EverFocus®

Instruction Manual

ERS-4

4 Channel Video Server / Recorder

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Safety Precautions

- To avoid any damage, please consider the following safety warnings:
- Never place the device near to heaters, furnaces, other heat sources or under direct solar irradiation.
- Operate the device only in locations providing the tolerable operating temperature range 0°C~40°C/32°F ~ +104°F.
- Make sure that the device‘s ventilation slots are not covered or sheeted.
- For cleaning, make sure the device is plugged off and only use a damp cloth without acid detergent.
- Install the device only in dry and dustproof surroundings. Protect the device against any liquid‘s penetration.
- Avoid the penetration of any artefacts, e.g. through ventilation slots.
- Do not attempt to disassemble the appliance. To prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside. Contact qualified service personnel for maintenance. Handle the appliance with care. Do not strike or shake, as this may damage the appliance.
- Do not operate appliance with other than specified power supplies.
- Avoid any affection of the device through vibrations or mechanical shock at the recorder‘s installation location.
- Avoid to power off the device during playback or recording operation.

CE

ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

FC

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures :

•Reorient or relocate the receiving antenna.
•Increase the separation between the equipment and receiver.
•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
•Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the users’ authority to operate this equipment.

RoHS

This Product is RoHS compliant.

WEEE

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused.
This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
Please, dispose of this equipment at your local community waste collection/recycling centre.
In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können.
Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen.
Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben.

The information in this manual was current upon publication. The manufacturer reserves the right to revise and improve his products. Therefore, all specifications are subject to change without prior notice. Misprints reserved.
Please read this manual carefully before installing and using this unit. Be sure to keep it handy for later reference.

TABLE OF CONTENTS

1 PRODUCT OVERVIEW

The ERS-4 is a 4 channel video server with local recording function for CCTV applications.
With the optional build-in HDD the ERS-4 is the ideal device for network operated CCTV systems with local recording and low usage of systems network bandwidth.
The efficient H.264 compression with newest codec - technology allows fast network video streaming in excellent quality, furthermore an efficient usage of Hard Disk capacity at local recording.
The ERS-4 provides live and playback evaluation via network. Live view and setup menu are also accessible at local monitor, operated by mouse.

1.1 FEATURES

- H.264 Compression format
- User friendly GUI with graphical icons and visual indicators
- Setup menu local (mouse, local monitor) or via network (Browser, CMS)
- Express Setup: by entering key parameters in EXPRESS menu the ERS-4 is ready for operation within a minute
- Audio recording capabilities
- Optional 1 internal SATA HDD
- Multi-language support

1.2 PACKAGE CONTENTS

ERS-4 video server x1

Quick Installation Guide x1

User's Manual Disk x1

AC Adapter and Power Cord x1

1.3 OPTIONAL ACCESSORIES

ERS-HDMK: ERS-4 Hard Disk mounting kit for installing 3.5" SATA HDD to ERS-4-NH

1.4 SPECIFICATIONS

Physical

Recording Rate/Resolution	352x288: 100 IPS PAL / 120 IPS NTSC 704x288: 100 IPS PAL / 120 IPS NTSC 704x576: 50 IPS PAL / 60 IPS NTSC
Playback and Streaming Rate/Resolution	352x288: up to 100 IPS PAL / 120 IPS NTSC 704x288: up to 100 IPS PAL / 120 IPS NTSC 704x576: up to 50 IPS PAL / 60 IPS NTSC depending on network conditions
Video Input	4 x 1 V^{pp} FBAS, BNC, 75 Ohm termination
Monitor output	1 x 1 V^{pp} FBAS, BNC at 75 Ohm 1 x VGA (resolution 800x600@60 Hz)
Audio Input/Output	Input: 1 x Line In, 1 V max. / 1 KOhm, RCA socket Output: 1 x Line Out 1 V max. at 1 KOhm, RCA socket
Alarm In	4 x N.O./N.C. , screw terminal connector
Alarm Out	1 x relay out N.O./N.C. , screw terminal connector
RS-485	1 x, screw terminal connector
Network interface	100 BASE-T, 8P8C / RJ45 socket
USB	1x USB 2.0 on Back Panel (for USB - Mouse) 1x USB 2.0 on Front Panel (for service purpose)
Status LED	Power, Alarm, HDD activity, Network traffic
Clock	Internal Real Time Clock, NTP synchronisation option
Power Source	12VDC with external power supply 100~240 VAC / 50/60 Hz
Dimensions (W x D x H)	320 x 208.9 x 54.3 mm / 12.6" x 8.2" x 2.1"
Temperature	0°C~40°C / 32°F~104°F (20~80% humidity)

Functional

OS	Embedded Linux
Video Compression	H.264
User Interface	GUI(Graphical User Interface)
Operation	Simultaneous network Live/Playback operation and local Recording
Recording Mode	Manual, Schedule and Event
Playback Search	By Date/Time or Event
Video Pause	Yes
Video Loss Detection	Yes
Motion Detection	Yes
Event Log	Yes
Schedule Setting	Support Express and Advanced Schedule Setting
User Access	3 Levels of User Access Support
PTZ Protocols	EverFocus, Pelco-D, Pelco-P, Samsung El., Transparent

1.5 FRONT PANEL

The front panel provides 1 USB port and the status LEDs.

Figure 1-1 Front Panel

USB port: USB 2.0 interface PC - mouse or service purpose .

Status LED:

	POWER:	LED ON indicates Power ON.
	ALARM:	LED ON indicates Alarm active.
	HDD:	LED flashes in case of HDD activity.
	Net:	LED flashes in case of Network activity.

1.6 REAR PANEL CONNECTORS

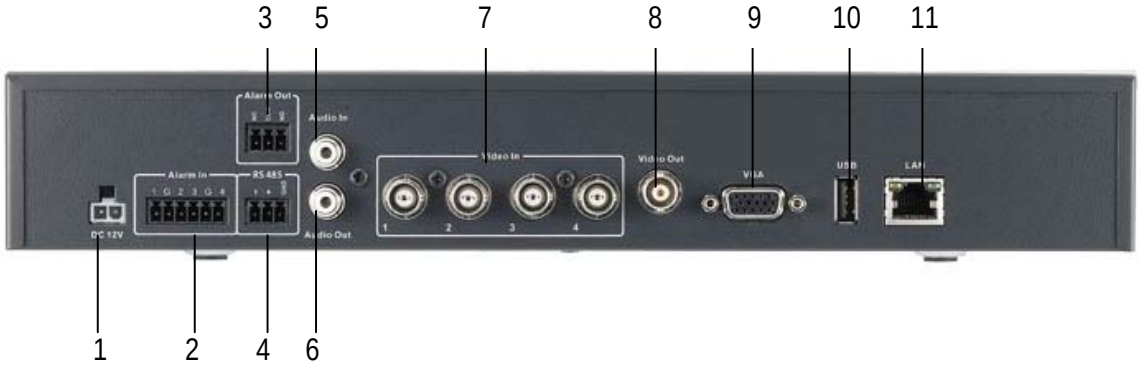


Figure 1-2 Rear Panel

1. Power: Power in socket DC 12V

2. Alarm In: 4 alarm inputs for dry contacts in mode N.O. / N.C. , screw terminal connector

3. Alarm Out: Relay output N.C. / N.O. , screw terminal connector

4. RS485: RS-485 interface, screw terminal connector for PTZ devices and control keyboard

5. Audio In: Audio input, RCA socket for line audio signals 1V max., 10 KOhm impedance.

6. Audio Out: Audio output, RCA socket, line audio signal 1V max at 10 KOhm.

7. Video In: Video input for composite signals 1 V^{pp} , BNC, 75 Ohm terminated

8. Video Out: Video monitor output composite signal 1 V^{pp} at 75 Ohm termination, BNC

9. VGA: Video monitor output VGA 800x600 @ 60 Hz, 15 pin VGA socket

10. USB: USB 2.0 port for USB mouse

11. LAN: 100Base-T network interface , 8P8C / RJ-45 socket

2 INSTALLATION

2.1 VIDEO INPUTS/OUTPUTS INSTALLATION

Camera and CCTV monitor must use 75 Ohm video cable (e.g. RG-59, RG-6, RG-11) with BNC connectors.

Due to inappropriate absorbability, 50 Ohm coax cable (e.g. RG-58), antenna cable and other types of coaxial cable are not compatible.

All connected video sources must provide a 1 Vpp NTSC or PAL standard video signal.

When converting transmission lines (twisted pair, fibre optics, radio) to the video inputs, be sure to verify accurate receiver calibration.

All 4 video inputs are terminated with 75 Ohm.

ATTENTION: In order for the system to auto-detect the appropriate video format (NTSC or PAL), make sure that there is a video signal on video input 1 upon power-up.

2.2 AUDIO INSTALLATION

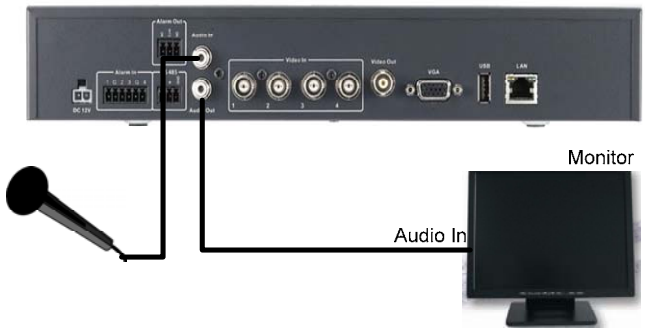
The ERS-4 provides 1 audio input and 1 audio output.

The input is designed for 500 mV (max. 1 V) to 10 KOhm line audio signals.

ATTENTION: The direct connection of a non-amplified microphone is not supported (a microphone amplifier is required).

The installation must be done with audio coax cable and RCA plugs.

The output provides a typ. 500 mV /max. 1V to 10 KOhm line audio signal and may be connected to a monitor's audio input or active speaker. The direct connection of passive speakers is not supported.



AUDIO RECORDING FUNCTIONALITY:

The audio channel is assigned to video channel 1.

Audio recording is activated / deactivated in the camera menu, camera 1.

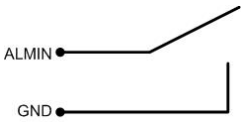
Audio channel is always recorded together with camera 1 and is independent of the image recording rate.

2.3 ALARM CONTACTS INSTALLATION

The ERS-4 alarm inputs can be used for recording start or recording rate adjustment. Furthermore, alarm reactions such as camera switching to monitors, buzzer, Email and network alarm are available.

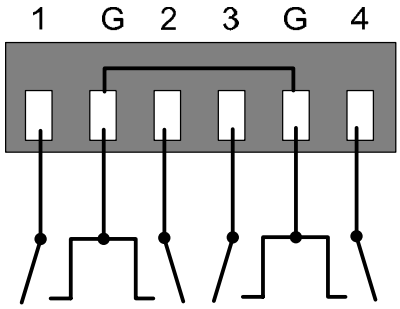
2.3.1 Alarm Input Contacts

ERS-4 provides 4 alarm inputs. All inputs are programmable N.O. (Normal Open) or N.C. (Normal Closed) Inputs have to be switched by dry contacts, default setting is N.O..



Alarm input with N.O. (Normal Open) contact in idle state

Alarm input with N.C. (Normal Closed) contact in idle state

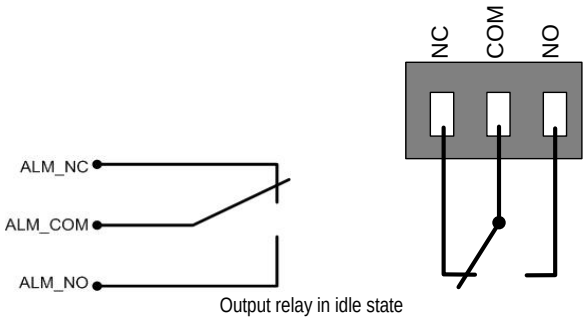


Alarm inputs 1~4 of ERS-4

All settings are programmed in the ALARM menu.

2.3.2 Alarm Output Relay

The relay output provides either Normally Open or Normally Closed dry contacts.



Output relay in idle state

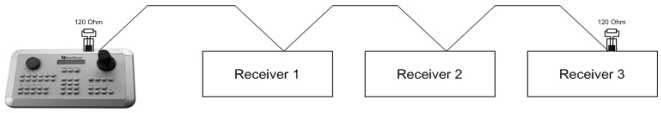
2.4 RS-485 KEYBOARD / PTZ INSTALLATION

The ERS-4 provides an RS-485 interface for PTZ control of speed domes and other PTZ devices. Furthermore the ERS-4 can be remote-controlled by the EKB-500 universal keyboard. Keyboards and speed domes can be installed on one single RS-485 bus. One system can comprise up to 8 keyboards.

2.4.1 General RS-485 bus installation

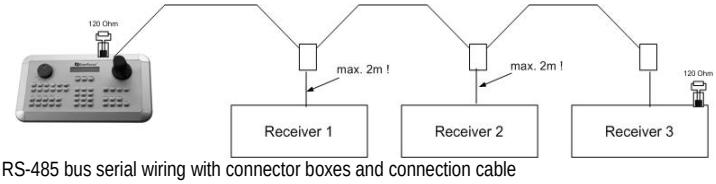
The ERS-4 uses a RS-485 simplex wiring; the signal is transferred via a single twisted pair line. CAT5 network cable is recommended, UTP version (unshielded) is sufficient for normal application. A shielded cable should be used if the installed cables are expected to be highly susceptible to interferences.
The number of devices installed in one bus is limited to 32, and the maximum cable length is 1200m. Both of these can be expanded using a signal distributor (see below).

Both the first and the last device in series should be terminated with 120 Ohm resistance in order to minimize line reflections.



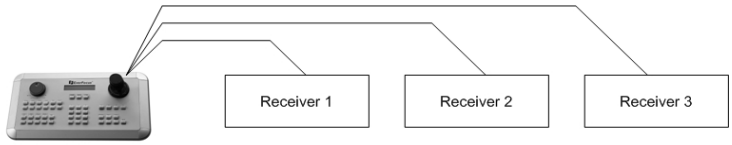
RS-485 bus serial wiring

Cable length from box to device („Stubs“) has to be limited to 2m using connector boxes.



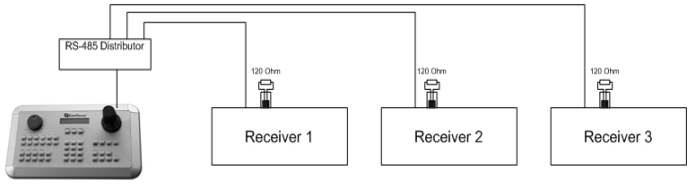
RS-485 bus serial wiring with connector boxes and connection cable

A direct RS-485 bus star wiring is not supported unless using a signal distributor (see below).



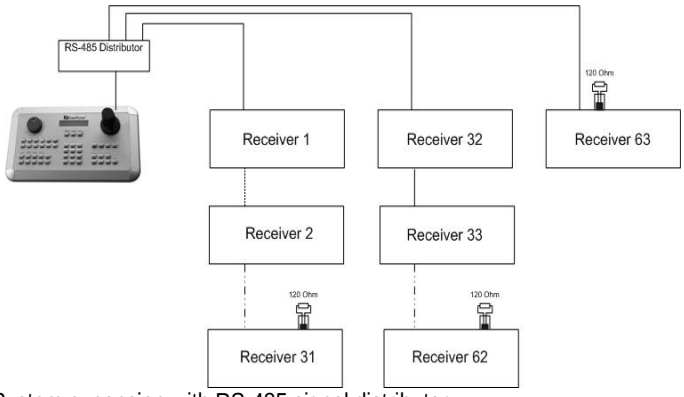
Improper RS-485 bus star wiring

A RS-485 signal distributor may be used to use a star wiring configuration.



Star wiring with RS-485 signal distributor

A RS-485 distributor can also be used to increase the maximum number of devices on the bus as well as the total range. Each distributor output provides another RS-485 bus. This allows each output to extend an additional 1200m, and it also enables the additional connection of 31 further devices to each output (the output itself represents one device).
The maximum system expandability depends on the RS-485 address range of the installed devices.

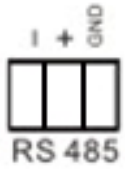


System expansion with RS-485 signal distributor

ATTENTION: Most signal distributors are unidirectional! This means that the signal only flows from the input towards the outputs. Therefore, e.g. the interconnection of several keyboards is not possible with these types of signal distributor!

2.4.2 RS-485 terminal pin assignment

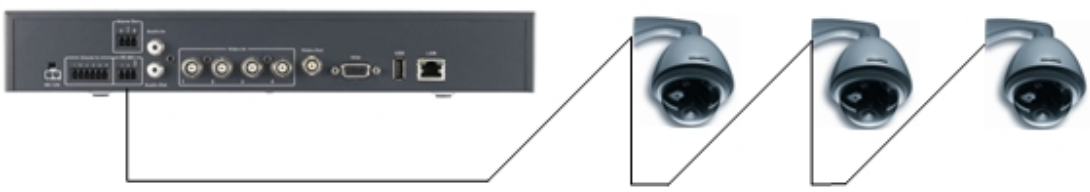
The following RS485 pin assignment as follow:



2.4.3 Speed Dome Installation

Speed dome or telemetry receiver pan/tilt/zoom control is available through web browser or the optional PowerCon software if the ERS-4 is connected to a network. Local telemetry control is provided by USB - mouse control or by the optional EKB-500 keyboard.

Supported protocols: EverFocus, Pelco-D, Pelco-P, Samsung, Transparent

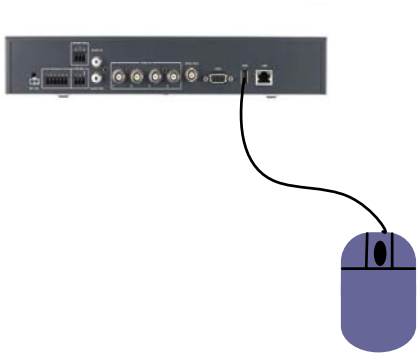


Required ERS-4 settings: RS-485 receiver address in *CAMERA* menu
RS-485 parameters and protocol in the *I/O CONTROL* menu

ATTENTION: Some Pelco-D / -P protocol domes and receivers require an address offset of -1, i.e. the address assigned to the dome / receiver in the ERS-4 camera menu must be 1 below the address set in the dome / receiver itself!

2.5 USB-MOUSE INSTALLATION

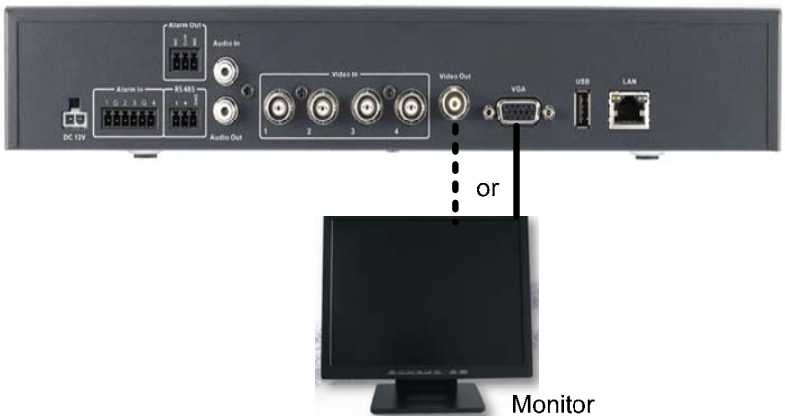
For service and installation the ERS-4 can be operated by mouse at a local connected monitor.
All functions except playback and export are available at local operation.
Connect the USB mouse to the back panel USB port.



NOTE: Recommended mouse types are Logitech® and Microsoft® wired USB wheel-mouse. Wireless USB mouse is not supported.

2.6 Monitor connection

For service and installation the ERS-4 can be operated by mouse at a local connected monitor.
All functions except playback and export are available at local operation.
The ERS-4 provides a composite Video output (BNC) and a VGA output (resolution 800x600 @ 60Hz) with similar functionality. Depending on monitor type select one of these video outputs for monitor installation.



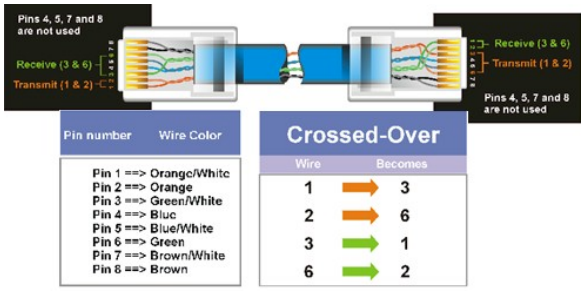
2.7 NETWORK CONNECTION

This section only describes physical connection to an Ethernet network. This step must be completed before the ERS-4's can connect to the network. Appendix C describes more Details for network installations.
There are two basic types of connection:

2.7.1 Direct PC Connection through Crossover Network Cable

The point-to-point connection of ERS-4 and PC requires a crossover (crossed) network cable. This type of connection is ONLY used for direct connection to a single PC. Make sure that the PC is equipped with a 10/100/1000 Mbps compatible network connection.

Figure 2-1 Direct PC Connection



Pin out of crossover-cable

2.7.2 Network Connection through Patch Cable

The connection to an existing network requires a normal patch cable (straight-through). The illustration shows the connection to a network switch, router, or modem.

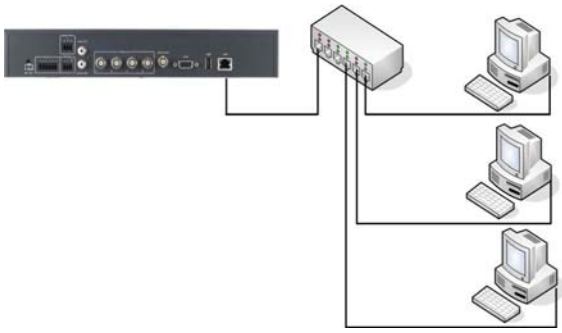
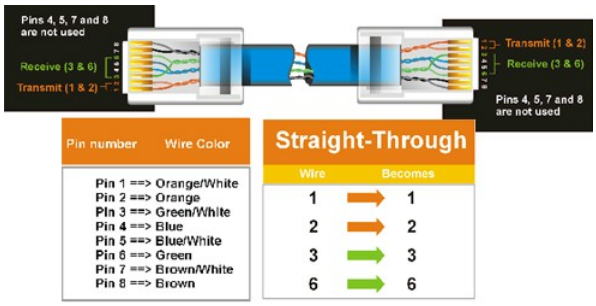


Figure 2-2 Network Connection through Patch Cable



Pin out of straight patch cable

2.8 Final Install Process

Once you have completed the basic wiring connections, you are ready to turn on the ERS-4. Plug in the power source. The POWER LED will light up if power is normal. The system start-up will take ~ 1 minute time.

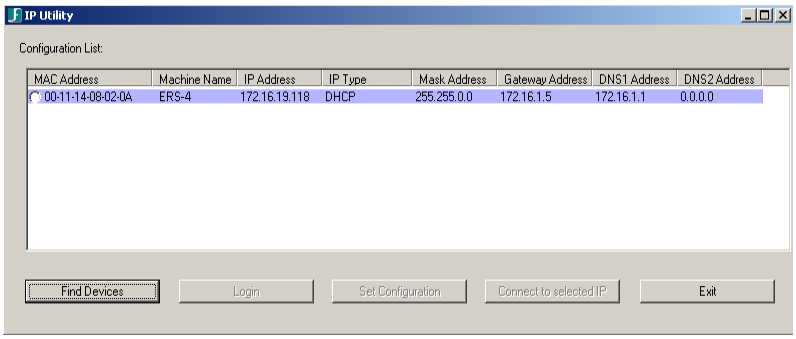
3 CONFIGURATION VIA NETWORK

3.1 IP-SETUP VIA NETWORK WITH IP-UTILITY

The ERS-4 configuration can be done via network or locally at the device, if USB - mouse and monitor are connected.

This chapter describes the remote network setup the ERS-4 Menu Settings step by step.

Start the application „IPUtility.exe“ from the application CD-ROM.



Click on „Find Devices“.
If connected to the network, the ERS-4 will be listed.
Select the ERS-4 and click on „Login“:

Enter user name and password.

Defaults:	User name:	user1
	Password:	11111111

After successful login the „set configuration“ button is activated (not greyed).
Enter the new IP—parameters, then click on „Set Configuration“.
After ~ 30 seconds check by clicking on „Find Devices“, if the new settings were taken over.

3.2 CONNECTING TO ERS-4

To access the ERS-4 from a computer, click on "Connect to selected IP" in the IPUtility tool window. Alternative you can open Internet Explorer window and in the address bar type:

Local connection: http:// (IP address from the ERS-4's Network Menu)
Internet connection: http:// (IP address given by your Internet Service Provider)

The login page will appear on the screen similar to the one shown above.

Enter a user name and password to access the recorder. These can be changed in the System section of the Main Menu.

Default login data:

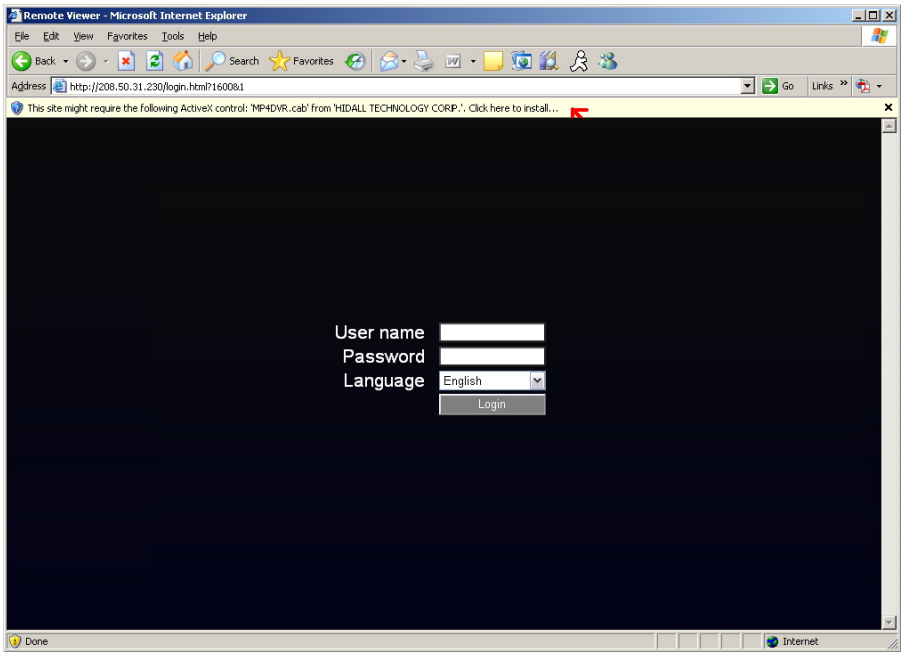
User name: user1
Password: 11111111

Click on the Login button and you will log in to the recorder's Network Viewer.

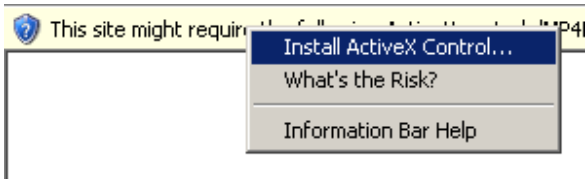
3.3 BROWSER SECURITY SETTING

3.3.1 Installing ActiveX controls

When you first connect to the ERS-4's IP address, you should see a screen like the one below. If you do not see a yellow bar like the one the arrow is pointing at, your security settings may be too high. If so, go to next chapter: "Enabling ActiveX Controls."



Right click on the yellow bar and select "Install ActiveX Control…"



Install the ePlusDVR.cab file when prompted to do so.

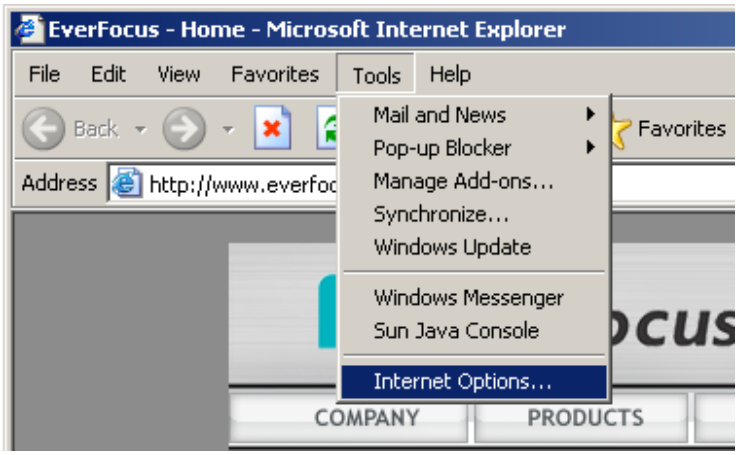
Once the file finishes installing, you will return to the same login page as before.
Type in the username and password and click Login to view the cameras.

Default username: user1
Default password: 11111111

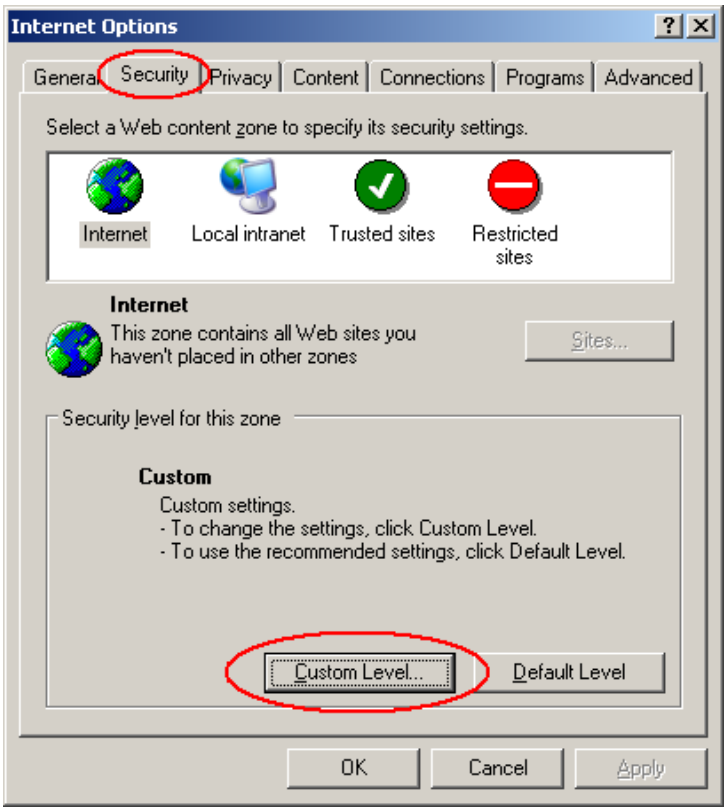
3.3.2 Enabling ActiveX Controls

Note: *This section is only necessary if you DO NOT see the yellow ActiveX bar at the top of your browser screen when you first connect to the ERS-4.*

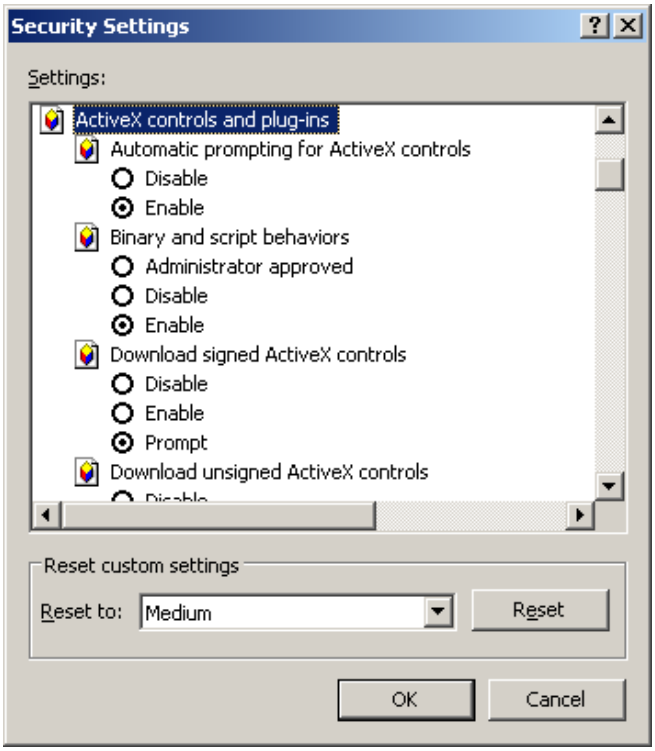
At the top of the Internet Explorer Window, click on Tools, then select Internet Options.



