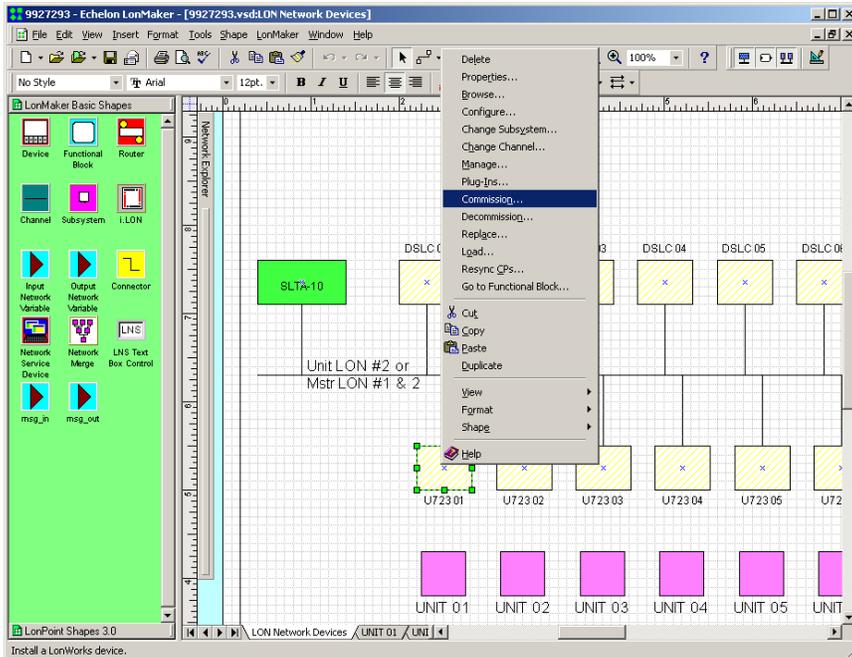


## Commissioning the 723PLUS DSLC Compatible Network Devices

The process of “commissioning” a device is necessary since a device will not function on the network until the commissioning process is performed to bind the device into the network. The network connections for each device are predefined in the 723PLUS/DSLC Compatible LON database (database name 9927293). Commissioning is the final step of assigning these connections, by device name, to the mating physical device on the network. After commissioning, network messages are exchanged between commissioned devices placed “Onnet” based on the predefined database connections.

It is important to note that only the U723 01, U723 02, etc., DSLC 01, DSLC 02, etc., and the LSIM devices are installed for the 723PLUS DSLC Compatible LON network situation. Only devices Mstr723\_1, Mstr723\_2, DSLC 01, DSLC 02, etc., and the MSLC are installed for the 723PLUS Gateway network situation. The DSLC devices are common to both network situations. The remaining 723PLUS Gateway devices are not used in the 723PLUS/DSLC Compatible LON network (and vice versa) and should not be installed.

To begin commissioning devices, the “LON Network Devices” drawing sheet must be open. With this drawing open, right click the device to be commissioned (e.g., U723 01) and the following pop-up menu choices appear. Select “Commission”.



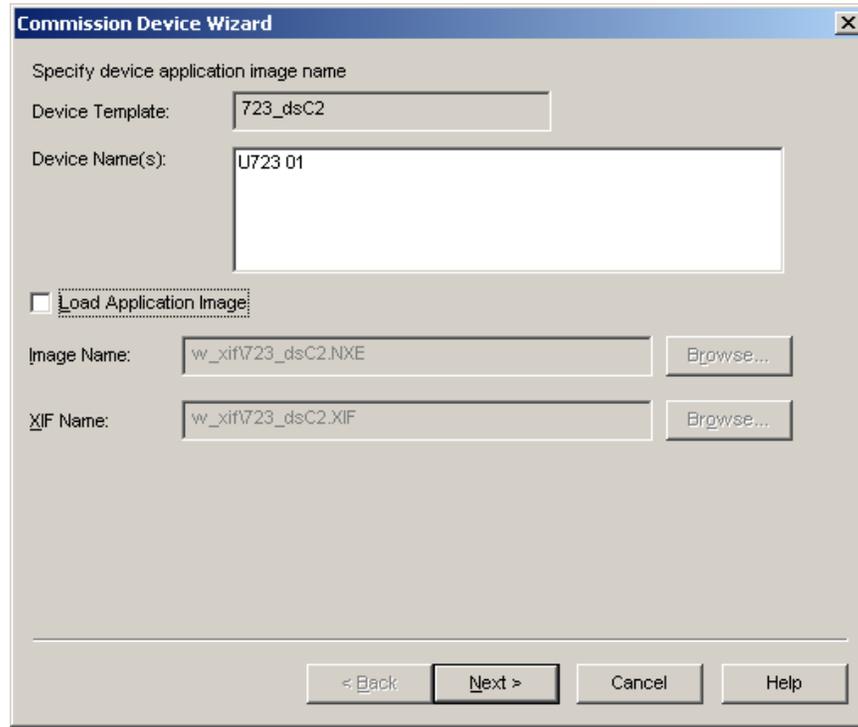
Only those devices that have not been commissioned can be commissioned (although commissioning a device again as the same device is not prohibited). See “Replacing the 723PLUS/DSL/C Compatible Network Devices” for instructions on replacing a commissioned device.

## **! WARNING**

When commissioning or replacing a device, be sure to select the correct device in LonMaker for Windows, and press or toggle the service pin on that corresponding physical device. You cannot install two devices with the same name on the same network. In addition, you cannot install one device twice in the same network.

Before commissioning or replacing any of the devices on a network, be sure that all of the engines are shut down and locked out. The load sharing between all DSL/C units and the LSIM unit will be temporarily removed during the commissioning/replacement process.

After selecting "Commission" from the pop-up menu, the following "Commission Device Wizard" screen appears. 723PLUS/DSL C Compatible devices use a .xif file in the device template. Do not attempt to load a different application image. Do not check the Load Application Image check box. The application image in the database is correct for all 723PLUS/DSL C Compatible devices.



The screenshot shows a dialog box titled "Commission Device Wizard" with a close button (X) in the top right corner. The dialog is used for specifying device application image names. It contains the following fields and controls:

- Section: Specify device application image name
- Device Template: Text box containing "723\_dsC2"
- Device Name(s): Text box containing "U723 01"
- Check box:  Load Application Image (unchecked)
- Image Name: Text box containing "w\_xif723\_dsC2.NXE" with a "Browse..." button to its right.
- XIF Name: Text box containing "w\_xif723\_dsC2.XIF" with a "Browse..." button to its right.
- Navigation buttons at the bottom: "< Back", "Next >", "Cancel", and "Help".

All engines need to be shut down before commissioning devices.

If the correct device was selected, select “Next,” and the following screen appears. If, however, the wrong device was selected, choose “Cancel” then select the correct device.

The screenshot shows a dialog box titled "Commission Device Wizard" with a close button (X) in the top right corner. The main text reads "Specify the initial state of the device and the source of CP values". Below this, there is a text input field labeled "Device Name(s):" containing the text "U723 01".

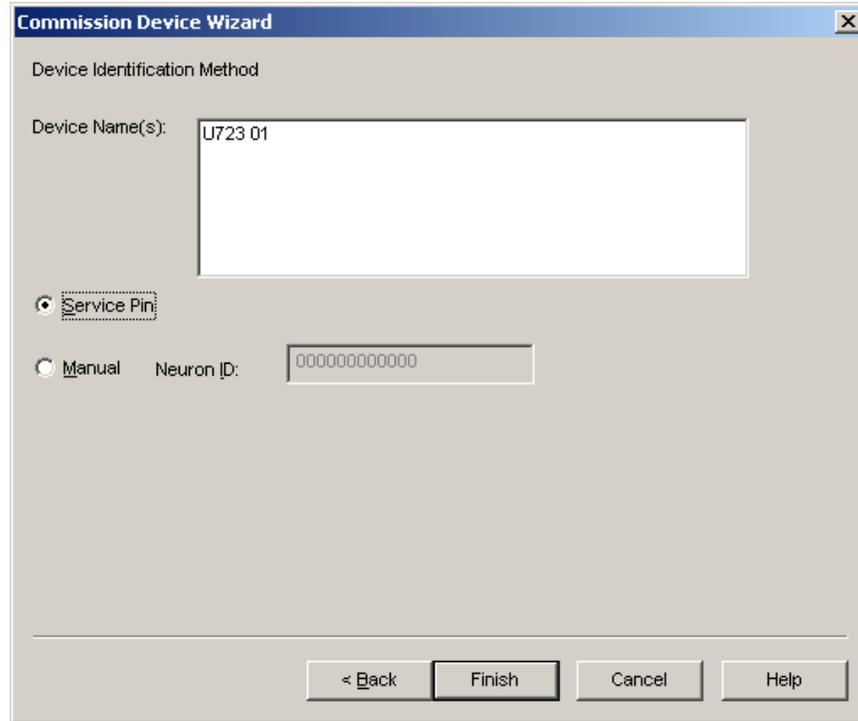
There are two main sections for configuration:

- State:** A group box containing four radio buttons: "Default", "Offline", "Online" (which is selected and has a dashed border), and "Disable".
- Source of Configuration Property Values:** A group box containing three radio buttons: "Current values in database" (which is selected), "Default values", and "Current values in device".

At the bottom of the dialog, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

To continue commissioning a device, proceed by setting the device state “Online” which makes the device active after it is commissioned. Set the “Source of Configuration Property Values” to “Current values in the database” to make the connections needed for the 723PLUS/DSL/C Compatible devices.

Select “Next” and the following screen will appear.



Select “Service Pin” as the commissioning method. The 723PLUS/DSLCL Compatible devices are built to use the Service Pin installation method.

Select “Finish” and the following screen will appear.



Go to the control chosen for commissioning and select the service pin for this device.

## IMPORTANT

Be sure that the physical device being commissioned matches the assigned device name on the LonMaker drawing before toggling the device LON Network Service Pin. *Commissioning the wrong device is not easy to undo.*

The service pin on the 723PLUS/DSLC Compatible control can be found in the "COMM PORT SETUP" service menu once "USE COMM PORT" in "CONFIG OPTION" menu is configured true. Either Servlink/Watch Window or a Hand Held Programmer connected to comm port J1 is needed to provide access and control of the 723PLUS/DSLC Compatible LON service pin. The 723PLUS/DSLC Compatible LON service pin will have to be tuned with the rabbit or turtle raise/lower keys to TRUE and then back FALSE. (See Chapter 4 of Woodward manual 02878 for more detailed instructions on Servlink/Watch Window and the Hand Held Programmer).

