Program Editor

1 General Information

The program editor permits the creation, display and editing of production programs. can be created, displayed and edited. After starting the editor, the main window is displayed:
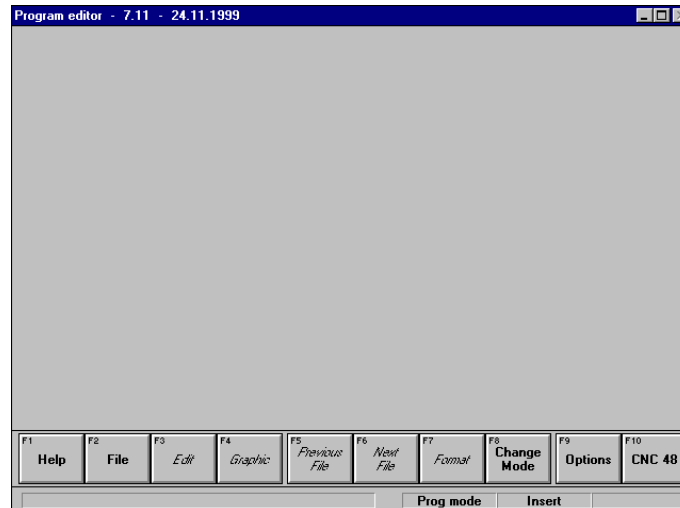
1.1 Button Bar

| F1 | HELP. Call of a short explanation of the functions.

| F2 | FILE. Call of a submenu for several file operations (page 6).

| F3 | EDIT. Call of a submenu for several edit operations (page 9).

| F4 | GRAPHIC. Change over to the graphic window with new button bar (starting from page 10).

| F5 | PREVIOUS FILE. Jump to the previous file, if several files are open.

| F6 | NEXT FILE. Jump to the next file, if several files are open.

| F7 | FORMAT. Setting of the program format (starting from page 14).

| F8 | CHANGE MODE. Change over between the modes PROG and TEXT (page 16).

| F9 | OPTIONS. Setting of tab width, capitals and access level (page 17).

| F10 | CNC 48. Return to the surface of the CNC 48.00, operational mode AUTOMA-TIC. *Stand alone version: QUIT. Return to the Windows surface.*

2   File

The menu "File" permits to call all file-related operations (load, save, print, etc.).
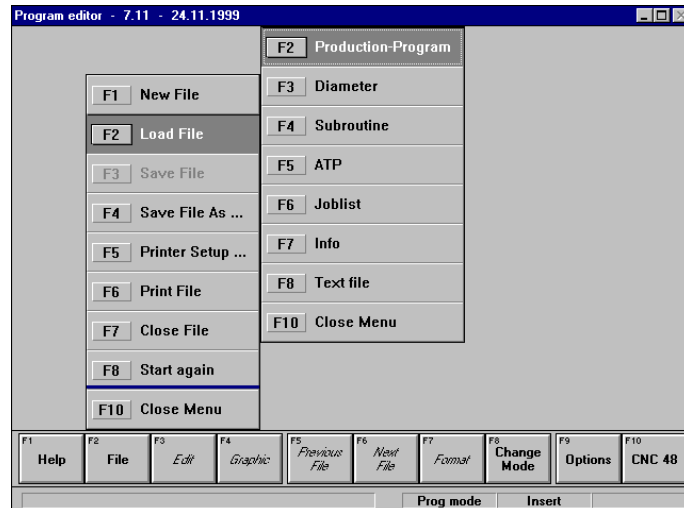
2.1   Button Bar

F2   FILE. Call of a submenu for several file operations.

     F1   NEW FILE. Creation of a new file.

     F2   LOAD FILE. Loading of an existing file.

     F3   SAVE FILE. Saving of the actual file.

     F4   SAVE FILE AS... Saving of the actual file under a different name.

     F5   PRINTER SETUP. Setting of printer options when printer is connected.

     F6   PRINT FILE. Printing of the actual file.

     F7   CLOSE FILE. Closing of the actual file. If alterations have been made you are prompted whether the alterations are to be saved or not.