Click the Security tab at the top of the window, then choose Custom Level near the bottom.



In the Security Settings window, scroll to “ActiveX controls and plug-ins”



Set the controls as follows:

“Enable”:
- ✓ Allow previously unused ActiveX controls to run without prompt (*Internet Explorer 7 only*)
- ✓ Allow scriptlets (*IE7 only*)
- ✓ Automatic prompting for ActiveX controls
- ✓ Binary and script behaviours
- ✓ Display video and animation on a webpage that does not use external media player (*IE7 only*)
- ✓ Run ActiveX controls and plug-ins
- ✓ Script ActiveX controls marked safe for scripting

“Prompt”:
- ✓ Download signed ActiveX controls
- ✓ Download unsigned ActiveX controls

“Disable”:
- ✓ Initialize and script ActiveX controls not marked as safe

Click OK and then choose Yes to change the security settings.

Close the window so you are back at the login screen.
Click the Refresh button to reload the page.

Install the ePlusDVR.cab file when prompted to do so.

Once the file finishes installing, you will return to the same login page as before.
Type in the user name and password and click Login to view the cameras.

Default user name: user1

Default password: 11111111

After correct login the browser will show the ERS-4 live screen.

3.4 REMOTE LIVE SCREEN

After successful login the screen will show live view with all connected cameras.

1	4 x Screen	Switches the video window to 4 x view of all cameras
2	Audio	This button toggles audio transmission direction:  Listen mode (ERS-4 > PC)  Speak mode (PC > ERS-4)
3	Audio ON/OFF	 Audio at PC enabled  Audio at PC disabled
4	Camera channels	Clicking on the camera buttons switches to full screen mode of selected camera. The color of the button represents current status of the camera (#5)
5	Status	Description of the status colors for camera buttons (#4)
6	Menu bar	Menu buttons for setup, search and export, details are explained in following chapters.  Live View  Express setup

 Camera setup

 Record setup / recording time calculator

 Alarm setup

 Schedule setup

 Network setup

 Hard disk status / setup

 System setup (date, time, user, interfaces, misc.)

 Display setup (for local monitor output)

 Info, system status informations

 Video export

 Playback search

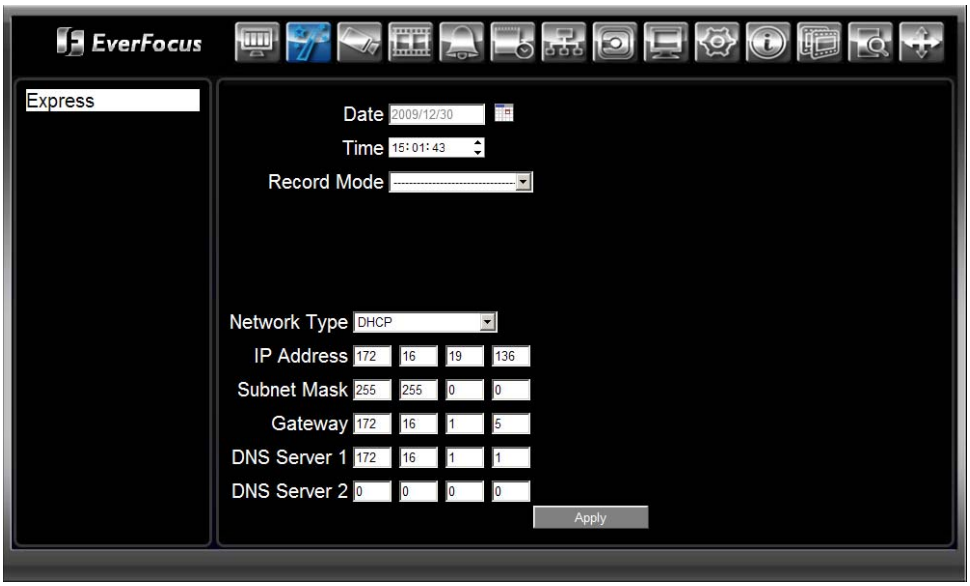
 PTZ control

7 Video window Area for live or playback view of the video channels

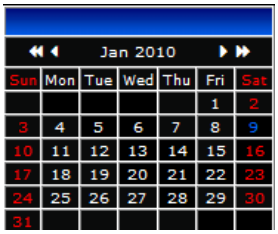
3.5 REMOTE SETUP - EXPRESS

The EXPRESS menu allows a fast configuration of all basic parameters without going through all other menus. This allows configuring an ERS-4 for installations with simple requirements (no alarm, no enhanced schedule setting, no advanced network settings...) within a few minutes at one menu page only.

Click on  to open the EXPRESS setup menu:



Date — Click on the calendar icon.



Click on current date, ERS-4 will take over this date.

Time — Select hour, minutes and seconds and adjust time with the up/down arrows.

Record mode — 3 recording modes are available in EXPRESS menu:

Normal+Event: ERS-4 will record continuously with 1 IPS and with full frame rate at motion event.
Enter the estimated total duration of motion (per day) in hours.

Event only: ERS-4 will only record, if motion appears.
Enter the estimated total duration of motion (per day) in hours.

Scheduled Record: ERS-4 will work with following schedule setting:
Friday 18:00 to Monday 6:00:
only event record for all cameras 25/30 IPS

Monday to Friday 6:00 till 18:00:
continuous record 1 IPS and event record 25/30 IPS

Monday to Friday 0:00 till 6:00 and till 18:00 till 0:00:
only event record for all cameras 25/30 IPS

Resolution Select recording resolution based on video format.
PAL: 720x576 / 720x288 / 360x288
NTSC: 720x480 / 720x240 / 360x240

Record with The available selection in this menu item depends on selected record mode.
Modes "Event only " and "Normal+Event":

Preset settings:

Preset Setting Option	Camera Item	Apply value
Best Quality	Quality	Superior
	Normal Frame Rate	Max recording frame rate of ERS-4
	Event Frame Rate	25 (PAL) / 30 (NTSC)
Standard Quality	Quality	Standard
	Normal Frame Rate	Half of max recording frame rate of ERS-4
	Event Frame Rate	25 (PAL) / 30 (NTSC)
Extended Quality	Quality	Basic
	Normal Frame Rate	1
	Event Frame Rate	8 (PAL) / 10 (NTSC)

Recording days:

Case 1:
Record Mode: Normal + Event
Record With: Recording days

ERS-4 will Auto adjust Quality and Event frame rate to match the Recording days which user selected:
According to resolution, event hours and assumption above, ERS-4 will select one set of suitable quality and event frame rate from Changing Order 1 to 8. If ERS-4 can't match require record days from 8 sets of Change Order, it will just use the set of Changing Order 8.

Changing Order	1	2	3	4	5	6	7	8
Normal Frame Rate	1	1	1	1	1	1	1	1
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate (PAL/NTSC)	25/30	25/30	25/30	12,5/15	8/10	6,25/7.5	5	1

Case 2:
Record Mode: Event Only

Record With: Recording days

ERS-4 will Auto adjust Quality and Event frame rate to match the Recording days which user need:
According to resolution, event hours and assumption above, ERS-4 will select one set of suitable quality and event frame rate from Changing Order 1 to 8. If ERS-4 can't match require record days from 8 sets, it will just use the set of Changing Order 8.

Changing Order	1	2	3	4	5	6	7	8
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate	30	30	30	15	10	7.5	5	1

In "Schedule" mode is only the selection "Preset Settings" available (details above).

Network Type

Static IP: Fixed IP-Address, IP parameters have to be entered below.
DHCP: If available, DHCP server in LAN will automatically assign IP for network connection.
PPPoE: This is a DSL connection application only. Check with your ISP if they use PPPoE.

IP-Address Enter the IP-address of the ERS-4 in your network.
If DHCP or PPPoE is selected, this value will be assigned automatically.

Subnet Mask Enter the Subnet mask of your network.
If DHCP or PPPoE is selected, this value will be assigned automatically.

Gateway Enter the address of the Gateway in your network.
If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS Server 1 Enter the address of secondary DNS Server in your network.
If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS Server 2 Enter the address of secondary DNS Server in your network.
If DHCP or PPPoE is selected, this value will be assigned automatically.

Username Only in PPPoE mode: Enter user name of your account.

Password Only in PPPoE mode: Enter password of your account.

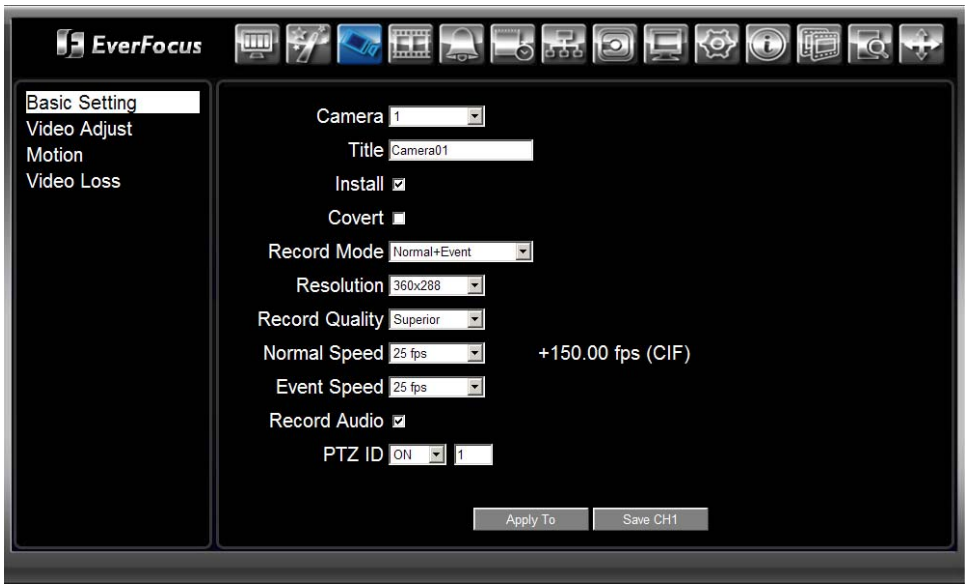
Apply Press "Apply" button to save and apply Express settings to ERS-4. The system will automatically adjust recording frame rate according to settings. The following message will pop up, press "Yes" to change Resolution, Recording frame rate and Quality depending on your express setting.

3.6 REMOTE SETUP - CAMERA

3.6.1 Camera: Basic settings

This menu provides settings for general camera parameters.

Click on  to open the CAMERA setup menu:



Camera	Select camera 1~4 for adjustment.
Title	Enter a camera title (max. 16 characters).
Install	Activate this checkbox for all installed cameras. Not installed camera channels should be deactivated, otherwise system performance will be reserved for these not used channels.
Covert	If this checkbox is activated, cameras will not be visible (local and remote) and for all users with "OPERATOR" user rights. Users with "ADMIN" and "MANAGER" user rights still can see the camera.
Record Mode	Select the recording mode: Normal+Event: Continuous record (with Normal speed) and Event (Motion, contact alarm) recording (with Event Speed) Event Only: ERS-4 will record only events (motion, contact alarm).
Resolution	Select recording resolution based on video format. PAL: 720x576 / 720x288 / 360x288 NTSC: 720x480 / 720x240 / 360x240
Record Quality	Select an image quality for recording. There are five different qualities available:

Superior, High, Standard, Basic and Low.

A higher image quality uses more HDD space.

Normal Speed Frame rate in images per second (IPS) for continuous recording. The speed is limited to the maximum recording rate of the ERS-4 (displayed on the right side of this line) divided by the number of installed cameras. If the resolution option is changed, the unit of this field will also be changed.

Recording capacity for all 4 cameras (shown next to the Normal Speed field): The number here indicates the remaining recording capacity available for all 4 cameras. When this number is positive, it means there is still recording capacity.

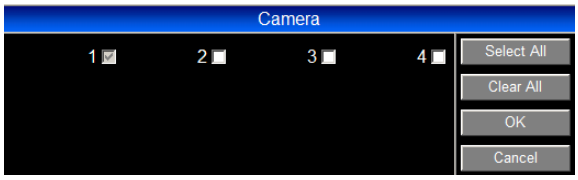
If this number is negative, it means the recording capacity has been exceeded, and the user must lower Normal Speed or Resolution. This number must be positive before saving the changes. Otherwise, a pop-up window will display “Fail" , enter valid frame rates in this case and save again.

Event Speed Frame rate in images per second (IPS) for event (motion, contact alarm) recording.

Record Audio This checkbox appears only at page of camera 1 (Audio channel is assigned to channel 1). Activate the checkbox for enabling audio record.

PTZ ID When using a PTZ Camera, activate PTZ control by switching to ON. The ID (= RS-485 address) must match the ID used by the connected camera in order to control the camera using the ERS-4.

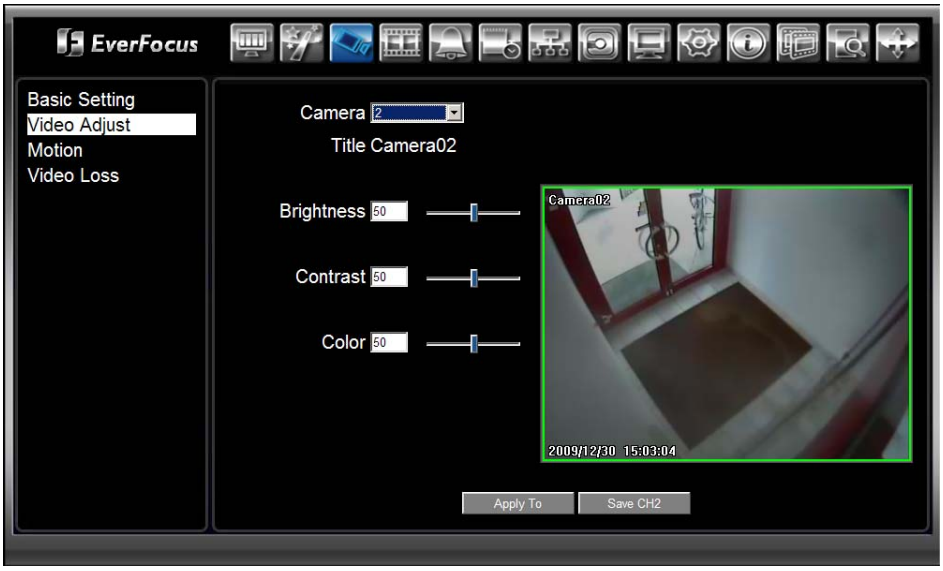
Apply To This button can be used to copy the recording settings to other cameras. Select which camera you wish to copy to. Camera titles and PTZ setting will not be copied. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.



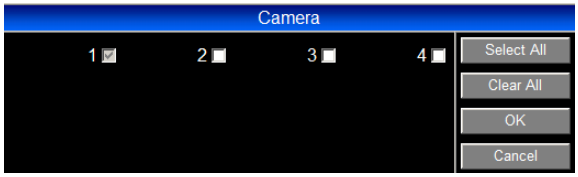
Save Ch 1...4 Clicking on this button will save the changed settings for this camera.

3.6.2 Camera: Video Adjust

This menu allows optimizing the camera image.

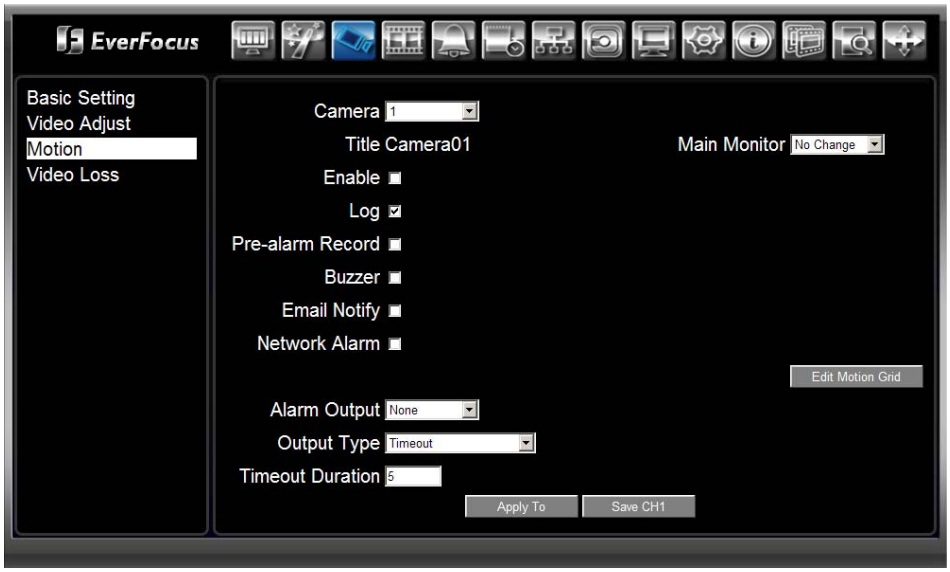


Camera	Select camera 1~4 for adjustment.
Brightness	Brightness adjustment in the range 1~100.
Contrast	Contrast adjustment in the range 1~100.
Color	Color adjustment in the range 1~100.
Apply To	This button can be used to copy the image settings to other cameras. Select which camera you wish to copy to. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.



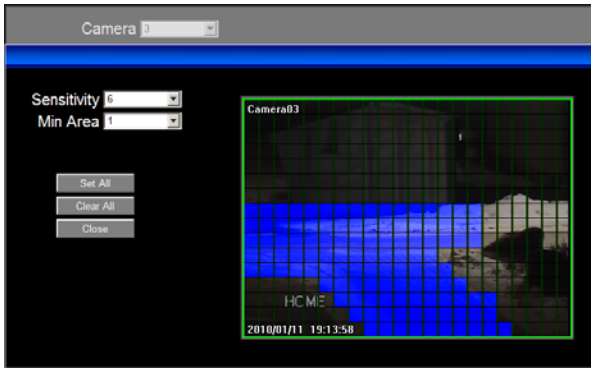
Save Ch 1...4	Clicking on this button will save the changed settings for this camera.

3.6.3 Camera: Motion



Camera	Select camera 1~4 for adjustment.
Enable	Check box to enable motion detection. Other motion options will not be available unless this feature is selected.
Log	Check box to record motion events in the log.
Main Monitor	Reaction of (locally at ERS-4 installed) monitor:
	No change: No change on the main monitor display.
	Full screen: A full screen of the active camera will display on the main monitor.
Pre-alarm Record	Check box to record several seconds before the motion event.
	(Pre-alarm recording rate will follow "Normal" frame rate setting)
Buzzer	Check box to enable buzzer when a motion event is triggered.
Email Notify	Check box to send email notification when a motion event is detected.
Network Alarm	Check box to send out a network alarm to client PC when motion occurs. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Edit Motion Grid Select the detection area in this submenu:



Sensitivity: Set the threshold value for sensitivity. Select from 1 (lowest) to 10 (highest).

Min Area: To avoid false detections by small objects this value defines, how many grids have to be detected for generating a motion event. Select a value between 1 (default) to 5 grids.

Set All: Press this button to select the entire area.

Clear All: Press this button to clear all the grids selected.

For defining a customized detection area click on "CLEAR ALL", the draw by mouse (hold left mouse key) an area.

Close: Save setting and return to MOTION menu

Alarm Output In case of event the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated) .

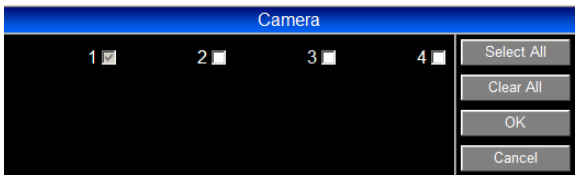
Output Type Output action when motion is triggered.

Timeout Duration Alarm output lasts for the set time duration.

Transparent: Alarm is active as long the event is active.
Timeout: Automatic alarm reset after a defined time (Timeout Duration)
Transparent+Timeout: Alarm will reset after event ended + Timeout Duration.

Apply To This button can be used to copy the image settings to other cameras. Select which camera you wish to copy to.

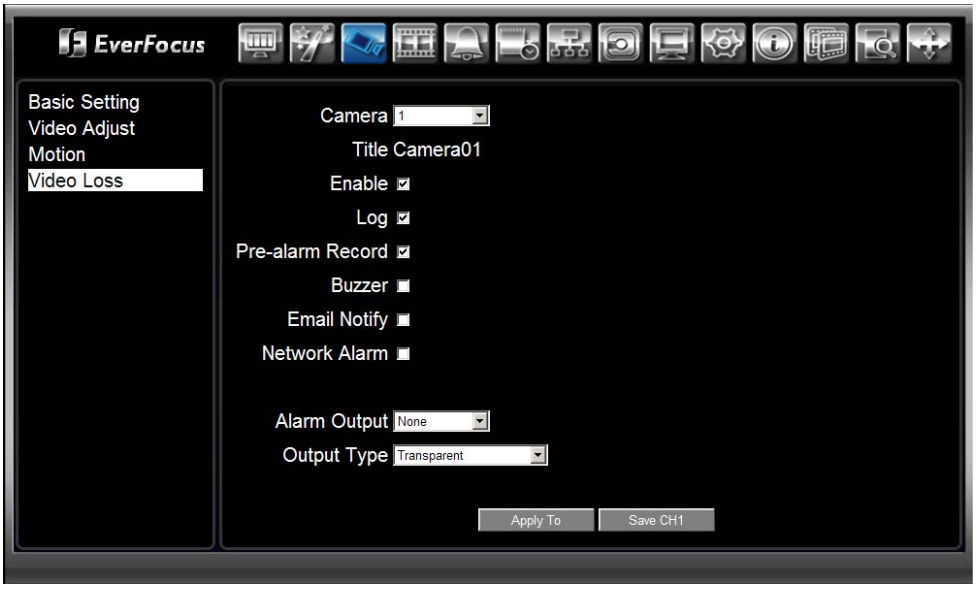
"Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.



Save Ch 1...4 Clicking on this button will save the changed settings for this camera.

3.6.4 Camera: Video Loss

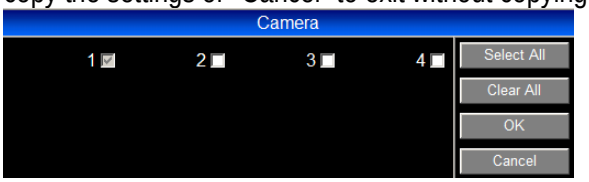
This menu defines the reaction on video loss events.



Camera	Select camera 1~4 for adjustment.
Enable	Check box to enable video loss detection. Other motion options will not be available unless this feature is selected.
Log	Check box to record video loss events in the log.
Pre-alarm Record	Check box to record several seconds before the video loss event. (Pre-alarm recording rate will follow "Normal" frame rate setting)
Buzzer	Check box to enable buzzer when a video loss event is triggered.
Email Notify	Check box to send email notification when a video loss event is detected.
Network Alarm	Check box to send out a network alarm to client PC when video loss occurs. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Alarm Output	In case of event the output relay will switch. It can be set to either "NONE" (not active) or "1" (relay activated) .
Output Type	Output action when motion is triggered. Transparent: Alarm is active as long the event is active. Timeout: Automatic alarm reset after a defined time (Timeout Duration) Transparent+Timeout: Alarm will reset after event ended + Timeout Duration.
Timeout Duration	Alarm output lasts for the set time duration.

Apply To

This button can be used to copy the image settings to other cameras. Select which camera you wish to copy to.
"Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.



Save Ch 1...4

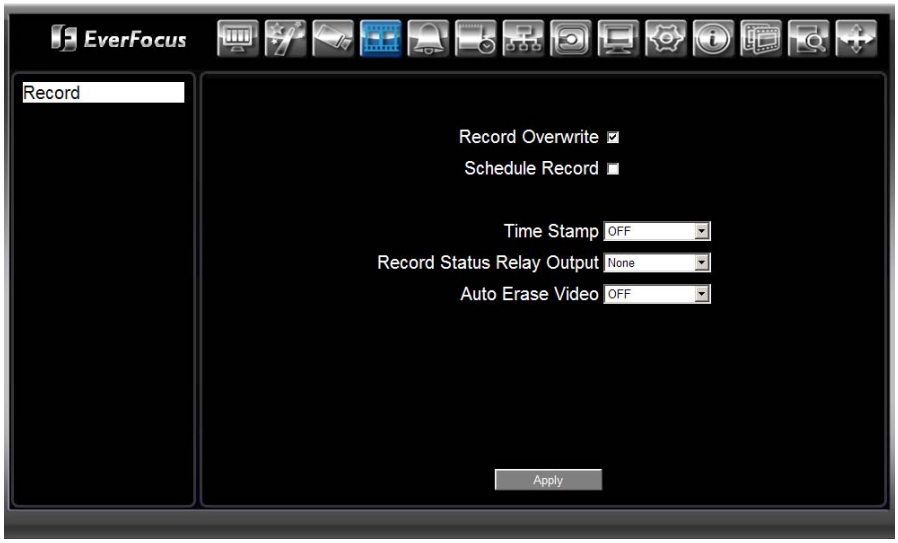
Clicking on this button will save the changed settings for this camera.

3.7 REMOTE SETUP: RECORD

The RECORD menu provides general recording settings and a recording time calculator.

Click on  to open the RECORD setup menu.

3.7.1 Record: Record



Record Overwrite	With activated checkbox the ERS-4 will overwrite oldest records automatically, if HDD is filled up.
Schedule Record	With activated checkbox the ERS-4 will record with the settings from SCHEDULE menu. In this case all recording settings from CAMERA menu are overruled by SCHEDULE recording settings.
Time Stamp	With activated checkbox the ERS-4 inserts a time / date overlay in the recording stream.
Record Status Output Relay	With selection "1" the output relay is activated during recording. If this function is used, please make sure, that the relay is not used for other event purpose.
Auto Erase Video	OFF: The ERS-4 records with full HDD capacity, no recording time limitation. 1~100 Days: Maximum recording duration. After the defined recording period ERS-4 will delete oldest records and keep only records from defined recording time period.
Apply	Click on APPLY to save the changes.

3.8 REMOTE SETUP: ALARM

The ALARM menu defines alarm and event reactions for input contacts and system events.

Click on  icon to open ALARM menu.

3.8.1 Alarm: Alarm

This menu defines behaviour of alarm input contacts.

Alarm	Select input contact 1~4 for adjustment.
Enable	Check box to enable input contact event. Other motion options will not be available unless this feature is selected.
Log	Check box to record input contact events in the log.
Pre-alarm Record	Check box to record several seconds before the input contact event. (Pre-alarm recording rate will follow "Normal" frame rate setting)
Buzzer	Check box to enable buzzer when a input contact event is triggered.
Email Notify	Check box to send email notification when a input contact event is detected.
Network Alarm	Check box to send out a network alarm to client PC when input contact event occurs. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output In case of event the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated) .

Output Type Output action when input contact event is triggered.

Transparent:	Alarm is active as long the event is active.
Timeout:	Automatic alarm reset after a defined time (Timeout Duration)
Transparent+Timeout:	Alarm will reset after event ended + Timeout Duration.

Timeout Duration Duration of event for the Output types "TIMEOUT" and "TRANSPARENT+TIMEOUT".
Enter the event duration in the range 1 ~ 150 seconds.

Main Monitor Reaction of monitor output on contact event:

No Change:	Monitor keeps current display.
Full Screen:	Monitor switches to full screen view of the camera, which is selected under ACTIVE CAMERA

Input Type Contact type:

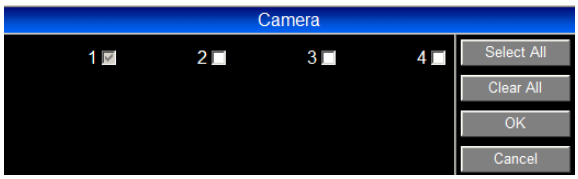
N.O.:	Normal open, event is triggered if contact closes.
N.C.:	Normal closed, event is triggered if contact opens.

Active Camera Selection of camera for full screen switching of monitor and PTZ preset position reaction (if this function is activated).
Select camera 1~4.

PTZ Preset If the ACTIVE CAMERA is a camera with PTZ and preset - position function, it is possible to move the camera in case of event to a desired preset position.

OFF:	no camera movement
1~255:	camera will move in case of event to selected preset position

Apply To This button can be used to copy the contact settings to other contacts. Select which contact you wish to copy to.
"Select All" selects all contacts, “Unselect All” deselects all contacts. Click “OK” to copy the settings or "Cancel" to exit without copying.



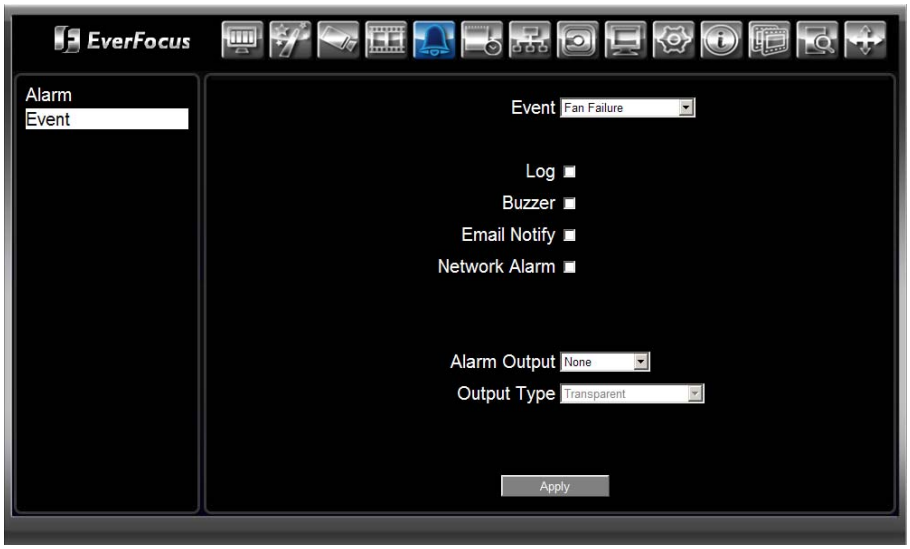
Save CH1...4 Clicking on this button will save the changed settings for this contact.

3.8.2 Alarm: Event

This menu defines reactions on system events.

