

FX Tools Software Package - FX CommPro Lon User Guide -

FX CommPro Lon	2
<i>Introduction</i>	2
Installation	4
<i>Installing FX CommPro Lon Tool</i>	4
Installing LonWorks® Network Interfaces	7
<i>Installing the PCC-10 Card in a Laptop PC</i>	7
<i>Installing the PCLTA-10/20 PCI Card in a Desktop PC</i>	9
<i>Configuring the PCC-10 or PCLTA-10/20 Card</i>	11
<i>Connecting the LonWorks® Network</i>	13
FX CommPro Lon Operation	14
<i>Starting FX CommPro Lon</i>	14
FX CommPro Lon Main Screen	15
Menu Bar	16
Tool Bar	22
Network View	23
Single Item View	23
Display View	24
Status Bar	24
Device Status Indicators	25
<i>Working with FX CommPro Lon</i>	25
Connecting Network Devices	26
Connecting Devices Manually	26
Connecting Devices Automatically	27
Connecting Devices via Service Pin	29
Connecting Devices via a Previously Saved Working Screen	29
Saving the Current Working Screen to a File	30
Working with a Single Device	31
Single Item View of a Device	31
Device Menu	32
Exploring a Device for Network Variables (NVs) and Configuration Parameters (CPs)	33
Display View of a Device	35
Specifications and Technical Data	42
Ordering Codes	42
Software	42
Technical Specifications	42
FX CommPro Lon Tool	42

FX Tools Software Package

FX CommPro Lon

Introduction

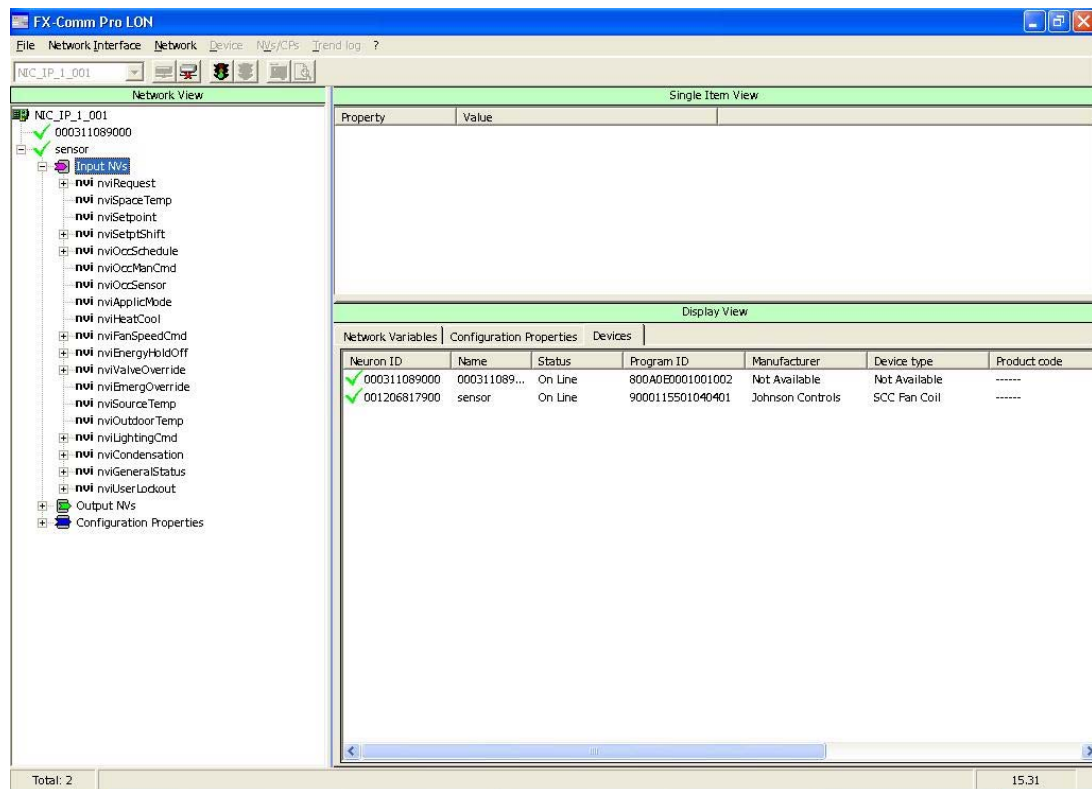


Figure 1: FX CommPro Lon Tool

FX CommPro Lon is the tool for commissioning the Facility Explorer series of HVAC/R controllers with a LonWorks® communication card.

Commissioning is a set of processes to ensure that the control application is designed, programmed and will operate in an optimal fashion to meet the design specification.

FX CommPro Lon enables the user to monitor and test the control application in the connected Facility Explorer controllers.

Parameter configuration and tuning can be performed in the online mode. The tool enables the user to read the device status, read and write input/output network variables and to configure parameters in

the network profile and automatically download them in the controller.

The parameters can be saved onto the hard disk for later archiving.

The controllers need to have the appropriate LonWorks® communication card fitted in order to be able to communicate.

FX CommPro Lon software functions include:

- ❑ Read/write of device status
- ❑ Read/write of Network Variables Input (nvi)
- ❑ Reading of Network Variables Output (nvo)
- ❑ Read/write of Configuration Properties (nci or cp)
- ❑ Downloading new LON communication card firmware
- ❑ Downloading new control applications
- ❑ Modifying, saving, and downloading parameters
- ❑ Reading device-specific data

FX CommPro Lon software cannot be used to:

- ❑ Assign logical network addresses to devices
- ❑ Bind network variables within the network
- ❑ Replace devices in the network

This manual has been written with the assumption that the reader is familiar with LonWorks® and Microsoft® Windows® operating system.

Installation

Installing FX CommPro Lon Tool

With Windows running on the PC, follow the steps below to install FX CommPro Lon software:

1. Close all open programs.
2. Insert the CD-ROM with FX CommPro Lon software into the PC CD-ROM drive. Launch the Setup.exe file

Select *FX CommPro Lon* and then *Install selected software* to call up the FX CommPro Lon Install Software window.

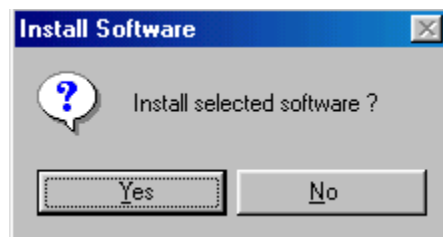


Figure 2 : FX CommPro Lon Install Software Window

Click on Yes to continue. The InstallShield Wizard will appear and guide you through the installation.

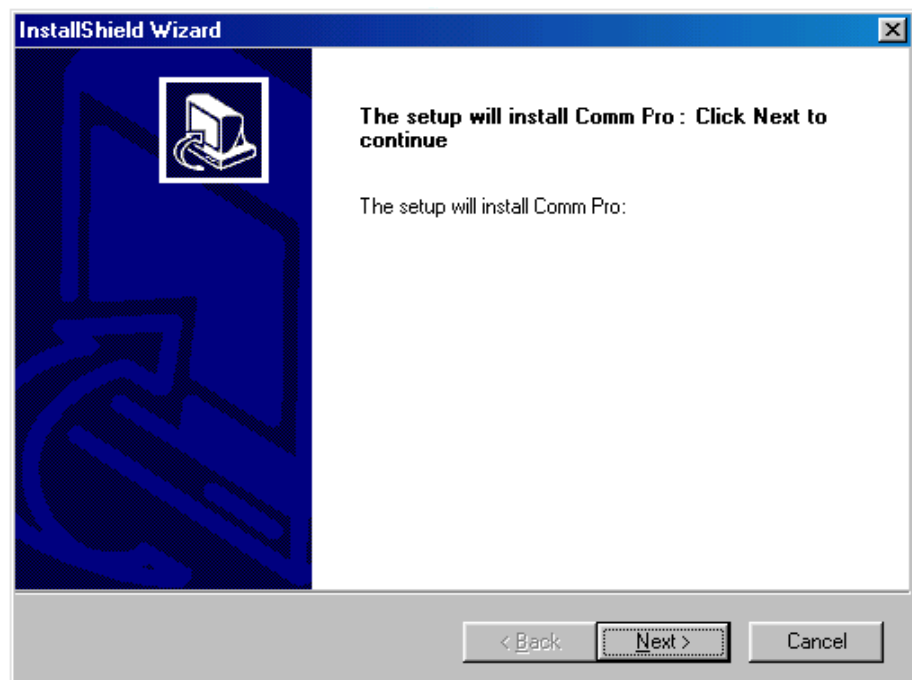
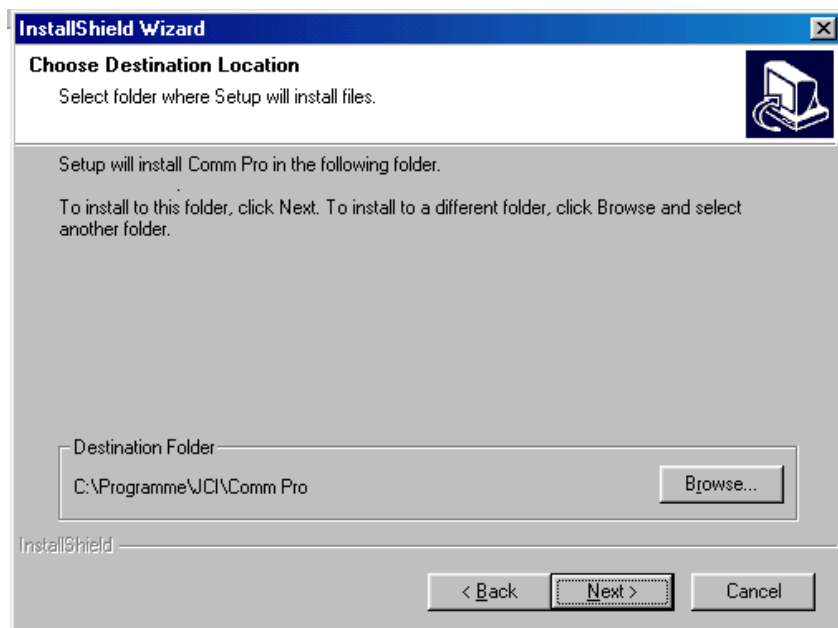


Figure 3 : FX CommPro Lon InstallShield Wizard Window

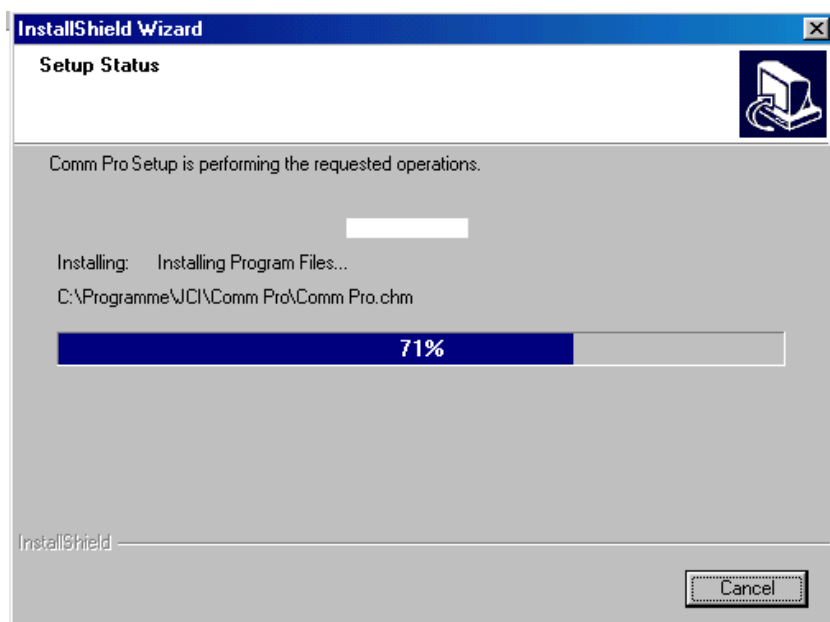
Click on Next > to continue.

