



Cortex IP Video Management System

Operation manual

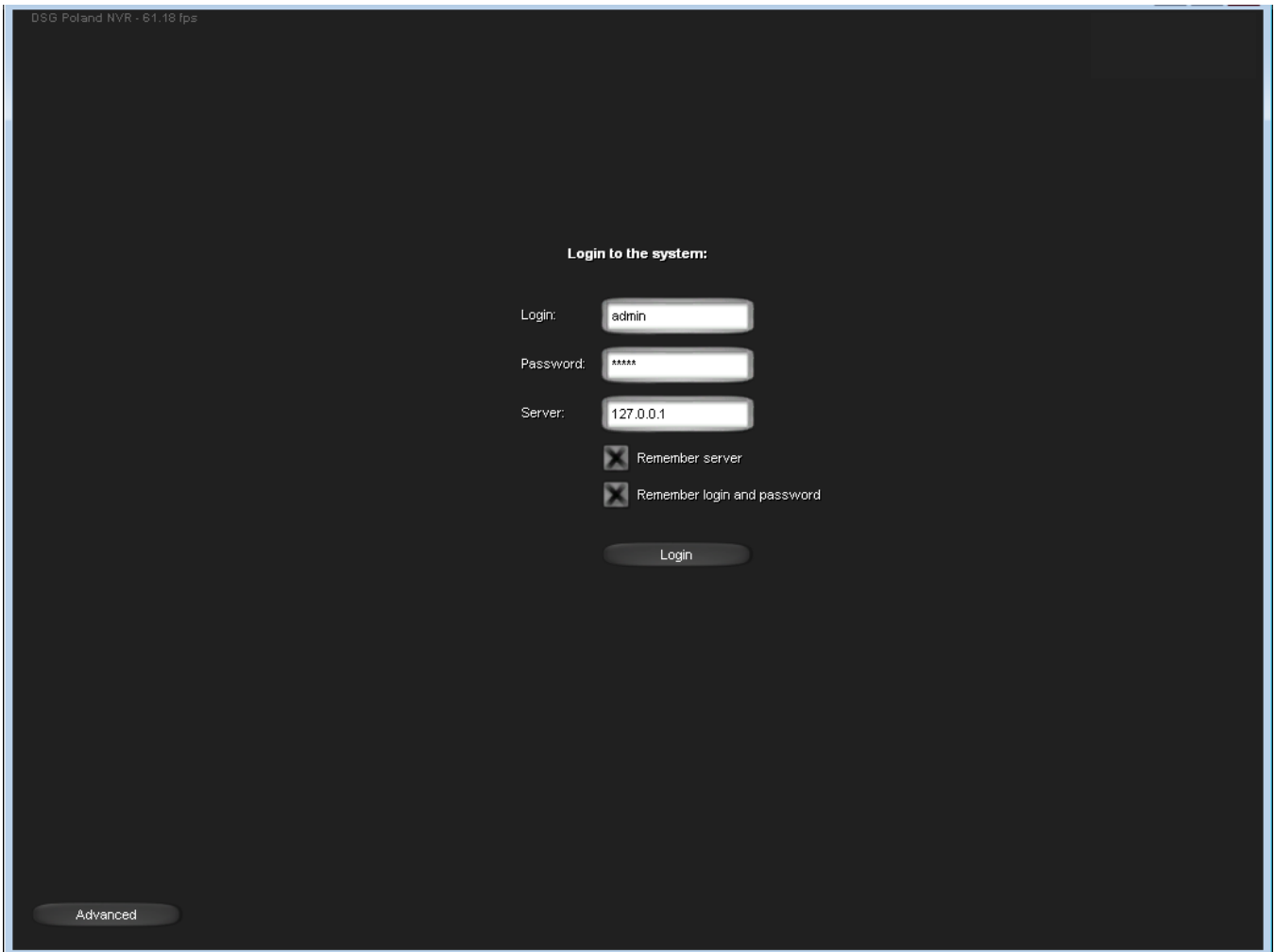
Table of contents:

Introduction	3
1. Login	3
1.1 Advanced login options	4
2. Preview	5
2.1 Main menu	6
2.2 Camera list	6
2.3 Main display	6
2.4 Maps	7
2.5 Display view selection panel	8
2.6 Event management panel	8
2.7 Control panel	8
2.7.1 Volume	8
2.7.2 360	9
2.7.3 Colors	9
2.7.4 Magnifier	9
2.7.5 PTZ	10
2.7.6 Monitors	11
2.7.7 Matrix	11
2.8 Keyboard	12
3. Playback	13
3.1 Events	14
3.2 Calendar	15
3.3 Playback control panel	15
3.4 Time line	15
3.5 Creating and saving media files	16
3.5.1 Screenshot and movie management panel	16
3.5.2 Copy data dialog	17
4. Settings	18
4.1 Logs	18
4.2 Administration	20
4.3 Support	20

Introduction

This document covers the operation of the Cortex IP Video Management System client software typically used by security operators. For configuration and technical maintenance of the system, please see the separate “Configuration manual”.

1. Login



This window is used to log into the system. It appears directly after the software is started or after the user has logged out of the system. To log into the system, fill out the **Login**, **Password** and **Server** fields and press the **Login** button. The **Server** field should have the format of an IP address.

If the **Remember server** option is selected, then during the next login the **Server** field will be automatically filled out with the IP address of the server to which the last successful login took place.

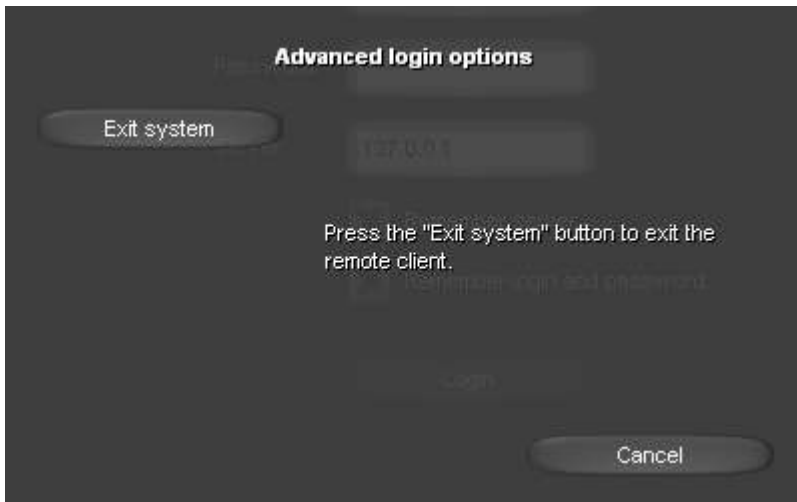
If the **Remember login and password** option is selected, then during the next login the **Login** and **Password** fields will be filled out automatically with the data of the last logged in user.

The **Advanced** button opens the **Advanced login options** window.