3.8.2.1 Event: Fan failure

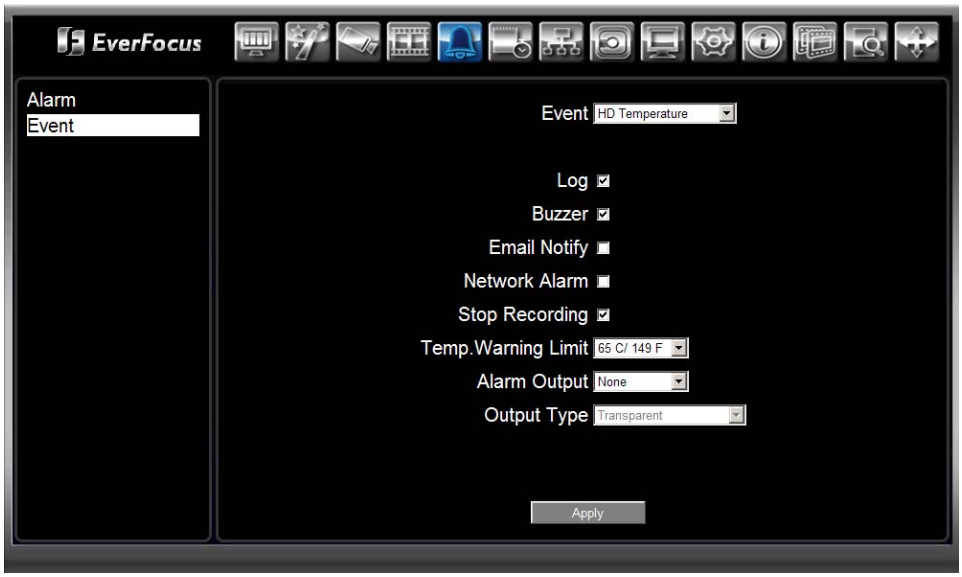
This menu defines system reaction in case of cooler fan malfunction.
Note: This event is only needed for ERS-4 with build in Hard Disk. ERS-4 without Hard Disk are not equipped with cooler fan.



Event	Select FAN FAILURE
Log	Check box to record fan failure events in the log.
Buzzer	Check box to enable buzzer in case of cooler fan fault.
Email Notify	Check box to send email notification in case of cooler fan fault.
Network Alarm	Check box to send out a network alarm to client PC in case of cooler fan fault. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Alarm Output	In case of in case of cooler fan fault the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated) .
Output Type	Output type is fixed to mode: Transparent: Alarm is active as long the event is active. Note: It is not possible to reset this alarm without solving the cooler fan problem.
Apply	Save the settings for this event type.

3.8.2.2 Event: HD Temperature

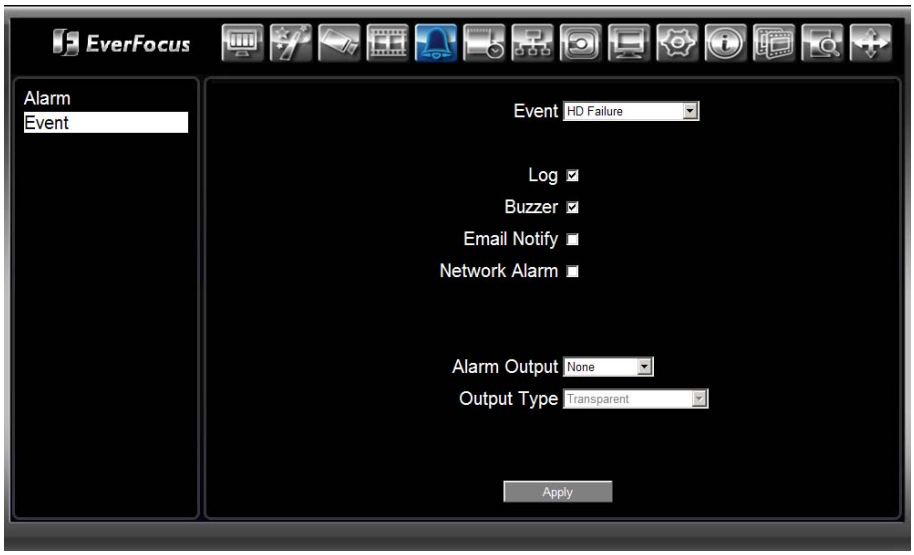
This menu defines the reaction on critical HDD temperature.



Event	Select HD Temperature.
Log	Check box to record HDD temperature events in the log.
Buzzer	Check box to enable buzzer in case of HDD temperature events.
Email Notify	Check box to send email notification case of HDD temperature events.
Network Alarm	Check box to send out a network alarm to client PC case of HDD temperature events. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Stop Recording	With activated checkbox the ERS-4 will stop recording for avoiding total damage of HDD and data loss. NOTE: It is not recommended to deactivate this check box !
Temp. Warning Limit	Sets the trigger temperature for all other active settings in HD Temperature. Choose from 55°C /131°F ~ 85°C /185°F. Note: Do not set a higher value as the max. operating temperature of the installed HDD (specified by HDD manufacturer) !
Alarm Output	In case of event the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated) .
Output Type	Output type is fixed to mode: Transparent: Alarm is active as long the event is active. Note: It is not possible to reset this alarm without solving the HDD temperature problem.
Apply	Save the settings for this event type.

3.8.2.3 Event: HD failure

This menu defines the reaction on detected HDD errors.

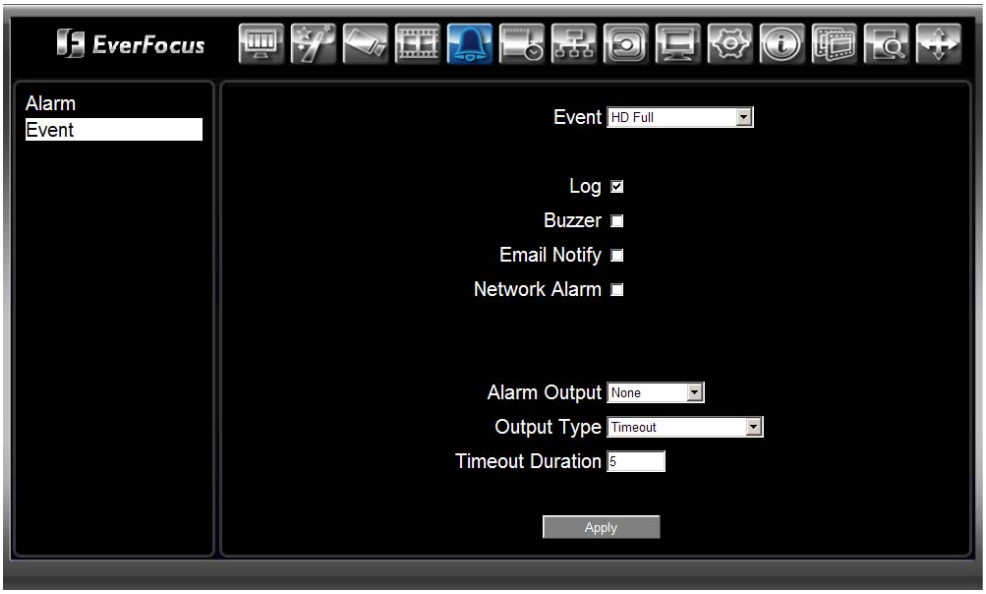


Event	Select HD Failure.
Log	Check box to record HDD failure events in the log.
Buzzer	Check box to enable buzzer in case of HDD failure events.
Email Notify	Check box to send email notification case of HDD failure events.
Network Alarm	Check box to send out a network alarm to client PC case of HDD failure events. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Alarm Output	In case of event the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated).
Output Type	Output type is fixed to mode: Transparent: Alarm is active as long the event is active. Note: It is not possible to reset this alarm without solving the HDD problem.
Apply	Save the settings for this event type.

3.8.2.4 Event: HDD Full

This menu defines reactions, if full HDD capacity is reached.

Note: Settings in this menu are only active, if the ERS-4 works not in "OverWrite" mode (check box in RECORD menu)



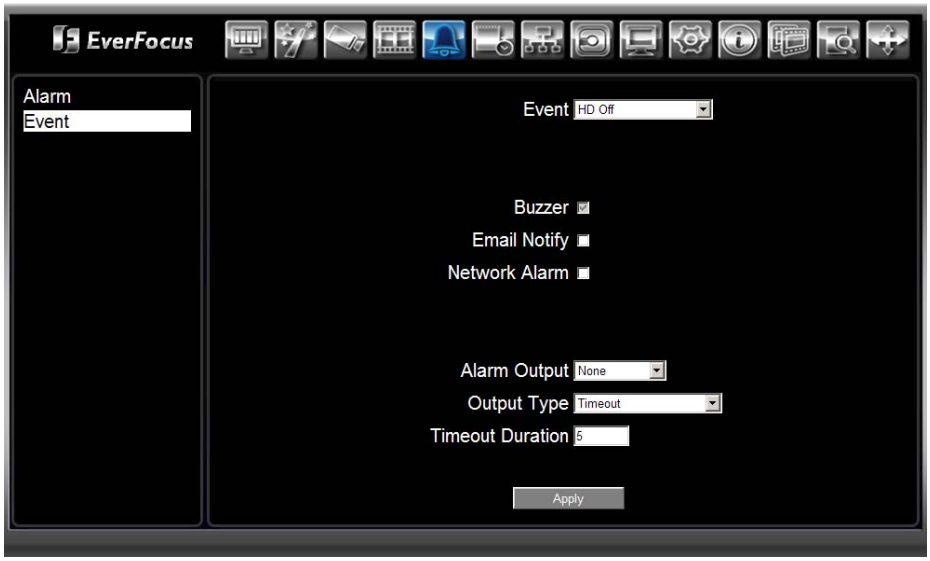
Event	Select HD Full.
Log	Check box to record HDD full events in the log.
Buzzer	Check box to enable buzzer in case of HDD full events.
Email Notify	Check box to send email notification case of HDD full events.
Network Alarm	Check box to send out a network alarm to client PC case of HDD full events. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Alarm Output	In case of event the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated).
Output Type	Output action when HDD full event is triggered.

Transparent:	Alarm is active as long the event is active.
Timeout:	Automatic alarm reset after a defined time (Timeout Duration)
Transparent+Timeout:	Alarm will reset after event ended + Timeout Duration.

Timeout Duration	Duration of event for the Output types "TIMEOUT" and "TRANSPARENT+TIMEOUT". Enter the event duration in the range 1 ~ 150 seconds.
Apply	Save the settings for this event type.

3.8.2.5 Event: HD Off

This menu defines reaction, if HDD is disconnected.



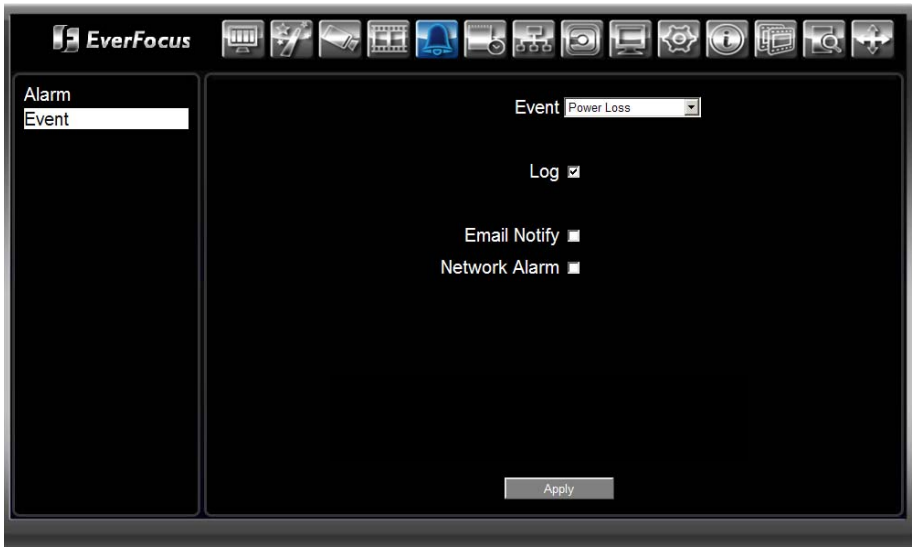
Event	Select HD off.
Buzzer	Check box to enable buzzer in case of HDD off events.
Email Notify	Check box to send email notification case of HDD off events.
Network Alarm	Check box to send out a network alarm to client PC case of HDD off events. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Alarm Output	In case of event the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated).
Output Type	Output action when HDD off event is triggered.

Transparent:	Alarm is active as long the event is active.
Timeout:	Automatic alarm reset after a defined time (Timeout Duration)
Transparent+Timeout:	Alarm will reset after event ended + Timeout Duration.

Timeout Duration	Duration of event for the Output types "TIMEOUT" and "TRANSPARENT+TIMEOUT". Enter the event duration in the range 1 ~ 150 seconds.
Apply	Save the settings for this event type.

3.8.2.6 Event: Power Loss

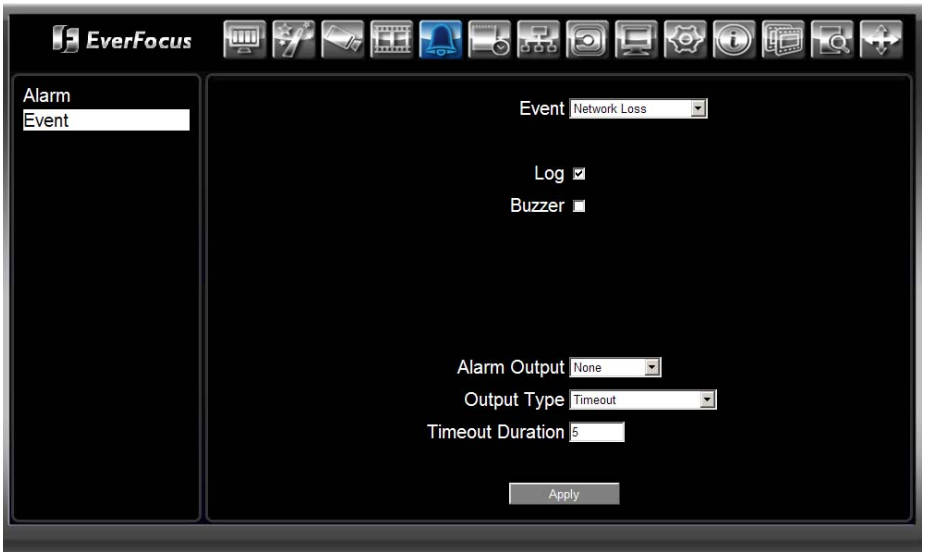
This menu defines reactions in case of power loss.



Event	Select Power Loss.
Log	Check box to record Power Loss events in the log.
Email Notify	Check box to send email notification case of Power Loss events. Note: The notification will be send after power is switched on again.
Network Alarm	Check box to send out a network alarm to client PC case of Power Loss events. (requires PowerCon software and setting up Alarm Server in Network Setup menu) Note: The notification will be send after power is switched on again.
Apply	Save the settings for this event type.

3.8.2.7 Event: Network Loss

This menu defines reactions in case of disconnected network.



Event	Select Network Loss.
Log	Check box to record Network Loss events in the log.
Buzzer	Check box to enable buzzer in case of Network Loss events.
Alarm Output	In case of event the output relay will switch. It can be set to either “NONE” (not active) or “1” (relay activated).
Output Type	Output action when Network Loss event is triggered.

Transparent:	Alarm is active as long the event is active.
Timeout:	Automatic alarm reset after a defined time (Timeout Duration)
Transparent+Timeout:	Alarm will reset after event ended + Timeout Duration.

Timeout Duration	Duration of event for the Output types "TIMEOUT" and "TRANSPARENT+TIMEOUT". Enter the event duration in the range 1 ~ 150 seconds.
Apply	Save the settings for this event type.

3.9 REMOTE SETUP: SCHEDULE

The ERS-4-4 provides an enhanced schedule for recording periods. The Schedule includes an EXPRESS Setup, Holiday list and separate alarm input timer.

Click on  for opening SCHEDULE menu.

Note: All schedule settings are active only, if the check box "SCHEDULE RECORD" in RECORD menu is activated !

3.9.1 Schedule: Express Setup

The Express setup is an option for fast schedule setup, if the installation does not require individual settings for each day and each camera.

Express schedule creates a similar schedule for each camera with following time periods:

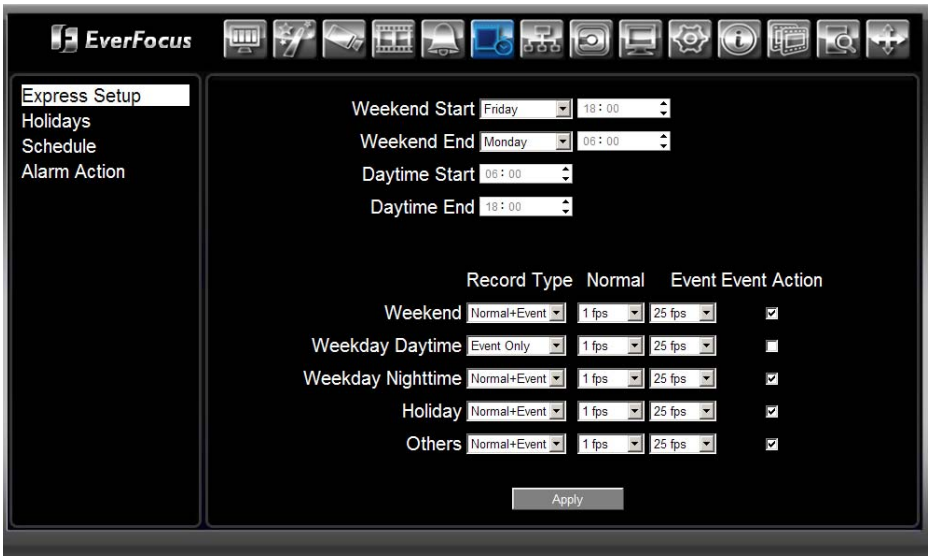
Weekend: Defaults: Start Friday 18:00, end Monday 06:00

Weekday daytime: Defaults: Start each weekday 6:00, end each weekday 18:00

Weekday nighttime: Defaults: Start each weekday 18:00, end each weekday 06:00

Holiday / Others: Settings for days, which are defined at "HOLIDAYS" menu page

All settings of the EXPRESS page can be modified at the SCHEDULE menu page.



Weekend Start Start time of the weekend period.

Weekend End End time of the weekend period.

Daytime Start Start time of daytime period for each weekday (all weekdays, which are not included

in the weekend period).

Daytime End — End time of daytime period for each weekday (all weekdays, which are not included in the weekend period).

SCHEDULE TABLE

Record Type — Select one of the 3 modes for each time period:

- Disabled: No records in this time period
- Event only: ERS-4 records only events
- Normal+Event: ERS-4 works with continuous and event (contact and motion events) record

Normal — Recording frame rate for continuous record. Select a frame rate for each time period.

Note: If recording resolution is set to 720x576 / 720 x480, maximum possible value to frame rate is 12,5 / 15 IPS. Entering 25 / 30 IPS exceeds max. Frame rate and will create a "Fail" message. ERS-4 will not take over the value.

Event — Recording frame rate for event (contact and motion events) record. Select a frame rate for each time period.

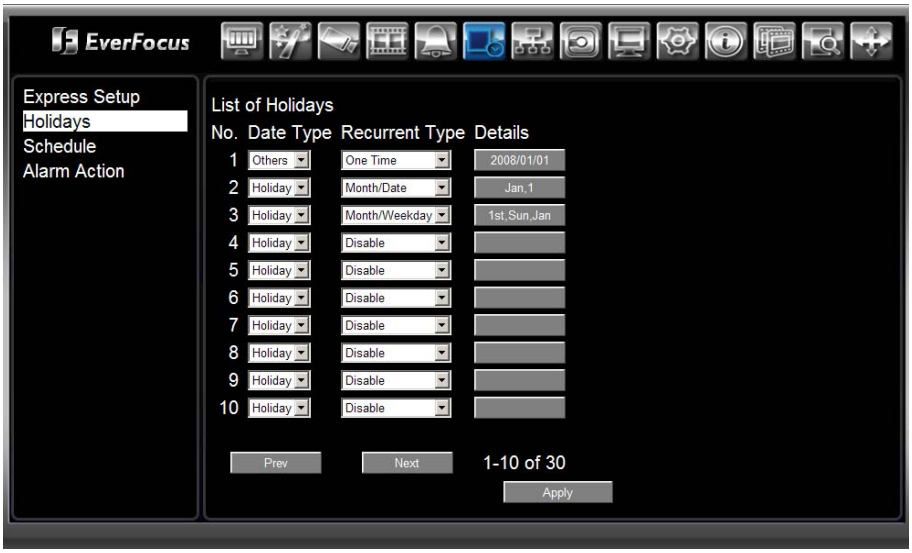
Event action — With activated check box all event related actions such as buzzer, relay out, mail and network notification are enabled for this time period.
Uncheck the check box to block this event actions for this time period.

Apply — Click on APPLY will take over the EXPRESS settings in the schedule. You can double-check and modify the settings at the SCHEDULE menu page.

Note: All schedule settings are active only, if the check box "SCHEDULE RECORD" in RECORD menu is activated !

3.9.2 Schedule: Holidays

The ERS-4 provides a Holiday list with up to 30 Holidays. Select HOLIDAY in SCHEDULE menu.

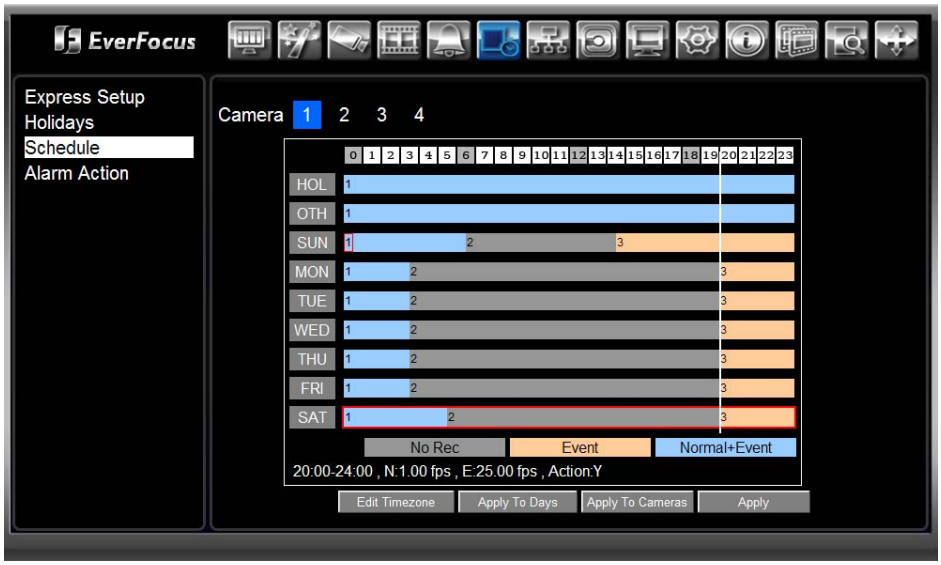


Date Type	Select one of the 2 day types, HOLIDAY or OTHERS.
Recurrent Type	Select one of the options for entering the date:
	One time: Input of a single date, not repeated in following years
	Month/Date: Input of month and date, this Holiday will be repeated in following years
	Month/Weekday: Input of month and day of the week, this Holiday will be repeated in following years
Details	Input of the date depending on the RECURRENT TYPE mode.
Prev / Next	Browse page forward / backward (3 pages total).
Apply	Click on APPLY will take over the Holiday settings.

3.9.3 Schedule: Schedule

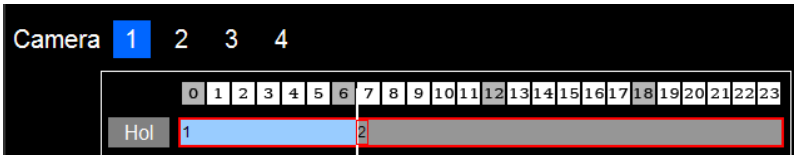
This menu allows a detailed setup of schedule for each camera and day.

If schedule was defined already by EXPRESS SCHEDULE page, all the setting are displayed and editable here.

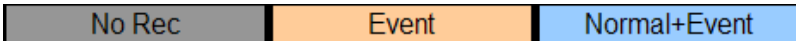


Step 1: Select a camera and a day type (here: Holiday).

Step 2: For start time of a time frame double click on the bar at desired time (30 min. steps possible):



Repeated double-click changes the color of the bar for different recording modes, colors are explained below the table:

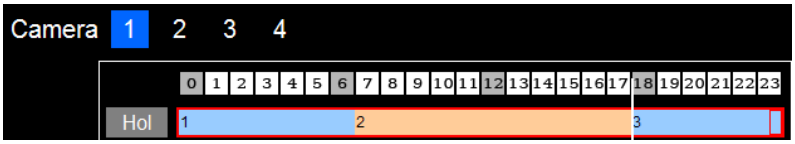


Grey: no records

Orange: Event (contact and motion events) record only

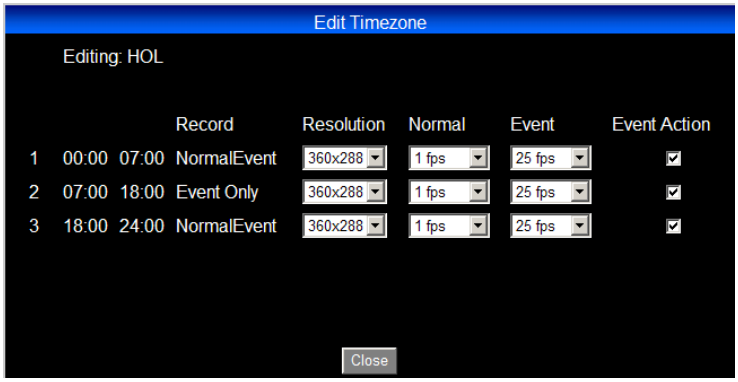
Blue: continuous and event (contact and motion events) record

Step 3: Repeat Step 2 for additional time periods:



Step 4: Edit recording setting for the defined day type:

Click on Edit Timezone for setup of recording options:



Set for each defined time period recording resolution, and event rate for normal and event recording.

Event action: With activated check box all event related actions such as buzzer, relay out, mail and network notification are enabled for this time period. Uncheck the check box to block this event actions for this time period.

Click on CLOSE for saving settings and exit to SCHEDULE page.

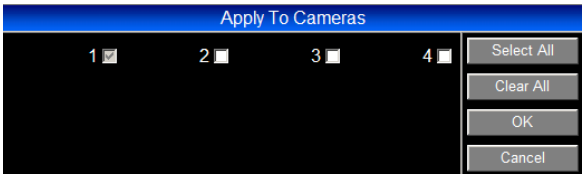
Step 5: Repeat steps 1 ~ 4 for other day types and cameras, if individual settings are required.

If similar settings can be used for other cameras and day types, go to step 6 / 7

Step 6: For copying the settings of selected day type to other day types click on Apply To Days :

Select desired day types and click on OK.

Step 7: For copying the settings of selected day type to other cameras click on Apply To Cameras :



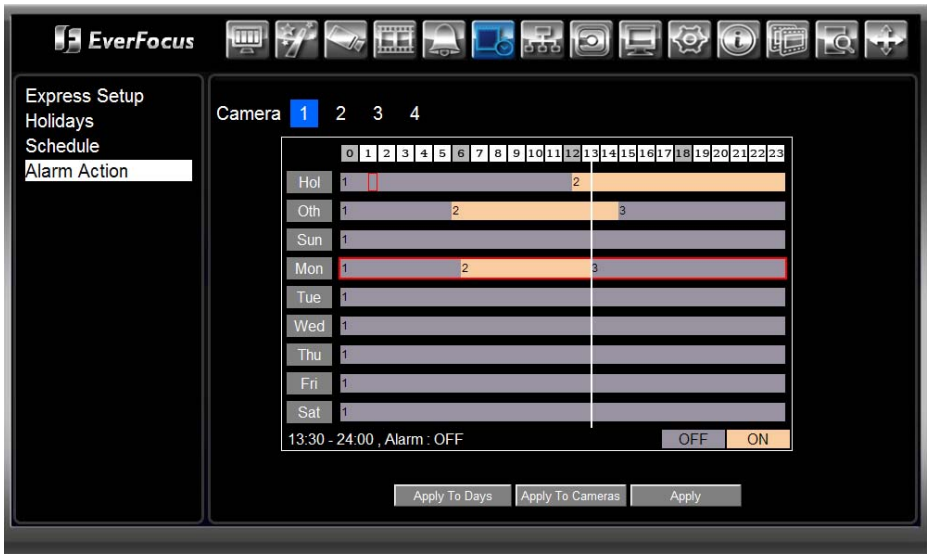
Step 8: Select desired cameras and click on OK.
Click on Apply to finish and save the schedule settings.

Note: All schedule settings are active only, if the check box "SCHEDULE RECORD" in RECORD menu is activated !

3.9.4 Schedule: Alarm Action

This menu describes scheduled activation of alarm input contacts.

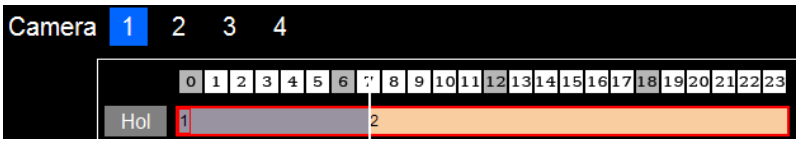
This schedule is independent from recording SCHEDULE menu and has higher priority for recording settings.



Setup procedure is similar to the SCHEDULE setup page.

Step 1: Select a Contact and a day type (here: Holiday).

Step 2: For start time of a time frame double click on the bar at desired time (30 min. steps possible):

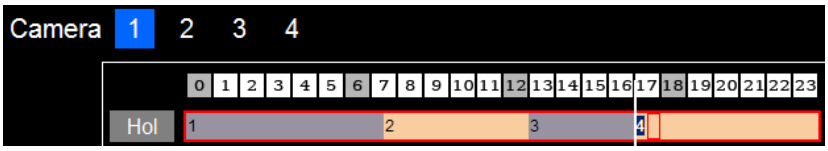


Repeated double-click toggles the color of the bar for enabled/disabled mode, colors are explained below the table:

Grey: input contact disabled

Orange: input contact enabled

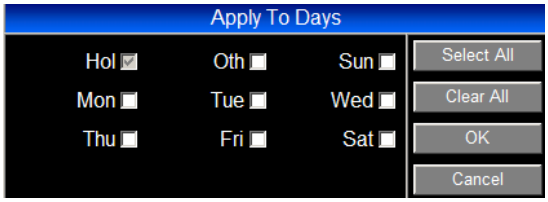
Step 3: Repeat Step 2 for additional time periods:



Step 4: Repeat steps 1 ~ 3 for other day types and cameras, if individual settings are required.

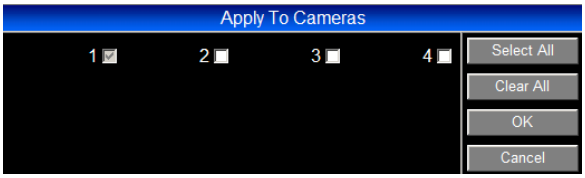
If similar settings can be used for other cameras and day types, go to step 5 / 6

Step 5: For copying the settings of selected day type to other day types click on Apply To Days :



Select desired day types and click on OK.

Step 6: For copying the settings of selected day type to other contacts click on Apply To Cameras :



Select desired cameras and click on OK.

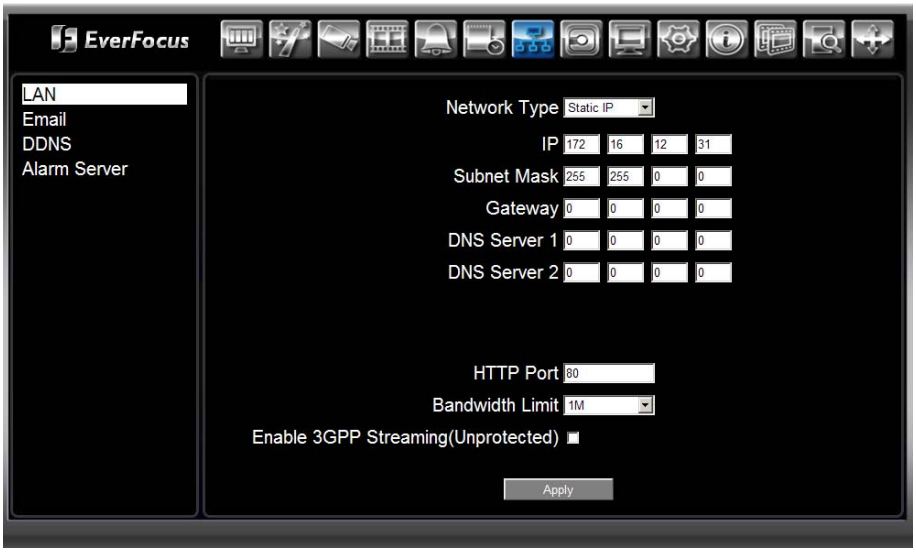
Step 7: Click on Apply to finish and save the schedule settings.

