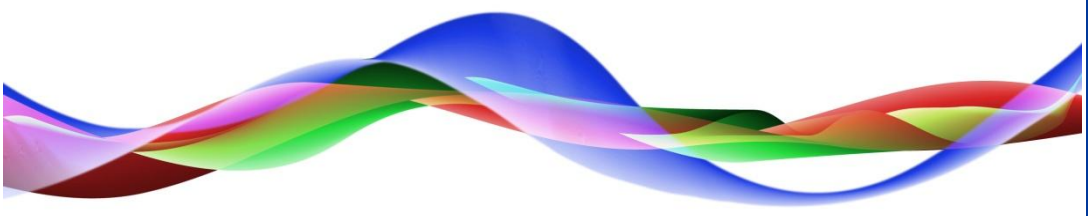
LSB
Broadcast Technologies GmbH

19 Panel Editor and vsmPanel

vsmStudio & vsmPanel

Manual



HHO / JHA / SJU / BME

18.07.2011

Legend

Please note: This information is of prime importance.

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Content

1 vsmPanel Installation

1.1 System Requirements

The installation of vsmPanel requires the following system specifications:

1.1.1 vsmPanel Version 1.x

- Processor: P4, 1GHz
- Memory: 256 MB RAM
- Operating System: Windows 2000.

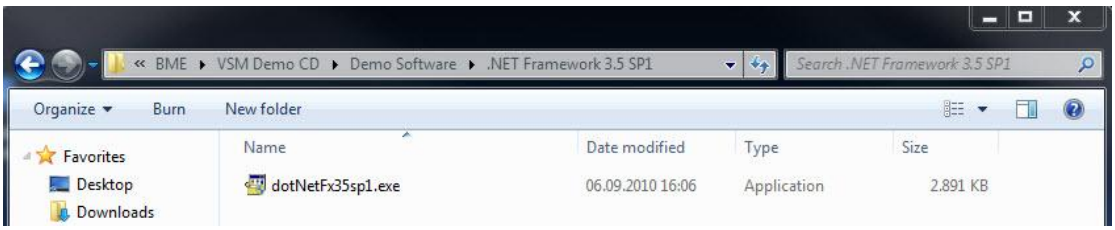
1.1.2 vsmPanel Version 2.x and 3.x

- Processor: Core2 Duo, 2 GHz
- Memory: 1 GB RAM (2 GB for Windows Vista Business)
- DirectX9-ready video card (nVidia Quadro FX or GeForce 6600+ or ATI Radeon)
- Hardware-Accelerator (for vsmPanel 3.x)
- Operating System: Windows XP SP3 / Vista Business
- .NET Framework 3.5 SP1.

1.2 Installation .NET Framework 3.5 Service Pack 1

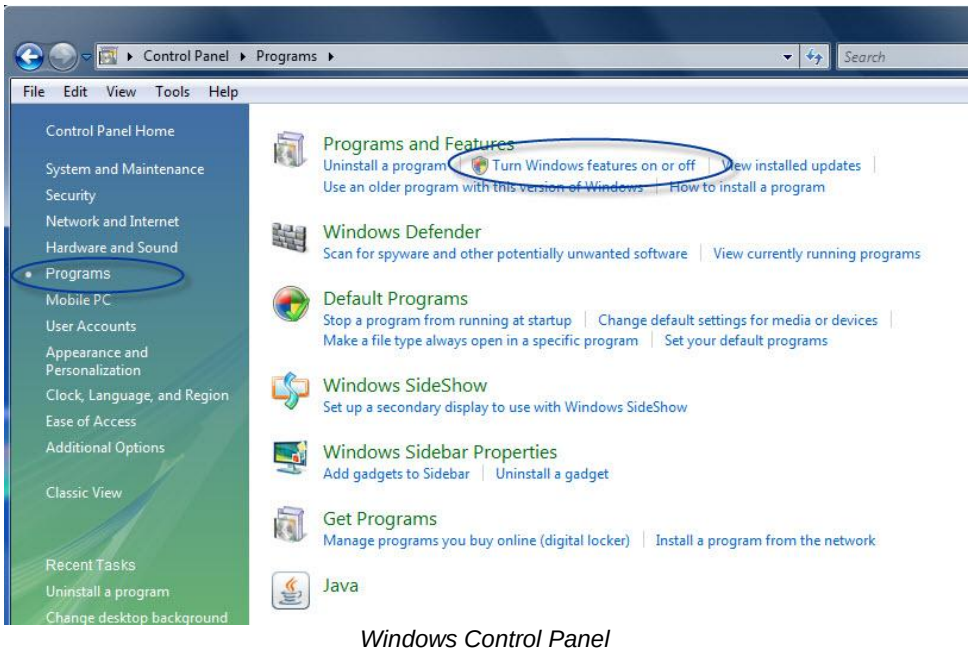
Please note: .NET Framework 3.5 Service Pack 1 must be installed before starting the vsmPanel installation process.

.NET Framework 3.5 Service Pack 1 is included with the files provided for the installation of vsmPanel. Execute the dotNetFx35sp1.exe file to install it.



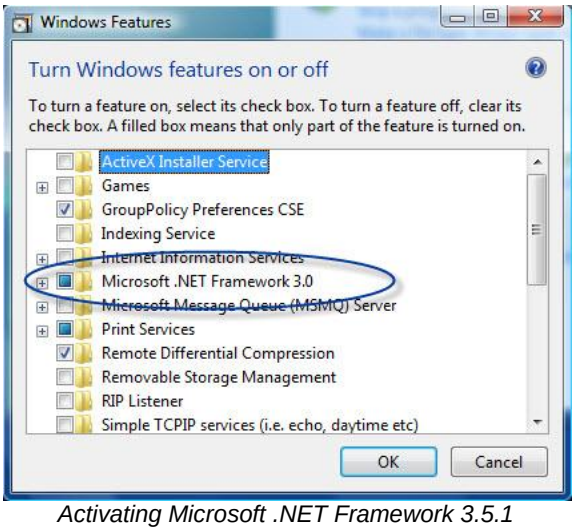
.NET Framework 3.5 Service Pack 1

In order to install .NET Framework 3.5 Service Pack 1, open the *Control Panel* and select the option *Turn Windows features on or off* located under the *Programs* tab.



Windows Control Panel

After the installation, .NET Framework 3.5 Service Pack 1 will be shown in the list of Windows functions. The function now only needs to be selected in order to be activated.

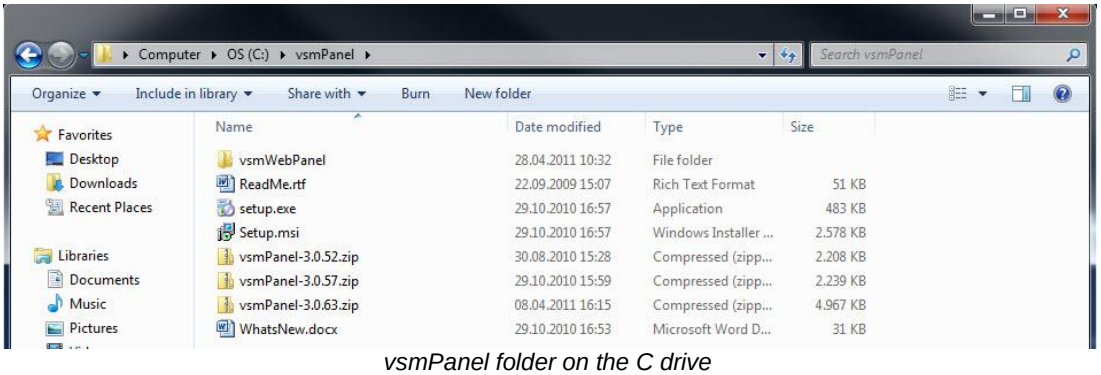


Activating Microsoft .NET Framework 3.5.1

1.3 vsmPanel Installation Version 1.x und 2.x

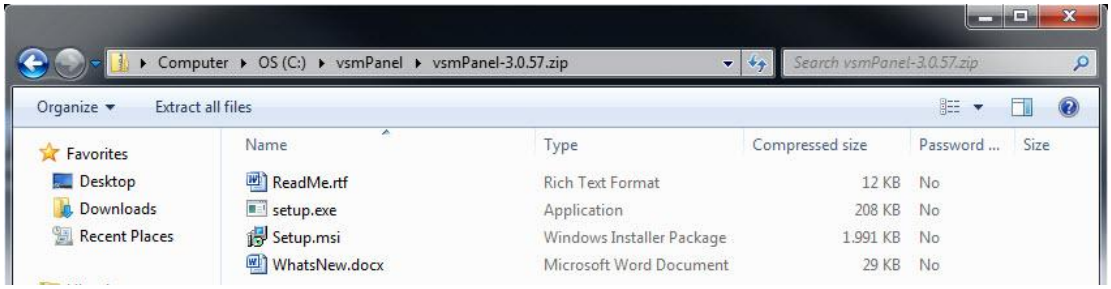
1.3.1 PC Installation

When installing the software application vsmPanel on a PC, create a subfolder named vsmPanel in the VSM folder on the C drive.



vsmPanel folder on the C drive

Next, copy the .zip file provided by L-S-B for the installation into the vsmPanel folder.

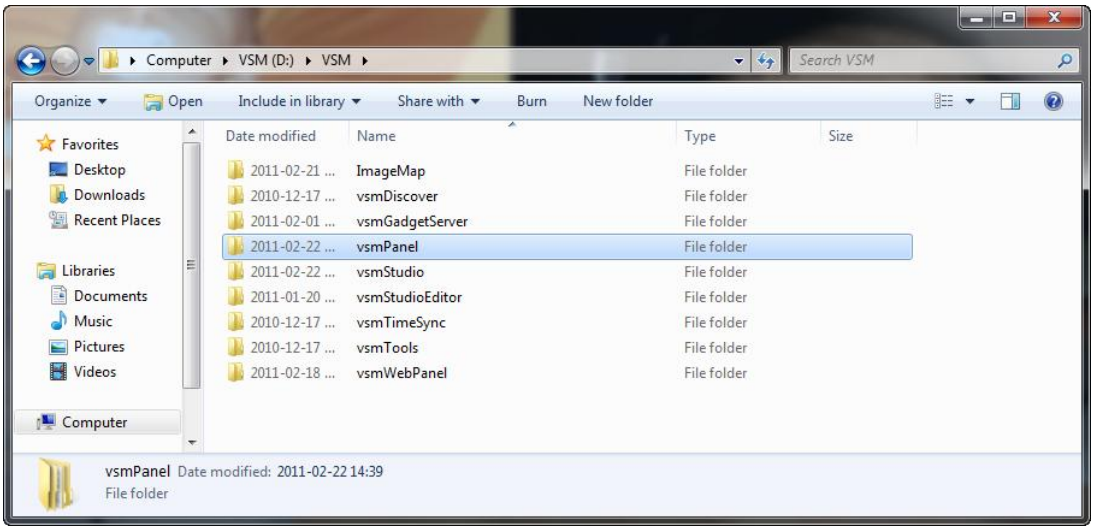


vsmPanel installation files

Once copied, either open the file and copy the contained files into the vsmPanel folder or extract the .zip file into the aforementioned folder.

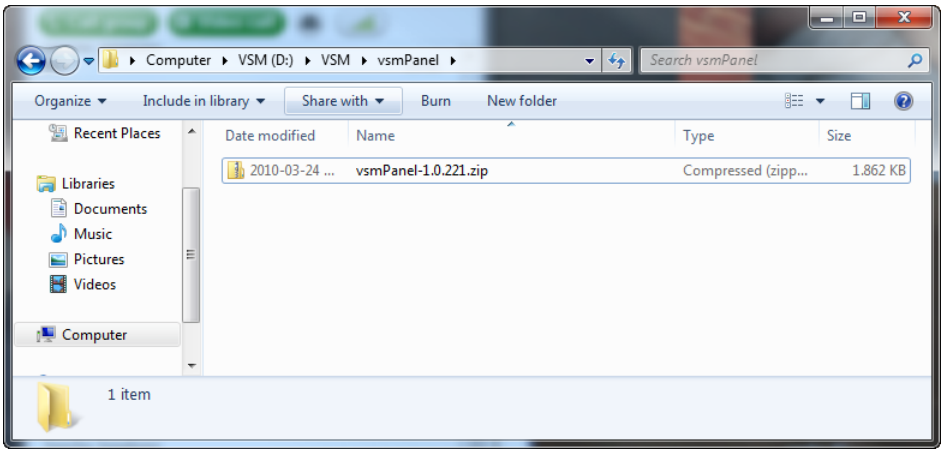
1.3.2 Server Installation

When installing vsmPanel on a server, create a folder named vsmPanel on the partition that contains the installation of vsmStudio.



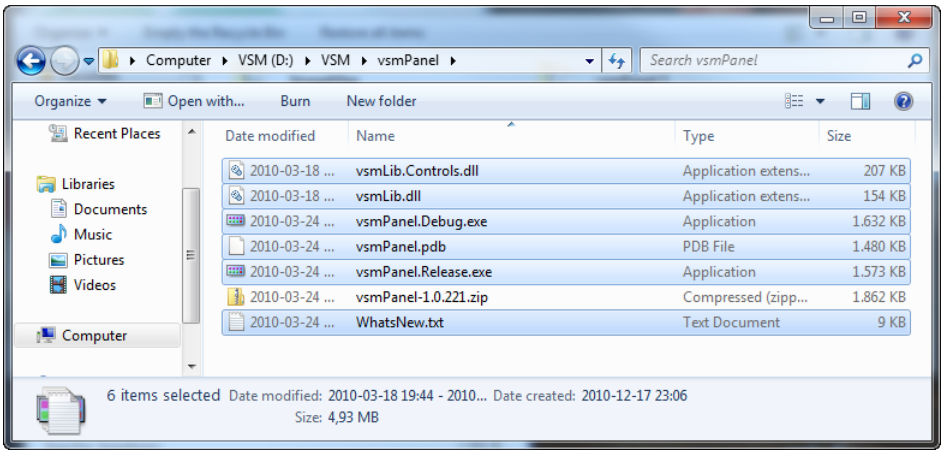
Creating the vsmPanel folder

Copy the provided .zip file into this folder.



Copying the vsmPanel .zip file into the vsmPanel folder

Next, either open the file and copy the contained files into the vsmPanel folder or extract the .zip file into the aforementioned folder.

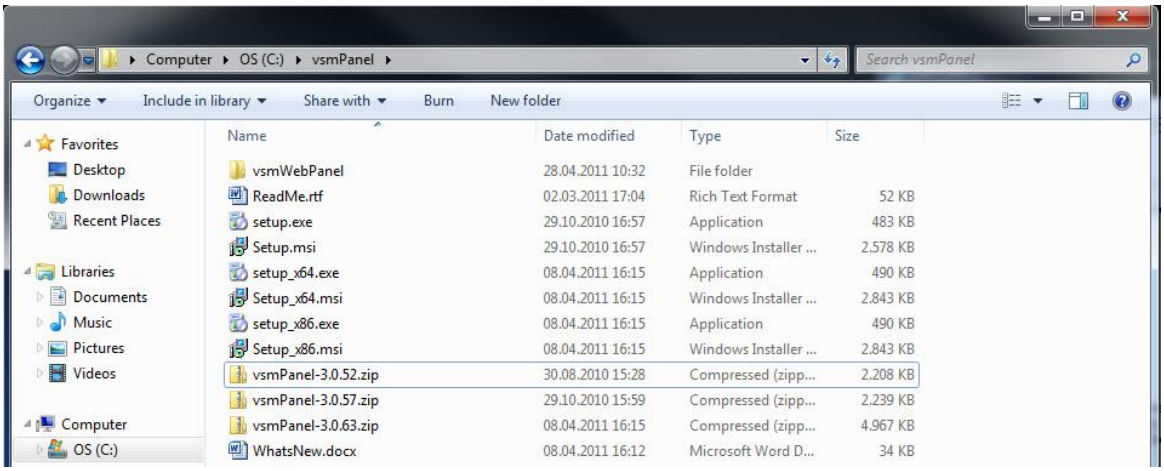


Extracted vsmPanel files

1.4 vsmPanel Installation Version 3.x

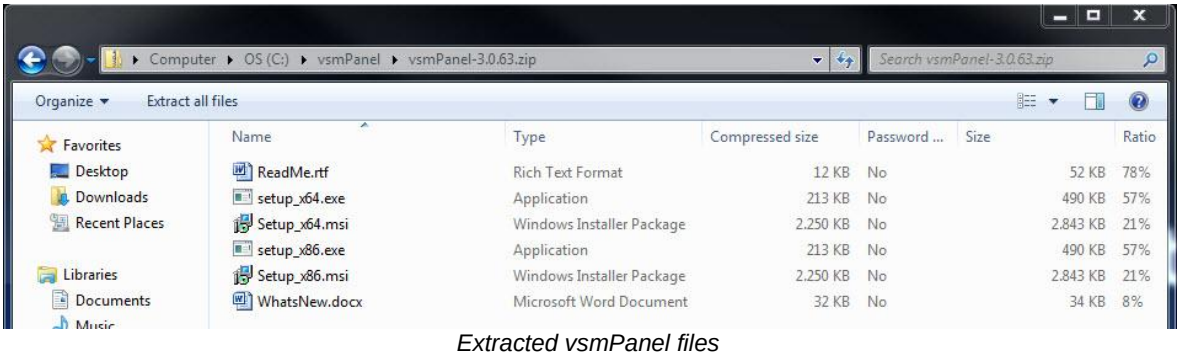
1.4.1 PC Installation

When installing the software application vsmPanel on a PC, create a subfolder named vsmPanel in the VSM folder on the C drive.



vsmPanel folder

Next, copy the .zip file provided by L-S-B for the installation into this vsmPanel folder. Once copied, either open the file and copy the contained files into the vsmPanel folder or extract the .zip file into the aforementioned folder.

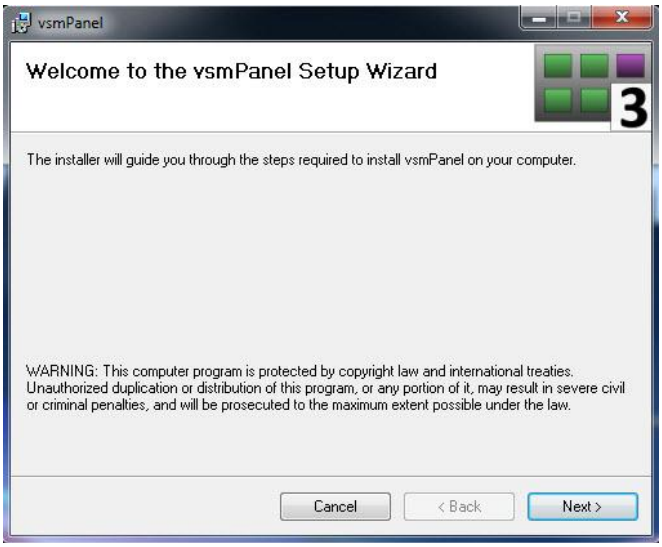


Extracted vsmPanel files

To start the installation of vsmPanel, double click onto one of the setup...msi or setup...exe files.

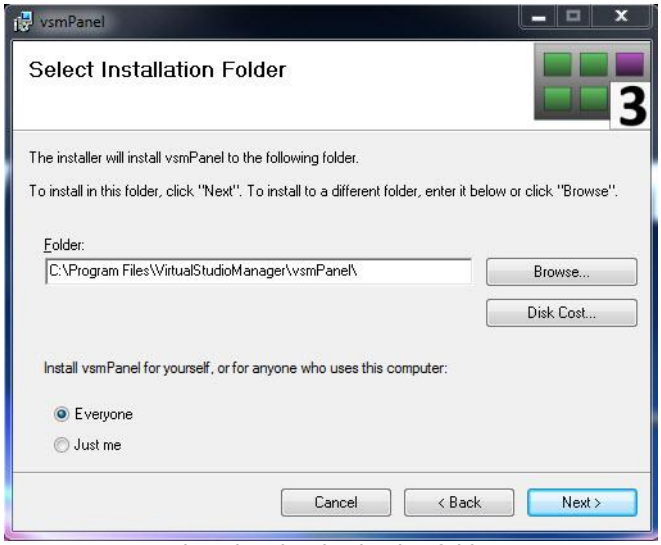
Please note: Use the installation file appropriate for your operating system: select the x64 file for 64-bit operating systems or the x86 file for 32-bit operating systems.

The vsmPanel Setup Wizard will lead you through the rest of the installation. To start the process, select *Next* in the first window of the installation wizard.



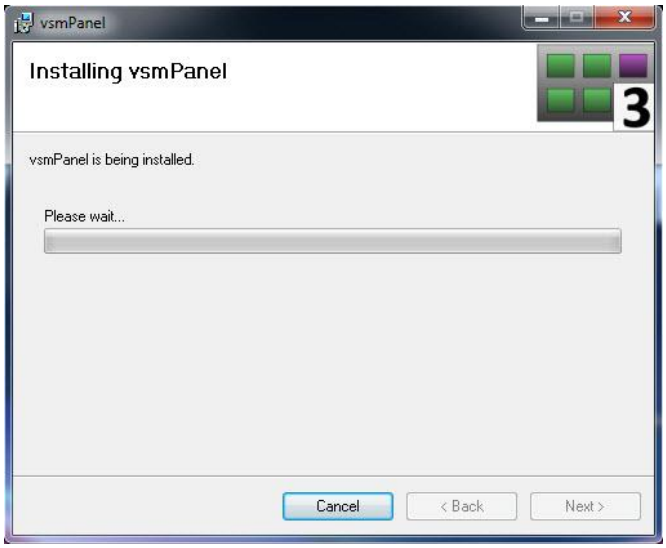
vsmPanel Setup Wizard

Select *Browse* and choose the vsmPanel folder on the C drive as installation destination.



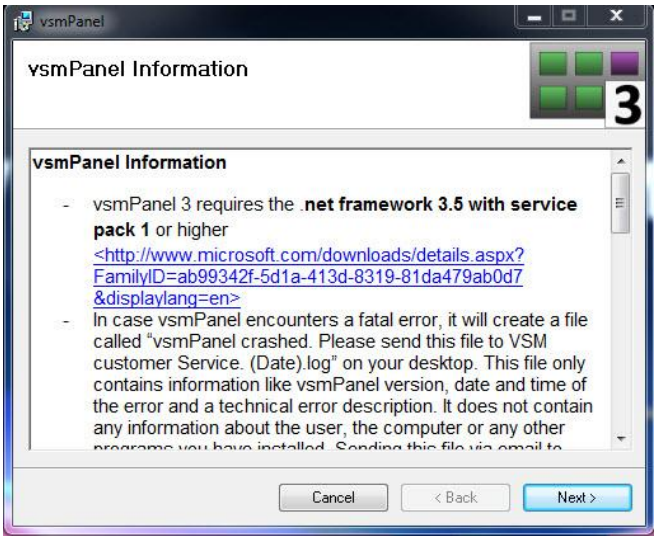
Choosing the destination folder

Select *Next* to start the installation.



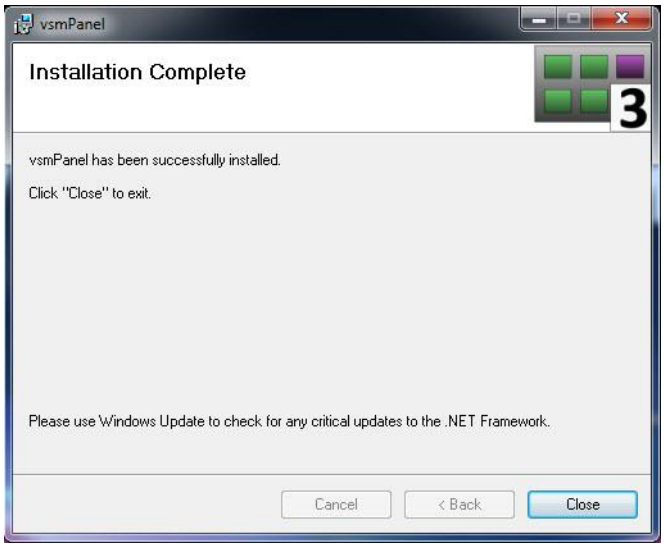
vsmPanel installation

The information window will also be closed by clicking *Next.*



vsmPanel information

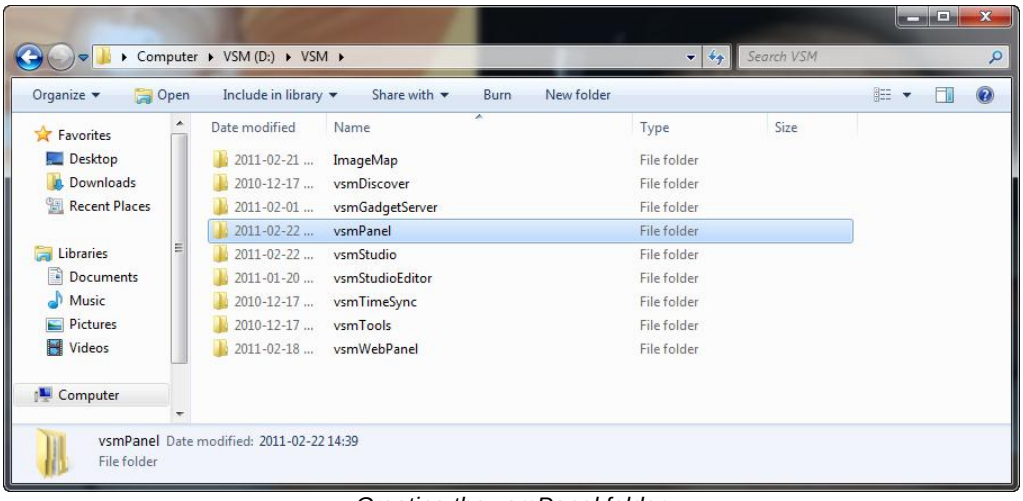
To complete the installation process, select *Close* in the last window.



Completing the installation

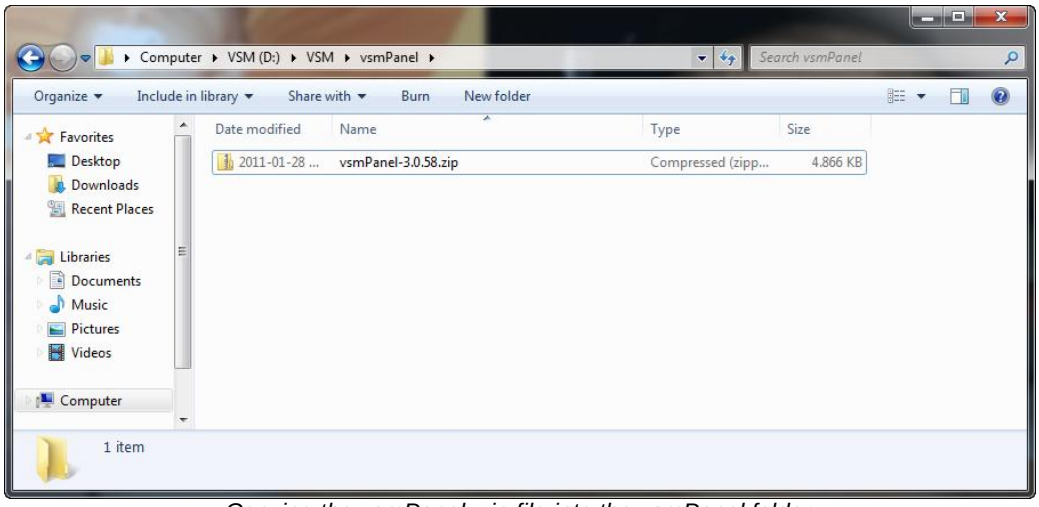
1.4.2 Server Installation

When installing vsmPanel on a server, create a folder named vsmPanel on the partition that contains the installation of vsmStudio.



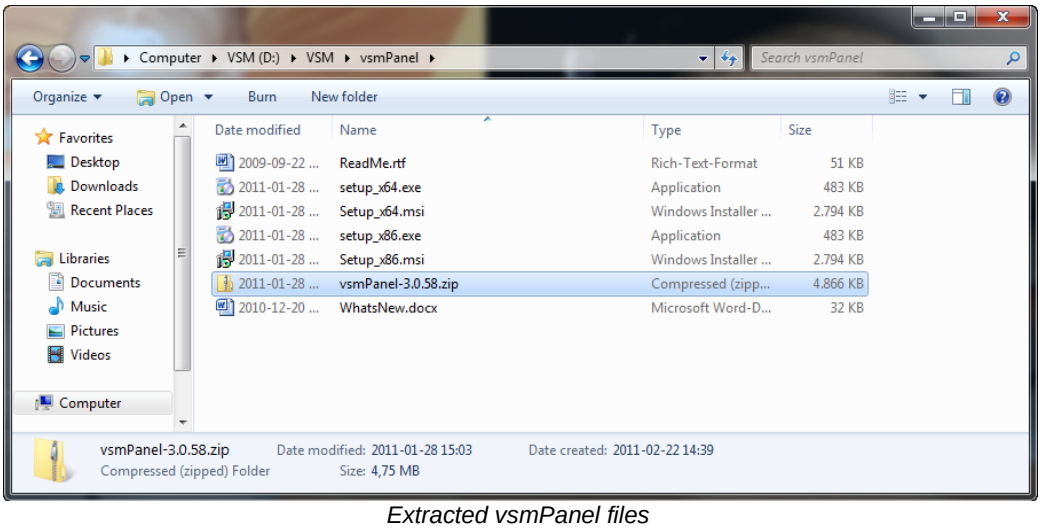
Creating the vsmPanel folder

Copy the provided .zip file into this folder.



Copying the vsmPanel .zip file into the vsmPanel folder

Next, either open the file and copy the contained files into the vsmPanel folder, or extract the .zip file into the aforementioned folder.

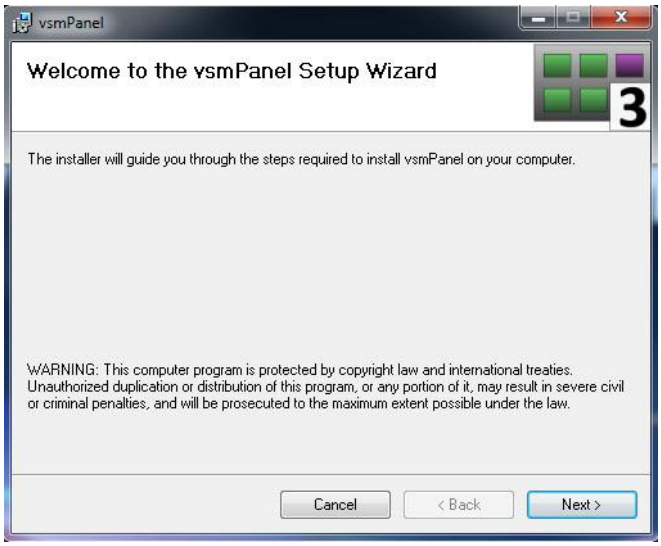


Extracted vsmPanel files

To start the installation of vsmPanel, double click onto one of the setup...msi or setup...exe files.

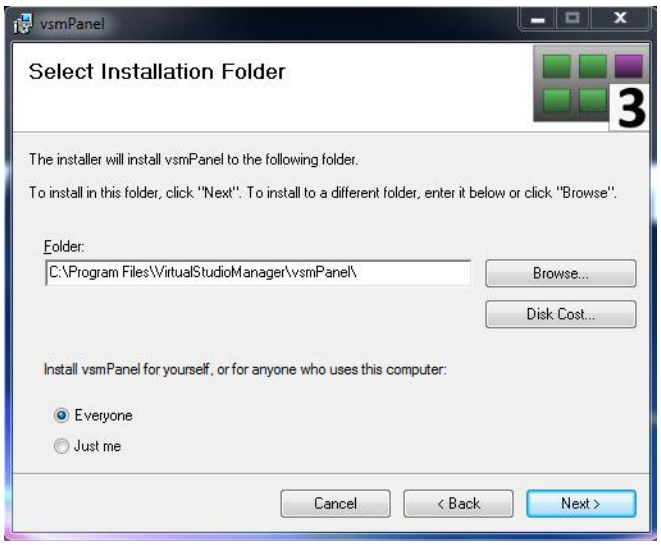
Please note: Use the installation file appropriate for your operating system: select the x64 file for 64-bit operating systems or the x86 file for 32-bit operating systems.

The vsmPanel Setup Wizard will lead you through the rest of the installation. To start the process, select *Next* in the first window of the installation wizard.



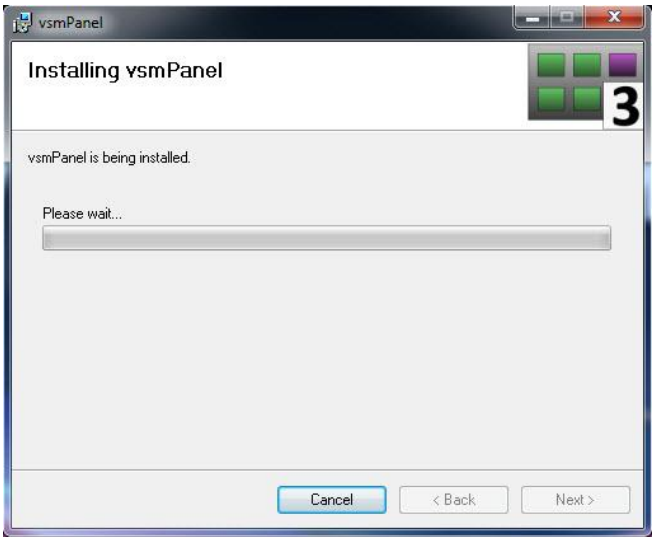
vsmPanel Setup Wizard

Use the browse function to select the folder D:\VSM\vsmPanel as installation destination.



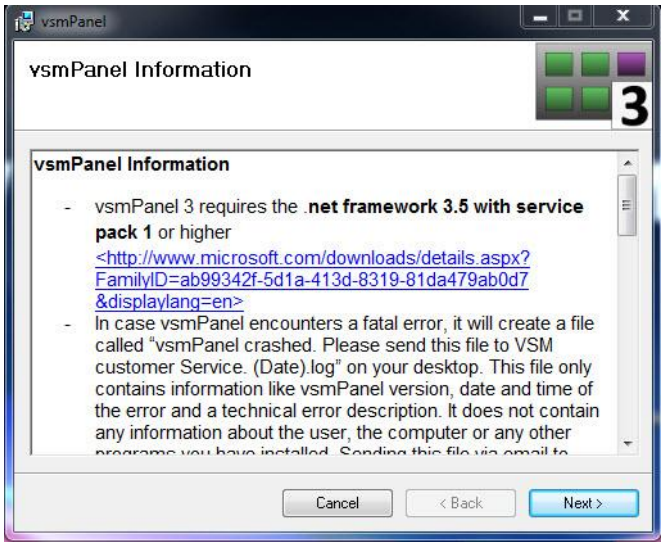
Selecting the destination folder

Select *Next* to start the installation.



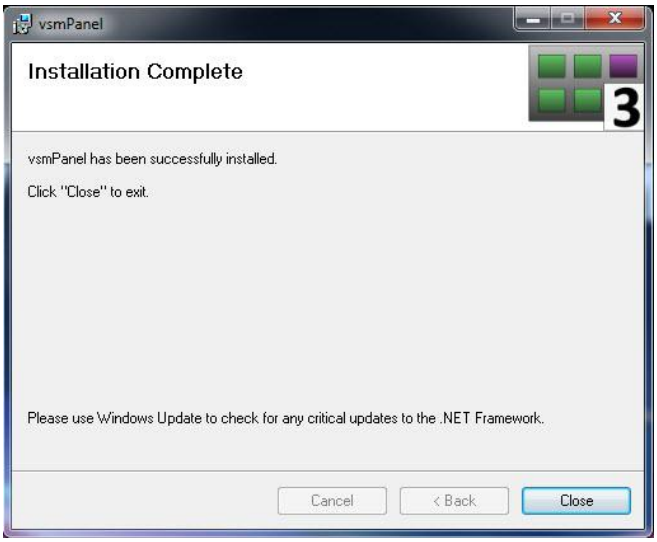
vsmPanel installation

The information window will also be closed by clicking *Next.*



vsmPanel information

To complete the installation process, select *Close* in the last window.

