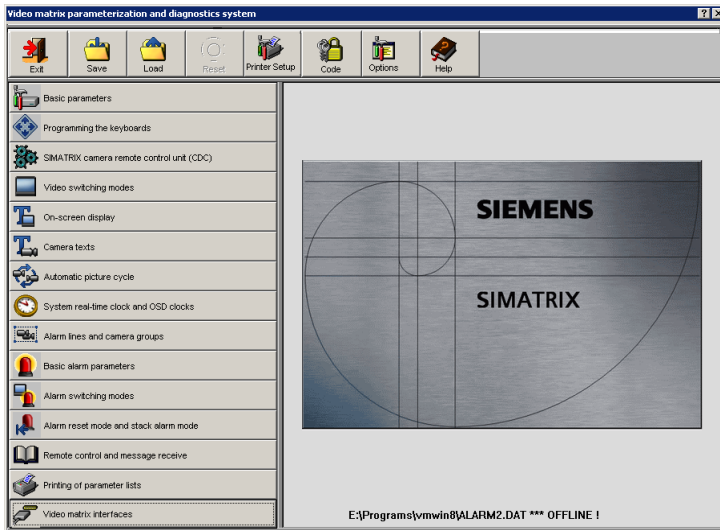


# SIEMENS



# SIMATRIX

## Programming manual

V 2.70

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# 1 General

## 1.1 Use

---

The SIMATRIX SYS, SIMATRIX NEO, SIMATRIX NEO V2, SIMATRIX 648 and SIMATRIX 164 video matrix systems are supplied with software whose standard settings cover the great majority of all the conceivable applications for these systems. The video matrix systems can be further set up to meet individual customer demands and to suit a variety of expansion levels by entering additional system and operating parameters.

The programming software, **Vm\_win8** for Windows, allows you to set up the entire range of functions offered by the SIMATRIX video matrix systems from the Windows configuration screen on your PC. The software also allows you to back up your system configuration and edit camera texts.



---

As the description that follows applies to all the video matrix system types, they are globally referred to as SIMATRIX. Only when there are differences between the systems are they referred to explicitly by their model designation.

---

## 1.2 Requirements

---

Your PC configuration must satisfy the following requirements in order to program the SIMATRIX system:

- Pentium PC using one of the following operating systems:
  - Windows 98
  - Windows NT 4.0 (Service Pack 6)
  - Windows 2000
  - Windows XP
  - Windows Vista
- A connection cable between the PC and the SIMATRIX is required if on-line programming is envisaged
- Programming software for the SIMATRIX

## 1.3 Programming and controlling the SIMATRIX from a PC

The SIMATRIX parametrization and control by PC is possible by serial link cable. With SIMATRIX NEO V2 also LAN parametrization is possible.

### 1.3.1 Software installation

Proceed as follows to install the **VM\_WIN8** programming software on your computer:

1. Insert the CD
  - Now the setup starts automatically.  
if not, then please start "setup.exe" on the CD.
2. If you don't want start the program via **Start > Programs**, drag the **VM\_WIN8.EXE** program icon from the installation directory to the desktop. You can change the name if required, to **VM\_WIN8** for example.



3. Double-click the program icon to start the programming software.
4. When starting program, you will be asked to enter a PIN code. The factory setting is **12345**. You can change the PIN code using **vm\_pin.exe**.

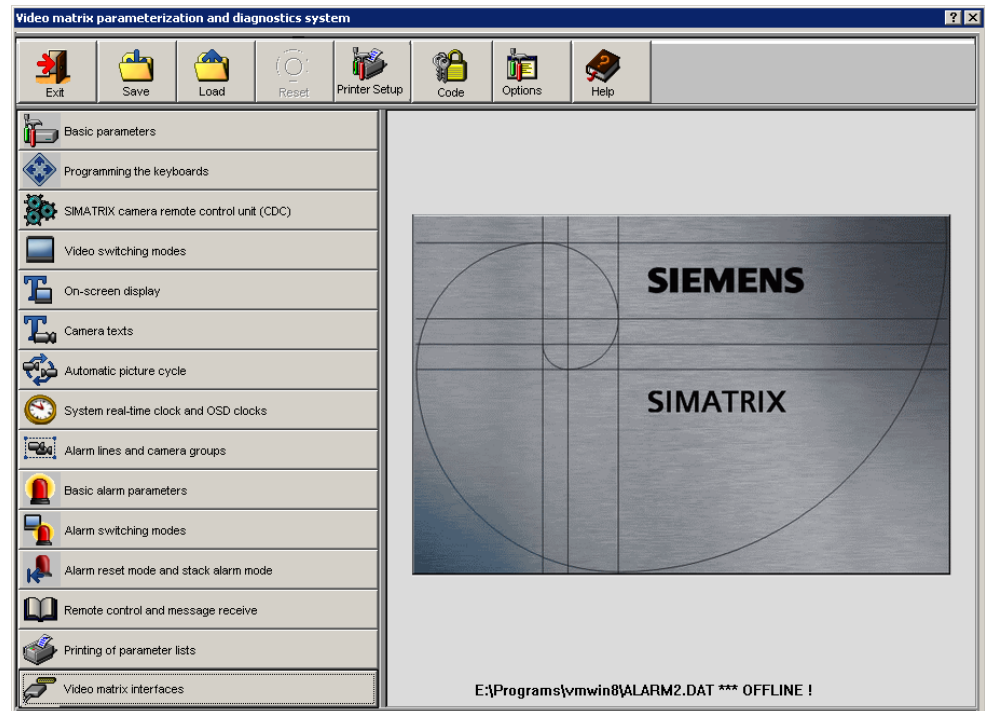


Fig. 1 SIMATRIX, parameterisation and diagnostics system



### 1.3.2 Parametrization via serial link cable

1. Connect the video matrix and the PC using a serial interface cable (V.24).
- You can use COM1 to COM20 on the PC. The PC interface port you use must be enabled in the dialogue screen **Program options** (see section 2.1). The COM2 interface port is set as standard.
2. Connect the cable to the COM2 connector (25-pin Sub-D socket) on the SIMATRIX SYS control unit.
  3. If you have a SIMATRIX NEO, SIMATRIX NEO V2, SIMATRIX 648 or SIMATRIX 164, you also connect the cable to the COM2 interface (9-pin Sub-D plug).

Fig. 2 shows the typical connection cable configuration between the SIMATRIX SYS and a computer (PC/AT) using a 9-pin or 25-pin serial interface (Sub-D socket).

Fig. 3 shows the typical connection cable configuration between the SIMATRIX NEO, SIMATRIX 648 and SIMATRIX 164 and a computer (PC/AT) using a 9-pin or 25-pin serial interface (Sub-D socket).

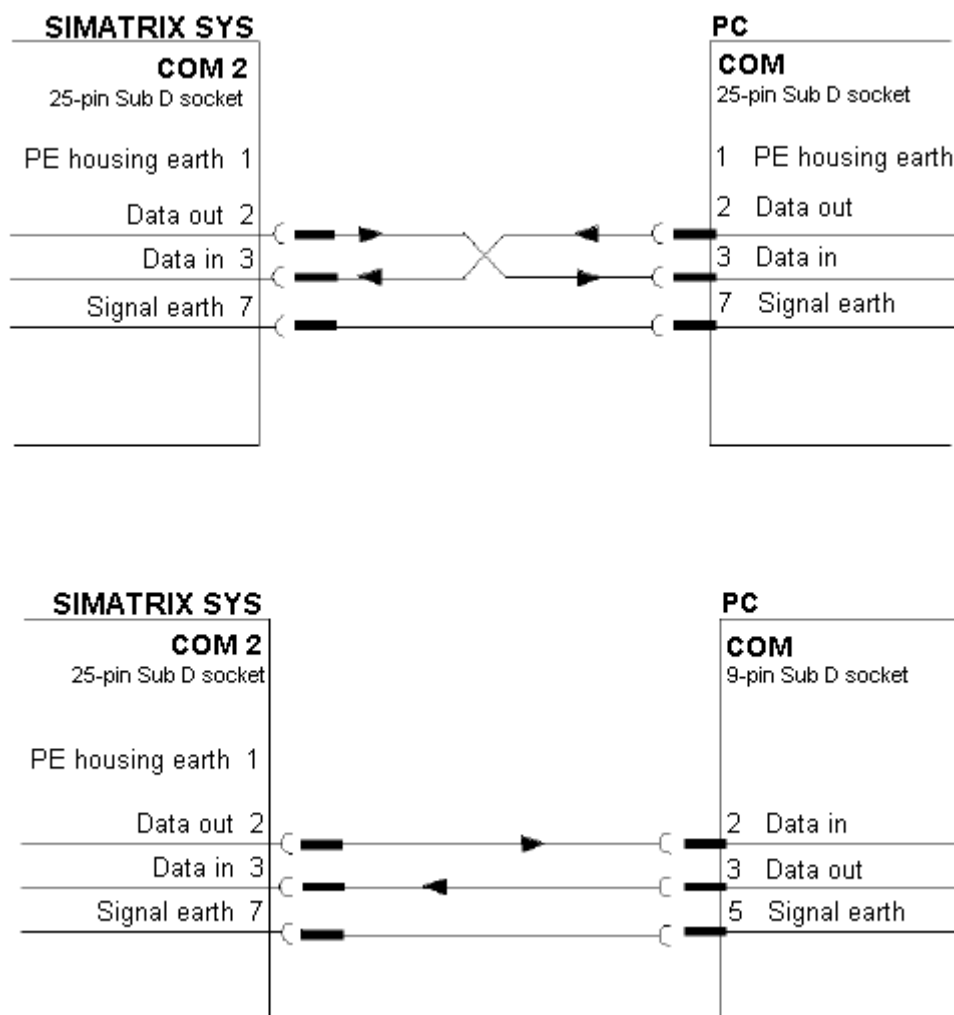


Fig. 2 Connecting the SIMATRIX SYS to a PC (V.24 interface)

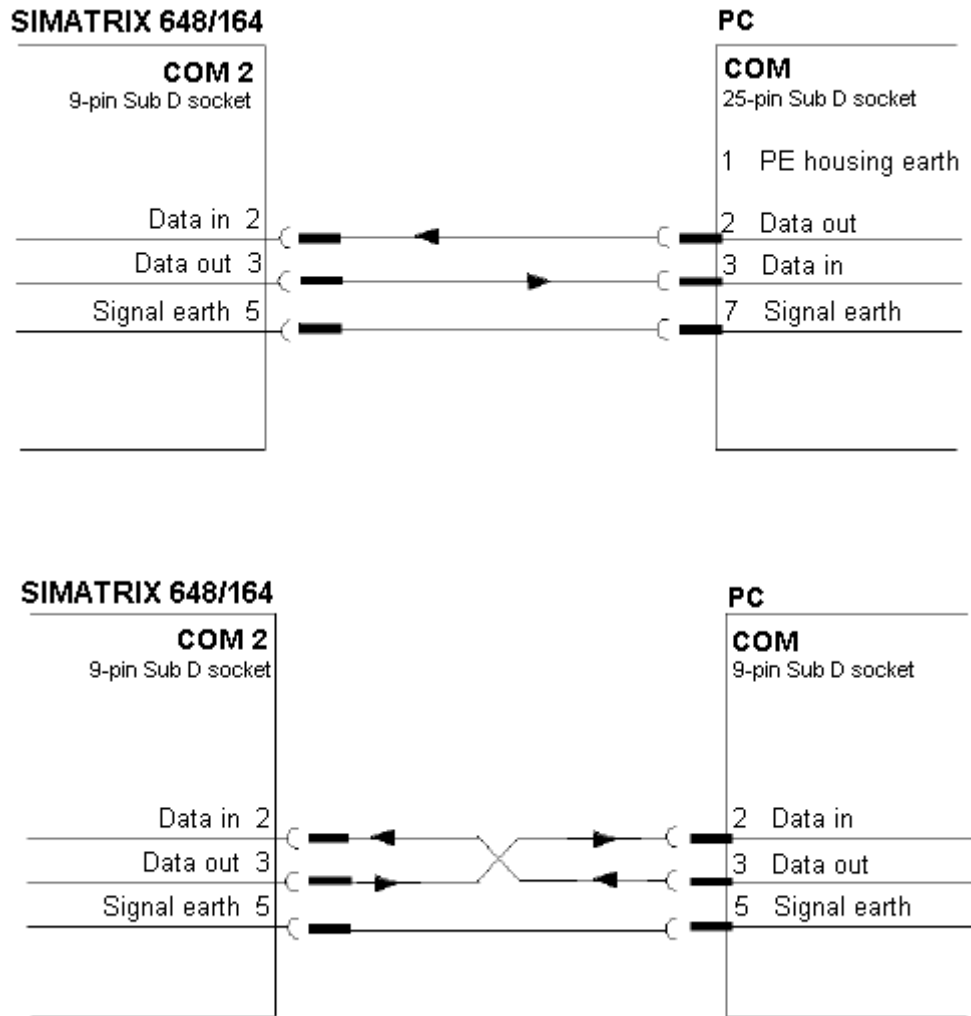


Fig. 3 Connecting the SIMATRIX 648/ 164 to a PC (V.24 interface)

### 1.3.3 Parametrization via LAN

The LAN connection can be done with a LAN crossover cable or with a standard patchcabel or a switch. For further instruction please look at General functions (see section 2).

## 1.4 Set-up

### 1.4.1 Parameter settings at delivery

The following alarm programs are loaded for the various types of device:

SIMATRIX SYS	Alarm program ALARM2.dat
SIMATRIX NEO	Alarm program ALARM_N.dat
SIMATRIX NEO V2	Alarm program ALARM2_N2.dat
SIMATRIX 648	Alarm program ALARM2_6.dat
SIMATRIX 164	Alarm program ALARM2_1.dat

## 1.4.2 Starting the SIMATRIX system clock (not necessary with NEO V2)

On delivery the system clock of the SIMATRIX is disabled.(except NEO V2 )

1. Use the **Options** button in the **Program options** dialogue screen to activate the PC interface.
  - The **System real-time clock/OSD clocks** menu will appear and display a preset, fixed time xx:xx:80.
2. To activate the real-time clock (system clock) in the video matrix, the PC time must be transferred to the SIMATRIX (see menu option **Real-time clock in the VM; Load PC time into VM** button). The SIMATRIX system clock is now activated.

The basic programs, alarm programs and set-up programs (GMA.dat, IVM\_NT.dat, LMS\_6.dat, LMS\_1.dat, SIPOQTQ.dat, SIPOSTS .dat, TEL\_LIVE.dat) shown against each SIMATRIX model in the table below are relevant when setting up special, independently enabled interfaces:

SIMATRIX	Relevant programs
SIMATRIX SYS	BASIS.dat and ALARMx.dat
SIMATRIX NEO	BASIS_N.dat and ALARMx_N.dat
SIMATRIX 648	BASIS_6.dat and ALARMx_6.dat
SIMATRIX 164	BASIS_1.dat and ALARMx_1.dat



To ensure the SIMATRIX 648 / 164 recognises the keyboards connected to the system, the number of keyboards must be set as a permanent parameter in the Basic parameters menu option. For example, if there are two keyboards in the system, 'Keyboards with fixed configuration:' = 2

## 1.4.3 VM PIN code

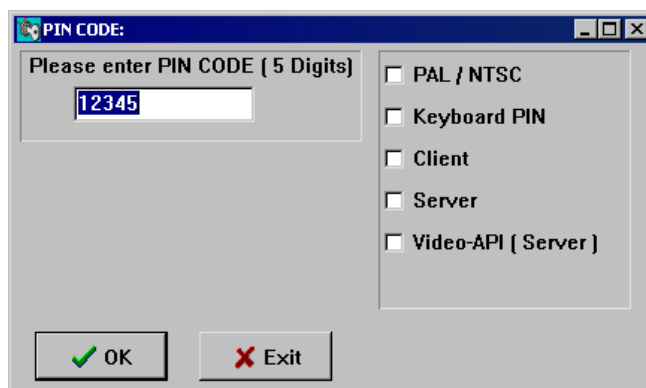


Fig. 4 External program, **vm\_pin.exe**

This dialogue screen allows entry of the following basic configuration parameters for the SIMATRIX:

### PIN CODE

The access code (PIN code) is designed to prevent unauthorised persons from changing programming parameters. The code is requested on start-up. The PIN code can be reset using an external program, **vm\_pin.exe**. After resetting the PIN code, make a copy of this external program (to floppy for example) and delete it to prevent unauthorised persons from changing the PIN code again.

### PAL/NTSC (not with NEO V2)

If a SIMATRIX system uses the NTSC or PAL colour video formats, the relevant format must also be selected in the programming software.

The option must be activated before you can parameterise the video colour transfer process in the **Basic Parameters** dialogue screen in the programming software. NTSC requires the use of special hardware.

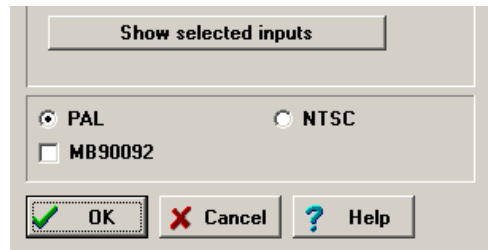


Fig. 5 Basic parameters for PAL/ NTSC

### Keyboard PIN

A dedicated PIN code for each keyboard connected to the system can be generated in the **Keyboard layout of keyboard x** dialogue screen.

### Client

This checkbox should be activated if the SIMATRIX is to be programmed via a client (vm\_win8.exe installed on the client). It is also necessary to activate the **VideoAPI** checkbox if the IVM NT-Client application will run in parallel.

### Server

This checkbox should be activated if the SIMATRIX is to be programmed via a server (vm\_win8.exe installed on the server). It is also necessary to activate the **VideoAPI** checkbox if the IVM NT-Server application will run in parallel.

### Video API (Server)

This checkbox should be activated in conjunction with IVM NT, to enable communication between vm\_win8.exe and IVM NT-Server when both applications are run in parallel on the same PC.

## 1.5 Status bar in the main window

---

A status bar at the bottom of the main window indicates whether or not there is a connection to the SIMATRIX and which parameter file is currently loaded.

## 1.6 On-line operation

---

Once the program has acknowledged correct connection to the video matrix you can work on-line. Correct connection has been established when the SIMATRIX system time is shown at the end of the status bar in the main window (instead of **OFFLINE**).

You can also establish connection to the video matrix by selecting the appropriate interface in the **Program Options** dialogue screen (COM1 to COM20).

The following applies when working on-line:

The parameters displayed in the various dialogue screens always correspond to those used in the SIMATRIX. Parameter changes will automatically be adopted by the SIMATRIX as soon as you exit the dialogue screen by clicking the **OK** button (if you click the **Cancel** button your changes will be discarded).

When loading a parameter file, you are in fact loading the parameters from the file in the SIMATRIX. Changes are transferred to the SIMATRIX immediately, but not automatically saved to the file!

You can then save the parameters to the hard disk or a floppy (see section 2.3).

## 1.7 Off-line operation

---

If the program is unable to find a viable connection to the video matrix, it will automatically switch to off-line operation.

You can also select the **Off-line mode** manually in the **Program options** dialogue screen (see section 2.1). You will then be requested to load a parameter file. **OFFLINE** appears in the main menu status bar when this mode is active.

The following applies when working off-line:

- The parameterisation display always corresponds to the file you have loaded.
- The name and path of the current file always appear in the status bar.
- Any changes you make are immediately written to the current file (as opposed to on-line operation).

If you want to create a new parameter file, first load an existing file and save it immediately under a new name. Only then should you make any parameter changes.

## 1.8 Procedure

---

In principle, you can process individual dialogue screens within this program independently of each other and in any sequence you choose. The following procedure will serve as a guide until you are fully familiar with the parameterisation process.

The software is divided up into two functional categories:

- Basic parameters
- Alarm parameters

### Basic parameters

1. Start by opening the **Basic parameters** dialogue screen. Enter the number of cameras and monitors in use in your system.
2. If the SIMATRIX communicates with sub-stations, IVM keyboards or with other interfaces, these must be parameterised in the **Ports on the video matrix** dialogue screen (see section 15).
3. Keys must be allocated in a sensible way for all the keyboards connected to the system allocation in the **Programming the keyboards** dialogue screen (see section 6).
4. In the **On screen display** dialogue screen (see section 4), you must allocate a monitor to each keyboard or you will not be able to view any data you enter using the device.
5. If you use camera head drives (CDC), define which keyboard controls which camera in the **Camera control unit (CDC)** dialogue screen (see section 9). The allocation of cameras to CDCs or to interfaces for Remote Digital Cameras is also very important.
6. Enter camera text labels in the **Camera texts** dialogue screen (see section 7)
7. In the Image switching behaviour dialogue screen (see section 5), you must define the desired image switching behaviour for each monitor (individual or group switching/in the **Alarm lines/camera groups** dialogue screen (see section 11), length of the monitor string, etc.) and the cameras, which are to be released for switching to the monitor.
8. If you want to program an automatic picture cycle, you can define the monitor or predefined cycle in the **Automatic picture cycle** dialogue screen (see section 8).

**Alarm parameters**

1. You must first parameterise your alarm configuration in the **Basic Alarm Parameters** dialogue screen (see section 10). The settings **1 st Alarm line at** and **No. of Active alarm lines** are particularly important
2. Once you have set the basic alarm parameters, you must set the way the alarm contact functions (normally open / normally closed) for each detection group in the **Alarm lines/camera groups** dialogue screen (see section 11). You can set the appropriate camera group here if more than one camera is to be switched when an alarm is triggered.
3. Now use the **Alarm switching configuration** dialogue screen (see section 12) to determine which monitors switch alarm images and how switching takes place.
4. In the **Alarm reset mode and stack alarm note** dialogue screen (see section 13), you can set the reset mode of the alarm monitors.

These are the most important dialogue screens. Please refer to the relevant chapters for more detailed information.

## 2 General functions

### 2.1 Program options

---

This dialogue window can be opened using the **Options** button.

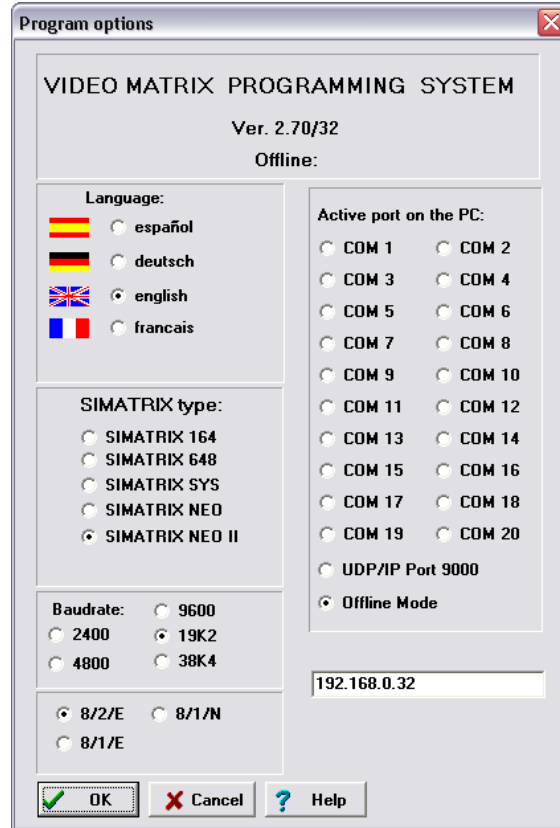


Fig. 6 Program options

#### 2.1.1 Choice of language

---

Select the required user language:

- Espagnol
- Deutsch
- English
- Français

Select by clicking a language.

When working on-line the video matrix will switch to your choice of language (monitor fade-ins).



### Creating additional language files

Proceed as follows to translate the user control panels in the programming software to another language:

1. Open DM\_dt.txt ("dt" stand for "Deutsch" or German) and save it as **DM\_def.txt**.

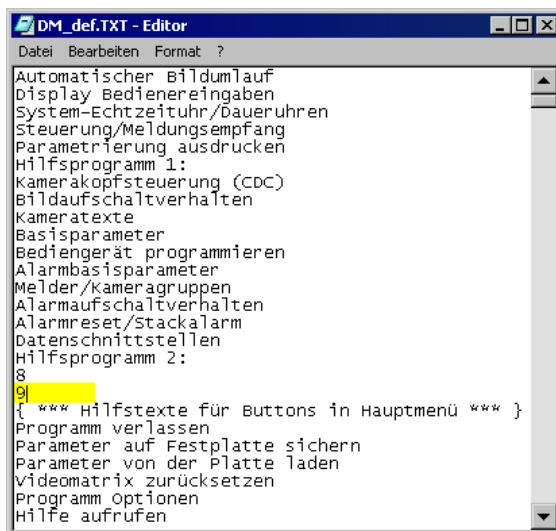


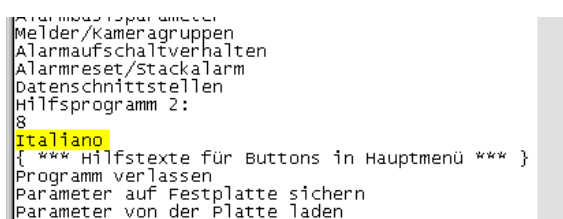
Fig. 7 DM\_def.TXT – Editor

2. Translate the text to the desired language.  
(Make sure you use the same amount of characters for the text).
3. Replace the **9** in the current text by the designation for the language you want to appear in language selection dialogue screen.



**Caution**

Make sure you neither add nor delete lines!



4. Open the flag file, Ger\_flg.bmp and save it as **Def\_flg.bmp**.
5. The flag can now be changed at will.

This newly created language for the programming software in the **Program Options** dialogue window (**italiano** in this example) can now be selected.

## 2.1.2 SIMATRIX Type

You must select the type of SIMATRIX in use here.

### SIMATRIX 164

In the case of the SIMATRIX 164, keyboard no. 0 (membrane keypad) is enabled.

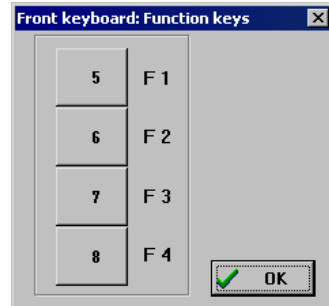


Fig. 8 Function keys on the front keypad

Function keys F1- F4 can be freely programmed (see section Keyboard layout (IVM)).

The LMS module is connected to the COM2 serial interface port in the case of the SIMATRIX 164 (see the **Ports on the video matrix** dialogue screen)

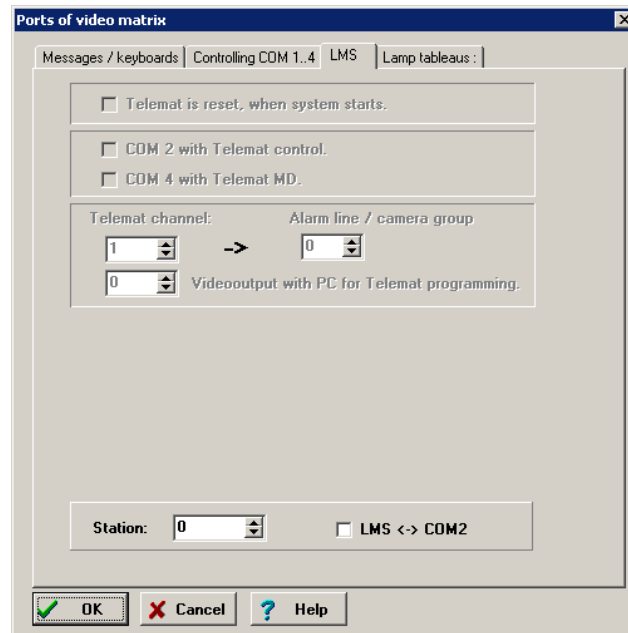


Fig. 9 The interfaces of the video matrix -SIMATRIX 164/ LMS

## 2.1.3 Interfaces and interface parameters

### 2.1.3.1 Active interfaces

---

Set by enabling the PC interface (COM1-COM2: as standard; COM3-COM20 if extra interfaces have been installed), to which the SIMATRIX is connected and setting the relevant interface parameters. Proceed as follows to work on-line:

- COM1
- ...
- COM20
- UDP/IP port 9000  
LAN connection , only available with NEO V2
- Off-line mode  
Choose this option if there is no connection with the SIMATRIX.

