

EASYDVR

from **OpenEye**



User Manual

OE1-D12004

OE1-D24008

OE1-D48016

www.openeye.net

NOTES:

OpenEye® D-Series EasyDVR
D-Series Operations Manual

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The following words and symbols mark special messages throughout this guide:

WARNING: Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

OPENEYE
Liberty Lake, WA 🇺🇸 U.S.A.

IMPORTANT SAFEGUARDS

1. **Read Owner's Manual** – After unpacking this product, read the owner's manual carefully, and follow all the operating and other instruction
2. **Power Sources** – This product should be operated only from the type of power source indicated on the label. If not sure of the type of power supply to your home or business, consult product dealer or local power company
3. **Ventilation** – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
4. **Heat** – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products that produce heat.
5. **Water and Moisture** – Do not use this product near water.
6. **Cleaning** – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
7. **Power Cord Protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
8. **Overloading** – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electrical shock.
9. **Lightning** – For added protection for this product during storm, or when it is left unattended and unused for long periods, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power line surges.
10. **Object and Liquid Entry Points** – Never insert foreign objects into the HVR, other than the media types approved by OpenEye, as they may touch dangerous voltage points or short-out parts that could result in a fire or electrical shock. Never spill liquid of any kind on the product.
11. **Accessories** – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious personal injury and serious damage to the product.
12. **Disc Tray** – Keep fingers well clear of the disc tray as it is closing. Neglecting to do so may cause serious personal injury.
13. **Burden** – Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.
14. **Disc** – Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.
15. **Damage Requiring Service** – Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power-supply cord or plug is damaged.
 - If liquid has been spilled, or objects have fallen into the unit.
 - If the unit has been exposed to rain or water.
 - If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
 - If the unit has been dropped or the enclosure has been damaged.
 - When the unit exhibits a distinct change in performance – this indicates a need for service.
16. **Servicing** – Do not attempt to service this product as opening or removing covers may expose the user to dangerous voltage or other hazards. Refer all servicing to qualified personnel.
17. **Replacement Parts** – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
18. **Safety Check** – Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

BATTERY EXPLOSION CAUTION STATEMENT

CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

NOTES ON HANDLING

Please retain the original shipping carton and/or packing materials supplied with this product. To ensure the integrity of this product when shipping or moving, repackage the unit as it was originally received from the manufacturer.

Do not use volatile liquids, such as aerosol spray, near this product. Do not leave rubber or plastic objects in contact with this product for extended periods of time. Rubber or plastic objects left in contact with this product for extended periods of time will leave marks on the finish.

The top and rear panels of the unit may become warm after long periods of use. This is not a malfunction.

NOTES ON LOCATING

Place this unit on a level surface. Do not use it on a shaky or unstable surface such as a wobbling table or inclined stand.

If this unit is placed next to a TV, radio, or VCR, the playback picture may become poor and the sound may be distorted. If this happens, place the HVR away from the TV, radio, or VCR.

NOTES ON CLEANING

Use a soft dry cloth for cleaning.

For stubborn dirt, soak the cloth in a weak detergent solution, wring well and wipe. Use a dry cloth to wipe it dry. Do not use any type of solvent, such as thinner and benzene, as they may damage the surface of the HVR.

If using a chemical saturated cloth to clean the unit, follow that product's instructions.

NOTES ON MAINTENANCE

This HVR is designed to last for long periods of time. To keep the HVR always operational we recommend regular inspection maintenance (cleaning parts or replacement). For details, contact the nearest dealer.

NOTES ON MOISTURE CONDENSATION

Moisture condensation damages the HVR. Read the following information carefully.

Moisture condensation occurs during the following cases:

When this product is brought directly from a cool location to a warm location.

When this product is moved to a hot and humid location from a cool location.

When this product is moved to a cool and humid location from a warm location.

When this product is used in a room where the temperature fluctuates.

When this product is used near an air-conditioning unit vent

When this product is used in a humid location.

Do not use the HVR when moisture condensation may occur.

If the HVR is used in such a situation, it may damage discs and internal parts. Remove any CD discs, connect the power cord of the HVR to the wall outlet, turn on the HVR, and leave it for two to three hours. After two to three hours, the HVR will warm up and evaporate any moisture. Keep the HVR connected to the wall and moisture will seldom occur.

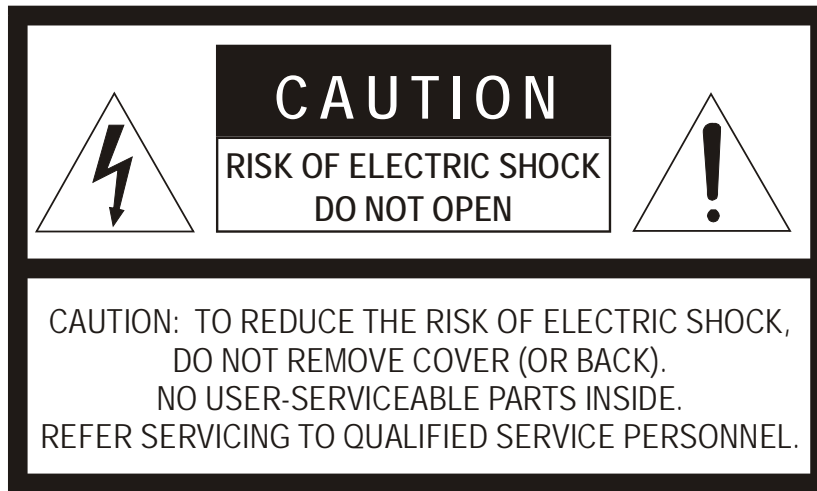
WARNING

TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE.

DO NOT OPEN THE CABINET.

REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

CAUTION



RACK MOUNT INSTRUCTIONS

Elevated Operating Ambient – If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.

Reduced Air Flow – Installation of the equipment in a rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

Mechanical Loading – Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Circuit Overloading – Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Grounding – Grounding of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

FCC STATEMENT

INFORMATION TO THE USER: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A 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 OR MORE OF THE FOLLOWING MEASURES:

- REORIENT OR RELOCATE THE RECEIVING ANTENNA.
- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND RECEIVER.
- CONNECT THE EQUIPMENT TO 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.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003
DU CANADA.

OPERATION OF THIS DEVICE IS SUBJECT TO THE FOLLOWING CONDITIONS:

- THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.
- THIS DEVICE MUST ACCEPT INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.
- CABLES USED WITH THIS DEVICE MUST BE PROPERLY SHIELDED TO COMPLY WITH THE REQUIREMENTS OF THE FCC.
- ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED IN THIS MANUAL COULD VOID YOUR AUTHORITY TO OPERATE THIS EQUIPMENT.

USERS OF THE PRODUCT ARE RESPONSIBLE FOR CHECKING AND COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND STATUTES CONCERNING THE MONITORING AND RECORDING OF VIDEO AND AUDIO SIGNALS. OPENEYE SHALL NOT BE HELD RESPONSIBLE FOR THE USE OF THIS PRODUCT IN VIOLATION OF CURRENT LAWS AND STATUTES.

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PREFACE

ABOUT THIS GUIDE

This manual is a setup and maintenance guide that can be used for reference when setting up the D-Series EasyDVR and for troubleshooting when a problem occurs. Only authorized personnel should attempt to repair this unit.

OpenEye reserves the right to make changes to the products represented by this manual without notice.

The following text and symbols mark special messages throughout this guide:

Note Text set off in this manner indicates topics of interests that can help the user understand the product better.

Tip Text set off in this manner indicates topics and points of interests that can be helpful when using or settings up the recorder.

TECHNICIAN NOTES

Warning: Only authorized technicians trained by OpenEye should attempt to repair this recorder. All troubleshooting and repair procedures that may be shown are for reference and minor repair only. Because of the complexity of the individual components and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard. And any indications of component replacement or printed wiring board modifications may void any warranty

Warning To reduce the risk of electrical shock or damage to the equipment:

- Do not disable the power grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Disconnect the power from the computer by unplugging the power cord either from the electrical outlet or the computer.

Caution To properly ventilate your system, you must provide at least 3 inches (7.6 cm) of clearance at the front and back of the recorder.

NOTES:

INTRODUCTION

PRODUCT DESCRIPTION



OpenEye's EasyDVR is an affordable video management solution designed for easy installation and operation. Configured for continuous recording right out of the box, the EasyDVR offers easy to use search, setup, and backup features. The EasyDVR runs on an embedded Linux operating system which provides stability and protection from viruses.

The OpenEye EasyDVR comes ready for fast and seamless integration within your existing IT infrastructure. Designed around Linux Embedded, the EasyDVR offers unparalleled stability, security, and ease of use. Accordingly, your security investment has never been easier to maintain. Multiple users may connect through any network for simultaneous live viewing, digital search, and use PTZ controls on available attached video input devices. With the latest advancements in the EasyDVR software, searching and indexing your video archive has never been easier.

The OpenEye EasyDVR comes pre-installed with remote viewing and configuration software; which is a web browser plug-in allowing users to view live or recorded video images and enables remote configuration. The EasyDVR remote software is stored in the recorder and deployed over a network connection to an internet browser, simplifying the installation and maintenance of the OpenEye EasyDVR.

FEATURES

OpenEye's EasyDVRs include the following features:

- 4/8/16 Composite Video Input Connectors
- 4/8/16 Audio Inputs
- 4/8/16 Alarm Sensor Inputs
- Compatible with Color (NTSC or PAL) and B&W Video Sources
- Recording Resolutions
 - NTSC : 720x480 / 720x240 / 360x240
 - PAL: 720x576 / 720x288 / 360x288
- Multiple Search Methods (Calendar, Event)
- H.264 Compression
- BNC, VGA, or HDMI Monitor Output
- PAN / TILT / ZOOM Controls
- Multiple Levels of Security Access
- Internal Storage of 1TB/2TB/4TB/6TB (depending on model)
- Remote System Operation & Configuration
- Digital Signature Support
- Schedule Recording for Day, Night, or Weekend
- Record Continuously, with increased on Motion Events, or on Sensor Events

PTZ COMPATIBILITY LIST

OpenEye's EasyDVR supports the following RS-485 PTZ communication protocols:

- AD422
- DSCP
- Fastrax 2
- GE RS-485
- GE RS-422
- JVC
- Panasonic C
- Panasonic N
- PELCO D
- PELCO P

QUICK START INSTRUCTIONS

1. Establish necessary cable connections and power on the recorder.
2. Press **MENU**.
3. Select **admin** and press **ENTER**.
4. Enter the default password **1234** and press **ENTER**.
5. Select **SYSTEM** and press **ENTER**.
6. Select **Date/Time** and press **ENTER**.
7. Verify or modify the date and time, press **ESCAPE** twice when finished.
8. Select **USERS** and press **ENTER**.
9. Select **Account Setup** and press **ENTER**.
10. Change the admin password or create new users, press **ESCAPE** twice when finished.
11. Select **NETWORK** and press **ENTER**.
12. Select **LAN Setup** and press **ENTER**.
13. DHCP is enabled by default, if no changes are needed simply make a note of the IP address.
14. If the IP address needs to be static, enter the **IP**, **Subnet**, **Gateway**, and **DNS** for the network.
15. Press **ESCAPE** three times when finished.

With these basic quick start instructions the recorder is configured to record, can be accessed remotely over the local network, and has been secured against unauthorized logins. For further instructions, setup details, and configuration see the later chapters in this manual.

LOGGING IN FOR THE FIRST TIME

Default administrative log in information:

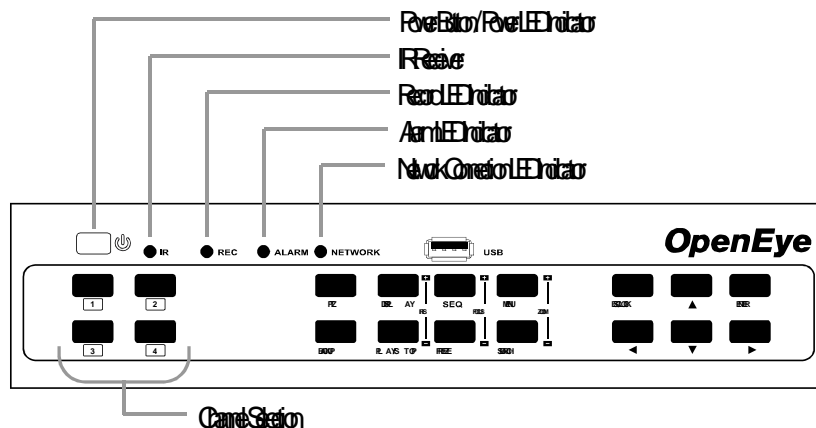
Username: admin

Password: 1234

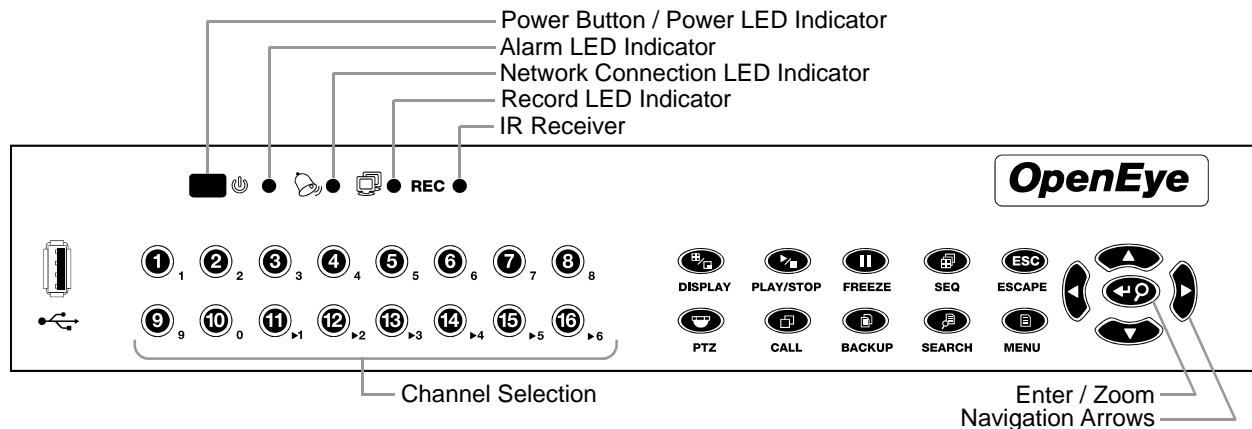
LEDs, CONTROLS, AND CONNECTIONS

FRONT PANEL LEDs

D120 Front Panel



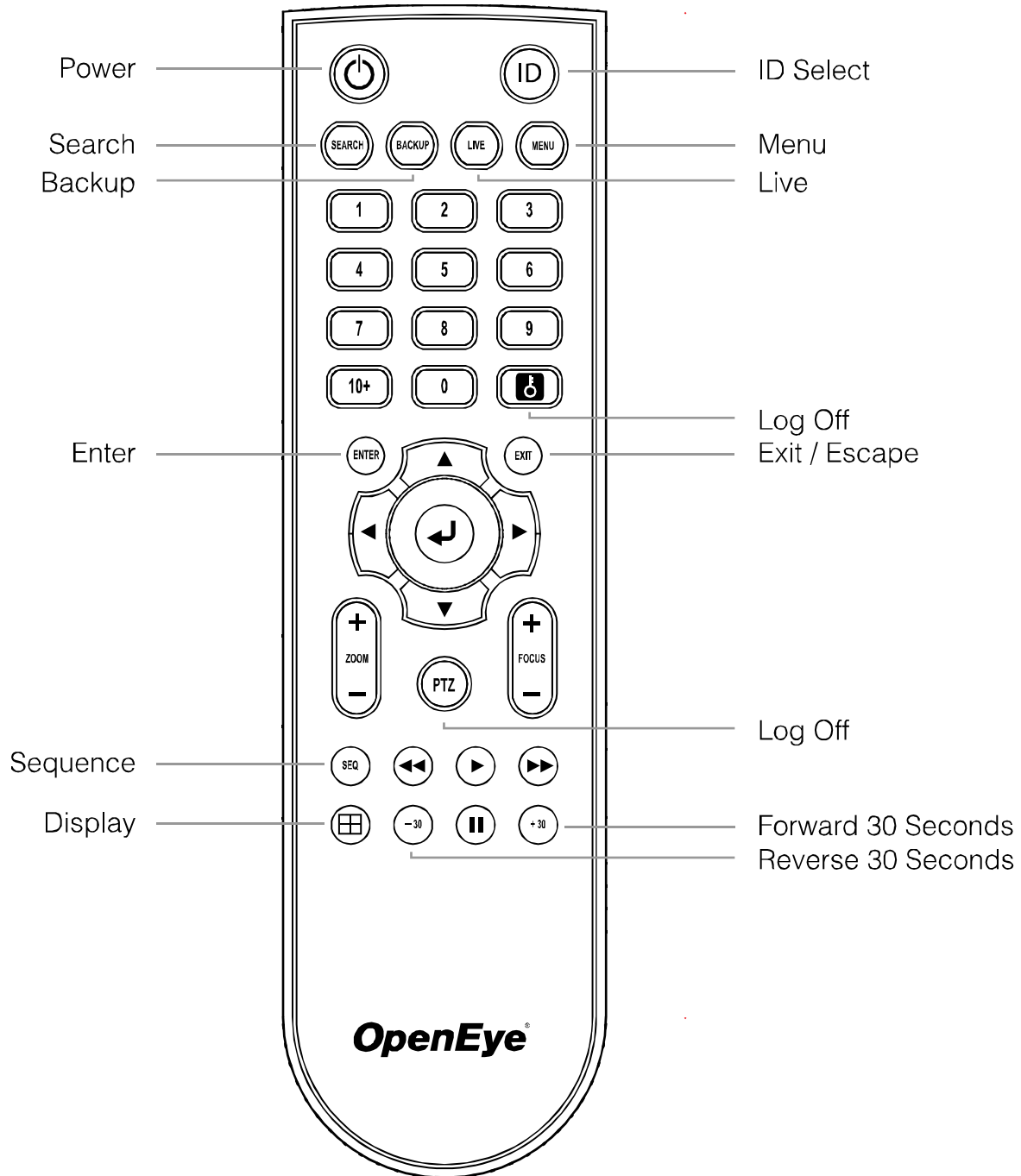
D240 & D480 Front Panel



Front Panel LED Indicators

- Power:** When the recorder is powered on, the power indicator is blue. When the recorder is powered off, the power indicator is red.
- Record:** The LED blinks when the recorder is recording.
- Alarm:** The LED blinks when an alarm is triggered.
- Network:** The LED is lit when the recorder is connected to a network, and blinks when data is being transferred.