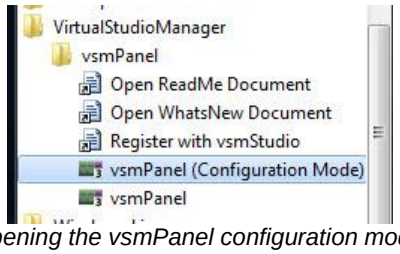


Completing the installation

2 Starting vsmPanel

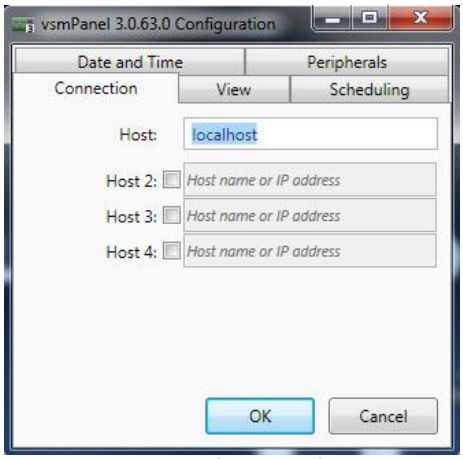
2.1 vsmPanel Configuration Mode

After vsmPanel has been installed, the application can be started through the windows start function (Virtual Studio Manager > vsmPanel).



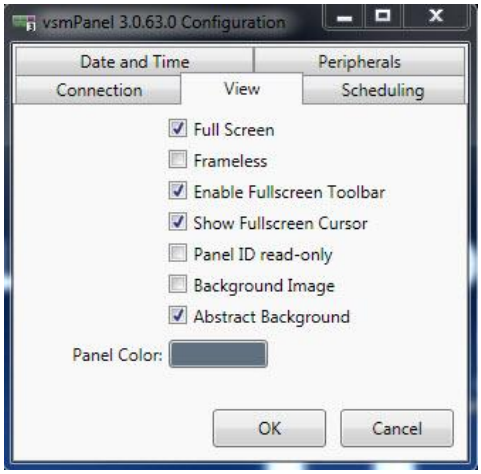
Opening the vsmPanel configuration mode

The currently connected host can be entered under Connection in the window *vsmPanel (Configuration Mode)*.



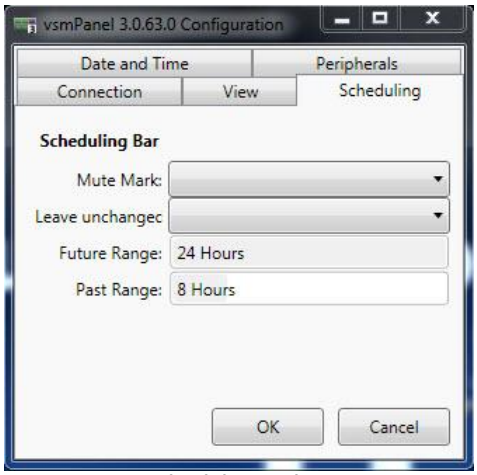
vsmPanel Connection

Under the *View* tab, different views can be chosen:



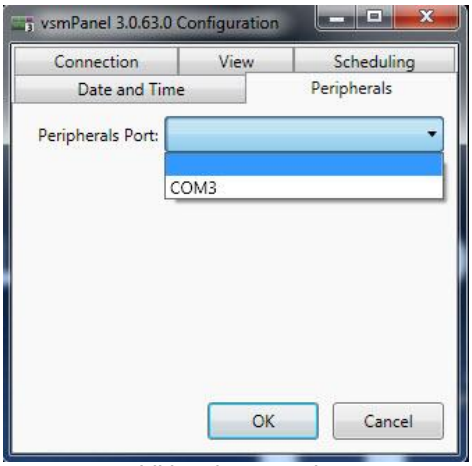
vsmPanel view settings

The settings of the scheduler bar can be changed under *Scheduling*.



Scheduler settings

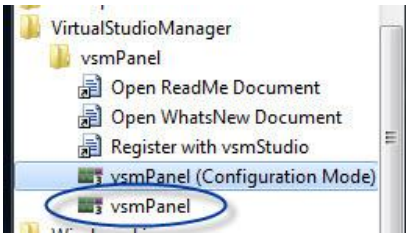
Additional ports can be selected under the *Peripherals* tab.



Additional port settings

Confirming the settings by pressing *OK* will open the currently set-up panel ID.

2.2 Opening vsmPanel



Opening vsmPanel

Selecting vsmPanel will automatically open the control panel of the currently set panel ID. Alternatively, a desktop shortcut can be created, or the vsmPanel icon can be placed in the Windows taskbar from where the program can be started.

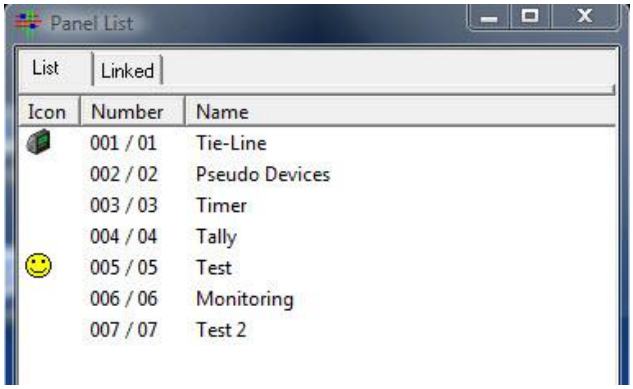
3 Panel List

Open panel list

To access the panel list, select the panel symbol located in the main menu. Existing control panels can be opened using the drop down menu in the vsmPanel taskbar.

Control panel drop down menu

In the panel list that opens after selecting the panel symbol mentioned above, existing control panels can be edited, and new control panels can be created or imported.

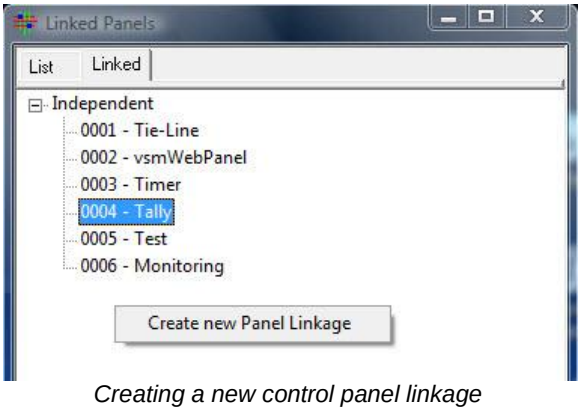


Panel list

Existing control panels are displayed under the *List* tab according to icon, name, and ID (number).

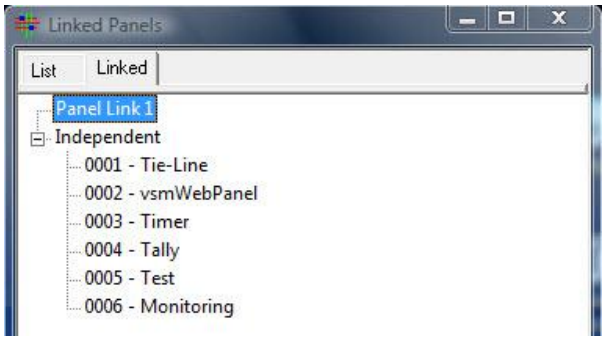
3.1 New Panel Linkage

Linked control panels are listed under the *Linked* tab. A new linkage can be created here by right-clicking into the list.



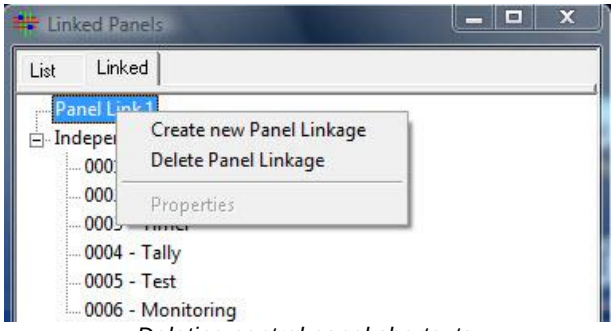
Creating a new control panel linkage

A single right-click on this linkage allows editing of its name. Required panels are assigned using drag and drop and subsequently function like a single, large control panel.



Editing control panel shortcuts

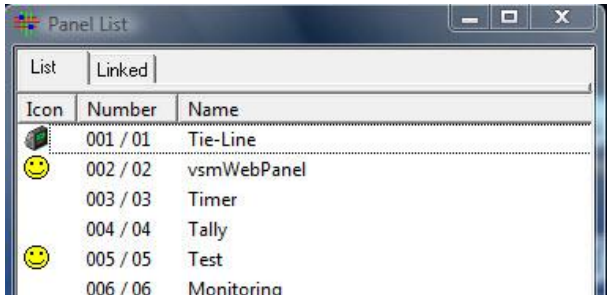
A panel can be removed from a linkage using drag and drop. However, an entry in the *Linked* list can only be deleted if all assigned panels have been removed from it.



Deleting control panel shortcuts

Therefore, the option *Delete Panel Linkage* only appears in the window that opens following a right-click onto a panel linkage if the panel linkage does not contain any control panels.

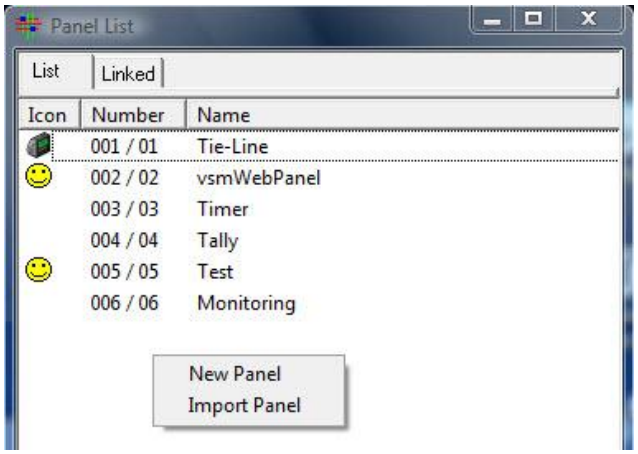
3.2 Columns of the Panel List



Panel list

Different, pre-defined symbols can be displayed in the *Icon* column. The column *Number* shows the different panel IDs. The column *Name* shows the name given to the respective panel during its set-up (see chapter 19.4.1 Panel Properties).

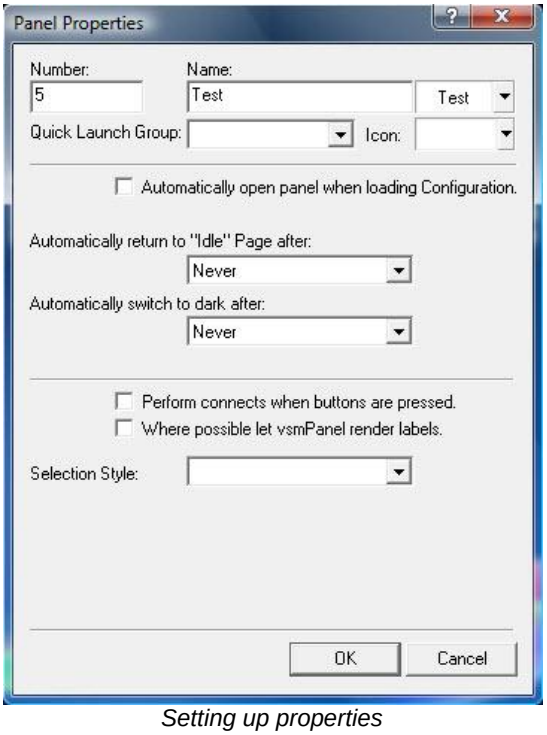
4 New Panel



Importing or creating a new panel

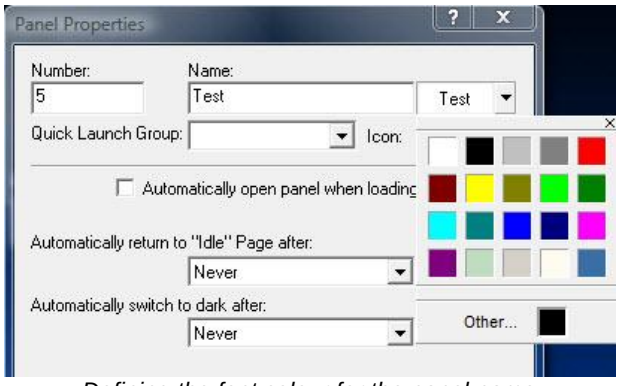
A right-click allows adding or importing of a new panel. Using the function *Import Panel*, a control panel that has previously been created in a different configuration can be imported. If the function *New Panel* is selected to create a new control panel, the panel properties window opens.

4.1 Panel Properties



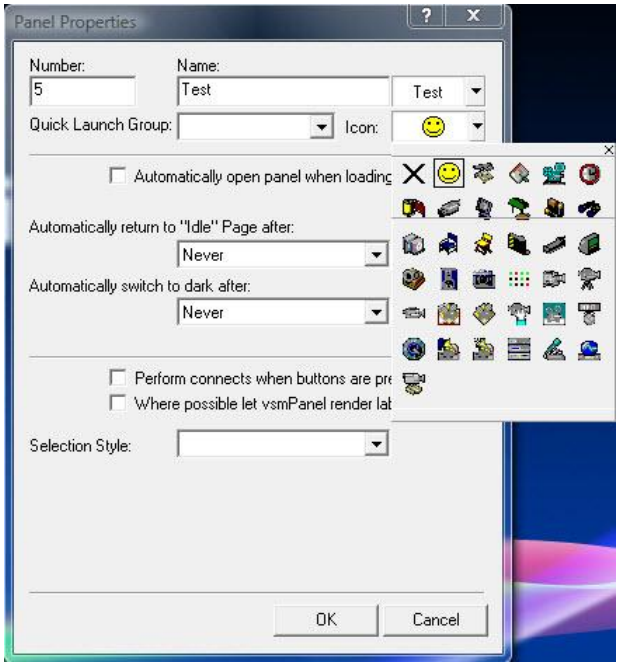
Setting up properties

Enter the panel-ID with which the control panel can later be opened in the field titled *Number*.



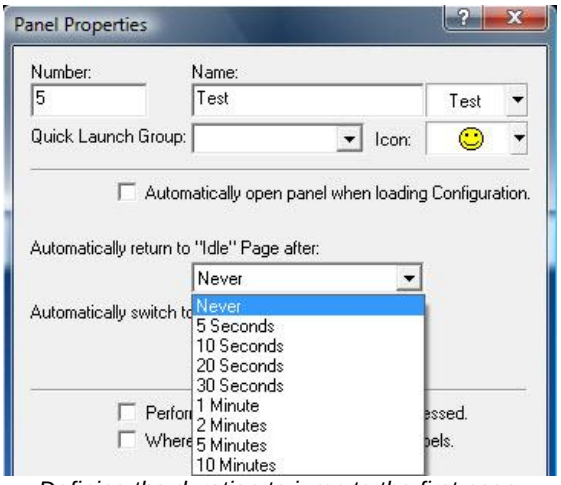
Defining the font colour for the panel name

Enter the panel name in the *Name* field. Beside it, the font colour for the control panel's name can be defined. Using the option *Quick Launch Group*, different panels can be assigned to one group. This creates a grouping in a drop down menu located under the control panel icon in the main taskbar, through which the control panels can be opened as virtual panels (see chapter 19.3 Panel List).



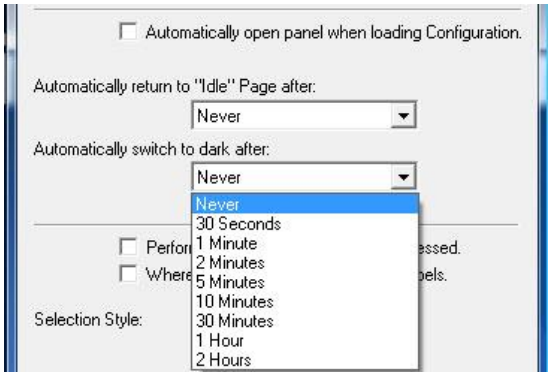
Defining an icon

The drop down menu *Icon* allows the choice of different symbols that can be assigned to a control panel. Subsequently, the symbol will be shown in the panel list.



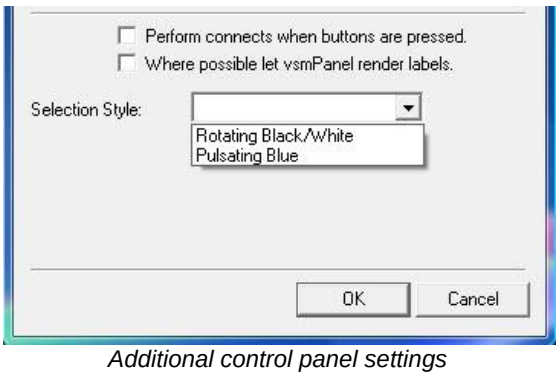
Defining the duration to jump to the first page

The drop down menu under *Automatically return to „Idle" Page after* allows the user to choose if and, if so, after what time the selected panel will jump back to page one.



Defining the duration for button–protector

The drop down menu below allows the user to choose if and, if so, after what time the selected panel will activate the button-protector. In order to protect the control panel buttons, they will turn black after the time period selected in this menu.



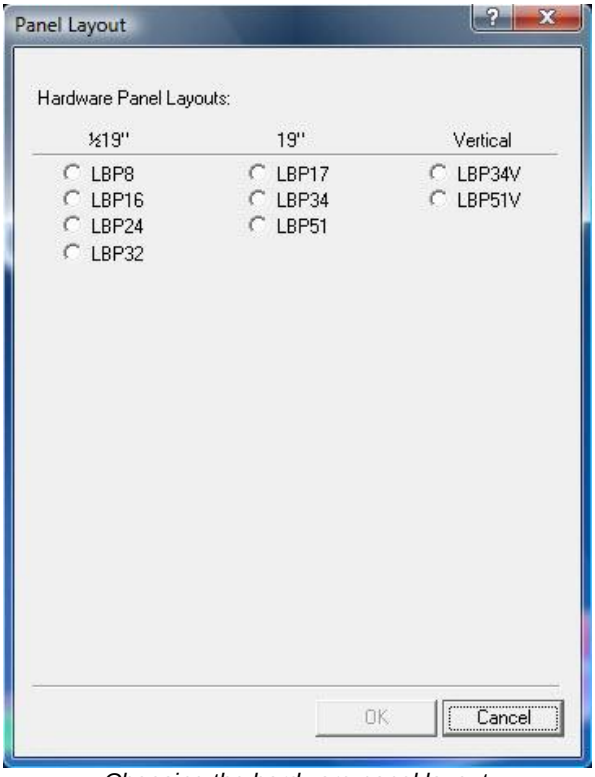
Additional control panel settings

Generally, the function assigned to a button is only executed once the button is released. If the box in front of *Perform connects when buttons are pressed* is ticked, all connects are executed automatically as soon as the button is pressed.

Using the attribute *Where possible let vsmPanel render labels*, line breaks can be set by vsmPanel, and the font is automatically adjusted to 8X. The drop down menu beside *Selection Style* allows the selection of the colour framing a pressed button on a virtual panel. This frame can either be rotating, white/black or blue and pulsing. By default, a rotating, white/black frame is set.

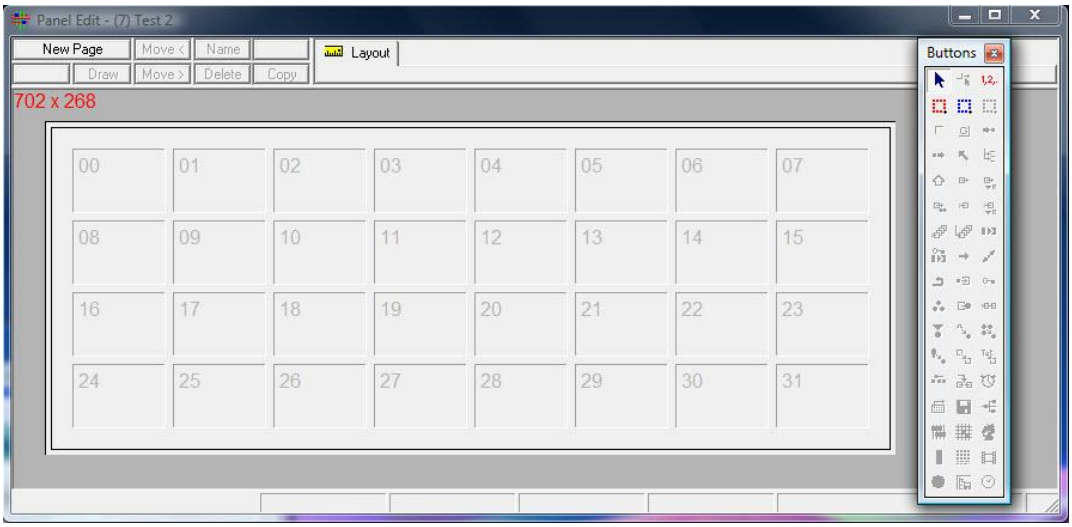
4.2 Panel Layout

In the window shown in the screenshot below, the panel layout can be chosen in accordance to the hardware panels.



Choosing the hardware panel layout

If, for example, a *LBP32* is selected here, the initial control panel layout will be displayed with 32 buttons – in four rows with eight buttons each - in the panel edit.



Panel edit

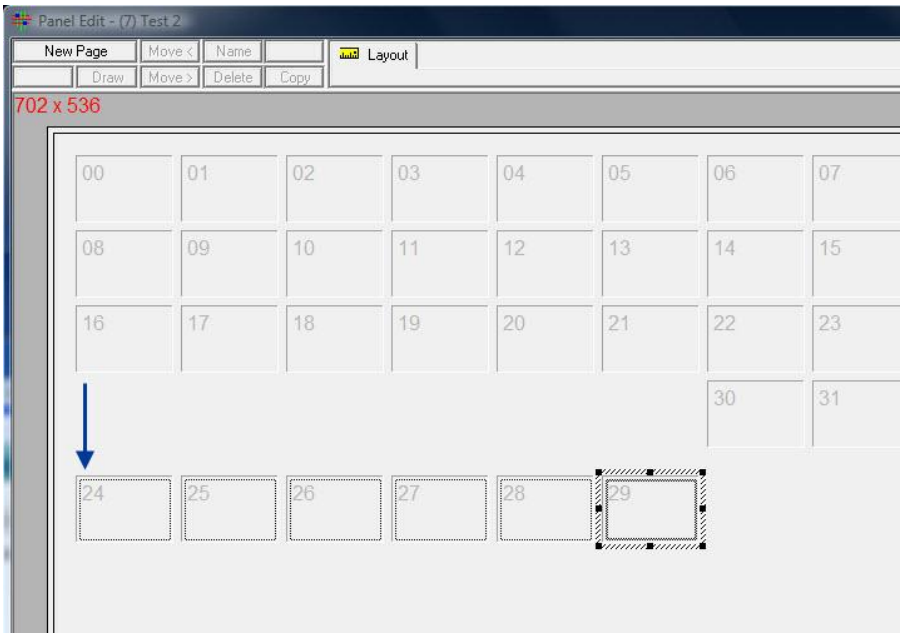
The panel resolution is shown in the top left of the layout view in a red font (here *702 x 268*).

Please note: This information is important for the correct scaling of virtual panels as they may otherwise be displayed too small.

4.2.1 Button Layout and Size

4.2.1.1 Moving Buttons

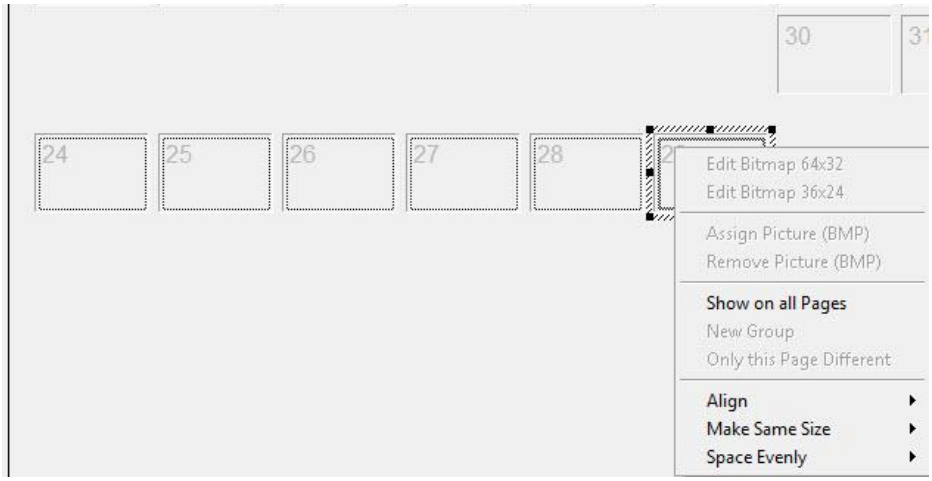
Position and size of single buttons can be changed while in layout view. It is possible to select multiple buttons while pressing the shift button. The selected buttons can then be moved across using the keyboard navigation buttons.



Moving multiple buttons down

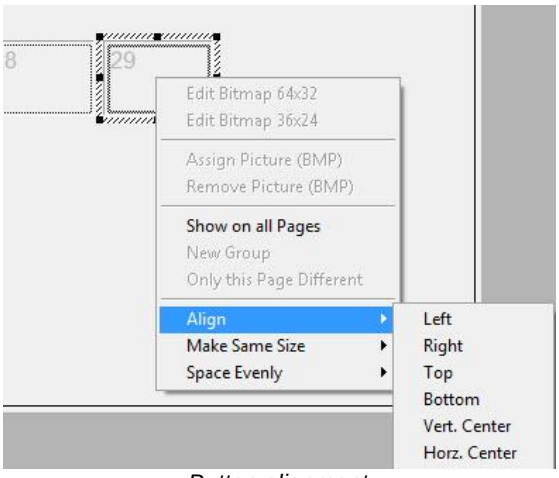
4.2.1.2 Button Alignment

If multiple buttons are selected, a right-click on them will open the following menu:



Button layout options

The option *Align* allows the adjustment of the button layout using the following menu:

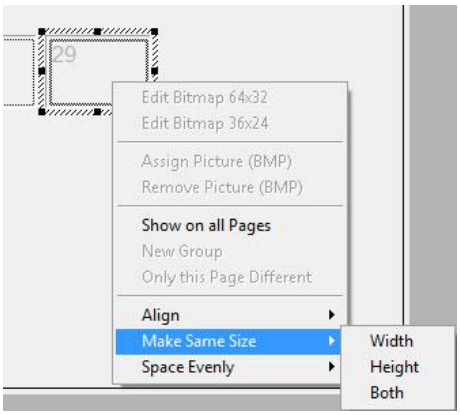


Button alignment

Buttons are aligned either to the left, right, top, or bottom.

4.2.1.3 Button Size

Selecting the option *Make Same Size* will adjust multiple buttons to the same size.

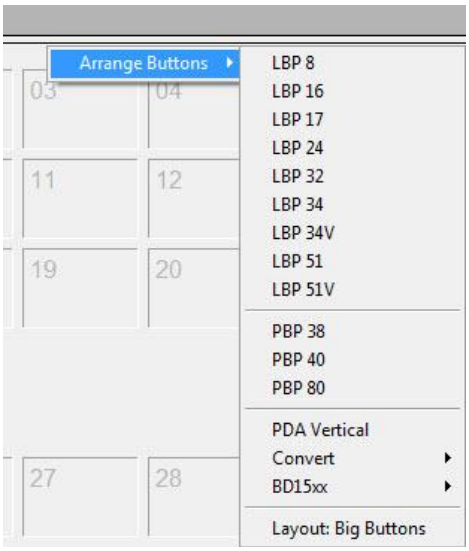


Adjusting the size of multiple button

Buttons can be matched in terms of height, width, or both height and width.

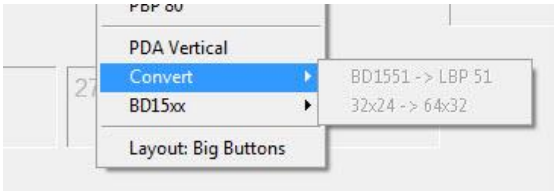
4.2.2 Button Arrangement

The option *Arrange Buttons* can be accessed by right-clicking onto the panel background.



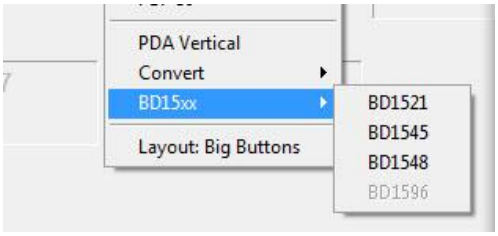
Arrange buttons

Here, a button layout for all available hardware control panels can be loaded, including everything from *LBP 8* to *LBP 51V*. In addition, PBP panels are available as layouts. The option PDA Vertical was added specifically for PDAs.



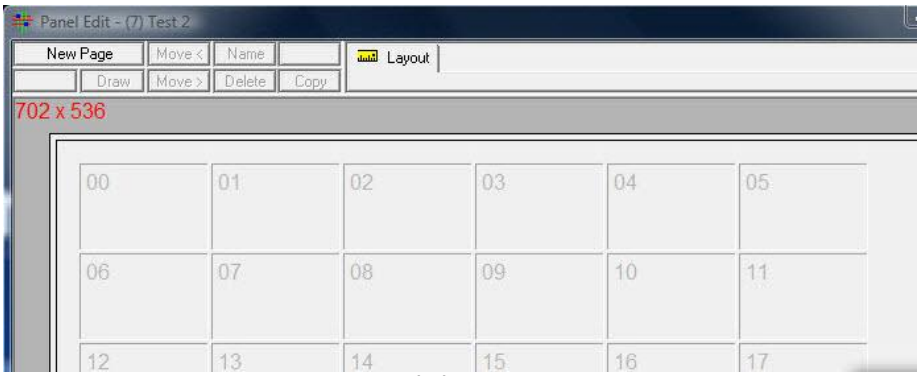
Conversion

The option *Convert* enables changing the button layout of a *BD1551* to a *LBP 51* and adjusting the button resolution from *32x24* to *64x32*.



BD layouts

The option *BD15xx* allows arranging the buttons to resemble the control panels of the company Protec.



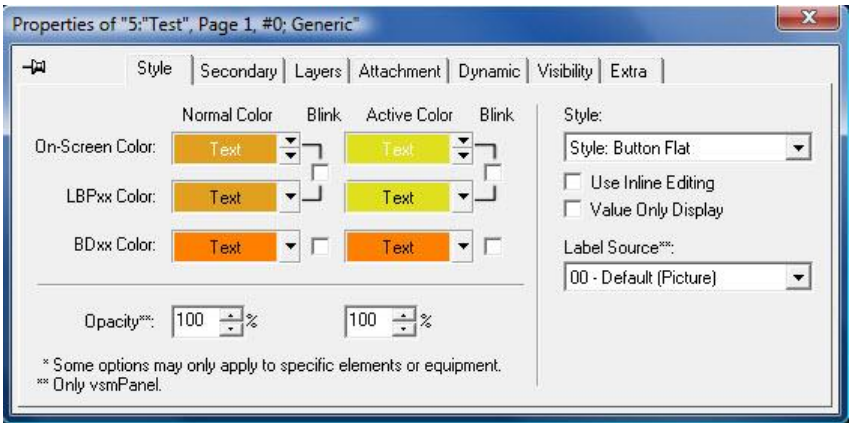
Big buttons

The option *Layout: Big Buttons* enlarges all buttons.

vsmPanel with big buttons

4.3 Button Properties

The selection of a button will automatically open the button's properties window.



Properties window

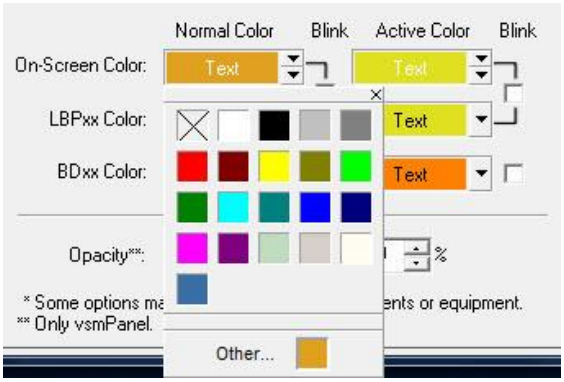
The title bar shows the following information:

- The panel ID, in this case *5*
- The panel name, here *Test*
- *Page 1* means that the button is located on the first page of the control panel.
- The button ID, in this case *0*, and
- The button type, here a Generic button.

With the pin symbol in the top left, the window can be locked into one position on the monitor.

4.3.1 Style

The *Style* tab allows the choice of colour, opacity, as well as style of the button and the label that should be used. The setting under *Normal Color* represents the colour that is shown when the button is not active. To select colours, use the two arrows on the right side (top for the background, bottom for the font) of the field.

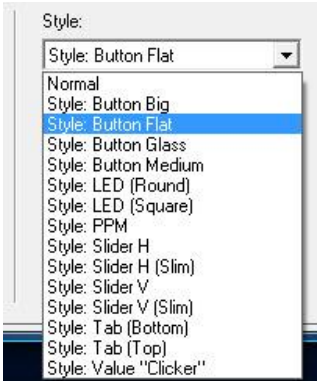


Colour selection for button background

The field shows the currently selected button background colour and the text colour both on a monitor (*On-Screen Color*) and on a hardware control panel (*LBPxx Color* is initially changed with the on-screen color, but can be edited later). The colour settings for *BDxx Color* refer to an older control panel generation and do not apply to current devices.

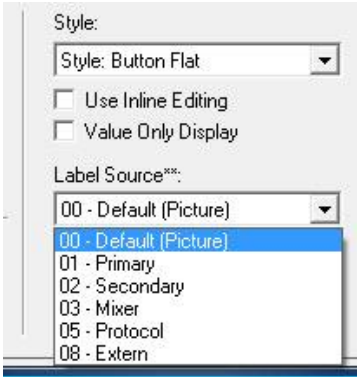
In normal mode, colour saturation can be changed in the fields following *Opacity*. Ticking the box in front of *Blink* will cause the button to blink.

Under Active Colour, the same colour settings are available for the active state.



Button style

The drop down menu located below the *Style* header allows the choice of display styles for buttons. These different display possibilities are not shown in the panel edit and are only visible through the vsmPanel software.

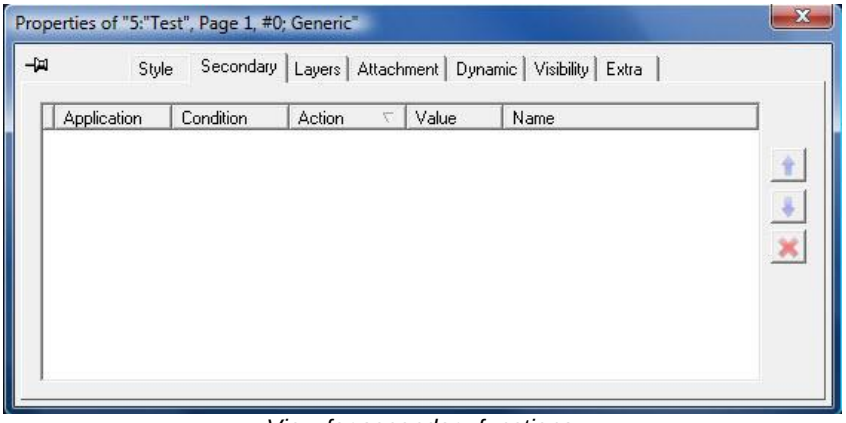


Additional display options

In order to make the value on button changeable, the option *Use Inline Editing* can be selected if a gadget parameter was placed on a button and the normal style was selected. If, on the other hand, *Value Only Display* is selected, the gadget parameter placed on the panel is only displayed.