If the programming software is unable to establish a connection to the SIMATRIX, the off-line mode will automatically be selected.

### 2.1.3.2 Interface parameters

---

The SIMATRIX will display the chosen baud rate upon start-up. The PC to which the SIMATRIX is connected must be set to the same baud rate and other interface parameters as the SIMATRIX.

The following parameters for communication with the SIMATRIX can be enabled and assigned to the active interface in the programming PC:

- 8/ 2/ E
- 8/ 1/ N
- 8/ 1/ E

### 2.1.4 IP – address

---

Here is shown the IP – address of SIMATRIX NEO V2.

## 2.2 Exit

---

Use the **Exit** button to close the program. If you have changed any parameters, a notification message will appear asking you if want to save the changes.

## 2.3 Saving parameters to a data carrier

---

Using the **Save** button saves all the settings you have entered, or changes you have made to the SIMATRIX parameters, to a file on the hard disk or on floppy. You can use any file name you want.

The file extension is set to \*.dat as standard, but, like the file name, can be set to any extension you want.

## 2.4 Creating a parameter file from a copy

---

Proceed as follows to create a new parameter file from an existing file when in off-line mode:

1. Open a parameter file.
2. Save it under a different file name before making any changes, as any changes made in the off-line modus are immediately saved to file as soon as you click the **OK** button.
  - You can now change parameters at will, without modifying the original file. The changes will only be written to the new file.



When working on-line, while all changes are transferred immediately to the SIMATRIX, the parameter file remains unaffected.

---

3. If you want to save the new parameters afterwards, you must use the **Save** button to write your changes to file.

## 2.5 Loading parameters from a data carrier

---

The **Load** button allows you to load parameter files from the CD delivered with the unit (\*.dat) or any other kind of parameter files held on a different data carrier.

If you are working on-line at the time, the parameter settings from the parameter file you have loaded will be transferred immediately to the SIMATRIX.

When working in off-line mode, the parameter settings can be loaded, processed and saved to file under the same or a different file name using the computer.

## 2.6 Printer

---

The **Printer Setup** button allows configuration of the Windows standard printer.

## 2.7 PIN code

Pressing the function key activates a window requesting re-entry of the access code (PIN code).

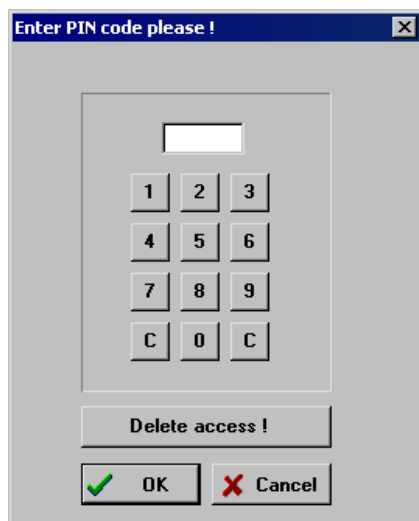


Fig. 10 PIN code

The access code (PIN code) is designed to prevent unauthorised persons from changing programming parameters. The code is requested on start-up.

Parameter settings can be viewed but not changed if the entered code is incorrect. This applies in both the on-line and off-line operating modes.

### Revoking access

The **Delete access** button reactivates PIN code protection of the parameter settings. You must then enter the PIN code again if you want to change parameter settings.

The PIN code itself is set in a different program. For security reasons, an external program, `vm_pin.exe`, is used to set the PIN code.

The following PIN code is active when the program is supplied initially:

12345

If you have used the external program `vm_pin.exe` to set the PIN code, you must delete this file from the hard disk afterwards to prevent unauthorised persons from changing the PIN code.

If there is no need to safeguard against unauthorised use, the PIN code request procedure can be deactivated by entering the following preset deactivation code:

54321

If this option is in use, there is no requirement to enter a PIN code, however the PIN code window will briefly appear and then close automatically when the program starts up.

## 2.8 Help

---

The **Help** button accesses the on-line Help function. Context-sensitive help is available whenever the Help button appears in the dialogue screens.

## 2.9 Printing parameter settings

---

Current parameter settings can be printed and used for help when documenting the system configuration and identifying the cause of errors. The standard format is DIN A4.

Click the box to select the required list and confirm by clicking **OK**.

There are listings available for the basic parameters, CDC configuration, alarm lines / camera groups and the individual camera label texts. The current date and time appear on each printed listing.

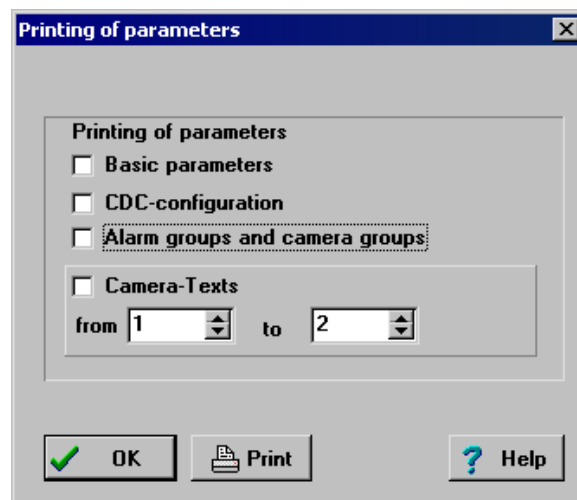


Fig. 11 Printing parameter settings

## 2.10 System reset

---

The Reset button is only active in the online mode. The button resets the SIMATRIX, i.e. the software re-initialises the system and the keyboards.

## 3 Basic parameters

This dialogue screen is used to set the basic system parameters.

As these basic parameters affect the contents of other dialogue screens, this is the first place to start when setting parameters.

For example:

In the selection dialogue screens where you can select a camera or a monitor, only those cameras or monitors entered in the **Basic Parameters** screen will appear in the selection list.

The screenshot shows a dialog box titled "Basic parameters" with a close button in the top right corner. The dialog is organized into several sections:

- Max. cameras in the system:** A numeric spinner set to 374.
- Transfer to all outputs**
- Max. monitors in the system:** A numeric spinner set to 118.
- Highest keyboard address:** A numeric spinner set to 2.
- Keyboards with fixed configuration:** A numeric spinner set to 2.
- Keyboard 1 = LAN router**
- A group box containing:
  - Ignore camera signal test**
  - Disable selection of inputs without signal**
  - Restore picture selection after restart.**
  - Master relay inactive if camera signal lost**
- Show selected inputs** button
- New textgenerator.**
- At the bottom are three buttons: **OK** (with a green checkmark icon), **Cancel** (with a red X icon), and **Help** (with a blue question mark icon).

Fig. 12 Basic parameters

### Maximum number of system cameras

Enter the total number of cameras or inputs you intend to use in the system here. When you activate the **Transfer to all outputs** option, the **Image switching parameters** dialogue screen will display the same number of cameras for manual switching.

### Max. system monitors

As above, enter the number of all the outputs or monitors you intend to use here.

### Highest keyboard address

Each keyboard used in the system must be allocated a unique address. This address is set in the operating unit using a coding switch (refer to the operating manual). You notify the system of the highest keyboard address here. Keyboards with a higher address than that entered here will be ignored.

### Keyboards with fixed configuration

When entering the number of keyboards, these addresses are permanently allocated to the I/O interface card (0-15) here, i.e. keyboard 1 is channel 1, keyboard 2 is channel 2, etc.



---

In the case of the SIMATRIX NEO/648/164, all keyboards connected to the system need to be permanently allocated, as only the number of devices entered will be recognised.

The factory setting for the number of keyboards is: 2

---

### Ignoring the signal failure test

The SIMATRIX tests connection to the cameras in the system once every second. The results of this test will be ignored if you tick the box here.

**Box not ticked** (the signal failure test is not ignored):

If a camera registers as unavailable, it will not switch in during manual switching. An error message (No Signal!) indicates that the camera is not available.

**Box ticked** (the signal failure test is ignored):

Tickling the box deactivates automatic signal failure recognition. This means that inputs without a signal may also be switched in this mode.

This may be desirable, for example when installing and setting the system up, in order to identify inputs that are not receiving a signal.

### Disabling selection of inputs without signal

This option prevents switching in blank displays both manually and when the automatic picture cycle is active.

### Memorizing of last picture configuration ( only with NEO V2 )

If this feature is selected, the last selected pictures on the video outputs are restored after reset or power on. Otherwise the output are dark controlled after reset.

### Activating/deactivating the master relay in the event of camera signal failure

You can activate or deactivate the master relay for camera signal failure here (refer to the operating manual).

The standard setting is **inactive**.



### Show selected inputs Selecting the input for setting the master relay if signal is lost

In the dialogue window that appears here, click the signals that require switching via the master alarm relay in the event of the collective failure signal. It is possible to exclude unused channels.



Fig. 13 Selecting the input for setting the master relay if signal is lost

The window shows all selected inputs which are included in the collective signal status.

The ticked boxes next to the input numbers indicate inputs where a signal is included.

Unticked boxes next to the input numbers indicate that there is no signal is present, these are not included.

## 4 User display information

All data that is input via a keyboard needs to be displayed on a monitor for checking purposes. You can allocate each keyboard to a monitor here (select: **Keyboard 0...11** or **Keyboard 12...31**), which will then display the data entered by the user. It is also possible to fade in the date, time and the status of the alarm areas.

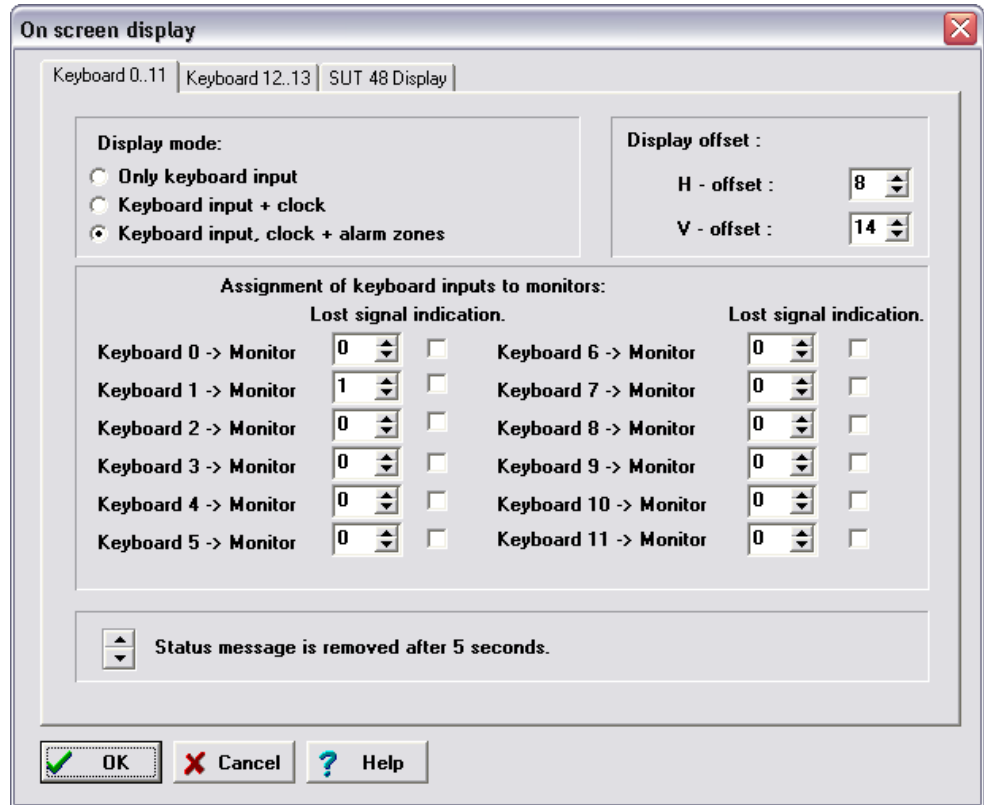


Fig. 14 User display information

### Display mode

You can select the information for display here when the user keys data in on a keyboard.

- Keyboard input only
- Keyboard input and clock
- Keyboard input, clock and alarm zones

The display on the monitor will react as soon as the user presses a key on the keyboard.

### Display offset

Determines the horizontal (H) and vertical (V) position of the text fade-in in the camera image.

### Assigning keyboard inputs to monitors

A monitor (arrow keys) that displays entered data can be assigned to each keyboard. Enter the corresponding monitor for each keyboard here. Keyed-in data will not be displayed if no output is allocated (Monitor 0). The data entry from more than one keyboard can be displayed on the same monitor.

### Lost signal indication (only with NEO V2 )

If this option is selected in case of a video signal lost a dark controlled picture is switched to the keyboard monitor and the camera text of the lost signal is shown on the screen.

### Status message removed after x seconds

The start—up message that follows a power-on reset or system reset, which appears on all the monitors connected to the system, can be erased after a preset period of time. If this setting has not been activated, the start-up message will remain on display until the first image appears.

- Status message removed after x seconds
- Automatic start-up message erasure not enabled  
The status message will remain on display until the first image appears.

Use the arrow keys to enter the settings.

### Index card for SUT 48 Display

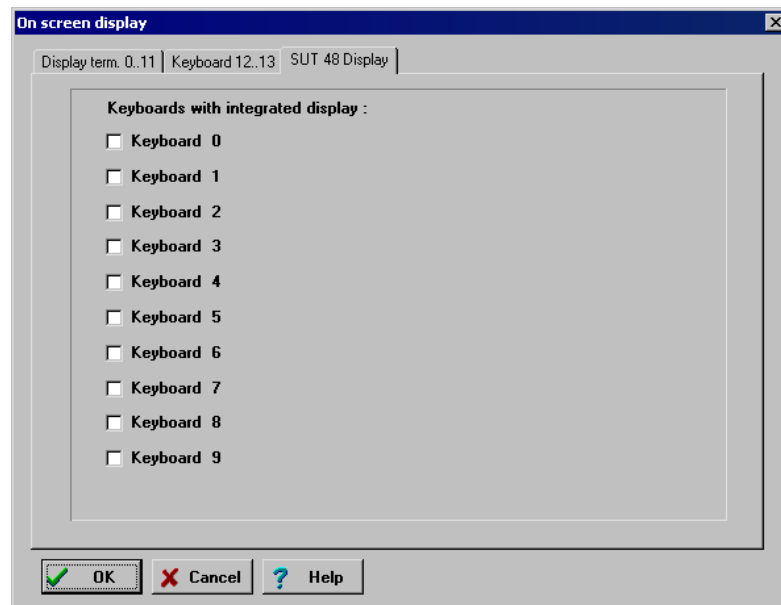


Fig. 15 SUT 48 display

Use this index card to indicate which SUT 48 keyboards will activate the screen for displaying the characters that are keyed in.



If connection has been made via a serial interface (COM2 to COM4), the SUT 48 display is not active as no data transfer will take place between the video matrix and the keyboard.

## 5 Image switching behaviour

This button opens the following window:

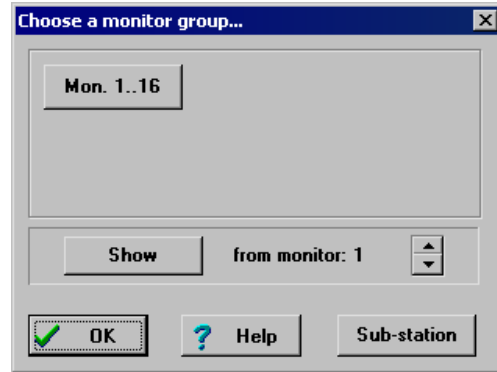


Fig. 16 Selecting a monitor group

Select the monitor group for the monitor whose parameters you want to set.

No more than 16 monitors can be displayed at once. The number of monitors that can be displayed is restricted by the data entered in the **Basic Parameters** dialogue screen.

Alternatively, you can also select **Show from monitor: x**. This feature is intended to display monitor strings exceeding the limits of a 16-monitor group more clearly.

The **Sub-station** button allows you to set sub-station parameters.

### 5.1 Representation of image switching behaviour

The following window appears when you have selected either one of the two monitor groups, or **Show from monitor x**, in the **Choose a monitor group** dialogue screen.

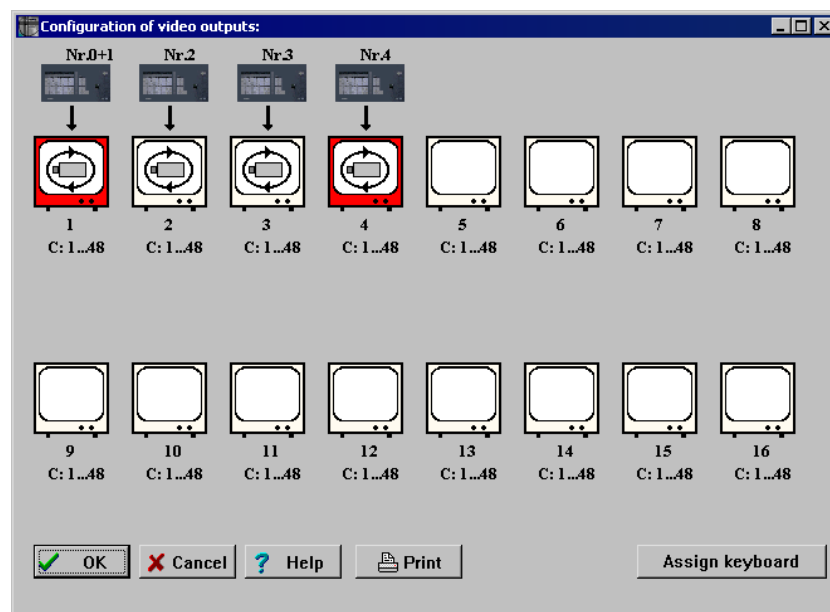


Fig. 17 Representation of image switching behaviour

This dialogue screen presents a graphical representation of the switching behaviour of the video outputs.



Alarm switching behaviour is presented in the **Alarm switching behaviour display** dialogue screen.

Each SIMATRIX output appears as a monitor icon.

For example:

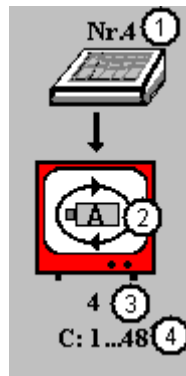


Fig. 18 Representation of the switching response of a video output

- 1 Keyboard no. 4
- 2 Video switching mode: automatic picture cycle at switch-on (**Auto-start after power on** option)
- 3 Monitor number
- 4 switchable cameras: 1 to 48

**C: 1 ...48** indicates which cameras have been released for switching on this monitor (in this example: cameras 1 to 48).

When a monitor has been assigned to a keyboard for displaying user entered data, a representation of the keyboard and its number will appear above the monitor icon (here: no. 4).

#### Display options for video switching modes

- Automatic picture cycle enabled  
If an automatic picture cycle has been enabled, a circular sequence icon with two arrowheads and a camera icon will appear in the corresponding monitor icon.
- An **A** in the camera icon indicates that the **Auto-start after power on** option is active (see section 5.1.2.2).
- Monitor string  
If a number of monitors have been grouped in a monitor string, this is shown by a box around the monitors involved.  
A **box with black lines** indicates a monitor string for manual switching. In this case, the first monitor in the string (the master monitor) is darker than the rest.  
A **box with yellow lines** indicates a monitor string for automatic switching. In this case, the first monitor in the string (the master monitor) is *darker* than the rest.
- Alarm monitors  
Monitors displayed in **red** are alarm monitors, which can be parameterised in the **Programming of the alarm switching mode on output x** dialogue box (see section 12.2.2).

Clicking the relevant monitor symbol will call up a dialogue screen (see section 5.1.2), where the switching response of a monitor can be parameterised. The complete configuration will be redisplayed upon exiting the parameterisation window. If you are working in the on-line mode, the parameters will not come into effect until you have confirmed them with **OK** to send the parameters to the video matrix. Click **Cancel** to keep the original parameter settings.

### 5.1.1 Assigning keyboards

The **Assign keyboard** button opens the **On screen display** dialogue screen (see section 4).

### 5.1.2 Setting video switching mode parameters for monitor x

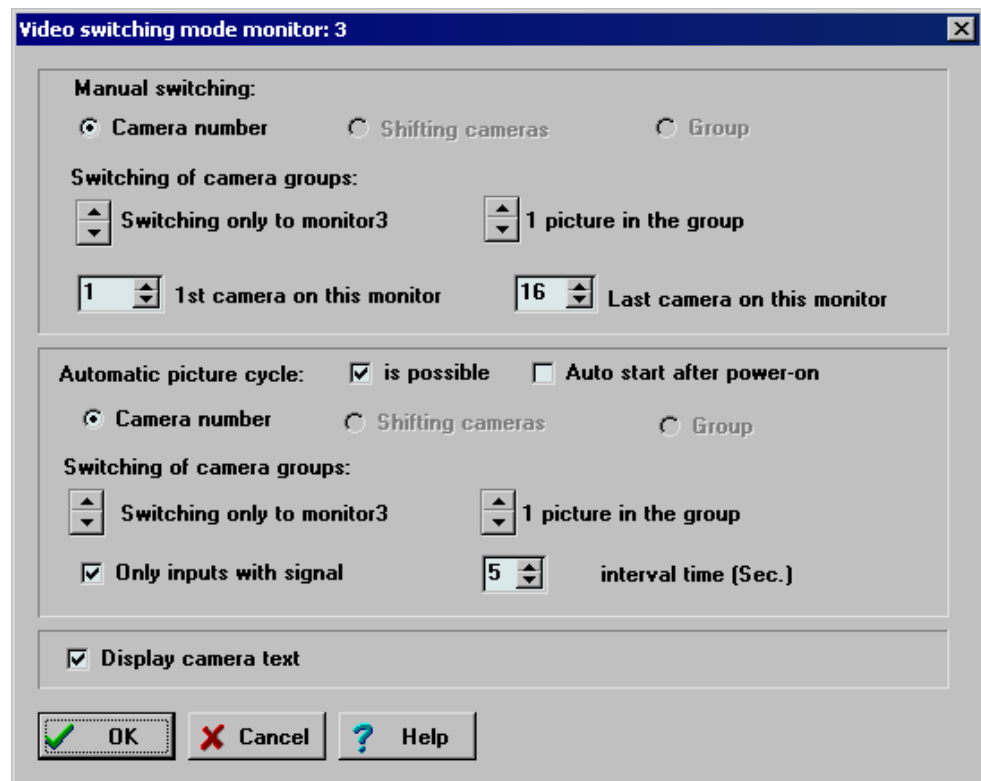


Fig. 19 Setting video switching mode parameters for monitor x

This dialogue screen allows parameterisation of the monitor's image switching response.

### 5.1.2.1 Manual switching



Fig. 20 Manal video control

With this response type, the user selects a camera and a monitor by manually inputting them from the keyboard. Three different operating modes can be selected:

#### Camera number

Select this setting to manually switch to a single monitor. Any input via the keyboard using the digit keys will be interpreted as a camera number.  
(1 image per switching operation/1 monitor)

#### Shifting cameras

This operating mode also only displays a single image, however each image that has already been displayed is placed in a monitor string. Enter the length of the monitor string.



This function can only be activated if the length of the monitor string has been set in **Switching to more than one monitor** previously.

The maximum length of the string is 8 monitors.  
(Switching to monitors x to y and 1 image per switching operation)

#### Group

You can enable group switching by selecting **Group** if a number of cameras are to be switched simultaneously. In this case, any input via the keyboard using the digit keys will be interpreted as a group number.



This function can only be activated if the length of the monitor string has been set in **Switching to more than one monitor** previously.

Additionally, the **max. no. of images per switching operation** option determines how many images from the group are to be switched in each case. Groups can also be moved on in the string. The group must be defined in the **Alarm / Camera groups** dialogue screen. As a group may not include more than 4 cameras, no more than 4 cameras can be switched simultaneously.  
(Switching to monitors x to y and max. x images per switching operation)

### Switching to more than one monitor

You can set the parameters governing the length of the monitor string for manual image switching here.

- Switching to monitor x only  
This setting deactivates the Shifting Camera and Group options.
- Switching to monitor x...y  
This setting deactivates the Shifting camera and Group options.

### n Images per switching operation

This feature allows you to set the number of images per switching operation. This is important for group switching. You can indicate here which images from the camera group should be switched.

### 1st camera on this monitor

#### Highest camera (limitation on the number of selectable cameras)

It is possible to enable a series of switchable cameras for each video output. You must enter the highest and lowest camera. Any cameras that fall outside this series are not switchable. This limitation only applies to individual manual switching. This parameter is ignored in the case of manual group switching or image cycle switching.

The number of cameras is also limited by the relevant basic parameter (see section 3).

## 5.1.2.2 Automatic picture cycle

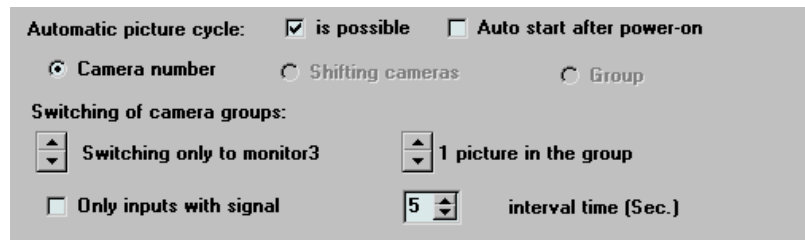


Fig. 21 Automatis picture sequence

If an automatic picture cycle has been enabled for this monitor, images from different cameras can be switched in sequence to a single or several monitors.

#### is possible

If this option is ticked, the monitor in question has been enabled for automatic image sequencing.

If the option is not ticked, the monitor has been excluded from automatic image sequencing.

#### Auto-start after power-on

If this option is ticked, the preset monitor cycle will start up automatically following switch-on or a power-on reset.

If this option is not ticked, automatic image sequencing has to be started using a key on the keyboard.



The cameras that are to be included in the automatic sequence must be parameterised in the **Monitor cycle on monitor x** dialogue screen (**Automatic picture cycle** button in the main window).

An image sequence is started using a key on the keyboard, to which the **Start cycle** function has been allocated.

An image sequence is stopped using a key on the keyboard, to which the **Stop cycle** function (see section 6.4.2) has been allocated, or by a priority image display.

Additional functions, such as the period of time the image remains on display, can also be allocated to keyboard keys.

There are also **3** different operating modes for automatic image sequencing:

- Camera number
- Shifting cameras
- Group

**Camera number:** (for monitor cycle/predefined sequence)

In this mode, single images are switched in turn, and the automatic sequence is only visible on one monitor.

*(Switching to monitor x only and 1 image per switching operation)*

**Shifting cameras:** (for monitor sequencing)

This operating mode also only displays single images in turn, however each image that has already been displayed is moved on one step in the monitor string.



This function can only be activated if the length of the monitor string has been set in **Switching to more than one monitor** previously.

---

e.g. switching to monitors 1..4. The length of the string is limited to 8 monitors.

*(Switching to monitors x to y and 1 image per switching operation)*

**Group:** (for image sequencing)

Choose this setting if complete camera groups are to be switched for image sequencing.



This function can only be activated if the length of the monitor string has been set in **Switching to more than one monitor** previously.

---

You can additionally set how many images from the group are switched in each case. The groups are moved into the monitor string one after another, so that each time a group is displayed a large number of images are all shifted one step on at the same time.

The camera group must have been defined in the **Alarm lines/camera groups** dialogue screen. As a group may not include more than 4 cameras, no more than 4 cameras can be switched simultaneously.

