User-

Instruction Manual

VBASE-RT (Runtime Systems)

VOK (light, PRO, Server, compact)

from Version 10.0

A product of the

VBASE - HMI/SCADA – family

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Industrie IT

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Table Of Content

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1 Important Explanation

To ensure the user a fast installation and startup of the described devices it is essential to carefully read and note the following instructions and hints.

1.1 Legal Bases

1.1.1 Copyright

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1.1.2 Personnel Qualification

The construction of the following instruction and the usage of the VBASE-product family require basic knowledge about the used windows operating system and the used remote systems. (e.g. SPS)!

The in this document described product use is directed exclusively to professionals or trained personnel, who are also familiar with the valid standards.
The VISAM GmbH offers at request inexpensive training for the use of the here described products.

1.1.3 Intended Use

The systems are delivered from factory with the specific use case and with a dedicated hardware and software configuration. Alterations are only allowed in the context of the in the documentation featured possibilities. All other changes to the hardware or software and the non-conforming use of the systems nullify the liability of VISAM GmbH.

1.1.4 License Agreement

The usage of all in this documentation described programs and program parts are subject to the VBASE license agreement.

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1.2   Range of validity

This document provides a general description, in conjunction with certain hardware and/or software. Note the latest and detailed descriptions accompanying the products!

1.3   Used symbols

	Note Information that should be noted to ensure a faultless and effective operation.
	Hint Tips and hints for the efficient use of the system respectively system optimization.
	ESD Warning of damage to the systems/ components by electrostatic discharge. Precautions should be taken when handling electrostatically sensitive components.

1.4   Used Abbreviations

Abbreviation:	Meaning:	Description:
AE	**A**pplication-**e**ditor (Creates the user interface)	Normally the manufacturer or the deliverer of the machine or system.
HMI	**H**uman **M**achine **I**nterface (Interface between machine and user)	Abbreviation for user interfaces of all kind.
Project	Application; is processed by the runtime system.	Contains the illustration and functionality of the user interface.
PV	**P**rocess **v**ariable	Data words in the VDF that contains all process data.
VOK	VBASE-Online-Communication manager, the VBASE runtime system (Base-software)	A runtime system contains the basic functions of the software and represents the basis of the application.
VDF	**V**BASE-**D**ata **f**ield	„Data storage" between all VBASE functions and the connected remote stations
VKM	VBASE communication module	Independent program parts for the data transfer between the VKK and the VOK and the different remote systems
VKK	VBASE communication channel	Data interface (software-side) to the VDF to read and write the PV

Projects are created by the "AE" and contain the illustration and the possibility to control a VBASE HMI/SCADA-application.
This means, how a certain process is visualized, which functions are used among other this all is defined by the "AE" at creation of the project.

The VBASE-runtime systems (VOK) provide the "AE" with all basic functions as software blocks.

The whole application, consisting of runtime system and the executed project, represents a HMI- respectively SCADA-system.

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2 Introduction

2.1 Regarding this document

This user instruction manual is intended to clarify the use with the VBASE HMI-SCADA-runtime systems. In this document the specific possibilities of the basic-software VOK are described.

The construction of the projects and their functions in connection with specific systems, machines or devices are very flexible and individual adjustable. **So this documentation should always be extended by a complete instruction manual of the "AE".**

The operation, installation and setup of the hardware (PC-system) on which the software is executed is not described in this document.

The creation and alteration of HMI-SCADA-applications (projects) with the help of the VBASE editor is described in another description.

Depending on the used VBASE-runtime version some in this document described functions may not be available or only in limited versions. Which VBASE-runtime version is used is decided by the "AE".

3   Specification

3.1   System data

VBASE-RT runtime-systems are executable on PC-systems with Microsoft runtime systems (Windows-XP / -XP embedded / -VISTA / -7 / -8).

The runtime versions "VBASE **compact**-RT" are executable on systems with operating system Microsoft Windows CE (VTP-C/ -IC / -UC) or on Windows embedded compact 7.

The VISAM GmbH delivers VBASE-RT runtime systems as pure software solution for the installation on PC-systems with windows operating systems or preinstalled on complete HMI/SCADA-solution (operation-device-series VTP or gateway products VGATE).

In the following the different VISAM-devices (VTP) are shortly introduced:

The devices of the „VTP-nX"-series (E.g. VTP-A... or VTP-TX...) consist of panel-computers for the industrial use with Microsoft Windows XP embedded or Windows 7 respectively Windows 8 as operating system and VBASE PRO runtime system (VOK) with a software license.

The devices of the „VTP-nC"-series consist of panel-computers for the industrial use with Microsoft Windows CE as operating system and a VBASE compact runtime system (VOK).

The devices of the "VTP-IC"-series consist of very compact 5,7" to 12,1" panel-computers for the industrial use with Microsoft Windows CE as operating system and a VBASE compact runtime system (VOK).

The devices of the „VTP-UC"-series consist of 5,7" to 7" open frame panel-computer for the industrial use with Microsoft Windows CE as operating system and a VBASE compact+ runtime system (VOK).

3.2   Interfaces

For the communication with remote systems different default-interfaces of a PC-system are used depending on the type of coupling (e.g. serial ports RS232, RS422, RS485 or Ethernet).
In some cases (e.g. for specific field bus systems) special interface cards must be installed in the PC or external adapter must be connected between PC-system and remote system (e.g. SPS, regulator).

Interfaces and protocols are chosen and configured by the "AE".

4 Start of the software

4.1 Automatic start of the software

The "AE" should have made sure, for the most applications, that the VBASE-runtime system is automatically started together with the created project (user interface) after the boot of the system.

4.2 Manual starting of the software

The VBASE runtime system can be started manually, if no autostart shortcut was created for your system.

There are different ways to start the VBASE runtime systems. Please ask the „AE" for further instructions.

> → The automatic start of an application can be set up later if needed. Please contact the „AE" for this task.

4.3 Selection of the project to be started

It is possible in different use cases that multiple projects are available for one system.

If the window for the selection of a project opens after the start of the software (VOK), then more than one project is available and the start process was not automated with the help of a corresponding project shortcut. If only one project is available in the respective folder, it is started automatically.

