



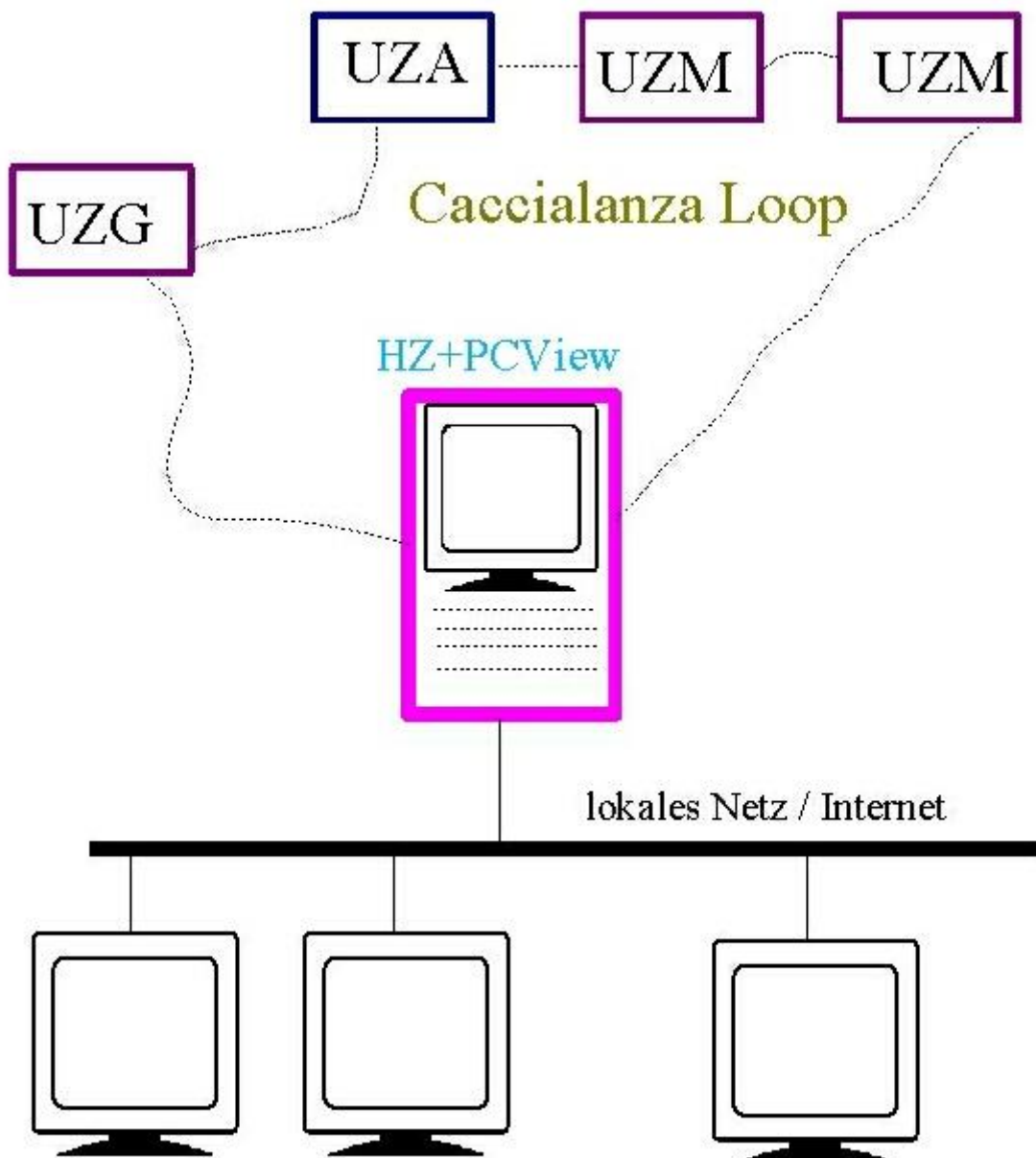
# **C M O N I T O R**

Control System for  
Fire Extinguishing and Fire Signalling  
Units

© Caccialanza & C., SpA  
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## CMONITOR – System Overview

Caccialanza's CMONITOR-system is a hierarchically structured intelligent system consisting of several components. It is used to control and monitor all external units connected to the "Caccialanza-Loop" (monitors, valves and fire signalling panels). The heart of the CMONITOR system is always a LKS6-device of Caccialanza & C.. The functionality provided by the system depends solely on the level its extension.