- ✓ If the **Remember server** and **Remember login and password** options are both checked, the login window will not appear after the software is restarted – the user will be logged in automatically

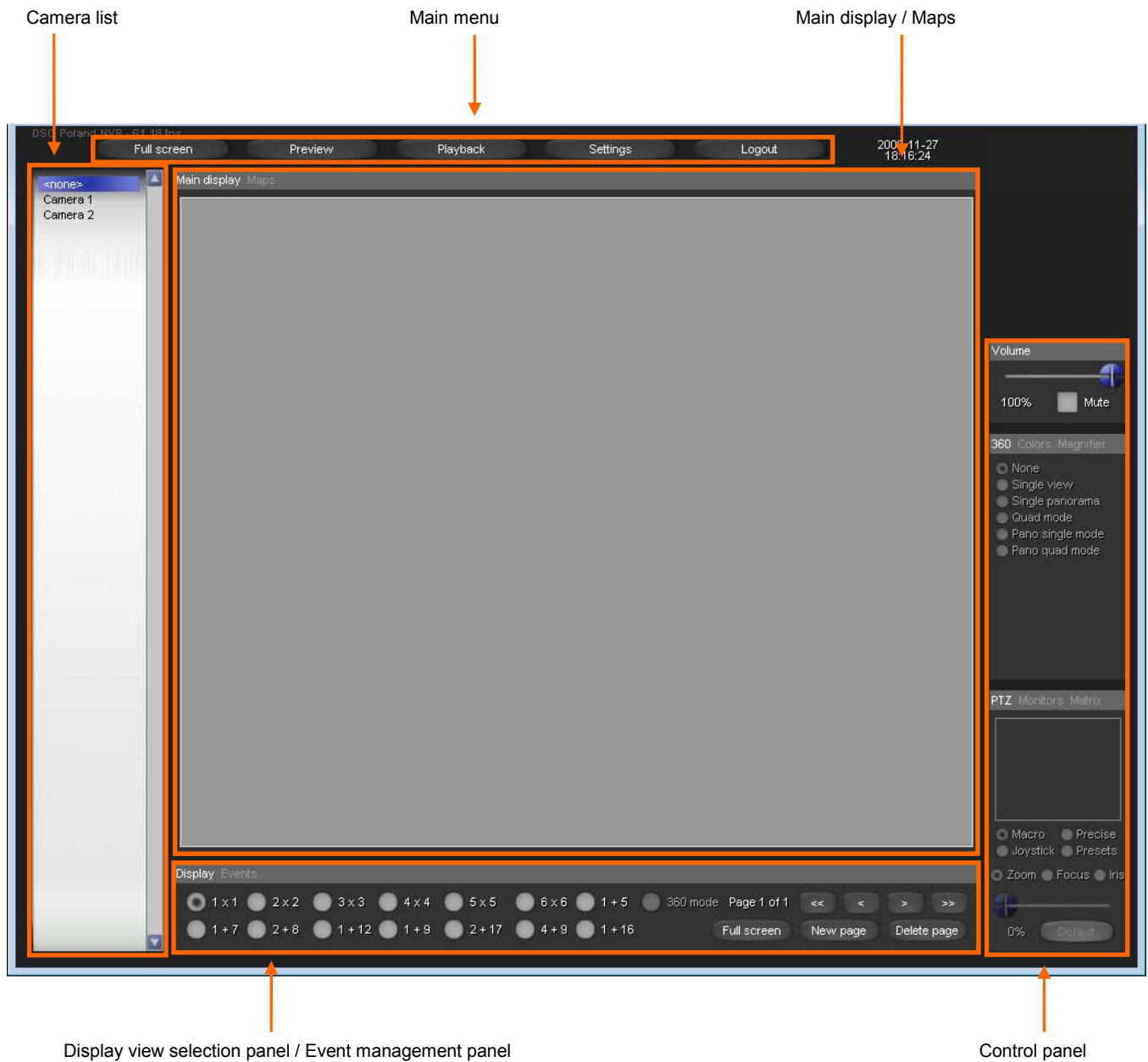
- ✓ The default password for the administrator account (login: **admin**) is **admin**.
- ✓ After a successful login, the **Preview** dialog will be displayed.

1.1 Advanced login options



This window is used to exit the client software using the **Exit system** button.

2. Preview



This window is used to preview live video and audio from cameras, alter their settings, perform PTZ, magnify, control monitors and virtual matrix, manage events/alarms and perform others actions.

The **Main menu** is used for switching between views, also allows the user to log out of the system and switch between full screen and windowed mode.

The **Camera list** on the left side of the window contains all cameras in the system.

The **Main display** in the main part of the window contains boxes called view ports, in which video is displayed.

The **Maps** in the main part of the window are used for viewing and managing maps.

The **Display view selection panel** underneath the **Display** consists of **Display** layout options are related features.

The **Event management panel** underneath the **Display** is used for team alarm and event management.

The **Control panel** on the right side of the window is used to control camera, video, audio and virtual matrix parameters.

2.1 Main menu



The **Full screen** button toggles between the full screen and windowed mode.

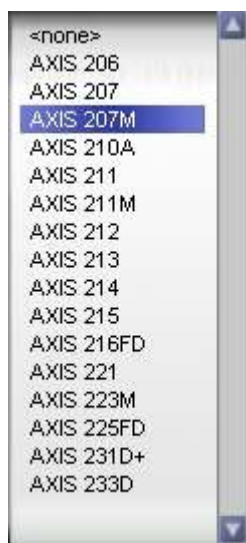
The **Preview** button shows the live preview dialog.

The **Playback** button shows the playback dialog.

The **Settings** button shows the settings dialog.

The **Logout** button is used to log out the current user of the system. After logging out, the **Login** window is shown.

2.2 Camera list



The camera list is used to select cameras from which video will be displayed on the active view port. The list also displays cameras being viewed in the active view port. Clicking a camera shows video from it on the currently selected view port. To not view any video, select the element named **<none>**. The list can be used to select multiple cameras for one view port, in this case each selected camera will be viewed for 10 seconds.

- ✓ To select multiple cameras, click a list element while holding down the Ctrl button on the keyboard. Repeat this process for all cameras you want to select.
- ✓ If a camera becomes disconnected, an exclamation mark will be shown before its name in the camera list.