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```
_Demo_Rezeptur.Prj
_Proj1.Prj
06297_03.Prj
Demo_Digitale_Uhr.Prj
Demo_V9_800.Prj
DemoNeu.Prj
DemoNeu_V2_800.Prj
DotNet_Muster_Offline.Prj
ELM Prüfvorrichtung Messe.Prj
farbtest.Prj
ftp_test.Prj
getzner_bse3.Prj
GUV.Prj
Messe_VTP.Prj
```

ESC

Figure 1 VBASE project selection at the start of the VOK
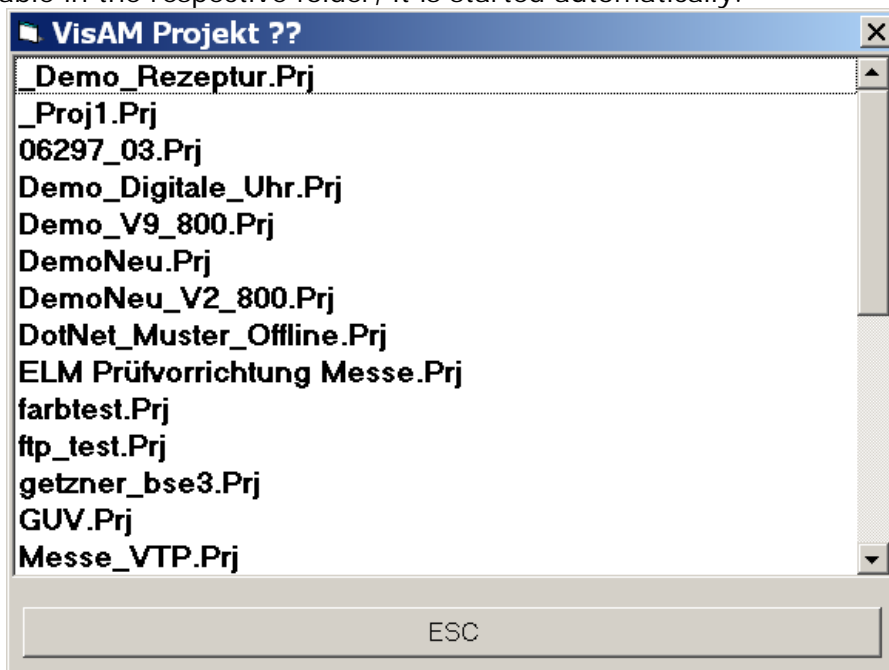
Select the desired project with the mouse by clicking the project name respectively - if using a touchscreen – by tapping the name.

When using a keyboard the selection can be made by using the arrow keys (arrow up/down). By hitting the return button (Enter/Return), the selection is confirmed.

The runtime system is then started with the selected application (project).

4.4 The start process of the VOK

After the runtime system (VOK) was started with the selected „project" the communication with the connected remote system is activated via the parameterized connection (VKK and VKM).
The parameterized process variables are updated and the initial picture is displayed.

In detail:
- o At the start of the VOK the files of the selected file are loaded first.
- o The VDF is initialized and the PVs are loaded with default values.
- o Via the VKK the predefined VKM is initialized.
- o The initial picture is loaded.
- o Was the option „Save VDF" activated, the systems tries to load the last content of the VDF (saved at the last „clean" shutdown).
- o Was "remnant-support" activated for the VDF then the as remnant defined saved data are loaded into the VDF.
- o The PV within the VDF are completely refreshed once (this means all data are requested by the remote systems).

The use of the application is only possible after a successful start process!

The picture that is automatically loaded as first picture (initial picture) was defined by the "AE" with the help of the editor (project properties).

5 The basic elements of the user interface (HMI)

5.1 Runtime system (the basic-software)

A VBASE-HMI-project is processed by a software program – the runtime system. In the background the runtime system takes care of the communication, the data transfer and the display of process values etc.

5.2 The project (the definition of the HMI)

A project is created by the ″AE″ with the VBASE-editor and contains especially the definition of the user interface (illustration). It contains the possibility that the user can manipulate the type of communication with the coupled/linked system.

5.3 Process pictures

A project consists (among others) of a variable amount of process pictures. With the in the process picture contained fields they represent the user interface.

5.4 Fields as control- and display-elements

Fields are animated objects and serve as display for states and data. They also enable the control of the surface by the user.

Process pictures can be invoked from other process pictures with the help of the menu-fields.

Fields are connected to process variables to display process information and enable the alteration of process-values and –states.

After hitting specific fields predefined accessibility tools are invoked that enable a fast and comfortable operation.

Parent functions are either operated with the help of special fields or with the help of the central status bar.

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6   Accessibility tools

To operate applications even without a keyboard, e.g. with pure touchscreen-systems or computer-mice respectively mouse-compatible input systems, VBASE runtime-systems automatically use special accessibility tools with virtual keyboards.

As soon as an input is needed the accessibility tool opens automatically. By using special accessibility tools faulty inputs are reduced as the tools can feature input thresholds.

All accessibility tools can be operated either by direct input via a physically connected keyboard or by clicking on the „virtual" keyboard.

All input- and selection-windows are custom-fitted in their size regarding the respective output device but can be changed by VISAM GmbH according to custom requests.

6.1   Selection help

If up to eight different statuses (states) are available, they are displayed as text or symbol that can be selected.
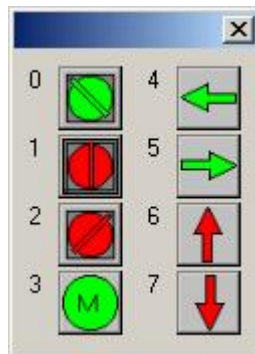

Figure 2 Symbolic selection

Figure 3 Text selection

The corresponding selection can be processed by clicking (with the mouse), tapping (touchscreen) or by inputting the number before the corresponding field with the help of the keyboard.
If only two statuses are available the accessibility tool will not be used but it will directly be switched between the two statuses.

6.2 Alphanumeric accessibility tool

The alphanumeric accessibility tool is used for inputting text, ASCII-strings and for the user login.

For the different areas of application the accessibility tool changes accordingly to adapted variants (see example).

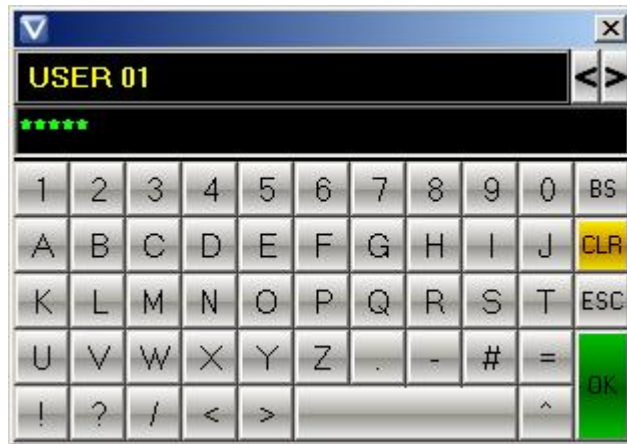Figure 4 Accessibility tool example: User login

At the user login it is possible in the uppermost line to enter respectively select the user name and to enter the user specific code (password). The code will be displayed hidden.

Figure 5 Accessibility tool example : ASCII-string

This variant of accessibility tool will show up when alphanumeric input (text) is needed. This input is displayed in plain text.

Description of the keys:

BS   BackSpace (deletes one character backward)

CLR   Clear (clear all)

ESC   Escape (cancel)

OK   OK (confirmation and acceptance of the input)

^   Shift (switching between uppercase and lowercase)

All remaining keys create characters according to their label. The created characters are displayed in the activated text line at the uppermost border of the accessibility tool.

The illustration (size and colors) of these accessibility tools may differ from the here displayed illustration and depends on the in the project defined settings. Changes can be made by the "AE" with the help of the VBASE-editor if needed.

6.3 Numeric accessibility tool

The compact numeric accessibility tool is used when only the input of pure numeric values is possible.

Figure 6 Accessibility tool example : numeric

For the different areas of application the accessibility tool changes accordingly to adapted variants.

In the two fields below the input line
the minimum and maximum thresholds of the possible input is displayed.

Description of the keys:

   BackSpace (delete one character backward)

   Clear (clear all)

   Escape (cancel)

   OK (confirmation and acceptance of the input)

All remaining keys create numbers according to their label. The created numbers are displayed in the input line at the uppermost border of the accessibility tool.

6.4 Gestures

Another way of operation can be realized via gestures (only in connection with Multi-touchscreens and Microsoft Windows 8 operating system!).

The setting if gestures are enabled in the project and which gestures has which function is described in the settings of the project and thus should be mentioned in the documentation of the project by the "AE".

⚠ General hint: Gestures cannot be executed when above of active fields!

Up to six different gestures can be used in a VBASE-project:

"Wipe"

Touching the touchscreen surface with two or more fingers and subsequent parallel movement of the fingers to a certain direction (from top to bottom, bottom to top, right to left, left to right).

It is usual to switch to a different process picture with these gestures, but the "AE" can change the function of these gestures arbitrarily.

"Turn"

Touching of the touchscreen surface with two spread fingers and subsequent turning of the finger position. This gesture can also be used for the switching of process pictures or for the activation/deactivation of a certain function by the "AE".

"Spreading"

Touching of the touchscreen surface with two spread fingers and subsequent opening or closing of the fingers. This gesture can also be used for the switching between process pictures (e.g. the illustration of details similar to "zooming") or for the activation/deactivation of a certain function by the "AE".

→ Hint: Besides the pure assignment of gestures to certain functions it is optionally possible to determine positions, distances etc. that were created with the help of gestures. Depending on the so determined values it is possible for the AE to realize specialized functions. The distance while "wiping" can be used for specific functions. For example short wipes can switch to an adjacent process picture, while a wide wipe would switch to a picture after next. As this behavior of the gestures is very specific the corresponding description should be documented by the "AE".

7   The status bar

The status bar of the VOK can be displayed in three different modes depending on the settings. The setting is determined centrally for the whole project by the "AE" with the help of the editor and is not adjustable at runtime.

