easyDnc version 4.7

Installation and user guide

When printing - A4 paper/format is recommended.

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www.easydnc.com
support@easydnc.com

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Cable diagrams are not included in this quick user guide. Diagrams and machine parameters for many types of CNC are available at the dncsetup.com website

www.dncsetup.com

Introduction

easyDnc is an easy to use file transfer program specifically designed for sending and receiving programs and other data to and from CNC machines.

Many DNC programs are based on DOS technology and even those that do use the Windows Graphical User Interface (GUI) often require quite a lot of keyboard work exposing their underlying DOS based heritage.

easyDnc is not a new program – it was first released in 1995 and has been tried and tested by thousands of users around the world. It has been continually updated to maintain forward and backward compatibility with all 32bit and 64bit versions of Windows including Windows XP, Vista, Windows 7.

easyDnc allows many functions to be accomplished using the PC mouse. For example - Sending a CNC file to a machine requires no keyboard work at all; simply use the mouse to navigate to the required file (or files) and click&drag the file(s) onto the relevant machine icon. easyDnc queues the files ready for transmission and just one more mouse click and the selected file is transferred to the CNC.

Saving data FROM the CNC is just as easy. Open the easyDnc receive window then go to your machine and punch out/send your data which is then displayed instantly inside the easyDnc text editor where you can view it, save it to disk or make changes and transmit back to the machine.

easyDnc can also operate in DripFeed mode where you can pause, stop, restart, restart from any line (for example after a tool break) and even single step through the program.

While drip feeding easyDnc can also automatically rewind right back to the start allowing you to repeat the same job as many times as you wish without going back to the computer.

easyDnc is the ideal solution for operators who don't require expensive CAD/CAM functionality but do need simple and extremely low cost CNC file-transfer capability.

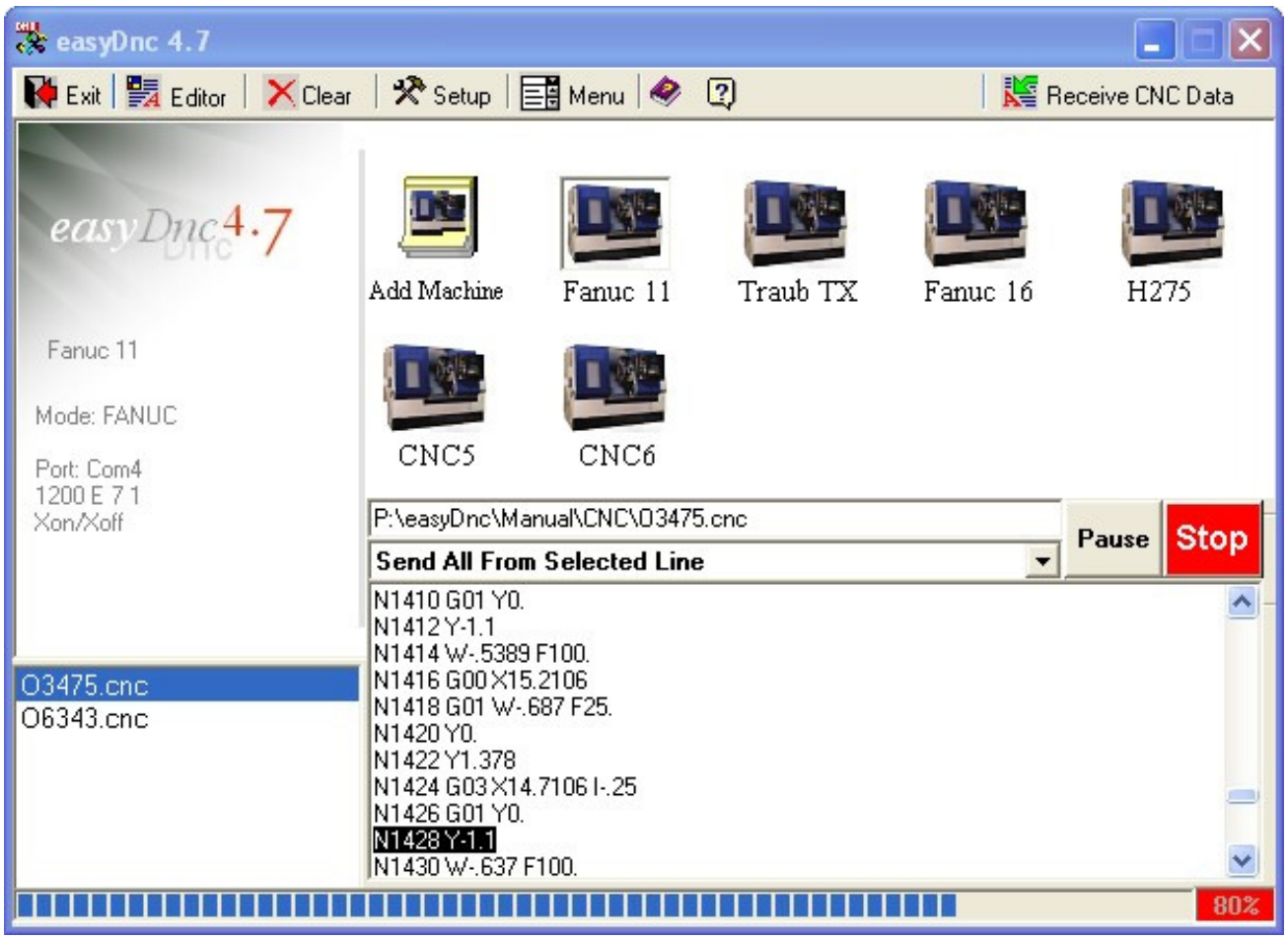
Installation

In most cases easyDnc will be installed from our downloadable installer package available on the internet at www. easydnc. com

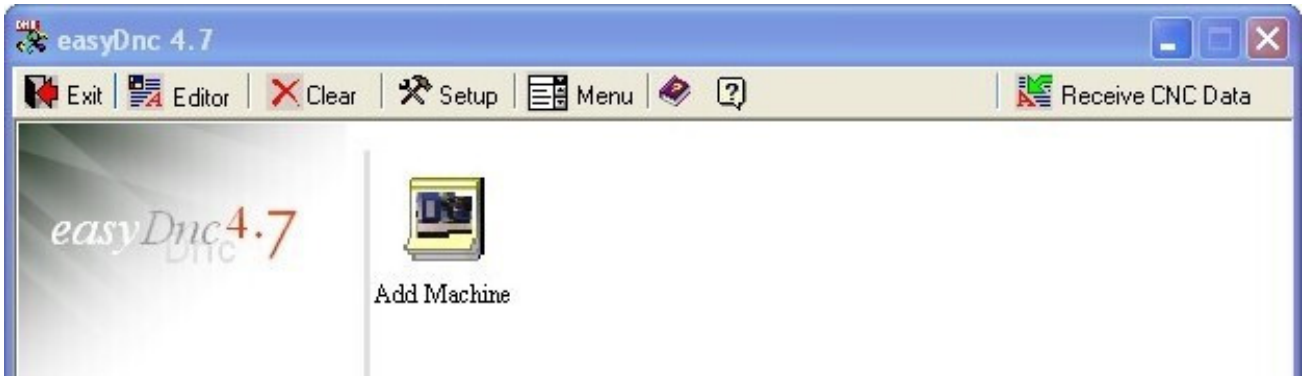
To begin setup double click the Setup icon and the installation wizard will guide you through the installation process.