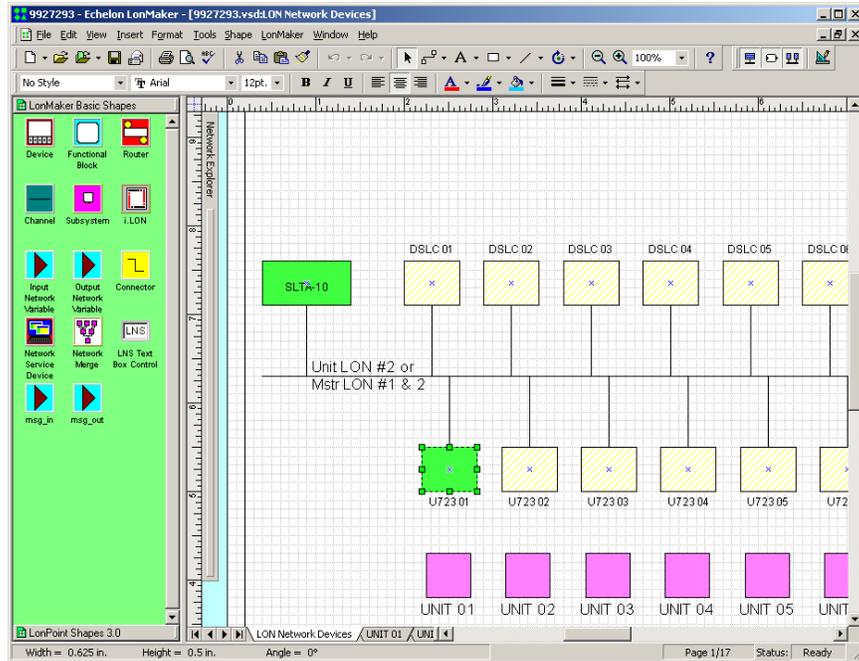
The service pin on a DSLC control is in "Menu 5." A Hand Held Programmer must be connected to the comm port, and the configuration key will have to be set to 49 to provide access and control of the DSLC service pin. The DSLC service pin will have to be tuned with the rabbit or turtle raise/lower keys to TRUE and then back FALSE.

The LSIM has a hardware service pin. Using LonMaker for Windows to bind (commission) the LSIM permanently negates the self-binding feature.

When the service pin is toggled, the following screen appears for the device being commissioned.



When the device is successfully commissioned, the Commissioning Device Wizard screens close and the newly commissioned device changes color on the “LON Network Devices” drawing sheet from a light yellow crosshatch (uninstalled) to a solid green (installed) as shown below for “U723 01”.



## IMPORTANT

When a DSL/C control is installed with LonMaker for Windows, the self-binding network address (in menu 5) is no longer valid. However, it can cause problems if the DSL/C control thinks it should be configuring itself, when in reality LonMaker for Windows is configuring the DSL/C controls. To eliminate these problems cycle power to all DSL/C controls after they have been commissioned.

Verify that all the DSL/C controls are installed by looking at the number of “active DSL/Cs” in menu 0 on all of the DSL/C controls. This number should equal the total number of all DSL/C units installed (commissioned and electrically connected) on the network and powered up, plus 1 (if applicable) for the LSIM.

If an attempt is made to install the same device twice on the same network, the device will not be installed and the following warning will appear.



***Mistakenly installing the wrong device is not easy to undo.***

The easiest workaround is to remove the device from the network and either physically swap it for the device it was commissioned to be or simply replace it with a new un-commissioned device. Do not attempt to decommission a DSLCL device—this will cause these controls to fail. You may decommission a 723PLUS device.

A somewhat more complicated and lengthy workaround is to blank the binding of the neuron chip on the DSLCL device. This will generally require the device to be returned to Woodward for blanking. This may be a good choice if a spare unit was commissioned and this unit is now the intended spare. To be useful as a spare the unit must be un-commissioned. Refer to 723PLUS/DSLCL Compatible Network Management for test details.

## 723PLUS/DSLCL Compatible Network Device Properties

To verify the properties of any device, whether commissioned, replaced, or un-commissioned, right click on the device and click “Properties” from the pop-up menu. The following Device Properties screen opens to show the device Attributes, including “Commission Status”, “State”, etc.

The screenshot shows the 'Device Properties' dialog box with the following details:

- Device Name:** U723 01
- Template Name:** 723\_dsC2
- Commission Status:** Current
- State:** Configured, Online
- Channel Name:** Unit LON #2 or Mstr LC
- Channel Handle:** 1
- Subsystems:** LON Network Devices, LON Network Devices:UNIT 01

In this example, the Commissioned Status and State Attributes show that the commission status for device ‘U723 01’ is current and that the device is configured and online. Of course these are the properties of the device commissioned for internal testing only. Real commissioning must be performed when the network is actually installed on site. Un-commissioned devices show the Commissioned Status as “Updates pending” and the State as “<Not Available>”.

Refer to the LonMaker for Windows User’s Guide for more in depth descriptions.

## Replacing the 723PLUS/DSL/C Compatible Network Devices

The process of “replacing” a device is similar to “commissioning” a device. Replacement is necessary when a commissioned device fails. The replacement device will not function on the network until the following replacement process is performed to bind the replacement device into the network. The commissioned device must be removed and the replacement device installed in its place.

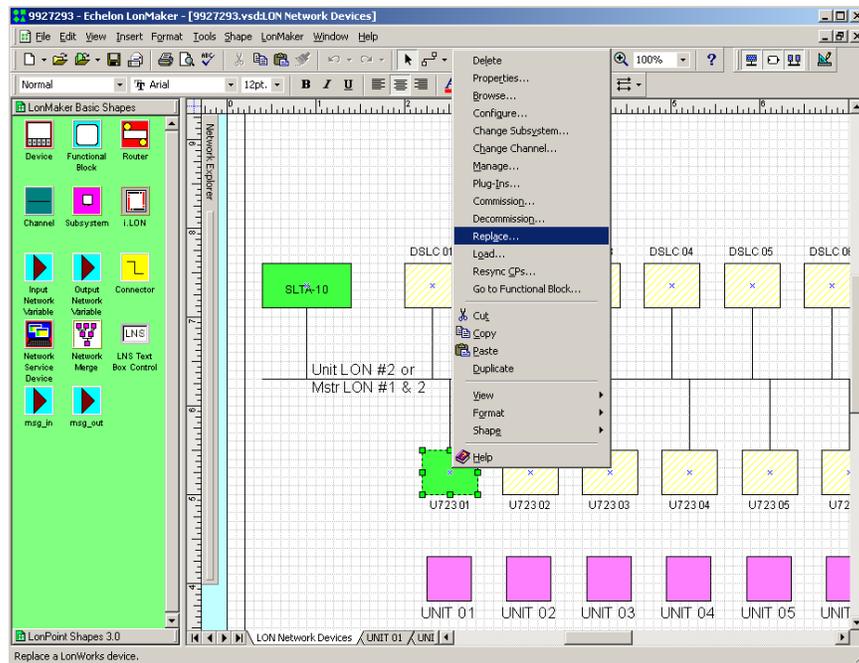


### WARNING

When commissioning or replacing a device, be sure to select the correct device in LonMaker for Windows, and press the service pin on that corresponding physical device. You cannot install two devices with the same name on the same network. In addition, you cannot install one device twice in the same network.

Before commissioning or replacing any of the devices on a network, be sure that all of the engines are shut down and locked out. The load sharing between the DSL/C units and the LSIM will temporarily be removed during the commissioning/replacement process.

With the “LON Network Devices” drawing sheet open, right click a commissioned device to be replaced (for example, ‘U723 01’). The following pop-up menu choices appear.



Select “Replace”, and the following Replace Device Wizard screen opens.

The screenshot shows the "Replace Device Wizard" dialog box. The title bar reads "Replace Device Wizard". The main area is titled "Specify Device Template". It contains the following fields and options:

- Current Template:** A text box containing "723\_dsC2".
- Device Name(s):** A text box containing "U723 01".
- External Interface Definition:** A section with three radio button options:
  - Upload From Device
  - Load XIF: A "File:" text box containing "c:\Lon\Works\Import\w\_xif\723\_dsC2.XIF" and a "Browse..." button.
  - Existing Template: A "Name:" dropdown menu containing "723\_dsC2".

At the bottom of the dialog are four buttons: "< Back", "Next >", "Cancel", and "Help".

Set the External Interface Definition to use an “Existing Template”.

Select “Next”, and the following screen will appear.

The screenshot shows the "Replace Device Wizard" dialog box, Step 2. The title bar reads "Replace Device Wizard". The main area is titled "Specify device application image name". It contains the following fields and options:

- Device Template:** A text box containing "723\_dsC2".
- Device Name(s):** A text box containing "U723 01".
- Load Application Image: A checkbox that is currently unchecked.
- Image Name:** A text box containing "w\_xif\723\_dsC2.NXE" and a "Browse..." button.
- XIF Name:** A text box containing "w\_xif\723\_dsC2.XIF" and a "Browse..." button.

At the bottom of the dialog are four buttons: "< Back", "Next >", "Cancel", and "Help".

723PLUS/DSL/C Compatible devices use a .xif file in the device template. Do not attempt to load a different application image. Do not check the Load Application Image check box.

Select “Next”, and the following screen will appear.

Replace Device Wizard

Specify the initial state of the device and the source of CP values

Device Name(s): U723 01

State

- Default
- Offline
- Online
- Disable

Source of Configuration Property Values

- Old device values
- Default values
- New device values

< Back Next > Cancel Help

Set the device State “Online” to make the device active after it is replaced. Set the Source of Configuration Property Values to use “Old device values”. The old values are needed for the 723PLUS/DSLCL Compatible replacement device.

Select “Next”, and the following screen will appear.

Replace Device Wizard

Device Identification Method

Device Name(s): U723 01

Service Pin

Manual Neuron ID: 00A088813800

< Back Finish Cancel Help

Select "Service Pin" as the commissioning method. The 723PLUS/DSL/C Compatible devices were built to use the Service Pin.

Select "Finish" and the following screen will appear.



## IMPORTANT

Be sure that the physical device being replaced matches the assigned device name on the LonMaker drawing before toggling the device Service Pin.

Go to the control chosen for replacement and select the service pin for this device as described earlier in the "Commissioning the 723PLUS/DSL/C Compatible Network Devices" section. Toggle the service pin TRUE then FALSE.

After the service pin is toggled, the following screen appears for the device being replaced.



When the device is successfully replaced, all replacement screens close, and the newly replaced device color remains a solid green (installed) color.

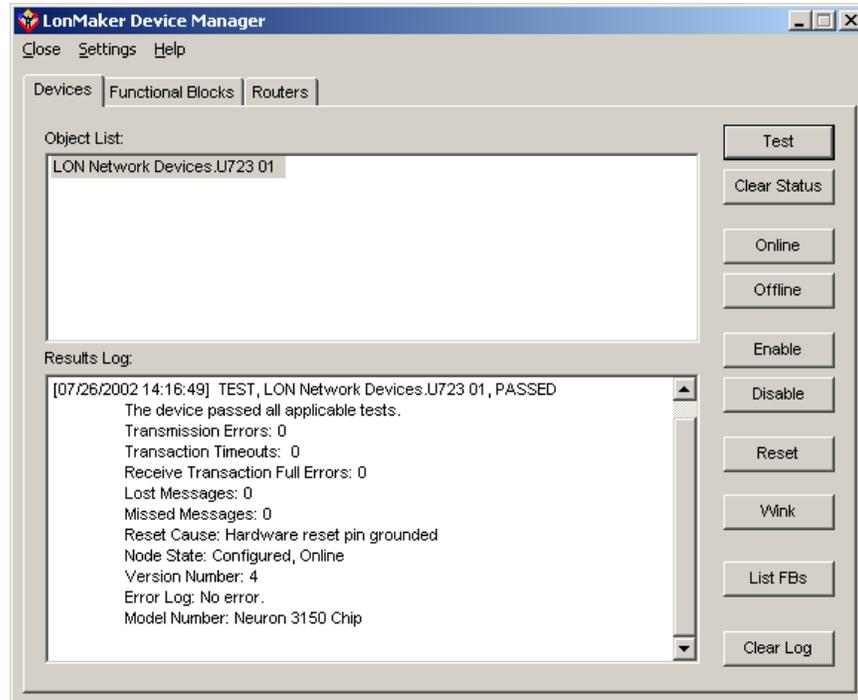
## IMPORTANT

Verify that all the DSL/C controls are installed by looking at the number of "active DSL/Cs" in menu 0 on all of the DSL/C controls. This number should equal the total number of all DSL/C units installed (commissioned and electrically connected) on the network and powered up, plus 1 (if applicable) for the LSIM.