The status bar contains system information of the VOK and enables the invocation of system functions. All in the status bar located functions can otherwise be invoked via the field "Systemfunctions" so that the status bar must not be used to ensure full functionality. The according function must be set by the "AE" in the VBASE-editor.

7.1   Large status bar

The large status bar is displayed at the uppermost border of the screen and is permanently displayed depending on the VOK-version

7.2   Small status bar

Was the status bar set as small status bar it is not permanently displayed and some additional properties for the activation and illustration of the small status bar are available.

The small status bar is more compact than the large status bar but contains the same information and functions. The small bar is displayed as overlay to the current process picture in contrast to the large status bar.

The position at which the status bar is displayed in the picture as well as how the small status bar is activated is centrally adjustable.

7.2.1   Activation of the small status bar

The small status bar can be invoked by positioning the mouse into the area where the status bar should be displayed depending on the predefined setting (most likely header). If additionally to the option "small status bar" the option „Shortcut" is activated then the automatic display of the small status bar is deactivated. To display the small status bar the according key shortcut must be pressed that was chosen by the "AE". To fade out the small status bar the same key shortcut must be pressed or the mouse pointer must be moved away from the status bar. Besides the described cases the status bar is displayed at certain notifications.

7.3 Areas of the status bar

The functions of the status bar are divided into different areas so called „cells".
The cells 1-5 (on the left side) can be operated according to the predefinition.

The cells 6-7 serve only as illustration of system information.

7.4 Operation of the status bar

The operable cells of the status bar can be activated by clicking them with the mouse (left button) or by tapping (at touchscreens).

When using a keyboard the cell number (1-5) can be used in connection with the "Alt"-key as shortcuts.
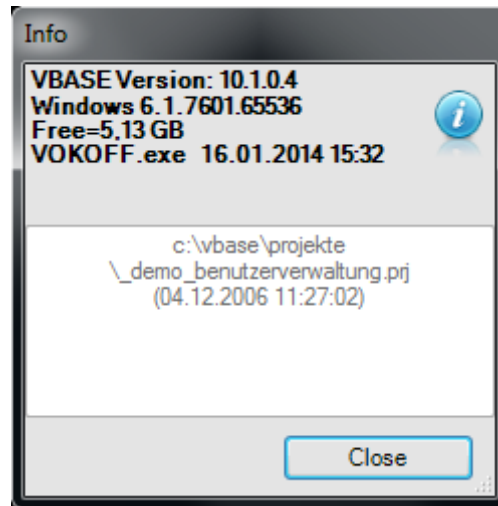
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7.5 Functions of the status bar

7.5.1 General system information (1)

Cell 1 (ALT + 1):

 Opens a window with general information.

The first four cells contain information, such as company name, contact details or similar things that were deposited by the "AE" for this project in the project properties (in the Info/Time tab).

The bottom two lines contain project name and save directory ("Prj=") as well as the version (date and time of the last changes made to the project)

7.5.2 Communication status (2)

Cell 2 (ALT + 2):

Opens a window with all information about the data transfer and shows the status of the communication (OK or error).

Status illustration:

Communication is fine

Communication is faulty.
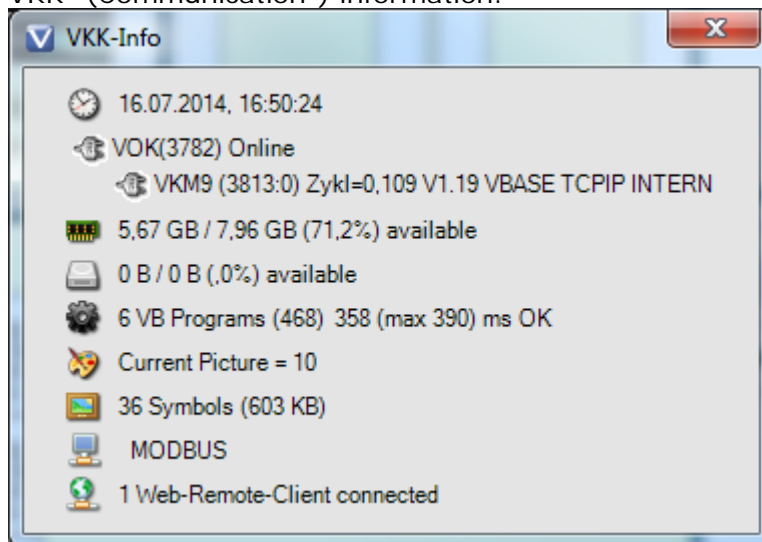
VKK- (Communication-) information:

Figure 7 VKK-information

This window shows detailed information about the data transfer and the current VOK-state.

The first line shows the current date and the time (as defined in the system).

The second line shows the uptime of the VOK in brackets and if a connection is established to a connected system (in above example „Online"). Additionally the used remote-interfaces and their statuses, communication counter (reading:writing), cycle time, driver version and name are displayed among grouped rows. In case of an error the line is displayed highlighted red and according hints are displayed

The third line displays the current ram usage as storage size (currently used/ total available) and the storage use in percentage.

The fourth line displays the used and the available hard drive space in storage size and the usage in percentage (in the example image 0B / 0B (0%) as

the screenshot was made on an emulated version); at real devices the available storage space of the used hard drive (HDD/SSD) is displayed.

The fifth line displays if the VBASE Basic-engine (VB-Engine) is activated. The BASIC-engine processes (if activated) specific programmed application parts made by the "AE" within the VBASE runtime system. Is the VB-engine active then this line features additionally VB-status information (amount of currently active VB-program, process counter, cycle time, maximum cycle time and status). In an error case the line is highlighted red and according hints are shown.

The sixth line illustrates the current picture number (unique picture number with which the pictures are managed within VBASE).

The seventh line illustrates the amount of symbols that are used in the current project and how much disk space they occupy.

The eighth line illustrates the status of the active data-server-interfaces. It is illustrated which server-interfaces were activated by the "AE" as well as their current operating state.

By VBASE supported data-server and their usage:

-   VOK TCP/IP-Server enables the linkage of different VBASE- respectively VisAM (communication between different VISAM HMI-systems and SCADA-applications). As this server-interface is openly documented by the VISAM GmbH and is easy to integrate, this server is also used for the connection of foreign software. Refer to the corresponding documentation of the "AE".
-   ISO on TCP (RFC1006) Server. The VBASE-RT features a simple server that is compatible to the "ISO-Standard" over which different systems that support this standard can communicate.
-   Modbus TCP-Server. The VBASE-RT features a simple server that is compatible to "Modbus TCP" over which different systems that support this standard can communicate.

The Web-Remote server (illustrated in the last line) enables (if activated) the remote control of specific process pictures respectively the whole project (depending on the parameterization of the "AE") with the help of web-browser-based systems. This includes PC-systems, smartphones, tablet-PC's etc. up to smartTV's. The VBASE web-remote server is platform independent and can be used as remote control on different operating systems (e.g. iOS, Android, MS-Windows…). Condition for usable web-remote-clients is the use of modern web-browsers (client side) which support the HTML5 standard.

This line shows the amount of active "Web-sessions" besides the status (web-remote server active/inactive).

Each web-session represents an active logged in distant system that has a connection to the server via a web-browser.

→ **Only** the VBASE **SERVER-RT supports** more than one web-session at a time! **All other runtime systems** will reject new login attempts from additional systems when one system has successfully connected to the VBASE web-remote server. Shortly after a session is terminated the login is available to other systems again.

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7.5.3 System and user administration (3)

Cell 3 (ALT + 3):

Opens the user administration if it was activated in the project by the "AE".

After activation of cell 3 in the system bar or by invoking it by an according field the system demands the identification of an authorized user by input of user name and user code („password"). In the top line a user can be selected from a list as valid user. To gain full access you have to login as System Manager (Administrator).
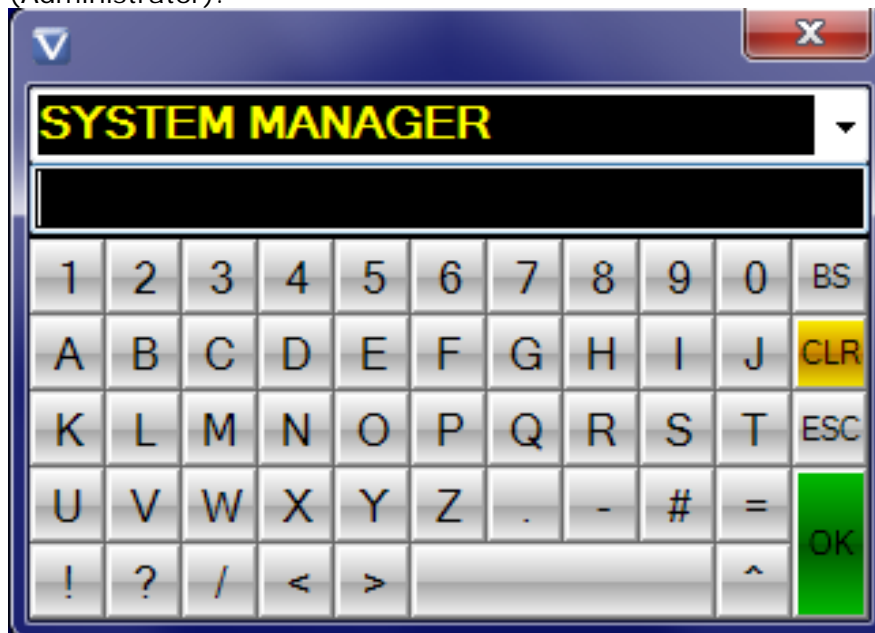

Figure 8 User administration

This accessibility tool („CODE"-window) allows the input of the required data with the help of a touchscreen or a computer mouse as well as the input of a keyboard.

A successful login is only possible if a valid user name with its valid user code was input.

The runtime system („VOK") knows two general types of users:

- Normal users (operators)
- System manager (administrator)

The name of the „System manager" is adjustable!

A faulty respectively invalid login is displayed with the following symbol:

Unsuccessful login.

Wrong name or wrong user code. User account including name and code can be changed by the „System manager" within the „System administration".

User account inactive respectively expired.

The validity of a user account was deactivated and must be reactivated within the system administration by the "System manager".

The logged in user does not have the required authorization to process this task.

All authorizations of user are exclusively granted or revoked by the „System manager" within the system administration. Which authorizations are required to fulfill certain tasks are determined by the "AE" and registered in the project.

The „AE" must provide the system manager with an corresponding documentation so that he is able to administrate the user authorization!

