

OpenEye[®]

Hybrid Video Recorder

Hardware Manual



H-Series

H4

OE5-H4U48016
OE5-H4U48008

X-Series

X4

OE5-X4U48032
OE5-X4U48016
OE5-X4U24032
OE5-X4U24016
OE5-X4U24008

X3

OE5-X3U24016
OE5--X3U2400
OE5-X3U24016E
OE5-X3U12016R
OE5-X3U12008R

www.openeye.net

OpenEye® X-Series HVR

Hardware Manual

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

Note Text set off in this manner indicates information that is necessary for proper operation of the product.

Tip Text set off in this manner indicates information that may be helpful.

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

OPENEYE

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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.

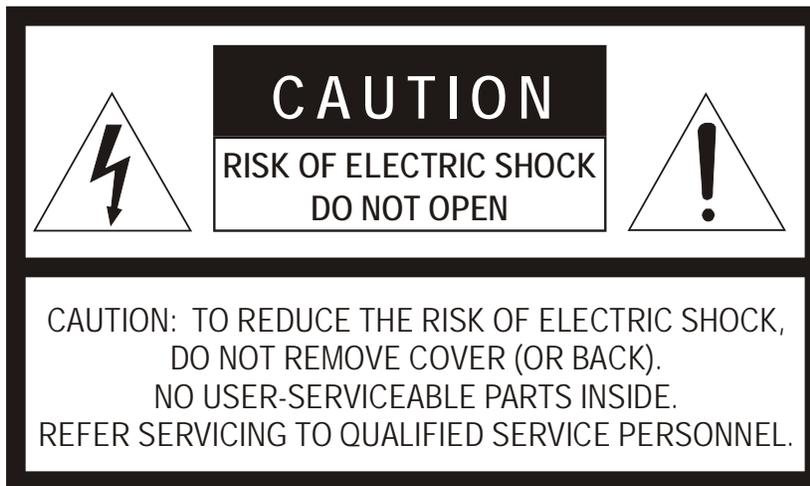
If the HVR is used in such a situation, it may damage discs and internal parts. Remove any CD discs, connect the power cord of the HVR to the wall outlet, turn on the HVR, and leave it for two to three hours. After two to three hours,

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

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

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.

UL NOTICE

Underwriters Laboratories Inc. has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock and casualty hazards as outlined in UL's Standard for Safety UL 60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT.

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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 X-Series HVR 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 information that is necessary for proper operation of the product.

Tip Text set off in this manner indicates information that may be helpful.

TECHNICIAN NOTES

Warning Only authorized technicians trained by OpenEye should attempt to repair this HVR. 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:

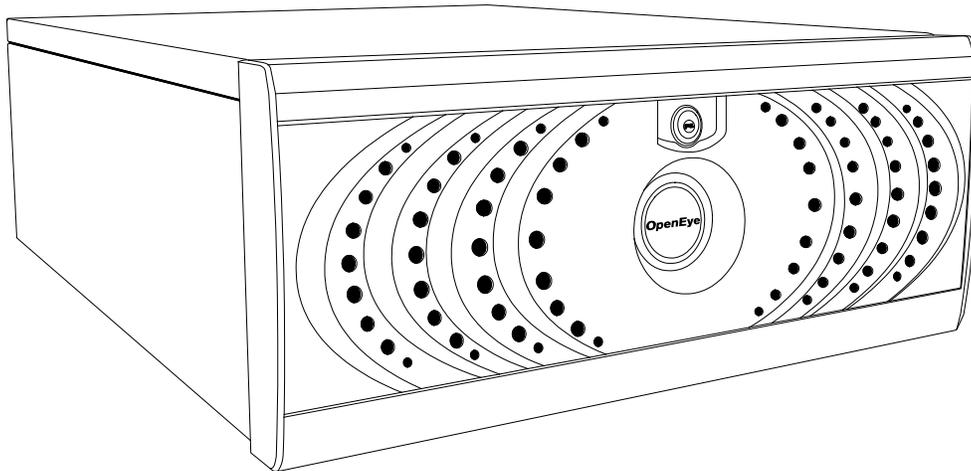
- Do not disable the power grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Disconnect the power from the computer by unplugging the power cord either from the electrical outlet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

NOTES:

INTRODUCTION

PRODUCT DESCRIPTION



OpenEye X-Series HVRs are a server that performs as a High Definition Digital Recorder. By utilizing the many features of a computer, including processing power, storage capacity, graphics compression, and security features, the HVR is more powerful than the analog recorders of the past.

The OpenEye HVR server software comes pre-configured for fast and seamless integration within your existing IT infrastructure. Designed around Microsoft® Windows 7 Embedded, the server software offers unparalleled stability, security, and ease of use. Accordingly, your security investment has never been easier to maintain. Multiple users may simultaneously connect through any network connection for instantaneous live viewing, digital search, and off site video storage. Users can also connect remotely through DSL, Cable Modems, or ISDN. This powerful software enables users to establish recording schedules, create motion detection zones, use PTZ controls, and configure alarm inputs and outputs for each of the system's cameras. With the latest advancements in the HVR Server Software, searching and indexing your video archive has never been easier. Video can now be found, viewed, and exported in a number of file formats with just a few clicks.

The OpenEye HVR is a high performance security product ready to meet today's security demands.

FEATURES

OpenEye's HVRs include the following new features:

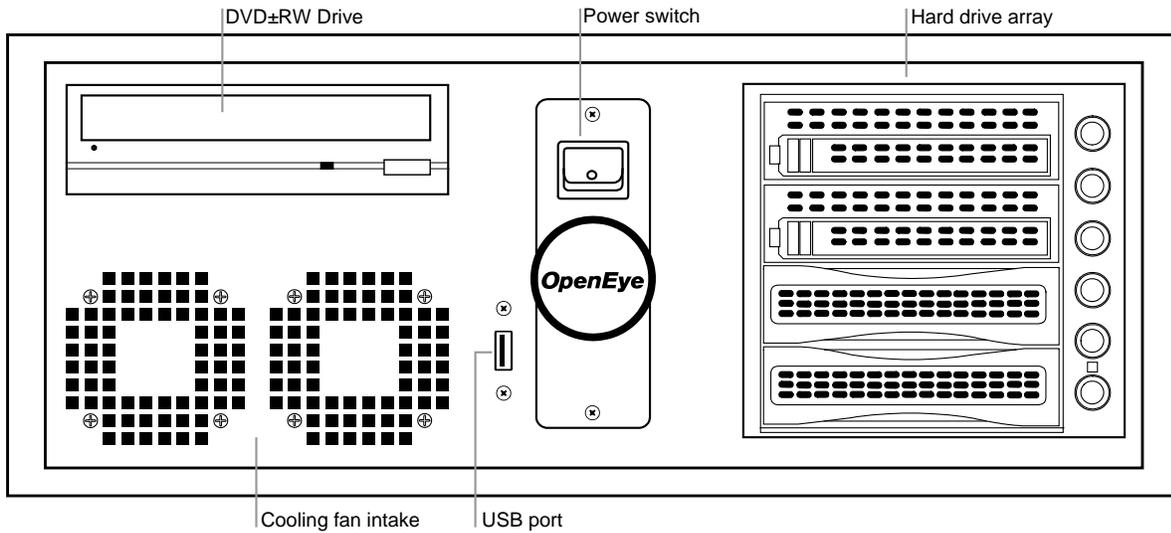
- Optimized and Designed for Microsoft® Windows 7 Embedded
- Up to 32 Camera Inputs
- Supports up to 32 Network Cameras
- Supports up to 16 Relay Outputs on Alarm Activation
- Supports up to 16 Sensor Inputs for Alarm Control
- Remote System Operation & Configuration
- Supports Multiple Simultaneous Remote Connections
- PAN / TILT / ZOOM Controls
- Simultaneous Video Search, Playback and Backup
- Video Indexes for Easy Searching
- Multiple Levels of Security Access
- Up to 32 Looping Outputs
- Up to 2 Composite Outputs
- Up to 16 Audio Inputs
- High Performance, Durable, Rackmount Case
- Output the Video to a NTSC/PAL Display
- Up to 12TB Internal Storage
- Digital Signature Support
- Continuous, Motion Detection, Alarm, Pre-Alarm, and Scheduled Recording Modes
- Hardware Watchdog
- Recording Resolutions
NTSC : 720x480 / 720x240 / 360x240 / 640x480, 640x240, 320x240 on the 240E
PAL: 720x576 / 720x288 / 360x288 / 640x576, 6480x288, 320x288 on the 240E

CONTROLS AND CONNECTIONS

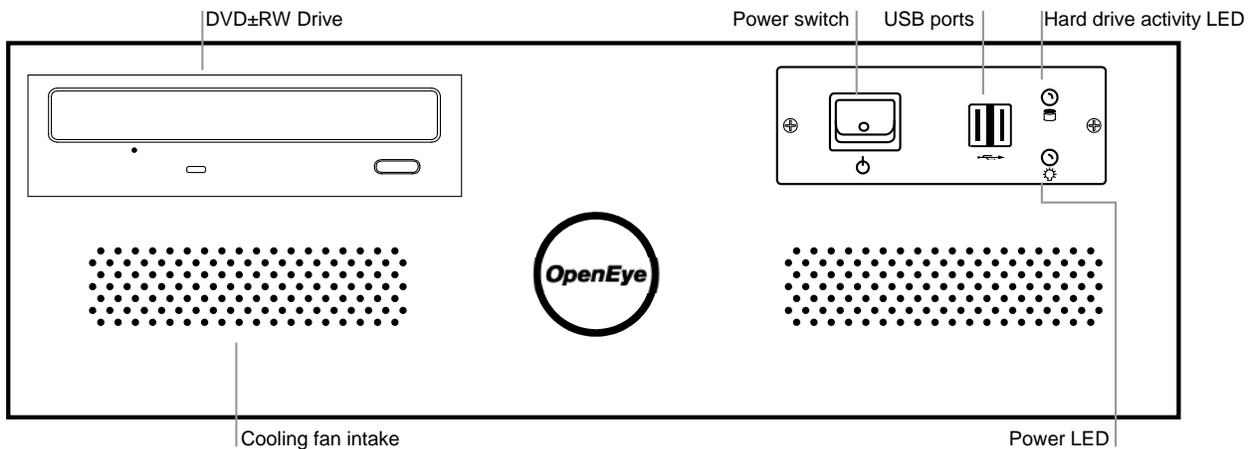
FRONT PANEL CONTROLS AND LEDS

The front panel of the HVR contains the devices that will be commonly used for data removal, retrieval, and backup replacement. The most common components and buttons are shown below:

X4 Front Panel



X3 Front Panel

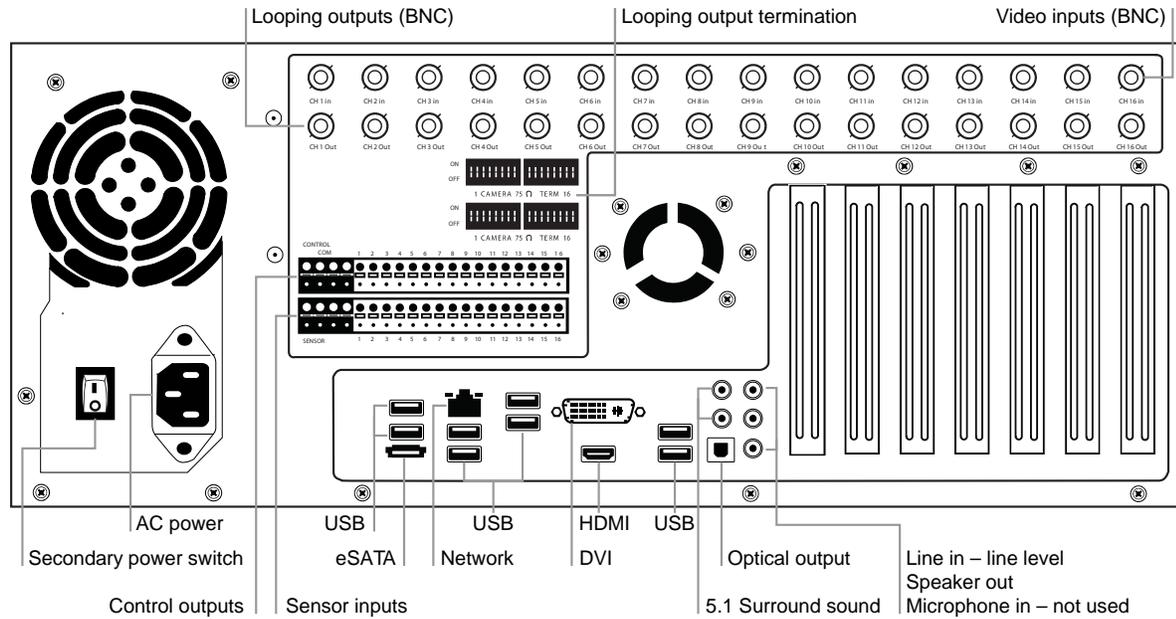


REAR PANEL CONNECTORS

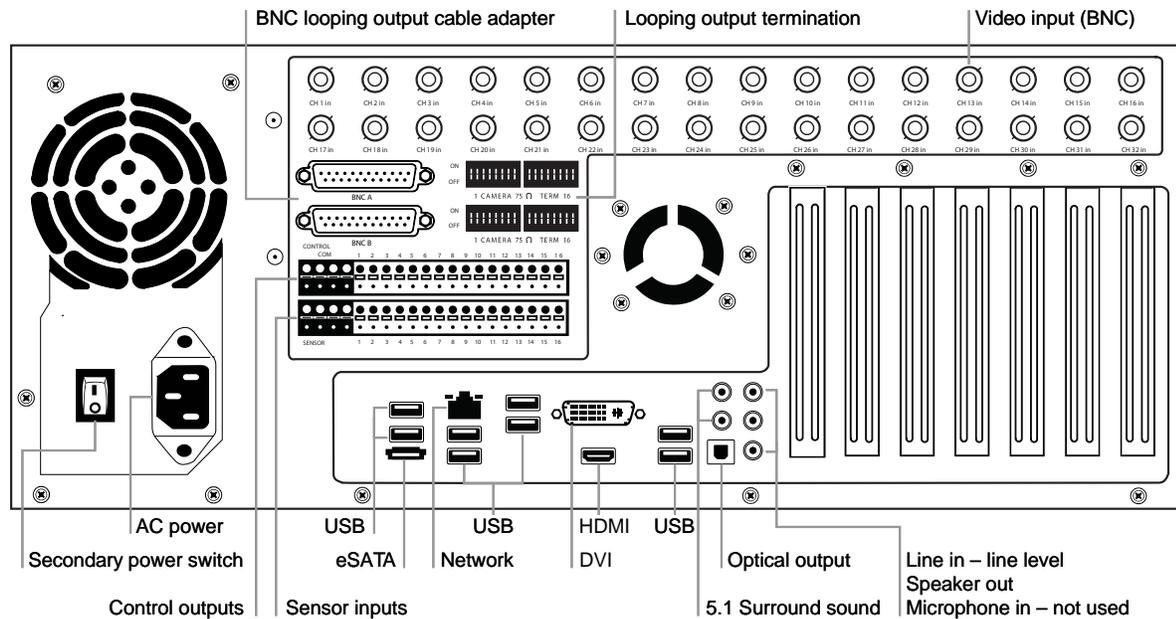
The rear panel of the HVR contains the connectors used to attach cameras, sensors, and relays to the HVR. Below are diagrams that outline the location and description of each connector:

X4 Rear Panel

8/16 Channel HVR

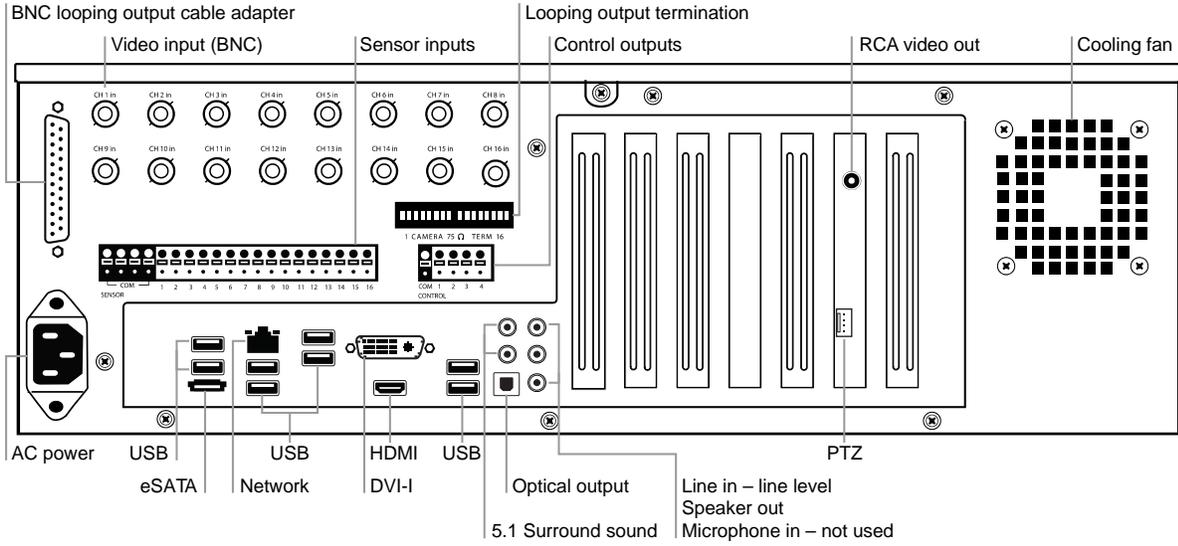


32 Channel HVR

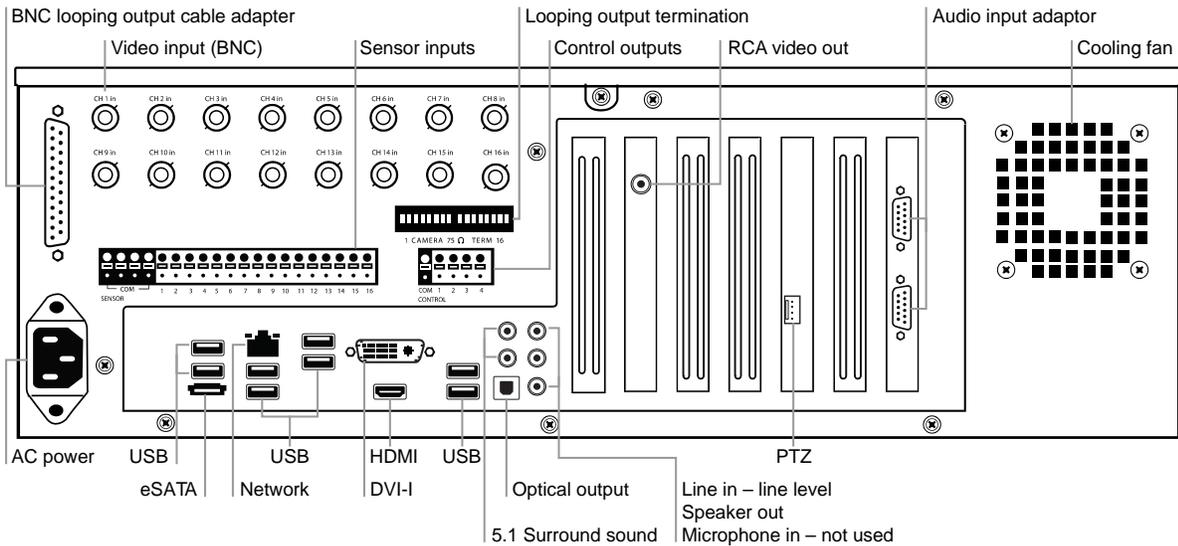


X3 Rear Panel

16 Channel (240E)

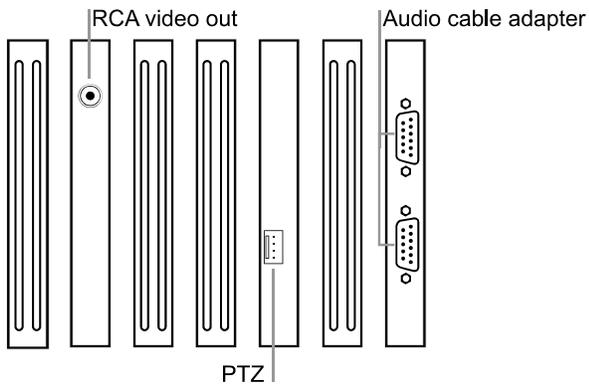


8/16 Channel

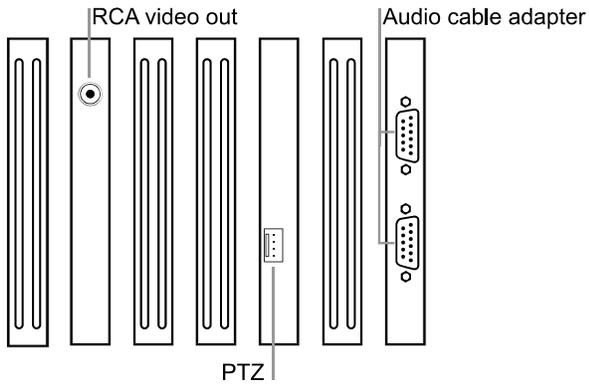


PCI Slot Configurations

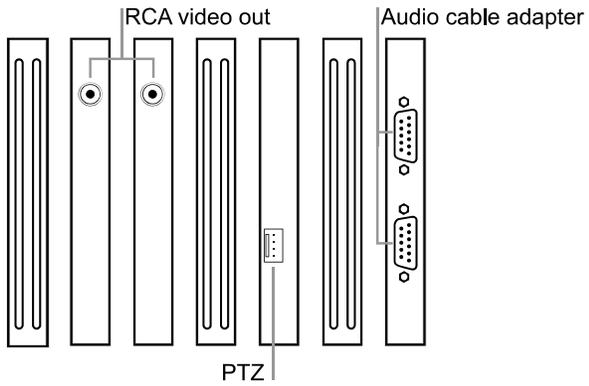
120R IPS PCI Configuration



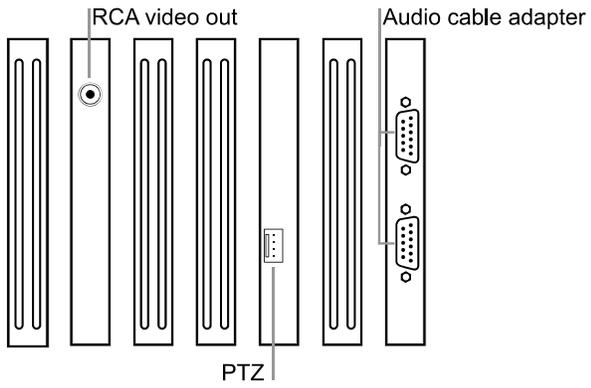
240 IPS 8/16 Channel PCI Configuration



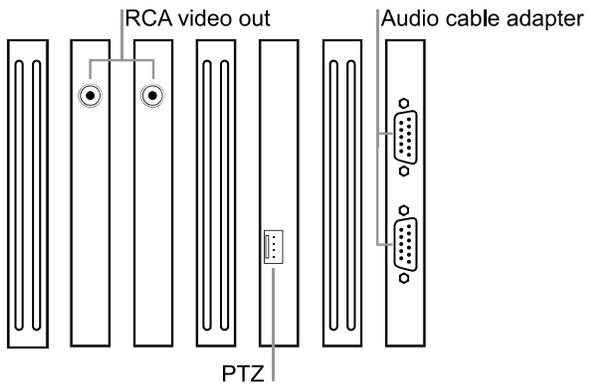
240 IPS 32 Channel PCI Configuration



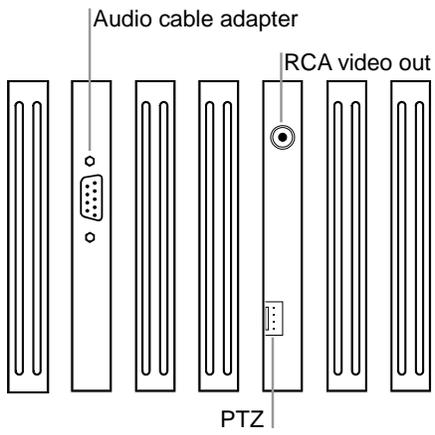
480 IPS 16 Channel PCI Configuration



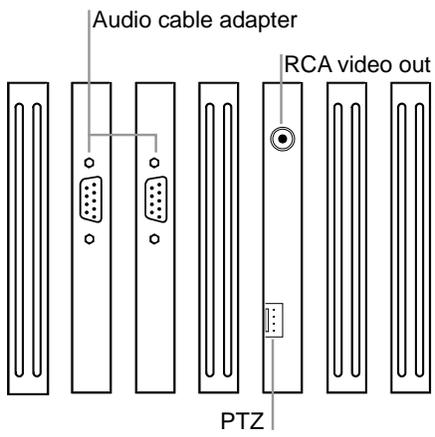
480 IPS 32 Channel PCI Configuration



H.264 240 IPS 8 Channel



H.264 480 IPS 16 Channel



GETTING STARTED

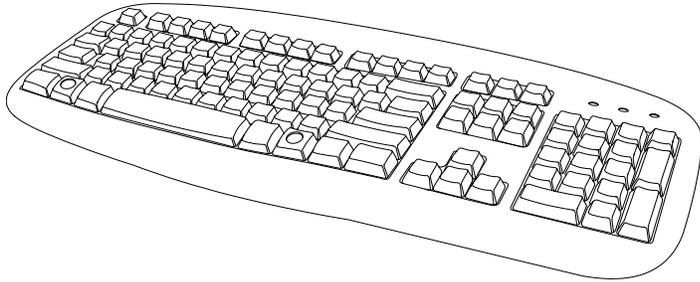
IDENTIFYING INCLUDED COMPONENTS

OpenEye HVRs come with a mouse, keyboard and selected software and cables. Identify the following components to make sure everything has been properly included with the new HVR. If any of the following items are missing, contact the dealer to arrange a replacement.

 <p>HVR Case Key</p>	 <p>Mouse</p>	 <p>Keyboard</p>
 <p>Repair Disc/ Software Disc</p>	 <p>Power Cable</p>	 <p>PTZ Adapter</p>
 <p>BNC to RCA Adapter</p>	 <p>BNC Connector Cable (8/16 CH X3 or 32 CH X4 Only)</p>	 <p>DVI to VGA Adapter</p>
 <p>8 CH Audio Cable</p>		 <p>Rack Mount Kit</p>

KEYBOARD SETUP

To attach the keyboard to the HVR, plug the end of the Keyboard into a USB port located on the back of the machine.



MOUSE SETUP

To attach the mouse to the HVR, plug the end of the mouse into a USB port located on the back of the machine.

The mouse uses a cursor called a pointer. Pointers come in many different shapes but are most commonly shaped like an arrow.

