For your information

907 PC 338 contains in one file

- the Safety Manual and

- an additional floppy disk with the Programming Software 907 PC 331.

The Safety Manual contains information about the structure of the Advant Controllers AC31-S. Furthermore the Safety Manual contains an additional floppy disk with an extension for the standard software 907 PC 331 to a Programming and Test Software for safety-related applications. The Program Development chapter describes distinctive features for developing a safety-related project. In addition, the manual contains a safety-related checklist.

Furthermore, the following is required:

- 907 PC 33 Programming and Test Software
  General Part

- 907 PC 331 Programming Software
  including the documentation

The 907 PC 33 file contains general information on how to use the programming and test software.

The AC31 software documentation includes the language description and the non-safety-related connection elements.

Information on how to place orders can be found in Volume 3, Chapter 1.4 of this file.

Furthermore, it is assumed that the user has the following up-to-date documents:

- Advant Controller AC31, System Description,
  Order-No.: GATS 1316 99 R1002

If you are not equipped with this documentation please order them using the order number given above.

Structure of the safety manual

Volume 1

In volume 1, you will find the floppy disks and installation instructions, the licence conditions as well as the software registration forms. Please fill in these forms and return the copy to us so that you will receive all further updates of your programming software in the future. ***This is absolutely mandatory for safety-related projects***

Volume 2

Volume 2 includes introductory information about the safety-related PLC, definitions of terms as well as the capability profile of the Advant Controller 31-S.

Volume 3

Here, you will be introduced to the structure of the Advant Controller 31-S. You will learn about system data, aids for hardware planning and module data sheets.

Volume 4

In volume 4 you receive information about how to program the Advant Controller 31-S.

Volume 5

Volume 5 includes the documentation of the safety-related connection elements.

Volume 6

Volume 6 includes descriptions of the hardware, the addressing, configuration and the diagnosis of the basic unit 07 KT 93-S which is used for the programming of safety and operational functions.

Volume 7

Volume 7 includes a checklist about safety-related items for the final acception of your system at the installation site. There you will also find a list of error numbers for diagnosis purposes.

Information for the user

All commands entered by the user are *printed in Italics*, keys are notated *<key>*. Screen displays (e.g. references and information) are represented in **bold letters**.

For the *<enter key>* you can also press the *left mouse button* and for the *<space key>* the *right mouse button*. In case of Yes/No requests, you can press the *left* mouse button for „Yes" or the *right* mouse button for „No".

Main menu: After pressing the *<right mouse button>*, a main menu item is selected or deselected alternately. By pressing the *<left mouse button>*, the selected sub-menu point is executed.

Key combinations:

<Key>-key or *<key>-key-key*:
In this case, press the first key and keep it pressed; then press the subsequent keys specified.
Example 1: *<Alt>-2*
Press the *<Alt* key and keep it pressed; then press the *<2>* key.
Example 2: *<Ctrl>-K-W*
Press the *<Ctrl>* key and keep it pressed; then press the keys *<K>* and *<W>* subsequently.

Keyboards

The names of certain keys on keyboards with German, English or American character set are different. The required cross references can be taken from the following table:

German character set	English/American character set
<Strg>	*<Ctrl>*
<Eing Lösch>	*<Esc>*
<Einfg>	*<Ins>*
<Entf> oder <Lösch>	*<Del>*
<Bild ↑>	*<PgUp>*
<Bild ↓>	*<PgDn>*
<Pos 1>	*<Home>*
<Ende>	*<End>*
<WR>	*<Return>*
<Tab. rechts>	*<RTAB>*
<Tab. links>	*<LTAB>*
< ⬆ >	*<Shift>*

In the present document, we will use the notation *<Enter key>*; further usual names for this key are *<Eing>*, *<Return>* and *<WR>*.

Abbreviations:

IL	Instruction list
AWP/UP	User program
FBD	Function block diagram
LD	Ladder diagram
PLC	Programmable controller
S-CE	Safety-related connection element
CE	Connection element
CU	Central unit or basic unit

Notes on completing the software registration forms

Please complete the software registration forms in full and using a typewriter or in block capitals. Please return the „double" to ABB. Do not forget to sign the software registration forms.