The system recognizes on the basis of the login automatically when the „System manager" logs in and opens after successful login automatically the system administration (see chapter 8 „System administration").

A "normal user" (operator) can change his own user code after successful login when he was given the authorization to do so in the system administration.

In this case the user administration button must be pressed again after login so that a window, similar to the login window opens with an accessibility tool. The new user code can be input and confirmed in this window.
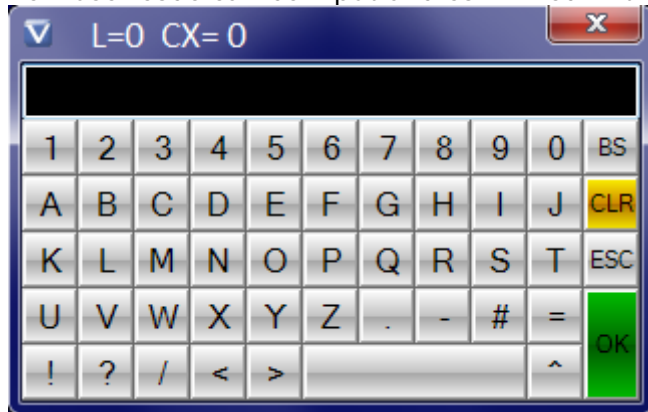
The in the header given value „L=" represents the minimum length (amount of characters) that the code must have. The value "CX=" represents the minimum complexity of the user code.

Code-complexity:
0 = minimum; only numbers or only letters are valid and it is not distinguished between upper and lower case.
1 = minimum; only numbers or only letters are valid but it is distinguished between upper and lower case.
2 = The new user code must at least fulfill two of the complexity requirements.
3 = The new user code must at least fulfill three of the complexity requirements.
4 = The new user code must fulfill all four complexity requirements.

Complexity requirements:
- Uppercase letters
- Lowercase letters
- Numbers
- Special character

After the input of a user code that fulfills all requirements, the old user code is replaced with the new user code and the accessibility tool is terminated.

If the accessibility tool is not terminated respectively is opened again then the input new code was not valid.

7.5.4 Hardcopy (4)

Cell 4 (ALT + 4):

Sends the current screen content to the connected default-printer as far as this function was activated by the "AE" in the project.

7.5.5 Notification System (5)

Cell 5 (ALT + 5):

Shows the current status of the notification system respectively opens the notification window with the illustration of current notifications as far as they were activated in the project by the "AE".

Status: no notification active

Permanent display, status: at least one notification, no unacknowledged notification

switching with ("blinking") ,
Status: at least one or more unacknowledged notification(s) are queued

7.5.6 Current user name (6)

Cell 6 (only display):

SYSTEM MANAGER   Shows the current respectively last logged in user.

7.5.7 System time (7)

Cell 7 (only display):

10.07.2014 08:57:46   Shows the current date as well as the time of the system.

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8 The system administration

8.1 Open system administration

If the „System manager" (administrator) logs in successfully with his name and user code by activating cell 3 of the status bar then the window of the system administration opens automatically.
Within the system administration the general system settings as well as the central administration of all user accounts can be managed and/or changed
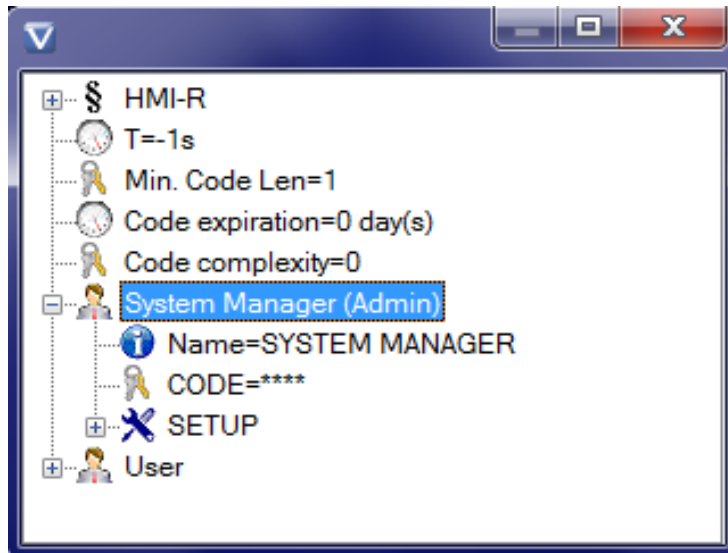

Figure 9 System administration main view

8.2 Assignment of authorizations for functions

Which functions require which specific authorizations to operate them are partially determined in the runtime system or are parameterized by the "AE" in the project.

⚠️ This assignment cannot be changed during runtime!

8.3 Changes in the system administration

8.3.1 Change authorization –labels (HNMI-R)

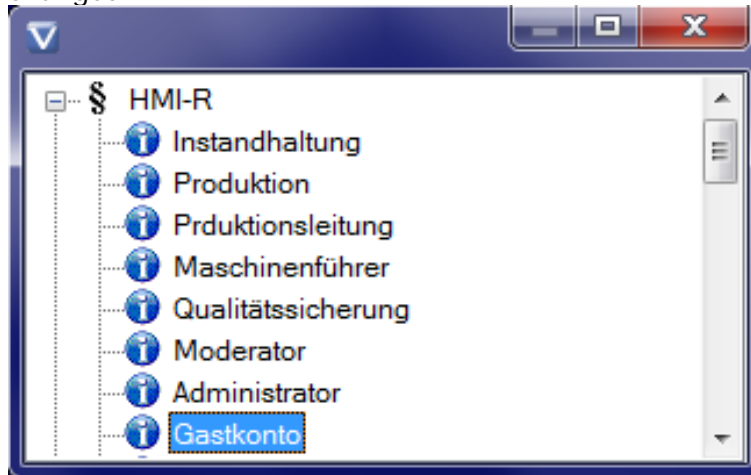In this section the names/labels of all 32 available authorizations can be changed.

Figure 10 System administration authorization labels

8.3.2 Set user-login time

In the section user-login time the duration (in seconds) can be set that determines how long the user login remains active without user input.

This time is automatically restarted after a successful user login or at every new user input. This means the user remains logged in as long as he actively operates the system

As long as the login time did not run out the user remains logged in and can operate all functions to which he has the required authorizations. If the time runs out the user is automatically logged out and must login again before he can make the next operation.

⚠ If the user-login time is set to „0" a login is required prior to each operation that requires an authorization.

8.3.3 Set minimum length for user codes

Under the abbreviation „Min Code Len=_" the minimum length (amount of characters) of new user codes can be set. Unter dem Kürzel „Min. Code Len=" kann die Mindestlänge (Anzahl Zeichen) für neue Benutzer-Codes eingestellt werden.

8.3.4 Set expiration time of user codes

Code expiration=20 day(s)

Under the abbreviation „Code expiration=_" the expiration time (in days) can be set after which the user account is automatically deactivated if the corresponding user did not change his user code in this period of time.

→ Deactivated respectively expired user accounts must be manually reactivated by the "AE" in the user administration.

8.3.5 Set the complexity for the user codes

Code complexity=0

Under the abbreviation „Code complexity=" the complexity requirement for the user codes can be set.
A description regarding complexity of user codes can be found in chapter 7.5.3 („System and user administration").

8.4 System Manager (Admin) account

The system manager has **always all authorizations** in the HMI-surface. Hence only the name of the account and the user code are settable for the account of the system manager.
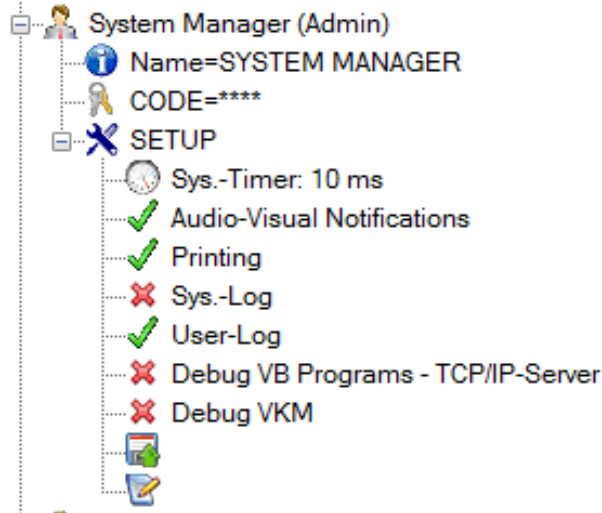

Figure 11 System manager account

8.4.1 Activate online-setup

Via the entry „Setup" within the system manager account the online-setup window is opened.

The „Online-setup" allows the alteration of certain, global project properties at runtime and grants access to so called debug-information that can help when diagnosing an error case.

⚠ All here made changes are not saved! After a restart of the software the settings are loaded from the project (as configured by the "AE").
These settings should only be altered by trained personnel with system knowledge!

8.4.2 Setting possibilities in the online-setup

1 Setting the VOK system clock (default value 10ms threshold 1-999ms)

2 De-/activation of audio-visual notifications

3 De-/activation of printer output

4 De-/activation of the system-log function

5 De-/activation of the user-log function

6 De-/activation of the VB debugging respectively the TCP-IP server debugging

7 De-/activation of the VKM debugging

8 Change of folder (directory) for the recipe administration

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9 Change of folder (directory) for the logging

8.5 User accounts

In the user accounts the „System manager" can perform different settings for each user as well as de-/activation of authorizations.
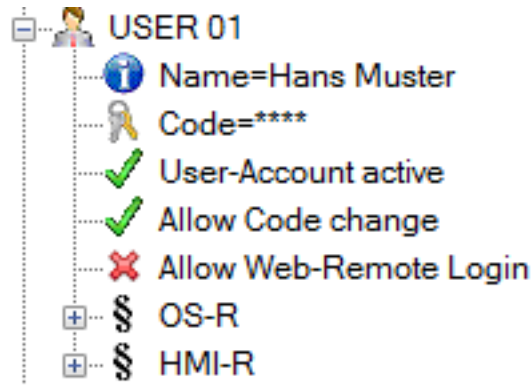

Figure 12 User account

8.5.1 Change user account name

By selecting the user account name the alphanumeric accessibility tool opens and allows the alteration of the user account name.

8.5.2 Change user code

By selecting the line „Code" the alphanumeric accessibility tool opens and allows the alteration of the user code.

8.5.3 De-/activate user account

The option „User-Account active" shows the status of the user account.

A green checkmark before the entry marks an active account.

A red cross before the entry marks an inactive account.

By selecting the line the status can be changed (active / inactive).

8.5.4 Allow the user the changing of his user codes

The option „Allow Code change" shows if this user is allowed to change his own user code.

 A green checkmark before the entry means the user is allowed to change his own user code.

 A red cross before the entry means the user is not allowed to change his own user code.

By selecting the status (user code changeable or not) the status can be switched.

8.5.5 Set OS-authorizations

§ In the section „OS-R" certain operating system authorizations can be set for each user.

A green checkmark before the entry means that this user has the according authorizations.

A red cross before the entry means that this user does not have the according authorizations.
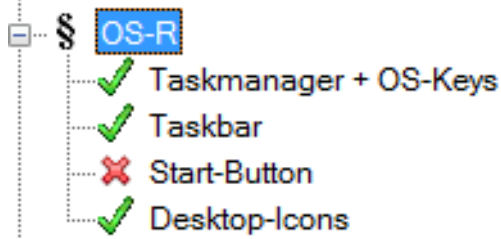
Figure 13 User OS-authorizations

Task-Manager + OS-Keys
Determines if the user has access to the „Task-Manager" or to basic key-combinations of the operating.

Taskbar
Determines if the user has access to the Taskbar or not.

Start-Button
Determines if the user has access to the „Start-Button" of the operating system.

Desktop-Icons
Determines if the user has access to the Desktop-icons of the operating system or not.

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8.5.6   Set HMI-authorizations

§   In the section „HMI-R" the authorizations for the HMI-R-surface (fields) are set for each user.
The labels as well as the usage of these authorizations are variable and partly predefined by the configuration by the „AE".