     F8   START AGAIN. (Only CNC 48.00) The execution of the actual program is started again. **Attention: In case of alterations the program on the hard disk is overwritten without prompt!**

     F10   CLOSE MENU. Return to the main menu.

2.2   Open File

You can create a new file (F1) or load an existing file (F2). Select the desired type of file from the cascading menu (F2 to F8). The file selection window is displayed:
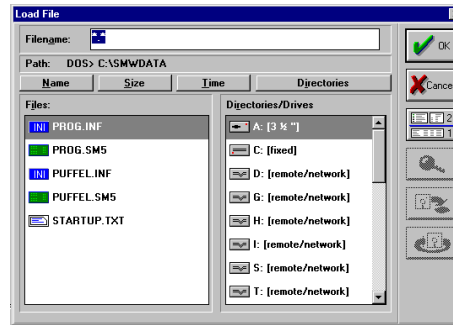
When creating a new file, enter the name under which the new file is to be saved and confirm with OK. The program editor opens an empty window.

When loading an existing file, select the filename and confirm with OK. The selected file is opened in the program editor.
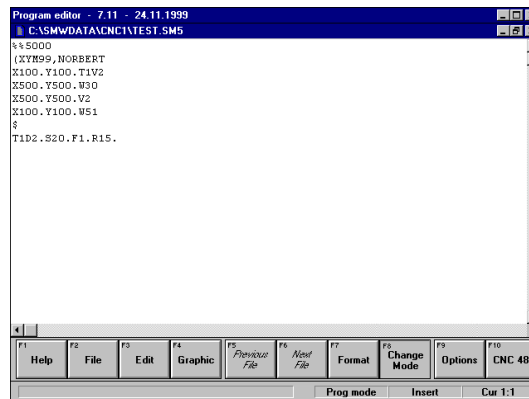
2.3   File Types

Production Program (F2)
A production program contains all coordinates and commands for the execution of a drill or rout program. A production program is saved in a file.

Diameter (F3)
Loading/reading of a diameter table.

Subroutine (F4)
Like a production program, a subroutine contains coordinates and commands for the execution of a drill or rout program. A subroutine can be called by several production programs. Several subroutines can be saved in one file.

ATP (F5)
Actual Tool Parameters. These files contain all tool parameters, the magazine assignment, the tolerance table and the actual values. The structure and contents of tool parameter files is described in the appendix.

Joblist (F6)
Joblists are required for an uninterrupted production. A joblist file contains all filenames of the production programs to be executed and the respective tool table (ATP file).

Info (F7)
Information files contain the COMM commands required for the correct setting of the CNC for a specific program.

Text File (F8)
Call of the ASCII editor.

3   Edit

When a program has been loaded or created, the menu F3 "Edit" offers special editing functions.
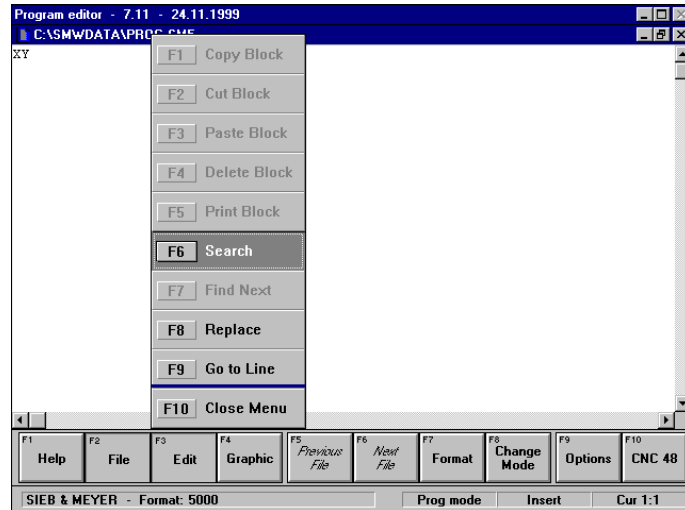
3.1   Button Bar

F3   EDIT. Call of a submenu.

F1   COPY BLOCK. The marked block is copied into the clipboard.

F2   CUT BLOCK. The marked block is removed from the file and saved in the clipboard.

F3   PASTE BLOCK. A block is inserted from the clipboard.

F4   DELETE BLOCK. The marked block is removed.