When the install process is complete you'll find an easyDnc icon on your Windows Desktop and in the Start menu.

When you've been using easyDnc for a while the desktop might look something like this:-



But the very first time you use it it will look more like this:-



You need to add at least one cnc/machine profile so that you can use easyDnc.

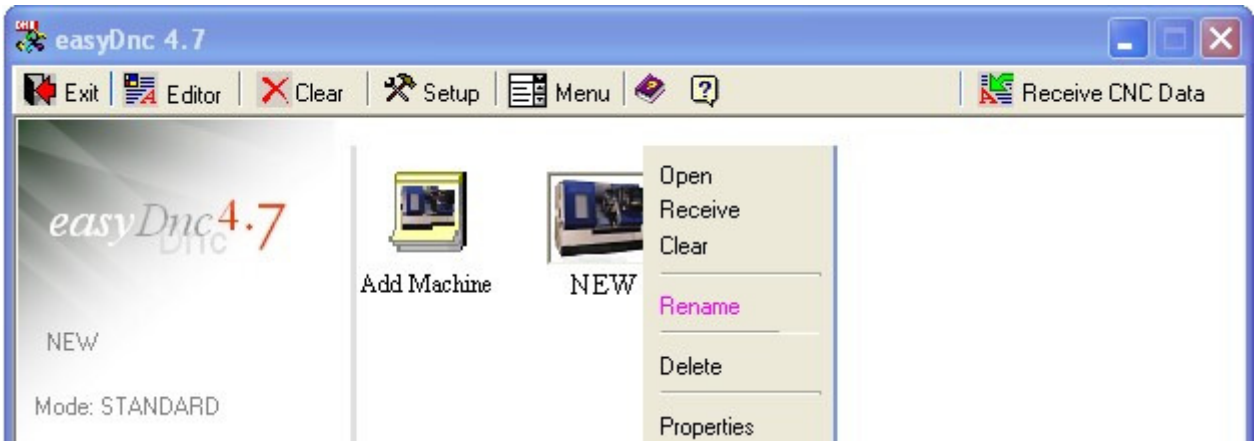
As a user of Microsoft Windows you are already accustomed to clicking icons and selecting options from menus. We've made easyDnc work the same way so you shouldn't have any problems with easyDnc's icons and menus. They work just like MS Windows.

To add your first machine you double click the 'Add Machine' icon and a new machine icon appears.

(note: Some more recent versions of easyDnc may already have one machine icon)

A new machine icon is always created with the name "NEW" and the first thing to do would be to give it a more meaningful name.

Just like renaming a Windows file or folder you can click the CNC icon with the RIGHT mouse button a small menu appears where you can select "Rename".

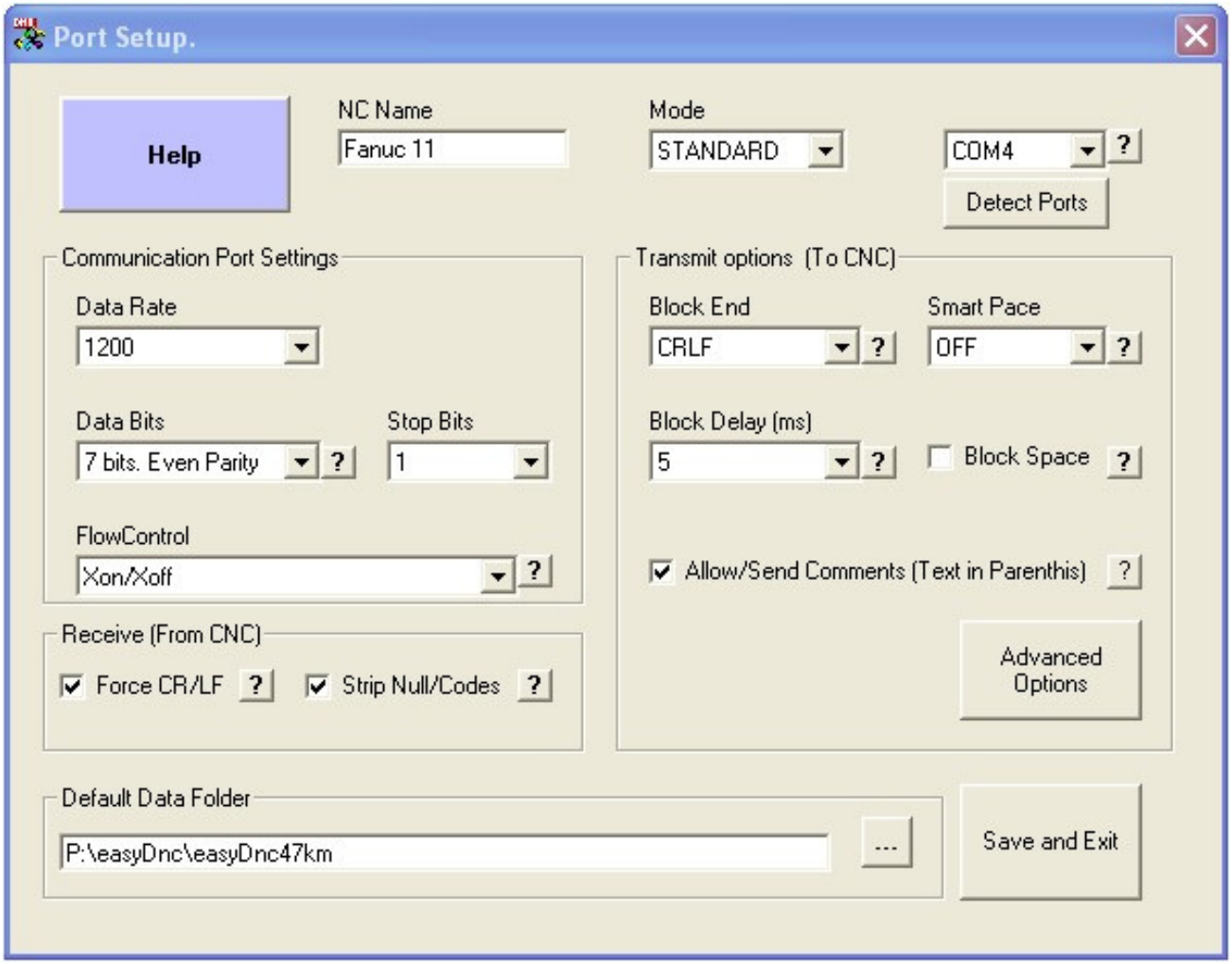


Setup / Configuration

Each icon on the easyDnc program window stores the settings related to one CNC.
Think of it as a 'Machine Profile'. When you have a number of different types of CNC you can switch instantly from one to the other by clicking the relevant CNC icon.

On the previous page you saw the menu with the "Rename" option. At the bottom of that menu you also see the "Properties" option. If you select that the properties "Port Setup" window appears.