REMOTE CONTROL



Setting the Remote Controller ID

When more than one OpenEye EasyDVR is installed in the same location, you can use one remote controller to control up to 16 recorders. To control multiple recorders, you must change the remote controller ID to match the Unit ID of the recorder. Follow the instructions below to set the Unit ID and change the remote controller number.

Assign a unique Unit ID on the recorder

1. Press **MENU**.
 - If prompted, login with an administrator level username.
2. Select **SYSTEM** and press **ENTER**.
3. Select **RS485 Setup** and press **ENTER**.
4. Select **Unit ID** and press **ENTER**.
5. Use the **UP/DOWN** arrows to set the desired Unit ID.
6. Press **ENTER** when the desired number is displayed.

Note See the Unit ID and Remote Control Number table below for additional reference.

Set the number on the Remote Controller

Press and hold the ID button on the remote controller and enter the corresponding Remote Control number to operate the recorder. For example, assuming the Unit ID is set to 225, press ID on the remote controller and then press 2 immediately.

Unit ID and Remote Control Number

To use the included remote controller, each recorder needs a unique Unit ID number that corresponds with a Remote Control number. Use the table below for reference.

Unit ID	Remote Control ID
224	01
225	02
226	03
227	04
228	05
229	06
230	07
231	08
232	09
233	10
234	11
235	12
236	13
237	14
238	15
239	16

INTERFACE CONTROL OPTIONS

The recorder can be controlled using the front panel buttons, the handheld remote control, or with a USB mouse; and a USB keyboard can be used to input alpha or numeric characters.

Front Panel Control Buttons

Power Button

When the recorder is powered off, pressing the power button will power on the recorder. When powered on, press and hold the power button until prompted to login; if authorized credentials are provided the recorder will shutdown. The power button also functions as an LED indicator; it will appear red when the recorder is powered off (but still connected to power), and will appear blue when the recorder is powered on.

Channel Number Buttons

In both Live and Search modes, pressing a channel button will display the selected channel full screen. In PTZ mode, pressing the channel **1** button will open the presets menu.

When the onscreen number keyboard is displayed, the channel **1~9** buttons will enter their corresponding number, and the channel **10** button will enter a 0.

Display Button

Press the **DISPLAY** button repeatedly to cycle through the available display configurations. Depending on the recorder model, the available options include: single channel, four cameras (2x2), nine cameras (3x3), and sixteen cameras (4x4).

Play/Stop Button

Press the **PLAY/STOP** button to enter Playback mode; press again to return to the Live Display.

Freeze Button

In Live mode, pressing the **FREEZE** button will freeze the currently displayed image(s); press again to return to live video.

In Search mode, pressing the **FREEZE** button will pause the current playback. While paused the left and right arrow buttons can be used to step forward or reverse. Pressing the **FREEZE** button again will resume playback.

Sequence Button

Press the **SEQ** button to start automatic sequencing of cameras; different sequences will cycle through depending upon the display options selected.

Escape Button

Press the **ESC** button to cancel or exit modes and menu selections. If Password Protection is set to On, pressing **ESC** twice while in live view will logoff a user logged in at the recorder. If Password Protection is set to Off, press and hold **ESC** for five seconds to lock the front panel buttons; press and hold **ESC** again for five seconds to unlock.

PTZ Button

Press the **PTZ** button to enter PTZ mode; please refer to the PTZ section later in this manual for further details.

Call Button

Press the **CALL** button to enter the call monitor control mode, and define the camera channels to be displayed on the call monitor output (only available on the 8 and 16 channel models). For more details, see the Call Monitor Display section in the Operations chapter later in this manual.

Backup Button

Press the **BACKUP** button to open the Backup menu and select export options; please refer to the Backup section later in this manual for further details.

Search Button

Press the **SEARCH** button to enter the Search menu; please refer to the Search section later in this manual for further details.

Menu Button

Press the **MENU** button to access the recorder configuration menu; please refer to the Setup section later in this manual for further details.

Arrow Buttons

The arrow direction buttons (▲, ▼, ◀, and ▶) are used to navigate menu items. In some menus the LEFT and RIGHT arrows are used to move the selection cursor from field to field, while the UP and DOWN arrows are used to change the value in the selected field.

In Zoom mode the arrow direction buttons move the picture in the desired direction.

Enter/Zoom Button

When navigating onscreen menus, the **ENTER** button is used to choose a menu option or confirm a selection.

In Live mode pressing the **ZOOM** button opens a 2x zoomed image of the currently selected camera channel (use the arrow buttons to move the focus of the picture). Press the **ZOOM** button again to exit back to Live mode.

Remote Control

Power Button

When the recorder is powered off, pressing the power button will power on the recorder. When powered on, press and hold the power button until prompted to login; if authorized credentials are provided the recorder will shutdown.

ID Button

Press the **ID** button followed by the desired identification number to change which recorder the remote can control. For more details reference the section on changing the remote ID earlier in this manual.

Search Button

Press the **SEARCH** button to enter the Search menu; please refer to the Search section later in this manual for further details.

Backup Button

Press the **BACKUP** button to open the Backup menu and select export options; please refer to the Backup section later in this manual for further details.

Live Button

Press the **LIVE** button while in the Search or Backup menus, or in Sequence mode to return to the Live Display.

Menu Button

Press the **MENU** button to access the recorder configuration menu; please refer to the Setup section later in this manual for further details.

Number Buttons

In both Live and Search modes, pressing a number button will display the selected channel full screen. Number buttons **1~9** will display the corresponding channel; for channels use the **10+** button in addition to the **0~6** button for the corresponding channel (example: to access channel 14, press the **10+** button then the **4** button).

In PTZ mode, pressing the channel **1** button will open the presets menu.

When the onscreen number keyboard is displayed, the buttons **0~9** buttons will enter their corresponding number.

Log Off (key) Button

Press the Log Off button while in Live Display to log off. While in other menu options, the Log Off button will function similarly to the Exit/Escape button (back one menu screen).

Enter Button

When navigating onscreen menus, the **ENTER** button is used to choose a menu option or confirm a selection. The button in the center of the Arrow Buttons also functions as an Enter button.

Exit Button

Press the **EXIT** button to cancel or exit modes and menu selections.

Arrow Buttons

The arrow direction buttons (**▲**, **▼**, **◀**, and **▶**) are used to navigate menu items. In some menus the LEFT and RIGHT arrows are used to move the selection cursor from field to field, while the UP and DOWN arrows are used to change the value in the selected field.

PTZ Button

Press the **PTZ** button to enter PTZ mode; please refer to the PTZ section later in this manual for further details.

Zoom Button

Press the **Zoom-Plus** or **Zoom-Minus** while in PTZ mode to control the PTZ camera zoom in and zoom out.

Focus Button

Press the **Focus-Plus** or **Focus-Minus** while in PTZ mode to control the PTZ camera focus in and focus out.

Sequence Button

Press the **SEQ** button to start automatic sequencing of cameras; different sequences will cycle through depending upon the display options selected.

Display Button

Press the **DISPLAY** button repeatedly to cycle through the available display configurations. Depending on the recorder model, the available options include: single channel, four cameras (2x2), nine cameras (3x3), and sixteen cameras (4x4).

Searching Navigation Buttons

These six buttons are used for navigation while in Search mode.



Play

Play video forward at normal speed.



Pause

Freeze the video at the current location.



Fast Reverse

Play video in reverse at higher than normal speed.



Fast Forward

Play video forward at higher than normal speed.



Reverse 30 Seconds

Skip 30 seconds back in video.



Forward 30 Seconds

Skip 30 seconds forward in video.

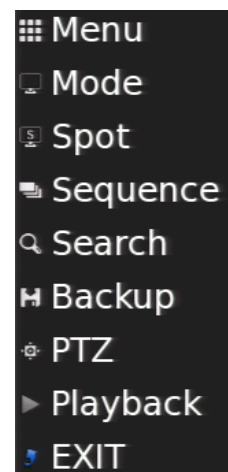
USB Mouse

A USB mouse can be connected to the USB port on either the front panel or the rear panel of the recorder. Having a USB mouse connected will allow you to use the mouse pointer to select and click menu items (instead of using the arrow buttons and ENTER on the recorder front panel). In most scenarios the left mouse button will act similar to the ENTER button on the front panel, the right mouse button will act similar to the EXIT button, and the mouse scroll wheel can be used to adjust values. Using a USB mouse also allows access to two additional menu controls: a right-click menu, and the onscreen menu bar.



Right-Click Menu

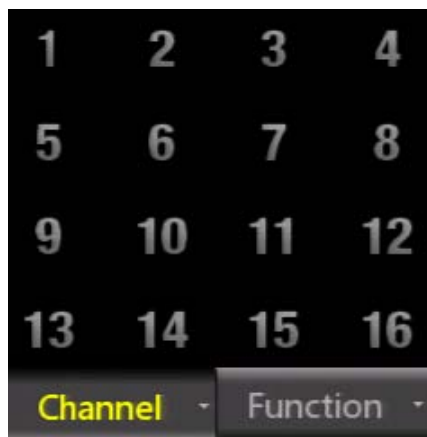
While in Live Display mode, use the mouse to right-click anywhere on the screen to display the Right-Click Menu. All of these menu options lead to the same options as their corresponding front panel or remote control buttons. Details on the options found in Menu selection can be found in the Setup section later in this manual; details on the remaining items can be found in the Operations section later in this manual.



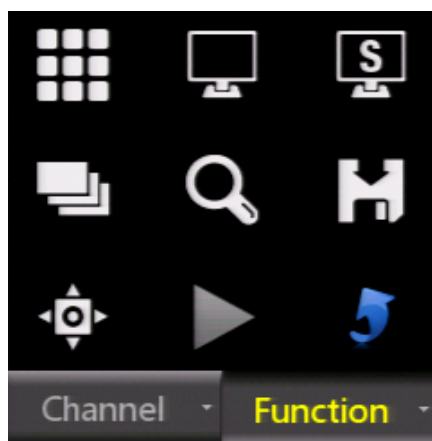
Onscreen Menu Bar

The Onscreen Menu Bar will display two menu buttons when you move the mouse pointer over the Menu Bar: Channel and Function.

The Channel menu allows you to click a channel number to display that channel full screen.

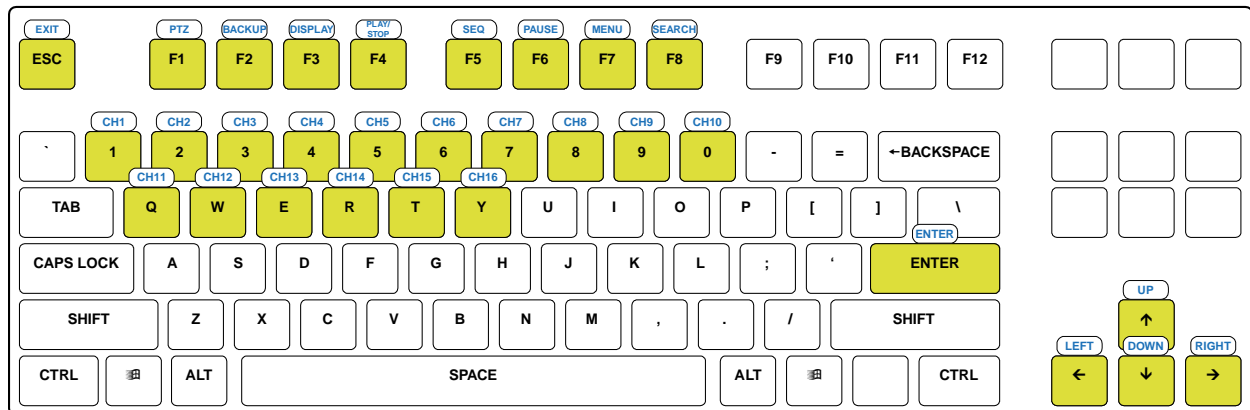


The Function menu provides all the same options as the Right-Click Menu in icon format. All of these menu options lead to the same options as their corresponding front panel or remote control buttons. Details on the options found in Menu selection can be found in the Setup section later in this manual; details on the remaining items can be found in the Operations section later in this manual.



USB Keyboard

A USB keyboard can also be used to directly access recorder function; use the diagram below for reference.

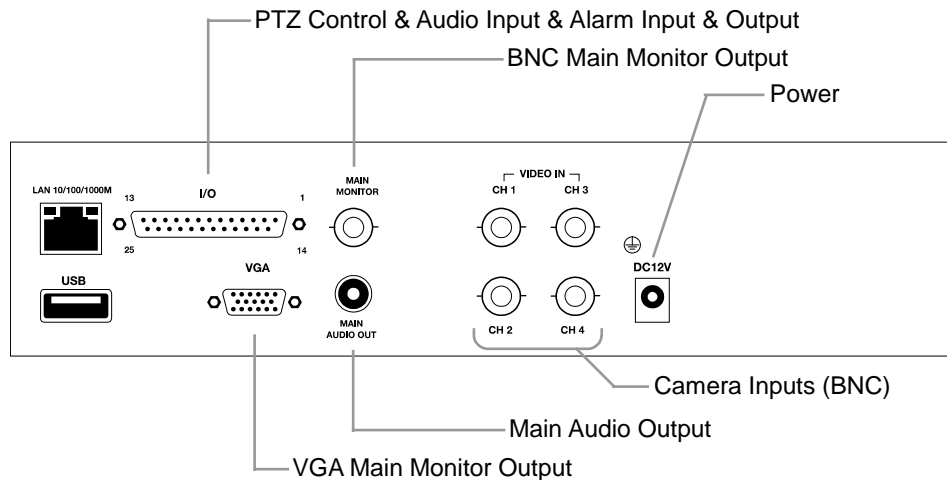


REAR PANEL CONNECTORS

The rear panel of the recorder contains the connectors used to attach cameras, sensors, relay, audio, network, and monitor to the recorder.