F5   PRINT BLOCK. The marked block is printed on a connected printer.

F6   SEARCH. A string can be entered which will be searched for in the program.

F7   FIND NEXT. The cursor stops at the string found. With F7 the search is continued.

F8   REPLACE. The string is replaced by another.

F9   GO TO LINE. The cursor is positioned in a defined line.

F10   CLOSE MENU. Return to the main menu.

4 Graphic

The graphic display (F4) permits to check the production program. Alterations made in the editor can be visualized here (without saving).
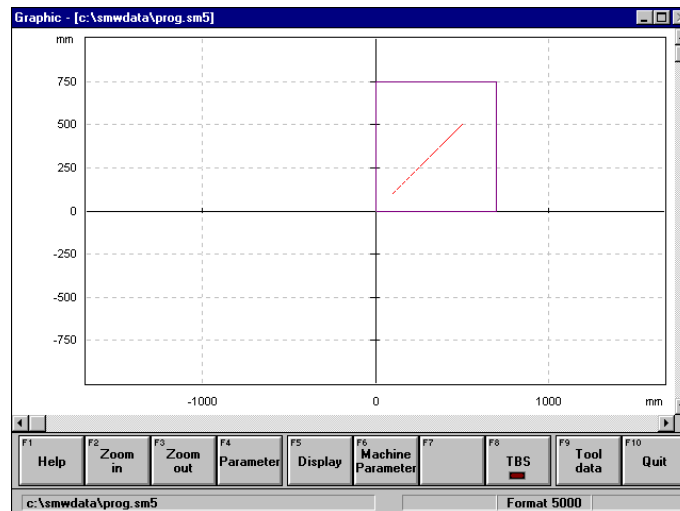
4.1 Button Bar

F1   HELP. Call of a short description for using the graphic display.

F2   ZOOM IN. Scaled-up display of the working area. The zoom factor is increased stepwise every time F2 is pressed.

F3   ZOOM OUT. The zoom factor is reduced stepwise back to the original display.

F4   PARAMETER. Definition of the program parameters for the graphic display.

F5   DISPLAY. Selection of display options (grid, lines, cursor coordinates, etc.).

F6   MACHINE PARAMETER. Selection of a machine parameter file.

F8   TBS. Tool Block Step. Display of the numbers of tool, block and step of the program block at the cursor position (otherwise display of the XY position of the cursor).

F9   TOOL DATA. Display of tool data (tool number, diameter, number of drilled holes).

F10   QUIT. Termination of graphic display and return to surface of the program editor.

4.2   Zoom

Stepwise scale-up of a part of the program
with F2, up to the display of individual holes.
With F3 you can scale stepwise down again
back to the original display.

The area to be displayed can also be selec-
ted directly by mouse (open a window kee-
ping the left mouse key pressed).
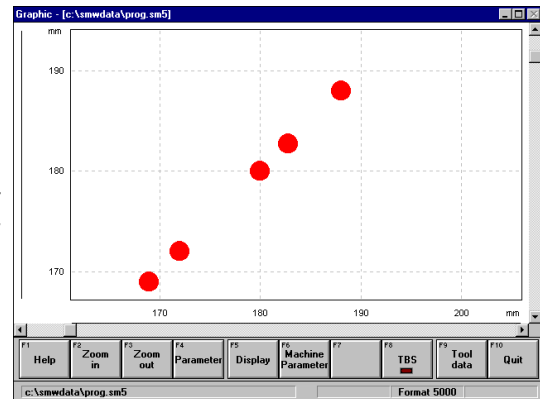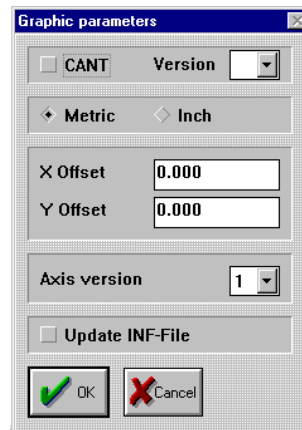
4.3   Parameter

F4 opens a dialog in which different parameter for the graphic display can be set.

