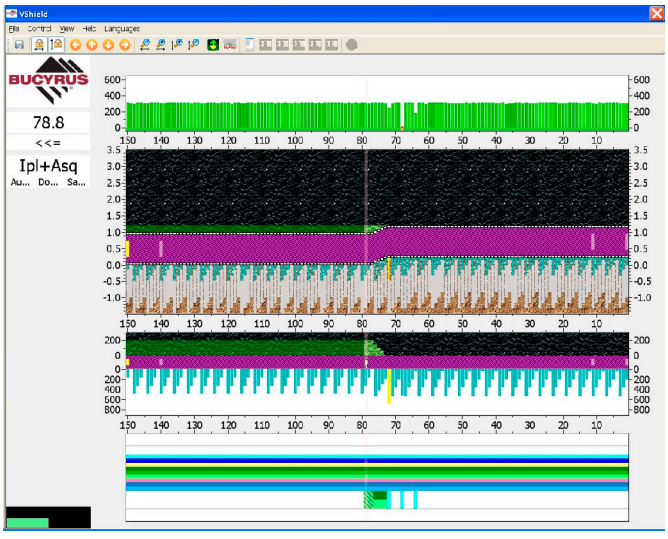
Reliability at work

Operating manual

PMC®-System

VShield central control
Face visualization
Version 10.62

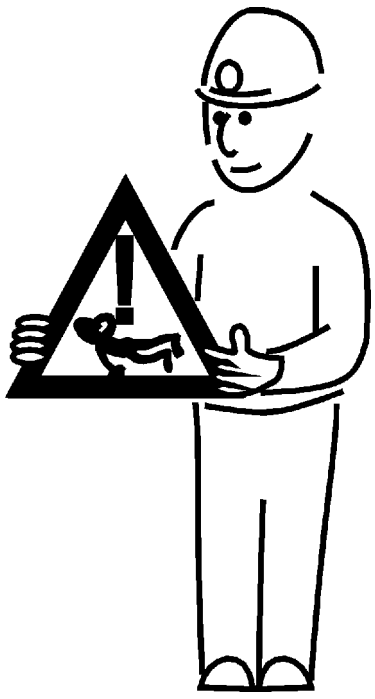
Doc. No.: 1999 001 013 BA 00



Bucyrus DBT Europe GmbH

Industriestraße 1 Phone: +49 (0) 23 06 / 709 - 0 Email: info@de.bucyrus.com
D-44534 Lünen Fax: +49 (0) 23 06 / 709 - 1421 Web: www.bucyrus.com

2 Your safety



About storage and transport

This chapter contains important information on correct storage and secure transport of the PMC® components. Observance of the instructions and manuals will increase the service life and reliability of the system components. Reading this chapter thoroughly will help you to make your day-to-day work easier.

Notice!
Never store PMC® components and other electronic equipment outdoors under any circumstances.

In this operating manual, the storage of data storage media, the creation of backup copies and the archiving of software are specifically addressed.

Important!
Every data storage medium and the corresponding reading/ writing device might have its own information material and operating manuals which should be read carefully. These instructions only provide a few general tips for storing data storage media.

Storage of data storage media

If software is not copied via data lines, the following types of data storage media are generally used:

- floppy disks
- CD or DVD
- exchangeable disk media (for example, external USB hard disk)

Floppy disks

The following damage diskettes or the stored data:

damaging effects

- dirt and dust
- magnetic fields
- sunlight
- heat (>50°C)
- cold (<10°C)
- moisture
- bending the floppy disk

best storage place

The best place to store diskettes is in plastic or cardboard sleeves in a dust- and dirt-free, lockable metal cabinet in an air-conditioned room.

not a durable storage medium

Diskettes can be stored for up to 5 years, depending on the storage place, but they can be very easily damaged and are therefore not to be considered to be a durable storage medium.

result

The program is now fully installed. It is located on the following path:
“C:\DBT\VCU\VShield\10_62__Build_4637“
The name of the folder “10_62__Build_4637” can vary, depending on the program subversion.

Uninstall process

The “VShield” program can be uninstalled at any time. Follow the following instructions one after another.

Procedure

☞ End the “VShield” program.

☞ Delete the directory in which “VShield” program was installed. (see “Installation” section in this chapter).

☞ Delete any shortcuts created (see “Creating a shortcut” section in this chapter).

result

The program is now completely uninstalled. It is not necessary to run a special program to uninstall the program.

Creating a shortcut

simplifying the startup procedure

To simplify the later startup procedure, we recommend creating a shortcut to the “VShield.exe” program.

Procedure

opening the context menu by clicking the right mouse button

☞ Click the right mouse button on the desktop.