Figure 14 HMI-authorization example

A green checkmark before the entry means that this user owns this authorization.

A red cross before the entry means that this user does not own this authorization.

9 The notification system

With the help of the optionally configured notification system notifications for example of warnings or technical faults can centrally be displayed. It is additionally possible to log and evaluate all notification events.

9.1 Status illustration of active notifications

If the notification system is activated in the „project" then queued up notifications are symbolically displayed.

Status: no notification active

Permanent display, status: at least one notification, no unacknowledged notification

switching with („blinking") ,
Status: at least one or more unacknowledged notification(s) are queued

9.2 Detail display of active notifications

By selecting „cell 5" in the status bar the notification window opens .

Depending on the project planning it is possible that this window is automatically opened when a notification occurs.

Quittiert	SQ	Bezeichnung	?
⚠ 10 - 10:58:25,262	18	18 ?	-
⚠ 10 - 10:58:25,257	1	Störung Druckluftversorgung	-
⚠✔ 10 - 10:58:25,262	3	Störung Ölstand	-
⚠✔ 10 - 10:58:25,262	17	17 ?	-

Each line in this table describes a queued active notification.

The first column of the table shows the status of the notification symbolically:

active, not acknowledged notification

active, already acknowledged notification

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SQ In the second column the unique notification number is displayed.

Bezeichnung The third column shows the descriptive text to this notification.

? In the last column additional information to this notification are displayed if they were programmed by the „AE".

X With the help of the key „Esc" or by clicking respectively tapping of the header this window can be terminated.

9.2.1 Illustration notification history

The illustration history shows the last 250 notification events in the order of their occurrence and with a time stamp.

newly occurred active notification („comes")

notification was acknowledged („acknowledged")

notification closed („goes")

The second column contains the time when the events occurred.

SQ In the third column the unique notification number is displayed.

Bezeichnung The fourth column shows the descriptive text to the notification.

9.3 Notification-protocol

If the „AE" did activate the current illustration of notifications (as described prior) and also the logging of notifications then all notification events are also stored to a storage medium or database.

Logged notification events can be viewed and evaluated with the help of the report-field (see chapter 13.3)

9.3.1 Notification-report

The notification-report is a help-tool from older VISAM HMI/SCADA versions and isn't a part of the current VBASE-version anymore, but can be installed optionally later for compatibility reasons (further use of older projects without alterations to the project). Modern projects should use the modern functionality of the report-field (see chapter 13.3).

Was the report-program configured by the „AE" then it can be activated by a field within the application.

Figure 15 Notification-report

The first column contains unique number of the occurred event.

The second column contains the time when the event occurred

The third column shows the status of the notification event symbolically:

-N : Newly occurred notification(„comes")
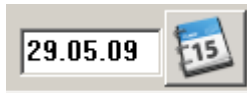
-Q : Notification was „acknowledged"

-G : Notification completed („goes")

The fourth column shows the unique notification number.

The fifth column shows the descriptive text to the notification.

9.3.2   Operation of the notification-report

In the lower line of the report program some operation elements can be found for the functions described as followed.

 Notification events are automatically written in daily changing files. The date in the lower left shows which file is currently displayed. To address a certain day the date can be manually changed directly.

 The date of the notification events that should be displayed can be changed with the arrow keys day-wise.

 The button with the printer-symbol allows the output of the currently displayed table.

 This button terminates the report-program.

9.3.3 Notification statistic

The notification-statistic is a help-tool from older VISAM HMI/SCADA versions and isn't a part of the current VBASE-version anymore, but can be installed optionally later for compatibility reasons (further use of older projects without alterations to the project). Modern projects should use the modern functionality of the report-field (see chapter 13.3).

The help program „notification statistic" allows a simple evaluation of the logged notification events for a selectable period of time (in days).

Was the program configured by the „AE" then it can be activated within the application with the help of a field.

After the start the following selection window opens:
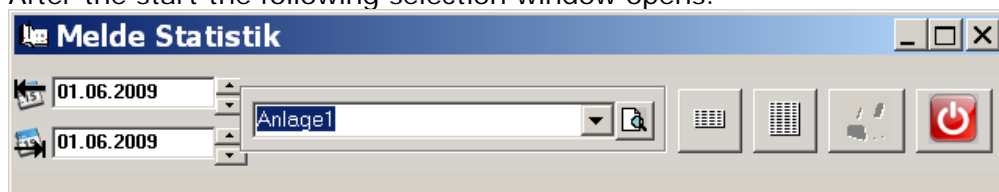
Figure 16 Selection window notification statistic

Evaluation-period of time:

 In the window in the lower left the desired period of time can be selected (from – to) in days.

Filter:
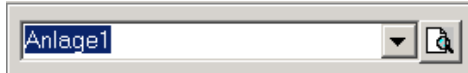
 In the middle window area it is possible to specify optional filters for the evaluation. Was a filter selected then only the notifications of the statistic are considered that contain the in the filter mentioned text.

Show evaluation:

 The button with the small table-symbol shows a compressed short overview of the statistic.

 The button with the big table-symbol shows a detailed overview of the statistic.

Figure 17 Notification statistic detailed view

The selected period of time and the filter-option can be changed at any time.

 The button with the printer-symbol allows the output of the currently displayed table.

 This button terminates the statistic-program.

10 The data logging

With the help of the (optionally by the AE configured) „logging", process-data and conditions can be automatically logged for a later display or evaluation.

What data are logged to which time and in which format is determined by the „AE" by the parameterization in the project.

If the logging is activated in „Project", the data are either saved to a storage medium or to a database.

For the display and evaluation of the logged data (e.g.) the powerful linewriter-field can be used (see chapter 13.2). Additional possibilities of evaluation can be parameterized by the „AE" and should be mentioned in the separate documentation of the "AE".

10.1 Show and evaluate logged data with the DB-report

The DB-report is a help-tool from older VISAM HMI/SCADA versions and isn't a part of the current VBASE-version anymore, but can be installed optionally later for compatibility reasons (further use of older projects without alterations to the project). Modern projects should use the modern functionality of the linewriter-field (see chapter 13.2).
The help program DB-report is <u>not</u> suited to process data from a SQL-database!

10.1.1 Activate DB-report

The help program DB-report can be activated with the help of a button („field") from the HMI-surface. But there are additional ways to start this help program.

10.1.2 Illustration views in DB-report

The DB-report can view the data in two different ways, as table or in a line graph. Within the DB-report window the illustration view can be switched with the help of buttons at any time.
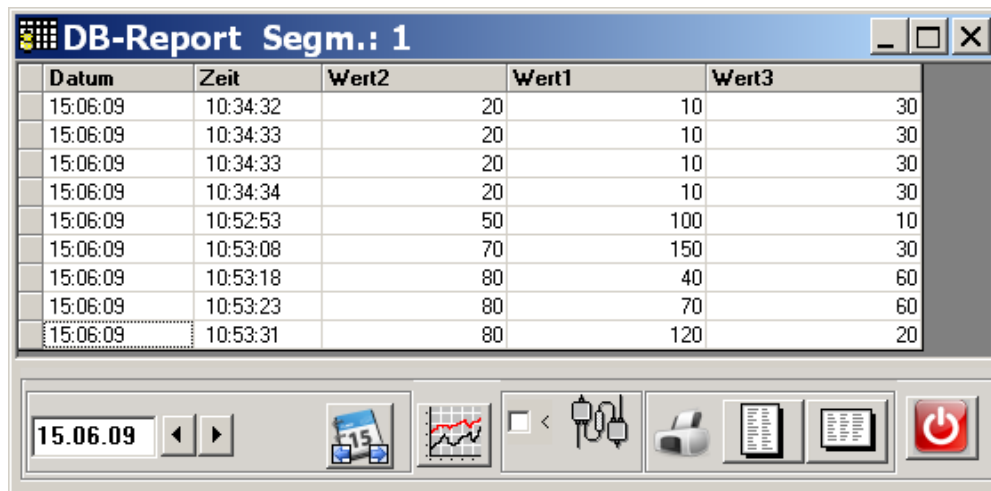
 By activating this button within the line graph view, the view is switched to table view.
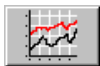
 By activating this button within the table view the view is switched to line graph view.

10.1.3 Table-view

In the table view the data are displayed in a table as configured by the „AE".
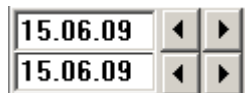

Figure 18 DB-report table view

   Simple date selection. Here the day for which the data should be displayed is set via direct input or selection.

   By hitting the button it is switched to the area-date-selection (display of multiple days). This option is only available in connection with CSV-files!
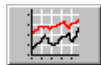
   Area-date-selection. The area (from day – to day) for which the data should be displayed can be set here via direct input or selection.

  By hitting this button the selected area is confirmed and the refreshing of the display is activated.

   By hitting this button it is switched from the area-date-selection to the simple date selection (display for one day/file).

  By activating this button within the table view it is switched to the line graph view.

   If this option is activated then the display is automatically refreshed when new data arrive.