☞   *Starting from software version 18-23 and 7.17, the setting made
here also affects the loaded production program.*

CANT	display of drilled text in actual axis (COMM-CANT)
Version	version for legible display of drilled plain text; only operative if CANT is not active (COMM-NOCANT)
Metric/Inch	unit of display in inch or mm
XY Offset	display with zero point offset
Axis version	axis version of the display
Update INF-File	setting of this menu is taken over into the information file
FPME/FPIN	Only for Excellon! Format setting; metric 1 to 6 (COMM-FPME), inch 7 to 10 (COMM-FPIN).

4.4   Display

With F5 "Display" different display options (grid, lines, cursor coordinates, etc.) can be set.
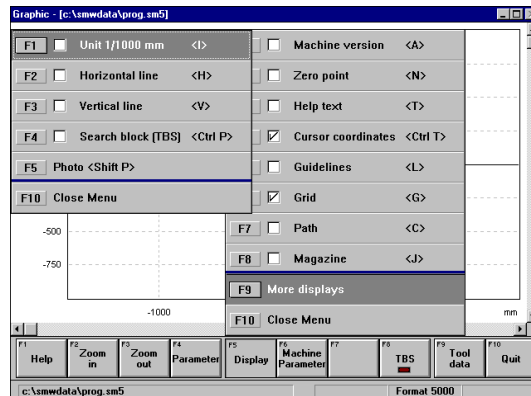
> [F5]   DISPLAY. Call of a submenu with option boxes (the function is active if the box is checked):
>
> > [F1]   MACHINE VERSION. Change over to the display of table coordinates (absolute).
> >
> > [F2]   ZERO POINT. Display of the program zero point.
> >
> > [F3]   HELP TEXT. Display of help texts.
> >
> > [F4]   CURSOR COORDINATES. Display of coordinates at cursor position.
> >
> > [F5]   GUIDELINES. Display of auxiliary lines.
> >
> > [F6]   GRID. Display of a grid.
> >
> > [F7]   PATH. Display of the path traveled between the holes.
> >
> > [F8]   MAGAZINE. Display of magazines (if they have been defined in the file MACHINE.PAR).
> >
> > [F9]   MORE DISPLAYS. Call of a submenu:
> >
> > > [F1]   UNIT. Display unit is changed to 1/1000 mm.
> > >
> > > [F2]   HORIZONTAL LINE. A horizontal auxiliary line is displayed at the cursor position.
> > >
> > > [F3]   VERTICAL LINE. A vertical auxiliary line is displayed at the cursor position.
> > >
> > > [F4]   SEARCH BLOCK. Activation of key TBS.
> > >
> > > [F5]   PHOTO. An image of the actual graphic is displayed in grey as background (e.g. for comparison).
> > >
> > > [F10]   CLOSE MENU. Return to the graphic window.
> >
> > [F10]   CLOSE MENU. Return to the graphic window.

The functions listed above can also be activated directly by pressing the letter or the key combination given after the entry. Example: the letter "N" activates/deactivates the zero point display.

4.5   Machine Parameter

With key F6 a file selection window is opened. Se-
lect the desired parameter file and confirm with OK.
The machine parameter file is loaded.
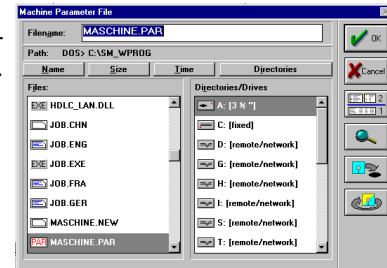
4.6   TBS

F8 activates and deactivates the TBS dis-
play.

If the key TBS is active (LED is on), the num-
ber of the tool (T), of the block (Block) and of
the step (Step) of the program block is dis-
played at the cursor position.

