FACTORY AUTOMATION

Manual

IVT-HH9

Handheld read/write device
with PSION Workabout MX
program description

CE

PEPPERL+FUCHS

1 Contents

2 Program Overview

The operating program for the PSION Workabout is used to address the Pepperl+Fuchs system IVT-HH9. The read/write head is supplied with voltage via the TTL port of the PSION Workabout. To prevent needless use of the PSION Workabout batteries, the TTL port is activated only when data are transferred to the read/write head. This leads to a delay ‹ 3 seconds when executing read and write operations. This behaviour can be disabled via "Options" in the "Special" menu ("Deactivate head“).

After program start, the program will perform automatic read/write head detection. The detection routine cannot be aborted.

The program is controlled via a window-oriented user interface described in the following chapters.

2.1 Installation

The program is pre-installed ex works. The solid state disk must be inserted in slot A if the AUTOEXEC.BFT file is to be executed correctly.

After the first start of the application, the IVTDEMO.INI file is generated in the IVT directory.

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2.2 Main window

The main window provides all the controls to read data from the read/write head and transfer data to the read/write head.

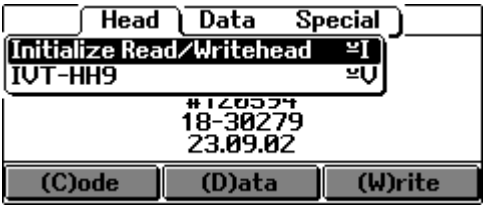

Figure 1: Main Window

The type of read/write head connected is shown in the top area of the main window. 5 text lines for displaying data are available in the display area. If it is not possible to display all the data, the program will provide a scroll bar on the right margin. The down arrow shows that more data can be displayed in the visible display area. The diplay can be controlled using the two arrow keys ↓ and ↑. The active keys are displayed in the scroll bar. The delete key can be used to delete the screen contents.

The three most important program functions can be started via the button bar along the lower margin of the display:

1. **(C)ode** The program will attemt to read the ID code of a tag within the sensing range. The results are displayed in the display area.
2. **(D)ata** The program will read the data of a tag within the sensing range and display them.
3. **(W)rite** The program will write to the data area of a tag within reading range. The data can be entered via the menu option Read/write head –> Write data.

2.3 Menu bar

Due to restrictions of space, the menu bar is not always visible. The menu bar can be shown by pressing the menu key. The menu options can then be selected via the arrow keys and the ENTER key. Alternatively, each menu option can be called via a shortcut. The shortcut is always a combination of the PSION key [⊻] and an alphanumeric key.

Almost all menu options open dialogs. The arrow keys can be used to navigate within a dialog. The Enter key closes a dialog and saves all data that were modified. The On/Esc key aborts the editing procedure. Any data modified will be lost. All the data set in the dialogs are permanently saved in an initialization file.

The various functions that can be called via the menu bar are described in more detail in the next chapters.

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2.3.1 Head

This option provides all the functions for setting the read and write parameters.

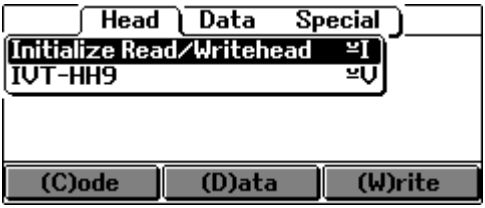

Figure 2: "Head“ menu

Initialize read/write head **PSION+‘L‘**

This function starts the detection of the read/write head. After a successful initialization of an IDENT system, the program will show the version information of the respective system. The following figure shows the version message of the IDENT system.

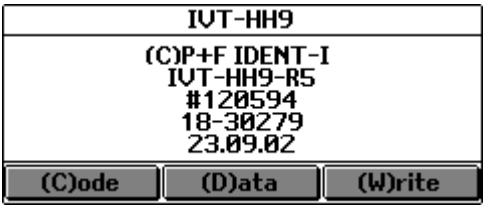

Figure 3: Version indication "IVT-HH9“

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2.3.2 Data

Provides all the functions for reading and writing data.

