

TOFESD



Industrial Text
Editor -
Robot Programming
Software

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INDUSTRIAL TEXT EDITOR

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## INDUSTRIAL TEXT EDITOR

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INTRODUCTION

Denford Machine Tools have a range of CNC software packages for all of today's popular Micro's. Our Industrial Text Editor allows part programs to be written and developed on a Pc with the option to output to a Controller or Tape Punch Reader. The software is totally configurable for most Cnc controllers and loads Cam files created from Denfords AutoCAM software package.

Hardware Specification

- * IBM compatible computer with at least one single floppy Disc Drive.
- * Monitor (colour or monochrome).
- * Compatible with CGA, EGA, VGA and Hercules graphic cards.
- * Serial Interface Card for downloading the CNC program to Machine Tool.
- * Parallel Interface Card (for connecting to a printer only).

Software Specification

- * Master copy of software on one floppy Disk.
- * Security Key (connects to the Serial Port).
- * Manual.
- * Cable.

SETTING UP

Installing on Floppy Disk Drive:-

Format a Floppy Disk using any Dos above Version 2.0
EG Format a:/s/ Followed by Return
Place the Master Disk in Drive B and type
Copy b:*. * a: Followed by Return.

Once all the files have been copied over you can put your Master Disk in a safe place. To run the software put the Disk in Drive A and type EDITOR followed by Return.

Installing on A Hard Disk Drive.

Switch on your computer and Boot up with Dos version 2.0 or higher. Place your Master Disk in Drive A and type:-

Copy a:*. * c: Followed by Return

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FIRST TIME IBM USERS

If you have received a system with your software be sure to read through the User guide on how to setup your computer before trying to use this Software. Run through the Software supplied with the computer to get a feel for the machine.

IMPORTANT

Make a backup copy of your MASTER disk and keep in a safe place. Your DOS manual will tell you how to copy a Disc.

Fitting the Security Key

This is the small box with a connector at each end that is supplied with your disk.

To run the software, the Security Key must be located in the Serial (RS232) Port at the back of the computer. The software will not work without the Security Key fitted.

CONNECTING THE RS232 CABLE

The cable plugs into the Security Key, at the computer end and into the connector at the back of the Controller.

Installing the Communications.

The **Install Comms** menu is accessed from the main menu.

This menu allows the machine controller link settings and the print destination to be modified, loaded and saved.

Machine Link

Changes the settings of the serial link between the EDITOR and a machine tool controller.

Printout

Changes the print destination.

Save Settings

Saves communication settings for a particular machine tool controller.

Load Settings

Loads communication settings for a particular machine tool. The default filetype for communication settings files is **CS**.

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Machine Link

One of two menus will appear, depending on the current settings.

No Machine Link

This menu appears when the machine link is set to disabled.

Serial Link

Enables communications to the machine tool.

Machine Link Settings

This menu appears when the machine link is enabled.

No Machine Link

Disable the machine link.

Communications Port

Communications port 1 or 2.

Baud Rate

The speed of data transmission.

Parity

The type of parity to use.

Bits per Word

The number of bits to hold each transmitted character.

Stop Bits

The number of stop bits to be sent after each word.

Remote Flow

Does the controller send XON/XOFF.

Local Flow

Does the controller receive XON/XOFF.

Clear To Send

Should the CTS protocol be used.

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Character Delay

The approximate delay in milliseconds after a character has been transmitted.

Carriage Return Delay

The approximate delay in milliseconds after a carriage return has been transmitted.

Line Feed Delay

The approximate delay in milliseconds after a line feed has been transmitted.

Printout

One of two menus will appear, depending on current settings.

No Printout

This menu appears when print output has been disabled.

Output Device

The name of a device can be specified here.
ie. **LPT1** will cause print output to be sent to parallel port 1, **COM2** will cause print output to be sent to communications port 2.

Output File

Output will be stored in a file with the same name as the program being edited and a filetype of **LST**.

Printout To File

This menu appears when print output is directed to a file.

No Output

Disables print output.

Output Device

The name of a device can be specified here.
ie. **LPT1** will cause print output to be sent to parallel port 1, **COM2** will cause print output to be sent to communications port 2.

Printout to Device

This menu appears when print output is directed to a device.

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No Output

Disables print output.

Output Device

The name of the output device can be changed.

Output File

Output will be stored in a file with the same name as the program being edited and a filetype of **LST**.

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MAIN MENU

After pressing any key to clear the front title page the Main Editor work area will be displayed.

MAIN MENU

Edit Program
New Program
Communicate
Configure
Change
Install Comms
Disk Utilities
Quit

EDIT PROGRAM

Select this option to Edit the resident program in memory.

Keyboard state indicators.

Alert the user to Keyboard status for Edit options.

INS Insert mode is active.

CAP Capitals Lock (CAPS LOCK) is active.

