



## NVR10 SERIES 4/8 CHANNEL





www.NightOwISP.com

#### Thank you for choosing Night Owl Security Products!

All of our products carry a conditional warranty which covers all hardware for 1 year from the date of purchase. Make the most of your warranty by creating an account on NightOwISP.com to access warranty and technical support information; you will have access to our multitude of free instructional How-To-Videos. You can also view our instructional videos by clicking the "How to Videos" tabs within your product's page on our website. We believe that a consumer should never have to pay any shipping charges or fees for a faulty part. That is why we have designed an EZ return process where a consumer never has to pay freight for any parts covered under our warranty either sending back to us or back to them. No hidden fees and no shipping costs, it's that simple!



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Please see the warranty section of this manual for exclusions and additional details. Not all features and capabilities are shared across all models so you may see features which are not applicable. In addition you may see screen images that do not exactly match those on your display. This manual was accurate at the time it was completed. Due to our ongoing effort to constantly improve our products, functions may have been added or changed.

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Scan or click the QR codes below to access our instructional videos that can assist you in configuring your Night Owl Security system.







**MOBILE APP** 

http://nightowlsp.com/NVR-VIDEO-qsg http://nightowlsp.com/startup-wizard-qsg

g http://nightowlsp.com/mobile-app-qsg

NVR10 Series Users Manual

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VIDEOS

For your reference, we have created an instructional video that explains the menu structure and functionality of your Night Owl recorder in detail. Click on the icon at any time to view Night Owl's instructional videos at www.youtube.com/user/NightOwlSP



Night Owl's NVRs are manufactured for quality and ease of use. As such, our NVRs contain menus designed for advanced user's that should not be adjusted without having enhanced knowledge regarding the menu. In most cases the default settings allow for optimal functionality. The menus that should maintain the default settings are indicated with this icon.

## **CHAPTER 1** FCC WARNINGS



## Chapter 1: FCC Warnings

#### FCC

This equipment has been tested and found to comply with limits for Class B digital devices pursuant to Part 15 of Federal Communication Commission (FCC) rules.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.



#### CAUTION

The Federal Communications Commission warns the user that changes or modifications to the unit not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

# **CHAPTER 2** SAFETY INSTRUCTIONS



## Chapter 2: Safety Instructions

#### Use the provided power adapter.

Do not use this product with a power source that applies more than the specified voltage.

Never insert metal into the NVR case or its openings. Inserting metal into the NVR case may cause electric shock.

**Do not operate in wet or dusty areas.** Avoid placing the NVR in areas such as a damp basement or dusty attic.

**Do not expose the NVR to rain or use near water.** If the NVR accidentally gets wet, unplug it and contact technical support immediately.

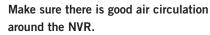
Keep product surfaces clean and dry. To clean the outside case of the NVR, use a lightly dampened cloth. Do not use cleaning solutions or solvents.

#### Do not install near any heat sources.

Do not install the NVR near any heat sources such as stoves, heat registers, radiators, or electronics (including amplifiers) that produce heat.

#### Unplug the NVR when moving it.

Make sure that the NVR is unplugged before you move it. When moving this device, be sure to handle it with care.



This NVR uses an internal hard drive, which generates heat during operation for video storage. Do not block vents on the NVR, as these vents reduce the generated heat while the system is running. Place this product in wellventilated area.

Do not attempt to remove the top cover. If you observe any abnormal operation, unplug the NVR immediately and contact technical support. Do not attempt to open the NVR to diagnose the cause of the problem.

#### Handle the NVR carefully.

If you drop the NVR on any hard surface, it may damage the device. If the NVR doesn't work properly due to physical damage, contact an authorized dealer for repair.

It is recommended to use your NVR with an uninterruptable power supply (UPS). Connecting your NVR and cameras to a UPS allows continuous

operation even during power outages. The run-time duration will depend on the rating of the UPS used.



You may be subjected to severe electrical shock if you remove the cover of the NVR.

# **CHAPTER 3** SPECIFICATIONS



## Chapter 3: Specifications

### 3.1 System Requirements

#### $\label{eq:Please} Please \ be \ sure \ that \ your \ PC/MAC \ complies \ with \ the \ following \ specifications:$

- PC Operating System: Windows Vista; Windows XP; Windows 7; Windows 8
- PC Browser: IE 8 or above; Google Chrome
- MAC Operating System: MAC OS X 10.7 and above
- MAC Browser: Safari 5.1 and above

#### Please be sure that your mobile device complies with the following specifications:

- Android: 3.0 and above
- iOS: 5.1 and above

### 3.2 Package Contents

- 1 x NVR
- Indoor/Outdoor Cameras\*
- Bundles of Camera Cable\*
- Mounting Hardware and Screws\*
- HDMI Cable
- 1 x RJ-45 Cable (Ethernet)

- 1 x Wireless Mouse
- 1 x Remote Control (Includes Batteries)

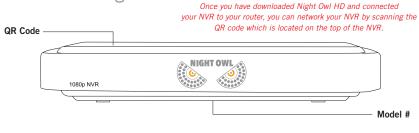
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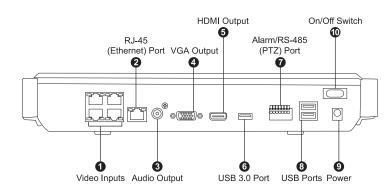
- 1 x Software CD
- 1 x Quick Setup Guide
- 1 X DC 15V/5A NVR Power Adapter
- ernet) 3 x Night Owl Security Stickers

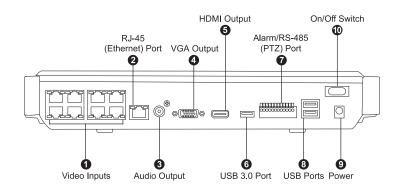


\*Cameras, additional cables and power adapters only included in certain security kits. Check
the product packaging for detailed kit contents.

#### 3.2.1 NVR Diagrams







#### **REAR VIEW**

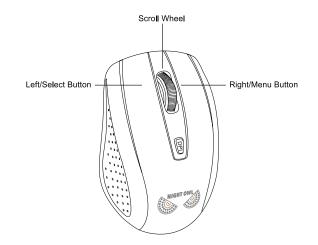
Images used are for reference only. Your product may slightly vary.

- 1. Video Inputs Video inputs allows for the connection of PoE cameras.
- 2. RJ-45 (Ethernet) Port RJ-45 port will be used to connect the NVR to your router/modem via the included Ethernet cable. Keep in mind, you can quickly network your NVR to begin viewing your cameras remotely right from your mobile device by completing the NVR's Startup Wizard once you have connected the NVR to your router and powered on the NVR.
- 3. Audio Output audio output allows for the connection of an amplified speaker.
- 4. VGA Output VGA output allows for the video connection. If the TV / Monitor has a VGA input, connect the VGA cable from the VGA output port on the NVR to the VGA input port on your TV / Monitor.
- 5. HDMI Output HDMI output allows for the video connection. If the TV / Monitor has an HDMI input, connect the HDMI cable from the HDMI output port on the NVR to the HDMI input port on your TV / Monitor.