To further verify the properties of the replacement device, refer to the 723PLUS/DSLCL Compatible Network Device Properties section. The device should show that the commission status is current and that the state is configured and online. To change the state, refer to the 723PLUS/DSLCL Compatible Network Management section.

## 723PLUS/DSLCL Compatible Network Management

Network Management is used to test devices, place devices online, take devices offline, etc. To open the following “Manage” screen for a particular device, right click on the device and click “Manage” from the pop-up menu.



The “Results Log” on the above screen displays the results of clicking the “Test” button. The Test feature provides considerable information about the selected device.

To place the selected device online, click the “Online” button. To take the selected device offline, click the “Offline” button.

Clicking the “Reset” button causes the device to temporarily stop, reset all values to their initial settings and restart the application. This also places an offline device online.

The Enable and Disable functions are not applicable to 723PLUS/DSLCL Compatible devices.

Refer to the LonMaker for Windows User’s Guide for more in depth descriptions.

## LonMaker "Turbo" Edition Setup

### Opening the 723PLUS/DSL/MSLC Gateway Network

From the Windows "Start" menu select "Program", then "LonMaker for Windows" to open a network. The following screen appears.

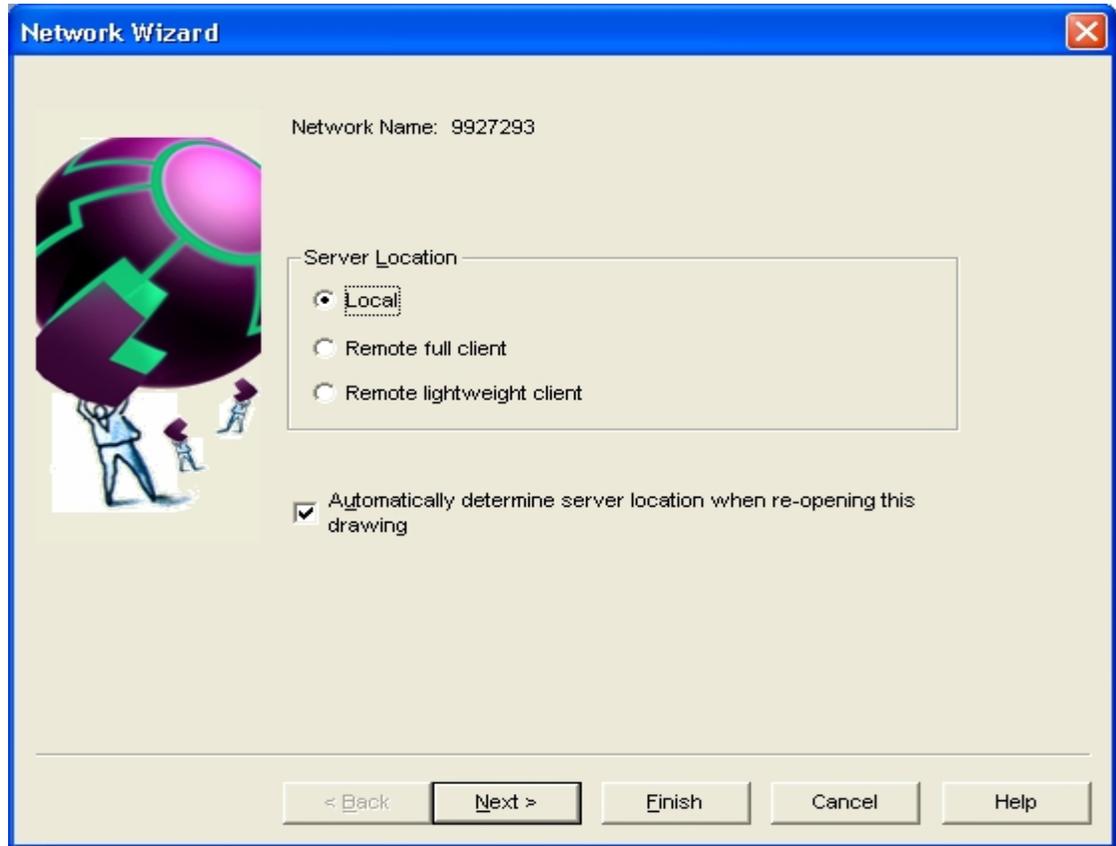
**IMPORTANT**

Activation is required before this LonMaker Turbo Edition Setup Section. Refer to: "Activating the LonMaker Tool" in the LonMaker User's Guide, Turbo Edition.

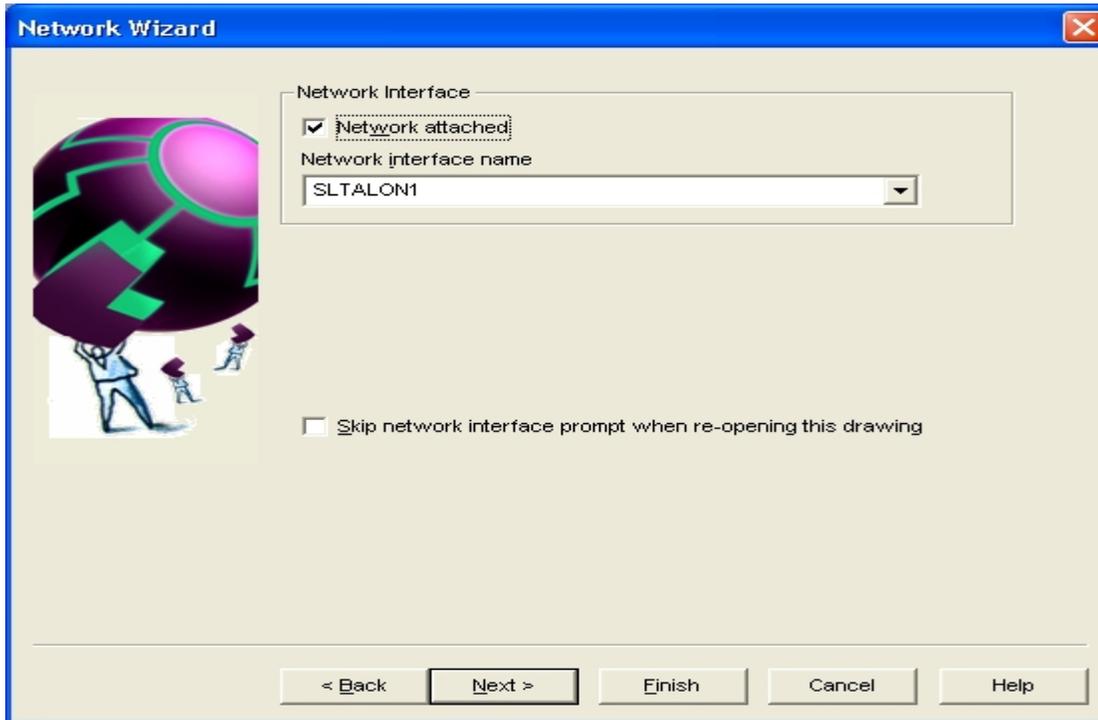
Check all settings and if necessary, select c:\lm\drawings as the Drawing Base Path, 9927293 for the Drawing Directory, and 9927293.vsd as the Drawing Name. Select 9927293 as the Database Name. 9927-293 is the Woodward part number for the unit 723PLUS DSL/MSLC Gateway LON database/drawing software.

The Database Name selection may not be available. If not, leave this selection blank. Select "Open Network".

The following prompt may appear. If not, skip to the “Network Interface” screen below. Should this prompt appear, choose “Local”.



The following screen appears when “Open Network” is selected or “Next”. Check the “Network Attached” box and select the “SLTALON1” Network Interface Name.



Network Wizard

Network Interface

Network attached

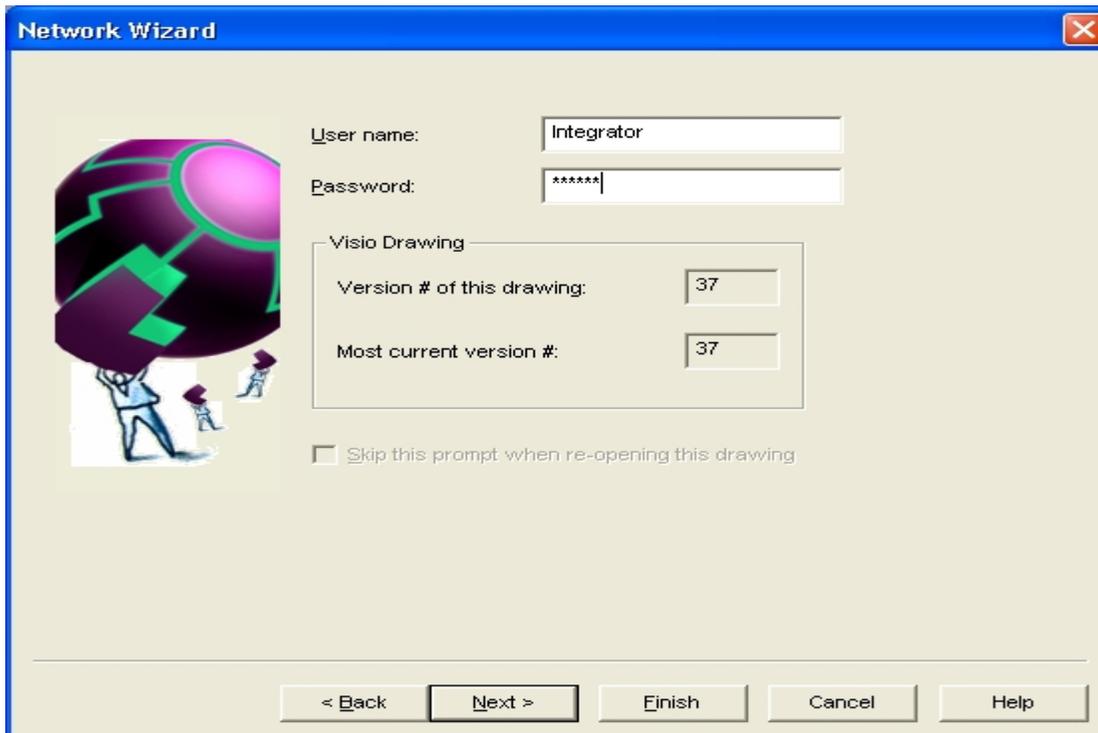
Network interface name

SLTALON1

Skip network interface prompt when re-opening this drawing

< Back   Next >   Finish   Cancel   Help

Select “Next.” The following screen appears. Type in “Integrator” for the User Name and “integr” for the Password. Both the user name and password are case-sensitive. Integrator privileges permit opening a “read only” network system drawing and database to commission, replace, or monitor the network devices.