NUM Numeric Lock (NUM LOCK) is active.

The left of the bottom edit border displays which line the cursor is on and how many lines are in the program.

ie. **Line 4/23**

means the cursor is on line 4 of a 23 line program.

The keys used for controlling menus are :-

Up	Moves the highlight bar up one line.
Down	Moves the highlight bar down one line.
Escape	Removes the menu.
Return	Selects the line that the highlight is on.
Home	Moves the highlight onto the first line.
End	Moves the highlight onto the last line.

Pressing a character causes the highlight to move onto the next line that starts with that character.

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### Using the Help Windows.

At any stage in the editor appropriate help windows can be accessed.

The help key is **ALT F1**.

If more than one help topic is available a menu of help topics will appear.

The keys for controlling the help windows are :-

**Up**        Display the previous help window.  
**Down**     Display the next help window.  
**Escape**   Remove the help window.

### EDITING

#### Menu Keys.

**F1**    Display the Edit Menu.  
**F10, ESCape** Display the Main Menu.

#### Line Editing Keys.

These keys also apply when entering a single line ie. entering the name of a file to load.

**Ins**    Toggles between insert and overwrite mode.  
**Left**   Cursor left one character.  
**Right**   Cursor right one character.  
**Home**   Cursor to the start of the line.

**End**        Cursor to the last non-space character on the line.  
**Ctrl Left**    Cursor moves one word to the left.  
**Ctrl Right**    Cursor moves one word to the right.  
**Ctrl Home**    Cursor moves to the top line in the edit window.  
**Ctrl End**     Cursor moves to the last line in the edit window.  
**Del**        Deletes the character that the cursor is on.  
**Backspace**    Deletes the character to the left of the cursor.  
**Ctrl Y**       Deletes the line that the cursor is on. The line is stored in the delete buffer.

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### ~~~~~ Page Editing Keys.

**Return** Inserts a blank line after the current line and moves the cursor to the start of it.

**Up** Cursor up one line.  
**Down** Cursor down one line.  
**Pg Up** Moves up a page.  
**Pg Dn** Moves down a page.  
**Ctrl Pg Up** Moves to the first page.  
**Ctrl Pg Dn** Moves to the last page.

### Range keys.

These keys are used to mark the start and end points of Edit Blocks. The marked range of lines are highlighted in reverse video.

**F7** Sets the start of the marked range to the current line.

**F8** Sets the end of the marked range to the current line. If used on a line before the start of the range then no range is set.

### Comments

Comment lines, they have an open bracket as the first non-space character and appear highlighted.

### The Edit Menu.

The **Edit** menu is accessed by pressing the **F1** key when in edit mode.

### Delete Blocks

Deletes the marked range. The lines are stored in the delete buffer.

### Move Blocks

Moves the marked range to immediately after the current line. The lines are also copied into the delete buffer.

### Copy Blocks

Copies the marked range to immediately after the current block.

### UnDelete

Inserts the contents of the delete buffer immediately after the current line.

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### **Search**

Prompts for a string of characters and moves the cursor to the next occurrence of those characters.

### **Goto Line**

Prompts for a line number and moves the cursor onto that line.

### **NEW PROGRAM**

Unloads the resident program from memory and enters Edit Mode.

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The Main Menu.

Edit Program

Program Editing mode is entered. Pressing either key F10 or the escape key will bring back the main menu.

Another way to enter editing mode is to press the escape key.

New Program

Deletes the current program from memory and enters editing mode.

Communicate

Allows programs to be loaded from or sent to a controller.

Configure

Allows the editor settings to be changed.

Change.

Adds or removes N' Block numbers or padding spaces.

Install Comms.

Changes the settings used when transmitting, receiving and printing.

Disk Utilities.

The **Disk Utilities** menu is accessed from the **Main** menu.

A filename consists of a file name, a full stop and a file type.

ie. **fred.abc** has a filetype of **abc**.

fred. has a blank filetype.

fred has an unspecified filetype, it is just a file name.

If a filename is entered with an unspecified filetype then the default program filetype is used to determine the filetype.

If the default program filetype does not contain either a * or a ? then it is used for the filetype, otherwise a blank filetype is used.

Examples

For a default filetype of **fnc**.

fred becomes **fred.fnc**.

harry.lgp stays **harry.lgp**.

tony. stays **tony..**

For a default filetype of * all filenames stay the same.

If a blank filename is entered then a **List Directory** menu is displayed. A filename can then be selected from this menu.

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Load Program.

Prompts for a filename. This is then loaded from the current path.

Save Program.

The program is saved with the same name at the current path.

Save As.

Prompts for a filename. The current program is renamed and saved at the current path.

List Directory.

A menu appears on screen displaying a list of files. The numbers at the bottom left of the menu border are the position of the highlight in the list and the number of files in the menu.