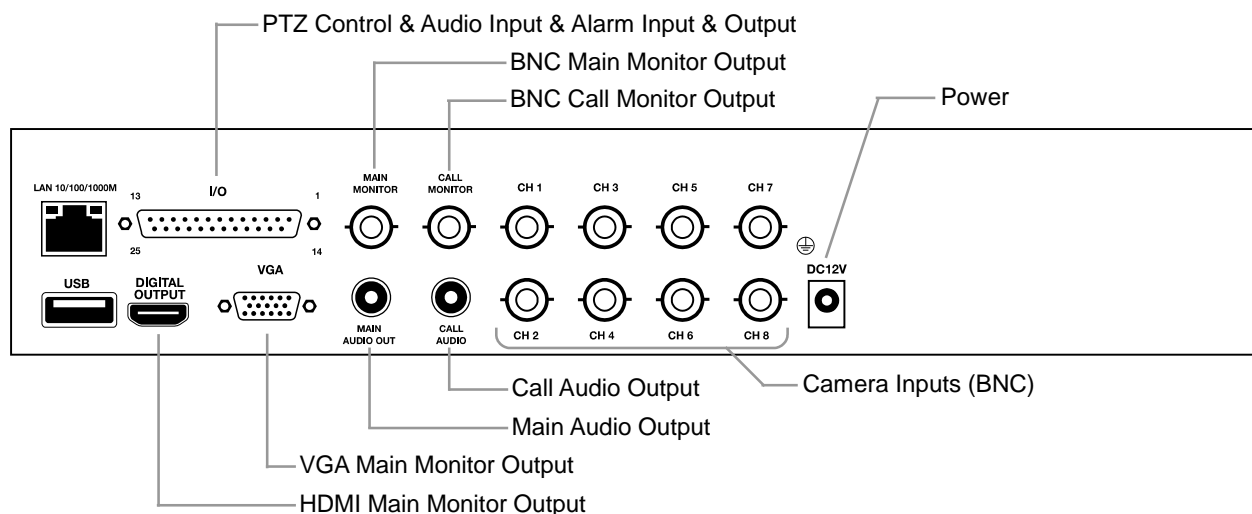
D120 Rear Panel

4 Channel



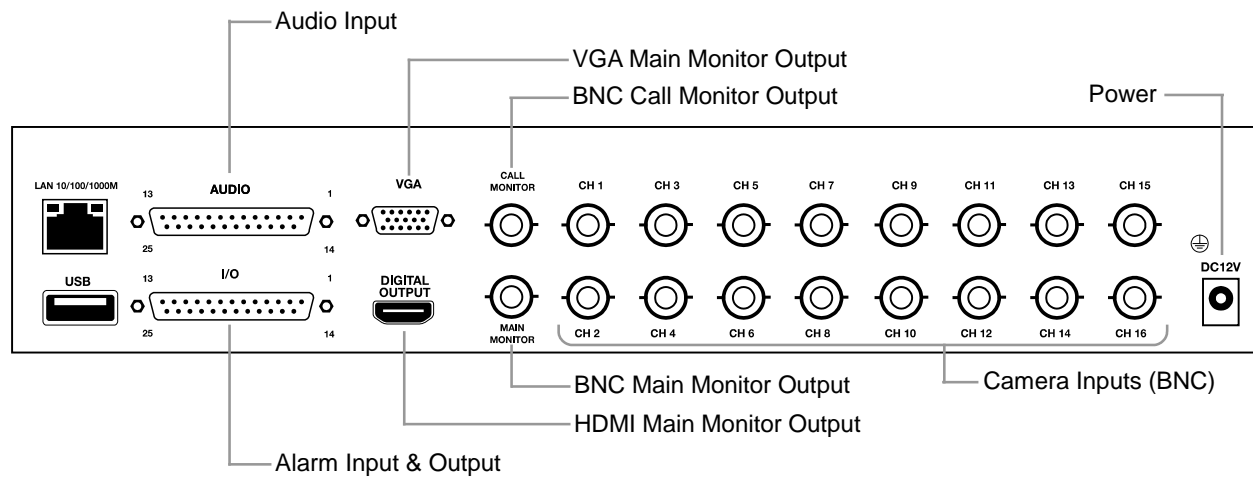
D240 Rear Panel

8 Channel



D480 Rear Panel

16 Channel



Pin Definition of Alarm I/O & RS-485, and Audio In

		<i>D120</i>	<i>D240</i>
Pin	Wire	Definition	Definition
1	Brown	Alarm Out Open	Alarm Out Open
2	Red	Alarm Out COM	Alarm Out COM
3	Black	RS485 D+	RS485 D+
4	Brown	Alarm In 1	Alarm In 1
5	Red	Alarm In 3	Alarm In 3
6	Orange	-	Alarm In 5
7	Yellow	-	Alarm In 7
8	RCA	Audio In 1	Audio In 1
9	RCA	Audio In 3	Audio In 3
10	RCA	-	Audio In 5
11	RCA	-	Audio In 7
12	Black	GND	GND
13	Black	GND	GND
14	Orange	Alarm Out Close	Alarm Out Close
15	Green	RS485 D-	RS485 D-
16	Blue	Alarm In 2	Alarm In 2
17	Purple	Alarm In 4	Alarm In 4
18	Gray	-	Alarm In 6
19	White	-	Alarm In 8
20	RCA	Audio In 2	Audio In 2
21	RCA	Audio In 4	Audio In 4
22	RCA	-	Audio In 6
23	RCA	-	Audio In 8
24	Black	GND	GND
25	Black	GND	GND

You can use this chart to create your own peripheral connection dongle; or you can purchase a manufactured dongle as an accessory.

Advantages of purchasing the manufactured dongle:

- The connections are colored according to the Wire list in this chart.
- Alarm Out Open, Alarm Out COM, and Alarm Out Close are labeled on the wires.
- Audio wires have RCA connectors and numbered labels.
- Pins for GND (12, 13, 24, and 25) are combined in one black wire with a label on it.

D480			
Alarm I/O & RS-485			Audio
Pin	Wire	Definition	Definition
1	White	Alarm Out Open	Audio 1
2	Brown	Alarm Out COM	Audio 3
3	Red	RS485 D+	Audio 5
4	Orange	RS485 D-	Audio 7
5		-	Audio 9
6	Yellow	Alarm In 1	Audio 11
7	Green	Alarm In 2	Audio 13
8	Blue	Alarm In 3	Audio 15
9	Purple	Alarm In 4	GND
10	Yellow	Alarm In 5	GND
11	Green	Alarm In 6	GND
12	Blue	Alarm In 7	Call Audio
13	Purple	Alarm In 8	Main Audio
14	Gray	Alarm Out Close	Audio 2
15		-	Audio 4
16		-	Audio 6
17		-	Audio 8
18	Yellow	Alarm In 9	Audio 10
19	Green	Alarm In 10	Audio 12
20	Blue	Alarm In 11	Audio 14
21	Purple	Alarm In 12	Audio 16
22	Yellow	Alarm In 13	GND
23	Green	Alarm In 14	GND
24	Blue	Alarm In 15	GND
25	Purple	Alarm In 16	-

You can use this chart to create your own peripheral connection dongles; or you can purchase manufactured dongles as accessories.

Advantages of purchasing the manufactured dongles:

- The connections are colored according to the Wire list in this chart.
- Alarm Out Open, Alarm Out COM, and Alarm Out Close are labeled on the wires.
- Audio wires have RCA connectors and numbered labels.
- Pins 6~9 are bundled as Group A.
- Pins 10~13 are bundled as Group B.
- Pins 18~21 are bundled as Group C.
- Pins 22~25 are bundled as Group D.

INSTALLATION

CONNECTION GUIDE

Power Setup



WARNING:

To reduce the risk of electrical shock or damage to the equipment:

Do not disable the power grounding plug.

The grounding plug is an important safety feature.

If the electrical plug you are using does not have a ground plug receptacle contact a licensed electrician to have it replaced with a grounded electrical outlet.

Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

Disconnect the power from the recorder by unplugging the power cord either from the electrical outlet or the recorder.

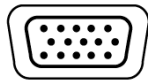
Monitor Setup

The recorder has the following connections available to attach a monitor.



HDMI Output

To TV / Digital Display



VGA

Connect to an analog VGA Monitor



BNC

Connect to an analog BNC Monitor

Attach the monitor or monitors to the rear of the recorder using the cable supplied by the monitor manufacturer. Refer to the monitor manual for detailed information on how to setup and use it.

Note The monitor must be capable of having a minimum screen resolution of 1024 x 768 and display colors of at least 32 Bit

Connecting a Video Source

Various types of video sources can be connected to the recorder including DVD players, VHS players, and CCTV Cameras. The back of the recorder contains 4, 8, or 16 video inputs depending on the recorder model. The connectors use the BNC standard.

The video inputs are 75 Ω BNC connectors. Plug one end into the video source (DVD, Camera, etc.) and plug the other end into the desired BNC input on the recorder.

Connecting to a Network

Use the RJ45 jack on the rear of the recorder when connecting to a network.



Connecting Audio

To record audio on the recorder connect the audio source to the connections on the audio ports on the I/O connector.

To listen to live or recorded audio connect the Audio Out Port to an amplified speaker system.

Connecting an Alarm/Sensor Input

Connect alarm/sensor inputs to the Alarm In ports on the I/O connector.

Connecting a Relay Output

Connect relay output to the Alarm Out port on the I/O connector.

Connecting a PTZ Camera

The RS485 connector on the I/O connector can be used to control Pan / Tilt / Zoom (PTZ) cameras. See the PTZ camera manufacturer's manual for configuring the RS485 connection.

Connect D+ and D- from the I/O connector on the recorder to the R+ and R- of the camera.

TURNING ON THE DVR

First Time Power On

1. Connect camera cables.
2. Connect monitor cable.
3. Connect network cable (if remote access will be needed).
4. Connect alarm inputs, relay output, or PTZ wires (if needed).
5. Connect the power cable to the recorder and wait until the main screen is displayed on the connected monitor; this process will take approximately 90 seconds.

Normal Power On

1. Press the power button on the front panel.

TURNING OFF THE DVR

1. Press and hold the power button on the front panel until the login screen is displayed.
2. Highlight the **admin** account and press **ENTER**.
3. Enter the admin password and press **ENTER**.
4. At the confirmation prompt press **ENTER** to complete the shutdown.

SETUP

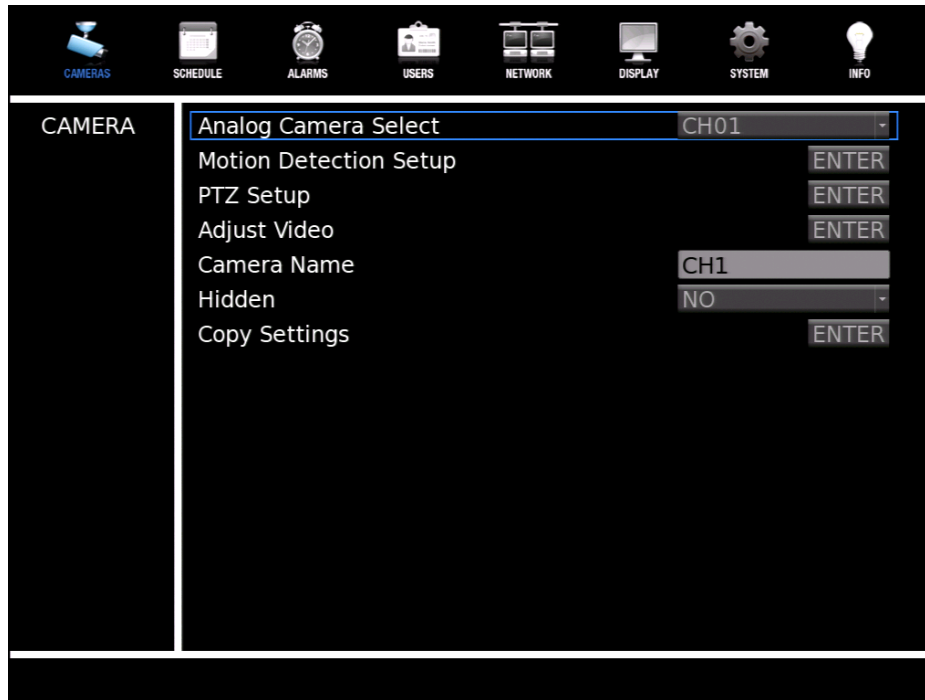
MENU



Use the MENU button on the front panel to access the system menu. All system configurations for the recorder are done through this menu.

Use the ▲, ▼, ◀, and ▶ buttons on the front panel to navigate the menus.

CAMERAS



Use the CAMERAS menu to configure camera channel settings; including channel name, motion detection, and PTZ configuration.

Analog Camera Select

Analog Camera Select allows you to select the camera channel to make changes to.

Motion Detection Setup

Detect Config allows you to configure the motion detection settings for the selected channel.

Motion Detect

Motion Detect allows you to enable or disable the motion detection for the recorder.

Detected Area Setup

Detected Area Setup allows you to configure the motion detection grid for the selected channel. By default all blocks in the 16x12 grid are selected to detect motion.

1. Select **Detected Area Setup** and press **ENTER**.
2. Use the arrow keys to move the cursor on the grid.
3. Press **ENTER** to deselect a block (ignore motion).
4. Press **ENTER** on an unselected block to reselect it (detect motion).
5. Press **SEQ** to deselect all blocks.
6. Press **SEQ** again to reselect all blocks.
7. Press **ESC** when you complete the configuration of the detection grid.

Sensitivity

Sensitivity allows you to change the sensitivity of motion detection function. A greater value represents more sensitive detection (motion events will be easier to trigger).

Block Threshold

Block Threshold allows you to change the amount of motion needed to register a motion event. This number represents the number of blocks on the 16x12 grid that are required to be detecting motion before a motion event is registered. Selecting the minimum (1) means that only one block needs to be detecting motion for it to register as a motion event. Selecting the maximum (16) means that sixteen grid blocks need to be detecting motion for it to register as a motion event.

Configure the Recorder for Motion Based Recording

By default the recorder is configured to record continuously with the configuration of "Best Quality."

To change to motion only recording:

1. Press **MENU**.
2. Select **CAMERAS** and press **ENTER**.
3. Select **Motion Detection Setup** and press **ENTER**.
4. Select **Motion Detect** and press **ENTER**.
5. Press **DOWN** arrow to change the selection to **On** and press **ENTER**.
6. Press **ESCAPE**.
7. Select **Copy Settings** and press **ENTER**.
8. Select **Select All** and press **ENTER**.
9. Select **Confirm** and press **ENTER**.
10. Press **ESCAPE**.
11. Select **SCHEDULE** and press **ENTER**.
12. Select **Global Configuration** and press **ENTER**.
13. Press **UP** arrow **three times** to change the selection to **Event Only** and then press **ENTER**.
14. Press **ESCAPE**.

PTZ Setup

PTZ Setup allows you to configure the PTZ settings for the selected channel.

PTZ Protocol

PTZ Protocol allows you to select the PTZ protocol for the camera on the selected channel.

Supported Protocols:

- AD422
- DSCP
- Fastrax 2
- GE RS-485
- GE RS-422
- JVC
- Panasonic C
- Panasonic N
- PELCO D
- PELCO P

Note The selected protocol must match the configured protocol in the PTZ camera.

Camera ID

Camera ID allows you to configure the device ID of the camera on the selected channel.

Note This ID must match the configured ID in the PTZ camera.

Note Each device on a RS485 network must have a **unique** ID.

Note All devices on a RS485 network should have the **same** Baud Rate, Bits, Stop, and Parity settings. By default the recorder is set to 9600, 8, 1, None.

Adjust Video

Adjust Video allows you to make manual adjustments to the **Brightness**, **Contrast**, **Saturation**, and **Hue** of the selected camera.

Camera Name

Camera Name allows you to create a custom name for each camera channel that will be displayed in live view. By default each camera channel is simply named with its channel number.

1. Select **Camera Name** and press **ENTER**.
2. Use the onscreen keyboard to enter the desired camera name (up to 11 characters).
3. When you are finished select **OK** and press **ENTER**.

Hidden

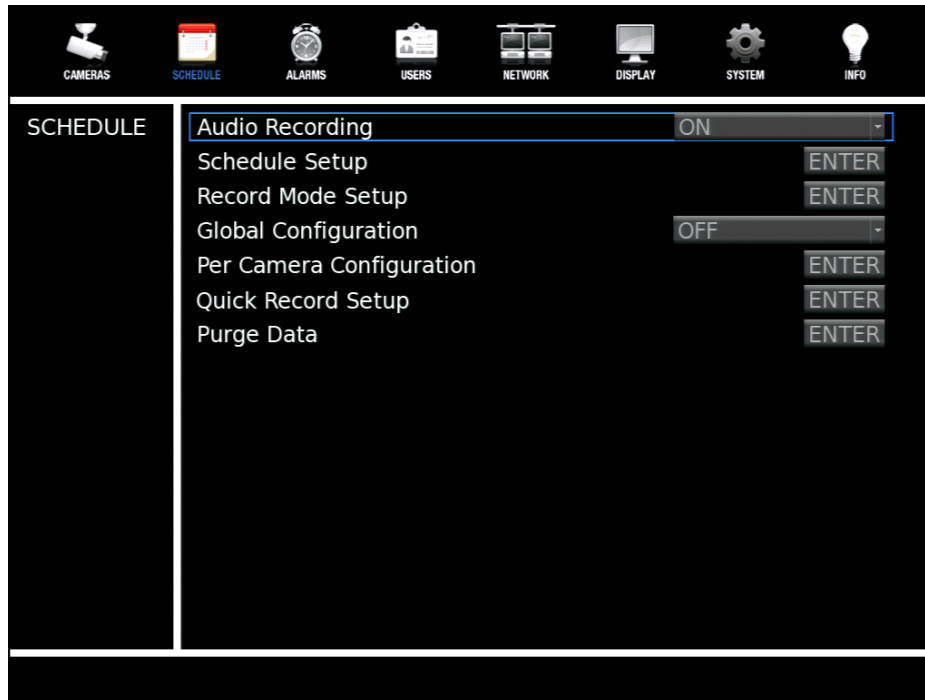
Hidden allows you set selected camera channels to be hidden unless an authorized user is logged in.

Copy Settings

Copy Settings allows you to copy the current channel confirmation to other channels.

1. Select **Copy Settings** and press **ENTER**.
2. Select the desired target channel and press **ENTER**.
 - Repeat for each channel you want to copy settings to.
3. Or copy to all channels, select **Select All** and press **ENTER**.
4. Select **Confirm** and press **ENTER** to copy the settings to the selected channel(s).

SCHEDULE



Use the SCHEDULE menu to configure recording quality, resolution, schedule, and other recording parameters.

Audio Recording

Audio Recording allows you to enable or disable audio recording. If an audio source is connect to the recorder, change Audio Recording to On to record the audio.

Schedule Setup

Schedule Setup allows you to define the start and end time for the day, night, and weekend schedule.

Day Time Start

Day schedule start time; use LEFT/RIGHT to move between fields, and UP/DOWN to change values.

Day Time End

Day schedule end time; use LEFT/RIGHT to move between fields, and UP/DOWN to change values.

