

SIEB & MEYER

Windows DNC

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900-pc-win-bed-smwindnc/R10-SM-EN-FK/HS/DB/LS
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1 Introduction

1.1 Application

The SIEB & MEYER software “SM WinDNC” allows data transmission from a PC to several CNC controllers. The data can be transmitted bidirectionally (PC ↔ CNC). PC and CNC are connected via the serial interface (DNC) or via the network (DDE).

DNC

- ▶ The data transmission (programs etc.) is processed via the serial connection. (All CNCs!)
- ▶ Optional the logging (recording of operational data) is carried out via the serial connection, too. (Only CNC 44.00 and 45.00!)

DDE

- ▶ The data transmission is carried out via the respective network drives, independent from “SM WinDNC”. (CNC 46.00, 48.00 and 55.00)
- ▶ The logging of the machine status is carried out via the network.

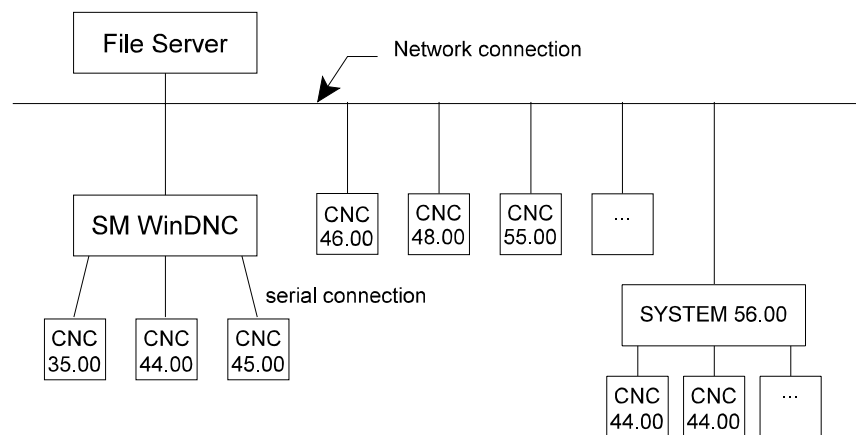


This manual only refers to the software version 8.xx!

Special features:

- ▶ A protocol file for the recording of operational data of **all** CNCs, etc. is supported.
- ▶ If the PC is operated within a network, all drives of the network can be accessed.
- ▶ Different users can be managed (*See chapter “Edit User” on page 22*).
- ▶ If the periodic transmission of messages is enabled (COMM-DNCO_r), the operating status will be shown. **This does not apply to the CNC 35.00!**

The following example schematically shows the field of application of “SM WinDNC”:





1.2 System Requirements

The following components must be available to use this program:

- Commercial PC
- Since software version 8.03C the program is only running on a 32 bits operating system: MS-Windows® 9x, ME, NT, 2000, XP
- Network interface when using a network connection
- Number of required serial interfaces when using a DNC connection

To achieve a trouble-free communication, interfaces with a 16550 component (with FIFO) should be used. Components without FIFO (8250) often caused problems. Usually, each additional card or interface should work correctly, if the respective drivers are supplied.

1.3 Hardware Requirements for the CNC Controller

DNC

- CNC 35.00, 44.00, 45.00 A DNC interface is required.
- CNC 46.00, 48.00, 55.00 A DNC interface is not required, the connection is carried out via the respective COM interface of the controller PC.

DDE

- CNC 35.00, 44.00, 45.00 This connection is not possible.
- CNC 46.00, 48.00, 55.00 A network interface is required.

2 Performance of DNC

2.1 Protocol

The following protocols are supported:

- ▶ “SIEB & MEYER DNC”
- ▶ “SIEB & MEYER DNC 1.1”
- ▶ “SIEB & MEYER AUX” for SIEB & MEYER controllers (only for 25.05!)
- ▶ “Excellon DNC 1.3” (with restrictions)
- ▶ “Excellon DNC 1.4” (with restrictions)

2.1.1 “SIEB & MEYER DNC” and “SIEB & MEYER DNC 1.1”

The transmission can be started either from the CNC or the PC. Therefore the following steps are necessary:

Starting the transmission from the CNC (only CNC 44.00 and 45.00):

- ▶ The transmission is made with the functions “DATA IN ... DNC” or “DATA OUT ... DNC” in the operational mode MANUAL.
- ▶ Enter the name of the program to load (“*Name.sm5*”).
- ▶ In the MANUAL menu of the CNC “... DNC” may be assigned as default data carrier with the command COMM-DIOE. (Menu points “DATA IN DNC” and “DATA OUT DNC”)

Starting the transmission from the PC:

- ▶ The access from the CNC to the host computer (PC) can be excluded in the configuration menu.
- ▶ Dialog mode between the PC and the CNC: All key strokes are displayed on the opposite monitor. The dialog mode can be canceled with the key <Esc>.
- ▶ The current operational mode of the CNC can be displayed at the monitor of the PC (MANUAL, PROGRAMMING, AUTO START, AUTO STOP).
- ▶ Generally starting the transmission from the PC is not allowed on the CNC and must be enabled, if necessary.

2.1.2 “SIEB & MEYER” AUX

- ▶ This protocol should be used only for the CNC 25.00 if necessary.
- ▶ When transmitting the data, the protocol is not used for checking the data. Only single characters are transmitted.

2.1.3 Excellon DNC 1.3 and Excellon DNC 1.4



The protocols are only possible on the CNC 44.00 and 45.00.

Only the CNC can start the transmission. The following steps are necessary:

- ▶ The transmission is made with the functions "DATA IN ... DNC" or "DATA OUT ... DNC" in the operational mode MANUAL.
- ▶ In the MANUAL menu of the CNC "... DNC" may be assigned as default data carrier with the command COMM-DIOE. (Menu points "DATA IN DNC" and "DATA OUT DNC")



Restriction: The piecewise transmission of a production program is not supported in the Excellon DNC.

2.2 Speed

The transmission is made via a standard RS232 interface or in a network via DDE.

Since software version 8.03C new baud rates are possible:

2400, 4800, 9600, 19200, 38400, 56000, 57600, 115200, 128000, 256000 bit/s.



The CNC must support the baud rate adjusted in the PC and must be set to the same baud rate!

The interfaces COM1 to COM n (MS-Windows® 9x: $n = 99$; MS-Windows® NT: $n =$ arbitrary) can be used.

The number of machines connected simultaneously may be limited by the computer performance and the memory of the computer, on which the program "SM WinDNC" is installed. A test with eight DNC machines sending and receiving simultaneously worked on a Pentium III (500 MHz) without any problems.

2.3 Distances



The cable lengths and the pin assignments correspond to the RS232 specifications.

The larger the distance between the CNC and the PC the greater the interference liability due to different ground potentials. Thus a galvanic isolation is recommended (e. g. a PC interface card with galvanic isolation).