3.10 REMOTE SETUP: NETWORK

This menu pages define all network related settings.

Click on  icon for opening network menu.

3.10.1 Network: LAN



Network Type — Select the network Type:

Static IP: Fixed IP address
DHCP: If the connected network supports DHCP, the DHCP server will assign an IP address to the ERS-4
PPPoE: For direct connection to DSL ONLY. Verify with your ISP if they use PPPoE.

IP — In STATIC IP mode enter the IP address of the ERS-4.

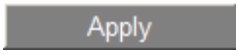
In DHCP and PPPoE modes the IP-address is assigned automatically, the address is displayed only and not editable.

Subnet Mask — In STATIC IP mode enter the subnet mask of connected network.

In DHCP and PPPoE modes the subnet mask is assigned automatically, the address is displayed only and not editable.

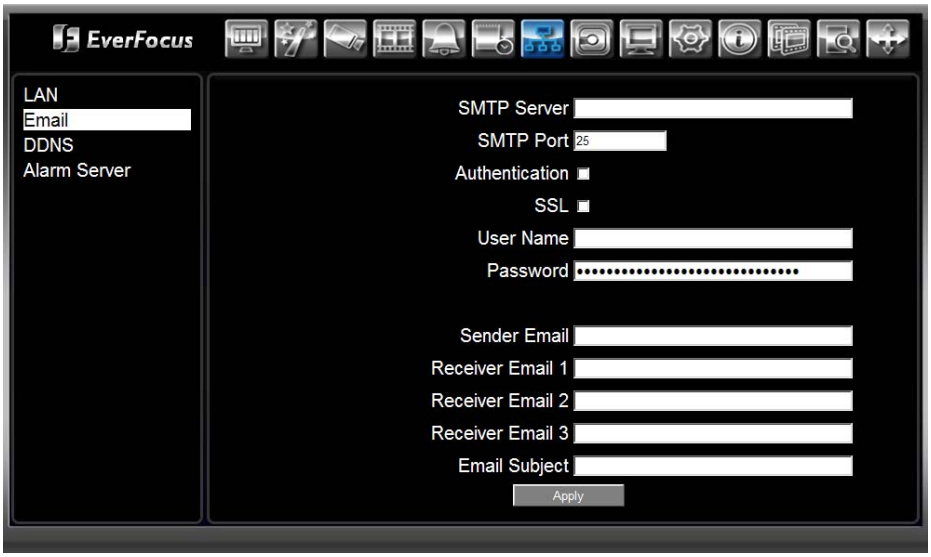
Gateway — In STATIC IP mode enter the gateway address of connected network.

In DHCP and PPPoE modes the gateway address is assigned automatically, the address is displayed only and not editable.

DNS-Server 1	In STATIC IP mode enter the address of DNS-Server 1 in connected network. In DHCP and PPPoE modes the DNS server address is assigned automatically, the address is displayed only and not editable.
DNS Server 2	In STATIC IP mode enter the address of DNS-Server 2 in connected network. In DHCP and PPPoE modes the DNS server address is assigned automatically, the address is displayed only and not editable.
HTTP - Port	HTTP port setting, default value is port 80.
Bandwidth limit	In case of limited network bandwidth resources it is possible to limit maximum streaming bandwidth of ERS-4: Disable: No limitation (full streaming performance). 128k ~ 3M: Select max. network bandwidth.
Enable 3GPP streaming	Activated check box allows access to live video streams of single video channels by mobile phone. For details refer to APPENDIX B. NOTE: The 3GPP streaming is not protected by user name and password. This means, everybody, who knows IP-address and the syntax, can access the ERS-4 by mobile phone or media player (which supports RTSP such as VLAN player). Please consider these security limitations before enabling 3GPP streaming!
PPPoE only: User Name	This input field is active only in PPPoE mode: Enter the user name of your DSL account.
PPPoE only: Password	This input field is active only in PPPoE mode: Enter the password of your DSL account.
Apply	Click on  to finish and save the settings.

3.10.2 Network: Email

In case of events ERS-4 is able to send notifications by Email. This menu defines the Email account settings.



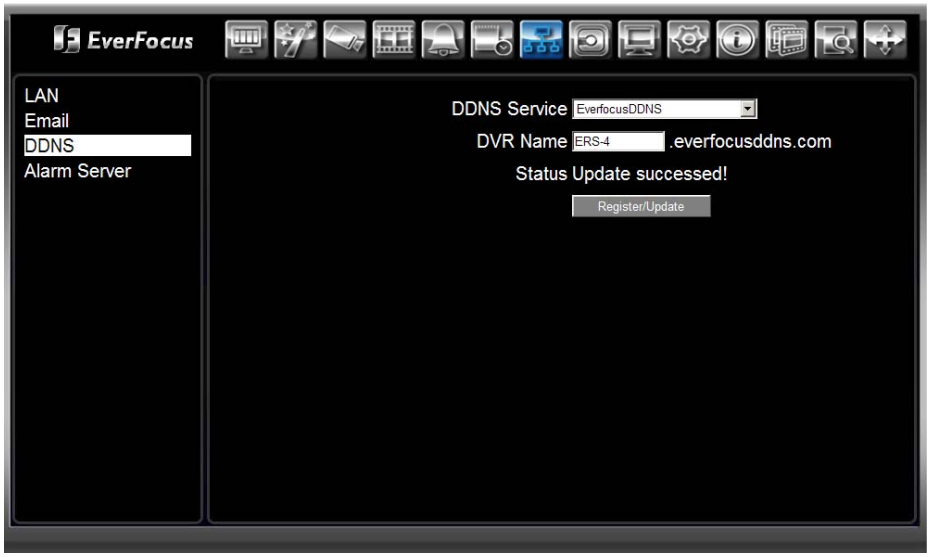
SMTP Server	Assign the SMTP (e-mail) server's name. *Note:* For more reliable email service, use the server's IP address.
SMTP Port	Assign the port number used by the SMTP server.
Authentification	Activate the check box, if the SMTP server requires an authentication (user name / password).
SSL	Activate the check box, if the SMTP server supports SSL (Secure Sockets Layer) transmission.
User Name	If authentification is required, enter user name here.
Password	If authentification is required, enter password here.
Sender Email	Input sender's e-mail address. Note: Make sure to enter a valid Email address here. Otherwise most of the mail server will block the Emails!
Receiver Email 1..3	Enter up to 3 Email addresses for receiving event notifications.
Email Subject	Input email subject.
Apply	Click on Apply to finish and save the settings.

3.10.3 Network: DDNS

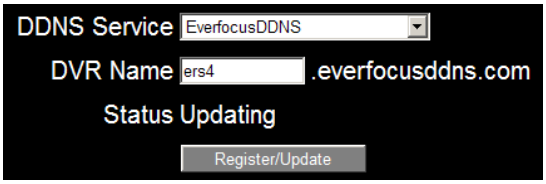
The ERS-4 supports the free DNS services of DynDNS and EverFocus.

EverFocus DDNS allows creating an account directly from the ERS-4.

3.10.3.1 EverFocus DDNS



DDNS Service	Select "EverFocusDDNS"
DVR Name	For creating an account enter the desired name of the device. Example: Entering "cool-ers4" will create an account with following IP-address: cool-ers4.everfocusddns.com (if this IP-Address is not used for another account already). The availability of EverFocusDDNS addresses can be checked also at the webpage: www.everfocusddns.com
Register / Update	After input of desired name click on Register/Update . After the message "Success2 for sending the data the screen shows the status message "Status updating"



Wait until status message changes.

Option 1) Registration successful

The selected name was registered successful. If the ERS-4 is connected correctly to the Internet, it can be accessed now under

http://[your registered name].everfocusddns.com

Option 2) Registration failed, no connection

This status message indicates, that no connection to DDNS server was established. Check the network settings for gateway and DNS server, furthermore check port forwarding settings in DSL router (if router is installed).

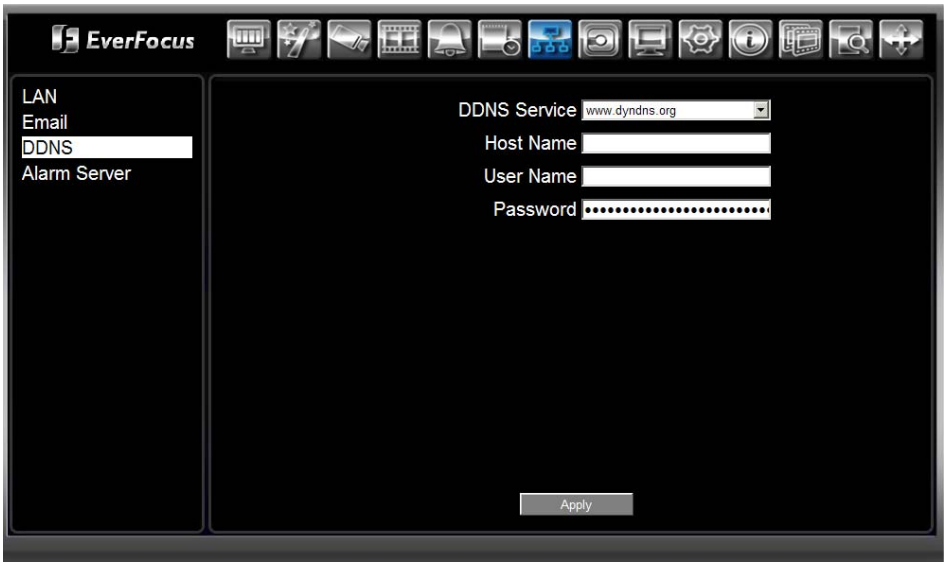
Option 3) Registration failed, selected name was registered already

Select a new name and try to register again.

Note: EverFocus DDNS addresses are not supported in PowerCon management software (Status version 4.3 and lower).

3.10.3.2 Dyndns DDNS

Using an address of dyndns.org requires an existing account.
Create a free account at www.dyndns.org first.

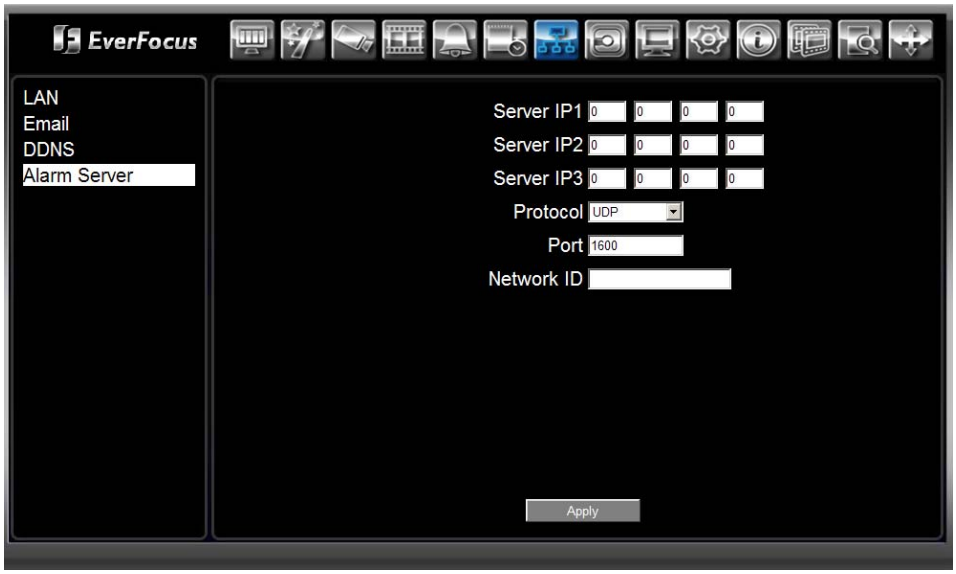


DDNS Service	Select "www.dyndns.org"
Host Name	Name of the ERS-4, as defined at www.dyndns.org account settings
User Name	User name of the dyndns.org account
Password	Password of the dyndns.org account
Apply	Click on Apply to finish and save the settings.

3.10.4 Network: Alarm Server

The ERS-4 can send network alarm notification to PowerCon software and other central management systems, which support this function.

The notification can be transmitted to max. 3 receiving servers.



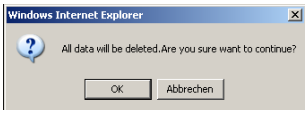
Server IP 1...3	Enter the IP - addresses of the receiving alarm servers
Protocol Type	Select the protocol type: UDP: User Datagram Protocol TCP: Transmission Control Protocol Note: Use UDP only for LAN applications, this mode is not safe for Internet connections.
Port	User name of the dyndns.org account
Network ID	Enter the network ID (Unique ID) for network alarm. Note: 1. The ID must contain 10 numbers. 2. Only numbers are valid characters 3. Do not use leading zeros.
Apply	Click on Apply to finish and save the settings.

3.11 REMOTE SETUP: DISK

This menu gives information about Hard Disk status and allows formatting the HDD.

Click on  for opening Hard Disk menu.

Record Time (Start)	Shows earliest recorded time on the hard drive.
Record Time (End)	Shows latest or most current recorded time on the hard drive.
Format	Formats (deletes) the HDD. Click on Format and confirm the screen message



with OK for formatting the HDD.

Note: All video and event data will be deleted in case of formatting.

Health Status	Displays current status of the selected disk.
Disk Temperature	Current HDD temperature.
Disk Size (Total)	Shows total disk size.
Disk Size (Usage)	Shows percentage of used disk space. If ERS-4 is set to automatically overwrite the disk, this option will show “Overwrite mode currently”.

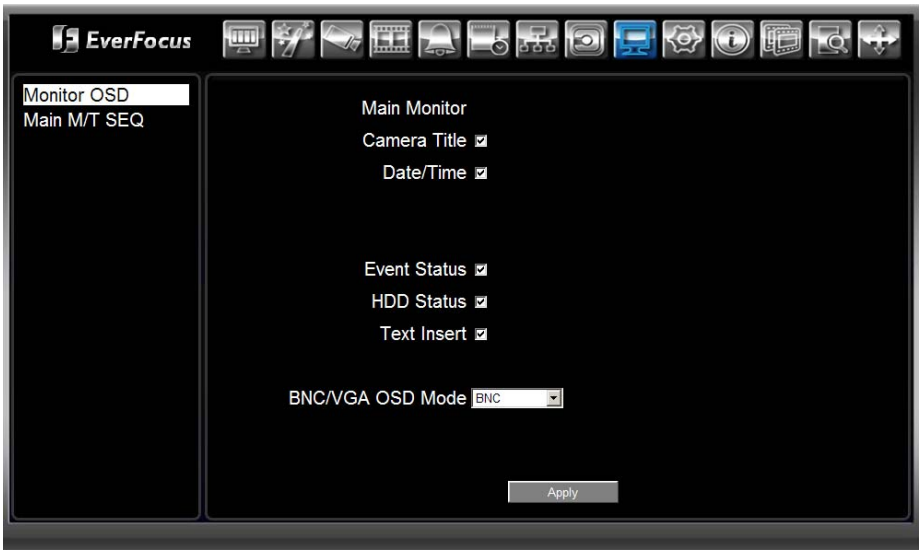
3.12 REMOTE SETUP: DISPLAY

The settings in this menu are related to the local Monitor output of ERS-4 only.

Click on  for opening MONITOR menu.

3.12.1 Monitor OSD

This menu provides settings for the Onscreen Display of local monitor.



Camera Title	With activated check box the monitor displays camera titles (as defined in CAMERA menu).
Date/Time	With activated check box the monitor displays current date/time.
Event Status	With activated check box the monitor displays event status.
HDD Status	With activated check box the monitor displays hard drive status.
Text Insert	Reserved for future applications.
BNC/VGA	This system supports both VGA and BNC monitor displays at the same time but only one of them can have optimized display quality. Use this feature to select which output is optimized.
Apply	Click on Apply to finish and save the settings.

3.12.2 Main M/T SEQ: Sequence

This menu defines the automatic switching sequence to the local monitor output.

Camera Select camera 1~4 for each step of the sequence.

Dwell Select a dwell time in the range 1~99 seconds to this camera. Select "0" to skip this step in the sequence.

Apply Click on Apply to finish and save the settings.

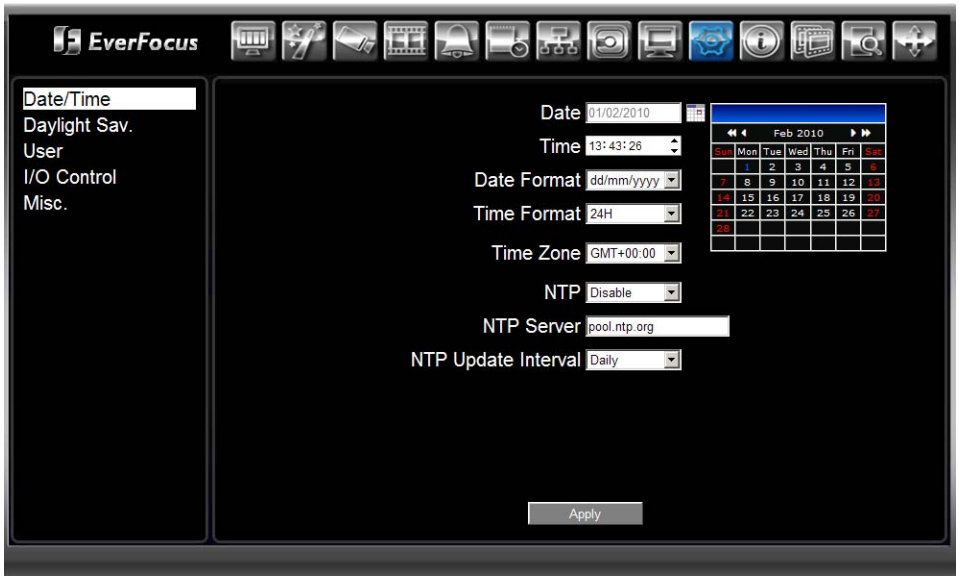
3.13 REMOTE SETUP: SYSTEM

The SYSTEM menu provides setup options for time/date, user management, maintenance and others.

Click on  icon for opening SYSTEM menu.

3.13.1 System: Date / Time

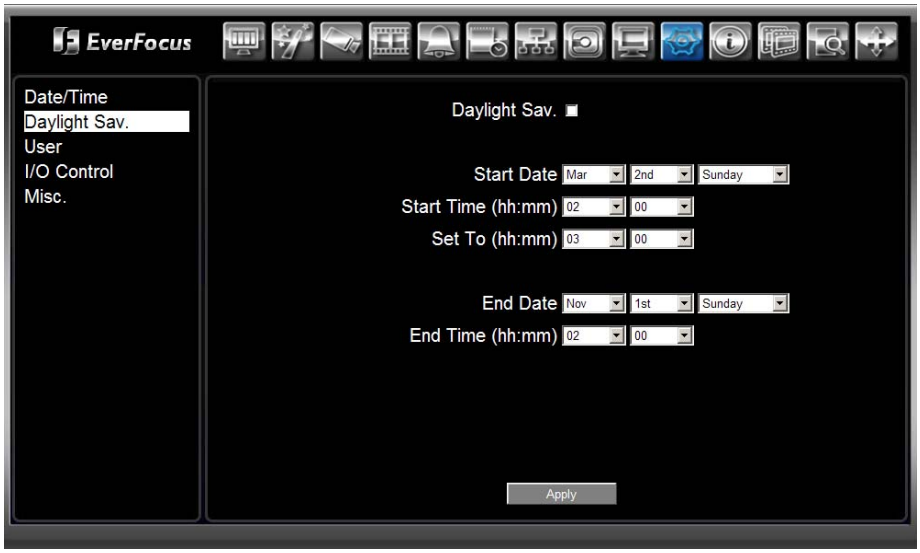
The menu provides settings for manual time date adjustment and NTP time synchronisation.



Date	Set current Date.
Time	Set current Time.
Date Format	Choose date format from yyyy/mm/dd, dd/mm/yyyy, and mm/dd/yyyy.
Time Format	Select time format 12H or 24H.
Time Zone	Select the time zone of current location.
NTP	Enable / disable automatic time synchronisation by NTP server.
NTP Server	Enter IP-Address of a valid NTP server. To find a compatible NTP address, please follow these steps: a) Go to a PC that is connected to the internet. b) Click on “START” -> “RUN” -> type “command” and press “OK”. c) In the DOS Prompt, type “ping pool.ntp.org” to find out the IP address of an NTP Server.
NTP Update Interval	Define the update interval for NTP time synchronisation (daily, weekly or monthly)
Apply	Click on Apply to finish and save the settings.

3.13.2 System: Daylight Saving

This menu provides settings for automatic Daylight saving switching.



Daylight Saving	Activated check box enables automatic Daylight Saving switching.
Start Date	Start date of Daylight Saving period.
Start Time (hh:mm)	Enter time when daylight saving period begins.
Set To (hh:mm)	Enter the new time for begin of Daylight Saving period. For most regions, this will be one hour ahead of the “Start Time”.
End Date	End date of daylight saving time.
End Time (hh:mm)	Enter the time when daylight saving time ends.

3.13.3 System: User

The ERS-4 allows up to 10 user accounts with 3 different user right levels.

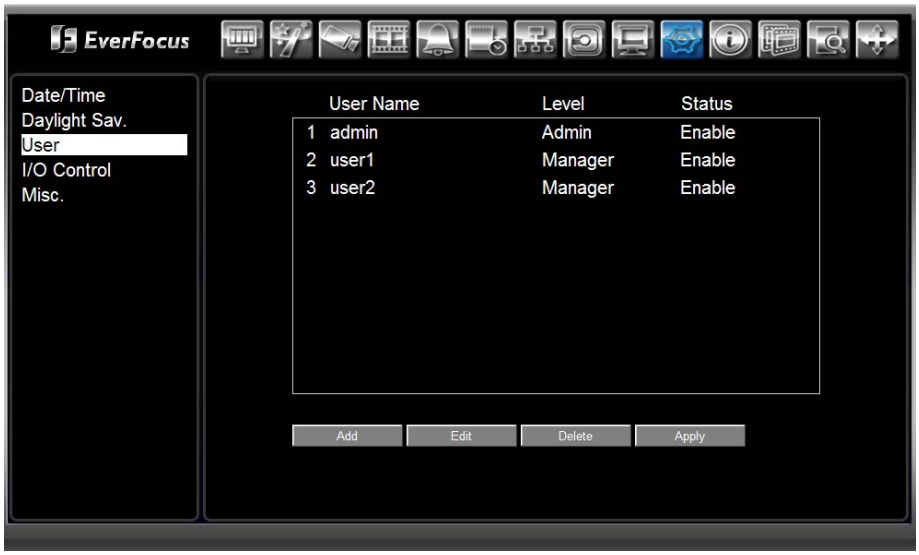
3.13.3.1 User right definition

User Rights	Operator	Manager	Administrator
Network Operation			
Live Views	✓	✓	✓
PTZ	○	✓	✓
View covert cameras	○	✓	✓
Playback Search	○	✓	✓
Copy / Export	○	✓	✓
Info - Menu	✓	✓	✓
View Log	○	○	✓
Delete Log	○	○	✓
Setup Menu	○	○	✓
Edit own user name / password	✓	✓	✓
Local Operation			
Live Views	✓	✓	✓
Display OSD ON/OFF	✓	✓	✓
OSD Settings	○	✓	✓
Sequence	✓	✓	✓
PTZ	○	✓	✓
View covert cameras	○	✓	✓
Info - Menu	✓	✓	✓
View Log	○	○	✓
Delete Log	○	○	✓
Setup Menu	○	○	✓
Edit own user name / password	✓	✓	✓

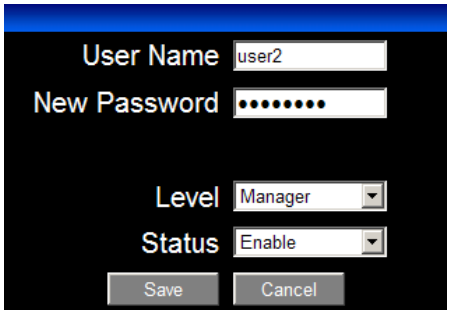
3.13.3.2 Edit user account

The default settings provide 3 users with different user rights:

User Name	Password	User Right Level
user1	11111111	Admin
user2	22222222	Manager
user3	33333333	Operator



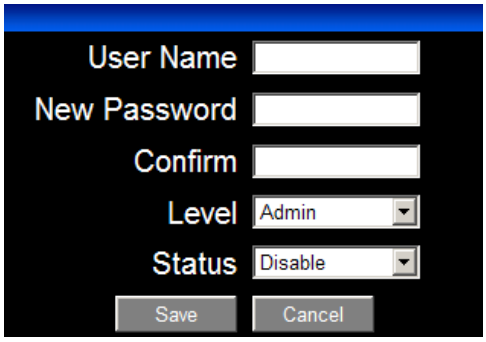
For editing an account select the user and click on Edit.



User Name	Edit the user name.	
New Password	Enter new password.	
Confirm	Re-enter the new password for verification.	
Level	User Right Level	
Status	Enable:	User account is active.
	Disable:	User account is disabled, but not deleted.

3.13.3.3 Add user account

Click on Add for creating new user account.



User Name	Enter the user name.
New Password	Enter the password.
Confirm	Re-enter the password for verification.
Level	User Right Level
Status	Enable: User account is active. Disable: User account is disabled, but not deleted.

3.13.3.4 Delete user account

Select a user account and click on Delete for removing the user account from list.

After finishing all settings click on Apply for saving the changes.

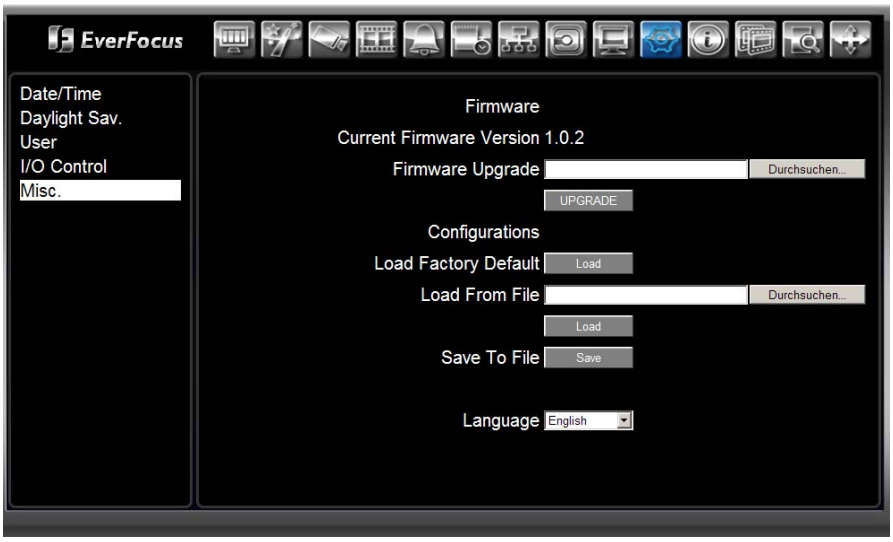
3.13.4 System: I/O Control

This menu defines parameters of the RS-485 interface.

PTZ Protocol	PTZ protocol for connected PTZ camera, select protocol type EverFocus, Pelco-D, Pelco-P, Samsung (Electron.) or Transparent. In Transparent mode the protocol type is defined in the central management software, this mode works only for network control.
485 ID	Enter RS-485 ID (address) of the ERS-4 in the range 1 ~ 127, required for RS-485 remote control by EKB500 Default: 1
Baud Rate	Transmission speed of RS-485 interface, select 1200, 2400, 4800, 9600, 19200, 38400, 57600 or 115200 BPS Default: 9600
Data Bit	Data bit used for transmission, select 7 or 8 Default: 8
Stop Bit	Stop bit used for transmission, select 1 or 2 Default: 1
Parity	Parity setting for RS-485 transmission, select NONE, ODD or EVEN Default: NONE
Apply	Click on Apply to finish and save the settings.

3.13.5 System: Miscellaneous

This menu is needed for system maintenance and language settings.



Current Firmware version	Displays the current version.
Firmware Upgrade	Press “Upgrade” to upgrade the firmware. Click on SEARCH and enter the correct update file "ers-4.bin" with new firmware. Click on UPGRADE will start the upgrade procedure. This may take several minutes. ERS-4 will restart automatically after successful update. NOTE: After updating it is mandatory to perform LOAD DEFAULT for avoiding malfunctions!
Load Factory Default	Click on Load will load the factory settings.
Load From File	Click on Load will load the configuration from a configuration file.
Save To File	Click on Save will save current configuration to a config file.
Language	Select menu- and OSD language for ERS-4

4 NETWORK OPERATION

4.1 LIVE SCREEN CONTROLS

1	4 x Screen	4UP Switches the video window to 4 x view of all cameras
2	Audio	This button toggles audio transmission direction: Listen mode (direction ERS-4 > PC) Speak mode (direction PC > ERS-4)
3	Audio ON/OFF	Audio at PC enabled Audio at PC disabled
4	Camera channels	Clicking on the camera buttons switches to full screen mode of selected camera. The color of the button represents current status of the camera (#5)
5	Status	Description of the status colors for camera buttons (#4)
6	Live View	Live View (current screenshot)

7	Setup Icons	The Setup menus are described in chapters 3.6 to 3.13. Note: Access to setup menus is only possible for users with ADMIN user rights.
8	Info	 shows system status informations
9	Copy / Export	 opens Video export menu
10	Playback Search	 opens Playback search menu
11	PTZ	 opens PTZ control (available only for PTZ cameras)
12	Video Window	Area for live or playback view of the video channels

4.2 VIEW MODES

4.2.1 Full Screen

Click on one of the 4 camera buttons  to view selected camera in full screen mode.

4.2.2 4 x Screen

Click on  button to switch to video screen with all 4 cameras (quad view).

4.2.3 Frameless Video Screen

Double click in the video window switches to frameless video window (without operation control icons).

Double click in the frameless video window switches back to normal screen.

4.3 BIDIRECTIONAL AUDIO

This button toggles audio transmission direction:

 Listen mode (direction ERS-4 > PC)

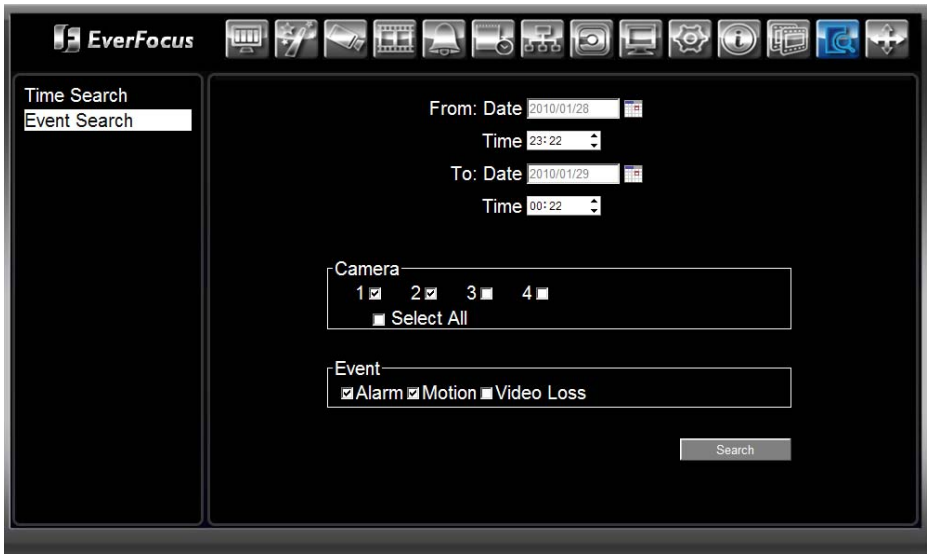
 Speak mode (direction PC > ERS-4)

4.4 PLAYBACK SEARCH

The ERS-4 provides 2 methods for playback search and evaluation, search by event and search by time / date.

