

user's manual

NVR-7308P8-H2
NVR-7316P8-H2
NVR-7524P8-H4
NVR-7716P16-H2



NOvUS[®]

IMPORTANT SAFEGUARDS AND WARNINGS

EMC (2004/108/EC) and LVD (2006/95/EC) Directives



CE Marking

Our products are manufactured to comply with requirements of following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.



WEEE Directive WEEE 2012/19/EU Electrical and Electronic Equipment

Information on Disposal for Users of Waste

This appliance is marked according to the European Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for the waste electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.



RoHS Directive RoHS 2011/65/EU

Concerning for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, were designed and manufactured in compliance with mentioned regulation. Simultaneously, we claim that our products were tested and do not contain hazardous substances exceeding limits which could have negative impact on human health or natural environment.



Information

The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

The manufacturer is not responsible for defects and damages resulted from improper or inconsistent with user's manual installation of the device in the system.

ATTENTION!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT PROVISIONED FOR THE GIVEN PRODUCT IN ITS USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR THAT ARISES FROM THE NORMAL APPLICATION OF THE PRODUCT, ITS MANUFACTURER MUST BE CONTACTED OR THE RESPONSIBILITY OF THE MANUFACTURER FOR THE RESULTS OF SUCH AN ACTION SHALL BE EXCLUDED.

IMPORTANT SAFEGUARDS AND WARNINGS

1. Prior to undertaking any action please consult the following manual and read all the safety and operating instructions before starting the device.
2. Please keep this manual for the lifespan of the device in case referring to the contents of this manual is necessary;
3. All the safety precautions referred to in this manual should be strictly followed, as they have a direct influence on user's safety and durability and reliability of the device;
4. All actions conducted by the servicemen and users must be accomplished in accordance with the user's manual;
5. The device should be disconnected from power sources during maintenance procedures;
6. Usage of additional devices and components neither provided nor recommended by the producer is forbidden;
7. You are not allowed to use the device in high humidity environment (i.e. close to swimming pools, bath tubs, damp basements);
8. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself as a consequence;
9. Mounting the device on unstable surface or using not recommended mounts is forbidden. Improperly mounted device may cause a fatal accident or may be seriously damaged itself. The device must be mounted by qualified personnel with proper authorization, in accordance with this user's manual.
10. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the devices technical datasheet. Therefore, it is forbidden to supply the devices from a power sources with unknown parameters, unstable or not meeting producer's requirements;
11. You cannot allow any metal objects get inside the recorder. It might cause serious damage. If a metal object gets inside the device contact the authorised Novus service immediately.
12. The manufacturer does not bear responsibility for damage or loss of data stored on HDDs or other media occurred during the usage of the product.

Due to the product being constantly enhanced and optimized, certain parameters and functions described in the manual in question may change without further notice.

We strongly suggest visiting the www.novuscctv.com website in order to access the newest manual .

Technical changes reserved without prior notice and printing errors possible.

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NVR OPERATING

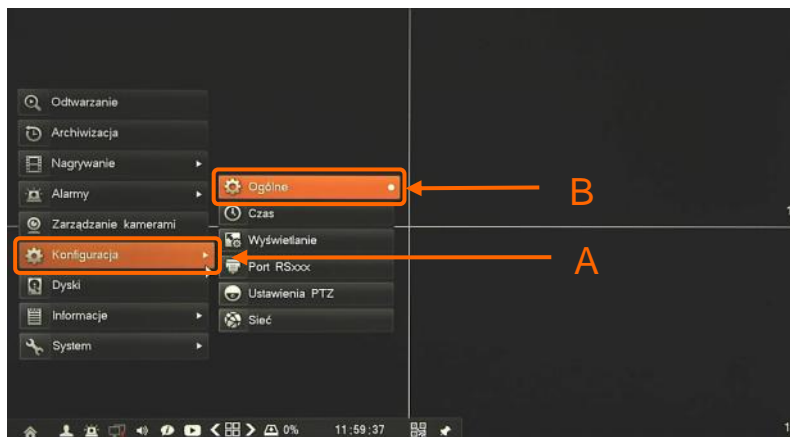
1. NVR MENU

1.1. Language change

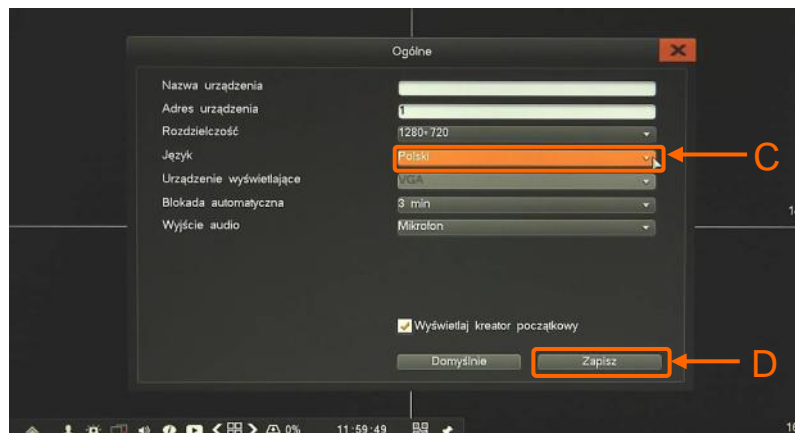
After starting device, the video output default to multi-window output mode. By default NVR is using English language interface.

To change language please follow the procedure like below:

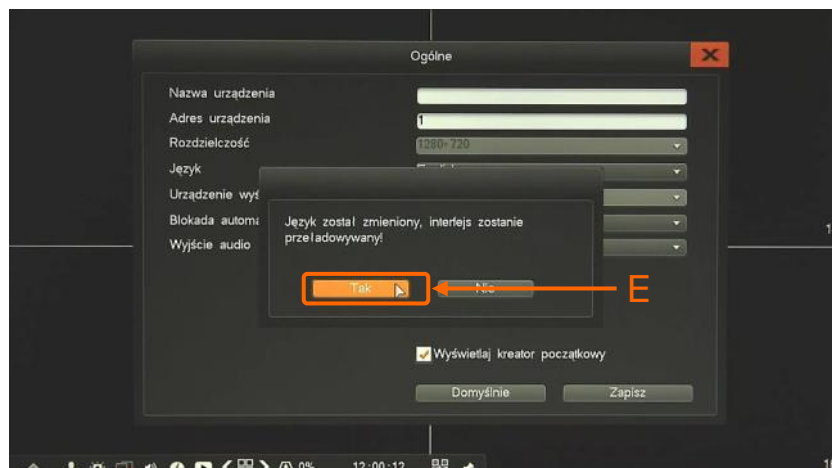
- Move mouse cursor to the bottom of the screen and click  icon to display main menu. Next select A and B.



- New window will appears, from selection C choose required language and confirm by button D.



- In pop up window you have to confirm again by E button.



After that GUI Interface will be reloaded and menu language will be applied.

1.2. System operations



To start NVR plug power cable and switch on power button. The power led turns on. After booting, the video output default to multi-window output mode.

By default local authorization of NVR is disabled so you can manipulate NVR without any username or password. After configuring NVR it is strongly recommended to set up user password.

Default login is root/pass. For safety reasons, it is recommended to change default user name and password.

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In order to shutdown or reboot NVR you should move cursor to the bottom icon  or click the right key of mouse and select *Start* icon . Next click the *System Maintenance* and *System Shutdown*. You could also use button at front or rear panel turn bring shutdown menu.

In pop-up window choose *Logout*, *Shutdown* or *Restart* and wait until it will be finish.

To prevent unauthorized access, it is recommended to log out when you leave the screen, or set up *Autolock* feature.

Note:

When user is not login or has limited rights all inactive icon and menus are greyed out.

CAUTION:

If you turn off the system in an abnormal manner such as removing the power cord while the system is working, the disk will acquire or increase the numbers of bad sectors, causing data loss and shortened life cycle of the disk.

NVR OPERATING

While NVR is log out there would be displayed live view or defined sequence.

To be able to operate NVR need to log in first. Bring up login window by clicking anywhere on screen. Then would be displayed window as below:



Choose user name which you would like to use and type password by virtual keyboard. While you click in password field keyboard would be displayed automatically.

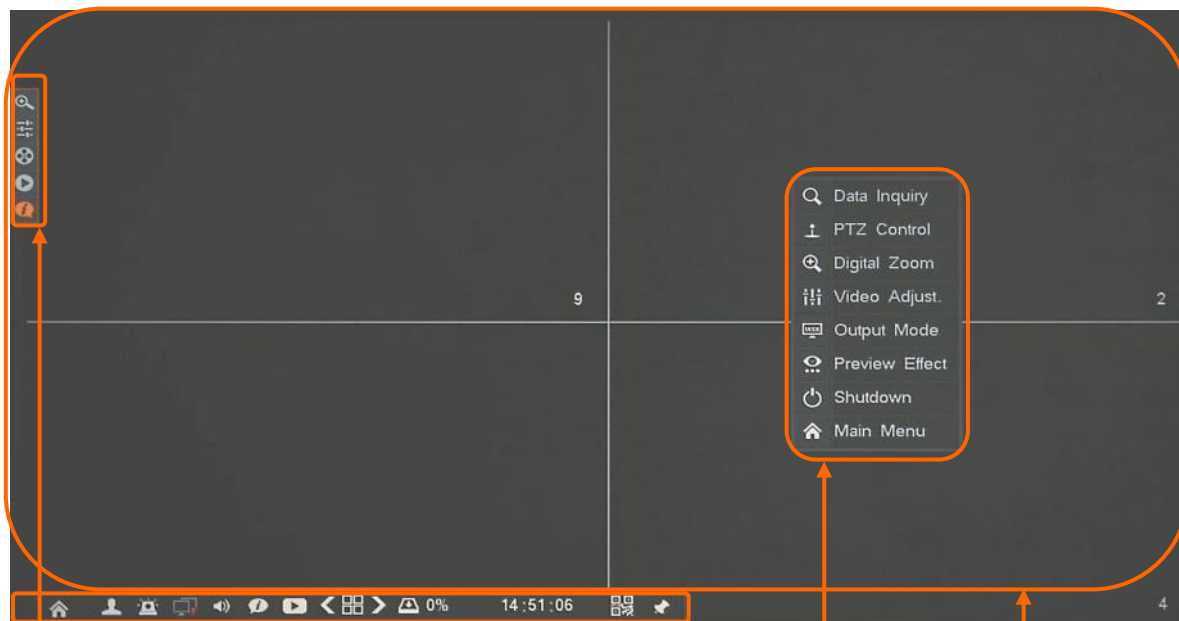


To change keyboard layout to digit or special characters click “abc” button, opposite password field. It will change qwerty keyboard (abc) > characters (.,;) > digits (123) and so on.

1.3. Live monitoring

Novus network video recorders features a multilingual OSD menu allowing for adjusting the settings of the device. Available languages are: English, Polish, and others

As soon as the NVR completes its initialization process, it will enter the real-time monitoring image. Displaying all cameras simultaneously is the default mode. On the bottom of screen STATUS BAR is displayed.



CHANNEL MENU





STATUS BAR

QUICK MENU

VIDEO WIN-

Single click at video channel will display CHANNEL MENU. At the right top right corner of video channel, shows its channel number. In the bottom right corner of each channel image, shows capture recording status icon (motion, alarm, manual).








STATUS BAR description:









Item	Icon	Description
Start		Click to run fast configuration of main NVR parameters
Login /Logout		Click to login/logout the system
Alarm		Display the alarm information and recording events.
Network		On mouse cursor display IP/MAC of device, on click open network diagnose/repair window

NVR OPERATING






Right mouse click on screen will bring QUICK MENU for quick operation.

QUICK MENU description:

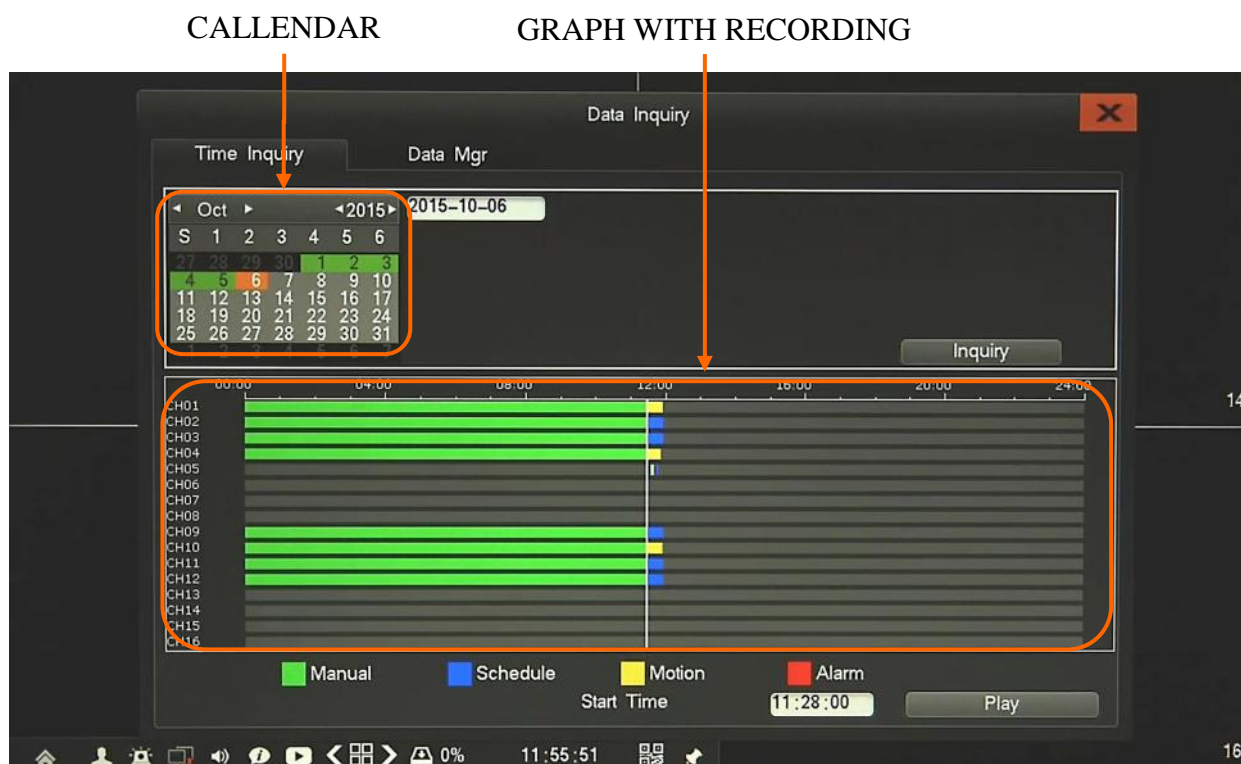
Item	Icon	Description
Volume		Click to enable/disable audio
Information		On mouse cursor display current device temperature
Fast Playback		Click to start playback of latest 5minutes recording
Split Screen		Click to change split screen mode, click right/left to change channels
HDD status		XX% informs about usage/free space of all storage, on mouse cursor display capacity and days amount which could be stored on free space. On click open HDD manage window.
QR codes		Click to open QR codes window, one to get mobile software, and second is serial number of NVR to easy connect NVR
Lock menu bar		Click to enable/disable auto hide of status bar

Item	Icon	Description
Data Inquiry		Move to the playback screen, which allow to search and watch recordings.
PTZ Control		Move to the PTZ screen. You can control the PTZ operations of a PTZ - c compliant camera on the PTZ screen.
Digital Zoom		Allow to zoom in picture of selected channel
Video Adjust		Menu allow to adjust image parameters for selected channel
Output Mode		Menu allow to adjust monitor color parameter
Preview Effect		Allow to set up priority fluency or reduce delay
Shutdown		Shut down NVR
Main Menu		Enter to the NVR Main Menu

Left mouse click on video channel will display Channel menu.