The drop down menu under *Label Source* allows the choice of the displayed label for inputs and outputs.

4.3.2 Secondary

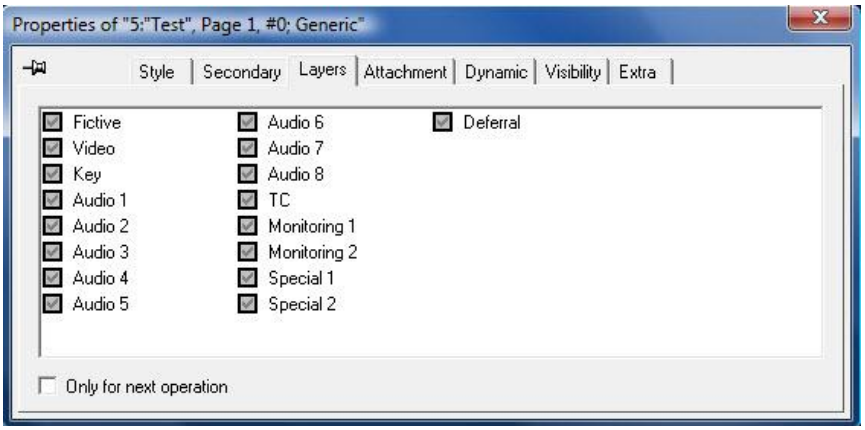


View for secondary functions

The tab *Secondary* is empty by default. Different functions, for example GP-I/Os (see chapter 15), signals (see chapter 5 Signal Paths), crosspoints, gadgets (see chapter 10), or storage groups (see chapter 9) can be placed here and attached to different methods of execution. These functions will then be executed as secondary function of the button in accordance to the options defined in this window (see chapter 19.7 Secondary Functions).

4.3.3 Layers

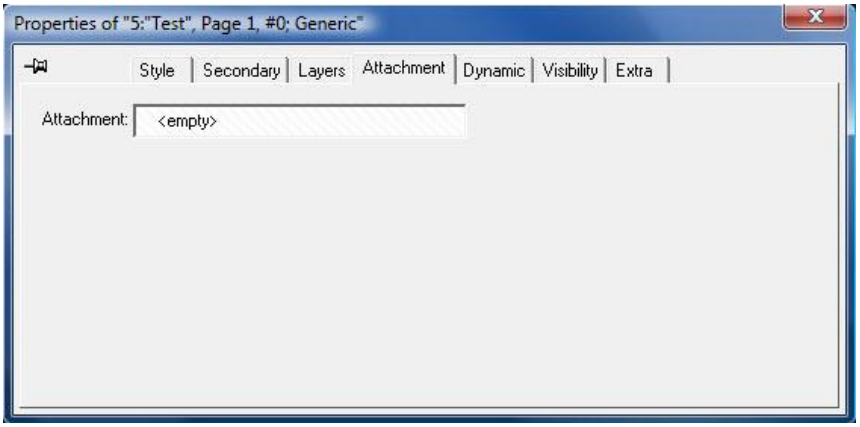
Under the *Layers* tab, certain layers can be activated or deactivated (see chapter 12 Pseudo Devices).



Layers

4.3.4 Attachment

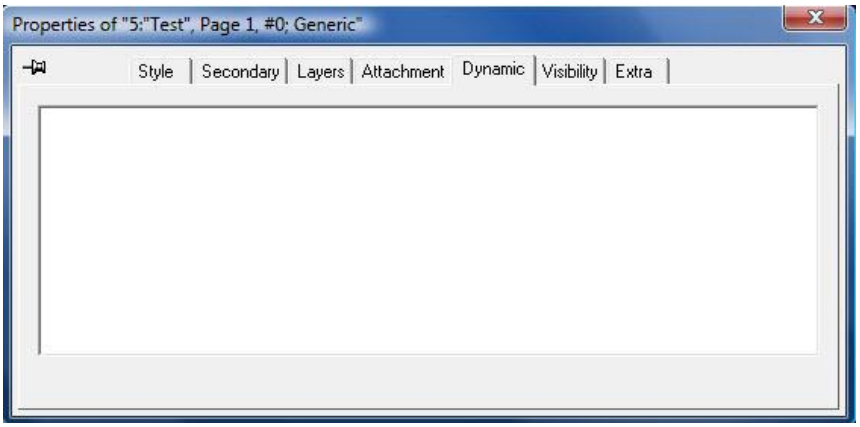
The Attachment tab shows the original name of the signal or the GP-I/O.



Original name of the signal path

4.3.5 Dynamic

The Dynamic tab is empty by default.

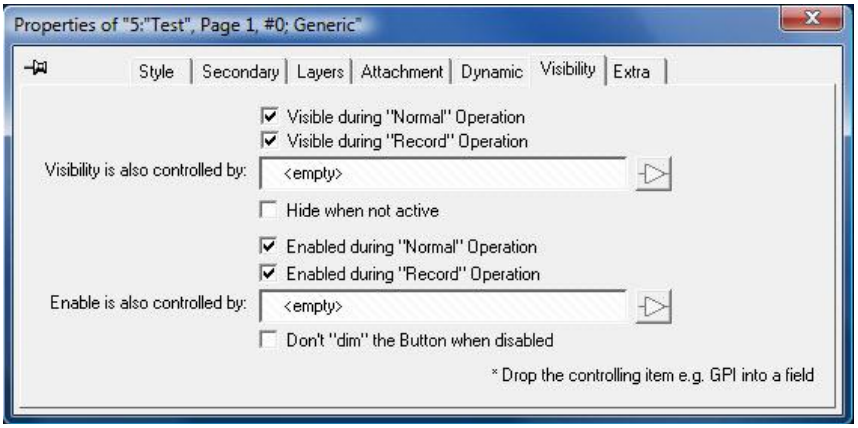


View for dynamic attachment scripts

It provides space to enter Dynamic Attachment Scripts (see chapter 19.8).

4.3.6 Visibility

The *Visibility* tab offers different settings concerning the button display.



Visibility view

Visible during "Normal" Operation is ticked by default and causes the button to be displayed. The option *Visible during "Record" Operation* affects storage groups (see chapter 9).

A crosspoint or a GP-I/O (see chapter 15) can be placed in the drop down menu beside *Visibility is also controlled by*. These will also influence the visibility of the button. The triangle symbol after the field indicates the logical connection. The standard view indicates that the button is displayed as soon as the assignment defined here is true. If the triangle has a black dot in its right tip, the button will be displayed of the assignment is false.

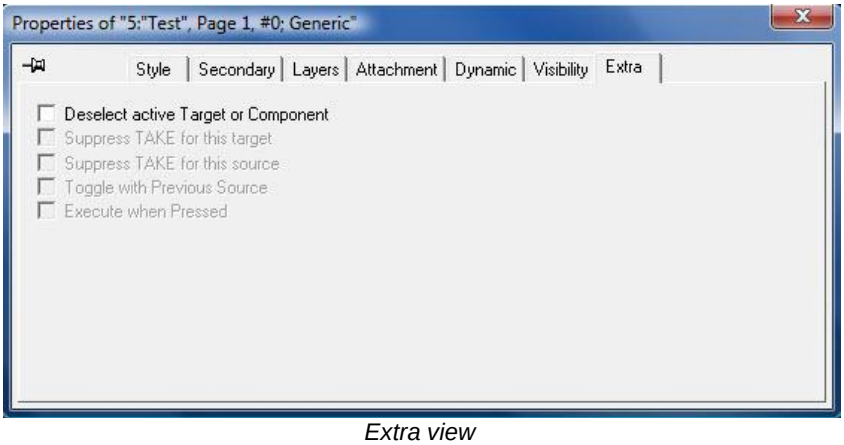
If the box in front of *Hide when not active* is ticked, the button will only be displayed when it is active.

Enabled during "Normal" Operation is ticked by default and is required so that the button can be operated. *Enabled during "Record" Operation* is also ticked by default. If it is deactivated, the button cannot be selected while a storage group (see chapter 9) is recorded.

The drop down menu beside *Enable is also controlled by* allows the placing of a GP-I/O (see chapter 15) or a crosspoint which can also influences the availability of the button. The triangle symbol behind the field indicates the logical connection. The standard view indicates that the button will be displayed as soon as the predefined assignment is true. If a black dot is shown in the right bottom tip of the triangle, the button will be displayed if the assignment is false.

The option *Don't "dim" the Button when disabled* can be used to display the actual colour instead of the light gray used as default.

4.3.7 Extra



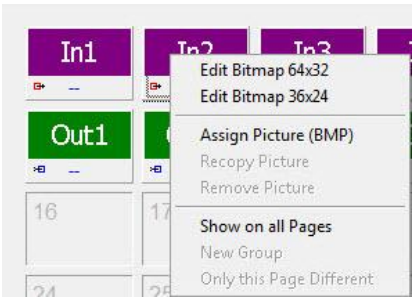
Extra view

Additional functions can be assigned under the *Extra* tab:

- If the field in front of *Deselect active Target or Component* is ticked, all currently selected sources, targets, gadgets, etc. will be deselected.
- Selecting the option *Suppress TAKE for this target* will make the confirmation of a Take button (see chapter 19.6.17) on the panel redundant for this target. *Suppress TAKE for this source* can be used to the same effect for sources.
- Using *Toggle with Previous Source*, it is possible to switch back to the previous source by selecting the current source again.
- If *Execute when Pressed* is selected, the function will be triggered as soon as the button is pressed.

4.4 Editing Button Labels

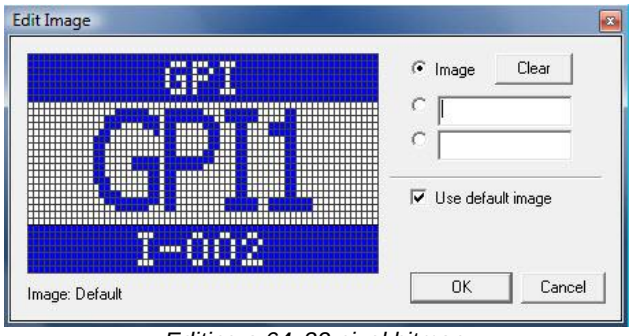
A right-click onto a button will open the following menu:



Editing button labels

4.4.1.1 Editing an Image

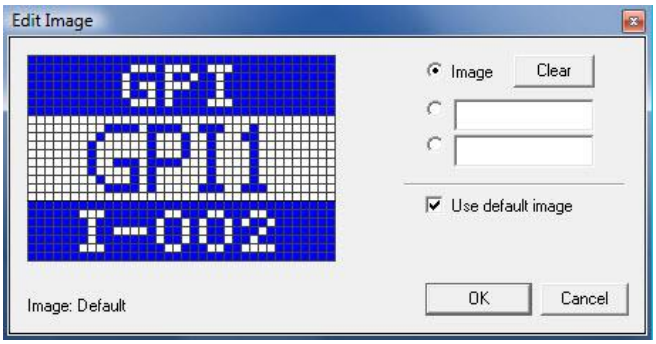
If the first option, *Edit Bitmap 64x32* is selected, a window opens in which the button label can be edited. 64x32 hereby indicates the number of pixels.



Editing a 64x32 pixel bitmap

Image is selected by default. The existing button label can be deleted by left-clicking onto *Clear*. The content for the first line on the button can be entered in the first empty box below. As long as this line is selected, the text in this field can be moved freely to the left or right while holding the left mouse button until *OK* is selected. The second text field represents the second line of the button. This field can be named like the one mentioned above. If the checkmark in front of *Use default image* is removed, a different label can be assigned to the currently selected button. Selecting *OK* will confirm the changes. If *Cancel* is selected, the changes will be discarded.

Selecting *Edit Bitmap 36x24* after right-clicking on a button will open the following window:



Editing a 36x24 pixel image

In general, this window offers the same settings as those described above. However, the number of pixels is only 36x24 in this scenario.

4.4.1.2 Assigning an Image

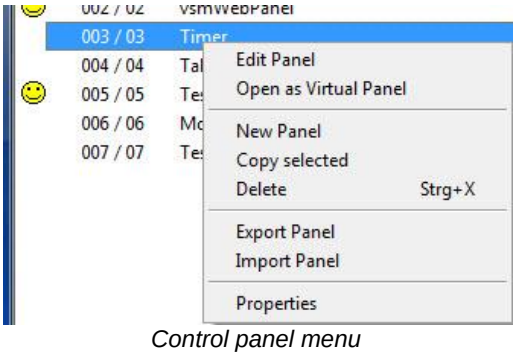
With the option *Assign Picture (BMP)*, an image can be assigned to a button. With the option *Recopy Image,* the image can be reassigned to this button. The option *Remove Image* deletes an image that was assigned to the button earlier.

4.4.1.3 Show on All Pages

If the option *Show on all Pages* is selected, this button will be visible on all panel pages. Selecting *New Group* will start a new group beginning from the page on which this option is chosen. A button placed on that specific page will therefore be visible on all following control panel pages. If the option *Only this Page Different* is selected, only the pages on which this option was selected will be displayed differently. On the following page, the previously assigned button will be visible again.

5 Editing a Control Panel

Right-clicking onto an existing control panel will open the following menu:

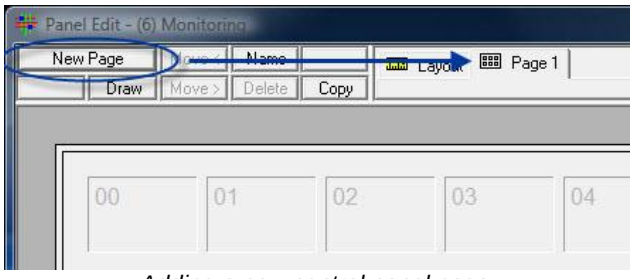


Control panel menu

The option *Edit Panel* opens the panel edit. *Open as Virtual Panel* will display the control panel as vsmPanel if the vsmPanel software is installed (see chapter 19.1 vsmPanel Installation). *Copy selected* copies the selected control panel, allowing its repeated use with a new ID and under a new name.

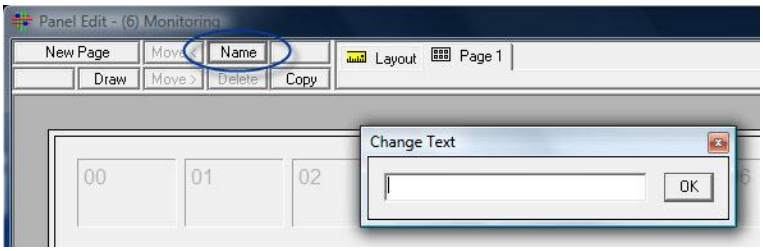
This menu can also be used to create a new control panel, delete an old panel (also possible by pressing *Ctrl+X*), and export or import it into another configuration file. Through *Properties*, the settings initially defined during the set-up of the control panel can be opened and edited (see chapter 19.4.1 Panel Properties).

5.1 New Panel Page



Adding a new control panel page

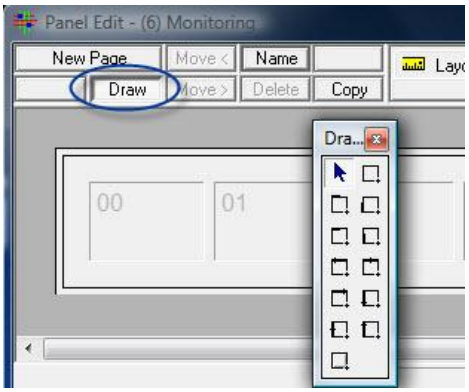
To add an arbitrary number of new pages to the control panel, press the *New Page* button.



Rename page

By clicking onto Name, the name of the page can be changed.

5.2 Page Options



Draw

The *Draw* function enables drawing coloured frames with text around certain buttons. The window that opens after selecting *Draw* offers a variety of frames, both with and without a text box that can be positioned differently according to the frame style chosen.

Additional page options

Using the *Copy* button, pages can be reproduced any number of times. With *Delete*, panel pages can be deleted if there is more than one page. *Move* < and *Move* > can be used to move the selected page backward or forward, respectively.

6 Panel Toolbox

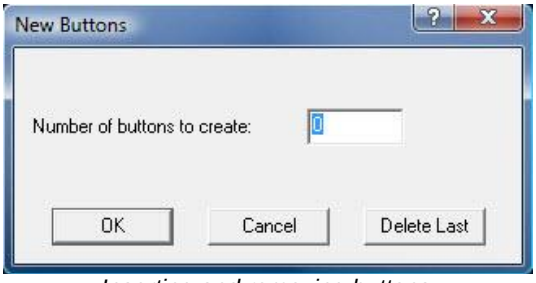
The panel toolbox opens automatically with the panel edit view and offers various “Page Items”, that is functions that can be displayed and used on control panels.

Layout functions in the panel toolbox

While the control panel is viewed in layout view, only four functions in the top two rows can be used. The cursor, *Select Object*, is selected by default. It can be used to select and edit buttons and button areas.

6.1 Adding and Removing Buttons

Using the function *Insert Buttons*, an arbitrary number of buttons can be added. Alternatively, it is possible to delete the same number of buttons that was added last.



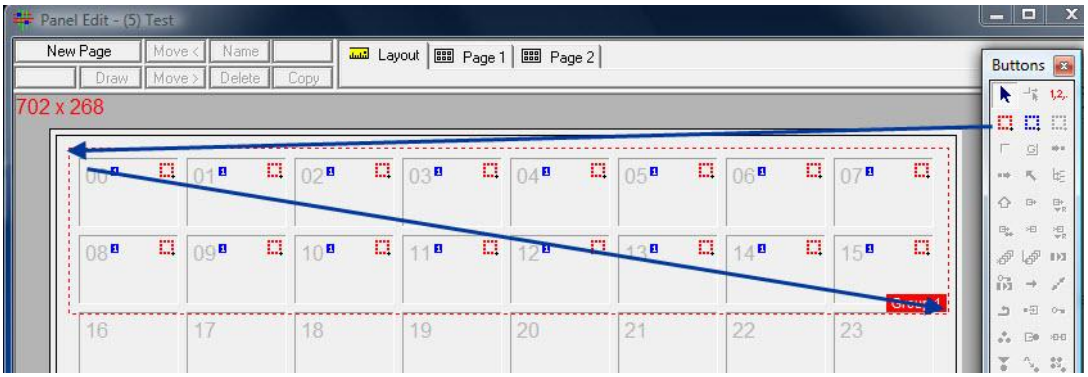
Inserting and removing buttons

Please note: Buttons are removed in order of their buttons IDs.

6.2 Define Virtual Pages

The symbol with the red frame indicates the function *Define Virtual Pages*. With this frame, multiple individually controllable areas or groups can be created on one panel. To this end, the number of different pages can be chosen as well. With the pressed left mouse button, the red frame can be dragged over the area of the control panel that is to be included in a group.

Please note: Only buttons that are entirely within the red frame will be included in the virtual page. The selected area must therefore be bigger than the actual size of the buttons.



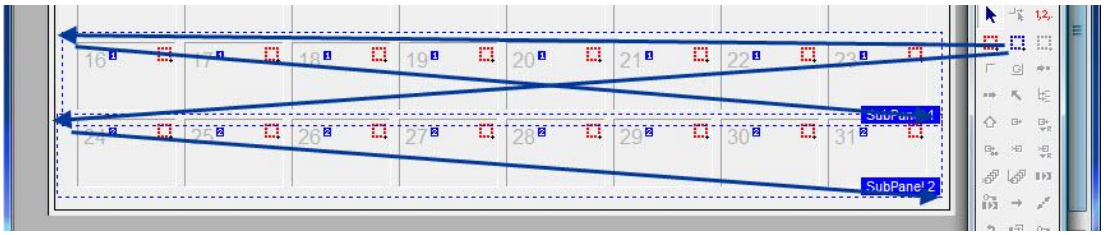
Virtual Panel Page

It is, for example, possible, to summarize the top-most buttons with the IDs 00 to 15 into one control area, which can then be navigated independently from the rest of the panel. To create each subsequent frame, the *Define Virtual Pages* icon must be selected. The maximum number of frames that can be created is 17.

6.3 Define Sub Panel

With the blue frame icon *Define Sub Panel*, a control panel in layout view can be divided into several small panels. It is hereby irrelevant whether the panel in question is a virtual or a physical panel. This enables multiple selection of sources and targets on a panel as well as the selection of different pages.

Please note: Only buttons that are entirely within the blue frame will be included in the sub panel. It is therefore recommended, to make the selected area bigger than the actual size of the buttons.

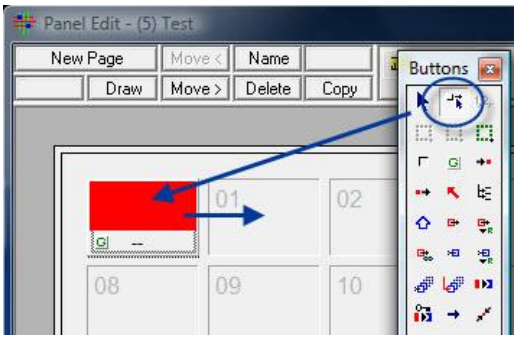


Sub panels

In the screenshot above, the button IDs 16 to 23 belong to sub panel 2, the button IDs 24 to 31 to sub panel 3. For each subsequent sub panel, the *Define Sub Panel* icon must be selected.

6.4 Copying and Moving Buttons

After the first control panel pages has been created, multiple page items become available in the panel toolbox that were previously greyed out.

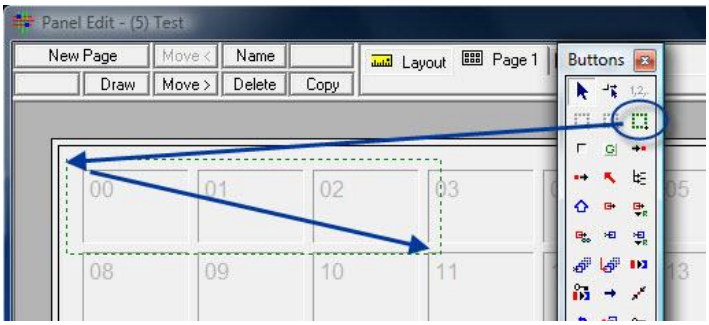


Copying and moving a button

With the second arrow symbol, *Move/Copy,* previously created buttons can be moved on the panel or copied while holding the shift button.

6.5 Grouping Elements

The green frame allows the grouping of elements. Through this function, it is possible to achieve an alternating behaviour of GP-I/Os (see chapter 15.7 GP-I/Os on Control Panels). If the function is not used, only one GP-I/O will be active per page at a time.



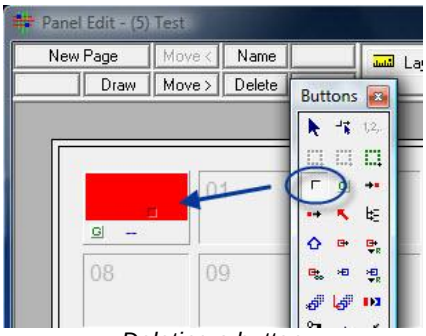
Grouping elements

To do so, select the green frame in the panel toolbox and drag it around the relevant area on the control panel page while pressing the left mouse button.

Please note: Only buttons that are entirely within the green frame will be included in the group. The selected area must therefore be bigger than the actual size of the buttons.

Subsequently, the button IDs 00 to 02 belong to the group element. To create any other frames, the *Group Elements* icon must be reselected.

6.6 Blank



Deleting a button

The *Blank* function is used to delete functions (signals, GP-I/Os, storage groups etc.) that were placed on the panel at an earlier time.

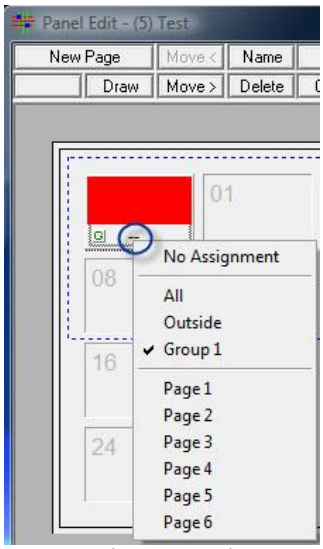
6.7 Generic Button

The *Generic* button, indicated by the G (for “Generic”) in the toolbox, can be used universally, meaning that various labels and functions can be assigned to it. To do so, simply select the icon in the panel toolbox and place the function onto the relevant button using drag and drop. The cursor will show a small, green G at its tip while doing so.

Generic button

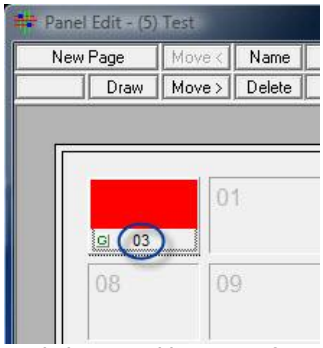
Contrary to the frame functions described above, this icon remains selected after having been placed on the panel, so that multiple generic buttons can be placed in quick succession. They are displayed in red in the panel edit as long as no function is assigned to them or if they were labelled.

It is, for example, possible to assign the function to the generic button that makes it jump to other panel pages. To assign this page, select the two, blue lines located in the bottom centre of the button.



Page and group assignment

No assignment is the default state. This option can also be used to reset pages and groups that were previously assigned. If no groups were created on the panel, the options *All* and *Outside* become visible and are automatically checked. As soon as a group is created on the panel, it will be shown in the same drop down menu. Moreover, all available panel pages are listed here. By selecting one of them, the generic button will jump to that page, indicated by a small number on the button.

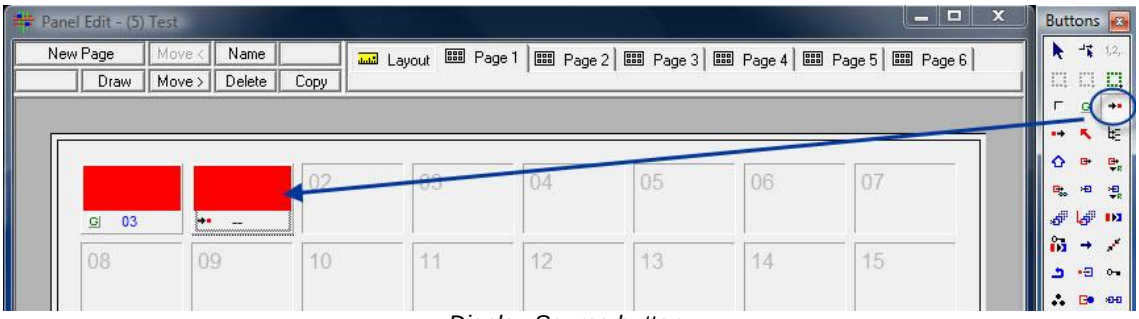


Generic button with page reference

6.8 Display Source and Target

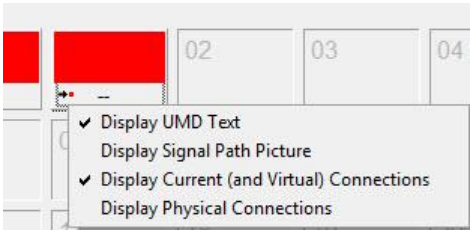
6.8.1 Display Source

Using the icon *Display Source*, the current source can be displayed. If this function is selected in the panel toolbox, a small version of the icon will be visible above the cursor. The number of *Display Source* buttons per panel page is not limited. If no other function was assigned to a button, it will be shown in red in the panel edit.



Display Source button

The following menu opens if the Display Source button is selected:

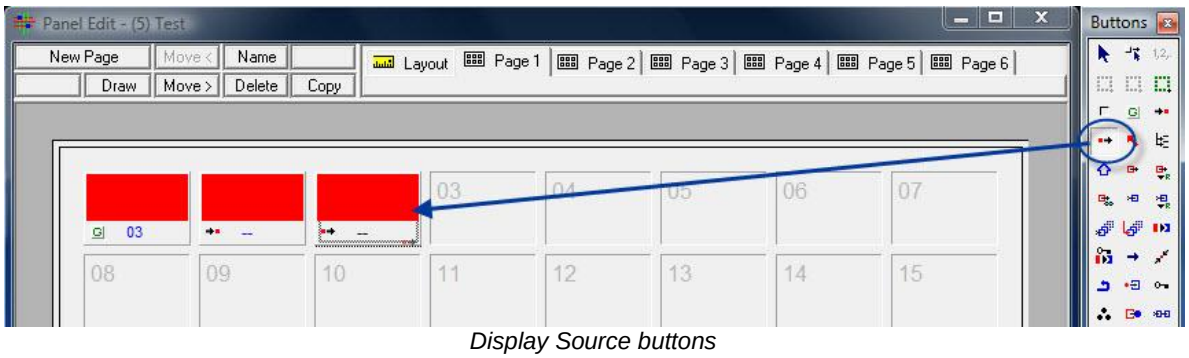


Options for the Display Source button

The option *Display UMD Text*, which causes input and output signals to be displayed on the button, is ticked by default. By clicking on *Display Signal Path Picture*, the primary label (see chapter 5.2.5 Labels) or a created signal path image (see chapter 5.2.7 Bitmaps) of the relevant signal path will be shown, depending on its configuration. With *Display Current (and Virtual) Connections,* all signals are displayed. It is also ticked by default. If *Display Physical Connections* is selected, only physical signals will be displayed.

6.8.2 Display Target

The *Display Target* button has the same function for targets as the *Display Source* button for sources. Therefore, the button shows which target is currently connected to a source. As with the *Display Source* button, the number of *Display Target* buttons per panel page is not limited, and the buttons will be shown in red in the panel edit if no other function is assigned to them.



Display Source buttons

A click on the bottom left of the *Display Target* button will open a menu offering the same functions as the *Display Source* button described above (see chapter 19.6.8.1 Display Source).

6.9 Navigation Buttons: Escape, Next, Main and Back

6.9.1 Escape

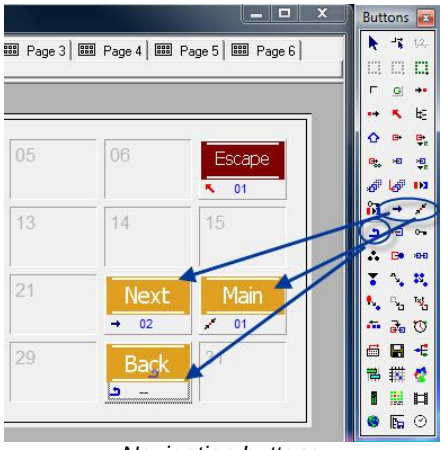
By default, the *Escape* button executes two functions: deselecting a selected button and jumping back to the first page. To add an *Escape* button to a panel page, select the symbol in the panel toolbox. A small *Escape* icon will be shown to the left above the cursor. The number of *Escape* buttons per panel is, again, not limited.

Escape button

The standard colouring for the *Escape* button is a dark red and an *Escape* label in white font.

6.9.2 Next, Main and Back

If a *Next* button has been set up on the panel, it can be used to navigate to the next panel page. The *Main* button will navigate to the first page, while the *Back* button jumps back to the previously opened page.



Navigation buttons

By default, these buttons are displayed on the panel in light orange with white writing.

6.10 Layer

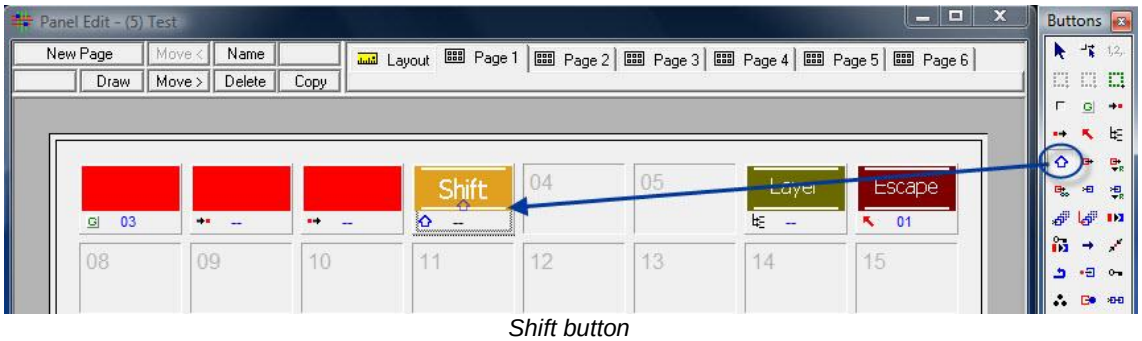
The *Layer* button can be used to deactivate certain layers. For instance, if switches connected to Pseudo Devices (see chapter 12) are made, it can be used to deactivate the audio component, thereby ensuring that switches are only made on the video layer.

Layer button

This button is normally displayed in olive-green with the caption *Layer* in white lettering.

6.11 Shift

The *Shift* button, while pressed, will jump to a page that needs to be defined prior to using the function. There, it is possible to execute switches or view the status of a switch. Upon releasing the *Shift* button, it will jump back to the previous page.



Shift button

The default colouring for the *Shift* button is a light orange with the caption *Shift* in white lettering.

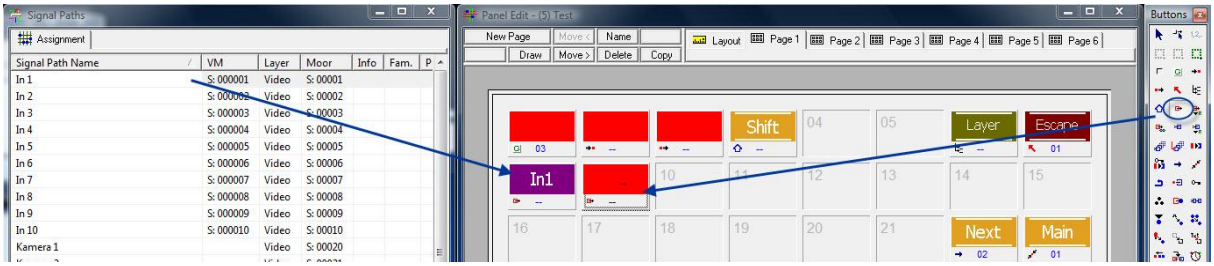
6.12 Source and Target

6.12.1 Source

The *Source* button is created as soon as a source signal is placed on the panel or a state is to be displayed through DAS (see chapter 19.8 Dynamic Attachment Scripts). Moreover, if, for example, the target of a loop-through device was placed on a panel instead of the source, this error can subsequently be corrected using this button.

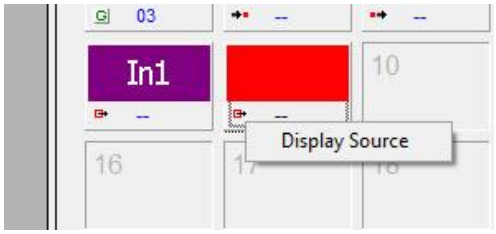
Please note: This only applies to loop-through devices, not to standard signal paths (see chapter 5).

Buttons with only the *Source* function are displayed in red in the panel edit.



Source and source signal buttons

If a source signal is placed on a panel from the signal path list (see chapter 5.1), the signal path name will appear on a purple background. This colour is predefined for source signal paths and cannot be changed.