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- **6. USB 3.0 Port** allows for the connection of a USB Flash Drive to rapidly download video files.
- 7. Alarm/RS-485 (PTZ) Port Alarm/RS-485 port allows for PTZ camera connection and integration with your monitored security company. Your security company must configure the NVR, not Night Owl. (Alarm block on 16CH NVRs only)
- 8. USB Ports USB ports allow for the connections of a USB mouse and / or a USB flash drive. You will connect the included USB mouse to assist you in navigating the NVRs menu interface. You will connect a USB flash drive to download video files from the NVR and save them to your USB flash drive.
- 9. Power Input power input to connect the included 12V DC power supply.
- 10. On/Off allows you to turn your NVR On or Off.

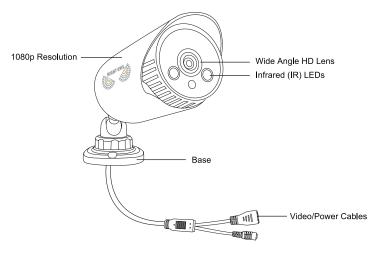
#### 3.2.3 Mouse and Remote Diagram



#### MOUSE

Left/Select: choose a field or button on screen. Right/Menu: when in Live View click to display the bottom menu bar. When in a menu window, right click to exit the menu.

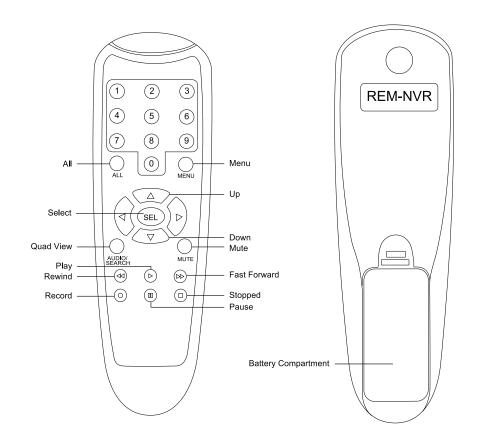
#### 3.2.2 Camera Diagram



#### CAMERA

Images used are for reference only. Your product may slightly vary.

**NOTE:** Connect all cameras locally before final placement to ensure that all components function properly.



REMOTE

## **CHAPTER 4** CAMERA INSTALLATION



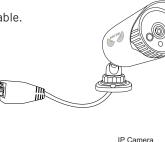
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## Chapter 4: Camera Installation

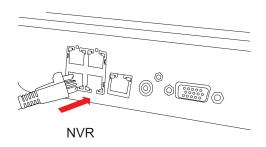
#### 4.1 Video/Power

**NOTE:** Connect all cameras locally before final placement to ensure that all components function properly.

- 1. Locate an included 60 foot PoE camera cable.
- Connect one end of the cable to the connector attached to the camera.



3. Plug the other end into a Video Input port on the back panel of the NVR.



4. Repeat for each camera, noting the channel number each camera is plugged into.



\* Cameras, additional cables, power adapters and splitters only included in certain security kits. Check the product packaging for detailed kit contents.

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Make sure all cameras are working prior to mounting by connecting them as described in the section above. Once all cameras are confirmed to be fully operational, you can run the cables and mount the cameras at their final locations.

### 4.2 Mounting the Cameras

#### Camera distance from viewing/recording device.

The further the camera is from the NVR or monitor, the higher the chances of signal degradation. The camera's power supply should be located as near to the camera as possible when the distance exceeds 200' as the power level will drop over



Connect all cameras locally before final placement to ensure that all components function properly.

extended distances resulting in video degradation.

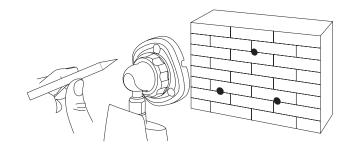
**Do not place near high voltage wires or other sources of electrical interference.** Electrical interference will degrade the quality of the signal.

Place camera out of reach to avoid vandalism.

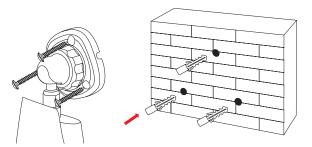
**Avoid direct exposure to weather.** Do not place the camera where rain or snow will hit the lens directly nor should the camera be placed so that the sun or bright light shines directly into the lens. Your camera is weatherproof, but it will not work when submerged in water. Ensure that all power and video connections are not directly exposed to water and are protected from the elements.

**Mounting surface.** The mounting surface must hold at least four times the camera's total weight.

- 1. Locate a camera and choose a location where you would like to mount the camera.
- 2. Indicate screw positions by marking three holes on the surface where you plan to mount the camera, using the holes in the camera base as a guide.



- 3. Using a drill bit slightly smaller than the included screw anchors, drill into the mounting surface using the guide marks you placed in the previous step.
- 4. Insert the screw anchors.
- 5. Line up the camera base holes with the screw anchors. Holding the base in place, insert screws and tighten until secure.



- 6. Once the base is screwed in place, make sure that the camera is securely mounted by placing gentle pressure on the mount.
- 7. Adjust the camera housing to point in the direction of the area you would like to monitor.



Don't feel like installing the system yourself? Let InstallerNet<sup>™</sup> do the work for you! Contact us at 1-800-806-5513 or visit us at www.NightOwISP.com.

# **CHAPTER 5** NVR INSTALLATION



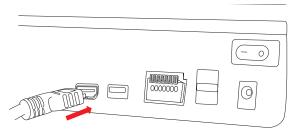
## Chapter 5: NVR Installation

### **5.1** Connecting to a TV (via HDMI)

1. Locate the included HDMI cable.

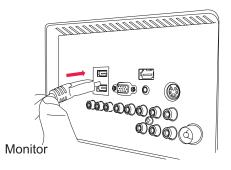


2. Plug one end of the cable into the HDMI port on the back of the NVR.





3. Connect the other end of the cable to an available HDMI input on your TV or monitor.



4. Select the appropriate video input channel on your TV or monitor to view the NVR.

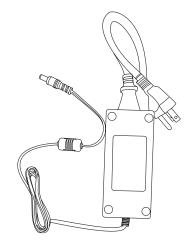


If your TV does not have an HDMI port, you will need to purchase a VGA or a BNC-to-RCA video cable.

## For a VGA connection, attach one end of the VGA cable to the NVR VGA port and the other end to your TV VGA port.

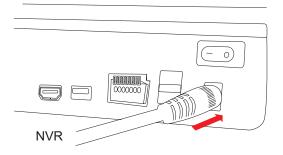
#### 5.2 Power

1. Locate the labeled NVR power adapter; the NVR power adapter should never be interchanged.



**NVR Power Adapter** 

2. Plug the included power adapter cable into the back of the NVR.



3. Plug the other end of the power adapter cable into an available wall outlet. If you are using an uninterruptable power supply (UPS), plug the adapter cable into one of its output sockets. Keep in mind, Night Owl always recommends utilizing a surge protector to minimize the risk of damage caused to your NVR in the event of a power surge.

Plug into surge protector



Battery Backup not included, sold separately.