At first this might look a little complicated but the good news is that you can ignore most of the options – easyDnc will do most things automatically so the defaults will work fine in many cases. But if you do wish to explore you'll see a small [?] button beside many of the options. Click that to see more information about the relevant option.



A couple of important thing though – Baud rate – We call it data Rate. Set this the same as your CNC. Also Databits and Parity. Most CNC require 7bits Even Parity although some very modern equipment uses 8bits No Parity.

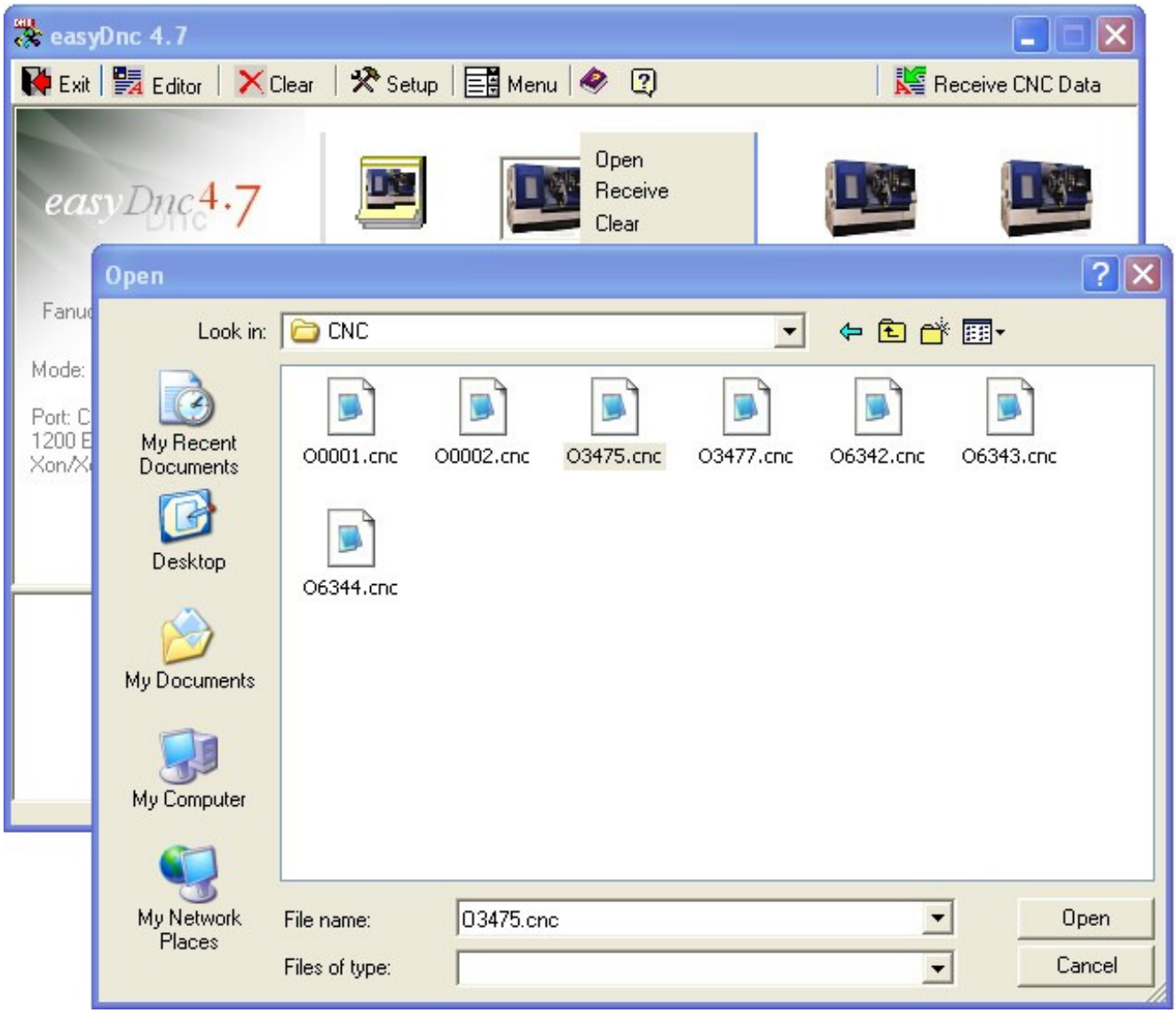
Please take a look at this website which lists settings for many types of CNC

www. dncsetup . com

Sending Data to the CNC

So that the file can be sent to the CNC it needs to be loaded into the easyDnc transmit buffer.

Right click the relevant CNC icon and select “Open” from the menu. This opens the Microsoft Windows file-select dialog allowing you to navigate around your computer’s file system or even your network to select the file that will be sent to the CNC.