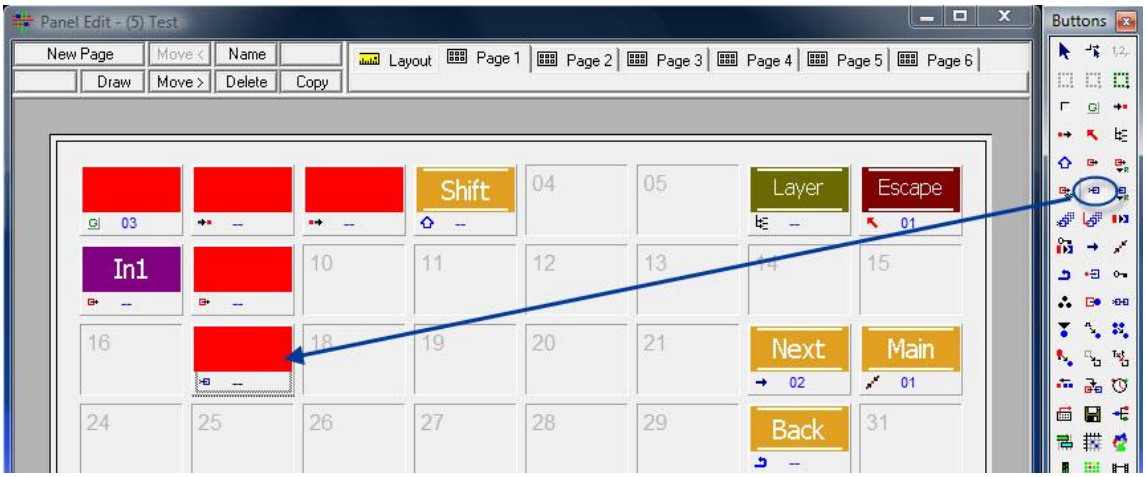
Display source options

A left-click onto the small source icon on the button will open a menu with the option *Display Source*. Used together with DAS (see chapter 19.8 Dynamic Attachment Scripts), it is possible to view the input signal that corresponds to the selected output signal.

6.12.2 Target

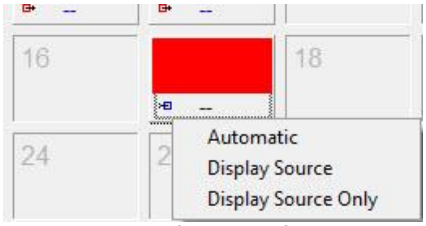
The *Target* button is created as soon as a target signal is placed on the panel or a state is to be displayed through DAS (see chapter 19.8 Dynamic Attachment Scripts). Moreover, if, for

example, the source of a loop-through device was placed on a panel instead of the target, this error can subsequently be corrected using this button.



Target button

This button is the equivalent of the *Source* button (see chapter 19.6.12.1 Source) for targets.



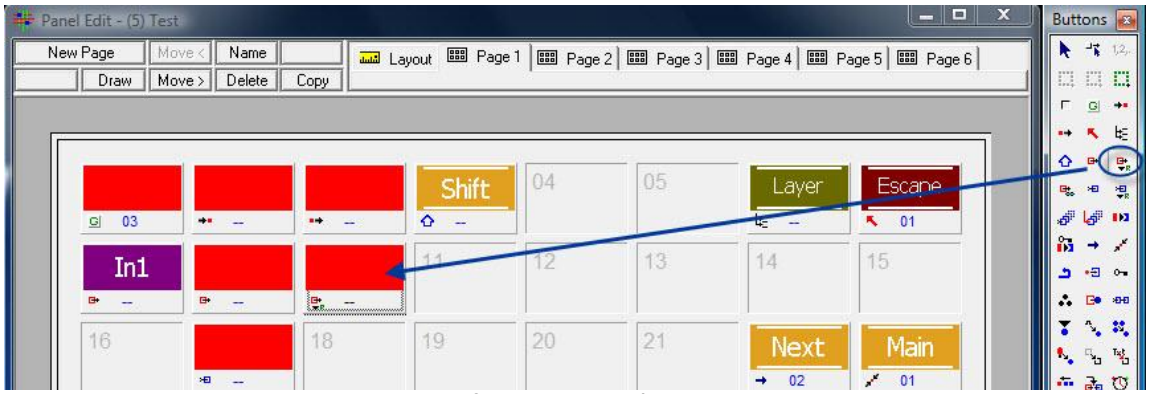
Target button options

Selecting the *Target* icon in the bottom left of the button, a menu with the following three options will open: *Automatic*, *Display Source*, and *Display Source Only*. If *Automatic* is chosen, this target will always be selected. *Display Source* will display the currently selected target and the source connected to it on the button. With *Display Source Only*, the currently connected source of the selected target will be shown on the button.

6.13 Reference Source and Target

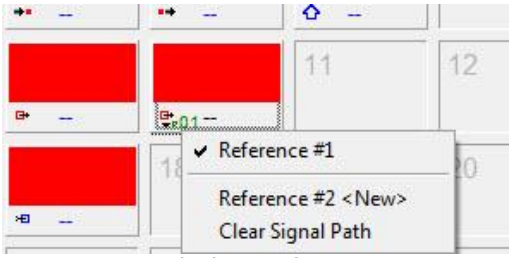
6.13.1 Reference Source

The button *Reference Source* allows the use of one signal as a reference to refer to multiple sub groups.



Reference Source button

The *Reference Source* button can be placed on multiple panels with one assignment. It is therefore sufficient to place the reference signal on only one panel.

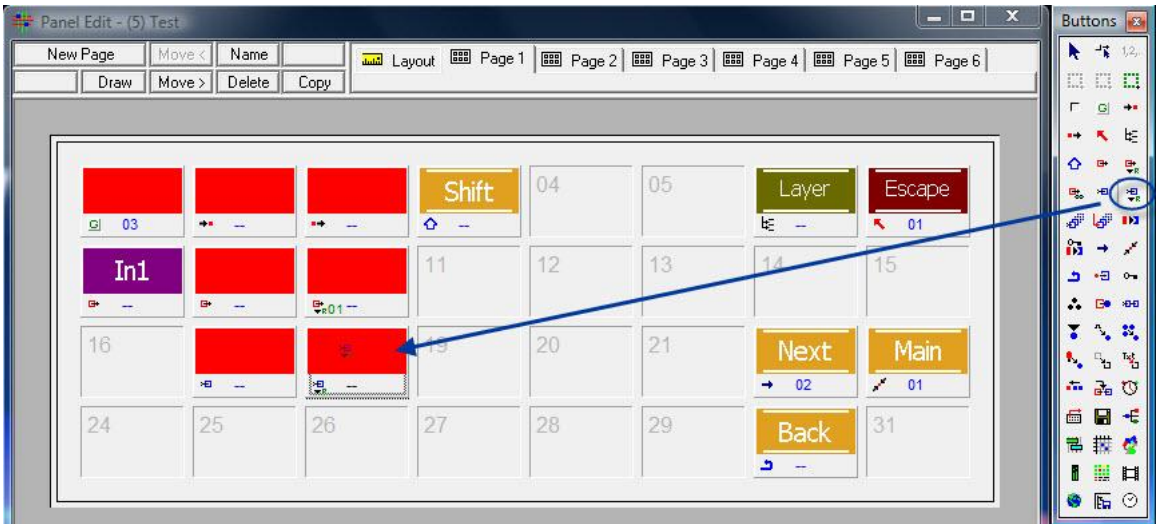


Assigning a reference

By selecting *Reference #1* after left-clicking on the small icon in the bottom left of the button, a first reference group can be created. The signal *In1* is, for example, assigned to it. After the first reference group has been created, the option *Reference #2 <New>* automatically appears. By selecting *Reference #2 <New>*, a second group will be created, to which the signal *In 2* could, for example, be assigned. *Clear Signal Path* will reset the signal assignment of a reference group, so that a new signal can be added.

6.13.2 Reference Target

The button *Reference Target* is the equivalent of the *Reference Source* button (see chapter 19.6.13.1) for targets. With this button, it is therefore possible to refer to multiple sub groups from one reference output signal. The *Reference Target* button can be distributed to multiple panels with one single assignment. It is therefore sufficient to place the reference signal on one panel.



Reference Target button

For the assignment of reference groups, the same options are available as those described for the *Reference Source* button (see chapter 19.6.13.1).

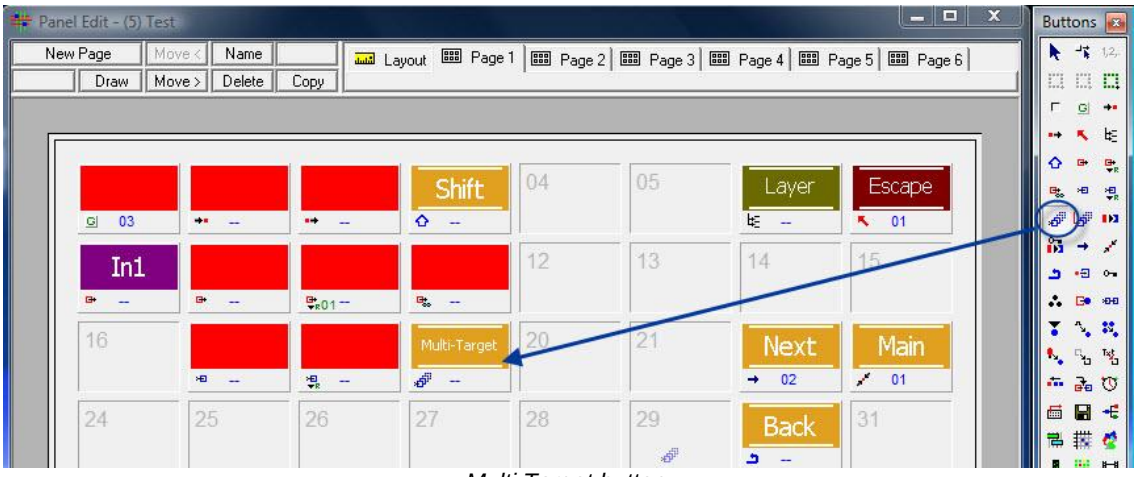
6.14 Preview

Pressing the *Preview* button allows the user to view a previously defined input. Once the *Preview* button is released, the output will be switched back to the previously switched signal.

Preview button

6.15 Multi Target

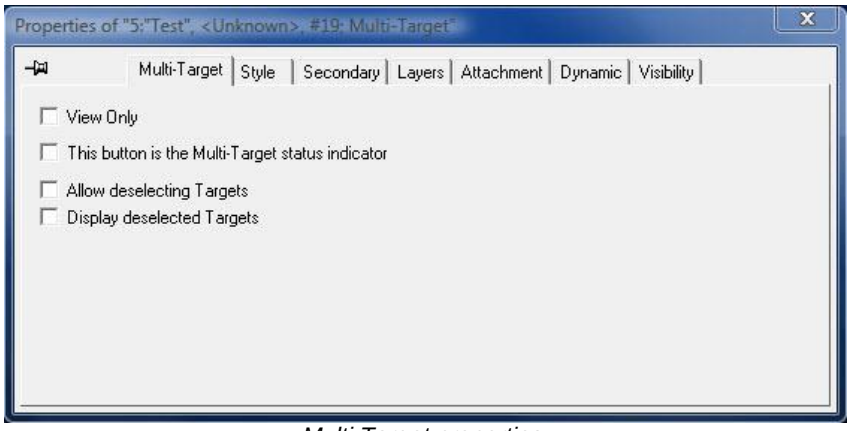
Using the *Multi Target* button, multiple targets can be selected and the sources connected to them can be viewed. Furthermore, it is possible to select multiple targets and connect one specific source to them.



Multi Target button

This button is generally displayed in light orange with the label *Multi Target* in white lettering.

If a *Multi Target* button has been placed on a panel, a new tab, *Multi Target*, appears in the button's properties window.



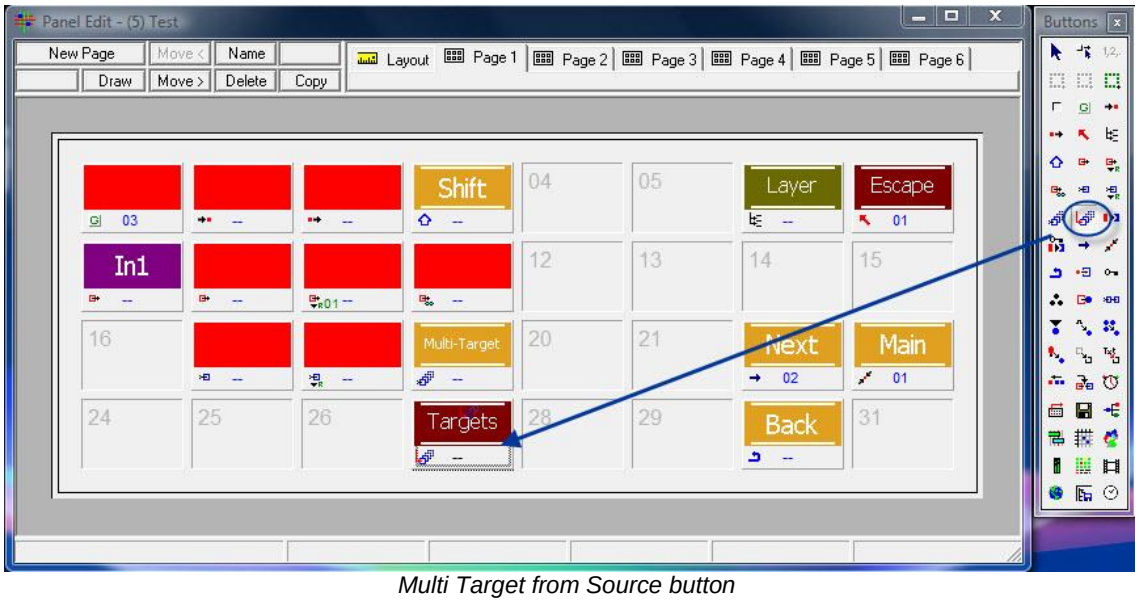
Multi Target properties

This tab offers the following options:

- With *View Only*, the button functions only as a display button
- With the checkmark before *This button is the Multi-Target status indicator*, this button can activate or deactivate the multi target function. The active colour indicates, whether the function is active or not.
- With *Allow deselecting Targets*, selected output signals can be deselected at a later point in time.
- With the checkmark before *Display deselected Targets*, deselected output signals will still be displayed. If the box is not ticked, these buttons are greyed out in the vsmPanel software.

6.16 Multi Target from Source

The *Multi Target from Source* button can be used together with the *Multi Target* button (see chapter 19.6.15 Multi Target) to view sources and targets that are connected to each other.

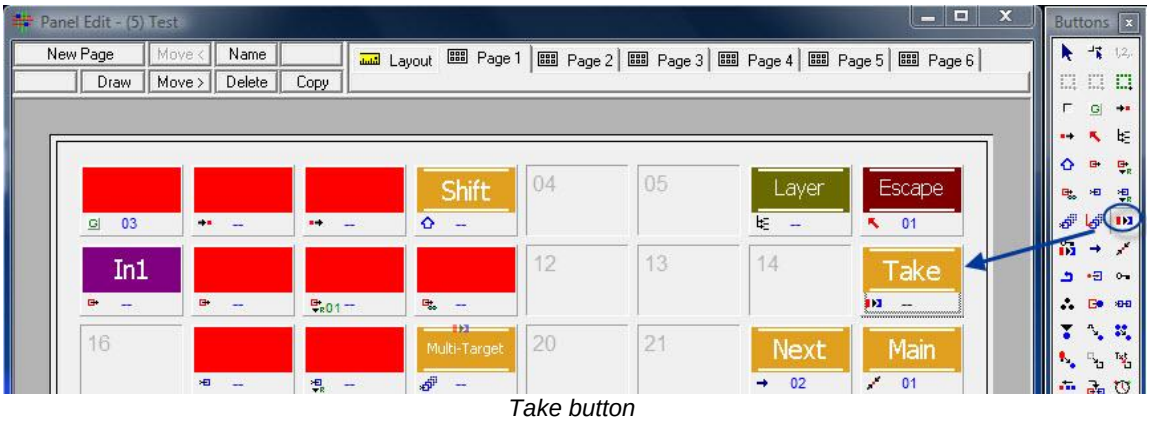


Multi Target from Source button

By default, this button is displayed with the caption *Target* in white lettering on a dark red background.

6.17 Take

If a *Take* button is used on a control panel, all switches must be executed via this button. Therefore, switches are only executed after the source, the target, and the *Take* button have been selected.

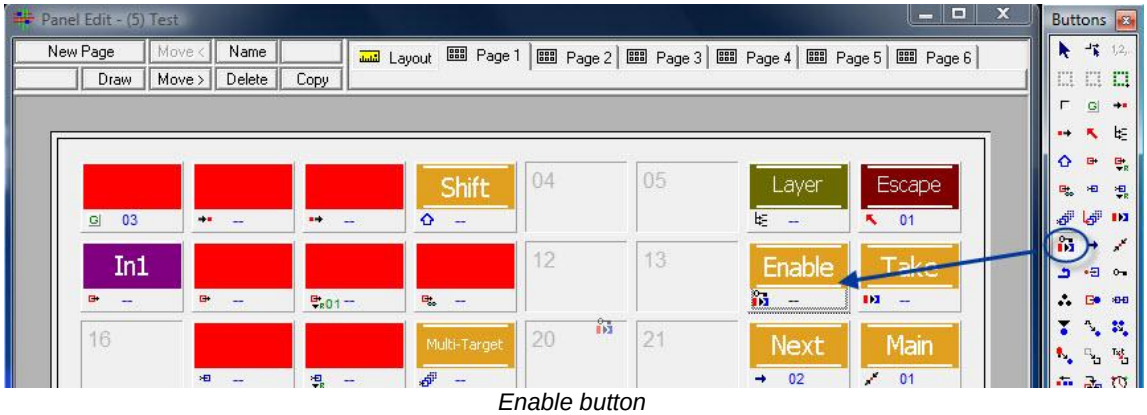


Take button

The default colouring for this button is the caption *Take* in white lettering on a light orange background.

6.18 Enable

If an *Enable* button is placed on a panel, it must be selected so that used GP-I/Os (see chapter 15) are activated.



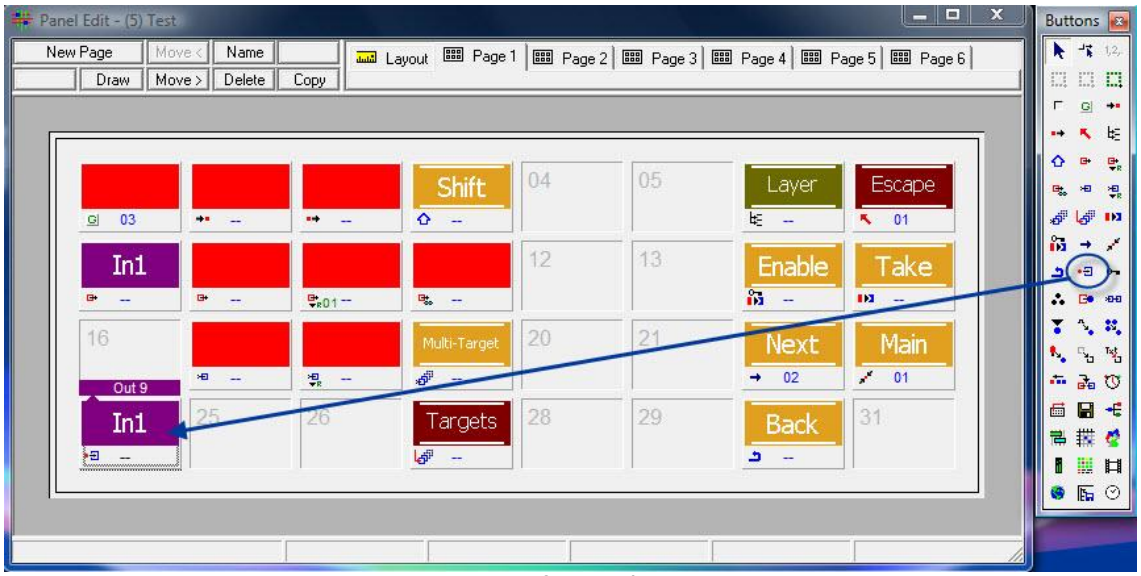
Enable button

Generally, this button is displayed with white lettering on a light orange background.

6.19 Source of Target and Target of Source

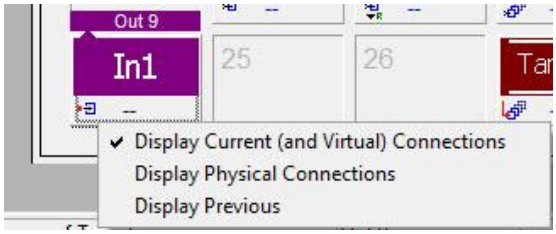
6.19.1 Source of Target

The button *Source of Target* can be used to display the source of the currently selected target. To do so, first create a *Target* button (see chapter 19.6.12.1 Target) on the panel. Afterwards, place the *Source of Target* function on the same button. The button will then show both the target – for example *Out 9* – and the corresponding source, for instance *In1*. It is also possible to execute direct switches with this button.



Source of Target button

After clicking the *Source of Target* icon in the bottom left of the button, the following menu opens:

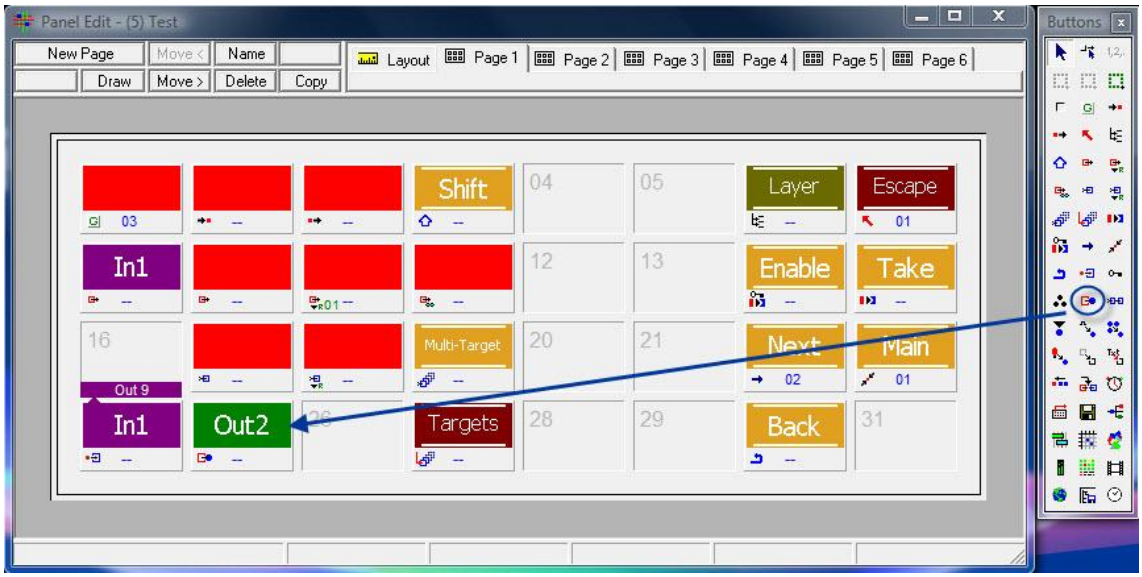


Source of Target button options

Display Current (and Virtual) Connections is checked by default and causes all signals to be displayed. *Display Physical Connections* will only display physical signals, while *Display Previous* will show the signal that was last switched onto the target.

6.19.2 Target of Source

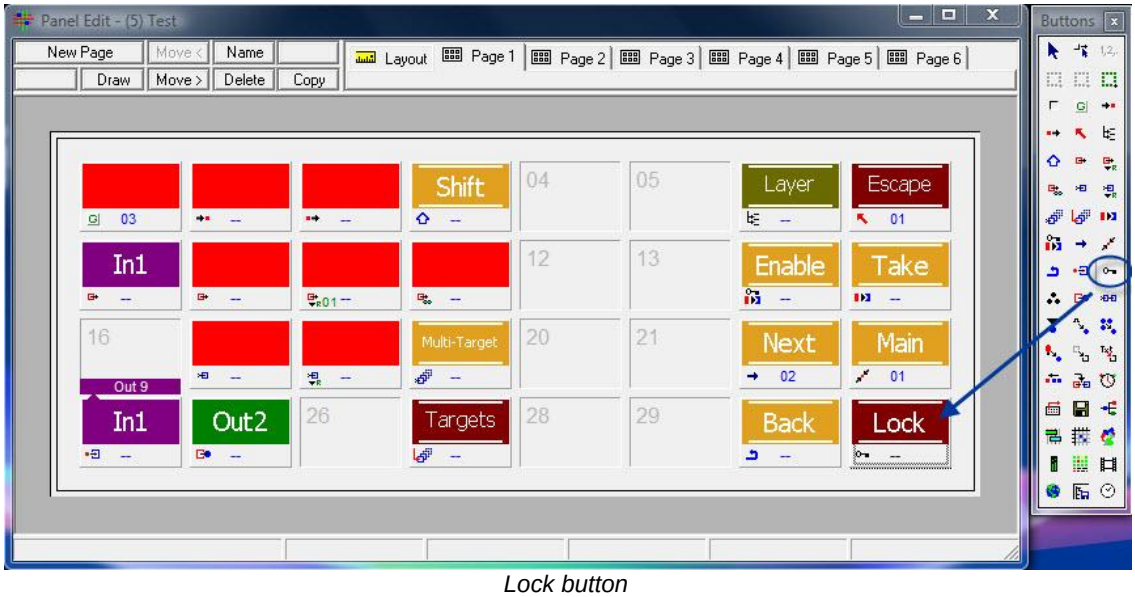
The *Target of Source* button is the equivalent of the *Source of Target* button (see chapter 19.6.19.1) for targets. It can be used to display the target of the currently selected source. To do so, place a *Source* button (see chapter 19.6.12.2 Source) on a panel followed by the *Target of Source* function on the same button. The button no longer shows the source but the target, for example *Out2*. Direct switches are also possible with this button.



Target of Source button

6.20 Lock Target

The *Lock* button can be used to lock targets.



Lock button

By default, this button is displayed with the caption *Lock* in white lettering on a dark red background.

If a *Lock Target* button has been placed on a panel, a new tab, *Lock*, will appear in the properties window:

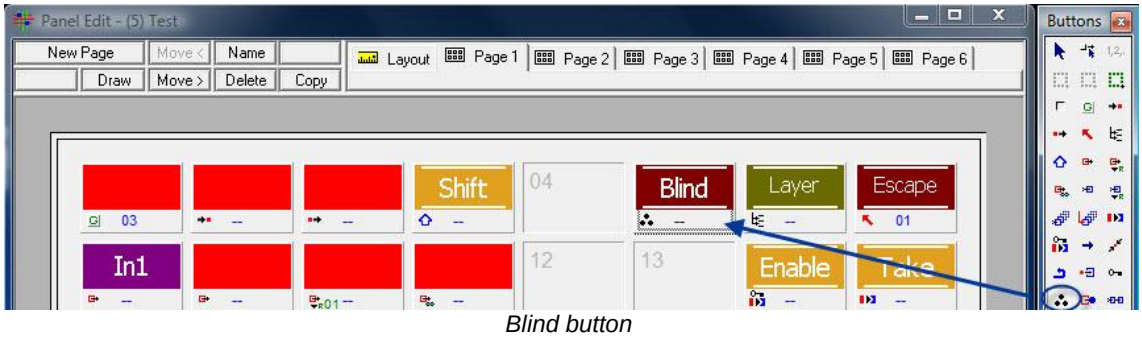
Lock target properties

The new tab offers the following options:

- If *Unlock* is selected, the button can only be used as unlock button.
- If *Toggle Target Lock* is ticked, the button can be used as lock or unlock button for the currently selected output.
- Using *Toggle Signal Path Lock*, the button can be used as either lock or unlock button for the currently selected output. However, it will lock the entire signal chain.
- If *Toggle Pseudo Device Lock* is selected, the button can be used as lock or unlock button for the currently selected output. In addition, the corresponding signal in the pseudo device list (see chapter 12 Pseudo Devices) will also be locked.
- *Master Lock / Unlock* will make the button usable as either lock or unlock button for the currently selected output. It can reset all previously set lock commands.

6.21 Blind Source

The *Blind Source* button can be used to switch selected targets onto the blind source that was defined for them.

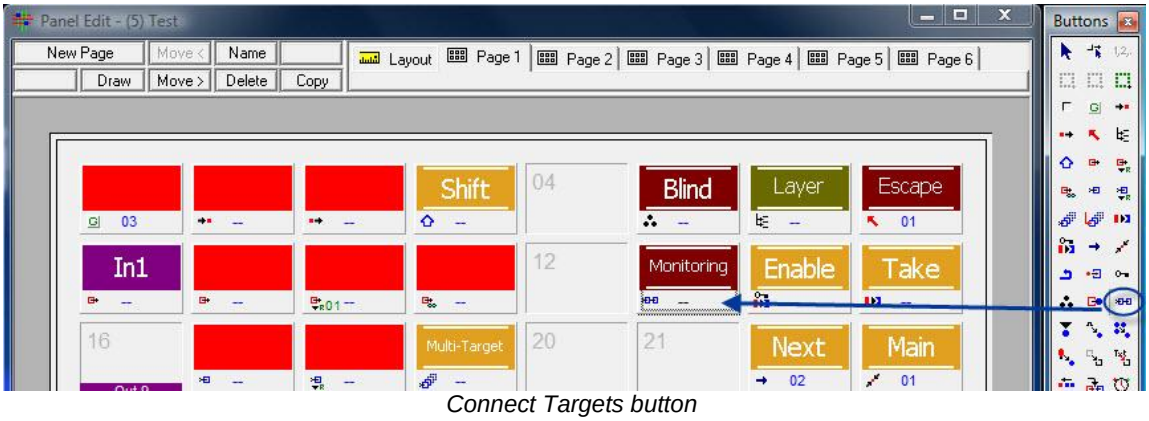


Blind button

The default colour theme for this button is the caption *Blind* in white lettering on a dark red background.

6.22 Connect Targets

Using the *Connect Targets* or Monitoring button, a target can be changed into a source.

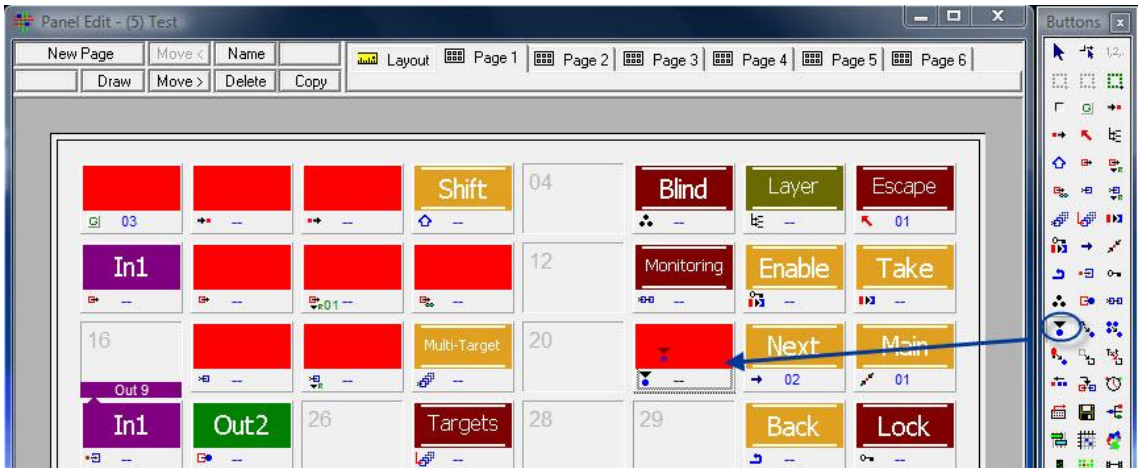


Connect Targets button

By default, it is displayed with the caption *Monitoring* in white lettering on a dark red background.

6.23 Control Button

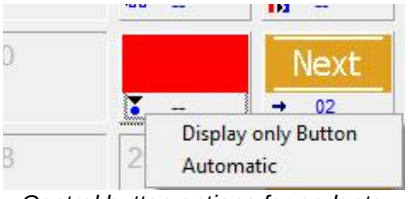
The button *Control, e.g. GPIs, Gadgets...* is used for functions, such as GP-I/Os (see chapter 15) and gadgets (see chapter 10).



Control button

6.23.1 Gadget Control

If the value placed on the control button is a gadget (see chapter 10), the following window will open by left-clicking on the icon in the bottom left of the button:



Control button options for gadgets

The first option changes the placed button into a display button. A gadget parameter can therefore be displayed but not edited. Selecting *Automatic* will automatically select the placed gadget, allowing the value to be changed directly on the control panel using an encoder.

6.23.2 GP-I/O Control

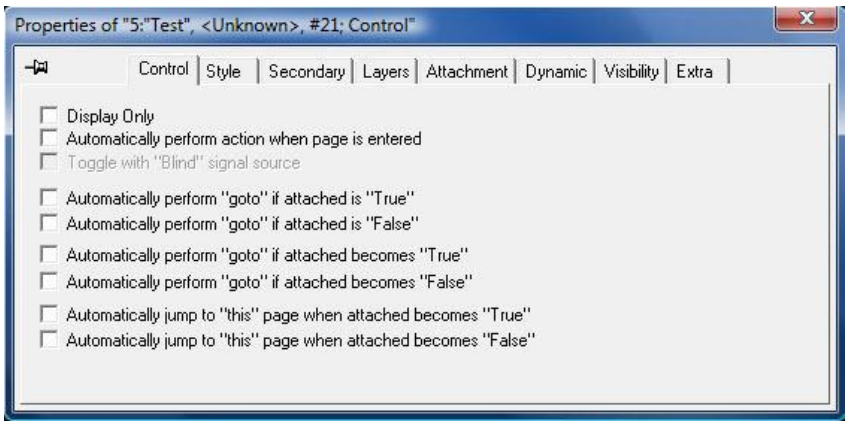
If the value placed on the control button is a GP-I/O (see chapter 15), a left-click onto the icon in the bottom left of the button will open the following window:

Control button options for GP-I/Os

The first option changes the placed button into a display button. A GP-I/O can therefore be displayed but not edited. If *Activate this page when GPI becomes true* is selected, the panel page on which the GP-I/O is located will be called up as soon as the GP-I/O is set.

6.23.3 Button Properties

If a control button is placed on a panel, a new tab, *Control*, appears in the properties window:



Control properties

This tab offers the following options:

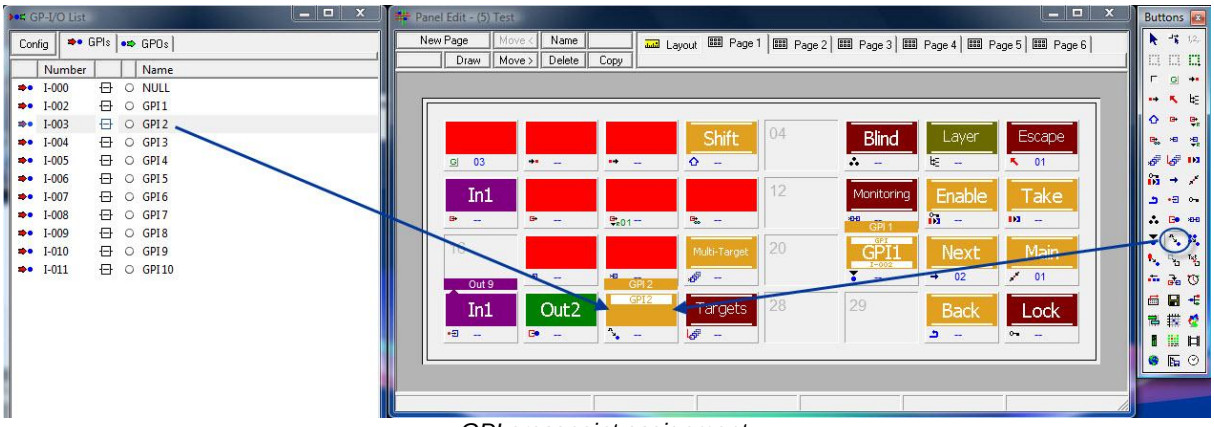
- *Display Only*: When this box is ticked, the button only serves as display button.