Item	Icon	Description
Digital zoom		Allow to zoom in picture of selected channel
Video adjust		Menu allow to adjust image parameters for selected channel
Manual record		Enable/Disable manual recording of selected channel.
Quick playback		Go to fast playback (5minutes before) of selected channel
Channel information		Displays channel information window

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1.4. Searching and playing recorded video

To start the playback choose *Data Inquiry* menu and *Time Inquiry*. Then following window appears:

Choose the date from the calendar and press *Inquiry* button to find records for selected date.

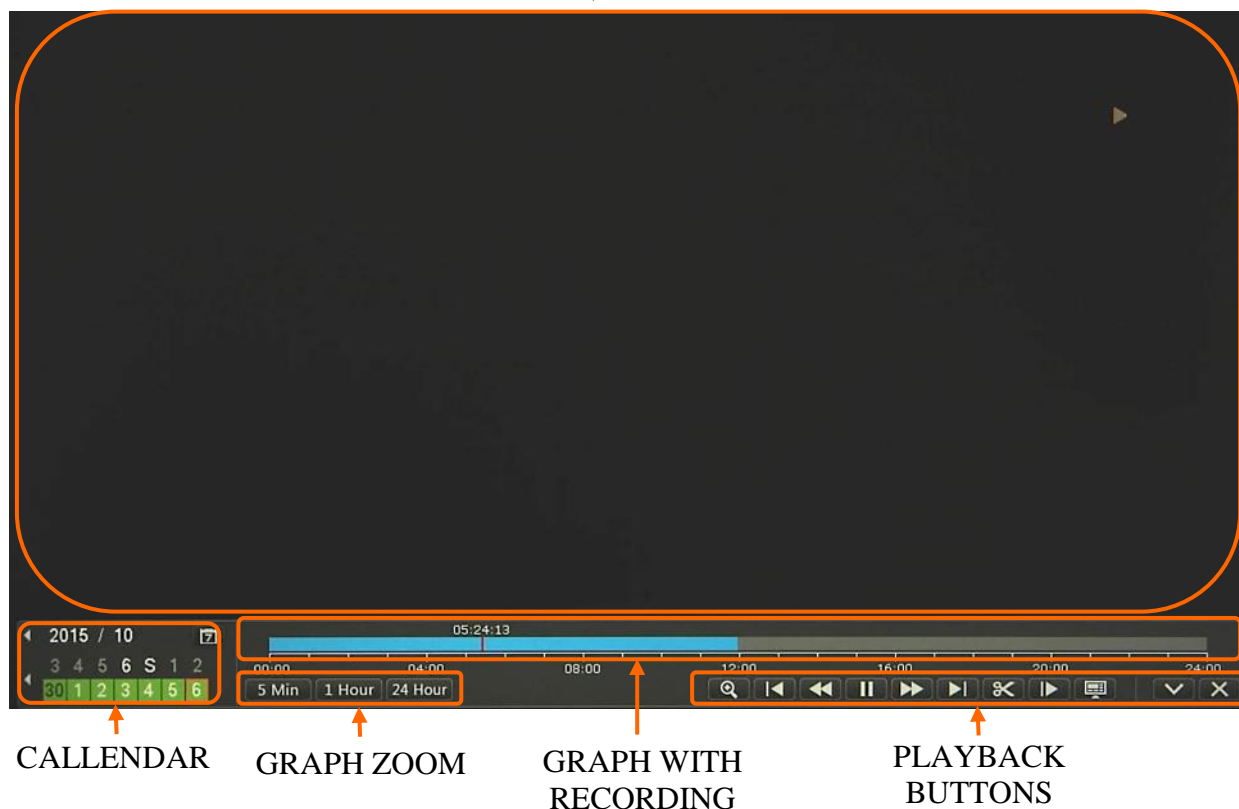
You can identify the type of the recording data by the color in the bar.

- Green (Manual) : data originating from manual recording.
- Blue (Schedule) : continuous recording data.
- Yellow (Motion) : motion event recording data.
- Red (Alarm) : alarm event recording data.

To play the searched data simply double click a desired point on or press *Play* button.

NVR OPERATING

VIDEO PLAYBACK WINDOW

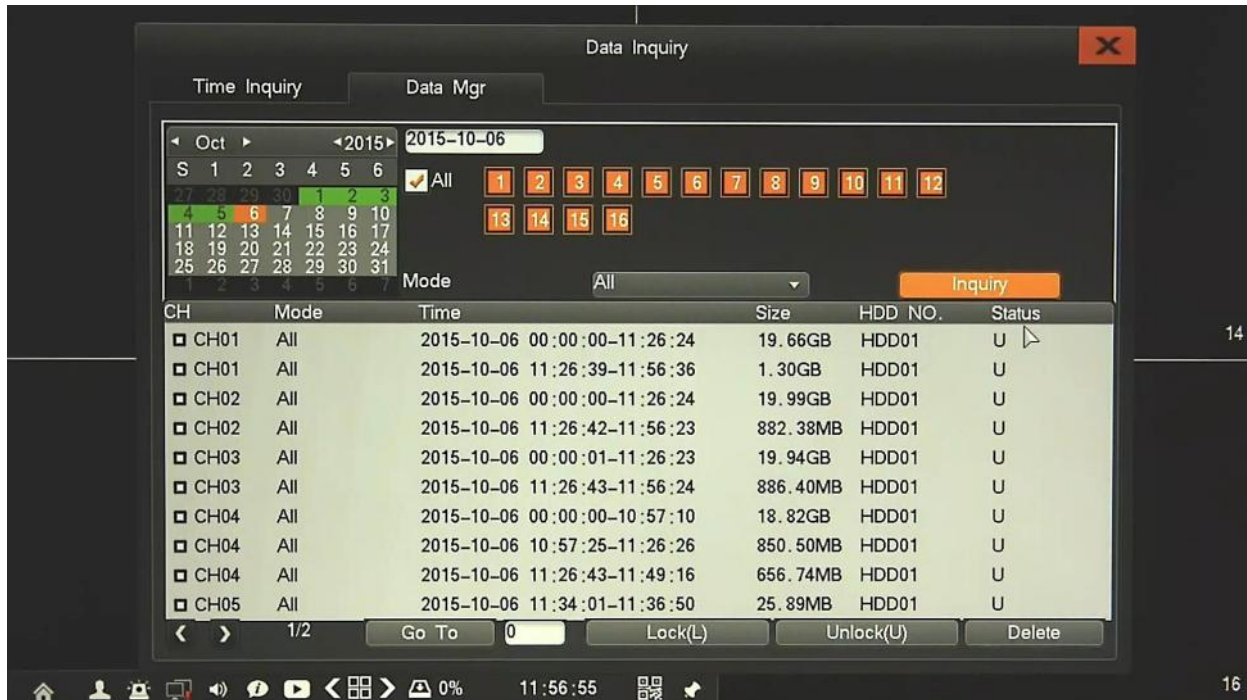


On calendar you can easy change playback range. Use GRAPH ZOOM buttons to expand displaying graph on screen. Graph is displaying sum of each channel available recordings.

Use playback buttons to operate recordings. Description of PLAYBACK BUTTONS:

- Slow backward: Slow down the backward speed. (there are: 1/2)
- Fast backward: Accelerate backward. (there are: 2, 4, 8, 16 times)
- Pause/Play: Pause the current playback image.
- Fast forward: Accelerate playback. (there are: 2, 4, 8, 16 times)
- Slow forward: Slow down the playback speed. (there are: 1/2, 1/4, 1/8, 1/16 times)
- Cutting: allow to set backup up start point and end point during playback, and backup records.
- Frame Forward: Jump forward frame by frame
- Split screen switch: change split screen view
- Player minimization: decrease size of player navigation window

To manage recording Data Inquiry menu and Data Mgr. Then following window appears:



Data manager allow to search records according to event type. To find records choose channel, date from calendar and recording mode (motion, alarm, etc.) and press *Inquiry* button. After searching list will be displayed, including recording mode, size and time information.

Double click selected item on list will start playback of current record.


You could lock selected item by using *Lock* button, then record wouldn't be removed during disk overwrite. Lock status is displayed in *Status* column. *Unlock* button remove lock status from file.

By using *Delete* button you could permanently remove selected record from disk.

NVR OPERATING

1.5. PTZ Control

PTZ button opens new window which allows to control the operations of a selected PTZ camera.

To start the PTZ click RMB on selected camera and choose  icon. Then following window will shown:



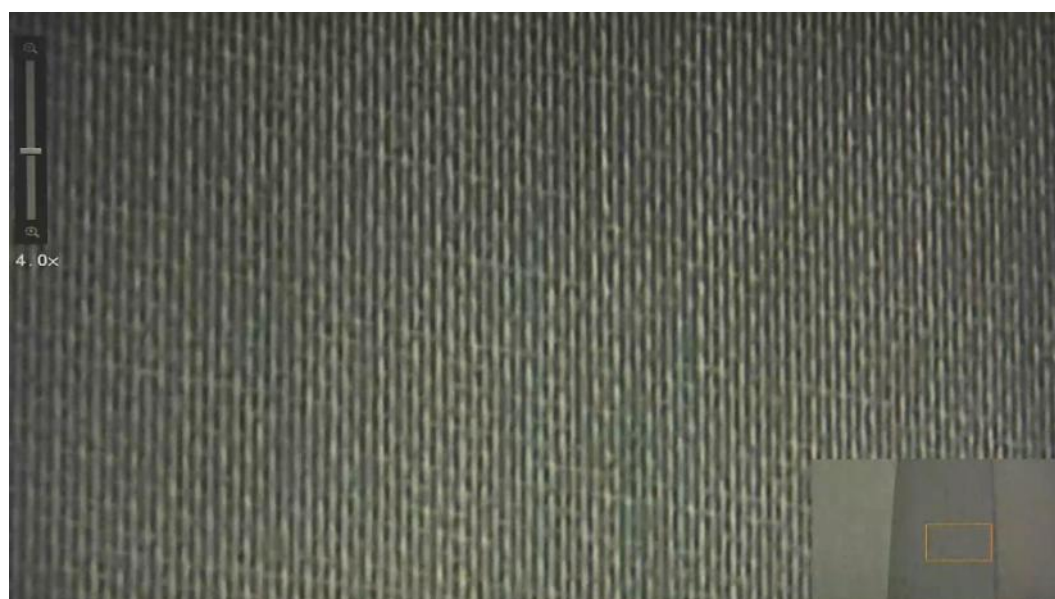
Use it to adjust the pan, tilt, focus, zoom and iris of the camera. You can also move mouse to the right, left, top, or bottom side, then camera will start movement automatically.

Menu also allow to run and set Preset etc. *Switch* button open advanced PTZ option.

Note: Not every camera model and network protocol allow to control camera remotely.

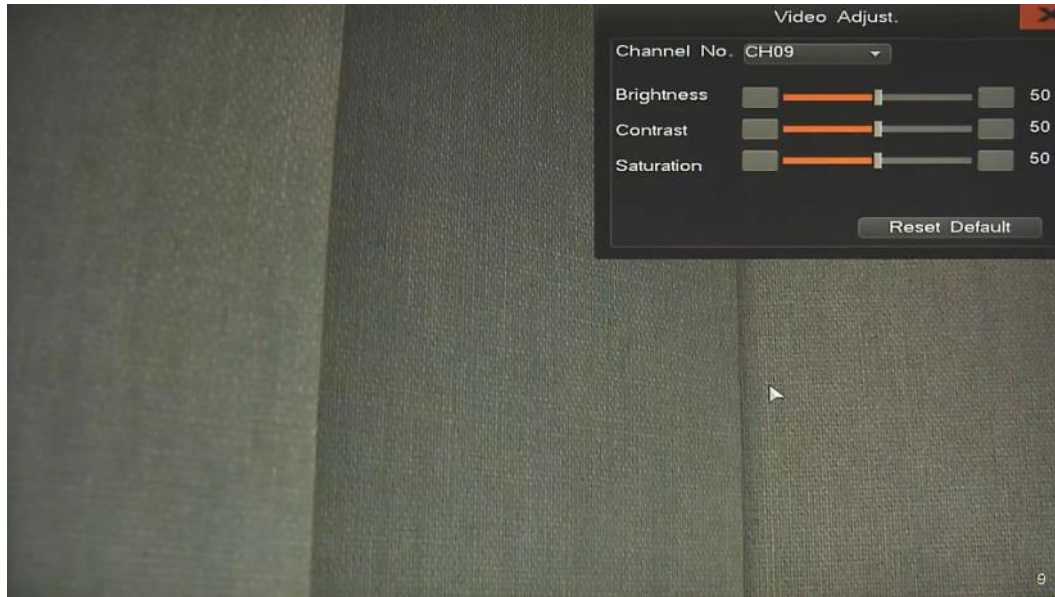
1.6. Digital Zoom

Allow to zoom in picture of selected channel. Use navigation border in bottom right corner to set required region. To zoom in/out use mouse scroll, or slider on the left side.



1.7. Video Adjust

Menu allows to camera image settings: user can set the brightness, contrast, saturation remotely in associated camera.



Note:

Not every camera model and network protocol allow to change all camera settings remotely.

1.8. Output Mode

Menu allows to change mode of output image (to monitor) depending of user requirement.



Choose picture style the best for ambient conditions and save it by Confirm button.

NVR MENU

1.9. Preview Effect

Menu allows adjust display to get better fluency or decrease delays.

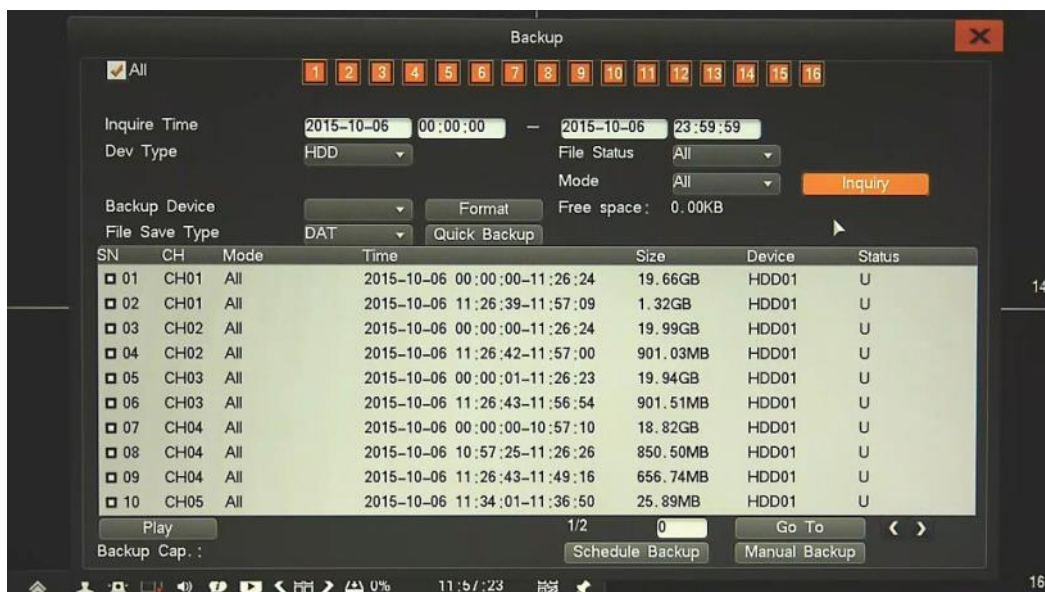


1.10. Shutdown

Menu allows to shutdown NVR in safe way. After click *Shutdown* there would be displayed question to confirm. When it's done it would be confirmed by popup message, then you could cut the power.


1.11. Main menu










Open the MAIN MENU which allow to configure various system parameters. Details of it are described in next chapter.



NVR CONFIGURATION

2. NVR CONFIGURATION

Main Menu allow to configure various NVRs parameters. It is divided on 9 section. To start Main Menu use icon . Table below show short description each of it:

Item	Icon	Description
Data Inquiry		Menu allows to search and playback window recordings. Also allows to manage records on disks.
Backup		Backup window, allows set up direct backup and scheduled backup.
Record		Menu allows to set up recording parameters and schedule.
Alarm		Menu allows to configure alarm events (motion, sensor, system) and reactions.
IPC Management		Allows to manage IP cameras: add, remove, change basic values of it.
Setting Management		Enter to the NVR setup, set language and parameters of: Monitor, Time, Ports, PTZ, Network.
Record		Menu for configuration NVR storage .
Sys. Info		Displays detailed information about device, channel & alarm status, power consumptions, logs, etc.
System maintenance		Menu allows to manage Quick settings, User Account, Set up and Back up configuration, upgrade and shut down system.