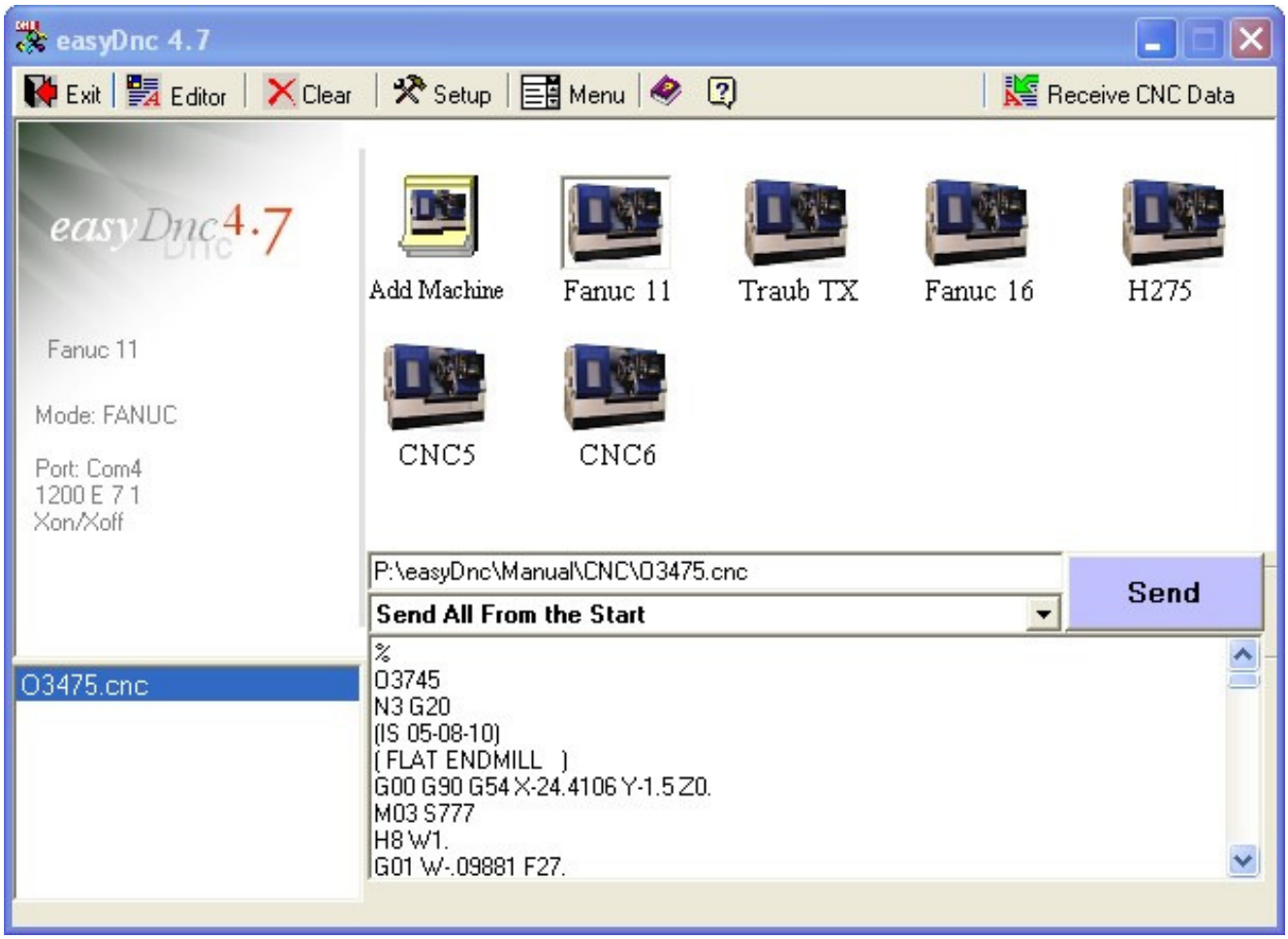


In our example we’ll select the file O3475 and click the [Open] button to load the file into easyDnc

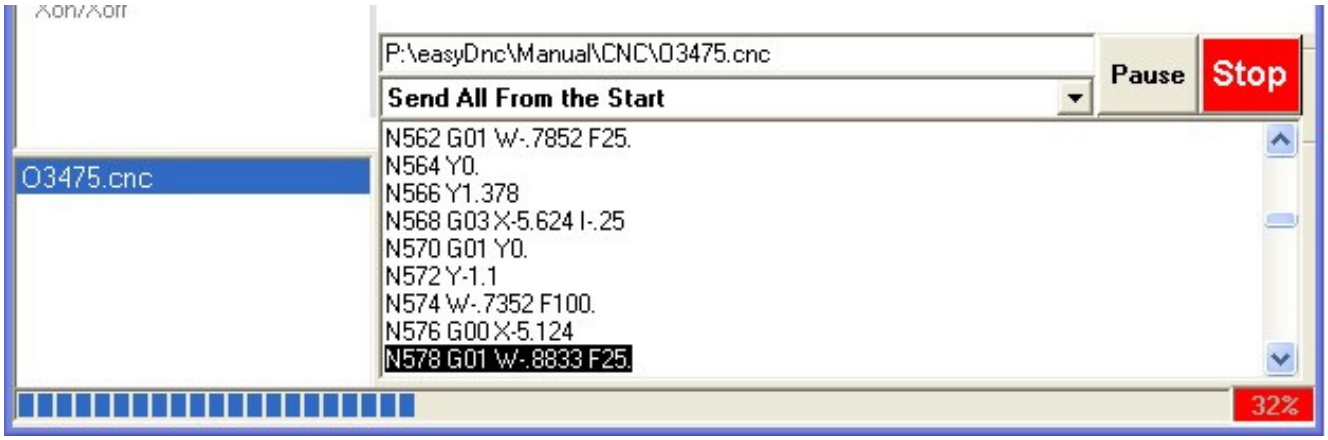
Tip: You may find it easier - and quicker - to load your CNC files into easyDnc by simply dragging and dropping them from a windows folder straight onto the machine icon.

This does not move the files - it just tells easyDnc where they are.

The selected file appears in the easyDnc transmit buffer – that's the text area in the lower half of the easyDnc window. The text area is quite small in this image but you can drag the centre bar up and down to increase the size of the text area.



And when you hit the [Send] button the data starts feeding into the CNC and you can see the progress as data scrolls up the through the buffer window and the blue progress bar moves left to right.

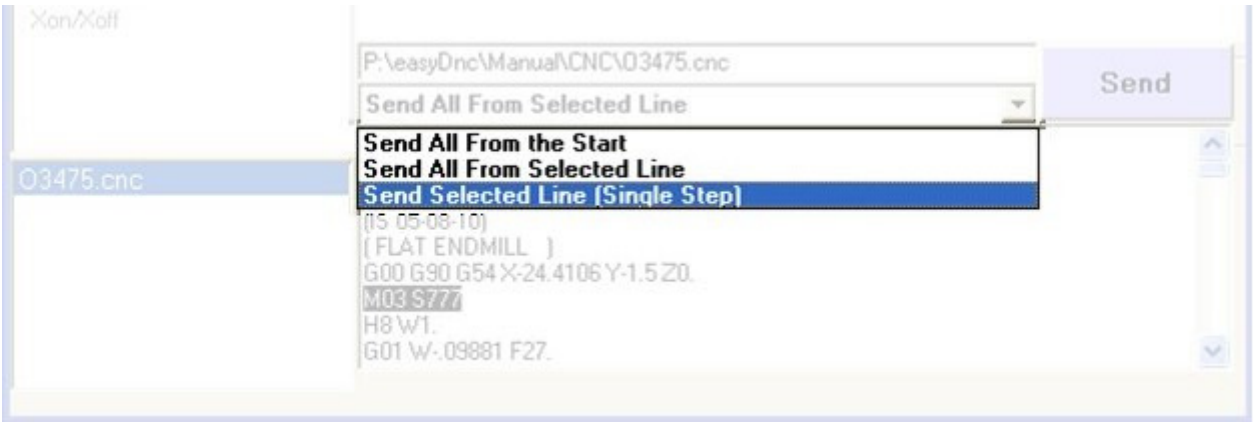


Also notice that the Send button has been replaced by other buttons allowing you to Pause or Stop the transmission.

Drip Feeding to CNC

easyDnc has no special drip feeding mode. It's automatic. But your CNC probably has a different switch setting. For example a typical Fanuc would be switched to 'Tape Mode' for drip feeding and then press Cycle Start on the CNC. At this point nothing will happen – press easyDnc's 'Send' button to begin the machining process. (See your machine documentation for setting/options related to your specific type of CNC.)

When transferring data into CNC memory you'll probably want to ignore this page. For drip feeding this version of easyDnc offers a couple of advanced options that didn't exist in previous versions.



Send All From the Start

No matter what part of the program you're viewing, when you select this option and click the Send button easydnc will rewind right back to the top and start sending from the very beginning of the file.

Send All From Selected Line

When you click the Send button easyDnc will start sending from the currently selected line.

Send Selected Line (Single Step)

When you click the Send button easyDnc will send the currently selected line and stop. You can repeatedly click the send button to Single Step through your program.