Night Owl's BB-86AH is our revolutionary battery backup designed for security NVR's. We recommend all customers to utilize the battery backup with your NVR. http://nightowlsp.com/bb-86ah.html

# **CHAPTER 6** GETTING STARTED



## Chapter 6: Getting Started



### 6.1 Startup Wizard

When your NVR is powered on it will display the Night Owl logo while initializing. Scan or click the QR code to view our Startup Wizard video which shows the quick and easy steps in detail.



After initialization, you will be prompted to use the Startup Wizard. Follow the on-screen instructions to:

- Create a system user name and password.
- Connect your NVR to a router that is hard wired. Wireless router will not work.
- Follow the Startup Wizard instructions to add your NVR to your mobile device.





You can toggle the Startup Wizard from appearing at each power cycle by checking off the tick box at the welcome screen.



### 6.2 Night Owl HD Mobile App

The Night Owl HD mobile app lets you access your NVR remotely with live viewing from your tablet or smartphone. Download our free Night Owl HD application from the iTunes App or Google Play store! Scan or

click the QR code to view our Night Owl HD video which shows how to add and configure your smart device for remote viewing.



Once you have downloaded Night Owl HD and connected your NVR to your router, you can network your NVR by scanning the QR code which is located on the top of the NVR.

#### 6.3 Displays and Icons

The following sections will describe the 3 main screens you will access for login, playback, recording, and configuration.

### 6.3.1 Login Screen



Any time you want to configure or adjust your system settings you will be required to log in by entering your username and password. It's important you save your login info or you won't be able to access your NVR. Be sure to store your user name and password in a safe location. You will need this information to access the main menu.

**Device ID:** the value in the field should match the value in the parentheses on the right. These numbers verify which device you are currently viewing.

User: enter the User name you created in the Startup Wizard or User Menu.

**Password:** enter the Password you created in the Startup Wizard or User Menu. If the password is incorrect you will be prompted to try again. Keep in mind the password is case sensitive and must be 8 characters long.

#### 6.3.2 Live View (All Channels)

Live View is the default screen you will see when viewing all channels on your NVR. Right-click anywhere on-screen to bring up the icon menu to change viewing options or access the main menu. Rearrange the channel order by left clicking and dragging individual channels to other locations in the on-screen layout.



- 1. Date and Time: current date and time of the system.
- 2. Channel Name and Number: channel name and number.
- **3. Menu:** access the main menu to configure or adjust settings. Be sure to store your user name and password in a safe location. You will need this information to access the main menu.
- **4.** Lock Screen: manually locks or unlocks screen. Once the screen is locked, you will need to enter your username and password to gain access.
- 5. Quad View: 4 channel viewing layout.
- 6. Recording: indicates when a camera is currently recording.

- 7. Multi-view: various layout options for viewing multiple channels at once.
- 8. Stream Switch: allows you to select Mainstream or Substream options. Mainstream will display your video in high definition. Substream will display your video in standard definition.
- **9. Video Fluidity:** allows you to select a Real-time, Balanced or Smooth video stream.
- 10. Volume: mute or adjust the system volume.
- 11. PTZ Cruise: starts/stops the cruise function of your PTZ camera.
- **12. PTZ:** open up the Pan, Tilt, Zoom (PTZ) menu. This function will only work when a PTZ camera is connected to your NVR.
- 13. Playback: access the recording/playback menu and functions.

#### 6.3.3 Live View (Single Channel)

When in Live View, select a single channel to bring up additional controls and playback options. By double-clicking on the channel you can also view that channel in full screen mode.



- 1. Stream Switch: allows you to select Mainstream or Substream options. Mainstream will display your video in high definition. Substream will display your video in standard definition.
- 2. Record: click to begin live recording of the selected channel.
- 3. Instant Playback: replay video footage stored on the HDD.
- **4. Zoom:** click and drag an area to zoom in and enhance. Right-click to return to the normal view.
- 5. Color Setting: adjust the channel hue, contrast, brightness, and saturation.

#### 6.3.4 Menu Screen

Access the main menu by right-clicking anywhere while in Live View and then selecting the menu icon. At the menus you will be able to access settings and parameters for all aspects of your NVR system.



- 1. General Menu: configure display, network, and alarm settings.
- 2. Cameras Menu: access channel display and color settings.
- **3. Record Menu:** setup or modify general recording, triggered events, and recording settings.
- 4. Device Menu: monitor available HDD space and access PTZ settings.
- **5. System Menu:** access general settings such as timestamp displays, user access, system info, and access logs.
- **6. Advanced Menu:** view and change maintenance settings, upgrades, and HDD alerts.

# CHAPTER 7 MENUS AND SETTINGS



## **Chapter 7:** Menus and Settings



Some menu screens will allow you to copy similar settings to multiple channels. Choose the channel you would like to copy information from in the first dropdown box (Copy), then select the channel you would like to copy the information to from the second dropdown box (To). Click Copy when the proper channels have been chosen.



Be sure to Save all changes you make in the menus. If you do not save the changes, they will not be applied. You can also select the Default button on any page to restore default settings for those parameters.



#### 7.1 General Menu

The general menu will allow you to access display, network, and alarm settings for your NVR system.

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#### **7.1.1** Display

a. Output: adjust the resolution that will be displayed on your TV or Monitor.

	0	<b>I</b>	_		] 🖃
General	Cameras	Record	Device	System	n Advanc
Display	Video Output	LIVE-OUT			
Output	View SetUp	Dynamic			
Privacy Zone	Sequence view	Layout1			
음 Network	Sequence time				
Alarm	VGA/HDMI Resolution	1024x768			
	Transparency		0		
				Default	Save Can

Video Output: defaulted to LIVE-OUT.

Sequence View: set the amount of channels that will be viewed when you select sequential mode.

Sequence Time: adjust the duration each channel is displayed during a sequential view. You can select between 1 and 300 seconds per channel. To begin the auto sequence feature, click on the Auto Sequence icon which is located on the quick access bar.

**VGA/HDMI Resolution:** optimize the display resolution to best fit your TV/monitor. By default, the optimal resolution option will be selected automatically by the NVR.

Transparency: modify the menu transparency when displayed on screen. If you select "0" the menu will not be transparent at all and if you select "128" the menu will be almost completely transparent.

**b. Privacy Zone:** create or modify up to 4 privacy zones per channel. These zones will not be visible to the cameras in Live View or during any recording.

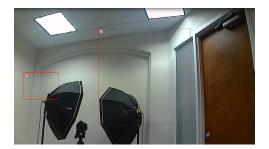
General	Cameras	Record	Device	System	Advanced
	Callieras	MEGIG	Device	System	Advanced
Display	Channel	CH1			
Output	Privacy Zone	Disable			
Privacy Zone	Area Setup				
A Network	Area Setup				
TE INCOMP	Mask Area	Setup			
Alarm					
	Copy CH1	To All	Сору	-	

**Channel:** choose which channel to apply a privacy zone(s).

**Privacy Zone:** *Enable* or *Disable* privacy zones on the selected channel.

Area Setup: select the number of masks you would like to create or modify.