Network Wizard

User name: Integrator

Password: \*\*\*\*\*

Visio Drawing

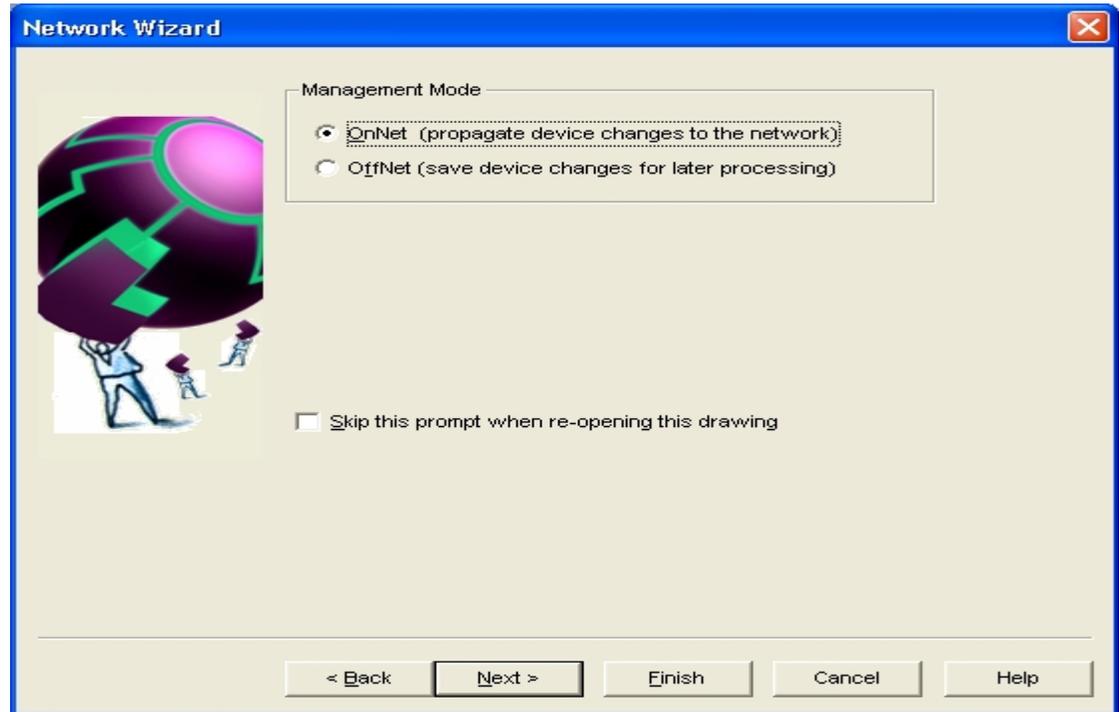
Version # of this drawing: 37

Most current version #: 37

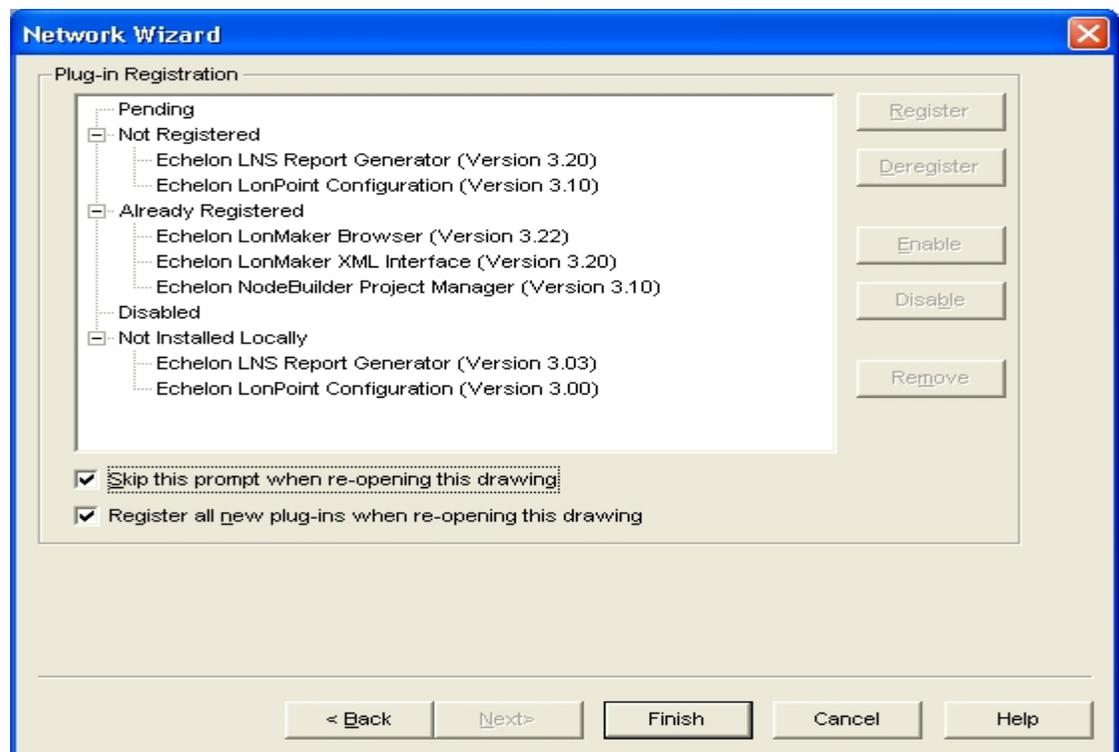
Skip this prompt when re-opening this drawing

< Back   Next >   Finish   Cancel   Help

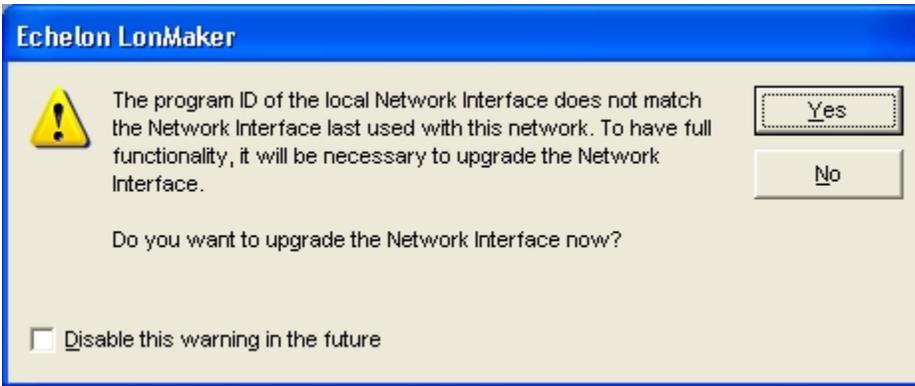
Select "Next." The following screen appears. Check "Onnet" to continue with the commissioning process. Onnet mode is necessary to activate the network device LON communication once commissioned (installed).



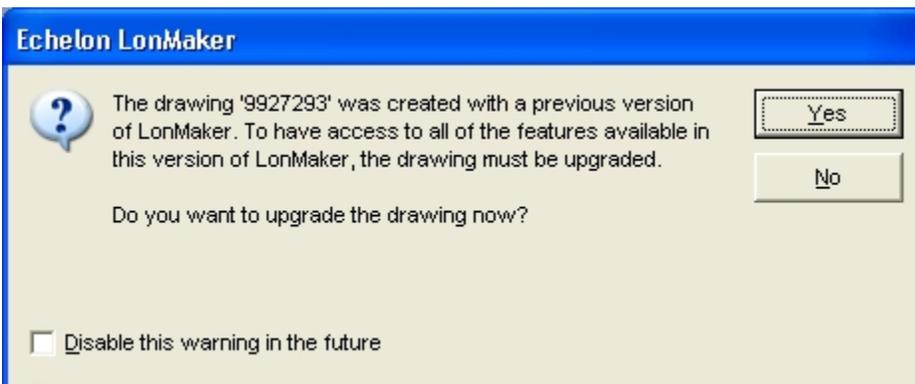
Select "Next".



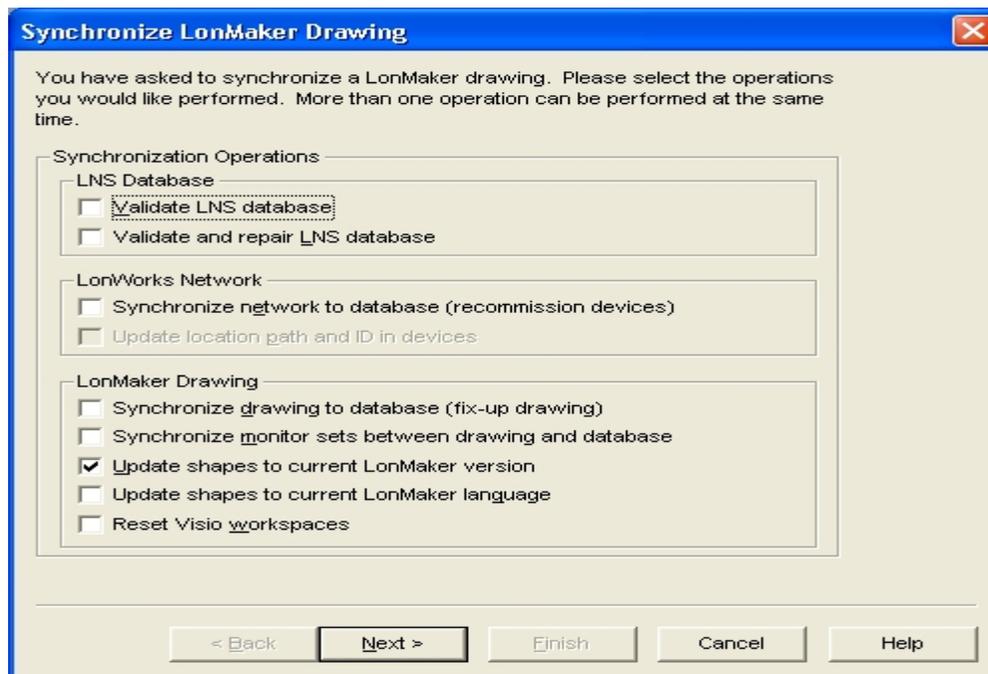
Select "Finish".



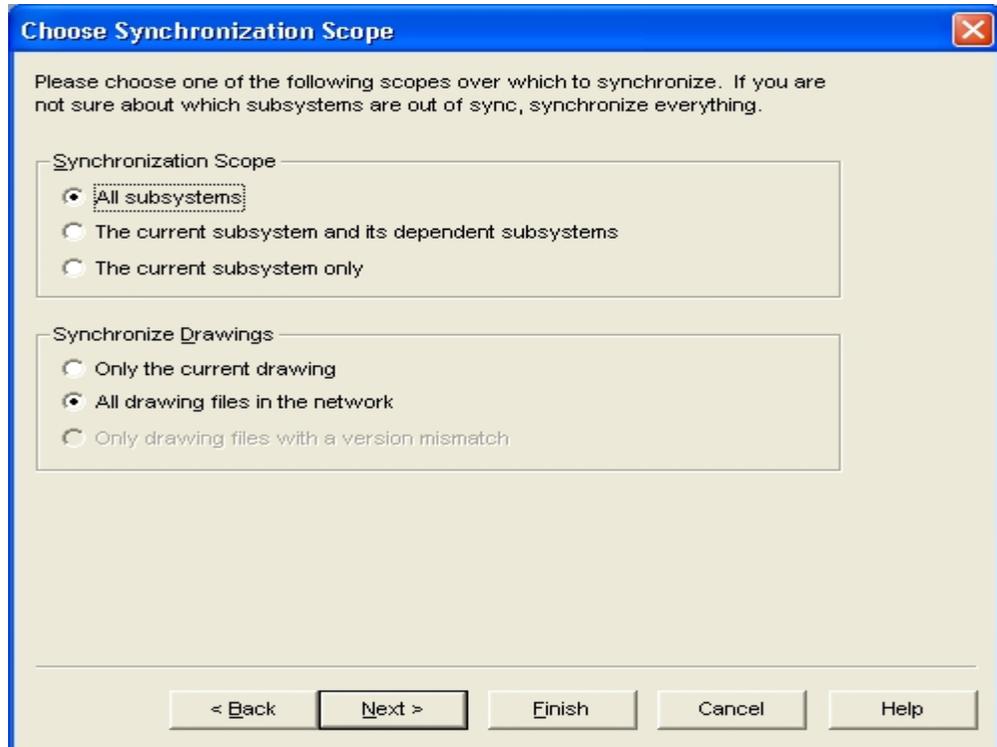
Select "Yes".