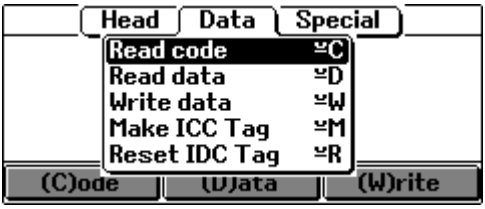

Figure 4: "Data“ Menu

Read code **PSION+‘C‘**

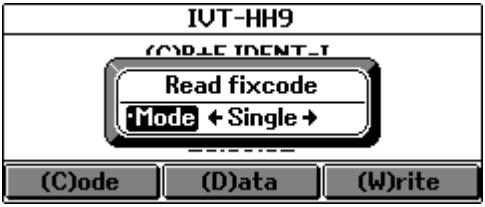

Figure 5: "Read code“ dialog

Calling the "Read code“ menu option opens a dialog, in which the user can set the read mode ("Single“ or "Buffered“). In the "Single“ read mode, the code or data carrier should be in front of the read/write head, otherwise the device will report a read/write error. In the "Buffered“ mode, the read/write head is activated until a code or data can be read or the user aborts the operation by pressing any key. The read operation starts when this dialog is closed. The parameters entered here are also used by the program when the "(C)ode“ button.

The code is always displayed in the format returned by the read/write head (data format 10). In the case of data format 10, the first 12 bits of the code are represented in hexadecimal code, the following 16 bits in the form of a 4-digit decimal number.

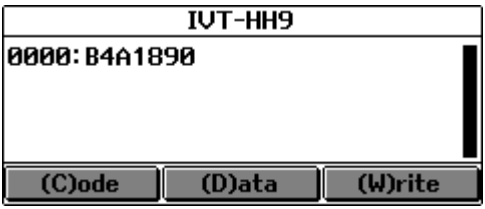

Figure 6: Displaying the ID Code

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Read data **PSION+'D'**

The "Read data" menu option opens a dialog, in which the "Mode", "Datatag", "Dataformat" parameters, the start address and the length of the data to be read can be set.

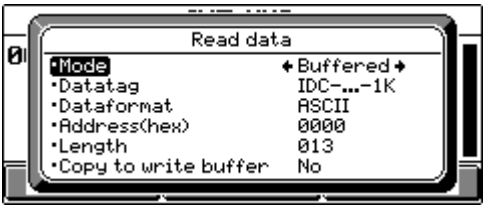

Figure 7: "Read data" dialog

In the case of the "Dataformat" parameter, the user can select either ASCII, HEX or DEC (see Fig. 9, Fig. 10 and Fig. 10). The start address of the read operation must be entered in hexadecimal code. The length of the data to be read is entered in the form of a decimal number. If the "Copy to write buffer" function is enabled, read tag data will be transferred to the write buffer directly after they have been read. The read mode, start address and tag type are also copied.

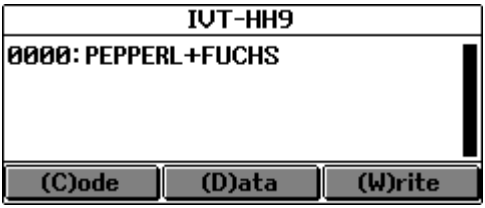

Figure 8: Data in ASCII notation

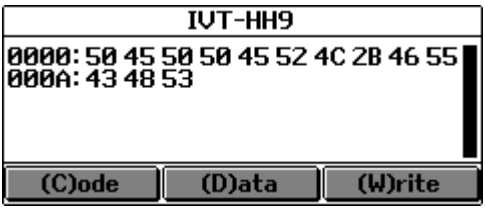

Figure 9: Data in hexadecimal notation

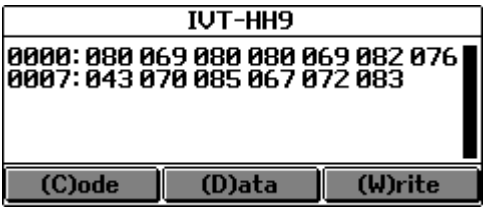

Figure 10: Data in decimal notation

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Write data **PSION+'S'**

Via the "Write data" menu item, the user defines the data that are to be written to a data carrier. The data defined in this menu item are used by the application when the "Write data" function is called via the "(W) Write" button.