If TBS is not active (LED is off), the cursor
coordinates are displayed at the cursor posi-
tion.
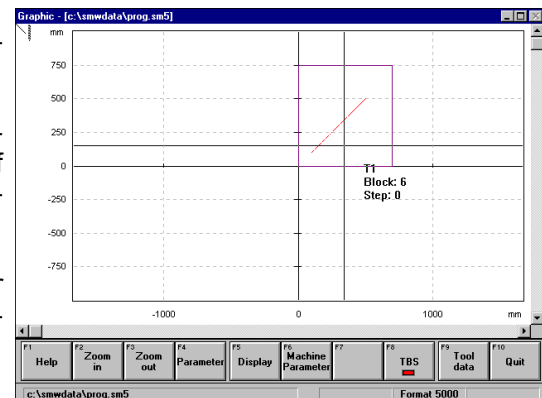
4.7   Tool Data

With F9 the tool data are listed in a separate
window. In this window the tool number (in
the color used in the display), the tool dia-
meter and the number of strokes the tool has
to make are displayed.

4.8   Quit

With F10 the graphic display is terminated. Return to the surface of the program
editor.
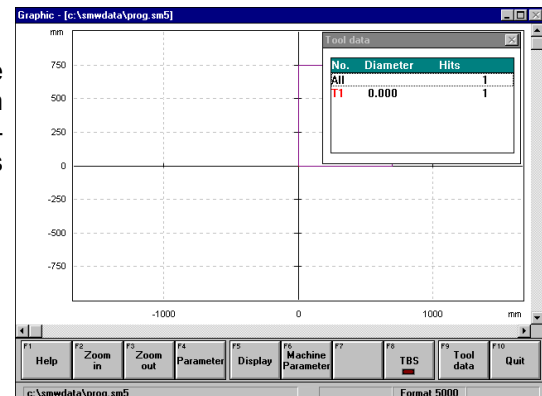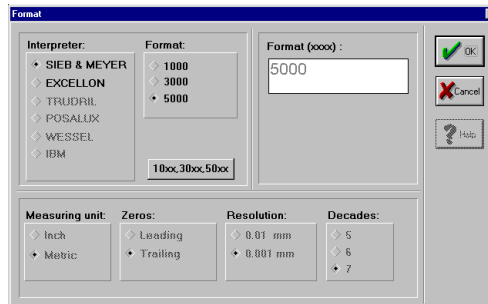
5 Format

☞ *The format set is displayed in the bottom line of the program editor.*

The program editor reads production programs in metric and inch format and executes them. If information about the numerical format is saved at the beginning of the production program (S&M: %%*Format Number*; Exc: Header entry), the definitions will be evaluated. Depending on the operator all screen displays can be changed to metric/inch values.

The format number is divided in two groups:
‣ Standard format (the first two digits of the format number, e.g. 50xx)
‣ Unit and resolution (the last two digits of the format number, e.g. xx07)

5.1 Standard Format

The first two digits of the format number define the standard format that contains the following information:
‣ Character repertoire (capitals, ciphers, etc.)
‣ Command repertoire (D | G1 | G2 | G3, etc.)
‣ Programming instructions (XY at the beginning of the block; no T commands in separate blocks; instructions for bracketing; etc.)

5.1.1 Standard Formats of the Standard Software

10xx SIEB & MEYER Format 1000. The format has been developed for the CNC 25.05. The programming instructions can be found in the manual of the CNC 25.05.

30xx SIEB & MEYER Format 3000. The format has been developed for the CNC 35.00. The Format 3000 is upward compatible with the Format 1000. The programming instruction can be found in the manual "Command Description SIEB & MEYER Format 3000".

50xx SIEB & MEYER Format 5000. The format has been developed for the CNCs 44.00 and 45.00. The Format 5000 is upward compatible with the Formats 3000 and 1000. The programming instruction can be found in the manual "Command Description SIEB & MEYER Format 5000".

5.1.2 Standard Formats of the Excellon Interpreter Software

41xx Excellon 'Format 1'
42xx Excellon 'Format 2'
The programming instructions of Formats 1 and 2 apply.

5.2 Units and Resolutions

The program editor supports the very different metric and inch resolutions. The digits 3 and 4 of the format number signify the structure of the coordinates and length definitions within a production program.

The required unit and resolution must be set with command COMM-FP before loading the program (e.g. `COMM-FP3005`, `COMM-FP4107`). During the loading the CNC converts the coordinate values and length definitions into the standard format (1000, 3000, 5000, 4100, etc.). The production program is also saved in the standard format.