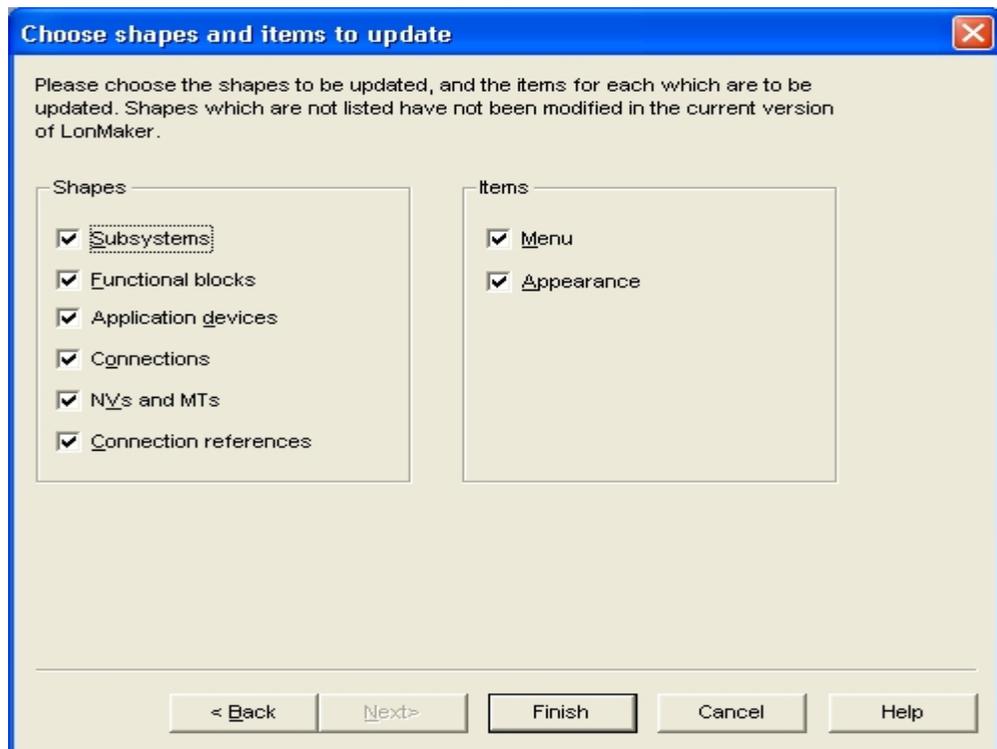
Select "Yes".



Select "Next".



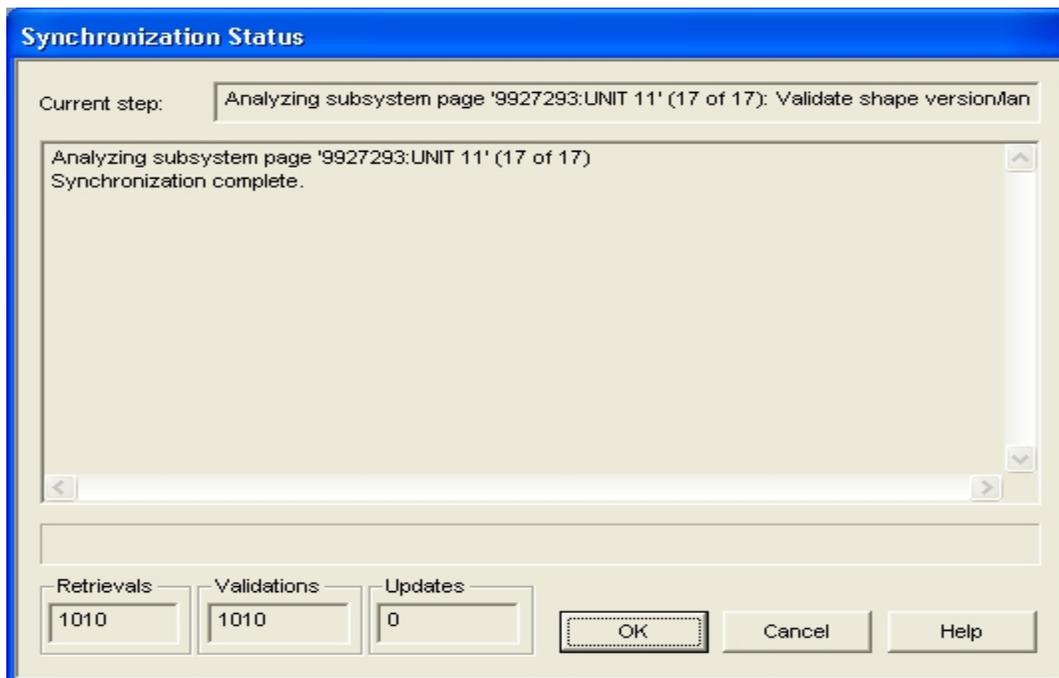
Select "Next".



Select "Finish".

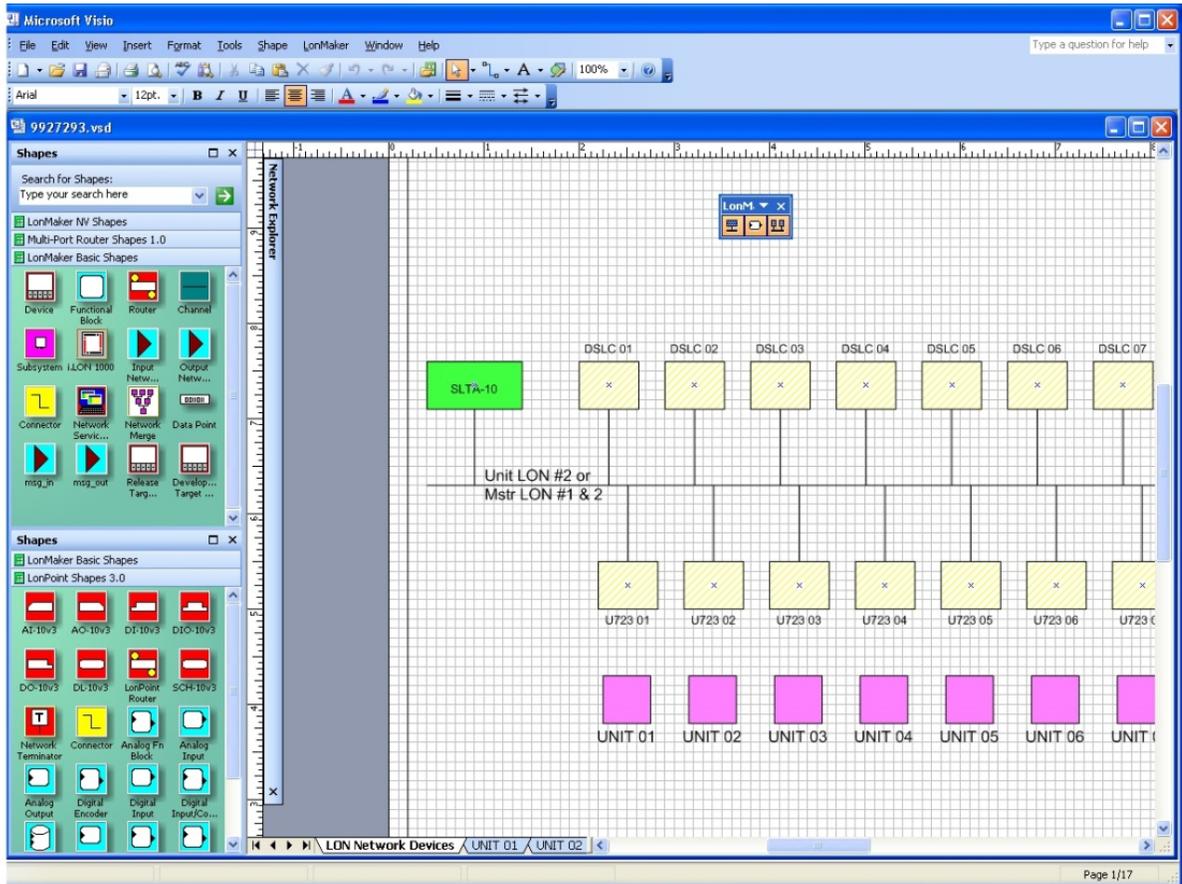


Select "Current Visio Format".



Select "OK".

The following 9927293.vsd drawing opens. The “LON Network Devices” drawing sheet is shown. The 723PLUS/DSLCL Compatible LonMaker network devices are commissioned or replaced from the “LON Network Devices” drawing sheet.



After a device is commissioned, the color changes on the drawing sheet. Devices that have been commissioned are shown with a solid green color. Devices that have not yet been commissioned are shown with a light yellow crosshatch. The drawing above shows that the SLTA-10 network interface adapter has been commissioned, but the remaining “LON Network Devices” devices have not been commissioned.

Subnets identify additional drawing sheets for each Unit, Gateway, and MSLC\_LSIM control. These drawing sheets define the function blocks and connections for each device. These are “read only” and cannot be changed except by persons with network “Administrator” privileges. These sheets are not used for commissioning or replacing devices. Write privileges to add or modify network devices or connections between devices are reserved for Woodward Administrators. The following message is typical when changes are attempted without proper authorization.