## CMONITOR – Visualisation Program

As was said above, CMONITOR-program allows the display and remote control of all functions offered by the LKS6-device. CMONITOR installation always accommodates itself to the characteristics and features of the LKS6-device.

In addition to that, CMONITOR is also used to visualise all operating states of the device and its intelligent control system.

System requirements for *CMONITOR* are as follows:

- operating system Windows 2000 or Windows XP ( NT 4 also supported)
- available disk space of about 500 MByte
- display resolution of at least 800x600 pixel (1024x768 recommended)
- main memory of at least 64 MB
- network card to connect the system to a local network or the Internet

The *CSPS* control program, which handles the communication between substations (UZM, UZG, UZA and HZ), is installed on the PCVIEW computer, located usually at the main station (see also picture on the previous page).

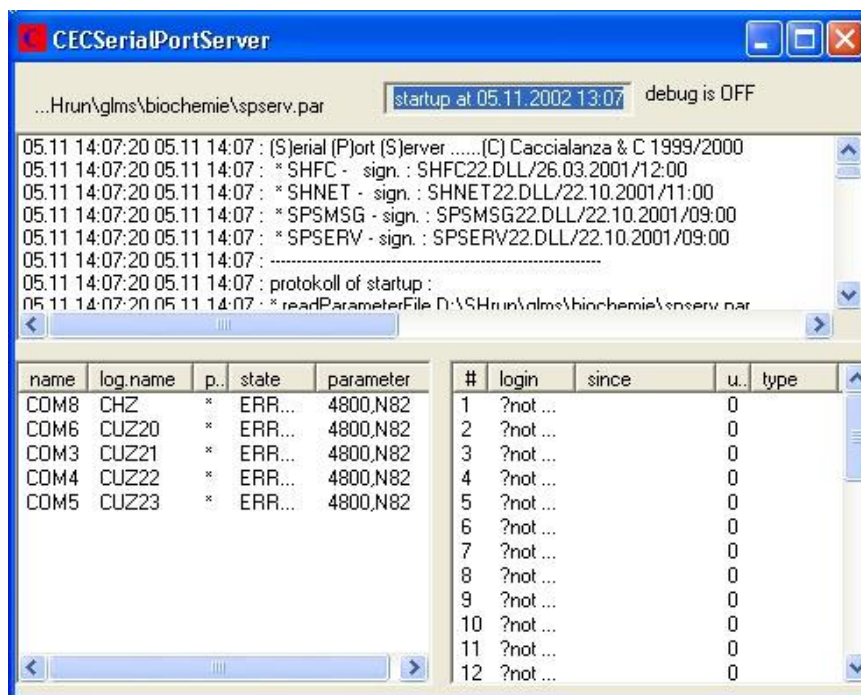


Bild 16: CSPS

PCVIEW is connected to the substations through a serial or fibre cable. It has a network card enabling the forwarding of data through a local network or the Internet. By integration into a local network, one or several substations at different locations may be controlled.

Installation of the *CMONITOR* visualisation program can be run on the PC VIEW or on any other system in the local network. Parallel operation on several computers is also supported.



## Abbreviations used

- UZ general abbreviation for a substation
- UZM substation, type MONITOR (i.e. fire monitor)
- UZA substation, auxiliary type, used mostly to control valves and pumps
- UZG substation, type: fire signalling station
- UZK substation, portable
- HZ main station

The core of the software module is the **Equipment Overview** providing all important information about the state of the overall system.

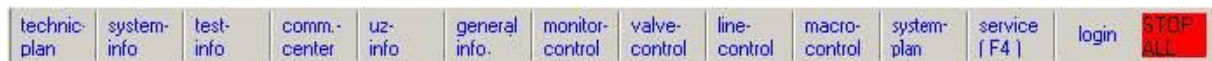
## Program description

CMONITOR runs correctly only with a connection to a CSPS program (i. e. proper operation requires a running CSPS program).

Serial interfaces are controlled from CSPS.

CMONITOR offers several windows built using the MDI (Multiple Document Interface) concept. That means, all the windows can be displayed side by side, or only one window is displayed. The desired setting is stored when exiting the program.

Each window can be activated by clicking on the relevant button on the symbol bar.