2.1. Data Inquiry - menu allows to search and playback window recordings. Also allows to manage records on disks. Description of it is in chapter 1.4.

2.2. Backup - To backup recording go to *Main Menu* and *Backup*. Then following window appears:

NVR OPERATING

- *Manual Backup* allow to search records according to event type and date. To find records choose channel, device type, time range, file status and mode (motion, alarm, etc.) and press *Inquiry* button. After searching list will be displayed, including recording mode, size and time information.

Double click selected item on list will start playback of current record.

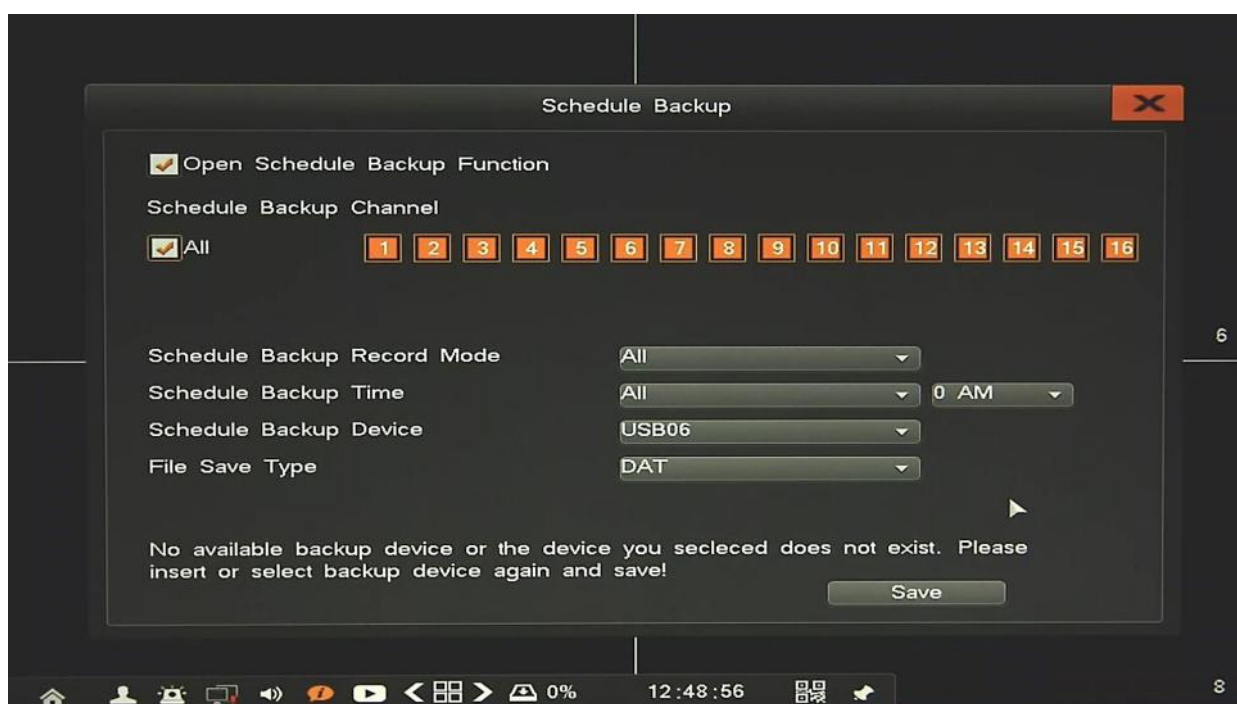
To backup records need to select them from the list, choose *Backup Device* (you need to plug it into NVR before), and select required File Type.

Quick backup button will start coping all files from the list to backup device.

Manual Backup button start coping only these files, which was previously selected from the list.

There is also possible to playback in NVR, records stored on USB flash disk or other external device. To do that need to select *Device Type*: USB and search records. After searching list will be displayed, double click record to playback.

- *Schedule Backup*. To open it choose *Schedule Backup* button from *Backup* window. Then following window appears:



Schedule Backup allow to copy video record from last 24 hour from selected channels according to selected *Record Mode*. To set up backup you need to choose *All* day and hour when backup will start. Need to choose device to copy data and file type.

While copy time is present, it will start coping from last 24 hour to selected storage, please remember to use storage with enough free space for coping data.

NVR CONFIGURATION

2.3. Record - menu contains video parameters, manual video and schedule parameters.

2.3.1. Record Para. - setting of streams parameters for every channel. Configuration is set up remotely in camera, associated to the selected channel.



After selecting *Channel No.* and *Stream* following parameters are available:

- *Resolution*: there is list of resolution available for current camera
- *Image Quality*: select different image quality as needed (for VBR mode).
- *Frame Rate*: select different value from the drop-down list.
- *Bitrate type*: select between CBR(constant) and VBR(variable).
- *Bitrate*: compression value for camera's current stream
- *Audio*: enable audio in camera.
- *Pre record*: time of recording before event.
- *Delay record*: time of recording after event.

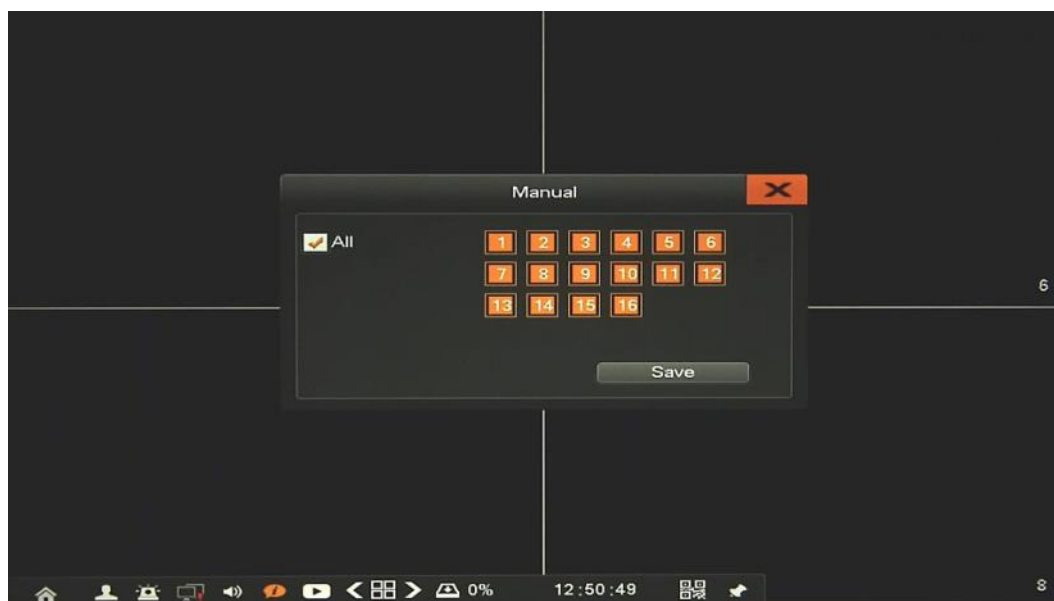
After changing parameters click *Save* button and wait until confirmation message occurs.

Note:

Not every camera model and network protocol allow to change all camera settings remotely.

NVR CONFIGURATION

2.3.2. Manual - menu allows to quick change of manual recording of selected channels.



2.3.3. Schedule - setting continuous record plan for each channel.



After selecting *Channel No.* set up schedule of selected channel. You could set up for each day independent time range or use *All* to set up the same for all days.

After changing parameters click *Save* button.

By using *Copy* button you can copy current settings to other required channel. Please remember to click *Save* current channel, before copy to other channels.

Reset Default button restore all setting of current channel to factory default.

NVR CONFIGURATION

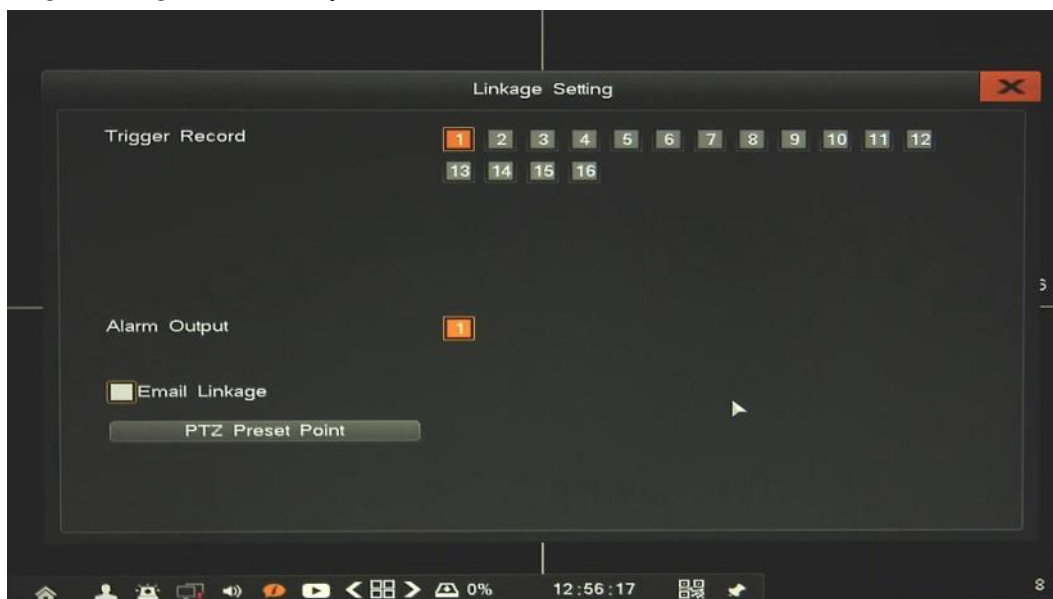
2.4. Alarm - menu allow to define various events, and specify the conditions to notify the user.

2.4.1. Motion - menu allows to configure schedule of motion recording and rules of the built-in camera motion detection function. Configuration of motion rules is set up remotely in camera, associated to the selected channel.



After selecting *Channel* following parameters are available:

- *Continuous alarm*: Tick the checkbox will enable continuous alarm, it will active whole time during motion.
- *Sensitivity*: set the sensitivity of detection
- *Motion Area*: select the motion detection area, press the left mouse button and drag to the area which you want to set motion detection, click LMB to return..
- *Schedule*: set the time intervals when alarm is active.
- *Linkage Setting*: select the system reaction for current alarm.



NVR CONFIGURATION

Available reaction are: System alarm out (always active). Trigger recording, Alarm output activation, Email, PTZ function.

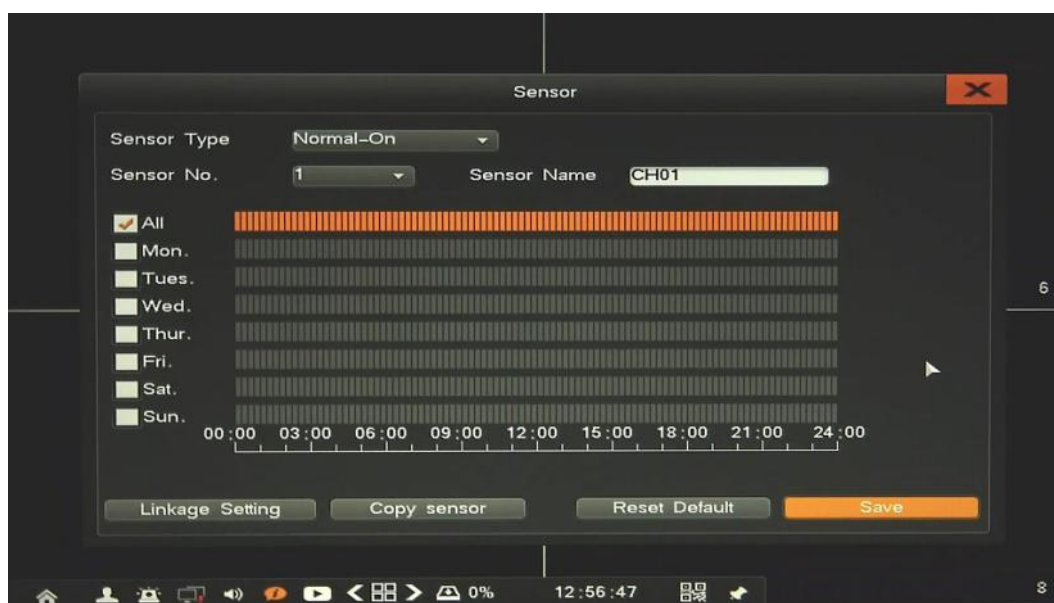
By using *Copy* button you can copy current settings to other required channel. Please remember to click *Save* current channel, before copy to other channels.

Reset Default button restore all setting of current channel to factory default.

Note:

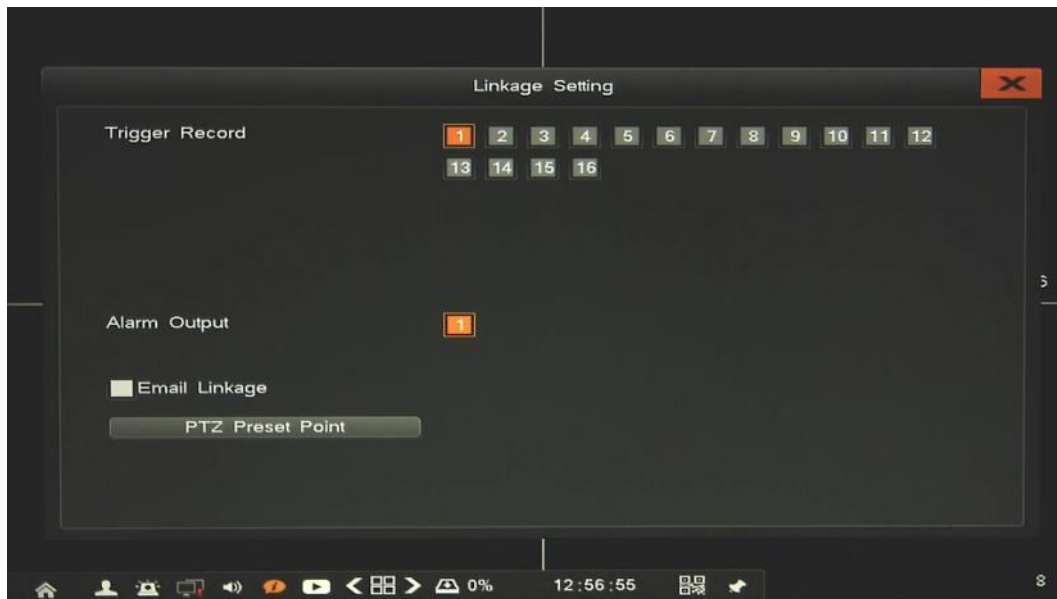
Not every camera model and network protocol allow to change all camera settings remotely.

2.4.2. Sensor - configuration of the alarm sensor and specify the operation of the sensor if an event occurs.



After selecting *Alarm Input* following parameters are available:

- *Sensor Type*: You can specify the type of the alarm sensor, Normal On or Normal Off
- *Sensor No.:* number of alarm input.
- *Sensor Name*: you can specify the name of the alarm sensor
- *Schedule*: set the time intervals when alarm is active.
- *Linkage Setting*: select the system reaction for current alarm.



Available reaction are: System alarm out (always active). Trigger recording, Alarm output activation, Email, PTZ function.

By using *Copy* button you can copy current settings to other required channel. Please remember to click *Save* current channel, before copy to other channels.

Reset Default button restore all setting of current channel to factory default.