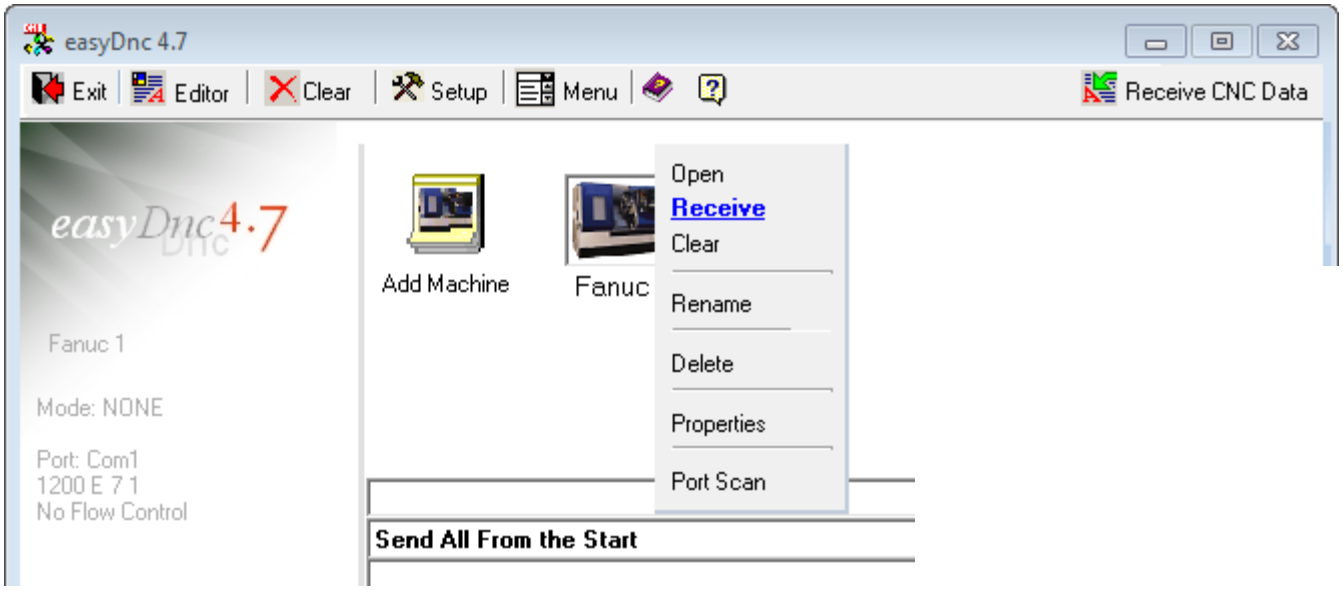
When drip feeding long programs you might experience a tool break. When you're ready to restart you wouldn't necessarily want to go right back to the start. You'd probably want to select a specific line and run from that point. If you weren't sure about a specific area of your program you might want to single step through it.

On the previous page you saw that when you click the Send button new buttons - [Pause] and [Stop] - appear. No need for us to explain what those buttons do. But interesting is that during drip feeding at full speed you can hit pause and switch the mode to single step - for example if you wanted to single step through an area you wanted to observe closely - and at any time switch the mode back to full speed machining.

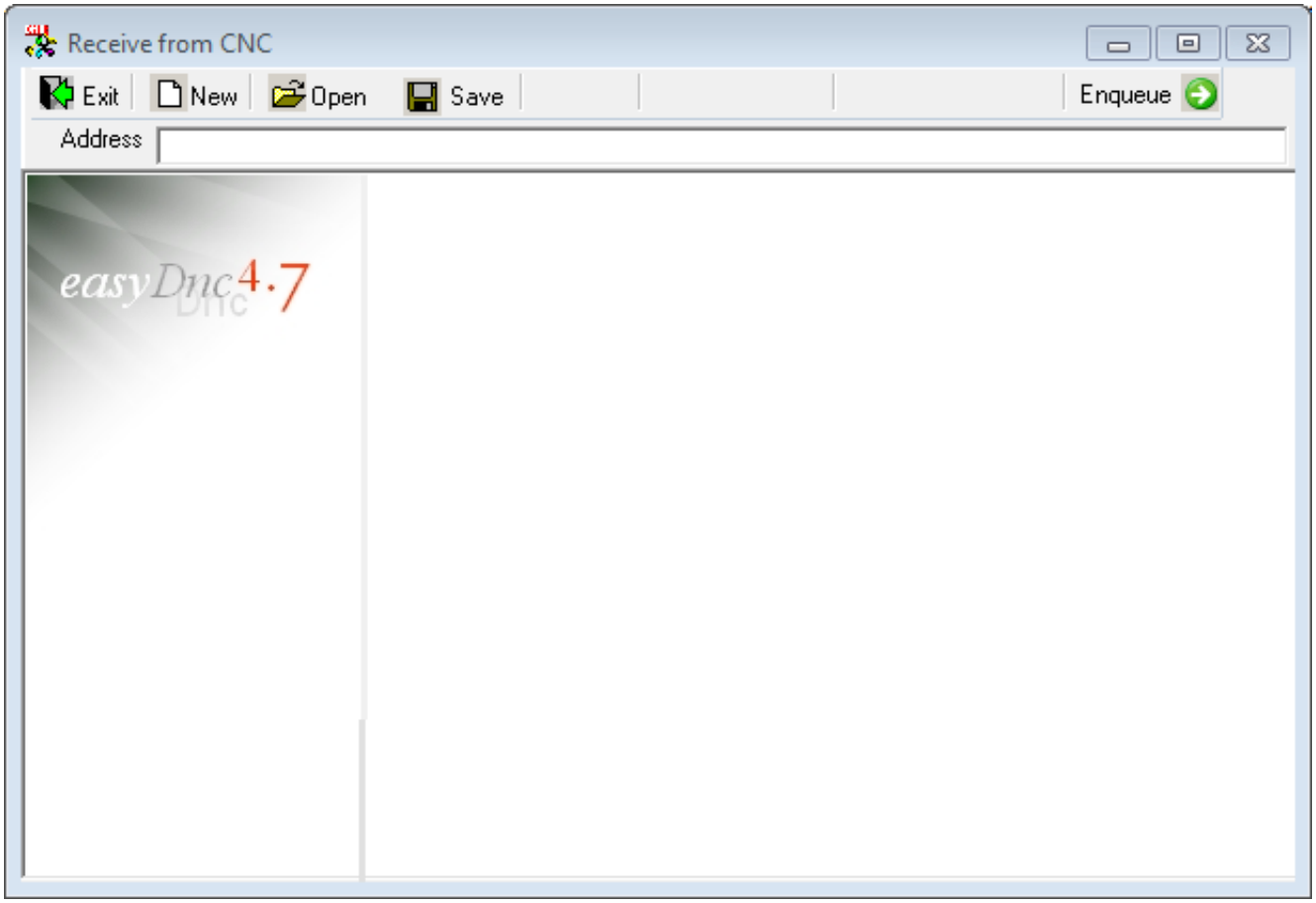
Receive data FROM the CNC

To receive data from the CNC you put easyDnc into ‘receive’ mode.

Click the relevant CNC icon with the RIGHT mouse button and select ‘Receive’ from the menu as shown in our example below.