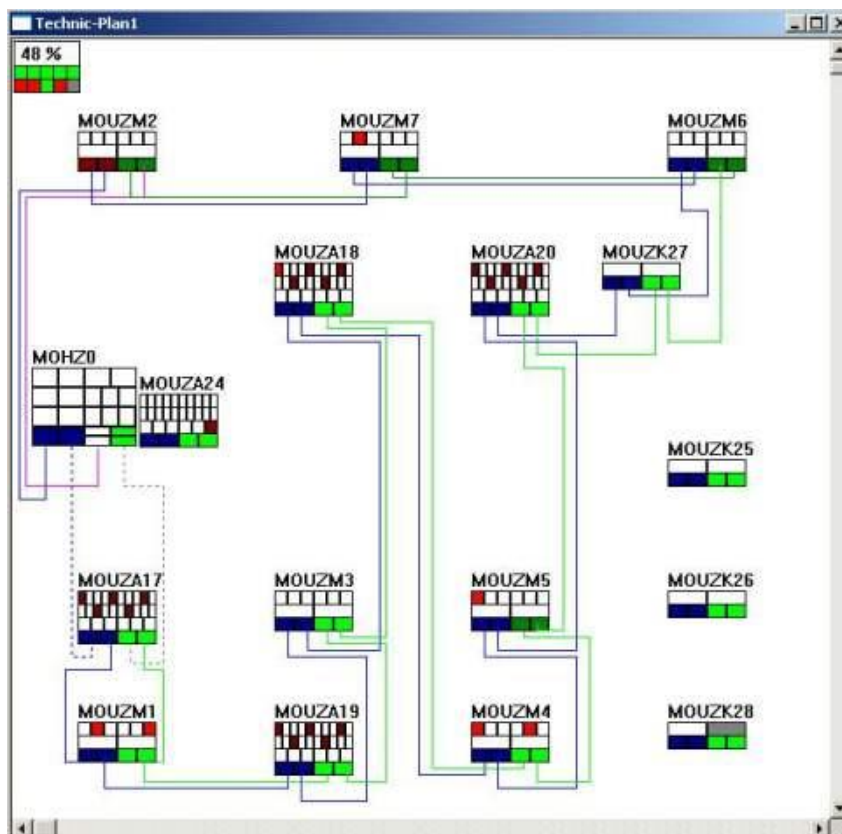
The menu bar is used to start the required action or to bring the relevant window into the foreground. All descriptions in this manual are ordered according to these menus.



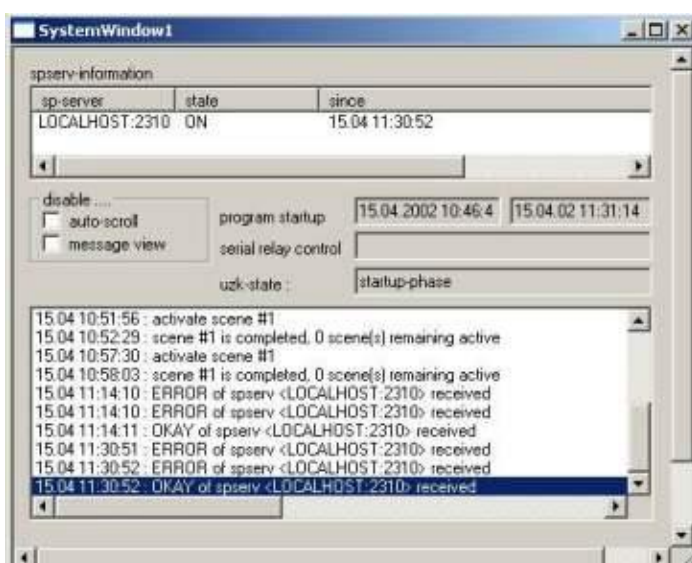
## Equipment Plan

*Equipment Plan* shows all the substations (HZ, UZM, UZA, UZK and UZG) installed.

**Blue lines** represent power cables; **green lines** represent data transfer lines. Dashed line represents no connection (a line changes to a dashed line, if there is no message for 30 seconds). Symbols in the picture show the status of relays, etc.