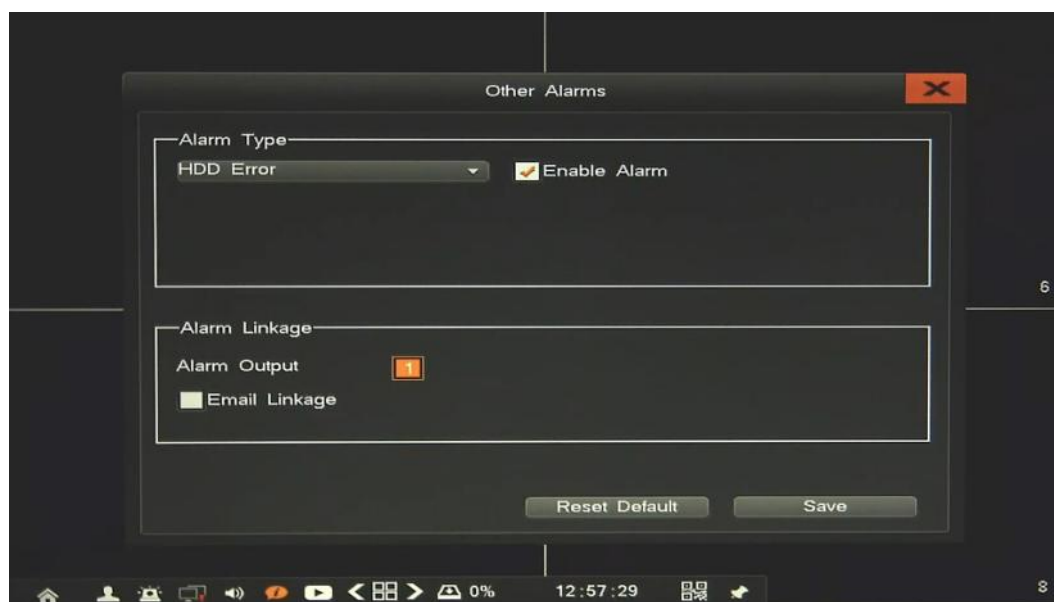
2.4.3. Alarm output - configuration behaviour of the alarming message for operator.



- *Audio* - enable sound message (audio out)
- *Buzzer* - enable internal NVR buzzer
- *Full Screen* - enable camera full screen view
- *Alarm duration* - time of alarming
- *Schedule*: set the time intervals when alarm is active

NVR CONFIGURATION

2.4.4. Exception - configuration of the alarm system events and specify the alarm reaction.



Select *Alarm Type*, Tick *Enable Alarm* to activate it and configure the reaction way for it which you need. Available types and possible problems are:

- *HDD Error*: When there is HDD read and write fault or smart alarm.
- *Video Lost*: When there is no video signal.
- *Network disconnect*: When there is network broken alarm.
- *Over Temperature*: When internal temperature inside NVR is too big.
- *HDD Full*: When there is no free space in the HDD.
- *PoE conflict*: When there are the same IP address on few devices connected to PoE ports.

Available reactions are (depending on alarm type): System alarm out (always active), Alarm output activation, Email.

Reset Default button restores all settings of the current channel to factory default.

2.4.5. Manual Alarm - menu allows to enable specified alarm output.

To activate alarm select in on the list and press *Triggered* button.

To deactivate alarm select in on the list and press *Clear* button.

2.5. IP Camera Management: menu allows to manage IP cameras connected to the system. After opening menu following window appear:



Selection A is search part. While opening menu it will automatically discover IP Cameras and list them. Press *Discover* button to search again. List of cameras include information like below:

S.N.	IP Address	Resolution	Status	Preview	Connecting
01	192.168.3.11	1280*720			+
02	192.168.3.20	0*0			+
03	192.168.3.21	2592*1944			+
04	192.168.3.22	0*0			+

- *S.N.* - number of camera
- *IP Address*
- *Resolution*
- *Status* - green camera is ready to connect, red need to provide password to connect
- *Preview* - display camera screenshot
- *Connecting* - press + to connect camera to the system

Selection B is IP Channel part. List of cameras added to system include following informations:

IP CH	IP Address	Status	Diagnosis	Information	Edit
CH09	192.168.3.19				
CH10	192.168.3.18				

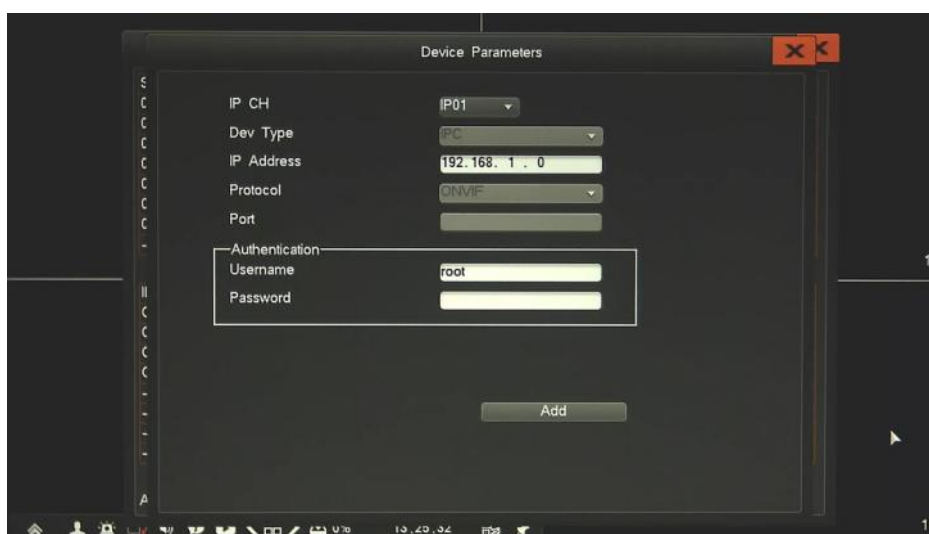
- *IP CH* - number of channel, if it connected to NVR PoE port, there is information about it.
- *IP Address*
- *Status* - green mean camera is connected, red mean camera is not connected
- *Diagnosis* - if camera is not connected press it and click *Start test*. After finishing result will be displayed with reason of connections problems.

Note

In case of using Diagnose please provide correct username/password. If camera password is obtain automatically diagnose could not work properly.

NVR OPERATING

- *Information* - display detailed information about current camera.
- *Edit* - menu allows to change IP address of camera (directly in camera), update user name and password.
- *Delete* - remove camera from system
- *Smart Access* button allows to quickly add all cameras which status are green. After clicking it, system assign cameras to the all empty channels of NVR.
- *Manual Add* button allows to add a specified camera manually. After clicking it, new window appear, need to choose empty channel, provide camera IP address, username and password.



- *Bitrate Mgr*: menu allows to modify mainstream and substream values. Stream size could be chosen by user for each stream. After changing value, confirm it by Save button. It is also possible to set streams size automatically by using *Smart Config* button. After pressing button streams would be set according to current image resolution and frame rate. At the bottom of screen there are displayed information about available bandwidth for recording camera and amount of days, which could be stored on HDD free space.



- *Delete all*: remove all cameras from system

NVR CONFIGURATION

2.6. Setting Management - menu allow to define various system settings and network parameters.

2.6.1. General - menu allows to configure the settings of language, resolution and other device parameters.



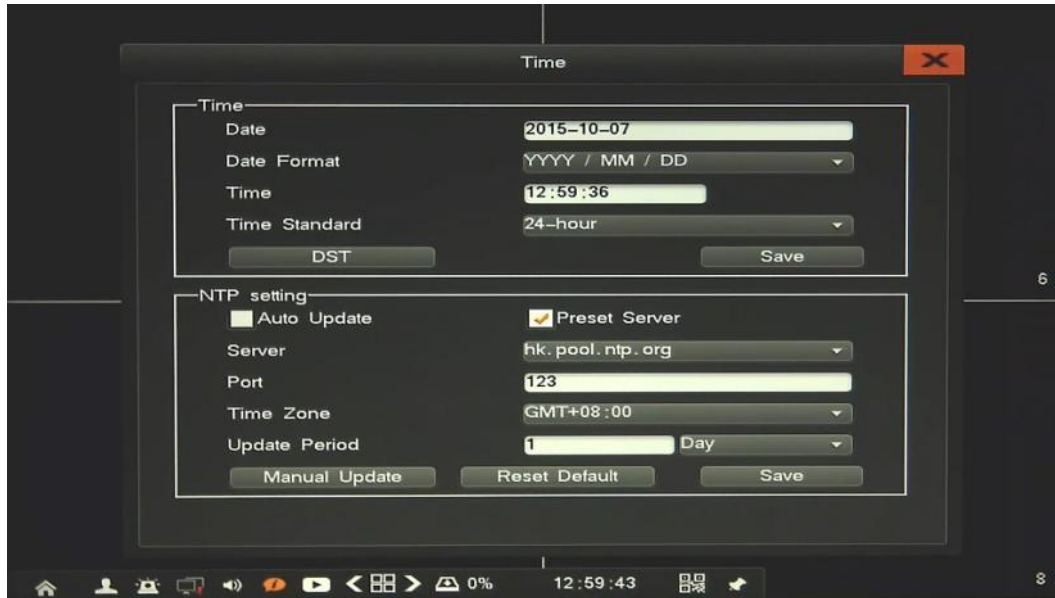
Following function are available:

- *Host name* - set device name
- *Host ID* - set up device unique number for remote controller
- *Resolution* - select the resolution most corresponding to the used monitor.
- *Language* - allow to select preferred language.
- *Display Device* - change display device (working HDMI and VGA in the same time)
- *Auto Lock* - time interval for auto log out.
- *Audio Device* - select type of audio input
- *Display Power On Wizard* - click to enable fast configuration of main NVR parameters at NVR start

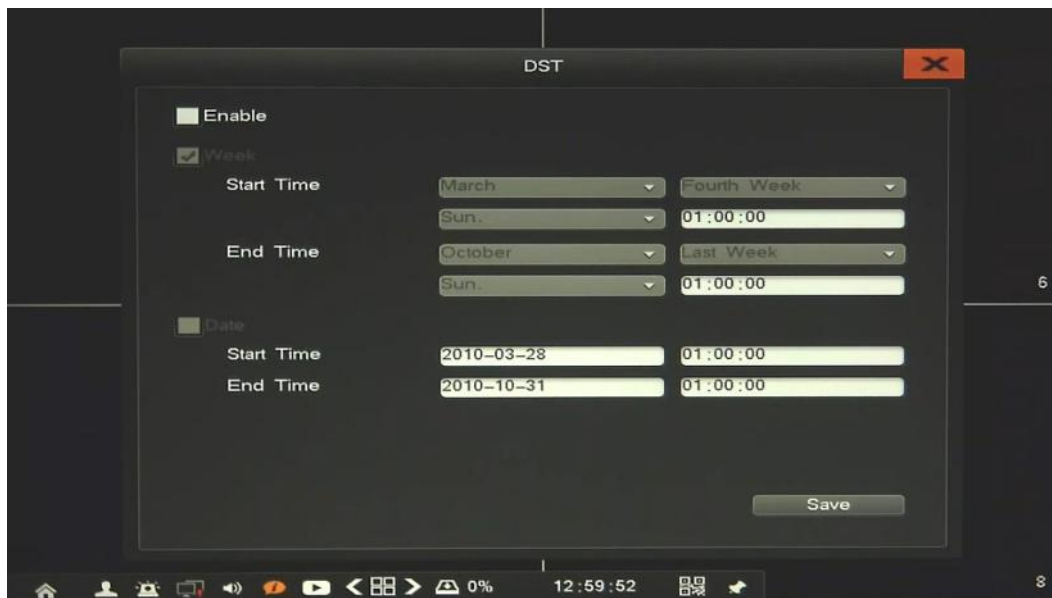
Reset Default button restore all setting of current channel to factory default.

NVR CONFIGURATION

2.6.2. Time - user can specify the time and date setting, DST (Daylight Saving Time) settings and NTP settings.



Time setting window include time and date setting, date format and time standard. Button *DST* open new window to set up Daylight Saving Time.



To ensure proper operation, set Start Time as last Sunday of March, 1:00 AM UTC. Set the End Time as last Sunday of October, 1:00 UTC. The clocks are moved back at specified time.

NTP setting window allow to enable and configure network time synchronization. Tick the *Auto Update* checkbox to enable detection functionality. Select server from the list, ore use own, define port, time zone and update period.

After changing parameters click *Save* button. Use *Manual Update* to update time while operation it.

Reset Default button restore all setting of current channel to factory default.

NVR CONFIGURATION

2.6.3. Output

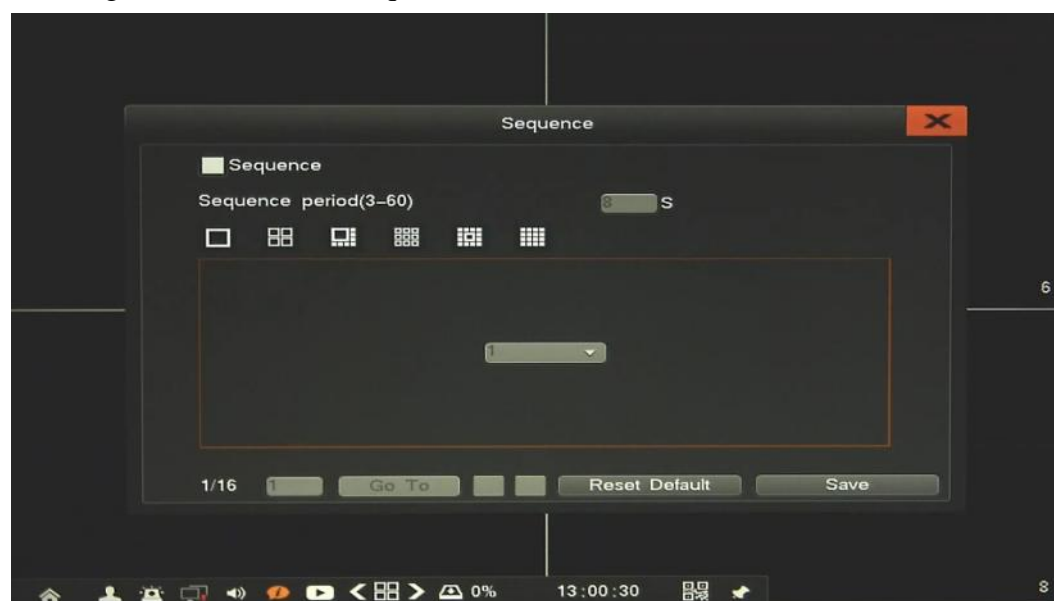
Channel setting - configuration of camera image and display parameters. These function are set up remotely in camera.



After selecting *Channel no.* following parameters are available: *Camera Name, Video Mask, Time Display, Channel name display, Time position, Video Adjust, CH name position*

Note: Not every camera model and network protocol allow to change all camera settings remotely.

Sequence - configuration of camera sequence.



To enable *Sequence* tick checkbox, next define time period, and choose split screen format. Basic on selected split screen select cameras from dropdown list, do the same way for all pages. When finish confirm it by *Save* button. To run sequence need to log out, then sequence start automatically.

Output Mode - menu allows to change mode of output image (to monitor) depending of user requirement. Detailed description in 1.8. chapter.

NVR CONFIGURATION

2.6.4. COM - menu allows to configure the settings of the port for remote controller and peripheral devices.



Select the serial port parameters according to requirement of connected devices. After changing parameters click *Save* button.

Reset Default button restore all setting of current channel to factory default.

2.6.5. PTZ Setting - menu allows to configure the settings of the PTZ parameters of connected devices.



Select the camera protocol, address and available interface. After changing parameters click *Save* button. *Reset Default* button restore all setting of current channel to factory default.