The mouse has two buttons: a left button and a right button. Quickly pressing and releasing one of these buttons is called clicking. Sometimes you will need to double-click – or click the same button twice quickly.

In this manual:

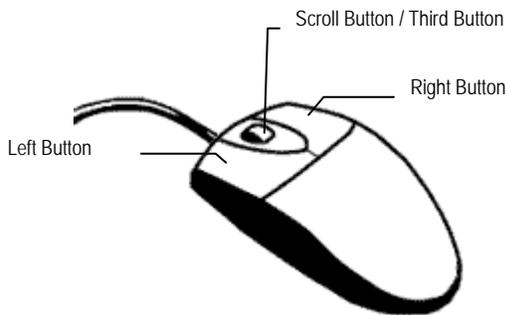
Click means to position the mouse cursor over an item and to single click the left button.

Right click means to position the mouse cursor over an item and to single click the right button.

Double-click means to position the mouse cursor over an item and to click the left button twice.

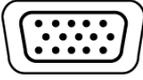
Select means to position the mouse cursor over a radio button, checkbox, or list item and click on it.

The scroll wheel in between the two buttons is used for added navigation functionality. By moving the wheel with index finger (scrolling), quickly move through multiple pages, lines, or windows. The wheel may also function as a third button allowing the user to quickly click or double-click an icon or a selected item



MONITOR SETUP

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

	HDMI Output	To TV / Digital Display
	DVI-I Output	To TV / Digital Display
	DVI to SVGA	Connect adapter to DVI output to connect an analog VGA Monitor

Attach the monitor or monitors to the rear of the HVR 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

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.

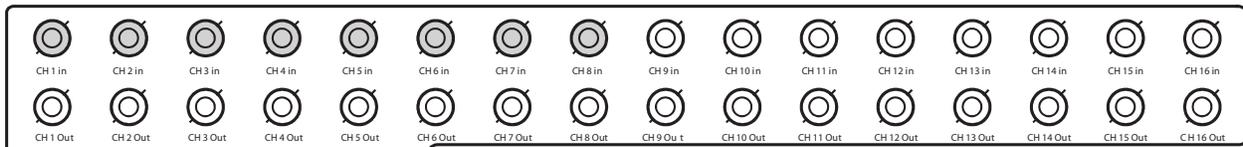
Disconnect the power from the computer by unplugging the power cord either from the electrical outlet or the computer.

MAKING CONNECTIONS ON AN X4 HVR

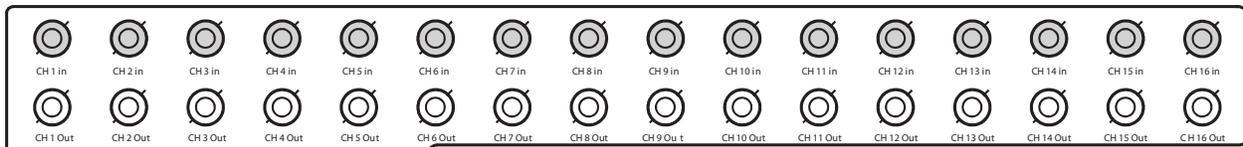
Connecting a Video Source

There are different types of Video Sources that can be plugged into the HVR including DVD players, VHS players, and CCTV Cameras. The back of the HVR contains up to 32 video inputs depending on the HVR model. The connectors use the BNC standard.