## System window



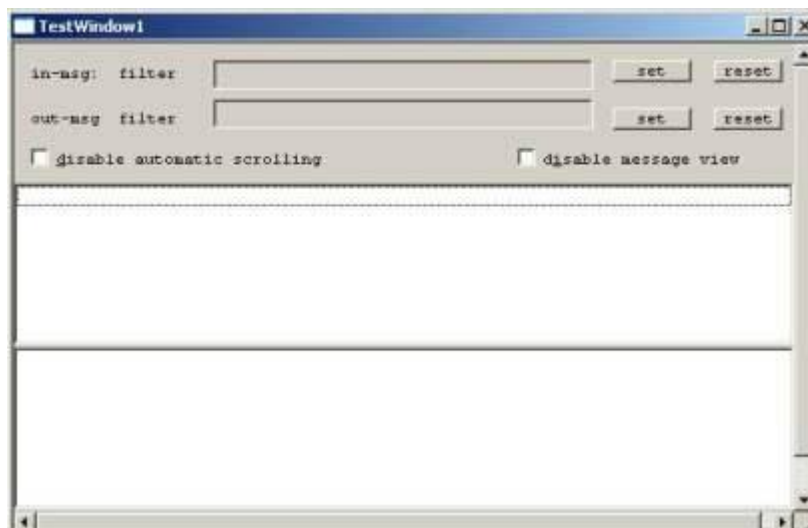
The System Window provides information about the current state of the system. “**Spserv-information**” shows the connection status to CSPS-program.

In the lower part, there is an information ticker keeping track of all messages received.

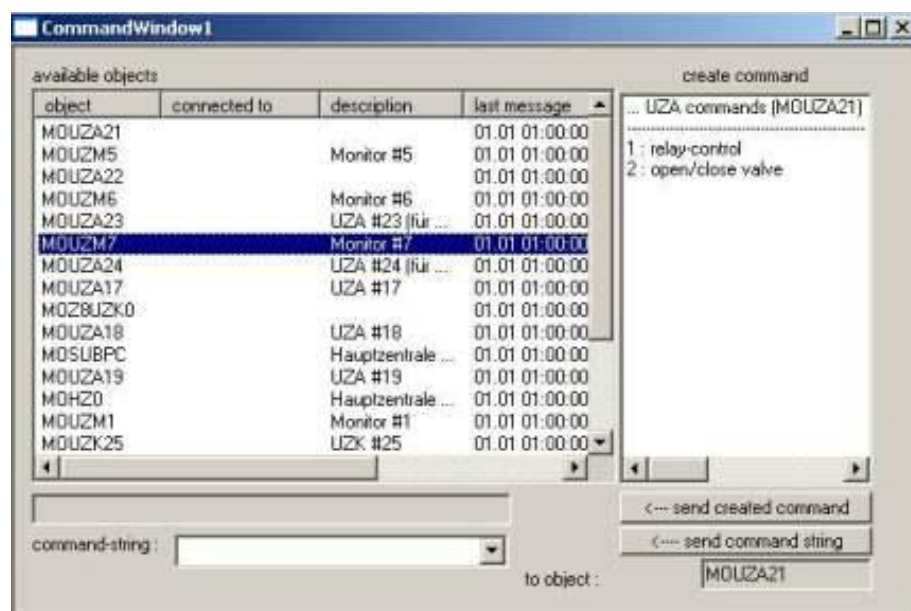


## Test-info Window

In this window, all incoming and outgoing messages can be displayed. `<set>` and `<reset>` buttons can be used to define the so called filters enabling targeted monitoring of individual substations. `<disable automatic scrolling>` disables automatic scrolling if there is a message. `<disable message view>` switches off the display of messages, thereby increasing program performance.



## Command-window



In the *Command-Center*, all available commands can be sent to individual substations. When the user selects an object, the right part of the window shows the available commands, depending on the type of the object (HZ, UZA, UZM, UZK). After the command is created, it is displayed in the next to last row for