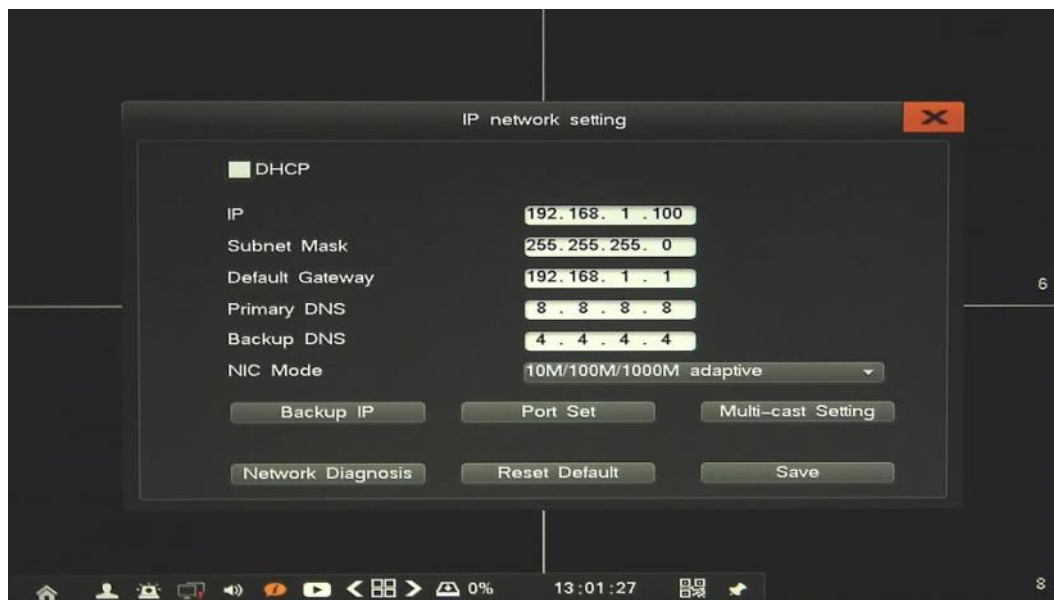
Note:

For NOVUS PTZ camera connected by ONVIF protocol no need to configure anything on this menu. All cameras using ONVIF directly for PTZ communication.

NVR CONFIGURATION

2.6.6. Network - menu allows to configure network parameters of the device including email, DDNS and email setting.

2.6.6.1. Network setting - configuration of basic network parameters of the device. Following parameters are available:



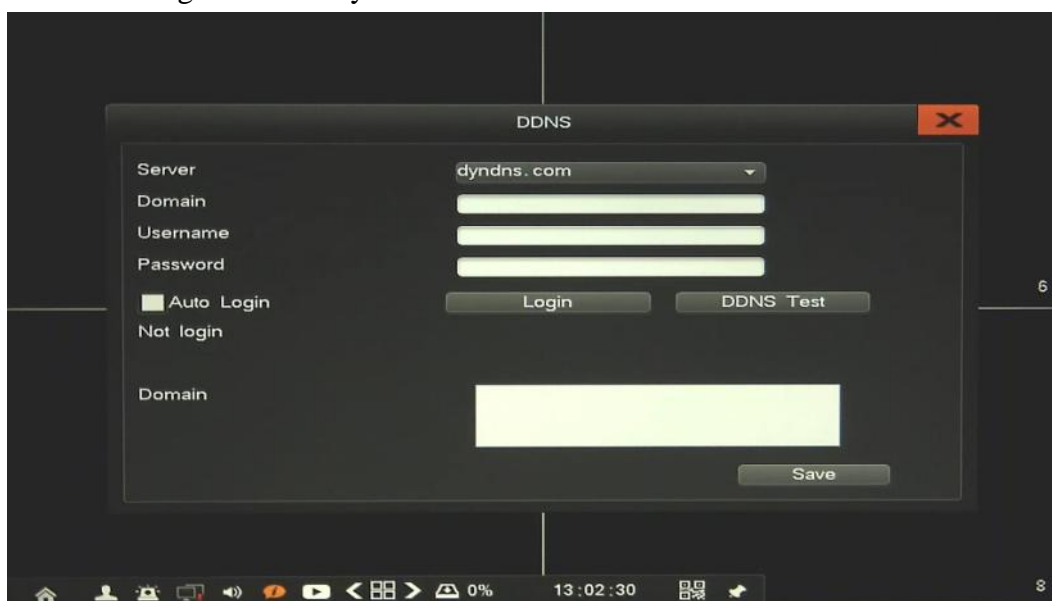
- **DHCP:** When the DHCP box is checked, the sub-fields: IP address, gateway, subnet mask, primary DNS server, secondary DNS server will be filled in automatically.
- **IP:** enter the IP address.
- **Subnet Mask:** Enter the corresponding IP subnet mask.
- **Default Gateway:** Enter the corresponding gateway address.
- **Primary/Backup DNS:** Enter the domain name servers IP address.
- **NIC Mode:** select maximum speed of LAN port.
- **Backup IP:** set up parameters of backup IP (used in case when DHCP server fail).
- **Port Set:** set up ports number used for sending video data and operate by web browser.
- **Multicast Setting:** set up IP address and port number used for sending video data via multicast.
- **Network Diagnosis:** open sub menu to diagnose network connection issues and try to repair it if possible.

When open new window press *Network Diagnosis* to verify Internet connection. If it fail from some reason the result will be displayed. If problem is with NVR configuration press *Repair Network*, then system try to set up correct network values. If it not solve problem you can try to solve it yourself.

After changing parameters click *Save* button.

Reset Default button restore all setting of current window to factory default.

2.6.6.2. DDNS - configuration of Dynamic DNS service

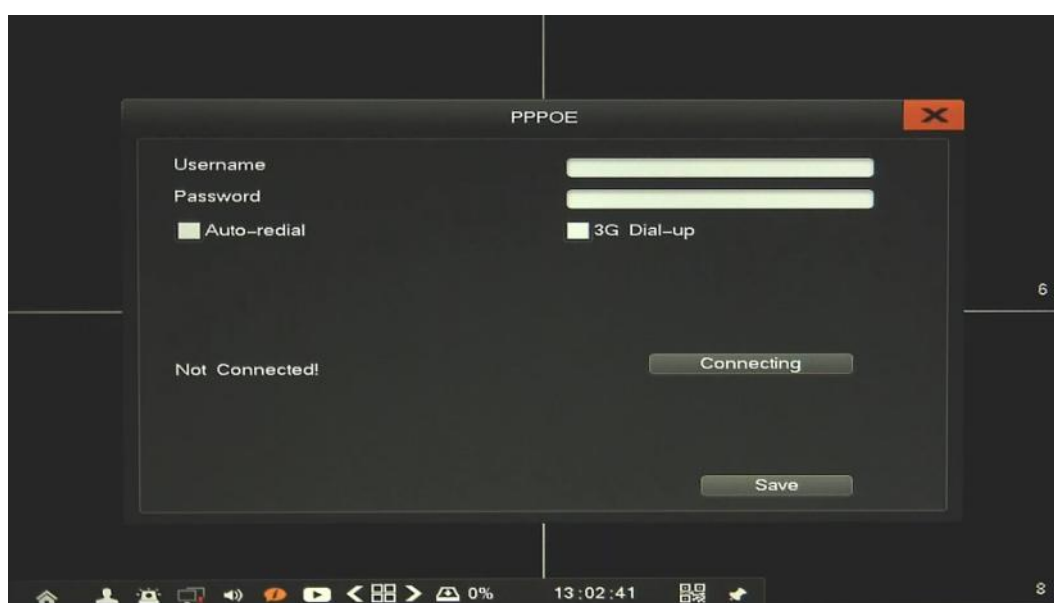


To Enable DDNS select server, provide domain name, username and password. Next click *Login* or tick *Auto Login* checkbox to start DDNS service. Use *DDNS Test* button to verify configuration.

Note:

Although the DVR supports dynamic IP addresses, it is advised that DDNS support should be performed at the local router that DVR is connected to. Prior configuration attempt please register the address in one of the DDNS servers supported by the device - www.dyndns.com server is advised. Prior to configuring the DDNS please contact the network administrator in order to obtain proper network parameters that are entered in this menu.

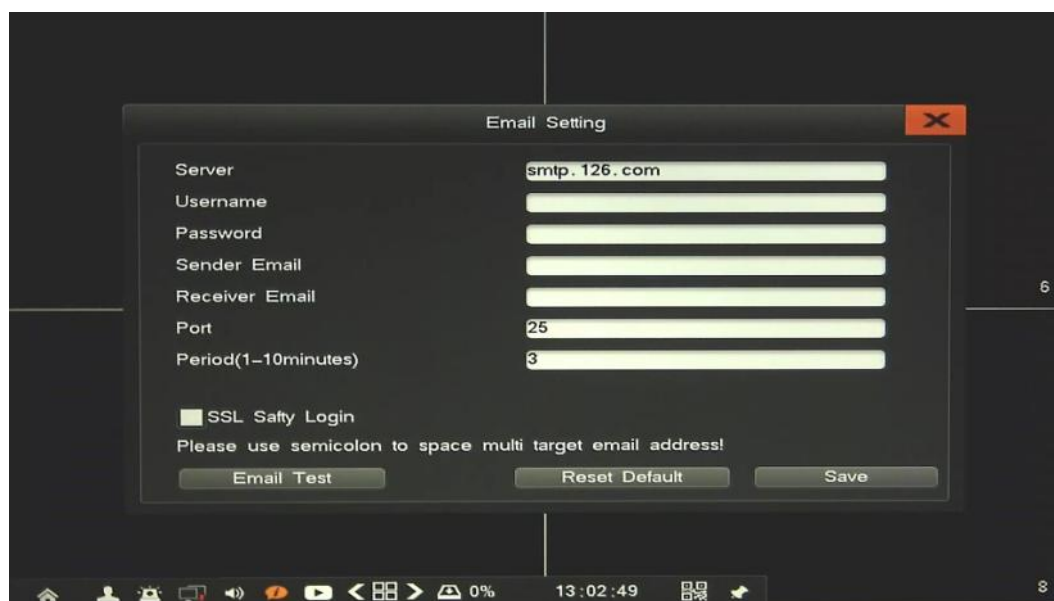
2.6.6.3. PPPoE - configuration of PPPOE setting.



To enable the PPPOE service: Input the PPPOE user name, password and click *Connecting* button or tick *Auto Redial* checkbox to start PPPoE connection.

NVR CONFIGURATION

2.6.6.4. Email setting - configuration of Email account.



To set up email sending configure parameters of email account. Provide parameters: Server SMTP, Username and Password, Sender Email, Receiver email, port of SMTP communications, and time period. Tic SSL to enable SSL authorization.

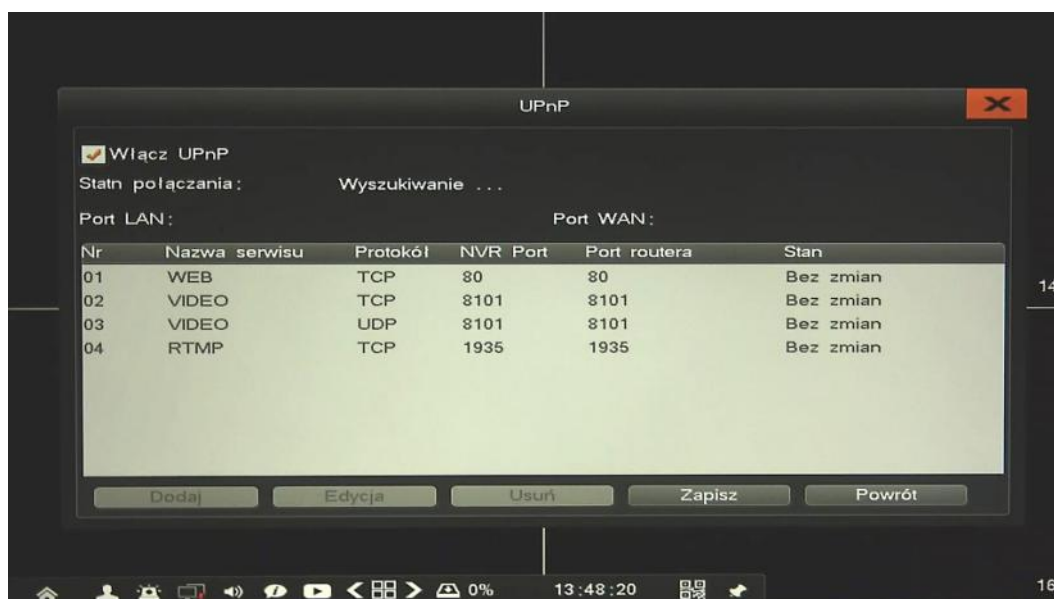
To verify configuration press *Email Test* button. If ok confirm it by *Save* button.

Note:

Some email servers can block the email sending if the email delivery cycle is too short, and classify it as spam. Contact your email service provider to adjust the minimum delivery cycle so that the server does not classify the email as spam

2.6.6.5. Advanced - configuration of other network services

UPNP - Universal Plug and Play, realize auto port mapping, it required to use on router automating port mapping. Tic *Enable UPNP* to start service. If it ready it will automatically open listed ports on your router, to be able to connect with NVR from the Internet.



NVR CONFIGURATION

2.6.6.6. Cloud Service - menu allows to enable cloud access to NVR. For proper operation of cloud service UPnP function should be enable, and router should support UPnP.



Click *Enable Ivview* to enable cloud access to NVR. After changing parameters click *Save* button. There are also two QR codes to scan in mobile device.

First is link for mobile software, scan it to go to the application downloading page.

Second QR code is serial number of NVR to easy connect NVR. After you download and install application, open it and scan second QR code to get access to NVR.

2.6.6.7. Bridge Enables access to cameras connected to the PoE interface from the network access interface. This allows you to change the configuration of the camera from the web browser using a PC connected to the same network with network recorder. To enable sharing click on the ENABLE field. The sharing process will start in the list and the IP addresses of available cameras will appear. Once the camcorder setup process is finished, disable the functions by clicking again in the ENABLE field.

NOTE: Use only for service purposes. When the bridge is running, the DVR will not connect to the cameras and will not record them. Function available in the recorder NVR-7716P16-H2.

NVR CONFIGURATION

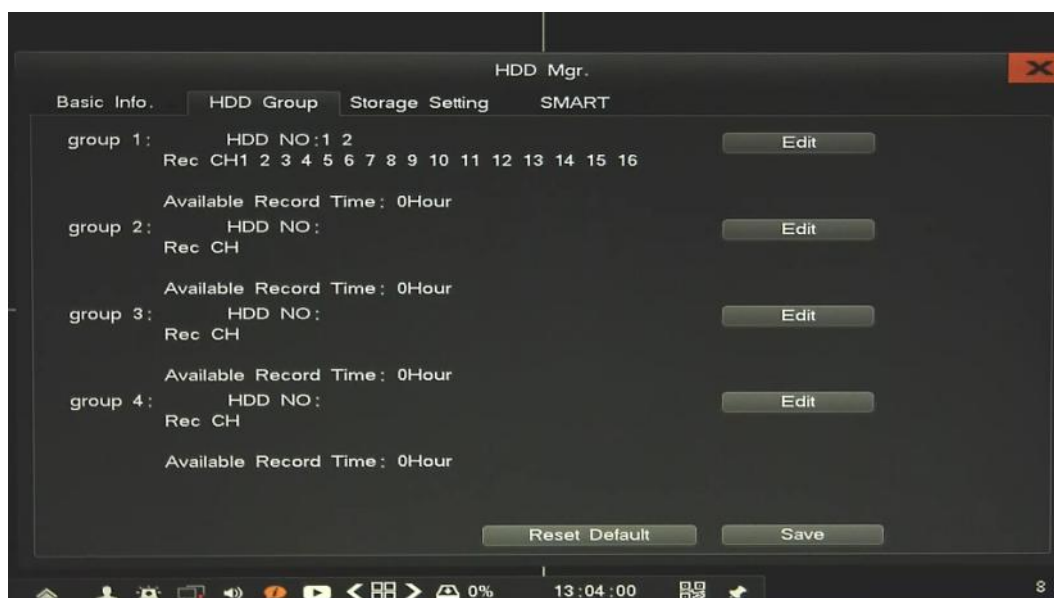
2.7. HDD Mgr. - menu allows to manage of the NVR storage.

2.7.1. Basic info - information about installed HDD on NVR, and it's status.



There are information about installed HDD and USB flash memory, its status, size and used space. There are possibilities to change HDD behaviour from Read-Write to Read Only, by clicking *R-W* setting. Use *Format* button to format selected HDD or use *All Format* button to format all installed HDDs.