The software registration form should contain the following information in order to prevent difficulties or delays in provision of software updates for you:

Licensee

Name or company: Full company name

Dept./Contact person/Phone: Name of department, name and tephone number of the contact person

Address: Street/road and number or P.O. Box, country code, postal code, town/city

Date of delivery:
(as defined in ALCN 4.1)   Already comleted (if you do not have this information, please enter the date of receipt)

Name/legally binding
signature: Name in block capitals and signature

Customer Hardware (PC)

Hardware manufacturer: Manufacturer of the PC used (e.g. Compaq)

Type: Precise type designation of the PC used (e.g. 80486DX, 33 MHz)

Software Product

Product name: Designation of the software (e.g. 907 PC 331; already completed)

Version: Version number (already completed)

Identification No.:   Identification number of the software (already completed)

Serial No.:   Diskette creation date (e.g. 12.92 = Dec. 92; already completed)

ABB order No. or ABB office: ABB order No. or ABB field office which supplied the software (already completed)

New software version should be
offered according to ALCN 6.2:   State whether new software versions are to be offered in accordance with ALCN 6.2

Specification to number 5.2 ALCN [1]

General

The programming and test software 907 PC 338 serves for the generation of programs for the programmable controller (PLC) Advant Controller 31-S in safety-related applications. It is based on the software 907 PC 331 for the Advant Controller 31.

The programming and test software 907 PC 338 is executable on commercially available IBM-compatible PCs with the following technical features:

- Min. 4 MByte RAM

- Hard disk drive

- Diskette drive, 3 1/2", 1.44 MB

- EIA RS-232 serial interface for the PLC system

- Parallel or second serial interface for printer

- MS-DOS operating system V5.0 or higher

- Optionally a mouse for fast cursor control

The programming and test software 907 PC 338 permits simple and economical programming of PLC programs in the following notations:

- Function block diagram (FBD)

- Instruction list (IL)

Both symbolic and absolute program input is possible. The PLC program is supplemented by symbolic designators, long text and comment. Auxiliary and error messages that can be called at any time, and also a syntax check, facilitate program input. Program creation as an FBD or LD takes place in a joint editor. Therefore, elements from FBD and LD can be mixed and can also be linked to each other.

Features

Default project

The default project provided includes all essential points which are required for the generation of a program for a safety-related application.

Menu prompting

- Modern, clearly arranged menu interface employing pop-up menus

- Colour displays

- Fast selection of menu options by mouse or on the keyboard

- Calls of external programs at the DOS level directly from the menu (DOS shell)

Path information

- Input of a file name with the affiliated DOS path

- Display of the project overview in a file directory

Password protection

- Several access privilege levels

Modularization

- Handling of safety-related projects as well as large projects

- Arrangement of projects in logical structures

- Subdivision into program and variable modules

FBD/LD editor

- Uniform editor for programming with graphic symbols as a function block diagram

Extended IL editor

- Notation with symbols and long text in various forms

- Cursor control by mouse

- Selection of connection elements via a selection menu and using a mouse

Variable editor

- Complete list of all entered variables

- Selectable sorting according to absolute or symbolic variables

- Adoption and transfer of variable lists from and to any chosen word processing system

- Provision and adoption of variable lists for specific CAD/CAE systems

Text editor

- Input of any ASCII files, up to 255 characters per line

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[1] General License Conditions for the Supply of Computer Software upon Payment of a Non-Recurring License Fee

Comments

- Verbal description of networks or program segments

Segment plans

- Subdivision of programs into segment plans

- Simple management by segment plan name and segment plan number

Scope of functions

An extensive spectrum of commands is available for program creation:

- Syntax check of all variables

- Block commands
  - mark
  - delete
  - shift
  - copy
  - store
  - load
  - print
  - delete unused variables