Night Time Start

Night schedule start time; use LEFT/RIGHT to move between fields, and UP/DOWN to change values.

Night Time End

Night schedule end time; use LEFT/RIGHT to move between fields, and UP/DOWN to change values.

Weekend Schedule

Weekend Schedule allows you to enable or disable the Weekend Schedule option. Change setting to **On** if you need to define a weekend schedule.

Weekend Start

Weekend schedule start time and day of the week; use LEFT/RIGHT to move between fields, and UP/DOWN to change values.

Weekend End

Weekend schedule end time and day of the week; use LEFT/RIGHT to move between fields, and UP/DOWN to change values.

Record Mode Setup

Record Mode Setup allows you to configure the recording resolution and bit rate.

Record Resolution

Available options: 352x240 (1CIF), 720x240 (2CIF), 720x480 (D1)

CBR/VBR

Constant Bit Rate Constant file size at the risk of reduced quality in video.

Variable Bit Rate Better quality video at the risk of large file sizes.

Global Configuration

Global Configuration allows you to quickly configure universal record settings based on a description of need based on the installation.

OFF

No preconfigured universal settings. Global Configuration must be set to **OFF** to enable the Per Camera Config menu option.

Best Quality

Record settings will be universally adjusted to capture the best quality picture; but will result in larger file sizes, reducing the total number of recorded days stored.

Standard

Record settings will be universally adjusted to balance picture quality with file size.

Extended Record

Record settings will be universally adjusted to capture the highest number of recorded days; but will result in reduced picture quality.

Event Only

Record settings will be universally set to only capture video based on motion or sensor events.

Quick Record

Global Configuration must be set to Quick Record to enable the Quick Record Setup menu option.

512Kbps DSL

Record settings will be universally adjusted to work in a low bandwidth environment.

256Kbps DSL

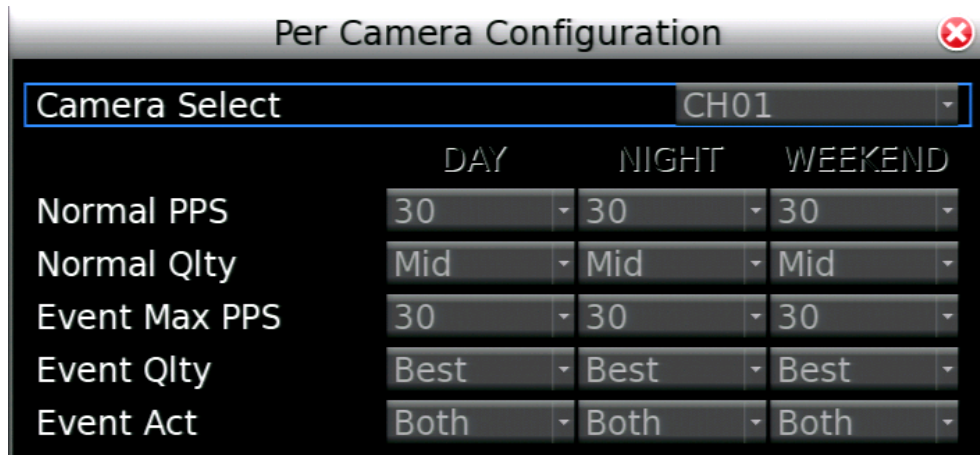
Record settings will be universally adjusted to work in a lower bandwidth environment.

128Kbps DSL

Record settings will be universally adjusted to work in the lowest bandwidth environment.

Per Camera Configuration

Per Camera Configuration allows you to configure the pictures per second (PPS) and quality for normal or event recording for the day, night and weekend schedule, on a per camera basis. The Global Configuration menu option must be set to **OFF** to allow access to the Per Camera Configuration menu option.



The screenshot shows a menu titled "Per Camera Configuration" with a close button (X) in the top right corner. Below the title is a "Camera Select" dropdown menu currently set to "CH01". The main area of the menu is a table with three columns: "DAY", "NIGHT", and "WEEKEND". There are five rows of settings, each with a label on the left and three dropdown menus corresponding to the columns. The settings are: "Normal PPS" (all set to 30), "Normal Qlty" (all set to Mid), "Event Max PPS" (all set to 30), "Event Qlty" (all set to Best), and "Event Act" (all set to Both).

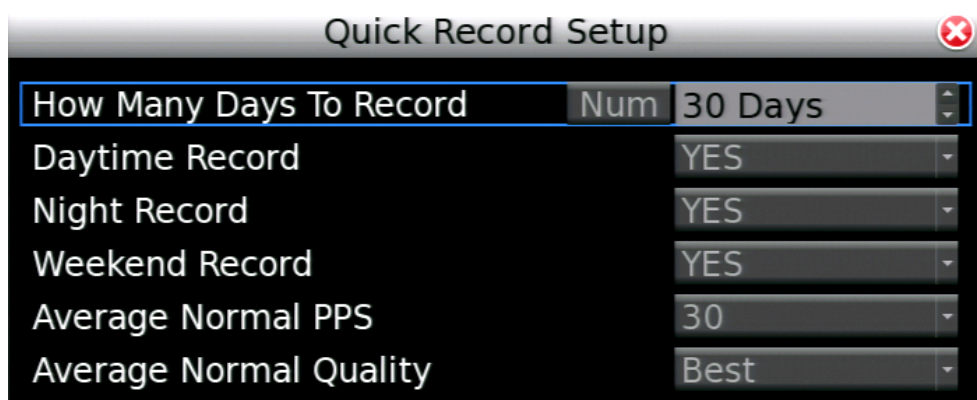
	DAY	NIGHT	WEEKEND
Normal PPS	30	30	30
Normal Qlty	Mid	Mid	Mid
Event Max PPS	30	30	30
Event Qlty	Best	Best	Best
Event Act	Both	Both	Both

1. Select the camera channel to configure.
2. Select the **Normal PPS** for the day, night, and weekend schedule.
3. Select the **Normal Quality** for the day, night, and weekend schedule.
4. If you want to configure for event recording, or to increase frame rate when an event occurs, adjust which **Event Activities** you want monitored (None, Alarm, Motion, Both) for the day, night, and weekend schedule.
 - Select the **Event PPS** for the day, night, and weekend schedule.
 - Select the **Event Quality** for the day, night, and weekend schedule.
5. Select a different camera channel and repeat as needed.
6. When finished press **ESC** to return to the SCHEDULE menu.

Quick Record Setup

Quick Record Setup allows you to easily make record setting changes to all channels. Two approaches can be used within the Quick Record Setup menu:

- The desired number of days can be entered, and the PPS and Quality settings will automatically adjust.
- The desired PPS and Quality can be set, (along with whether to record during the day, night, and weekend schedule), and the estimated number of days will automatically adjust.



Note If Weekend Schedule (under Schedule Setup) has been set to **Off**, the option to change Weekend Record on this menu will not be changeable.

Note The current number of connected cameras will affect the estimated recording days, average PPS and average quality.

Purge Data

Purge Data allows you to quickly purge recorded data from the recorder if needed.

Purge All Data

Purge All Data allows you to delete all recorded video from the recorder.

Caution This will permanently delete all recorded video; there are no recovery options once this process is started.

1. Select **Purge All Data** and press **ENTER**.
2. Press the **DOWN** arrow to change the selection to **Yes** and press **ENTER**.
3. Select **Start To Purge** and press **ENTER**.
4. Press the **DOWN** arrow to change the selection to **Yes** and press **ENTER**.

Purge All Event Data

Purge All Event Data allows you to delete all event based recorded video from the recorder.

Caution This will permanently delete all motion based and alarm based recorded video; there are no recovery options once this process is started.

1. Select **Purge All Event Data** and press **ENTER**.
2. Press the **DOWN** arrow to change the selection to **Yes** and press **ENTER**.
3. Select **Start To Purge** and press **ENTER**.
4. Press the **DOWN** arrow to change the selection to **Yes** and press **ENTER**.

Purge Event Before

Purge Event Before allows you to delete all event based recorded video that occurred prior to the selected date from the recorder.

Caution This will permanently delete all motion based and alarm based recorded video that occurred prior to the date selected; there are no recovery options once this process is started.

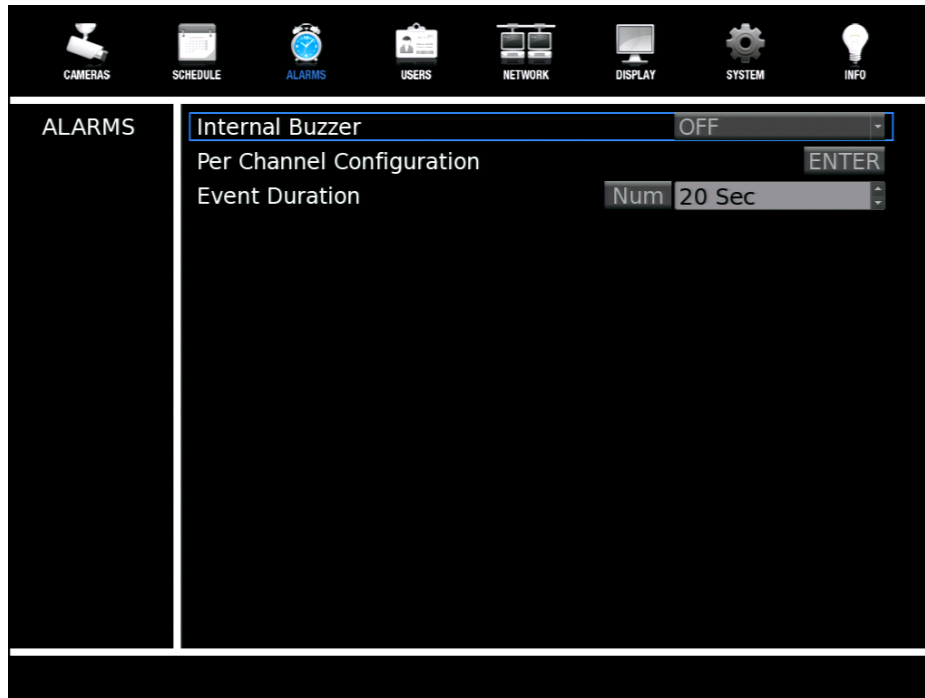
1. Select **Purge Event Before** and press **ENTER**.
2. Use the **LEFT/RIGHT** arrows to navigate the date fields, and the **UP/DOWN** arrow to change the date.
3. Once the desired target date has been set, press **ENTER**.
4. Select **Start To Purge** and press **ENTER**.
5. Press the **DOWN** arrow to change the selection to **Yes** and press **ENTER**.

Start To Purge

Start to Purge starts the purge process selected (Purge All Data, Purge All Event Data, or Purge Event Before).

Caution Once this option has been set to Yes there are no further confirmations, purging of the selected data will begin immediately, and cannot be cancelled or recovered.

ALARMS



Use the ALARMS menu to configure the recorders response to alarm events

Internal Buzzer

Internal Buzzer allows you to enable or disable the audible beep from the recorder when alarm events occur. Set to **On** to enable the beep; set to **Off** to disable the beep.

Per Channel Configuration

Per Channel Configuration allows you to configure alarm events for video loss and alarm inputs and outputs.

Channel Select

Channel Select allows you to select the camera/alarm channel to modify.

Alarm In

Alarm In allows you to enable or disable the alarm channel. Select **N/O** for Normal Open, **N/C** for Normal Close, or **OFF** to disable.

Alarm Out

Alarm Out allows you to enable or disable the alarm relay output.

Note There is only a single alarm relay output.

Video Loss Detect

Video Loss Detect allows you to enable or disable video loss as an alarm event.

Copy Event Settings

Copy Event Settings allows you to copy the current channel confirmation to other channels.

1. Select **Copy Event Settings** and press **ENTER**.
2. Select the desired target channel and press **ENTER**.
 - Repeat for each channel you want to copy settings to.
3. Or copy to all channels, select **Select All** and press **ENTER**.
4. Select **Confirm** and press **ENTER** to copy the settings to the selected channel(s).

Event Duration

Event Duration allows you to set the duration of both the alarm beep, and the alarm relay output functions after an alarm is triggered (5 seconds to 999 seconds).

USERS

The screenshot shows the 'USERS' menu in the OpenEye recorder interface. At the top, there is a navigation bar with icons for CAMERAS, SCHEDULE, ALARMS, USERS (highlighted), NETWORK, DISPLAY, SYSTEM, and INFO. Below this, the 'USER' menu is open, displaying the following settings:

Setting	Value	Action
Password Protection	ON	
Auto Logout	300 SEC	
Account Setup		ENTER
Permissions Setup		ENTER
Load Default Setting	NO	

Use the USERS menu to manage usernames, passwords, and privileges. The OpenEye recorder provides eight built in user accounts. Seven of these accounts can have the username, password, and privilege customized; the preconfigured admin account has a statically set username and privilege, but you can customize the password.

Password Protection

Password Protection allows you to require username and password authentication to access menu functions. The option is set to **On** by default, meaning username and password are required to access any menu functions. Change this setting to **Off** to allow uninhibited access to the recorder.

Auto Logout

Auto Logout will log off a user after the selected amount of time. The option can be set from 60 seconds to 300 seconds. The option can also be set to Disabled.

Account Setup

Account Setup allows you to setup or modify user accounts, including customizing the username, password, and privilege level, or even disable an account.

Creating a New User Account

1. From the **USER** menu, select **Account Setup**.
2. Select **user** from the **Account** option.
3. Click **Edit** to the right of the Account field.
4. Use the onscreen keyboard to enter the desired username.
5. When you are finished select **OK** and press **ENTER**.

Note The username is case sensitive.

6. Click **Edit** to the right of the Password field.
7. Use the onscreen keyboard or channel buttons on the front panel to enter the password.
8. When you are finished select **OK** and press **ENTER**.

Note Passwords require a minimum of four characters; maximum of eight characters.

9. Select the **Privilege** level; options include **Level 1~8** and **Disable**. Level 1 has the lowest authority, and Level 8 has full administrative authority.
10. Click **Save**.
11. Repeat as necessary, selecting **user2** through **user7** on step 2 above.

Modifying an Existing User Account

1. From the **USER** menu, select **Account Setup**.
2. Select the username to be modified from the **Account** option.
3. Click **Edit** to the right of the Account field to change the username.
4. Use the onscreen keyboard to enter the desired username.
5. When you are finished select **OK** and press **ENTER**.

Note The username is case sensitive, and can be a maximum of fourteen characters.

6. Click **Edit** to the right of the Password field to change the password.
7. Use the onscreen keyboard or channel buttons on the front panel to enter the password.
8. When you are finished select **OK** and press **ENTER**.

Note Passwords require a minimum of four characters; maximum of eight characters.

9. Select the **Privilege** level; options include **Level 1~8** and **Disable**. Level 1 has the lowest authority, and Level 8 has full administrative authority.
10. Click **Save**.

Permissions Setup

Permissions Setup allows you to modify the privilege level required to access menu options and features of the recorder.

To enable privilege requirements for any option, set it to a selected level: **1 through 8**. Users will be able to access functions that are equal to or less than (numerically) their set privilege level.

To disable privilege requirements for any option, set it to **DISABLE**. No username will be required to access any function set to **DISABLE**.

The functions that can be configured for privilege requirements:

- Playback/Search
- Hidden Camera
- PTZ Control
- Live Operation
- Spot Out Control
- Export Data
- Menu Access
- Camera Setup
- Schedule Setup
- Alarms Setup
- User Management
- Network Setup
- Display Setup
- System Setup
- System/Version Information

Note The **Menu Access** option cannot be set to **DISABLE**.

Load Default Settings

Load Default Settings allows you to reset all **USERS** menu settings back to factory defaults.

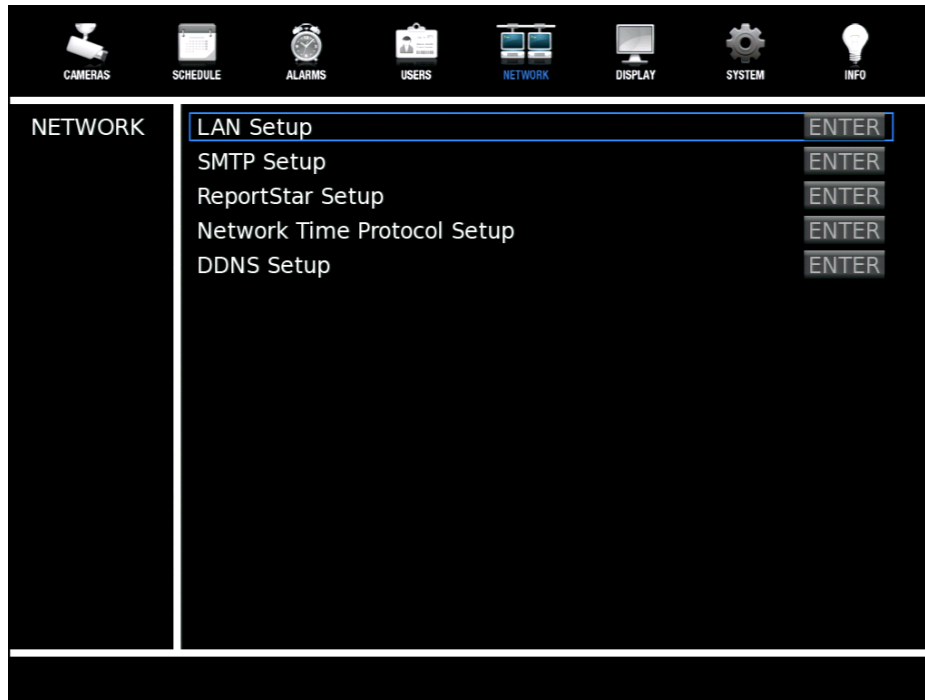
1. Select **Load Default Settings** and press **ENTER**.
2. Press the **DOWN** arrow to change the setting to **Yes** and press **ENTER**.