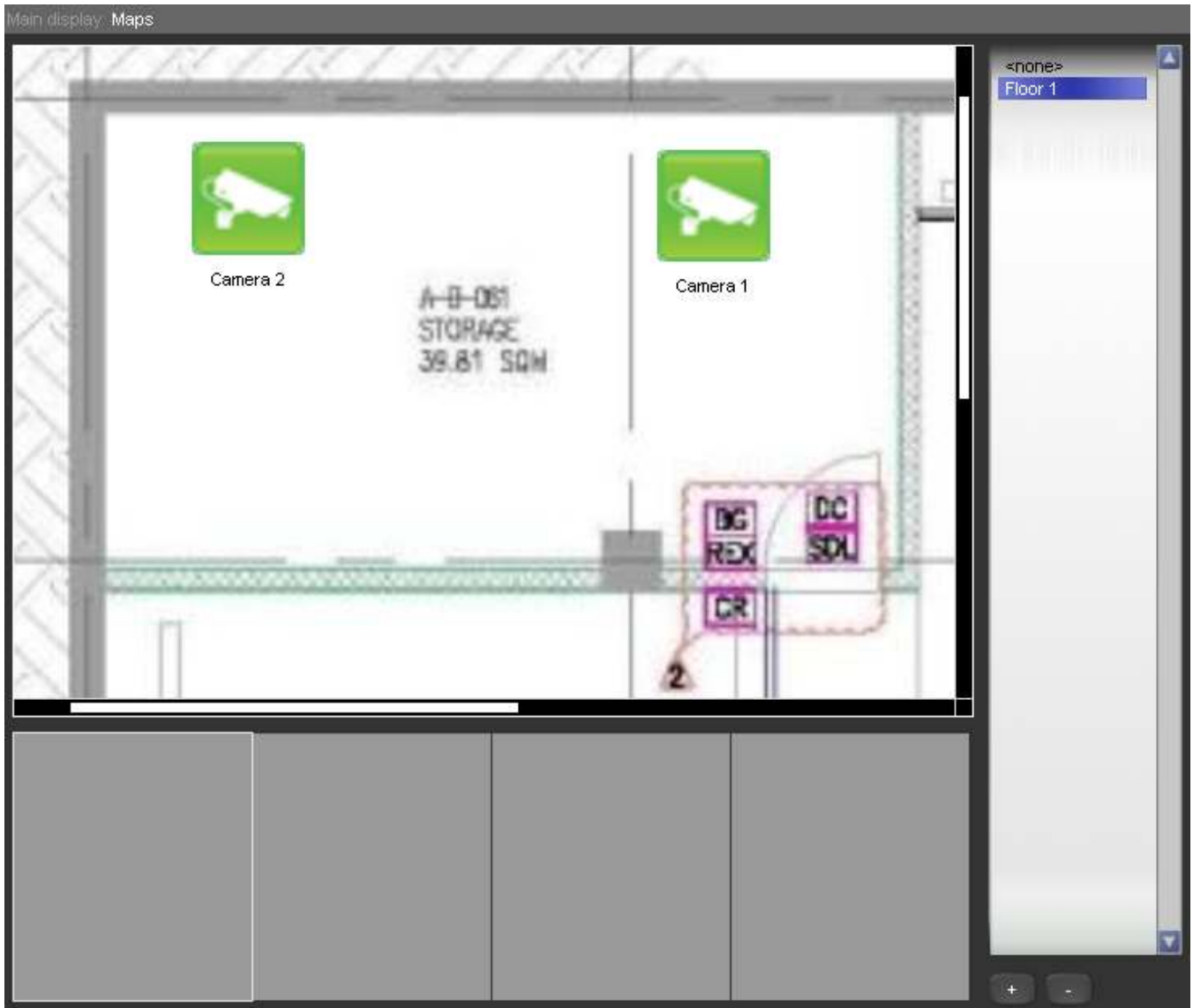
2.3 Main display

The **Main display** is located in the central part of the **Preview** dialog.

It consists of view ports, on which video from cameras is displayed. The layout of the view ports can differ depending on the option selected in the **Display view selection panel**. Clicking a view port marks it as active and draws a white border around it. A view port can display video from a camera or stay inactive (when the **<none>** element is selected in the **Camera list**). The cameras from which the video is displayed on the active view port are highlighted in the **Camera list**. The camera which video is currently viewed on the active view port, also has its audio played (if the camera has this feature and it has been configured).

- ✓ The name of the camera being displayed in a viewport always appears in its top left corner.
- ✓ If a camera becomes disconnected, a blinking red border will appear outside the view port that is showing video from it.

2.4 Maps



The **Maps** are located in the central part of the **Preview** dialog.

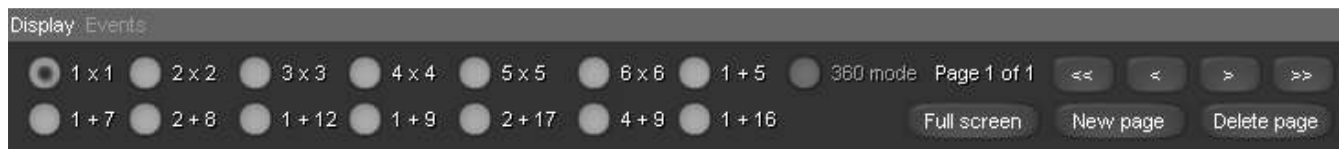
The left top side of the window is the map itself. To pan through the map, drag the mouse with the right mouse button pressed. To zoom in and out of the map, use the mouse wheel. To select a camera, click on it. Selecting a camera will cause video from it to be displayed in the selected auxiliary view port underneath the map. Double clicking the camera will cause video from it to be displayed in the **Main display**.

Clicking on a view port in the auxiliary display underneath the map activates the **Control panel** for the camera being shown in it.

The right side contains a list of all maps. Clicking an item displays the selected map. Choosing the **<none>** item clears the map display.

Underneath the map list, there are two buttons that can be used for zooming in and out of the map as an alternative way to the mouse wheel.

2.5 Display view selection panel



This panel is used for changing the layout of view ports in the **Main display**. To switch through views with different number of view ports, select one of the options in the panel. To create a new page of the current display layout, press the **New page** button. To delete the current page, click the **Delete page** button. To browse through pages, use the 4 navigation buttons. Click the **Full screen** button to display the current layout on the whole application window (hiding all other controls). To go back to normal mode from full screen mode, press the Escape button on the keyboard.

- ✓ If the 360 degree views are in use, the **360 mode** option is automatically selected.
- ✓ The panel shows the current page and the total number of pages of the current layout.

2.6 Event management panel



This panel is used for team event and alarm management. Each new event captured since the software is started is shown in the list. If an event is assigned to or unassigned from a user, the status is reflected in the list. After an event is closed, it is automatically deleted from the list. The **Assign** button is used to assign the selected event to the current user. The **Unassign** button is used to unassign the selected event from the current user. The **Close** button closes the selected event and consequently removes it from the list (the event is also removed from event lists of all other clients). The **Preview** button shows live preview from the camera associated with the selected event in the **Main display**. The **Playback** button shows playback of recordings from the associated camera at the time of the event. The **Map** button shows the associated camera on the map.

2.7 Control panel

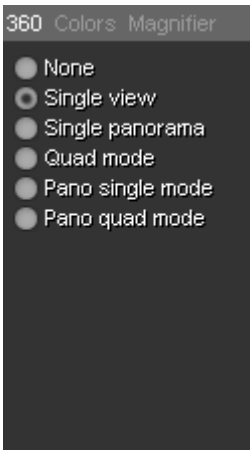
This panel is used to control cameras, video, audio and the virtual matrix.

2.7.1 Volume



This panel is used to set volume of the audio. The **Mute** option mutes all sounds in the system.

2.7.2 360



This panel is used for selecting views for 360 degree cameras. The views are displayed in the **Main display** and its positions and parameters can be controlled using the mouse (dragging with the left button pressed and mouse wheel).

The **None** option disables the 360 mode for the selected camera.

The **Single view** option displays a single perspective view from the camera.

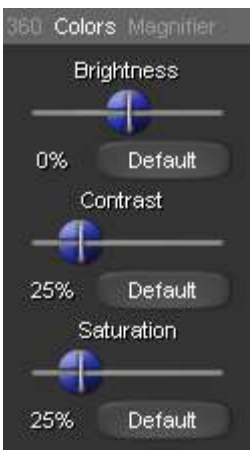
The **Single panorama** view displays a full 360 panoramic view from the camera.