The software Destination Location window will appear:

**Figure 4 : Destination Location Window**

To install the program in a directory other than the default directory shown in the Destination Folder box, click on the Browse button. Choose a different directory and then click on Next >.

In the windows which subsequently appear, you will be asked to select the program folder and check the setup information. Then the Setup Status window will appear:

**Figure 5 : Setup Status Window**

When the FX CommPro Lon installation is complete, the following window will appear:

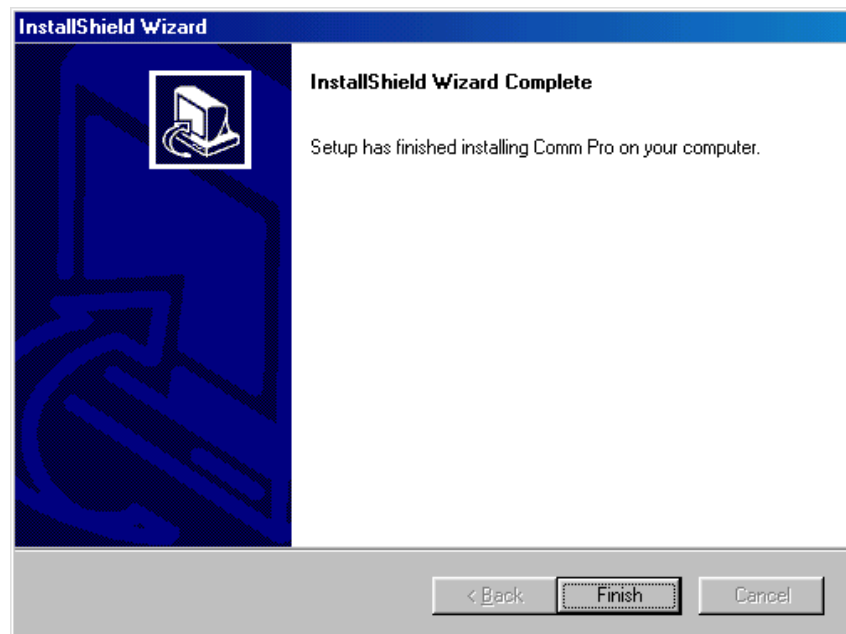


Figure 6 : Installation Complete Window

Click on Finish to reconfirm, and exit the Software section and the CD Navigator section.

Important Note: Do not rename the program directory after the program has been installed.

Installing LonWorks® Network Interfaces

FX CommPro Lon accesses the LonWorks® network via a LonWorks® Network Interface card. Standard JCI products use an FTT-10 transceiver.

In a laptop PC, a LonWorks® PCC-10 card is used as a network interface.

In a desktop PC, a LonWorks® PCLTA-10 (ISA) or PCLTA-20 (PCI) card (hereafter referred to as PCLTA-10/20) is used as a network interface.

Interface card drivers are listed in the CD-ROM Navigator Drivers Window. Select the driver needed and follow the installation instructions which subsequently appear on screen.

Installing the PCC-10 Card in a Laptop PC

The installation procedure for the PCC-10 card is outlined below. For a more detailed explanation, refer to *LonWorks® PCC-10 Card User's Guide, Document 078-0155-01B*, on the Echelon® Internet website : www.echelon.com.

When using Windows® NT (SP6), the PCC-10 software can be installed before or after the card is inserted into a Type II PC Card (PCMCIA) slot.

When using Windows® 95 or 98, installation of the PCC-10 software must precede insertion of a PCC-10 card into a Type II PC Card (PCMCIA) slot.

Note: When using Windows® 95 or 98, be sure to install the software *before* inserting the card in the laptop PC slot. Otherwise, the card will be unusable until the software is removed and then reinstalled.

Installing the PCC-10 Driver

The PCMCIA driver is normally automatically installed. Some computers come equipped with hardware which use their own card and socket services. These services replace those provided by Windows and may contain incompatibilities that prevent the PCC-10 card from functioning. (One example is SystemSoft's® CardWorks® TM PCMCIA drivers.)

To install the PCC-10 driver software:

1. Close all programs currently open. When using Windows® 95 or 98, do **not** insert the PCC-10 card into a laptop PC slot at this time.
2. Insert the FX CommPro Lon CD-ROM into the PC CD-ROM drive.
3. Click on the Utilities and Drivers menu to call up the CD-ROM Navigator Drivers window, and select the driver needed.

4. Follow the driver installation procedure, as prompted on screen, until installation is complete.

Installing the PCC-10 Card

Carry out the installation as follows:

1. Insert the PCC-10 card into the Type II PC card (PCMCIA) slot of the laptop PC.
2. Attach the cable to the PC interface card port and the LonWorks® network.

Removing PCC-10 Software Under Windows® 95/98

Note: This section is relevant only if the card was inserted before the driver was installed, when using Windows® 95 or 98.

To remove the PCC-10 software, use the Uninstall function under Windows as follows:

1. Click on the Add/Remove Programs icon in the Control Panel folder.
2. Select " LonWorks® PCLTA-10/20/PCC-10" from the list under the Install/Uninstall tab, click on the Add/Remove button, and confirm file deletion at the prompt.
3. Close the Control Panel window if it is open. Rename C:\Windows\System\PCC10cfg.cpl to C:\Windows\System\PCC10cfg.cpx (where C: is the drive containing the Windows folder).
4. Send the PCC10cfg.cpx file to the Recycle Bin.
5. Delete all references to the LDVSTUB.SYS driver in the CONFIG.SYS file.

Installing the PCLTA-10/20 PCI Card in a Desktop PC

The installation procedure for the PCLTA-10/20 card is outlined below. For a more detailed explanation, refer to *LonWorks® PCLTA-10 PCI LonTalk® Adapter User's Guide, Document 078-0159-01B*, or *LonWorks® PCLTA-20 PCI LonTalk® Adapter User's Guide, Document 078-0179-01B*, on the Echelon® Internet website: www.echelon.com.

Note: The PCLTA-10 card is inserted into an ISA slot. The PCLTA-20 card is inserted into a PCI slot.

When using Windows® NT (SP6), installation of the driver software can precede or follow insertion of a PCLTA-10 or PCLTA-20 card into an ISA or PCI slot, respectively.

When using Windows® 95, 98, 2000 and XP, installation of the driver software must precede insertion of a PCLTA-10 or PCLTA-20 card into an ISA or PCI slot, respectively.

Note: When using Windows® 95, 98, 2000 and XP be sure to install the driver software *before* inserting the card in the desktop PC slot. Otherwise, the card will be unusable until the software is removed and then reinstalled.

Installing the PCLTA-10/20 Driver

To install the PCLTA-10/20 driver software:

1. Close all programs currently open. When using Windows® 95, 98, 2000 and XP, do ***not*** insert the PCLTA-10/20 card into the desktop PC slot at this time.
2. Insert the FX Tools Pro CD-ROM into the PC CD-ROM drive.
3. Click on the *Software* menu to call up the CD-ROM Navigator Drivers window, and select the driver needed.
4. Follow the driver installation procedure, as prompted on screen, until installation is complete.

Installing the PCLTA-10/20 Card

- ❑ Turn off the PC and remove the power cable.
- ❑ Open the PC case and locate an empty 32-bit PCI or ISA slot. Remove the corresponding blank panel from the rear of the PC. Set aside the screw.
- ❑ Insert the PCLTA-10 card into an ISA slot or insert the PCLTA-20 card into a PCI slot, ensuring that the edge connectors are fully matched and the slot in the rear panel mounting lug of the PCLTA-10/20 adapter is aligned with the threaded hole in the PC chassis.
- ❑ Replace the screw to hold the PCLTA-10/20 adapter firmly in place.
- ❑ Reinsert the power cable and restart the PC. A "New Hardware Found" window will be displayed briefly when the operating system recognizes the PLCTA-10/20 adapter.
- ❑ Attach the cable to the PC interface card port and the LonWorks® network.

Removing PCLTA-10/20 Software Under Windows 95/98/2000/XP

Note: This section is relevant only if the card was inserted before the driver was installed, when using Windows® 95,98, 2000 and XP.

To remove the PCLTA-10/20 software, use the Uninstall control panel under Windows® as follows:

1. Click on the Add/Remove Programs icon in the Control Panel folder.
2. Select "LonWorks® PCLTA-10/20/PCC-10" from the list under the Install/Uninstall tab, click on the Add/Remove button, and confirm file deletion at the prompt. Most of the PCLTA-10/20 software will be removed automatically.
3. Close the Control Panel window if it is open. Rename C:\Windows\System\PCLTA-10cfg.cpl to C:\Windows\System\PCLTA-10cfg.cpx (where C: is the drive containing the Windows folder).
4. Send the PCLTA-10cfg.cpx file to the Recycle Bin.
5. Delete all references to the LDVSTUB.SYS driver in the CONFIG.SYS file.

Configuring the PCC-10 or PCLTA-10/20 Card

To configure the PCC-10 or PCLTA-10/20 card, open the LonWorks® PCC-10 or PCLTA-10/20 control panel by selecting the LonWorks® Plug 'n Play icon in the System Panel.



Figure 7 : LonWorks® Plug 'n Play Icon

The following window will appear:

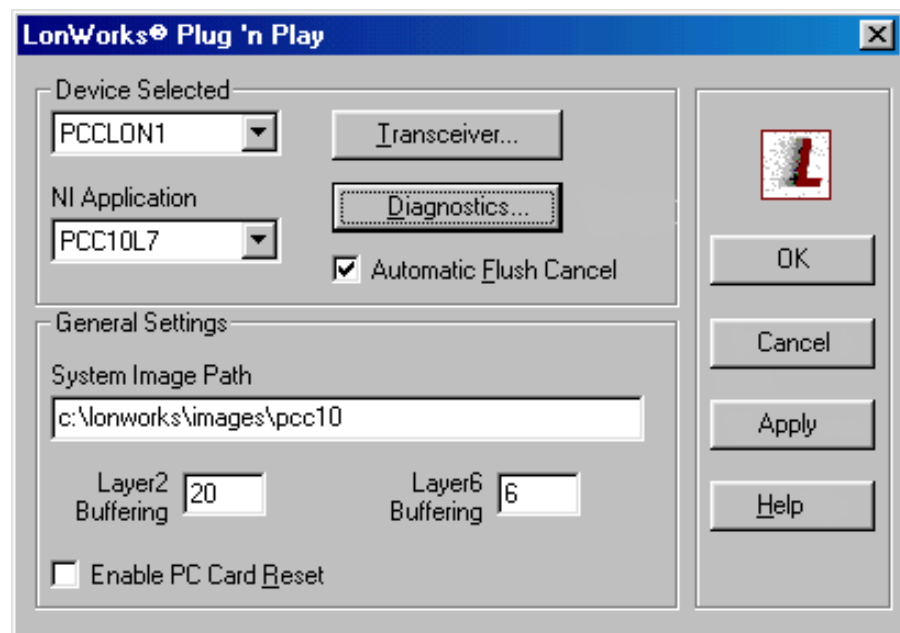


Figure 8 : LonWorks® Plug 'n Play Window

If not already set, make the following entries:

- ❑ Device Selected: PCCLON1
- ❑ NI Application: PCC10L7
- ❑ **Laptop** PC System Image Path: C:\lonworks\images\pcc10
- ❑ **Desktop** PC System Image Path: C:\lonworks\images\pclta10 (or pclta20)
- ❑ Layer2 Buffering: 20
- ❑ Layer6 Buffering: 6
- ❑ Automatic Flush Cancel: yes

Select the Transceiver button and set the transceiver to FTT-10:

- ❑ Transceiver : FTT-10

Testing the Card

Select the Diagnostics button to call up the Diagnostics dialog, which shows the current status of the PCC-10 or PCLTA-10/20 device driver. If no error message appears on screen, the card is installed and running.