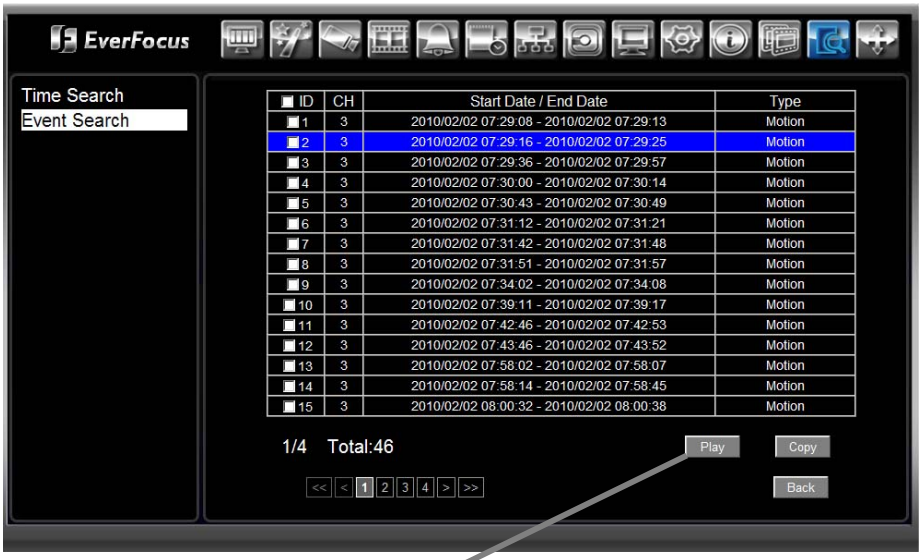
4.4.1 Event Search

This search method allows searching for motion and contact alarm records.



From: Date	Enter the start date for playback search.
Time	Enter the start time for playback search.
To: Date	Enter the end date for playback search.
Time	Enter the end time for playback search.
Camera	Select the cameras for playback search.
Event	Select one ore more event types for playback search: Alarm: Alarm contact inputs Motion: Motion detection events Video: Video Loss events
Search	Click on Search for starting playback search.

After click on Search the screen show a list with the search results, depending on the number of events the list may have several pages (4 pages in example below):

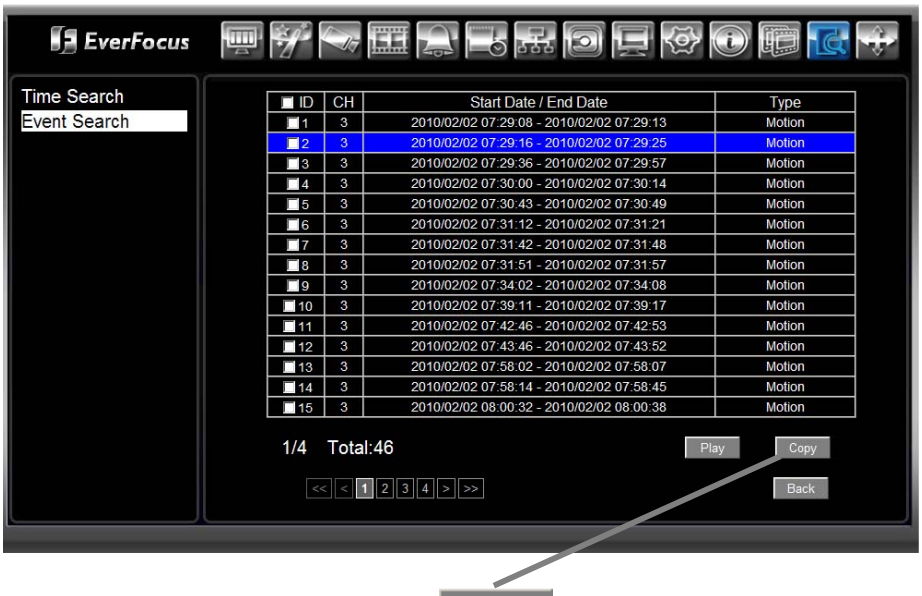


Select an item from the list and click on Play button, the screen will show the playback window with the selected event video:

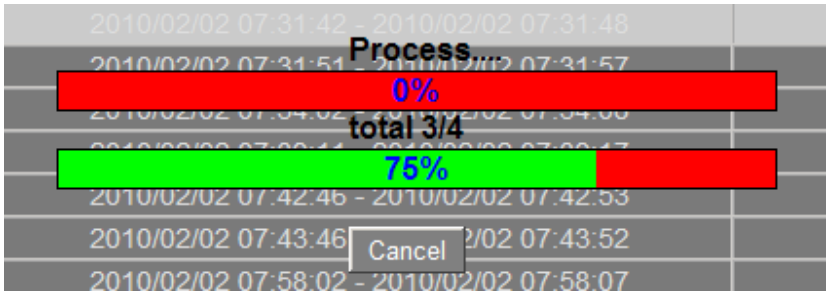
CONTROLS:
Fast backward 2x~32x
Playback backward
Stop
Pause
Play
Fast forward 2x~32x

Return to SEARCH results

In addition to the Copy / Export menu page it is also possible to export event video files directly from the event search page.

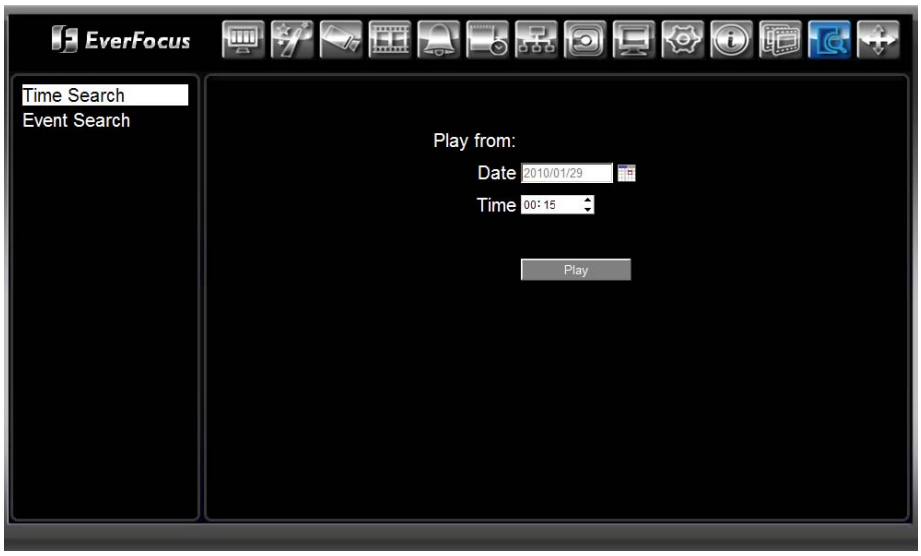


Select one or more events (check box) and click on Copy button.
After entering file name and file path the screen shows a progress bar, until the export is finished:



4.4.2 Time / Date Search

The search by time / date allows searching normal (continuous) or event records.



Play from:

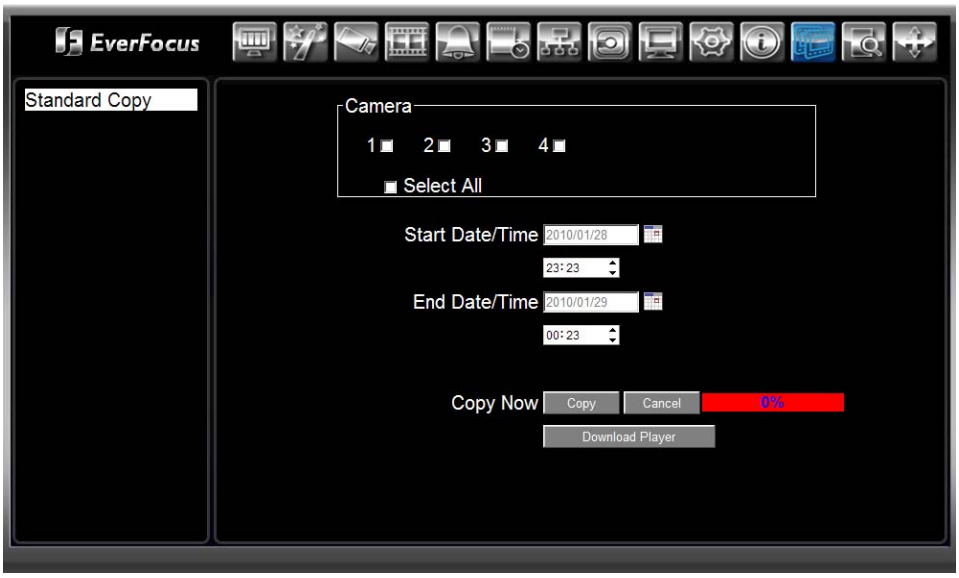
Date Enter the start date for playback search.

Time Enter the start time for playback search.

Play Click on Play for starting playback search.

4.5 VIDEO COPY / EXPORT

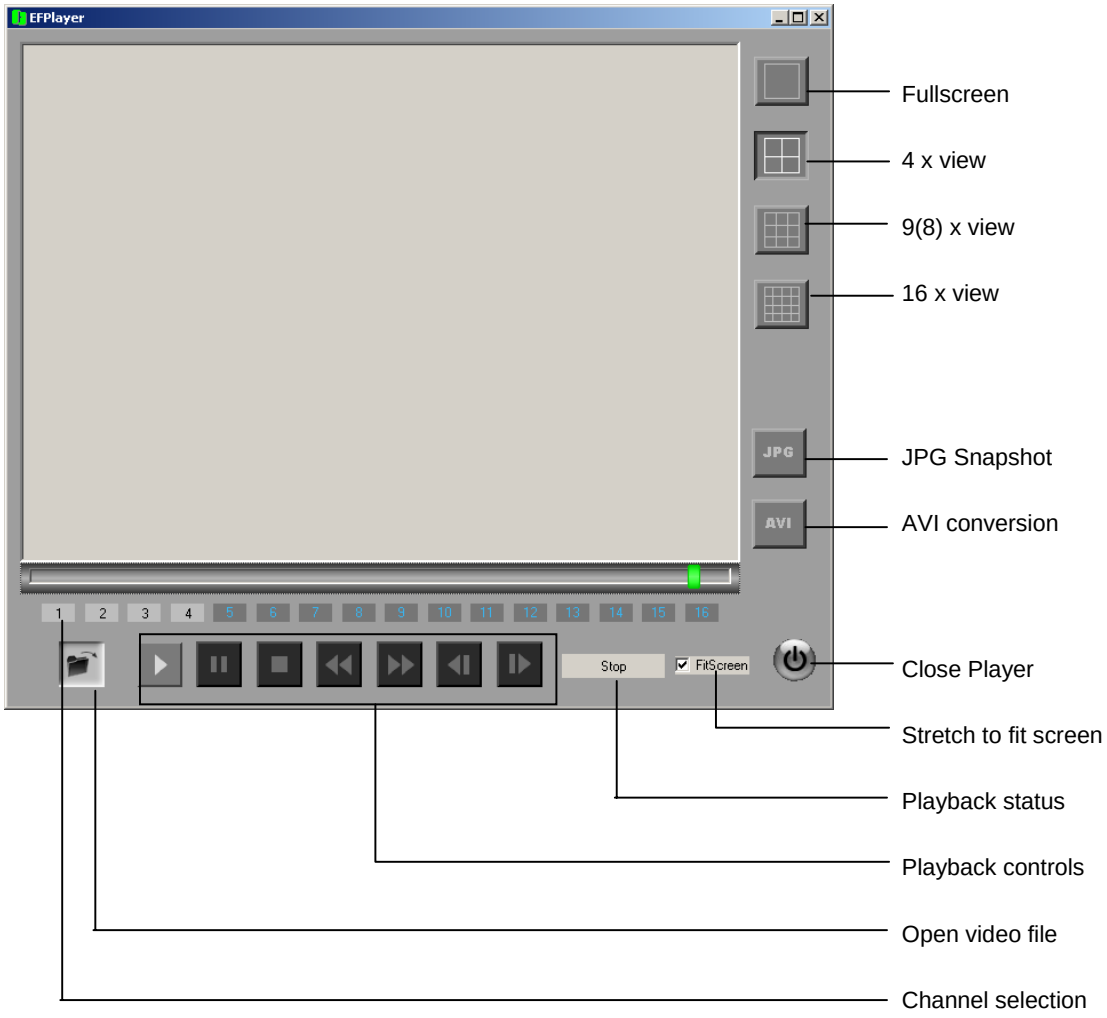
The COPY menu allows exporting video files to the client PC. Furthermore a file player software is available for playback of video files on PC.



Camera	Select one ore more cameras for video export. Activate check box "SELECT ALL" for export of all cameras.
Start Date/Time	Start date and time of export file.
End Date/Time	End date and time of export file.
Copy now	Click on Copy, enter filename and file storage location and start the copy procedure. The progress bar shows the current status of transmission. 6% During transmission it is always possible to stop the export by clicking on Cancel button.
Download Player	Click on Download Player for downloading of the file player software. This software is needed for playback of exported files in *.aver format from ERS-4.

4.5.1 Export File Evaluation with EFPlayer Software

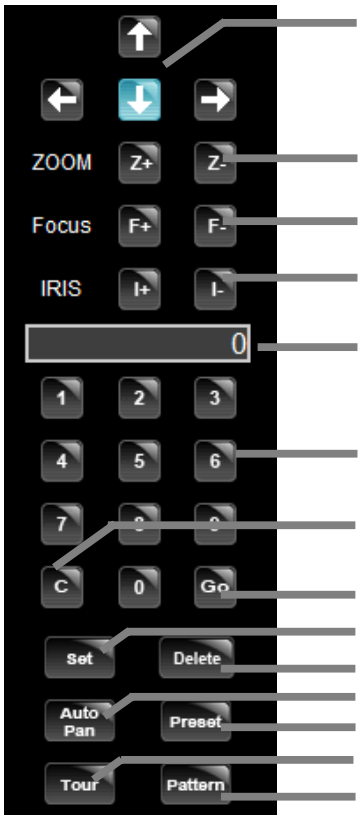
Use the downloaded software EFPlayer.exe to evaluate *.aver files exported from the ERS-4.
Start EFPlayer.exe at your PC.



4.6 PTZ CONTROL

If the connected camera is defined as a PTZ device (Speed Dome, PTZ head with RS-485 receiver), the PTZ control panel is shown at left side after clicking on  button.

Required settings: 1. PTZ is enabled and RS-485 address is entered in CAMERA > BASIC SETTING.
2. RS-485 parameter are adjusted in SYSTEM > I/O CONTROL.



Pan - Tilt direction keys
Zoom in (+) , Zoom out (-)
Focus far (+), Focus near (-)
Iris open (+), Iris close (-)
Input field for preset, tour and pattern numbers
Number buttons
Clear numeric input
Start (for preset, tour, pattern
Save preset position
Delete preset position
Auto-Pan
Preset position
Preset Tour
Pattern

Input syntax:

Go to Preset Position	PRESET > [number] > GO
Save Preset Position	PRESET > [number] > SET
Delete Preset Position	PRESET > [number] > DELETE
Start Preset Tour	TOUR > [number] > GO
Start Pattern	PATTERN > [number] > GO
Start Auto-Pan	AUTO-PAN
Open Setup Menu	PRESET > [95] > SET
Enter in Speed Dome OSD	I+ ((iris open)
ESC / Cancel in Speed Dome OSD	I- (Iris close)

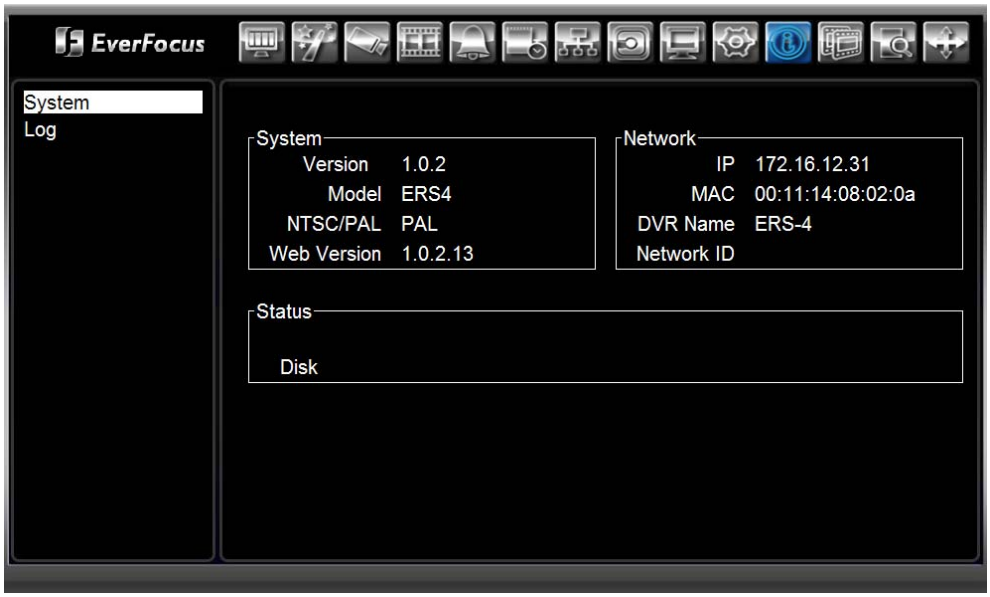
NOTE: The availability of each PTZ feature depends on user camera type and used PTZ protocol !

4.7 INFO

4.7.1 Info: System

The SYSTEM menu provides informations about hardware and firmware status of ERS-4.

Click on  icon for opening INFO menu.

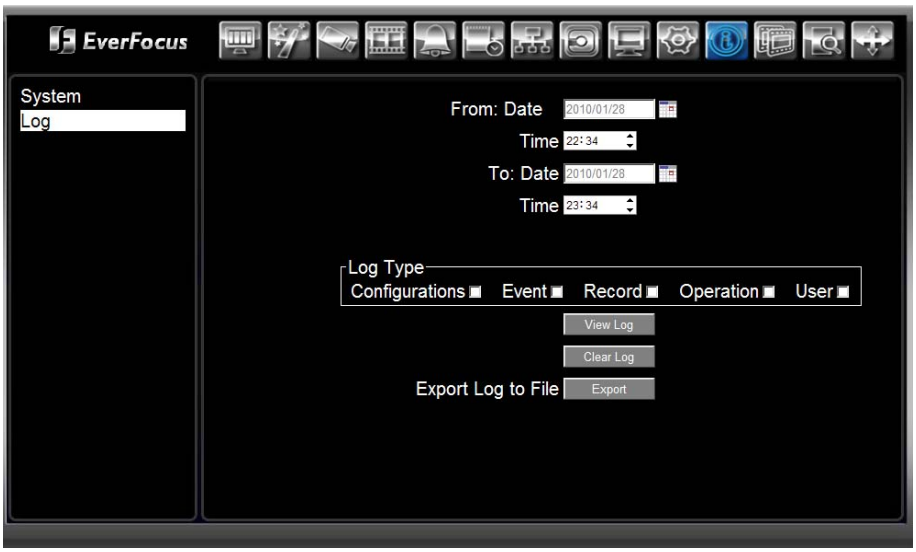


Version	Current Firmware version of ERS-4
Model	Model Name
NTSC/PAL	Video system of installation
Web Version	Firmware version of ActiveX control (web browser)
IP	IP - address of ERS-4
MAC	MAC - Address of ERS-4
DVR Name	Device name
Network ID	Network ID for network alarm transmission

4.7.2 Info: Log

Depending on settings the ERS-4 logs informations about events, system errors and user activities.

Select LOG in info menu:



Enter the desired start and end time for the log request.

Select the event type for the log search:

Configurations	Configuration changes
Event	Recording and system events
Record	Recording activities
Operation	Other operations
User	User logins / logouts

Note: The event log data are stored on Hard Disk. ERS-4 without Hard Disk can only buffer a small quantity of events in the buffer. The complete log is lost in case of power loss for ERS-4 without Hard Disk.

4.7.2.1 View Log

After entering the search parameters click on View Log button, the search results list is shown:

Depending on the number of events the list may be splitted on several pages. Browse between the pages.

Click on Close button for returning to LOG menu.

4.7.2.2 Delete Log

Click on Clear Log button for deleting complete log.

4.7.2.3 Export LOG

The selected log entries can be exported to a file in *.txt format.

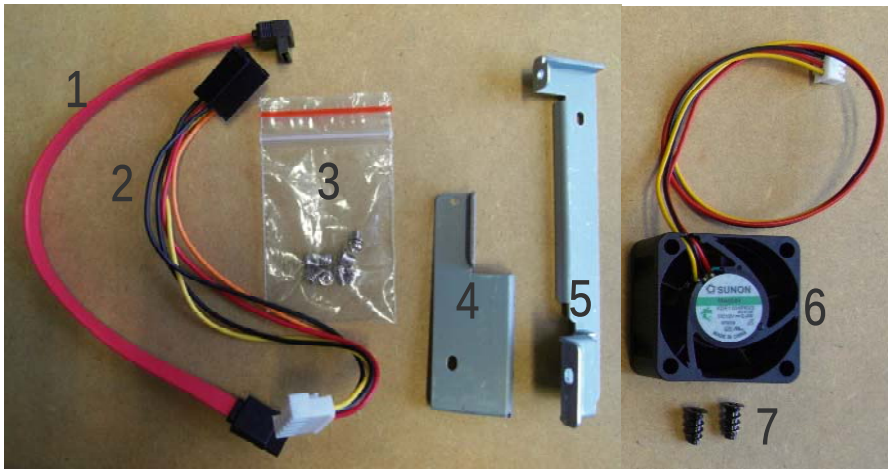
Click on Export button for creating the log file.

5 APPENDIX A: HDD ASSEMBLING

If the ERS-4 was delivered in the version without Hard Disk, it is possible to add a HDD with the optional Hard Disk mounting kit ERS-HDMK.

The kit ERS-HDMK contains:

1	SATA connector cable
2	HDD power cable
3	Screws for HDD and brackets
4	Left side HDD bracket
5	Right side HDD bracket
6	Cooler fan
7	screws for cooler fan

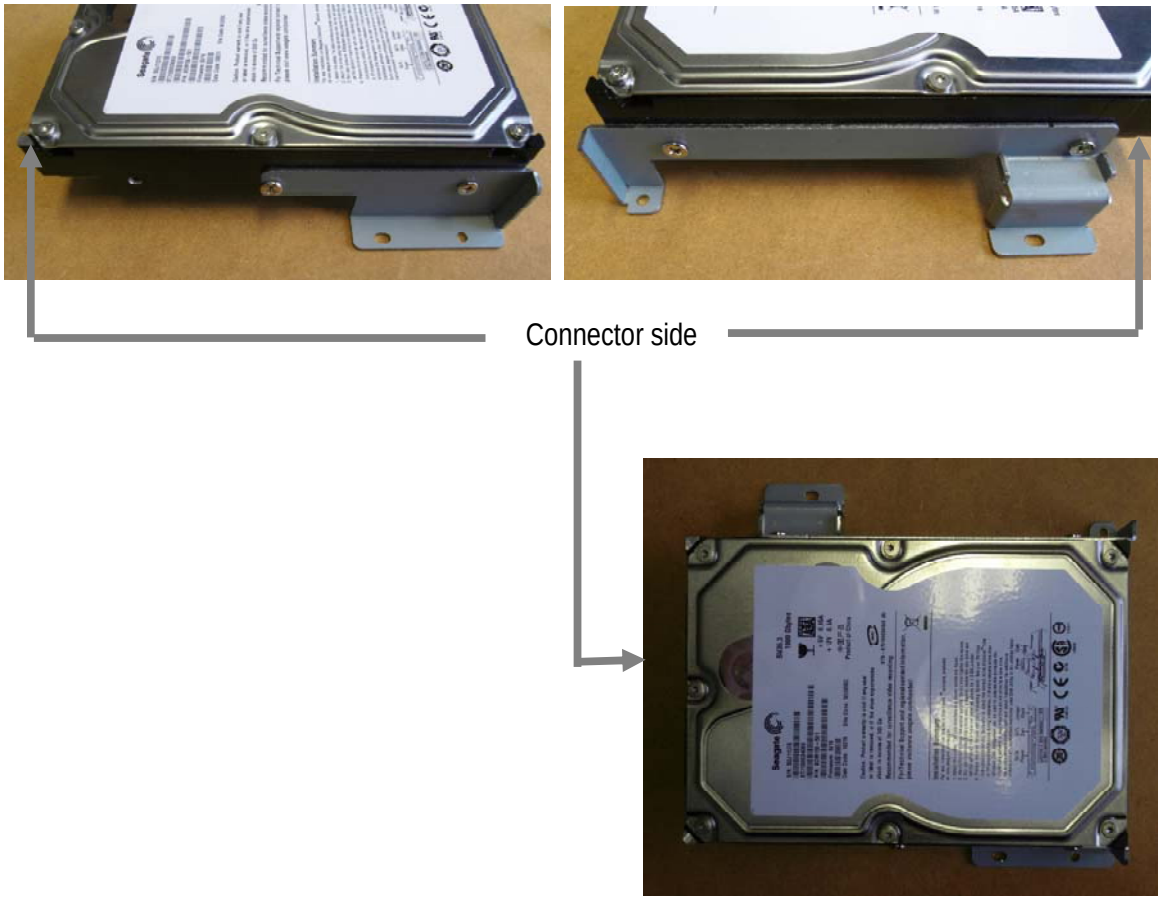


5.1 OPEN ERS-4 HOUSING

Unscrew the 2 screws at each side of ERS-4 for removing the cover.
Lift the back side of the cover first, take care for the middle mount at front side (marked red).

5.2 MOUNTING HDD BRACKETS

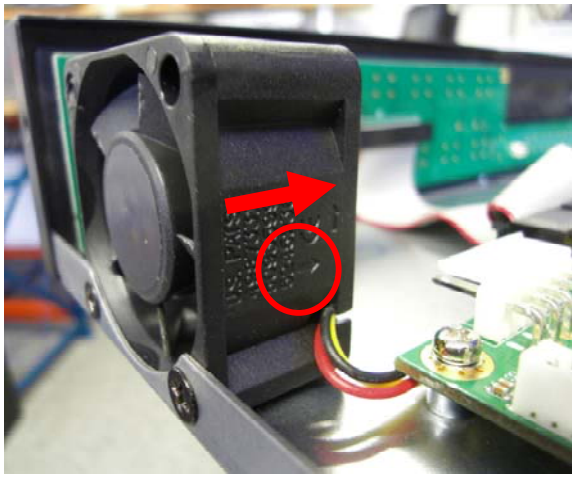
Assemble the HDD-brackets with 2 screws each at both sides of HDD.



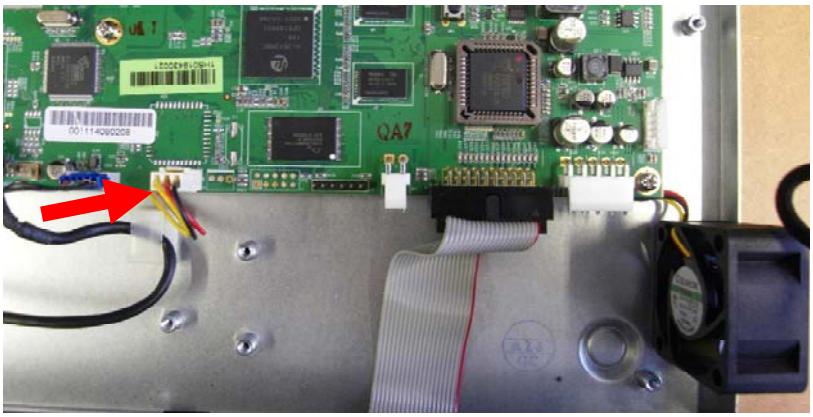
5.3 ASSEMBLING COOLER FAN

Mount the cooler fan with the 2 fan screws at the right housing side.

Please make sure for correct cable position and airflow direction (intake fan):

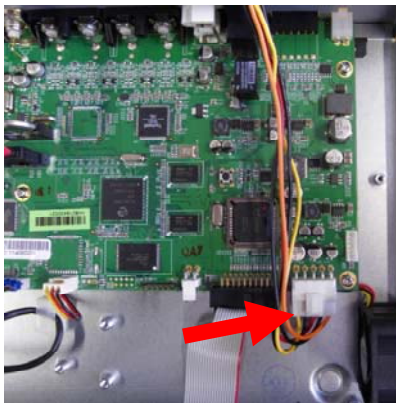


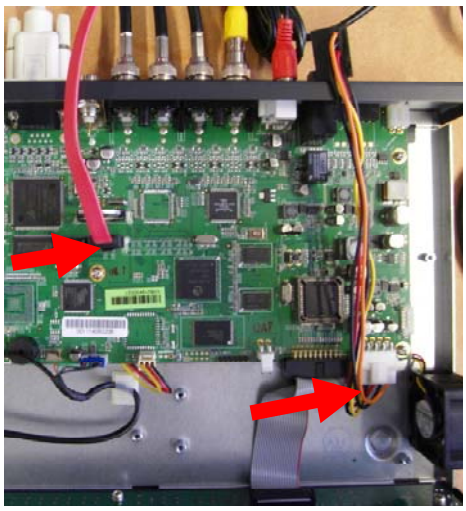
Connect the plug of fan cable to the fan connector at the main board:



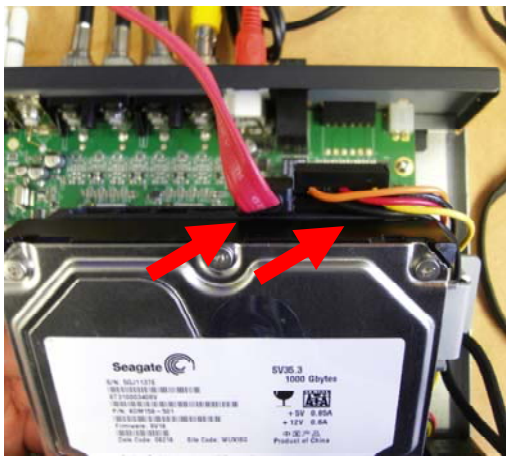
5.4 SATA AND POWER CABLE INSTALLATION

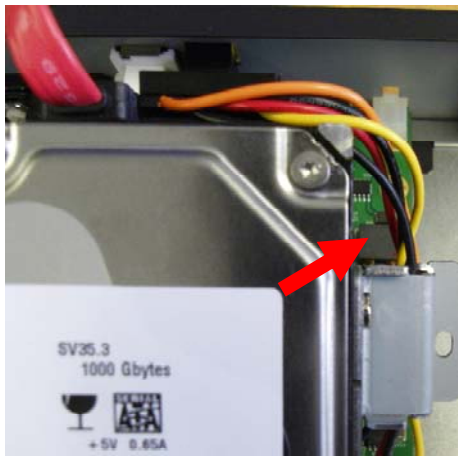
Connect the power cable and SATA cable to the main board:





Connect SATA and power cable to the pre-assembled HDD before mounting the HDD to the housing. Make sure for correct position of power cable.