2.7.2. HDD Group - configuration of HDD group

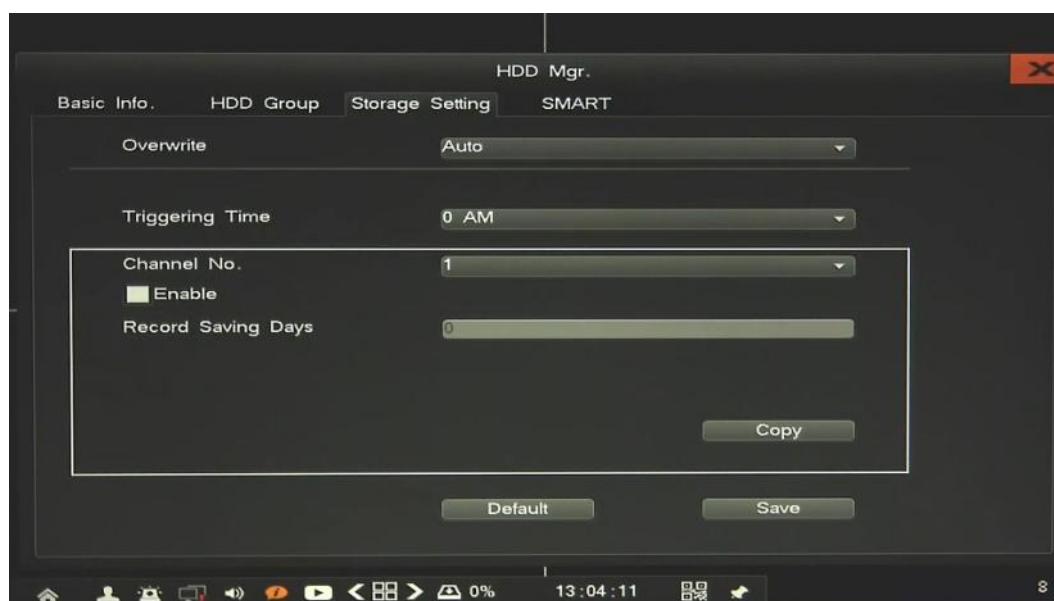


Creating HDD groups is possible when at least two HDD are installed. Main benefit of HDD grouping is that some important channel could be stored for longer time than other. There are 4 groups possible, each group should include at least one HDD, not common with other group. To modify group setting press *Edit* button, next in window choose HDD and channels, which will be assigned to selected group. The same way edit other groups. After changing parameters click *Save* button.

Reset Default button restore all setting of current window to factory default.

NVR CONFIGURATION

2.7.3. Storage Settings - advanced configuration of recordings.



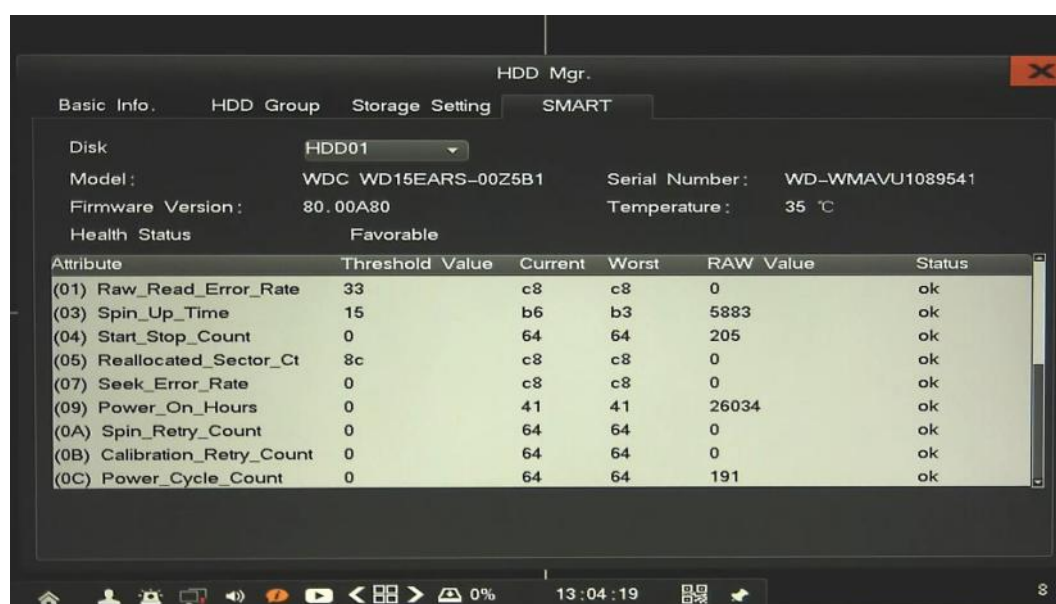
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To change overwrite mode, from drop down list select *Manual*, then you have to replace HDD each time when it would be full.

If needed to set up time record limit, you need to set up *Trigger time*, choose channel, tick *Enable* and set up numbers of days. When trigger time occurs defined days of limitation will be used for selected channel. After changing parameters click *Save* button.

Default button restore all setting of current window to factory default.

2.7.4. Smart - display SMART details of each HDD



NVR CONFIGURATION

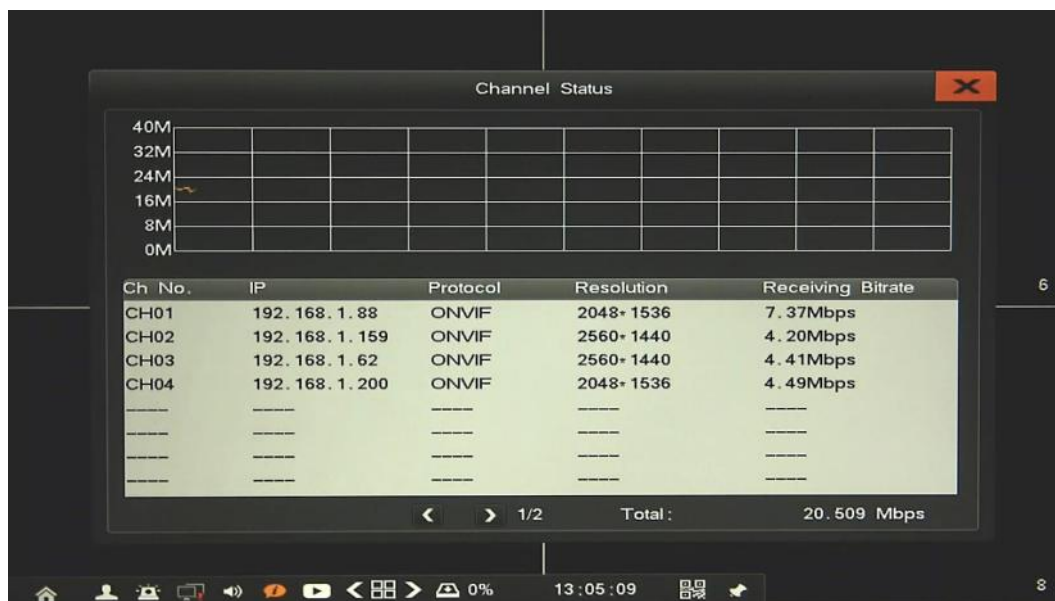
2.8. System Info. - information about the NVR status, and devices connected to it.

2.8.1. Device information - Device information displays the system software version and other relevant information.



2.8.2. Channel Status - The statistic table displays the total real-time bitrate received by NVR from cameras. At the bottom of window total receiving bitrate value is also displayed.

The information table displays the IP address, protocol, receiving rate and record resolution of each channel of the current IPC, click on the icon <, > can flip view another page channel status.



NVR CONFIGURATION

2.8.3. PoE Status - Menu shows the power supply situation, power consumptions, and power on time of every POE channel.



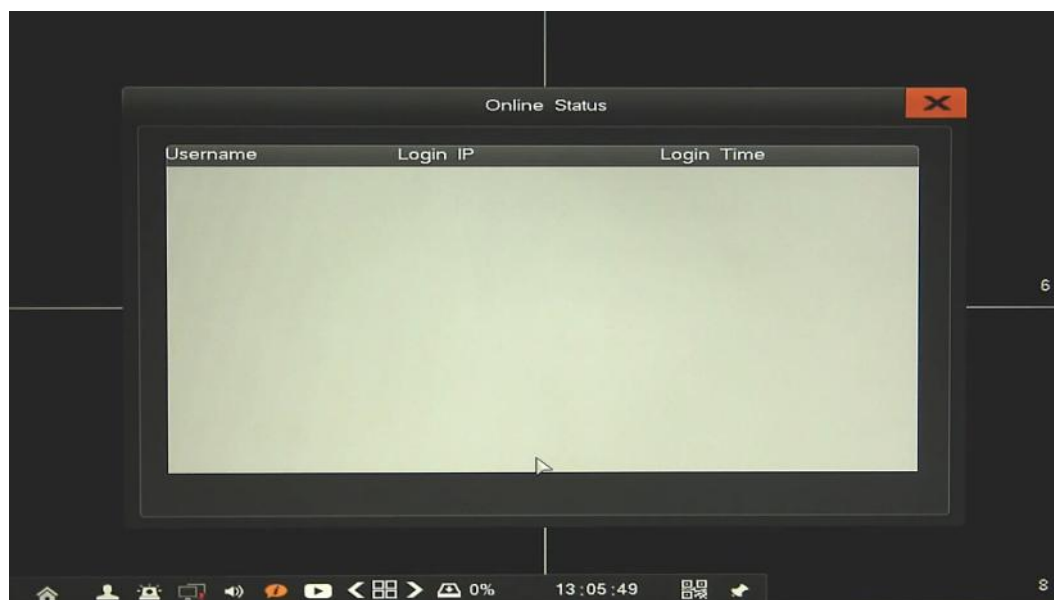
2.8.4. Alarm Status - Menu shows the all connected devices alarm information: sensor alarm, motion alarm, video lost alarm, PoE conflict; and system alarm information: HDD alarm, Network disconnected, Temperature alarm.

Use *Alarm Clear* button to disable the alarm sounds.



NVR CONFIGURATION

2.8.5. Online Status - menu displays the relevant information of the network server, that currently login the device, display the login username, server IP and log time.



2.8.6. Log Inquiry - menu allow to search the logs according to different types and different date and time, as shown in the picture below.



To display log list define *Main Type* and *Sub Type*, or choose *All* for any of them. Next select a day and press *Inquiry* button. Result will be displayed at list, use *<*, *>* arrows or *Go To* to change viewed page.

To copy search result select *Backup Device* and press *Log Backup* button.

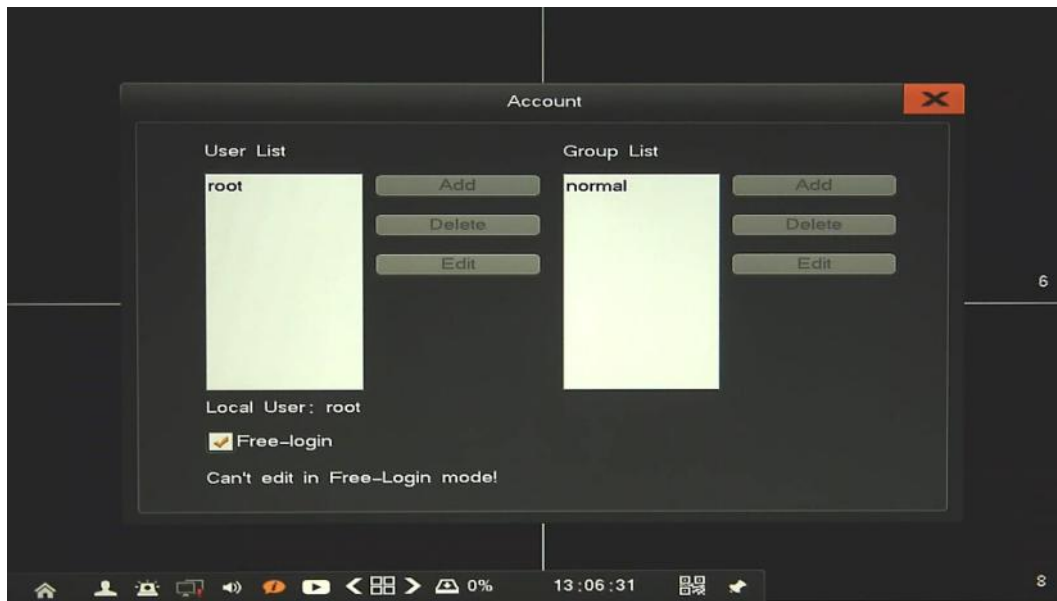
NVR CONFIGURATION

2.9. System Maintenance - menu allows to configure, system settings, user management, and other system features.

2.9.1. Quick setting - feature allow to quick configure NVR, set up main functionality and assign cameras to channels. Detailed description of it you will find in chapter 3.4. of User's manual (Short) .

2.9.2. Account - You can add a user accounts and set up various permissions of them.

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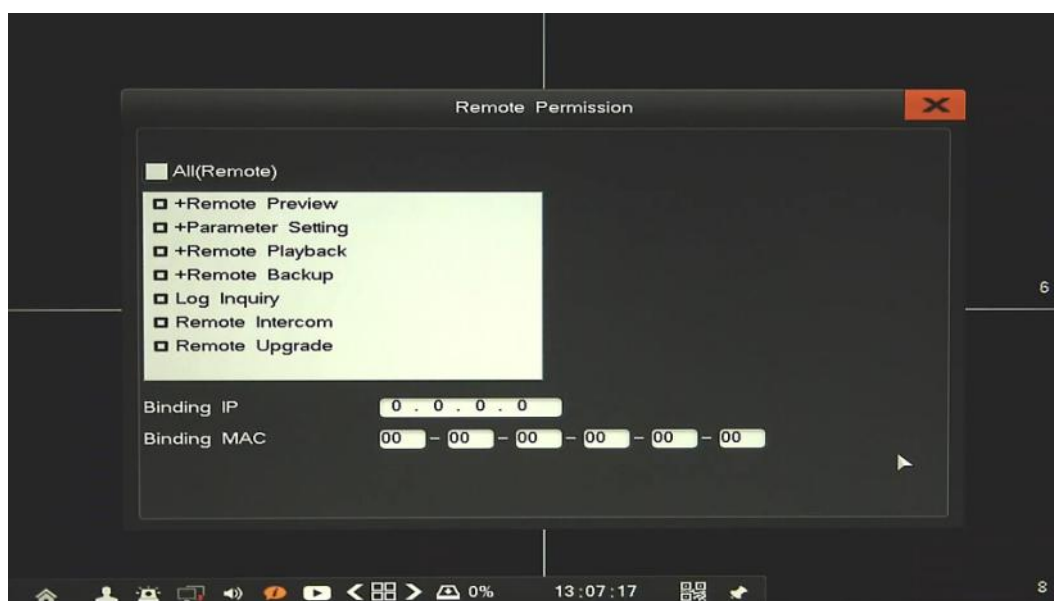
To add a user account you must firstly disable *Free-login* feature. Next click *Add*, will be displayed window like below.



NVR CONFIGURATION

Please provide following values:

- *User Name* : enter user name.
- *Password / Confirm Password*: enter the password.
- Select a *Group* that user belongs to, by default is *Normal* but you could create your own group.
- Select *Privileges* on a list, if name is begin from + then need to select it for required video channels.
- *Remote Permission*: in new window please choose required access values for remote operation.



- *Binding IP/ Binding MAC*: provide IP address and MAC value for limiting access from network.

If done click RMB to return and click *Save* button.