The **Quad mode** displays a 2x2 view with the left top view being the warped view and the 3 remaining ones perspective views.

The **Pano single mode** displays a 1x2 view with the top view being a perspective view and the bottom view a full 360 panoramic view.

The **Pano quad mode** displays a 2x2+1 view with the top 2x2 section being 4 perspective views and the bottom section a full 360 panoramic view.

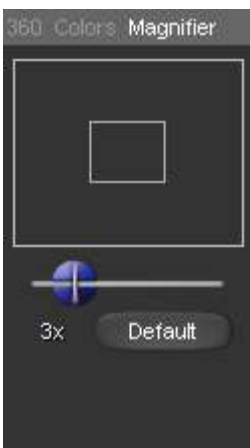
2.7.3 Colors



This panel is used for settings brightness, contrast and saturation of the video from the camera in the active viewport.

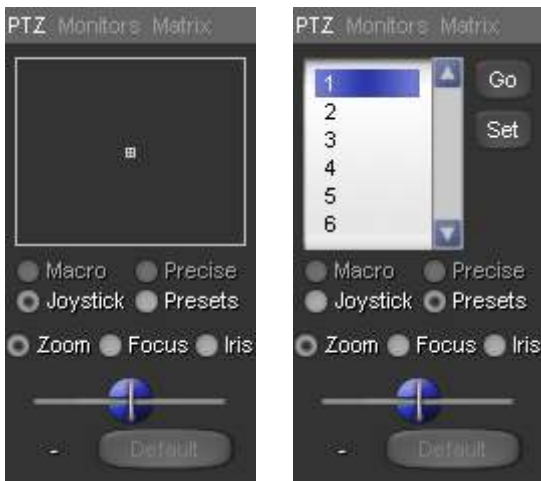
Altering the slider position changes the setting level. The **Default** button restores the default value of the setting.

2.7.4 Magnifier



This panel is used to magnify the video in the active view port. Moving the slider to the right sets the magnification level higher. If the magnification level is greater than 1x, a rectangle appears showing the currently viewed (magnified) area. The rectangle can be moved by dragging it with the left mouse button down. The **Default** button restores the default magnification level of 1x.

2.7.5 PTZ



This panel is used to control the pan, tilt, zoom, focus, iris and presets of PTZ cameras.

There are seven modes available:

- **Macro**

The macro mode is used to position the camera in an absolute fashion. Moving the rectangle representing the currently viewed area changes the direction in which the camera is positioned and therefore changes the viewed area. Moving the rectangle to a specific location will always result in the camera moving to its associated specific position. This mode is similar to the **Magnifier**.

- **Precise**

The precise mode is used to position the camera accurately. In this mode, a small cross appears in the exact center of the rectangle. Clicking anywhere around the center moves the camera in the direction from the center to the clicked point. The length of the movement depends on the length from the clicked point to the center. Multiple clicks in the same place will cause multiple movements in that direction.

- **Joystick**

This mode is primarily used to position the camera using a PTZ joystick. To fully use this mode you need to have a PTZ joystick connected to the USB port. In this mode, a small cross inside a square appears in the exact center of the rectangle. Moving the joystick in any direction moves the camera in the same direction from the center. The speed of the movement depends on the strength used to move the grip – it can be observed by different sizes of the line between the cross and the square on the rectangle. Moving the camera in this mode can also be achieved by pressing and holding the left mouse button in the rectangle. To zoom using the joystick, rotate the grip (right to zoom in, left to zoom out). For calling presets using the joystick, use the joystick function buttons.

- **Preset**

This mode is used to call and store PTZ presets. To call a stored preset, select it from the list and click the **Go** button. To store a preset, first position the camera as desired, then select the preset from the list and click the **Set** button.

- **Zoom**

To zoom the video without using a joystick, select the **Zoom** option above the slider and then move the slider to the right (zoom in) or left (zoom out). The **Default** button will restore the default zoom factor (0%). In most cameras, setting the slider to 49% inclusively sets optical zoom, from 50% - digital zoom.

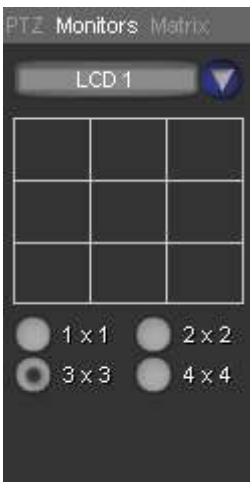
- **Focus**

This function is used to set the focus of the camera. It is only available in cameras supporting this feature. By default the camera focus is automatic. To set the focus manually, select the **Focus** option, deselect the **Auto** option and move the slider to the left or right to adjust the focus for the best image sharpness. For the camera to switch back to the automatic focus mode, reselect the **Auto** option.

- **Iris**

This function is used to set the iris. It is only available in cameras supporting this feature. By default the camera iris is automatic. To set the iris manually, select the **Iris** option, deselect the **Auto** option and move the slider to the left or right to adjust the iris for the best image. For the camera to switch back to the automatic iris mode, reselect the **Auto** option.

2.7.6 Monitors



This panel is used for displaying video from cameras on external displays. To send video from a camera on an external display, first select the camera in the **Camera list** to show it on a view port in the **Main display**. After the view port is selected, choose the desired external display from the display list in this panel. Then choose the layout to be used on the display. Click and hold the mouse button on the desired view port in the miniature display layout in this panel until it becomes red, after which the video will be sent to the selected display.

- ✓ If the display layout used in the selected display was different than selected, it will be automatically changed upon sending the video.
- ✓ To disable a view port on the external display, send an empty viewport to it.

2.7.7 Matrix



This panel is used for managing named matrix views. To save a matrix view, first prepare the view by selecting cameras using the desired view port layout in the **Main display**. The enter a name for the matrix in this panel and click the **Save** button. To delete a matrix view, select it from the list in this panel and click the **Del** button. To refresh the matrix view list to reflect changes done by other users, click the **Refr** button.

To recall a matrix view to the **Main display**, select it from the list in this panel and click the **To display** button.

To send a matrix view to an external display, select it from the list in this panel, then select the external display from the drop down list and click the **To monitor** button.

- ✓ Multiple matrix views can be sent to an external display to be rotated with a specific time interval. To send multiple views to an external display, select them using the Ctrl button on the keyboard and enter the desired time interval in seconds in this panel. After that, click the **To monitor** button.

2.8 Keyboard

Displaying live video can be controlled using keyboard shortcuts. To use the key actions, create commands formed by pressing keys on the numeric keyboard.

Selecting a camera is done by pressing the / (divide) numeric keyboard button after which the camera number should be entered.

Selecting an external display is done by pressing the * (multiply) numeric keyboard button after which the display number should be entered.

Selecting a matrix view is done by pressed the – (subtract) numeric keyboard button after which the matrix view number should be entered.