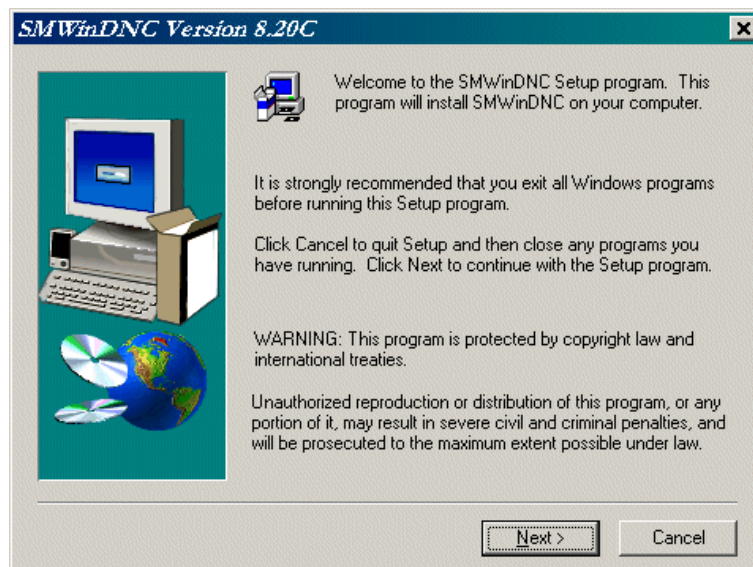
3 Installation

Hardware installation

If particular hardware components are required for the operation of the software, they must be installed before installing the software. *Information can be found in the section "System Requirements" and "Hardware Requirements for the CNC controller" on page 6.*

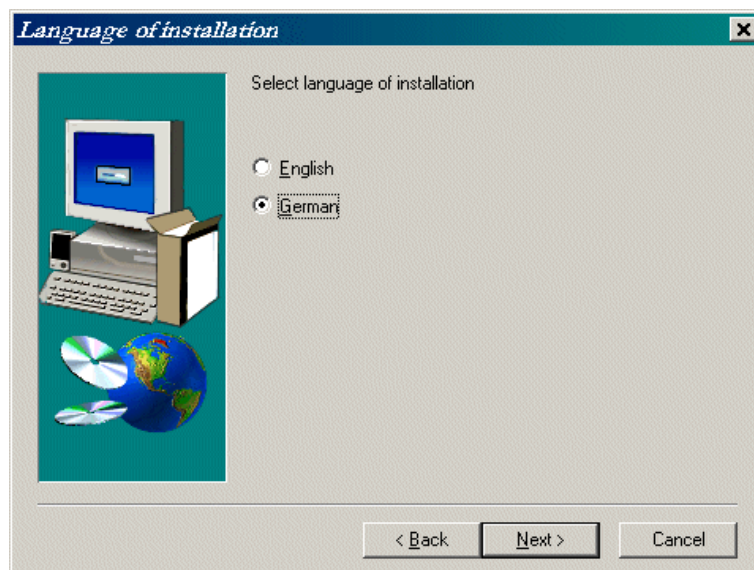
Software installation

Turn the PC on, insert the software diskette in the floppy drive and start installation program. Therefore click on the button "Start" → "Run", enter "a:\setup.exe" and click the button "OK".

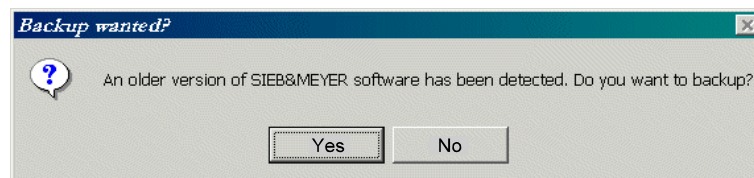


Follow the further installation steps by clicking on the button "Next".

Select a language and click "Next".



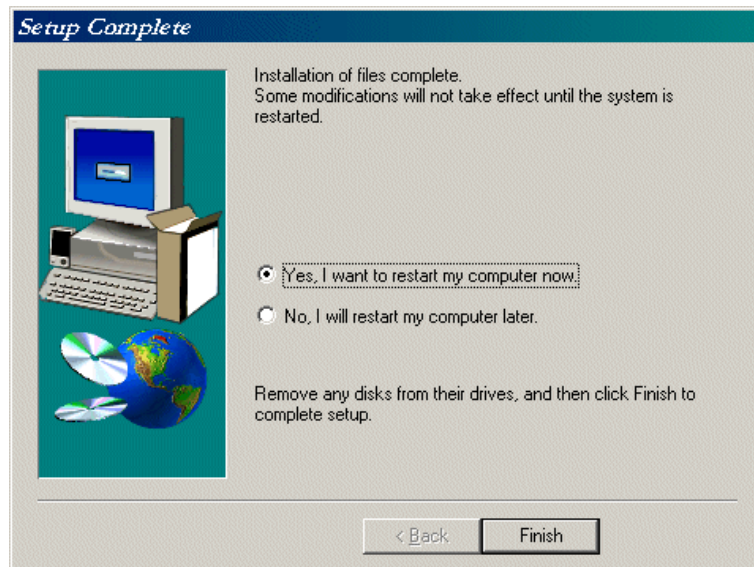
The following window appears, if an older software version is installed on your PC:



If you want to backup the existing software version, click on the button "Yes".

The files of the current software version will be installed.

After the installation has finished you will be asked, if you want to restart the computer now or later:



Select the option “Yes, I want to restart my computer now.” and then click on the button “Finish” to restart the computer immediately.



Before starting the program please connect the provided dongle to an available printer interface (e. g. LPT1). Without a dongle the program does not run!

Click on the button “Start” → “Programs” → “SIEB & MEYER” → “SM WinDNC” to start the program. After having started the program the software must be configured.



4 "SM WinDNC" Configuration

4.1 Program Start

During the start cycle the user name and the password are prompted.



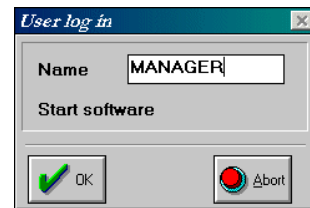
When you start the program for the first time, the default settings apply!

The default settings are as follows:

Name: "MANAGER" (user level 3)

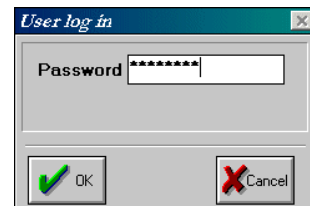
Password: "SYSTEM56"

Type "MANAGER" (or your user name) and press <Enter> or click on the button "OK".



The image shows a 'User log in' dialog box. It has a title bar with 'User log in' and a close button. Inside, there is a 'Name' label followed by a text box containing 'MANAGER'. Below that is a 'Start software' label. At the bottom, there are two buttons: 'OK' with a green checkmark icon and 'Abort' with a red circle and white 'X' icon.

Type "SYSTEM56" (or your personal password) and press <Enter> or click on the button "OK".