**Mask Area:** a single Live View of the selected channel will be displayed with the number of Areas selected in the previous line. Select, drag, and resize each area by left clicking the mouse to mask areas on camera that you do not want visible while recording or monitoring. Once the area(s) are selected, right-click to return to the menu.





**ADVANCED a. Main:** find network values and optimize connectivity based on your Internet connection. In most cases the values should populate automatically once your NVR is connected to the Internet and you have completed the startup wizard's simple steps. The values in this section should only be adjusted if you are an advanced user and have extensive experience in device networking.

	0		-		
General	Cameras	Record	Device	System	Advance
💻 Display		• DHC		• Static	
📇 Network	Media Port	05038	Web Port	05037	
Main	IP Address	192.168.001.123			
Switch	Subnet Mask	255.255.255.000			
Substream	Gateway DNS1	192.168.001.001 192.168.001.001			
Email	DNS2	000.000.000.000			
Email Schedule					
DDNS					
🕰 Alarm	UPNP	Disable			
				Default	Save Canc

**PPPOE:** for broadband dial-up network users only. You will need to contact your ISP to retrieve the User Name and Password needed to complete this type of connection. If you do not know your user name and password be sure to attain this information before attempting to network your NVR.

**DHCP:** the most common network connection type. These values will be gathered automatically from your ISP when connected.

**Static:** modify these values if you are using a static IP address. Information can be obtained from your router and ISP.

**Media Port:** allows access to your NVR from a mobile device. The default value of 9000 should generally be used for most cases.

**Web Port:** allows access to your NVR with your computer through your LAN or the Internet. In most cases the default value of 2049 or 2051 will provide the most optimal connectivity.

IP Address: network address of the connected NVR.

**Subnet Mask:** the range of IP addresses that can be found in the network. This should always be set to the default address 255.255.255.000.

**Gateway:** the connection between two networks. This should always be the IP address of the connected router.

**DNS1:** primary Domain Name System server address.

**DNS2:** secondary Domain Name System server address.

**UPNP:** *Enable* or *Disable* Universal Plug and Play abilities depending on your network device capabilities.

**b.** Switch: view network information such as IP Address, Subnet Mask, Gateway options and Switch mode.



**IP Address:** network address of the connected NVR.

Subnet Mask: the range of IP addresses that can be found in the network.

Gateway: the connection between two networks.

**Switch Mode:** allows you to select auto mode or manual mode. Auto mode will complete the manual automatically. Manual mode will require manual configuration to complete the manual.

c. Substream: configure or optimize the video quality of your Live View.



**Channel:** select the channel to configure Substream options.

Resolution: allows you to adjust the resolution being displayed during sub streaming.

**FPS:** increase or decrease the frames per second of the streaming video depending on your connection speed. A higher FPS will result in more data transfer but smoother video. A lower FPS will eliminate most lag but at the expense of video quality.

**Bitrate Mode:** allows you to select predefined or user defined modes. The predefined mode will provide a dropdown list of standard bitrate options. The user defined mode will allow you to input your desired bitrate option.

**Bitrate:** adjust the amount of data transferred while streaming. The default setting is sufficient for most networks.

**Audio:** click the tick box if your camera is audio enabled. Not all cameras are audio enabled.

d. Email: Enable or Disable email alerts based on your alarm settings.

General	Cameras	Record	Device	System		Advanc
💻 Display		Disable				
📇 Network						
Main						
	SMTP Server					
Switch	Sender					
Substream	Sender Passwor					
Email	Receiver					
Email Schedule	Interval		<ul> <li>Test Email</li> </ul>			
DDNS						
Alarm						
				Default	Save	Can

SSL: Enable or Disable to send encrypted email alerts.

**SMTP Port:** the access point for your email determined by your email service provider.

**SMTP Server:** this is the mail server address of your email provider. This information is determined by your email provider.

Sender: the email address that will send email alerts.

Sender Password: the password for the email address provided in Sender.

Receiver: the email address that will receive the email alerts.

Interval: set the duration between sending emails for multiple alerts.

**e. Email Schedule:** choose when alert emails can be sent. Select *Motion*, *Exception* or *Alarm* above the calendar and click the corresponding green, red or yellow boxes; you can highlight multiple boxes by left clicking and dragging. Highlighted boxes represent days and times in which emails will be sent. Motion refers to events sent when cameras are triggered by motion; Exception refers to events such as video loss or; Alarm refers to events such as memory conflicts.

General	Cameras			Recor			Device			stem		Adva	ncec
Display						0	Motion	C	Alarm		O Ex	ception	
Network	0	2	4	6	8	10	12	14	16	18	20	22	
Main	<u>s</u>												
Switch	M												
Substream	T W												
Email													
Email Schedule													
DDNS	s												
Alarm	Сору	CH:			То	All		C	py				

f. **DDNS**: *Enable* or *Disable* DDNS service to view your NVR from a computer. Click on the link to learn more.



**Server:** set to the *NIGHTOWL* server when using the Night Owl free domain name server.

Domain: set to the domain name you created when registering your DDNS.

User: the UserID created during the DDNS registration process.

Password: the password created during the DDNS registration process.

### 7.1.3 Alarm

a. Motion: configure the motion alarm settings for your NVR system.



**Channel:** select the channel to configure motion alarm settings. **Enable:** activate motion alarms.

**Sensitivity:** adjust the level of motion detection. A lower setting will require more movement in the camera range to begin recording.

**Buzzer:** toggle between *ON* and *OFF* to enable an audible alert from the NVR. **Sensitivity:** adjust the level of motion detection. A lower setting will require more movement in the camera range to begin recording.

**Area:** clicking *Setup* will allow you to configure areas which will and will not detect motion. Red boxes denote areas that will detect motion and uncolored boxes show areas that will not. When finished, right click to go back to menu.

**Latch Time:** refers to the amount of video recorded before motion is detected. You can select 10 seconds to 1 minute latch times from the drop down menu.

**Post Recording:** set the amount of time to record after the motion is detected. You can select between 30 and 300 seconds.

**Alarm Out:** refers to alarms being sent onscreen, via email and or full screen display of the alarm event. To receive the alarms you must left click the box to show a check mark which will signify alarm out is enabled.

**Show Message:** check the tick box to enable the display of a red "M" on-screen while in Live View mode. "M" means motion is occuring.

**Send Email:** check the tick box to send an email alert when motion is detected. See section 7.1.2. for email setup and configuration.

**Full Screen:** when this tick box is checked, the selected channel will go to full screen when motion is detected.

**Record Channel:** this option gives you the ability to start recording on the channels you select/highlight as soon as motion has been detected on the Channel selected above within the Channel field.

b. Alarm: configure alarm settings.



**Channel:** select the channel to configure.

**IO Status:** refers to the Alarm In/Out status of the selected channel. You should leave this option as the defaulted Normal-Open option to allow the normal transmission of alarms.

Buzzer: toggle between ON and OFF to enable an audible alert from the NVR.

**Latch Time:** refers to the amount of video recorded before motion is detected. You can select 10 seconds to 1 minute latch times from the drop down menu.

**Post Recording:** set the amount of time to record after the motion is detected. You can select between 30 and 5 minutes.