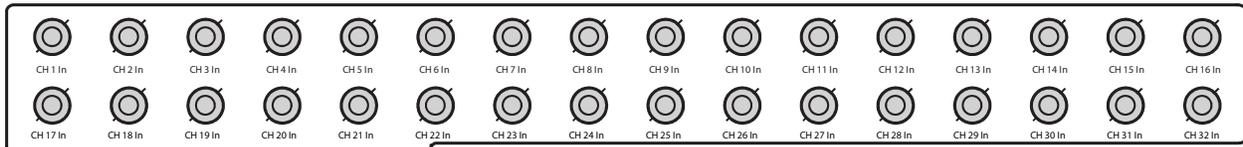
8 Channel HVR



16 Channel HVR



32 Channel HVR

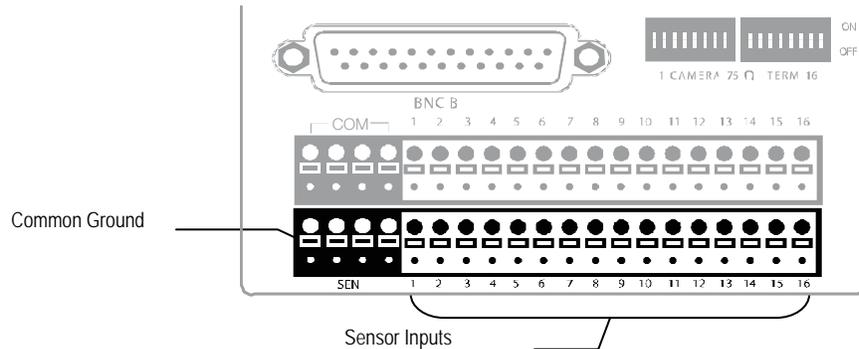


The video inputs are 75 Ω BNC connectors. Plug one end into the video source (DVD, Camera, etc.) and plug the other end into the desired BNC input on the HVR.

Connecting Sensors to the HVR

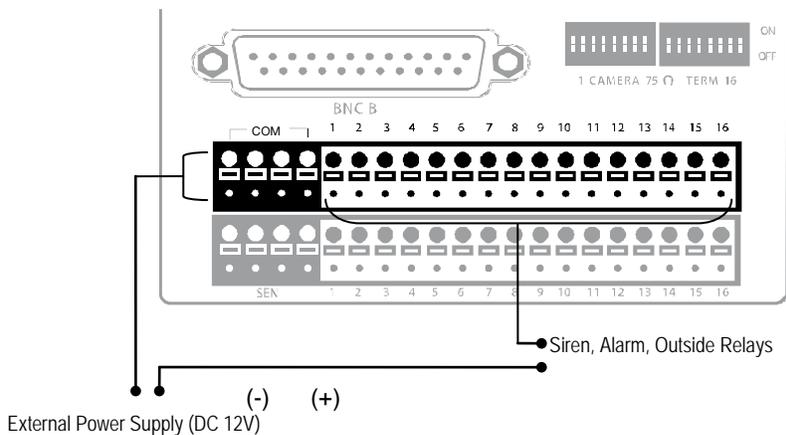
Each HVR has up to 16 Sensor inputs. These inputs can be used with devices such as infrared devices, motion device, glass breakage alarms, door and window trips, and many more. The Sensors can be set to Normally Open or Normally Closed inside the software.

There are 4 Common Grounds (-) and 16 sensor inputs (+). There is no power supplied to the ports so an external power supply must be used if power is necessary.



Connecting Control Outputs to the HVR

Each HVR has up to 16 Control Outputs. These outputs can be used to trigger devices such as Sirens, Phone Dialers, Lights, and any other relay activated device. There is no power supplied to the ports. Use an external power supply if necessary.



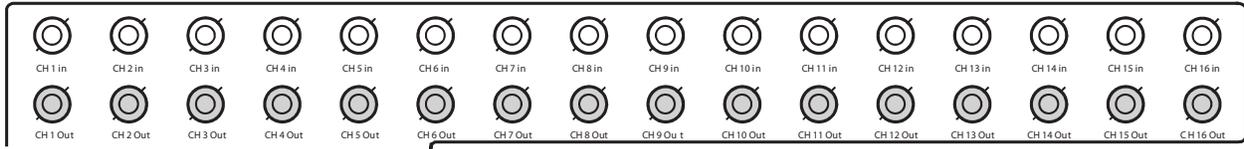
Use 12V, below 300mA. For controlling lights or other devices, use another external relay.

Maximum voltage is 24V AC @ 1 amp

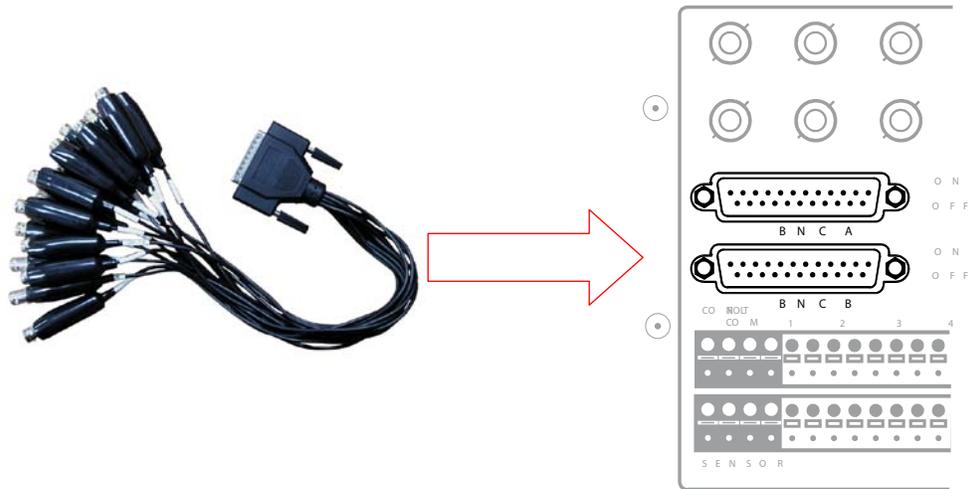
Output uses a Form C Relay

Looping Outputs

The 8/16 Channel X4 HVR has up to 16 looping outputs. Depending on the destination of the looping outputs, each one may have to be terminated.



The 32 Channel HVR has up to 32 looping outputs. Connect the included 16 Channel BNC Connector Cables to the 16 Channel Cable Adapter ports.

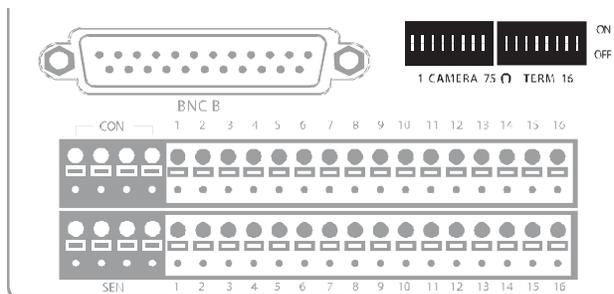


The video inputs/outputs are 75 Ω BNC connectors. Make sure there is a video source connected to the input and then connect a cable to the Channel Out on the BNC Connector Cable. The looping outs can be connected to video monitors or combined with adapters to connect to VCRs.