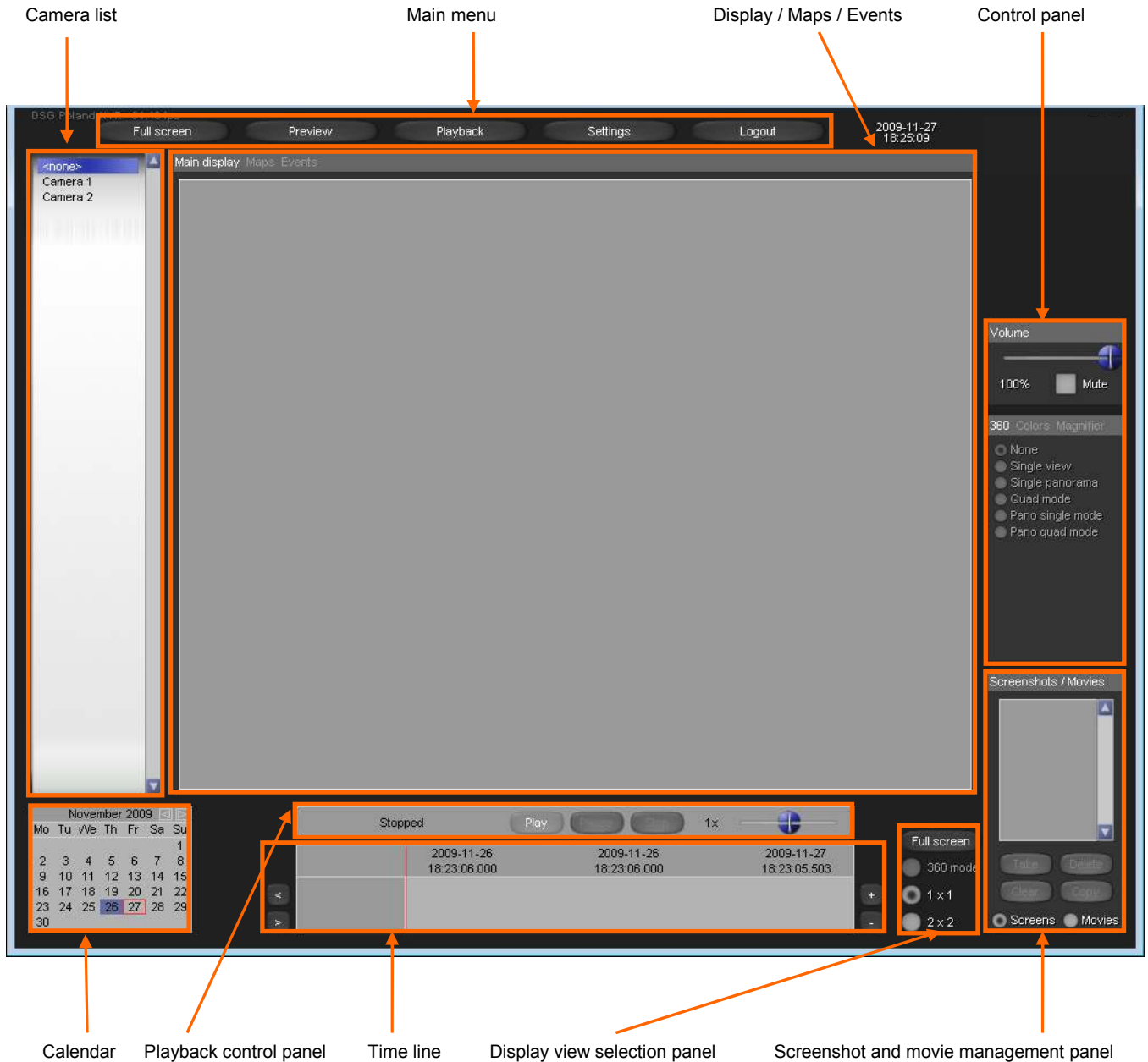
The numeric **Enter** key accepts the command.

The **Escape** key cancels the command.

Examples:

/ 15 <Enter> - displays camera #15 on the **Main display**
/ 15 * 2 <Enter> - displays camera #15 on external display #2
- 2 <Enter> - displays matrix view #2 on the **Main display**
- 2 * 2 <Enter> - displays matrix view #2 on external display #2
/ 1 - 2 <Enter> - invalid command, no action
/ 1 <Escape> - cancelled command, no action

3. Playback



This window is used for playback of recordings and managing historic events/alarms.

The **Main menu**, **Camera list**, **Main display**, **Maps**, **Control panel** and **Display view selection panel** serve for the same purposes as in the **Preview** dialog and are not covered in this section.

The **Events** in the main part of the window are used for searching and browsing through historic events and alarms.

The **Calendar** in the bottom left corner of the window is used for fast selection of the day, on which the desired recording is located.

The **Playback control panel** underneath the **Main display** is used for controlling the played movie.

The **Time line** underneath the **Playback control panel** presents the current position of the played movie and also allows for fast and accurate searching through the recordings.

The **Screenshot and movie management panel** is located underneath the **Control panel** and is used for making lists of screenshots and movies, managing them and saving them to external storage.

3.1 Events



The **Events** are located in the central part of the window.

To browse through historic events, first enter a date/time range in the **Start date**, **Start time**, **End date** and **End time** controls. The latter two can remain empty, in this case the range is open at the end. After setting the range, click the **Search** button. The events will appear in the list in the central part of this panel. The **Prev 100 results** and **Next 100 results** buttons are used for paging through the result set.

To view details of an event, select it in the list. The details will be shown in the bottom part of the panel. Using the **Go to preview**, **Go to playback** and **Go to map** has the same outcome as using these buttons in the **Preview** dialog **Event management panel**.

3.2 Calendar



The calendar is used for fast searching for the specific date. After clicking a date, the time line automatically shows movies from the start to the end of the selected date (from 00:00:00 to 23:59:59). Additionally, while searching through the time line, the calendar shows the date, at which the time line time begins. Clicking on the arrows in the top-right corner switches between months. The date surrounded by the red border is the current date.

3.3 Playback control panel



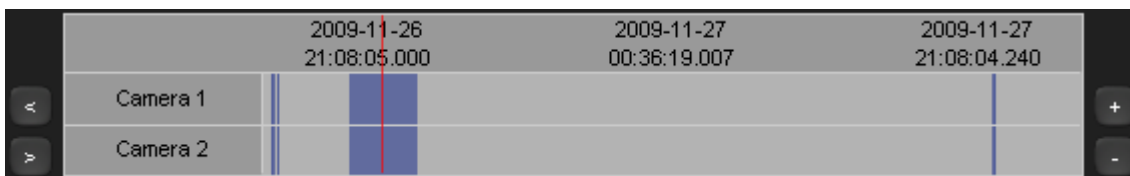
This panel is used to control the movie playback.

The first part shows the current playback status and can be any of: **Playing**, **Paused** or **Stopped**. Next, the date and time in which the currently played movie was recorded.

To start playback, click the **Play** button. After playback is started it can be paused using the **Pause** button or stopped using the **Stop** button.

The playback speed can be set using the speed slider. The speed can be 1/8x, 1/4x, 1/2x, 1x, 2x, 4x or 8x allowing for both slow motion and fast forward.