**Alarm Out:** refers to alarms being sent onscreen, via email and or full screen display of the alarm event. To receive the alarms you must left click the box to show a check mark which will signify alarm out is enabled.

**Show Message:** check the tick box to enable the display of a red "M" on-screen while in Live View mode. "M" means motion is occurring.

**Send Email:** check the tick box to send an email alert when motion is detected. See section 7.1.2. for email setup and configuration.

**Full Screen:** when this tick box is checked, the selected channel will go to full screen when motion is detected.

**Record Channel:** this option gives you the ability to start recording on the channels you select/highlight as soon as motion has been detected on the Channel selected above within the Channel field.

#### 7.2 Cameras Menu

Adjust or modify individual camera settings connected to your NVR.

#### 7.2.1 Configure



**Channel:** displays the channel number.

**Edit:** allows you to edit the IP camera's information such as Alias (Channel Name), Alias (Channel Name's) Position and IP address when you left click on the pencil icon.

State: will display if the channel is recording and fully operational.

IP Address/Domain: displays the IP address of the selected channel.

Subnet Mask: displays the subnet mask number of the selected channel.

Port: displays the port being utilized by that camera.

Manufacturer: displays the manufacturer.

Device Type: displays the type of camera connected to this channel.

Protocol: will display if your protocol is private or public.

MAC Address: displays the MAC address of the selected channel.

Firmware Version: displays the firmware version of the selected channel.

**Auto Assign IP to Cameras:** allows the NVR to automatically assign an IP address to the selected camera. Not all IP cameras will function with this feature and you will not need to configure this setting when you utilize a Night Owl NVR10 camera.

**Delete:** deletes the selected channels camera configuration.

Add All: allows you to add the same info to all cameras that are connected to the NVR.

User-Defined Add: allows you to add the same info to the cameras that you select.

### 7.2.2 Image Control

Display advanced settings which will allow you to flip your camera's image, adjust BLC and IR-CUT modes.



Channel: allows you to select the channel to configure.

IR-Cut Mode: GPIO Auto; Color Mode; Black White Mode; Video Auto.

**IR-Cut Delay:** allows you to adjust the delay when the IR-CUT initiates. Selecting "1" will be less delayed than selecting "36".

**Lens Flip:** allows you to flip the image (top to bottom) of the selected channel by left clicking this box.

**Angle Flip:** allows you to flip the image (left to right) of the selected channel by left clicking this box.

**Backlight:** allows you to enable or disable the backlight function of the selected channel.

**BLC Level:** allows you to select Low, Middle or High options. By default this option is set to the Middle option.

3D Noise Reduction: allows you to disable or set this option to Auto or Manual.

**WDR:** Wide Dynamic Range option allows the configuration of exposure in areas of the frame to maintain optimum detail in both the shadows and highlights of the image.

**AGC:** Auto Gain Control option allows the configuration of the brightness of camera images, but also increase the image noise, users can adjust it from Low/ Middle/High or shut it down depending on the situation.

**White Balance:** by default this option is set to Auto. If you select the Manual option you will have to configure the color settings for Red, Green and Blue.

Shutter: select Auto or Manual. By default this should remain as Auto.

**Time Exposure:** allows you to set the camera's shutter speed which is the video output per second.

#### 7.2.3 Settings



**Channel:** select the channel you want to configure a camera for.

**Channel Name:** create a name for the selected channel; this name will be displayed on-screen during live view and playback.

Show Name: will display the selected channel's name when this box is checked.

Show Time: will display the selected channel's time when this box is checked.

**Position:** change the position of Channel Name while viewing in Live View. For example U-L = Upper-Left; D-L= Down Left; U-R=Upper Right; D-R=Down Right.

**Color:** click *Setup* to access a sub-menu to adjust the colors of the selected channel. In this sub-menu you can adjust the *Hue, Brightness, Contrast,* and *Saturation* of the image.

**Date Format:** allows you to select the format your date will be displayed. You can select Month/Day/Year, Year/Month/Day or Day/Month/Year.

**Time Format:** *Enable* or *Disable* the recording time display on-screen during playback mode.

Refresh Rate: Enable or Disable the on-screen timestamp during live view mode.

### 7.3 Record Menu

From this menu you can enable recording, set video settings, and adjust streaming options.

#### 7.3.1 General (Playback)

Search and playback all recorded video from this menu. Choose your desired date and times from the options below, then click *Play* to view recorded video. Right-click to exit back to the menu screen.



Channel: select the channel you would like to playback footage from.
Type: search *All, Normal Motion or IO* videos to playback.
Playback Channel: choose the desired channel to view footage from.
Start Time: set the initial time parameter for your video search.
End Time: set the end time parameter for your video search.



- 1. Calendar: indicate the date to playback video.
- 2. Channel Selection: choose the channels to display on-screen.
- 3. Full Screen: hides the Calendar and Channel Selection panels.
- 4. Rewind: rewinds the recorded video.

- 5. Slow Forward: forwards the video at a slower speed.
- 6. Play: plays video starting at the indicator on the timeline.
- 7. Pause: pause the recorded video.
- 8. Stop: stop the recorded video.
- 9. Fast Forward: fast forward frame-by-frame of the recorded event.
- 10. Zoom: click the icon and select the area on-screen to zoom in.
- **11. Clip/Save:** click once to set the start point of the video you would like to save. Press the icon again to select the end point of the video you would like to save then choose whether you would like to save as an *H.264* or *AVI* format.
- 12. Volume Scale: adjust the volume of the video in the selected channel(s).
- 13. Start Time: indicates the beginning of the timeline on the selected Calendar date.
- 14. End Time: indicates the end of the timeline.
- **15.** Timeline Length (24h, 2h, 1h, 30m): select the duration of the on-screen display of the timeline.
- 16. Exit: double right click the mouse or click on the X to exit the playback screen.

#### 7.3.2 Events (Playback & Backup Files)

Search for video from triggered events and quickly backup the video files for future reference. You can select either *All, Normal Motion* or *IO.* 



Date: select the date to search for event footage.

Time: choose a start and end time that the event happened.

**Channel:** pick the channel(s) with the desired video.

Type: select from All, Normal, Motion or IO video files.

**Search:** once the parameters are set, click this button to retrieve video from the specified time period. You can choose to save the video file as an AVI or H.264 format.

**Quick Backup:** check the tick boxes to the left of the found video clip(s) and click this button to save that video to a USB Flash Drive. You can also Playback by right clicking on the icon located in the playback section.

#### 7.3.3 Settings (Recordings)

View or modify general recording settings for your NVR system.



a. Basic: turn channel recording capabilities on or off.

Channel: select the channel you would like to configure.

**Record:** *Enable* or *Disable* recording capabilities for this channel.

**Pre-Record:** *Enable* or *Disable* pre-recording for this channel. Pre-recording is the amount of video captured prior to an alarm being triggered.



**NOTE:** By default, the NVR is configured to begin recording when motion is detected.

**b. Record Schedule:** set parameters for recording situations. For example, from this menu you can configure your camera on channel one to record from 1pm-9pm (Scheduled) and the remaining cameras to begin recording only when motion is detected (Motion).