- *Automatically perform action when page is entered*: This option allows the execution of a function placed on the panel as soon as the page on which the button is located is opened.
- *Toggle with „Blind“ signal source*: This option allows a crosspoint button to jump between the crosspoint placed on the panel and the blind source.
- *Automatically perform „goto“ if attached is „True“* allows a page change as soon as the function on the panel is active.
- *Automatically perform „goto“ if attached is „False“* allows the same automatic page change if the function is inactive.
- With *Automatically perform „goto“ if attached becomes „True“*, an automatic page change will occur as soon as the function on the panel becomes active.
- *Automatically perform „goto“ if attached becomes „False“* prompts the same automatic page change as soon as the function on the panel becomes inactive.
- *Automatically jump to „this“ page when attached becomes „True”*: This option also enables an automatic page change. If, for instance, a GPO lies on a panel page and becomes active, the program will open the page on which the GPO was placed.
- *Automatically jump to „this“ page when attached becomes „False”* is exactly the same function for an inactive GPO.

6.24 GP-I/O Assignments

6.24.1 GP-I/O Crosspoint Assignments

Using the button *Assign GPI to Switchable Node*, a crosspoint switch can be assigned to a GP-I/O (see chapter 15). To do so, the relevant GP-I/O is placed on a control panel button followed by the function *Assign GPI to Switchable Node*, which is placed on the same button.

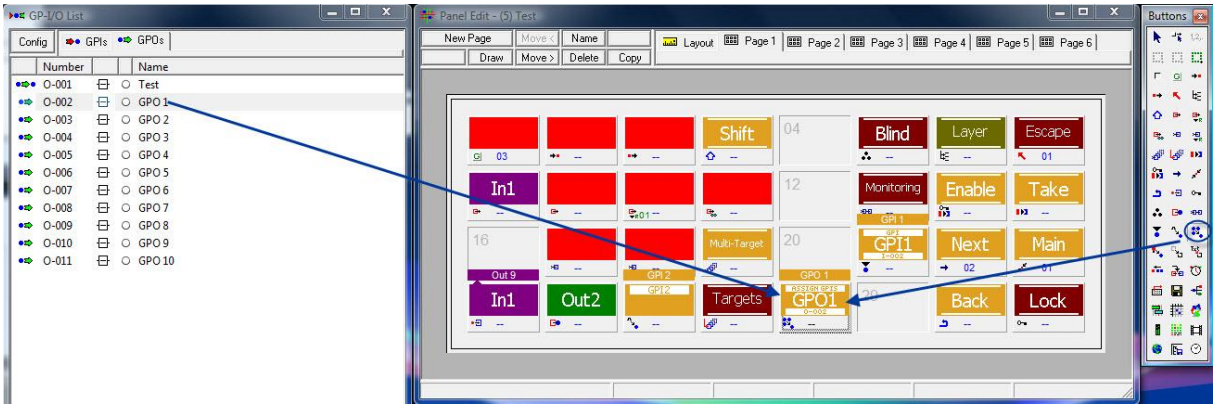


GPI crosspoint assignment

The default colouring before a GP-I/O is placed on it is the caption *GP-I/O?* in white lettering on a light orange background. As soon as a GP-I/O is placed on it, the caption changes to the GP-I/O's name.

6.24.2 GPI-GPO Assignment

With the button *Assign Multiple GPIs to GPO*, multiple GPIs can be linked to one GPO. To do so, a GPO is placed on a control panel button followed by the function *Assign Multiple GPIs to GPO*, which is placed on the same button.

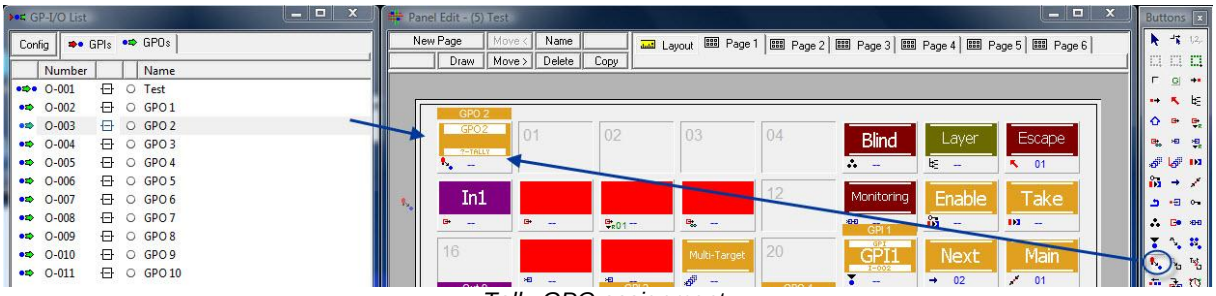


GPI-GPO Assignment

Before a GPI is placed on this button, its default colouring is the caption *GP-O?* in white lettering on a light orange background. As soon as it is linked with a GPO, the button will display its name.

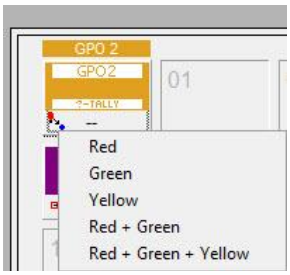
6.24.3 Tally-GPO Assignment

Using the *Assign Tally to GPO* button, a source can be assigned to a GPO. The GPO will become active as soon as this source receives tally.



Tally-GPO assignment

The default colouring for this button is the caption *GP-O?* in white lettering on a light-orange background. When it is linked to a GPO, the GPO's name will be shown in the button caption instead. By selecting the icon in the bottom left of the button, the following icon opens:



Tally button options

By selecting *Red* in this menu, a colour can be assigned to the tally within the GPO. This means that a red tally link is created. If multiple colours are selected (for example *Red + Green* or *Red + Green + Yellow*), a red-green or red-green-yellow OR-link is created in the GPO with the selected signal.

6.25 Mimic Button

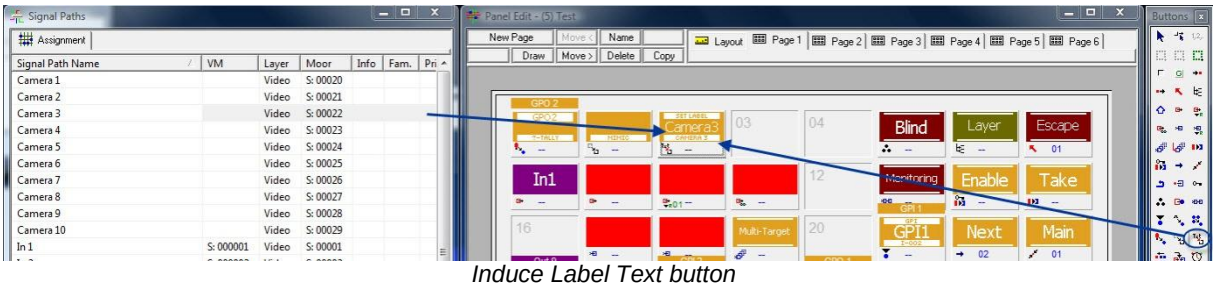
By first selecting the *Mimic* button followed by the selection of another button, the second button's function can be replicated.

Mimic button

By default, this button is displayed with the caption *Mimic* in white lettering on a light-orange background, as long as no other function is copied.

6.26 Display Label

Using the button *Induce Label Text*, the primary label (see chapter 5.2.5) on a virtual panel can be changed.

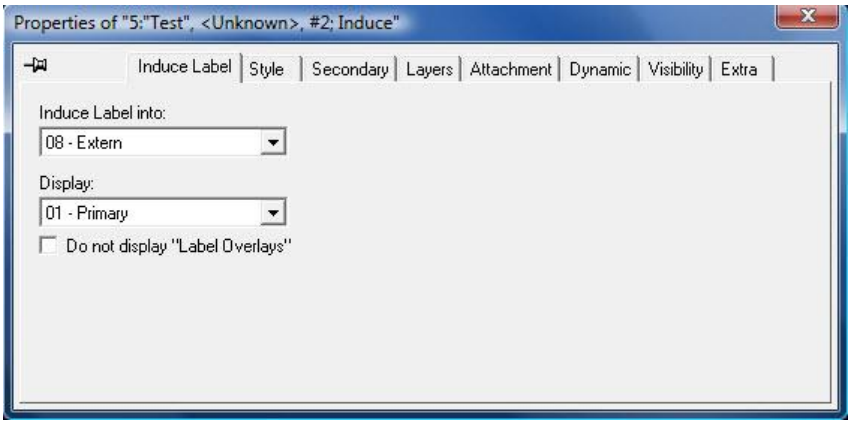


Induce Label Text button

By default, this button is displayed with the caption *<nosignal>* in white lettering on a light-orange background as long as no signal is assigned to it. If the function was placed on a signal button, it will take on the signal path's name, for example *Camera3*. The label can subsequently be changed on the virtual panel by simply overwriting it.

Label change on vsmPanel

If an *Induce Label Text* button is placed on a panel, the following new tab appears in the properties window:



Induce Label Text properties

Using the options in the drop down menu located below *Induce Label into*, the changed label can be saved in the protocol label or the external label. The drop down menu under *Display* can be used to change the display on the button between primary, secondary, video mixer, protocol and external label (see chapter 5.2.5 Labels).

If the option *Do not display "Label Overlays"* is ticked, duplicate labels are not displayed.

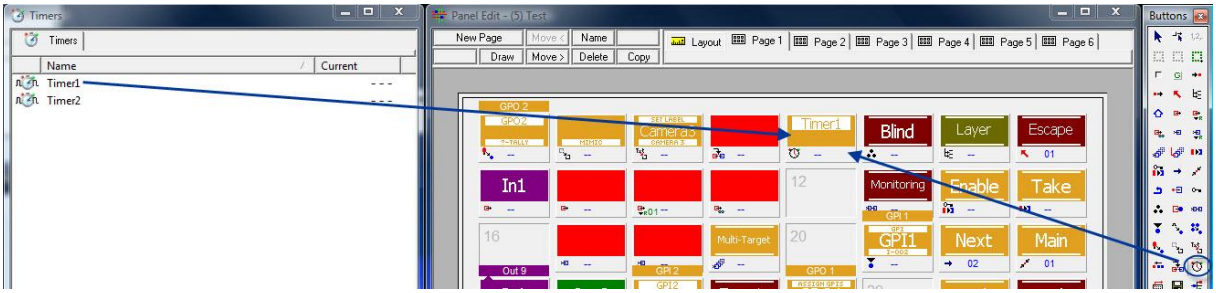
6.27 Insert

With the *Insert* function, loop-through devices, such as frame synchronizers, can be added into the signal chain. If this button is selected, the corresponding device is switched onto the selected target.

Insert button

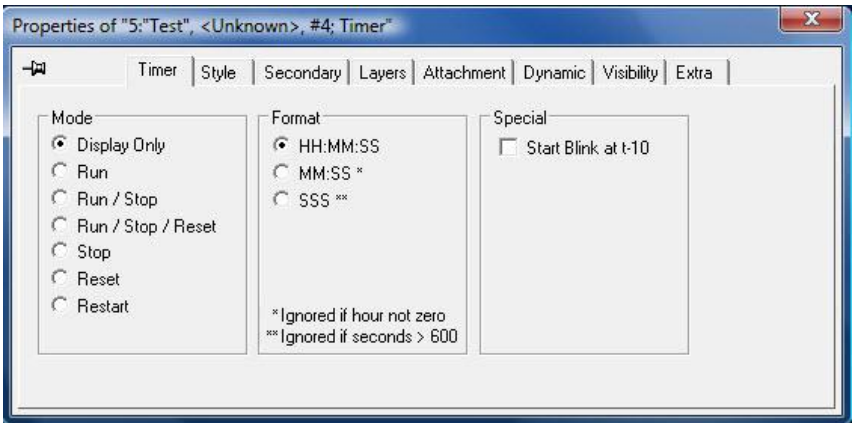
6.28 Timer

The *Timer* button is used to display a timer (see chapter 13) on the control panel. First, a timer must be placed on the button from the timer list (see chapter 13.4 Timer on Control Panels), so that the button will display a timer. Placing the button on the panel directly from the panel toolbox enables the use of DAS (see chapter 19.8 Dynamic Attachment Scripts).



Timer button

The default colouring for this button consists of three white question marks on a light-orange background as long as no timer is assigned. As soon as a timer is placed on the button, its name will be shown. Placing a time on a panel will add the following tab in the button's properties window:



Timer properties

Below the option *Mode*, different button options can be defined:

- If *Display Only* is selected, the timer placed on the panel will only be displayed.
- With *Run*, the timer can be started on the panel, while it can be started and stopped using the option *Run/Stop.* With the option *Run/Stop/Reset*, the timer can be started, stopped, and reset.
- *Stop* will make a stop function available, *Reset* a reset function, and *Restart* a restart function.

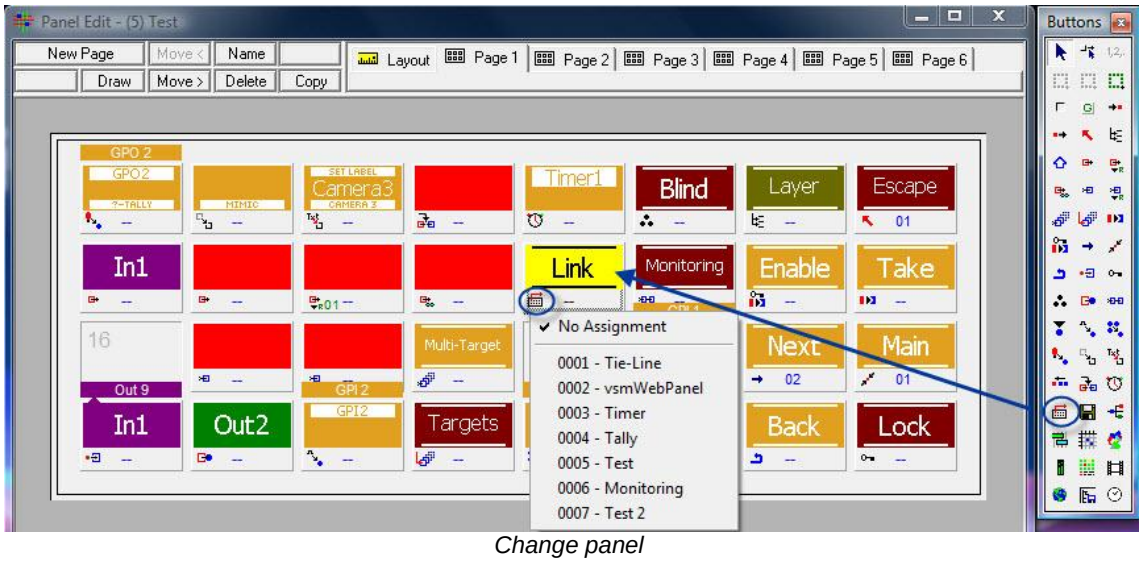
Format allows the choice of three different views:

- *HH:MM:SS* displays hours, minutes, and seconds in double-digits.
- *MM:SS* displays minutes and seconds in double-digits.
- *SSS* displays seconds in triple-digits.

If the option under *Special* is ticked, the timer will start to blink at 10 seconds.

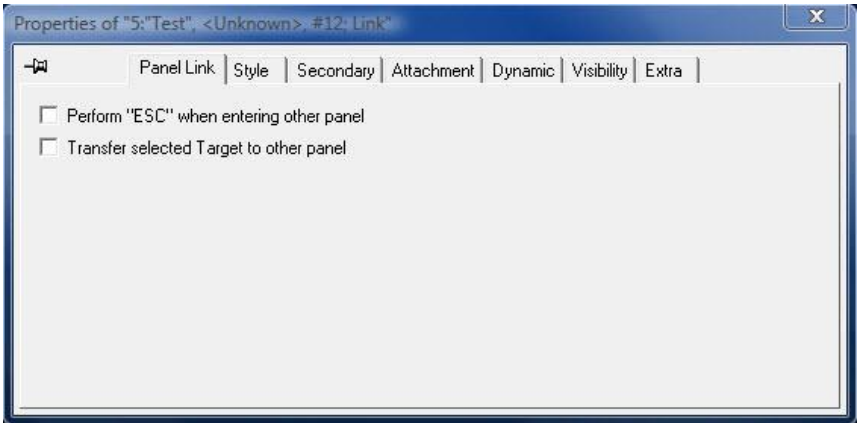
6.29 Change Panel

The *Change Panel* button allows jumping from the currently opened panel to a panel with a different panel ID.



Change panel

The default colour for this button is a black caption on a light-yellow background. After a left-click onto the small symbol in the bottom left corner of the button, it is possible to select the panel ID to which the button should refer. *No Assignment* is checked by default. This option also allows the reversing of previously made assignments. After placing a *Change Panel* or *Link* button on a panel, the following tab appears in the button's property window:



Panel link properties

With *Perform „ESC" when entering other panel*, the function of an *Escape* button can be replicated for page changes, so that all currently selected buttons are reset.

Transfer selected Target to other panel allows selecting an output on a panel and then using the *Link* button to jump to a different panel to choose the relevant input. Once the input is selected, the *Link* button must be used to jump back to the initial page.

6.30 Storage Groups

Use the *Storage Group* button to place a storage group (see chapter 9) onto a control panel. As before, directly placing the button on the panel from the panel toolbox allows the use of DAS (see chapter 19.8 Dynamic Attachment Scripts).

Storage Groups button

When no storage groups are assigned, the button is displayed with three white question marks on a light-orange background. Once a storage group is assigned, its name is shown on the button.

Placing a *Storage Grou*p button on a panel will add a *Storage* tab to the button's properties window:

Storage group properties

The name of the storage group or of the storage disc (see chapter 9 Storage Groups) is shown after *Name* – in this case *StorageGroup1.*

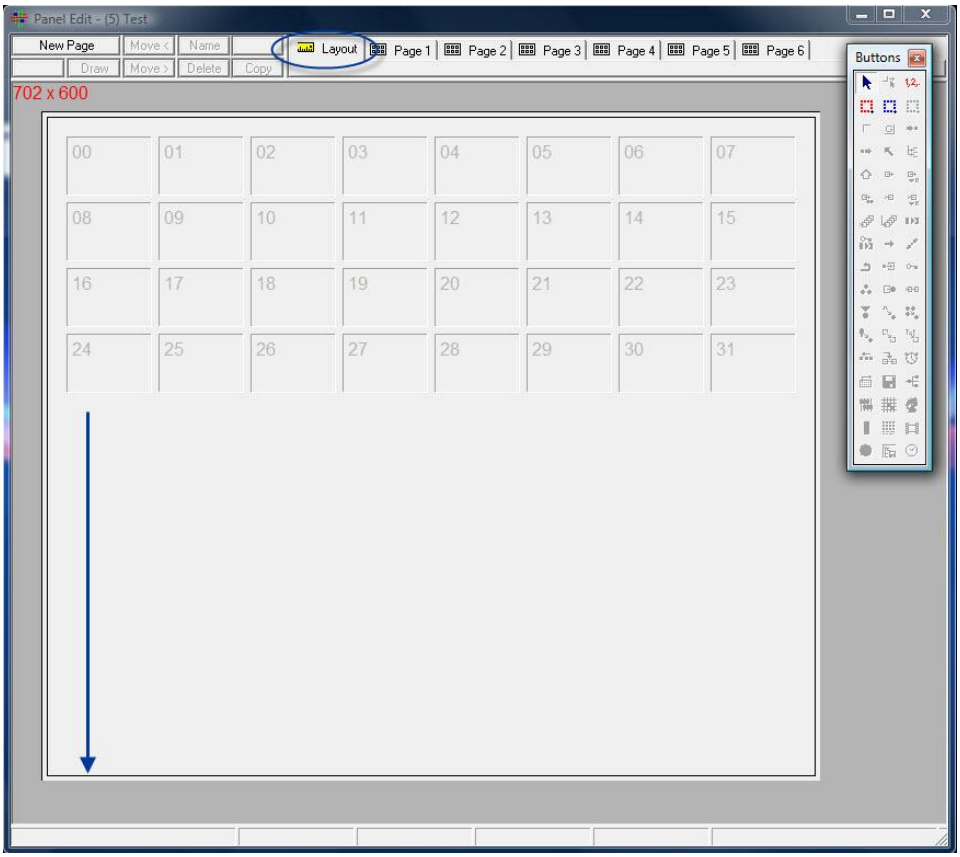
Under *Store as defined by Storage Group* it is possible to select which functions should be available for this storage group or storage disc on the panel: crosspoint setups can either be loaded or saved.

Through *Record user actions*, crosspoint setups can be set to be loaded or recorded.

6.31 Visual Link

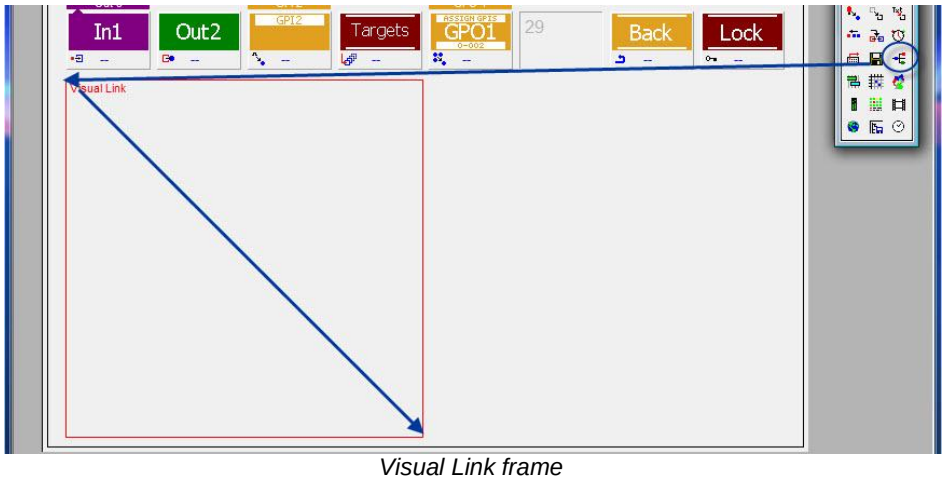
To be able to use the *Visual Link* function, a frame must be drawn on a panel. This function, as those described in the following, are not button-related functions, but are only displayed on virtual control panels.

If the available space on the panel does not have a sufficient size, the entire panel can be enlarged in the *Layout* tab (see chapter 19.4.2 Panel Layout).



Increasing panel size

To create the *Visual Link* frame, select the function in the panel toolbox and draw the frame by moving the curser from top left to bottom right while pressing the left mouse button until the desired size is reached. The same procedure applies to the following functions, including Scheduler, Views, Map, Audio Level Meter, Alarm Management, Media Player, Browser, and Storage List (see chapter 19.6.32 to 39).

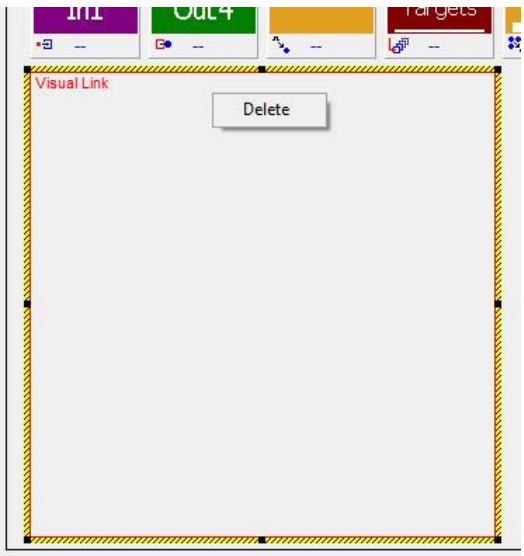


Visual Link frame

In the panel edit, the visual link has a red frame has a red caption in the top left corner. On a virtual panel, signals linked within this frame are shown as a signal chain.

Visual Link on vsmPanel

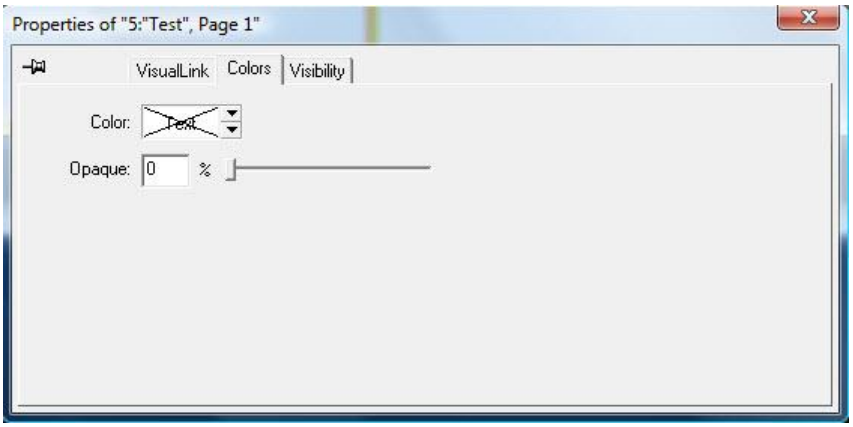
To delete the *Visual Link* frame, right-click into it in the panel edit and select *Delete*.



Deleting the Visual Link frame

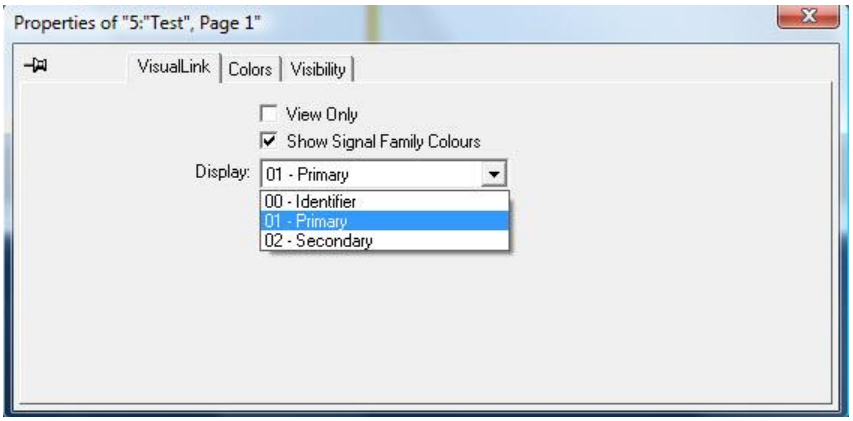
If a *Visual Link* frame is placed on a panel, the tabs *VisualLink, Colors,* and *Visibility* appear in the properties window.

The first tab allows changes to colour and opaqueness of the *Visual Link*. As with the buttons, the colour can be changed in the field next to *Color*. Similarly, opaqueness can be changed directly in the field beside *Opaque* or by using the slide control.



Colour settings

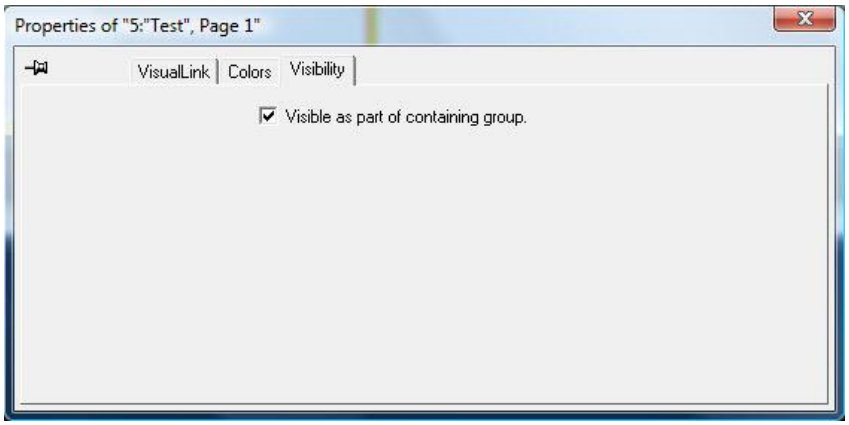
The following options are available under the *VisualLink* tab:



Visual Link properties

If *View Only* is ticked, the *Visual Link* will only be displayed. *Show Signal Family Colours* allows the display of colours assigned to signal path families (see chapter 5.2.2) in the signal path list.

The drop down menu next to *Display* offers the choice of which label should be displayed in the *Visual Link*. The options hereby include *Identifier*, *Primary*, and *Secondary* label (see chapter 5.2.5 Labels).



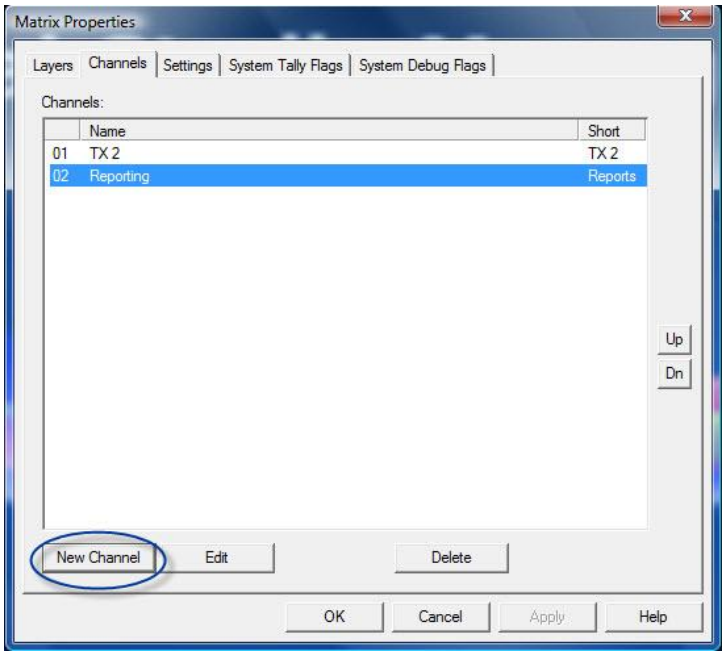
Visibility properties

Using the option under the *Visibility* tab, the *Visual Link* will remain visible within a group.

6.32 Scheduler

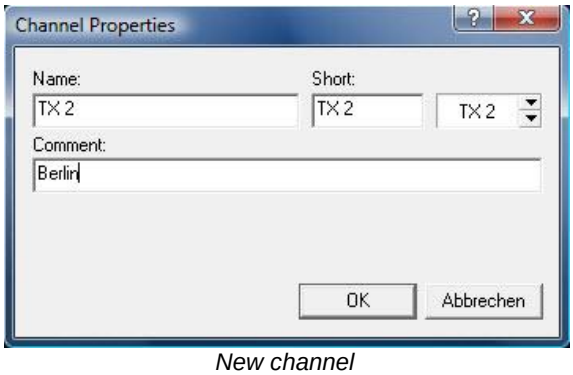
6.32.1 Creating Channels

In order to be able to use the Scheduler, corresponding channels (see chapter 6.7.2 Channels) must be created first. This can be done in the *Matrix Properties* view under the *Channels* tab.



Channels

Upon selecting *New Channel*, a window opens in which a new channel can be set up.

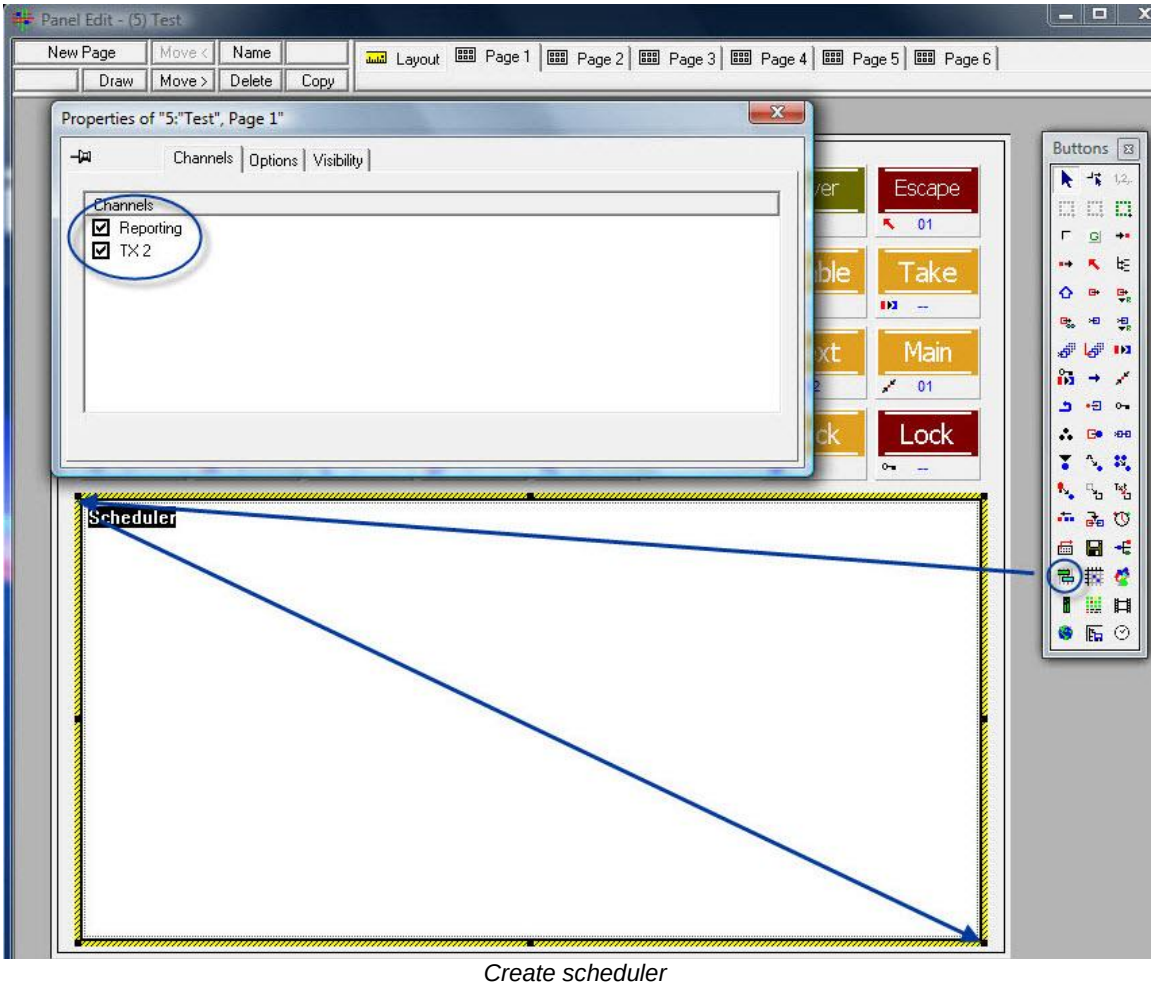


New channel

Enter a relevant name for the new channel and confirm the input by pressing *OK*. Close the *Matrix Properties* view after all necessary channels have been created.

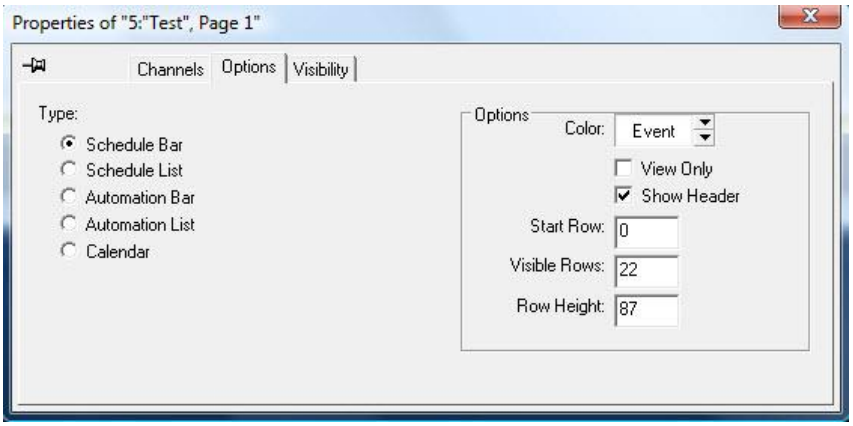
6.32.2 Create Control Panel with Scheduler

Select the *Scheduler* function in the panel toolbox and draw a frame as describe above (see chapter 19.6.31 Visual Link) across the side of the panel edit on which the scheduler is to be added. In the panel edit, the scheduler has a black frame and a white caption on black background in the top left corner. The scheduler frame can be deleted by right-clicking into it.