- Search commands
  - according to sentence No.
  - according to word No.
  - according to variable
  - according to symbol
  - according to command
  - according to line number
  - repeat
  - according to segment plan
  - according to connection element
  - according to unassigned terminal

- Search and replace

- Insert

- Delete

ONLINE functions

Numerous ONLINE functions support the user during the commissioning phase, e.g.:

- Status display in
  - function block diagram
  - ladder diagram
  - instruction list
  - variable list

- Program
  - transfer
  - start
  - abort
  - *stop* *
  - *continue* *
  - status

- *Single cycle ON/OFF* *

- *Breakpoint* *
  - *set* *
  - *display* *
  - *delete* *

- Triggering
  - time
  - variable

- Overwriting

- *Jogging* *

- Forcing *

- Modification of
  - time and counter setpoints
  - variable addresses
  - operators
  - operand identifiers
  - program parts to a limited extent

* Caution:

These functions are implemented in 907 PC 338 but they will cause a safety-shutdown and an FK2 error message if they are used. After this, the system has to be initialized by switching on the supply voltage again.

Moreover, selected variables can be combined in ONLINE lists and their states can be displayed.

Program documentation

Automatic program documentation embraces the following printed lists:

- function block diagram
- instruction list
- connection element library
- logic plan diagram
- ladder diagram
- variable list
- cross-reference list
- comment list
- ONLINE list
- text page
- data area
- modularization list
- total variable list
- total reference list
- system configuration

Outputs can be adapted to any printer.

Print format editor

A special print format editor allows you to add an individual header and footer to the respective lists. Specific data can also be included automatically in this header or footer, e.g. name of the project file, date and time.

Installation Instructions

The installation of the programming and test software 907 PC 338 under the operating system MS-DOS is described step-by-step in the following.

If you are not familiar with some of the MS-DOS terms, please refer to the 'MS-DOS operating system' manual of your PC.

The installation program creates the following directory structure under MS-DOS:

```
C:\ABB-SPS\AC31-S33 ┬─ DEFAULT
                    ├─ EXAMPLE
                    ├─ BIB
                    └─ DIVERSE
```
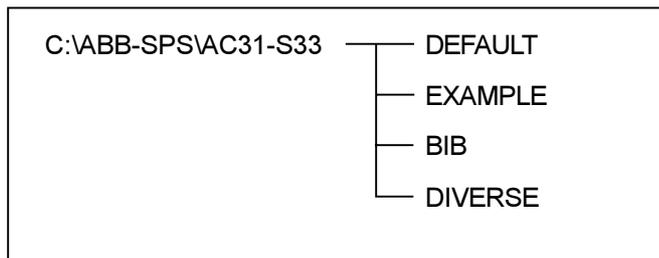
Notes

Installation requires a **minimum of 10 Mbytes of free hard disk space**. If there is insufficient memory capacity, a message will be displayed by the installation program. Furthermore, a **free main memory of at least 500 kByte** is required. By entering the DOS command *CHKDSK*, the free main memory capacity is displayed.

The programming and test software 907 PC 338 is executable on:

commercially available IBM-compatible PCs of the type 07 PH 32 (Compaq) with the following technical features:

- Processor 80386
- Min. 4 MByte RAM
- Hard disk drive
- Diskette drive, 3 1/2", 1.44 MB
- EIA RS-232 serial interface for the PLC system
- Parallel or second serial interface for printer
- MS-DOS operating system V5.0 or higher
- Optionally a mouse for fast cursor control
- Cache memory to increase the performance

Main memory

The software 907 PC 338 adapts itself to the available memory as far as possible. However, no other programs, such as network drivers or MS DOS user interfaces, should reside in the memory. The installation of a cache memory increases the processing speed and should always be carried out.

After calling the software the maximum available memory for 907 PC 338 is displayed below the logo. If there is no sufficient memory available, a corresponding message appears indicating this. The length of a program module is limited by the variable memory with a maximum lenght of 64.000 Byte. In the variable memory the symbolic variables and long texts are stored as well. Depending on the usage of symbolic variables and/or long texts the number of variables is increased or decreased. The maximum memory required for one variable including symbol and long text is 61 Byte.