*(Images per switching operation/image sequence on more than one monitor)*

*(Switching on monitors x to y and several images per switching operation)*

### Switching to more than one monitor:

You define the length of the monitor string for automatic image sequencing here:

- Switching to monitor x only (for monitor cycle/preset sequence)  
This deactivates the 'Group' and 'Cameras' parameters.
- Switching to monitor x...x+n (for monitor cycle)  
This activates the 'Group' and 'Camera shift' parameters.

### n Images per switching operation

One or more images per switching operation. This is important for group switching. You can indicate here which images from the camera group should be switched.



Only operating mode 1, **Camera number**, can be used with the preset sequence (see section 8.2).

---

### Interval time in sec.:

This setting allows you to define how long (in seconds) an image or a camera group should be displayed before being overwritten.

### Only inputs with signal

If this option is active, inputs which have been parameterised in the sequence but do not supply a signal, are skipped in the image sequence.

## 5.1.2.3 Displaying camera text

---

If this function key is active, the camera text, as set in the **Camera texts** dialogue screen (see section 7), also appears in the camera image.

## 5.2 Sub-station configuration

Access this dialogue screen by clicking the **Image switching response** button in the main window, followed by the **Sub-station** button in the **Select monitor groups ...** dialogue screen.

This dialogue screen is only of any significance if sub-stations are connected to the SIMATRIX.

This window shows the sub-stations that have been parameterised (see section 5.2.2). These are indicated by a green screen.

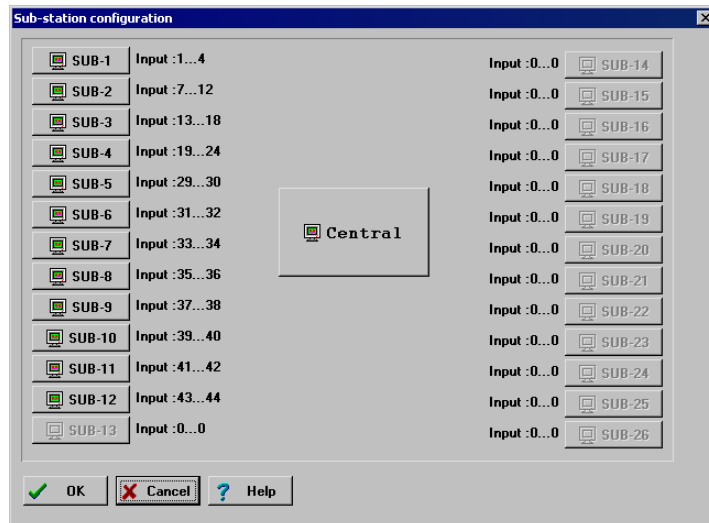


Fig. 22 Sub-station configuration

The **Central** button opens the **Central** dialogue screen (see section 5.2.1), the **SUB-x** buttons open the relevant dialogue screens for each sub-station.

### 5.2.1 Central configuration

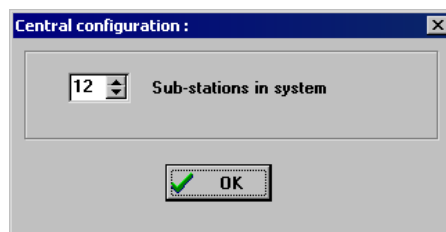


Fig. 23 Central

Enter the number of sub-stations in the system in this dialogue screen.

## 5.2.2 Sub-station x

---

You must allocate the sub-station outputs to the central inputs here.

During this process the following applies:

The sub-station outputs are always numbered from output 1. For example, if sub-station 1 is connected to the main video matrix by four video cables (four channels), these outputs are automatically designated outputs 1 to 4 on sub-station 1.

You must now indicate the main video matrix inputs to which these four channels are connected. In principle there are no restrictions on which inputs on the main video matrix are used. If you have connected sub-station outputs 1 to 4 to inputs 5 to 8 on the main video matrix, you must enter 5 for the lowest input channel and 8 for the highest input channel.

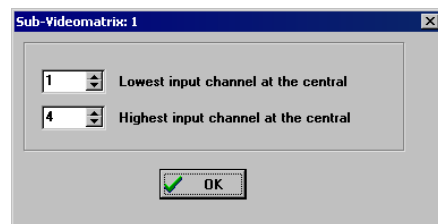


Fig. 24 Sub-station: x

## 6 Programming keyboards

The **Program keyboards** button opens a list in a dialogue window, in which you can select the keyboard you want to program.

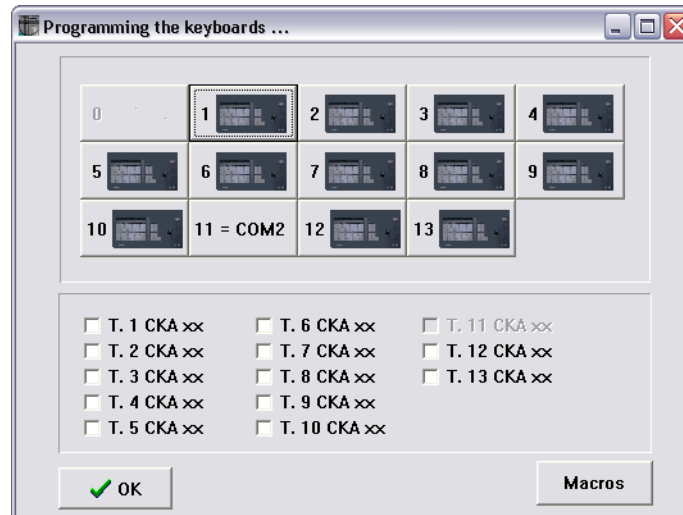


Fig. 25 Selecting a keyboard for programming

With the option „CKAxx“ the CKA layout can be selected. If this option is selected, only the 10 function keys can be user defined. If unselected, all keys can be user defined.

### Macros (only with NEO V2 )

Opens the macro definition screen. There can be defined up to 32 macros with up to 48 functions and sub functions for each macro.

This button is only available with NEO V2. With the other SIMATRIX types the macros are generated by keyboard command sequences.

### 6.1 Keyboard layout (IVM)

If IVM operator stations are used, open the **Video matrix interfaces** dialogue screen and allocate a keyboard to interfaces **COM1..4 Control** on the index card (the example above shows keyboards 11, 12 and 13 as the standard settings).

This keyboard must then be programmed for the following standard key allocation.

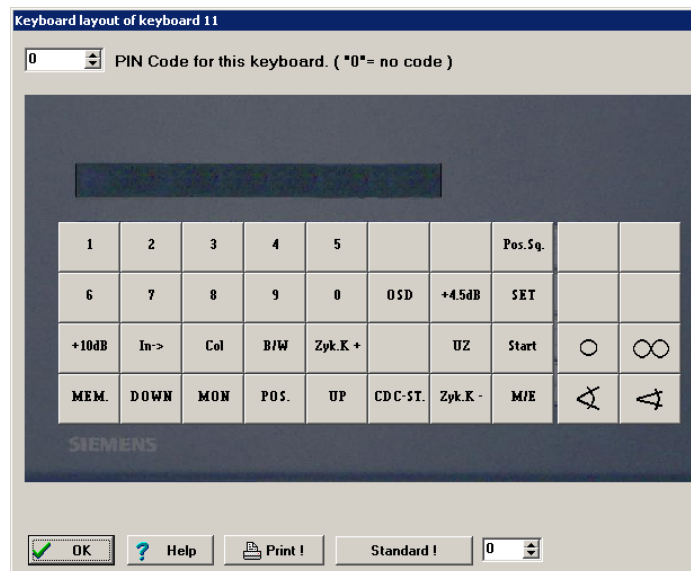


Fig. 26 Keyboard layout of keyboard x (IVM)

## 6.2 Connecting CKA 48/32 keyboards

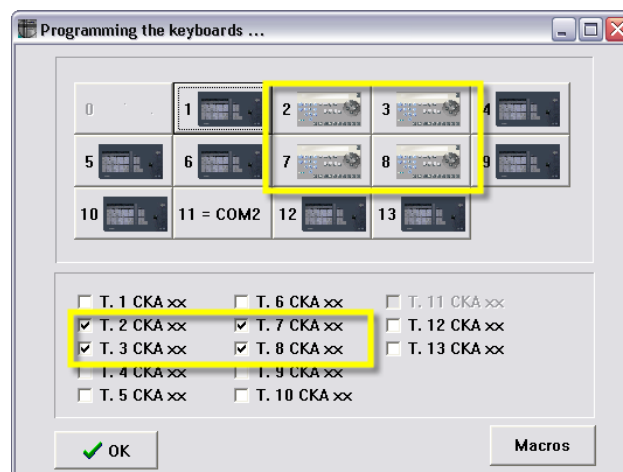


Fig. 27 Selection CKAx keyboard

This notifies the SIMATRIX and the parameterisation program which keyboards in the system are type CKA 48/32 units. A modified version of the **Keyboard layout of keyboard x** dialogue screen is required to set parameters.



Fig. 28 Keyboard CKA 3210/CKA 48xx

### 6.3 Keyboard layout of keyboard x

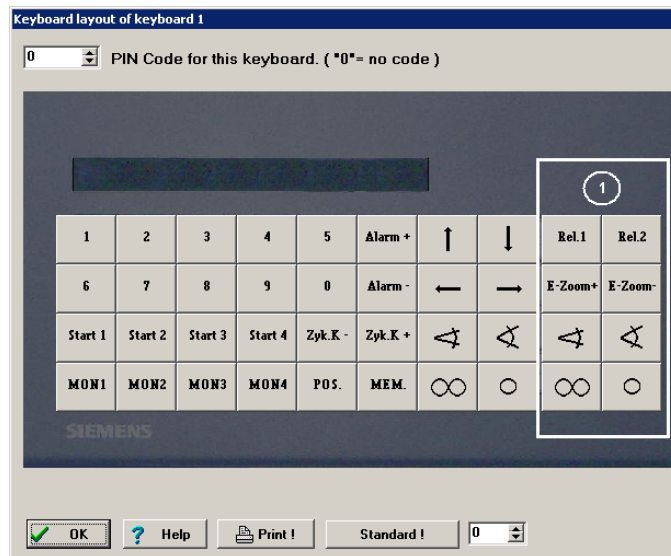


Fig. 29 Keyboard layout for SUT 48 keyboard 1

1 SUT 48 extension

The SUT 48 keyboards have 32 freely programmable keys. There are certain limitations that apply to programming the 8 highlighted keys for the SUT 48 extension. When you open the **Programming the keyboards** dialogue screen for the additional SUT 48 keys, only the available key setting options will appear.

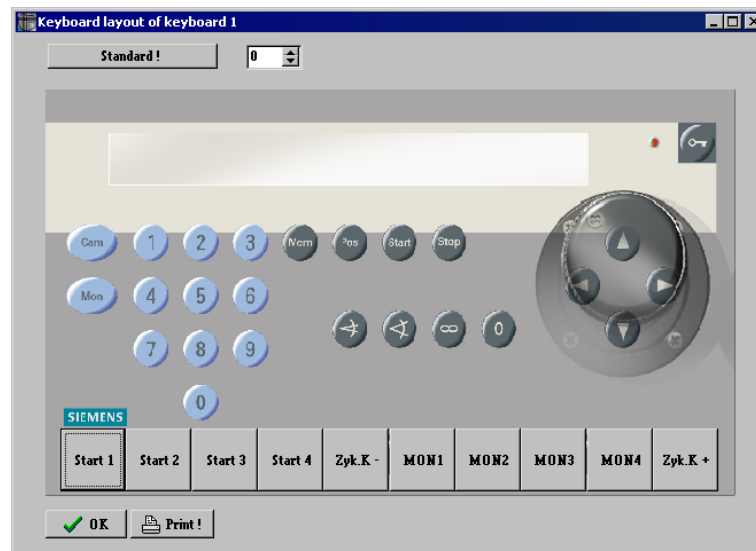


Fig. 30 Keyboard layout for CKAx10 keyboards

The screen display in the parameterisation software replicates the layout of the **CKAx** keyboard. The device has ten freely programmable keys (F1 to F10), which can be parameterised as required.

- To program a key, click the key icon and set the desired functionality in the dialogue box that has opened.



When parameterising a VMT 32 keyboard, the parameter settings of the additional SUT 48 keys are ignored.

The keyboard layout shown corresponds to the current key allocation for this keyboard (in the example above: standard layout for keyboard 1).

The current functionality is displayed in the key icons in each case. Placing the mouse pointer on a key opens a small pop-up box, which briefly describes the programmed functionality.

The **Standard!** button restores key allocation to standard settings.

Clicking the **Print!** button prints a report showing the programmed key allocation to the standard Windows printer.

If the keyboard PIN code feature is active (see section 1.4.3 on `vm_pin.exe`), a PIN code can be set for each keyboard here (VMT 32/ SUT 48; not CKA xx).



Settings for keyboard 0 (membrane keypad with 4 freely programmable keys) can only be entered in conjunction with the SIMATRIX 164.



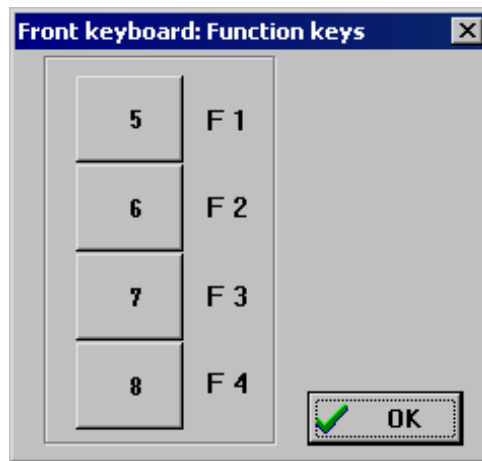


Fig. 31 Function keys on the front keypad (SIMATRIX 164)

## 6.4 Programming keyboards

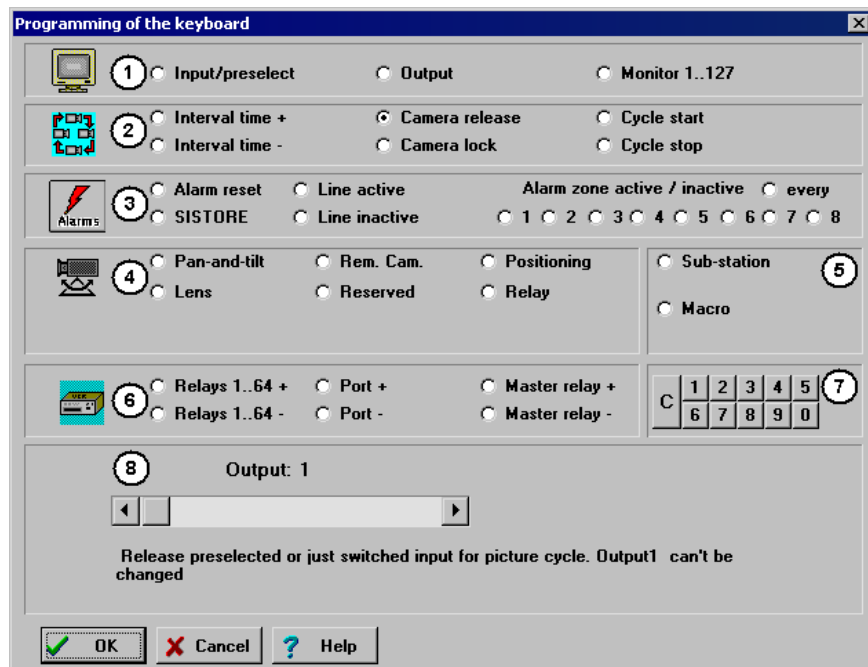


Fig. 32 Programming of the keyboard

- |   |   |
|---|---|
| 1 Input/output function category            | 5 Various functions   |
| 2 Automatic picture cycle function category | 6 Relay function category   |
| 3 Alarm processing function category        | 7 Digit keys function category  |
| 4 Camera control function category          | 8 Display window:<br>Current parameter settings for the selected functions and extra parameters |

Each key can be allocated a function from any one of the seven function categories.

When you select a function within a function category, a brief explanation and the current parameter settings will appear in the display window. Many functions allow the input of extra parameters in the display window (e.g. the video output number).

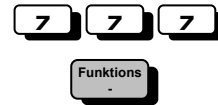


In the function description, this icon indicates the label that is used in the parameterisation software to illustrate the programmed key/keyboards. We recommend you also use this label for the actual keyboards. Where applicable, x stands for a selected value.

The following basically applies if a key has been allocated a function that requires additional entry via the digit keys:



First input the value (max. 255) using the digit keys,  
then press the function key; never in reverse order!



**For example:**

Switching camera 15 to monitor 7.

1. Program a key with the **Input/preselect** function (without entering the number of the video input) and another key with the **Output** function (without setting the number of the video output).
2. Now enter **1** and **5** using the digit keys and press the **Input/preselect** key.
3. Now enter **7** using the digit keys and then press the **Output** key.  
→ Camera 15 will be switched to monitor 7.



When supplied, the key lettering of the keyboards corresponds to the parameter settings of keyboard 1. The lettering on the other keyboards must be modified to suit the parameter settings.

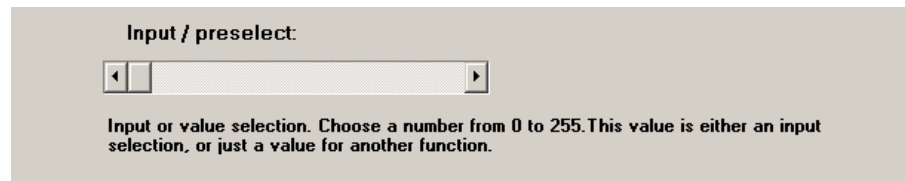
### 6.4.1 Input/output function category



Fig. 33 Input/output function category

**Input/preselect**

This function will normally preselect a set video input for display. It is however possible to combine the programmed preselection with other functions.



In →

- Video inputs preselection without number presets  
Enter the number of the desired video input at the keyboard using the digit keys, then press the key that has been allocated this function.  
The scroll bar in the display window must be set to its initial position.

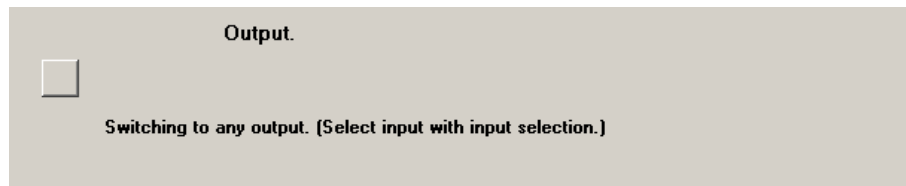


- Video input preselection with number presets  
Use the scroll bar in the display window to set the video input that will always be switched by pressing the function key.

Procedure at the keyboard:

### Output

This function allows selection of the video output to which you want to switch the image signal.



The square, grey button in the display window can be used to select one of the two switching options described below:



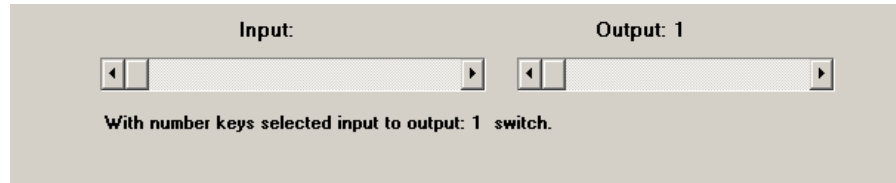
- Switching to any monitor  
Enter the number of the desired video output at the keyboard using the digit keys, then press the key that has been allocated this function.



- Switching the chosen video input to the monitor that was last selected using this keyboard.  
In this particular case, it is not necessary to enter the number of the video output each time.  
Enter the number of the video input (max. 255) using the digit keys and then press this key.

**Monitor 1..127**

This function allows a video input to be switched to a monitor.



There are 2 variants:



MONx

- Only the number of the video output is fixed:  
The user's choice of video input is always switched to the selected monitor. Use the **Output** scroll bar to set the desired video output number. Leave the **Input** scroll bar in its initial position.

Procedure at the keyboard:

Enter the number of the video input at the keyboard using the digit keys, then press the key that has been allocated this function.



x->y

- The numbers of the video input and output are fixed:  
Permanently program the input and output using the two scroll bars to allow full switching at a single press of a button.

**6.4.2 Automatic picture cycle function category**

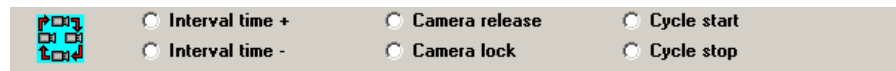
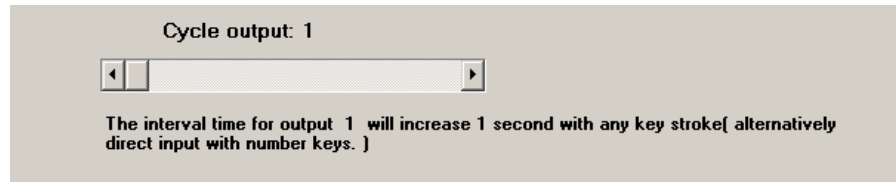


Fig. 34 Automatic picture cycle function category

**Image interval time +**

Each time this function is activated, it increases the image interval time at the chosen image sequence video output by one second.

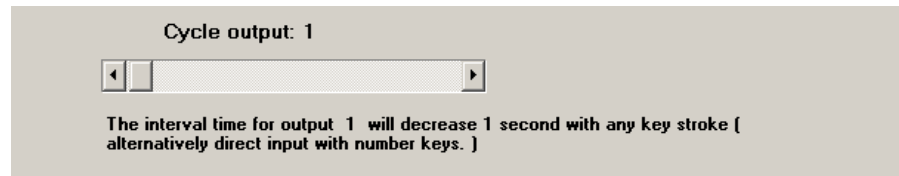


Tim.x +

- Choosing the output where the image interval time will be increased by one second  
In the case of automatic image sequencing, you can use the scroll bar to select the video output to which you want the function to apply.

### Image interval time –

Each time this function is activated, it decreases the image interval time at the chosen image sequence video output by one second. Alternatively the image interval time can be indicated as an absolute value in seconds.



 Tim.x –

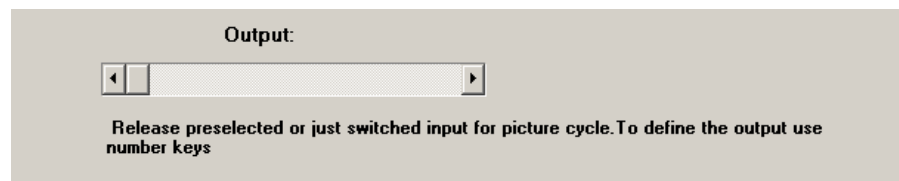
- If automatic image sequencing has been programmed, each press of the **Cycle output: x** key combination will reduce the image interval time by one second.


 Tim.

- Alternatively, you can enter the period of time directly.
  1. Use the digit keys to enter the period of time
  2. Execute the **Input/preselect** function
  3. Enter the monitor number using the digit keys
  4. Execute the image interval time - function (**Tim.**)


### Camera release

This function allows the user to enable his choice of video input for an automatic picture cycle. The video output can either be selected at the keyboard using the digit keys, or selected in the display window using the scroll bar.



 ZyK.K. +

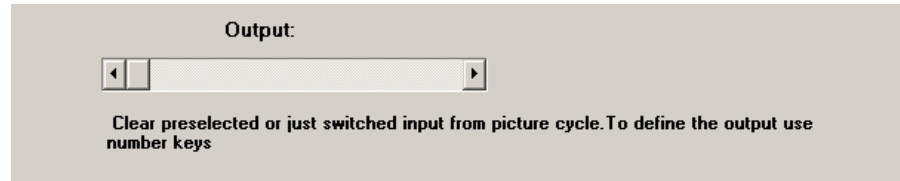
1. Preselect the camera using the **Input/preselect** key
2. Using the digit keys, enter the video output to which the image sequence is to be switched, then execute the **Release camera** function.  
If no number is entered for the video input, the camera that is currently switched will be enabled.


 ZyK. + x

3. It is also possible to permanently program the video output rather than use the digit keys to enter a number.  
To do so, use the digit keys to enter the camera number you want to enable
4. Press the Input/preselect key
5. Then press this function key (ZyK.+x)


### Lock camera

This function allows the user to disable his choice of video input for an automatic picture cycle. The video output can either be selected at the keyboard using the digit keys, or selected in the display window using the scroll bar.



 ZyK.K –

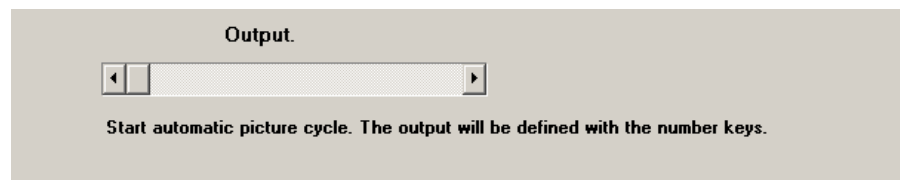
1. Preselect the relevant camera using the **Input/preselect** function (see above)
2. Enter the output that corresponds to the image sequence and then execute the **Lock camera** function. If you do not preselect a camera, the camera that is currently switched will be disabled.

 ZyK. –x

3. You can also permanently program the output rather than enter it using the digit keys. This means that either the current camera can be disabled for the preset output at a press of a button,
  - or –
  - you can enter the number of the camera you want to disable using the digit keys
4. Then execute the **Input/preselect** function
5. And finally execute the **ZyK.-x** function.

### Cycle start

This function starts an automatic picture cycle on any monitor or a programmed monitor.



 Start

- Image sequence on a chosen monitor
  - Enter the number of the desired video output at the keyboard using the digit keys, then press the key that has been allocated this function.
  - The scroll bar in the display window must be set to its initial position.

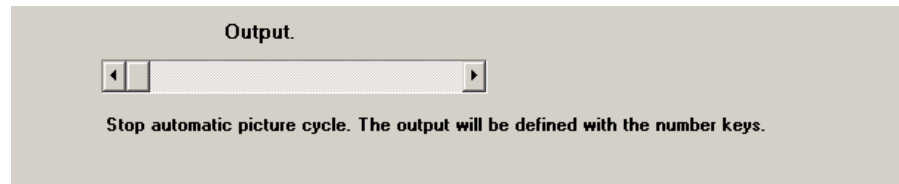
 Start x

- Image sequence on a set monitor
  - Program the video output using the scroll bar in the display window. The sequence can be started at the keyboard at the press of a button.

You can also use this function to start a preset sequence (see section 8.2).

### Cycle stop

This function stops an automatic picture cycle on any monitor or a programmed monitor.



#### Stop

- Stopping an image sequence on any monitor  
Enter the number of the desired video output at the keyboard using the digit keys, then press the key that has been allocated this function.  
The scroll bar in the display window must be set to its initial position.



#### Stop x

- Stopping an image sequence on a programmed monitor  
Program the video output using the scroll bar in the display window. The sequence can be stopped at the keyboard at the press of a button.

You can also use this function to stop a preset sequence (see section 8.2).

## 6.4.3 Alarm processing function category

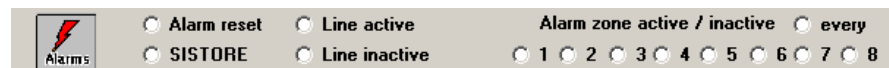
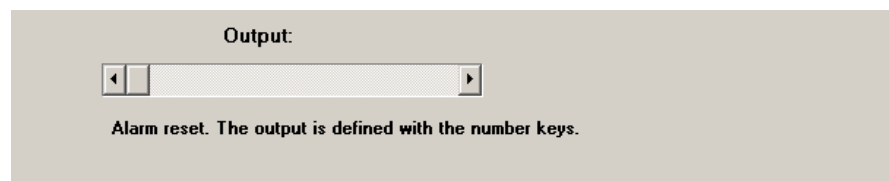


Fig. 35 Alarm processing

### Alarm reset

This function allows displayed alarm images to be deleted.