   To print out the currently displayed table in portrait or landscape format.

 This button terminates the program.

10.1.4 Line graph view

In the line graph view the data are displayed as a line graph. It is possible to display up to 10 lines simultaneously over a timeline.
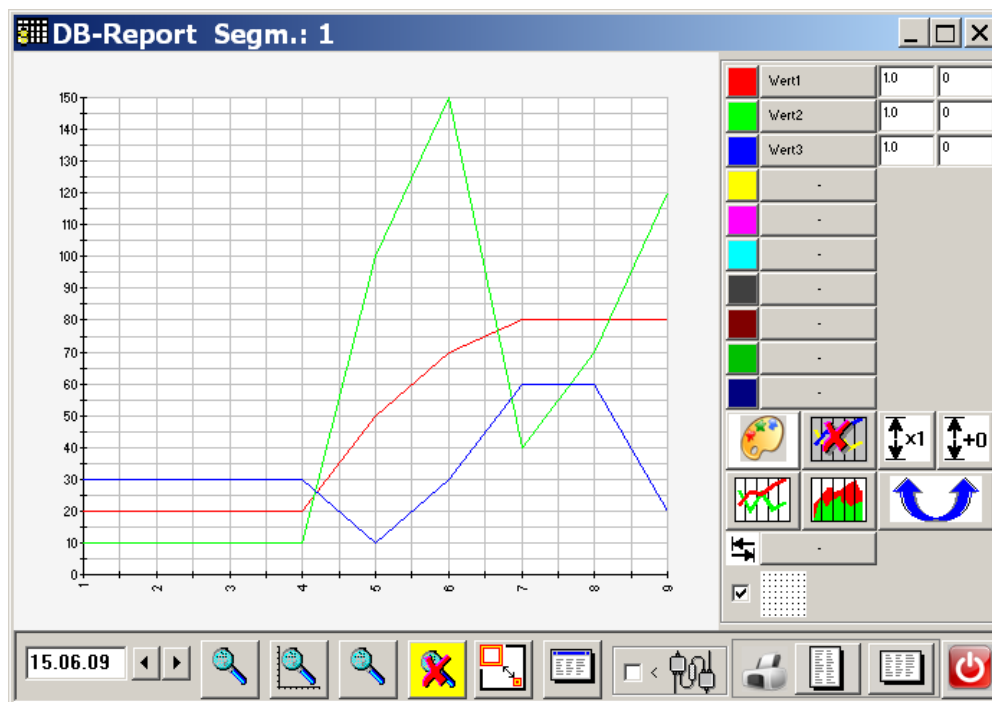

Figure 19 DB-report line graph view

In line graph view some additional options are selectable which influence the display.

Basic settings:

  Date selection. Here the day is set for which the data should be displayed by direct input or selection.

  Key, selection and color assignment of up to 10 data points that should be displayed simultaneously in the line graph. Each entry represents one line (respectively one data point) in the line graph.

  The hitting of this button deletes the selection of all data points.

  This button allows the optional assignment of a database-column to the timeline. If no assignment is entered the data sets are displayed numbered on the timeline.
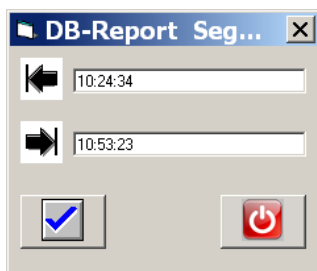
Zoom-functions:

The first button (from left) with the magnifying glass symbol allows the enlargement of a selected area over both line graph axis.

With the second button the selected area is enlarged only over the time axis while the other axis remains on the maximum value.

With the third button the displayed area (time axis) can be selected via input.

The format of the area selection depends on the selected time axis assignment. If no time axis assignment selected the data set number (1 – x) can be input.

With this button the zoom-illustration can be canceled. Is the button yellow highlighted this means that currently no zoom-illustration is used (all data are illustrated).

Display options:

De-/activate grid in background

Set diagram/line graph background color

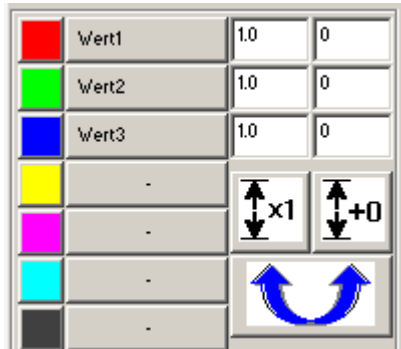Display as surface chart

Display as line graph

Switch between view types ;
1. only diagram with footer
2. diagram with key without adjustment values
3. maximum view (with adjustment values).

Adjustment values:

For illustration purposes the measured values of each line can optionally be applied with an offset value and/or multiplied with a factor.

The adjustment values can be inserted after each line.

■ (red)	Wert1	1.0	0
■ (green)	Wert2	1.0	0
■ (blue)	Wert3	1.0	0
■ (yellow)	-		
■ (magenta)	-	⬍x1	⬍+0
■ (cyan)	-		
■ (black)	-	↻	

By hitting this button the order of the calculation is reversed (first multiplied with factor than applying offset or vice versa).

Hitting this button erases all factor values.

Hitting this button erases all offset values.

General operation functions:

By activating this button while in diagram-illustration the view is switched to table.

Is this option activated then the display is automatically refreshed every time a new data set arrives.

To output the currently viewed diagram in portrait or landscape format.

This button terminates the program.

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11 Recipe administration

With the term „Recipe" a grouping of data is associated that can be stored as file to a storage medium.

With help of recipes, station settings respectively product specific data sets (mixing ratio, parts lists etc.) can be saved under a name and reinvoked any time needed.

The grouping of data sets is configured by the „AE".

At runtime there is the possibility (depending on the project) to save new or changed recipes to load existent recipes or erase them.

11.1 Save recipes

Is a (by the „AE" configured) „Save recipe"-field hit then the alphanumeric accessibility tool is opened to enter a recipe name under which the data will be saved.
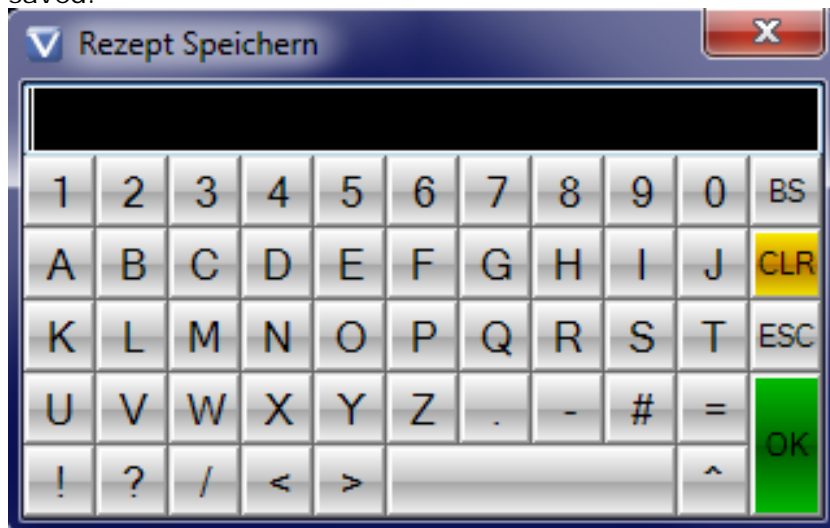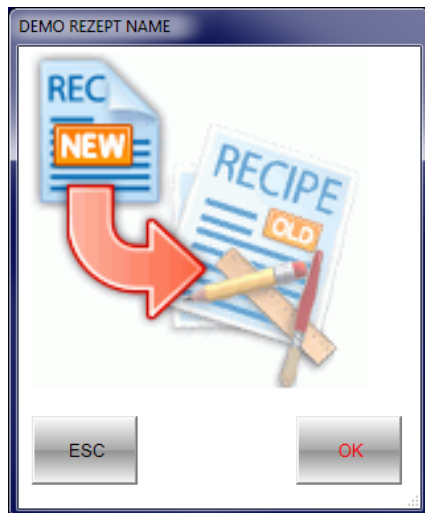

Figure 20 Save recipe input

After confirming the recipe name a file with all recipe data is created respectively saved.

If a recipe name is used for saving that is already existent on the storage medium a symbolic confirmation is shown.

If the existent recipe should be overwritten with new data the "OK" button should be hit.

To cancel the process and to not overwrite the data on the existent recipe on the storage medium the "ESC" button should be hit. After hitting "ESC" the save process must be initialized again with another name!

11.2 Load recipe

Is a (by the „AE" configured) „Load recipe"-field hit then the selection list of the available recipes is opened.
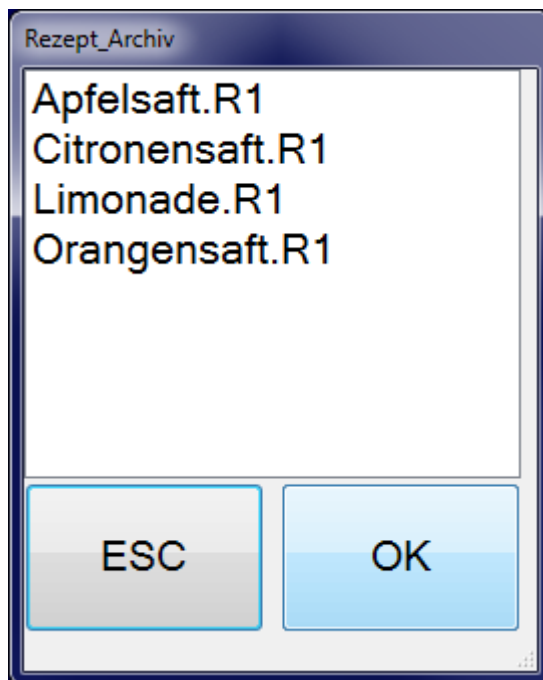

Figure 21 Load recipe selection

To load a certain recipe it must be selected by clicking respectively tapping (at touchscreens) or by selecting it with the arrow keys and subsequent confirmation by hitting the Enter/Return key

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 The size of the dialog window is defined in the project but can be adjusted at runtime by clicking and holding the frame and dragging it with the mouse.

11.3   Erase recipe

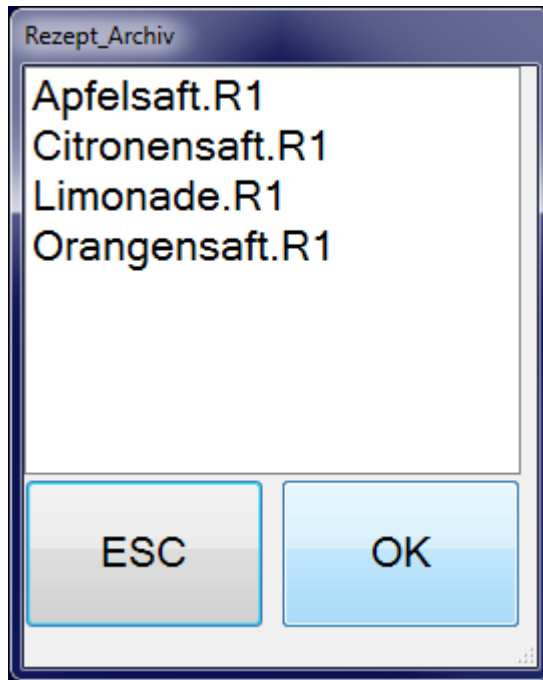If a (by the „AE" configured) „Delete-Recipe"-field is hit a selection list with the available recipe opens.

Figure 22 Delete recipe selection

To delete a specific recipe it must be selected by clicking respectively tapping (at touchsceens) or by selecting it with the arrow keys and subsequent confirmation of the Enter/return key.

In the second step a symbolic safety query if the selected recipe should irreversibly be deleted opens:
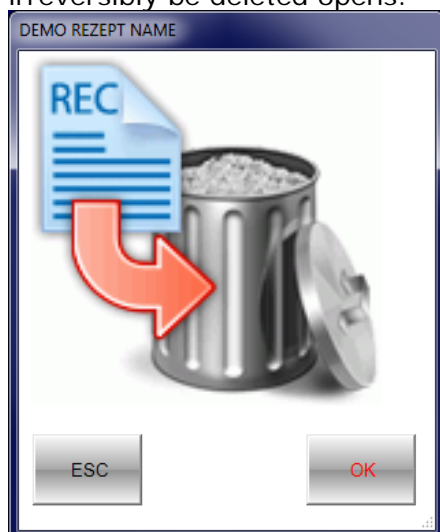
⚠ By hitting the „OK" button the selected recipe will be irreversibly deleted!

By hitting the „ESC" button the process can be canceled without deleting the selected recipe.

12 LOG – Protocol

With the help of the optional configurable „LOG-functions" system-events and user inputs can be logged.

Which events will be logged are determined by the „AE" by the parameterization of the project.

12.1 Display of the LOG-data with the report field

To display the LOG-reports (logged events) in a VBASE-project the field „Report" is used.

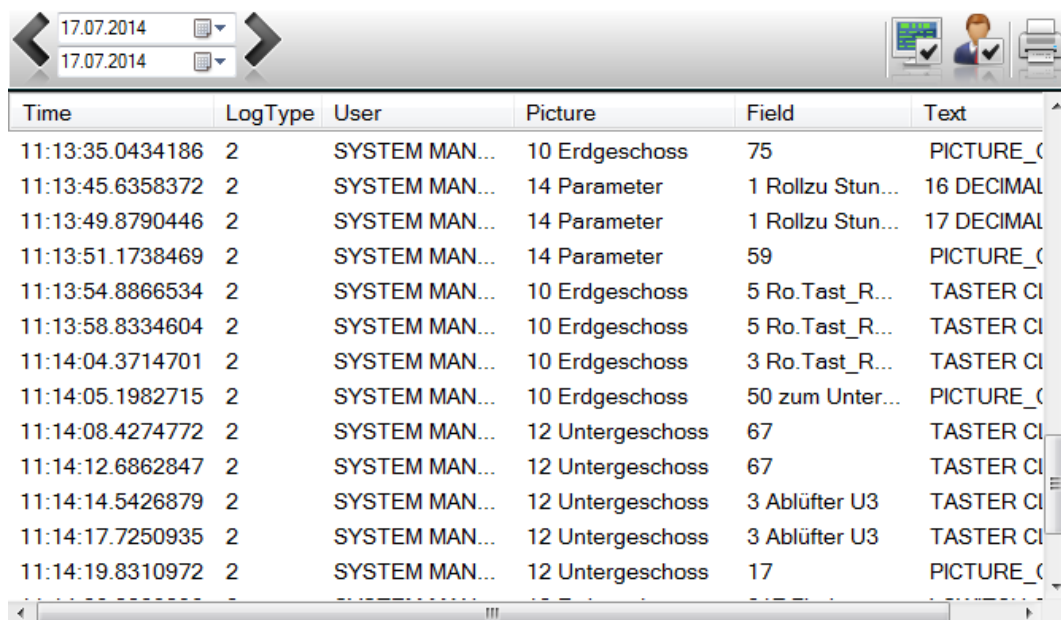All functions of the report field are deposited in this field type.

The report field can be fundamentally parameterized by the „AE" within the VBASE-editor.
The illustration and behavior of this field is influenced by the parameterization at runtime.

Depending on the settings (that were made in the editor) of the field property "menu" the menu is either always displayed in the header of the field or by clicking the header to be displayed in an own drag able window:

CSV-Export Function (with symbol in menu):

By hitting („clicking" with) the right mouse button the function **„CSV-Export"** is invoked which allows to write/save the current data to a CSV-file.

Figure 23 LOG display in report

The log-events are displayed in a table. The columns of the table contain:
- a timestamp ("Time")
- the log-event-no. (see table in chapter 12.2.2)
- the user that was logged in when the event occurred (if no user was logged in the entry „U?" is used)
- the number and the name of the process picture that was active when the event occurred
- the field-number and optional the name of the field that was operated
- a description to the event („text")

CSV-Export Function (without symbol in menu):

By hitting („clicking" with) the right mouse button the function **„CSV-Export"** is invoked which allows to write/save the current data to a CSV-file.

By clicking the header of this function the usual symbol bar can be displayed and moved freely to a desired location. By clicking the header again the symbol bar disappears again.

The following described operation elements all belong to the integrated menu of the report field:

Period of time selection
Here the display range (from day / to day) can be selected.
The possibilities and effects depend on the data source to which this field is associated by the parameterization.

Start the output of the currently displayed view on a printer.
If a file with the name : *„PrintHeader.png"* is available in the project-directory then this graphic from this file is also printed as header in the output.

Illustration - Log-Report

Show system-log-events (if „checked") respectively don't show if unchecked

Show user-log-events (if „checked") respectively don't show if unchecked.

12.1.1 List of LOG-event numbers

LOG–Event-No:	Descripton:	Kind of event:
1	Login of a user	User
2	Manipulation of fields (user operation)	User
10	Restart of the VOK initialized	- System -
11	Restart of the VOK completed	- System -
12	Communication error of a VKK	- System -
20	User administration – Login was unsuccessful , wrong name or wrong user code (password)	User
21	User administration – missing authorization	User
22	User administration – successful login	User
25	User administration – unsuccessful login, user account is blocked/deactivated respectively expired	User
27	User administration – Unsuccessful confirmation when saving the user administration	User