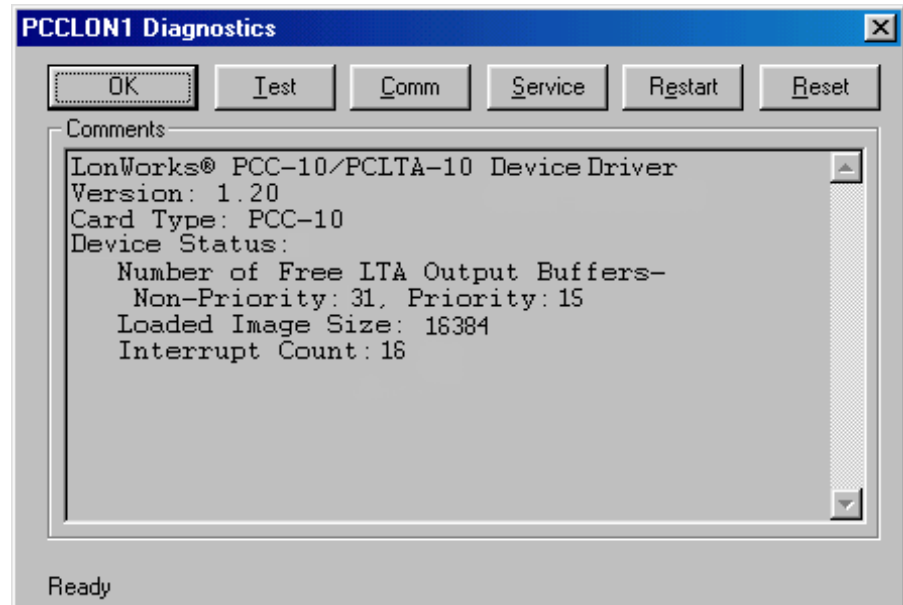


Figure 9 : LonWorks® Diagnostics Window

Click on the Test button to retrieve status and error counts from the card.

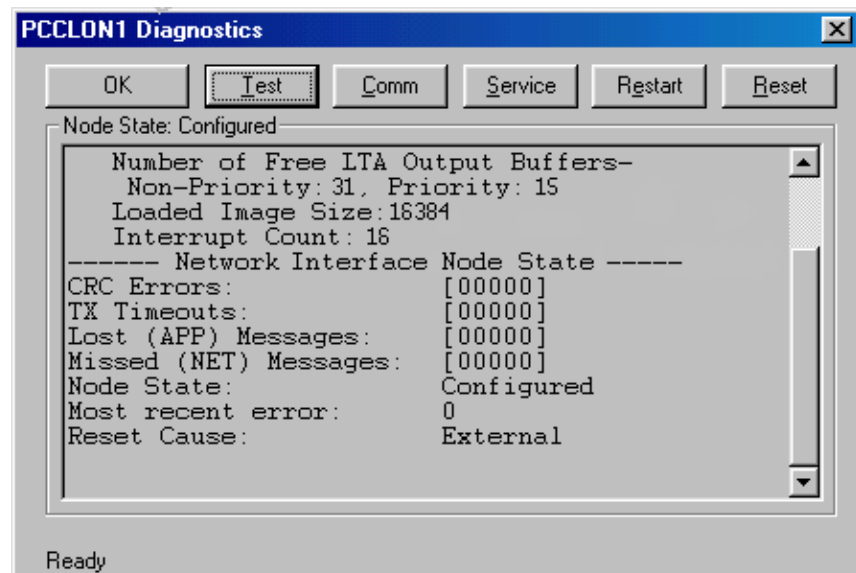


Figure 10 : LonWorks® Test Window

Select the Comm button and a message appears asking whether you wish to proceed with configuring the network interface. Select OK. The software will wait for the service pin message from a device

connected to the LonWorks® network. Connect the LonWorks® network to the card and press the service pin of any device connected to this network. If communication is functioning, the message

**** Ping Passed ****

will appear. Press the Quit button to cancel.

Click on OK to exit from the configuration window.

When the interface configuration has been successfully completed, FX CommPro Lon software may be installed on the PC.

Connecting the LonWorks® Network

To connect the LonWorks® network to a PCC-10 card you need cable assembly model 78302 (from Echelon®) with a 15-pin Hirose connector and a 2-meter (6-foot) 2-wire cable with flying leads for connection to a FTT-10 or LPT-10 LonWorks® network.

For connecting other LonWorks® interface cards to the LonWorks® network, refer to the documentation of the corresponding card.

Each interface card is provided with a 2-wire cable, which must be connected to the LonWorks® network. The connection to the LonWorks® network is polarity insensitive.

Note: The transceiver of the LonWorks® interface card must match the LonWorks® network to which the interface is connected. If the network is *not* FTT-10 or LPT-10, install the appropriate LonWorks® interface card for that network. This document is written with the assumption that the PC with FX CommPro Lon is connected to an FTT-10 or LPT-10 network.

FX CommPro Lon Operation

Starting FX CommPro Lon

To start FX CommPro Lon:

- ❑ Open the Windows Start menu and select All Programs. Browse to the FX Tools folder, then FX CommPro and click on FX CommPro Lon, or use Windows® Explorer.

The following FX CommPro Lon start-up window appears:

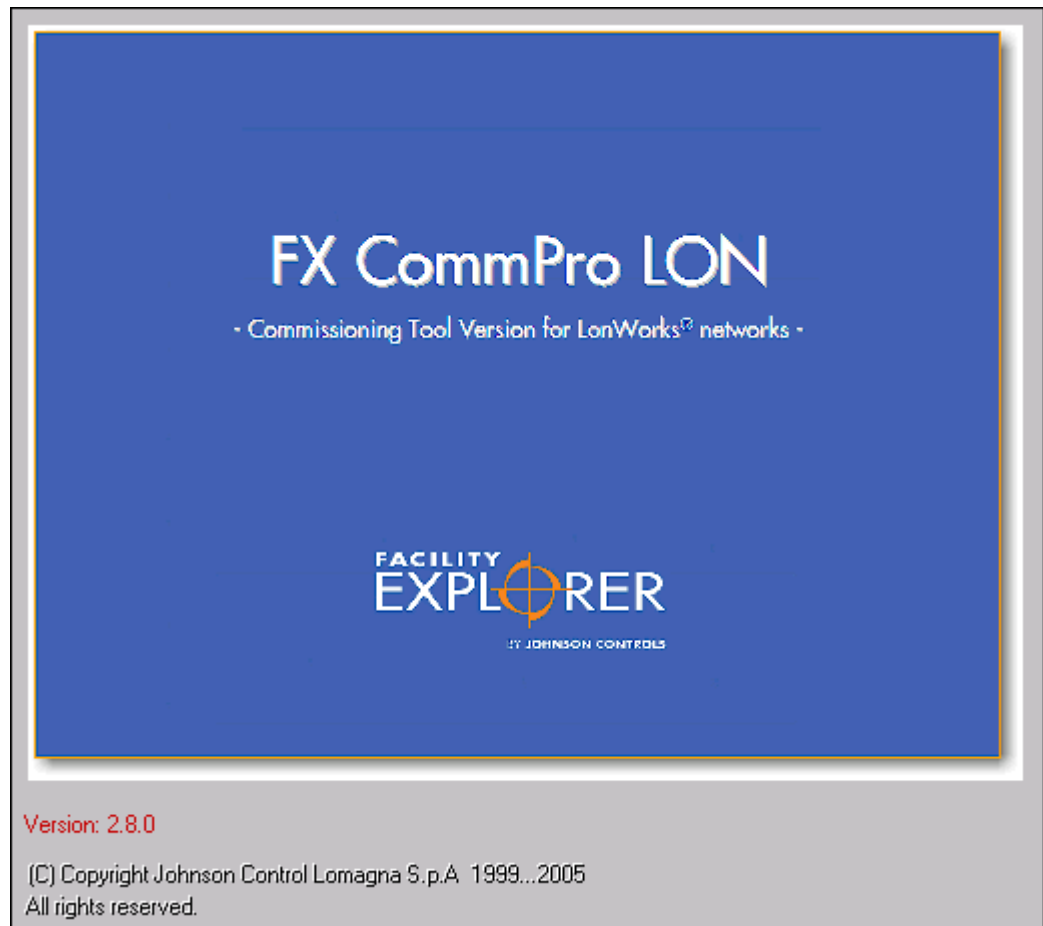


Figure 11 : FX CommPro Lon Start-up Window

FX CommPro Lon Main Screen

The FX CommPro Lon main screen appears after start-up:

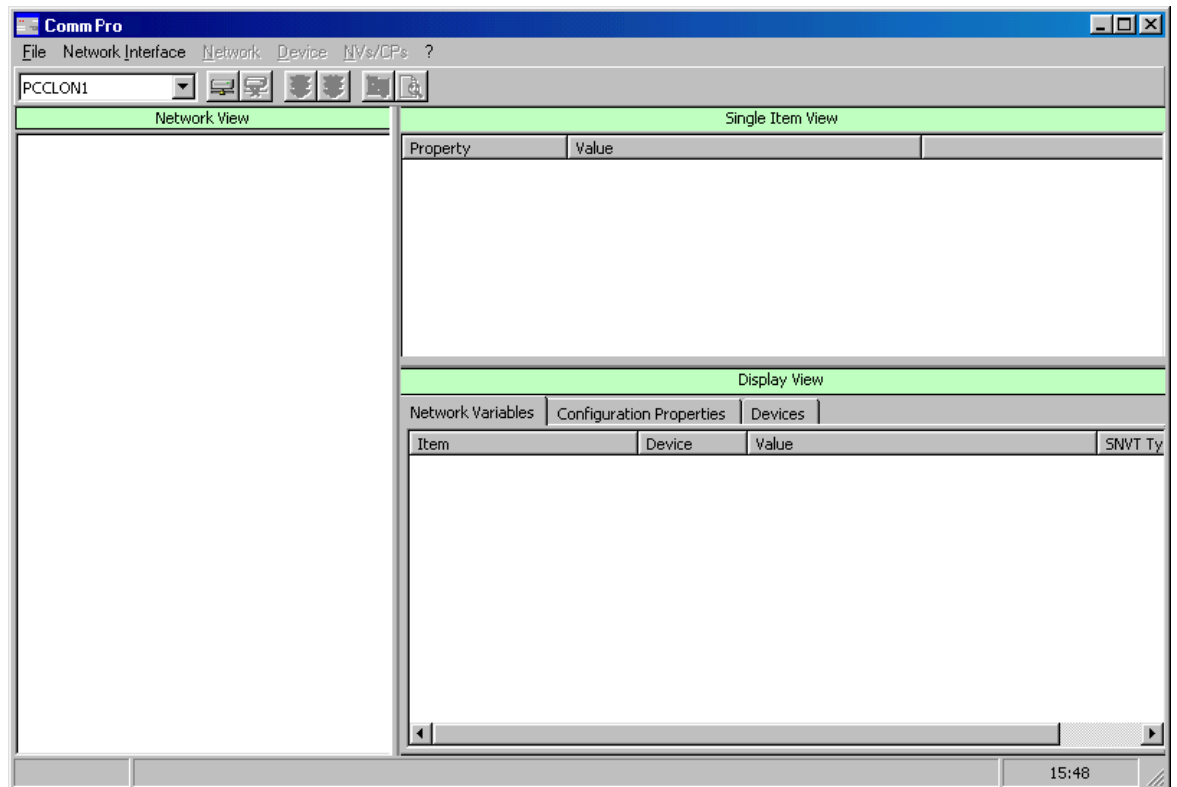


Figure 12 : FX CommPro Lon Main Screen

It contains the following areas:

- ❑ The title bar for basic Windows information and actions
- ❑ The menu bar for FX CommPro Lon information and actions
- ❑ The tool bar for short cuts to actions
- ❑ The Network View area to show connected devices and their network variables
- ❑ The Single Item View to show information and values of one item (device or network variable)
- ❑ The Display View to show information and values of multiple items simultaneously
- ❑ The status bar for general information about the operation of the tool.

Each area is described in more detail below.

Menu Bar

The menu bar is directly under the title bar. Click on a menu item with the left mouse button for a list of corresponding options. The menu bar groups the configuration activities into six categories.