To modify a user information:

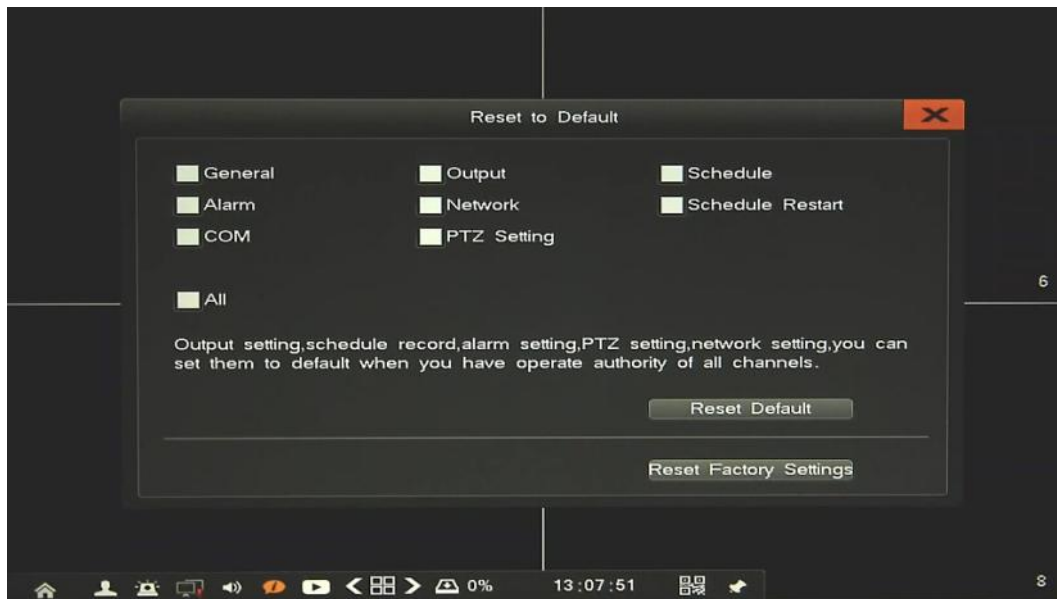
- Select user on a list and click *Edit* button.
- In new window please modify required values.
- When done, click *Save* button.

To delete a user information:

- Select user on a list and click *Delete* button.
- In new window please confirm deleting user by *Yes*.

The same way you could manage users group list, and permission of each group.

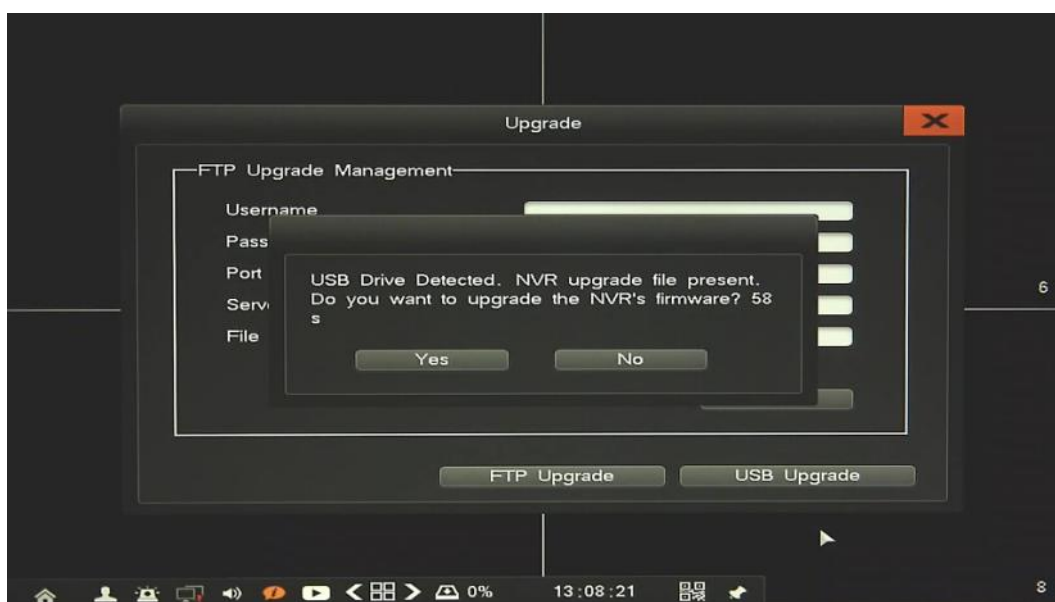
2.9.3. Reset to default - menu responsible for restoring default NVR settings



- *Reset Default*: will clear setting of features, selected in given window.
- *Reset Factory Settings*: Default: will recover all NVR settings to the factory default.

2.9.4. Upgrade - menu responsible for upgrading NVR firmware

To update firmware please connect the USB storage device that contains the “upgrade.bin” file placed in a root directory. After few second popup window occur with question to *Upgrade NVR*.



NVR CONFIGURATION

If no follow procedure below:

- Open upgrade menu



- Choose *USB* upgrade button and confirm proceed of upgrading system.
- Click *UPGRADE*
- The progress bar displays the progress of the firmware upgrade process.
- When the upgrade is complete press *OK* reboot the system.
-

Caution:

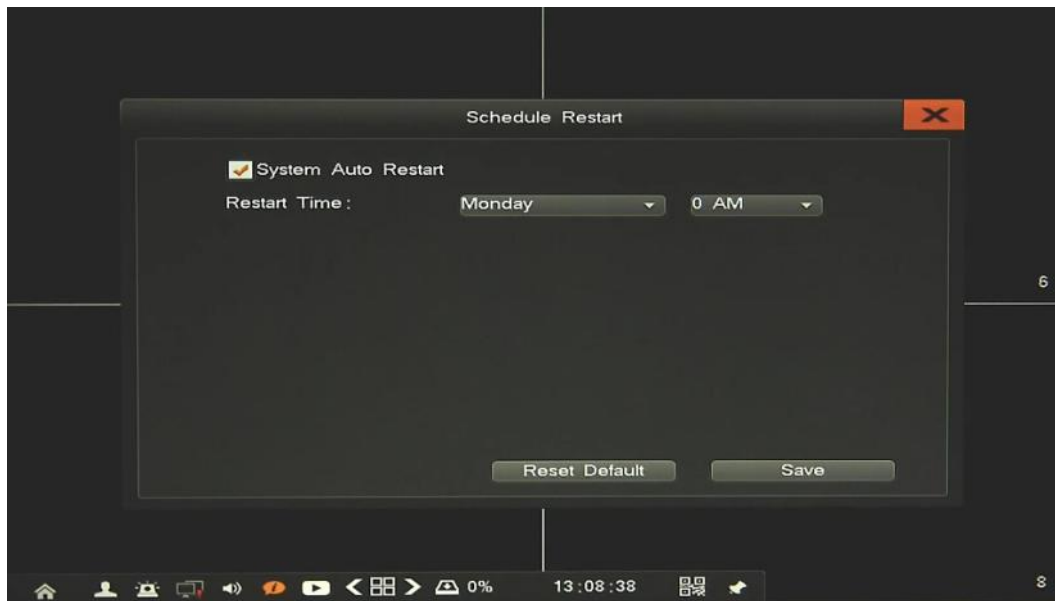
Please contact your local distributor prior to software upgrade.

Power outage, turning the device off or removing the Flash memory during update may result in damage to the NVR and a necessity of service repair.

The producer isn't responsible for any data loss resulting from firmware update.

NVR CONFIGURATION

2.9.5. Auto reboot - menu allow to set auto reboot feature, with selected frequency.

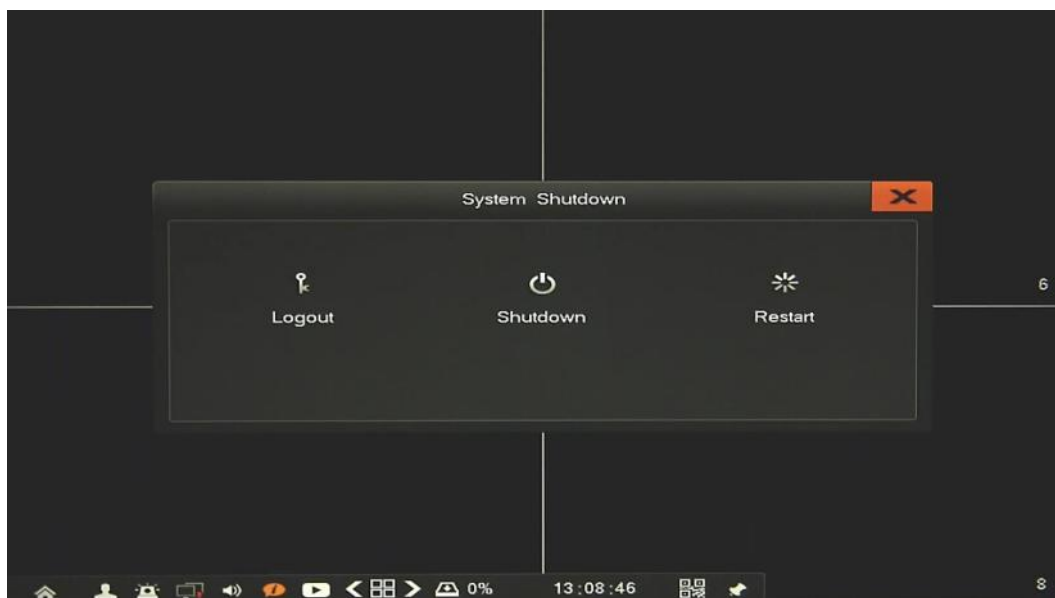


Tick *System Auto Restart* checkbox to enable feature.

Set up restart Day and Hour, when restart occur. After changing parameters click *Save* button.

Reset Default button restore all setting of current window to factory default.

2.9.6. System Shutdown - menu allow to shut down NVR, logout current user or reboot NVR.



NETWORK OPERATIONS UTILIZING WEB BROWSER

3. NETWORK OPERATIONS UTILIZING WEB BROWSER

Network Video Recorder features the possibility of controlling video data using network connections and web browser (Internet Explorer is recommended).

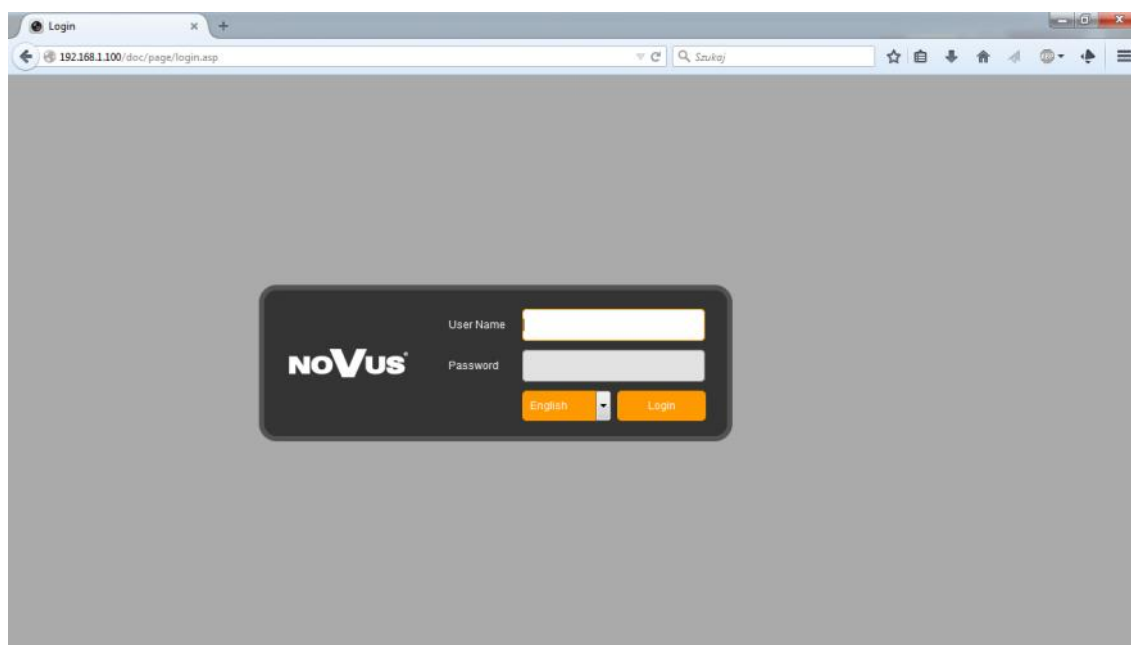
3.1. Recommended PC specification for web browser connections

Requirements below apply to connection with an NVR, assuming smooth image display 4 channel in 1920x1080 resolution and 25 fps speed.

Operating System	Windows 7, Windows 8, Windows 10
Web browsers:	Internet Explorer 10.0 or later, Google Chrome 41.0 or later, Mozilla Firefox 32.0 or later, other supported Flashplayer 19 or later
CPU	Intel Pentium Core 2 Duo 3,16 GHz or higher
Memory	1024 MB or more
Display	min. 16-bit 1280 x 1024 High Color
Hard Disk Drive	50MB (space required for installing the web viewer software)

3.2. Establishing a connection

To establish connection open the web browser and enter IP address of the NVR (by default, IP address is 192.168.1.100).



Next choose your *Language*, provide *Username* and *Password* and confirm by I button.

Note

NVR 7000 uses Flash player Plugin to display video channels. If you don't have to installed compatible version, you need to go to get.adobe.com/flashplayer/ download and install it.

Microsoft Edge is not recommended because of unstable work.

NETWORK OPERATIONS UTILIZING WEB BROWSER

3.3. Configuration of remote access

If you are going to use Internet to remote connect with the NVR you need to have a Public IP Address (Static or Dynamic). Check your *Network Provider* if you don't know it.

More over you have to configure NVRs NETWORK SETTING and Router in right way.

For NVR you have to configure:

- *IP and Subnet Mask* - use value corresponding to your router IP address, check your *Network Provider* if you don't know them.
- *Default Gateway* - Yours Internet gateway (router) address, check your *Network Provider* if you don't know it.
- *Primary and Backup DNS* - Check your *Network Provider* to get DNS addresses or use Public DNS like for eg. 208.67.222.222.

To connect to the device by using Internet you have to create mapping of following ports:

- *HTTP port*: default number 80
- *Command port*: default number 8101

Depending of used Router *Mapping Ports* could be also named as *Virtual Server* or *Port Forwarding*.

If you have an Dynamic IP Address you have to configure DDNS setting. Go to the DDNS setting chapter configure NVR like it is described.

After proper configuration of the device you will be able to connect with it remotely. To check it try to use web browser typing in address: `http://your_static_ip:http_port` or use your DDNS address: `http://your_ddns_domain:http_port`. If everything correct then login window should be appear.

Note:

In case of using P2P connection there is only needed to support UPnP by router and NVR. Also any port forwarding in router are unnecessary, UPnP will do it automatically. You only need to configure the recorder to get connection with Internet, and then connection will be established automatically, while using P2P connection.

NETWORK OPERATIONS UTILIZING WEB BROWSER

3.4. Live monitoring interface

After successful logging into a user interface using web browser, the following window opens:




CHANNEL LIST

MENU BAR

VIDEO WINDOW

PTZ MENU

Description of interface features:

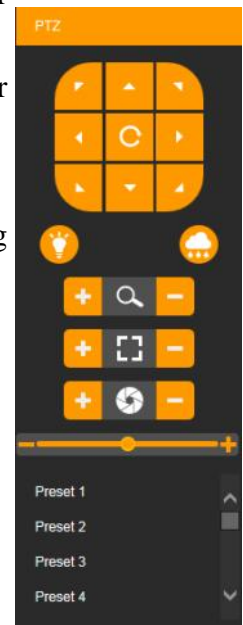
To enable/disable all channel preview click *All channel* on channel list or  icon on video window.

To enable/disable one channel preview click once on required camera icon.  

Selection *Real Time / Fluency* will change streaming to get less delays or better fluency.

Selection *Record bitrate / Network bitrate* will change stream to main or substream. It's working only in 1channel mode.

PTZ panel allow to manipulate a PTZ camera, adjust zoom, focus, iris, using Presets, etc.



