

FOCAL*POINT INSTALLATION NOTES

*These installation notes are an extract from the Quick Start Guide and are intended as a brief introduction for configuring Focal*Point during its initial setup. Please consult the program Help file and User Guide for more information.*

Initial System License and Configuration

Focal*Point Configuration Wizard

Welcome to the Focal*Point Configuration

Product and License Configuration

Please specify how Focal*Point will be used on this computer

- MULTIPLE PORT DNC Plus ADMINISTRATION Functions**
Example: This computer will connect simultaneously to multiple CNC controls through one or more multiple-port serial devices and/or multiple wireless units. DATA COLLECTION may be added as an option.
- DATA COLLECTION SERVICES ONLY (NO DNC)**
Example: This computer will gather data simultaneously from multiple CNC controls through one or more multiple-port serial devices and/or multiple wireless units but NO DNC OPERATIONS OR ADMINISTRATION FUNCTIONS WILL BE SUPPORTED.
- SINGLE PORT DNC Plus ADMINISTRATION Functions**
Example: This computer will connect one-at-a-time to one or more CNC controls by being moved to each CNC control and plugged into the COMM port as needed, or will be connected to multiple CNC controls through one COMM port connected to manual switch boxes and cables.

COMM Port to be used for all Single Port DNC:

ADMINISTRATION functions only.

IP Address For This Computer. Use This Address As The Host IP Address In Focal*Point Remote.

Enable Remote Socket

Socket Port Number

The Remote Socket function requires the use of the optional package Focal*Point Remote.

Use the CMD function "netstat -ano" to avoid conflicts when selecting a new Socket Port number. Refer to Focal*Point Help for details

Product Selection and License

After the initial installation, Focal*Point provides three configuration/licensing options. The mode of operation or license (as purchased) must be indicated prior to using and/or requesting a password code.

The four modes of operation are as follows.

Multiple Port DNC plus Administrative Functions (Legacy Mode)

This is the standard operating mode when Focal*Point is used as a DNC host connected to multiple machines using external add-on RS232 hardware devices. Administrative functions are defined as having access to the DNC*Library (NC program database), Parts and Operations, and the Received File Administrator.

Data Collection Services Only

As implied, this mode does not support DNC operations. It is used solely for capturing DPRNT output from a machine control. Although DNC operations are excluded, it is possible to add Data Collection to a DNC configuration.

Single Port DNC plus Administrative Functions

This mode of operation may be popular replacement for CNC's Easytalk DOS software and for situations where multiple machines with different communications parameters must be configured for use with a laptop computer or when a single-port PC will connect to multiple machines using an A/B style switchbox. This mode requires the user select a desired machine prior to performing I/O functions. For larger networks, this mode of operation is ideally suited for use on a laptop that can be used in emergency situations or when a roaming laptop is required.

Administrative Functions Only (Legacy Mode)

This mode is generally used in conjunction with Multiple Port DNC installations as if provides NC programmers and system administrators the ability to maintain the NC program database, received program files and numerous other administrative functions. This mode does not support communications with machines.

As discussed above, it is important to select the appropriate mode of operation prior to generating the 10-Day trial and requesting a permanent password code.

*To generate your 10-Day trial and request a password code, simply click on the Manage License button shown when Focal*Point is starting. Now click the button to generate the 10-Day license, which will generate a unique Seed code. Copy and paste the Seed code into an e-mail message and send it to info@cncinnov.com*

Version Upgrades

Users upgrading from an earlier version of Focal*Point should enable and test new features individually. That is, to ensure the proper understanding and function of a new feature such as the new "Purge if Sending and Inactive", it is best to enable the feature and test machine communications before enabling any additional new features.

GETTING STARTED

Before communicating with any machine control it is important to verify the configuration of your RS-232 port(s). Some suppliers, as well as the native COM 1 port have a configuration option the controls the buffer size of the COMM port. This option, know as a FIFO (First In, First Out) buffer can easily affect downloads on many machines resulting in “086” or similar “Buffer Overflow” alarms.

To verify or change the port property requires using the Device Manager located within the System Properties section. System properties may be accessed via the Control Panel or by clicking the Manage option in My Computer. For detailed instructions please refer to the help section provided with your computer’s operating system.