Create scheduler

When the window for the scheduler has been created, the properties view will open automatically. In this view, additional settings can be adjusted. The first tab allows the choice of which channels will be displayed in the scheduler.

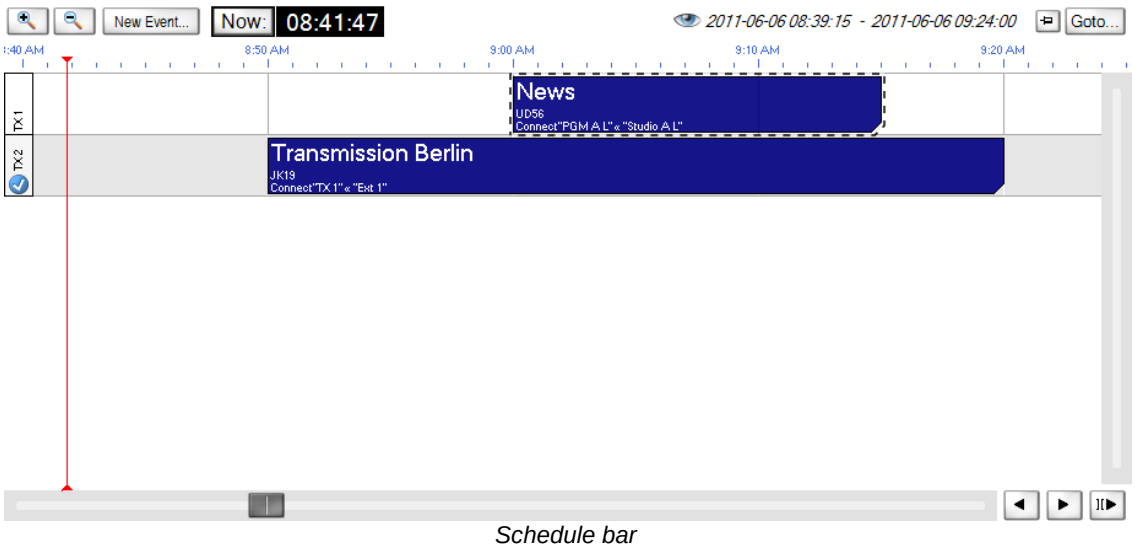


Scheduler options

The second tab currently provides four view options for the scheduler:

6.32.2.1 Schedule Bar

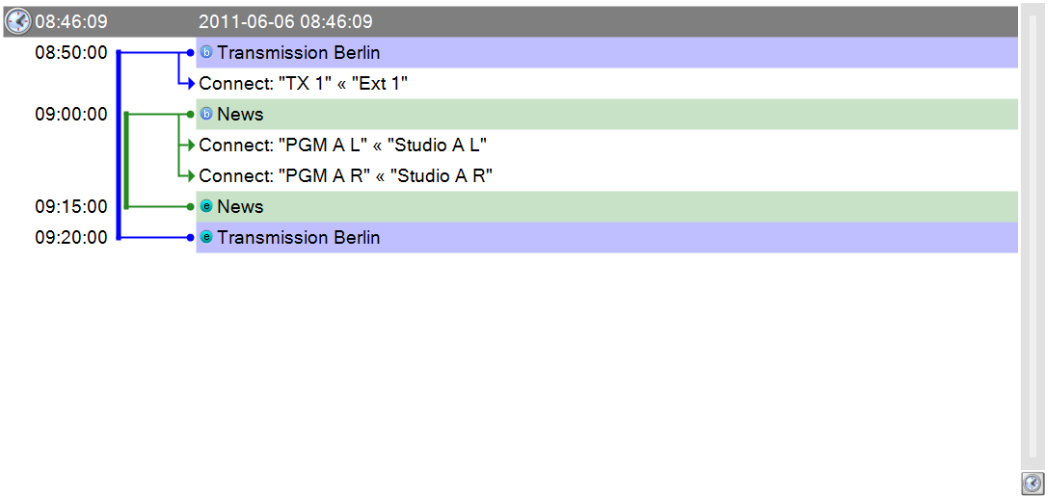
With the Schedule Bar, events can be created and displayed on a time line.



Schedule bar

6.32.2.2 Schedule List

The *Schedule List* shows all current switches per channel. Events cannot be displayed in this view.

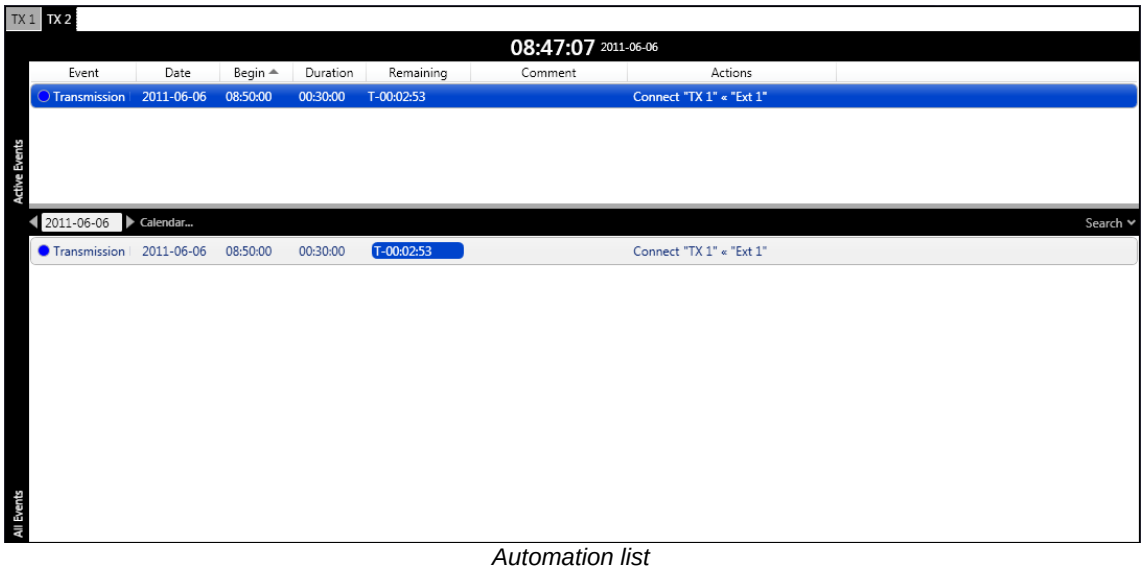


Schedule list

The *Automatic Bar* function is currently not supported.

6.32.2.3 Automation List

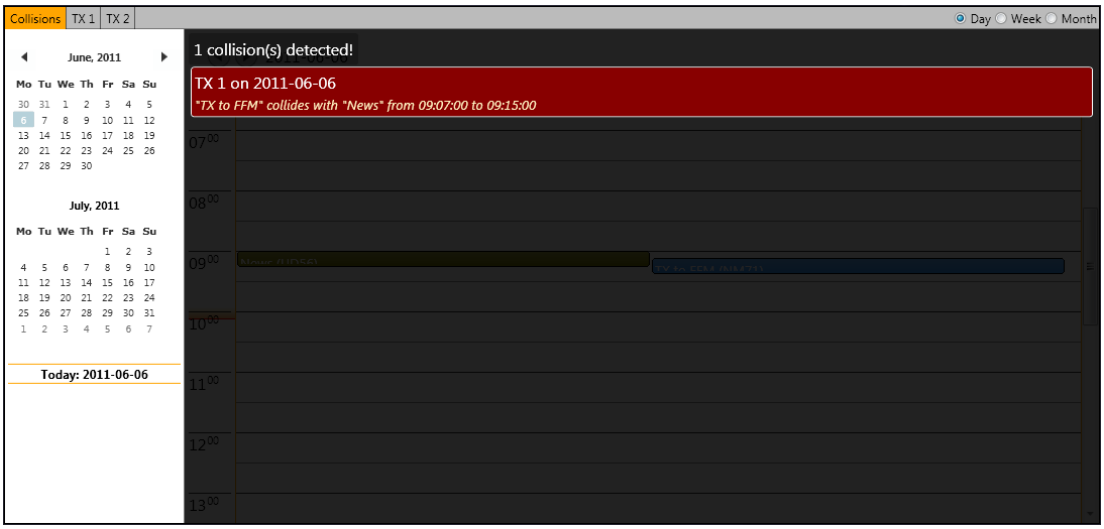
Through *Automation List*, events can be created while they are displayed as an automation list. Each event is clearly distinguishable through automatically generated colours. Moreover, events are automatically organized into active events with a five minute preroll and planned events per channel. This list comes with an integrated search function to quickly find created events.



Automation list

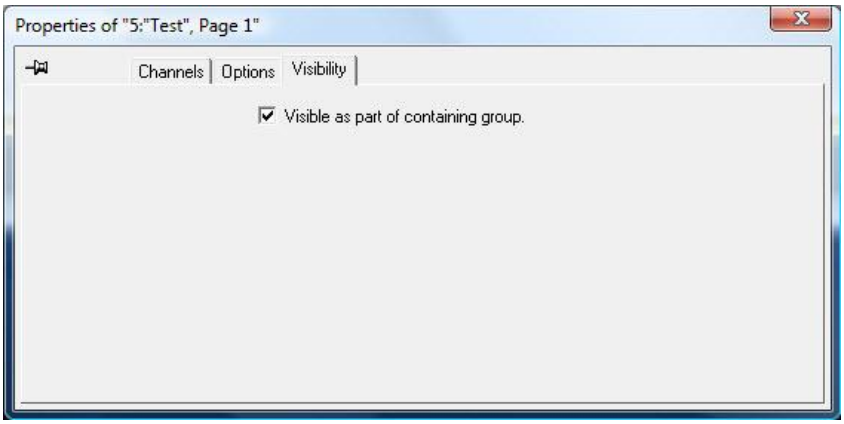
6.32.2.4 Calendar

With the *Calendar* function, events can be created and displayed in a calendar view. In addition, this view offers a collision test for each channel. As soon as a time conflict is detected within a channel, the interface will show the corresponding collision.



Calendar

6.32.2.5 View Properties

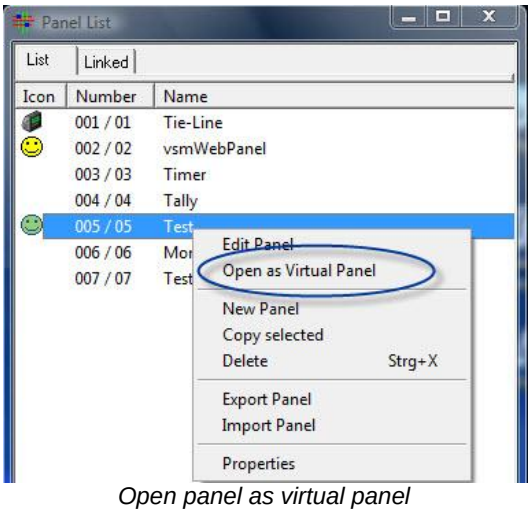


Visibility tab in the scheduler properties

The option *Visible as part of containing group* can be activated or deactivated in the *Visibility* tab. If active, the scheduler area will be changed in accordance to a page change. Consequently, if no scheduler was created on the relevant page, the control panel will not show one. With this function, multiple scheduler windows can be configurated for multiple pages, for example to allow the use of multiple views. If this option is not activated, the scheduler window will not change in the event of a page change. All other scheduler settings are taken from the vsmPanel.

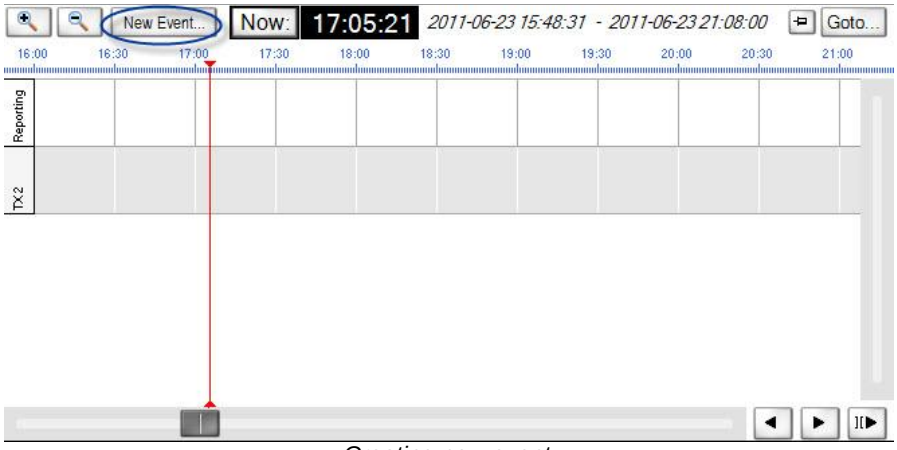
6.32.3 New Event

The procedure for the creation of events always remains the same, regardless of the view option chosen for the scheduler. To create a new event, select the control panel on which the scheduler is located and open it as virtual panel by right-clicking onto it in the control panel list.



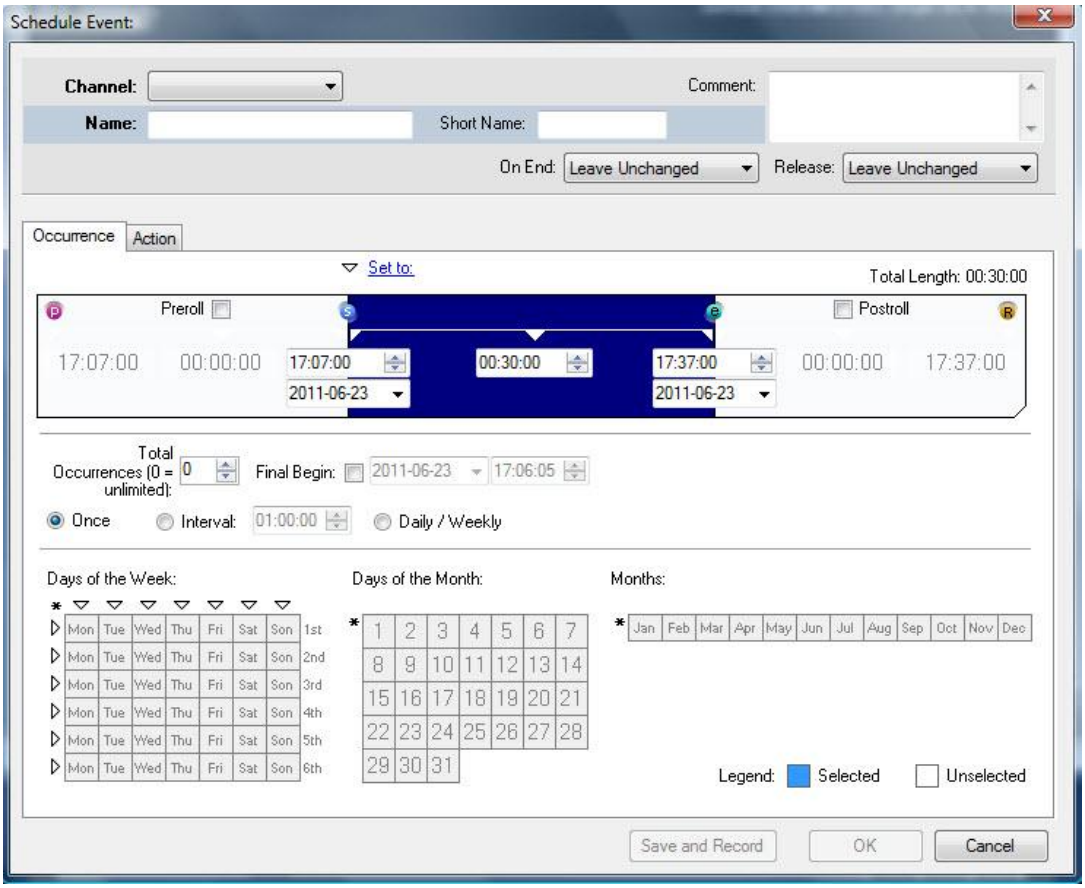
Open panel as virtual panel

Next, select *New Event* in the scheduler view to create a new event.



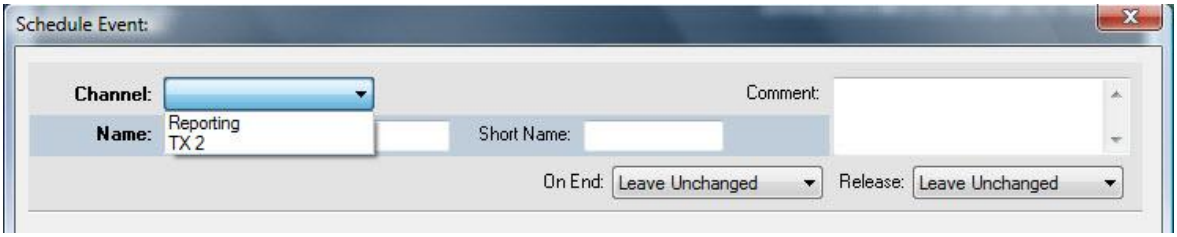
Creating new event

This will prompt the following window:



Window to create an event

In a drop down menu on the top, the previously selected and activated channel can be chosen (see chapter 19.6.32.2 Creating Control Panel with Scheduler). Next, the event can be created for the selected channel.

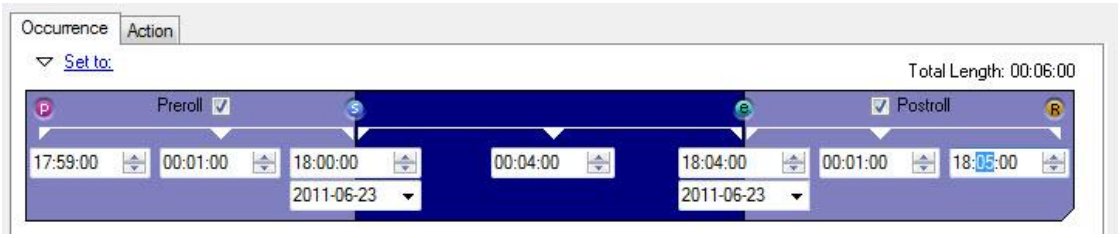


Selecting a channel

In the next step, enter a name for the event. As soon as a channel has been chosen and a name entered, the previously greyed out confirmation button *OK* in the bottom right become available.

Starting time, duration, and end time for the event

The time for the start of an event can be set in hours, minutes, and seconds along with a date in the field *Occurrence.* The end time will automatically be added once the duration of the event has been entered.

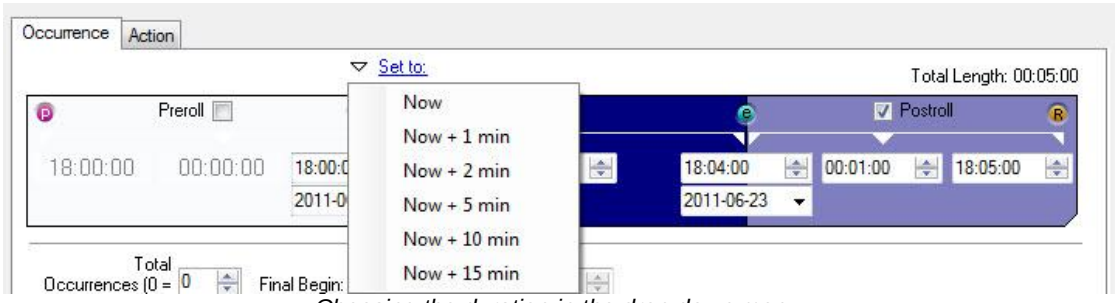


Preroll and postroll

If *Preroll* and *Postroll* are ticked, durations for postroll time after and preroll time before the event can be entered there. These times can be defined either as start or end time points, where *p* stands for *Preroll*, *R* for *postroll* (Release), *s* for the start, and *e* for the end of the event

6.32.3.1 One-Time Event

There are two possible ways to set up a one-time event: The starting time of the event can be chosen through the drop down menu under *Set to*. The scheduler will automatically add the duration (between one and 15 minutes) entered here to the current time, which then becomes the starting time for the event.

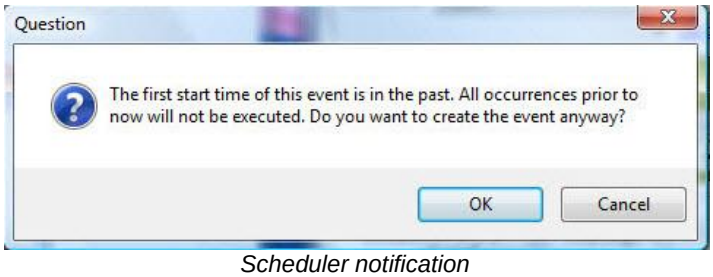


Choosing the duration in the drop down menu

Alternatively, it is possible to enter a start and end time or the duration of the event as described above. Select the option *Once* after these entries have been made to indicate that this event is a one-time event.

Select Once for a one-time event

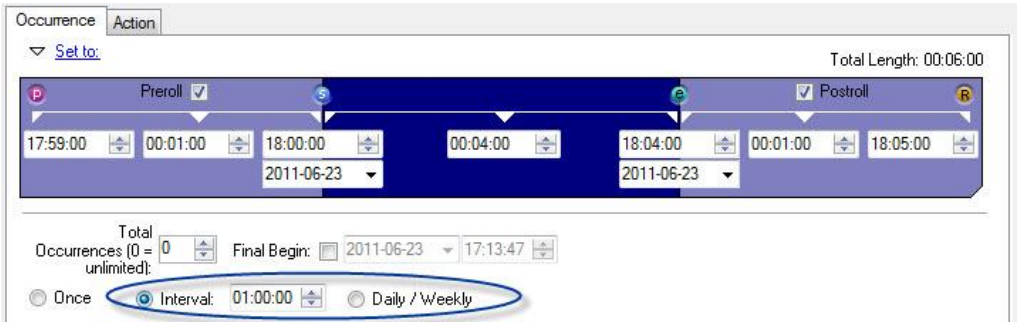
After confirming the entries by pressing *OK*, event actions can be defined. The scheduler will notify the user if the start time of the event was set before the current real time.



Scheduler notification

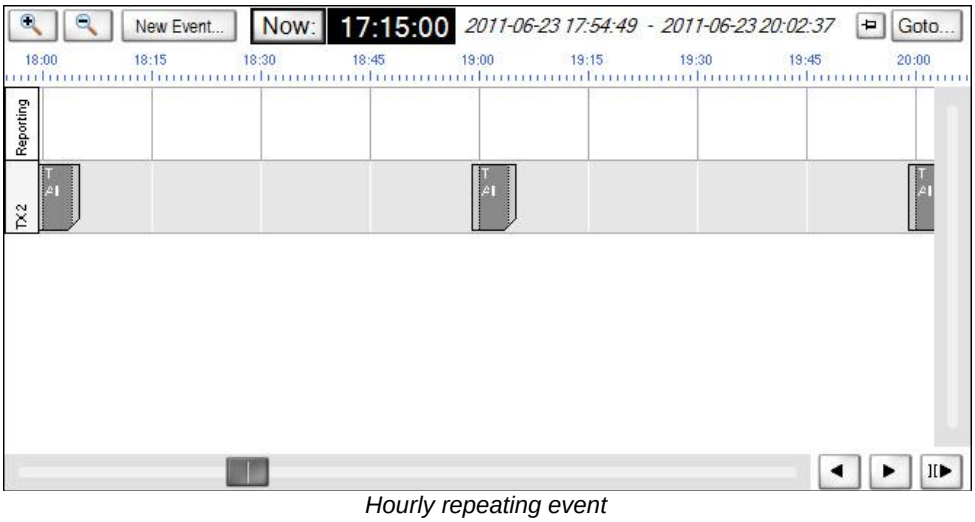
6.32.3.2 Repeated Event

A repeating event can be set up in multiple ways. The duration, after which the event repeats itself, is entered under *Interval*.



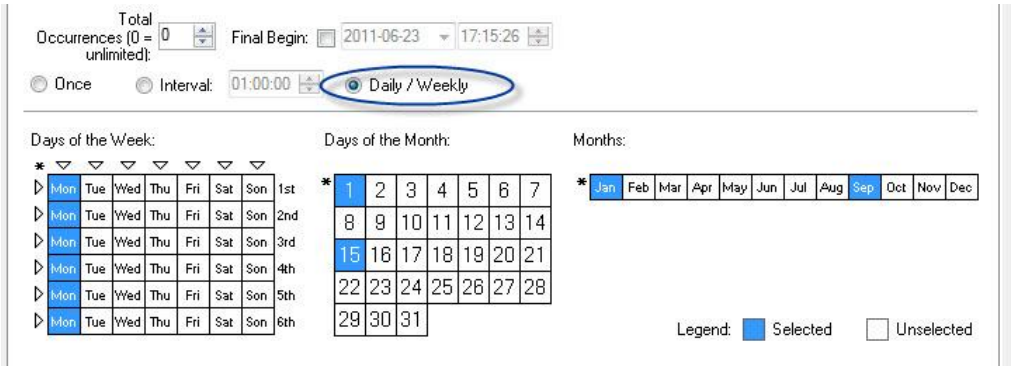
Entering an interval

It is, for example, possible to create an event that repeats itself hourly.



Hourly repeating event

An event can also be set to repeat on certain weekdays, dates, and certain months. To do so, select the option *Daily / Weekly*.

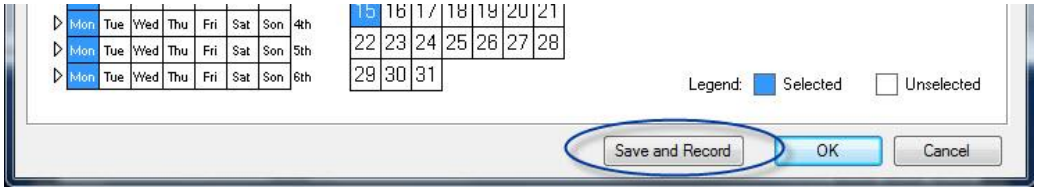


Scheduling by weekdays, dates, and months

In the field below, certain weekdays (multiple selections are possible, for example all Mondays), dates, and months can be chosen for the repetition of the event. These fields can be individually selected and deselected by repeatedly clicking onto them. Blue colouring indicates that this day, month, or date is selected; white indicates that it is not selected.

6.32.3.3 Event Actions

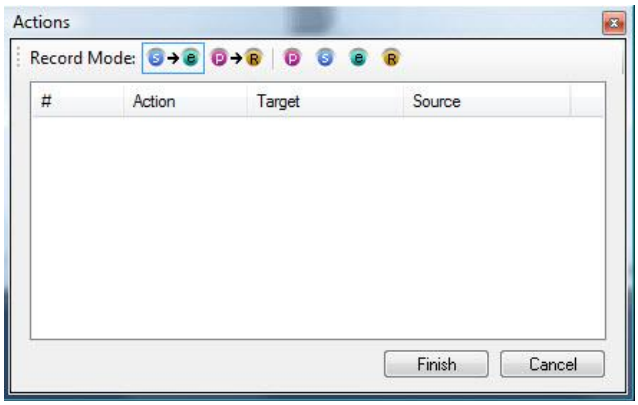
Once time, duration, and repetition of the event have been set, the event action must be defined. To do so, select *Save and Record*.



Defining event actions

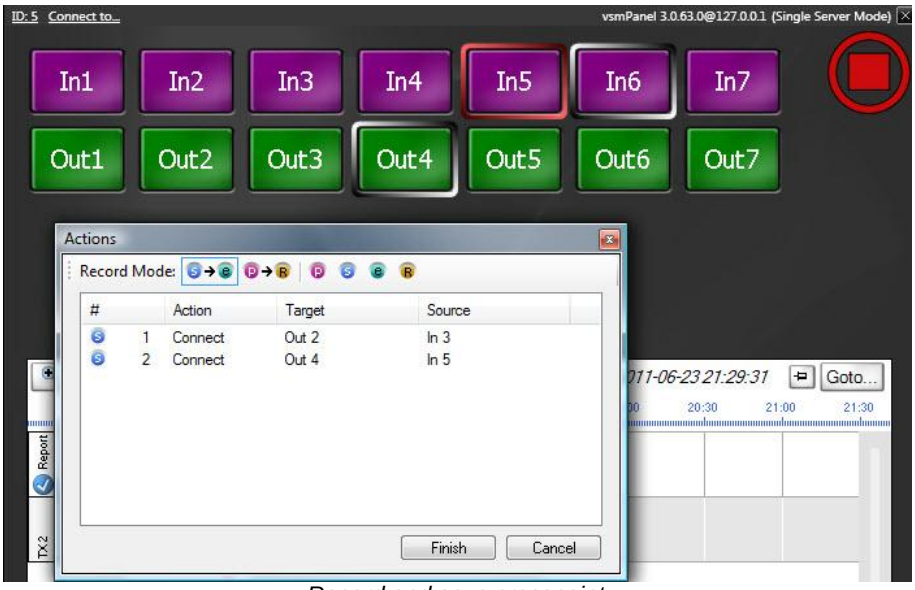
In a new window, the following recording modes are available:

- *s* > *e*: from beginning to end of the event
- *p* > *R*: from postroll to preroll
- *p*: preroll
- *s*: beginning
- *e*: end
- *R*: release (postroll).



Recording and saving actions

To record and event action, the event phase (that is from preroll to postroll) for which an action is to be defined must be chosen first. Next, the targets and sources whose links will be part of the event must be selected, for instance *Out4* and *In5*. The recording mode is indicated by a red record symbol on the panel.

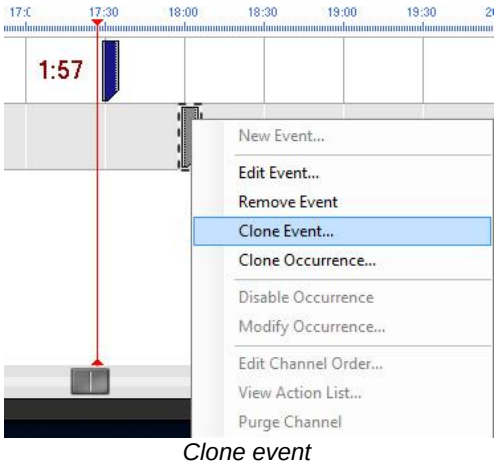


Record and save crosspoint

Press *Finish* to confirm the entries.

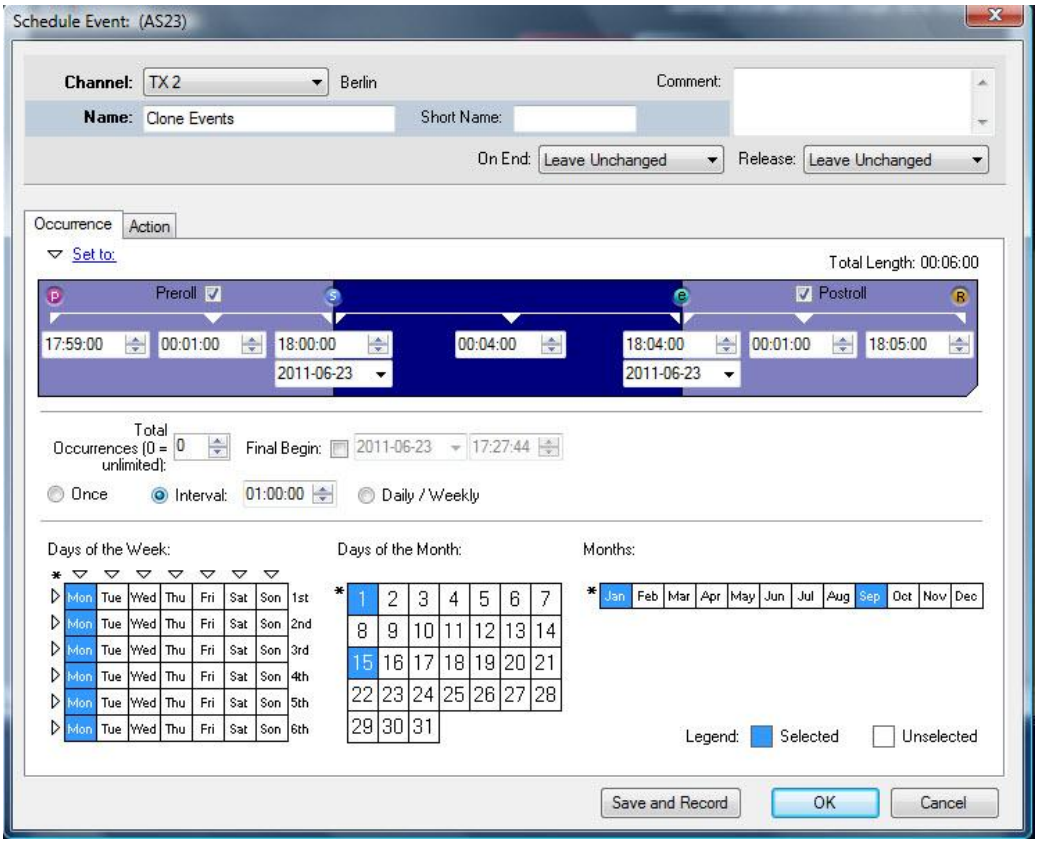
6.32.4 Clone Events

To duplicate an event, right-click onto the event that is to be copied and select the option *Clone Event*.



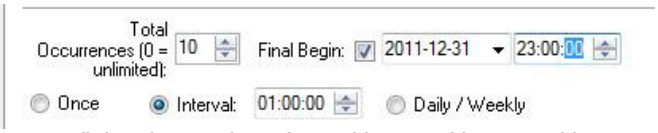
Clone event

A new window opens, in which the event settings described above can be adjusted.



Settings for cloned events

Similarly to the procedure described above, this window requires the input of a name, channel, etc. for the cloned events (see chapter 19.6.32.3 New Event).

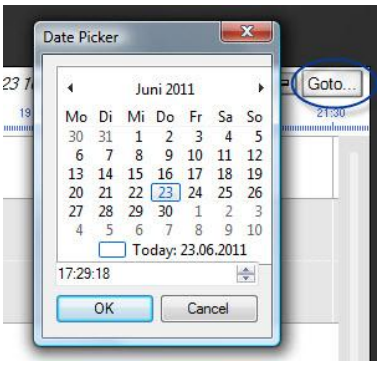


Defining the number of repetitions and last repetition

Beside *Total Occurrences*, the number of repetitions can be defined. The field besides Final Begin allows the definition of the time of the event's last repetition.

6.32.5 Scheduler Navigation

The scheduler features a so-called *Date Picker* that allows an optimized search for an event by selecting an exact date, to which the scheduler view will jump.