Example:

The specified data apply to one program module:

64000 Bytes / 61 Bytes =
1049 variables including a symbol and long text

or

64000 Bytes / 31 Bytes =
2064 variables including only a symbol

or

64000 Bytes / 21 Bytes =
3047 variables without symbol and long text

Hard disk drive

The programming and test system carries out numerous accesses to the hard disk. In order to keep the access times as short as possible it is recommended to set up a cache memory. Such programs are provided with the operating system MS DOS or can be obtained from PC or software traders.

Backup

In addition to the extensive backup measurements which are automatically performed by 907 PC 338 you should never do without storing project backups on floppy disk. 907 PC 338 provides a corresponding function.

The MS DOS file CONFIG.SYS

For an optimum program flow it is essential to take care of a sufficient PC environment. 907 PC 338 should only be run on a PC with a processor of at least 80386.

Operation by mouse

Working with the programming and test system is made considerably easier by operating the 907 PC 338 and the cursor control by a mouse. For that purpose, the mouse must be connected to a suitable PC interface and the mouse driver must be installed on the PC. Attention should

be paid that a mouse driver is used and installed on the PC in a way that it seizes as little memory space as possible. For further information refer to the manuals of the particular manufacturer.

Installing the programming software 907 PC 338 on the PC

The programming software 907 PC 338 consists of one floppy disk.

It is assumed that the standard software 907 PC 331 of the PLC system Advant Controller 31 is already installed on drive X: (e.g. C). If this is not the case, first install this software. Make sure that the software version is **R0402 from 11/98** or higher.

Installing 907 PC 338:
Insert the floppy disk in drive A. Enter the following commands:

1. **c:\>a:**   <Enter>
2. **a:\>install x:**   <Enter>
   x: Here you have to enter the drive where the 907 PC 331 installation is already located. 907 PC 338 is also installed on this drive.
3. You are asked whether you want to install the *German* or the *English* version. Answer this question accordingly.
   At the moment only the German version is available. If you have entered *English* by mistake, the German version of the library is used.

Course of installation:

- New directories are generated (x: is the drive where the 907 PC 331 installation is located):
  x:\abb-sps\ac31-s33\bib
  x:\abb-sps\ac31-s33\default
  x:\abb-sps\ac31-s33\example
  x:\abb-sps\ac31-s33\diverse

- All 907 PC 331 files are copied into the new directory structure. During this process the program automatically checks whether the 907 PC 331 software version is **R0402 from 11/98** or higher. If this is not the case an error message appears and you first have to install the correct version of the AC31 programming software.

- The CEs of the safety library are copied into the AC31 standard library and the name of the new library is changed to AC31-S.

- After the installation is completed the message **a:\> Installation of 907 PC 338 completed successfully** appears.

- Remove the installation disk from the drive.

If you have carried out the installation on another drive than C: you have to change the drive identifier of the modules in the DEFAULT project.

- Enter the following:
  (x: is the drive where the 907 PC 331 installation is located**.)**
  a:\>x: <Enter>
  x:\>cd \abb-sps\ac31-s33   <Enter>
- Start the programming software 907 PC 338:
  x:\>abb-sps\ac31-s33>ac31   <Enter>
- Answer the question „Path does not exist. Generate new path?" with CANCEL.
- Select the project „DEFAULT" in the screen PROJECT DATA, PROJECT.
  x:\>abb-sps\ac31-s33\default\default   <Enter>
  After typing the password and pressing <ESC> you will enter the main menu.
  From the left hand area select:
  EDIT, MODULAR EDITOR <Space key>,
  EDIT FILENAME, PM EDIT FILENAME
- In both modules, change the drive from C: to the drive where the programming software is installed, e.g. D:.
- After that press <ESC> and then <Space key>.
  Select the menu
  VM EDIT FILENAME
- In both modules, change the drive from C: to the drive where the programming software is installed, e.g. D:.
- Press <ESC>, <ESC> and answer the question „Do you want to adopt the changes to the editor" with YES.
- Now you are in the main menu. Exit the programming software by selecting
  PROJECT MANAGEMENT, SAVE PROJECT, EXIT SYSTEM

Now the user has to load the library with the safety-related CEs into the AC31 library:

- Enter the following:
  a:\>x: <Enter>
  x:\>cd \abb-sps\ac31-s33   <Enter>
- Start the programming software 907 PC 338:
  x:\>abb-sps\ac31-s33\ac31   <Enter>

- Answer the question „Path does not exist. Generate new path?" with CANCEL.