Looping Output Termination

When it is necessary to terminate a looping output, the HVR has built in termination that allows users to select individual outputs. It is not always necessary to terminate the output; it depends on the device to which you are connecting. As a rule, if the image appears distorted or virtually unviewable, it likely needs to be terminated.

8/16 Channel



ON Not connected to a monitor (Normal)
OFF Connected to a monitor (Looped)

Always leave the dipswitch set to the ON position when the Looping Outputs are not used.

Connecting a PTZ Camera

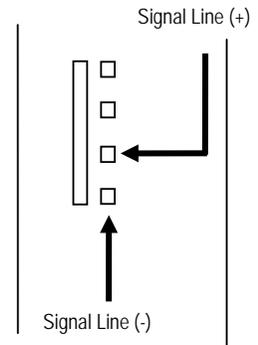
Setting up a PTZ Camera is simple. The HVR comes preassembled with an internal PTZ adapter. The cabling may be run up to 4,000 ft using 22 Gauge Twisted Pair.

It is important to understand how the PTZ connects to the HVR. The HVR outputs an RS-232 signal and converts in to an RS-422/485 signal which is then sent to the PTZ camera.

Attaching the 4-Pin Adapter

1. Locate the PTZ adapter cable
2. Connect the wires of the PTZ adapter to the PTZ camera. The yellow wire should connect to the RX+ on the camera and the orange wire should connect to the RX-.
3. Connect the other end of the adapter to the HVR as shown.
4. Assign the PTZ camera an ID number in PTZ Setup that coincides with the number assigned to the camera. This is normally done utilizing a dip-switch configuration method on the addressable dome.

Example If the camera is plugged into input number 5, set the PTZ unit to ID number 5.

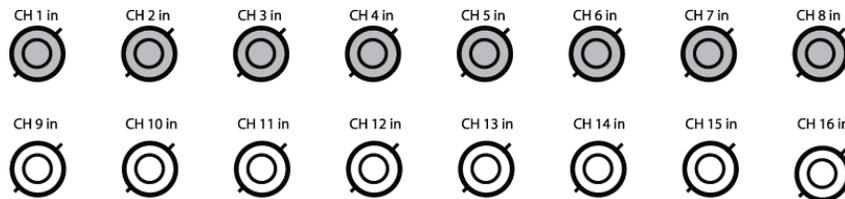


MAKING CONNECTIONS ON AN X3 HVR

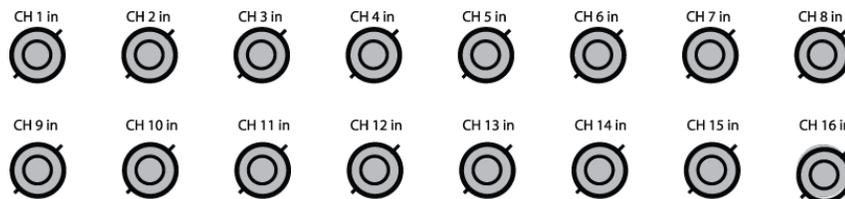
Connecting a Video Source

There are different types of Video Sources that can be plugged into the HVR including DVD players, VHS players, and CCTV Cameras. The back of the HVR contains up to 16 video inputs depending on the HVR model. The connectors use the BNC standard.

8 Channel HVR



16 Channel HVR



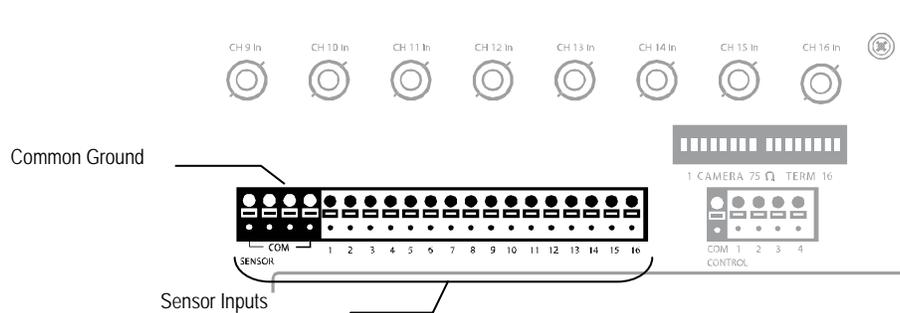
The video inputs are 75 Ω BNC connectors. Plug one end into the video source (DVD, Camera, etc.) and plug the other end into the desired BNC input on the HVR unit.

Connecting Sensors to the HVR

Each HVR unit may have up to 16 Sensor inputs. These inputs can be used with devices such as infrared devices, motion device, glass breakage alarms, door and window trips, and many more. The Sensors can be set to Normally Open or Normally Closed inside the software.

There are 4 Common Grounds (-) and 16 sensor inputs (+). There is no power supplied to the ports so an external power supply must be used if power is necessary.

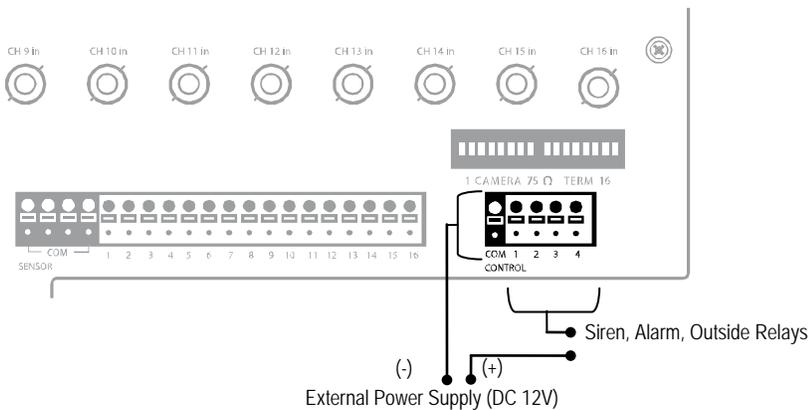
8/16 Channel



Connecting Control Outputs to the HVR

Each HVR unit may have up to 4 Control Outputs. These outputs can be used to trigger devices such as Sirens, Phone Dialers, Lights, and any other relay activated device. There is no power supplied to the ports. Use an external power supply if necessary.

