

File

Controls reading, writing, deleting, and printing NC program files. Also contains the Exit menu item. Please see the note below.

New - Clears the current program, if any, and enables keyboard input.

Open... - Invokes a panel where you can select the file you want to edit.

Save - Saves the current file to disk, over writing the old copy.

Save As... - Invokes a panel where you can specify a new file name and/or directory before saving the file to disk.

Print

Print All - Prints the entire file.

Print Selected - Prints only the lines and characters that are selected.

Delete... - Invokes a panel where you can choose a file to be deleted from disk.

Insert... - Invokes a panel where you can specify a file to be inserted into your current NC program file at the cursor location.

Exit - Terminates the editor.

Note: Depending on installation options, some File menu items listed above may not be available. Their function exists elsewhere within the overall system within which the editor is one component.

Edit

Allows "cut and paste" operations within the edit window, and controls "input mode".

Undo - Undoes the previous editing operation.

Cut - Deletes selected characters but saves them in a buffer for possible Paste.

Copy - Saves selected characters in a buffer for later Paste.

Paste - Inserts characters from the buffer into cursor location.

Input mode - Optionally used for entering new programs.

On - Inserts sequence number on each new line.

Off - Disables input mode.

Search

Performs various types of searches and sets search options.

Feeds and Speeds - Searches for tool changes, feedrate changes, and spindle speed changes.

Goto Tool Change - Moves the cursor to the next tool change.

Goto Speed Change - Moves the cursor to the next spindle speed change.

Goto Feedrate Change - Moves the cursor to the next feedrate change.

Define Change Words... - Invokes a panel where you specify letter addresses that signify the changes above.

Characters... - Invokes a panel to perform character and numeric searches.

Mark - Sets and locates a temporary 'mark', or pointer, in your NC program.

Goto - Moves the cursor to a previously set mark.

Set - Sets a mark and enables the 'Goto' command.

Global

Provides functions that operate on the entire NC file, i.e. 'global' operations.

Reseq... - Invokes a panel to add sequence numbers, remove them, or resequence an NC program. ([More on reseq](#))

End-of-block... - Invokes a panel to add or remove end-of-block characters. ([More on End-of-Block](#))

Find and Replace... - Invokes a panel to perform search-and-replace operations.

Remove Blanks - Removes all blanks from the NC program, except those within comments.

Word Format... - Invokes a panel that lets you change the word format for the word addresses you specify. ([More on Word Format](#))

Move... - Invokes a panel that allows [coordinate translations](#) for the entire program or by tool. It can also be used to help [convert](#) between English and metric units and to [convert](#) between radius and diameter notation on lathes.

Calcs

[Calls up various calculators.](#)

Windows Calculator... - Calls up the standard calculator provided with Windows. If the Windows calculator is not available on your system, this menu item is not visible.

Trig Calculator... - Calls up a special purpose panel that helps calculate angles and sides of triangles. To use it, fill in the data you know and pick the *Compute* button.

Programming Calculator... - Invokes a panel that provides various aids in developing feedrates, spindle speeds, and hole making parameters. It also includes an inch-mm converter.

[Feedrate conversions:](#) Units per minute <--> Units per revolution and feed per tooth

[Speed conversions:](#) RPM <--> Surface units per minute

[Drill/Tap/Thread:](#) Drill tip length calc, feedrate based on pitch or threads per unit

Analysis

Displays some characteristics of the NC program, and offers a program comparison function.

Length - Displays the size of the NC program in characters and equivalent feet of punched tape.

General - Shows number of blocks, and tool usage. Also shows min/max values of words normally associated with axis positions.

Compare... - Invokes a panel that helps compare two NC programs. (More on Compare)

Settings

Controls editor settings and preferences. These are retained between sessions.

Colors - Lets you choose from several foreground/background color combinations.

Text - Determines size of characters in the edit area. You can also check the Upper Case Only option, which will force all keyed alphabetic input to be in upper case.

File Options... - Specifies how the editor handles trailing blanks, automatic creation of backup files, and file extensions.

Menu Items

File

Edit

Search

Global

Calcs

Analysis

Settings

Welcome to NFR editNC 2.0 Help



Menu Items

Navigation Buttons (Icons)

Special Keys

Resequencing Panel Fields

- Increment: The number to be added to each seqno.
- Starting Number: The first sequence number.
- Number of digits: The number of numeric characters in each seqno. This is the maximum seqno field size if leading zeros are being suppressed.
- Sequence every ___ block(s): Insert 0 or 1 to sequence every block, 10 to sequence every 10th block, etc.

Resequencing Panel Controls

- Start at Cursor: If checked, start resequencing operation at the current cursor location. Otherwise, operate on the entire file.
- Suppress Leading Zeros: If checked, remove leading zeros from seqnos.
- Add/Change: Add seqnos if none exist, change seqnos that already exist.

End-of-Block Panel Fields

- End-of-Block Character: The character used to indicate end-of-block. Frequently a dollar sign (\$)

End-of-Block Panel Controls

- Add EOB Character: Check this item to add an EOB character to the end of each block.
- Remove EOB Character: Check this item to remove EOB characters from the end of each block.
- Add CR/LF after EOB's: If checked, this option adds carriage return/line feed characters after each EOB character. This option helps make some files more readable and easier to edit. There is no automatic option to remove CR/LF's however, so be sure your controller accepts them before using this option.
- Remove Fixed Line Numbers: This option is used to help reformat NC programs stored in "packed card" format. This format is produced by some postprocessors. Using this option will cause the characters in positions 73-80 of each block to be removed. Additional editing is almost always needed.