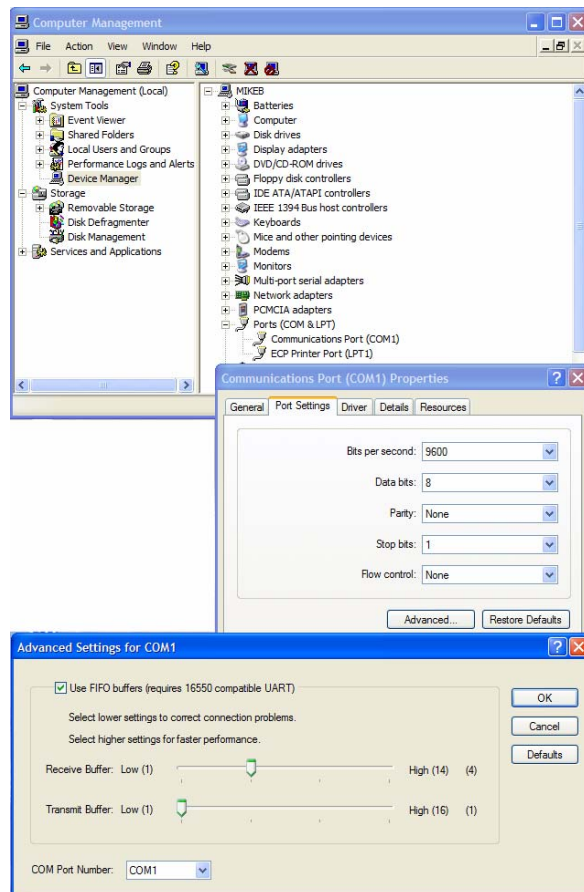
Note that not all communications hardware will provide a setting to change the FIFO buffers. However, if the option exists it is generally accessed by viewing the COM port properties. Within the properties page(s) you may see a button labeled Advanced Options. By default most ports use the highest available receive and transmit buffers.

For best operation, especially with native ports, the transmit buffer should be set to between 1 and 4 characters and the receive buffer to about 4 characters. These settings should provide good port response and maintain compatibility with your CNC controls.

If your COM properties do not provide the option to change the buffer size, which is generally true with most Control, Digiboard and Wirefree devices, it does not mean the device will not work properly--it very likely will. However, some devices such as low-cost USB-to-Serial adaptors may claim to provide the option yet in reality it may not work.

Also note that whenever COM properties are changed it is important to reboot your PC. Changes generally do not take effect until you re-start.

If you continue to receive a Buffer Overflow alarm, verify that your control and Focal*Point are both configured to use X-on/X-off flow control. In rare cases, especially with older controls, it may be necessary to use the RTS/CTS handshake method. In which case, your RS-232 cable must connect these control lines from the machine control to the PC COM port.



OVERVIEW FOR CONFIGURING THE SOFTWARE

The following information briefly describes the main setup options with recommended settings for some of the most important program features. For details regarding a particular function or operation refer to the Focal*Point manual or help screens.

Multi-User Administration/LAN Connectivity (Settings Menu--Optional)

Configuring the software for either a single DNC host PC or multiple seats (Including Administrative Licenses) is essentially the same except that multi-user installations will share one common database. This option moves the Focal*Point database to a common LAN drive allowing shared access by multiple users. Keep in mind that this common directory must have complete read and write system rights by all workstations involved with DNC administration.

To enable the LAN connectivity, open the Multi-User Administration window that is located in the Settings menu and click the Browse button to locate and select a target folder for the database file. This operation will create a copy of the DNC*Library database, known as fpshare.mdb, in the selected folder. Note – It is not recommended to select the root folder of any drive.

Hint: Single user stations may also enable LAN connectivity. This will make the DNC file database available to established LAN backup strategies.

System Defaults (Settings Menu)

Suggested Settings:

- Configure the “Receive Admin Save As” and the “NC Editor Directory” to open at the location of your stored NC Programs.
- Enable the Archive feature for saving overwritten NC Programs
- Select a Port Reconnect Rate (time period) for activating wireless or single-port communication devices.
- Select the global time period for machines using the “Send Standby Timeout” and “Send Standby Purge” features located in Settings > Communications Parameters.
- Note – Receive Delay (3) and XOFF Reset (2) should be left at their default settings during the initial setup.