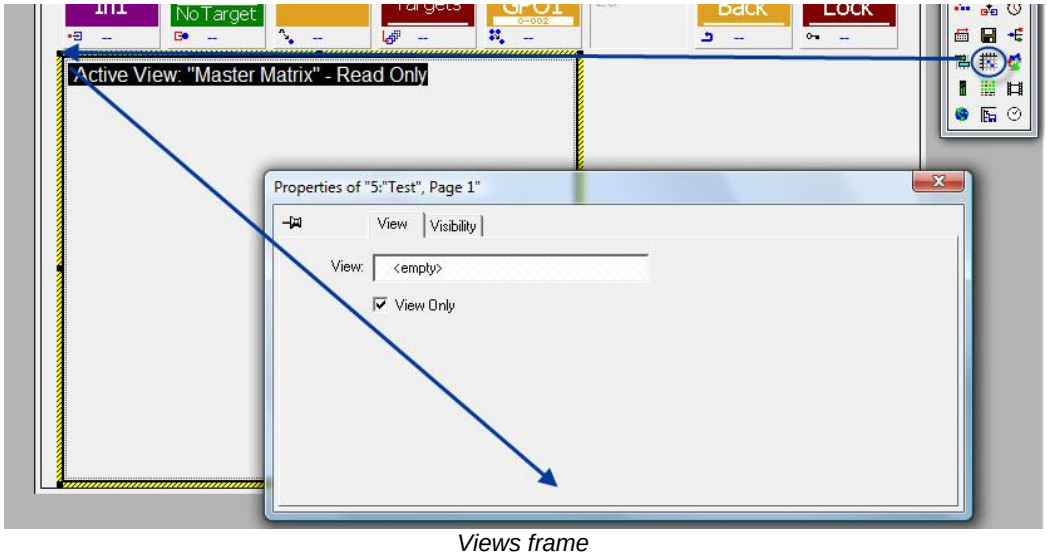
Date Picker

Navigation of the scheduler is made easy by the three arrows located in the bottom right corner of the window. Using them, it is possible to jump directly to the next or previous event or to the next gap.

Navigation arrows

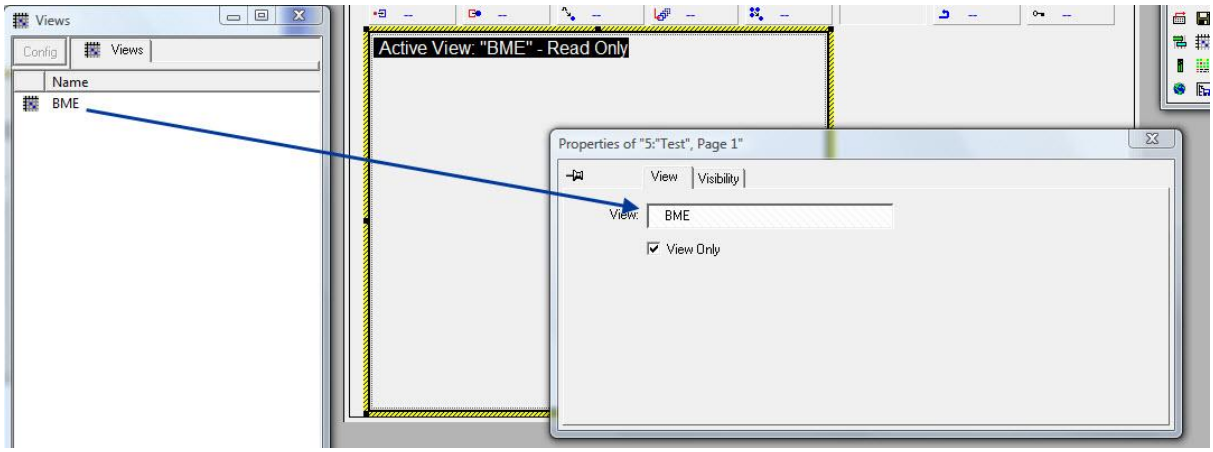
6.33 Views

The *Views* function allows the display of views (see chapter 7) on a virtual panel. They can be used either as display option only or to switch crosspoints. As the previous functions, the *Views* function requires a frame. To create it, select the function in the panel toolbox and drag the cursor from the top left to the bottom right while pressing the left mouse button to draw a frame in the required size.



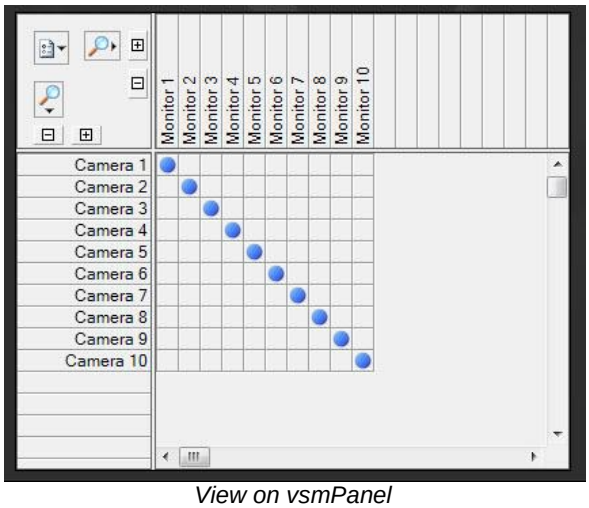
Views frame

Views have a black frame with the white caption *Active View* and the name of the currently selected view on a black background in the panel edit. If no view has been assigned, the read-only view of the master matrix (see chapter 6) is shown.



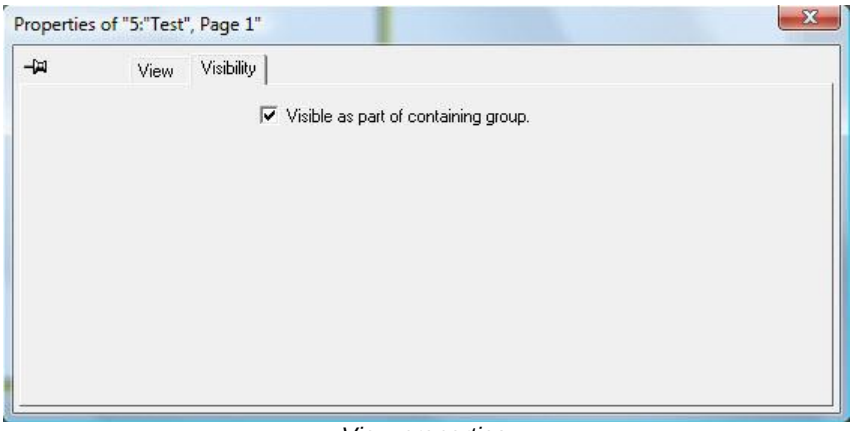
Assigning a view

A view must be dragged and dropped from the views list into the views frame's properties window in order to be displayed on a virtual control panel. This window also allows the choice whether the view will be read-only or if it can be edited.



View on vsmPanel

The *Visibility* tab allows the option to set the view to remain visible as part of its containing group.



View properties

To delete the frame, right-click into it and select the *Delete* function.

6.34 Map

The *Map* function allows the creation of button ranges on previously edited images. These can then be switched on a panel. In order to be able to create and edit image maps prior to their use, the Software Image Map (see chapter 18) is required. This function also requires a frame. To create a frame, select the function in the panel toolbox and drag the cursor from the top left to the bottom right while pressing the left mouse button to draw a frame in the required size.

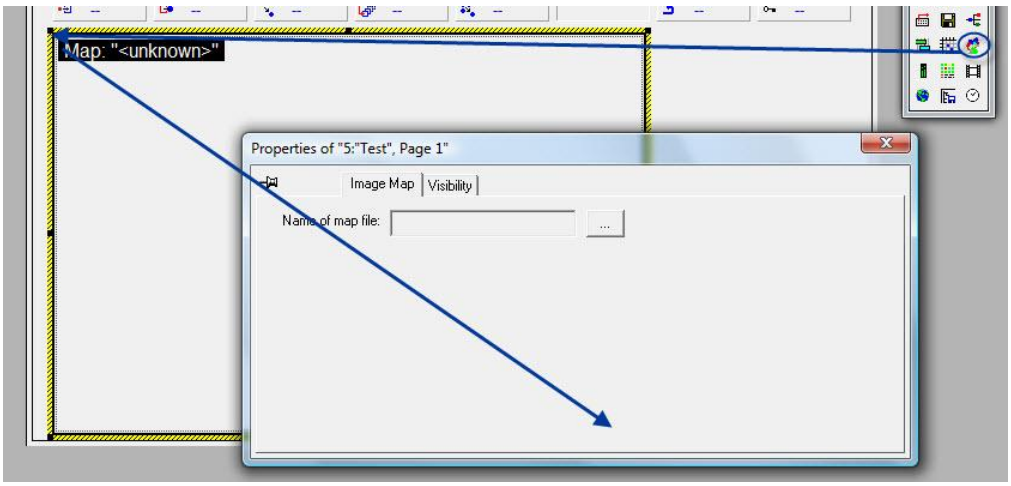


Image Map frame

In the panel edit, image maps have a black frame with the white caption *Map* and the name of the currently selected image map on a black background. Using the browser function next to *Name of map file*, the image map can be added to the frame. If no image map is assigned, the caption will read *Map: ">unknown>"*. The *Visibility* tab offers the option to keep the image map visible in its containing group. The frame can be deleted by right-clicking into it.

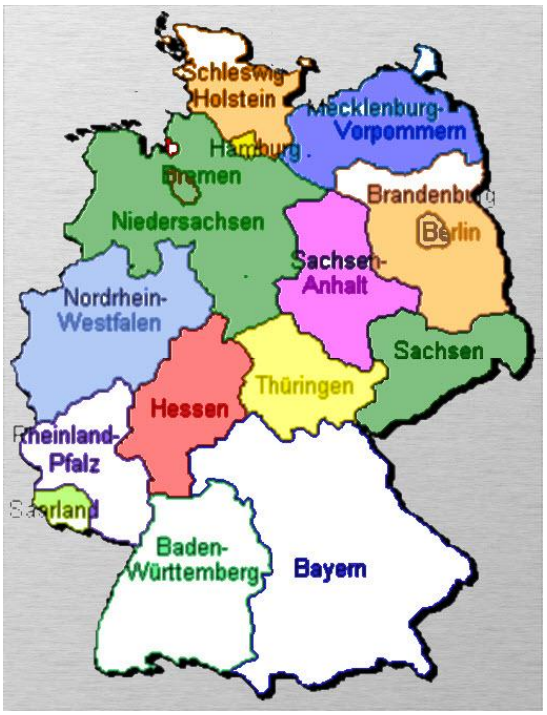
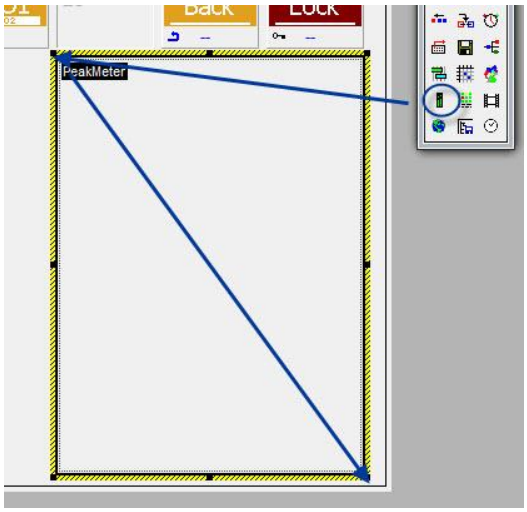


Image Map on vsmPanel

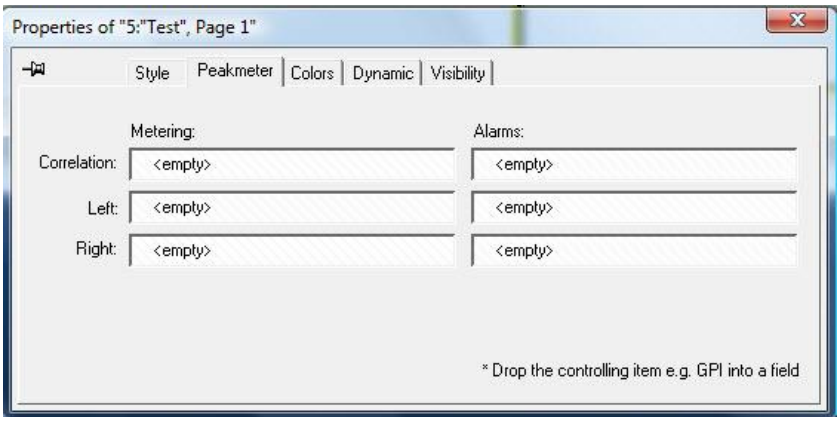
6.35 Audio Level Meter

Using the *Audio Level Meter* function, peak meter data that is available as gadget (see chapter 10) can be displayed on a virtual panel. Again, this function requires a frame. To create a frame, select the function in the panel toolbox and drag the cursor from the top left to the bottom right while pressing the left mouse button to draw a frame in the required size.



Audio Level Meter frame

Once an *Audio Level Meter* frame has been placed on a panel, the following new tab appears in the properties window.

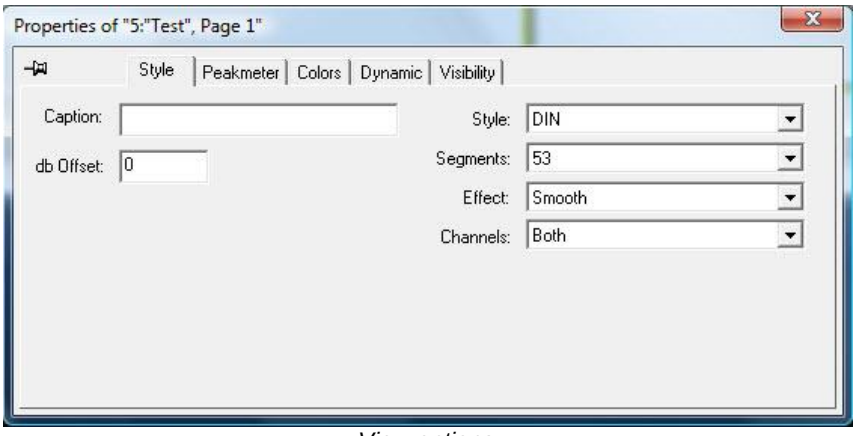


Peakmeter properties

The tab *Colors* allows the selection of colours, similar to the same function for buttons. The *Dynamic* tab offers space to enter Dynamic Attachment Scripts (see chapter 19.8).

The tab *Peakmeter* offers the following options:

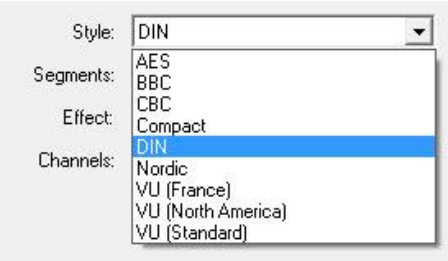
- The appropriate correlation gadget parameter can be dragged and dropped from the gadget list (see chapter 10 Gadgets) into the field next to *Correlation* for the metering.
- *Left* represents the respective PPM gadget parameter of the left channel, *Right* the PPM gadget parameter for the right channel. For the metering, both can be inserted into the appropriate field from the gadget list using drag and drop.
- In the spaces below *Alarms*, gadget parameters for alarms are placed (the first field represents correlation, the second the left channel, and the third the right channel).



View options

The *Style* tab offers the following options:

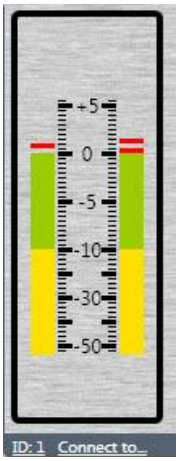
- *Caption* is merely used as label in the panel edit mode.
- The drop down menu beside *Style* allows the choice between different display options.



Style options

- The drop down menu beside *Segments* offers the choice between 26 and 53.
- The menu next to *Effects* offers the choice between *Smooth* and *Fast*.
- The options in the drop down menu next to *Channels* include *Both*, *Left*, and *Right*.

Using the option under the *Visibility* tab, the *Audio Level Meter* can be set to be visible within its containing group. The frame can be deleted by right-clicking into it and selecting *Delete*.

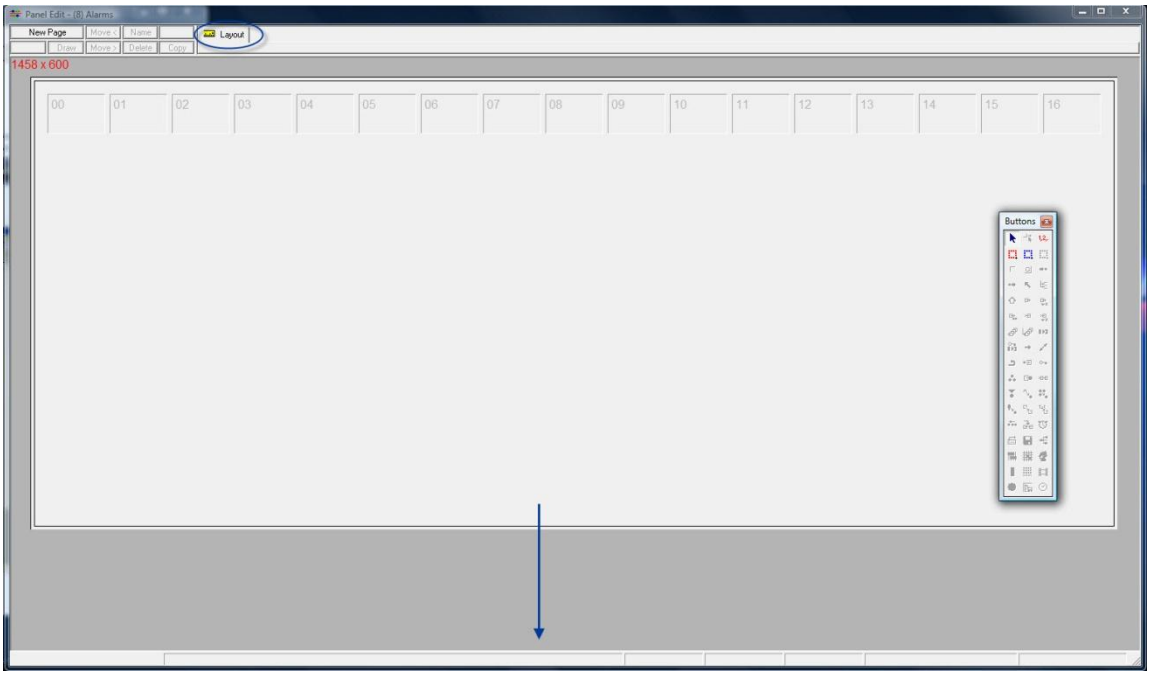


Peakmeter on a vsmPanel

6.36 Alarm Management

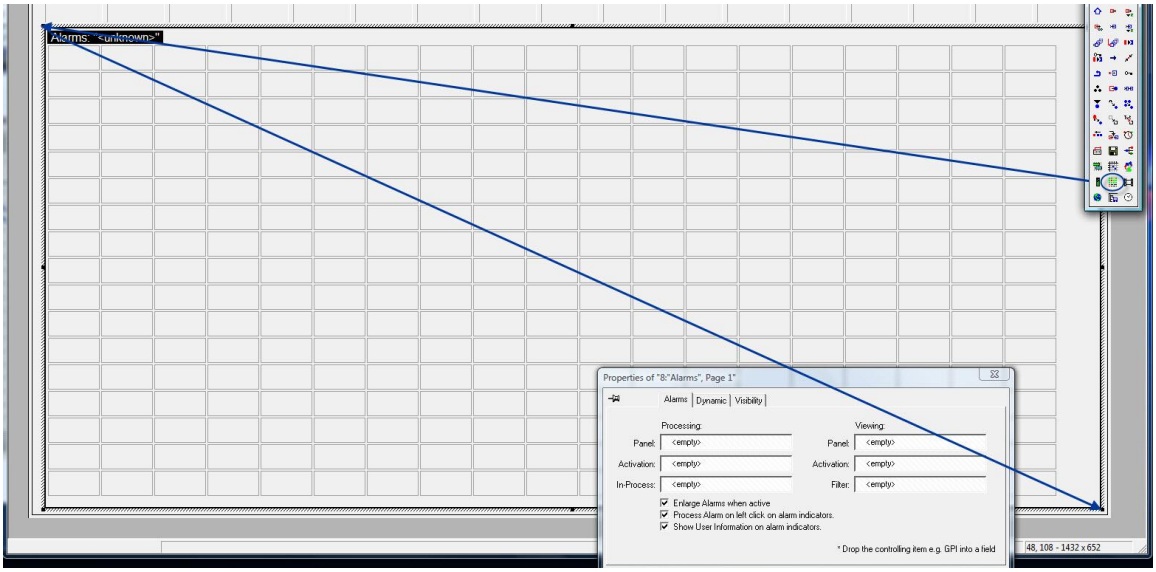
6.36.1 Configuration of the Alarm Management Console

Prior to configuring an alarm management console on a virtual control panel, a free layout area needs to be defined in the panel area.



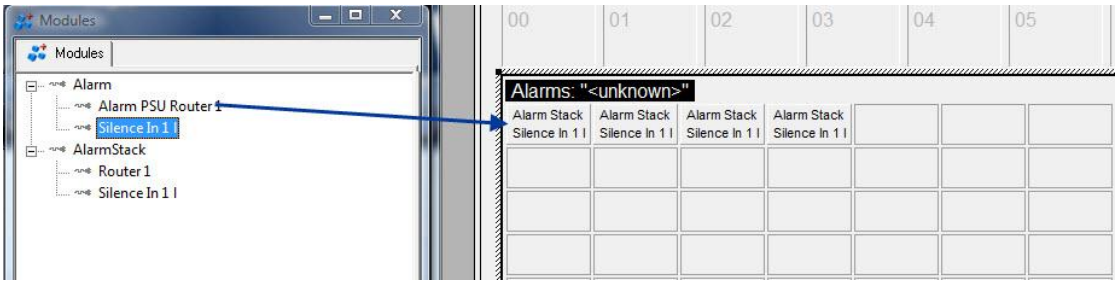
Drawing a layout area

Within this area, the page item for the alarm management can have any size.



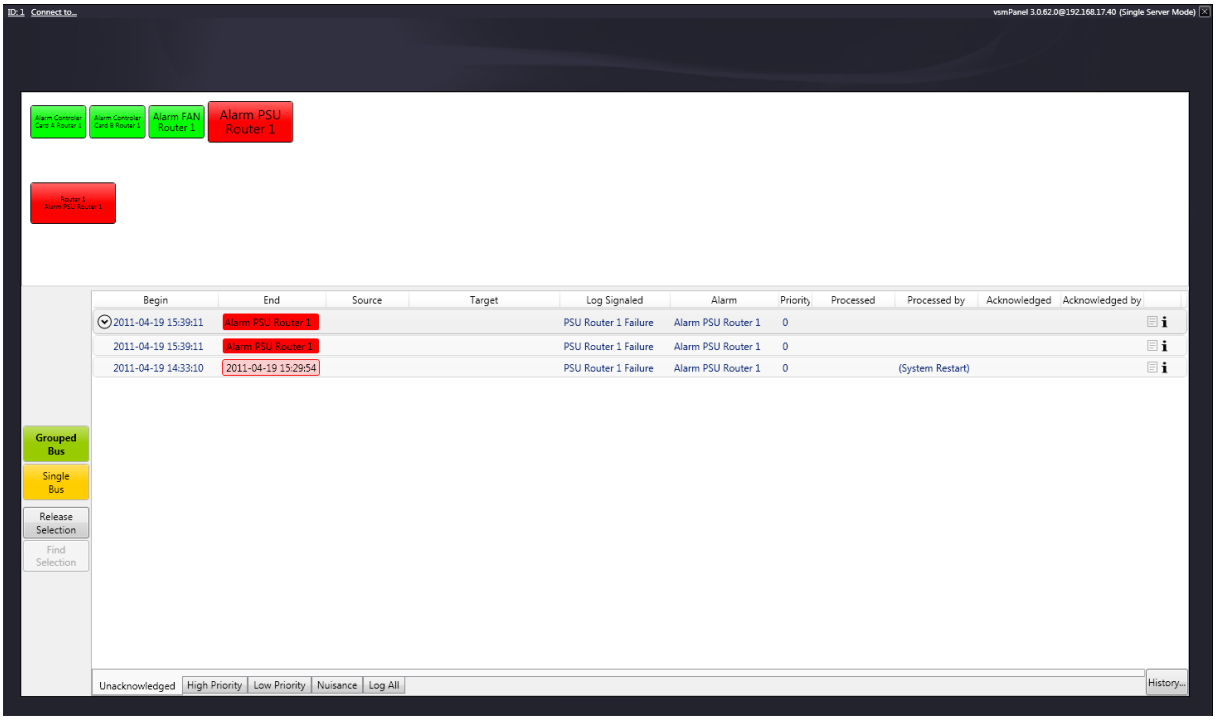
Placing an alarm management page item on the panel

Next, alarms (see chapter 16.1 Alarm) or *AlarmStacks* (see chapter 16.2) are dragged and dropped into any position in the alarm management console. In the panel edit, this function is displayed with a black frame and, as long as no alarms or alarm stacks are assigned to it, the white caption *Alarms: "<unknown>"* on a black background. The frame can be deleted by right-clicking into it and selecting *Delete*.



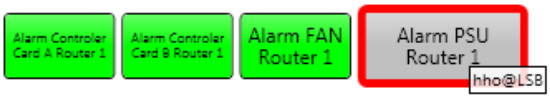
Assigning alarms and AlarmStacks

When an alarm becomes active, it will be displayed in the appropriate colour. At the same time, the individual, active alarm is indicated in an *AlarmStack*. If this panel ID is opened with the vsmPanel, the following alarm management console will appear.



Alarm management console

6.36.2 Operating the Alarm Management Console



Individual alarms

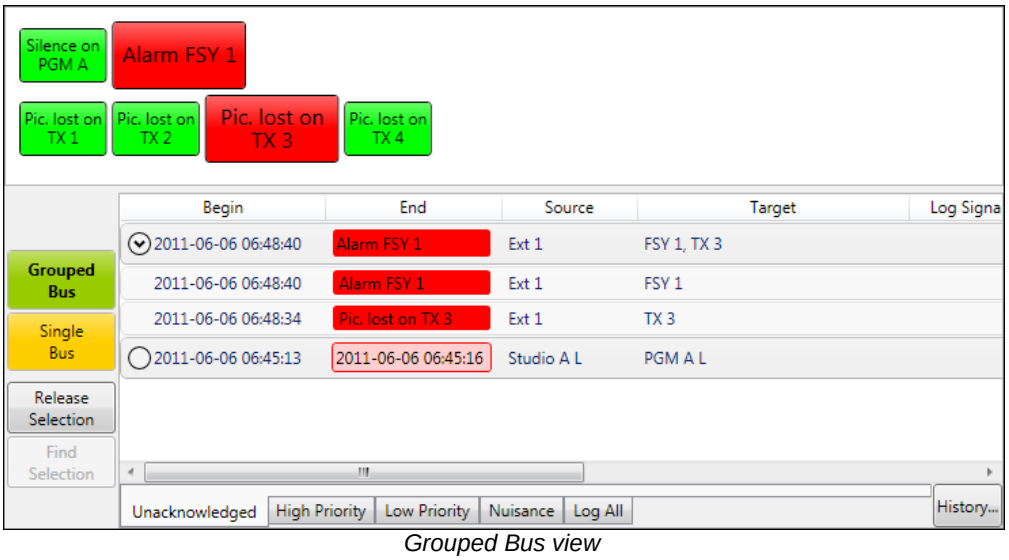
Active alarm notifications are highlighted and displayed in the appropriate colour in accordance with the colour specifications (see chapter 16.1.3 Alarm Module). The process status of the alarm can be accessed by left-clicking onto an active alarm. A right-click on the active alarm, however, will open a sub-menu offering the following options: *Process*, *Acknowledge*, and *View in X/Y Panel*.

AlarmStack

The *AlarmStack* (see chapter 16.2) groups all individual alarms and shows the active alarm in accordance to the created priority list. The colours used hereby depend on the colours defined for each individual alarm (see chapter 16.1.3 Alarm Module). By left-clicking onto an active alarm, the process status of the alarm is activated. A right-click on the active alarm will open a sub-menu offering the following options: *Process*, *Acknowledge*, and *View in X/Y Panel*:

- *Process*: This option registers the user editing the alarm and puts the alarm into the process state. Depending on the control panel configuration, certain process panels can be created and equipped with the relevant switch information. The alarms are then saved in the history where they can be viewed at any time.
- *Acknowledge*: This option registers the user who confirmed the alarm and moves the alarm into a different sub category. The alarms are then saved in the history where they can be viewed at any time.
- *View in X/Y Panel*: This option transfers the information belonging to the alarm to a control panel previously configured to this end.

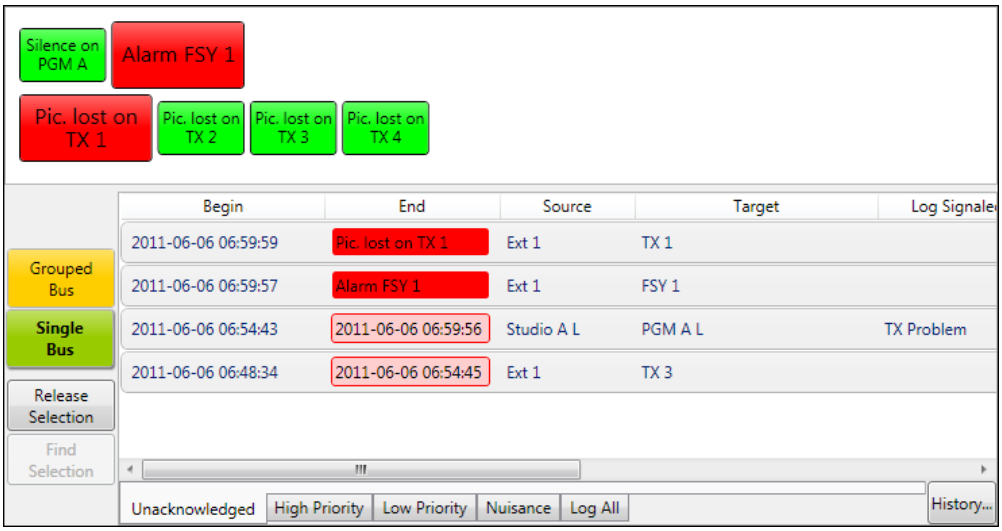
Please note: All control panel interaction for processing or viewing requires an appropriately configured dynamic attachment script (see chapter 19.8).



Grouped Bus view

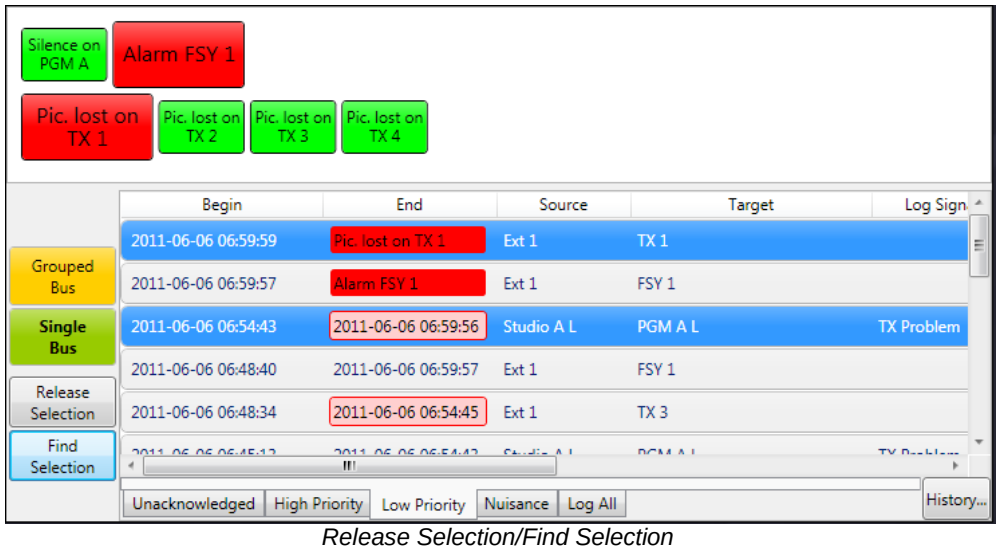
A click onto *Grouped Bus* summarizes all alarms in groups. They are, however, only summarized if they are independent from each other. Dependence can occur, for example, if the alarm for FSY 1 (picture lost) triggers an alarm on the TX path which is switched onto the

FSY (and an appropriate alarm exists for it). In this scenario, all affected signals are shown at once. If the grouped bus is confirmed by pressing *Acknowledge* or edited further through *Process*, all alarms dependent on it are put into this state at the same time.



Single Bus view

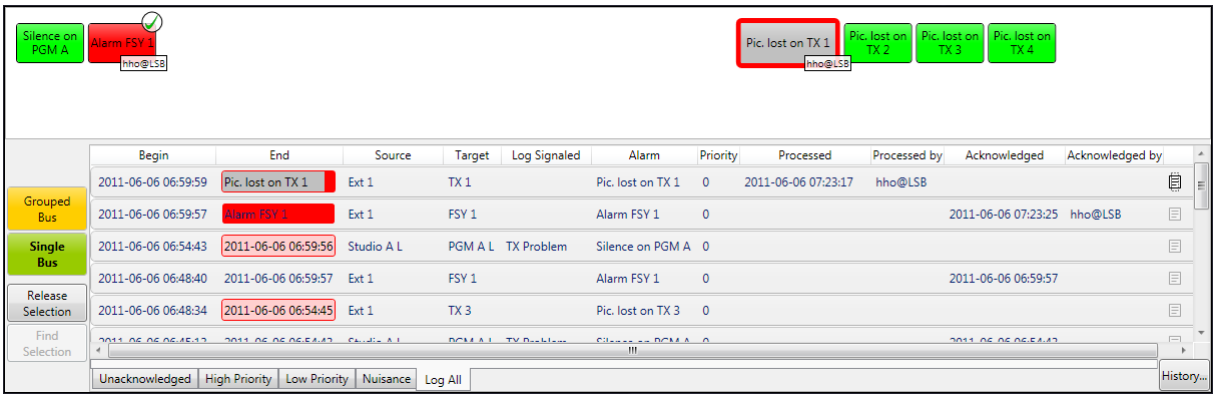
By clicking *Single Bus*, all alarms are listed individually. They are, therefore, not grouped, and alarms have to be changed to either the *Acknowledge* or the *Process* state individually.



Release Selection/Find Selection

Using the button *Release Selection*, selected alarms (with a blue background) can be deselected. The function *Find Selection* allows the recovery of selected (with a blue background) alarms. For extensive alarm lists, this button helps to specifically focus in on the selected individual alarms.

6.36.3 Columns of the Alarm Management Console

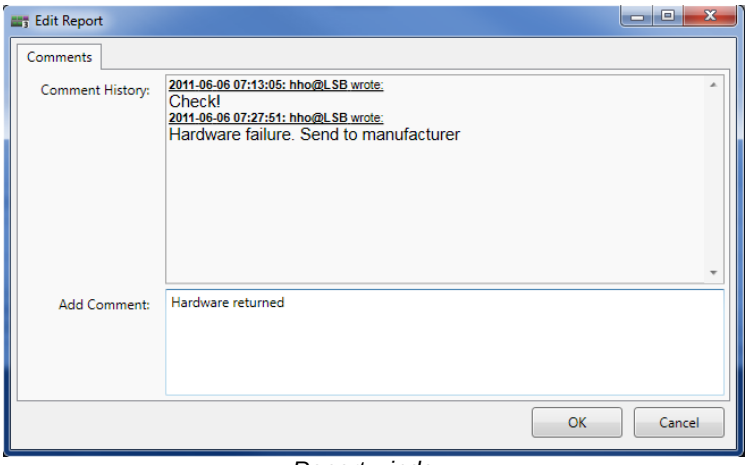


Alarm View details

- *Begin*s shows the time and day on which the alarm became active.
- *End*: For active alarms, the name of the alarm will be displayed. For inactive alarms, the end of the alarm will be displayed.
- *Source*: If possible, this column shows the connected source that is affected by the alarm.
- *Target* displays the target corresponding to the alarm.
- *Log Signaled* displays the name used for the reporting. This entry can be found in the vsmStudio.log file (see chapter 2.3.3.1 Folder Log Files). The name is defined during the set-up of the GP-I/O (see chapter 16.1.2 Alarm GPO).
- *Alarm* displays the name of the alarm.
- *Priority* indicates the priority of the alarm
- *Processed* shows at what time and date the alarm was changed to the *Processed* state.
- *Processed by* shows the vsmPanel PC user who put the alarm into the *Processed* state
- *Acknowledged* indicates the time and date at which the alarm was changed to the status *Acknowledged.*
- *Acknowledged by* indicates the vsmPanel PC user who changed the alarm's state to *Acknowledged.*

6.36.4 Alarm Report

A report for the problem can be saved by selecting the text icon in the backmost part of the alarm list.