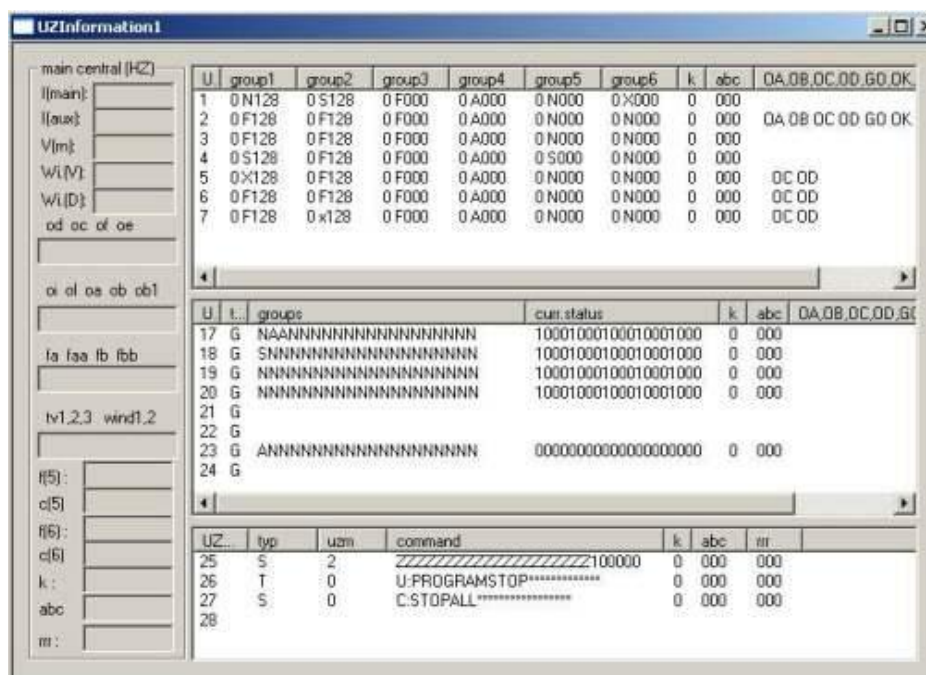
checking and it can be sent to the substation by pressing `<send created command>`. The `<command-string>` field also allows manual entry of a command; in such a case the command is transmitted by pressing `<send command string>`.



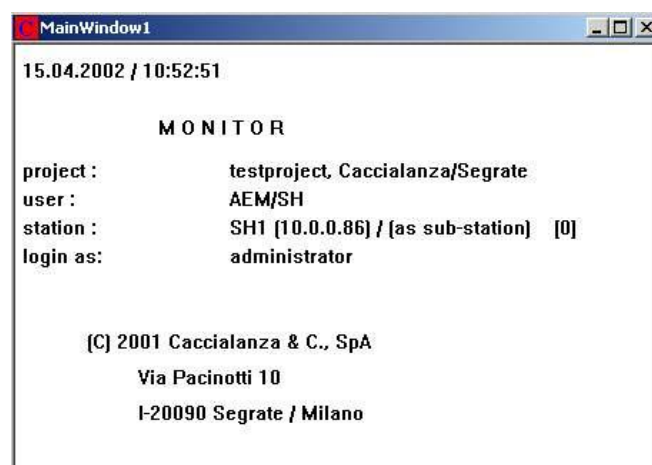
## UZ-info Window

- **UZInformation** displays the current status of all substations installed. In the left part, the status of the main station is shown;
- the upper part shows the UZM
- the centre shows UZA and
- the lower part the UZK.

The display automatically updates itself after receiving a message.



## General Info Window



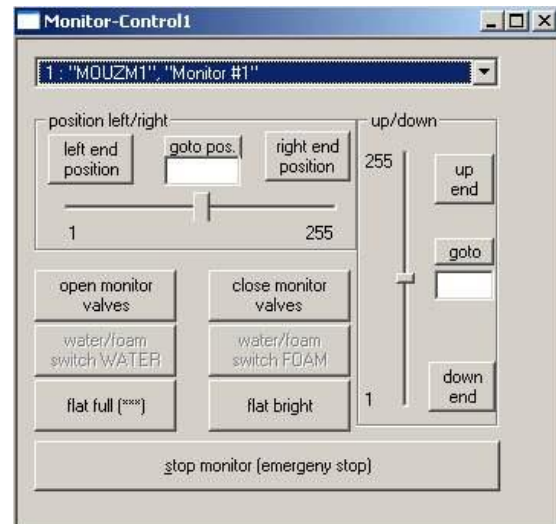
This window shows all system-specific data retrieved from configuration files. It also displays the daytime and the current login status.

The number in brackets shows the number of service programs currently logged in to the local network.