Note ALL customized usernames and configurations will be lost, and cannot be recovered.

Note This reset only affects options customized within the **USERS** menu.

Caution There is no confirmation message; selecting **Yes** will instantly reset **USERS** menu settings.

NETWORK



Use the NETWORK menu to configure your network communication options.

LAN Setup

LAN Setup allows you to configure the basic network settings for Ethernet communication. Consult a network administrator if you are not familiar with basic network configuration, or not familiar with the network you will be connecting to the recorder.

Enable Network

Enable Network allows you to enable or disable the LAN port, as well as LAN settings.

DHCP

DHCP allows you to enable or disable DHCP (Dynamic Host Configuration Protocol). By default DHCP is set to **On** and will attempt to obtain a dynamic IP address automatically. DHCP must be set to **Off** to allow editing of the IP, Netmask, Gateway, and DNS fields.

IP

IP allows you to specify a unique IP address for the recorder.

Subnet

Subnet allows you to specify the subnet mask of the network you are connecting to the recorder.

Gateway

Gateway allows you to specify the default gateway of the network you are connecting to the recorder.

DNS

DNS allows you to specify the DNS of the network you are connecting to the recorder.

Web Port

Web Port allows you to specify the web port used to connect to the recorder from a remote location. By default the port is set to 80. Although ports 1 through 65535 are valid, to avoid possible conflicts we recommend using port 80, or ports 1025 through 65535.

SMTP Setup

SMTP Setup allows you to configure the recorder to send email messages.

Email Via SMTP

Email Via SMTP allows you to enable or disable the email option.

Email Address

Email Address allows you to enter an email address that will receive alarm event information.

Note Only a single email address can receive alarm even information. If multiple people need to receive notification, consider using a distribution address.

SMTP Server

SMTP Server allows you to configure the server address of the mail server you will use to send the email message. The SMTP Server entry can either be the mail server name (maximum of 47 characters) or an IP address.

SMTP Port

SMTP Port allows you to configure the mail port that the specified SMTP server uses. Port 25 is the default, and most commonly used mail port; ports 465 and 587 are the most typical alternates. Contact the mail server administrator if you are unsure of the mail port the SMTP server is using.

SMTP Account

SMTP Account allows you to enter an account name that exists on the specified SMTP Server, and is authorized to send emails via SMTP.

SMTP Password

SMTP Password allows you to enter the corresponding password for the account name entered in the SMTP Account field.

Use SSL Connection

Use SSL Connection allows you to enable or disable the use of Secure Sockets Layer (SSL); this setting should correspond with the configurations on the mail server entered in the SMTP Server field. Contact the mail server administrator if you are unsure of SSL setting configuration on the mail server.

Email Notice

Email Notice allows you to enable or disable the email notification being sent for each alarm event triggered.

Email Attachment

Email Attachment allows you to enable or disable the AVI attachment inclusion with alarm event notifications.

Note When Email Attachment is enabled, any alarm event will cause the recorder to send a short AVI video clip from each channel with a connected camera.

ReportStar Setup

ReportStar Setup allows you to configure the ReportStar settings for the recorder.

Note A network connection with a connection to the internet is needed for ReportStar to function. Also a ReportStar account is required to view ReportStar information.

Enable ReportStar

To enable ReportStar:

1. Ensure that the EasyDVR recorder is connected to the internet.
2. On your recorder, press **MENU** on the front panel or remote control and go to **NETWORK > ReportStar Setup**.
3. Set **Enable ReportStar** to **On**.
4. Enter a new numeric **Security Code** to protect against unauthorized users and write it down in the space provided at the bottom of this document.

Note *It is recommended that the remaining ReportStar settings are left as the default.*

5. Select **Send Update to ReportStar** and press **ENTER**.

Note *If you receive an error message it is likely that the internet connection is not set up correctly. Double check all equipment and settings related to the connection and send the update again.*

6. Write down the **MAC ADDRESS**. The MAC Address is required to add the device to ReportStar.

Note The Serial Number and MAC Address of your recorder are required to add your device to ReportStar. The Serial Number and MAC Address are noted at the bottom of this document for later reference.

Send Update to ReportStar

The Send Update To ReportStar button will attempt to send a report to ReportStar. This button is used to verify that ReportStar is configured and working properly. A message will show "ReportStar Update Completed Successfully" if everything is working correctly.

Security Code

Security Code allows you to create a custom numeric code required to add the recorder to your ReportStar account. This provides an additional layer of security by preventing unauthorized personnel from receiving ReportStar information.

Set Daily Update

Set Daily Update allows you to configure the time of day the recorder will send daily information updates to the ReportStar server.

Send Alarm Events Instantly

Send Alarm Events Instantly allows you to enable an immediate send of alarm event information to ReportStar. If left in the default **Off** state, alarm event information is sent with the normal daily information updates.

MAC Address

MAC Address simply displays the MAC address of the recorder; this information is required to add the recorder to your ReportStar account, so you should make a note of it.

Send to Custom URL

Send to Custom URL is used for additional troubleshooting, and should only be enabled when directly instructed to do so by an OpenEye representative.

Custom URL

Custom URL is used for additional troubleshooting, and should only be modified when directly instructed to do so by an OpenEye representative.

Network Time Protocol Setup

Network Time Protocol Setup allows you to have the recorder synchronize time with a network time server.

Note A time zone must be selected to enable this option (via the SYSTEM menu).

Note A network connection is required to connect to a NTP server; and an internet connection is required if you plan to connect to a public NTP server.

NTP Server

NTP Server allows you to enter the NTP server you want to connect and synchronize with. This can be a local area network server (as long as the time server service is running on it); or a public time server. We recommend using **nist.time.gov**; or you can do an internet search for “public NTP servers” to find an alternate.

Automatically Time Sync

Automatically Time Sync allows you to enable or disable automatic time synchronization; time sync will occur once per hour when enabled.

Manually Time Sync

Manually Time Sync allows you to perform an immediate one-time synchronization.

DDNS Setup

DDNS Setup allows you to configure a static name to correspond to your dynamic public IP address using the Dynamic Domain Name System (DDNS).

Enable DDNS

Enable DDNS allows you to enable or disable the DDNS function, and options.

Host Name

Host Name displays the recorder's assigned host name which corresponds to the DDNS address used to connect to the recorder.

DDNS Port

DDNS Port allows you to specify the web connect port; this could match the port configured under **IP Advanced**.

Submit/Update

Submit/Update allows you to force a send to the DDNS server to update the dynamic IP address that corresponds to the DDNS address used to connect to the recorder.

ezDDNS

ezDDNS allows you to fill the Host Name field, and complete the configuration of DDNS settings.

To enable and configure DDNS on your recorder:

1. Select **Enable DDNS** and press **ENTER**.
2. Press the **DOWN** arrow to change the selection to **On** and press **ENTER**.
3. Select **ezDDNS** and press **ENTER**.
4. Press the **DOWN** arrow to change the selection to **Yes** and press **ENTER**.

Note A network connection with a connection to the internet is needed for the DDNS update to connect and complete.

5. The recorder will automatically pull a Host Name, and submit an update to the DDNS server.
6. The DDNS address will also be displayed (you should make a note of this address for future use).

Note Port forwarding also needs to be configured on the router to allow remote access to the recorder from an offsite location. For further instruction on this process, visit <http://openeye.net> and search for "Port Forwarding."

DISPLAY

Use the DISPLAY menu to change the video output display settings.

Date/Time Display

Date/Time Display allows you to enable or disable the display of the date and time on the main display.

Show Camera Name

Show Camera Name allows you to enable or disable the camera name display in live view.

Show System Name in Live

Show System Name in Live allows you to enable or disable the display of the Unit Name (specified in the SYSTEM menu) on the main display.

VGA Resolution

VGA Resolution allows you to change the screen resolution output from the recorder to a VGA monitor. Available options are 1024x768 (default), 1280x1024, and 1080P.

If you increase the resolution and the monitor does not display an image, or displays an “out of range” or “no signal” message, follow these steps immediately:

1. Press **ENTER**.
2. Press the **DOWN** arrow, then press **ENTER** twice.

Main Monitor Dwell

Main Monitor Dwell allows you to select the dwell time of a camera or screen division when the main display has been set to sequence (1 second – 120 seconds).

Main Monitor Sequence

Main Monitor Sequence allows you to configure a custom sequence order to be displayed when the main display has been set to sequence single channels.



The number of sequencing positions available is equal to the total number of channels on the recorder. A channel can appear in more than one sequencing position. If not all sequencing positions are needed, choosing Circular will cause the sequence to return to the beginning.

A Custom Sequence Example:



In this example the channel 1 camera needs to be seen more often, and only the first 10 channels need to be viewed while sequencing. This configuration will display in this order: CH1, CH2, CH3, CH4, CH1, CH5, CH6, CH7, CH1, CH8, CH9, CH10; then the sequence starts over.

Create a Custom Sequence Order

To create the example above:

1. Select **Main Monitor Sequence** and press **ENTER**.
2. Press **LEFT** arrow until the fifth sequence position (CH5) is selected.
3. Press **UP** arrow until **CH1** is displayed.
4. Press **RIGHT** arrow to select the sixth sequence position (CH6).
5. Press **UP** arrow until **CH5** is displayed; repeat for position seven and eight.
6. Press **RIGHT** arrow to select the ninth sequence position (CH9).
7. Press **UP** arrow until **CH1** is displayed.
8. Press **RIGHT** arrow to select the tenth sequence position (CH10).
9. Press **UP** arrow until **CH8** is displayed; repeat for position eleven and twelve.
10. Press **RIGHT** arrow to select the thirteenth sequence position (CH13).
11. Press **UP** arrow until **Circular** is displayed.
12. Select **Confirm** and press **ENTER**.

Call Monitor Dwell

Call Monitor Dwell allows you to select the dwell time of a camera channel displayed on the call monitor as it sequences (1 second – 120 seconds)

Spot Monitor Sequence

Call Monitor Sequence allows you to configure a custom sequence order to be displayed on the spot monitor. See the Main Monitor Sequence section above for details on configuration.

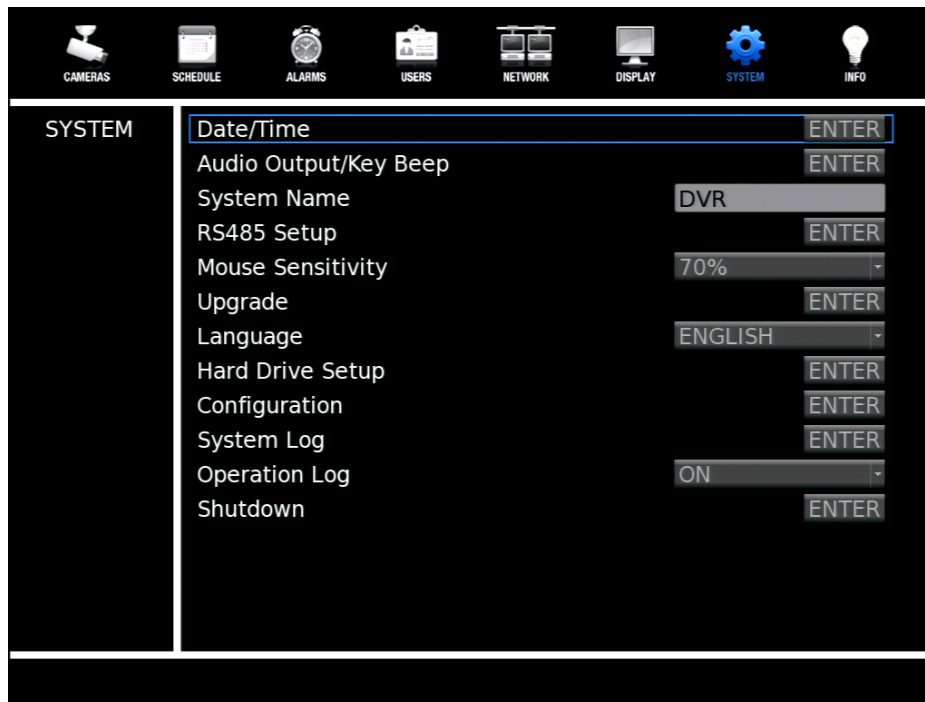
Event Icon

Event Icon allows you to enable or disable the display of an event icon letter on the main display when an event occurs (**A** for alarm input events; **M** for motion detection events; **L** for video loss events).

Event Full Screen

Event Full Screen allows you to display a channel full screen for a short period of time when an alarm event occurs for the associated alarm channel. Select **Main** to display the full screen channel on the main monitor when an alarm event is triggered. Select **Call** to display the full screen channel on the call monitor when an alarm event is triggered. Select **Both** to display the full screen channel on both the main and call monitor. Select **None** to disable.

SYSTEM



Use the SYSTEM menu to configure the date and time and the unit name; to export, import, or reset system configurations; and to upgrade software and restart or shutdown the recorder.

Date/Time

This is the option used to set the date and time on the recorder.

Date

1. Select Date and press **Enter**.
2. Use the LEFT and RIGHT arrows to move between fields; and the UP and DOWN arrows to change the year, month, and day.
3. Press **Enter** when finished.

Note Changing the date or time requires formatting the hard drive(s) to avoid data mismatch.

Time

1. Select Time and press **Enter**.
2. Use the LEFT and RIGHT arrows to move between fields; and the UP and DOWN arrows to change the hour, minute, second, and AM/PM.
3. Press **Enter** when finished.

Note Changing the date or time requires formatting the hard drive(s) to avoid data mismatch.

Time Zone

This option allows you to select your time zone difference from Greenwich Mean Time (GMT).

Date Display Mode

This option allows you to select the format for the date displayed (Y/M/D, M/D/Y, or D/M/Y).

Time Display Mode

This options allows you to select the format for the time displayed (12 HR or 24 HR).

Daylight Saving Time Setup

This option allows you to turn Daylight Saving Time **On** or **Off**. You can also manually select the date and time when Daylight Saving Time will start and end; as well as specify the amount of time shift that should be applied.

Audio Output/Key Beep

Audio Output

This option allows you to select the audio output options (Off, Live/Playback, Always Live).

Key Beep

This option allows you to set the recorder to provide a beep feedback for each front panel key press.

System Name

System Name allows you to assign a name to the recorder.

1. Select **System Name** and press **ENTER**.
2. Use the onscreen keyboard to enter a name up to 11 characters.
3. When finished, select **OK** and press **ENTER**.

RS485 Setup

RS485 Setup allows you to configure the RS485 communication settings for the recorder to communicate with PTZ cameras.

Unit ID

Unit ID allows you to configure the RS485 network ID of the recorder (1-255).

Note Each device on a RS485 network must have a **unique** ID.

Note All devices on a RS485 network should have the **same** Baud Rate, Bits, Stop, and Parity settings. By default the recorder is set to 9600, 8, 1, None.

Baud Rate

Baud Rate allows you to select the baud rate that the RS485 network communicates at.

Bits

Bits allows you to select the bit rate that the RS485 network communicates at.

Stop

Stop allows you to select the stop bit rate that the RS485 network communicates at.

Parity

Parity allows you to select the parity that the RS485 network communicates at.

Mouse Sensitivity

Mouse Sensitivity allows you to configure the sensitivity of a connected USB mouse. Setting options range from 10% to 100% in increments of 10. The 10% settings is the least sensitive, resulting in a slower moving mouse pointer; and 100% is the most sensitive, resulting in a faster moving mouse pointer.

Upgrade

Use this option to update the software version installed on the recorder.

Note The currently installed version can be checked on the INFO menu.

1. Connect a USB storage device that contains the upgrade software to the recorder.
2. Select **Upgrade** and press **ENTER**.
3. Select **Software Upgrade** and press **ENTER**.
4. At the Upgrade prompt press **ENTER**.
5. Select the version you want to upgrade to and press **ENTER**.
6. Press the **DOWN** arrow to change the selection to **YES** and press **ENTER**.

Note Wait for the upgrade to complete, and the recorder to restart and return to the live screen before you remove the USB device.

7. Remove the USB storage device.

Language

Language allows you to change the language settings on the recorder.

Hard Drive Setup

Hard Drive Setup allows you configure a static number of days that video is stored, set the repair option, and see total drive space as well as available free space.

Data Lifetime

Data Lifetime allows you to specify the number of days of recorded video to store and have available for searching. Set this option to **0** to disable. Valid options for storing data range from 1 day to 365 days.