File Network Interface Network Device NVs/CPs ?

Figure 13 : Menu Bar

Options available appear in black. Options not available for selection are greyed-out, such as NVs/CPs in the example above. To choose an option, click on it once with the left mouse button. To leave the menu without choosing an option, click the left mouse button once anywhere on the screen outside of the menu. A detailed description of the items in each menu will follow.

File Menu

The file menu contains options to open and save the current view of the main screen, and to exit FX CommPro Lon.



Figure 14 : File Menu

Table 1: File Menu Options

Menu Option	Description
View	Opens a submenu for working screen file options.
-Open	Opens working screen viewing options.
-Complete View	Opens a complete view from an existing working screen file.
-Device Only	Opens a view from an existing working screen file, but shows devices only, no network variables or configuration properties.
-Save	Saves the current working screen (view of the main screen) as a *.NET file.
-Save As...	Saves the current working screen under a different name.
Exit	Exits FX CommPro Lon.

Network Interface Menu

The Network Interface menu contains options to open a network interface for access to the connected LonWorks® network, or to close it to terminate access to the LonWorks® network, and to view the network interface address.

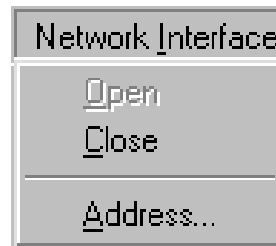


Figure 15 : Network Interface Menu

Table 2: Network Interface Menu Options

Menu Option	Description
Open	Opens the network interface for access to the LonWorks® network.
Close	Closes the network interface to end access to the LonWorks® network.
Address...	Shows the network interface address.

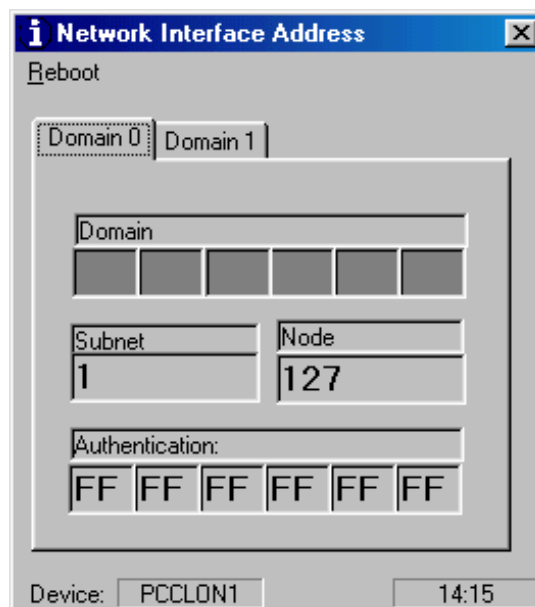


Figure 16 : Network Interface Address Window

The Network Interface Address Window shows the default address of the network interface card. It cannot be changed. If no address is shown, click on the Reboot button to re-initialize the network interface card.

Network Menu

The Network menu contains options for scanning a LonWorks® network and saving information to an Excel file.

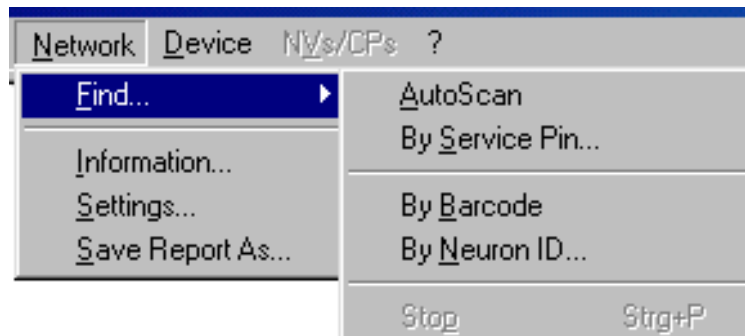


Figure 17 : Network Menu

Table 3: Network Menu Options

Menu Option	Description
Find...	Opens a submenu for scan modes.
-Auto Scan	Commands automatic scan of LonWorks® network for devices.
-By Service Pin...	Allows user to connect to the device by pressing its service pin.
-By Barcode	Allows user to connect to the device by scanning its Neuron ID bar code.
-By Neuron ID...	Allows user to connect to the device by entering its Neuron ID.
-Stop	Terminates scan.
Information...	Opens a window for user to enter network description.
Settings...	<p>Opens a window to change polling rates, network domain and "Advanced actions" option.</p> <p>In the Network Settings Window there is a check box to select the "Advanced actions" option, which enables the following submenus under the Device menu:</p> <ul style="list-style-type: none"> - Download Firmware... - Force failure recovery - Download Application... - Save calibration data as...
Save Report As...	Saves the current network information to an Excel file (*.XLS).

Device Menu

The Device menu is used for device-related actions.

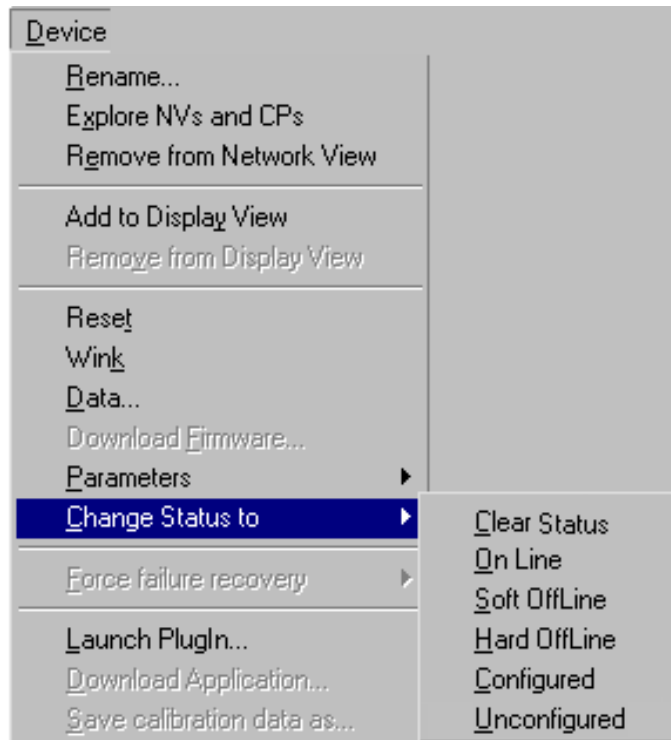


Figure 18 : Device Menu

Table 4: Device Menu Options

Menu Option	Description
Rename...	Allows user to enter a new name (location) for the device.
Explore NVs and CPs	Shows the network variables (NVs) and configuration properties (CPs) of the selected device.
Remove from Network View	Deletes the device from the current session.
Add to Display View	Adds the device to the Display View.
Remove from Display View	Deletes the device from the Display View.
Reset	Sends a software reset to the device.
Wink	Sends a wink command to the device that makes the Service LED on the device blink.
Data...	Opens a window with device status, statistics and logical address.
^Download Firmware...	Calls up two selection windows, in succession, for the *.XIF and *.NXE files, to select new firmware for downloading.
Parameters	Opens a submenu for parameter saving and downloading.
- Download	Downloads parameters from a *.CPS file.
-Save as...	Saves parameters in a *.CPS file.
Change Status to	Opens a submenu to change the current status of the device.
- Clear Status	Clears internal error statistics. Node operating status remains unchanged.
-On Line	Sets status to online.

-Soft Offline	Sets status to soft offline.
-Hard Offline	Sets status to hard offline.
-Configured	Sets status to configured.
-Unconfigured	Sets status to unconfigured.
^Force failure recovery	Opens a submenu for failure recovery actions.
-Set Applicationless state	Disables the firmware in the device. Device then requires download of new firmware.*
- Reboot	Initializes device EEPROM from Flash memory.
^Launch PlugIn...	Opens a plug-in for the selected device.
^Download Application...	Downloads a new application *.APP file.
^Save calibration data as...	Saves the calibration data as a *.TCA file.

^Enabled via "Advanced actions" option in the Network Settings Window

NVs/CPs Menu

The NVs/CPs menu contains options related to network variables and configuration properties.

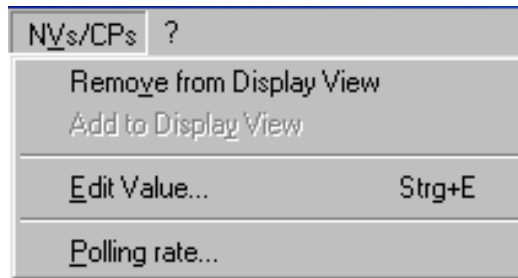


Figure 19 : NVs/CPs Menu

Table 5: NVs/CPs Menu Options

Menu Option	Description
Remove from Display View	Deletes the Network Variable (NV) or Configuration property (CP) from the Display View.
Add to Display View	Adds the Network Variable (NV) or Configuration property (CP) to the Display View.
Edit Value...	Opens a window to change the value of the Network Variable (NV) or Configuration property (CP).
Polling rate...	Opens a window to change the polling rate of the NVs and CPs in the Display View.

? Menu

The ? menu is used to display the message log, help text, and the current FX CommPro Lon software version.

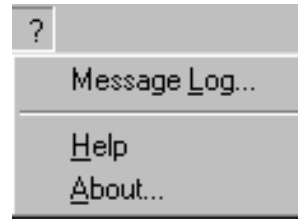


Figure 20 : ? Menu

Table 6: ? Menu Options

Menu Option	Description
Message Log...	Displays a log of all user transactions.
Help	Launches online help for FX CommPro Lon.
About	Shows the FX CommPro Lon software version

Tool Bar

The tool bar is located just below the menu bar. It contains buttons that provide a "short cut" to specific functions when clicked on with the left mouse button. *Table 7* shows the tool bar buttons and describes their functions.

The selection box to the left of the Tool Bar shows the selected LON® driver. If more than one interface card is available, the appropriate driver can be selected from the box after clicking on the down arrow.

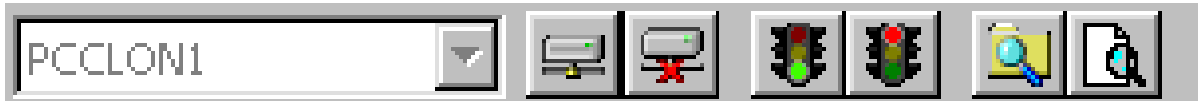








Figure 21 : Tool Bar

Table 7: Tool Bar Buttons

Tool Bar Button	Menu Bar Equivalent	Description
	Network Interface– Open	Opens the network interface to the LonWorks® network.
	Network Interface– Close	Closes the network interface to the LonWorks® network.
	Network–Find– AutoScan	Starts an automatic scan of the network.
	Network–Find–Stop	Stops all scans active on the network.
	Device– Explore NVs and CPs	Displays network variables (NVs) and configuration properties (CPs) of the selected device.
	Device– Launch PlugIn	Launches the plug-in for a selected device, if available.

Network View

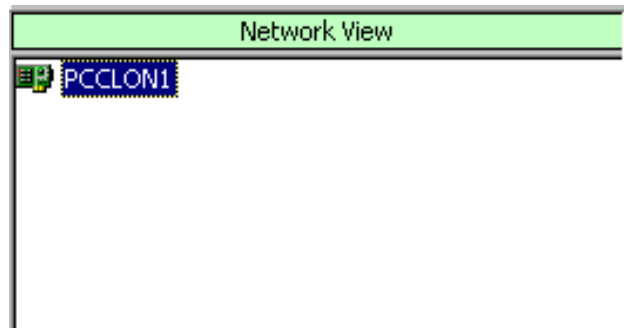


Figure 22 : Network View

The left part of the FX CommPro Lon main screen contains the Network View, which is empty until the network interface is opened. Thereafter, the interface, with its driver name, will appear. In the diagram above it is shown as PCCLON1. As devices are connected, they appear in a tree formation inside this view.