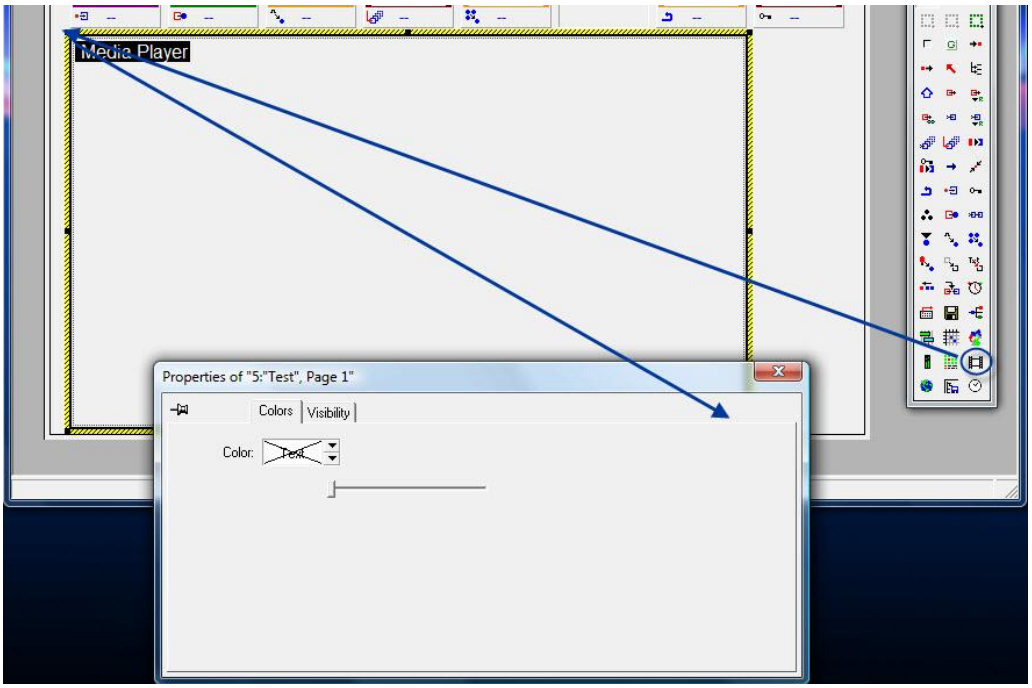


Report window

- *Unacknowledged* shows all alarms that have not yet been acknowledged.
- *High Priority* shows all alarms (acknowledged or not) with high priority.
- *Low Priority* show all alarms (acknowledged or not) with low priority.
- *Nuisance* shows all alarms that have been assigned the status *Nuisance.*
- *Log* all shows all alarms.
- *History* shows past alarms and allows the export of “all” alarms or alarms from the “current day” into a file.

6.37 Media Player

Using the *Media Player* function, different audio and video files can be played back on a virtual panel. This function also requires a frame. To create a frame, select the function in the panel toolbox and drag the cursor from the top left to the bottom right while pressing the left mouse button to draw a frame in the required size.



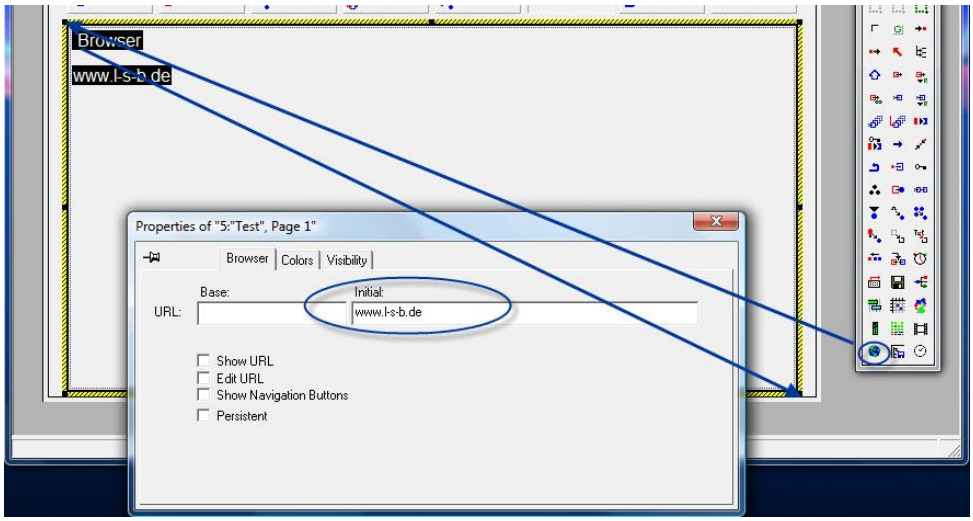
Media Player frame

The default colour style for the *Media Player* in the panel edit is a black frame with a white caption on a black background in the top left corner.

Media Player on vsmPanel

6.38 Browser

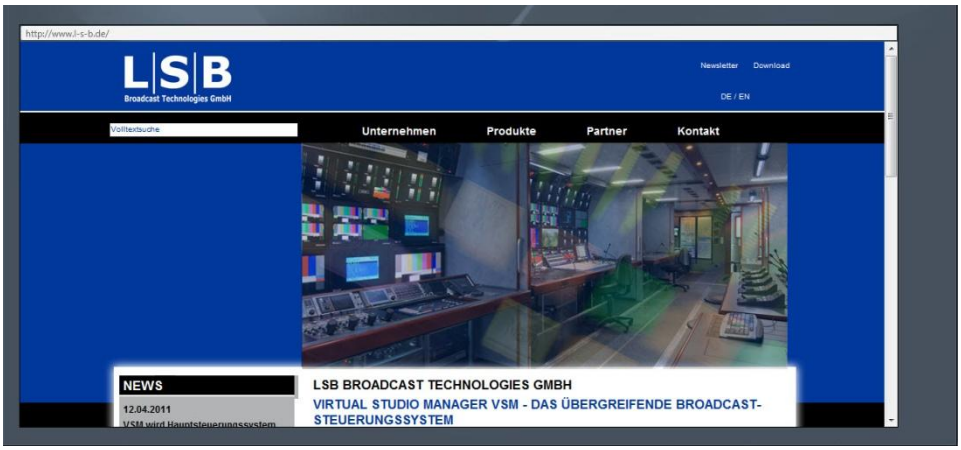
The *Browser* function allows the display of websites or switch configurations online on a virtual panel. It also provides complete internet browser navigation. This function also requires a frame. To create a frame, select the function in the panel toolbox and drag the cursor from the top left to the bottom right while pressing the left mouse button to draw a frame in the required size.



Browser frame

In the panel edit, the browser is displayed with a black frame and a white caption on a black background in the top left corner of the frame.

The homepages that will be displayed in the browser window when the panel is opened with vsmPanel can be entered under *Initial* in the *Browser* tab of the function's properties window. The standard URL can be entered in the field beside *URL*. If the box in front of *Show URL* is ticked, the web address will be shown. If *Edit URL* is checked, the address can be changed. The option *Show Navigation Button* allows the user to navigate to the previous or the next site just as with a normal browser.

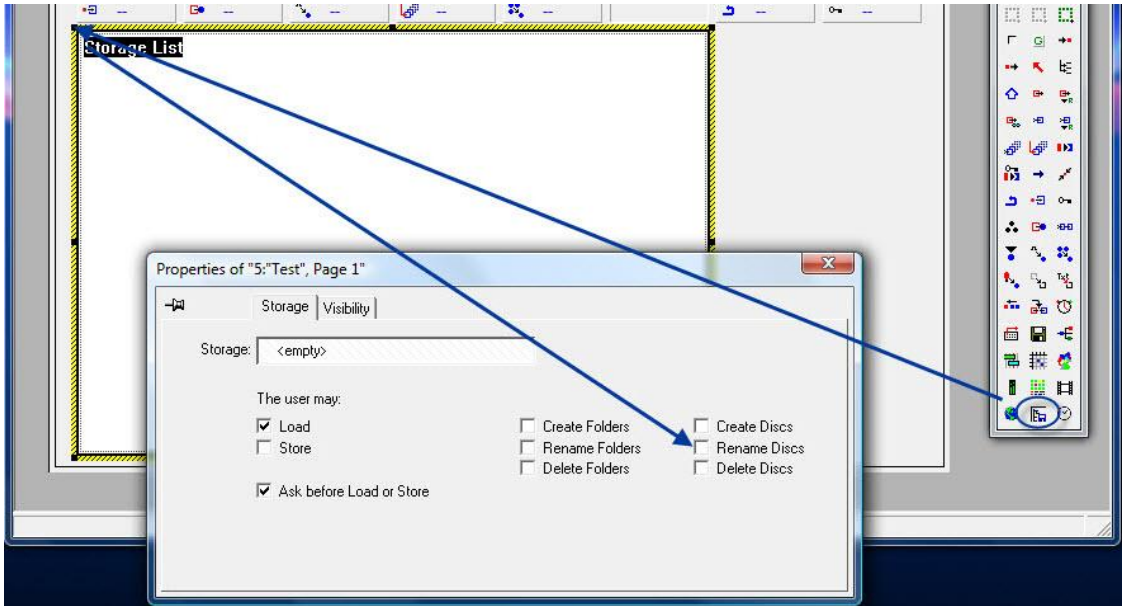


Web browser on vsmPanel

The frame can be deleted by right-clicking into it.

6.39 Storage List

The function *Storage List* allows the creation, loading, and saving of storage groups (see chapter 9) on a control panel. This function also requires a frame. To create a frame, select the function in the panel toolbox and drag the cursor from the top left to the bottom right while pressing the left mouse button to draw a frame in the required size.



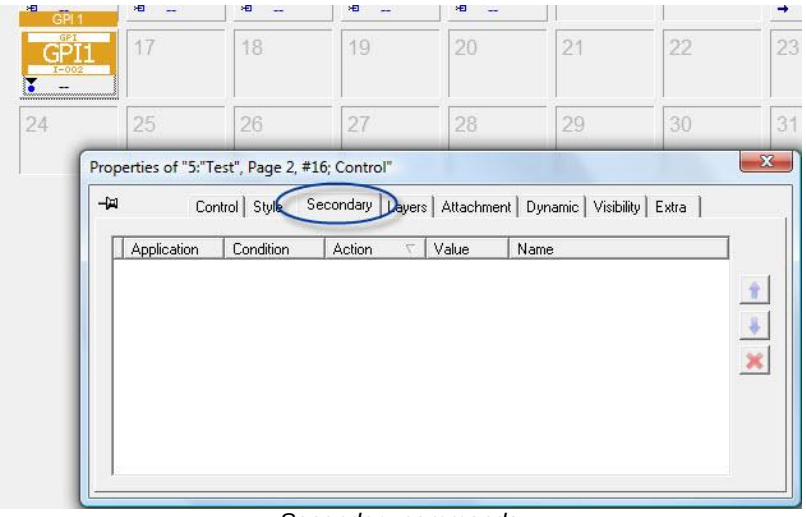
Storage List frame

- The *Storage* tab of the properties window offers the following options:
- The storage group or the storage disc that is to be used on the panel can be added in the field beside *Storage* using drag and drop.
- Under *The user may*, the functions to load and save storage groups or storage discs are offered.
- If the option *Ask before Load or Store* remains active, a click onto save or load will prompt a window asking for confirmation of the action.
- *Create Folders* enables the creation of new storage groups in the storage frame on the panel.
- Using *Rename Folders*, it is possible to rename new storage groups in the storage frame on the panel.
- Storage groups can be deleted using *Delete Folders*.
- *Create Discs* enables the creation of new storage discs in the storage frame on the panel.
- *Rename Discs* enables the renaming of new storage discs in the storage frame on the panel.
- Storage discs can be deleted in the storage frame on the panel using *Delete Discs*.

The frame can be deleted by right-clicking into it.

7 Secondary Commands

A *Secondary Command* is a button function. It allows buttons to be assigned functions in addition to their primary functions. Secondary commands can be accessed as tab in the panel edit's properties window. Alternatively, the relevant secondary function can simply be placed on the respective button while pressing the *Ctrl*-button.



Secondary commands

Once a secondary command has been added, a white *S* will be shown on green background in the bottom of the button.

Button with secondary command

7.1 Configuration of Secondary Commands

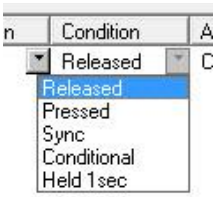
There are generally two ways to add an additional function to the secondary field: The function can either be placed into the secondary field using drag and drop, or directly onto the relevant button while pressing the *Ctrl*-button.

Configuration of the secondary command

If an element has been placed in the secondary field, the predefined columns *Application*, *Condition*, *Action*, *Value*, and *Name* offer different ways to specify further how the secondary commands are to be executed. The options available in the field under *Action* hereby depend on the selected function.

Options under Application

The options under *Application* and *Condition* are the same for all secondary commands.

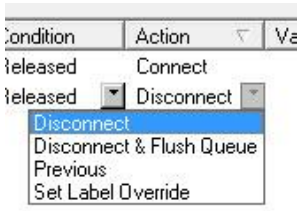


Options under Condition

The following options are available under *Condition*:

- *Released* (default setting): The secondary function will be executed as soon as the button is released.
- *Pressed*: The secondary function will be executed when the button is pressed.
- *Sync*: If the button itself as well as the secondary command is a gadget parameter (see chapter 10) with the same function and the same value range (that is gain from 0 to -128dB), the value used in the secondary command will follow the value of the button.
- *Held 1sec*: The secondary function is executed when the button is pressed for one second.

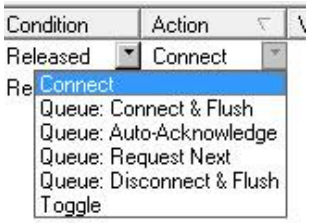
7.2 Secondary Commands and Actions



Action options for targets

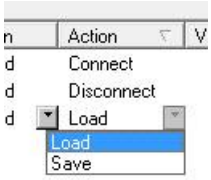
The following functions can be placed in the secondary window:

- Target: *Disconnect* (default setting) connects the target with the blind source. Previous connects the target with the previously connected source.



Action options for crosspoints

- Crosspoints: *Connect* (default setting): The crosspoint is placed. *Queue: Disconnect & Flush* refers to the queue connect function. *Toggle* switches between the crosspoint or the crosspoint *blind > target* at the push of a button.



Action options for storage groups

- Storage groups: *Load* (default setting) loads a pre-defined storage group, *Save* saves it.

Action options for GPOs

- GPOs (see chapter 10): *Toggle* (default setting) changes the state of the GPO to the currently unused one (that is if the GPO is *ON*, toggle will turn it *OFF* and vice versa).

Set activates the GPO, *Clear* deactivates it. *Pulse* will activate the GPO for one second.

Action options for gadget parameters

- Gadget parameters (see chapter 10): *Set Absolute* (default setting) changes a parameter to the value that was entered in the *Value* field. *Set Relative* will change the parameter by the interval defined in the *Value* field (with +/- as prefix).

Action options for panels

Panel: *Escape* (default setting) deselects the active components of the selected control panel. *Goto* jumps to a different panel. *End Alarm Processing* ends the alarm processing on the selected panel. With the function *Assign DAS Alias* that can be found below the panel name, the secondary function can be used in connection with *Dynamic Attachment Scripts* (DAS) by entering a unique name (see chapter 19.9 Secondary Commands and Dynamic Attachment Scripts). This allows all secondary functions to be used dynamically.

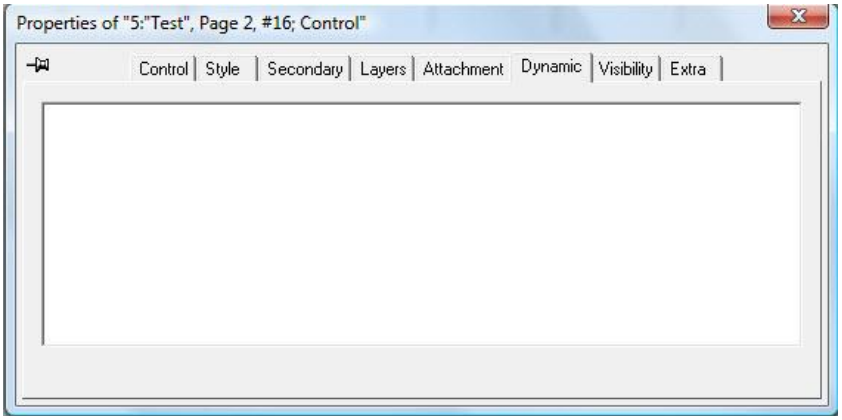
Providing an alias for dynamic attachment scripts

8 Dynamic Attachment Scripts (DAS)

Dynamic Attachment Scripts – short DAS – are scripts that the VSM control system uses to make assignments dynamically.

8.1 Configuration of Dynamic Attachment Scripts

These scripts are assigned to a button in the *Dynamic* tab of its properties window.



DAS field

As soon as a script has been assigned to a button, a white *D* on a green background will appear on the button.

DAS marking on buttons

The *Dynamic* window allows the simultaneous configuration of multiple scripts. Scripts are entered line by line and are executed from top to bottom, until a script with a true result ends the execution of the scripts. Dynamic attachments scripts are not case sensitive.

Generally, the same button function (signal, control button, etc.) is selected that the script is meant to generate in the end. A gain, for example, would usually be placed on a control button, while a target would be placed on a target button.

8.2 Scripts and Applications

The following scripts can be used for the described applications:

- *trace*: This script is added in the first line of a DAS and can be used optionally to display the result of a script in the *CommTrace*.

Achtung: This script impedes system performance and should therefore be deleted after testing and verification of a script.

- *selectedtarget*: With this script, the target selected on the panel will appear on the button on which the script is executed.

- *selectedtarget.source*: This script allows accessing the source corresponding to the selected target. This function only becomes visible if a source button is used.

- *connectedsource*: This script allows accessing the source corresponding to the selected target.

- *selectedsource*: This script allows access to the selected source.

- *selectedgadget*: If a selected parameter can be activated, it can be accessed with this script.

- *selectedcomponent*: With this script, a selected element, a parameter, or a GPI (except for signals) can be accessed.

- *attached*: This script gives access to a function that is concealed “under” a button. If, for example, a source or a target is placed on a button, and a GPI or gadget button is placed on the same button, the script attached will provide the “attached” function. This means that if a target is placed on the button first followed by a source button, the script
  attached.source
  will provide the source of the target previously placed on the button.

- *current*: With this script, the last evaluated script will be shown until it is re-evaluated. The script
  selectedtarget
  current
  results in the display of the last active target until a new target is selected.

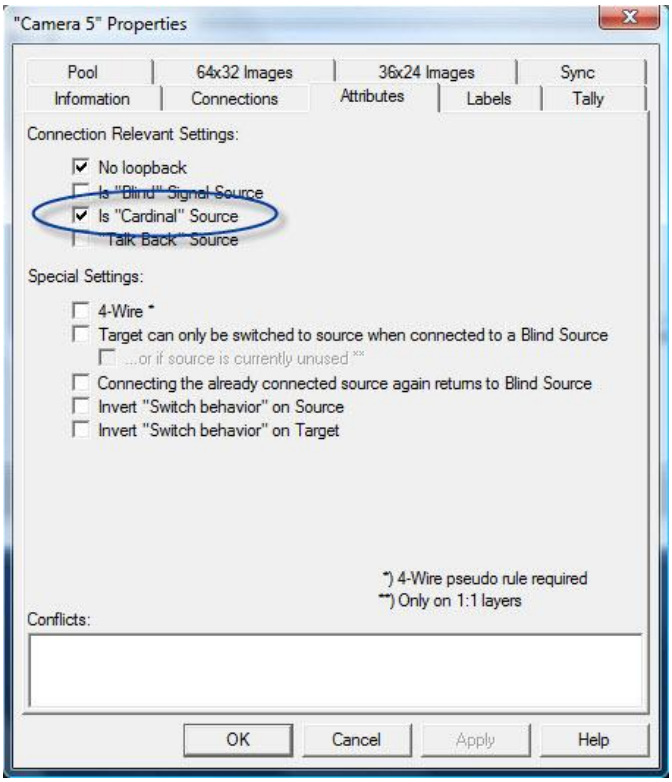
- *target= or source=*: These scripts are generally used in combination with a control button. They become crosspoint buttons.
  target=selectedtarget
  or
  source=selectedsource
  for example, dynamically generate a crosspoint from the selected target and source.

If a source should be generated dynamically (for example the currently selected source) and the corresponding target should be locked, a crosspoint with the locked target is used. The source of the crosspoint is hereby irrelevant. In this scenario, the script would look as follows:
target=attached
source=selectedsource
The same procedure works the other way as well (dynamic target, locked source).

- *pSource*: The p in the beginning of the scripts stands for physical. When this prefix is used, the next available physical source in the signal flow is displayed. Virtual signals in the signal flow are ignored.
  selectedtarget.psource
  for example, displays the next outgoing physical source of the selected target.

- *fSource*: The *f* in the beginning of the script stands for far. Using this prefix, the first source in the signal flow will be displayed.

- *cardinal*: The attribute main source or cardinal source was added in order to be able to reach signals in the signal flow that are neither located at the beginning nor before the selected target. A *signal* can only be found using this script if the attribute signal path *Is "Cardinal" Source* is selected in the signal path properties (see chapter 5.2.4 Signal Path Attributes).



Main source indicator

selectedtarget.cardinalsource

would be an example of a valid script.

- *target*: This additional script allows access the target located at the end of the signal flow from another target in the signal flow, for example by using the script
- *selectedtarget.target*

- *meta*: This script is used to gain access to previously created gadgets (see chapter 10) from pre-defined meta gadget containers (see chapter 11). The relevant syntax becomes clear in the following example: If the corresponding volume has been assigned to a target in the meta gadgets, the script
  selectedtarget.meta:“Volume“
  will provide the corresponding volume value. Similarly, this script can be used for all values stored in meta gadget containers.

- *activate=*: This script allows the dynamic activation of a parameter, for example to be able to modify it through an incremental encoder. As an example: In order to modify the volume belonging to a selected target, this value must be generated and activated on the position of the incremental encoder.
  activate=selectedtarget.meta:“Volume“
  selectedtarget.meta:“Volume“
  or
  activate=selectedtarget.meta:”Volume”
  activate

- *<signal>:”layer”*: This syntax allows the generation of values (that is signals, parameters, etc.) due to definitions of pseudo devices (see chapter 12). Based on the selected target,
  selectedtarget:“Audio 2“
  for example, searches the target that is located in the column *Audio 2* under pseudo devices (see chapter 12.2 New Pseudo Device Rule).

- */follow=*: With this script, parameters can be set to follow each other. This becomes relevant for application with stereo gains. Using the script
  Selectedtarget:“Audio 2“.meta:“Gain“/follow=selectedtarget.meta:“Gain“
  the gain parameter based on the selected source and belonging to the signal defined in the column *Audio 2* in the pseudo device rules is set to follow the gain of the selected target.

- *xconnect*: With this script, a crosspoint generated by DAS is executed at once. For example, to dynamically connect a locked target to a selected source, a crosspoint with the required target is chosen. The script on the crosspoint button would read as follows:
  target=attached

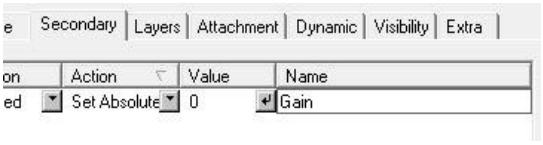
source=selectedsource
xconnect

- *if*: This script allows the generation of events depending on the occurrence of certain other events. If, for example, a crosspoint is only to be generated if a gain parameter was added to the selected target in the meta gadget container, the following script would be used:
  if(selectedtarget.meta:"Gain")
  target=selectedtarget
  source=selectedsource

- *visibility=*: In combination with the if-script, buttons can be made visible or invisible with this script. If a navigation button is to be made invisible if the selected target has a meta gadget gain:
  if(selectedtarget.meta:"Gain")
  visibility=false

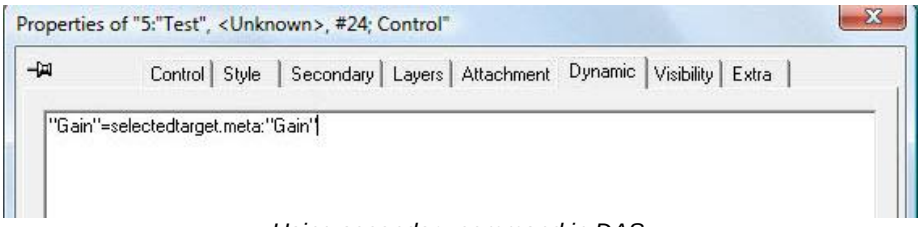
9 Secondary Commands and DAS

Dynamic Attachment Scripts can be used in combination with secondary commands. By combining the two, dynamic secondary commands can be generated on buttons. To do so, a signal or parameter has to be added in the secondary tab und button properties. Select the function *Assign DAS Alias* in the column *Name* and enter a unique name. This name must be used in the *Dynamic* window in the future.



Assigning gain as DAS Alias

If, for example, the gain of the selected target is to be locked at -20dB on a generic button, place an arbitrary gain in the secondary window and define it according to the requirements (*Set Absolute* with value -20). Then, select *Assign DAS Alias* in the column *Name*, and enter a name, for example *Gain*. Next, the following script must be used in the *Dynamic* window: *„Gain"=selectedtarget.meta:"Gain"*.

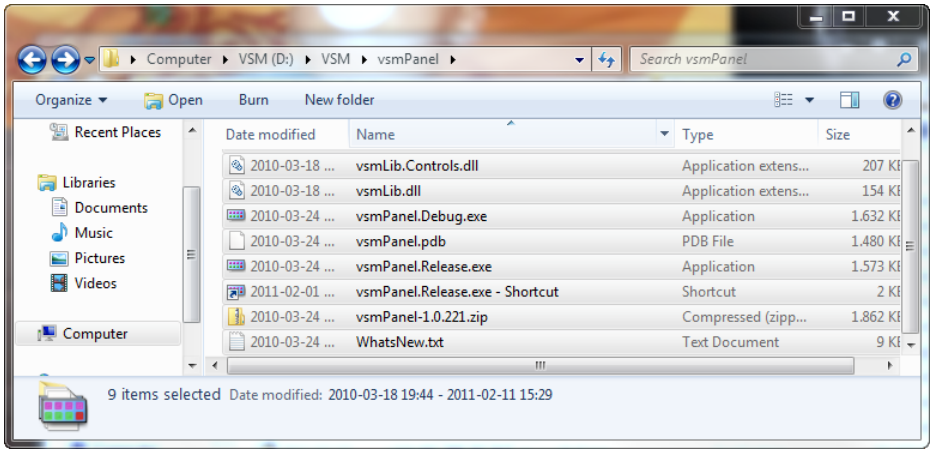


Using secondary command in DAS

10 vsmPanel Update

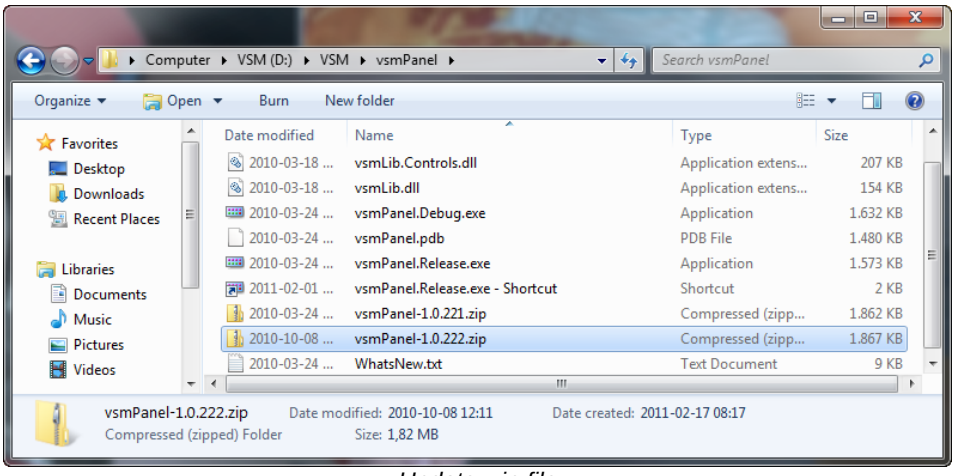
10.1 vsmPanel Versions 1.x and 2.x

Please note: Before updating vsmPanel, it is recommended to backup the currently running version of vsmPanel. To do so, copy all files located in the folder \VSM\vsmPanel onto your backup partition.



Copying vsmPanel files

Place the .zip file provided for the update in the folder \VSM\vsmPanel.

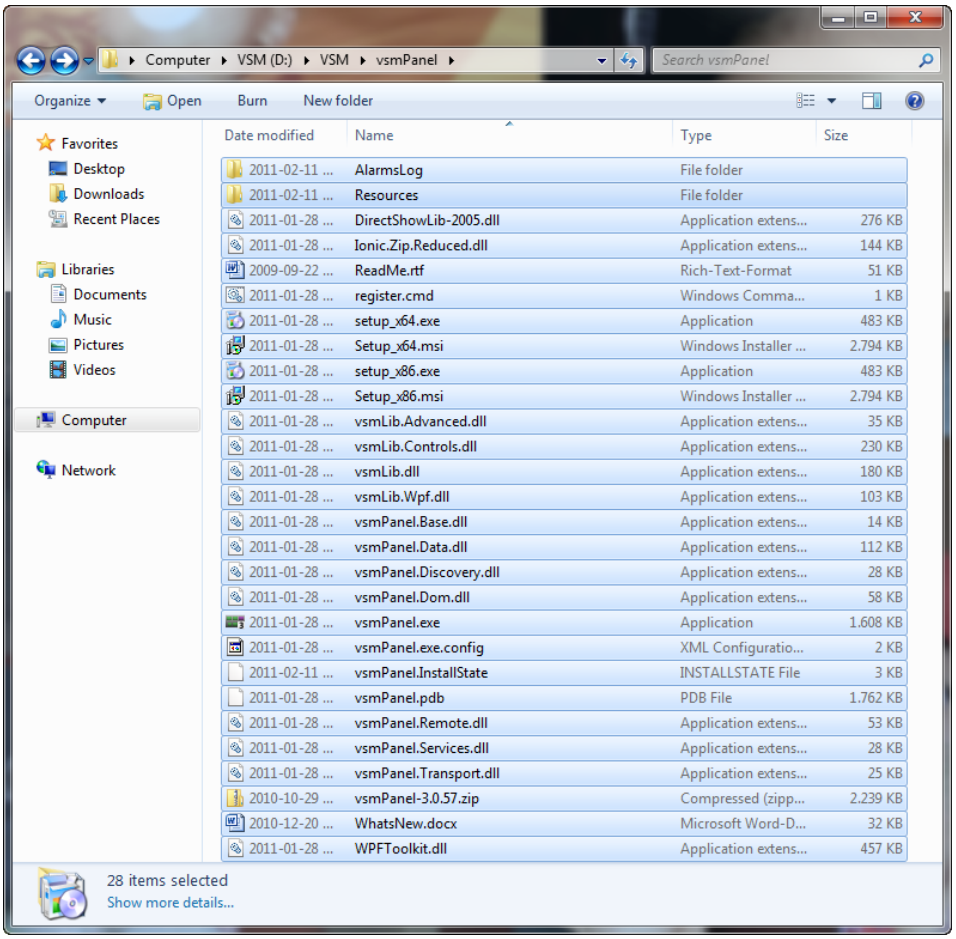


Update .zip file

All files from the .zip-folder will be copied into the vsmPanel folder. Older versions of files located in the vsmPanel folder must be replaced. To do so, delete the old .zip file from the folder and proceed with the installation of the new vsmPanel version.

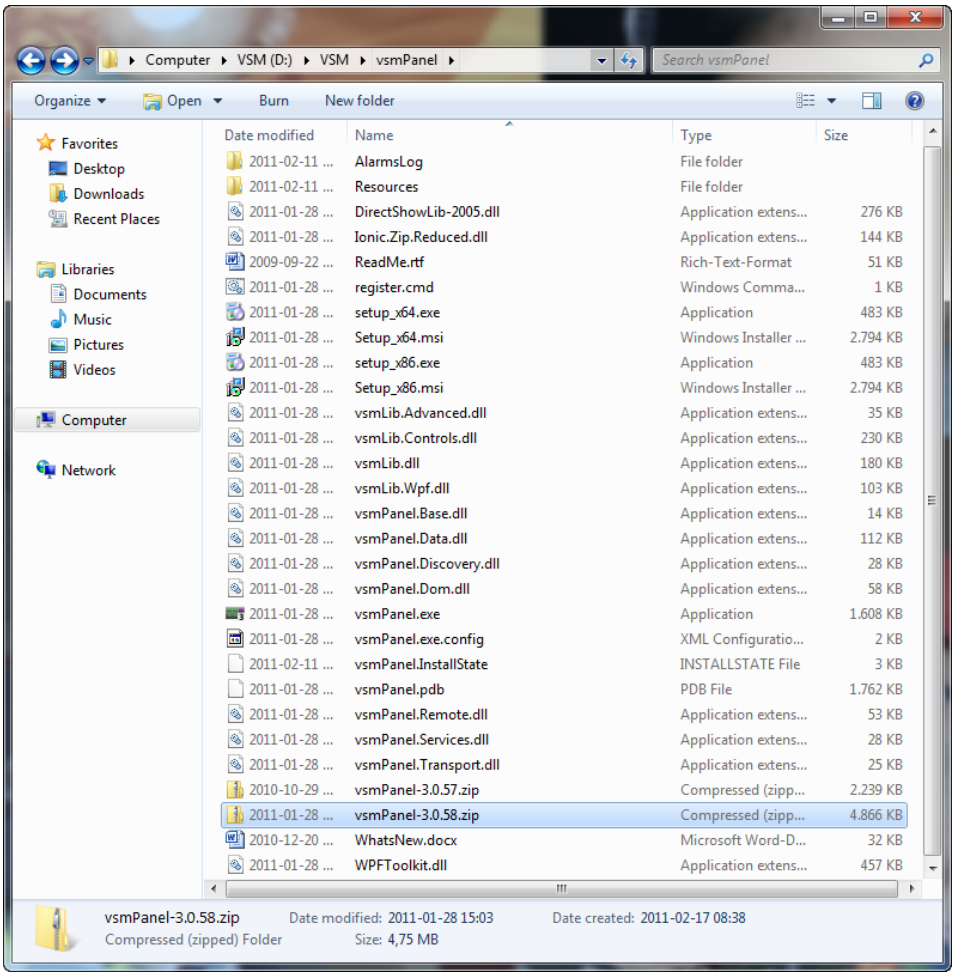
10.2 vsmPanel Version 3.x

Please note: Before updating vsmPanel, it is recommended to backup the currently running version of vsmPanel. To do so, copy all files located in the folder \VSM\vsmPanel onto your backup partition.



Copying vsmPanel files

Place the .zip file provided for the update in the folder \VSM\vsmPanel.



vsmPanel update folder

All files from the .zip-folder will be copied into the vsmPanel folder. Older versions of files located in the vsmPanel folder must be replaced. To do so, delete the old .zip file from the folder and proceed with the installation of the new vsmPanel version (see chapter 19.1 vsmPanel Installation).