The file menu can be made to scroll through the list of files by using **Pg Up**, **Pg Dn**, **Cursor Up** and **Down**. These keys operate the same way as for the edit window.

The files displayed are those in the current path whose filetype matches the default filetype.

The filetype matching follows the same rules as MSDOS.

Examples

fnc would only match with **fnc** ie. **fred.fnc** and **harry.fnc**.

A blank default filetype would only match with a blank filetype ie. **fred.** and **harry..**

A ***** would match all files ie. **fred.fnc**, **fred.**, **harry.fnc** and **harry..**

Insert Part Program.

Prompts for a filename. The file is inserted into the current program after the current line.

Save Part Program.

Prompts for a filename. The marked range is then written to the specified file.

Delete File.

Prompts for a filename. The specified file is then deleted from disk.

Path

Allows the current directory path to be changed. This follows the same rules as for the MSDOS **CD** command. ie. Entering **B:** will set the path to the current directory on the B drive.

The path is used for loading and saving all the files used by the editor.

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### The Communicate Menu

#### **Print range**

Outputs the marked range. The **Install Comms** menu allows the output to be sent to disk file, a device or the output to be disabled.

#### **Transmit Program**

Outputs the program in memory to a controller.

#### **Transmit Range**

Outputs the marked range to a controller.

#### **Receive Program**

Inputs a program from a controller.

### The Configure Menu.

The **Configure** menu is accessed from the **Main** menu.

#### **Transmit Codes**

Changes the codes used for transmitting to a machine tool.

#### **Receive Codes**

Changes the codes used for receiving from a machine tool.

#### **'N Block Settings**

Changes the values that are used when renumbering a program. The values are the length of the N' block number, the first line number and the line increment.

#### **Program Filetype**

Changes the default program filetype.

#### **PNC**

Selects the use of PNC control settings ON/OFF.

#### **Filter Comments**

Use this option to select filtering either ON or OFF. If filtering is set to ON, then comments will be removed when communicating with a controller.

#### **Load Settings**

Loads a configuration file.

#### **Save Settings**

Saves the current configuration.

The default filetype for editor configuration files is **CFG**.

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~~~~~ The Communicate Menus.

These menus are accessed from the **Configure** menu.

The **Transmit Code** and **Receive Code** menus are exactly the same.

The difference is that they are for changing different codes.

Program Start Code

End of Program Code

N' Block Start Code

End of N' Block Code

Some characters are filtered out when receiving.

All code 0's are removed, line feeds are converted to carriage returns and multiple occurrences of carriage returns and line feeds are replaced by one carriage return.

ie. A controller uses carriage return line feed for the end of an N' block. The end of N' block code should be set to a carriage return for receiving and carriage return line feed for transmitting.

Specifying Codes.

The codes can be entered as a combination of literal characters, control codes and hexadecimal.

Literal characters are contained between either double or single quotes. ie. "Hello" or 'Hello'.

Control codes are a ^ followed by an alphabetic character. ie. ^M for a carriage return and ^J for a line feed.

Hexadecimal numbers are a \$ followed by a 2 digit hexadecimal number. ie. \$0C for a carriage return, \$0A for a line feed and \$41 for a "A".

So a percent sign followed by a carriage return and line feed could be specified as "%" ^M ^J, or \$25 \$0C \$0A etc.

N' Block Settings Menu.

The **N' Block Settings** menu is accessed from the **Configure** menu.

The N' block settings are used when adding N' block numbers to a program.

This menu is different in that there is another box to the right of the menu. When an item is selected from the menu the matching value in the other box can be edited. The range of numbers that can be used is displayed in brackets.

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Minimum Length

This is the number of digits to use when adding an N' block number. For a block number of 12 and a minimum length of 4 the N' block number would appear as **N0012**.

If the length is too small to hold the block number then the smallest length that will fit will be used. For a block number of 123 and a minimum length of 0 the N' block number will appear as **N123**.

Start From

This is the number that will be used for the first N' block number.

Increment Value

This is the value by which the N' block numbers will increment.

Program Filetype.

The **Program Filetype** menu is accessed from the **Configure** menu.

This is the default program filetype used by **Load Program**, **Save As**, **List Directory**, **Insert Part Program**, **Save Part Program** and **Delete File**.

PNC

This should be enabled when communicating to a PNC controller. No other settings are required to set Communications to a PNC controller.

The Change Menu.

The **Change** menu is accessed from the **Main** menu.

Options in the Change Menu modify the entire program, apart from blank and comment lines.

Add N' Blocks.

N' block numbers are be inserted into the program.

Remove N' Blocks.

Removes N' block numbers from the current program.

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Add Padding.

Inserts a space before every alphabetic character, starting from the second character position.

Remove Padding.

Removes all spaces.