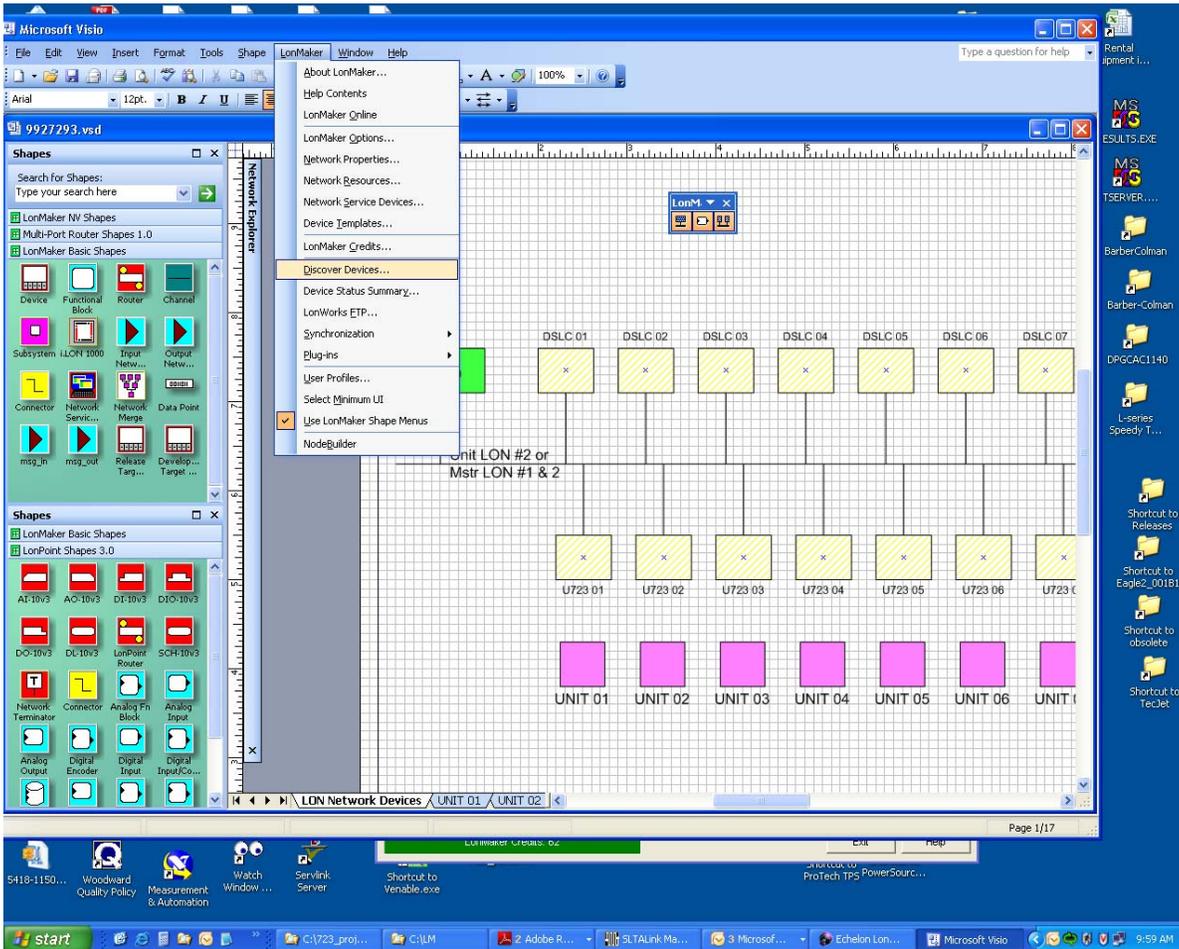


## Discover Devices

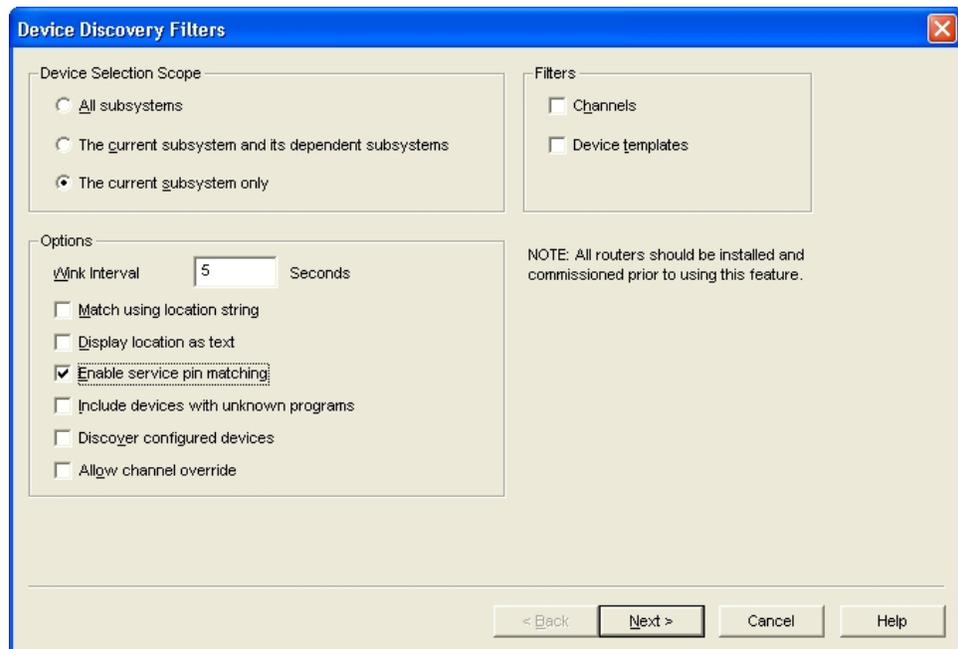
Commissioning Using Device Discovery: method in the LonMaker User's Guide, Turbo Edition.

Found in Table of Contents under [5 Installing Network, "Commissioning Using Device Discovery"]

Use this method when commissioning the "723PLUS DSL/C Compatible Network Devices". Go to LonMaker, then Select: Discover Devices.

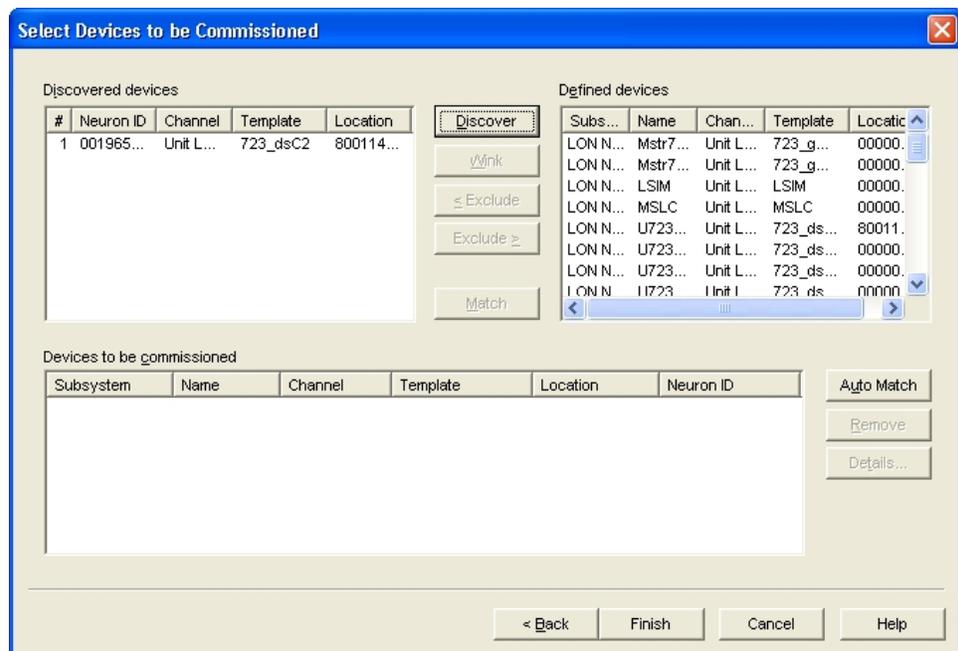


The “Device Discovery Filter” will appear and under Options Check: Enable service pin matching.



Select “Next”.

Note: First – The 723PLUS DSLC Compatible Network Devices “pin” (LON SERVICE PIN) must be tuned: \*TRUE [Located in the Handheld Device]. Second – If the Discovered devices box is empty, Select: Discover.



Select “Finish”.

The Device is now ready to be commissioned.

## Commissioning the 723PLUS DSLCL Compatible Network Devices

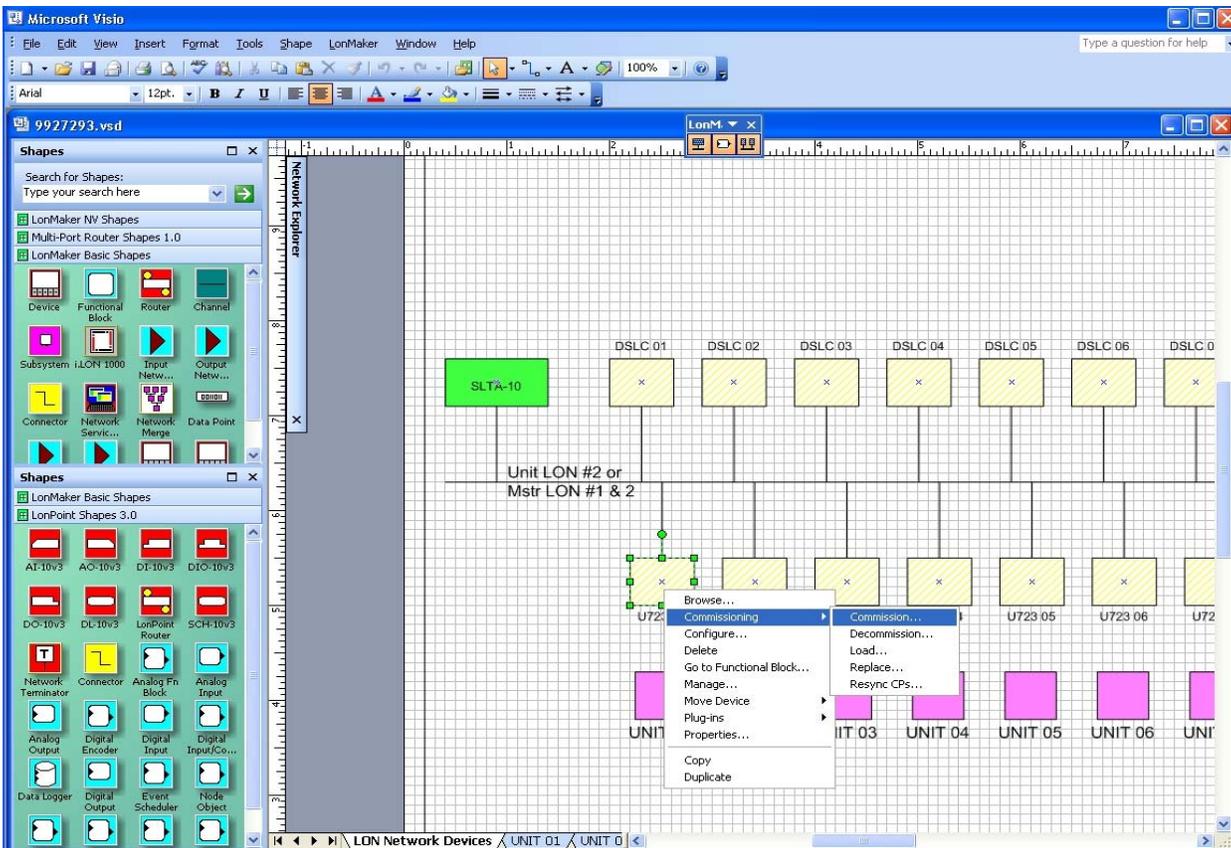
The process of “commissioning” a device is necessary since a device will not function on the network until the commissioning process is performed to bind the device into the network. The network connections for each device are predefined in the 723PLUS/DSLCL Compatible LON database (database name 9927293). Commissioning is the final step of assigning these connections, by device name, to the mating physical device on the network. After commissioning, network messages are exchanged between commissioned devices placed “Onnet” based on the predefined database connections.

It is important to note that only the U723 01, U723 02, etc., DSLCL 01, DSLCL 02, etc., and the LSIM devices are installed for the 723PLUS DSLCL Compatible LON network situation. Only devices Mstr723\_1, Mstr723\_2, DSLCL 01, DSLCL 02, etc., and the MSLC are installed for the 723PLUS Gateway network situation. The DSLCL devices are common to both network situations. The remaining 723PLUS Gateway devices are not used in the 723PLUS/DSLCL Compatible LON network (and vice versa) and should not be installed.

### IMPORTANT

If the attempt to commission the device has failed, you may need to use “Commissioning Using Device Discovery” method in the LonMaker User’s Guide, Turbo Edition, or go to “Discover Devices” in the previous section of this chapter.

To begin commissioning devices, the “LON Network Devices” drawing sheet must be open. With this drawing open, right click the device to be commissioned (e.g., U723 01) and the following pop-up menu choices appear. Select “Commission”.