The desktop context menu is opened (Fig. 7).

Fig. 7: Opening the wizard in order to create a link

using the Windows wizard to create a shortcut

☞ Select the “New / Shortcut” menu item.

“Create Shortcut”, the first dialogue page of the wizard used to create a new shortcut, appears (Fig. 8).

☞ Enter the path for the program file “VShield.exe” or select the path by clicking on the “Browse...” button.

The following parameter entries can be made within the [ComNext] section:

Type = **Defining the type of connection**

Type is used to define the connection type used by the “VShield” program to forward the data received

The Type parameter can be assigned the following values:

Compactacd A serial port is used.

DbtUdpPmcrTest The connection is established via the network (Ethernet).

Example:
Type=DbtUdpPmcrTest

Port = **Physical address of the port used**

The physical address of the port to which the “VShield” program forwards the data is defined here.

The Port parameter can be assigned the following values:

com1, com2, com3, com4 The data are forwarded via a serial port with the entered physical address.

IP address The IP address of the target computer is entered to forward the data. The transmission and reception ports must be additionally entered, separated by a colon.

between 01024 and 65535 The first port address is entered behind the IP address. The port is used to receive data. The value must be between “01024” and “65535”. The next free port is searched for if “0” is entered.

between 01024 and 65535 The second port address is entered behind the first port address. The port is used to transmit data. The value must be between “01024” and “65535”, must not be the same as for the first port address however. The next free port is searched for if “0” is entered.

Examples:
Port=10.158.22.34:0:0
Port=10.158.22.34:55566:55565

bps = **Entering the transmission rate for a serial port**

This parameter is used to specify the transmission speed when using a serial interface.

The maximum transmission speed is 115200 baud. A lower transmission speed must be selected in the event of interference.

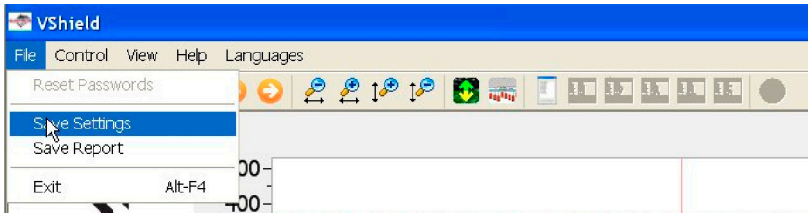
Example:
Baud=19200

Description of the menus

Below, the menus with their respective submenu items will be explained from left to right, as they are shown in the menu bar at the upper edge of the screen.

If the “File” menu is opened, the following submenu items are displayed:

Fig. 25: File pull-down menu



The File menu has the following subitems:

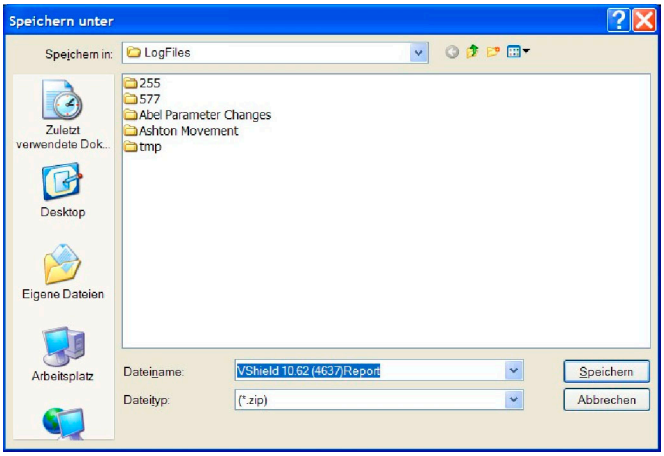
- Reset passwords (not active)
- Save settings
- Save report
- End

Tab. 3: File menu commands

Command	Explanation
Reset passwords	For some operations, a password is queried with which this command can be reset.
Save settings	With this command, the defined settings are saved.
Save report	For saving a report
End	The central program can be ended here (key combination Alt+F4). After exiting the central program, one returns to the WINXP or WIN NT level of the PC.

Save report

Fig. 26: Save-As window for a VShield Report



Important!
The parameters shown depend on the PMC®-R program to which the VShield program is linked.