3.4 Time line



The time line graphically shows the current playback time and availability of movies. Blue color on the time line means that there are recordings in the time range on the camera. Grey color means that there are no recordings at the time range.

To go to a time in the time line, click on it with the left mouse button. The current position can also be changed by dragging the mouse while keeping the left mouse button down.

To scroll through the time, drag over it while keeping the right mouse button down. To change the scale of the time line, use the mouse wheel.

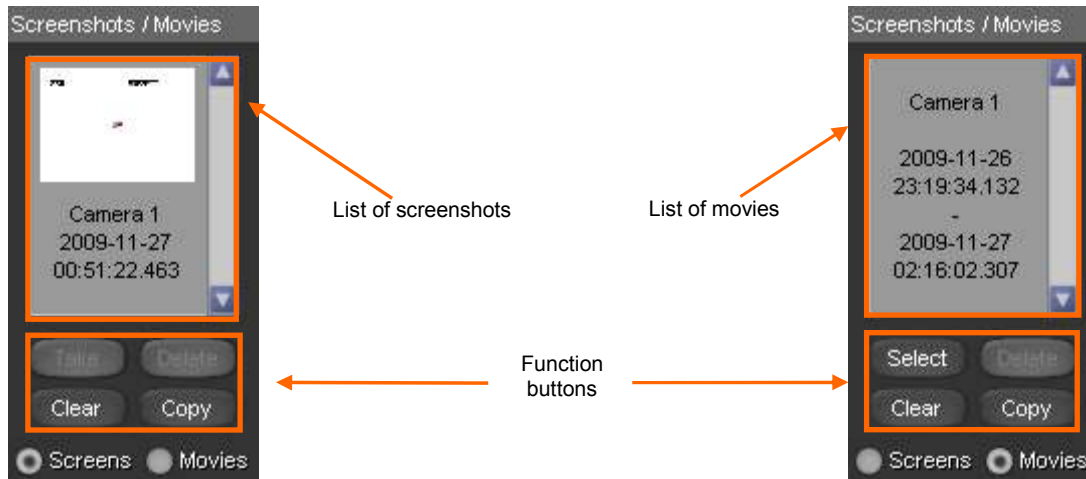
Additionally, on the left side, there are two buttons with arrows, which scroll through the time back and forth. The “<” button scrolls the time back, the “>” scrolls forth.

On the right side, there are buttons used for changing the scale of the time line. The “+” button widens (zooms in) the time range, the “-” button shortens (zooms out) the range.

3.5 Creating and saving media files

This section describes how to create media files (screenshots and movies) and save them to an external storage (hard drive, USB drive, DVD etc.).

3.5.1 Screenshot and movie management panel



This panel is part is used for creating lists of screenshots and movies and saving them to external storage. The panel can work in two modes. The first mode is used to create a list of screenshots, the second – a list of movie fragments.

In order to create a list of screenshots and then copy them to a removable storage, select the **Screens** option in the bottom of the panel. To create a list of movies, select the **Movies** option.

The list in this panel shows the taken pictures if the **Screens** option is selected or added movie fragment descriptions if the **Movies** option is selected.

To add a new screenshot to the list, make sure the **Screens** option is selected and click the **Take** button. The current frame on the active view port gets copied. It is possible to take screenshots when the movie is played or paused.

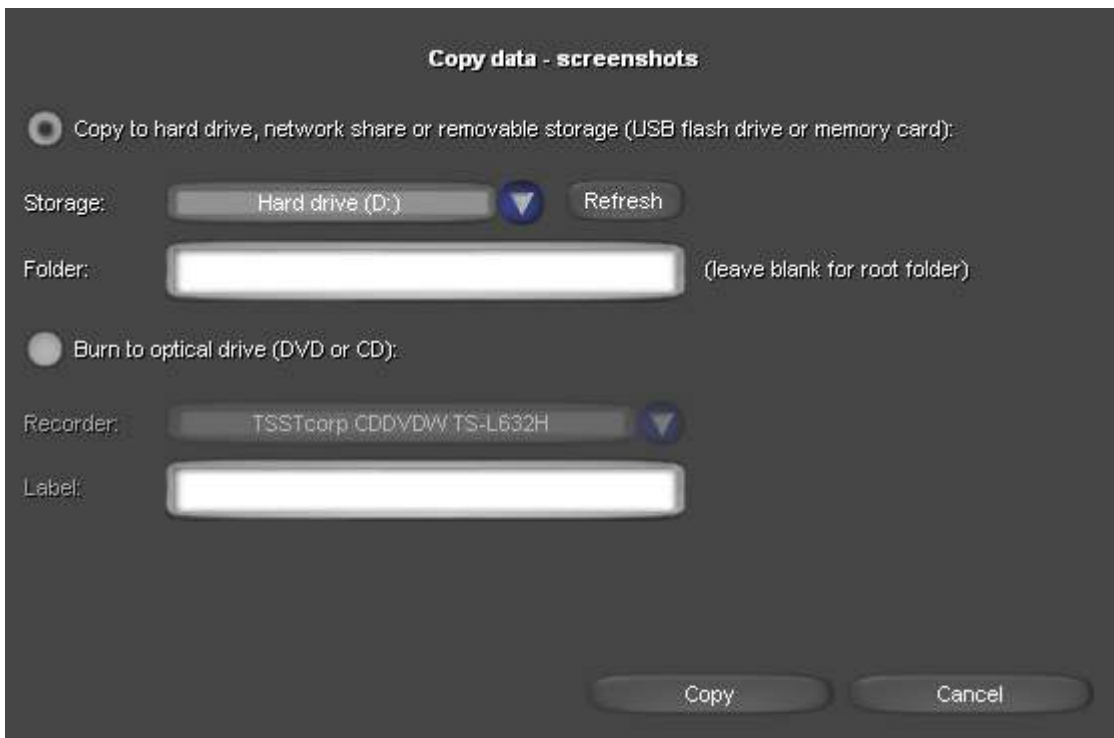
To add a new movie fragment to the list, make sure the **Movies** option is selected and click the **Select** button. After that it will be possible to select a movie fragment on the time line, which can be subsequently added to the list. To select a fragment, position the mouse cursor on the time line, and drag it left or right while keeping the left mouse button down. The time line will show a red area which is the selection. After selecting is done, click the **Add** button to add the movie fragment to the list.

To delete a screenshot or a movie from the list, select it and click the **Delete** button.

To clear the list, click the **Clear** button.

To copy screenshots or movies to external storage, click the **Copy** button.

3.5.2 Copy data dialog



This dialog is used for saving data located in the screenshot or movie fragment list to an external data storage, e.g. hard drive, network share, USB drive, SD memory card, CD/DVD disc etc.

In order to save the data to a hard drive, network share or removable storage, select the **Copy to hard drive, network share or removable storage (USB flash drive or memory card)** option. From the **Storage** list select the desired data storage. If the list is empty or does not contain your data storage, ensure that it is correctly connected to the computer and then refresh the storage list using the **Refresh** button. In the **Folder** field enter the path to the folder on the storage, in which the data will be saved (e.g. **photos\2007-03-12**). If the data should be stored in the storage root directory, leave this field empty.