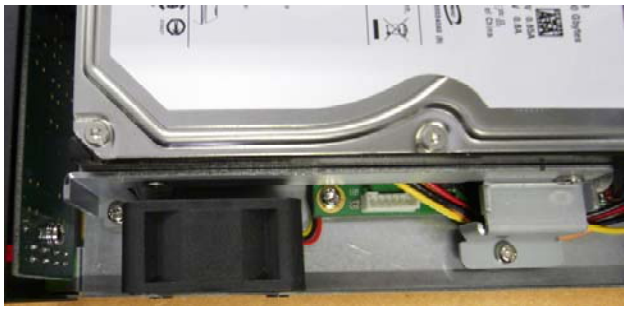




5.5 HDD MOUNTING IN HOUSING

Mount the pre-assembled HDD in the ERS-4 housing with 2 screws for each bracket:

Left bracket position

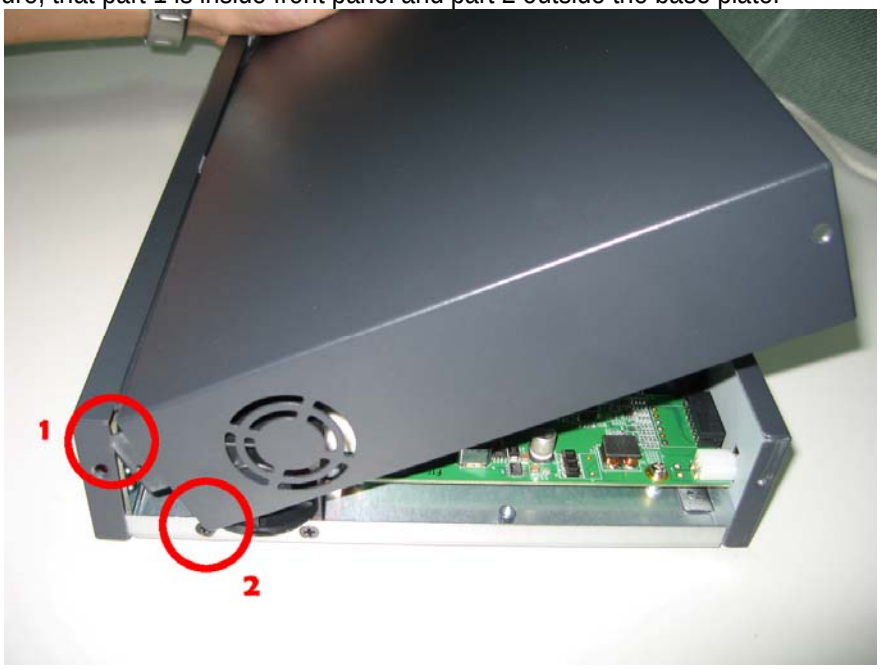


Right bracket position

5.6 CLOSING ERS-4 HOUSING

Lift back part for inserting cover in front panel:

Please make sure, that part 1 is inside front panel and part 2 outside the base plate:



Fix the cover with the 2 screws at each side.

6 APPENDIX B: 3GPP MOBILE PHONE STREAMING

6.1 GENERAL REQUIREMENTS

Mobile phone access to the live streams of the ERS-4 requires a media player on the mobile phone, which allows RTSP streaming.
Furthermore 3GPP streaming has to be enabled in ERS-4 network menu.

The stream address has the syntax:

Live stream Channel 1: rtsp:// [IP-Address of ERS-4]/live0.3gp
Live stream Channel 2: rtsp:// [IP-Address of ERS-4]/live1.3gp
Live stream Channel 3: rtsp:// [IP-Address of ERS-4]/live2.3gp
Live stream Channel 4: rtsp:// [IP-Address of ERS-4]/live3.3gp

NOTE: The 3GPP streaming is not protected by user name and password. This means, everybody, who knows IP-address and the syntax, can access the ERS-4 by mobile phone or media player (which supports RTSP such as VLAN player).
Please consider these security limitations before enabling 3GPP streaming!

6.2 APPLE IPHONE

Viewing ERS-4 Live-Streams on iPhone requires installation of a media player, which supports RTSP streaming.
One possible application is STREAMER. download STREAMER from APPLE® store and install.

1. Start / enable STREAMER.
2. Select Bookmarks function.
3. Add Bookmarks with following syntax:
   Live stream Channel 1: rtsp:// [IP-Address of ERS-4]/live0.3gp
   Live stream Channel 2: rtsp:// [IP-Address of ERS-4]/live1.3gp
   Live stream Channel 3: rtsp:// [IP-Address of ERS-4]/live2.3gp
   Live stream Channel 4: rtsp:// [IP-Address of ERS-4]/live3.3gp
   Save settings
4. Select one of the saved bookmarks for live stream of ch. 1 ~4.

6.3 OTHER MOBILE PHONES

Mobile phone access to the live streams of the ERS-4 requires a media player on the mobile phone, which allows RTSP streaming.
Following mobile phone types were tested successful for 3GPP streaming (with RealPlayer application):

NOKIA N93i

NOKIA N95

NOKIA N96

NOKIA N97

NOKIA N97 mini

NOKIA 5530 XpressMusic

NOKIA 5800 XpressMusic

HTC Hero

Apple iPhone 3G S 16GB (with STREAMER player)

7 APPENDIX C: NETWORKING

7.1 NETWORKING OVERVIEW

This chapter will give you a basic instruction on how to set up the ERS-4 for network connection. It is highly recommended that you have a working knowledge of what a network is and how it works. This will be helpful in completing the networking process.

7.1.1 Introduction to TCP/IP

TCP/IP is the group of protocols used by the Internet and most Local Area Networks (LANs) throughout the world. In TCP/IP, every computer or other communications device that is connected to the network has a unique IP address. By doing this you are giving your device a unique address similar to the address of your house. An IP address is composed of four octets (numbers in the range of 0 to 255) separated by decimal points. The IP address is used to uniquely identify a host or computer on the LAN. For example, one computer on a network could have an IP address of 192.168.1.127.

You should never give two or more devices the same exact IP address, but the first three octets of an IP address should be the same for all computers in the local area network. For example, if a total of 253 computers exist in a single LAN, the IP addresses could be assigned starting with 192.168.1.*x*, where *x* represents a number in the range of 2 to 254.

7.1.2 Subnet Masks

Each host in a LAN has a subnet mask. The *subnet mask* is a set of octets that is used to determine which LAN or class it belongs to. The number 255 is usually used to represent the network address portion of the IP address and a zero is placed at the end to identify the host portion of the address. Basically the subnet mask can be compared to the city you live in for your home address, but in this case you are stating the network you belong too.

7.1.3 Gateway Address

Each host in a LAN has a gateway. A *gateway address* is composed of four octets separated by decimal points. The gateway address is used to uniquely identify the main host or computer on the LAN that assigns the IP addresses to your network (usually a router). This is comparable to the zip code of your address.

7.1.4 Virtual Ports

A port number represents a "channel" or entryway for network communications. Port numbers allow different applications on the same computer to utilize network resources without interfering with each other. Port numbers most commonly appear in network programming, particularly socket programming. Sometimes, though, port numbers are made visible to the casual user. For example, some websites on the Internet use a URL like the following:

http://www.fakeaddress.com:8100/

In this example, the number 8100 refers to the port number used by the browser to connect to the web server. The standard port number used by web sites is 80, so this number does not need to be included with the URL (although it can be). In IP networking, port numbers can theoretically range from 0 to 65535. Most popular network applications, though, use port numbers at the lower end of the range (such as 80 for HTTP). Ports are similar to doors and windows of your house, with port 80 acting as the front door. If these are not open you could not enter the house. This is the same case with ports on a network. If the ports for a specific IP address are not open then you could not gain access to that IP address.

Note: *The term port also refers to several other aspects of network technology. A port can refer to Ethernet connection points, such as those on a hub, switch, or router. The term port is also used to refer to a physical connection point for peripheral devices such as serial, parallel, and USB ports.*

7.2 WHAT IS YOUR NETWORK SETUP?

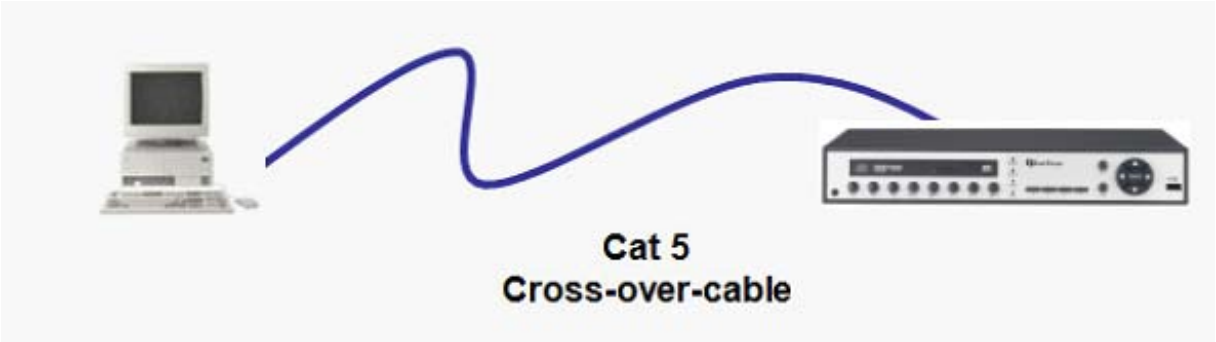
Everfocus DVR's and IP - products can operate using one of three types of networking connections.

1. Simple One to One Connection: A simple one to one connection is the simplest type of network connection. It uses a cross-over cable to make a direct connection from one computer to another (or in this case a computer to a DVR).

2. Direct High Speed Modem Connection: A direct modem connection uses a standard network cable to connect the modem directly to a computer (or in this case a modem to the DVR). This type of connection only covers single-port modems. For a combination modem/router, use the setup described below.

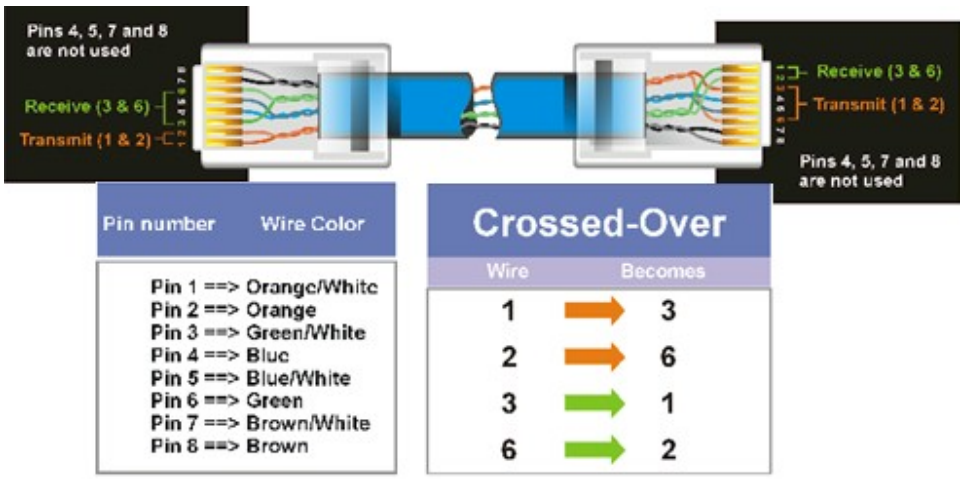
3. Router or LAN Connection – A local area network connection requires either a router or a pre-existing LAN connection. This is the most common type of connection. A router allows multiple computers and DVR's to access each other as well as the Internet. It assigns different internal IP addresses to the computers.

7.2.1 Simple One to One Connection



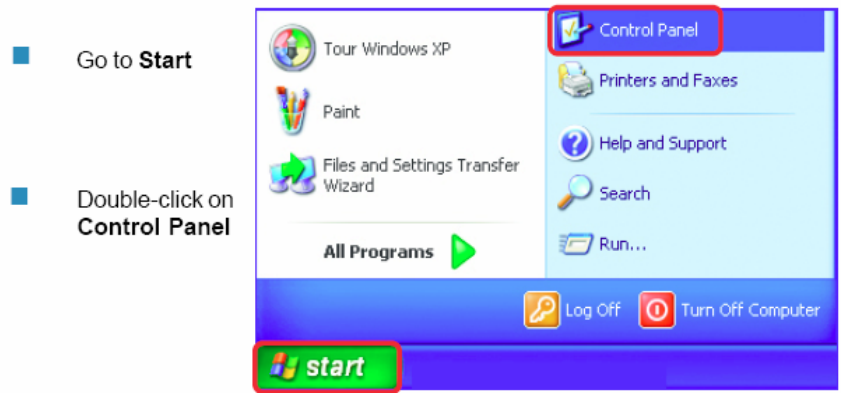
Crossover Ethernet Cable Pin outs:

The Figure below shows the pin configurations for a cross-over cable.

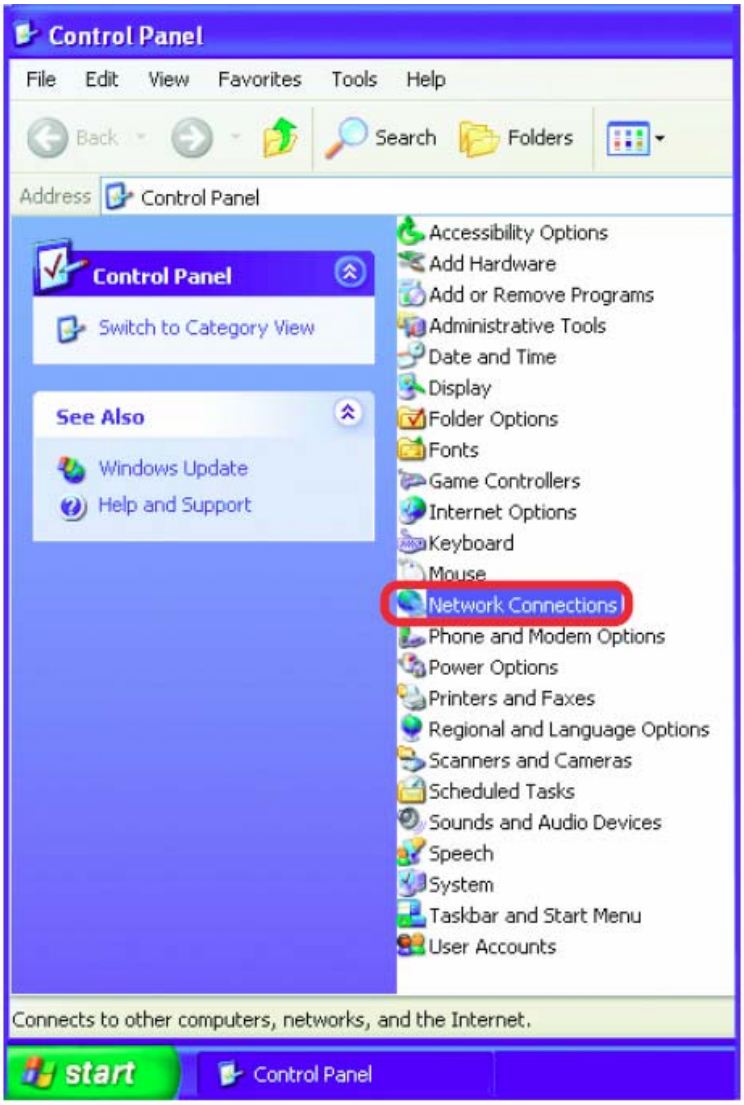


Connection Procedure:

- The First step is to purchase or make a cross-over cable. We recommend purchasing one if you have never made a cross-over cable. Please remember you can not use a straight through network cable for this application
- Once you have a cross-over cable plug one end into the LAN port on the back of the DVR and the other into the network card on the back of the computer.
- Log into the EverFocus DVR menu and go to the Network Setting Menu.
- You must use the Static IP option for this type of connection.
- Assign an IP of 192.168.001.003, a Subnet Mask of 255.255.255.000, and a Gateway of 192.168.001.001. You can ignore DNS Server.
- The next step is to set the computer's network settings to match those of the DVR. You will need Administrator privileges on your Windows machine to do this.
- To assign a fixed IP address in Windows 2000/XP.

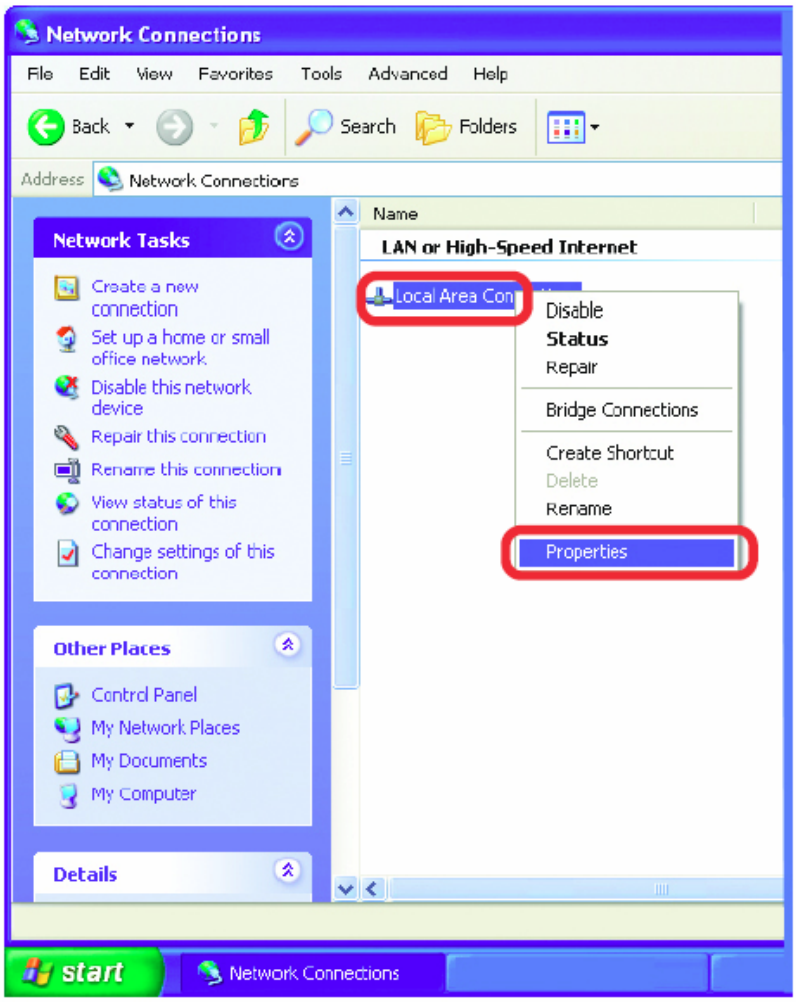


- Double-click on **Network Connections**

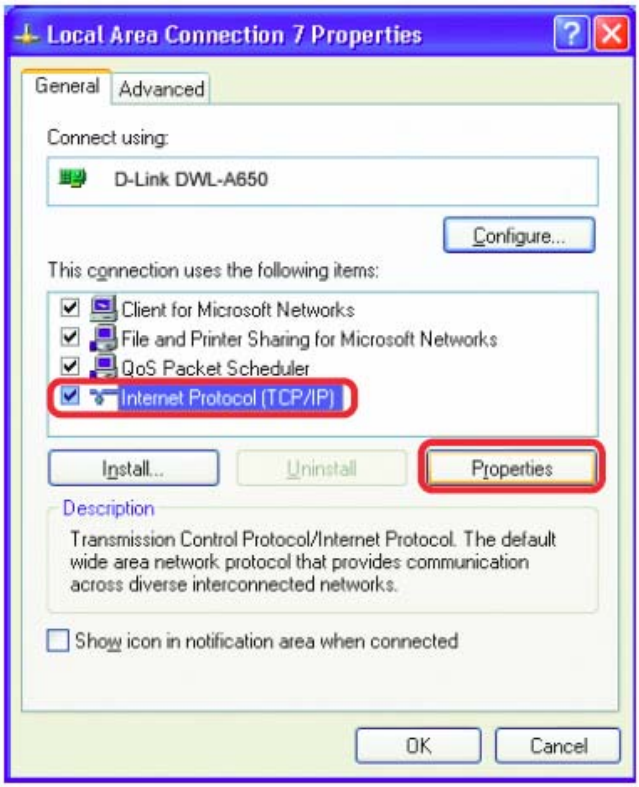


- Right-click on **Local Area Connections**

- Double-click on **Properties**



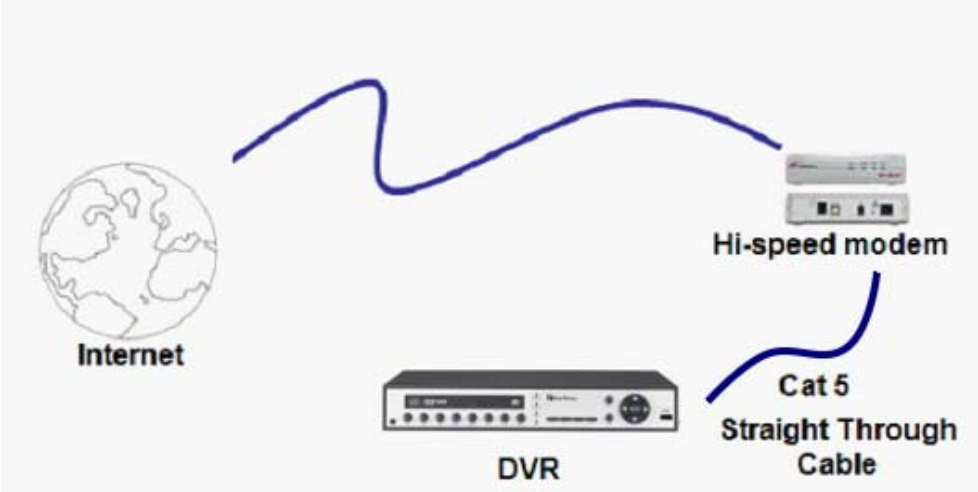
- Click on **Internet Protocol (TCP/IP)**
- Click **Properties**



- Click on the option that says “Use the following IP address”
- Assign an IP address of 192.168.1.2, a Subnet Mask of 255.255.255.0, and a Default Gateway of 192.168.1.1, then click OK.
- Restart both the computer and the DVR.
- To access the DVR from the computer, simply open Internet Explorer and in the address bar type:

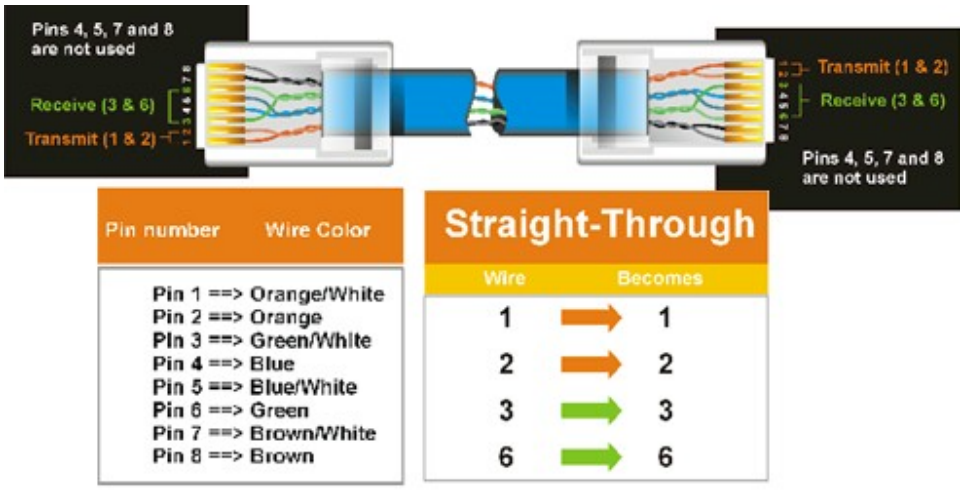
  http://192.168.1.3

7.2.2 Direct High Speed Modem Connection



Straight Through Ethernet Cable Pin outs:

The Figure below shows the pin configurations for a straight cable.



Connection Procedure:

- The first step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application

- Once you have a straight through cable plug one end into the LAN port on the back of the recorder and the other into the high speed modem.

- Log into the EverFocus DVR menu and go to the Network Setting Menu.

- Input the Static IP address, the Subnet Mask, and the Gateway that you obtained from the internet service provider.

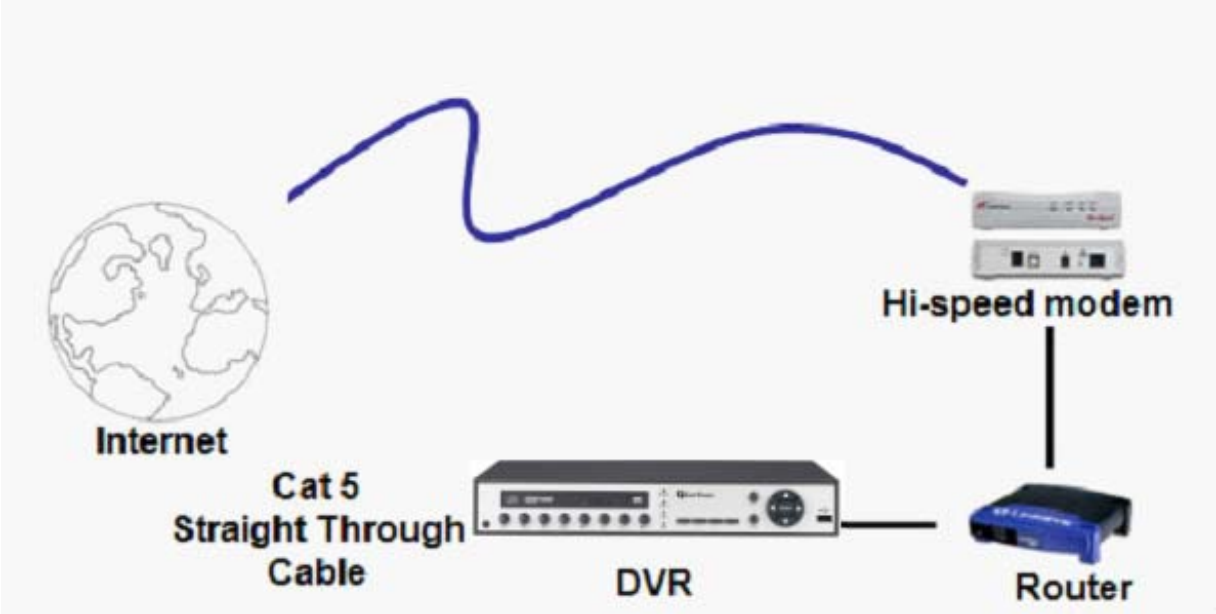
- Note: *If you have a dynamic IP address, you can set the DVR to DHCP to automatically detect the network settings. Therefore, it can use a dynamic IP address.*

➢ Exit from the DVR's Menu to save the settings.

➢ To access the DVR from a computer, open Internet Explorer and in the address bar type:
http:// (IP address given by your internet service provider)

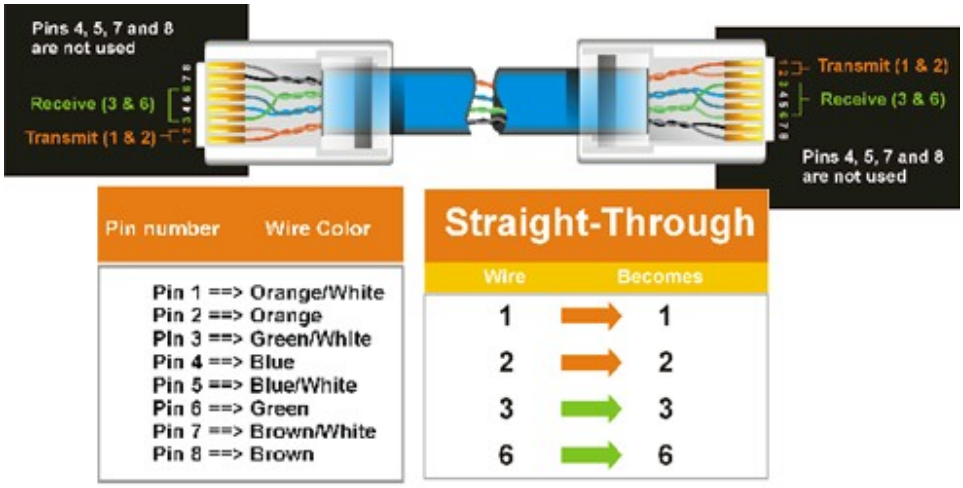
- *Note: When using this type of connection, only one device can be connected to the modem at a time. You will need to use a computer at a different location to test the connection.*

7.2.3 Router or LAN Connection



Straight Through Ethernet Cable Pin outs:

The Figure below shows the pin configurations for a straight cable.



Connection Procedure:

- The First step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application

- Once you have a straight through cable plug one end into the LAN port on the back of the recorder and the other into the router.

- Log into the EverFocus DVR menu and go to the Network Setting Menu.

- To let the router automatically assign an address:

  - Set the Network Type to DHCP. Make sure to write down the IP address and the Gateway.

  - Exit from the Menu to save settings.

  To manually assign an address:

  - Go to a computer connected on the same network as the DVR.

  - Click on the Start button and choose Run.
    - If using Windows Vista, choose Search instead.

  - Type "command" and click on OK.
    - In Vista, you will need to double-click on the "Command Prompt" file to open it..

  - In the DOS prompt, type "ipconfig" and press Enter.

  - The network information will be displayed on a screen similar to the one below.
    - In Windows Vista, look for the information that says "IP v4".

  - Take the values for Subnet Mask and Default Gateway and input them into the DVR; these values should be exactly the same in both devices. However, you should change the last number of the IP address. For example, if the IP address of the computer is 192.168.2.101, the DVR's IP address should be 192.168.002.050.

- To access the DVR from a computer simply open Internet Explorer and in the address bar type: http:// (IP address of the DVR)

  - Note: *The DVR's IP address will only work at the location of the DVR. To connect from a different location over the Internet, see below.*

To set DVR for Internet Connection through router

- The next step is to open ports within your router. Log into the router using a PC and open the following ports.

    - Ports to open: 80, 1600
    - If your Internet service provider blocks port 80, you can change it to a different port in the DVR's Network Menu Setup.
    - If you are using a Linksys or D-Link router, see Chapter 9 for basic support on setting up ports. For any other router, you will need to contact the manufacturer for support.

- To access the DVR from a computer simply open Internet Explorer and in the address bar type: http:// (the IP address given by your internet service provider)

    - Note: *If you changed to a different port other than 80, you will need to include this at the end of the IP address*

- If you have a Dynamic IP address and have opened the ports, go to the next chapter to setup DDNS.