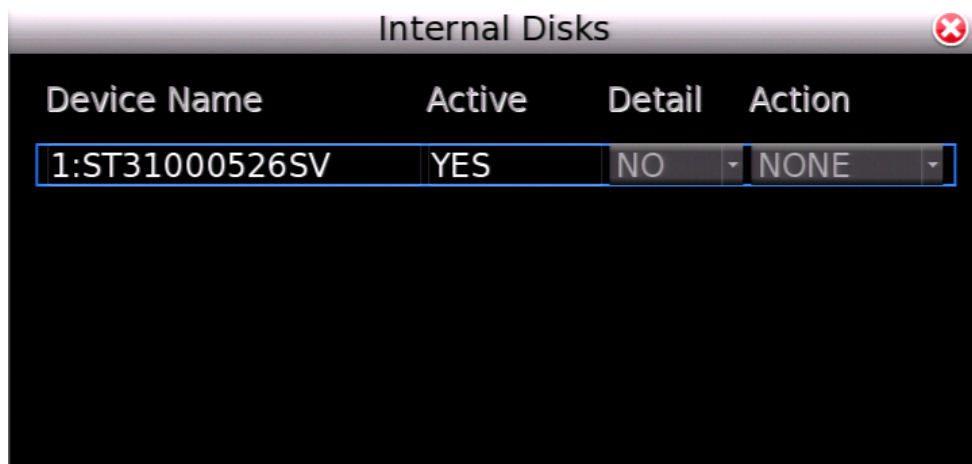
Warning Recorded data that falls outside the specified day range will be purged and cannot be recovered.

Circular Recording

Circular Recording allows you to enable or disable the option to overwrite old data when the hard drive fills. When set to **On**, the oldest video data is overwritten with new video once the hard drive has filled. When set to **Off**, the recorder will alert you with an onscreen message and internal buzzer beep (if enabled) at 98% disk usage; and stop recording when the hard drive is full.

Internal Disks

Internal Disks allows you to examine the state and details of internal hard drives; as well as add new drives to data rotation, remove drives from data rotation, format drives, and repair data on drives.



Check Drive Status and Details

1. Select **Internal Disks** and press **ENTER**.
2. The Active status of the hard drives will be displayed under the Active column.
 - An Active option of **Yes** indicates the drive is currently included in data rotation.
3. **Yes** indicates the drive is being used for recorded data.
4. **No** indicates the drive is not being used for recorded data.
5. To see Details, select the drive you want to see and press **ENTER**.
6. Press **LEFT** arrow, then **DOWN** arrow and press **ENTER**.

Add a Drive to Data Rotation

1. Select **Internal Disks** and press **ENTER**.
2. Select the drive to add to data rotation and press **ENTER**.
3. Press **DOWN** arrow, and then press **ENTER**.

Remove a Drive from Data Rotation

1. Select **Internal Disks** and press **ENTER**.
2. Select the drive to add to data rotation and press **ENTER**.
3. Press **DOWN** arrow **two times**, and then press **ENTER**.

Format a Drive

1. Select **Internal Disks** and press **ENTER**.
2. Select the drive to add to data rotation and press **ENTER**.
3. Press **DOWN** arrow **three times**, and then press **ENTER**.

Repair a Drive

1. Select **Internal Disks** and press **ENTER**.
2. Select the drive to add to data rotation and press **ENTER**.
3. Press **DOWN** arrow **four times**, and then press **ENTER**.

Repair On Power Loss

Repair On Power Loss allows you to enable or disable the automatic hard drive scan and repair process that occurs upon startup after a power loss or improper shutdown.

Total Size

Total Size displays the total storage capacity of all hard drives that are active.

Free Size

Free Size displays the current free space on the hard drives that are active.

Configuration

Configuration allows you to export and import your recorder settings, and reset the recorder back to factory defaults.

Export Configuration

1. Select **Configuration** and press **ENTER**.
2. Connect a USB storage device to the recorder.
3. Select **Export Configuration** and press **ENTER**.
4. Select **Destination** and press **ENTER**.
5. Select the USB storage device to export to and press **ENTER**.
6. Press **DOWN** arrow to change the selection to **Yes**, and then press **ENTER**.
7. Select **File Name** and press **ENTER**.
8. Use the onscreen keyboard to enter the desired file name (up to 15 characters).
9. When you are finished select **OK** and press **ENTER**.
10. Select **Export** and press **ENTER**.
11. Press **DOWN** arrow to change the selection to **Yes**, and then press **ENTER**.

Import Configuration

1. Select **Configuration** and press **ENTER**.
2. Connect a USB storage device to the recorder that contains a configuration export file.
3. Select **Import Configuration** and press **ENTER**.
4. Select the configuration file you want to import and press **ENTER**.
5. Press **DOWN** arrow to change the selection to **Yes**, and then press **ENTER**.
6. Press **ENTER** to confirm the configuration load and system restart.

Note This load and restart may take up to 5 minutes, and cannot be aborted or interrupted.

Load Factory Default

Load Factory Default allows you to reset all settings and configuration to the default state.

Note This does not affect the recorded data on the internal hard drive (which can be done via the Internal Disks menu).

1. Select **Configuration** and press **ENTER**.
2. Select **Load Factory Default** and press **ENTER**.
3. Press **DOWN** arrow to change the selection to **Yes**, and then press **ENTER**.

Note The recorder will immediately pause and begin loading defaults; there is no way to stop or undo this process. After approximately 60 seconds the recorder will restart.

System Log

System Log allows you to review and export the system log.

Exporting the System Log

1. Connect a USB storage device to the recorder.
2. Select **System Log** and press **ENTER**.
3. Select **Export** and press **ENTER**.

Note The system log will automatically be exported to the connect USB device as a text file.

Note The system log text file will be located in subfolders designating the time and date of the export. In the root of the USB device will be a folder labeled in the format YYYYMMDD; within this folder will be a subfolder labeled in the format HHMMSS; and with this will be the log file export in the format LOG_HHMMSS.TXT.

Operation Log

Operation Log allows you to enable or disable the logging of user activity. When enabled, user activities (log ins, setting changes, video exports) will be included in the System Log. When disabled, user activities will not be included in the System Log.

Shutdown

Shutdown allows you to restart or shutdown the recorder, as well as configure what level of authorization is required to initiate these two functions.

Reboot

Select this option to restart the recorder.

Power Off

Select this option to shutdown the recorder.

Power Key Privilege

This option defines what prompts will be displayed when the power button is held down for five seconds. There are four options to choose from:

- Auth** Users will be prompted to login with an authorized account to shutdown the recorder (the Password Protection option under USERS must also be enabled). Enabling the Auth option will also enable the Confirm option.
- Confirm** Users will be prompted to press the ENTER key to complete the power off; or the ESCAPE key to cancel the shutdown.
- Direct** The recorder will automatically shut down without any prompt or confirmation.
- Disable** This option disables any shutdown option via use of the power button; leaving the Shutdown menu option as the only way to do a proper shutdown.

INFO



Use the INFO menu to view system information such as hardware and software version, and network address information.

Note The items displayed in this menu are read only and cannot be changed on this screen (Software version can change via upgrade on the SYSTEM menu, and Network Address can be customized via the NETWORK menu).

Model Name

Displays the model identifier of the recorder.

MAC Address

Displays the MAC (Media Access Control) of the recorder.

Network Address

Displays the IP Address of the recorder (can be customized via the NETWORK menu).

Hardware

Displays the hardware version of the recorder.

Software

Displays the software version of the recorder (can be upgraded via the SYSTEM menu).

OPERATION

LOGIN

1. Press **MENU**.
2. Select **admin** and press **ENTER**.
3. Enter the default password **1234** and press **ENTER**.

Change the Admin Password

To prevent unauthorized changes to the recorder settings, OpenEye recommends changing the default admin password.

1. Press **MENU**.
2. Login with a user that has admin privileges.
3. Select **USERS** and press **ENTER**.
4. Select **Account Setup** and press **ENTER**.
5. Select **Edit** to the right of the Password field and press **ENTER**.
6. Use the onscreen keyboard or channel buttons on the front panel to enter the password.

Note Passwords require a minimum of four characters; maximum of eight characters.

7. When you are finished select **OK** and press **ENTER**.
8. Select **Save** and press **ENTER**.

Disable Authentication Requirement for Menu Access

If unauthorized access is not a concern, username and password requirements can be disabled.

1. Press **MENU**.
2. Login with a user that has admin privileges.
3. Select **USERS** and press **ENTER**.
4. Select **Password Protection** and press **ENTER**.
5. Press **UP** arrow to change the selection to **OFF** and then press **ENTER**.

LIVE DISPLAY

Live Display is the default mode of the recorder. After startup the recorder will load to the Live Display. After being left idle on any menu, the recorder will return to the Live Display.

Channel Selection

To display an individual camera channel press the channel number buttons on the front panel, on the remote control, or via the onscreen menu bar using the mouse.

Display Mode

To cycle through the available the available display options press the DISPLAY button on the front panel or the remote control, or use the mouse to click Mode on the right-click menu or the onscreen menu bar. The display mode options depend on the recorder model (4, 8, or 16 channel); the available options are single channel, four cameras (2x2), nine cameras (3x3), and sixteen cameras (4x4).

Sequence

Once any Display Mode has been selected (except the 16 channel 4x4 view), press SEQ on the front panel or the remote control, or use the mouse to click Sequence on the right-click menu or the onscreen menu bar. The recorder will then begin sequencing through the camera channels based upon the Display Mode at the time the sequence is started.

Single Channel: The recorder will sequence through each camera channel individually. This sequencing mode can be customized using the Main Monitor Schedule option in the DISPLAY menu (see the section earlier in this manual).

4 Channel (2x2): The recorder will sequence through channels 1-4 in the first view, then channels 5-8, then 9-12, then 13-16. This sequence mode is only available on the 8 and 16 channels models; and the 8 channel will only sequence through channels 1-4 and 5-8.

9 Channel (3x3): The recorder will sequence through channels 1-9 in the first view, then channels 8-16. This sequence mode is only available on 16 channel models.

CALL MONITOR DISPLAY

Using the **CALL** button, you can define what is being displayed on the BNC Call Monitor output.

To display a single channel:

1. Press **CALL** on the front panel or the remote control, or use the mouse to click **SPOT** on the right-click menu or the onscreen menu bar.
2. Press any number button on the front panel or the remote control.
3. Press **ESC/EXIT** to return to Live Display mode.

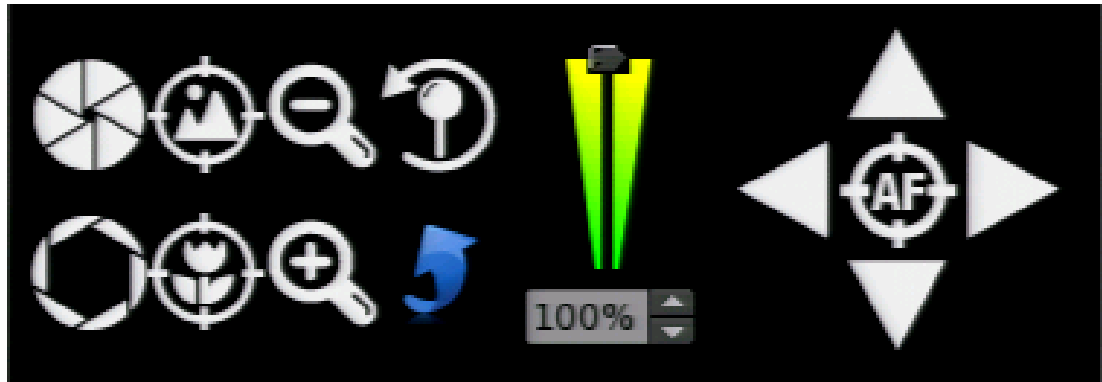
To display all camera channels in sequence:

1. Press **CALL** on the front panel or the remote control, or use the mouse to click **SPOT** on the right-click menu or the onscreen menu bar.
2. Press **SEQ** on the front panel or the remote control.
3. Press **ESC/EXIT** to return to Live Display mode.

Note The camera dwell time and the channels displayed in the sequence can be customized using the Spot Monitor Dwell and Spot Monitor Sequence located in the DISPLAY setup menu.

PTZ

To open the PTZ control menu, press **PTZ** on the front panel or the remote control, or use the mouse to click **PTZ** on the right-click menu or the onscreen menu bar.



The PTZ control menu can be controlled using the recorder front panel, the remote control, or the USB mouse; the mouse is the recommended control method for the best ease of use.

The available menu options on the left side of the PTZ control menu are **Iris Close**, **Iris Open**, **Focus Far**, **Focus Near**, **Zoom Out**, **Zoom In**, **Presets**, and **Exit**. In the middle is a slider that controls the pan and tilt speed (100% being fastest, 1% being slowest). On the right side are the pan and tilt arrow controls, and **Auto Focus**. For easiest use, all of these options can be clicked using the mouse pointer.

If a mouse is not available, the front panel or remote control can be used. Below is a chart listing the front panel and remote options to access the PTZ control menu items.

Recorder Front Panel	PTZ Control Menu	Remote Control
PLAY/STOP	Iris Close	Play
DISPLAY	Iris Open	Display
FREEZE	Focus Far	Focus -
SEQUENCE	Focus Near	Focus +
SEARCH	Zoom Out	Zoom -
MENU	Zoom In	Zoom +
1	Presets	1
ESC	Exit	EXIT
3	Decrease Pan/Tilt Speed	3
4	Increase Pan/Tilt Speed	4
Arrow Buttons	Directional Controls	Arrow Buttons
ENTER	Auto Focus	ENTER

Note Some of these options may be dependent on the model of the PTZ camera being controlled

Presets

When the PTZ control menu is open, click the **Preset** icon with the mouse pointer (or press **1** on the front panel or remote). From the Preset screen preset camera positions can be set or called, and tours can be started.

Note Preset position and tours are stored in the camera, **not** in the recorder.

Note Most PTZ cameras have a designated preset that can be called to open the cameras onscreen menu; please reference the camera manual or manufacturer website for details.

Creating a Camera Position Preset

1. Press the channel button of the PTZ camera you want to work with.
2. Press **PTZ** on the front panel or the remote control, or use the mouse to click PTZ on the right-click menu or the onscreen menu bar.
3. Use the direction arrows and zoom to position the camera in a location you want to save.
4. Press **1** on the front panel or the remote control, or use the mouse to click **Presets**.
5. Enter a number for the preset position you want to create.
6. Select **Set Preset** and press **ENTER** (or click **Set Preset** with the mouse).

Calling a Camera Position Preset

1. Press the channel button of the PTZ camera you want to work with.
2. Press **PTZ** on the front panel or the remote control, or use the mouse to click PTZ on the right-click menu or the onscreen menu bar.
3. Press **1** on the front panel or the remote control, or use the mouse to click **Presets**.
4. Enter the number of the preset position you want to call.
5. Select **Go Preset** and press **ENTER** (or click **Go Preset** with the mouse).

Calling a Camera Tour

1. Press the channel button of the PTZ camera you want to work with.
2. Press **PTZ** on the front panel or the remote control, or use the mouse to click PTZ on the right-click menu or the onscreen menu bar.
3. Press **1** on the front panel or the remote control, or use the mouse to click **Presets**.
4. Enter the number of the tour you want to call.
5. Select **Run Tour** and press **ENTER** (or click **Run Tour** with the mouse).

Note Some camera models do not support tours and some only support a single tour. Most cameras that do support tours require the tour configuration be done through the cameras onscreen menus, please reference the camera manual or manufacturer website for details.

SEARCH

Search Menu

Search By Time

Start: 2012/08/03 07:49:37 AM

End: 2012/08/06 10:45:30 AM

Select: 2012/08/06 10:45:25 AM

Begin Playback START

Calendar Search ENTER

Search By Event

Select Channel: Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 Ch7 Ch8 Ch9 Ch10 Ch11 Ch12 Ch13 Ch14 Ch15 Ch16 Ch17 Ch18 Ch19 Ch20 Ch21 Ch22 Ch23 Ch24 Ch25 Ch26 Ch27 Ch28 Ch29 Ch30 Ch31 Ch32 Ch33 Ch34 Ch35 Ch36 Ch37 Ch38 Ch39 Ch40 Ch41 Ch42 Ch43 Ch44 Ch45 Ch46 Ch47 Ch48 Ch49 Ch50 Ch51 Ch52 Ch53 Ch54 Ch55 Ch56 Ch57 Ch58 Ch59 Ch60 Ch61 Ch62 Ch63 Ch64 Ch65 Ch66 Ch67 Ch68 Ch69 Ch70 Ch71 Ch72 Ch73 Ch74 Ch75 Ch76 Ch77 Ch78 Ch79 Ch80 Ch81 Ch82 Ch83 Ch84 Ch85 Ch86 Ch87 Ch88 Ch89 Ch90 Ch91 Ch92 Ch93 Ch94 Ch95 Ch96 Ch97 Ch98 Ch99 Ch100 All

Event List ENTER

To open the Search Menu, press **SEARCH** on the front panel or the remote control, or use the mouse to click **Search** on the right-click menu or the onscreen menu bar.

There are four different search methods that can be used to find the desired video to playback: Play First or Last Video, Select a Date and Time to Play, Review Calendar to Select Date and Time to Play, Search By Event.