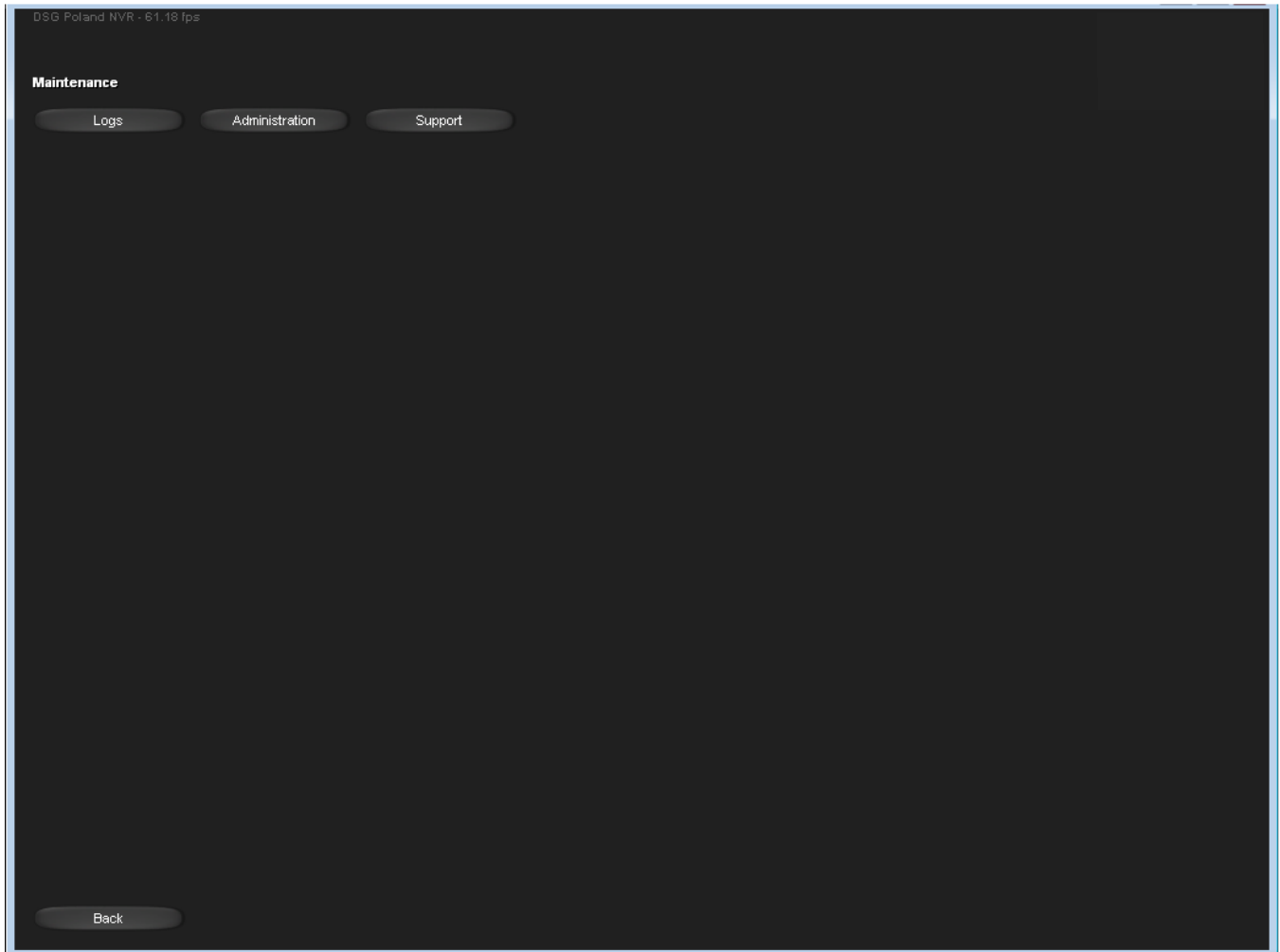
- ✓ Directly after the dialog is shown, the **Storage** list only contains storage devices, which were connected before the dialog was shown. If the storage was connected after the dialog is shown, refresh the list using the **Refresh** button.

In order to burn data to a CD or DVD disc, select the **Burn to optical drive (DVD or CD)** option. From the **Recorder** list select the desired recorder and enter the disc title in the **Label** field.

Clicking the **Copy** button will cause the copying process to start. Additionally, progress controls will appear in the dialog. It is also possible to close the dialog without saving any data – using the **Cancel** button.

Movies saved in the way described above are in the AVI format. To be able to correctly play them, either the **ffdshow** codecs or the **VLC media player** need to be installed on the system.