#### Reset

- Deleting all alarm images in the system  
The scroll bar in the display window must be set to its initial position.



#### Res.x

- Deleting an alarm image on a set monitor  
Program the video output using the scroll bar in the display window. Alarm image generation can be stopped at the keyboard at the press of a button.
- Deleting switched alarm images by entering the appropriate monitor number:
  1. Enter the monitor number using the digit keys
  2. Execute the **MON** function

– or –

press a programmed **MONx** key

3. You can permanently allocate the alarm reset function to an output so that pressing the appropriate key will always delete the alarm image switched to this output.  
(Scroll bar set to the desired output number)

### Alarm line active

This function activates an alarm line in a similar way to the 'Alarm line/camera group' dialogue screen.

Changing alarm status can be protected by an access code (see section 13.3).

1. Enter the alarm line number using the digit keys and press this function key.

The key has the following special functions when operated in conjunction with the digit sequences below:

- 255: **all** alarm lines are switched to **active**
- 254: deletes access rights for changing alarm line status
- 253: switches between summer and winter time (also known as toggling)

The key is also used to enter the access code referred to above (see section 13.4)

### Alarm line inactive

This function deactivates an alarm line in a similar way to the 'Alarm line /camera group' dialogue screen.

Alarm line deactivation remains in force until the next system reset.

Alarm handling can be protected by an access code (see section 13.3).

1. Enter the alarm line number using the digit keys and press this function key.

The key has the following special functions when operated in conjunction with the digit sequences below:

- 255: **all** alarm lines are switched to **inactive**
- 254: deletes access rights for changing alarm line status
- 253: switches between summer and winter time (also known as toggling)

The key is also used to enter the access code referred to above.

### Alarm zone active / inactive

Each press of the function key switches between the active /inactive condition.

- Alarm zone 1...8:  
This allows a complete alarm zone to be switched to active/inactive. It applies to alarm lines in the corresponding alarm zone.
- every:  
The 'every' setting is effective for the alarm zone that has been selected using the digit keys.



As an alarm zone can be switched to active at preset time intervals (see section 10.3), the following applies when this key is used to enable manually:

manually inactive + inactive according to time setting	Alarm zone inactive
manually active + inactive according to time setting	Alarm zone active
manually inactive + active according to time setting	Alarm zone active
manually active + active according to time setting	Alarm zone active

This shows that manual enabling takes precedence over time-controlled enabling.



That means that a time-enabled change in alarm zone status will only become effective if the alarm zone is manually inactive and the preset switching time lies in the past.

### SISTORE-NT ( not available with NEO V2 )

The scroll bar can be used to assign the following functions to the function key:

- Stop display
- Store alarm sequence
- Stop image recording
- Start image recording
- Show live image
- Show stored image
- Show last or selected image sequence
- Display
- Play back
- Switch alarm image forward by one frame
- Switch alarm image backward by one frame
- Switch alarm image forward by 10 frames
- Switch alarm image backward by 10 frames
- Show video matrix time
- First alarm event image
- Last alarm event image
- Show next alarm event
- Show previous alarm event
- Show image from next camera
- Show image from previous camera
- Switch on slow-motion
- Switch off slow-motion
- Reset alarm

## 6.4.4 Camera control function category

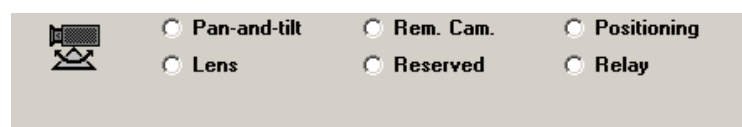


Fig. 36 Camera positioning

### **Pan-Tilt**

Used to control the movement of a PTZ camera (**Pan-Tilt/Zoom**) in 8 different directions.

The scroll bar can be used to assign the following functions to the function key:

- Pan/tilt head to the right
- Pan/tilt head to the left
- Pan/tilt head down
- Pan/tilt head up
- Pan/tilt head to the right and down
- Pan/tilt head to the right and up
- Pan/tilt head to the left and down
- Pan/tilt head to the left and up

The most common approach is to allocate the first 4 functions to 4 different keys (right/left/down/up).

### **Lens**

It is possible to assign various camera lens control functions to different keys here.

This includes zoom and focus control in the case of mechanically driven lenses.

Lens driver commands (set using the scroll bar):

- Zoom + (Tele)
- Zoom - (Wide)
- Focus - (Near)
- Focus + (Far)
- Electronic Zoom + for remote digital cameras
- Electronic Zoom - for remote digital cameras

### **Remote Digital Camera**

It is possible to assign various remote digital camera control functions to different keys here.

Commands for remote digital cameras (set using the scroll bar):

- OSD-ON
- OSD-SET
- OSD-UP
- OSD-DOWN
- Amplification + 4,5 dB
- Amplification +10 dB
- BW
- COLOUR
- Switching between electronic/mechanical control  
This parameter setting causes cameras that can zoom both optically and electronically to first exhaust the optical (mechanical) range of adjustment before switching to electronic zoom.

## Reserved

For permanent allocation of a camera to a keyboard.

To set this parameter, it is necessary to first enter a camera number using the digit keys and then activate this function.

This function is only available for CDC drivers.

### For example:

You enter the following at keyboard 3:  
use the digit keys to enter 15,  
then activate the Reserved function

Camera 15 has now been permanently assigned to the keyboard, i.e. this keyboard is now the only device that can control the CDC for camera 15.

To revoke the setting, activate the **Reserved** function a second time.

Reserving a second camera revokes the first reservation setting.

## Positioning

Function keys for calling up and storing camera positions can be programmed here. This only applies to CDCs that allows automatic positioning.

(Set the desired position using the arrow keys)

- Store the camera position to memory (MEM)
  - Store the current camera position under a position number.
  - Enter the position number using the digit keys and store by pressing this function key.
  - (Scroll bar in its initial position)
  - Store the camera position as a permanently programmed position number
  - (Set the position number using the scroll bar)
- Call up a camera position(POS)
  - Call up a programmed camera position.
  - Enter the position number using the digit keys and call it up by activating this function.
  - (Scroll bar in its initial position)
  - Call up a permanently programmed camera position.
  - (Set the position number using the scroll bar)



### Caution

All stored positions are deleted when initialisation takes place!

- Initialisation
  - Triggering the initialisation process for camera positioning. The camera is driven through its entire range of movement on all axes to record the maximum and minimum range values for each axis.
- Stopping movement
  - Stopping camera positioning movement. In normal operation, movement will stop automatically. A specific signal is only required if remote control is used.

- Starting the positioning sequence  
Before a sequence can be started, it must first have been set in the OSD menu (see operating manual) of the CDC. This menu can be reached using the **INIT** (Initialisation) function key.

### Relay

This function is designed to allow remote control of 3 relays (in CDCs with position control) to control external devices.

The following functions can be programmed using the arrow keys.

- Camera on/off
- Relay 1 on/off
- Relay 2 on/off
- Relay 3 on/off

Each activation switches the condition of the 3 relays (on/off).

The two other key functions allow the camera to be switched on and off or to stand-by.

## 6.4.5 Sub-station function category

---

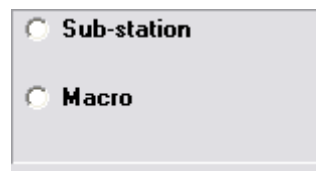


Fig. 37 Sub-station

### Sub-station

This function key switches images from a camera that is connected to a sub-station.

When switching a camera connected to a sub-station, the number of the sub-station must also be indicated when switching takes place.

1. Preselect the sub-station using the digit keys and then activate the 'Sub-station' function key.  
(Scroll bar in its initial position)
2. You can also permanently assign a sub-station to a key so that the sub-station can be called up at a single key press.  
(Use the scroll bar to program the sub-station number)

### Typical example of programmed keys

To switch camera 5 on sub-station 7 to monitor 3:

1. Enter 7 using the digit keys and press the **Sub-station** function key
2. Enter 5 using the digit keys and press the **Input/preselect** function key
3. Enter 3 using the digit keys and press the **Output** function key

The desired camera will be switched to monitor 3.

## Macros

The SIMATRIX can store four macros that were previously recorded using a keyboard. The stored macros can be executed by any keyboard in the system that has been programmed accordingly. Each macro can include up to 60 keyboard actions, allowing automation of complex special functions.




---

Commands for camera head drives cannot be used in macros.

---

The programming software is used to configure whether a key on the keyboard executes just one macro, or whether all four macros can be called up and executed using the same key.



Mak.:x

- Executing a preset macro

Use the scroll bar in the display window to select macro 1, 2, 3 or 4.

The programmed key on the keyboard is always used to execute the selected macro.



Macro

- Arbitrarily executing a macro

Leave the scroll bar in the display window in the left-hand position.

Enter the macro number at the keyboard (1, 2, 3 or 4), then press the key that has been assigned the **Macro** function.

- Recording macros ( not with NEO V2)

1. To start recording

Use the digit keys to enter the number of the macro +100 at the keyboard (i.e. 101, 102, 103 or 104)

2. Press the key that has been assigned the **Macro** function.

3. Now execute the macro, which consists of up to 60 keyboard actions. (The 61st action will break off programming and shut off the macro recorder)

4. To end macro recording

Enter the macro number used for the recording (i.e. 101, 102, 103 or 104)

5. Press the key that has been assigned the **Macro** function.




---

The exact functionality of a macro depends on the key configuration of the keyboard where the macro was originally recorded.

If the configuration of any of keys used in the macro is changed after initial macro programming, the functions executed by the macro will also change.

We therefore recommend that macros are only recorded and executed on a dedicated keyboard.

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## 6.4.6 Relay function category

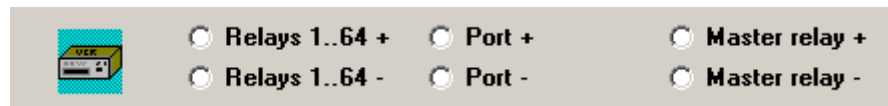


Fig. 38 6 Relay

### Relays 1..64 +

If any of the optional relay cards have been installed in the SIMATRIX SYS control unit, a relay activation key can be allocated here:  
(Program the relay number using the scroll bar)

Alternatively, a relay can also be selected by preselecting the desired relay number. The position of the scroll bar has no effect in that case.

### Relays 1..64 -

If any of the optional relay cards have been installed in the SIMATRIX SYS control unit, a relay deactivation key can be allocated here:  
(Program the relay number using the scroll bar)

Alternatively, a relay can also be selected by preselecting the desired relay number. The position of the scroll bar has no effect in that case.

### Port +

This key function allows any data bit of the 8-bit parallel port to be set to COM2.  
(Program the control outputs D0-D7 using the scroll bar)

#### Display window options:

- permanent switching  
a permanent signal condition
- toggling  
a signal changes the condition and this condition is then maintained.
- pulse  
When pressed the signal is briefly activated (approx. 200ms), following which the relay returns to its resting position

### Port –

This key function allows any data bit of the 8-bit parallel port to be set to COM2.  
(Program the control outputs D0-D7 using the scroll bar)

### Master relay +

This key function allows setting of the alarm master relay in the SIMATRIX.

The alarm master relay can also be set to automatic operation in the event of an alarm. This is parameterised in the dialogue screen (see section 10).

**Display window options:**

- permanent switching  
a permanent signal condition
- toggling  
a signal changes the condition and this condition is then maintained.

**Master relay –**

This key function allows clearing of the alarm master relay in the SIMATRIX.

The alarm master relay can also be cleared automatically in the event of an alarm. This is parameterised in the **Basic alarm parameters** dialogue screen.

**6.4.7 Digit keys function category**

Fig. 39 Number keys

Normally each keyboard has a numerical key pad (0 to 9) as most functions require an input via the digit keys.

1. The key to be programmed can be allocated a digit in the range 0 to 9 to allow the entry of digit sequences.
2. The **C** (Clear) button clears the function that is currently assigned to a key.

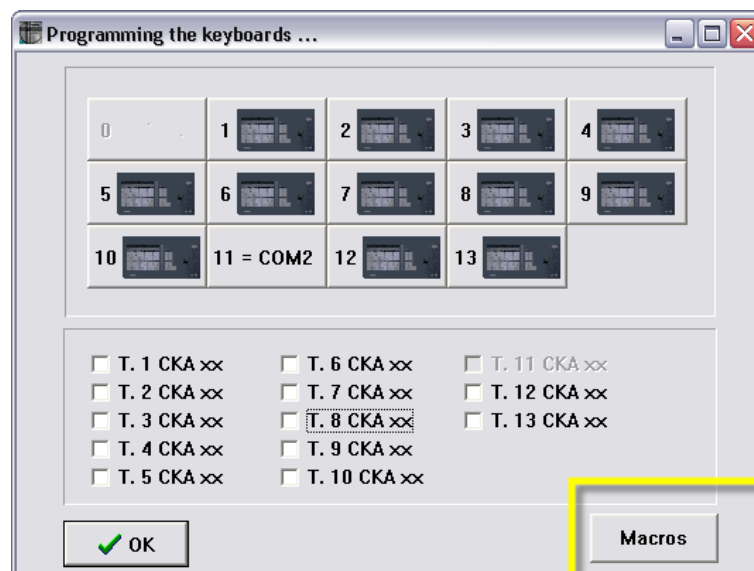
**6.5 Macros (only with NEO V2)**

Fig. 40 Macro selection.

Here up to 32 macros with up to 48 functions and subfunctions can be defined.

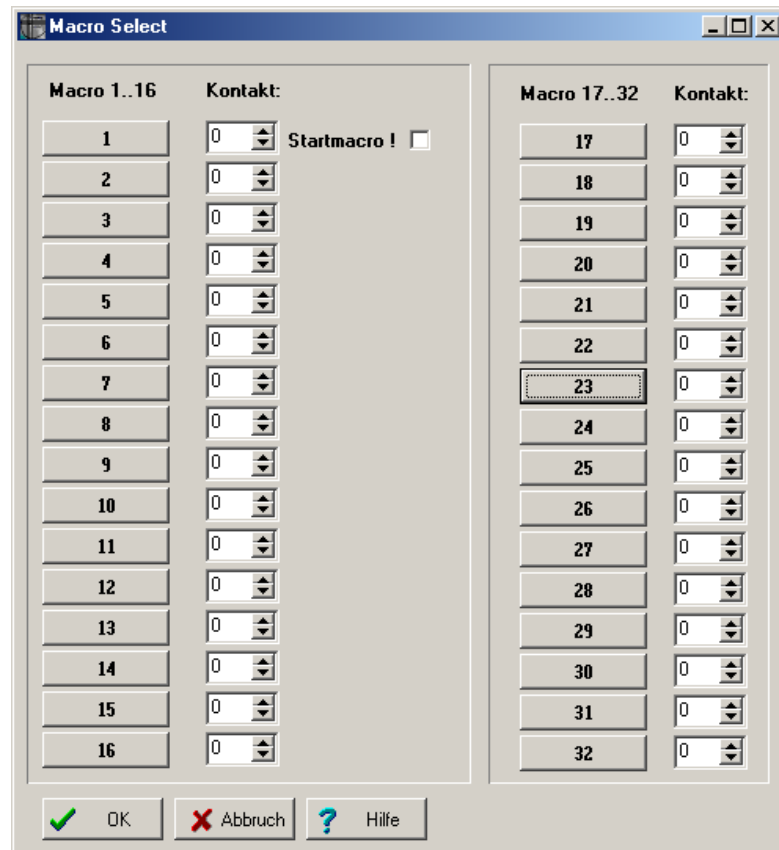


Fig. 41 Macro selection

Each of the 32 macros can contain up to 48 functions with subfunctions.

The first macro can be defined as startmacro. It is executed then after power on or reset.

If a contact is defined, the macro starts after triggering this contact.

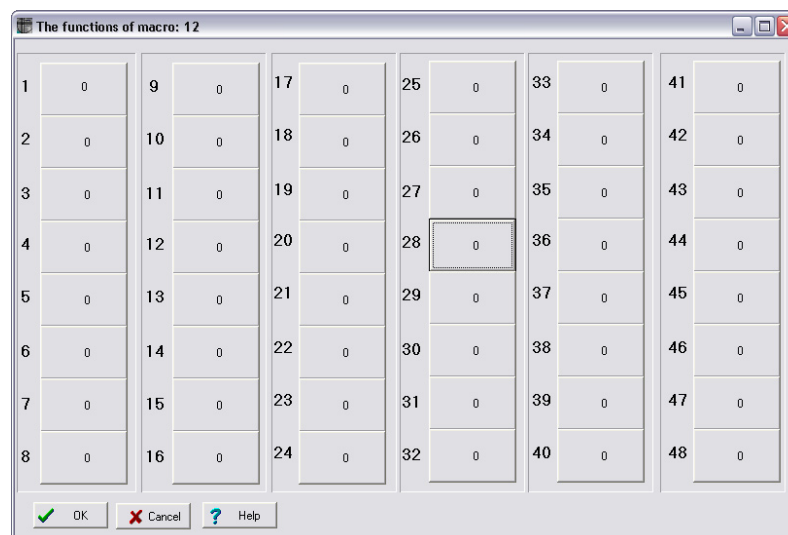


Fig. 42 Macro function definition



With this menu the macro functions can be defined. One single macro can contain up to 48 functions. If mor functions are neede, it is possible, to call another macro at the end of the first macro.



The definition of the macro functions is compatible to the parametrization of the keyboard keys. See also chapter 6.3.1

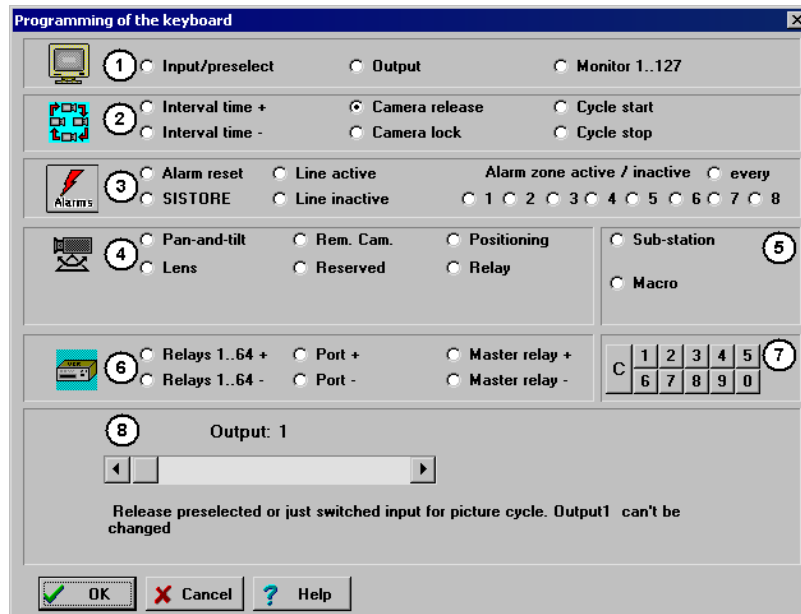


Fig. 43 Parametrization of macro functions.

## 7 Camera text labels

In the **Please choose a camera for text display** dialogue screen: select the desired camera by clicking a number. A dialogue screen allowing text entry will now appear.

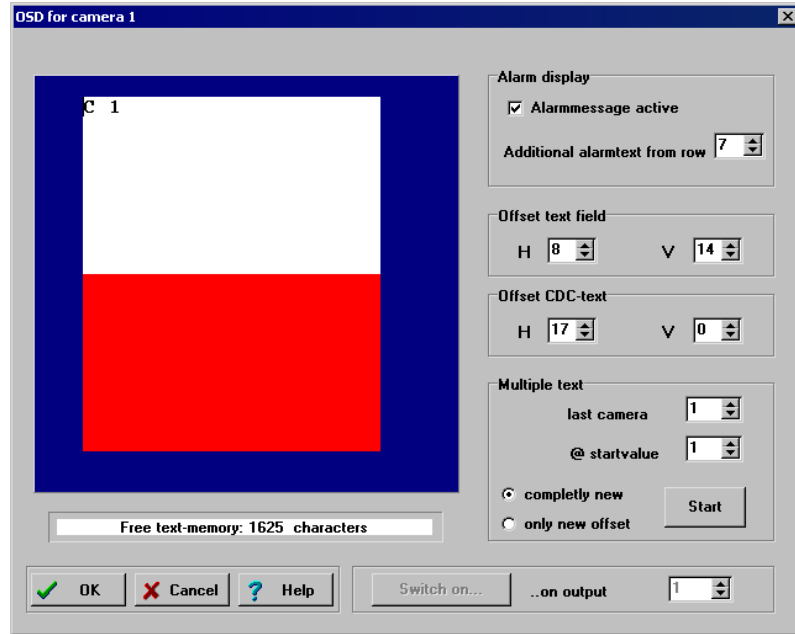


Fig. 44 OSD for camera x

### 7.1 Entering a camera text

A user-defined text can be entered here for every camera in the system. This text will then be superimposed on the camera image when it is switched, if the **Display camera text** option has been activated in the **Setting video mode switching parameters for monitor x** dialogue screen (see section 5.1.2.3).

The text is displayed in 12 lines of 24 characters each. No more than 100 characters in total may be entered.

Generally speaking, this feature used to enter the camera number.

In this example the text label is: **C 1**

## 7.2 Alarm message

If the **Alarm message active** box has been ticked, the text **Alarm!** will be superimposed on the camera image that is displayed when an alarm is triggered.

If the display of an additional alarm text has been enabled, an extra text label against a red background will appear in the image when an alarm is triggered.

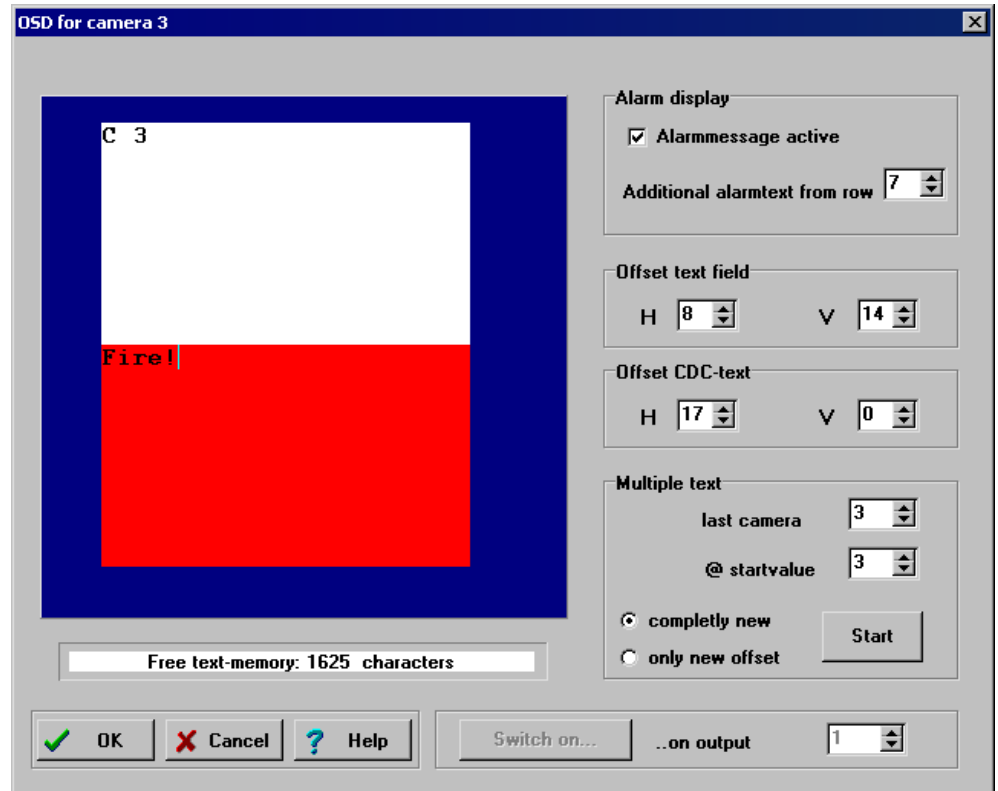


Fig. 45 Extra alarm text for camera 3

## 7.3 Text field offset

With this option the position of the text field within the camera image can be defined.

The separate value fields for the horizontal (H) and vertical (V) positions use the top left of the image as a datum point.

## 7.4 Text field offset for CDC

When controlling a CDC using a keyboard, the corresponding control command is faded into the camera image. To prevent interference with the camera label texts that can be entered in this dialogue screen (see section 7.1), the position of this command can also be set within the camera image.

There are separate value fields for the horizontal (H) and vertical (V) positions.

## 7.5 Multiple text

---

If the same text is to be used for several different cameras, you can copy the text and the corresponding offset settings to a range of cameras starting from camera x (@ start value) up to the desired camera number (last camera). Press the Start key to copy the text.

### **Completely new**

This copies the text and offset settings to the selected camera numbers.

### **Only offset new**

This **only** copies the offset settings to the selected camera numbers

## 7.6 Switching to output x

---

This function allows immediate switching of the text display to the desired monitor.

## 8 Automatic picture cycle

An automatic picture cycle consisting of images from user programmable cameras can be installed on each video output. In a sequence, the images from various different cameras appear one after the other on a single monitor or several monitors. The period of time for a sequence can be set using the image interval time setting. This and other parameter settings can be entered in the **Setting video mode switching parameters for monitor x** dialogue screen (see section 5.1.2).

### There is a distinction between:

A monitor cycle (see section 8.1)

A monitor cycle can include all the cameras that are present in the system. The set cameras are switched in ascending order.

A preset sequence (see section 8.2)

A preset sequence includes a maximum of 32 cameras. The set cameras are switched in random order.

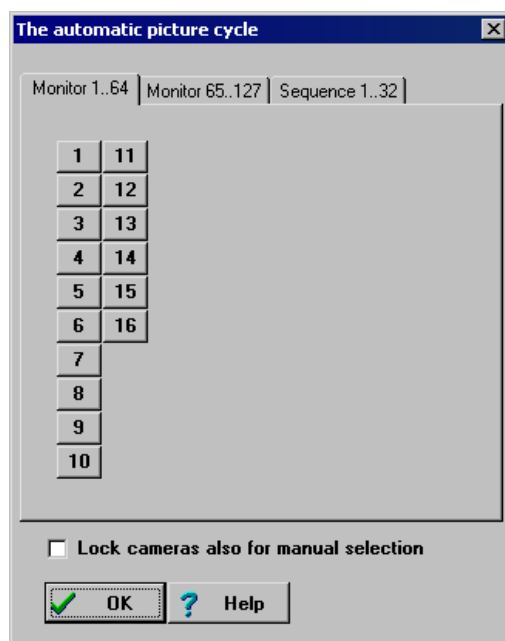


Fig. 46 The automatic picture cycle

In this dialogue screen you can choose the monitor on which the monitor cycle will be displayed, or you can choose a preset sequence.

The subsequent dialogue screens are used to program which cameras are included in the automatic picture cycle.

### Locking cameras for manual selection

Ticking this option box (only applies to the monitor sequence) also inhibits manual dial-up to the cameras that have been disabled for the monitor cycle. I.e. it is only possible to manually switch the cameras that have been enabled for the monitor cycle. This only applies if the monitor has been enabled for this cycle. This disabling procedure only applies to individual manual switching. It is not possible to disable cameras for manual group switching or alarm switching.

## 8.1 Monitor cycle on monitor x

In a monitor cycle, the cameras are switched in ascending input number order, e.g. 1-3-4-8-12 etc. (in this case the sequence consists of cameras 1 to 16 on monitor 1).