Single Item View

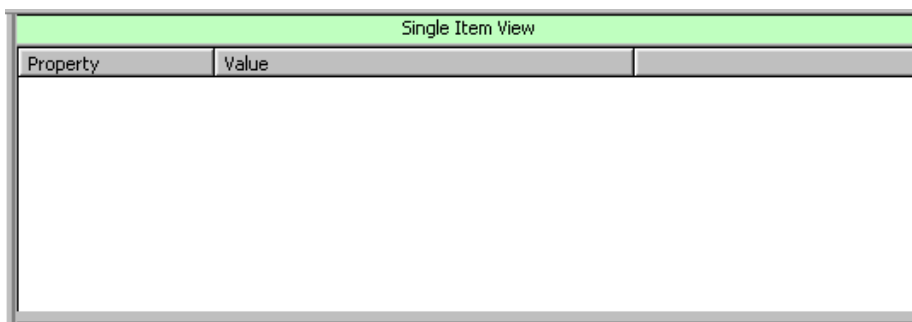


Figure 23 : Single Item View

The upper right part of the FX CommPro Lon main screen contains the Single Item View, which displays properties and current values of a single item when selected in the Network View. Items can be devices, network variables or configuration properties.

Display View

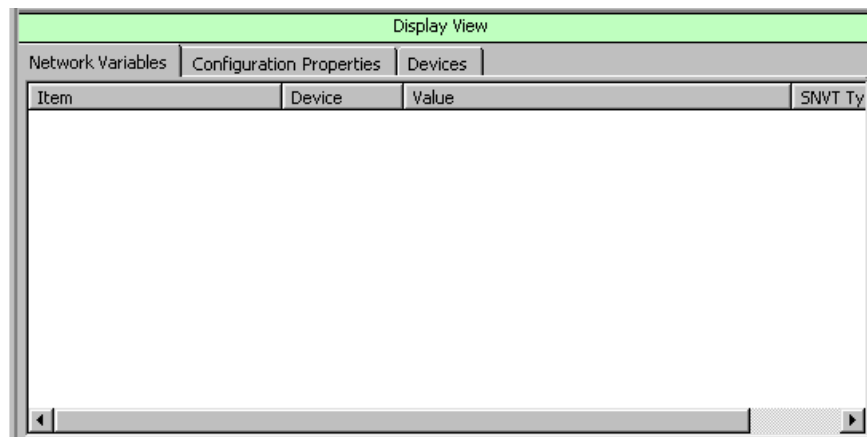


Figure 24 : Display View

The Display View, in the lower right part of the FX CommPro Lon main screen, contains tabs for Network Variables, Configuration Properties and Devices. Items selected under the Network View are shown here under the appropriate tab.

Click on a tab to see the corresponding items in the Display View.

- ❑ Information displayed for Network Variables and Configuration Properties : Item, Device, Value, SNVT Type (Standard Network Variable Type).
- ❑ Information displayed for Devices: Neuron ID, Name, Status, Program ID, Manufacturer, Device Type, Product Code, Subnet, Node, Transmission Errors.

Status Bar

The status bar is found across the bottom of the main screen.

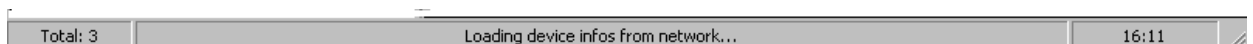


Figure 25 : Status Bar

It displays the following information, from left to right:

1. Number of devices in the Network View (not including the interface).
2. Action or task currently being executed.
3. Current time of day.

Device Status Indicators

In the Network View and Display View, the devices are marked with different colored √ or Δ symbols, depending on the status of the device.

Working with FX CommPro Lon

Important Note: Only one PC running FX CommPro Lon can be connected to one LonWorks® network. If multiple PCs are connected, an error message will appear. Further, FX CommPro Lon cannot be run simultaneously with another LON® Tool on the same PC when both share the same PC interface card.

After starting FX CommPro Lon and physically connecting the LonWorks® network to the interface card, the first task is to open the network interface. Select the Network Interface-Open menu or click on the corresponding icon in the tool bar.



Figure 26 : Network Interface-Open Icon

The network interface appears in the Network View, as shown in the diagram below.

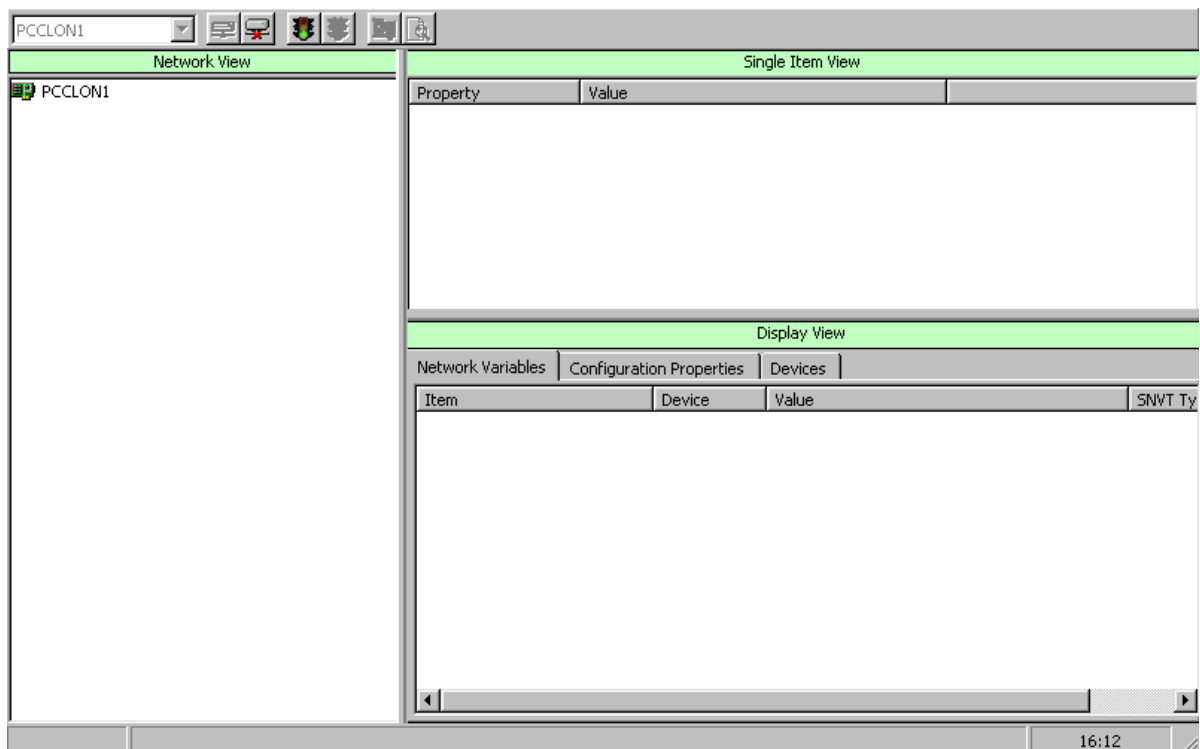


Figure 27 : Main Screen with Network Connected

Now you can connect devices and display and modify data in the devices.

Connecting Network Devices

You must connect one or more devices in order to work with FX CommPro Lon. The various connection procedures are described below.

Connecting Devices Manually

Select the *Network-Find-By Neuron ID* menu. In the window which appears, enter the Neuron ID of the device to be connected. Or choose the *Network-Find-By Barcode* menu, and use a bar code reader to read the Neuron ID from the device sticker. This must be done for each device to be connected.

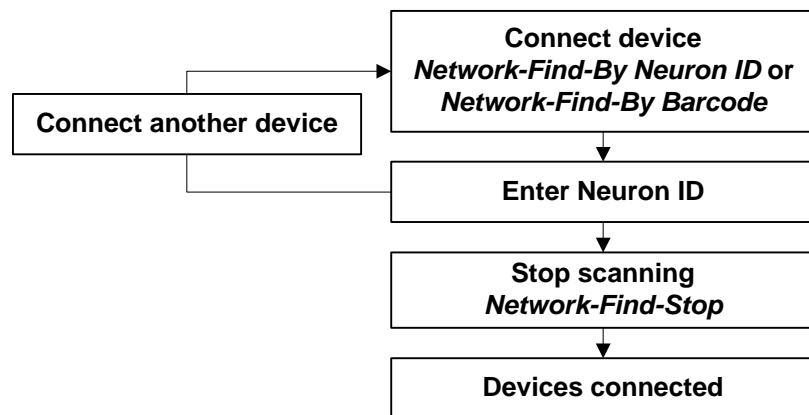


Figure 28 : Connecting Devices by Neuron ID

Connecting Devices Automatically

Select the *Network-Find-AutoScan* menu or click on the corresponding icon to scan the network. During this task the status bar will report “Scanning the Network”.

Wait until all devices to be connected appear in the Network View. Then select the *Network-Find-Stop* menu or click on the corresponding icon to stop the scan. If more devices appear than required, use the *Device-Remove from Network View* menu to delete them.



Figure 29 : Network Scan Start/Stop

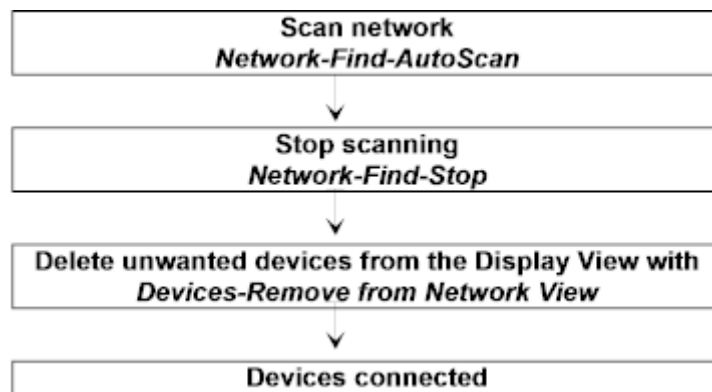


Figure 30 : Connecting Devices by Auto-Scan

For a project with more than 30 devices, it is recommended to disable the device polling during AutoScan. To do this, use the *Network-Settings* menu.

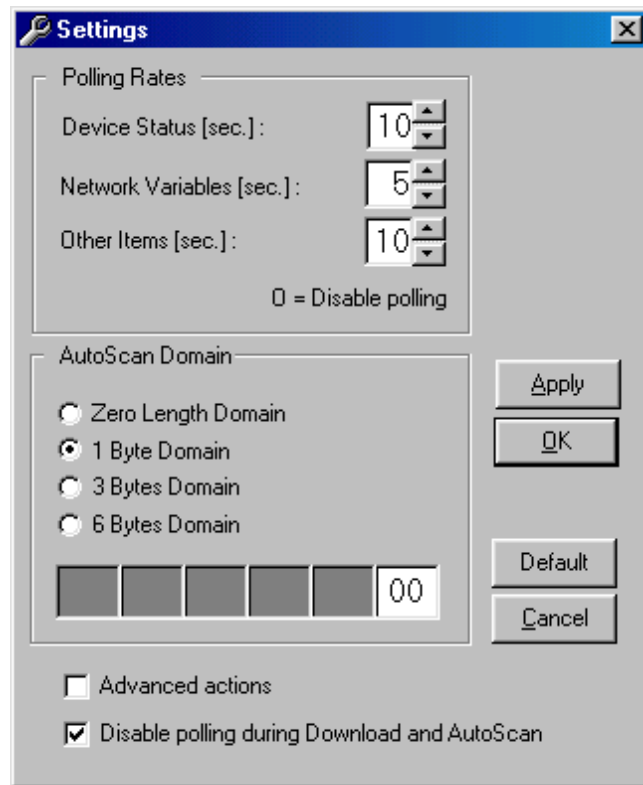


Figure 31 : Network Settings Window

For a better performance of AutoScan, check the box next to "Disable polling during Download and AutoScan." AutoScan works only for the AutoScan Domain selected. If no device is found, the network is offline or the wrong domain has been selected.

If a device is not found via AutoScan, try another *Network-Find* menu option, *-By Service Pin*, *-By Barcode* or *-By Neuron ID*. Once a single device is found by this method, determine its domain by selecting the *Device-Data* menu and clicking on the Logical Address heading in the Device Data window.