Water spray parameters

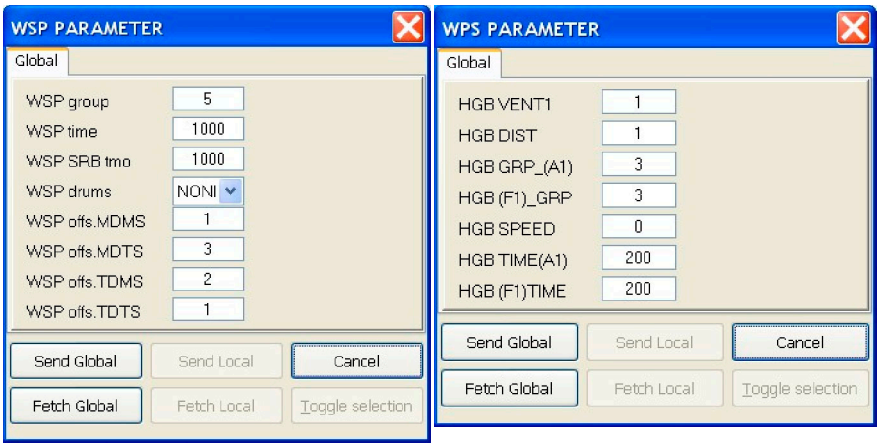
WSPWater Spray Parameters

PWCPlow Water Curtain

WSPWater Spray Parameters

Fig. 44 shows the dialog window for the water spray parameters.

Fig. 44: WSP parameters and PWC parameters



The individual parameters have different designations in the plow and shearer programs:

Plow: PWC_xxx with the meaning
PWCPlow Water Curtain
_empty space
xxxParameter designation

Shearer
drum: WSP_xxx with the meaning
WSPWater Spray Parameters
_ = empty space
xxxParameter designation

Here, too, the same procedures for editing the parameters apply.

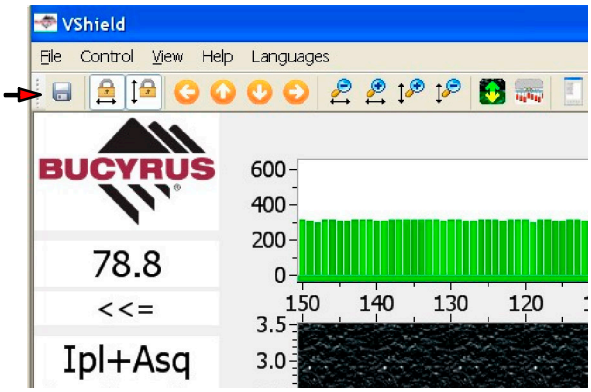
Important!
The parameters shown depend on the PMC®-R program to which the VShield program is linked.

The View menu

The screen view can be configured with the View menu. Various options, such as the toolbar, status bar, graphics options, etc. can be selected.

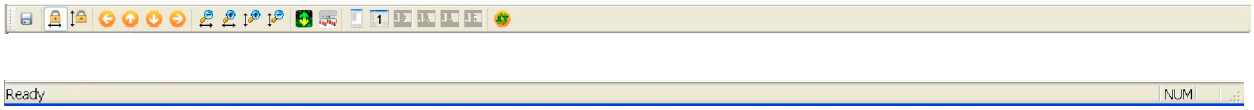
Various lines, pressures and plow level indicators can still be displayed (Fig. 61).

Fig. 61: "View" pull-down menu



The standard toolbar is activated in the setting shown in Fig. 61 (checkmark next to the word "Standard toolbar"). The standard toolbar is indicated with the red arrow and is shown in its entirety in Fig. 62.

Fig. 62: Standard toolbar and status bar at the lower edge of the screen



A status bar can be shown at the bottom edge of the screen (see command in "View" pull-down menu). Here, the status parameters, such as the activated numeric keypad or CapLock are displayed.

The Main text view

With the "Main text view" command, a window as shown in Fig. 63 is opened, in which the following values are displayed for every shield:

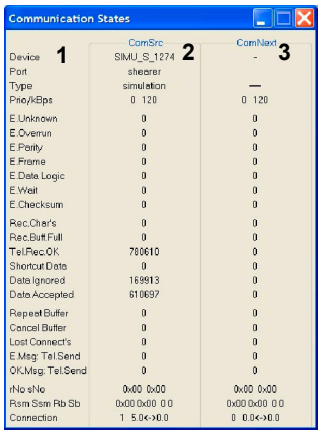
Fig. 63: Main text view

	135	134	133	132	131	130	129	128	127	126	125	124	123	122
Support Type:	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Receive counter:	1065	1054	1016	1056	1055	1034	996	1050	1050	1060	1013	1052	1066	1066
Data Age [s]:	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Voltage [V]:	11.80	11.60	12.10	11.50	12.80	11.10	11.60	12.10	12.30	12.30	12.00	12.70	12.10	11.40
Pressure < [bar]:	306	304	306	304	300	302	308	314	300	302	312	310	304	306
Pressure > [bar]:	306	315	309	300	305	310	309	304	308	313	300	310	302	306
Ramstroke [mm]:	160	0	480	320	160	0	480	320	160	0	480	320	160	0
Cycle time [s]:	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Push time [s]:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coalline [m]:	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
Targetline [m]:	###	###	###	###	###	###	###	###	###	###	###	###	###	###
Cutline [m]:	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80	6.80
Conveyor position [m]:	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
Shield position [m]:	6.44	6.60	6.12	6.28	6.44	6.60	6.12	6.28	6.44	6.60	6.12	6.28	6.44	6.60

Communication states

In order to check the communication states between the central computer and the face or the central underground control and central aboveground control, the “Communication States” information window can be called up by clicking on button “2”, in Fig. 76 page 5.38.