Only those devices that have not been commissioned can be commissioned (although commissioning a device again as the same device is not prohibited). See “Replacing the 723PLUS/DSLCL Compatible Network Devices” for instructions on replacing a commissioned device.

|                  |   |
|------------------|---|
| <b>! WARNING</b> | <p><b>When commissioning or replacing a device, be sure to select the correct device in LonMaker for Windows, and press or toggle the service pin on that corresponding physical device. You cannot install two devices with the same name on the same network. In addition, you cannot install one device twice in the same network.</b></p> <p><b>Before commissioning or replacing any of the devices on a network, be sure that all of the engines are shut down and locked out. The load sharing between all DSLCL units and the LSIM unit will be temporarily removed during the commissioning/replacement process.</b></p> |
|------------------|---|

After selecting “Commission” from the pop-up menu, the following “Commission Device Wizard” screen appears. 723PLUS/DSLCL Compatible devices use a .xif file in the device template. Do not attempt to load a different application image. Do not check the Load Application Image check box. The application image in the database is correct for all 723PLUS/DSLCL Compatible devices.

Commission Device Wizard

Specify device application image name

Device template: 723\_dsC2

Device name(s): U723 01

Load application image

Update firmware in device to match application image

Image name: w\_xif\723\_dsC2.NXE Browse...

XIF name: w\_xif\723\_dsC2.XIF Browse...

< Back Next > Finish Cancel Help

All engines need to be shut down before commissioning devices.

If the correct device was selected, select “Next,” and the following screen appears. If, however, the wrong device was selected, choose “Cancel”, then select the correct device.

The screenshot shows a Windows-style dialog box titled "Commission Device Wizard". The main instruction is "Specify the initial state of the device and the source of CP values".

Fields and options include:

- Device name(s):** A text box containing "U723 01".
- State:** Radio buttons for Default, Offline, **Online** (selected), and Disable.
- Source of CP Values:** Radio buttons for LNS database (selected), Defaults, and Current device values. A checkbox for "Include NV type CPs" is present under the Defaults option.
- Device Specific CPs:** Radio buttons for Do not update (selected), Update with other CPs, and Upload from device.

At the bottom, there are five buttons: "< Back", "Next >" (highlighted), "Finish", "Cancel", and "Help".

To continue commissioning a device, proceed by setting the device state “Online”, which makes the device active after it is commissioned. Set the “Source of Configuration Property Values” to “LNS database” to make the connections needed for the 723PLUS/DSLCL Compatible devices.

Select “Next”, and the following screen will appear.

Select “Service Pin” as the commissioning method. The 723PLUS/DSL/C Compatible devices are built to use the Service Pin installation method.

Select “Finish” and the following screen will appear.

Go to the control chosen for commissioning and select the service pin for this device.

## IMPORTANT

Be sure that the physical device being commissioned matches the assigned device name on the LonMaker drawing before toggling the device LON Network Service Pin. Commissioning the wrong device is not easy to undo.

The service pin on the 723PLUS/DSLCL Compatible control can be found in the "COMM PORT SETUP" service menu once "USE COMM PORT" in "CONFIG OPTION" menu is configured true. **Also the service pin may be found in "Debug" under "LON"**. Either Servlink/Watch Window or a Hand Held Programmer connected to comm port J1 is needed to provide access and control of the 723PLUS/DSLCL Compatible LON service pin. The 723PLUS/DSLCL Compatible LON service pin will have to be tuned with the rabbit or turtle raise/lower keys to TRUE and then back FALSE. (See Chapter 4 of Woodward Manual 02878 for more detailed instructions on Servlink/Watch Window and the Hand Held Programmer).

The service pin on a DSLCL control is in "Menu 5." A Hand Held Programmer must be connected to the comm port, and the configuration key will have to be set to 49 to provide access and control of the DSLCL service pin. The DSLCL Service pin will have to be tuned with the rabbit or turtle raise/lower keys to TRUE and then back FALSE.

The LSIM has a hardware service pin. Using LonMaker for Windows to bind (commission) the LSIM permanently negates the self-binding feature.

When the service pin is toggled, the following screen appears for the device being commissioned.



## Replacing the 723PLUS/DSLCL Compatible Network Devices

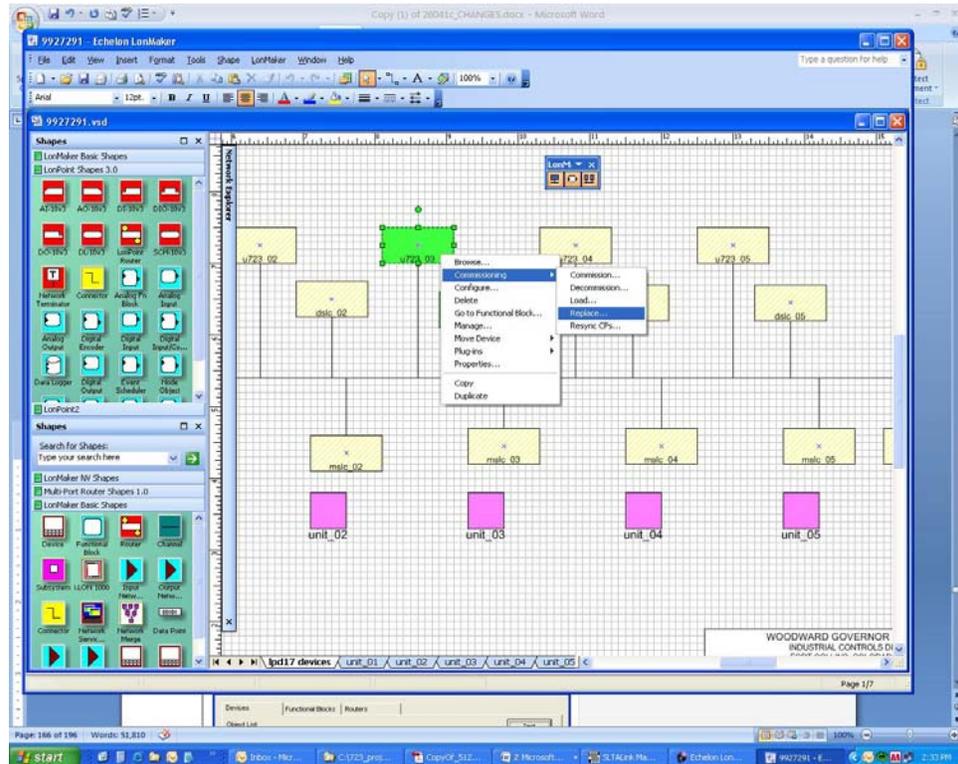
The process of "replacing" a device is similar to "commissioning" a device. Replacement is necessary when a commissioned device fails. The replacement device will not function on the network until the following replacement process is performed to bind the replacement device into the network. The commissioned device must be removed and the replacement device installed in its place.

### **WARNING**

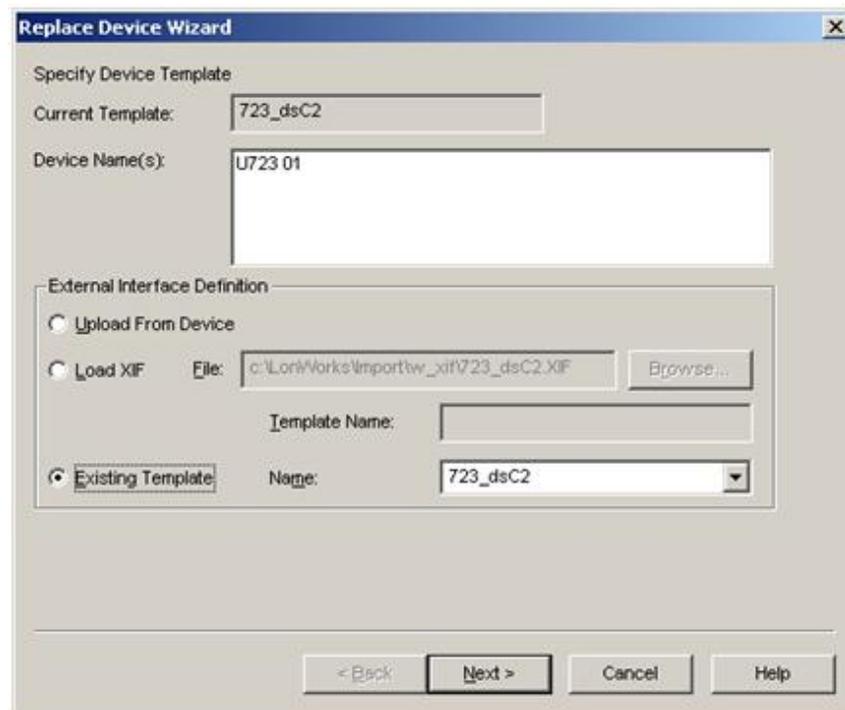
**When commissioning or replacing a device, be sure to select the correct device in LonMaker for Windows, and press the service pin on that corresponding physical device. You cannot install two devices with the same name on the same network. And you cannot install one device twice in the same network.**

**Before commissioning or replacing any of the devices on a network, be sure that all of the engines are shut down and locked out. The load sharing between the DSLCL units and the LSIM units will temporarily be removed during the commissioning/replacement process.**

With the “LON Network Devices” drawing sheet open, right click a commissioned device to be replaced (for example, ‘U723 01’). The following pop-up menu choices appear.



Select “Replace” and the following Replace Device Wizard screen opens.



Set the External Interface Definition to use an “Existing Template”.

Select "Next", and the following screen will appear.

Replace Device Wizard

Specify device application image name

Device Template: 723\_dsC2

Device Name(s): U723 01

Load Application Image

Image Name: w\_xif\723\_dsC2.NXE Browse...

XIF Name: w\_xif\723\_dsC2.XIF Browse...

< Back Next > Cancel Help

723PLUS/DSL/C Compatible devices use a .xif file in the device template. Do not attempt to load a different application image. Do not check the Load Application Image check box.

Select "Next", and the following screen will appear.

Replace Device Wizard

Specify the initial state of the device and the source of CP values

Device name(s): u723\_01

State

Default

Offline

Online

Disable

Source of CP Values

LNS database

Defaults

Include hV type CPs

New device values

Device Specific CPs

Do not update

Update with other CPs

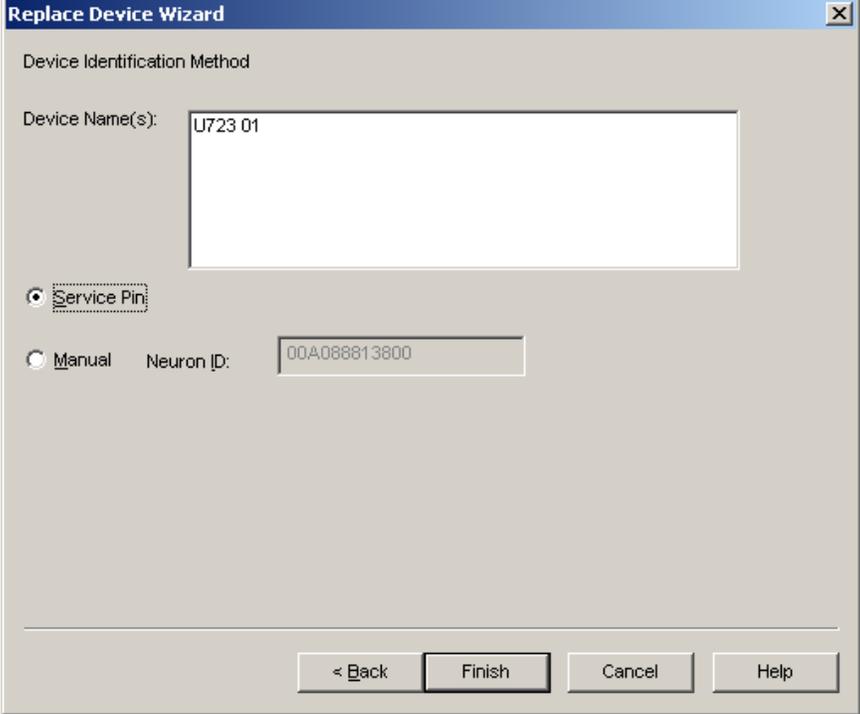
Upload from new device

Transfer from old device

< Back Next > Finish Cancel Help

Set the device *State* "Online" to make the device active after it is replaced. Set the *Source of CP Values* to use "LNS database". The configuration property values stored in the LNS network database for the old device will be written to the replacement device. The old values are needed for the 723PLUS/DSLC Compatible replacement device.