Then enter the domain under "AutoScan Domain" in the Settings window (above). Click on "OK" and start AutoScan again. All devices in this domain will then be found.

Connecting Devices via Service Pin

Select the *Network-Find-By Service Pin* menu. The message “Press the Service Pin on device” will flash on the status bar. Press the service pin of each device to be connected. To stop the scan use the *Network-Find-Stop* menu or the corresponding icon.

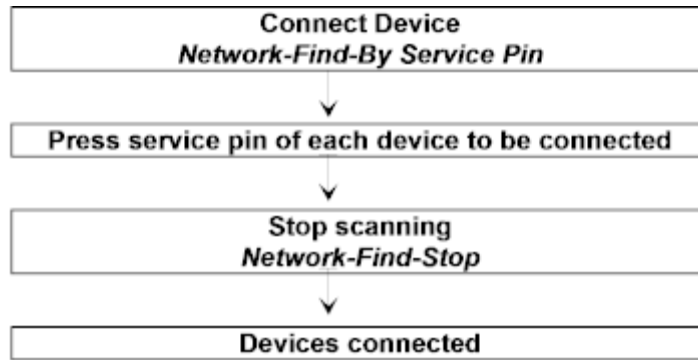


Figure 32 : Connecting Devices via Service Pin

Connecting Devices via a Previously Saved Working Screen

Use the File-View-Open menu to select a previously saved file (*.NET) of a working screen (view of a FX CommPro Lon main screen with a set of devices connected).

Note: With this option, the previously used network interface will also be opened. If a network interface is already open on the screen, close it before using the command.

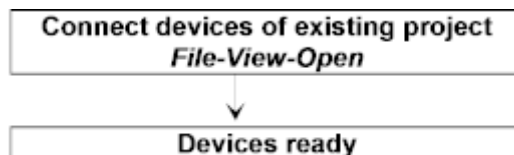


Figure 33 : Connecting Devices via a Previously Saved Main Screen

Saving the Current Working Screen to a File

When ending a work session, you can save the current working screen to a file if you wish to have the same view the next time you begin work. Then you can simply open the *.NET file.

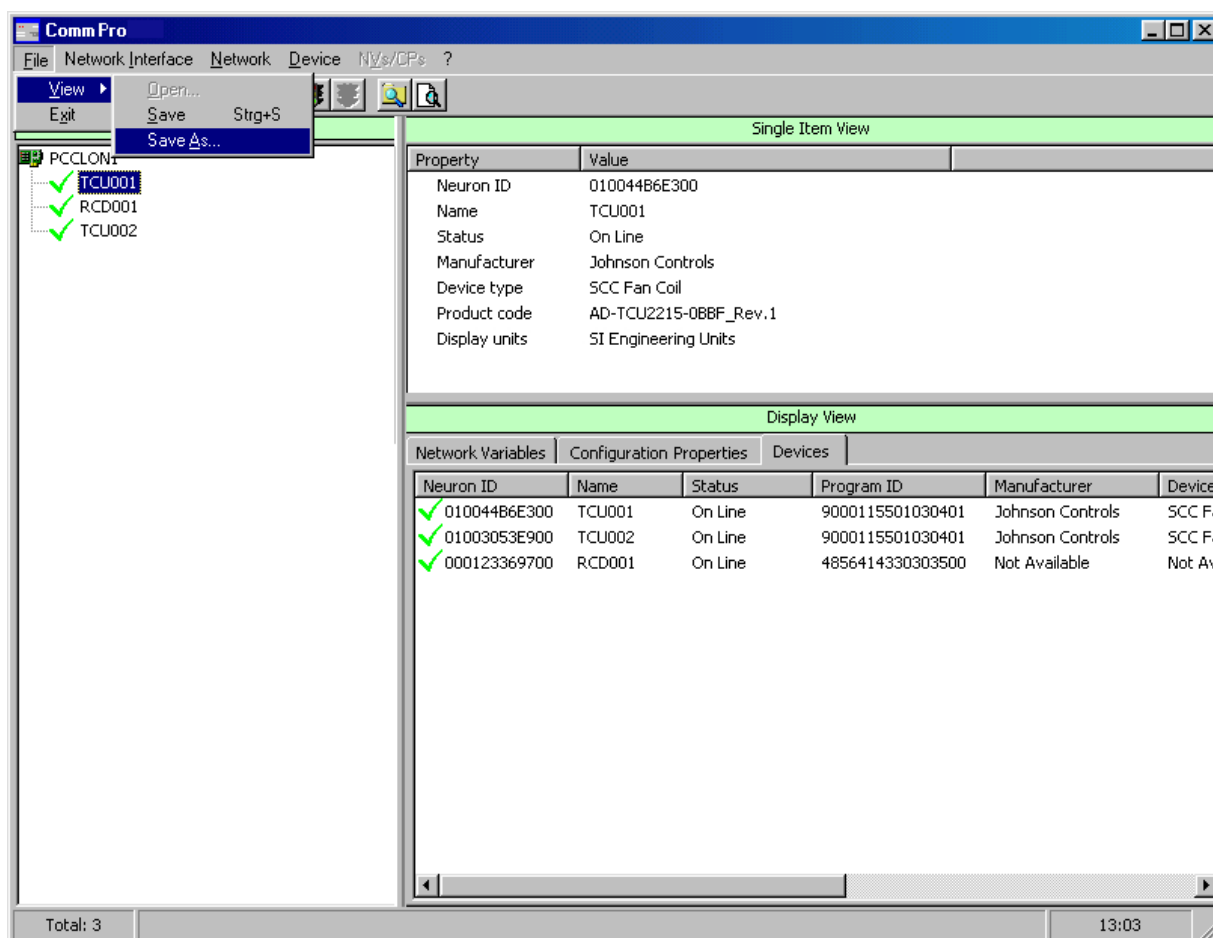


Figure 34 : Saving the Working Screen

To save your current working screen, select the *File-View-Save As...* menu, and enter a name (*.NET) in the file name entry field of the window that appears.

To open the file, select the *File-View-Open...* menu and choose the previously stored file. The view of your project will be the same as it was when you saved it.

Working with a Single Device

Once you have connected the required devices, they will appear in the Network View and the Display View.

Three connected devices are shown in the diagram below.

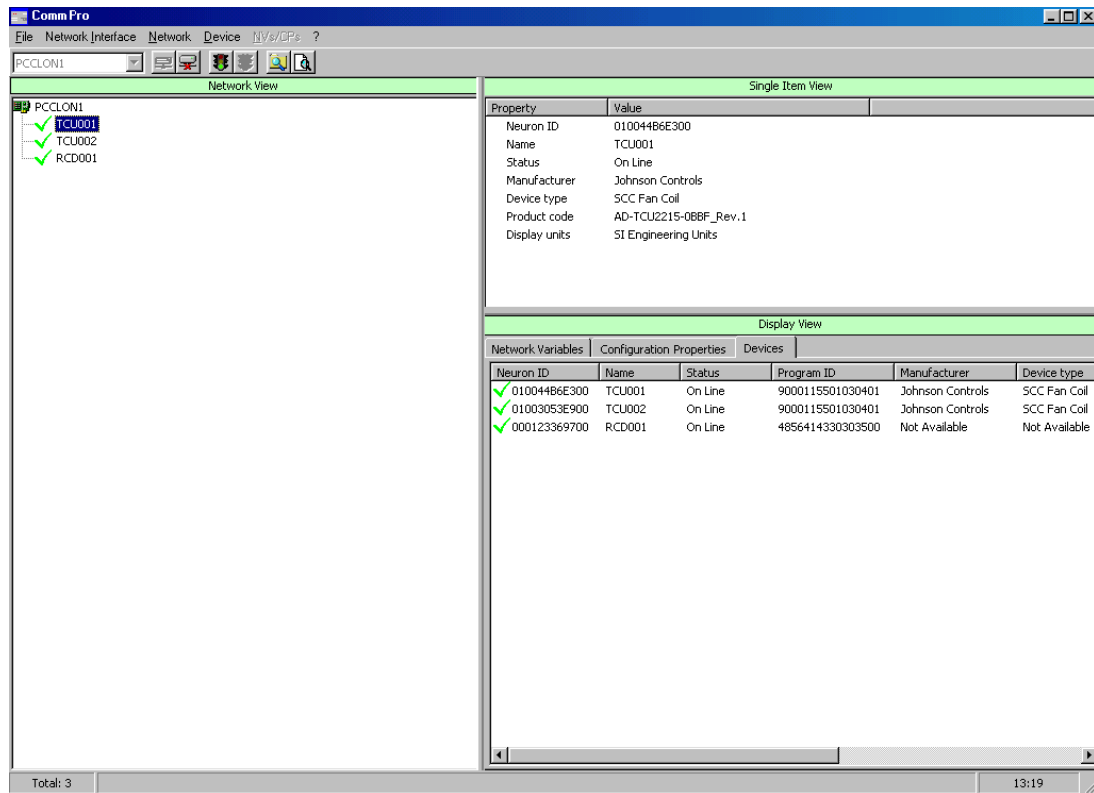


Figure 35 : Selecting Device for Detailed Information

Single Item View of a Device

Select one device in the Network View with the cursor and click the left mouse button.

The following information about the device appears in the Single Item View:

- *Neuron ID*
- *Name*
- *Status*
- *Manufacturer*
- *Device Type*
- *Product Code*
- *Display Unit.*

If a device does not have a Name, its Neuron ID will be shown, and a name can be entered using the Device-Rename menu.

To change the display units you must restart the FX CommPro Lon program. If a device does not have a units conversion file for US engineering units, the SI engineering units from the LonTalk® protocol will always be displayed.

Device Menu

To call up the Device menu, a device must be selected. In the Network View, select a device name with the left mouse button, and press the right mouse button for a list of menu options.

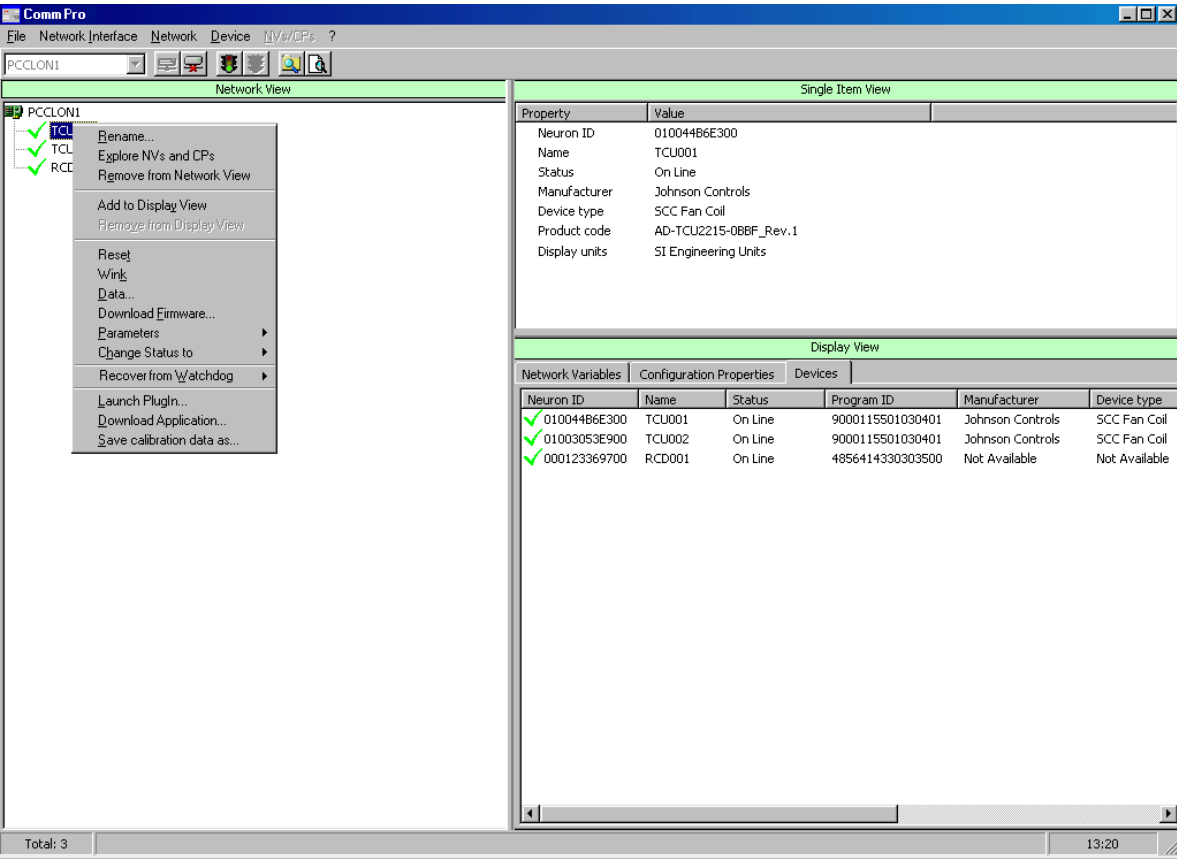


Figure 36 : Device Menu Options in Network View

Exploring a Device for Network Variables (NVs) and Configuration Parameters (CPs)

Select the Device-Explore NVs and CPs menu to display in the Network View the icons and headings for the input and output network variables, and configuration properties. A plus sign (+) will appear to left of the icon if these network variables or configuration properties are configured in the device.