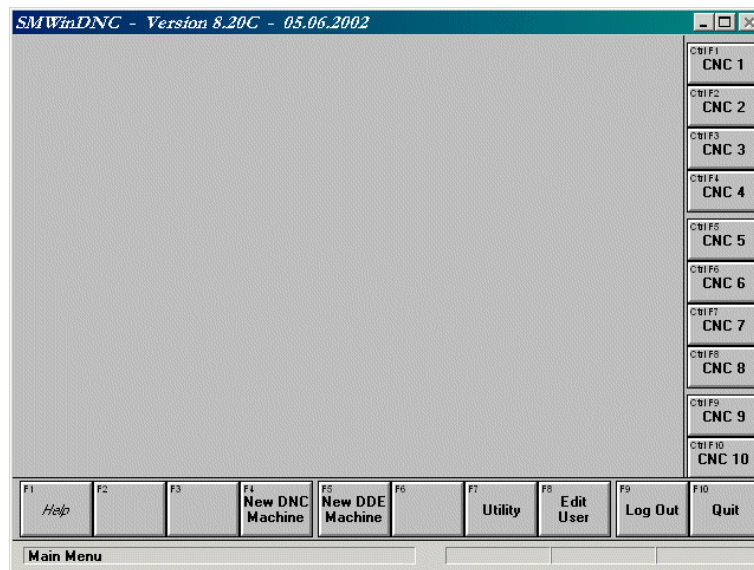


The image shows a 'User log in' dialog box. It has a title bar with 'User log in' and a close button. Inside, there is a 'Password' label followed by a text box filled with asterisks. At the bottom, there are two buttons: 'OK' with a green checkmark icon and 'Cancel' with a red 'X' icon.



Information about editing own users can be found in the section "Edit User" on page 22.

If all entries have been made, the main window appears displaying no CNCs at first.



Signification of the Buttons

- ▶ “Help” Call Help menu.
- ▶ “New DNC Machine” Register a new CNC connected via the serial interface (DNC).
- ▶ “New DDE Machine” Register a new CNC connected via the network (DDE).
- ▶ “Utility” Up to nine utilities can be defined. They will be shown in a menu, when clicking this button.
- ▶ “Edit User” Users can be edited and managed.
- ▶ “Log Out” The current user will be logged out and a new user can be logged in (See “Program Start” on page 13).
- ▶ “Quit” Quit the program. If a machine is still sending data, you will be asked, if you want to quit the program in spite of an active data transmission.

Before “SM WinDNC” is correctly operating, at least one CNC has to be configured (see the section “Machine Assignment” on page 15).



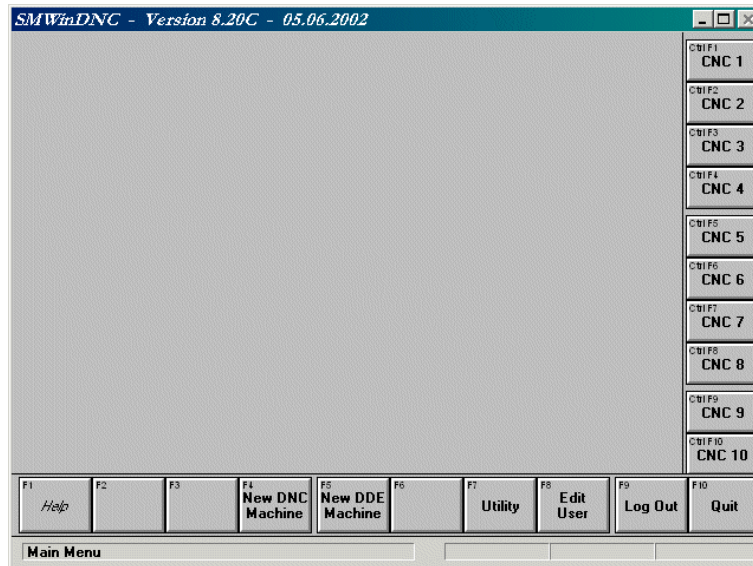
Before you configure a machine, it is recommended to register some users! (See the section “Edit User” on page 22)

4.2 Machine Assignment

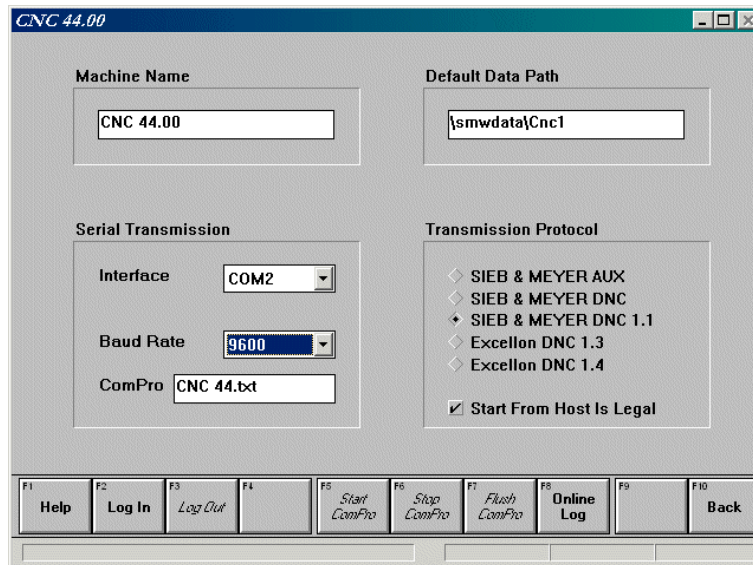
After the first start, no machine has been assigned yet. The main window is blank. Now, a DNC or DDE machine has to be configured.

4.2.1 New DNC Machine

To register a CNC click on one of the buttons at the right edge of the window (e. g. "CNC 1") or use the button below "New DNC Machine".



A window appears to configure the new DNC machine (the CNC is connected via a serial interface).



Meaning of the Buttons

- ▶ “Help” Call Help menu.
- ▶ “Log In” Registering of the machine with the data entered.
- ▶ “Log Out” The machine will be signed off.
- ▶ “Start ComPro” Starts the data transmission check. The transmitted data is written into the file entered in the input field “ComPro” (*see the chapter “Transmission Recording” on page 28*).
- ▶ “Stop ComPro” Stops the data transmission check (*see the chapter “Transmission Recording” on page 28*).
- ▶ “Flash ComPro” Data being still in the internal buffer (RAM) will be written into the ComPro file.
- ▶ “Online Log” The window “Online DNCLog” will be activated to check the transmitted data. The data will be displayed. (*see the chapter “Transmission Recording” on page 28*)
- ▶ “Back” If the machine has not been registered yet, you are asked, if the machine should be registered with the current data. If you click on the button “Yes”, the window appears showing the DNC commands.

The individual input areas are described as follows:

“Machine Name”

The name of the machine may not exceed 14 characters. Special characters and spaces are allowed. The name serves to distinguish the machines. It is displayed

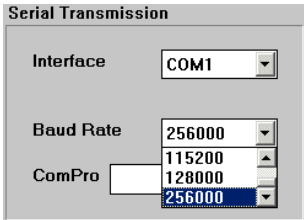
- ▶ in the headline of the current transmission window.
- ▶ in the main window below the machine icon.
- ▶ in the protocol file.