 $\label{eq:channel: configure the recording schedule.}$ 

**Normal Record:** select this option to set the schedule for continuous recording. Once selected, highlight the boxes corresponding to the day and times that the channel should be recording. Click and drag to highlight multiple boxes green.

**Motion Record:** select this option to set the schedule for motion-activated recording. Once selected, highlight the boxes corresponding to the day and times that the NVR should record when motion is detected. By default, motion recording is always on.

**Alarm Record:** select this option to set the schedule for alarm activated recordings.

**c. Mainstream:** configure or adjust the video settings to best optimize for your connection.

General	Cameras	Record	Device	Syst	em	Advance
🎇 General	Channel					
O Events	Resolution	1920 × 1080				
Settings						
<ul> <li>Basic</li> </ul>	Bitrate Mode	Predefined mode				
Record Schedule	Bitrate Audio	2048		Kbps		
Mainstream						
	Copy CH1		All	Сору		
				Default	Save	Cance

**Resolution:** choose between 640 x 480, 704 x 576, 1280 x 720 or 1920 x 1080 resolutions based on your TV or Monitor capabilities.

**FPS:** increase or decrease the frames per second of the streaming video depending on your connection speed. A higher FPS will result in more data transfer but smoother video. A lower FPS will eliminate most lag but at the expense of video quality.

**Bitrate Mode:** adjust the amount of data transferred while streaming. The default setting is sufficient for most networks.

**Audio:** click the tick box to record sound if your camera is audio enabled. Audio enabled cameras are only included in certain kit models.

#### 7.4 Device Menu

### 7.4.1 HDD

Check available memory on your NVR HDD and set recording parameters to optimize storage.



**Select:** if multiple drives are installed, choose the HDD you would like to customize.

**Overwrite:** by default, the *Auto* setting will overwrite the earliest footage once the HDD is full. Choose one of the other options to overwrite footage at the end of the desired time duration, starting with the earliest data. *Off* will record until the HDD has reached capacity.

**Format HDD:** click this button to format the selected drive. Keep in mind, formatting the HDD will erase all video files from the HDD.

#### 7.5 System Menu

#### 7.5.1 General

Set or adjust basic NVR settings such as the time, date, and language.

General	Cameras	Record	Device	Syste	m	Advan
्रि General		03/30/2015 📷	Time 09:55:38	PM 🔻		
Settings	Date Format	MM/DD/YY				
DST	Time Format	12 Hour				
	Language	ENGLISH				
NTP	Video Format	NTSC				
👤 Users	Menu Timeouts	1 Min				
Info	Show wizard					
n Log	Mobile Wizard	• <b>0</b>				

a. Settings: basic system configuration.

Date: manually set the date by left clicking on the calendar icon

Time: manually set the time by left clicking inside the time field.

**Date Format:** choose the display format for the date. You can select Month/Day/ Year, Year/Month/Day or Day/Month/Year.

**Time Format:** select between a *12Hour* or 24Hour display.

Language: pick between ENGLISH or SPANISH language preferences.

**Video Format:** *NTSC* or *PAL* formats are available to choose from. NTSC is the standard for video in North America.

**Menu Timeouts:** select the duration of time for an inactive menu to be displayed on-screen.

**Show Wizard:** check the tick box to display the Startup Wizard each time the NVR is powered on.

**Mobile Wizard:** click the mobile icon to launch mobile application setup portion of the Startup Wizard.

**b. DST:** configure Daylight Savings Time settings.

DST: Enable or Disable the Daylight Savings Time feature.

**Time Offset:** choose the amount of time (*1Hour* or *2Hours*) to offset if DST is enabled.

**Daylight Saving Time:** indicate whether you would like this feature to be applied the week of or an exact date.

Start Time: select the date and time to apply the DST offset.

**End Time:** select the date and time to remove the DST offset.

c. NTP: sync your NVR to the Network Time Protocol standard time and date.

**NTP:** *Enable* or *Disable* the NTP sync feature.

Server Address: choose the NTP server in which to sync the date and time with.

Time Zone: indicate your current or desired time zone.

**Update Now:** after selecting the above options, click this button to apply the settings.

#### 7.5.2 Users

Create and modify user's permissions.



**Edit:** select an existing user from the list to change the *User Name, Enable* or *Disable* password access, or create a new *Password*.



**Permission:** select a new user profile (e.g. user1) and press the Permission button to select which menus, settings, and playback/recording functions are available to that specific user and on which channels. *All* will give that user basic admin settings.

Genera	User Name	user1			dvance
@ General	Log Search	General	Maintain	Manual Record	
	Disk Manage	Remote Login	SEQ Control		
Users	Backup				
III Info		789101121	3141210		
	Live				
🛃 Log			3141216		
	Playback				
			2121210		
	PTZ	- <b>7 8 9 10 11 12</b> 1			
		<u>، کا کا کا کا ک</u> ک	2121212		

#### 7.5.3 Info

View your NVR system's information and specifications at a glance. This menu will provide crucial device and network information to allow manual reconfiguration of your mobile application if needed. Keep in mind you can also scan the QR code on this screen using your Night Owl HD mobile application to quickly reconfigure your mobile device via our Owl Scan feature.



Device ID: create a unique device ID number if you are using multiple NVRs.

Device Name: create a unique device name for easy reference.

Device Type: product's model number.

Hardware Version: your current hardware version.

Software Version: your current software version.

IE Client Version: the current IE client version.

IP Address: the current NVR network address.

MAC Address: the NVR media access control address on the network.

**HDD Capacity:** the max capacity of installed hard drives.

Video Format: your current video recording format.

Media Port: By default should be left at 9000

Web Port: By default should be left at 2049 or 2051

**P2P:** The ID of your Peer to Peer (P2P) connection.

#### 7.5.4 Channel Info

Displays an overview of the selected channel's settings such as resolution, bandwidth and FPS.

General	Cameras		Record	Devic	e	S	/stem	A	dvano
🔅 General	Channel	Alias	State	Mair	nstrea	m	s	ubstream	m
L Users	CH1		On-line	1920×1080, 2	SFps,	2048Kbps	640x 480,	15Fps,	512
Info			On-line	1920×1080, 2	5Fps,	2048Kbps	640x 480,	15Fps,	
Linto			On-line	1920×1080, 2	SFps,	2048Kbps	640x 480,	15Fps,	
Main	CH4		On-line	1920×1080, 2	SFps,	2048Kbps	640x 480,	15Fps,	512
Channel Info					K				
🗐 Log									
							, used band		

### 7.5.5 Log

Search for logs of all events and notifications on the NVR to playback or backup files.

÷0	0						
General	Cameras		Record	Devio	e	System	Advan
🔅 General	Start Date	03/24/2015	30	Start Time	00:00:00		
👤 Users	End Date	03/24/2015	30	End Time	23:59:59		
Info	Log Type				Search		
E Log	Channel	TYPE	TIME		CON.	RECORD	Playback
						0	<b>•</b> ••

**Log Type:** select the type of event log that you would like to *Search* for. Each choice corresponds to an action or event that was triggered and noted within the system. For example, *System* logs are recorded when the NVR time is synced with NTP (if enabled) or if the system is turned on or off.