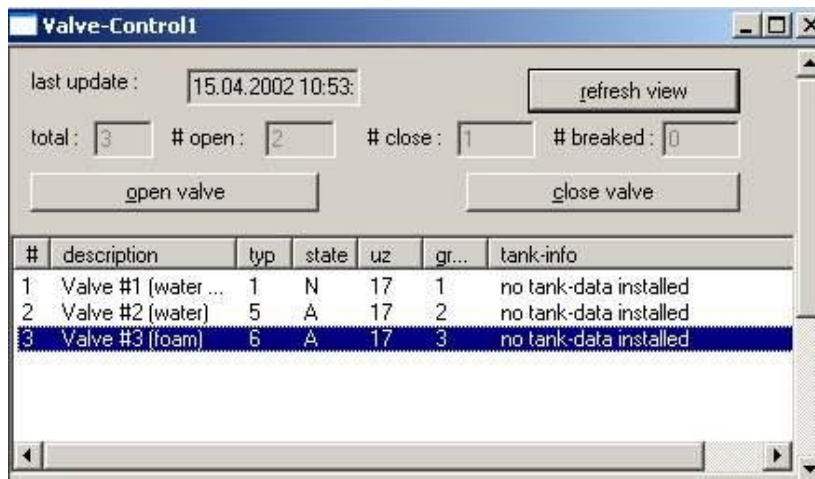


## Monitor Control Window

*Monitor Control* allows the targeted control of a monitor. After selecting the desired UZM, it is possible to send commands to the monitor.



## Valve Control Window



*Valve Control* is used to control and monitor individual valves. Valves can be opened (open valve) or closed (close valve). The display can be updated by clicking onto the “refresh view” button.

Meaning of the “state“ column:

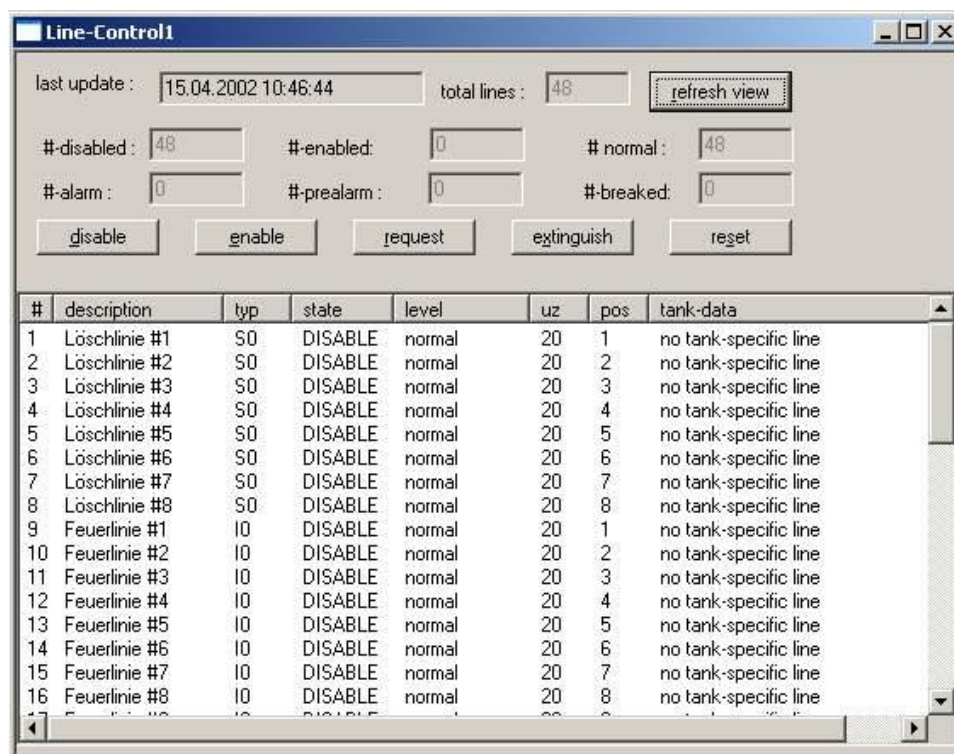
- A=valve open
- O=valve closed
- N=not used
- a=valve being opened
- o=valve being closed

any other letter describes an error.