“Default Data Path”

A separate default data path can be defined to each machine. If the filename is specified without a path, “SM WinDNC” will search the production programs in the default data path. Any path within the network can be entered. The spelling of the path corresponds to the MS-DOS® or MS-Windows® conventions.

“Serial Transmission”

- “Interface” Selection of the serial interface the CNC is connected to.
- “Baud Rate” Transmission rate in bit/s. Both, the interface and the CNC must be configured with this transmission rate.
- “ComPro” The name of the file, where the transmitted data is saved. (*See the button “Start ComPro” above*)



Serial Transmission

Interface: COM1

Baud Rate: 256000

ComPro: [text input field]

“Transmission Protocol”

The transmission protocol for the data exchange has to be selected. The following protocols are supported:

- ▶ SIEB & MEYER AUX for S&M controllers (only for 25.05!)
- ▶ SIEB & MEYER DNC
- ▶ SIEB & MEYER DNC 1.1
- ▶ Excellon DNC 1.3 (with restrictions)
- ▶ Excellon DNC 1.4 (with restrictions)

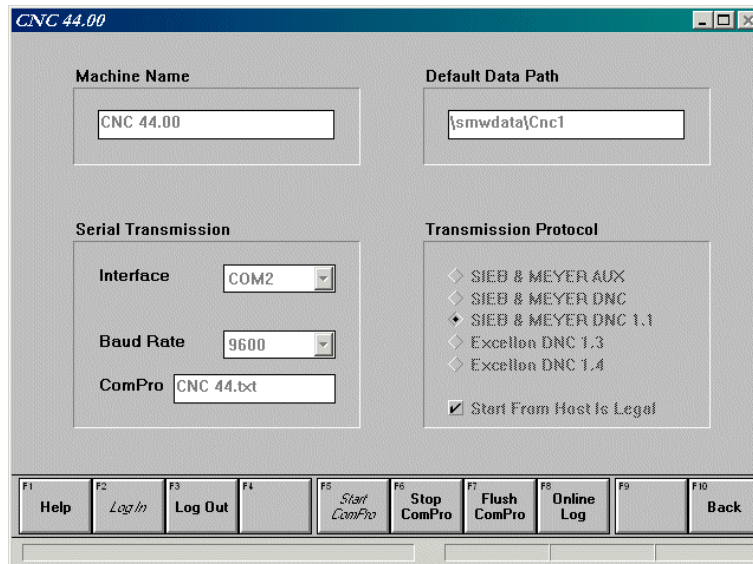
“Start From Host Is legal”

The SIEB & MEYER protocols allow starting the data transmission from the host computer (PC), too. Production programs can be transmitted bidirectional.



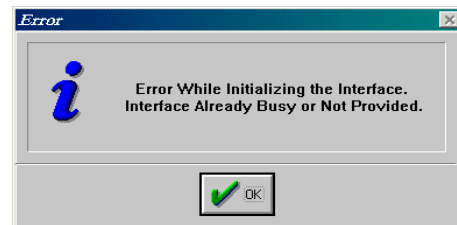
This option should not be used in either case, because the machine can not be seen by “SM WinDNC”.

Click on the button “Log In” to take over the settings. If you have entered a filename in the input field “ComPro”, the function “Start ComPro” will start automatically and the buttons “Stop ComPro”, “Flush ComPro” will be enabled.




As long as the CNC is not registered data transmission will not be possible.

If an error message is displayed during the assignment, the reason often is an interface not available or used otherwise (mouse, terminal, modem, touch screen, etc.).

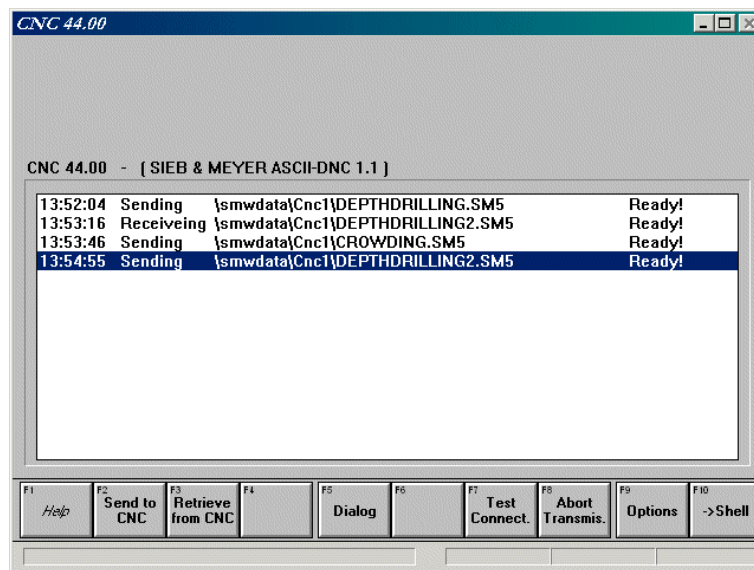


In this case when using MS-Windows® 95, also check the presetting in the file “system.ini” (section “[386]enh” the entries “Com1Irq=” and “Com1Base=”). If the mouse cursor cannot be moved, probably the same interrupt (IRQ) is used for the interface just preset and the mouse driver. Otherwise it is possible that an assigned DNC machine uses the same interface. In these cases click on “OK” and select the next available interface until the error does not exist anymore.



Generally the interfaces COM1 and COM3 use the interrupt IRQ4 and the interfaces COM2 and COM4 the interrupt IRQ3.

When clicking on the button “Back”, the sent DNC messages are displayed.

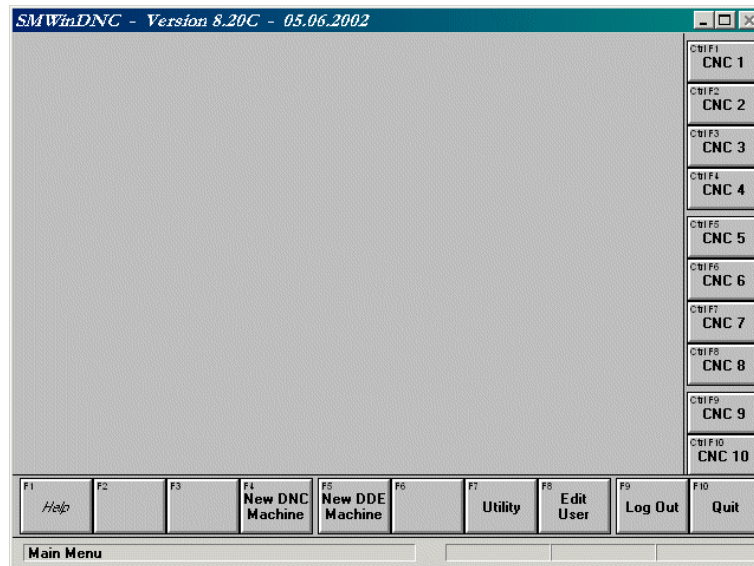


With the button “-> Shell” you can return to the main window. The new assigned DNC machine is displayed.