Modify Values

Changes all values after a given prefix to that of a given formula within a marked range. If, for example, you want to alter all the **Z** values by adding 3 to them, enter **Z** for the prefix and **+3** for the formula.

Append Text

This facility allows characters to be inserted at the end of each line within a marked range.

Eg. A block sent to the PNC controller with an **L** inserted at the end of the block will be saved in the PNC's memory and not executed directly.

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## INDUSTRIAL TEXT EDITOR

### ~~~~~ Customizing Help Screens and Menus

The software has been designed so that all Menus and Help Screens can be easily translated into foreign languages.  
Procedure for translating :-

Load the file editor.txt into the Cnc editor or any Word Processor for a complete listing of all the Menu Items, Messages, Prompts and Help screens used in the software.

The Menu Items are listed at the start of the file with the Help Screens following on.

To change any of the Menu Items, Prompts or Messages simply overwrite with the translation. You are not restricted to a certain length of text as the windows will adjust to the length of the longest item per window.

#### How to Change Help Screens

|name\_A| All lines within |-----| vertical bars should be left alone. The name of the Help Screen is followed by an underscore and a letter. The letter is the Page number and follows the alphabet (A B C D and so on).

How to add more Help Pages.

example:-

|EDITING A LINE\_A|This part must not be translated.  
Window Menu Item if required.

Window Title and page no.  
Help notes for page 1

|EDITING A LINE\_B|  
Help Notes for page 2

|EDITING A LINE\_C|  
Help Notes for page 3

To add another Page type in |EDITING A LINE\_D| followed by the Help Notes.  
The maximum number of Help Pages for each help screen are 26 from A to Z.

Each page can have a maximum 54 characters across and 17 characters down.

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### IMPORTANT

Please ensure you have a Backup of the EDITOR.TXT file for security reasons.

Once the file has been translated Save it to Disk in the same Directory has the Editor.

Quit the program and select the Editor Directory.

Type "messages" followed by Return to run the compiler and enter "editor" to select the Editor.txt file.

The compiler will reconstruct all the Menu Items and Help screens adjusting Window sizes and center justifying Text.

After the compilation is over you can re-run the new translated version.

### LISTING OF EDITOR.TXT

```
{=====
{   D E N F O R D   M A C H I N E   T O O L S   L T D
{
{ EDITOR.TXT    (source for EDITOR.MSG).
{
{ This file contains the messages, menus and help screens
{ used by the program EDITOR  (INDUSTRIAL TEXT EDITOR).
{=====
{
|TEXT EDITOR 1_|
{
{           M E S S A G E S
{-----
{ The title page messages.
|SUPPLIER_|
Press a key to continue
Denford Machine Tools Ltd
Birds Royd, Brighouse,
West Yorkshire HD6 1NB, ENGLAND
Telephone 0484 712264 Telex 517478
{-----
{ The messages used for giving HELP.
{
|HELP_|
HELP
Help Screens
{-----
{ Messages used by the EDIT unit.
{
```

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```
~~~~~
|EDIT_|
Enter String to Find
Press the ESC key to continue
Press SPACE to continue, ESC to cancel
Cannot Find the String
A Marked Range is required
No room available
Searching
Error is highlighted
F1=Edit Menu, ALT F1=Help, F7/F8=Mark lines, F10=Main Menu
The cursor is within the block
Out of range
No lines in delete buffer
Enter line number (1 to last line)
Yes
No
Error in number
EDIT Menu
{-----
{ The messages used by the "EDITOR" program.
{
|GENERAL_|
INDUSTRIAL TEXT EDITOR
Line
Invalid Value
Comms Config File Error
Changes made will be lost, are you sure
Loading
Saving
Printing
Transmitting
Receiving
Enter the string
Enter Block Number Length
Changing Lines
Waiting
Line to wide
Select Load on the Controller
Installing Communications (ALT F1 for help)
MAIN Menu
More characters required.
Wrong type of file.
{-----
{ The Input/Output error messages.
{
|IO_|
```