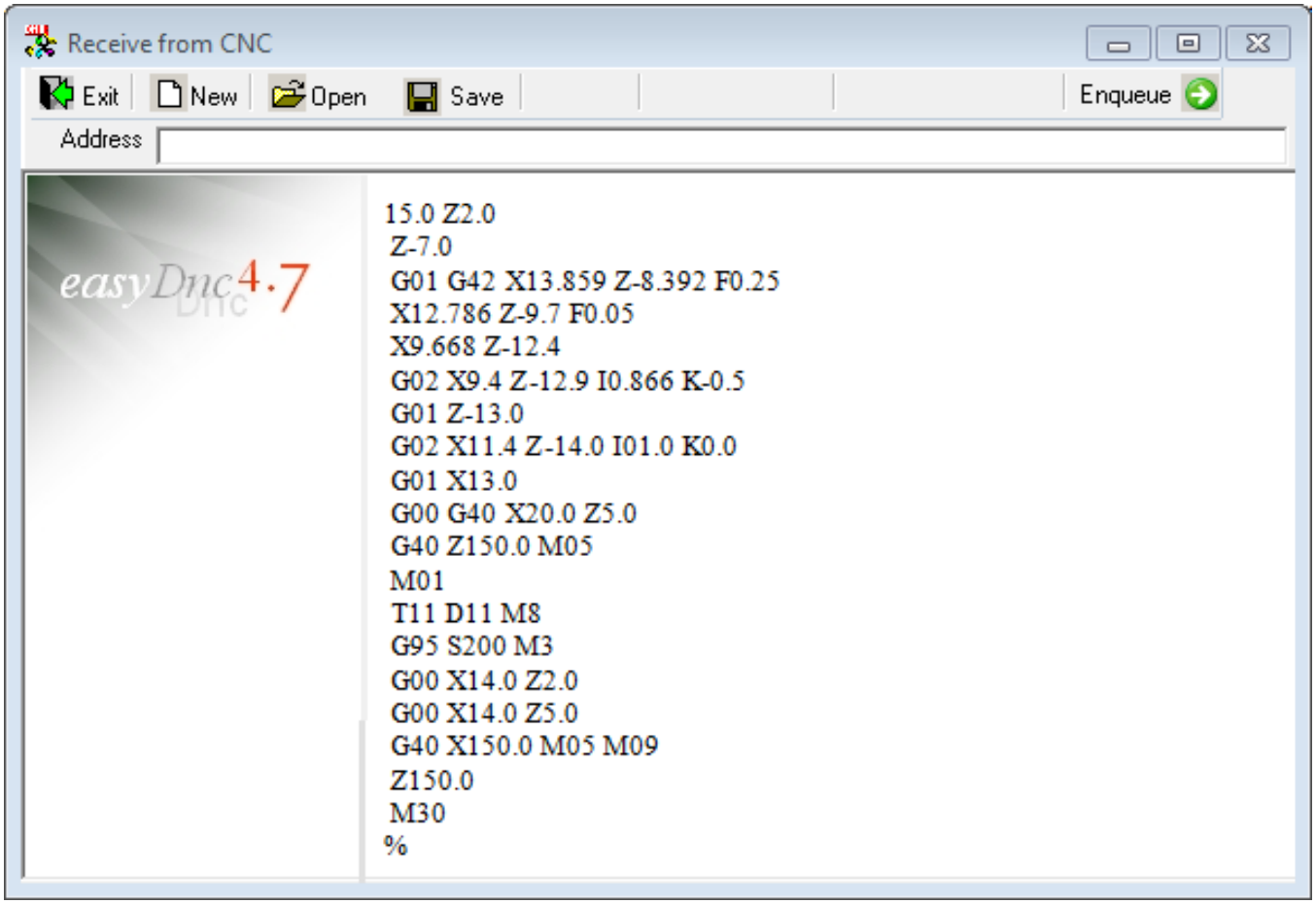


The window for receiving CNC data appears.



Now go to the CNC console and send/punch the program/file from the CNC

As soon as the CNC begins to send the data you should see it appear on easyDnc's receiving window.



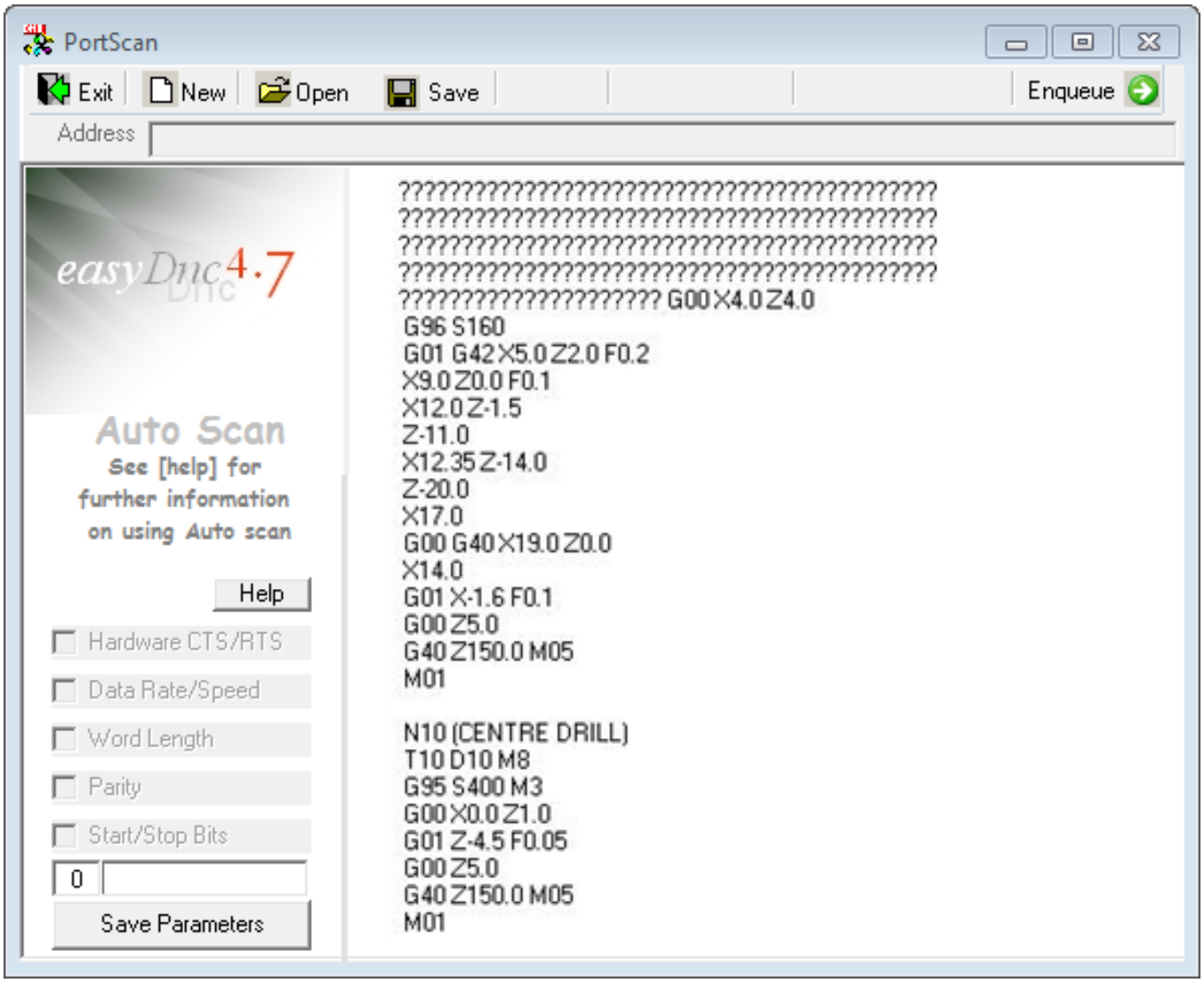
The receive window also functions as an editor. You can edit directly into the window to change the data before saving if required. Alternatively you can click the 'Enqueue' button to load the edited data into the easyDnc transmit buffer and send it right back to the CNC.