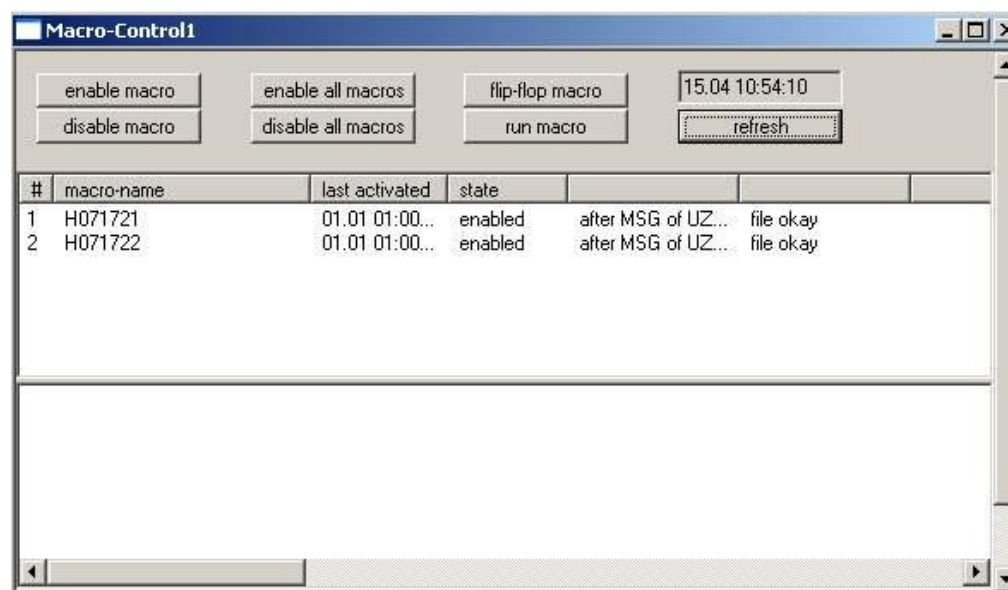


## Line Control Window

*Line-Control* is the standard overview providing information about the lines connected to a UZG. Users with appropriate access rights can use this window to control the individual lines.



## Macro Control Window



*Macro-Control* is used to control and test macros. The window displays all the installed macros, their status and the time of the last run.



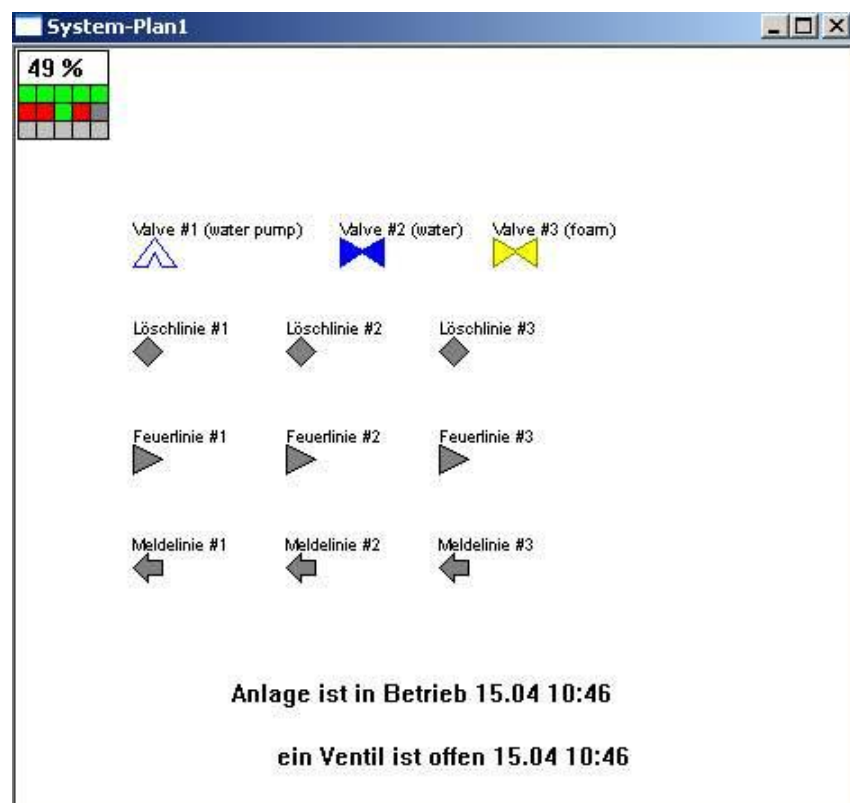
- *state DISABLE* means, the macro has never been run before (alternatively state-ENABLE)
  - *at hh:mm* means, the macro is executed only at that particular time
  - *every x seconds* means, the macro is executed every x seconds
  - *at prog.start* means, the macro is executed only at program start
  - *at prg.finish* means, the macro is executed when exiting the program
  - *only manual* means, the macro can only be run by pressing the <run macro> button
- If *file-okay* is displayed, it means, the appropriate macro file (basic file with SHB suffix) has been found.

The window's lower part keeps a track record of the current state of macro run.