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```
~~~~~
FILES
File not found
Invalid filename
File access denied
Error number
Enter file to load
Enter file to save
Enter file to delete
Enter files NEW name
Enter NEW Path
Invalid Path
Enter NEW File type
No files found
COMMUNICATIONS
Invalid Parameter
Wrong type
Null device
Not supported
Close Error
Open Error
Read Error
Write Error
Keyboard Pressed
Cannot load the file
Block not Acknowledged
Dongle not found
{-----
{ The menu titles used when installing
{ the communication channels.
{
|IBM-PC_TITLES|
Machine Link Settings
No Machine Link
Printout to File
Printout to Device
No Printout
{
{=====
{      M E N U S
{
{ The main menu of the "EDITOR" program.
{
|MAIN MENU|
Edit Program
New Program
Print Range
Transmit Program
Receive Program
Configure
Change
Install Comms
Disk Utilities
Quit
{-----
{ The main menu used of the "EDIT" unit.
~~~~~
```

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```

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{
|EDIT MENU|
Delete Blocks
Move Blocks
Copy Blocks
UnDelete
Search
Goto Line
{-----
{The disk utilities menu of "EDITOR".
{
|DISK MENU|
Load Program
Save Program
Save As
List Directory
Insert Part Program
Save Part Program
Delete File
Path
{-----
{ The menu used by "EDITOR" for
{ configuring the communication
{ strings for sending to the controller.
{
|CONFIG MENU|
Transmit Codes
Receive Codes
N' Block Settings
Program Filetype
PNC
Load Settings
Save Settings
{-----
{ The menu used by "EDITOR" for
{ inserting and removing N'block
{ numbers and padding spaces.
{
|CHANGE MENU|
Add N' Blocks
Remove N' Blocks
Add Padding
Remove Padding
{-----
{ The menu used by "EDITOR" for changing the
{ settings used when inserting Block Number's.
{
|BLOCK NO MENU|
Minimum Length
Start From
Increment Value
{-----
{ The menu used by "EDITOR" for changing
{ the transmission strings.
{
~~~~~

```

INDUSTRIAL TEXT EDITOR

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~~~~~
|IN STRINGS MENU|
Program Start Code
End of Program Code
N' Block Start Code
End of N' Block Code
{-----
{ The menu used by "EDITOR" for changing
{ the receiving strings.
{
|OUT STRINGS MENU|
Program Start Code
End of Program Code
N' Block Start Code
End of N' Block Code
{-----
{
|PNC MENU|
Not use PNC
Use PNC
{-----
{ The menu used for Communications
{ Installation.
{
|COMMS MENU|
Machine Link
Printout
Save Settings
Load Settings
{
{=====
{ MENUs used for installing
{ the communication channels.
{
|IBM-PC_IO MENU| {-io device
No Machine Link
Communications Port
Baud Rate
Parity
Bits per Word
Stop Bits
Remote Flow
Local Flow
Clear To Send
Character Delay
Carriage Return Delay
Line Feed Delay
{
|IBM-PC_NO_IO MENU| {-no i/o device.
Serial Link
{
|IBM-PC_NO_OUT MENU| {-no output.
Output Device
Output File
{
~~~~~

```

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```

~~~~~
|IBM-PC_DEVICE MENU|      {-output to device.
No Output
Output Device
Output File
{
|IBM-PC_FILE MENU|      {-output to file.
No Output
Output Device
{
|IBM-PC_PORT MENU|
COM1
COM2
{
|IBM-PC_BAUD MENU|
110 Baud
150 Baud
300 Baud
600 Baud
1200 Baud
2400 Baud
4800 Baud
9600 Baud
{
|IBM-PC_PARITY MENU|
No Parity
Odd Parity
Even Parity
|IBM-PC_BITS MENU|
5 Bits per word
6 Bits per word
7 Bits per word
8 Bits per word
|IBM-PC_STOP MENU|
1 Stop Bit
2 Stop Bits
|IBM-PC_REMOTE MENU|
No Remote Flow
Use Remote Flow
|IBM-PC_LOCAL MENU|
No Local Flow
Use Local Flow
|IBM-PC_CTS MENU|
No CTS
Use Clear To Send
{-----
{ Text used for installing
{ the comms channels.
{
|IBM-PC_CHAR-DELAY|
Character Delay (0 to 65535)
|IBM-PC_CR-DELAY|
Carriage Return Delay (0 to 65535)
|IBM-PC_LF-DELAY|
Line Feed Delay (0 to 65535)
|IBM-PC_DEVICE|
~~~~~

```

INDUSTRIAL TEXT EDITOR

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Name of Output Device

{ {=====

{ H E L P S C R E E N S

{

{-----LINE-----

|EDIT LINE\_A|

Editing a Line

EDITING A LINE 1/2

Cursor left and cursor right move the cursor one character to the left or the right.

Control cursor left and control cursor right move the cursor to the beginning of the previous and next words respectively.

Home moves the cursor to the start of the line.

End moves the cursor to just after the last non-space character on the line.

|EDIT LINE\_B|

EDITING A LINE 2/2

The INS key changes between insert mode and overwrite mode. In insert mode any characters typed are inserted into the line. In overwrite mode the characters typed replace those already on the line.

The DEL key removes the character under the cursor.

The backspace key removes the character to the left of the cursor.

The Control Y keystroke deletes a line.

{

{-----EDITOR-----

{

|EDITOR\_A|

Editing a Page

EDITING A PAGE 1/3

The cursor up and down keys move the cursor up and down one row.

The PgUp and PgDn keys move the cursor up and down a window page.

The control Home key moves the cursor to the line at the top of the editor window.