Coordinate Values and Length Definitions
D   Radius of a corner to be rounded
I   Side length (rectangle in X direction) or interpolation parameter
J   Side length (rectangle in Y direction) or interpolation parameter
K   Plunge depth for G83
R   Radius (circle, arc of circle) or side length (square)
X   X coordinate
Y   Y coordinate

Determination of the Format Number
To determine the required format number, the numerical values of a production program must be examined according to the following criteria:
▸ Resolution (0.01 | 0.001 | 0.0001). The numerical values can contain a point (millimeter, inch) in the standard formats 3000 and 5000.
▸ Measuring unit (millimeter, inch)
▸ Leading/trailing zeros (001234 or 123400)
▸ Number of the decades (for leading zeros)

The following table provides an overview:

Format	Resolution	Meas. Unit	Zeros	Decades
xx00	0.001	mm	point is legal	
xx01	0.01	mm	trailing	
xx02	0.001	mm	trailing	
xx03	0.01	mm	leading	5
xx04	0.01	mm	leading	6
xx05	0.001	mm	leading	6
xx06	0.001	mm	leading	7
xx07	0.001	inch	trailing	
xx08	0.0001	inch	trailing	
xx09	0.001	inch	leading	5
xx10	0.0001	inch	leading	6

Example: A production program contains coordinate values with leading zeros and 5 decades with a resolution of 0.01 mm. The correct format number therefore is 5003. The respective command is COMM-FP5003.

☞   *If a production program is saved in Format 1000, the CNC appends the FA offset as M50 block to the end of the program. If the production program already contains offset blocks, the FA coordinates are added to every offset coordinate!*

6 Change Mode
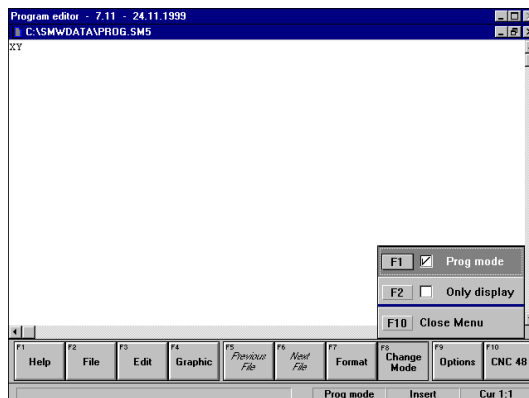
With F8 you can change between the text mode and the programming mode. In each mode you can edit or only display the data. The selection made is displayed in the bottom line of the program editor.

6.1 Programming Mode

In the programming mode the entered coordinates are corrected considering the format as soon as the line is left. Missing coordinates are completed when reading a file. This mode is only active for creating or editing production programs and subroutines.

6.2 Text Mode

The text mode corresponds to a normal ASCII editor. In the text mode no coordinates are completed, the files are treated like normal text files. The text mode is automatically active when creating or editing diameter files, ATP files, joblist files, information files and text files, also if the setting PROG mode has been selected.

7   Options
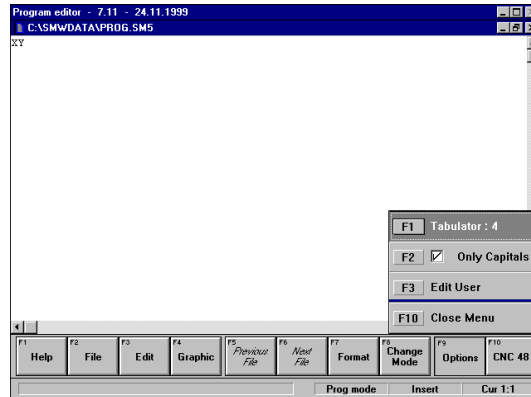
F9   OPTIONS. Call of a submenu:

F1   TABULATOR. Definition of the tab width (number of characters per tab). This function is not required for production programs.

F2   ONLY CAPITALS. All letters are automatically used as capitals. This function must be active for the creation of production programs!

F3   EDIT USER. Definition of the access level. For detailed information see chapter "Getting Started".

F10   CLOSE MENU. Return to the program editor.

8   CNC 48/Quit

Stand alone version:
Quit. Return to the Windows surface.

CNC 48.00:
Change over to the surface of the CNC 48.00, operational mode AUTOMATIC.