## System Plan Window

### System Ground Plan

shows graphically the state of all tanks, valves, pumps and system variables. By right clicking onto a symbol, users with appropriate access rights can open a menu used to control that component (open/close valve, control line, etc.).



## Service Function (F4)



Generates a status report of the current state and logs it into a LOG-file. Depending on the settings, LOG-files can either be copied onto a floppy disk or a server.



## Login Function

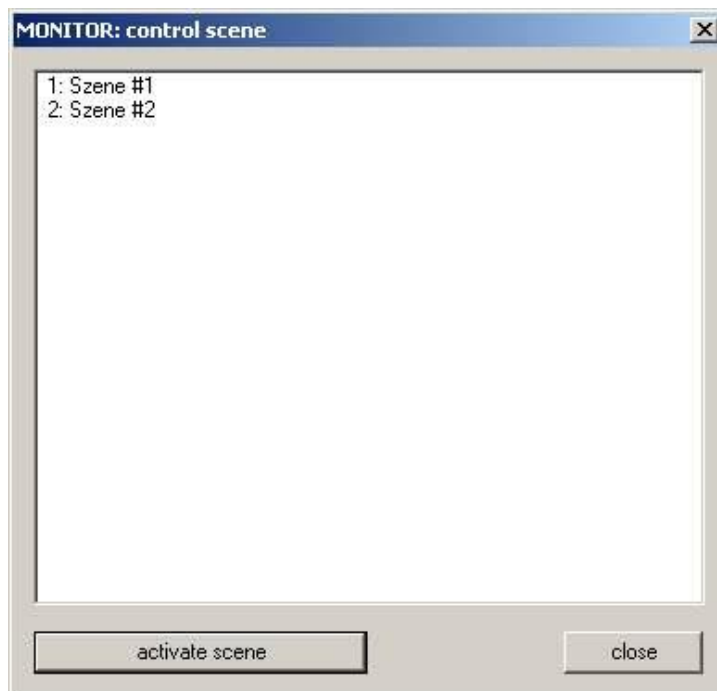
User login to the system. The system differentiates between two users with predefined passwords (Service and User). The controls are only available if the user is logged in to the system.



## STOP ALL (EMERGENCY EXIT) F7 FUNCTION

**Emergency Exit** causes the immediate stop of all UZM and closing of all valves. This function is only enabled for users logged in with the Service login level.

## Scene Administration



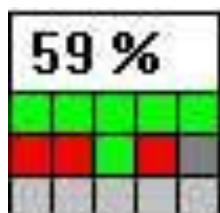
By pressing F8, a window opens showing all the scenes installed. Scenes are fixed actions (i.e. open valve, change monitor position, etc.), which can be activated on request. The scenes are activated by a user and are then played down by the program. The function is only available to users logged in with the Service login level.

## Restart Serial Loop Function

By pressing F9, commands for the reconfiguration of the serial loop are displayed. This function can only be activated by users logged in as „Service“.



## Annex 1: System States Symbols in Equipment Plan and System Plan



The system status symbol shown in the left upper corner of Equipment Plan and System Plan provides a quick information about the current operating state of the system.

Row 1	Memory usage in percent, working with Windows 2000 or above
Row 2, column 1	Control from front/back RED = system currently controlled from the back GREEN = standard control
Row 2, column 2	Status test (024) RED = Status test DISABLED GREEN = Status test ENABLED
Row 2, column 3	Auto Relay Control RED = function DISABLED GREEN = function ENABLED
Row 2, column 4	Macro Processing RED = processing of macros DISABLED GREEN = processing of macros ENABLED
Row 2, column 5	Scene Processing RED = processing of scenes DISABLED GREEN = processing of scenes ENABLED
Row 3, column 1	Message Status LIGHT GREY: status test DISABLED RED = no message received GREEN = NORMAL
Row 3, column 2	Error Status LIGHT GREY: status test DISABLED RED = error message received GREEN = NORMAL
Row 3, column 3	Monitor in motion LIGHT GREY: status test DISABLED RED = a monitor is currently being moved GREEN = NORMAL (no movement)
Row 3, column 4	Valve open LIGHT GREY: status test DISABLED RED = a valve is currently open GREEN = NORMAL (all valves closed)
Row 3, column 5	not used



## **CMONITOR, features**

- graphical desktop
- modular system supporting the Client/Server architecture of modern systems
- full network compatibility (local network and the Internet)
- allows remote control and maintenance
- support for main station and substations
- controlled by mouse and/or keyboard
- seamless logging of all events