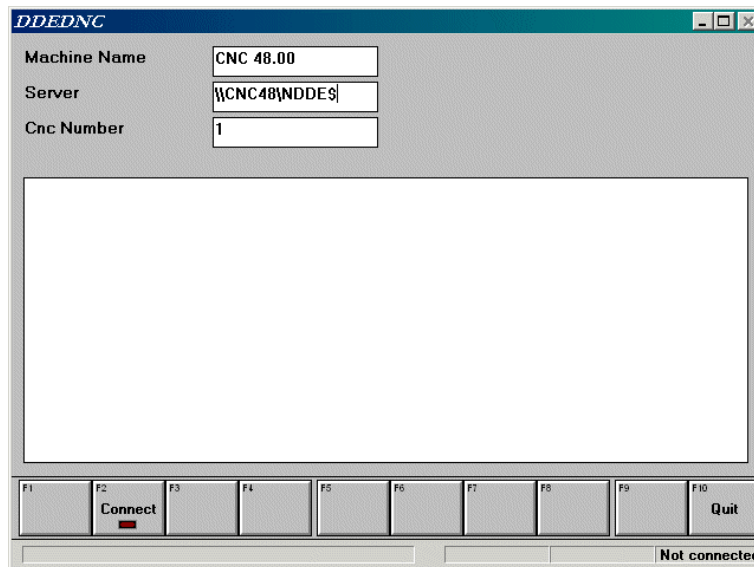
The operation of “SM WinDNC” and the further handling of the assigned machines can be found in the chapter “Operation” on page 25.

4.2.2 New DDE Machine

To register a DDE machine click on the button "New DDE Machine" below or press the key <F5>.



A window appears to configure the new DDE machine (the CNC is connected via DDE):



The following entries have to be made to register the machine:

- ▶ “Machine Name” The name of the CNC will be displayed in the main window. The name is freely selectable like the name of a DNC machine (see page 16 “Machine Name”).
- ▶ “Server” If the CNC is connected to the same computer, “SMSERVER” must be entered.
If the CNC is connected to the network, after “\\” the computer name of the CNC, known by the network, must be entered. Both computers (CNC and PC with “SM WinDNC”) must be in the same workgroup. (*Further information can be found in the manual “CNC Network Connection”*).
- ▶ “Cnc Number” This number selects the CNC module.

For the CNC 46.00, CNC 48.00 and CNC 55.00 only one module exists (CNC number = 1).

Several CNC modules can be connected to a SYSTEM 56.00 (CNC number between 1 and *n*).

Meaning of the Buttons

- “Connect” Start the connection to the machine with the entered data. The luminous bar of the button becomes light red. When clicking the button once more, the connection will be terminated and the luminous bar will be dark red again.
- “Quit” Quit the display and go back to the main window.



If the connection is not established, check once more the correct computer name in the network, the network settings and connections! (*Further information can be found in the manual “CNC Network Connection”*).

4.3 Configuration of Utilities

The user can configure utilities. Thereto a new section "[Utility]" has to be added at the end of the file "C:\sm_wprog\sm_ini\smwindnc.ini". Then the entries of the respective utility succeed:

"UtilText n =*Name*"

The *Name* will appear in the menu and can freely be selected. For n a successively increasing number must be entered (1-9).

"UtilProg n =*Command line*"

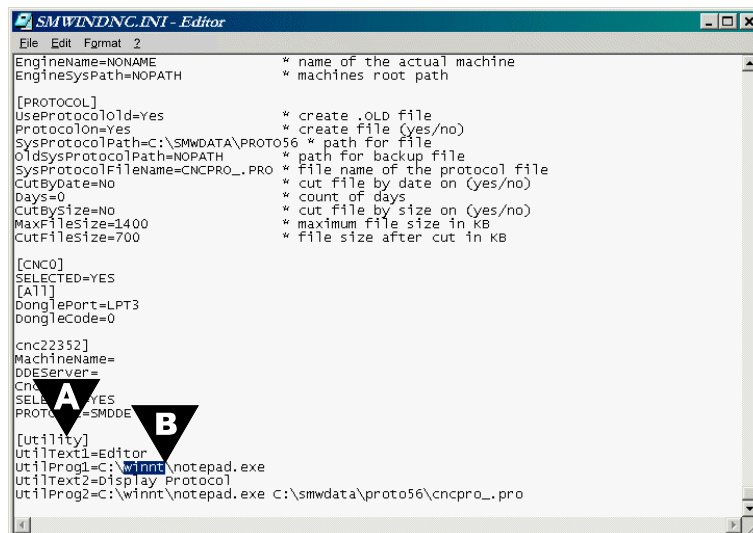
The *Command line* of the respective utility must include the complete path and the filename starting the program. For n (1-9) the same number as in the entry "UtilText..." must be entered.

Example

The following text is added at the end of the file "smwindnc.ini" [A]:

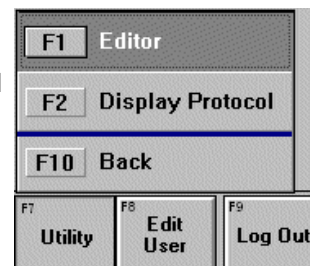
```
[Utility]
UtilText1=Editor
UtilProg1=C:\winnt\notepad.exe
UtilText2=Display Protocol
UtilProg2=C:\winnt\notepad.exe c:\smwdata\proto56\cncpro_.pro
```

The path of MS-Windows® can be different depending on the PC and the MS-Windows® system software used (default: C:\winnt or C:\windows). Enter the correct path of the file [B].



The following menu has been defined in the example:

Click on the button "Utility" and then choose the desired menu item. The respective utility will be started.



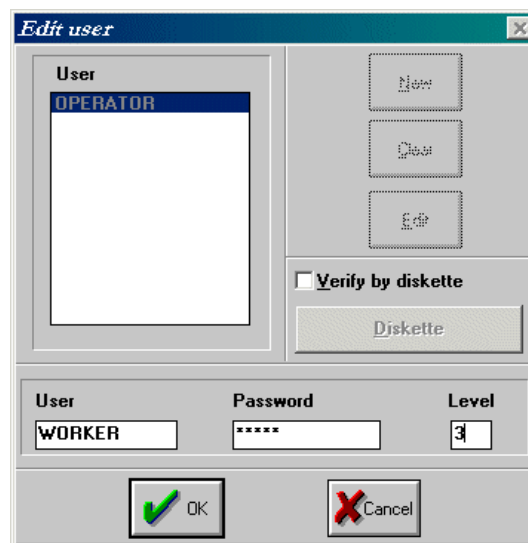
4.4 Edit User

The existing user data can be changed or a new user can be added.