- In the screen PROJECT DATA, PROJECT select the example „Example".
  x:\>abb-sps\ac31-s33\example\example   <Enter>
  After entering the password and pressing <ESC> you are in the main menu. In the left hand area select LIBRARY and then LOAD MANUFACTURER'S LIBRARY.

Note: If the installation was performed on another drive than C: you must correct the directory specification accordingly, e.g.
d:\abb-sps\ac31-s33\bib\31s_ve

For the library, enter the name „31S_VE" (without an extension).
The AC31 standard library is merged with the safety library and the new name of the library is „AC31-S".

- Select the menu item CE LIBRARY and check whether the libraries are successfully merged.
  In the library, search for CEs which start with S_yyy, e.g. S_ASV, S_+, S_=SK.

- Exit the programming system by selecting the menu items
  PROJECT MANAGEMENT, SAVE PROJECT and EXIT SYSTEM.

- If you are asked „Do you want to save changes for the overall project?", answer with YES.

- You have now installed an executable 907 PC 338 programming system on drive x: and you can start your user defined project.

UPDATE installation

1. **Updates for basic software 907 PC 331**
   The installation is carried out according to the enclosed description.
   If you want to use the changes also in your safety-related software 907 PC 338 you have to carry out the above described installation of 907 PC 338 following the installation of 907 PC 331. If the installation program detects an already existing library in the directory **x:\abb-sps\ac31-s33\bib<r>**, the new library named SER90.VE is copied to this directory but it is not merged with the existing library.
   The user has to carry out this manually by selecting the menu items LIBRARY, LOAD MANUFACTURER'S LIBRARY.
   To do this, enter the name **SER90** into the window.
   Note that the library to be updated (AC31-S.VE*) is registered in the project data. This updates the existing library to the latest version.
   Your user CEs are retained.

2. **Updates for safety-related software 907 PC 338**
   This is described in chapter **Installing the programming software 907 PC 338 on the PC**.
   The installation of an update does not differ from the initial installation.

Short description of the 907 PC 338 files

The following files are absolutely necessary to start the program:

controller_name.exe	Controller program
controller_name.scr	Initial screen
controller_name.cfg	Standard configuration file/ name of the last project
controller_name.hkf	Hardware (colour) configuration
controller_name.tex	907 PC 338 program messages
controller_name.hlf	Auxiliary texts and assignment of control keys
controller_name.mnu	Structure of menu windows
controller_name.hmn	Structure of main menu
controller_name.pas	Password release file
controller_name.trs	Syntax compiler configuration
controller_name_f.exe	Colour configuration
controller_name_s.exe	Backup
controller_name.ter	Interface parameters for terminal operation
controller_name.dfe	Standard printing format for lists

Project files

Depending on the used editor and the entered data, a project includes the following files:

project_name.cfg	Project configuration
project_name.sym	Variable list
project_name.dbr	Data areas (from data area editor)
project_name.dfe	Printing format (headers and footers)
project_name.dpm	Printing parameters of all lists
project_name.err	Error file for compilers
project_name.edp	Parameters for editor settings (e.g. scrolling speed)
project_name.bld	Screen shots adopted from 907 PC 338 (<CTRL>-K-D)
project_name.hmp	Menu settings (main menu)
project_name.ref	Variable cross references (for modularized projects)
project_name.pas	Password release
project_name.oe	Online list
project_name.be	Breakpoint list
project_name.vex	Variable import/export
project_name.pg1	Directory file (FBD/LD, Ext. IL program)
project_name.pg2	Cross reference file (FBD/LD, Ext. IL program)
project_name.pg3	Data (FBD/LD, Ext. IL program)

library_name.ve1	Directory file (CE library)
library_name.ve2	Cross reference file (CE library)
library_name.ve3	Data (CE library)

If necessary further files named "temp????.???" and "temp_???.???" are generated during the program execution. These operating files are copied into the project name files after saving/exiting 907 PC 338.