7.3 LINKSYS & D-LINK PORT FORWARDING

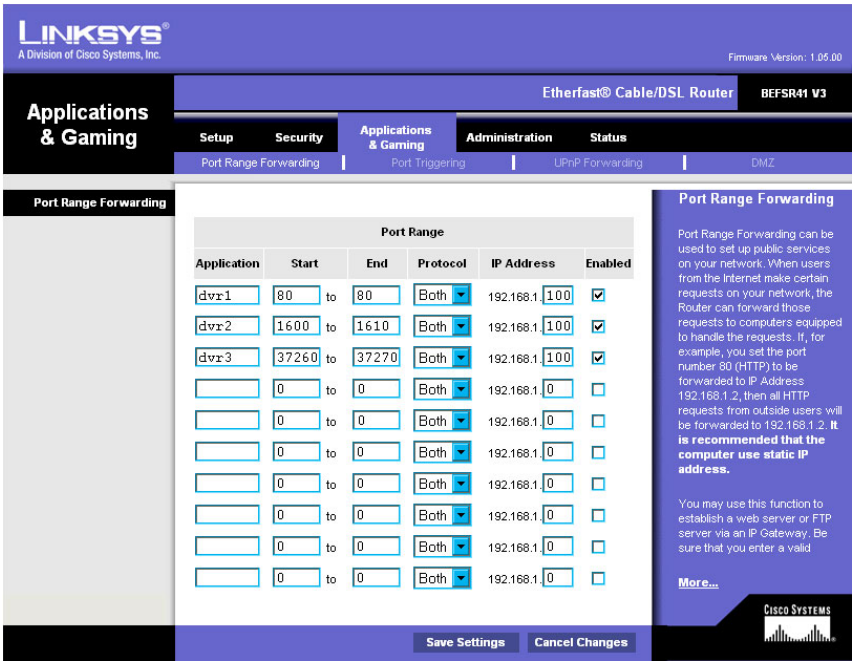
7.3.1 Linksys Port Forwarding

This section will cover a few simple configurations for the Linksys router. This chapter is only to offer some help to the installer and end user. Please understand we DO NOT support this product and will not give tech support on it. If you need additional technical support on this router you must call Linksys.

To access the Web-based Utility, launch a web browser and type the Router's default IP address, 192.168.1.1, in the address bar. Then press Enter. A password request page will appear. (Non-Windows XP users will see a similar screen.) Leave the *User Name* field blank. The first time you access the router, use the default password admin. Click the OK button to continue.

The first screen that appears displays the Setup tab. This allows you to change the Router's general settings. Change these settings as described here and click the Save Settings button to apply your changes or Cancel Changes to cancel your changes.

Click on the "Applications & Gaming" tab.



Applications and Gaming allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Some Internet applications may not require any forwarding) To forward a port, enter the information on each line for the criteria required. Descriptions of each criterion are described here.

Application - In this field, enter the name you wish to give the application.

Start/End - Enter the starting number of the range under Start and the ending number under End.

Protocol - Enter the protocol used for this application, either TCP or UDP, or Both.

IP Address - For each application, enter the IP Address of the PC running the specific application.

Enable - Click the Enable checkbox to enable port forwarding for the relevant application.

When finished making changes, click the Save Settings button to apply your changes or Cancel Changes to cancel them.

Here is an example for how the port information might look:

HTTP	80 to 80	Both	192.168.1.50	Enable
CTRL	1600 to 1600	Both	192.168.1.50	Enable

- Note: *If you changed port 80 in the DVR's Network Menu, open that port instead of 80.*

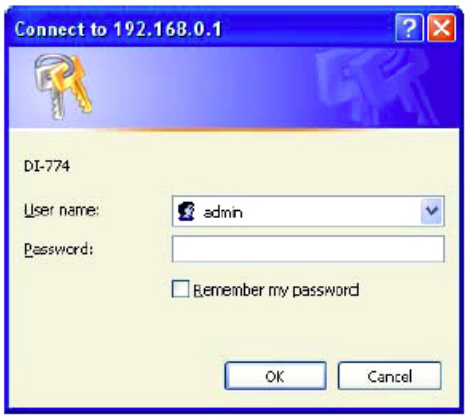
7.3.2 D-Link Port Forwarding

This section will cover a few simple configurations for the D-Link router. This chapter is only to offer some help to the installer and end user. Please understand we DO NOT support this product and will not give tech support on it. If you need additional technical support on this router you must call D-Link.

Whenever you want to configure your network or the DI-624, you can access the Configuration Menu by opening a web-browser and typing in the IP Address of the DI-264.

The DI-264 default IP Address is 192.168.0.1.

- Type "admin" in the User Name field
- Leave the Password blank
- Click OK



The first screen that shows up is the Home Tab. This is the starting point for all the router's settings and functions.

Click Virtual Servers on the left to bring up the following screen.

Virtual Servers allows users who are connecting remotely to access services on the router's Local Network. The functions of each field are described below.

Virtual Server - Select Enabled or Disabled

Name - Enter the name referencing the virtual service

Private IP - The IP address of the device running the local services.

Protocol Type - The protocol used for the virtual service.

Private Port – The port number that the service uses on the LAN (Local Area Network).

Public Port - The port number that the services uses on the WAN (Wide Area Network).

Schedule – The time period the virtual server will be active.
When you have input all the information for a virtual server, click on Apply to add it to the list at the bottom or Cancel to clear all fields.

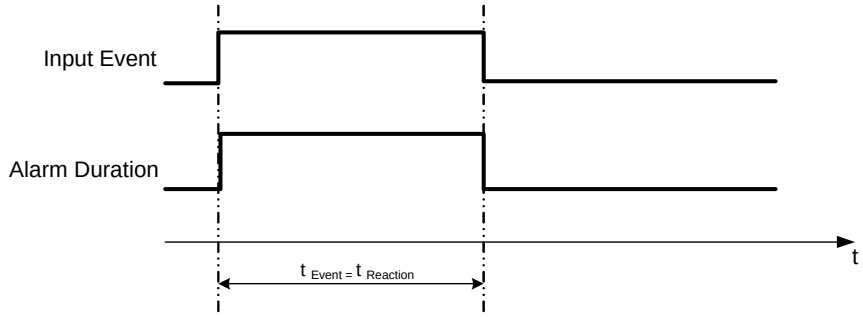
Here is an example of the information for each service:

Name	Private IP	Protocol	Private Port	Public Port	Schedule
HTTP	192.168.1.50	Both	80	80	Enable
CTRL	192.168.1.50	Both	1600	1600	Enable

- Note: *If you changed port 80 in the DVR's Network Menu, open that port instead of 80.*

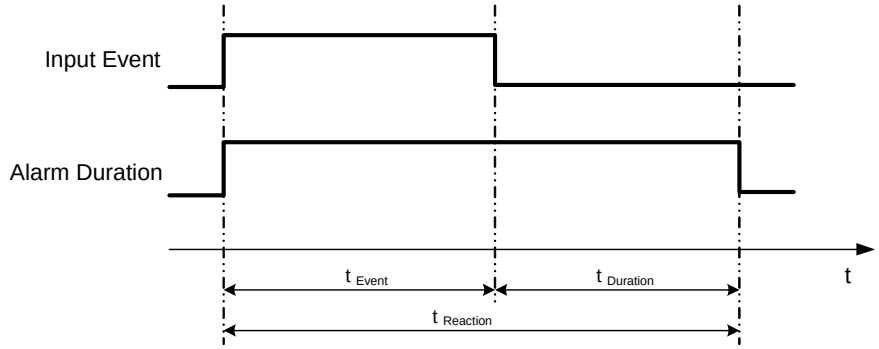
8 APPENDIX D: TIMING OF ALARM MODES

Transparent Mode



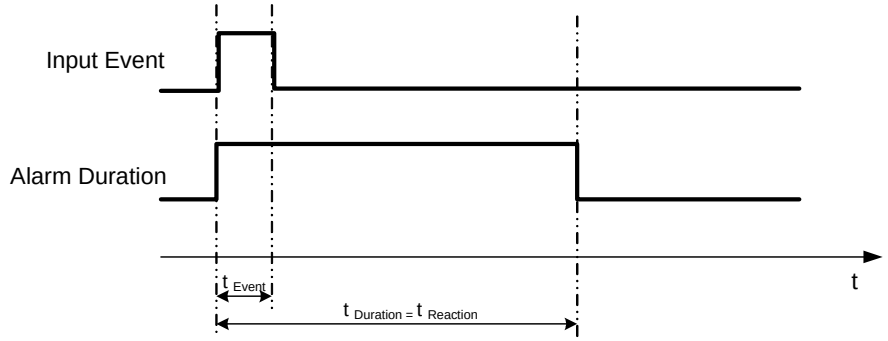
t_{Event}: Duration of alarm input source (motion, contact, system events...)
$t_{reaction}$: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout + Transparent Mode



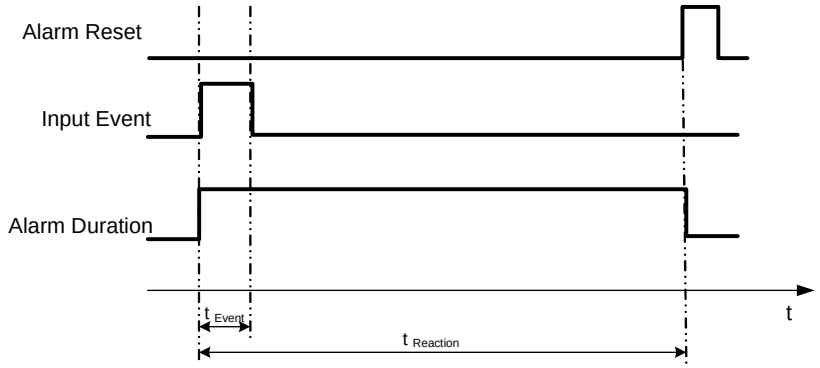
t_{Event}: Duration of alarm input source (motion, contact, system events...)
$t_{Duration}$: Alarm duration for timeout, defined in the event setup menus
$t_{reaction}$: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout Mode



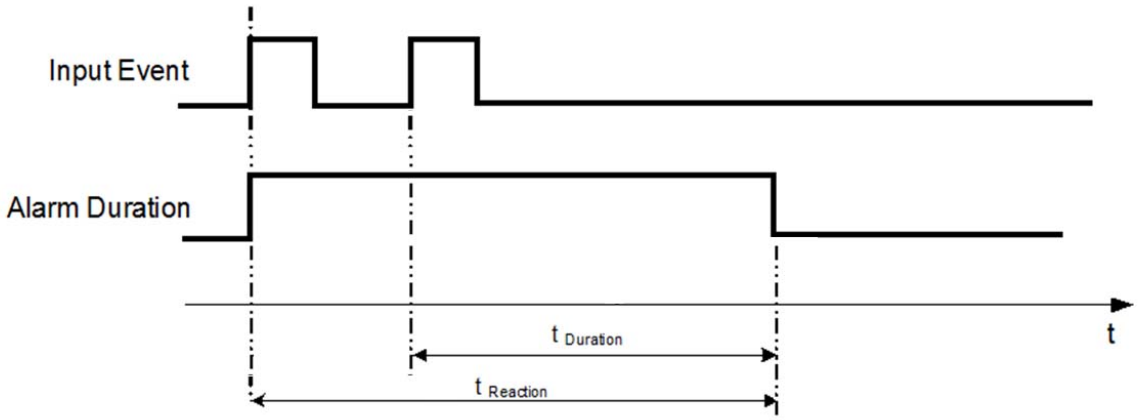
t_{Event}: Duration of alarm input source (motion, contact, system events...)
$t_{Duration}$: Alarm duration for timeout, defined in the event setup menus
$t_{reaction}$: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Permanent Mode



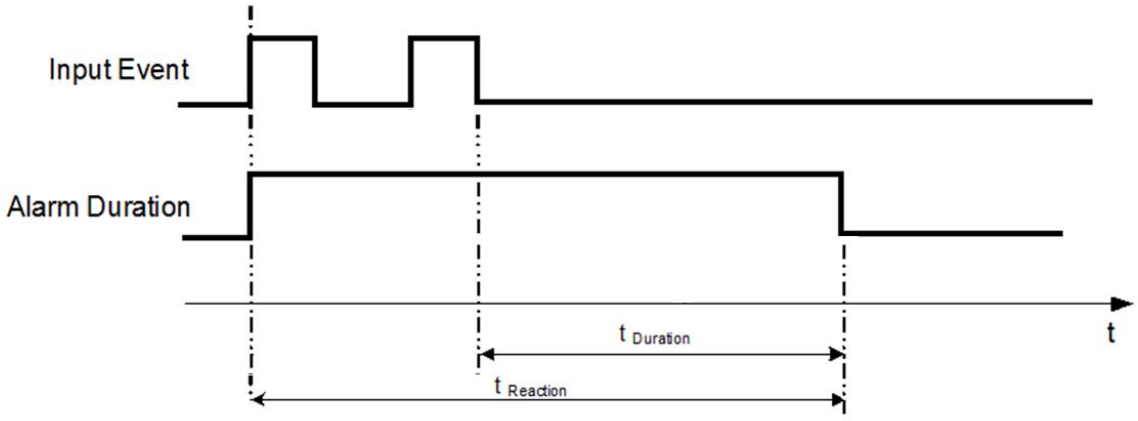
t_{Event}: Duration of alarm input source (motion, contact, system events...)
$t_{Duration}$: Alarm duration for timeout, defined in the event setup menus
$t_{reaction}$: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout Mode: Retrigger of Alarms



t_{Event}: Duration of alarm input source (motion, contact, system events...)
$t_{Duration}$: Alarm duration for timeout, defined in the event setup menus
$t_{reaction}$: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout+Transparent Mode: Retrigger of Alarms



t_{Event}: Duration of alarm input source (motion, contact, system events...)

$t_{Duration}$: Alarm duration for timeout, defined in the event setup menus
$t_{reaction}$: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

9 APPENDIX E: CHANGING RULE FOR EXPRESS SETUP

Case 1:
Record Mode: Normal + Event
Record With: Recording days

ERS-4 will Auto adjust Quality and Event frame rate to match the Recording days which user selected:
According to resolution, event hours and assumption above, ERS-4 will select one set of suitable quality and event frame rate from Changing Order 1 to 8. If ERS-4 can't match require record days from 8 sets of Change Order, it will just use the set of Changing Order 8.

Changing Order	1	2	3	4	5	6	7	8
Normal Frame Rate	1	1	1	1	1	1	1	1
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate	30	30	30	15	10	7.5	5	1

Case 2:
Record Mode: Event Only
Record With: Recording days

DVR will Auto adjust Quality and Event frame rate to match the Recording days which user need:
According to resolution, event hours and assumption above, DVR will select one set of suitable quality and event frame rate from Changing Order 1 to 8. If DVR can't match require record days from 8 sets, it will just use the set of Changing Order 8.

Changing Order	1	2	3	4	5	6	7	8
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate	30	30	30	15	10	7.5	5	1

Case 3:
Record Mode: Normal + Event or Event Only
Record With: Preset Setting

ERS-4 will apply setting in below table to all cameras according to different Preset Setting.

Preset Setting Option	Camera Item	Apply value
Best Quality	Quality	Superior
	Normal Frame Rate	Max recording frame rate of DVR
	Event Frame Rate	30
Standard Quality	Quality	Standard
	Normal Frame Rate	Half of max recording frame rate of ERS-4
	Event Frame Rate	30
Extended Quality	Quality	Basic
	Normal Frame Rate	1
	Event Frame Rate	10

10 APPENDIX E: LOCAL SETUP AT ERS-4

Alternativ to the setup in Web Browser the ERS-4 provides a local setup by USB-Mouse and connected monitor.

The menu structure is in general similar to the setup via network. The following chapters describe the setup menus.

10.1 OPEN CONFIGURATION MENU

1. To bring up the Main Menu, press the "Menu" key on the front panel or right-click with the USB mouse to bring up the OSD menu bar.
2. Press "Enter" or left-click on the "Configuration" icon "  " to enter configuration menu.

10.2 EXPRESS

Figure 10-1 Express Menu is a screen shot of the EXPRESS SETTING MENU. This menu is used to configure express setting for all cameras. For example, if user selects Event Only in Record Mode and presses "Apply" button, all 4 cameras will be set to Event only. If user selects Blank in Recording Mode and presses "Apply" button, 4 cameras will keep their own current record modes without changing.

Figure 10-1 Express Menu

Date: Set the current date of ERS-4.

Time: Set the current time of ERS-4.

Record Mode:

Normal+Event: Normal recording plus event recording.

Event Only: Event recording only.

Schedule Rec: Schedule recording.

Enter the number of hours per day for the estimate event.

Resolution: Select recording resolution based on video format.

NTSC: 720x480 / 720x240 / 360x240

PAL: 720x576 / 720x288 / 360x288

Record With:

Blank: No change for Record with

Preset Settings: Select preset setting or recording quality. Available options are Best Quality, Standard and Extended Record in the next column. For more detail, please refer to Appendix E: changing rule for express setup

Recording Days: Set the maximum recording days. Available selection will be shown in the next column, including 1, 3, 5, 7, 14, 20, 30, 40, 50 and 60 day. ERS-4 will auto adjust relative settings for 4 cameras to fit the selected max recording day. For more detail, please refer to Appendix E: changing rule for express setup

Network Type:

Fixed IP: User can set a fixed IP for network connection.

DHCP: DHCP server in LAN will automatically assign IP for network connection.

PPPoE: This is a DSL connection application ONLY. Check with your ISP if they use PPPoE.

IP Address: This field shows the current IP Address for the ERS-4. A Fixed IP address must be set manually. If DHCP or PPPoE is selected, this value will be assigned automatically.

Subnet Mask: This field shows the subnet mask for your network so the ERS-4 will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

Gateway: This field shows the gateway for your network so the ERS-4 will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS server 1: This field shows the primary DNS server for your network. When DHCP is selected and an internet connection is available, this value will be assigned automatically. This field must be assigned correctly if you plan to use the DDNS feature (see DDNS for more detail).

DNS server 2: This field shows the secondary DNS server for your network.

> *Note: The default addresses in the machine are for internal testing only. You must apply your own addresses to comply with your network. Refer to Chapter 8 for more details.*

Apply: Press "Apply" button to save and apply Express settings to ERS-4. The system will automatically adjust recording frame rate according to settings. The following message will pop up, press "Yes" to change Resolution, Recording frame rate and Quality depending on your express setting.

10.3 Camera Setting

Figure 10-2 is a screen shot of the CAMERA SETTING MENU. This menu is used to configure individual camera settings.

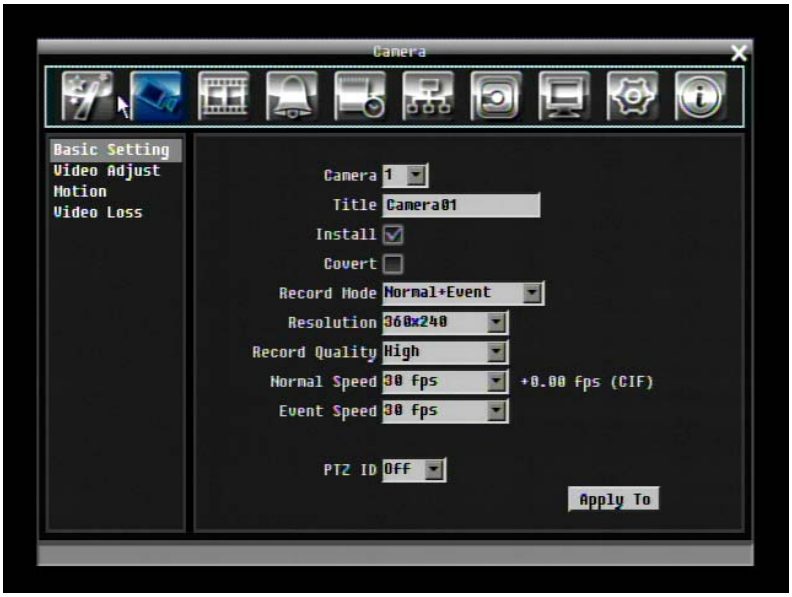


Figure 10-2 Camera Menu-Basic Setting

10.3.1 Basic Setting

Camera: Select the camera number.

Title: The title setting allows you to assign a title to selected camera. Each title supports up to 16 characters. The on-screen keyboard will appear when you click the title option.

Install: Check the box to enable the current camera. To take full advantage of the ERS-4's recording abilities, any unused cameras should have this option disabled.

Covert: Check the box to hide the camera picture in live and sequence modes. However, the image will still be recorded and can be played back by any user who has playback rights.

Record Mode: 2 record modes are available.

Normal + Event: This recording mode includes continuous and event recording.

Event Only: Video will be recorded only when events occur.

Resolution: Select recording resolution based on video format.

NTSC: 720x480 / 720x240 / 360x240

PAL: 720x576 / 720x288 / 360x288

Record Quality: Select an image quality for recording. There are five different qualities available: Superior, High, Standard, Basic and Low. A higher image quality uses more HDD space.

Normal Speed: Frame rate in images per second (IPS) for continuous recording. The speed is limited to the maximum recording rate of the ERS-4 (displayed in the bottom left corner) divided by the number of installed cameras. If the resolution option is changed, the unit of this field will also be changed.

Recording capacity for all 4/8cameras *(shown next to the Normal Speed field)*: The number here indicates the remaining recording capacity available for all 4/8 cameras. When this number is positive, it means there is still recording capacity. If this number is negative, it means the recording capacity has been exceeded, and the user must lower Normal Speed or Resolution. This number must be positive before saving the changes. Otherwise, a pop-up window will display "Total FPS exceed maximum recording rate, discard changes!" and the settings for all cameras will return to previous values.

Event Speed: Frame rate in images per second (IPS) for event recording.

PTZ ID: When using a PTZ Camera, this ID must match the ID used by the connected camera in order to control the camera using the ERS-4. Click "On" to confirm selection, "Off" to cancel selection.

Apply To: This button can be used to copy the recording settings to other cameras. Select which camera you wish to copy to. "Select All" selects all cameras, "Unselect All" deselects all cameras. Click "OK" to copy the settings or "Cancel" to exit without copying.

10.3.2 Video Adjust

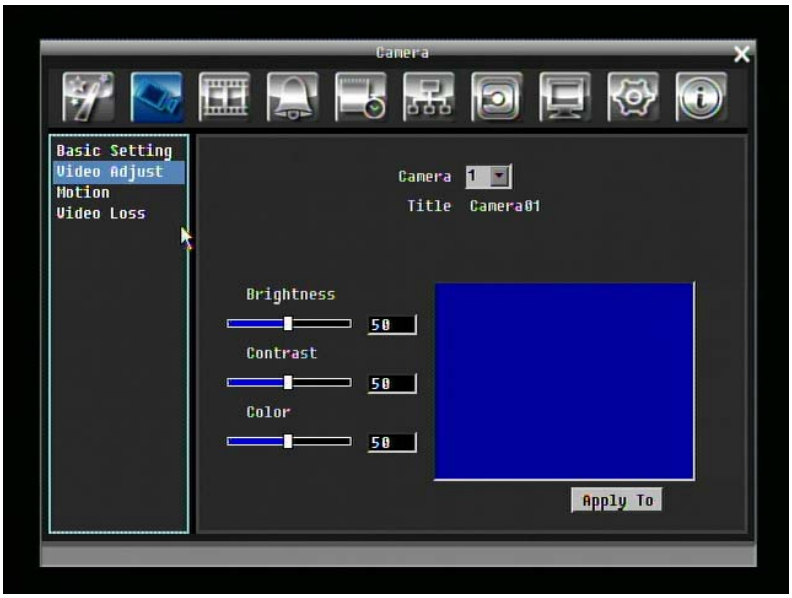


Figure 10-3 Camera Menu – Video Adjust

Camera: Select the camera you wish to adjust. “Title” will change to the name of the selected camera.

Brightness: Adjusts how bright/dark the picture appears. If details appear to be lost in the shadows or darker regions, try increasing the Brightness. If the image appears too saturated or if the colors appear overwhelmed by glare, try decreasing the Brightness.

Contrast: Adjusts the total amount of light output from the display. If details are lost or lines appear distorted, try decreasing the contrast.

Color: Adjusts the amount of color information in the picture.

Apply To: This button can be used to copy the video settings to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

10.3.3 Motion

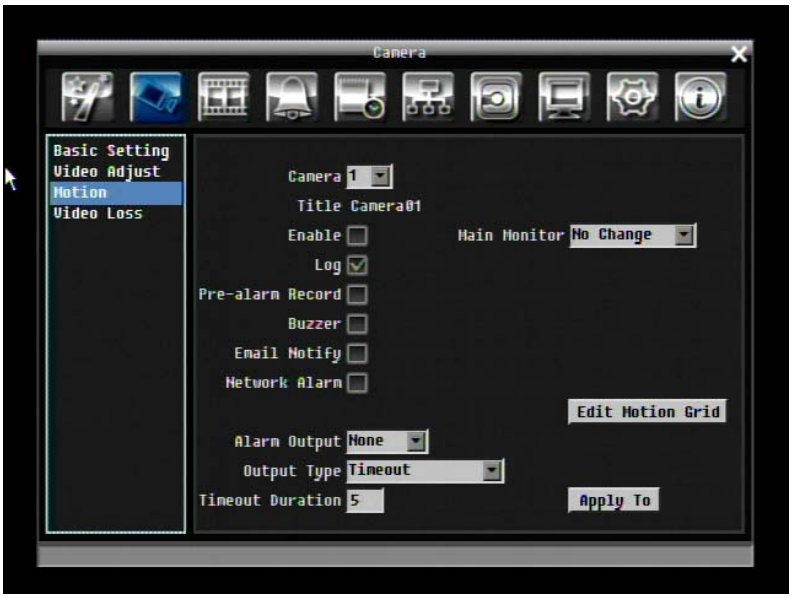


Figure 10-4 Camera Menu – Motion

Camera: Select the camera you wish to adjust. "Title" will change to the title name of the selected camera.

Enable: Check box to enable motion detection. Other motion options will not be available unless this feature is selected.

Log: Check box to record motion events in the log.

Main Monitor: Monitor display options when a motion event occurs.

No change: No change on the main monitor display.

Full screen: A full screen of the active camera will display on the main monitor.

Pre-alarm Record: Check box to record several moments before the motion event. (Pre-alarm recording rate will follow "Normal" frame rate setting)

Buzzer: Check box to enable buzzer when a motion event is triggered.

Email Notify: Check box to send email notification when a motion event is detected.

Network Alarm: Check box to send out a network alarm to client PC when motion occurs. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either "NONE" (not active) or "1".

Output Type: Output action when motion is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will remain on until user presses "Enter" key on front panel.

Timeout Duration: Time duration selectable from 1 to 150 seconds.

Edit Motion Grid: Press this button to edit the motion grid (See Figure 10-5 Camera Menu – Motion Grid Setting).

Sensitivity: Set the threshold value for sensitivity. Select from 1 (lowest) to 10 (highest).

Min Area: To avoid false detections by small objects this value defines, how many grids have to be detected for generating a motion event. Select a value between 1 (default) to 5 grids.

Preview: Turn off display for motion grid

Set All: Press this button to select the entire area.

Clear All: Press this button to clear all the grids selected.

Save & Back: Press this button to save the motion grid setting and return to motion setting menu.

Cancel: Press this button to cancel all changes and return to motion setting menu.

How to select motion grid by mouse:

1. Select upper-left grid 2. Select lower-right grid. 3. The area between upper-left and lower-right grid will be selected.

Figure 10-5 Camera Menu – Motion Grid Setting

Apply To: This button can be used to copy the motion settings to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

10.3.4 Video Loss

Figure 10-6 Camera Menu – Video Loss

Camera: Select the camera you wish to adjust, “Title” will change to the title name of the selected camera.

Enable: Check box to enable Video Loss.

Log: Check box to record video loss events in the log.

Pre-alarm Record: Check box to record several moments before the video loss. (Pre-alarm recording rate will follow “Normal” frame rate setting)

Buzzer: Check box to enable buzzer when a video loss event occurs.

Email Notify: Check box to enable email notification when a video loss event occurs.

Network Alarm: Check box to send out a network alarm to client PC when video loss occurs. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either “NONE” (not active) or “1”.

Output Type: Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will remain active until user presses “Enter” key on front panel.

Transparent: Alarm output continues as long as there is a video loss.

Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Apply To: This button can be used to copy the video loss settings to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

10.4 Record Setting

Figure 10-7 is a screen shot of the RECORD & PLAY SETTING MENU. This menu is used to configure basic recording and playback settings.

Figure 10-7 Record & Play Menu

Record Audio: Check the box to record audio.

Record Overwrite: Check the box and disk will begin overwriting when full.

Schedule Record: Use schedule recording mode.

For Schedule recording, the only way to stop schedule recording is to turn schedule recording off. Pressing any keypad on front panel to change schedule recording will not work during scheduling record mode. When schedule recording is disabled, ERS-4 will auto turn on recording.

Time Stamp: Select if the time and date will display while recording. Choose from Top, Bottom, or Off.

Record Status Relay Output: Select from "NONE" and "1".

Auto Erase Video: The hard drive will automatically erase after the selected number of days. To use the maximum hard drive space, choose "OFF".

10.5 Alarm & Event Setting

Figure 10-8 is a screen shot of the ALARM & EVENT SETTING MENU. This menu will walk you through alarm and event setup.

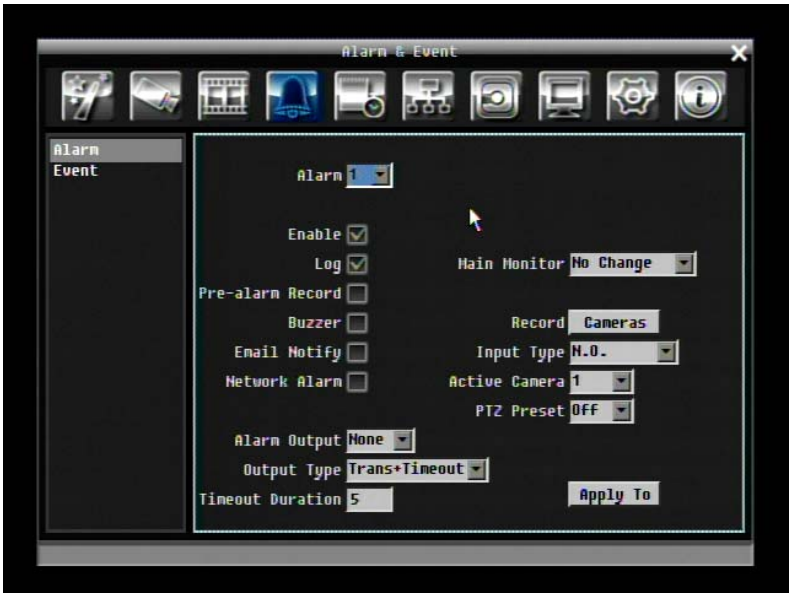


Figure 10-8 Alarm & Event Menu - Alarm

10.5.1 Alarm

Alarm: Select the alarm number from 1 to 4.

Enable: Check box to enable alarm.

Log: Check box to record alarm events in the log.

Pre-alarm Record: Check box to record several moments before the alarm event. (Pre-alarm recording rate will follow "Normal" frame rate setting)

Buzzer: Check box to enable buzzer when an alarm occurs.

Main Monitor: Monitor display options when a motion occurs.

No change: No change on the main monitor display.

Full screen: A full screen of the active camera will display on main monitor.

Record: Select which cameras will start recording when alarm happens.

Email Notify: Check box to enable email notification when an alarm occurs.

Input Type: This field is to change the type of alarm trigger.

N.O.: Normal Open contact.

N.C.: Normal Close contact.

Network Alarm: Check box to send out a network alarm to client PC when motion occurs. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Active Camera: This field is for assigning the alarm to a specific camera. For example if you had an external motion detector on camera one you would set this option to “1”.

PTZ Preset: Select PTZ Preset from “1” to “255”. If the Active Camera is a PTZ speed dome, the alarm will move the camera to the specified preset position for event recording. Click “On” to confirm selection, “Off” to cancel selection.

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either “NONE” (not active) or “1”.

Output Type: Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will remain active until user presses “Enter” key.

Transparent: Alarm output keeps working according to the signal of alarm input.

Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Timeout Duration: Time duration selectable from 1 to 150 seconds.

Apply To: This button can be used to copy the alarm settings to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

10.5.2 Event

This section covers internal system event warnings.

Figure 10-9 Alarm & Event Menu – Event

Event: Select from the following event types.

HD Temperature: Hard drive is over the safety warning temperature

HD Failure: If ERS-4 fails to detect a HDD on start up, the system will create a HD failure event.