The control End key moves the cursor to the line at the bottom of the editor window.

{

|EDITOR\_B|

~~~~~

INDUSTRIAL TEXT EDITOR

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EDITING A PAGE 2/3

The control PgUp and control PgDn move the cursor to the first and last lines in the editor.

The F1 key displays the Editing menu.

The F7 and F8 keys are for highlighting the start and end of a range of lines.

The F10 key displays the Main menu.

|EDITOR\_C|

EDITING A PAGE 3/3

Any line starting with a "(" (open bracket) is taken to be a comment and is highlighted in the editor.

When Adding N'Block numbers or Transmitting comments and blank lines are ignored.

{  
{-----VALUE-----

{  
|VALUE\_A|

Entering a Value

ENTERING A VALUE 1/1

The value required is a whole number between or equal to the numbers specified.

ie. (10 to 22)

This allows 10, 22 and 16.

It does not allow 3, 9, 23 and 360.

{  
{-----FILENAME-----

{  
|FILENAME\_A|

Entering a Filename

ENTERING A FILENAME 1/2

- 1) Enter a blank filename and press return.  
A menu of files will appear and the required file can then be selected.

The filetype of the displayed files will be the appropriate default filetype.

The meaning of "\*" and "?" in the program filetype is as for MSDOS, so a filetype of "\*" means ALL filetypes.

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INDUSTRIAL TEXT EDITOR

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|FILENAME\_B|

ENTERING A FILENAME 2/3

- 2) Type in the filename and press return.  
If the filename does not contain a filetype  
then the default filetype will be appended.

The default filetypes are "CS" for  
communication configuration files and "CFG"  
for EDITOR configuration files.

If the program filetype does not contain a  
"?" or a "\*" then it is used as the default  
program filetype.

|FILENAME\_C|

ENTERING A FILENAME 3/3

{  
{-----PATH-----

{  
|PATH\_A|

File Paths

FILE PATHS 1/1

This allows you to select the disk and directory  
to use for loading and saving files.

The rules for entering paths are the same as for  
the MSDOS commands.

{  
{-----FILETYPE-----

{  
|FILETYPE\_A|

File Type

File Types 1/1

If the program filetype does not contain a "?" or  
a "\*" then it is used as the default program  
filetype.

When displaying a directory of program files only  
those whose filetype matches the program filetype  
will be displayed.

The meaning of "\*" and "?" in the program filetype  
is as for MSDOS, so a filetype of "\*" means ALL  
filetypes.

{  
{-----CTRL CODES-----

{  
|CTRL CODES\_A|

Control Codes

CONTROL CODES 1/1

The codes may be specified as combinations of

- 1) Literal characters.  
These must be bracketed between 'single'  
quotes or between "double" quotes.

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### 2) Control Codes.

These are entered as a circumflex followed by a letter of the alphabet (ie. ^A).

### 3) Hexadecimal.

These are 2 digit values.

```
{
{-----CODES IN-----
{
|CODES IN_A|
Receiving Codes
RECEIVING CODES 1/1
When receiving a program certain characters will
be filtered out or converted.
```

1) Nulls (ASCII 0) will be ignored.

2) Line Feed's are converted to Carriage Return.

3) Consecutive occurrences of Carriage Return and Line Feed will be treated as one Carriage Return.

```
{
{-----CODES OUT-----
{
|CODES OUT_A|
Transmitting Codes
Transmitting Codes 1/1
No filtering or conversion is used on the
program text or the codes.
```

The end\_block code is not sent after the last block, only the end\_program code is sent.

```
{
{-----FN KEYS-----
{
|FN KEYS_A|
Function Keys
FUNCTION KEYS 1/1
The ALT F1 key brings up the appropriate help
menu, from which pages of help can be selected.
```

The F1 key brings up the edit menu.

This menu allows the lines of the program to be moved, copied, deleted, searched for some text or the cursor moved to specified line.

The F10 key brings up the main menu.

```
{
{-----GOTO LINE-----
{
|GOTO LINE_A|
Goto Line
GOTO LINE 1/1
A whole number is to be entered here, the cursor
will then move onto the line specified.
```

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INDUSTRIAL TEXT EDITOR

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The number is NOT the N'block number, it is the position within the program.

```
{
{-----SEARCH-----
```

```
{
|SEARCH_A|
Search
SEARCH 1/1
```

When the text has been entered the editor will start searching from the current cursor position for a line containing that text.

If the text is found then the cursor is moved onto that line.

```
{
{-----PNC-----
```

```
{
|PNC_A|
PNC
PNC 1/1
```

This is an option required for transmitting to and receiving from PNC machines.

```
{-----FILE MENU-----
```

```
{
|FILE MENU_A|
```

Using a File Menu

```
USING FILE MENUS 1/2
```

A file menu shows which files are available and allows one to be selected.

Unlike the menus a file menu allows scrolling.

The numbers at the bottom border of the window indicate the number of files in the list and the position of the highlight within the list.