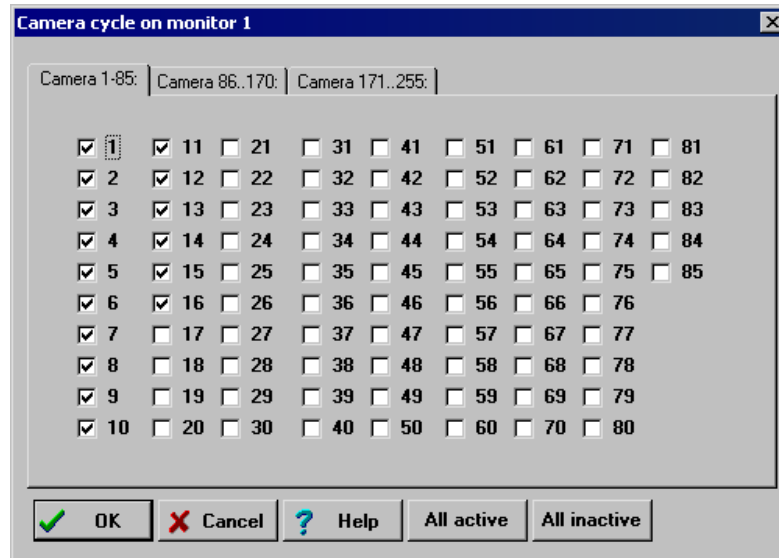


Fig. 47 Monitor cycle on monitor x

Tick the boxes here for all the cameras you wish to include in the monitor cycle.

Remember that the cameras are always switched in ascending input number order. Further monitor cycle parameter settings can be entered in the **Setting video mode switching parameters for monitor x** dialogue screen (see section 5.1.2).

If you want to program a preset sequence, click the **Cancel** button to return to the dialogue screen where you can select the index cards **Position 1..32** (see section 8.2).

### All active

The **All active** button selects all the cameras. This enables all cameras for the monitor cycle.

This also applies to the cameras that have been programmed on the other index cards.

### All inactive

The **All inactive** button deselects all the cameras. This disables all cameras for the monitor cycle.

This also applies to the cameras that have been programmed on the other index cards.

### Starting a monitor cycle using a keyboard

Starting and stopping a monitor cycle requires the **Cycle start**, **Cycle stop** and **Input/preselect** keys on the keyboard. These keys are programmed in the **Programming keyboards** dialogue screen (see section 6.4).

To start a monitor cycle:

1. Enter the monitor number
2. Press the Cycle start key

To stop a monitor cycle:

1. Enter the monitor number
2. Press the **Cycle stop** key

Higher priority image switching also stops the sequence

Alternatively, it is also possible to permanently allocate the **Cycle start** and **Cycle stop** keys to a monitor. Entry of the monitor number is not then required.

## 8.2 Preset sequence no.x

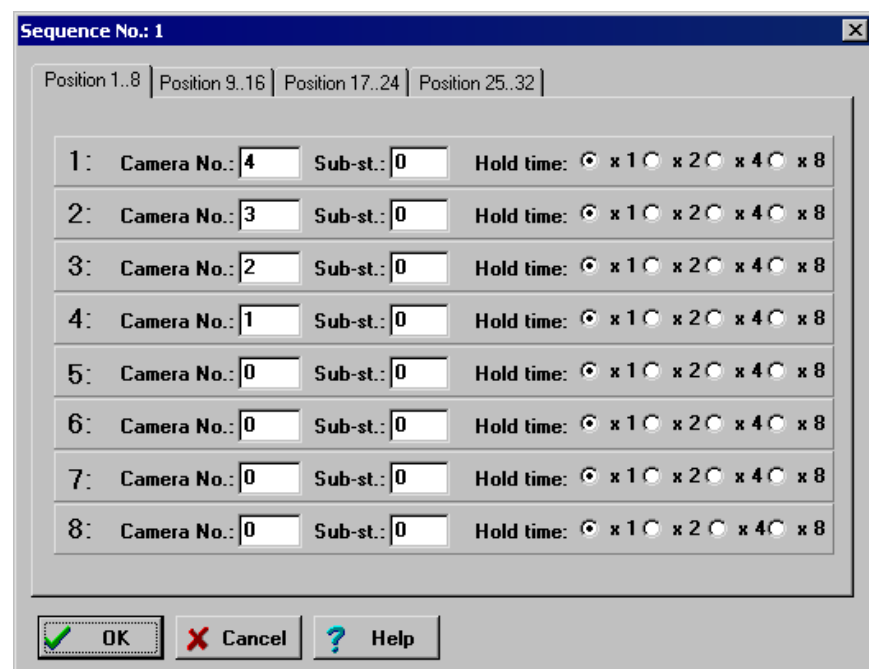


Fig. 48 Preset sequence no.x

In a preset sequence, it is possible to program the order of switching at will, e.g. 4-1-15-12-13. A preset sequence includes no more than 32 cameras, whereas a monitor cycle can include all the cameras in the system.

If you wish to initiate a monitor cycle, click the Cancel button to return to the screen where you can select the appropriate monitor.

Each preset sequence can include up to 32 cameras. The cameras are switched in ascending position number order, from position 1 to the highest position (position 32 if the sequence is full).

1. You can assign cameras to each position at will in order to program the desired camera switching order.
2. The image interval time can be entered in the **Setting video mode switching parameters for monitor x** dialogue screen (see section 5.1.2). You can extend the display time here by up to a factor of eight.
3. Select the **Sub-st** field if a camera is connected to a sub-station.

### **Starting a preset sequence using a keyboard**

Starting and stopping a monitor cycle requires the **Cycle start**, **Cycle stop** and **Input/preselect** keys on the keyboard. These keys are programmed in the **Programming keyboards** dialogue screen (see section 6.4).

To start a preset sequence:

1. Enter the table number using the digit keys
2. Press the **Input/preselect** key
3. Enter the number of the monitor where you wish to display the preset sequence
4. Press the **Cycle start** key

To stop a preset sequence:

1. Enter the monitor number
2. Press the **Cycle stop** key

Higher priority image switching also stops the sequence

Alternatively, it is also possible to permanently allocate the **Cycle start** and **Cycle stop** functions to a monitor. Entry of the monitor number is not then required.



## 9 Camera head control (CDC)

Each camera that is fitted with a CDC can be controlled via a keyboard. This is only possible with the first 10 keyboards.

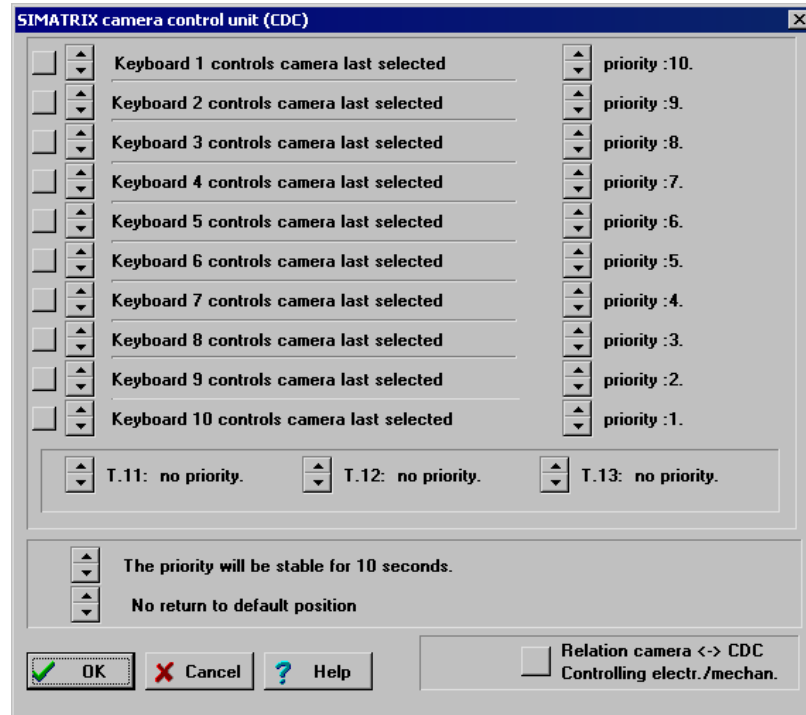


Fig. 49 Camera head control unit (CDC)

### 9.1 Control mode

The square buttons on the left of the dialogue screen allows you to set each of the ten keyboards to one of the following three control modes:

- Keyboard x controls all cameras on monitor y:  
This mode allows automatic control of the camera that is currently switched to a monitor (permanently assigned to the keyboard) when a camera is switched manually or as a result of an alarm.  
This option is the most **user-friendly** control mode and offers the greatest security.  
(Monitor parameters can be programmed using the arrow keys)
- Keyboard x controls the last selected camera:  
The keyboard automatically controls the last selected camera, regardless of the monitor to which the image is switched.  
E.g.: If keyboard x was last used to switch camera 4 to monitor 10, automatic control of camera 4 is now possible.

- Keyboard x only controls camera y:  
There may be a requirement for a keyboard to control just one camera, or there may only be one CDC camera in the system. It is possible to allocate a single CDC camera to the keyboard under these exceptional circumstances.



Caution

Automatic control is only possible if the CDC camera is switched to the monitor.

(Camera parameters can be programmed using the arrow keys)

## 9.2 Control priorities

---

- No priority:  
The 'no priority' status can be allocated to each device.  
(Set using the arrow keys)
- Priority: x:  
A priority of 0 to 10 can be allocated to each keyboard.  
(Set using the arrow keys)

If two keyboards have been allocated the same priority, the CDC camera will be controlled by the keyboard, which transmits the last control command.

The parameter settings of keyboards T11-T13 are relevant for the serial interfaces for the connection of external computers, such as IVM. These keyboards can also be allocated control priorities.

## 9.3 Maintaining control priority precedence

---

When two keyboards attempt to gain access simultaneously, the keyboard with the higher priority takes precedence. A time delay can be set here to avoid the camera reacting to a different, lower priority device immediately after control command processing.

- No requirement to maintain control priority precedence:  
The camera settings can be changed immediately by control commands transmitted by another keyboard.  
(Set using the arrow keys)
- The priority is stable for x seconds:  
The priority can be maintained for up to 99 seconds.  
The camera settings can only be altered by control commands transmitted by a different, lower priority keyboard after the set period of time has elapsed.  
(The delay time can be set using the arrow keys)

## 9.4 Return to default position

It is possible to set the camera to return to a set default position after a given period of time (x seconds) if the camera head drive is fitted with a positioning unit. The default position is only readopted after the camera has been controlled manually.

The **Default position** is defined as **Position 64**. This position needs to be saved to memory using the keyboard (see the operating manual)

- No return to the default position  
(Set using the arrow keys)
- Return to the default position after x seconds  
(Set using the arrow keys)

## 9.5 Camera selection

The **Relation Camera <-> CDC** button in the Camera head control dialogue window opens the **Choose a camera from....** dialogue screen.

Each pan/tilt camera that is fitted with a CDC must be allocated an unambiguous CDC address. Click one of the buttons in the dialogue screen to choose a CDC-controlled camera.

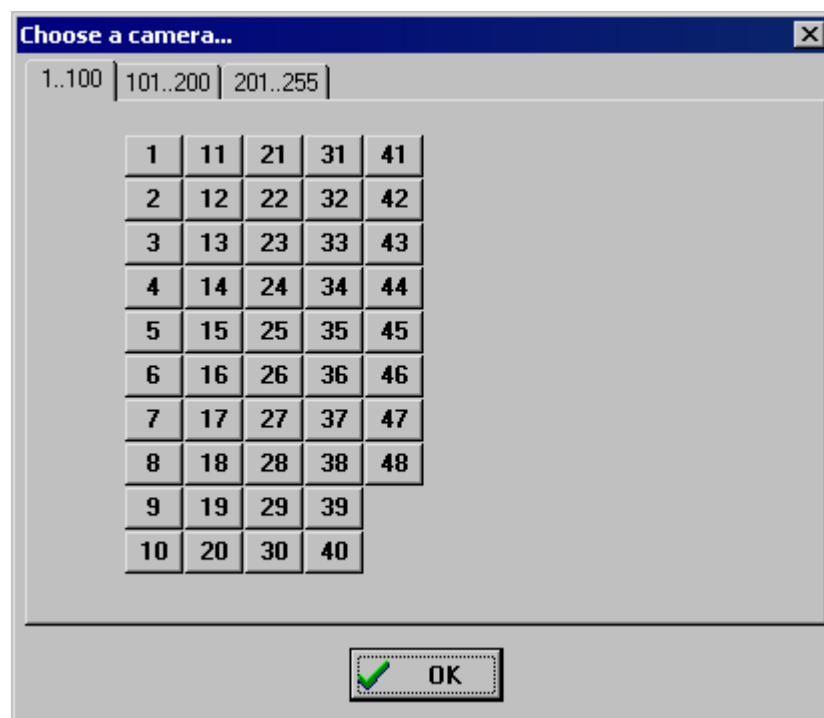


Fig. 50 Selecting a camera for CDC allocation

After selecting the camera you want to set, the **Relationship between camera and CDC** dialogue screen will appear (see description below).

### Relationship between camera and CDC

All the CDCs in the system must have their own address (see the operating manual). Each address may be used once only.

This dialogue screen allows CDC address allocation to a camera.

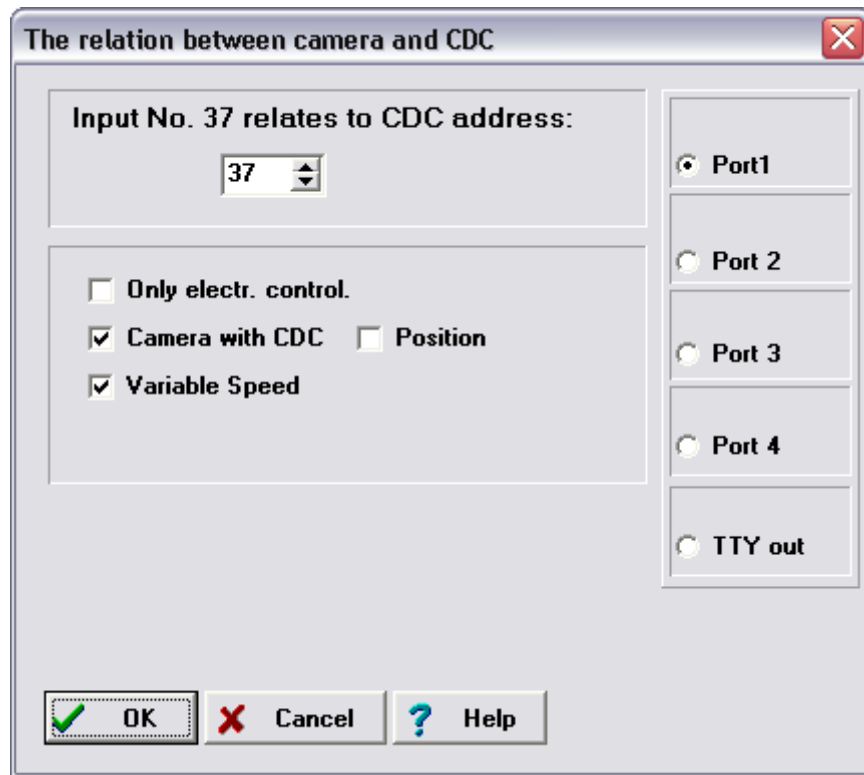


Fig. 51 Relationship between camera and CDC

- Input number x relates to CDC address:  
A CDC address can be allocated to each camera in the system.  
All the CDCs and interfaces in the system must have their own unambiguous address.  
This address is set in the device itself.  
In the standard system, address allocation is 1:1; the camera number is the same as the address.  
It is only necessary to change this type of allocation if the system is configured differently.

The following parameters define the type of camera control:

- Camera with CDC:  
Activate this option for CDCs with position control and those without position control, and where electronic control is used to drive a Remote Digital Camera (interface).
- Electronic control only:  
Activate this option if electronic camera remote control is used:  
Any Remote Digital Cameras used in the system can be controlled purely electronically. M/E switch-over (electrical/mechanical).  
Deactivate if there is no lens drive or panning drive.  
In that case, all the commands destined for the camera head address will be always be transmitted as electronic code.
- Position:  
Activate this option if the CDC allows position control.
- Variable speed:  
Activate this option if the SIMATRIX has to send variable speed commands for camera movement.  
If this option is not activated, the SIMATRIX will only transmit fixed speed commands, meaning that the cameras with variable speed panning capability will also only move at a fixed speed.
- Port 1..4 / TTY out:  
Here each camera remote can be assigned to one of the 4 telemetry ports or to the TTY OUT current loop port. For a big amount of camera stations it is also possible, to assign the same bus address to different telemetry ports. The protocol of each port can be defined in the „video matrix interfaces“ menu.

# 10 Basic alarm parameters

This dialogue screen allows basic alarm processing parameters to be set in the system. These include, for example:

- Number and connection of alarm lines



The following data is important as otherwise alarms will either not be recognised or not correctly recognised.

- Alarm zone alarm enabling at preset times.

Firstly, you must indicate to which alarm line input on the SIMATRIX you have connected your first alarm line, and secondly how many alarm lines are used. These alarm lines will then be correctly allocated if you have connected them in sequence from first to last to the alarm line inputs on the SIMATRIX, starting with the first input for alarm lines (setting for 1st alarm line at.. ). The **Alarm line/camera groups** dialogue screen allows the setting of further parameters for each individual alarm line.

Operating profile	Alarm inputs on the basic unit	Alarm inputs on the extension unit	Alarm inputs on alarm box 1	Alarm inputs on alarm box 2
Operating profile 1	1 – 32	33 – 64	65 – 192	193 – 240
Operating profile 2	1 – 32	none	33 – 160	161 – 240
Operating profile 3	none	none	1 – 128	129 – 240

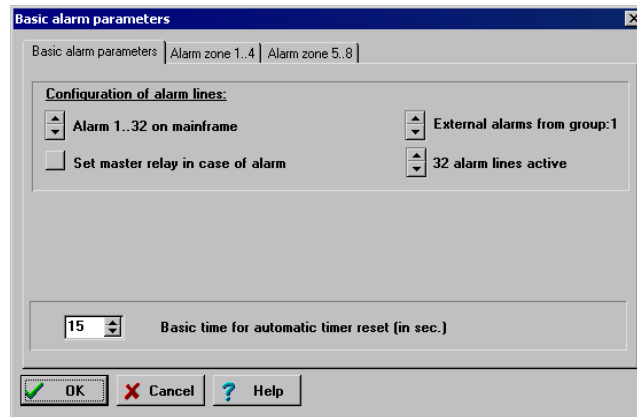


Fig. 52 Basic alarm parameters for SIMATRIX NEO

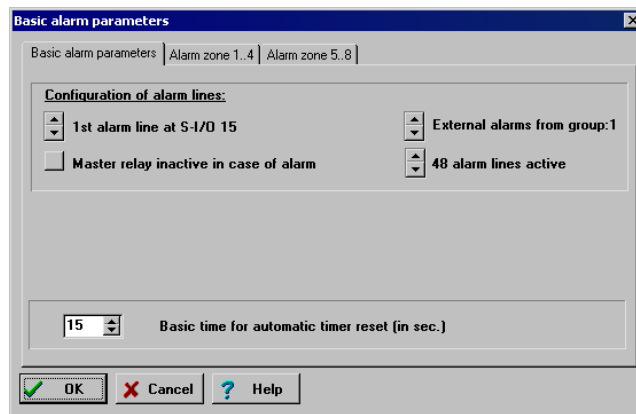


Fig. 53 Basic alarm parameters for SIMATRIX SYS

## 10.1 Alarm configuration

### Alarm line connection to S-I/O.(only in the case of SIMATRIX SYS)

Indicate here to which alarm input you have connected your first alarm line. Serial-I/O 0 will normally be left free, while S-I/O 1 to S-I/O 4 are normally reserved for keyboards. This means that the first alarm line will generally be connected to S-I/O 5. You can of course connect your alarm lines to S-I/O 1 and further, if these I/Os are not used for keyboards. In principle, you can allocate the first input in any way you want. The following allocation of the alarm inputs to the alarm input modules applies:

Important for SIMATRIX SYS:

Setting parameters for the **UART-MX 16 interface card**:

S-I/O 0 to S-I/O 15 correspond to I/O-terminal strip 0-15  
(UART-MX 16-0/ no.1 to UART-MX 16-0/ no.16)



**The AS32MX and A32MX alarm cards each have 32 alarm inputs**

Setting parameters for the **AS32MX** alarm card:

S-I/O 16 to S-I/O 47 correspond to AS32MX-1/ no.1 to AS32MX-1/ no.32

S-I/O 48 to S-I/O 79 correspond to AS32MX-2/ no.1 to AS32MX-2/ no.32

Setting parameters for the **A32MX** alarm card:

S-I/O 32 to S-I/O 63 correspond to A32MX-1/ no.1 to A32MX-1/ no.32

S-I/O 64 to S-I/O 95 correspond to A32MX-2/ no.1 to A32MX-2/ no.32

- xx alarm lines active:  
Use the arrow keys to indicate the number of connected alarm lines here.
- External alarm from group xx:  
External alarms are generated by external computers (e.g. GMA Topsis) and are transmitted to the SIMATRIX via a communications interface (COM 3, COM 4). It is only necessary to set from which alarm line onwards allocation should take place if this type of configuration is used (use the arrow keys to do so).

- No external alarms:  
If this kind of configuration is not in use, select the 'no external alarms' parameter.
- Set master relay in case of alarm:  
Programme the alarm master relay here:  
on  
off  
inactive

## 10.2 Basic time setting for the automatic Timer Reset

The time period for an automatic timer reset can be set in seconds (period of time after which an alarm signal will automatically be turned off). The setting is entered as a multiple of the basic time. The basic time can be entered here.

## 10.3 Defining the time interval for alarm zones

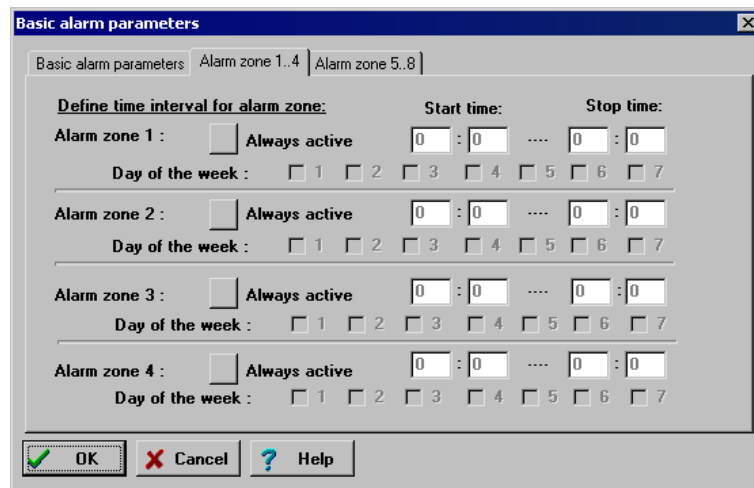


Fig. 54 Alarm zone 1...4, 5...8



When setting time enablement, note that the setting will not take immediate effect if the start time for the day in question already lies in the past. The setting will take effect on the following day at the earliest.

To test the setting, set the start time to a time that is just a few minutes in the future.

For example:

You want to set and test a time interval of 17:00 to 24:00. It is already 17:10 when you enter the setting. The time interval would normally only come into effect on the following day as the start time already lies in the past. For test purposes, set the start time to 17:15, or similar.

Each alarm zone (max. 8) is either

- always active  
– or –
- only active for a set time interval  
Enter the desired date, the start time and the stop time for alarm activation here. All alarms generated by this alarm zone will be ignored, except when alarms are generated in the set time period.

Enter 00:00 as the time if switching from active to inactive or vice versa takes place at midnight.



## 11 Selecting an alarm line/camera group

This dialogue screen allows you to enter parameters for an individual alarm line and/or camera group. A specific camera group can be set for each alarm line. If set to do so in the **Setting alarm image switching mode on output x** dialogue screen, this camera group will switch to monitor when an alarm event takes place (see section 12.2.2).



The camera group defined here (see section 11.1) can also be switched manually and totally independently of an alarm, if group switching has been enabled in the manual switching field in the **Setting video mode switching parameters for monitor x** dialogue screen (see section 15.1.2).

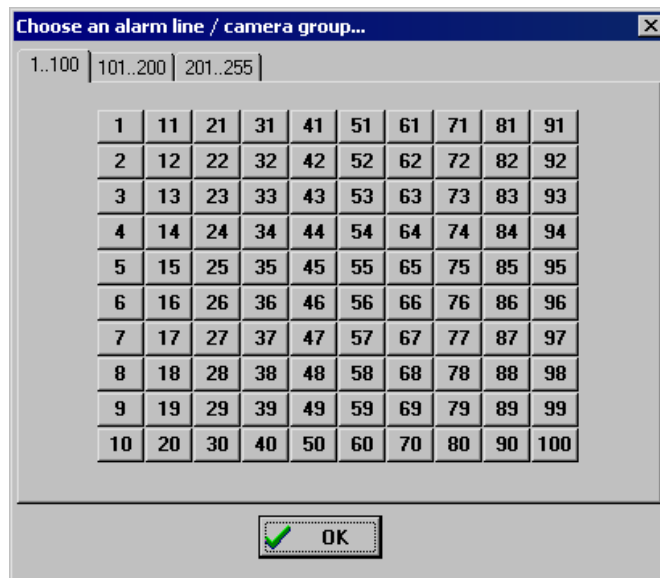


Fig. 55 Alarm lines /camera group

Use the Alarm lines /camera groups button and then click a number button to open the **Alarm line/camera group** dialogue screen (see section 11.1).

### 11.1 Alarm line/camera group x

This dialogue screen allows you to set parameters for an alarm line and/or camera group. Each alarm line can be permanently allocated to a camera group (max. 4 cameras). If set to do so, these cameras will be switched in the event of an alarm.

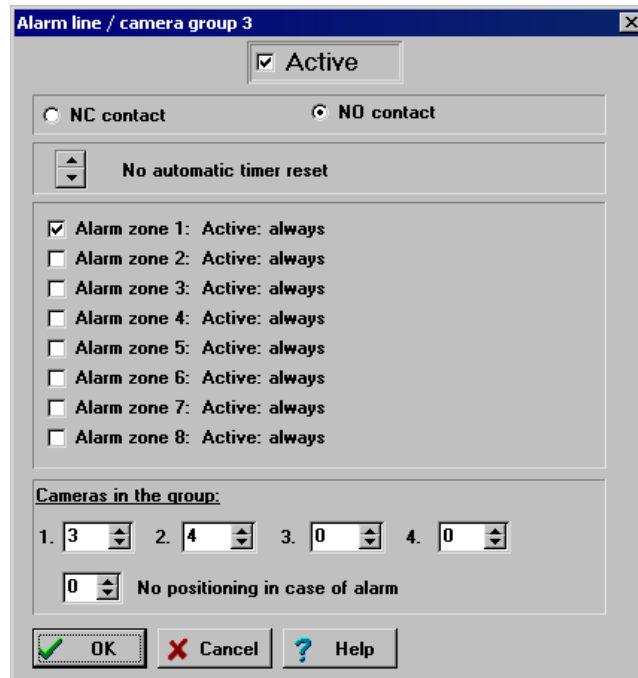


Fig. 56 Alarm line/camera group x

### Active

The **Active** option activates the alarm line. If this option is not active, any alarms generated by this alarm line will be ignored!

### Normally closed/normally open contact

This parameter registers whether the alarm contact for the alarm line acts as a make (normally open) or break (normally closed) contact.

### Timer reset

- No automatic timer reset  
(Set using the arrow keys)
- Automatic timer reset after x seconds  
When an alarm triggers, the alarm signal can be automatically turned off after a period of time that is set here. The setting is entered as a multiple of a basic time value. You set this basic time value in the **Basic alarm parameter** dialogue screen (see section 10.2).  
(Use the arrow keys to enter the setting)

### Alarm zone 1...8:

A number of different alarm lines can be amalgamated into an alarm zone. Generally speaking, you would only allocate alarm lines that are located in the same general area to an alarm zone.

For example, you could allocate all the alarms in building A to alarm zone 1 and all the alarms in building B to alarm zone 2. An alarm monitor can then be programmed to switch the images from alarm zone 1, while a separate alarm monitor is programmed for the images from alarm zone 2.