Detect CNC settings using Port Scan.

This version of easyDnc includes a feature called Port Scan. If you don't know any of your CNC's settings, baud rate or even which com ports are available on your computer, easyDnc can often detect the settings using Port Scan.

To enter port scan mode select 'Port Scan from the relevant CNC icon's menu and the Port Scan window appears.

Now go to the CNC console and send/punch out a sizable program. As soon as the CNC begins to send you should see garbage data appear on easyDnc's port scan window but after a few lines easyDnc should detect the parameters and focus on the data and clear readable text should begin to appear.



If the flow of data stops before analysis is complete then simply resend the data from the CNC without restarting the port scan process.

Usually port scan requires only 10 lines or so but if after repeated attempts the data is still not detected then you will have to enter your CNC parameters manually via easyDnc's setup properties window.

Cable Diagrams

This ‘quick’ user guide does not contain any CNC machine specific settings, parameters or cable diagrams.

Please visit the website below to see settings and cable diagrams for many different types of cnc.

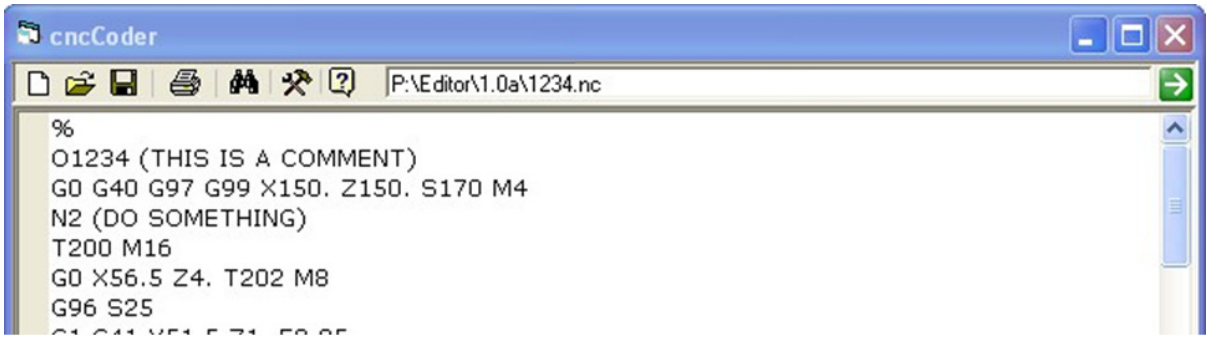
www . dncsetup . com

Editor (cncCoder)

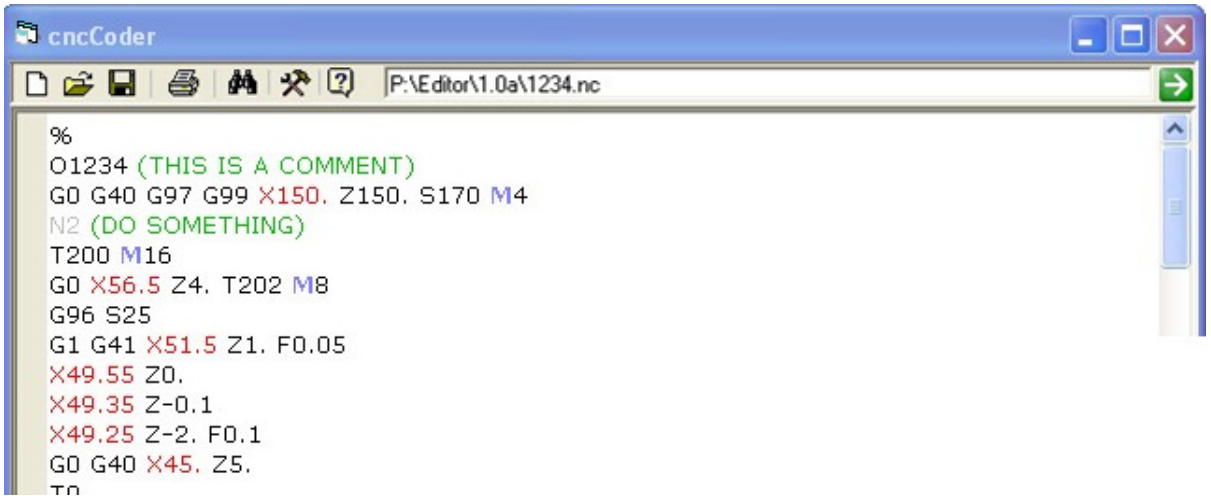
This version of easyDnc includes ‘cncCoder’ the CNC text editor.

cncCoder can be installed separately on as many computers as you wish at not additional cost.

Use cncCoder just like Windows NotePad



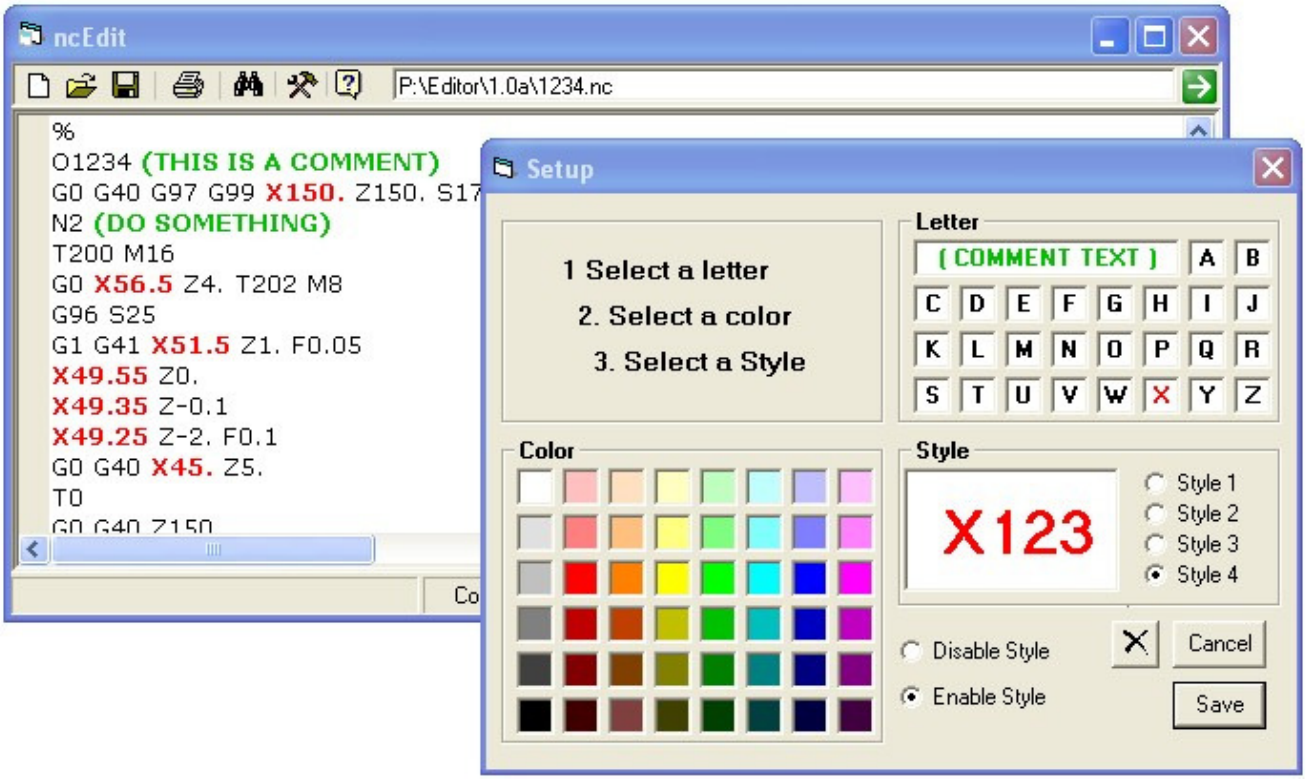
Or enable syntax highlighting to make things a little clearer.