28	User changed his user code (password) successfully	User
29	Settings were changed, the „System-Manager" (administrator) committed changes to the User administration.	User

30	User administration – Login was unsuccessful , wrong name or wrong user code (password)	User
31	User administration – successful login	User
33	User administration – successful login but an authorization is missing	
35	User administration – login unsuccessful, reason : user account is blocked/deactivated respectively expired	User
100	Runtime system (VOK) was terminated and the operating system was shut down	- System -
101	Runtime system (VOK) was terminated	- System -
102	Project restart was executed	- System -
103	Foreign-application was started and runtime system (VOK) was terminated	- System -
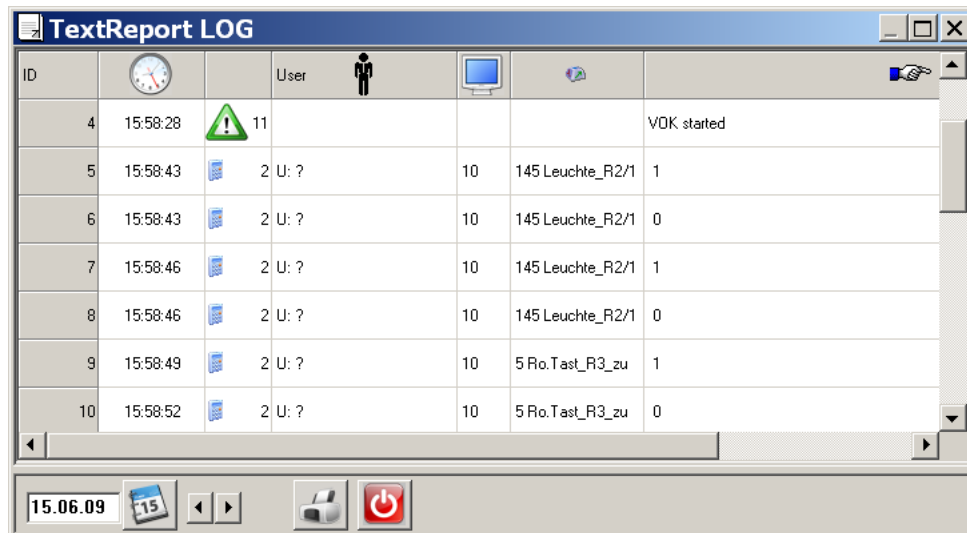
12.3 Illustration of the LOG-data with the „Text-Report"

To display the logged LOG-events VBASE offers the help tool „Text-Report".
The text-report is a help tool from earlier VISAM HMI/SCADA versions and is no
longer a component of the current VBASE-version but can be installed optionally
later for compatibility reasons (further use of older projects without alterations
to the project). Modern projects should use the modern functionality of the
report-field instead of DB-report (see previous chapter!).

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12.3.1 Activate LOG-Report (Text-Report)

Was the text-report help tool configured by the "AE" it can be activated by a field within the application.

After the opening of the program window the last log-events are displayed in a table.

12.3.2 Description of the displayed LOG-data

The first column „ID" numbers all notification events with unique digits.

Is additionally to the ID-number in the ID-column a „lock"-symbol shown then this means that the logging was configured manipulation safe (option: "MGD") by the „AE".

If data sets are red highlighted this means, that the data set was subsequently manipulated!

The second column contains the time when this event occurred.

The third column contains the unique event number.

The fourth column contains the name of the user that was logged in while the event occurred if the user administration was active respectively a user logged in.

The fifth column contains the number of the process picture that was active when the event occurred.

The sixth column contains (at user input) number and name of the field whose content was changed.

The seventh and last column contains information about the status. At user inputs the newly set status respectively the from the user set value is displayed.

12.3.3 Operation of the Text-report

In the lower line of the report-program some operation elements can be found and are described in the following lines:

LOG-events are automatically written in files that change on a daily base. The date in the lower left shows which file is currently displayed. To address a specific day the date can be changed directly at this location.

With the arrow keys the date of the LOG-events that should be displayed can be changed day-wise.

The button with the printer-symbol allows the output of the currently displayed table.

This button terminates the report-program.

13 Operation of complex fields

13.1 Bargraph

Bargraph fields can be parameterized by the „AE" as pure illustration- or as operating-element.
If the bargraph is parameterized as operation-element different input modi are available:

- „Dialog" in this case the numeric accessibility tool (see chapter 6.3) is opened
- Three optical different slider are available

For each slider-variant there is the possibility to show the slider permanently respectively to select the AutoHide-option. Was the AutoHide-option selected then the slider is only activated when the field is activated or the mouse cursor is above the field. If the mouse cursor leaves the bargraph field the slider will automatically disappear again.

Figure 24 Bargraph input modi

13.2 Linewriter

This section describes the handling of the complex field linewriter at runtime.
The Linewriter field is activated by a mouse click (left mouse button) and then opens the Linewriter-menu.
Depending on the setting of the field-property "menu-position" (set in the editor) the menu will always be displayed at a firm predefined position of the field or as a relocatable window.

A mouse click (left mouse button) onto the Linewriter-field, yet outside of the menu, deactivates the Linewriter-menu.

The user menu of the linewriter at runtime:

CSV-Export Function (without the symbol in the menu):

By clicking with the right mouse button the function "**CSV-Export**" is invoked which allows the writing of the current data to a CSV-file.

The two **arrow buttons**

With the two buttons at the outmost edge of the menu, the illustration section (offset) can be relocated for the data that should be displayed, to display or select historic data with the Linewriter.
When keyboard operating the same behavior can be achieved by pressing the keys "+" (plus) respectively "-" (minus).

Select Table-View

The views can be changed with the "V" key when operating with the keyboard.
Within the Table-View sectors can be marked (selected). By clicking the right mouse button a "**Context-Menu**" with additional functions opens up.

Autosize Colums - automatically sets the column width, in which (if possible) all texts are displayed with their full length.

Show Statistics - displays a basic statistic of the marked (selected) data. When no data are marked, the statistic refers to all data of the table.

Illustration Example:

Export - Enables the export of the selected respectively all data of a table into a CSV-file.

Change view:

 The views can be changed with the "**V**" key when operating with the keyboard.

Hint: The switching between the views can optionally be restricted or permitted for certain users to avoid mishandling, by according settings in the field-property "Authorization".

File selection:

To directly select a file/database/table with historic data that should be displayed, the File-selection-tool can be used.
When keyboard operating the File-selection-dialog can be opened by pressing the "**F**" key.

After activation of the File-selection-tool the file-selection-dialog opens up:

In the File-selection-dialog the file/table that should be displayed can be selected and by clicking the "Load" button the corresponding file/table is loaded (displayed).

Flatline-Setup:

The Flatline-setup enables the selection and adjustment of the illustration properties of flatlines and by this describes the most important tool of a Linewriter.
When keyboard operating the Flatline-setup dialog can be activated by pressing the "**S**" key.

The Flatline-setup can optionally be restricted or permitted for certain users to avoid mishandling, by according settings in the field-property "*Authorization*".

After activating the Flatline-setup-tool the Flatline-setup-dialog shows up:

Value	Color	Offset	Factor	Style	Mode
Ist_Temp_Vorlauf		0	1	Line	☐
Ist_Temp_Ruecklau		0	1	Line	☐
Ist Helligkeit in Lux		0	0,1	Line	☐
Brenner_Status		10	1	Line	☑
Status_Luef_SI		50	1	Line	☑
Ist_Temp_Aussen		0	1	Line	☐
Ist_Temp_SI		0		Line	☐
Ist_Temp_Lager		0	1	Line	☐
		0	1	Line	☐
		0	1	Line	☐

Backcolor	Gridcolor	Values	X-Axis
		10000	Uhrzeit

Each of the 10 rows in the displayed table contains the properties of one flatline.

Value:
In the Flatline-setup-dialog the values from a file/database that should be displayed are selected as "Value" and assigned to one of the ten available flatlines.
In the mode **VDF-Array** the Array-data-field (which was defined in the editor) is selected, whose content is then displayed with the help of a flatline.

Color:
In the column „Color" the color for each flatline can be defined with the help of the color-selection-dialog. A detailed description of the color-selection-dialog can be found in the editor-help.

Factor:
If in the column "Factor" a value is entered, then the values of the corresponding flatlines are multiplied by this factor before being displayed.

Offset:
If in the column "Offset" a value is entered, then the values of the corresponding flatlines are aggregated by this offset-value before being displayed.
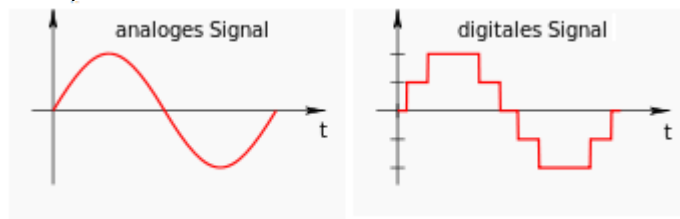
Style:
defines the display mode of each flatline:
At choice:
- **Line** (basic line)
- **Fill** (filled area up to a line)

Mode:
Defines in which way a flatline connects two data points with each other. In analog display the lines connect the two data point via the shortest path. In digital display the value-axis remains discreet.

Example:

In the bottom sector of the Flatline-setup the following general settings can be found:

Backcolor = Background color of the Linewriter in the Line-Chart-View

Gridcolor = Color of the optional grid

Values = Defines the amount of measured values with which the flatlines will be drawn with (so the "resolution" of the x-axis).