HD Full: If the ERS-4 is not set to Overwrite in the Record Menu, an event will be created when all HDDs are filled.

HD Off: If HDDs are switched off or are removed, the ERS-4 will create a HD OFF event.

Power Loss: The ERS-4 keeps a record of any time the system is powered off.
NOTES: When using a contact output for this feature, make sure the control output is 5V effective.

Network Loss: If connection to network is lost, ERS-4 will create a Network Loss event.
NOTE: This function only checks physical connection to the network. Any network behaviour that blocks connection (blocked ports, wrong IP setup, etc.) is not detected by this function.

HD Temperature:

Figure 10-12 Alarm & Event Menu – Event - HD Temperature

Log: Check box to record events in the log.

Buzzer: Check box to enable buzzer when hard drive's temperature is over the "Temp. Warning Limit".

Email Notify: Check box to enable email notification when temperature is over the "Temp. Warning Limit".

Network Alarm: Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Stop Recording: Check box to stop recording when HD's temperature is over the "Temp. Warning Limit".

Temp. Warning Limit: Sets the trigger temperature for all other active settings in HD Temperature. Choose from 55°C /131°F~85°C /185°F.

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either "NONE" (not active) or, "1"".

Output Type: Output action is locked to Transparent.

HD Failure:

Figure 10-13 Alarm & Event Menu – Event - HD Failure

Log: Check box to record events in the log.

Buzzer: Check box to enable buzzer when no hard drive is detected.

Email Notify: Check box to enable email notification function when HD fails.

Network Alarm: Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu).

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either "NONE" (not active) or "1".

Output Type: Output action is locked to Transparent.

HD Full:

Figure 10-14 Alarm & Event Menu – Event - HD Full

Log: Check box to record events in the log.

Buzzer: Check box to enable buzzer when hard drive is full.

Email Notify: Check box to enable email notification when HD is full.

Network Alarm: Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either "NONE" (not active) or "1".

Output Type: Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will be continuously active until user presses "Enter" key.

Transparent: Alarm output remains active until event ends.

Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Timeout Duration: The amount of time the buzzer sounds when the HD is full. Duration selectable from 1 to 150 seconds.

HD Off:

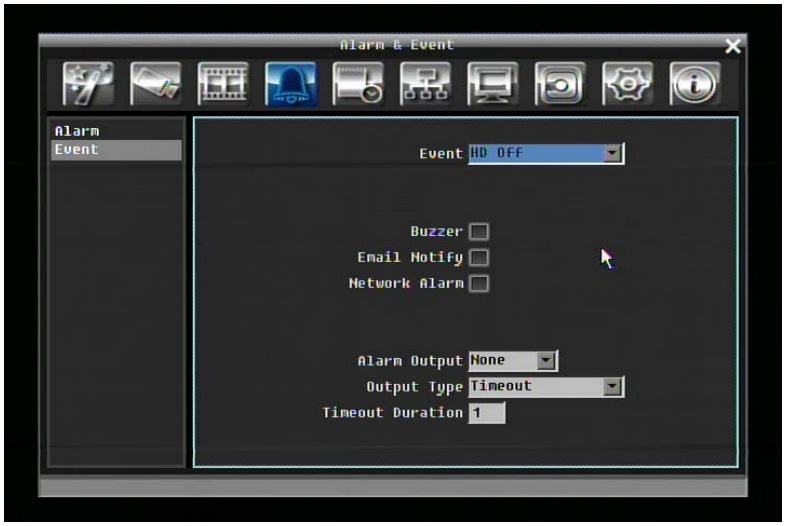


Figure 10-15 Alarm & Event Menu – Event - HD Off

Buzzer: Check box to enable buzzer when hard drive is off.

Email Notify: Check box to enable email notification when HD is off.

Network Alarm: Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either "NONE" (not active) or "1".

Output Type: Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will be continuously active until user presses "Enter" key.

Transparent: Alarm output remains active until event ends.

Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Timeout Duration: The amount of time the buzzer sounds when the HD is off. Duration selectable from 1 to 150 seconds.

Power Loss:

Figure 10-16 Alarm & Event Menu – Event – Power Loss

Log: Log is permanently checked for this feature. Power Loss events are always recorded by the ERS-4.

Email Notify: Check box to enable email notification when HD is off.

Network Alarm: Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Network Loss:

Figure 10-17 Alarm & Event Menu – Event – Network Loss

Log: Check box to record events in the log.

Buzzer: Check box to enable buzzer when network is lost.

Alarm Output: This will transmit a signal through one of the alarm outputs. It can be set to either "NONE" (not active) or "1".

Output Type: Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will be continuously active until user presses "Enter" key.

Transparent: Alarm output remains active until event ends.

Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Timeout Duration: The amount of time the buzzer sounds when ERS-4 stops recording. Duration selectable from 1 to 150 seconds.

10.6 Schedule Setting

Figure 10-18 is a screen shot of the SCHEDULE SETTING MENU. In this menu you can set a unique timer to start recording during a specified time period. This menu is used to configure Express Setup, Holidays and Schedule settings.

Figure 10-18 Schedule Menu-Express Setup

10.6.1 Express Setup

Weekend Start: Select day and time when weekend starts.

Weekend End: Select day and time when weekend ends.

Daytime Start: Select daytime starting time. (Nighttime schedule ends when Daytime begins)

Daytime End: Select daytime ending time. (Nighttime schedule begins when Daytime ends)

Record Type: Select the type of recording for each time period.

Disabled: No recording during scheduled time period

Normal+Event: Continuous and Event recording

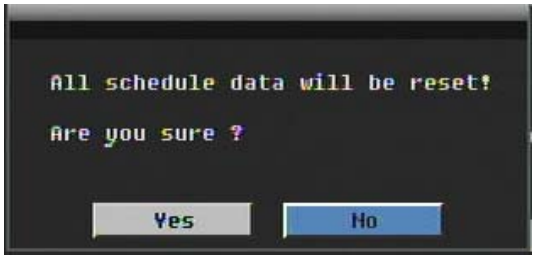
Event Only: Event recording only

Normal Frame Rate: Continuous FPS recording rate for the scheduled time period. The maximum rate is limited to the ERS-4's maximum recording rate divided by the number of active cameras. Selectable frame rate includes 30fps, 15fps, 10fps, 7.5fps, 5fps, 1fps or 0fps.

Event Frame Rate: FPS recording rate for events. Selectable frame rate includes 30fps, 15fps, 10fps, 7.5fps, 5fps, 1fps or 0fps.

Event Action: Check this box to enable Buzzer, Alarm out, E-mail and Network actions when an event occurs on the selected time period.

Apply: Press “Apply” button bring up a confirmation window. Select “Yes” to confirm and apply express schedule settings or “No” to cancel changes.



10.6.2 Holidays

In addition to setting a weekly record schedule, user can also schedule recording for specific days of the year.

Figure 10-19 Schedule Menu-Holidays

Date Type: Select either Holiday or Others. (Holiday and Others means two different groups, you can assign special days in these two groups)

Recurrent Type: Choose how often each scheduled day should be recorded.

Disable: Recording is disabled.

One time: Records date only once.

Month/date: Repeats recording on the same specific date.

Month/weekday: Repeats recording on a specific day of the month/week.

Details: Specifies the date to be recorded.

Prev: Previous Page (30 Holidays Total)

Next: Next Page (30 Holidays Total)

10.6.3 Schedule

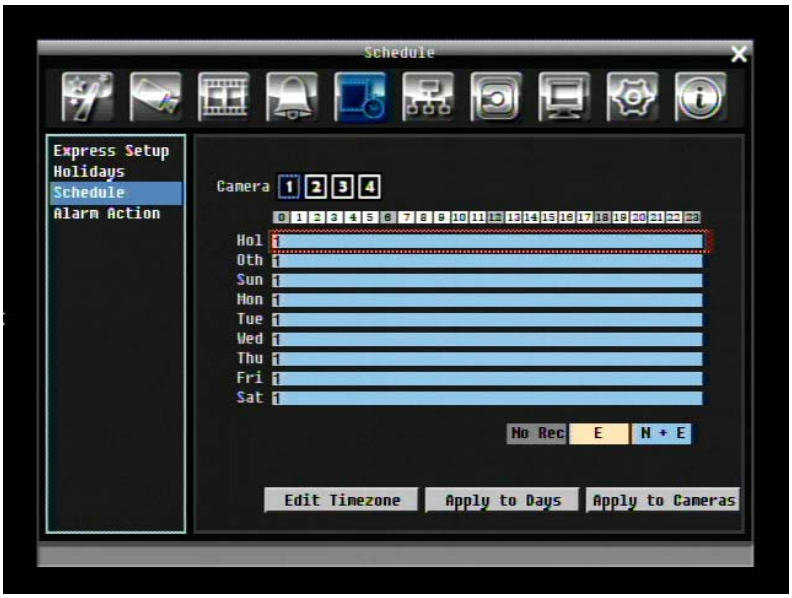


Figure 10-20 Schedule Menu-Schedule

Camera: Select a number to change the schedule for that camera. Each camera can be set on a 24 hour time block for Holiday (Hol), Other (Oth), Sunday (Sun), Monday (Mon), Tuesday (Tue), Wednesday (Wed), Thursday (Thu), Friday (Fri), or Saturday (Sat).

Time Bar: The time bar uses three different colors to distinguish each recoding mode.

Gray (No Rec): No recording during this time block.

Orange (E): Only events are recorded during this time block.

Blue (N+E): (Default) Normal and event recording during this time block.

To Set Schedule using Mouse

1. Click on desired start time block (no numbers on it) on a time bar. At this time, the selected block will be highlighted in blue frame and the selected time bar will be highlighted by red frame.

   There are 24 blocks on the time bar representing 24 hours respectively. Set a schedule start time by clicking on a desired start time block on a time bar and clicking again to confirm it. At this time, the selected block and all following blocks will turn gray, which means this gray time zone has been set to the recording mode of gray (No Rec).

2. Click again to confirm, then a new number (for the new section) will show on this block and current and all following blocks will turn to gray. This means this new gray time zone has a new record mode (No record).

Change the section to different mode (with different color) by clicking on the first block of each section. The color switches from gray -> orange -> blue, every time user click the first block of a section.

3. Repeat clicking on the first block (with number on it) of any time zone, this time zone will change from one color to another, which means switching the record mode. The color switch sequence is gray->orange->blue.

Schedule Setting from front panel

1. Enter schedule setting mode: press “Enter” button to enter schedule setting mode. At this time, the whole editing area at right-down side will be highlighted within a blue frame. See below image.

2. Enter camera selection mode: Use Up/Down arrow key to switch to Camera selection mode. When Camera selection mode is selected, all 4 cameras will be highlighted in a blue frame. See below image.

3. Selecting camera: Use Right/Left arrow key to select desired camera to configure. Selected camera number will be highlighted by a blue frame. See above image.
4. Enter time bar editing mode: Use Up/Down arrow key to switch to time bar editing mode. When this mode is selected, all 9 time bars will be highlighted within a blue frame.
5. Select desired time bar for setting: press Enter button, the first time bar will be selected for setting and highlighted in a red frame. See below image. Use Up/Down arrow key to desired time bar for setting.

6. Editing blocks in a time bar: when a time bar is selected (highlighted in red frame), press Enter button, then the first block of this bar will be selected (highlighted in blue frame). Use Right/Left arrow key to switch to desired block as starting time, and press Enter button again to confirm. At this time, the current and all following blocks will turn into gray, which means this gray time zone has been set to the recording mode of gray(No Rec). User can also change the time zone to a different record mode (with different color) by following instruction in next step.

7. Changing recording mode (color) of a time zone: Use Right/Left arrow key to switch to the first block (with number on it) of a time zone. Clicking Enter button, and this time zone will switch to another color, which means switching to another record mode. The color switch sequence is gray->orange->blue.

Press "Edit Time zone" button to edit the time zone.

Figure 10-21 Schedule Menu-Schedule-Edit Time zone

Editing Time zone:

From: Displays schedule start time

To: Displays schedule end time

Record: Displays Record mode

Resolution: Select recording resolution.

NTSC: 720x480; 720x240; 360x240

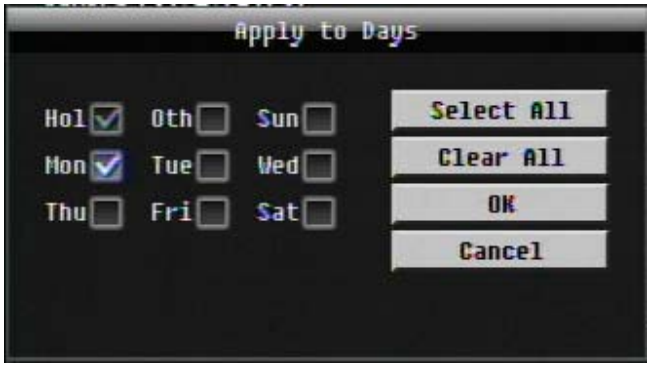
PAL: 720x576 / 720x288 / 360x288

Normal: Frame rate in images per second for continuous recording. The speed is limited to the maximum recording rate of the ERS-4 divided by the number of installed cameras.

Event: Frame rate in images per second for event recording. Event record speed can be set from 1 to 30 (25 for PAL).

Action: Check this box to enable Buzzer, Alarm out, E-mail, and Network when an event occurs.

Apply to Days: This button can be used to copy schedules to other days. Select which days you wish to copy to. "Select All" selects all days, “Clear All” deselects all days. Click “OK” to copy the settings or "Cancel" to exit without copying.



Apply to Cameras: This button can be used to copy schedules to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Clear All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

10.6.4 Alarm Action

Alarm: Select a number to change the schedule for that alarm. Each alarm can be set on a 24 hour time block for Holiday (Hol), Other (Oth), Sunday (Sun), Monday (Mon), Tuesday (Tue), Wednesday (Wed), Thursday (Thu), Friday (Fri), or Saturday (Sat).

Time Bar: The time bar uses two different colors to distinguish each recoding mode.

Off: No recording during this time block.

On: Alarm action will be recorded during this time block.

To Set Schedule using Mouse

1. Click on desired start time block (no numbers on it) on a time bar. At this time, the selected block will be highlighted in blue frame and the selected time bar will be highlighted by red frame.

   There are 24 blocks on the time bar representing 24 hours respectively. Set a schedule start time by clicking on a desired start time block on a time bar and clicking again to confirm it. At this time, the selected block and all following blocks will turn gray, which means this gray time zone has been set to the recording mode of gray (alarm action recording off).

2. Click again to confirm, then a new number (for the new section) will show on this block and current and all following blocks will turn to gray. This means this new gray time zone has a new record mode (alarm action recording off).

   Change the section to different mode (with different color) by clicking on the first block of each section. The color switches from gray -> orange, every time user clicks the first block of a section.

3. Repeat clicking on the first block (with number on it) of any time zone, this time zone will change from one color to another, which means switching the record mode. The color switch sequence is gray->orange.

Alarm Action Setting from front panel

1. Enter Alarm Action setting mode: press “Enter” button to enter Alarm Action setting mode. At this time, the whole editing area at lower-right side will be highlighted within a gray frame. See below image.

2. Enter camera selection mode: Use Up/Down arrow key to switch to Alarm selection mode.

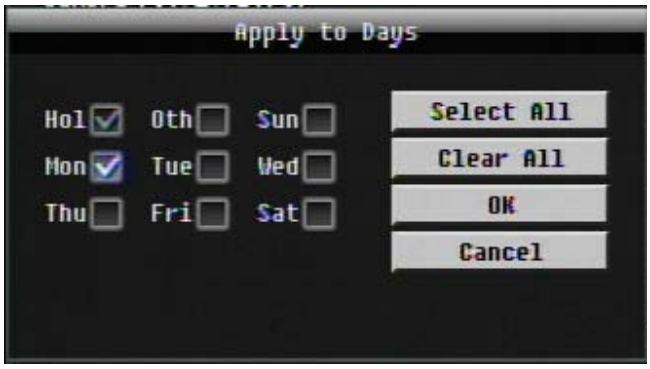
3. Selecting camera: Use Right/Left arrow key to select an alarm to configure. Selected alarm number will be highlighted by a blue frame. See above image.
4. Enter time bar editing mode: Use Up/Down arrow key to switch to time bar editing mode. When this mode is selected, all 9 time bars will be highlighted within a blue frame.
5. Select desired time bar for setting: press Enter button, the first time bar will be selected for setting and highlighted in a red frame. See below image. Use Up/Down arrow key to desired time bar for setting.

6. Editing blocks in a time bar: when a time bar is selected (highlighted in red frame), press Enter button, then the first block of this bar will be selected (highlighted in blue frame). Use Right/Left arrow key to switch to desired block as starting time, and press Enter button again to confirm. At this time, the current and all following blocks will turn into gray, which means this gray time zone has been set to the recording mode of gray (Alarm Action off). User can also change the time zone to a different record mode by following instruction in next step.

7. Changing recording mode (color) of a time zone: Use Right/Left arrow key to switch to the first block (with number on it) of a time zone. Clicking Enter button, and this time zone will switch to

another color, which means switching to another recording mode. The color switch sequence is gray->orange.

Apply to Days: This button can be used to copy schedules to other days. Select which days you wish to copy to. "Select All" selects all days, “Clear All” deselects all days. Click “OK” to copy the settings or "Cancel" to exit without copying.



Apply to Cameras: This button can be used to copy schedules to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Clear All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

10.7 Network

Figure 10-22 is a screen shot of the NETWORK SETTING MENU. This menu is for configuring the ERS-4 for a network connection.

NOTE: Since every Network Configuration is different, please check with your Network Administrator or ISP to see if your ERS-4 requires specific IP addresses and/or port numbers.

Figure 10-22 Network Menu – LAN

10.7.1 LAN

Network Type:

Static IP: User can set a fixed IP for network connection.

DHCP: DHCP server in LAN will automatically assign IP for network connection

PPPoE: For direct connection to DSL ONLY. Verify with your ISP if they use PPPoE.

IP: This field shows the ERS-4's current IP Address. A static IP address must be set manually. If DHCP or PPPoE is selected, this value will be assigned automatically.

Subnet Mask: This field shows the subnet mask for your network so the ERS-4 will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

Gateway: This field shows the gateway for your network so the ERS-4 will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS Server 1: This field shows the primary DNS server for your network. If DHCP is selected and an internet connection is available, this value will be assigned automatically. This field must have a valid DNS address in order to use the DDNS feature (see 5.7.3 DDNS for more detail).

DNS Server 2: This field shows the secondary DNS server for your network.

HTTP Port: Port number for HTTP/WEB communication.

10.7.2 EMAIL

Figure 10-23 Network Menu – Email

SMTP Server: Assign the SMTP (e-mail) server's name.

NOTE: For more reliable email service, use the server's IP address.

SMTP Port: Assign the port number used by the SMTP server.

Authentication: Check this box if the SMTP server requires authentication (user name / password).

SSL: Check the box if mail server needs to be encrypted by SSL.

User name: Input the login user name if the SMTP server requires authentication.

Password: Input the password if the SMTP server requires authentication.

Sender Email: Input the e-mail address of the sender (ERS-4).

Receiver Email 1: Input the first e-mail address that event messages are sent to.

Receiver Email 2: Input the second e-mail address that event messages are sent to.

Receiver Email 3: Input the third e-mail address that event messages are sent to.

Email Subject: Input email subject.

10.7.3 DDNS

DDNS Server: Select either "EverfocusDDNS" or "www.dyndns.org" as the DDNS provider. If DDNS will not be used, simply select "Disable".

EverfocusDDNS

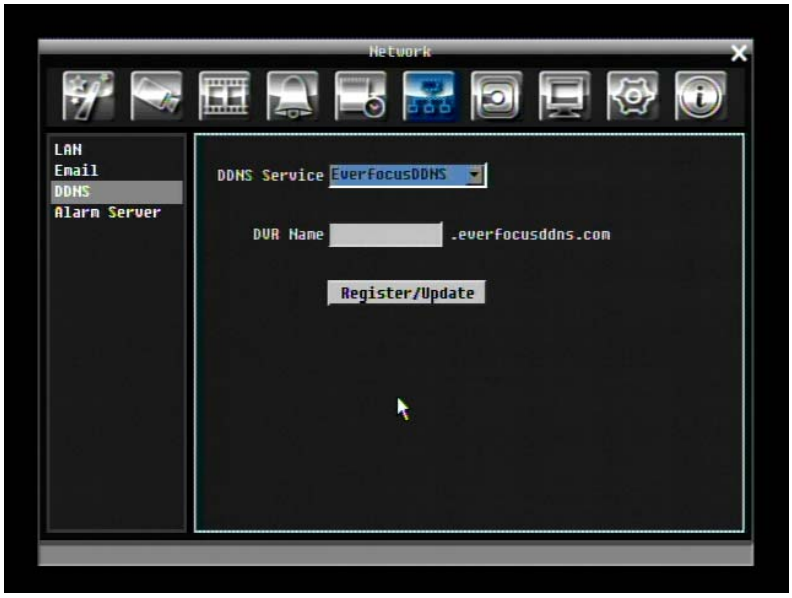


Figure 10-24 EverfocusDDNS

DVR Name: Input the desired name for the ERS-4

Register/Update: Click the button to submit and register the name to the Everfocus server.

www.dyndns.org

Figure 10-25 www.dyndns.org

Host name: Host name created through the dyndns account.

User name: User name of the dyndns account.

Password: Password of the dyndns account.

Confirm: Re-enter password.

10.7.4 Alarm Server

Figure 10-26 Network Menu – Alarm Server

Server IP1~3: IP address of client PC with installed PowerCon or other management software, which handles network alarm. The network alarm can be transmitted to up to 3 addresses.

Protocol: Select the protocol type for alarm transmission:
UDP: User Datagram Protocol
TCP: Transmission Control Protocol

Port: Select the transmission port for network alarm messages

Network ID: The network ID is an identifier for the alarm transmitter.

10.8 DISK SETTING

5-27 is a screen shot of the DISK SETTING MENU. This menu is used to review and manage the ERS-4's hard drive settings.

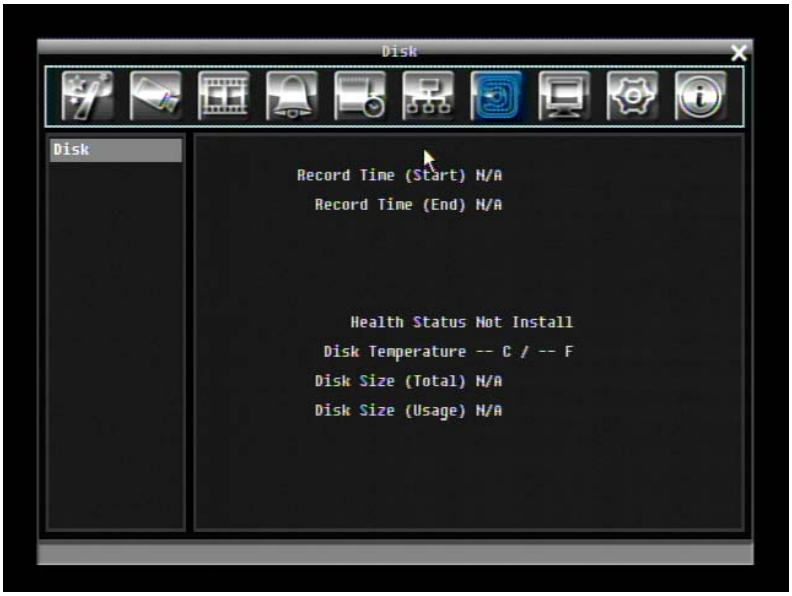


Figure 10-27 Disk Menu

Record Time (Start): Shows earliest recorded time on the hard drive.

Record Time (End): Shows latest or most current recorded time on the hard drive.

Health Status: Displays current status of the selected disk.

Disk Temperature: Displays current disk temperature.

Disk Size/Total: Shows total disk size.

Disk Size/Usage: Shows percentage of used disk space. If ERS-4 is set to automatically overwrite the disk, this option will show "Overwrite mode currently".

10.9 Display Setting

Figure 10-28 is a screen shot of the DISPLAY SETTING MENU. This menu will walk you through Monitor On-Screen Display (OSD) and Sequential setup.

Figure 10-28 Display Menu – Monitor OSD

10.9.1 Monitor OSD

These are the display options for the Main Monitor.

Main Monitor

Camera Title: Check the box to display camera titles.

Date/Time: Check the box to display current date/time.

Playback Date/Time: Check the box to display playback date/time.

Playback Status: Check the box to display playback status.

Event Status: Check the box to display event status.

HDD Status: Check the box to display hard drive status.

Text Insert: Check the box to display data transmitted from external RS232 device.

Main Monitor Output: This system supports both VGA and BNC monitor displays at the same time but only one of them can have optimized display quality. Use this feature to select which output is optimized.

10.9.2 Main M/T SEQ

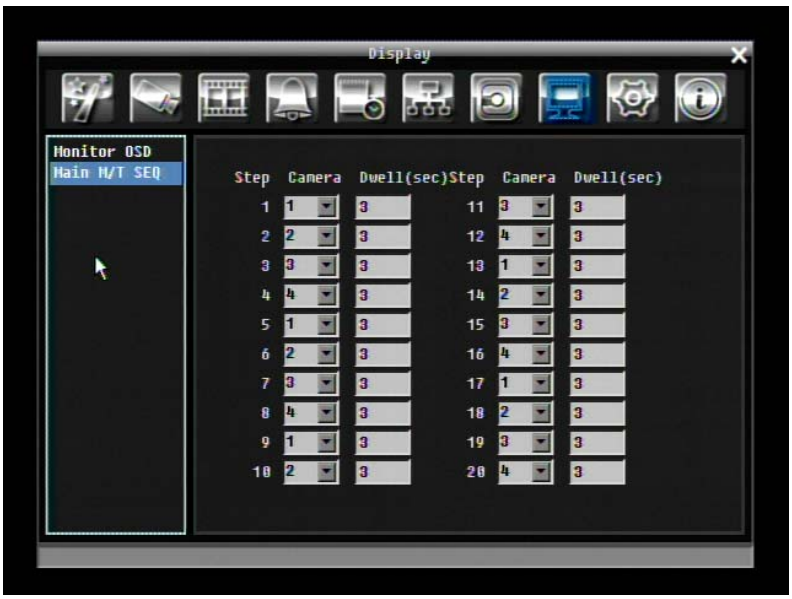


Figure 10-29 Display Menu – Main M/T SEQ

Step: Sequence order. Cannot be changed.

Camera: Select which camera appears on the current step.

Dwell (sec): Set the dwell time for each step. Sequence dwell time can be set from 0 to 99 seconds.

10.10 System Setting

Figure 10-30 is a screen shot of the SYSTEM SETTING MENU. This menu is for setting up the system configurations of the ERS-4.

Figure 10-30 System Menu – Date/Time

10.10.1 Date/Time

Date: Set current Date.

Time: Set current Time.

Date Format: Choose date format from yyyy/mm/dd, dd/mm/yyyy, and mm/dd/yyyy.

Time Format: Change time format between 12H and 24H mode.

Time Zone: Set the time zone that the ERS-4 adjusts to when updating from the time server.

NTP: Select “Enable” or “Disable” NTP time synchronization.

NTP Server: Displays the time server address that the uses for time synchronize. To find a compatible NTP address, please follow these steps:

a) Go to a PC that is connected to the internet.

b) Click on “START” -> “RUN” -> type “command” and press “OK”.

c) In the DOS Prompt, type “ping pool.ntp.org” to find out the IP address of an NTP Server.

NTP Update Interval: The frequency that the system automatically updates the time. Select Daily, Weekly, or Monthly.

10.10.2 Daylight Saving

Figure 10-31 System Menu – Daylight Saving

Daylight Saving: Check the box to enable daylight saving time.

Start Date: Set the start date of daylight saving time.

Start Time (hh:mm): Set the time when daylight saving time begins.

Set To (hh:mm): This is what the time will change to when daylight saving begins. For most regions, this will be one hour ahead of the “Start Time”.

End Date: Set the end date of daylight saving time.

End Time (hh:mm): Set the time when daylight saving time ends.

10.10.3 User

User Menu is where you can add or delete different users on the system as well as set administrator rights.

Figure 10-32 System Menu – User

Add

Click “Add” button to add a new user. Set the name (case-sensitive), password, and access level. Press “Add” button to confirm a new user or “Cancel” to exit without making changes.

Figure 10-33 System Menu – User - Add

Edit

Click “Edit” button to make changes to an existing user account. Press “Save” button to save changes or “Cancel” to exit without making changes.

Figure 10-34 System Menu – User - Edit

User Login: Check this box to activate user login. When this is disabled, no username or password is required to access the system, and all users operate with ADMIN rights.

Auto Logoff: Check this box to automatically logoff the current user after 3 minutes of inactivity.

10.10.4 I/O Control

Figure 10-35 is a screen shot of the I/O Control Setting Menu. This menu is used to define the settings for controlling the ERS-4 through RS485.

Figure 10-35 System Menu – I/O Control

RS485

PTZ Protocol: Select PTZ protocol, choose from the following protocols: Transparent, Pelco D, Pelco P, Everfocus, or Samsung. (*NOTE: all cameras must be on the same protocol*)

485 ID: If more than one ERS-4 is used through the RS485 connection, each one must be assigned a unique ID number between 0 and 127.

Baud Rate: The speed used to transmit instruction or information through the RS485 port on the ERS-4. Choose from the following speeds: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 BPS.

Data Bit: The data bit used for transferring. This can be set to 8 or 7.

Stop Bit: This field is to set the stop bit for the RS485 connection. This can be set to 1 or 2.

Parity: This selects the transmission level of the connection. Choose either None, Odd, or Even.

10.10.5 Misc.

Figure 10-36 System Menu – Firmware & Misc.

Firmware

Current Firmware Version: Displays the current version.

Firmware Upgrade: Press "Upgrade" to upgrade the firmware.

> *NOTE: To perform a Firmware Upgrade, you will need to connect a USB flash device with the latest version of the firmware. Do not disconnect USB device or turn off the power of the unit during the upgrade; this can cause the system to crash.*

Configurations

Load Factory Default: Click "Load" to restore all menu settings to the default values. User Account, Network Setting, and Time are not affected.

Load From USB: Click "Load" to upload saved ERS-4 configuration settings from a USB flash device.

Save To USB: Click "'Save" to save the current ERS-4 configuration settings to a USB flash device.

Language: Choose which language the ERS-4 uses. The available languages may vary based on region.

10.11 INFORMATION

5.37 is a screen shot of the INFORMATION SETTING MENU. This menu displays important system information.

Figure 10-37 Information Menu – System.

10.11.1 System

System

Version: Displays firmware version number.

Model: Displays ERS-4 model number.

NTSC/PAL: Displays current video format.

Network

IP: Displays the ERS-4's current IP Address.

MAC: Unique address of the ERS-4's internal network card. This option cannot be changed.

DVR Name: Displays ERS-4 name

Network ID: The ID number for the alarm network.

Status

Disk: Displays disk temperature.

10.11.2 Log

Figure 10-38 Information Menu – Log

From

Date: Select starting date of log to be displayed.

Time: Select starting time of log to be displayed.

To

Date: Select end date of log to be displayed.

Time: Select end time of log to be displayed.

Log Type:

Configurations: to see log sorted by configurations.

Event: to see log sorted by event.

Record: to see log sorted by record data.

Operation: to see log sorted by operation.

User: to see log sorted by user.

View Log: Press "View Log" button to view the log. See Figure 10- for more detail.

Clear Log: Press "Clear Log" button to clear the log.

Export Log to USB: Press "Export' button to export log data to USB.

Figure 10-39 Log List

Prev Page: Go to the previous page of log.

Next Page: Go to the next page of log.

Close: Close the window.

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