```
{
|FILE MENU_B|
USING FILE MENUS 2/2
```

To select a file the highlight must be moved onto the filename and the return (enter) key pressed.

The highlight is moved one file at a time with the cursor keys and a windowful at a time with the PgDn and PgUp keys.

```
{
{-----MAIN MENU-----
```

```
{
|MAIN MENU_A|The Main Menu
THE MAIN MENU 1/3
EDIT PROGRAM
```

This removes the Main menu and allows the program to be edited.

```
NEW PROGRAM
```

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INDUSTRIAL TEXT EDITOR

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This clears the program from memory and allows  
a new program to be entered.

### PRINT RANGE

All the lines that are highlighted will be sent  
to the printer.

|MAIN MENU\_B|

THE MAIN MENU 2/3

### TRANSMIT PROGRAM

This will send the program to a machine tool.

### RECEIVE PROGRAM

This will receive a program from a machine tool.

### CONFIGURE

Allows the user to change the codes used in  
transmitting and receiving, to add or delete  
N'block numbers and to specify what numbers  
to use when adding N'block numbers.

{  
|MAIN MENU\_C|

THE MAIN MENU 3/3

### CHANGE

Allows N'block numbers and padding spaces  
to be inserted/removed.

### INSTALL COMMS

Allows the user to change/save/load the  
communication settings.

### DISK UTILITIES

Allows the user to Load files, Save files,  
Delete files etc.

### QUIT

The program finishes.

{  
{-----EDIT MENU-----  
{

|EDIT MENU\_A|

The Edit Menu

THE EDIT MENU 1/3

### DELETE BLOCKS

Removes the marked range of lines.

### MOVE BLOCKS

Removes the marked range of lines and inserts  
them immediately after the line the cursor  
is on.

### COPY BLOCKS

Copies the marked range and inserts them  
immediately after the line the cursor is on.

|EDIT MENU\_B|

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INDUSTRIAL TEXT EDITOR

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### THE EDIT MENU 2/3

#### UNDELETE

The lines from the latest block delete or block move are inserted immediately after the line the cursor is on.

#### SEARCH

Prompts for some text and then searches from the current cursor position for the first line that contains that text. The cursor is then moved to this position.

|EDIT MENU\_C|

### THE EDIT MENU 3/3

#### GOTO LINE

Prompts for a line number and then moves the cursor to that line.

{  
{-----DISK MENU-----

{  
|DISK MENU\_A|

The Disk Utilities Menu

### THE DISK UTILITIES MENU 1/3

#### LOAD PROGRAM

Prompts for a filename, then loads that program from disk.

#### SAVE PROGRAM

Saves the program being edited onto disk.

#### SAVE AS

Prompts for a filename, then changes the name of the program being edited and saves it to disk.

|DISK MENU\_B|

### THE DISK UTILITIES MENU 2/3

#### LIST DIRECTORY

Displays the files in the the directory with a filetype that matches the program filetype.

#### INSERT PART PROGRAM

Prompts for a filename, then inserts that file into immediately after the line the cursor is on.

#### SAVE PART PROGRAM

Prompts for a filename, then saves the marked range onto disk.

|DISK MENU\_C|

### THE DISK UTILITIES MENU 3/3

#### DELETE FILE

Prompts for a filename, then deletes that file from the disk.

#### PATH

Allows the default disk directory to be changed.

{  
{-----CONFIG MENU-----

~~~~~

INDUSTRIAL TEXT EDITOR

```
~~~~~
{
|CONFIG MENU_A|
The Configure Menu
THE CONFIGURE MENU 1/3
TRANSMIT CODES
  The codes used when transmitting to a machine.

RECEIVE CODES
  The codes used when receiving from a machine.

N' BLOCK SETTINGS
  The settings used by "Add N'Blocks"

ADD PADDING
  Inserts spaces into the lines.
|CONFIG MENU_B|
THE CONFIGURE MENU 2/3
REMOVE PADDING
  Removes spaces from the lines.

PROGRAM FILETYPE
  This is the default filetype used for loading,
  saving and deleting files.

PNC
  Special option for communicating to PNC machine
  tools.
|CONFIG MENU_C|
THE CONFIGURE MENU 3/3
LOAD SETTINGS
  Loads N' Block settings and the program filetype
  from a configuration file.

SAVE SETTINGS
  Saves N' Block settings and the program filetype
  to a configuration file.
{
{-----CHANGE MENU-----
{
|CHANGE MENU_A|
The Change Menu
THE CHANGE MENU 1/1
ADD N'BLOCKS
  Adds N' block numbers to the program being
  edited, but not to blank lines or comments.

REMOVE N' BLOCK
  Removes N' block numbers from the program
  being edited.