Click on the corresponding plus sign (+) to display a list of the configured network variables or configuration properties.

Click on a network variable or configuration property and the following information will be shown in the Single Item View:

- *Name*
- *SNVT Type (Standard Network Variable Type)*
- *Value, Index*
- *Self Documentation*

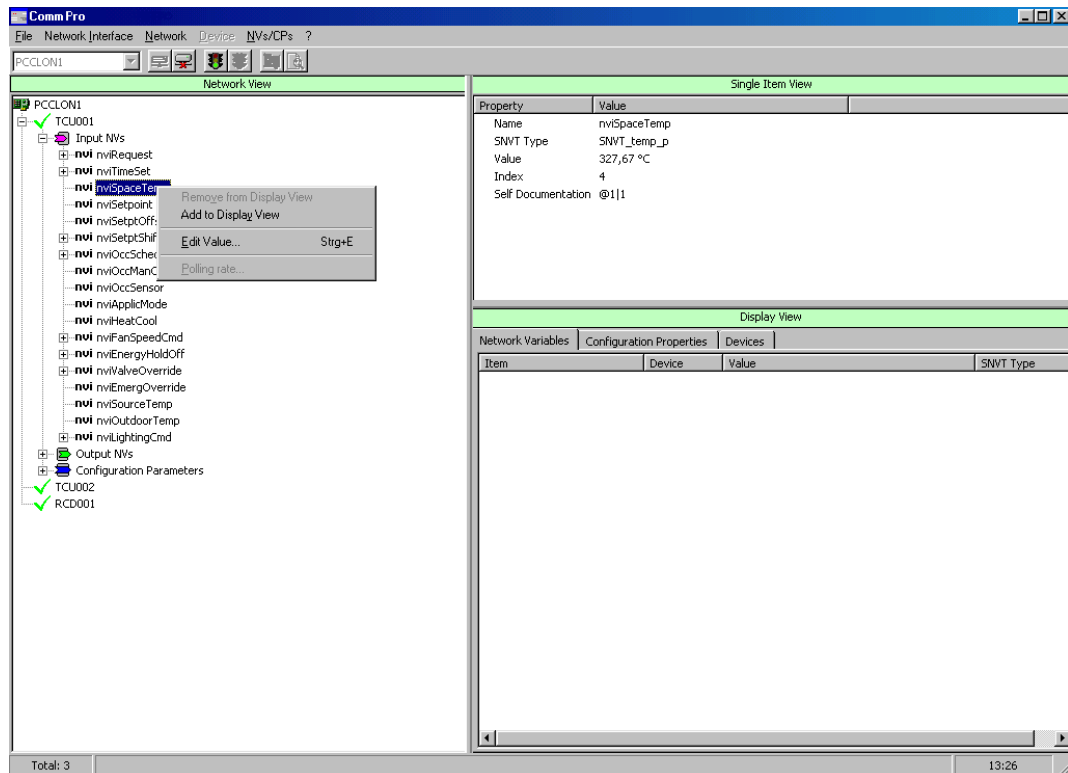


Figure 37 : Device with NVs/CPs and NVs/CPs Menu

The NVs/CPs menu is also available when you have selected a single item (Network Variable or Configuration Property) in the Network View. Press the right mouse button for the list of menu options. Edit Value is used to change the value of a network variable, and only appears for network variable inputs and configuration properties. Network variable outputs cannot be changed.

Select the *NVs/CPs-Add to Display View* menu or double-click on an item to copy the item into the Display View.

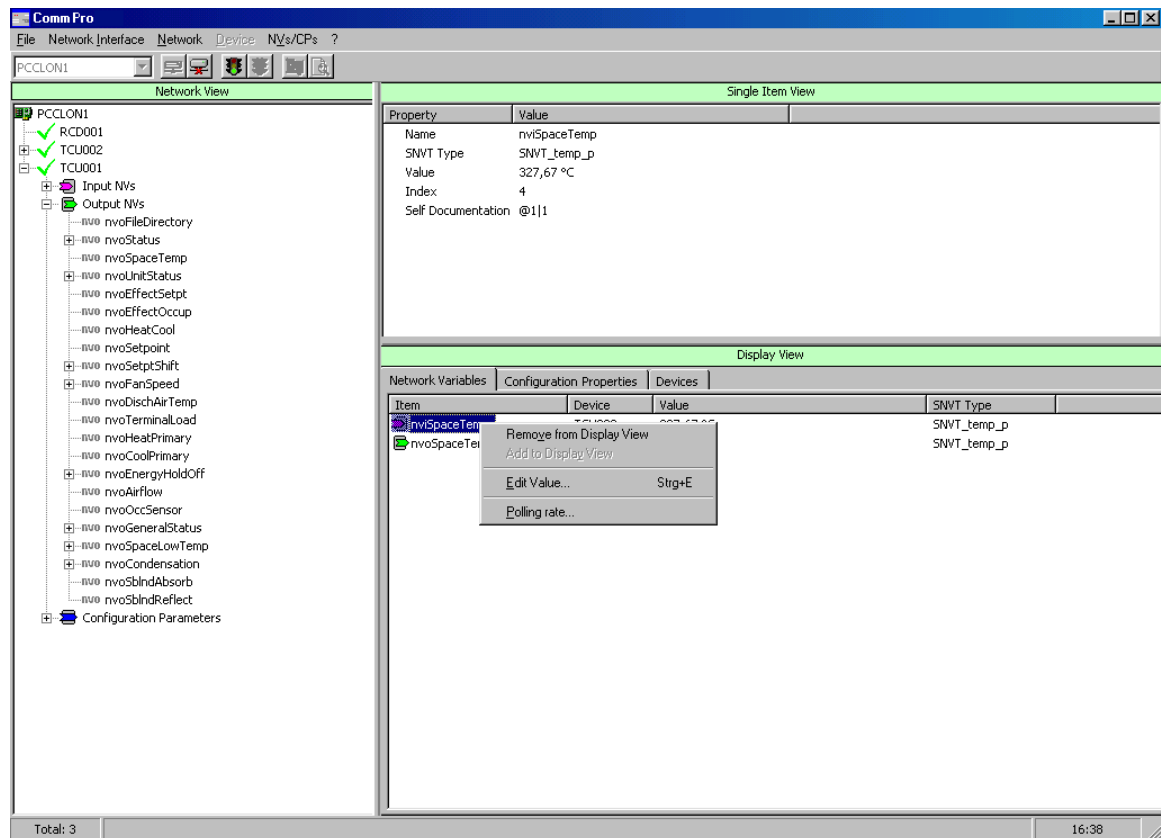


Figure 38 : Using the NVs/CPs Menu in Display View

The NV/CP menu is also available when you have selected an item (Network Variable or Configuration Property) in the Display View. Press the right mouse button to call up the list of menu options. You can select Edit Value to change the value of a network variable input or configuration property. Select Remove from Display View to delete the item from the Display View.

In the Display View the Polling rate menu is also available. Select it to change the polling rate of all the items in the Display View.

Display View of a Device

After the network is scanned, all devices appear in the Network View and the Display View.

To remove a device from the Display View, select the device name in the Display View, then select the *Device-Remove* from Display View menu.

Multiple devices can be selected for removal in the Display View. To choose a block of items, select the first item. Then hold down the Shift key and click on the last item with the left mouse button. The first and last items and those in between will be selected. Alternatively, hold down the Control key while using the left mouse button to click on each item in succession.

To copy a device back into the Display View once it has been removed, double-click on a device or select the *Device-Add* to Display View menu.

The following information appears:

Neuron ID, Name, Status, Program ID, Manufacturer, Type, Device Type, Product Code, Subnet, Node, Transmission Errors.

To sort the information numerically/alphabetically, click on the corresponding field label.

Deleting a Device

To simultaneously remove a device from both the Display View and the Network View, select the device name in either view, then click on the right mouse button to call up the Device menu. Select the *Remove from Network View* option. This action disconnects the device from FX CommPro Lon.

Renaming a Device

Select a device and click on the *Device-Rename* menu to change the device name. It can be up to six characters and usually defines the name or location of the device.

FX CommPro Lon calls it the name of the device. In LonWorks® terms it is called the "Location" and is assigned to the device during the configuration and addressing of the network. This information will also be available in the project documentation of the network configuration tool.

Note: Do not change the device name when it has been set by a network management or configuration tool.

Resetting a Device

Select a device and click on the *Device-Reset* menu to send a software reset command to the device. A device with soft offline status will change to online after reset. This can also be used to restart the device.

Sending a Wink Command to a Device

Select a device and click on the menu option *Device-Wink* to send a wink command to the device. Some devices can indicate when a wink command has been received. The service LED of a TCU or VMA, for example, will flash three times.

Device Data Window

Select a device and click on the menu option *Device-Data* to call up an information window. Information under the Status and Statistics tabs is helpful for troubleshooting a LonWorks® device or network. The Transmission Errors shown in Figure 46: *Device Data Window - Status* are the same as those shown under the Device tab in the Display View.

Transmission errors are detected during data reception. These may be due to collisions, noise or electromagnetic fields on the transceiver input or the LonWorks® network.

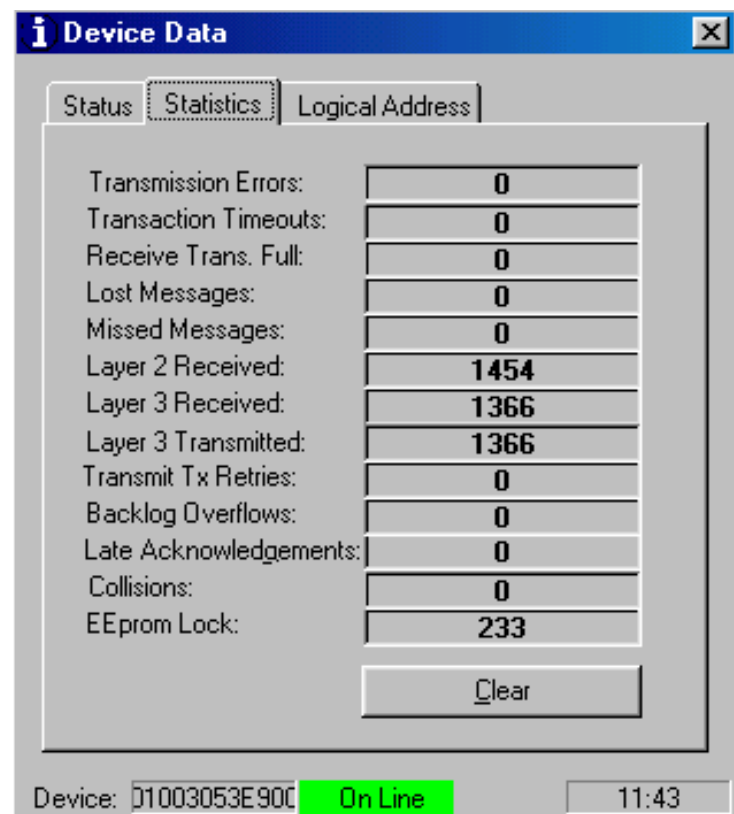


Figure 39: Device Data Window - Statistics

At the beginning of an analysis you should copy down the Status and Statistics information, and then clear the Status and Statistics windows. This is done in order to have a defined start position without losing the old information. Record the information at fixed time intervals and write down the contents of the window. The time interval and period depend on the error you are seeking. Consult a LonWorks® specialist for expert help to interpret the data.