Select "Next", and the following screen will appear.



Replace Device Wizard

Device Identification Method

Device Name(s): U723 01

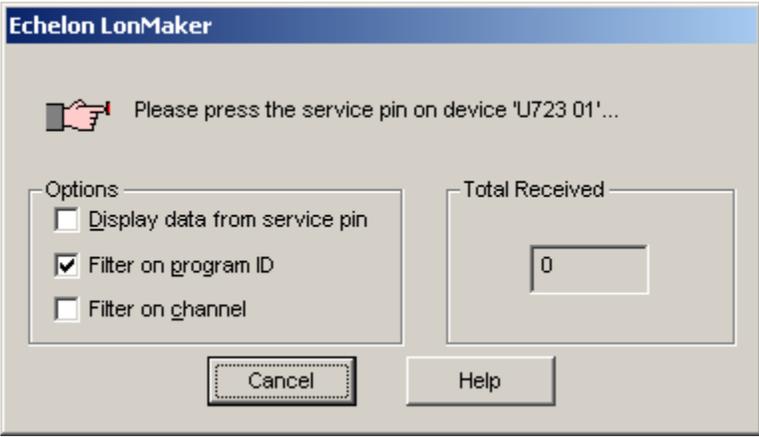
Service Pin

Manual Neuron ID: 00A088813800

< Back Finish Cancel Help

Select "Service Pin" as the commissioning method. The 723PLUS/DSLC Compatible devices were built to use the Service Pin.

Select "Finish" and the following screen will appear.



Echelon LonMaker

Please press the service pin on device 'U723 01'...

Options

Display data from service pin

Filter on program ID

Filter on channel

Total Received

0

Cancel Help

**IMPORTANT**

Be sure that the physical device being replaced matches the assigned device name on the LonMaker drawing before toggling the device Service Pin.

Go to the control chosen for replacement and select the service pin for this device as described earlier in the “Commissioning the 723PLUS/DSLCL Compatible Network Devices” section. Toggle the service pin TRUE then FALSE.

After the service pin is toggled, the following screen appears for the device being replaced.



When the device is successfully replaced, all replacement screens close, and the newly replaced device color remains a solid green (installed) color.

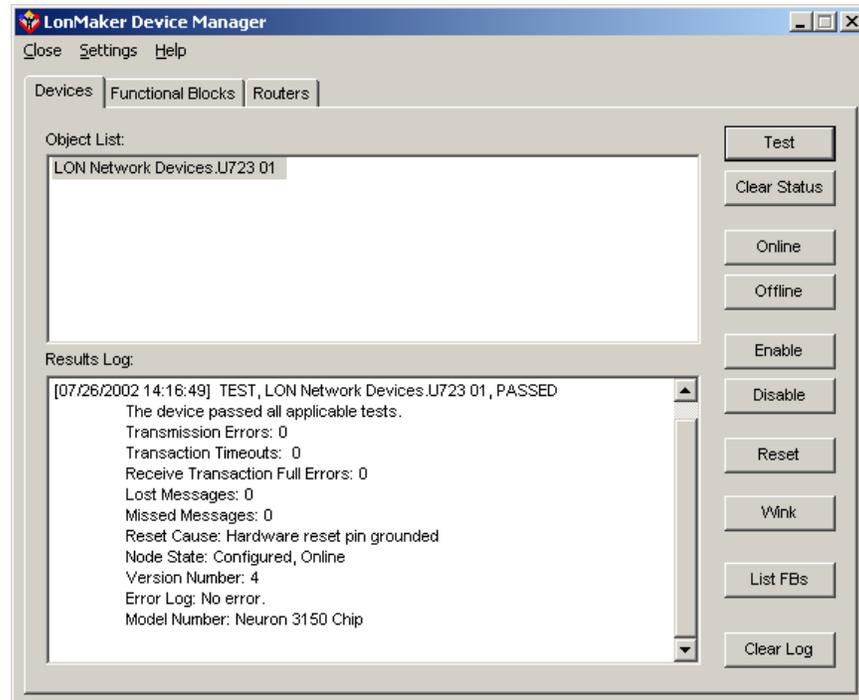
## IMPORTANT

Verify that all the DSLCL controls are installed by looking at the number of “active DSLCLs” in menu 0 on all of the DSLCL controls. This number should equal the total number of all DSLCL units installed (commissioned and electrically connected) on the network and powered up, plus 1 (if applicable) for the LSIM.

To further verify the properties of the replacement device, refer to the 723PLUS/DSLCL Compatible Network Device Properties section. The device should show that the commission status is current and that the state is configured and online. To change the state, refer to the 723PLUS/DSLCL Compatible Network Management section.

## 723PLUS/DSL/ Compatible Network Management

Network Management is used to test devices, place devices online, take devices offline, etc. To open the following “Manage” screen for a particular device, right click on the device and click “Manage” from the pop-up menu.



The “Results Log” on the above screen displays the results of clicking the “Test” button. The Test feature provides considerable information about the selected device.

To place the selected device online, click the “Online” button. To take the selected device offline, click the “Offline” button.

Clicking the “Reset” button causes the device to temporarily stop, reset all values to their initial settings and restart the application. This also places an offline device online.

The Enable and Disable functions are not applicable to 723PLUS/DSL/ Compatible devices.

Refer to the LonMaker for Windows User’s Guide for more in depth descriptions.

## Quick Reference Guide

### Initial Installation

1. Copy drawing/database from 8928-225 CD-ROM Kit to create site directories.
2. Attach to the network, start LINKManager, and make the local SLTA-10 "Link" connection.
3. Execute LonMaker for Windows from your site directory.
4. Open the "LON Network Devices" drawing.
5. Right-click the device and select "Commission" from the pop-up menu.
  - a. Choose "Online" and "Current values in database".
  - b. DO NOT choose "Load application image".
  - c. Choose "Service Pin".
6. Toggle the service pin for the correct device.
7. Repeat installation for all U723, DSLCL, and LSIM controls on the network.
8. Cycle power to all DSLCL controls.
9. Verify that the number of active DSLCL controls in Menu 0 on all DSLCL controls is correct after all devices are installed. This number should equal the total number of all DSLCL controls installed and powered, plus 1 (if applicable) for the LSIM.

### Replacing

1. Attach to the network, start LINKManager and make the local SLTA-10 "Link" connection.
2. Execute LonMaker for Windows from your site directories. If you don't have the site directories, follow the initial installation steps.
3. Open the "LON Network Devices" drawing.
4. Right-click the device and select "Replace" from the pop-up menu.
  - a. Choose "Existing template".
  - b. DO NOT choose "Load application image".
  - c. Choose "Online" and "Old device values".
  - d. Choose "Service Pin".
5. Toggle the service pin for the correct device.
6. Repeat the "Replace" process for all devices being replaced.
7. Cycle power to all replaced DSLCL controls.
8. Verify that the number of active DSLCL controls in Menu 0 on all DSLCL controls is correct after all devices are installed. This number should equal the total number of all DSLCL controls installed and powered, plus 1 (if applicable) for the LSIM.

#### **IMPORTANT**

**The network commissioning or replacement can be done on a bench before the physical installation of the device. The device can be commissioned or replaced without being connected to the other devices in the network. Be sure to properly identify which device is being commissioned or replaced so that the correct device is physically placed or replaced on the network. Once the device is installed and electrically connected to the other installed devices, they will start communicating.**

## Wiring and Proper Cable

All DSL/C and LSIM controls communicate with each other and the 723PLUS through shielded twisted-pair wiring. The specifications for the DSL/C system require that listed level V type cable be used. The Echelon network is wired with all DSL/C controls connected to the network via stubs as in Figure 2. There is no polarity associated with the network wiring. For optimum EMC performance, the network cable shield should be continuous throughout the entire network and the exposed wire length limited to 25 mm (1 inch) or less. At the 723PLUS, the outer insulation should be stripped and the bare shield landed to the chassis grounding stud.

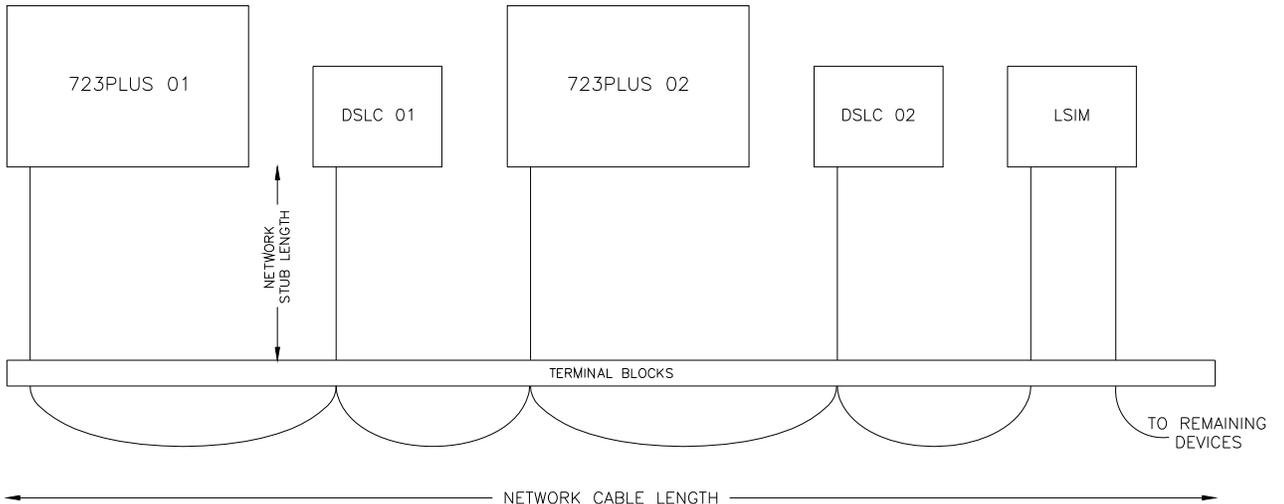
Correct cable is available from Woodward, Belden, or other suppliers providing an equivalent cable.

Woodward part number 2008-349

Belden  
PO Box 1980  
Richmond IN 47375  
Telephone (317) 983-5200

| Belden Part Number | Description  |
|--------------------|--|
| 9207               | PVC 20 AWG (0.5 mm <sup>2</sup> ) shielded. NEC Type CL2, CSA Cert. PCC FT 1.                |
| 89207              | Teflon 20 AWG (0.5 mm <sup>2</sup> ) shielded, Plenum version. NEC Type CMP, CSA Cert. FT 4. |
| YR28867            | PVC 22 AWG (0.3 mm <sup>2</sup> ) shielded.  |
| YQ28863            | Plenum 22 AWG (0.3 mm <sup>2</sup> ) shielded.   |

Network Cable Length—500 m maximum (–20 to +85 °C) typical.  
Network Stub Length—600 mm (0 to 70 °C).



035-016C  
02-10-1

Figure 2. Echelon Network Wired Via Stubs

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