For modularized projects the following additional files can exist:

overall_project_name.mod	Module structure (from module editor)
overall_project_name.rep	Logfile for Updates (ASCII file)
overall_project_name.pas	Password release

For some controllers additional files are generated named project_name.* or overal_project_name.*.

Reserve file

907 PC 338 often accesses multiple files on the hard disk simultaneously.

To ensure that all writing operations to the necessary files on the hard disk can be successfully completed, even when there is an unexpected disk space lack, an empty reserve file named

_RESERVE.DAT

is generated when starting 907 PC 338. This file is of variable size and located in the 907 PC 338 directory on the current disk drive (normally this is the drive where 907 PC 338 is installed).

In the case that a writing operation to this drive detects a lack of disk space, a warning message is displayed and the reserve file is step by step decreased by 250 kBytes. This way the necessary writing operations can now be completed.

After that you have to exit 907 PC 338 and then establish free space on the hard disk.

CAUTION:

The advantage of the reserve file can only be used on the current disk drive. If you are working with several disk drives and one drive which is not the actual drive has a lack of free disk space, it is not possible to free disk space because a reserve file does not exist on that drive.

Starting the programming software and creating a new project

- In order to start a new project, enter the following:
  x:\abb-sps\ac31-S33\ac31-s <project_name>

  x: is the drive where 907 PC 338 is installed.

  This starting of a new project is prescribed and mandatory because it is the only way to ensure that the new project contains all required basic parameters of the safety-related application.

- A new directory <project_name> is created:
  x:\abb-sps\ac31-s33<<>project_name>

- The default project is copied into this directory and then renamed to <project_name>:
  x:\abb-sps\ac31-s33<<>project_name><<>project_name>.*
  The library is registered in the project data:
  x:\abb-sps\ac31-s33\bib\ac31-s

Now, the user can start designing the safety-related program. If necessary, additional safety-related and non safety-related modules can be added.

Display:

```
┌─────────────────────────────────────────────────────────────┐
│  ╔═════════════════════════════════════════════════════════╗│
│  ║                                                         ║│
│  ║   PC programming system for Advant Controller AC31-S    ║│
│  ║                                                         ║│
│  ╚═════════════════════════════════════════════════════════╝│
│                                                               │
│                     AC31-S                                    │
│                                                               │
│  ┌─────────────────────────────────────────────────────────┐│
│  │      GJP5 2067 00 R0102    Version 08/99                 ││
│  │    ABB Schalt- und Steuerungstechnik GmbH               ││
│  └─────────────────────────────────────────────────────────┘│
│                                                               │
│  <F1> = Abort       <F2> = Go to main menu    Any key = Continue│
│  Free memory = 103488 Bytes            <F10> = Help always accessible│
└─────────────────────────────────────────────────────────────┘
```

The following screen is displayed. The cursor is positioned on **EXAMPLE\EXAMPLE**.

```
┌───────────────────────────────────────────────────────────────┐
│ ABB 07 ZE 62              Project data                EXAMPLE  │
│ ┌─────────────────────────────────────┬─────────────────────┐ │
│ │ Manufacturer of controller: ABB     │ Controller name__: AC31│
│ ├─────────────────────────────────────┴─────────────────────┤ │
│ │ Project___:   EXAMPLE\EXAMPLE                              │ │
│ │ Library___:   BIB\AC31-S                                   │ │
│ ├─────────────────────────────────────┬─────────────────────┤ │
│ │ Type of controller_____: Series 90 │ Timeout_____:    │ │
│ ├─────────────────────────────────────┼─────────────────────┤ │
│ │ Actioned by_____:                   │ Last change_____:   │ │
│ ├─────────────────────────────────────┴─────────────────────┤ │
│ │ Project name____:                                         │ │
│ ├───────────────────────────────────────────────────────────┤ │
│ │ Project description:                                      │ │
│ │                                                           │ │
│ └───────────────────────────────────────────────────────────┘ │
└───────────────────────────────────────────────────────────────┘
```

Press the <Enter key>. The system now asks for the password. Type AC31 and press the <Enter key>.