It is also possible to allocate an alarm line to more than one alarm zone. You must program at least one alarm zone as otherwise image switching will not take place when an alarm triggers.

Highlight the desired alarm line/ alarm lines in order to allocate it/them to an alarm zone.

A time field for the alarm zone is also displayed (e.g. 07:00<->12:00). If no time period is defined, "**always**" will appear.



---

A time-enabled change in alarm zone status will only become effective if the alarm zone is manually inactive and the preset start time lies in the past.

---

## 11.2 Cameras in the group and alarm positioning

---

- Cameras in the group (for group and alarm line switching):  
The camera groups are defined here. A group consists of a maximum of four cameras. Enter the desired camera numbers for the four cameras in the group here (cameras 1 to 4). The numerical sequence of the cameras in the group (cameras 1 to 4) is relevant in that switching within a monitor string will take place in this sequence. The sequence starts with a display of the image from the camera on the first monitor in the string (master monitor).  
If a group only consists of two cameras, for example, enter camera number '0' for the third and fourth cameras in the group.  
(Set using the arrow keys)
- Alarm positioning  
If fitted with CDC control, all the cameras in a group can be positioned automatically when an alarm triggers.  
The alarm position (freely selectable position number) must be stored in memory using the keyboard.
- No automatic alarm positioning  
(set using the arrow keys)
- Position x is the alarm position  
(Set the position number using the arrow keys)

## 12 Alarm image switching

### 12.1 Choose a monitor group

---

The following dialogue screen will appear if there are more than 16 monitors in the system. This screen allows selection of the monitor group that contains the monitor you want to set up for alarm image switching.

- No more than 16 monitors can be displayed at once. The selection shown here is limited to the maximum number of monitors in the system, as entered in the **Basic parameters** dialogue screen (see section 3).
- Alternatively you can select 'Show from monitor...'. This feature is designed to display monitor strings exceeding the limits of a 16-monitor group more clearly.

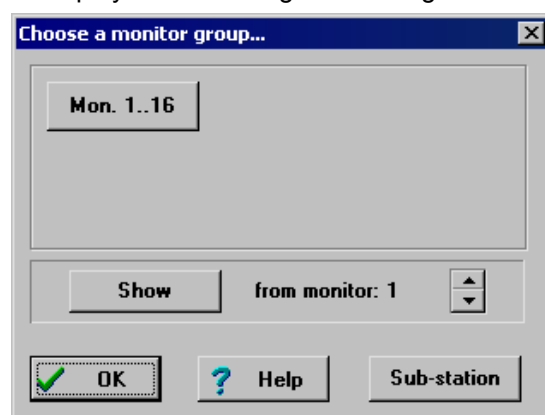


Fig. 57 Monitor group alarm

Selecting the monitor group opens the **Alarm configuration of the monitors** dialogue screen (see section 12.2).

## 12.2 Alarm configuration screen

Clicking the desired monitor opens the **Setting alarm image switching mode on output x dialogue** screen (see section 12.2.2), where clicking the **Reset dialogue** button opens the **Alarm reset mode and stack alarm handling** dialogue screen (see section 13).

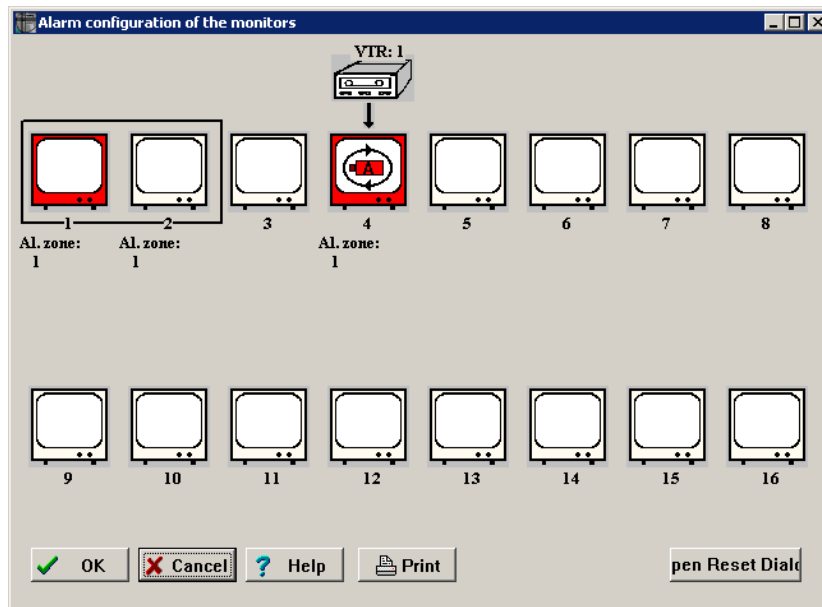


Fig. 58 Alarm configuration screen

This dialogue screen presents a graphical display of the alarm configuration of the video outputs. In principle, the display is exactly as shown in the 'Video mode configuration' dialogue screen. That screen displays normal video image switching behaviour as opposed to the alarm image switching behaviour that is shown here!

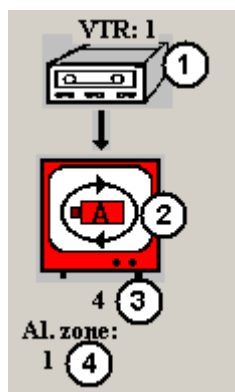


Fig. 59 Representation of the alarm configuration of a video output

- 1 Video recorder
- 2 Alarm monitor and alarm image sequence
- 3 Monitor number 4
- 4 Alarm zone 1

- Each matrix output appears as a monitor icon.
- The monitor number is displayed directly under the monitor symbol.
- Representation of the parameter settings, as entered in the **Setting alarm image switching mode on output x** dialogue screen (see section 12.2.2).
- Alarm zone  
The alarm zones that transmit alarm images to the relevant monitor are indicated below the monitor number.
- Representation of a video recorder  
If an alarm monitor activates a control output, a representation of a video recorder along with the control output number (VTR: x) appears above the monitor icon.
- Monitor string for alarm image switching  
Where a number of monitors form a monitor string, a black box will appear around the corresponding monitors.
- First alarm monitor  
The first monitor in a string of alarm monitors is displayed in *red* (alarm master monitor). Single monitors that have been enabled for alarm image switching are also displayed in the same way.



---

Alarm image switching only needs to be enabled for the alarm master monitor, not for the slave monitors.  
The alarm master monitor is also shown in the **Video mode configuration** dialogue screen (see section 5.1).

---

- Representation of the parameter settings, as entered in the **Alarm reset mode and stack alarm handling** dialogue screen (see section 13). **Alarm image sequence**  
The monitor that has been set for alarm image sequence display in the **Alarm reset mode and stack alarm processing** dialogue screen, appears as an alarm monitor with a camera icon and a cycle icon.  
Only one monitor in the entire system can be programmed in this way, and this is only possible in combination with the 'Stack alarm' option.  
The image interval time is adjustable (see section 13.2).

Use the 'Print' button to print the alarm output settings. The print-out replicates the screen display. The information for a maximum of 16 monitors can be printed each time.

### 12.2.1 Reset dialogue

---

The **Reset dialogue** button opens the **Alarm reset mode and stack alarm handling** dialogue screen (see section 13) where you can program alarm reset behaviour.

## 12.2.2 Setting alarm image switching mode on output x

Clicking the relevant monitor symbol will call up a dialogue screen where the alarm switching mode of a monitor can be parameterised. The complete configuration will be redisplayed upon exiting the parameterisation window. The settings will not be transferred to, nor become effective in the SIMATRIX, until they have been confirmed using the 'OK key'.

Click the **Cancel** button to keep the original parameter settings.

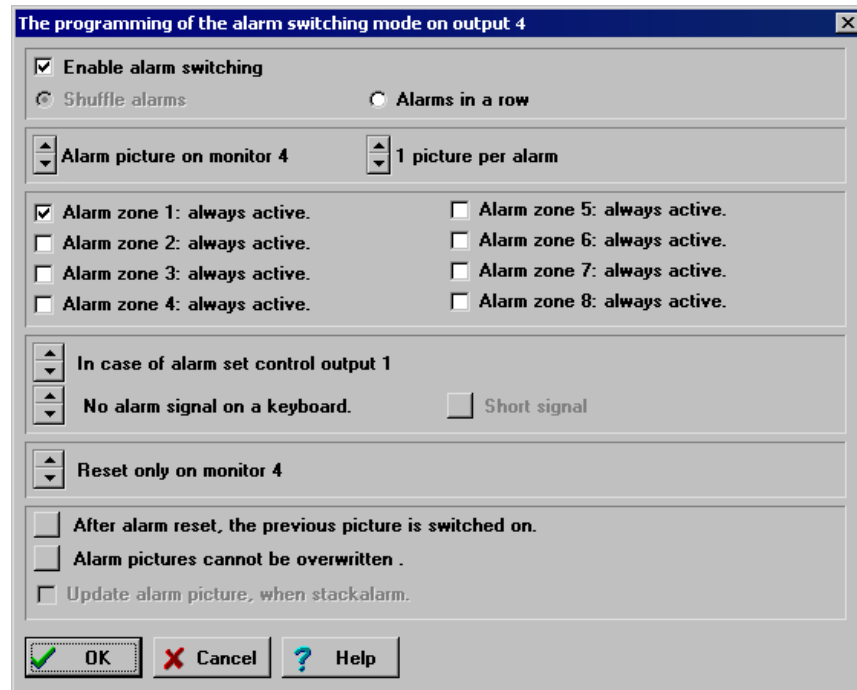


Fig. 60 Setting alarm image switching mode parameters on output x

This dialogue screen allows you to set the alarm switching mode for a given monitor.

Any settings you enter or change here will only apply to the monitor concerned.

This dialogue screen allows parameterisation of a monitor's image switching response. You can select one of three different operating modes:

- Alarm picture on one monitor only  
This option displays only one image per alarm. The image is switched to one monitor only. Each new alarm image overwrites the previous one. If a camera group has been defined for the alarm line that has generated the alarm (see section 11.2), only the first camera in the group will be switched.

- Shuttle alarms

This operating mode allows switching of between 1 and 4 images per alarm. Image switching take place on a monitor string of 2 to 12 monitors. The alarm images move to each monitor in the monitor string in turn, starting from the left-hand monitor, and are displayed in the same sequence as they are generated. In other words the first alarm image is switched to the first monitor in the string first. If a second alarm is triggered, the second alarm image appears on the first monitor and the first alarm image moves on to the second monitor, etc. The most recent alarm image is always displayed on the first monitor (alarm master monitor).

The number of **Pictures per alarm** setting relates to the camera group of the alarm line where the alarm has been triggered. If the setting were 2 images per alarm, only the images from the first two cameras in the group would be displayed, etc. As a camera group contains a maximum of 4 cameras, it is not possible to switch more than 4 images per alarm.

- Alarms in a row

This operating mode functions in the same way as the 'Shuttle alarms' mode, with the following exception: The alarm images are not switched from left to right to each monitor in turn, but displayed alongside each other in sequence.

So the first alarm image appears on the first monitor in the string, the second alarm image on the second monitor in the string, etc.



If images from camera groups are to be switched, the leading monitor in the subgroup must be programmed as the alarm monitor (string and group size but not alarm monitor).

---

### Alarm image switching

- Enable alarm switching:

This option must be selected if it is intended to automatically switch the images relating to incoming alarms to the monitor in question.

The monitor that has been enabled is displayed in red as an alarm monitor (see section 12.2)



If you have defined a monitor string, you only need to enable the alarm master monitor.

---

- Shuttle alarm:

If a monitor string has been defined and this option has been selected, the most recent alarm image will be displayed on the first monitor in the string (alarm master monitor) when an alarm triggers. Any other alarm images on display will move on to the next monitor in the string one step at a time.



This parameter is only available if more than one monitor has been set in the **Alarm picture on monitor** option.

---

- Alarms in a row:

When this option is enabled, the first alarm image is switched to the first monitor in the string. The second alarm image appears on the second monitor, etc.



This parameter is only available if more than one monitor has been set in the **Alarm picture on monitor** option.

---



**Alarm picture on monitor**

- Alarm picture on monitor x  
if the length has been set to 1, the 'shuttle alarm' and 'alarms in a row' settings for the **Alarm image** options are inactive (grey).  
If the length has been set to greater than 1, they are active (black).  
(Set using the arrow keys)
- Alarm pictures on monitor x:  
This setting determined the length of the alarm monitor string. A box is used to display the monitor string (see section 12.2). A monitor string can contain no more than 8 monitors.  
(Set using the arrow keys)
- Pictures per alarm:  
Each alarm event leads to the display of a single, or a maximum of four simultaneous images. The alarm images correspond to the camera group: i.e. if one image is displayed per alarm event, only the image from the first camera in the group where the alarm has triggered will be switched. If two images are required per alarm event, the images from cameras 1 and 2 in the relevant group will be displayed, etc. As a group can include no more than four cameras (see section 11.2), the maximum number of images per alarm event is also four.  
(Set using the arrow keys)

**Alarm zone**

You can set the alarm zones here by selecting any of the zones (8 maximum) whose alarm events are to be switched to the monitor in question.

**For example:**

Only alarm zone 1 is active:

Only alarms generated by the alarm lines allocated to alarm zone 1 will be displayed (see section 11.1)

It is of course possible to program a monitor to display alarms from a number of different alarm zones. The alarm zone status in terms of time-enabling is also displayed here (e.g. **always**, '07:00<-> 12:00'). See section 10.4 for more details.

**Control response to alarms**

- Setting the control output  
No control output in response to an active alarm  
(Set using the arrow keys)  
In case of alarm (logical Or) set control output x:  
If a video recorder is used to record images, enter the number of the control output (1 -8) to which the recorder is connected here.  
Control output 1 corresponds to control lead D0 on COM2 on the SIMATRIX SYS or the 'ALARM OUT' output on the SIMATRIX 648/164, etc.  
(Enter the number of the control output using the arrow keys)

- Alarm signal on keyboard x:  
No alarm signal on a keyboard  
(Set using the arrow keys)  
Alarm signal on keyboard x  
If an acoustic signal is required in the event of an alarm, you can set the keyboard number x here where the alarm is to sound.  
(Set the keyboard number using the arrow keys)
- Short signal/permanent signal:  
can only be activated if a value has been entered for the 'Alarm signal on keyboard x' parameter. This option is not active otherwise.  
Clicking the switch alternates between a permanent signal and a short signal.  
If the permanent signal is set, the alarm signal will continue to sound until the alarm has been cleared. When the short signal option is active the alarm signal will shut off automatically.

#### Reset only on monitor

- Reset only on monitor x  
When an alarm is cleared, the reset only applies to the first monitor in a string.  
(Set using the arrow keys).
- Reset only on monitor x+n  
When an alarm is cleared, the reset applies to a number of monitors in the string. The alarm images are correspondingly cleared from monitors 1..n.  
(Set using the arrow keys).



---

If serial switching is active, the group will be always be cleared. (When a reset is executed on the alarm monitor or the lead group monitor)

---

#### Alarm image behaviour

- After alarm reset  
After an alarm has been cleared, two different parameters can be set using the switch:  
**The alarm image display is maintained after the alarm reset**  
**The pre-alarm image is switched after alarm reset**, i.e. the image that was switched before the alarm was triggered, is switched back to the display.
- Alarm images can / cannot be manually overwritten  
The switch allows two different parameter settings:  
**Alarm images cannot be overwritten**  
Manual switching has no effect on this monitor.  
**Alarm images can be overwritten manually**  
The alarm image is overwritten by a manually switched image, thus clearing the alarm
- Update alarm picture when stack alarm is active:  
If this option has been selected, the current alarm image will be continually displayed if Stack alarm is active.  
If this option has not been selected, the alarm image will remain on display until the alarm has been cleared. Only then will the next alarm image in the stack be presented on the alarm monitor.

## 13 Alarm reset mode and stack alarm handling

The **Alarm reset/Stack alarm** button in the main window opens the following dialogue screen:

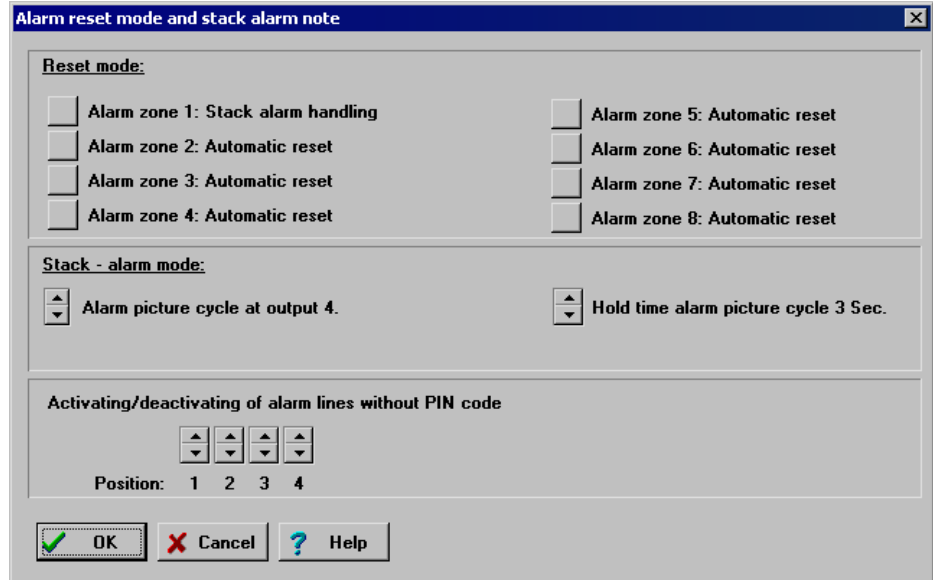


Fig. 61 Alarm reset mode and stack alarm note

### 13.1 Reset mode

You can set how alarms are cleared in the Reset mode dialogue window.

There are three different Reset operating modes:

- Manual reset
- Automatic reset
- Stack alarm handling

#### Manual reset

In this mode, you can clear alarms in one of the following ways:

- using the **Alarm reset** key on the keyboard
- By manually overwriting the alarm image (only possible if the **Alarm images can be overwritten manually** option is active):
  - By switching a new image or
  - Keying in **x** and **MON**
  - The alarm will clear automatically after a preset period of time has elapsed. (see **Timer reset**)

#### Automatic reset

In this operating mode, the alarm will automatically clear as soon as the alarm contact goes open circuit.

### Stack alarm handling

This option stores the successive alarms in sequential order in a stack. When an alarm is cleared, the next alarm image in the stack is presented on the alarm monitor. Clearing an alarm takes place manually (see **manual reset**).  
(The stack alarm can only be parameterised for a **single** alarm zone)

One of the three reset operating modes can be selected for each of the eight possible alarm zones using the grey selection button.



The use of the **Stack alarm handling** reset mode is limited to a single alarm zone!

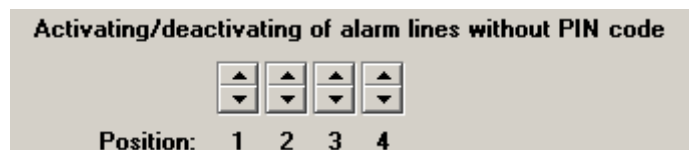
## 13.2 Stack alarm handling

### Alarm picture cycle

- No alarm picture cycle  
(Set using the arrow keys)
- Alarm picture cycle at output x  
When stack alarm processing is active, the alarm image sequence can be allocated to a monitor. It is generally recommended that a video recorder is also connected to the monitor.  
(Set the monitor parameters using the arrow keys)
- Hold time alarm picture cycle: x seconds  
Enter the display hold time for the alarm image sequence in seconds (max. 99 seconds).  
(Use the arrow keys to enter the value)

## 13.3 Activating / deactivating alarm lines (access code)

An alarm line access code can be used to prevent unauthorised persons switching an individual alarm line or all the alarm lines to active or inactive.



The value '0000' means that changes can be made without having to input an access code.

Any other 4-digit value activates the access code as soon as the **OK** button has been clicked to confirm.

The following functions are protected by the access code:

1. Changes to alarm status (active/inactive) of the individual alarm lines.  
Entry of digits 'xxx', function key 'Alarm+'  
Entry of digits 'xxx', function key 'Alarm-'
2. Entering or changing monitor cycles  
Entry of digits 'xxx', function key 'Zyk.Kx+'  
Entry of digits 'xxx', function key 'Zyk.Kx-'

- Permanently enabled activation/deactivation of the alarm lines  
(Set using the arrow keys. The 4-digit code must be set to '0000'.)
- Access code: 'xxxx' for activating/deactivating the alarm lines  
Programming of a 4-digit access code using the arrow keys. The code allows activation/deactivation of the individual alarm lines (see Alarm processing function category, section 6.4.3) and of the function described above (Entering and changing monitor cycles)  
(Set using the 4 arrow keys)

## 13.4 Entering the access code using the keyboard

---

Proceed as follows to configure the keyboard to set alarm lines to active/inactive using an access code:

The following keys must be programmed on the keyboard: **Alarm line active**, **alarm line inactive** and the digit keys.

1. Use the digit keys to enter the first two digits of the access code.
2. Press the **Alarm line active** or **Alarm line inactive** key
3. Enter the third and fourth digits of the access code
4. Press the **Alarm line active** or **Alarm line inactive** key
5. Now switch the alarm lines to active or inactive
6. Enter **254** using the digit keys
7. Press the **Alarm line active** or **Alarm line inactive** key

The last two steps reverse access authorisation, meaning that any further change to the alarm status of the individual alarm lines will require the procedure to be repeated.

The same procedure is used for the 'Change image sequences' function, the only exception being that the relevant function is performed in step 5.

## 14 System real-time clock / OSD clocks

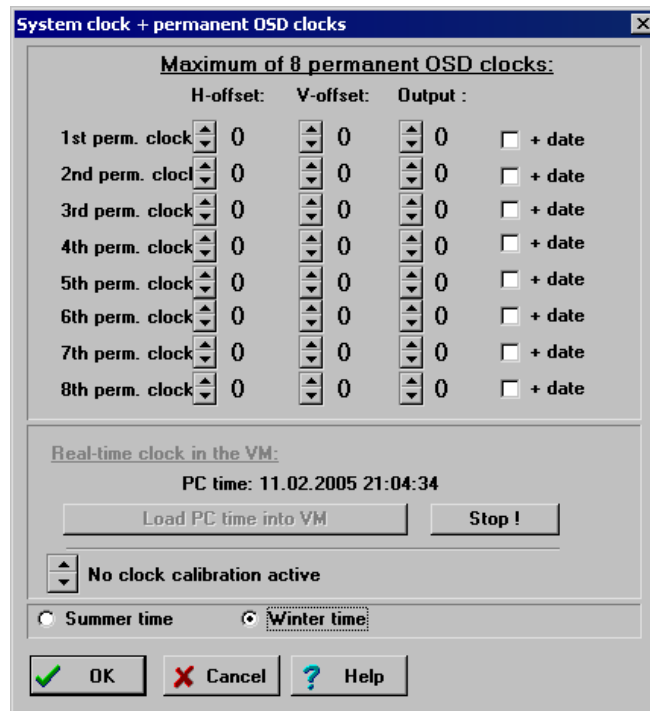


Fig. 62 System clock and permanent OSD clocks

### 14.1 OSD clocks

The video matrix contains a real-time clock with battery back-up (system clock). This system time can be overlaid on a maximum of eight monitors (outputs). These overlays are described as OSD clocks.

OSD clocks can be allocated to a maximum of 8 outputs. The H and V offset relates to the camera text of the image that is currently on display. The clock is not displayed if the output has no signal. The date can also be displayed as an extra option.

### 14.2 Real-time clock in the video matrix

The date and time of the system clock in the SIMATRIX are displayed.

#### Load PC time

The **Load PC time** button transfers the time in the PC to the real-time clock in the video matrix. The clock is accurate to +/- 1.53 minutes per month.

#### **Clock calibration**

- Clock calibration not active  
(Use arrow keys to set)
- The clock runs fast/slow by x seconds per month  
The clock adjustment function can be used to calibrate the clock more accurately. Adjustment can be made in 5-second steps using the arrow buttons)

#### **Stop!**

The **Stop!** button is used to stop the clock. This reduces the clock's electrical current requirement to a minimum and is useful when the video matrix or the CPU card will be out of operation for an extended period. This feature prevents premature battery discharge and the ensuing loss of settings.

With SIMATRIX NEO V2 this function is no longer necessary, as the real time clock needs much less battery, if the SIMATRIX is switched off.

## **14.3 Switching between summer and winter time**

---

Defining system time as summer or winter time (normal time) using the keyboard has the following effect:

If the PC system time has been set as summer time using the **Summer time** option, the system clock is set an hour earlier at the change-over point and the status changes to winter time.

The reverse applies in the case of winter time.

## 15 Ports on the video matrix

The dialogues that can be opened using the **Data interfaces** button in the main window vary according to the modules that have been enabled (refer to the software supplied) and the type of the SIMATRIX.

Separate descriptions are supplied for each individual module.

External system connections to *SIMATRIX SYS/ 648/NEO* that are available as standard

External systems	Available COM connections
External computer IVM NT (RS232)	COM2, COM3, COM4
IVM NT RS485	COM2
LMS	COM3
SISTORE-NT	COM2, COM3, COM4
TELEMAT	COM4

External system connections to *SIMATRIX 164* that are available as standard

External systems	Available COM connections
IVM NT	COM2
LMS	COM2

External system connections to *SIMATRIX SYS/ 648* that are available when enabled (module)

External systems (module)	Module ordering numbers see also PN	Available COM connections
SIPORT	A24000-W336-C88-1-91 of 19.06.00	COM3
GMA	A24000-W336-C88-1-91 of 19.06.00	COM3
	A24000-W336-C88-1-91 of 19.06.00	COM2, COM3, COM4

Parameterisation files supplied to support interface set-up:

Connection to external system	Dat file
IVM NT	IVM_NT.dat
LMS	LMS_6.dat, LMS_1.dat
GMA	GMA.dat
SIPORT	SIPORTQ.dat, SIPORTS.dat
TELSCAN	TEL_LIVE.dat



The table below describes connectable devices and their interface settings:

Connection from <b>SIMATRIX SYS/NEO/648 to</b>	Interface <b>COM2/ COM3/ COM4</b>	Baud rate <b>2400/ 9600/ 19200 Baud</b>	Bit code <b>6/ 7/ 8</b>	Parity <b>E= even O= odd N= none</b>	Stop bits <b>1/ 1.5/ 2</b>
Main matrix	COM2/ COM3/ COM4	19200	8	E	2
Sub-station	COM2/ COM3/ COM4	19200	8	E	2
TELEMAT	COM4	9600/19200	8	E	2
TELEMAT parameterisation	COM2	19200	8	E	2
SISTORE-NT switch-over control	COM2/ COM3/ COM4	19200	8	E	2
SISTORE-NT operation	COM2/ COM3/ COM4	19200	8	E	2
LMS	COM3	2400	8	N	1
GMA	COM3	9600	7	E	1
External computer	COM2/ COM3/ COM4	19200	8	E	2
IVM NT (RS485)	COM2/ COM3/ COM4	19200	8	E	2
IVM NT (RS 232)	COM2	19200	8	E	2
SIPORT	COM3	9600	7	E	1

Connection from <b>SIMATRIX 164 to</b>	Interface <b>COM2</b>	Baud rate <b>2400/ 9600/ 19200 Baud</b>	Bit code <b>6/ 7/ 8</b>	Parity <b>E= even O= odd N= none</b>	Stop bits <b>1/ 1.5/ 2</b>
LMS	COM2	9600	8	N	1
IVM NT (RS 232)	COM2	19200	8	E	2
IVM NT (RS 485)	COM2	19200	8	E	2

## 15.1 Messages/keyboards index card

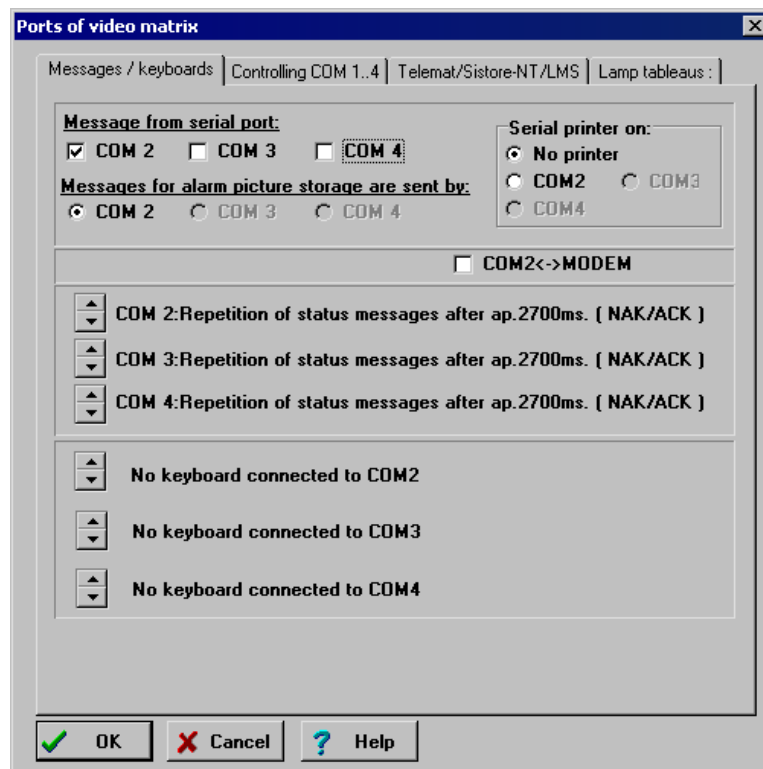


Fig. 63 Messages/keyboards

### 15.1.1 Messages from serial port

If required, a status message can be transmitted using one of the three interfaces on the SIMATRIX. This status message appears if the SIMATRIX is reset, in the event of an alarm and in the event of camera failure.