To prevent any unauthorized use, define the individual users directly after getting started. Take notes of the definitions and keep them in a secure place. “SM WinDNC” does not provide possibilities to retrieve the password and the level.

When clicking on the button “Edit User”, the window “Edit User” appears:



Meaning of the buttons

- ▶ “New” Set a new user. Three input fields appear below the window, as showed in the figure above.
- ▶ “Clear” Delete a user. The current user name cannot be deleted.
- ▶ “Edit” Alter a configured user. Only the password and the level can be changed!

The several input fields are as follows:

“User”

In the input field “User” a **new** user name is defined (approx. 8 characters). The entry cannot be modified later, only cleared and then entered again.

“Password”

In the input field “Password” the individual password of the user is defined. When logging in, this password must be entered. This input field will be enabled, when clicking on the button “New” or “Edit”.

“Level”

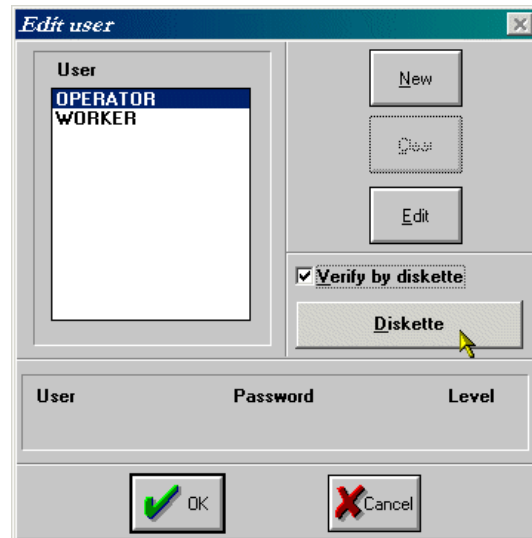
In the input field “Level” the authorized access for the user is defined. Depending on the level specific functions are enabled for the user or not. Users with a higher level than the current one are not displayed and consequently they cannot be edited.



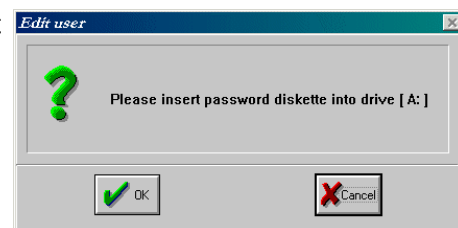
The first user assigned must have the level 3. This user then is the system administrator. Subsequently it is impossible to log in with the default user name. (*See the default settings on page 13*)

4.4.1 Verify by Diskette

Users with level 3 and higher are able to create a password diskette for every user working like a code card. Begin with the user of the highest level. Select the user and then activate the option “Verify by diskette” (a check mark appears). Afterwards click on the button “Diskette”.



You are prompted to insert a diskette. Insert a blank diskette and click on “OK”.



The password diskette of the user chosen will be created.

Carry out this process for **all** other users, by creating an **own** diskette for **every** user!



If a password diskette has not been created for a user, this one cannot log in! In this case log in with another user name a password diskette is available for and create the missing password diskette.

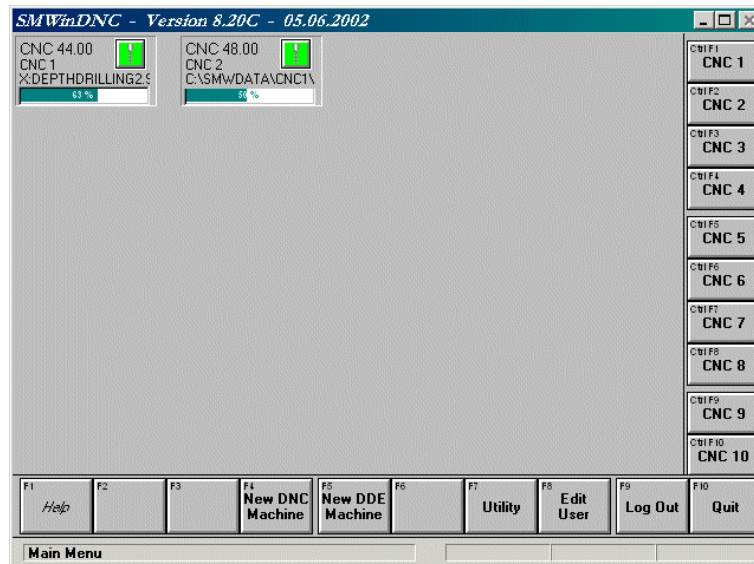
If all password diskettes are created, a user can only log in with the respective diskette. Insert this password diskette into the floppy drive and enter your user name and the appropriate password.



Diskettes must be stored protected against dust, dirt and magnetic fields. In order to prevent unauthorized use, keep the diskettes in a secure place. In emergency cases it is possible to create another diskette. In this case it is recommended to register the user completely new.

5 Operation

The configured machines are displayed in the main window. In this example the registered DNC and DDE machine are displayed. All saved settings will be automatically loaded when starting the program, and the connection to all registered machines will be established. The settings of a CNC can be altered at any time by clicking the button of the respective CNC machine. The button shows the status of the machine:



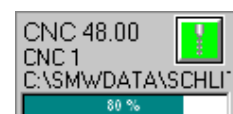
The following icons display the operational mode of the CNC:

- Not installed
- No online data available
- Data is received from the CNC
- Data is sent to the CNC
- Dialog between PC and CNC

The following icons are displayed when the CNC is sending status information:

- Work
- Operation MANUAL
- Waiting for program
- Service
- Machine error (alarm)
- Stop

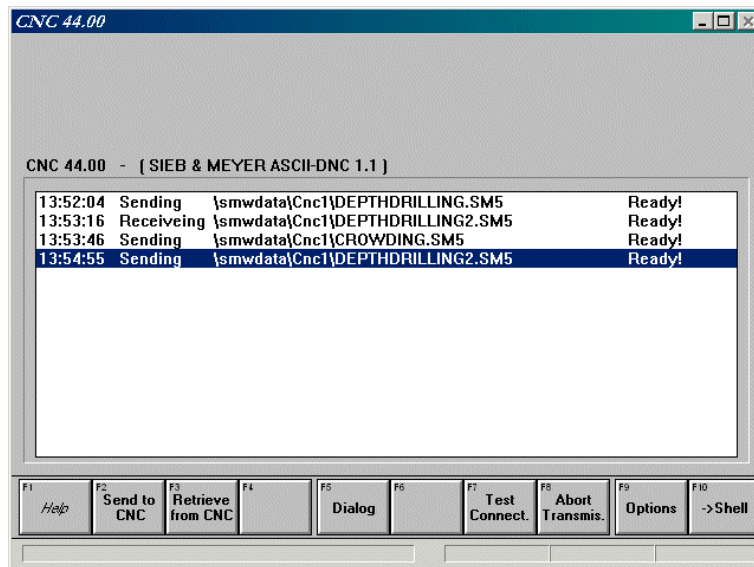
When the CNC is sending online data, a progress bar is displayed additionally (starting with the second execution).