The Project Data menu contains information which are necessary for creating, editing and documenting the PLC application program.

For an explanation of the parameters that can be entered, please refer to 907 PC 33, Chapter 5.

Library:

Enter BIB\AC31-S.

Type of controller

The only valid entry is „Serie 90".

Leave this menu by pressing <ESC>.

All further settings shown in the screen above are explained in the chapter „Project Data" in the General Part of the 907 PC 33 Operating Instructions.

Note about Timeout

Specifying the timeout as Txxxx can lead to the error message "Receiver time exceeded" being output by some PCs, when the online functions are called. In this case, change the timeout value to the default xxxxx (without the preceding T). Further information can be found in the General Part.

Pressing <Esc> transfers you to the main menu. The main menu are the five columns with three lines each in the upper screen area where the cursor can be moved freely. From here, you can practically choose all other functions.

The menu items can be selected either with the mouse or using the arrow keys on the keyboard.

1. And this is how you work with your mouse:

   By moving the mouse, all main menu items can be selected.
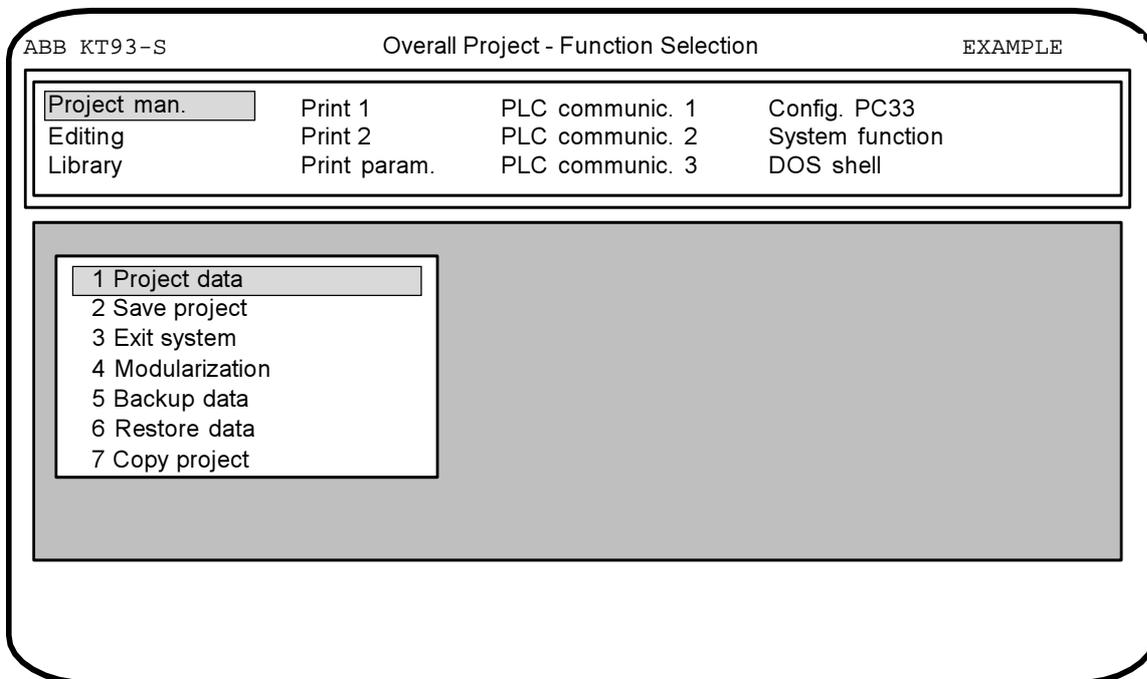
   If the cursor will not move first press the <right mouse button>. Select the desired main menu item, then click the right mouse button. Now, the related submenu items are displayed. By moving the cursor to the desired submenu item followed by clicking the left mouse button, this submenu item will be executed.