8/16 Channel



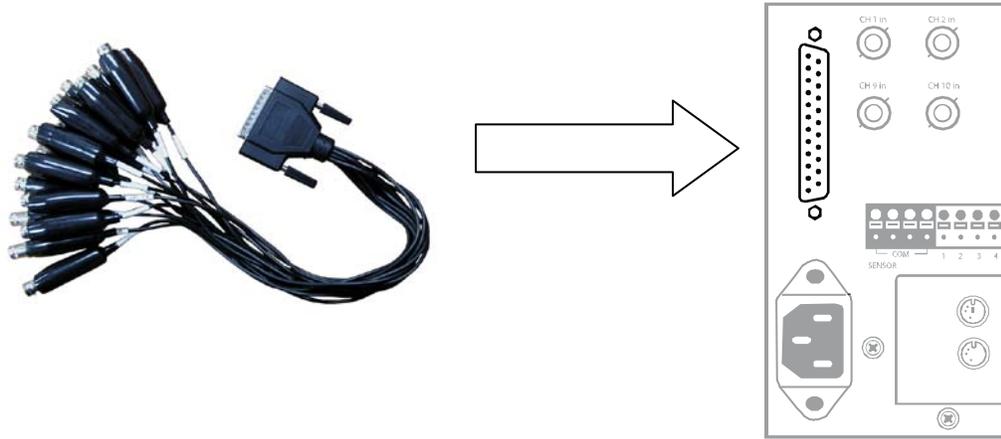
Use 12V, below 300mA. For controlling lights or other devices, use another external relay.

Maximum voltage is 24V AC @ 1 amp

Output uses a Form C Relay

Looping Outputs

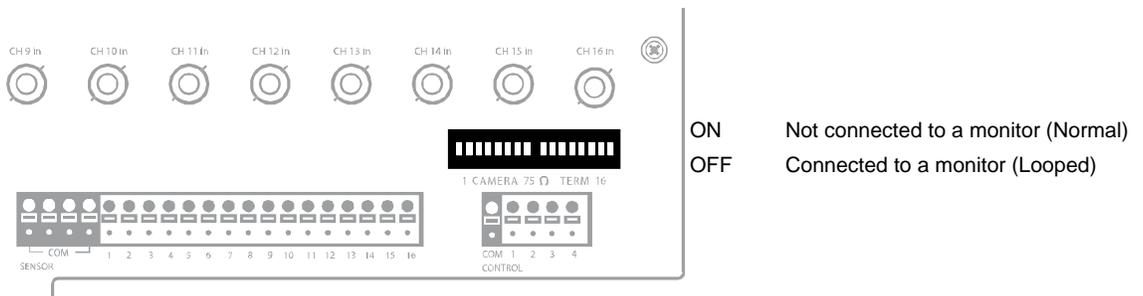
The 8/16 Channel HVR unit may have up to 16 Looping outputs. Depending on the destination of the outputs, each output may have to be terminated. The outputs are located on the BNC Connector Cable. Attach the cable to the input for the BNC Connector Cable highlighted below.



The video inputs are 75 Ω BNC connectors. Make sure there is a video source connected to the input and then connect a cable to the Channel Out on the BNC Connector Cable. The looping outs can be connected to video monitors or combined with adapters to connect to VCR's.

Looping Output Termination

When terminating the outputs becomes necessary, the HVR unit has built in termination that allows you to select individual outputs to terminate individually. It is not always necessary to terminate the output when using it. It is dependent on the device with which you are connecting it to. As a rule, if the image appears distorted or virtually unviewable, it most likely needs to be terminated.



Always leave the dipswitch set to the ON position when the Looping Outputs are not used.

Connecting a PTZ Camera

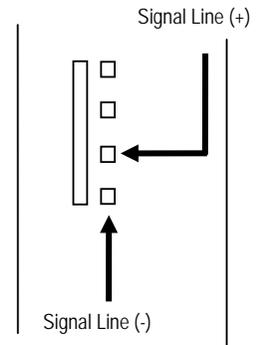
Setting up a PTZ Camera is simple. The HVR comes preassembled with an internal PTZ adapter. The cabling may be run up to 4,000 ft using 22 Gauge Twisted Pair.

It is important to understand how the PTZ connects to the HVR. The HVR outputs an RS-232 signal and converts in to an RS-422/485 signal which is then sent to the PTZ camera.

Attaching the 4-Pin Adapter

1. Locate the PTZ adapter cable
2. Connect the wires of the PTZ adapter to the PTZ camera. The yellow wire should connect to the RX+ on the camera and the orange wire should connect to the RX-.
3. Connect the other end of the adapter to the HVR as shown.
4. Assign the PTZ camera an ID number in PTZ Setup that coincides with the number assigned to the camera. This is normally done utilizing a dip-switch configuration method on the addressable dome.

Example If the camera is plugged into input number 5, set the PTZ unit to ID number 5.



HARD DRIVE ARRAY (X4 ONLY)

Hard drives in the X4 HVR are arranged top to bottom in the HDD cage. A minimum of one and a maximum of four hard drives may be installed in the hard drive cage. The hard drive installed in bay one contains the operating system and if removed will render the HVR inoperable.

Removing a Hard Drive

1. Press the hard drive power button to turn off power to the hard drive being removed.
2. Push the release button on the left side of the HDD cage.
3. Pull the release handle outward, sliding the drive tray out of the drive cage.

Inserting a Hard Drive

1. Slide the drive tray into the drive cage fully.
2. Press the release handle until it clicks, locking the drive tray in place.

TURNING ON THE HVR

1. Turn on the monitor and any external peripherals(ex. Printers, External Storage Devices, etc.) connected to the HVR.
2. Turn on the Secondary Power Switch located in the rear of the HVR.
3. Press the Power Switch located on the front of the HVR.
4. The HVR will run a series of self-tests. After two or three minutes, a series of messages may be displayed as the various hardware and software subsystems are activated. Under normal circumstances, users should not be asked to respond to these messages. If asked to respond to the messages (adding a Printer, Monitor, etc for the first time) follow the instructions carefully.
5. Startup is complete when the OpenEye HVR software is finished loading and displays the main menu screen.

TURNING OFF THE HVR

1. Click the Exit on the main menu screen of the HVR software.
2. Select Power Off from the drop down menu and click OK.
3. The HVR may take several minutes to shut down completely.

Caution Always be sure to follow the proper procedures when turning off the power to the HVR. NEVER disconnect the power to the HVR while it is still running or in the process of shutting down. Doing so can cause data loss, file corruption, system instability and hardware failure.

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