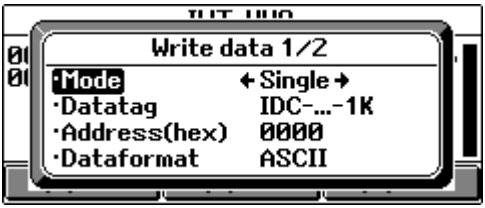

Figure 11: "Write data 1/2"

Figure 12: "Write data 2/2"

The start address corresponds to the address of the "Read data" dialog. The length of the data to be written is automatically calculated by the program.

Generate ICC Tag **PSION+'M'**

This function generates an ICC-compatible data carrier. A data carrier in this format is recognized by the read/write head as an ICC code carrier. The wafer number is specified in the form of a 3-digit hexadecimal number.The DIE number is a 4-digit decimal number.

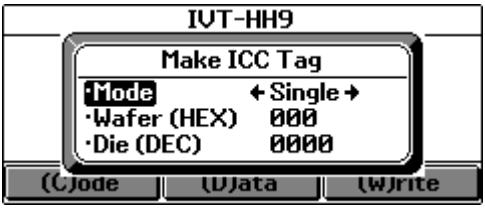

Figure 13: "Generate ICC Tag" dialog

Reset IDC Tag **PSION+'R'**

This command is used to reset all the attribute bits of a data carrier.

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2.3.3 Special

The generic term "Special“ comprises all the program service functions that are not directly related to a read/write operation.

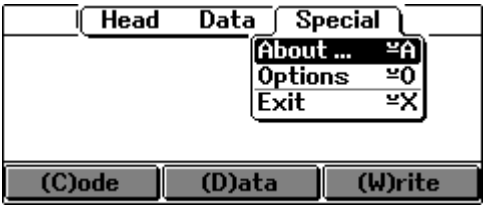

Figure 14: "Special" menu

About **PSION+‘I‘**

The "About“ menu option displays a version info and copyright notice window. It is of no importance for the program run.

Figure 15: "About“ window

Options **PSION+‘O‘**

In the "Options“ dialog, the user can set the program preferences.

Figure 16: "Options“

In this program version, you can choose between the languages German and English. The language is changed directly after the dialog has been closed.

The port defines the serial interface for communicating with the read/write head. The program can use the TTL interfaces as well as the serial interfaces of the PSION Workabout. The TTL interfaces are activated during the communication cycles only, since the voltage supply of the read/write head is also implemented via this interface.

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If the option "Deactivate head“ is set to "No“, the serial interface is not deactivated after a command has been executed.

This will accelerate the execution speed but is recommendable only for stationary operation with power pack. Otherwise the batteries are discharged too fast.

Exit **PSION+‘X‘**

This command is used to exit the program.

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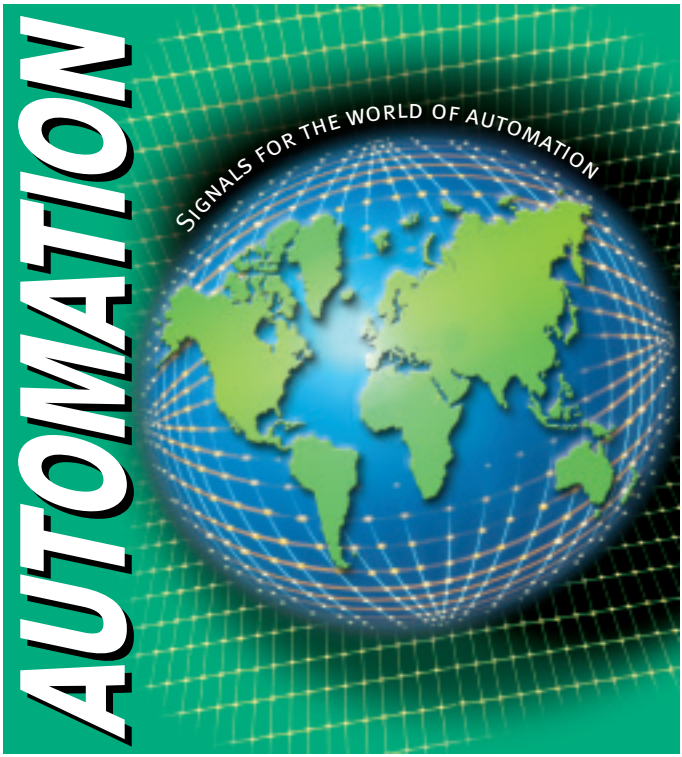

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