ADD PADDING
  Inserts a space before every letter.

REMOVE PADDING
  Removes the padding spaces.
~~~~~
```

INDUSTRIAL TEXT EDITOR

```
~~~~~
{
{====Communications Installation=====
|COMMS INST_A|
Communications Installation
COMMUNICATIONS SETUP 1/2
MACHINE LINK
    Change the settings for the serial channel.

PRINTER
    Change the settings for the printer channel.

SAVE SETTINGS
    Prompts for a filename and saves the settings in
    that file.
|COMMS INST_B|
COMMUNICATIONS SETUP 2/2
LOAD SETTINGS
    Prompts for a filename and loads the settings
    from that file.

Communication setup files have a filetype of "CS".

On starting "EDITOR" the settings are taken from
the file "EDITOR.CS".
{
{
|IBM-PC_IO HELP_A|
Machine Link
MACHINE LINK 1/3
NO MACHINE LINK
    This option disables any attempt to do a machine
    link.

COMMUNICATIONS PORT
    Either "COM1" or "COM2" can be selected for the
    machine link.

BAUD RATE
    The speed of the machine link.

PARITY
    A serial link option.
|IBM-PC_IO HELP_B|
MACHINE LINK 2/3
BITS PER WORD
    A serial communications option.

STOP BITS
    A serial communications option.

REMOTE FLOW
    Does the machine tool send XON/XOFF.

LOCAL FLOW
    Does the machine tool accept XON/XOFF.
~~~~~
```

INDUSTRIAL TEXT EDITOR

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|IBM-PC\_IO HELP\_C|  
MACHINE LINK 3/3

CLEAR TO SEND

Should the CTS/RTS protocol be used.

CHARACTER DELAY

CARRIAGE RETURN DELAY

LINE FEED DELAY

These are the number of milliseconds delay after the specified character is transmitted, this is approximate.

{  
{-----  
{ HELP for the communications  
{ channel setup.

{  
|IBM-PC\_NO\_IO HELP\_A|

No Link

NO MACHINE LINK 1/1

SERIAL

Allow a machine link.

|IBM-PC\_NO\_OUT HELP\_A|

No Output

NO OUTPUT 1/1

OUTPUT DEVICE

Prompts for a device name.

Any printing will be directed to this device.

OUTPUT FILE

Any printing will be directed to a file with the same name as the file being edited, but with a filetype of "LST".

|IBM-PC\_DEVICE HELP\_A|

Device

DEVICE 1/1

NO OUTPUT

Disables any printing.

OUTPUT DEVICE

Allows the output device to be changed.

OUTPUT FILE

Any printing will be directed to a file with the same name as the file being edited, but with a filetype of "LST".

|IBM-PC\_FILE HELP\_A|

File

FILE 1/1

NO OUTPUT

Disable any printing.

OUTPUT DEVICE

Prompts for a device name.

~~~~~

INDUSTRIAL TEXT EDITOR

Any printing will be directed to this device.

|IBM-PC_PORT HELP_A|

Ports

PORTS 1/1

Which serial communications port is to be used.

|IBM-PC_BAUD HELP_A|

Baud Rate

BAUD RATE 1/1

This is the speed of transmission on the machine link.

The computer and the machine must have the same setting.

|IBM-PC_PARITY HELP_A|

Parity

PARITY 1/1

The computer and the machine must have the same setting.

{
|IBM-PC_BITS HELP_A|

Bits per Word

BITS PER WORD 1/1

The computer and the machine must have the same setting.

{
|IBM-PC_STOP HELP_A|

Stop Bits

STOP BITS 1/1

The computer and the machine must have the same setting.

{
|IBM-PC_REMOTE HELP_A|

Remote Flow

REMOTE FLOW 1/1

Does the machine tool send XON/XOFF to control the speed of transmission.

{
|IBM-PC_LOCAL HELP_A|

Local Flow

LOCAL FLOW 1/1

Does the machine tool accept XON/XOFF.

|IBM-PC_CTS HELP_A|

Clear To Send

CLEAR TO SEND 1/1

Should the CTS/RTS protocol be used.

{
|IBM-PC_CHAR-DELAY HELP_A|

Character Delay

CHARACTER DELAY 1/1

How long the computer is to delay after transmitting a character.

INDUSTRIAL TEXT EDITOR

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The delay is in milliseconds and is approximate.

|IBM-PC\_CR-DELAY HELP\_A|

Return Delay

RETURN DELAY 1/1

How long the computer is to delay after transmitting  
a Carriage Return.

The delay is in milliseconds and is approximate.

|IBM-PC\_LF-DELAY HELP\_A|

Line Feed Delay

LINE FEED DELAY

How long the computer is to delay after transmitting  
a Line Feed.

The delay is in milliseconds and is approximate.

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