An IVM PC or serial printer can be connected to the selected interface.

### 15.1.2 Alarm picture storage via interfaces

If required, an external computer for storing alarm images can be connected to one of the three interfaces on the SIMATRIX.

### 15.1.3 Serial printer on ...

A serial printer for generating hard-copy documentation can be connected to all three 3 interfaces.

The following information is printed along with the report time:

- Alarm active / inactive
- Camera failure
- Alarms
- Alarms cleared

### 15.1.4 Remote set-up 'COM2 ↔ MODEM'



A modem for remote set-up can be connected to the COM2 interface on the SIMATRIX (activate the COM2 box on the **Messages/ keyboard** index card). A special program is required for remote set-up.

### 15.1.5 Repeating messages (COM2, 3, 4)

These settings relate to chapter 15.1.1. It is possible to work with or without a hard-copy print-out:

- Message transmission without repetition  
No hard-copy print-out  
(Set using the arrow keys)
- Message repetition after x seconds  
With hard-copy print-out  
(Use the arrow keys to set the number of seconds)

The first entry applies to COM2

The second entry applies to COM3

The third entry applies to COM4

### 15.1.6 Keyboard on COM2, COM3, COM4

The SUT 48 and CKAx10 keyboards can be connected directly to COM2, COM3 or COM4 (in contrast to other keyboards).

Enter here whether, and to which interface, the keyboard is connected.

- No keyboard connected to COMx  
(Set using the arrow keys)
- Keyboard with address: x connected to COMx  
(Set address x using the arrow keys)



In order to refresh the OSD on the monitor allocated to the SUT 48, it is necessary to permanently allocate the keyboard address. "Normal" keyboards can also be connected in addition to this permanent allocation.

For example: 3 Keyboards: 1x SUT 48 and 2 x VMT32

S-I/O 1 is left free, SUT 48 on address 1, one permanently allocated keyboard. Upper address 3.

Both the other keyboards can be connected at will from S-I/O 2 onward.

If connection has been made via a serial interface (COM2 to COM4), the SUT 48 display is not active as no data transfer will take place between the video matrix and the keyboard.

## 15.2 Controlling COM1...4 index card

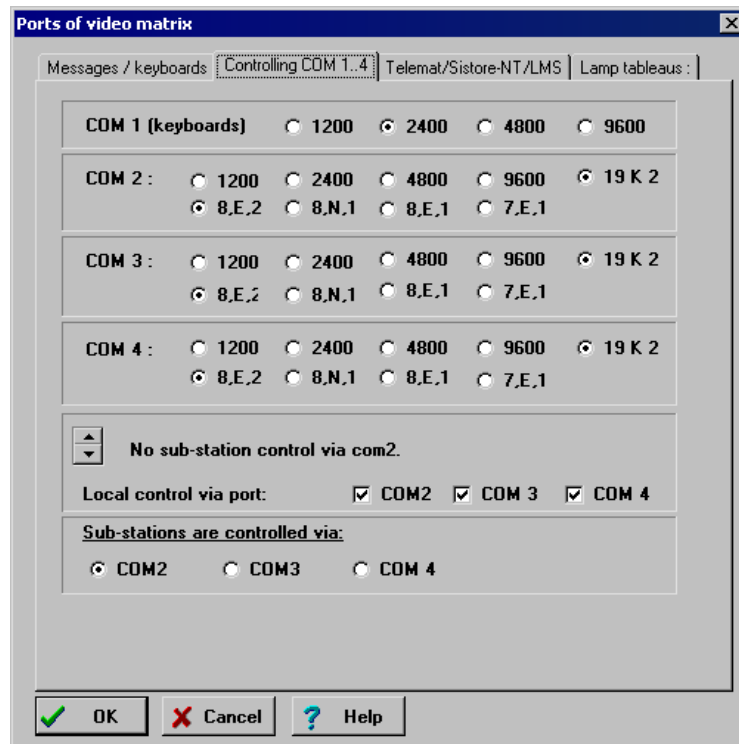


Fig. 64 Controlling COM1...4 index card

This dialogue screen allows you to set the parameters of the serial interfaces on the video matrix. Any reference made here to COM1 to COM4 relate to the SIMATRIX and must not be confused with the COM1 to COM4 connection ports on the PC! The serial interface on the PC, which is used to connect the PC and the SIMATRIX, can be set in the Active interfaces dialogue screen.

### 15.2.1 COM2, COM3, COM4 interface settings

The interface settings must be configured for each interface used by selecting the desired values.

As standard, COM1 should be set to a baud rate of 2400 baud, as the devices connected to this port (keyboards, CDC) are set to 2400 baud as standard.

COM2 to COM4 should be set as standard to a baud rate of 19k2 and a data format of 8,E,2.



Caution

If the data format or baud rate setting for an interface are changed, the new values will only take effect after a power-off reset, i.e. by interrupting the mains supply and restarting the SIMATRIX.



Caution

One interface must always be set to 19K2 and 8/E2, as parameterisation is not possible otherwise.

## 15.2.2 Control via an external computer

If control takes place via an IVM operator station, the interface used is allocated a keyboard number as standard.

From programming software version 1.25 on, the three COM2, 3, 4 interfaces are permanently allocated to keyboard addresses 11, 12 and 13 in order to allow free configuration of keyboards 1. to 10.

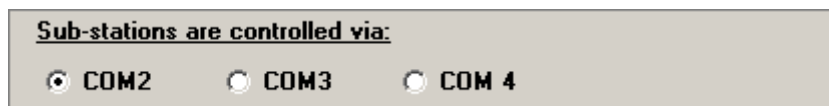
Interface	Keyboard
COM2	Keyboard 11
COM3	Keyboard 12
COM4	Keyboard 13

These keyboards are configured for the standard key layout in **Programming keyboards**.

## 15.2.3 Controlling a sub-station using

This dialogue screen is only of any significance if a sub-station is connected to the SIMATRIX.

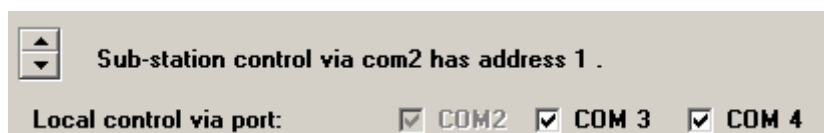
**In the main matrix (only SIMATRIX SYS, NEO, 648):**



Only one interface can be selected for sending commands to a sub-station.

Select the serial interface, which will be used to connect the sub-station to the SIMATRIX.

**In the sub-station:**



Address-directed control is only possible via COM2, i.e. the commands from the main matrix must be received via COM2.

The sub-station address is entered using the arrow keys. It is possible to control up to 26 sub-stations.

The menu option **Remote control and message receiving** automatically sends the sub-station number when dialling a camera. This allows a test of whether the sub-station address is correct or not.

### 15.3 Telemetry Ports (only with NEO V2)

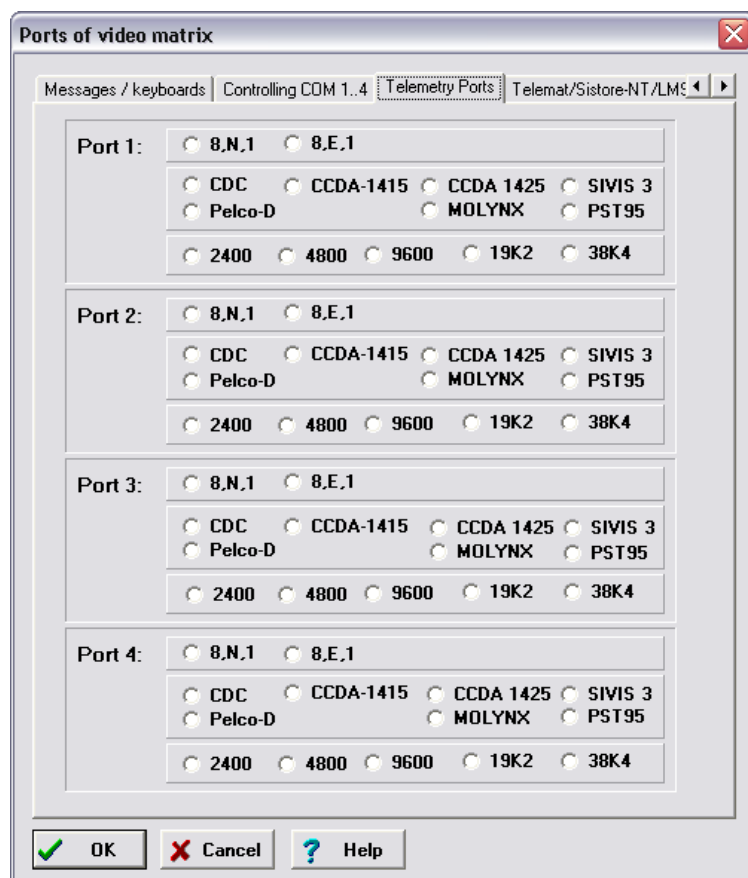


Fig. 65 Telemetry Ports

Here the protocol, format and baudrate of each telemetry port can be defined.

## 15.4 TELEMAT/ SISTORE-NT/LMS index card

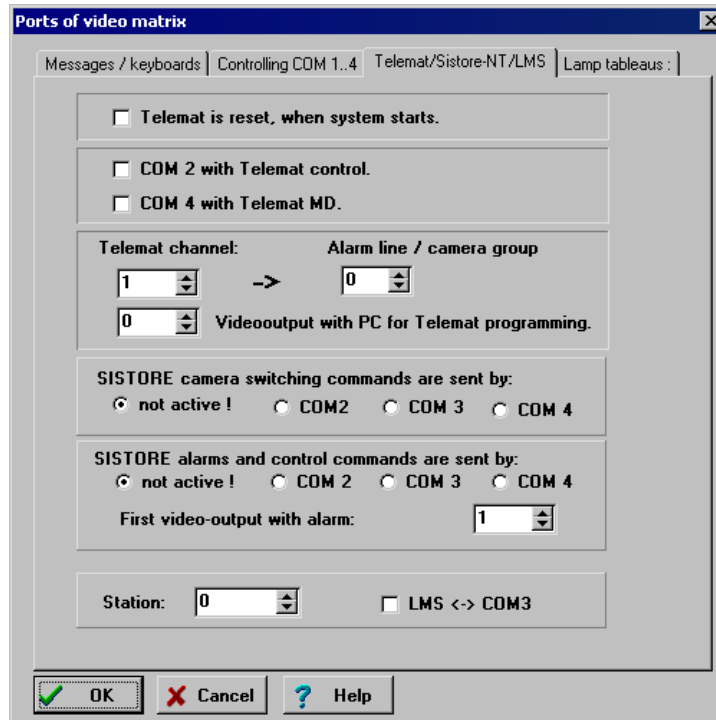


Fig. 66 TELEMAT/ SISTORE-NT/LMS

### 15.4.1 TELEMAT MD/MTD to SIMATRIX SYS/648/NEO

(with NEO V2 only the alarms from telemat are interpreted and used for camera switching)

Recommended parameter settings example (extra parameterisation via COM2):

The following standard parameter settings apply for the **Messages/keyboards** index card (fields in white boxes):

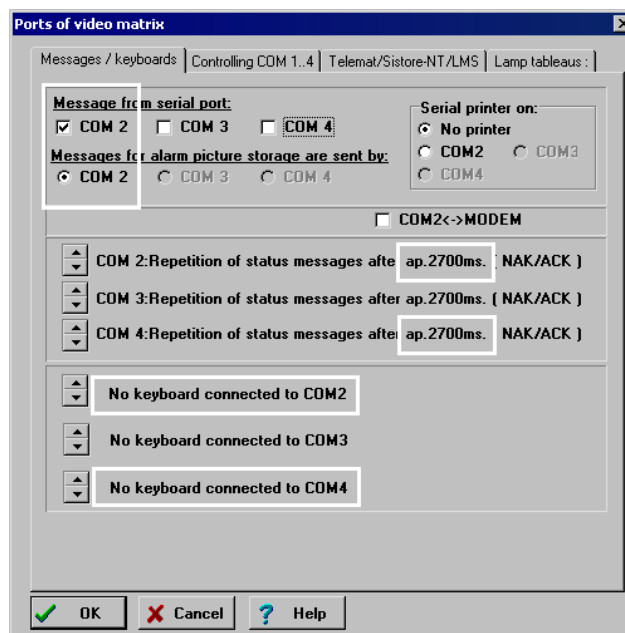


Fig. 67 TELEMAT connection register **Messages/keyboards**

The following standard parameter settings apply for the **COM1...4** index card (fields in white boxes):

If an IVM or external computer is connected via COM2, COM2 must be selected in menu option 'Local control via:..

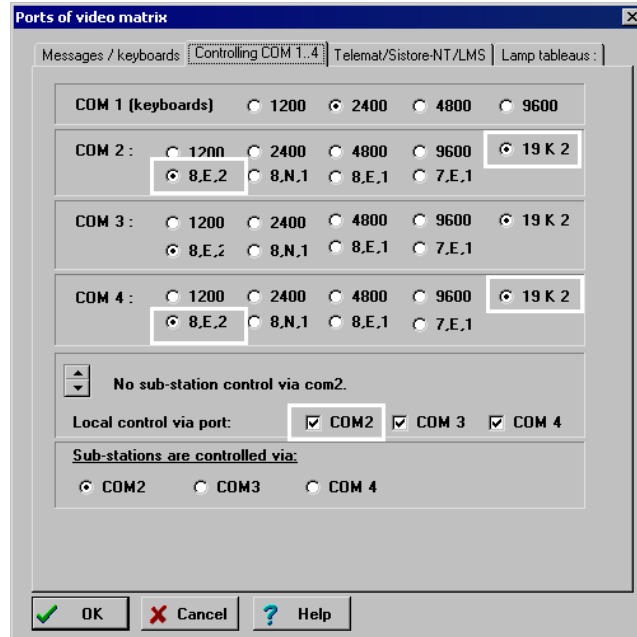


Fig. 68 TELEMAT MD/MTD connection register **COM1...4 control**

The following standard parameter settings apply for the **TELEMAT/SISTORE-NT/LMS** index card (fields in white boxes):

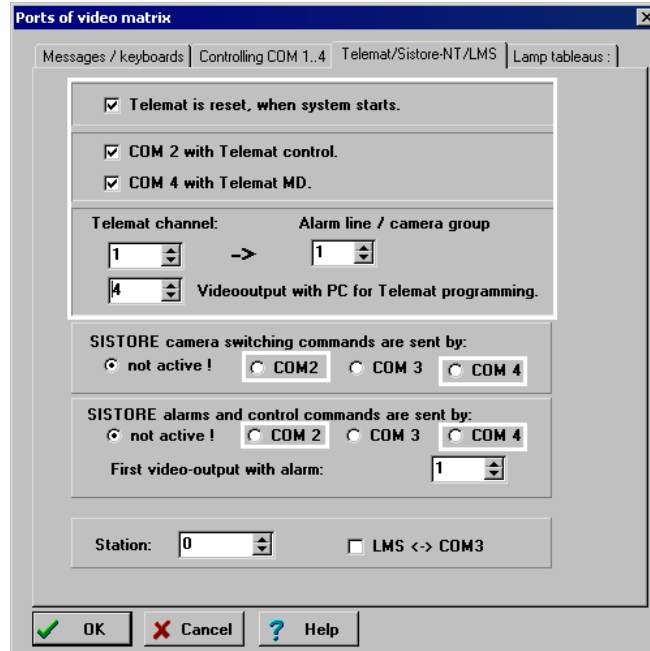


Fig. 69 TELEMAT connection - **TELEMAT/ SISTORE-NT/LMS** register

**TELEMAT is reset, when system starts:**

Select the checkbox if TELEMAT should also be reset when a system reset takes place.

**COM2 with IVM TELEMAT control**

Select the checkbox if a PC for setting TELEMAT parameters (e.g. IVM) is



connected to **COM2**.

For TELEMAT parameter setting, the PC and TELEMAT MD/MTD must communicate at the same baud rate.

#### **COM4 with TELEMAT MD**

This checkbox must be selected if a TELEMAT is connected.

#### **TELEMAT channel -> Alarm line/camera group**

The allocation of each TELEMAT channel to the alarm line/camera groups is set here.

e.g.:

Channel 1 to alarm line /camera group 1

Channel 2 to alarm line /camera group 2

This means that if channel 1 triggers an alarm, it will be seen by the SIMATRIX system as an alarm originating from alarm line 1 etc. (the first camera in this group is the camera with the TELEMAT).

Video output with programming PC

The video output for parameterisation of the TELEMAT is set here.



After setting interface parameters, the system must be reset before the new settings will take effect.

As standard, the **Basic alarm parameters** dialogue screen should be set up as follows:

- External alarm always from group 1
  - at least 1 active alarm line
- 

General:

When alarms are now switched between active/inactive using the keyboard or IVM, the corresponding TELEMAT channel is also switched between active/inactive.

The SIMATRIX integrates TELEMAT alarms into normal alarm processing:

If an alarm originates from a TELEMAT, it is converted to the corresponding alarm line and switched to screen. TELEMAT modulation alarms are handled by the SIMATRIX in the same way as an alarm.

If the TELEMAT alarm is to be reset by the SIMATRIX (no auto-reset), the alarm zone containing the groups that are equipped with TELEMAT channels must be set to STACK RESET.

If set in this way, the SIMATRIX will also send a message to the corresponding TELEMAT channel when the alarm is cleared.

All other forms of alarm processing are only possible by activating auto-reset at the TELEMAT.

Automatic storage also requires the alarms in the SIMATRIX to be set to timer reset.



The timer reset function will only be available if the external alarms have also been included in the basic enabling parameters.

---

If the TELEMAT is programmed via **COM2** using a PC, the image from the channel set in this way will be switched to the PC output first. The ensuing data exchange between TELEMAT and PC will be transferred from **COM4** to **COM2** and vice versa by the SIMATRIX. Alarms originating from other TELEMAT channels will still be switched (however not to the PC output).

Once the parameters have been set, the TELEMAT will once more fall under direct SIMATRIX control.

Normal TELEMAT operation is possible during programming. (Switching to an internal video bus, fields on off etc. )



All software versions from VMx\_9806.X23 on, allow use of the keyboard to set all TELEMAT channels to active/ inactive in one operation, by switching alarm zone 1 to active/ inactive.  
 From version VMx\_9905.X12 on, the TELEMAT can also be set to active/ inactive via alarm zone 1 timer settings.

### 15.4.2 SISTORE-NT to SIMATRIX SYS/648/NEO, ( not with NEO V2 )

Recommended parameter settings example (SISTORE-NT to COM3/messaging operation):

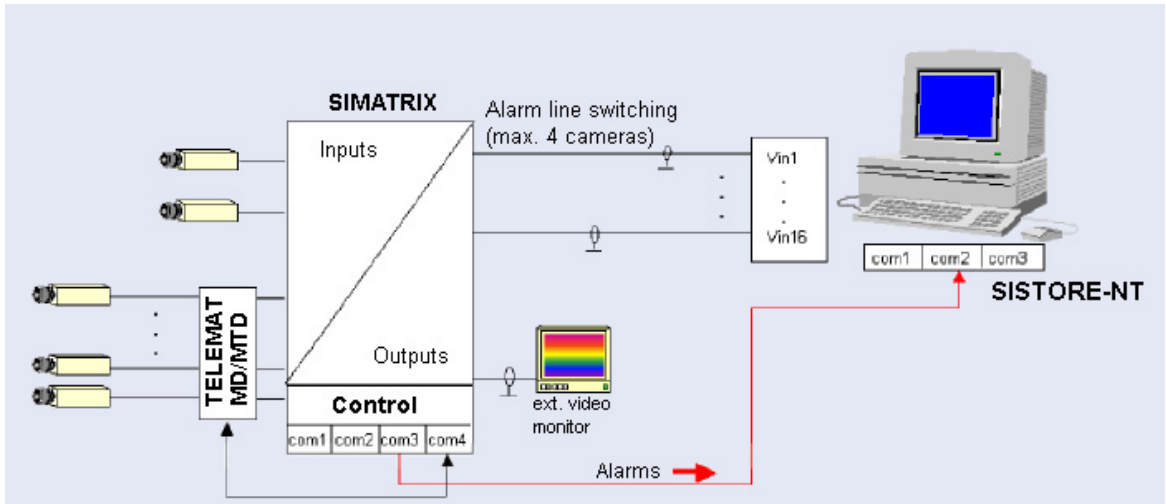


Fig. 70 SISTORE-NT messaging operation

#### TELEMAT/SISTORE-NT/LMS

The following standard parameter settings apply for the **Messages/keyboards** index card (fields in white boxes):

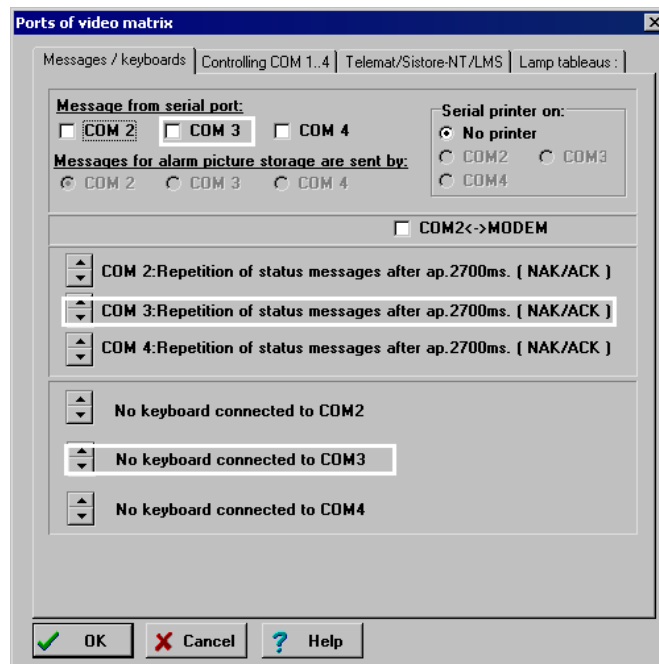


Fig. 71 Connecting SISTORE-NT for message operation – **Messages/keyboards**

The following standard parameter settings apply for the **COM1...4** index card (fields in white boxes):

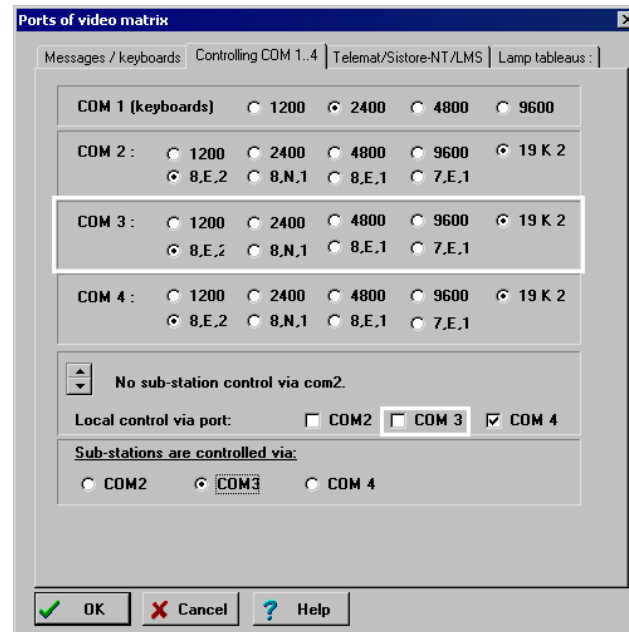


Fig. 72 Connecting SISTORE-NT for message operation – **COM1...4 control**

The following standard parameter settings apply for the **TELEMAT/SISTORE-NT/LMS** index card (fields in white boxes):

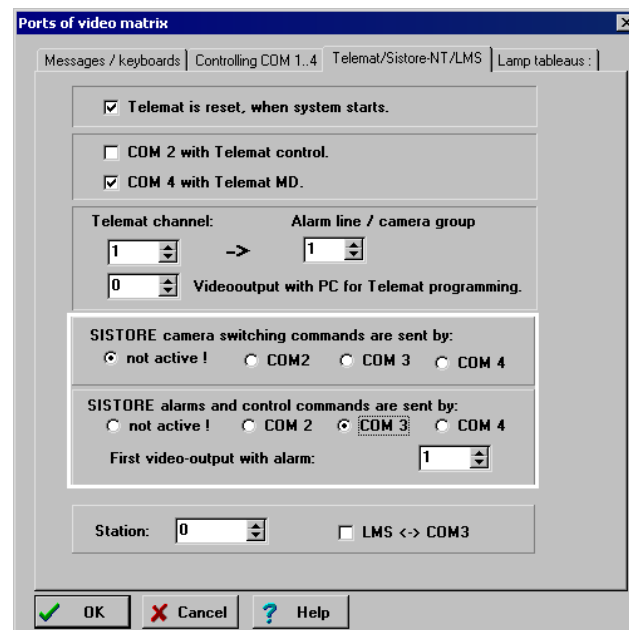


Fig. 73 Connecting SISTORE-NT for message operation – **TELEMAT/SISTORE-NT/LMS**

#### **SISTORE camera switching commands sent by (SISTORE-NT --> SIMATRIX):**

Select the checkbox for the SIMATRIX interface, which will be used to send switching commands to the SISTORE-NT (ring operation).

**SISTORE alarms and control commands are sent by (SIMATRIX --> SISTORE-NT):**

Select the checkbox for the interface, which the SIMATRIX will use to transfer alarms or SISTORE-NT control commands (messaging operation or ring operation).

**First video output with alarm:**

Setting alarm images for recording



After setting interface parameters, the system must be reset before the new settings will take effect.

### 15.4.3 LMS to SIMATRIX SYS/ 648/ 164 / NEO / NEO V2

The "LMS-link" connection allows the SIMATRIX to be coupled as a subsystem within LMS-Modular.