Start Time: choose the initial date of your log search period.

End Time: choose the end date of your log search period.



**Backup:** in order to save a log, a USB flash drive must be inserted into one of the available USB ports on the back of the NVR. Select the log or logs you would like to save; you will then be prompted to specify which drive to save to.

#### 7.6 Advanced Menu

Configure additional settings related to maintenance, hard drive space, and upgrades.

#### 7.6.1 Maintain

Adjust settings related to default user access and reboot schedules.



Default User: choose a user to default at the login screen at startup.

Auto Reboot: Enable or Disable a scheduled reboot.

**Reboot:** set the frequency of reboots if this feature is enabled.

**Update:** if any of the above settings were changed, click this button to save the new parameters.

Load Default: revert back to the standard reboot schedule.

Save Settings: save reboot settings to a USB flash drive.

Load Settings: load previously saved settings from a USB flash drive.

Shutdown: reboot the NVR.

**IPC Upgrade:** allows you to upgrade the IPC configurations to the selected channels by uploading the desired IPC configuration from a USB flash drive. Keep in mind this should only be done if you have extensive knowledge in this field.

#### 7.6.2 Events

Configure notification settings for other triggered events not related to motion detection such as disk error, disk full or and/or video loss.



**Event Type:** choose the type of event you would like to create a notification for. *Disk Full* means you will receive a notification if the HDD is full. *Disk Error* refers to the status of the HDD and will notify you if it crashes or has become corrupt. *Video Loss* is the absence of video due to power loss disconnection.

Enable: turn notifications on or off for the selected Event Type.

**Show Message:** enable an icon to be displayed in Live View when the selected Event Type is triggered.

**Send Email:** allows you to check this box if you would like an alarm to be sent for the selected event type.

**Latch Time:** select the amount of recorded video before an event is triggered. You can select from 10 seconds up to 1 minute.

Send Email: sends an email to notify you an alert has been triggered.

**Buzzer:** turn an audible buzzer on for a duration of time to alert you when this *Event Type* happens. Choose *OFF* to disable this feature. You can select in between 10 and 60 seconds.

#### 7.6.3 Auto Upgrade

Control settings for auto upgrades of the NVR software.



**Auto Upgrade:** *Enable* or *Disable* the auto upgrade feature. Firmware updates will be detected automatically when this feature is enabled. The default selection for the auto upgrade feature is enable.

**Check For Updates:** check this tick box to periodically check for updated software versions.

**Detect:** click this button to query your NVR and notify you if you are current or need to be updated.

**Upgrade:** if an upgrade is detected, click this button to download and install the new version.

# **CHAPTER 8 X** REMOTE ACCESS



## Chapter 8: Remote Access

This chapter will show you how to connect your NVR to the Internet. You will learn how to properly connect your NVR to your router/modem and setup port, Internet, and mobile configurations along DDNS registration.

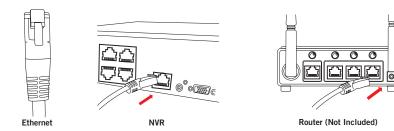
### 8.1 System Requirements

You will need to have the following in order to be able to successfully connect the NVR to the Internet.

- High-speed Internet connection
- Router or modem with two open Ethernet ports
- Computer with Internet Explorer 7, 8, 9, or 10 and Windows<sup>®</sup> XP, Windows<sup>®</sup> Vista, Windows<sup>®</sup> 7, and Windows<sup>®</sup> 8 operating systems
- 2x Ethernet cables (1x included with the system; see image below)

#### 8.2 Setup

Learn how to connect the NVR to your router/modem.



**NOTE:** Do not connect the NVR to a wireless router.

#### 8.3 Network Configuration

### 8.3.1 Windows® Operating Systems

Make sure that the NVR is properly connected to the router/modem and that you have a computer that works with Windows and connected to the same router.

Follow these steps to determine the basic information about your network:

1. Press the *Windows* and *R* key at the same time on your computer's keyboard to bring up the Run window. Type *"cmd"* and press the *Enter* key.

🗁 Run	
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
<u>O</u> pen:	It is task will be created with administrative privileges.
	OK Cancel <u>B</u> rowse

2. In the command prompt window, type "ipconfig" and press *Enter*. Find the section named "Ethernet adapter Ethernet" or "Wireless LAN adapter Wi-Fi" and locate the "IPv4 Address" and write this address down e.g. 192.168.1.123.



- 3. Change the last three digits of the address to 150 and write this address down as well e.g. 192.168.1.150. This will become the IP address of your NVR at a later time.
- 4. Find "Default Gateway" in the same section and write this number down as well e.g. 192.168.1.1. You will need to enter this in the NVR network settings.

For the following steps, use the information that you just wrote down. To access the network settings on your NVR, go to the General Menu, then to Network > Main and choose the Static option.

- 🍫	0		-			
General	Cameras	Record	Device	Syster	n	Advanced
📃 Display				<ul> <li>Stati</li> </ul>	c	
📇 Network		05038		05037		
Main	IP Address	192.168.001.123				
Switch	Subnet Mask	255.255.255.000				
Substream	Gateway DNS1	192.168.001.001				
Email	DNS2	000.000.000.000				
Email Schedule						
DDNS						
🖸 Alarm	UPNP	Disable				
				Default	Save	Cancel

1. Manually enter the IP address into the *IP Address* field; this is the number that ends with 150. You may have to add placeholder zeros for any sections that do not contain three digits e.g.  $192.168.1.150 \rightarrow 192.168.001.150$ .

	0	<b>E</b>	-		•	N.
General	Cameras	Record	Device	Syster		Advanced
💻 Display				<ul> <li>Stati</li> </ul>	6	
Network		05038		05037		
Main	IP Address	192.168.001.123				
<ul> <li>Switch</li> </ul>	Subnet Mask	255.255.255.000				
<ul> <li>Substream</li> </ul>	Gateway DNS1	192.168.001.001				
<ul> <li>Email</li> </ul>	DNS2	000.000.000.000				
Email Schedule						
DDNS						
Alarm	UPNP	Disable				
				Default	Save	Cance

2. Confirm that the Subnet Mask is set to 255.255.255.000.



Enter the "Default Gateway" number from the prior section into the *Gateway* field. Again you will need to add placeholder zeros in any sections that do not contain three digits e.g. 192.168.1.1 → 192.168.001.001.

	0		_		•	
General	Cameras	Record	Device	Syster		Advanc
💻 Display				<ul> <li>Stati</li> </ul>	c	
Network		05038		05037		
Main	IP Address	192.168.001.123				
Switch	Subnet Mask	255.255.255.000				
Substream	Gateway	192.168.001.001				
• Email	DNS1 DNS2	192.168.001.001 000.000.000.000				
Email Schedule						
DDNS						
Alarm	UPNP	Disable				
				Default	Save	Cano

- 4. *DNS1* and *DNS2* fields are auto-populated in most cases, if they are not they need to be set as follows: DNS1: [Gateway] DNS2: 8.8.8.8.
- 5. Click the *Save* button to apply all changes.
- 6. Reboot or power cycle the NVR.