NC Program Categories (Settings Menu--Optional)

Provides a descriptive, program filter for use by the DNC*Library and the machine connection. Categories provide for a quick and filtered file selection process by allowing the NC program library to import and sort programs and reports according to specific machine categories. For example, mill programs are considered a separate group from lathe programs. Note that using NC Program Categories can add an additional security feature that will prevent the remote transfer of NC programs to incompatible machine controls. Also, be sure to match each machine to its category when setting communication parameters as described below.

Suggested Settings:

- To share DNC*Library files among several machines it is best to use fewer categories and then associate machines accordingly in Settings > Communications Parameters.
- To restrict files to only certain machines use individual machine categories.
- Note – When programs must be shared with multiple machines while still using individual machine categories, it will be necessary to add the NC programs to the DNC*Library for each machine category.

Automatic Library Transfer Directories (Settings/Defaults Menu--Optional)

Assigns a LAN directory that Focal*Point will scan in order to automatically add files to the DNC*Library. This feature allows virtually any programming station to make new files available to the DNC server computer. This option can be enabled at any time and requires a thorough understanding of Focal*Point's DNC*Library.

Setup Communication Parameters (Settings Menu)

Configures the RS232 parameters and a COM port for each machine connection. This step also specifies the format for operator initiated, remote file requests as well as advanced string and compression options. Here you will also assign machines to particular NC Program Categories as discussed above. Keep in mind that Focal*Point's main program screen will not show active communication connections until each connection is assigned a dedicated COM port.

Hint - While synchronizing serial communications parameters from your machine control with Focal*Point's communications section, you may find it helpful to use the Terminal function, located in the communications section to view uploaded programs from your control and thus verify proper configuration.

Suggested Communications Options:

- Most machines default to the ISO data type using Xon/Xoff handshake. End-of-Block and Stop Bits should match the control settings.
- When using remote file requests, be sure to configure and enable a "File Not Found Message" compatible with each of your machines. It is best to establish a standard, shop-wide program number—especially for machines that extract embedded program numbers during the load sequence.
- Recommended Advanced Options are: Enable No-Wait Read, Purge if Sending and Inactive and Strip Trailing End of Blocks. Please Note, if "No-Wait Read" is NOT selected and the optional Receive File Confirmation feature IS enabled, it will be necessary to enable the "Send Standby Purge" feature—its delay time is specified in System Defaults. Furthermore, when not using "No-Wait Read", operators must wait a minimum 15 seconds (for request processing) between punching a remote file request and before initiating the program load sequence.
- Finally, the "Send Standby Timeout" feature is typically used for controls that do not output the X-on start character when initiating a program load sequence.

Import DNC*Library Files (Database Menu)

The DNC*Library will be your database of NC programs available for editing and download at your machine controls. The DNC*Library does not duplicate files that are stored either locally or on a LAN network, it simply acts as a pointer to their physical location. This feature eliminates the need for operators to enter long path and file names when performing remote program requests. It also provides a quick method for locating machine specific programs when browsing the list of NC program files.

Suggested Setup:

- It easiest to build and maintain the library using the Import Directory function located in the File menu. Afterwards, when adding new programs, it is a simple matter of re-running the import function while being careful to use the identical Program Category and DNCID creation options. This method will add the new files without duplicating existing selections.
- Insert the DNCID as a comment into each NC Program. This feature, located in the DNC Library File menu, simply adds a comment that will be used by the Receive File Administrator when matching and comparing uploaded program from machine controls. This feature may be applied to files within specific program categories by first selecting the category on the main screen.

Build a Parts & Operations Database (Database Menu--Optional)

Provides a database for paperless distribution of customer related information. Each part and operation can have links to associated CAD drawings, setup sheets, historic documents and photos, and of course, an NC program file. This section provides machine operators a paperless reference for manufacturing documents. CNC Innovations suggests the use of a PDF or a multi-document viewer for use with the Parts and Operations database.

Assign Security Rights (Settings Menu--Optional)

Creates access rights for people using Focal*Point. This feature can be used to restrict certain operations for each user. Generally, it is only necessary to protect access to vital setup configurations such as the communication parameters and default settings.

Conclusion

Following the suggested setup procedures will greatly enhance your understanding of Focal*Point's capabilities. It will establish a solid working model for your DNC system as you explore all the additional program benefits. Keep in mind that computer user accounts and network group policies can also affect program performance--for a brief overview read the document *PC Permissions and Windows 7 UAC*. For additional program information consult the User's Guide available on the distribution CD and on CNC Innovations' web site.