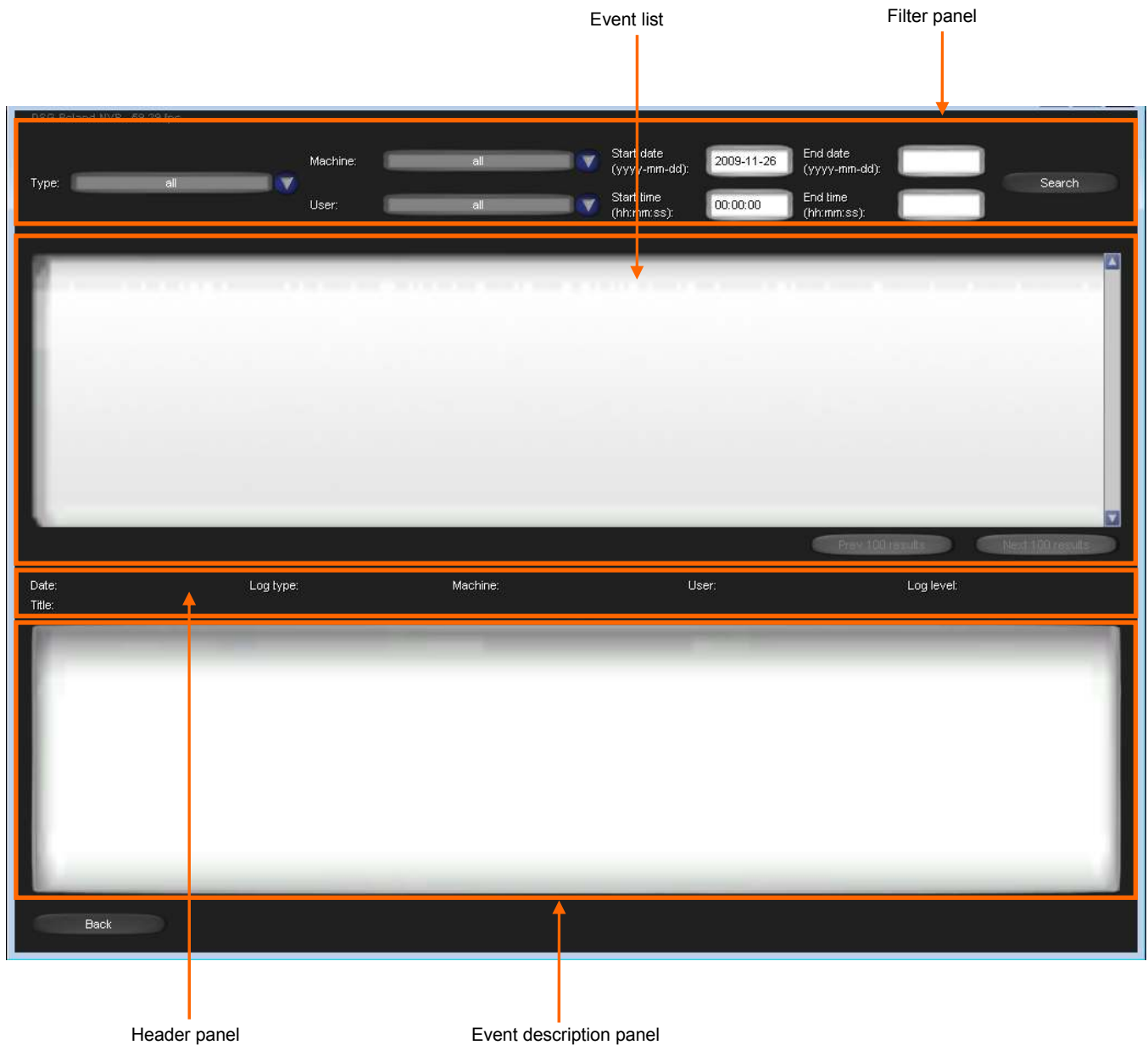
4. Settings



This window is used for limited maintenance of the client software.

The **Logs** button opens a window used for browsing logged events in the system. The **Administration** button opens a window used for software administration. The **Support** button opens a window used for making upgrades to the software.

4.1 Logs



This window is used for browsing through the system event log.

The list in the center part contains information, warnings and errors, which occurred while the system was working. Monitoring these event logs can help finding infrastructure errors, help troubleshooting the system and show signs of unauthorized access attempts.

To display event logs, fill out the filter fields and click the **Search** button.

The filter **Type** list determines the type of events that will be returned and can have one of the following values: **All** (all events), **Information** (information events and higher – warnings and errors), **Warning** (warning events and higher – errors), **Error** (error events). The filter **Machine** list determines the server from which the events will be returned. The filter **User** list determines the user which is associated with the events that will be returned. To determine the date/time range of the returned logs, enter a date/time range in the **Start date**, **Start time**, **End date** and **End time** controls. The latter two can remain empty, in this case the range is open at the end.

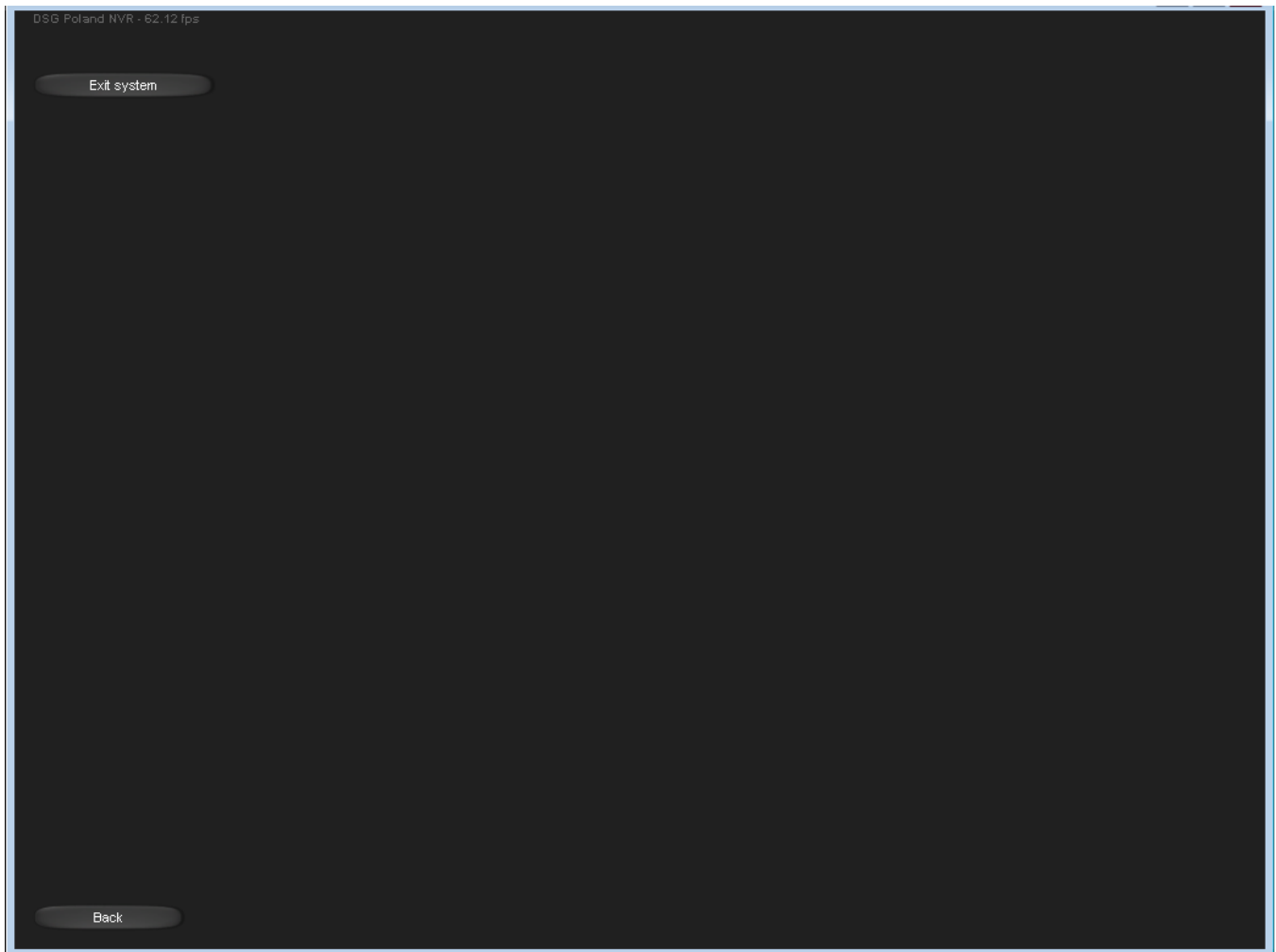
The **Prev 100 results** and **Next 100 results** buttons are used for paging through the result set.

Clicking on an element from the list will cause its additional information to be displayed. Some of them will be displayed on the header panel and the detailed description will be displayed in the event description panel. If the description is **(no additional information)**, it means that the selected event has no detailed description.

The header panel has the following information: **Date** (date and time), **Log type** (event type), **Machine** (on which the event took place), **User** (who was logged in when the event took place), **Log level** (event level – the higher the more serious the event is), **Title**.

To leave the logs window and go back to the settings window, click the **Back** button at the bottom of the window.

4.2 Administration



This window is used to exit the client software using the **Exit system** button.

4.3 Support

This window shows the product information (name, version and optionally product code).

This information is required to use technical support. It also helps to obtain correct software upgrades. The **Upgrade** button upgrades the software using an upgrade CD/DVD.

Please contact your vendor for technical support.

For updates/upgrades, contact your vendor.

If you have an upgrade CD/DVD, please insert it into the optical drive and press the below button.

Upgrade

Back