Click on the button of a CNC. Depending on the connection of the machine (via DNC or DDE) the respective window appears.

5.1 DNC Machine

When selecting a DNC machine, the following window appears:



Meaning of the buttons

- ▶ "Send to CNC" Transmit data from the PC to the CNC.
- ▶ "Retrieve from CNC" Transmit data from the CNC to the PC.
- ▶ "Dialog" Direct communication with the CNC. All key strokes are transmitted to the CNC and displayed on its screen. The response of the CNC operator is displayed on the screen of the PC. Press the key <Esc> to quit the dialog.
- ▶ "Test Connect." The interface and the transmission cable can be checked with a test connector (See "Test Connection" on page 27).
- ▶ "Abort Transmis." The transmission is interrupted immediately. The button corresponds to the <Esc> key of the CNC. **The main memory of the CNC might contain incorrect data.**
- ▶ "Options" The settings of the CNC can be altered (See the section "Machine Assignment" on page 15)
- ▶ "-> Shell" Quit the window and go back to the main window.

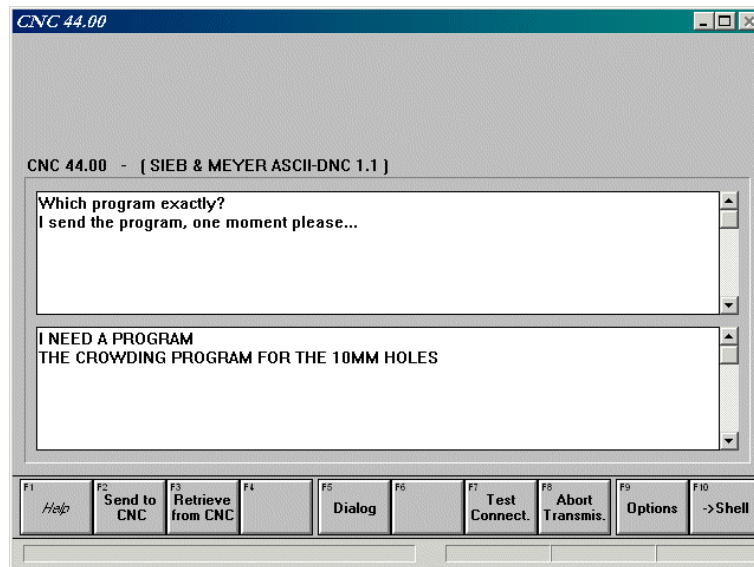


All settings are saved in the file "smwindnc.ini" under "C:\smwprog\sm_ini". This file can be edited. **Therefore "SM WinDNC" may not be started.** Incorrect entries are automatically reset to default values, when starting the program the next time.

“Dialog”

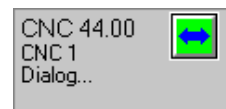
To enable a dialog between CNC and PC, the setting "Start From Host Is Legal" has to be activated in the configuration window of the PC and the command COMM-DNCE (Data transmission via DNC) has to be entered at the CNC.

When starting the DNC dialog at the CNC, the dialog window will be automatically started. You can also click on the button “Dialog” at the PC. The dialog window appears as follows:



In the upper field the user of the PC can enter messages for the user of the CNC. The response of the CNC user is displayed in the lower field. Pressing the key <Esc> closes the dialog.

In the main window the respective icon is displayed as long as the dialog is active.



“Test Connect.”

“SM WinDNC” allows it to check the transmission cable to the CNC. When executing the test, the transmission must be deactivated and the connection cable may not be connected to the CNC!

Use a test connector wired as follows:

9 pin connector

2 (Rx) ↔ 3 (Tx)
7 (RTS) ↔ 8 (CTS)

25 pin connector

3 (Rx) ↔ 2 (Tx)
4 (RTS) ↔ 5 (CTS)

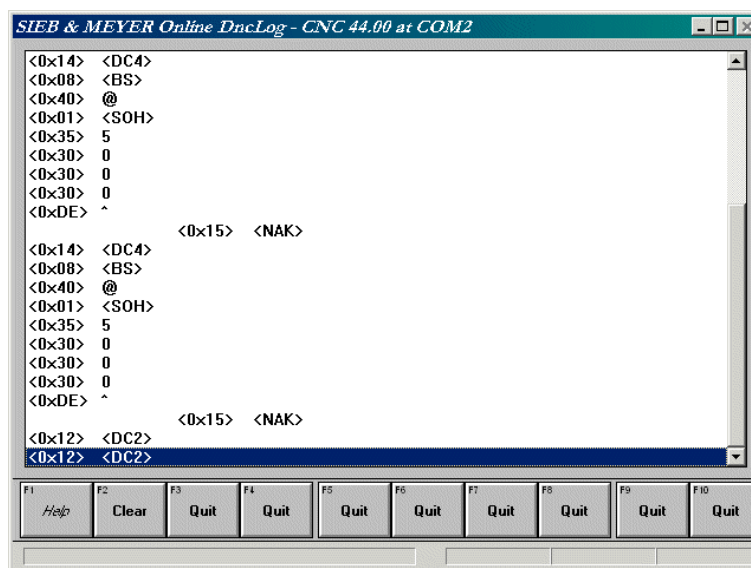
- ▶ Plug the test connector into the interface output of the PC. Start the test by pressing the key <F7> or by clicking on the button "Test Connect.". When testing, data blocks with random character strings and lengths are transmitted. The failed packages are counted. When pressing the key <F8> or clicking on the button "Abort Transmis." the test is finished.
- ▶ Now connect the transmission cable to the interface card.
- ▶ Fix the test connector at the end of the cable and repeat the test by pressing the key <F7>.
- ▶ Then connect the cable to the interface of the CNC. As a standard, the hook switches of the SIEB & MEYER interface card are set to ensure the connection with a PC as host computer.
- ▶ Start the dialog mode at the CNC ("DATA IN" ⇒ "F DNC Dialog"). Type some characters. They should be displayed on the opposite screen.
- ▶ If this is not the case, note the positions of the hook switches (to reconstruct the original configuration). Check all possible positions of the RTS/CTS switches:

RTS	CTS
open	open
open	closed
closed	open
closed	closed

5.1.1 Transmission Recording

The data flow in both directions can be recorded. If there are transmission errors, there are two different ways, helping the advanced user or programmer to find the source of the error and to debug it:

- ▶ The first possibility is the window "Online DncLog", which is started by clicking on the button "OnlineLog" in the configuration window of the DNC machine (See the chapter "Machine Assignment" on page 15). This function can be started only for one machine at a time:



In the window of this independently running program all characters transmitted in any direction are listed. If the window is completely visible, this possibility is time-consuming, since the screen has to be updated permanently. The amount of recordable data is limited. In the left column the received data is displayed, in the right one the data sent. In the first "<>" the hexadecimal value of the character is displayed, in the second the ASCII meaning.