Fig. 78: “Communication States” information window



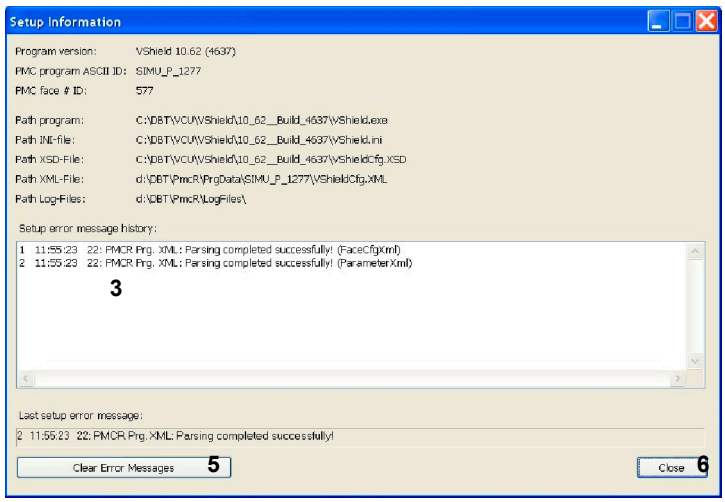
1 list of communication data
2 display column for the face communication
3 display column for the communication to a connected computer

In the last line, “Connection”, a “1” must be displayed in order to have a connection to the face. An existing connection is also indicated by a running display in the lines “TelRecOK”, “DataIgnored” and “DataAccepted”.

Setup info

In the Setup Information window, important data is displayed for the VShield program installation.

Fig. 79: Setup information window

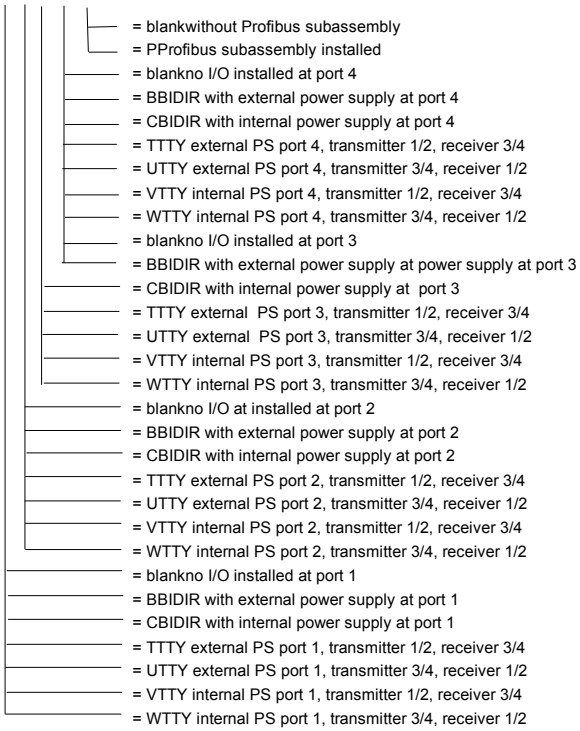


1 info block version
2 display of the paths to the program files
3 list field for Setup error messages
4 display of the last Setup error message
5 switch for deleting error messages
6 “Close window” switch

Master Control Unit MCU-2I */*/*/*/*

Type key

The following type key is used:
MCU-2I */*/*/*/*



A few additional identification markings can be added without influencing the intrinsic safety.

Connections

The peripheral lines are electrically connected by clearly labeled connectors.

Commissioning, installation

- the device may be put into operation in Category M2.
- the power is connected via plug connectors. These may only be professionally installed.
- unused connectors are to be sealed.
- the equipment is designed for the IP 54 protection type (when professionally attached to an external housing); in the event of harsh ambient conditions (e.g. sprayed water), the equipment must be additionally protected by the operator.
- requirements for safe use from the EC type examination certificate must be observed.
- the connection to the power supply and wiring with external circuits must be specifically certified.
- the equipment is to be electrostatically grounded.
- the device may only be operated when its housing is completely closed and in good condition.
- it is forbidden to operate the device when the housing is damaged.