The following basic functions can be implemented using the LMS connection:

- Transmission of alarm signals to LMS
- Video signal failures
- Alarms

**Receiving control commands from LMS:**

- Status request
- Time alignment
- Switching video inputs to video outputs
- Activating and deactivating alarm lines
- External alarms
- Clearing alarms (external alarm reset)
- System reset

These SIMATRIX functions can be executed via an operating screen in LMS-Modular.

Recommended parameter settings example (see also LMS\_6.dat und LMS\_1.dat):

Typical parameters for LMS_6.dat	For SIMATRIX SYS/ 648 (connection to COM3)
Typical parameters for LMS_1.dat	For SIMATRIX 164 (connection to COM2)

The following standard parameter settings apply for the **Messages/keyboards** index card (fields in white boxes):

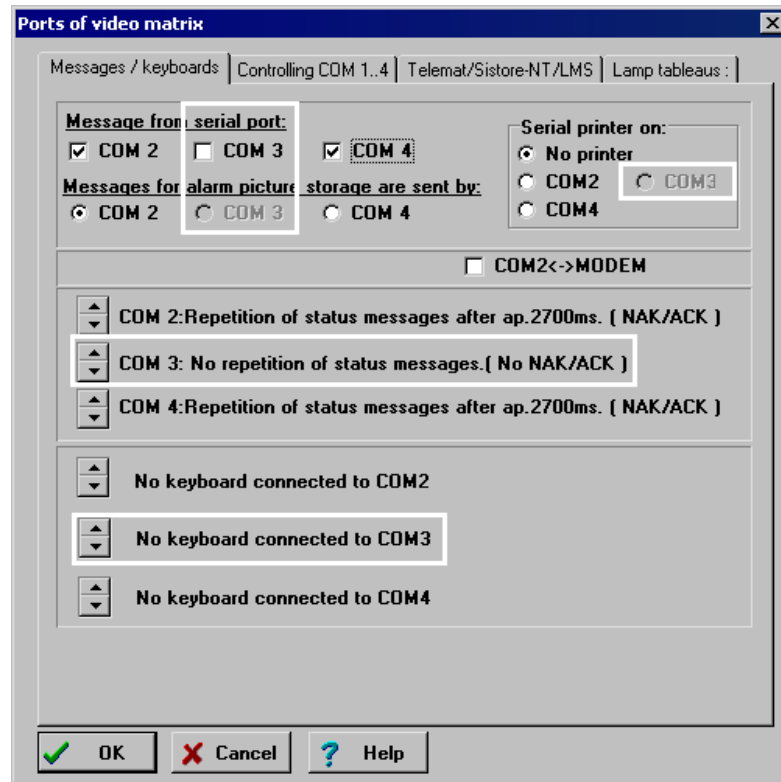


Fig. 74 Connecting LMS to SIMATRIX SYS 648 – Messages/keyboards

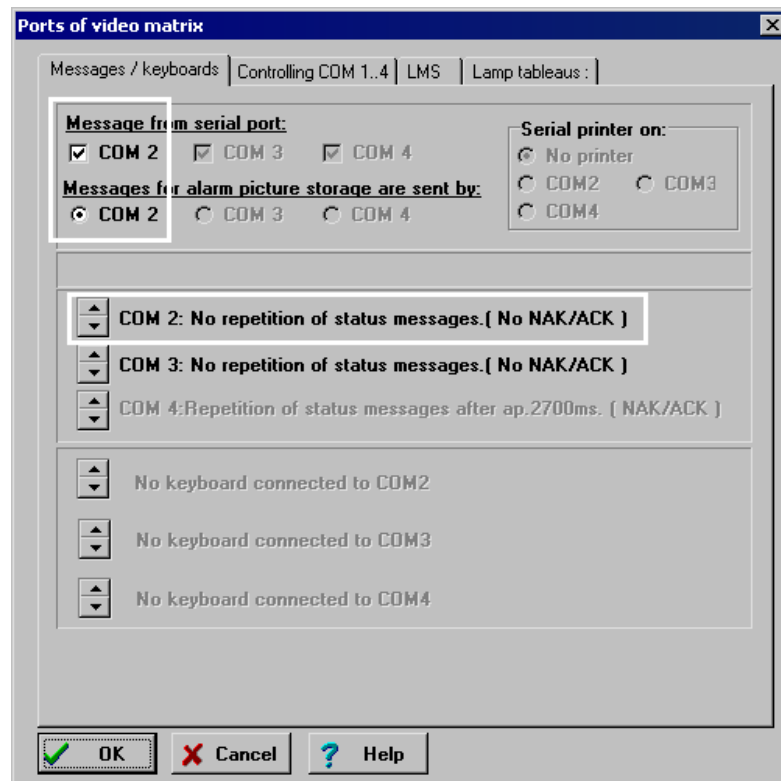


Fig. 75 Connecting LMS to SIMATRIX 164 – Messages/keyboards

The following standard parameter settings apply for the **COM1...4** index card (fields in white boxes):

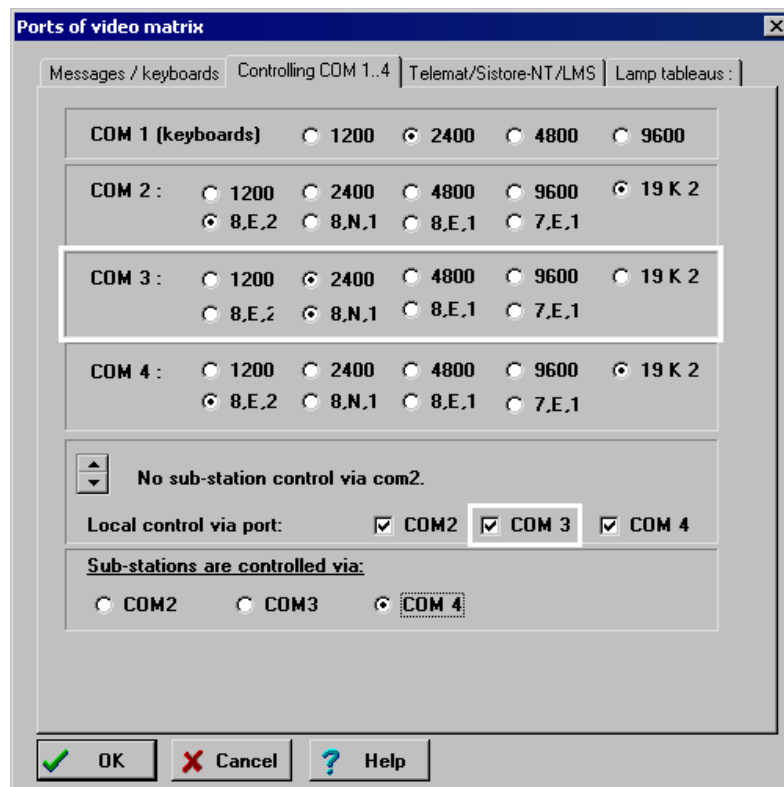


Fig. 76 Connecting LMS to SIMATRIX SYS/ 648 – **COM1...4** control

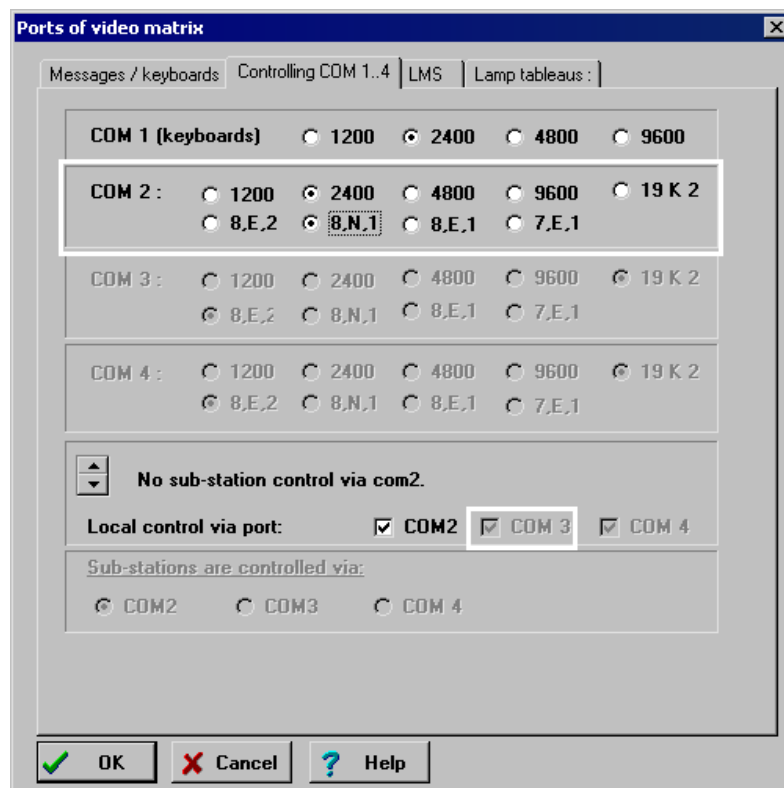


Fig. 77 Connecting LMS to SIMATRIX 164 – **COM1...4** control

The following standard parameter settings apply for the **TELEMAT/SISTORE-NT/LMS** index card (fields in white boxes):

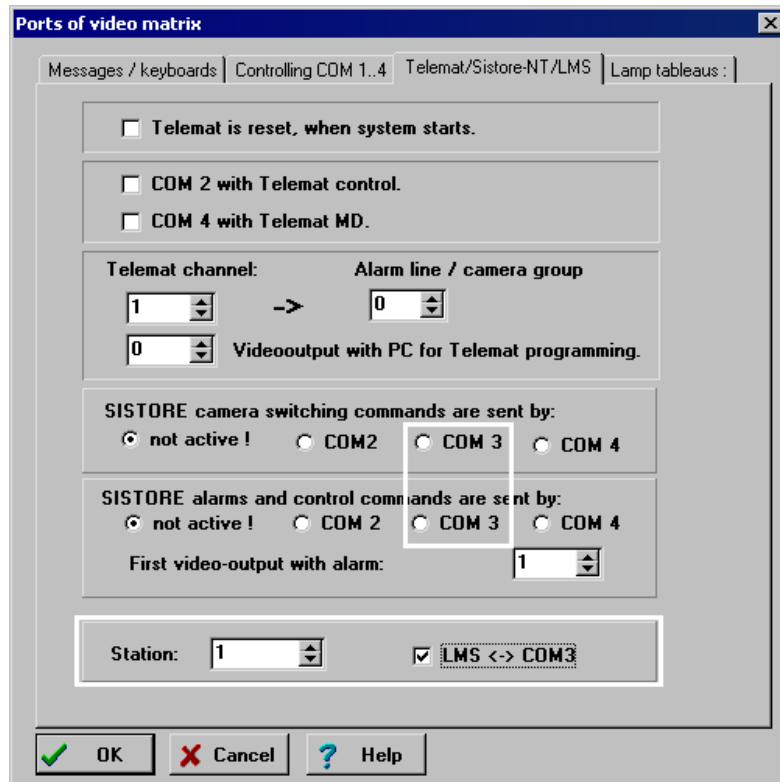


Fig. 78 Connecting LMS to SIMATRIX SYS/ 648 – **TELEMAT/SISTORE-NT/LMS**

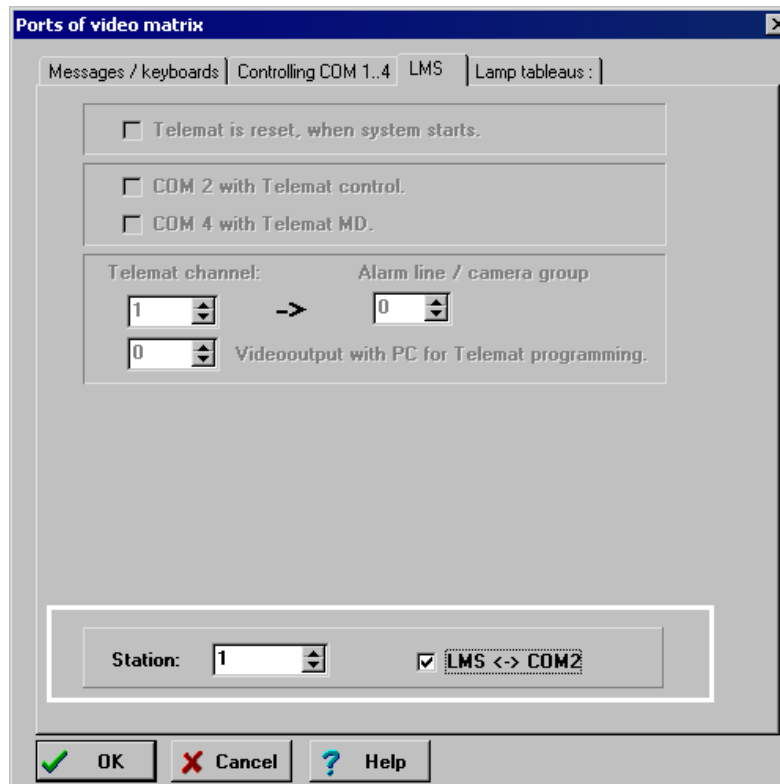


Fig. 79 Connecting LMS to SIMATRIX 164 – **TELEMAT/SISTORE-NT/LMS**

### Station

A station number is set here in the SIMATRIX subsystem; LMS-Modular uses this station to control the subsystem.

LMS ↔ COM3/ COM2:

This checkbox must be selected if a SIMATRIX SYS/ 648/ 164 is connected as a subsystem within LMS-Modular. This is the COM2 interface in the case of the SIMATRIX 164.



After setting interface parameters, the system must be reset before the new settings will take effect.

## 15.4.4 External computer to an SIMATRIX SYS/ 648/ 164/ NEO/ NEO V2

Recommended parameter settings example (external computer on COM2/ see also alarm2\_6.dat):

The following standard parameter settings apply for the **Messages/keyboards** index card (fields in white boxes):

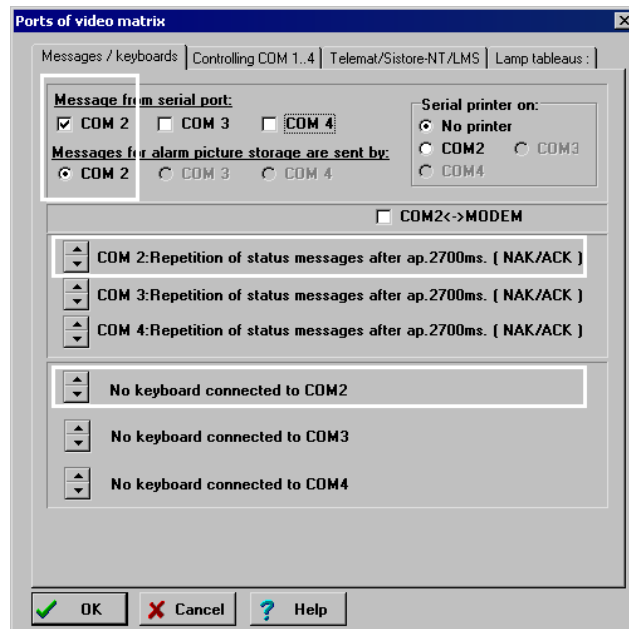


Fig. 80 Connection of an external computer – **Messages/keyboards**



The following standard parameter settings apply for the **COM1...4 control** index card (fields in white boxes):

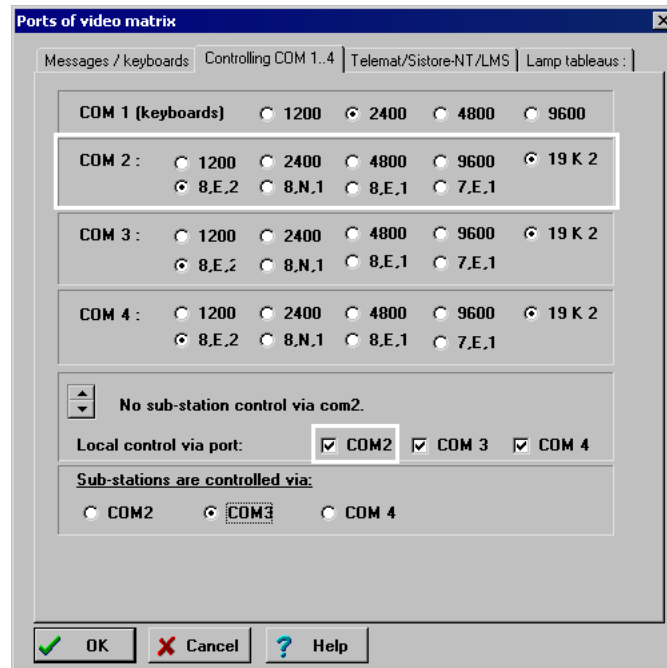


Fig. 81 Connection of an external computer – **COM1...4 control**

If the external computer is connected via COM2, COM2 must be selected in menu option **Local control via:**

The following standard parameter settings apply for the **TELEMAT/SISTORE-NT/LMS** index card (fields in white boxes):

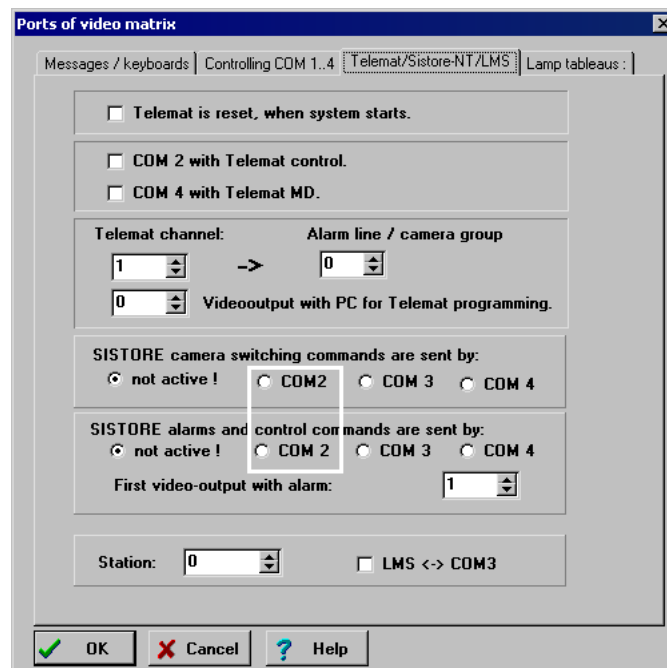


Fig. 82 Connecting and external computer - 'TELEMAT/ SISTORE-NT/ LMS'



After setting interface parameters, the system must be reset before the new settings will take effect.

### 15.4.5 IVM NT (RS485) to SIMATRIX SYS/ 648/ 164/ NEO/ NEO V2

Recommended parameter settings example (IVM NT on COM2/ see also ivm\_nt.dat):

The following standard parameter settings apply for the **Messages/keyboards** index card (fields in white boxes):

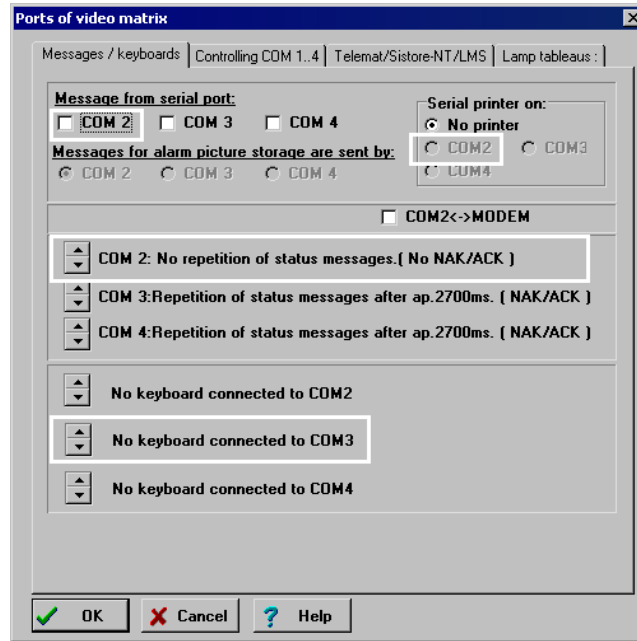


Fig. 83 Connection of IVM NT – **Messages/keyboards**

The following standard parameter settings apply for the **COM1...4** index card (fields in white boxes):

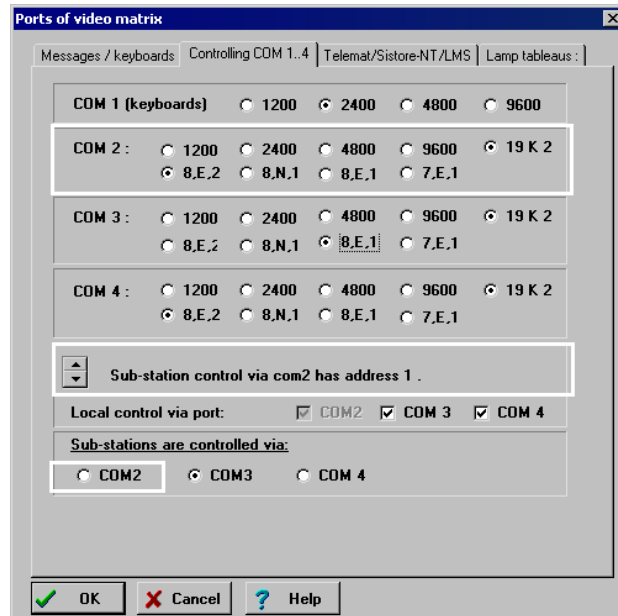


Fig. 84 Connection of IVM NT – **COM1...4 control**

As IVM NT is connected via COM2, COM2 must be selected in menu option **Local control via:**. When used in an IVM NT system, the SIMATRIX act as a sub-station (polling mode).

This means that each SIMATRIX in the system must be allocated an address. Address 1 is used in this example.

The following standard parameter settings apply for the **TELEMAT/SISTORE-NT/LMS** index card (fields in white boxes):

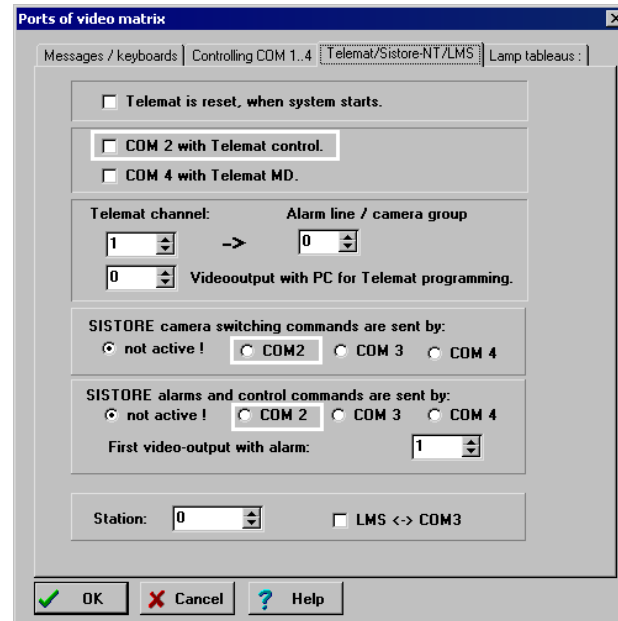


Fig. 85 Connecting IVM NT - TELEMAT/ SISTORE-NT/ LMS



After setting interface parameters, the system must be reset before the new settings will take effect.

Each device is supplied with the relevant device programming manual.

A \*.dat file with typical settings is supplied with the SIMATRIX as standard. This file must be enabled before it takes effect.

Parameterisation files supplied to support interface set-up:

Connection of	Dat file
GMA	GMA.dat
SIPOINT	SIPOINTQ.dat, SIPOINTS.dat
TELSKAN	TEL_LIVE.dat

## 15.5 Indicator lamp tableaus (not with NEO V2)

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The indicator lamp tableaus can be used to indicate 3 different camera conditions:

- Lamp tableau for alarm display
- Lamp tableau for display of switched cameras
- Lamp tableau for display of signal status

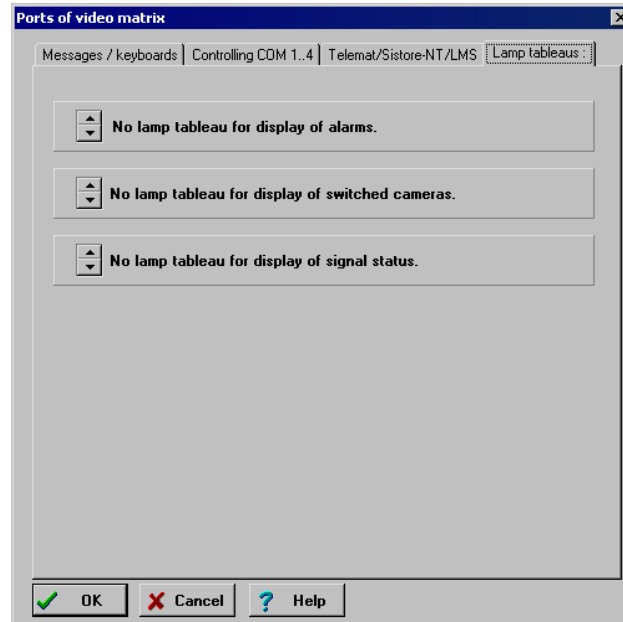


Fig. 86 Connection of lamp tableaus



The hardware for the tableaus is no longer available in standard component form.

---

Use the arrow keys to indicate the lamp tableau address, from which the lamp tableaus will be used (each tableau contains 30 lamps).

## 16 Remote control and message reception

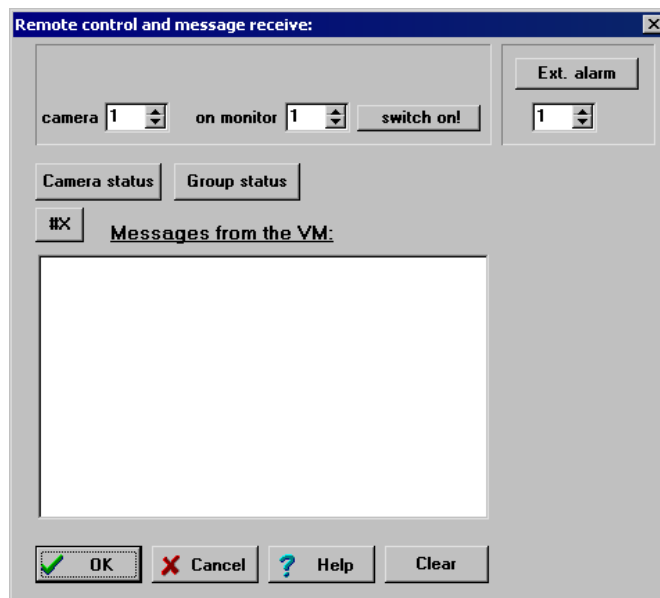


Fig. 87 Remote control and message reception

### 16.1 Remote control

This dialogue screen allows direct control of all SIMATRIX functions from a PC in order to test the functionality of the interface.

#### Image display

By entering the camera and monitor number and clicking the **Switch on!** Button, any camera can be switched to any monitor (single image switching).

#### Ext. alarm

Any one of the alarms can be simulated here. The effect is the same as when the corresponding alarm is triggered. If set to do so, for example, an alarm image will be displayed.

#### Camera status

Camera signal status request (signal/ no signal)

#### Group status

Alarm line status request (active/ inactive)

#### #X

Switching condition of the outputs (e.g. switched camera, sequence ...)

## 16.2 Messages from the video matrix

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This window displays messages sent by the SIMATRIX to the PC. For example, the alarm sensor that has been triggered is shown in the event of an alarm.

<ACK> stands for Acknowledge and means acceptance of the transmitted data.

<NAK> stands for Negative Acknowledge and means non-acceptance, for example if the transmitted data is incorrect.

If more messages have been transmitted than can be displayed in the window, the scroll bar on the right can be used to scroll through the window.

The **Clear** button deletes the content of the message window.

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