When you enable syntax highlighting cncCoder switches the display color instantly – this highlighting is only visual – it only affects the display on the computer. It does not change the actual file text in any way.

Of course the highlighting is fully configurable. (see following page)

Each individual part of your CNC syntax can be configured separately.
As an example maybe you're working on something where you want to pay extra attention to the X values - Simply open the color picker, select 'X' followed by a color and 'Save' and every X value throughout the display area is instantly shown in the new color. As mentioned previously this only affects the display within cncCoder - the colors or other formatting are not applied to the underlying CNC text so does not alter the format of your CNC files or affect the machining process.



Note:

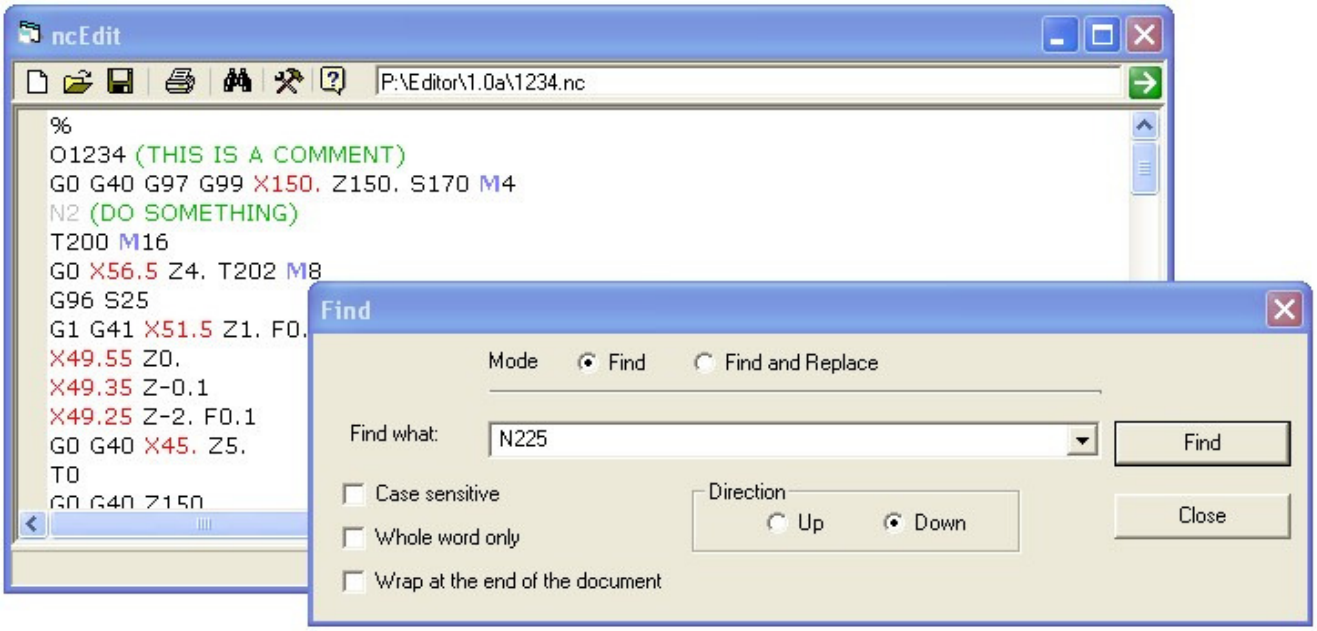
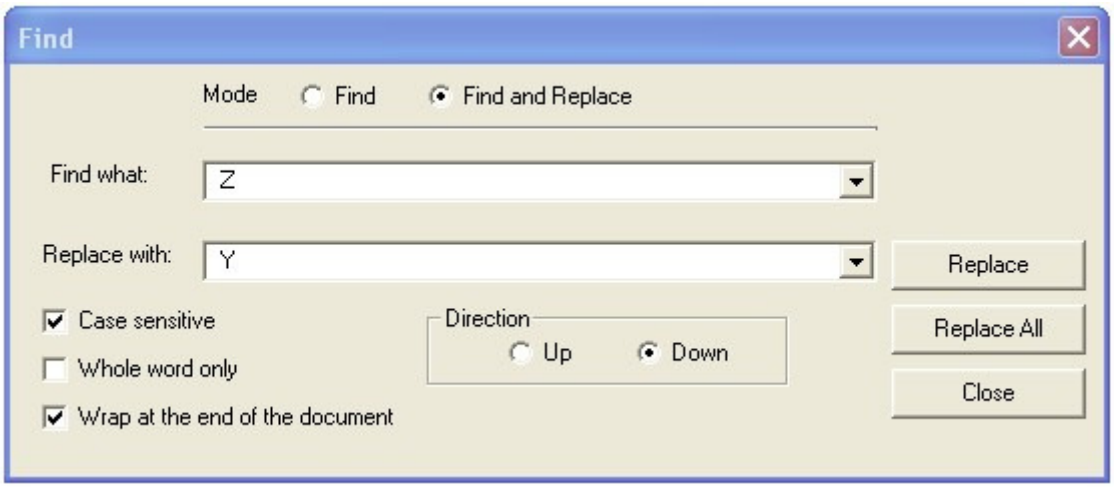
We understand that many users will want to edit CNC files in the office on a desktop computer while their DNC software is running on a different computer "out in the shop.

cncCoder can be installed separately on as many computers as you wish at no additional cost.

cncCoder is included with the easyDnc installation but if you just want to install cncCoder then you can download it on its own – completely free of charge – from the cncCoder website at :-

www.cncCoder.com

The editor also includes the usual features such as ‘Find’



As well as instant ‘Find and replace’