NETWORK OPERATIONS UTILIZING WEB BROWSER

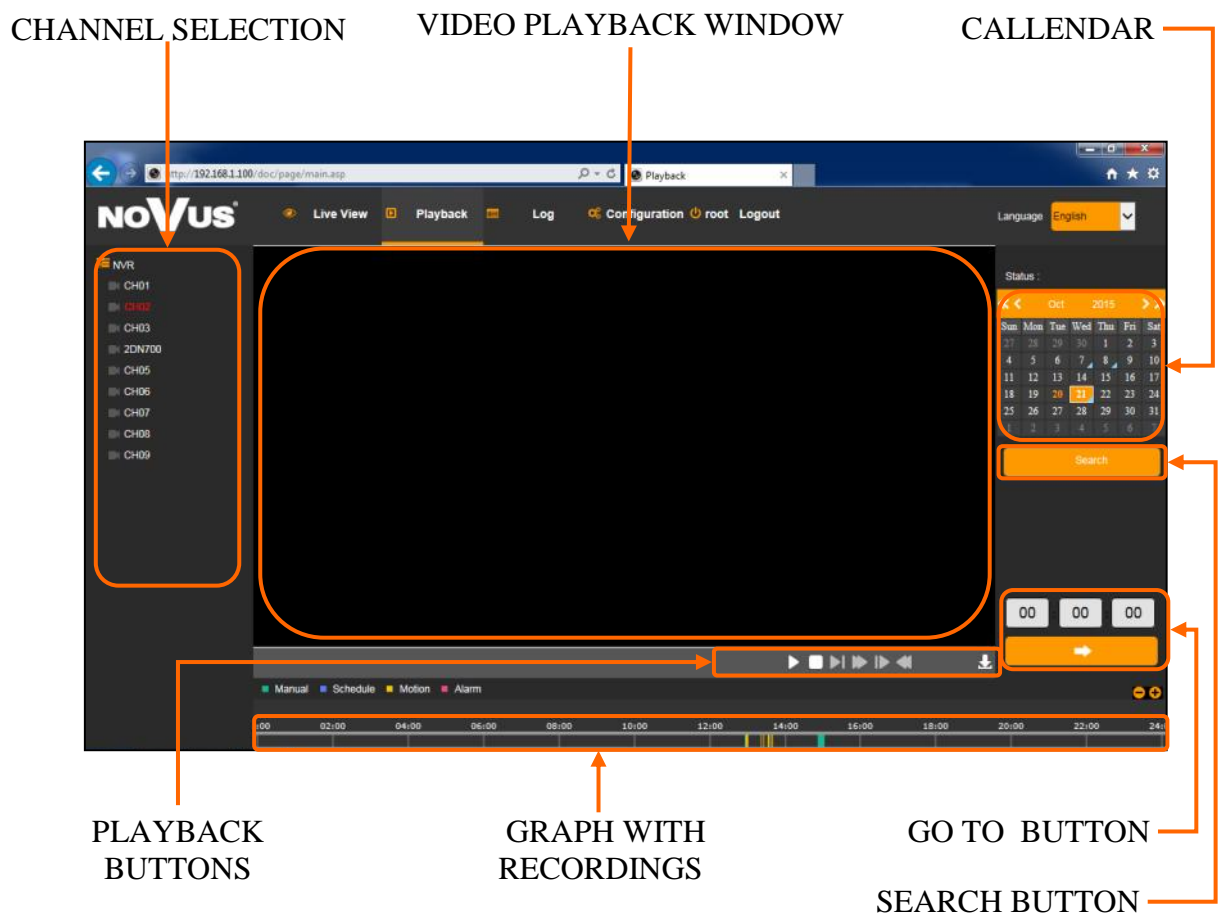
Menu description:

Item	Description
Live	Live view cameras interface
Playback	Move to the playback screen, which allow to search and watch recordings..
Log	Allow to search the logs according to different types and different date and time.
Configuration	Enter to the NVR setup
Logout	Logout and exit interface
Language	Choose language of interface

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3.5. Searching and playing recorded video

To start the playback you have to chose *Playback* from main menu. Then following window appears:



1. From the CHANNEL SELECT tick the channel which you want to search the recording, it will auto search the recording for current day.
2. Change the date from the calendar and press *Search* button to find records for selected date.

NETWORK OPERATIONS UTILIZING WEB BROWSER

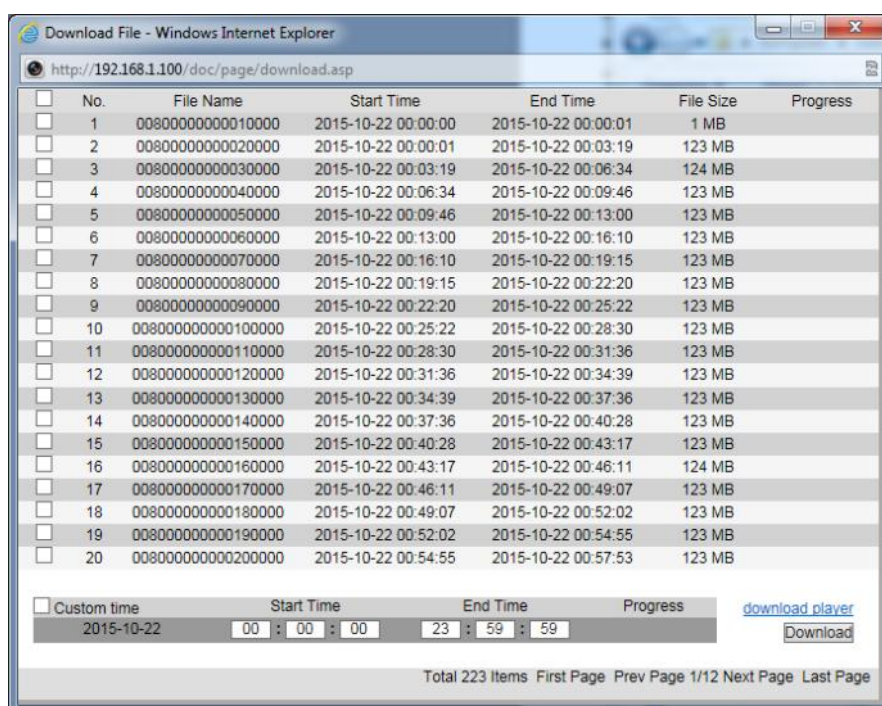
You can identify the type of the recording data by the color in the bar.

- Green (Manual) : data originating from manual recording
- Blue (Schedule) : continuous recording data.
- Yellow (Motion) : motion event recording data.
- Red (Alarm) : alarm event recording data.

3. To play the searched data simply double click a desired point on “Timeline” or press PLAY button.

Description of playback buttons:

- *Pause/Play*: pause the current playback image.
- *Stop*: Stop the playing video.
- *Slow*: Slow down the playback speed. (there are: 1/2, 1/4, 1/8, 1/16 times)
- *Fast Forward*: Accelerate playback. (there are: 2, 4, 8, 16 times)
- *Frame*: jump one frame forward/backward.
- *Fast Backward*: Backward playback in fast mode (there are: 2, 4, 8, 16 times)
- *Download File*: Menu allow to backup record files according to selected channel.



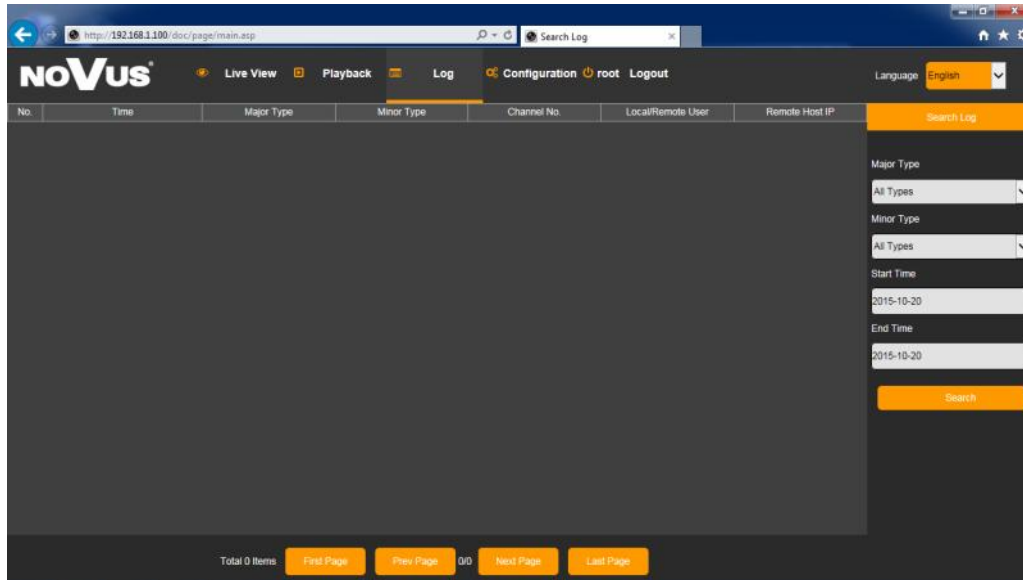
To download records simply select a required files and press *Download* button.

If you need some time range, select custom time, filling *Start Time* and *End Time* and press *Download* button.

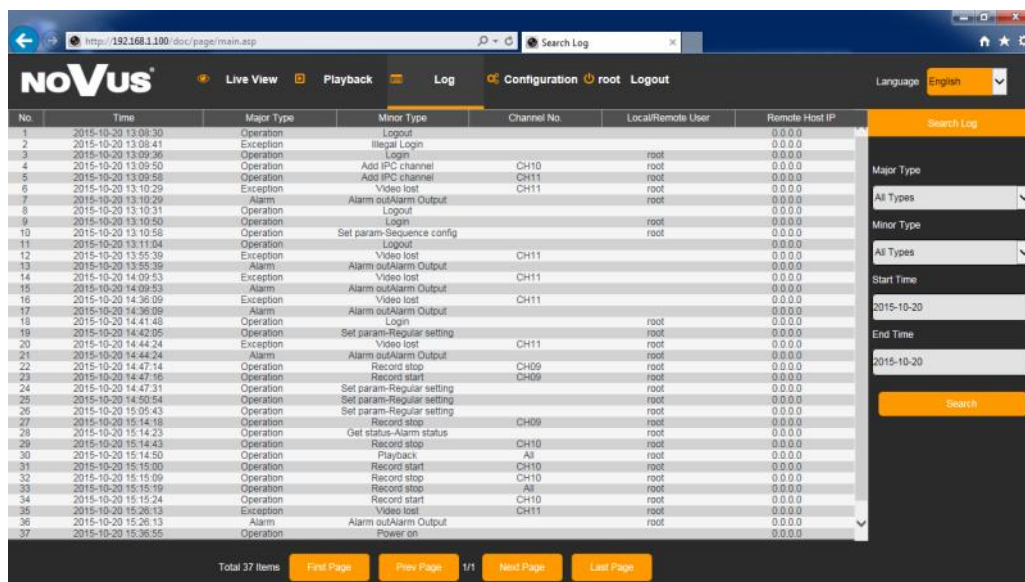
To open records choose *Download Player*, save it on PC and install. Then you could use this software to playback records.

NETWORK OPERATIONS UTILIZING WEB BROWSER

3.6. Log - You can search the logs according to different types and different date and time, as shown in the above picture.



- *Major Type*: there are All Type, Alarm, Exception and Operation for selection.
- *Minor Type*: depending of selection major type, you could select all, or one specified minor type.
- *Start Time, End Time*: you can select time range of a log you want to search.
- *Search*: press to display list of logs.



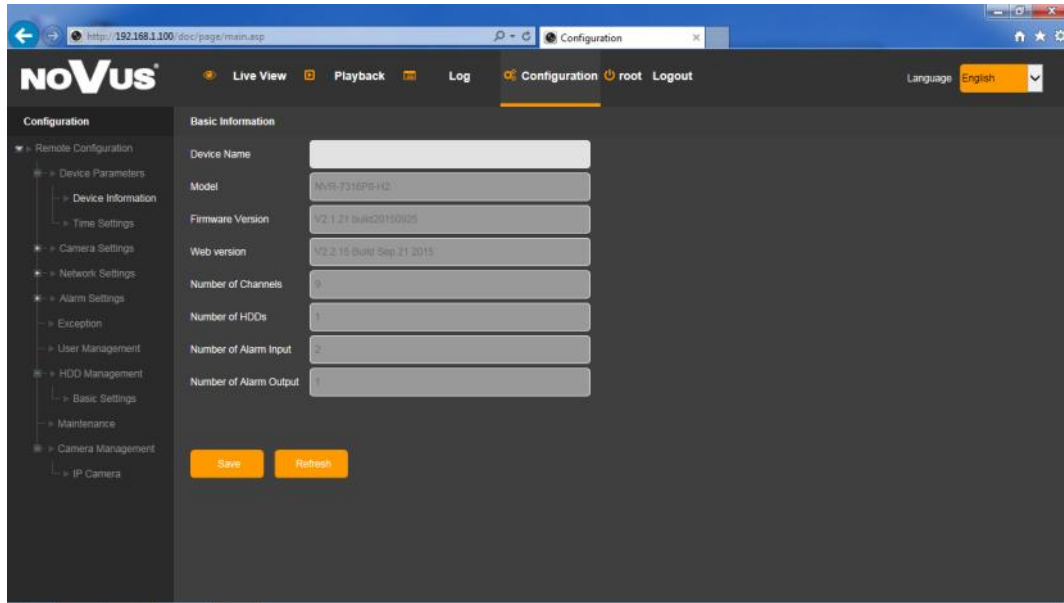
After searching list of logs would be displayed. Each log include information about time, type of log, and if possible channel information, user name and ip address of it.

At the bottom of screen there are navigation buttons, which allow to move between pages.

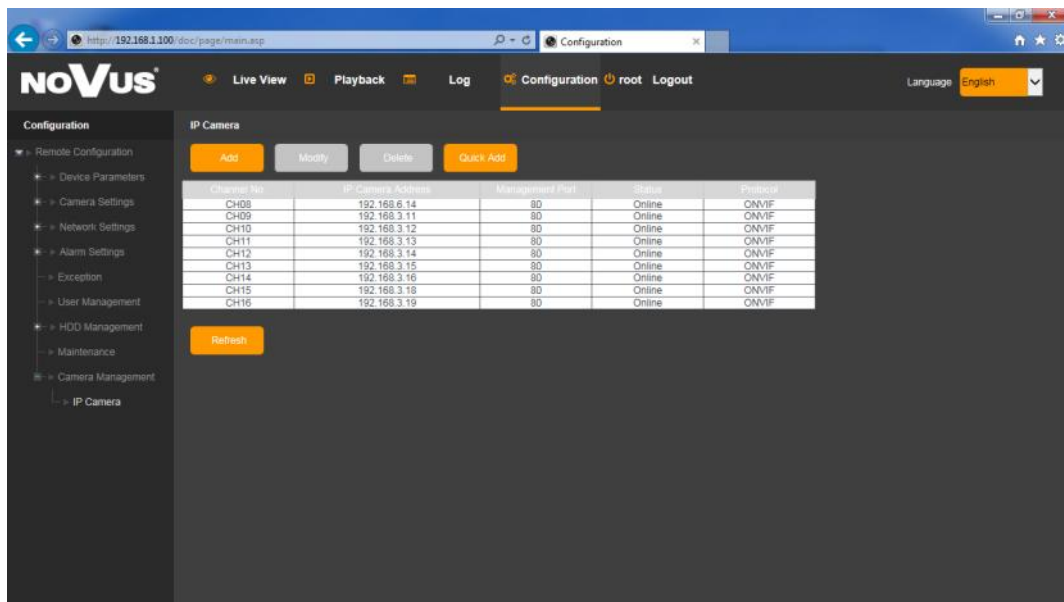
NETWORK OPERATIONS UTILIZING WEB BROWSER

3.7. Configuration

Setup menu contains minor settings of NVR. Whole interface is similar to interface displayed on NVRs monitor.



IP camera settings is placed in *Camera Management* menu.



For detail of each settings please refer “System Setup” description in chapter 2 - NVR CONFIGURATION.

NETWORK OPERATIONS UTILIZING WEB BROWSER

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AAT Holding sp. z o.o., 431 Pulawska St., 02-801 Warsaw, Poland
tel.: +4822 546 07 00, fax: +4822 546 07 59
www.novuscctv.com