X-Axis = Assignment to a database-column which identifies the displayed datasets (ID). Here ideally a timestamp or a unique dataset number should be chosen. The content (the data) of the here selected database-column will be transmitted to the scale-field of the assigned Linewriter (optional the x-axis).

Grid-Tool:

With this tool the optional grid of the Linewriter can be activated respectively deactivated.
The grid size is predefined in the field properties of the Linewriter and can not be changed at runtime!
When keyboard operating the grid can be activated respectively deactivated by pressing the "**G**" key.
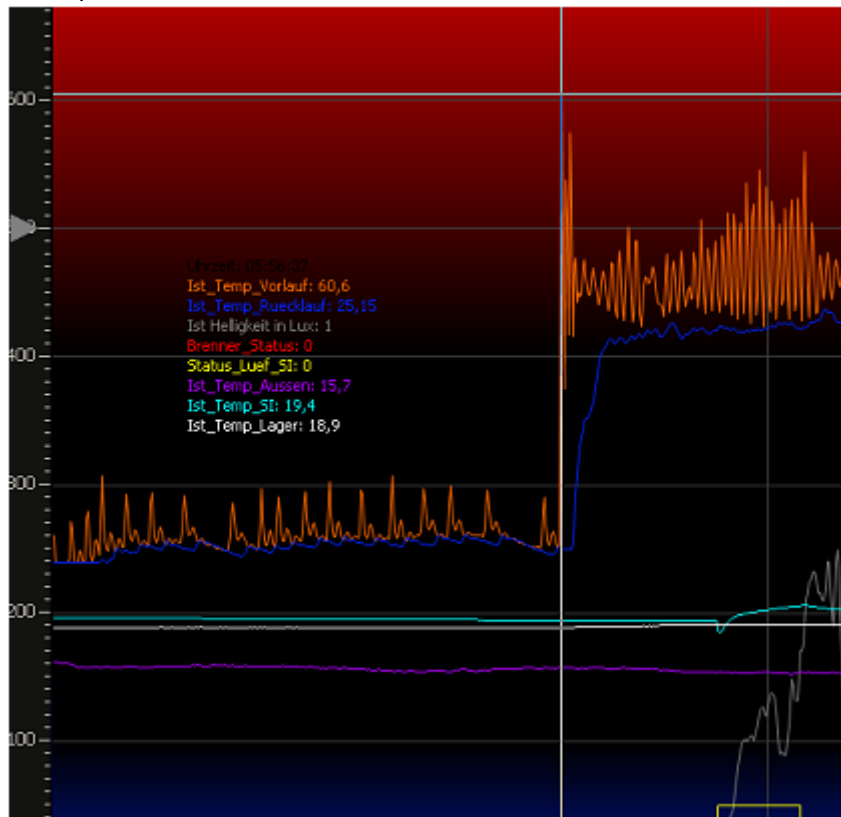

Cross hair-tool:

The cross hair can be activated respectively deactivated.
The cross hair can (if active) be used at runtime as a read off assistant and be moved above the Linewriter to read off certain positions easier/more precise at the adjacent scales.
When keyboard operating the cross hair can be activated respectively deactivated by pressing the "**C**" key.

If the cross hair-tool is active (in the PRO version) a key combined with the values, that are currently located below the cross hair, will be displayed.

Example:

The position of the key can be randomly changed by positioning the cross hair and subsequently clicking with the right mouse button (within the Linewriter field)!

Zoom-tool:

The Zoom-tool features 3 different zoom-modes which can be switched through by multiply clicking of the tool. After selecting the desired zoom-mode the sector that should be changed in size can be selected by dragging the frame (rubber banding) with the mouse.

The Zoom-Modi:

- Zoom over both axis
- Zoom only over the x-axis
- Zoom only over the y-axis

When keyboard operating the zoom-modes can be activated by pressing and holding the following keys respectively key shortcuts :
- "**Ctrl**" = Zoom over both axis
- "**Ctrl + Alt**" = Zoom only over the x-axis
- "**Ctrl + Shift**" = Zoom only over the y-axis
while simultaneously dragging the frame with the mouse.

To termiante the enlarged display (zoom) the mouse must be clicked once in the sector of the Linewriter. Alternatively this can be achieved also by pressing the "ESC" key.

DB - Filter- / Selection-tool:

With this tool a time range (from / until) can be selected from a database that determines which datasets should be currently displayed.

 This tool is only available when using a database-connection (e.g. not when using CSV-files)! Moreover the used database must at least feature one column of the type "date" respectively "date/time" so that this column can be used for selection.

Printing:

By selecting this symbol the current display-situation including all linked scales will be dumped to a connected printer.

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When keyboard operating the printing can be activated by pressing the "**P**" key.

When printing, the in "DB Report Headers" defined header lines are taken into account respectively are printed if they are defined.

Display Current Data:

By activating this tool the mode "automatic display of current data" can be activated respectively deactivated. When the mode is active the Linewriter is automatically updated when new values (data) are written to the database.
The activation of certain tools such as the selection of historic data deactivates the mode "Display Current Data" automatically.
When keyboard operating this mode can be activated respectively deactivated by pressing the "**A**" key.

Overview of the available keys and key shortcuts:

Keys/Short-cuts	*Meaning*
F	File-Selection-Tool
A	automatic updating on/off
G	Grid on/off
V	Change View(Line-Chart/Table)
S	Open Flatline-Setup
C	Cross hair on/off
P	Printing
+	relocate time-axis **ahead**
-	relocate time-axis **back**
Ctrl + Shift	enlarge vertical sector
Ctrl + Alt	enlarge horizontal sector
Ctrl	free enlarging over both axis

Tip: So that the listed keys and shortcuts are transmitted to the desired Linewriter, the according field must be marked (selected)!

13.3 Report-Field at runtime

The report-field is used for illustration purposes respectively for evaluation of logged data of the notification system and the LOG-functions.

All functions of the Report-field are firmly deposited in this fieldtype.

The Report-field can be basically parameterized within the VBASE-editor by the "AE". The behavior and the illustration of the field can be influenced by parameterization at runtime.

At runtime the report-field provides the following described control elements for the user via an integrated menu, depending on the parameterization.

Depending on the settings of the (in the editor appointed) field property "Menu", the menu will always be displayed in the header sector of the field, or by clicking the header in an own movable window.

CSV-Export Function (without a symbol in the menu):

By selecting (clicking with) the right mouse button the function "**CSV-Export**" is invoked that enables the export of the current data to a CSV-file.

The following described control elements all belong to the integrated menu of the report-field:

Time Range-Selection
Here the indication range (from day / to day) can be selected.
The possibilities and effects depend on the data source to which the field refers due to its parameterization.

To start the output of the current display on a printer.
If the project-directory contains a file with the name: *"PrintHeader.png"* this graphic is also printed out at every output.

Some settings are only available within specific illustration or function modes!

Illustration - Notification report/ Notification statistic (in general)

Switch to the Notification-Report-View (chronological display of the notification events)

Switch to Notification-Statistic-Table-View

Switch to the Notification-Statistic-Graphic-View.

Full-Text-Filter-Tool
By selecting this button the "alphanumeric input help" opens up and offers the possibility to employ a full text filter. If this filter is active ("checked") the current notification statistic only contain notifications, that match respectively contain the corresponding filter text.
To deactivate the filter, the filter text has to be deleted.

Illustration - Notification Statistic - tabular

Detail-Tool
With the help of the plus-key the details (to single notification events) to all notifications can be displayed respectively hidden with the minus-key.
In the table window the corresponding keys (with the notification number) can be found to selectively pick the details of single notifications.

Illustration - Log-Report

Show-System-Log-Events (if "checked") respectively hidden

Show-User-Log-Events (if "checked") respectively hidden

14 Administration-Tool

The administration-tool is no longer a component of the current VBASE-version but can be installed optionally later for compatibility reasons (further use of older projects without alterations to the project). Modern projects should use the modern functionality of the systemfunction-field.

The administration-tool is used for the administration of files that are created at runtime as far as it was activated by the „AE".

Depending on the settings in the project log- respectively protocol-files are created automatically at runtime. After a while these files can accumulate to a large amount. If those files are not needed anymore they have to be removed manually. To simplify this process and to prevent operation faults the administration tool was developed

⚠ This program changes or deletes files and can perform these tasks even automatically depending on the settings. So be careful when handling this tool!

14.1   Functions of the help tool

The program checks daily at a predefined time or after a manual invocation if files exist in the project-directory that exceed a predefined age. If that is the case the deletion/compression or moving of the file is suggested via a dialog or depending on the settings this process is executed automatically.

By request the tool can be activated automatically when the runtime system boots. This must be accomplished by the "AE" by editing the project properties. But it is also possible to manually invoke the program.

After the activation the program is symbolized by a wrench in the task bar. It will perform its surveillance service in the background.

If the help tool recognizes that some tasks must be performed, the following user-dialog shows up (if configured by the „AE"):
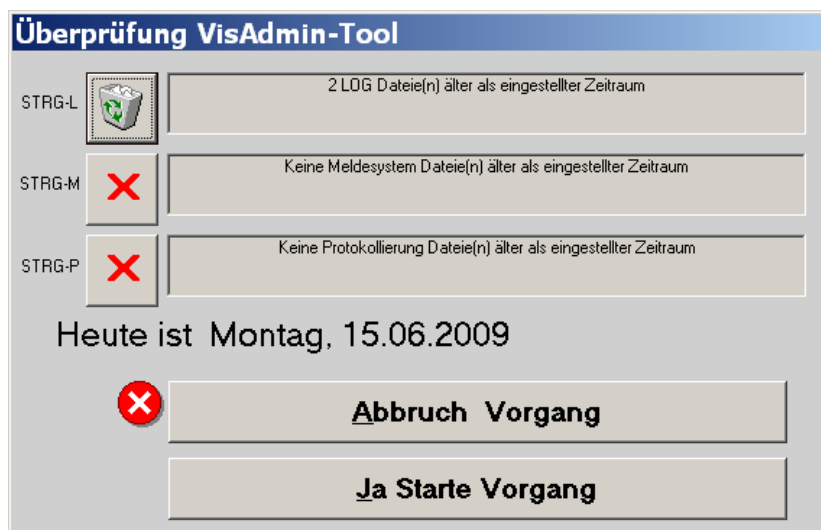
Figure 25 Administration-tool

In the upper area the needed measures are shown.

⚠ Before the suggested measures are executed with the help of the button „Yes, start process", the displayed system date should absolutely be checked to avoid the deletion of files at a wrong entered system date!

15 Illustration Directory

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