Play First or Last Video

1. Press **SEARCH**.
 - The **Start** field displays the earliest recorded data available.
 - The **End** field displays the most recent recorded data available.
2. Select **Start** or **End** and press **ENTER** to start playback.
3. Press **SEARCH** at any time to return to the Search Menu.
4. Press **STOP** at any time to stop playback and return to live view.

Select a Date and Time to Play

1. Press **SEARCH**.
2. Highlight the **Select** field and press **ENTER**.
3. Use **LEFT** and **RIGHT** to navigate date and time options; **UP** and **DOWN** to change the options.
4. Press **ENTER** again when the desired date and time is displayed in the **Select** field.
5. Highlight **Begin Playback** and press **ENTER** to start playback.
6. Press **SEARCH** at any time to return to the Search Menu.
7. Press **STOP** at any time to stop playback and return to live view.

Review Calendar to Select Date and Time to Play

1. Press **SEARCH**.
2. Highlight **Calendar Search** and press **ENTER**.
3. The calendar will display highlighted dates if there is recorded data.
4. Below the calendar a horizontal bar represents 24 hours, and will display yellow highlights to indicate recorded data.
 - Click **START** to change the Select date and time to the earliest recorded data.
 - Click **END** to change the Select date and time to the most recent recorded data.
5. Highlight **Select** and press **ENTER**.
6. Use **LEFT** and **RIGHT** to navigate date and time options; **UP** and **DOWN** to change the options.
7. Press **ENTER** again when the desired date and time is displayed in the **Select** field.
8. Highlight **Begin Playback** and press **ENTER** to start playback.
9. Press **SEARCH** at any time to return to the Search Menu.
10. Press **STOP** at any time to stop playback and return to live view.

Search By Event

1. Press **SEARCH**.
2. Highlight the **Select Channel** field and press **ENTER**.
3. Use **LEFT** and **RIGHT** to navigate the channels and **ENTER** to check or uncheck desired channels to search.
4. Press **ESC** when channel selection is complete.
5. Select **Event List** and press **ENTER**.



Date Time	Ch	Type
2012/08/06 AM 11:18:13	1	Motion
2012/08/06 AM 11:17:48	1	Motion
2012/08/06 AM 10:54:11	1	Motion
2012/08/06 AM 10:48:10	1	Motion
2012/08/06 AM 10:47:26	1	Motion
2012/08/06 AM 10:47:01	1	Motion

First Page

<<< << < > >> >>>

6. Select the desired event and press **ENTER**.
 - Use the single arrow button to navigate one page at a time, the double arrow button to navigate ten pages at a time, and the triple arrow button to navigate one hundred pages at a time.
7. To view just the event, select **Replay** and press **ENTER**.
8. To start playback at the time of the event, select **Play** and press **ENTER**.
9. Press **SEARCH** at any time to return to the Search Menu.
10. Press **STOP** at any time to stop playback and return to live view.

BACKUP FROM SEARCH: QUICK BACKUP

The Quick Backup function allows you to quickly select and export video footage while searching, using as few as three button presses.

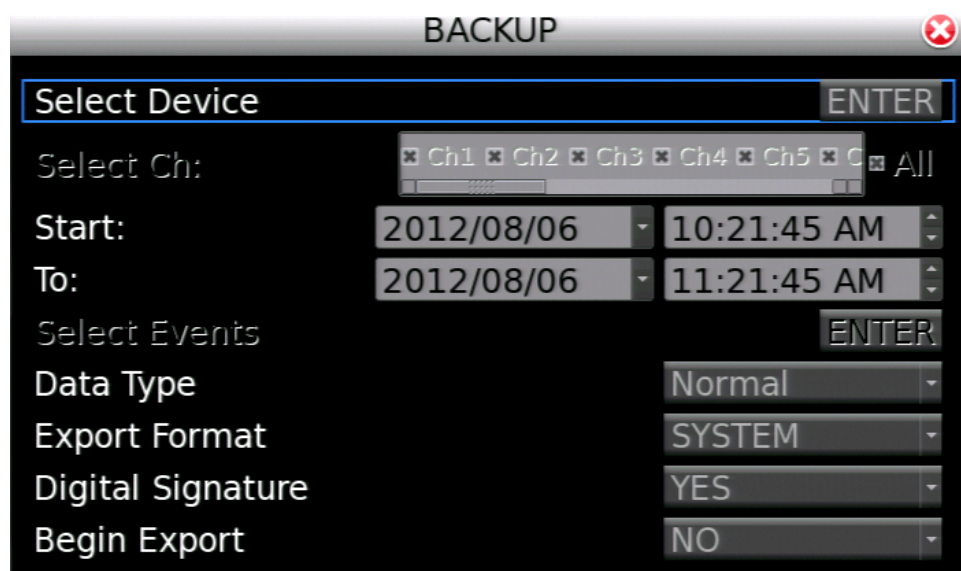
Backup a Selection of Video with Quick Backup

1. Connect a USB thumb drive or external hard drive to the front panel of the recorder.
2. Start a Search:
 - Use one of the three standard search methods detailed in the previous section (**Play First or Last Video**, **Select a Date and Time to Play**, **Review Calendar to Select Date and Time to Play**).
3. During playback, at the point you want the backup segment to begin, press **BACKUP**.
 - An onscreen icon will appear indicating “point A” in the backup has been designated.
4. As playback continues, at the point you want the backup segment to end, press **BACKUP** again.
 - The Quick Backup Confirmation screen will appear; this screen will display the required space to complete the backup as well as the date and time range of the backup.
5. Press **ENTER** to confirm the backup for the selected video.
6. When completion message appears, press **ENTER** and remove the USB drive.

Backup Event Video with Quick Backup

1. Connect a USB thumb drive or external hard drive to the front panel of the recorder.
2. Start an Event Search (reference the previous section **Search By Event**).
3. Once you have selected an event, press **BACKUP**.
 - The Quick Backup Confirmation screen will appear; this screen will display the required space to complete the backup as well as the date and time range of the backup.
4. Press **ENTER** to confirm the backup for the selected video.
5. When completion message appears, press **ENTER** and remove the USB drive.

BACKUP (EXPORT)



BACKUP

Select Device ENTER

Select Ch: Ch1 Ch2 Ch3 Ch4 Ch5 Ch6 All

Start: 2012/08/06 10:21:45 AM

To: 2012/08/06 11:21:45 AM

Select Events ENTER

Data Type Normal

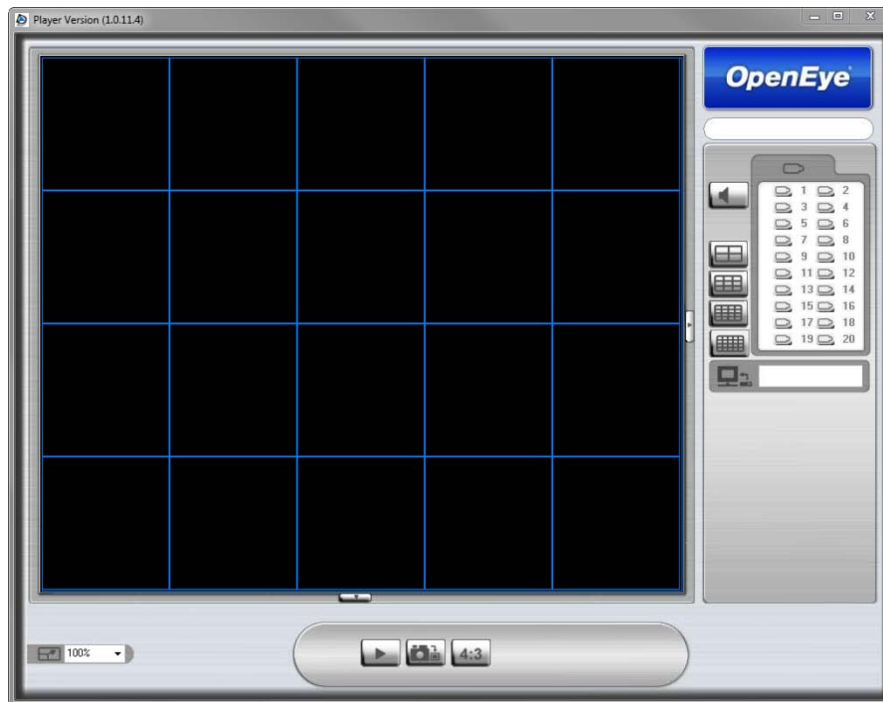
Export Format SYSTEM

Digital Signature YES

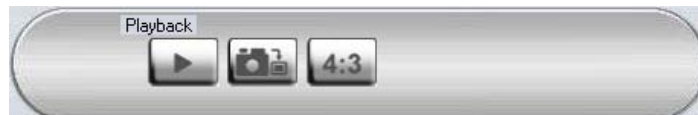
Begin Export NO

1. Connect a USB thumb drive or external hard drive to the front panel of the recorder.
2. Press **BACKUP**.
3. Select **Select Device** and press **ENTER**.
4. Select the desired USB device and press **ENTER**.
5. Press **UP** arrow to change the selection to **YES** and then press **ENTER**.
6. Select the camera channels to export.
7. In the **Start** field select the date and time for the start point of the backup.
8. In the **To** field select the date and time for the end point of the backup.
9. Select the **Export Format**.
 - **AVI** provides a compressed video file viewable in most media player applications.
 - **DRV** provides a compressed video file viewable only with the included proprietary player software.
 - **SYSTEM** provides a raw (uncompressed) video file viewable only with the included proprietary player software.
10. Select **Begin Export** and press **ENTER**.
11. Press **UP** arrow to change the selection to **Yes** and then press **ENTER**.
12. When completion message appears, press **ENTER** and remove the USB drive.

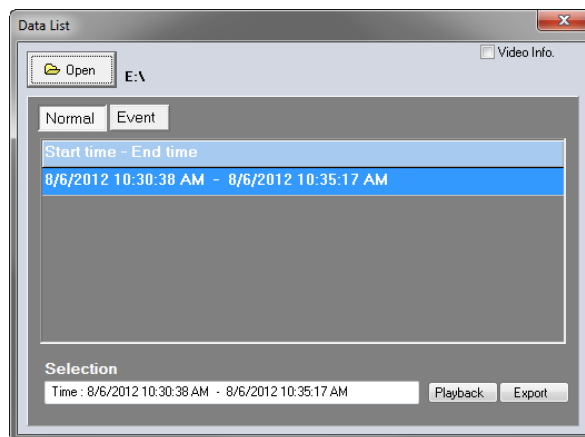
BACKUP VIEWER



1. Connect the USB thumb drive or external hard drive containing backup video to your PC.
2. Browse to the USB drive and open the **Player** folder.
3. Double-click **DVR_Player**.
4. Click the **Playback** button near the bottom of the window.



- Available video backups located on the USB drive will be displayed.
5. Select the desired video timeframe and click **Playback**.



6. Choose the camera channels to be displayed in playback and click **OK**.
7. Playback of the selected video will begin.

UPGRADE THE RECORDER FIRMWARE

Note The currently installed version can be checked on the INFO menu.

1. Visit **openeye.net** to download the latest firmware version.
2. Unzip the downloaded firmware update to the root of a USB storage device.
 - It will unzip a folder labeled “upd_88ts” that contains four files; DO NOT change this folder label or relocate any of the files it contains.
3. Connect the USB storage device that contains the upgrade software to the recorder.
4. Press **MENU**.
5. Select **SYSTEM** and press **ENTER**.
6. Select **Upgrade** and press **ENTER**.
7. Select **Software Upgrade** and press **ENTER**.
8. At the Upgrade prompt press **ENTER**.
9. Select the version you want to upgrade to and press **ENTER**.
10. Press the **DOWN** arrow to change the selection to **YES** and press **ENTER**.

Note Wait for the upgrade to complete, and the recorder to restart and return to the live screen before you remove the USB device.

11. Remove the USB storage device.

SAVE OR LOAD SETTINGS

The recorders configuration settings can be exported to and imported from a USB storage device.

Save Configuration

1. Connect a USB storage device to the recorder.
2. Press **MENU**.
3. Select **SYSTEM** and press **ENTER**.
4. Select **Configuration** and press **ENTER**.
5. Select **Export** and press **ENTER**.
6. Select **Destination** and press **ENTER**.
7. Select the USB storage device to export to and press **ENTER**.
8. Press **DOWN** arrow to change the selection to **Yes**, and then press **ENTER**.
9. Select **File Name** and press **ENTER**.
10. Use the onscreen keyboard to enter the desired file name (up to 15 characters).
11. When you are finished select **OK** and press **ENTER**.
12. Select **Export** and press **ENTER**.
13. Press **DOWN** arrow to change the selection to **Yes**, and then press **ENTER**.

Load Configuration

1. Connect a USB storage device to the recorder that contains a configuration export file.
2. Press **MENU**.
3. Select **SYSTEM** and press **ENTER**.
4. Select **Configuration** and press **ENTER**.
5. Select **Import Configuration** and press **ENTER**.
6. Select the configuration file you want to import and press **ENTER**.
7. Press **DOWN** arrow to change the selection to **Yes**, and then press **ENTER**.
8. Press **ENTER** to confirm the configuration load and system restart.

Note This load and restart may take up to 5 minutes, and cannot be aborted or interrupted.

REMOTE CONNECTION

The recorder has built-in web-based remote software that can be accessed if the recorder has a network connection. This web-based remote software requires Microsoft® Internet Explorer®.

Note Mozilla® Firefox®, Google™ Chrome™, or Apple® Safari® can be used to connect to the recorder. These browsers have a single channel view limitation, restricting you to viewing only one camera at a time. The setup menus can be accessed, but no search and no backup options are available.

REMOTE CONNECTION SETUP

Configure the Recorder for Remote Access

Configure the recorder for DHCP or static IP address

Dynamic IP Address (DHCP)

1. Connect a RJ45 Ethernet cable with an active network connection to the recorder.
2. Press **MENU**.
3. Select **NETWORK** and press **ENTER**.
4. Select **LAN Setup** and press **ENTER**.
5. By default the recorder is set to DHCP, and the IP address will be displayed. Make a note of this IP address.
6. Press **ESCAPE** when finished.

Static IP Address

1. Connect a RJ45 Ethernet cable with an active network connection to the recorder.
2. Press **MENU**.
3. Select **NETWORK** and press **ENTER**.
4. Select **LAN Setup** and press **ENTER**.
5. Select **DHCP** and press **ENTER**.
6. Press **UP** arrow to change the selection to **Off** and then press **ENTER**.
7. Input the **IP**, **Netmask**, **Gateway**, and **DNS** for the network you will connect to.
8. Press **ESCAPE** when finished.

Configure Port Forwarding

To connect to the recorder with the remote software from an offsite location, the router or firewall device will need to be configured for port forwarding to the recorder.

1. Press **MENU**.
2. Select **NETWORK** and press **ENTER**.
3. Select **IP Advanced** and press **ENTER**.
4. Make a note of the Web Port; or you can customize the Web Port.
 - To customize the Web Port, press **ENTER**; then use the **UP/DOWN** arrow to select the desired port, and press **ENTER** when you have the desired port displayed.

Note By default the port is set to 80. Although ports 1 through 65535 are valid, to avoid possible conflicts we recommend using port 80, or ports 1025 through 65535.

5. Reference the manufacturer's website or manual for your router or firewall to complete the port forwarding configuration. Or reference a site like **portforward.com** that contains instructions for most router models.
 - Configure the router to forward the **Web Port** to the **IP** address of the recorder.

Establishing a Connection on the Remote Workstation

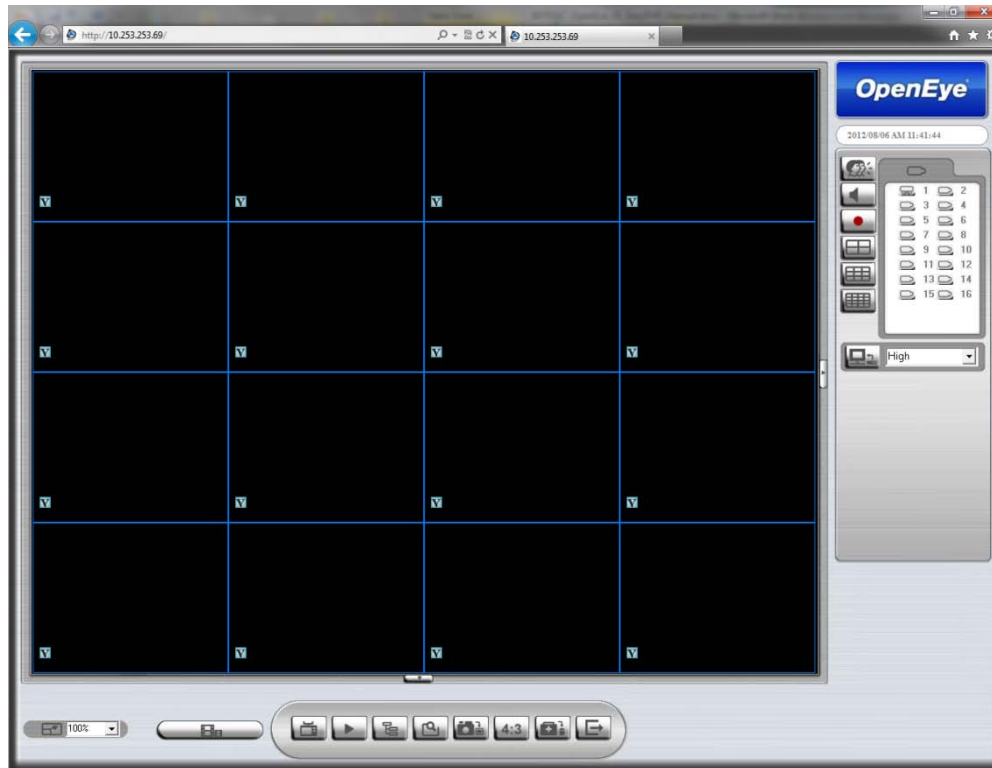
Connecting to the Recorder on a Local Area Network

1. Launch Internet Explorer.
2. In the address bar type in the IP address of the recorder and press **Enter**.
3. When prompted to allow/run/install the ActiveX component, choose the affirming option.
4. When prompted to login, provide an authorized username and password, and click **OK**.