- The second possibility is less time-consuming, the transmission can be carried out nearly in real time. The data is written to the ComPro file which can be as large as the hard disk capacity allows (See the chapter "New DNC Machine" the section "Serial Transmission" on page 16).

Due to the disk cache and the internal buffer, the data is written into the file with a little delay. A valid filename has to be entered in the input field "ComPro" in the configuration window. The recording can be started by clicking on the button "Start ComPro".

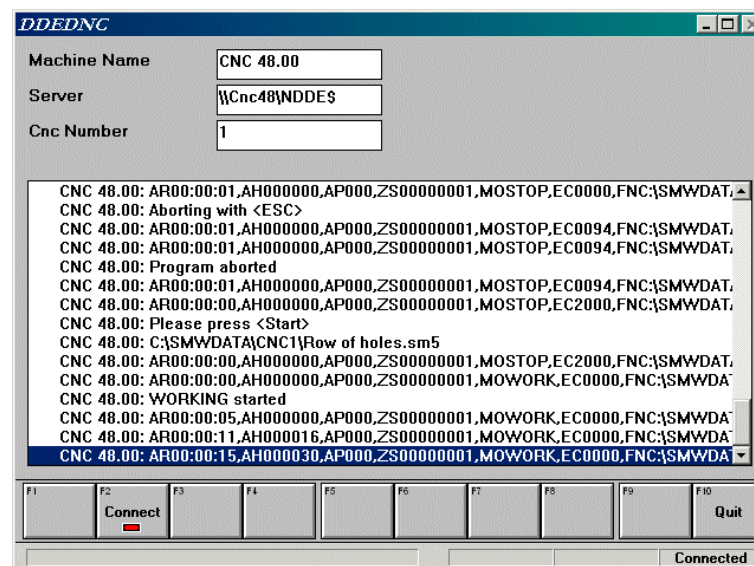
To stop the recording, click on the button "Stop ComPro". The start is noted in the file with date and time. The recording can be started and stopped during the transmission, e.g. if only a certain part is of interest.



The order of the characters corresponds to the order the DNC is actually using.

5.2 DDE Machine

When selecting a DDE machine, the following window appears:



The periodical event information or **all** CNCs are displayed in this window. Every line begins with the name of the CNC: e.g. "CNC 48.00:". (The buttons are described in chapter "New DDE Machine" on page 19.)



6 CNC Settings

To use "SM WinDNC", the following parameters have to be set.

Only for CNC 44.00 and 45.00: Certain parameters have to be set in the parameter editor as follows:

- ▶ DNCI Setting of the DNC interface
"DNCI=Yes" (DNC interface available)
- ▶ DNCF Selection of the protocol (must coincide with the protocol set at the PC).

DNCF	DNC protocol
0	Standard ASCII DNC
1	Ring DNC System 47.01 with interface 35.20.035 (is not supported)
2	Excellon DNC 1.3
3	SM DNC 1.1
4	Excellon DNC 1.4

To use e.g. the protocol "SM DNC 1.1", the parameter has to be defined as follows:
"DNCF=3"

- ▶ DNCB Set the baud rate: e.g. 9600 (The PC must coincide with the same baud rate set at the CNC.)

The following baud rates are possible:
300, 600, 1200, 2400, 4800, 9600, 19200, 38400.

- ▶ DNCO Setting of the direction of data flow.
"DNCO=Yes" Data can only be read from the DNC system. They cannot be saved back into a file.
"DNCO=No" Data can be read and written. They can be saved back into a file.
- ▶ DNCM Selection of data to be transmitted (defined by the bit set to "Y"). Signification: "Y"="Yes" and "N"="No".

DNCM	Explanation
"NNNNY" (1 st bit from the right)	Admits the transmission of event messages. The transmission is activated by the command COMM-DNCM _n .
"NNNYN" (2 nd bit from the right)	Transmits the event messages at the end of the execution as file (is not needed for "SM WinDNC").
"NNYNN" (3 rd bit from the right)	Reserved for special monitoring data (is not needed for "SM WinDNC")
"NYNNN" (4 th bit from the right)	Admits the transmission of periodical messages. The transmission is activated by the command COMM-DNCO.
"YNNNN" (5 th bit from the right)	Only camera software. Admits the transmission of statistic data. (is not needed for "SM WinDNC")

For the transmission of periodical event messages needed for "SM WinDNC", the parameter DNCM has to be defined as follows:
"DNCM=NYNNY"

- ▶ AUXI **Only for CNC 25.00, 35.00, 44.00 and 45.00:** The protocol SIEB & MEYER AUX requires an AUX interface
- “AUXI=Yes” AUX interface available
- “AUXI=No” NO AUX interface available

6.1 Online Data Transmission

To enable the transmission of operational data and event messages to the PC, the following commands have to be activated at every connected CNC:

- ▶ COMM-DNCO_t



Prerequisite for CNC 4x: The machine manufacturer has set the fourth bit from the right of the parameter DNCM to “Y” in the Parameter Editor (“DNCM=NYNNN”)!

The command COMM-DNCO_t activates the periodical transmission of event messages from the CNC to the PC. Additionally the transmission interval is set in seconds (e.g. COMM-DNCO10 for an interval of 10 sec). Legal value range: 5 sec to 60 sec.

- ▶ COMM-DNCM1



Prerequisite for CNC 4x: The machine manufacturer has set the first bit from the right of the parameter DNCM to “Y” in the Parameter Editor (“DNCM=NYNNN”)!

The command COMM-DNCM1 activates the transmission of event messages from the CNC to the PC. “SM WinDNC” generates a protocol file out of this message. The protocol file can be evaluated for statistical purposes.

- ▶ COMM-DNCE

This command enables starting the transmission from the PC.

7 Appendix: Revisions

The appendix describes alterations, made in comparison to the version with the identification number "901-win-bed-sm-en-4.1/v1-dn/hs" of April 2, 1996.

SIEB & MEYER Windows DNC

Version 6.08

901-PC-WIN-BED-SMWINDNC/R7-SM-EN-MA/HS/FK

February 12, 1998

Completely revised.

SIEB & MEYER Windows DNC

Version 6.21

400-PROT-WIN-BED-SMWINDNC/R8-SM-EN-MA/HS/FK

December 17, 1998

The identification number has been changed.

Cover

New version number: 6.21

Page 22

Updated figure.

Page 31

Table of DNCM has been revised.

SIEB & MEYER Windows DNC

Version 6.36

900-PC-WIN-BED-SMWINDNC/R9-SM-EN-MA/HS/FK

June 7, 1999

The identification number has been changed.

Cover

The version number has been removed.

Page 24

The section "Verify by Diskette" has been added. The following pages have shifted.

Page 21

The section "Utility" has been added.

SIEB & MEYER Windows DNC

Version 8.10T

900-PC-WIN-BED-SMWINDNC/R10-SM-EN-FK/HS/DB/LS

August 12, 2002

Completely revised.