"EOB character" as used here refers to the character specified in the text box near the bottom of the EOB panel. It is saved between sessions and can vary by NC machine. A dollar sign (\$) is a common EOB character.

The "Panel" referred to here is a standard Windows file selection dialog box with the addition of a check box to indicate that a file is "read-only". Checking this box does not affect the file's status on disk. It simply disables the File Save menu item so that you do not file over the existing copy by mistake.

Word Format Panel

This panel lets you change the format of several types of word addresses at once. For example, you can change a program where the X,Y, and Z moves have no decimal points into a completely different format containing no leading zeros and including decimal points.

This is a complex panel that contains its own help function. To use it, bring up the panel and select the "Turn Help On" button. Then pick the various buttons and text boxes on the panel and the editor will display a short description. The editor manual contains a more complete explanation.

The words checked are X,Y,Z,A,B,C,U, and V.

Compare Panel

This panel contains two scrolling areas, one over the other. The top area shows the current line at the bottom and scrolls 'backwards'. This places the two current lines together near the screen center. Files can be compared manually, or using three automatic modes.

Compare Options

Exact mode - Blocks must match exactly.

Numeric mode - Blocks must match exactly, except that numeric values need not be formatted identically. A tolerance can be applied within which they are considered to match. Also, comments and sequence numbers are ignored.

Controller mode - This is similar to numeric mode, but attempts to consider modality typically used in NC programs. For example, a program that includes a single feedrate specification of F15.0 could match a program that includes an F15 on every motion statement. Controller mode assumes that ALL word address numeric values are modal and should therefore not be used as the only indication that two programs are identical.

Compare Buttons

+ Bot Cur Line to Clipboard - Clicking on this button adds the current line of the lower scrolling area to the clipboard for later pasting into the edit area. Note that, except for the first time you click this button, the clipboard is not cleared - the line is added to the existing contents.

Set Cursor in Editor - This button will be enabled if the file currently loaded in the editor itself has the same name as the top file in the compare panel. The editor cursor will be positioned on the line that was current in the upper compare portion when you leave the compare function. This function is useful if you are attempting to copy blocks from the lower compare file to the current file being edited based on compare results. (You could, for example, simply paste the clipboard contents at that location).

Navigation Buttons



Go to top (start) of the NC program



Page up



Go to next tool change or preset



Go to next spindle speed change



Go to next feedrate change



Repeat the previous search operation (Also F3 key)



Go to mark (Only displayed if mark is set)



Page down



Go to bottom (end) of NC program

Special Keys

F1 - Calls help display for the current panel

F3 - Repeats the previous *search* operation

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backup files

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numeric searches

A numeric search assumes a hit if the numeric portion of a word address is equal in value to the numeric portion of the search argument. X01.2220 equals X1.222 , for example.

mark

This is a temporary "bookmark" in your program that you can use to quickly jump to the marked location. The jump can be performed by a navigation button or a menu item.

buffer

The buffer is actually the Windows Clipboard, so that cut and paste operations can be performed between Windows applications.

packed card

Packed card data looks like this:

```
N10G90$N20T01M06$N30G0X10.000Y10.00PROG0001
```

```
Z1.000$N40G01Z-2.000F15.0$N50Z1.000F20PROG0001
```

and so on. Although this example shows shorter lines, in reality they are usually 80 character lines.

coordinate translations

This lets you add or subtract constant values by letter address as you might want to do if you change a setup, for example. BE CAREFUL! Don't forget that changing X and Y values might also require changes to I and J and other values for the NC program to work properly.

tool usage

This display depends on the tool change trigger value that you set using the Settings menu item. If the value starts with a T, then the editor assumes any numeric value immediately following a T in the NC program is a tool number and displays all tool numbers found. If the letter address is not a T (e.g., an M6) then the editor simply counts the number of changes. Note that, if a T-word is used, tool pre-selects may be counted as changes.

trailing blanks

These are called trailing spaces on the File Options panel. These are blanks contained in the NC program file between the last character in a block and the CR/LF characters that mark the end of a line. Some file transfer procedures result in trailing blanks being added to 'pad' each record to a fixed length. If 'Remove Spaces' is checked, the editor will remove these when a file is opened. Do not use the option unless necessary since it slows down the opening process.

backup files

Checking 'Auto Backup' causes the editor to make a backup of each file as it is opened. The backup copy has the same file name but the extension is changed to .BAK. Any previous backup copies are overwritten.

file extensions

The file extension is the set of characters following the period in a DOS file name. You can specify an extension (up to three characters) that might, for example, indicate NC program files. The editor will use your value as a file extension default.

conversion

If you precede the numeric adjustment value entered for an axis with a slash (divide) or an asterisk (multiply) then this operation will be performed. For example, *25.4 will convert inch to metric, /25.4 will convert metric to inch, *2 will convert radius to diameter, and /2 will convert diameter to radius.