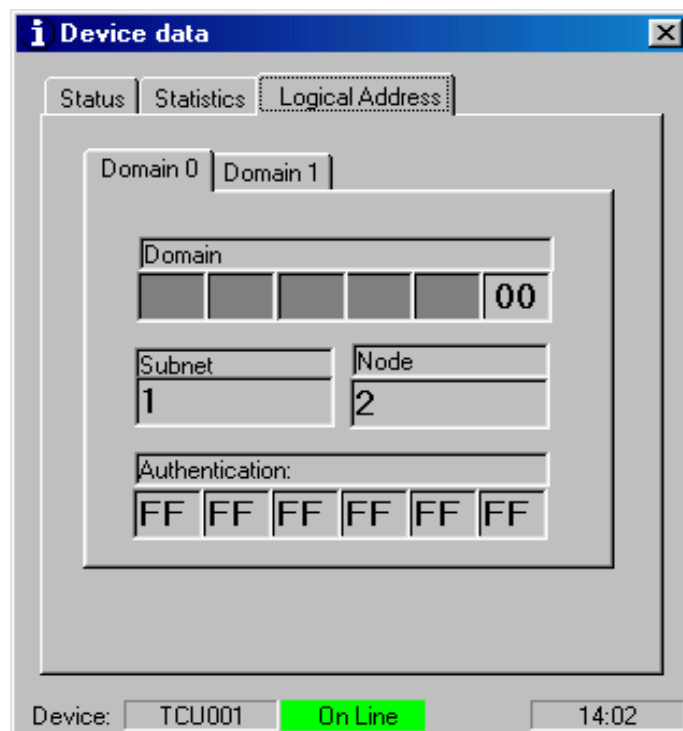


Figure 40 : Device Data Window - Logical Address

Select the Logical Address tab under the Device Data window to view the logical address of the device. The Domain address shown under the Domain 0 tab is the address to look for if the device has not been found via AutoScan.

In that case you must set the AutoScan Domain address under the Network-Settings menu to the same value as the Domain 0 address of the device.

If the device is not found via *Network-Find-AutoScan*, try selecting another option, *-By Service Pin*, *-By Neuron ID* or *-By Barcode*.

Changing a Device's Status

Select a device and choose the *Device-Change Status to* menu to change the device to a status listed below. Click on a status to select it.

- ☐ Clear Status
- ☐ Online
- ☐ Soft Offline
- ☐ Hard Offline
- ☐ Configured
- ☐ Unconfigured

Force Failure Recovery

The Device-Force failure recovery menu option requires that the "Advanced actions" option is set in the Network Settings Window. In the unlikely event that a device becomes unstable and its status is constantly changing in the Network View, the user can disable the firmware in the device, and then download the firmware again as described in the next section. The Reboot option initializes the device's EEPROM memory from Flash memory in case the EEPROM memory becomes corrupted. These actions should only be done by advanced users who have experience in troubleshooting network and device communication problems and in downloading firmware and control applications to devices.

Downloading an Application

This option allows the user to download an application which can be generated by :

- FX Builder

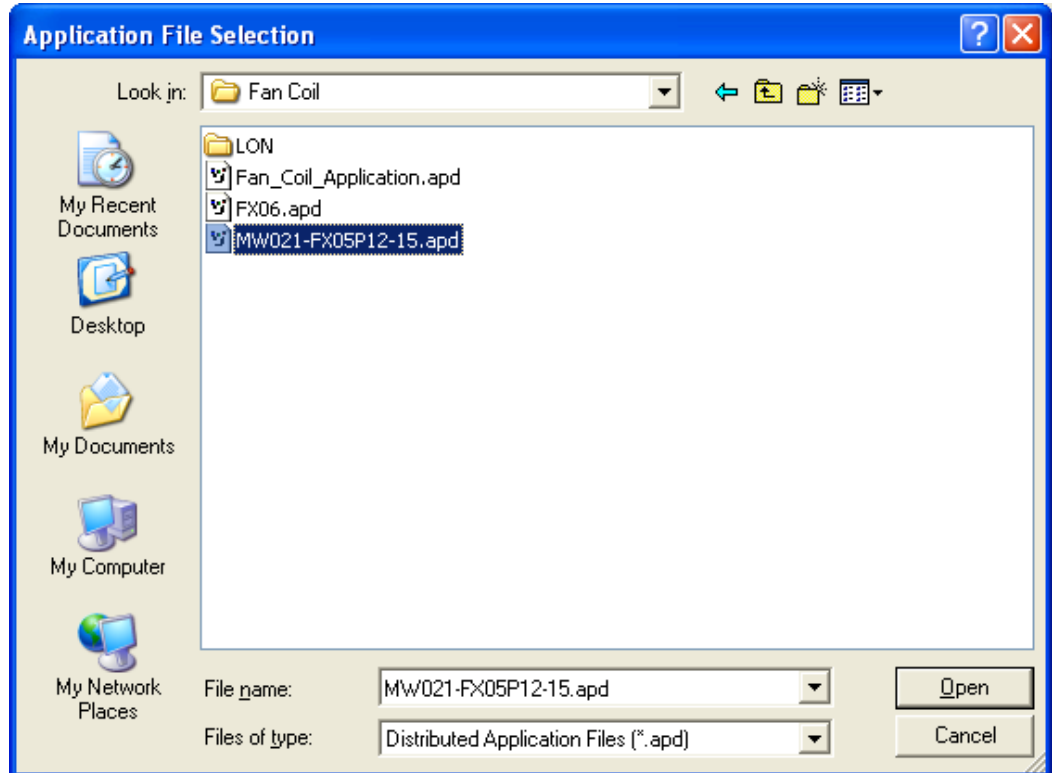


Figure 41 : Downloading an Application Configuration

Select a device and choose the *Device-Download Application* menu. Select the new application and click on Open. The application will be downloaded into the device which will subsequently run with the new control application code.

Important Note : download the application files, using **FX CommPro Lon**, in order to enable the tool to create automatically the LonWorks references, the commissioning file and, eventually, to add a new Program ID to the list of compatible Program Ids.

If an application downloading is performed via **FX Loader**, there could be a problem in synchronization.

Saving and Downloading Parameters

The Device-Parameters menu is used in the commissioning of devices such as the FX Platform Devices. The Device-Parameters menu can be used to download or save parameters to a file. To save parameters, select a device and choose the Device-Parameters-Save as menu. The following window appears:

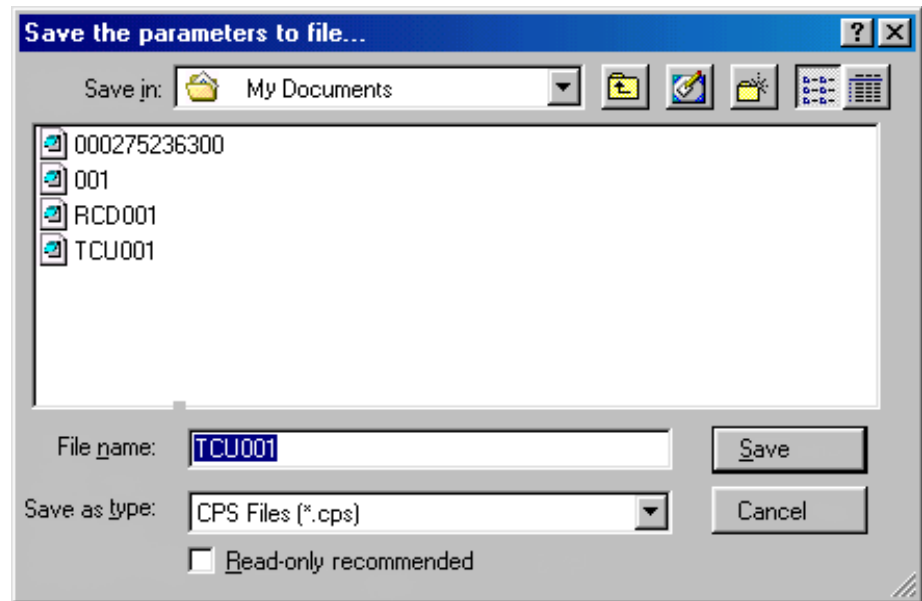


Figure 42 : Saving Parameters to a File

Enter or select a file name, and click on Save to store the parameters of the device in a *.CPS file. To download parameters, select a device or multiple devices in the Display View, and click on the Device-Parameters-Download menu to call up a window in which you can select a *.CPS file. Select the file name and then click on the Open button.

A selection window containing all stored parameters will appear.

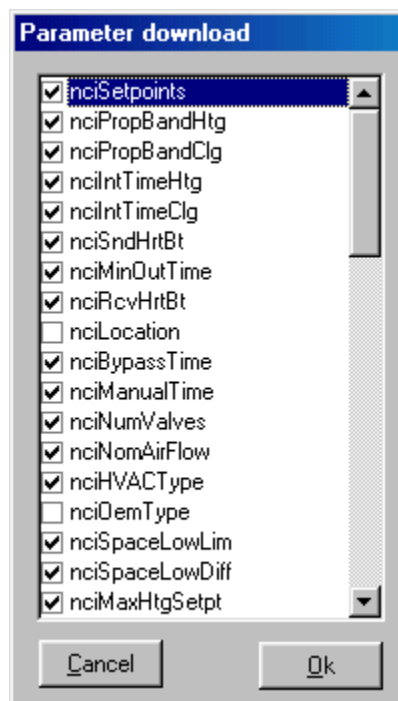


Figure 43 : Parameter List

Checked parameters will be loaded to all selected devices. This option enables the download of the same parameter file to multiple devices by selecting the parameters with values that are common for all of them. Select OK to start the download.

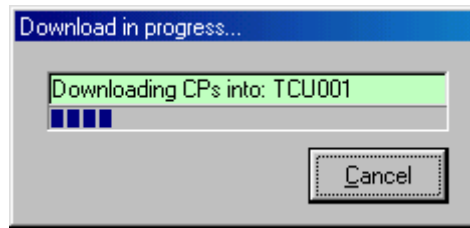


Figure 44 : Downloading Parameters

When you click on Cancel, the download will continue until completed in the current device, and then stop.

Specifications and Technical Data

Ordering Codes

Software

Product Code	Product Description
LP-FXTPRO-0	FX Tools Pro CD ROM (FX Builder, FX Builder Express, FX CommPro N2, FX CommPro Lon, FX Loader Utility)
LP-FXTEXP-0	FX Tools Express CD ROM (FX Builder Express, FX CommPro N2)

Technical Specifications

FX CommPro Lon Tool

System Requirements		
Operating System		Microsoft® Windows 98 Microsoft Windows NT® Version 4.0 Microsoft Windows 2000 (with Service Pack 4 or later) Microsoft Windows XP (with Service Pack 1 or later)
Hardware Requirements	Processor	Intel® Pentium® Processor, 500 MHz or higher
	RAM	Minimum 512 MB RAM
	Hard Disk	60 MB available hard disk storage
	Display	Display resolution 800 x 600 16-bit (32,768) color minimum
	Interface	RS232, USB
Software Requirements		Microsoft Internet Explorer Version 5.0 or later

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.



Controls Group Global Headquarters
507 E. Michigan Street
P.O. Box 423
Milwaukee, WI 53201

Published in U.S.A. and Europe