Connecting to the Recorder from a Remote Location

1. Launch Internet Explorer.
2. In the address bar type in the public IP address location of the recorder and press **Enter**.
 - To find the public IP address, visit a website like **ipchicken.com** or **whatsmyip.org** from a computer on the same local area network as the recorder.
3. When prompted to allow/run/install the ActiveX component, choose the affirming option.
4. When prompted to login, provide an authorized username and password, and click **OK**.

USING THE REMOTE SOFTWARE



Channel Select

The channel select buttons allow you to view an individual camera channel in the viewing area.

2-Way Audio

2-Way Audio allows you to communicate via audio with someone at the recorder location (this requires speakers and microphone at both the recorder and the computer running remote software).

Live Audio

Live Audio allows you to listen to live audio from audio sources connected to the recorder.

Record (Backup)

Record allows you to save a backup to the local computer. This local save is done in DRV format only (this is a compressed video file viewable only with the player software). The Record button can be used to save video you are currently viewing live, or to save playback video while searching.

To save a segment of video while watching live video or playback video:

1. Click **Record** to start the video segment.
2. A 'Save As' prompt will open; select a location and file name, then click **Save**.
3. When you are ready to end the video segment click **Record** again.

Camera Display Divisions

The camera display division buttons allow you to choose the desired display view.

Normal Stream or Dual Stream

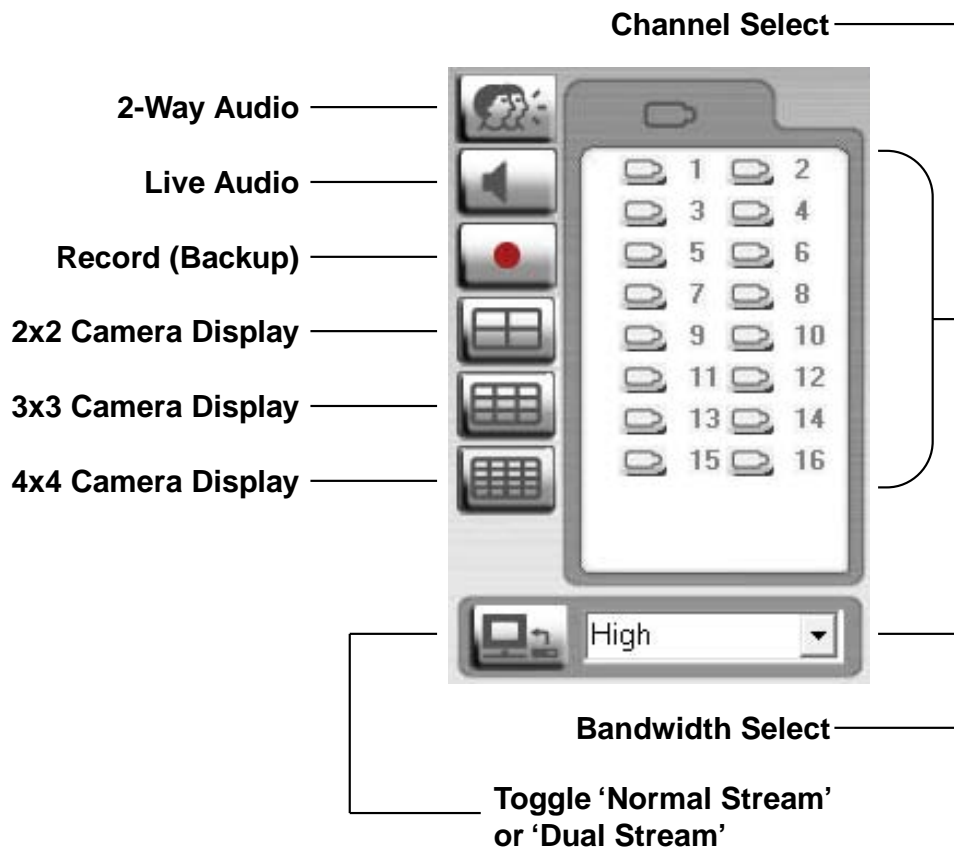
Dual Stream provides the highest quality video streaming from the recorder to the remote software. Normal Stream provides a lower quality video stream from the recorder for connections with less bandwidth.

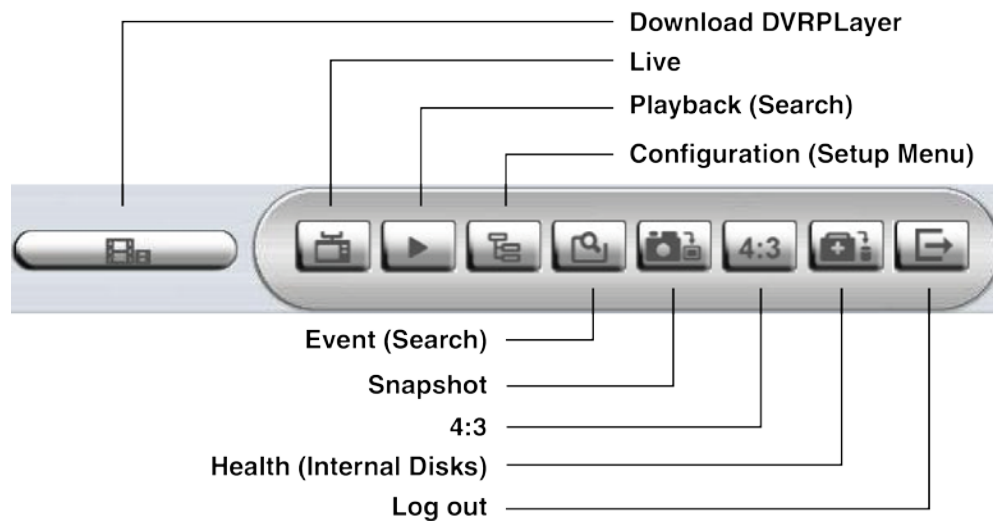
Bandwidth Select

The bandwidth select options are dictated by whether Normal Stream or Dual Stream is selected.

If Dual Stream is selected, your bandwidth select options are **High** (highest quality, highest bandwidth usage), **Middle**, or **Low** (low quality, low bandwidth usage).

If Normal Stream is selected, your bandwidth select options are **High Kbps** (high quality, high bandwidth usage), **Mid Kbps**, **Low Kbps**, **Poor Kbps** (lowest quality, lowest bandwidth usage).





Download DVRPlayer

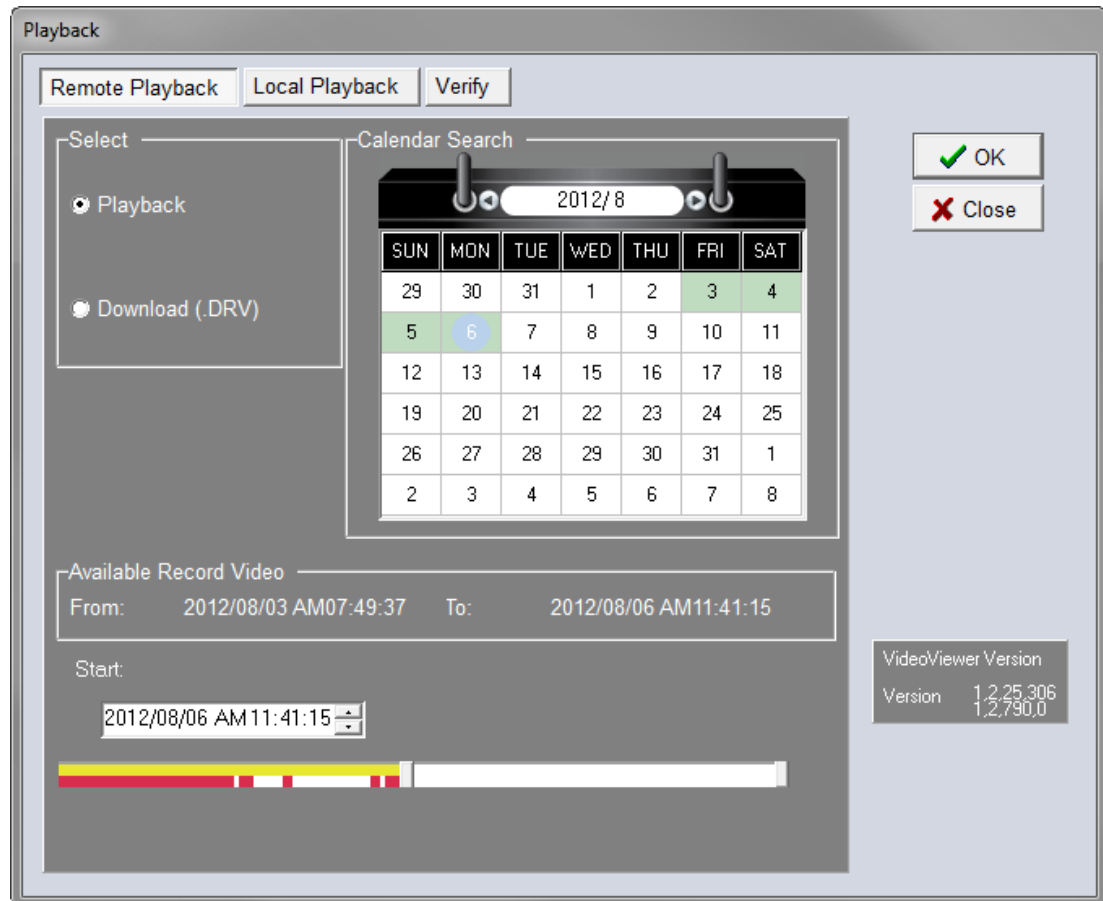
Download DVRPlayer allows you to download the proprietary player software. When you click this button you will be prompted to save or open a ZIP file; extract the contents of the ZIP file to a location on your computer's hard drive. To launch the player, double-click the **DVR_Player** executable.

Live

Live allows you to return to the live mode from Playback mode.

Playback (Search)

Playback allows you access to basic search function playback recorded video, download a segment of recorded video to your local workstation, or use the proprietary player to playback DRV video files already located on your computer.



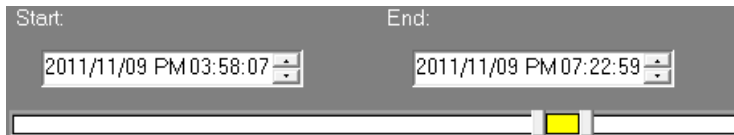
Playback Recorded Video

1. Click **Playback**.
2. Select the desired date from the calendar and the desired time (or move the left-hand 'Start' slider in the yellow bar).
3. Click **Execute**.
 - Playback of all channels at the selected time will begin.
 - Use the playback navigation buttons in the lower right to rewind, pause or fast forward.
4. Click **Live** when you are done with Playback and want to return to Live.



Download a Segment of Recorded Video

1. Click **Playback**.
2. Select **Download (.DRV)**.
3. A 'Save As' prompt will open; select a location and file name, then click **Save**.
4. Change the date and time of the **Start** field to the desired time (or move the left-hand 'Start' slider in the yellow bar).
5. Change the date and time of the **End** field to the desired time (or move the right-hand 'End' slider in the yellow bar).
6. Select the desired **Camera** channels.
7. Click **OK**.



Note Functions in the remote software will not be accessible until the download completes.

Playback DRV Files Already on your Computer

1. Click **Playback**.
2. Click **Local Playback**.
3. Click **Open**.
4. Browse to the location on your local computer where the desired DRV backup file is located; select the desired file and click **Open**.
5. Click **Execute**.
 - Playback of all channels at the selected time will begin.
 - Use the playback navigation buttons in the lower right to rewind, pause or fast forward.
6. Click **Live** when you are done with Playback and want to return to Live.



Configuration (Setup Menu)

Configuration allows you to access the recorder setup menu. Please reference the Setup chapter earlier in this manual for a complete description of menu options.

The screenshot shows a software window titled "Configuration". It has a tabbed interface with the following tabs: "Camera Setup", "Schedule Setup", "Alarms Setup", "Network Setup", "Display Setup", "System Setup", and "System/Version Info". The "System/Version Info" tab is currently selected and highlighted in blue. On the left side of the window, there is a vertical list of menu items, with "System/Version Info" also highlighted in blue. The main area of the window displays the following information:

Model Name	L08CF-16G2
MAC Address	00:D0:89:08:81:C9
Network Address	010.253.253.118
Hardware	77-24-00
Software	0074-0438-0668-745a

At the bottom of the window, there are three checkboxes: "Video Info." (unchecked), "Deflicker" (unchecked), and "Fullscreen smooth calculation" (checked). Below these checkboxes are three buttons: "OK", "Cancel", and "Apply".

Note Some menu options can only be configured when accessing the recorder physically. When connected remotely these option may appear as read only in the configuration menu, or may be hidden completely.

Event (Search)

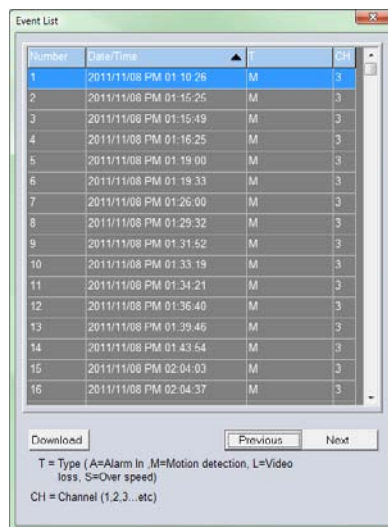
Event allows you to search based on event recorded video. Each event can be downloaded or reviewed in playback.

View an Event in Playback

1. Click Event.
2. Double-click the desired event.
 - Playback of all channels at the selected time will begin.
 - Use the playback navigation buttons in the lower right to rewind, pause or fast forward.
3. Click Live when you are done with Playback and want to return to Live.

Download an Event to your Computer

1. Click **Event**.
2. Select the desired event and click **Download**.
3. A 'Save As' prompt will open; select a location and file name, then click **Save**.



Snapshot

Snapshot allows you to take a screen capture of the remote interface (everything inside the browser window, but not the browser itself). This screen capture is automatically save in JPEG format to the local Desktop.

4:3

4:3 allows you to force the camera aspect ratio to 4:3. By default the aspect ratio will dynamically resize based on the size of the browser window; this may cause distortions in the picture you are viewing. This option allows you to correct that distortion by forcing the aspect ratio to 4:3. Clicking 4:3 a second time will return to dynamic ratio.

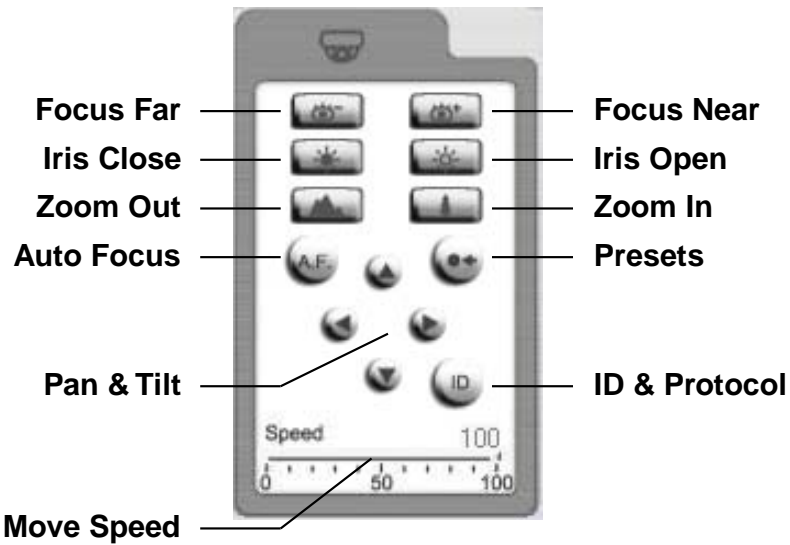
Health

Health allows you to quickly check the status of any storage devices connected to the recorder (internal or external).

DVR health status				
Device name	Int./Ext.	Total size	State	Temperature
1:ST2000VX002-1A	Internal	1850GB	Active	38
1:FLASH Drive SM	External	1GB	NonActive	0

PTZ

Use the channel select buttons to view a single PTZ camera to enable the onscreen pan-tilt-zoom controller.



Please reference the PTZ section in the Operation chapter earlier in this manual for details on each of these functions.

The RS-485 ID and protocol configuration can be changed for the selected channel by clicking the ID button.

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