2. And this is how you work with your keyboard:

   Using the <Cursor right> and <Cursor left> keys, you can horizontally move the cursor in the main menu. A vertical movement is initiated within the main menu using the keys <Page up> und <Page down>. The <Cursor up> and <Cursor down> keys allow for a vertical movement within the submenu. The desired submenu item is executed by positioning the cursor to this item and pressing the <Enter key>.

Help

You can call up a help screen at any time by pressing <F10>. Pressing <ESC> will return you to the status before calling the help screen.

ABB KT93-S	Overall Project - Function Selection			EXAMPLE
Project man.	Print 1	PLC communic. 1	Config. PC33	
Editing	Print 2	PLC communic. 2	System function	
Library	Print param.	PLC communic. 3	DOS shell	

1 Project data
2 Save project
3 Exit system
4 Modularization
5 Backup data
6 Restore data
7 Copy project

Files of 907 PC 338 after new installation

LHA's SFX 2.13L (c) Yoshi, 1991

COMPARE.EXE
CS31.BAT
CS31.ITO
SER90_D.VE1
SER90_D.VE2
SER90_D.VE3
SER90_GB.VE1
SER90_GB.VE2
SER90_GB.VE3
SER50NEU.VE1
SER50NEU.VE2
SER50NEU.VE3
SER50NEW.VE1
SER50NEW.VE2
CS31_DA.BAT
SER50NEW.VE3
SER50_D.VE1
SER50_D.VE2
EXAMPLE.BIT
EXAMPLE.CFG
EXAMPLE.DBR
EXAMPLE.DPM
EXAMPLE.EDP
EXAMPLE.HMP
EXAMPLE.OE
EXAMPLE.PAS
EXAMPLE.PG1
EXAMPLE.PG2
EXAMPLE.PG3
EXAMPLE.SYM
EXAMP_B2.PG1
EXAMP_B2.PG2
EXAMP_B2.PG3
EXAMP_B2.SYM
EXAMP_BL.PG1
EXAMP_BL.PG2
EXAMP_BL.PG3
EXAMP_BL.SYM
INIT.HP4
INIT-A3.KYO
INIT-A4.KYO
KONVERT.KYO
SER50_D.VE3
SER50_GB.VE1
SER50_GB.VE2
SER50_GB.VE3
NEU.VE1
NEU.VE2
MPST.CFG
MPST.DBV
MPST.EXE

MPST.HKF
MPST.KFS
MPST.PAS
MPST.SCR
MPST.SYM
MPST.TAB
MPST.TER
MPST.TVC
MPST_D.DFE
MPST_D.HLF
MPST_D.HMN
MPST_D.MNU
MPST_D.TEX
MPST_DA.EXE
MPST_F.EXE
MPST_FG.TEX
MPST_F_D.TEX
MPST_GB.DFE
MPST_GB.HLF
MPST_GB.HMN
MPST_GB.MNU
MPST_GB.TEX
MPST_KP6.TRS
MPST_KR1.TRS
MPST_KR2.TRS
MPST_S.EXE
MPST_S1.TRS
MPST_S2.TRS
MPST_T30.TRS
MPST_V3.TRS
MPST_V4.TRS
MPST_V5.TRS
MPST_V6.TRS
MPST_V7.TRS
MPST_V8.TRS
MPST_V81.TRS
NEU.VE3
NEW.VE1
NEW.VE2
NEW.VE3
ONLINE.OE
README.HP4
REINIT.HP4
REINIT.KYO
SYS_CONS.SYM
AC31.BAT
NB33ARC.EXE

The list of files is generated during installation and is saved as an ASCII file under
\ABB-SPS\AC31-S\REPORT.TXT.

ABB