**NOTE:** Write these addresses down in the User Information section at the end of the manual for future reference.

#### 8.3.2 Mac® Operating Systems

Make sure that the NVR is properly connected to the router/modem.

Follow these steps to determine basic information about your network:

- 1. Select the *Airport* icon on your computer screen and choose the "Open Network Preferences" option.
- 2. Choose *Ethernet* and select the *Advanced* button in the lower right corner.
- 3. Select the *TCP/IP* tab at the top to display your computer's network information.
- 4. Write down the "IPv4 address."
- 5. Change the last three digits of the address to 150 and write this address down as well e.g. 192.168.1.150. This will become the IP address of your NVR at a later time.
- 6. Make note of the IP address listed for router. You will need to enter this into the NVR network settings.

For the following steps, use the information that you just wrote down. To access the network settings on your NVR, go to the General Menu, then to Network > Main and choose the Static option.

- 🍫	0		-			
General	Cameras	Record	Device	Syster	n	Advanced
📃 Display				<ul> <li>Stati</li> </ul>	c	
📇 Network		05038		05037		
Main	IP Address	192.168.001.123				
Switch	Subnet Mask	255.255.255.000				
Substream	Gateway DNS1	192.168.001.001				
Email	DNS2	000.000.000.000				
Email Schedule						
DDNS						
🖸 Alarm	UPNP	Disable				
				Default	Save	Cancel

1. Manually enter the IP address into the *IP Address* field; this is the number that ends with 150. You may have to add placeholder zeros for any sections that do not contain three digits e.g.  $192.168.1.150 \rightarrow 192.168.001.150$ .

-	0		-		•	
General	Cameras	Record	Device	System		Advanced
💻 Display				• Stati		
Network		05038		05037		
Main	IP Address	192.168.001.123				
<ul> <li>Switch</li> </ul>	Subnet Mask	255.255.255.000				
Substream	Gateway DNS1	192 168 001 001 192 168 001 001				
• Email	DNS2	000.000.000.000				
Email Schedule						
DDNS						
Alarm	UPNP	Disable				
				Default	Save	Cancel

2. Confirm that the Subnet Mask is set to 255.255.255.000.



Enter the "Default Gateway" number from the prior section into the *Gateway* field. Again you will need to add placeholder zeros in any sections that do not contain three digits e.g. 192.168.1.1 → 192.168.001.001.

- 🍋	0					
General	Cameras	Record	Device	System		Advanc
💻 Display				<ul> <li>Stati</li> </ul>		
Hard Network		05038		05037		
Main	IP Address	192.168.001.123				
Switch	Subnet Mask	255.255.255.000				
Substream	Gateway	192.168.001.001				
Jubinean		192.168.001.001				
<ul> <li>Email</li> </ul>	DNS2	000.000.000				
Email Schedule						
DDNS						
Alarm	UPNP	Disable				
				Default	Save	Canc

- 4. *DNS1* and *DNS2* fields are auto-populated in most cases, if they are not they need to be set as follows: DNS1: [Gateway] DNS2: 8.8.8.8.
- 5. Click the *Save* button to apply all changes.
- 6. Reboot or power cycle the NVR.

**NOTE:** Write these addresses down in the User Information section at the end of the manual for future reference.

#### 8.3.3 Port Configuration

After you have configured the network settings, you will need to forward the necessary ports to be able to view the NVR over the Internet.

Refer to your router's documentation to see how port forwarding works for your device. This process may be referred to as "Port Forwarding," "Port Mapping," or "Virtual Server."

Below are some general considerations to keep in mind to make sure that the appropriate ports are forwarded:

- 1. Go to **http://whatismyip.com**. Your public IP address will appear at the top of the page; write this number down.
- 2. Open the Internet Explorer browser and type in your IP address in the URL bar.
- 3. Log in to your router using your user name and password. If you do not know your router's user name and password you will need to contact your ISP or the router manual/support to retrieve that information.
- 4. Once logged in to your router, go to the settings related to port forwarding.

- 5. You will need to enter a new port forwarding entry for each port that your NVR uses: Media Port (9000), Web Port (2049 or 2051). Repeat the steps below for each entry.
- When entering the port numbers and IP address into your router's port forwarding section, you will need to remove any leading zeros e.g. 09000 → 9000, 192.168.000.150 → 192.168.0.150, etc.
- 7. Additionally most router menus will ask you to enter the following information in order to forward a port; the language and naming on your particular router may be different than the below but the same principles will apply:
  - Application Name: create a unique name for your NVR system.
  - **Public Port:** select the port to forward: Media Port (9000), Web Port (2049 or 2051), or Server Port (2050).
  - Private Port: set to the same number you entered for the Public Port.
  - **Port Type/Protocol:** if your router has an option for both, use TCP and UDP. If your router allows either TCP or UDP port types, use TCP.
  - Host IP Address: set to your NVR IP address ending in 150 that you wrote down earlier.

Once you have forwarded the necessary ports on your router, you should check to make sure they have been correctly forwarded.

- 1. Go to http://www.yougetsignal.com/tools/open-ports/.
- 2. Type in port 9000 and select the *Check* button to see if the port is open or closed.
- 3. Type in port 2049 or 2051 and select the *Check* button to see if the port is open or closed.
- 4. All ports should be open. If any ports test as closed, that port is not forwarded correctly.

**NOTE:** Write you external address in the User Information section at the end of the manual.

#### 8.3.4 DDNS Registration

This option allows you to set up a free website address that will point back to the NVR, regardless of whether or not the IP address changes. If you do not have a static IP address, you should use this option.

Follow the steps below to register a free domain name/DDNS.

- 1. Go to http://www.nightowINVR.com.
- 2. Select the Registration button located at the top left corner of the page.

NIGHT OWL			
Logon Registration	Welcome to Night	OWI DDNS g users below to begin.	
		DDNS account creation.	
	NEW USER REGIST	RATION	
	USERID		
	EMAIL		
	PASSWORD	0	
	PASSWORD		
	FIRST NAME		
	LAST NAME		
	SECURITY QUESTION.	My first phone number. 🗸	
	ANSWER		
	CONFIRM YOU'RE HUMAN	1+9== New Captola Solve the problem above.	
	×	Submit Reset	

3. Complete the New User Registration form. Write down the UserID and Password information.

NIGHT OW						
User Settings Domains	My Domains Your domain names are listed below	v. Choose create ne	w domain to add additional domain names.			
Logout	Your domain was successfully created.					
	Search by Domain. Se	STATUS	Click a name to edit your domain settings.			
	SEATA	0	seaya.rightowldvr.com			
	Last Update: Aist yet updated' 19	Address: 119.145.1	17.83			
	Create additional domain names		[1]			
	★ Download our automatod IP update software for Windows. ▲ Download dddiart a free Perl based IP update for Linux/Unix systems. ▲ A sample configuration file can be found here.					
	All Rights Rose	rved @ 2014				

- 4. Create a domain name.
- 5. If the domain name that you have chosen is available, you will see a window that tells you that your domain was successfully created. If the domain name is taken, try again until you find an available name.

**NOTE:** Write the registered domain name down in the User Information section at the end of the manual.

#### 8.3.5 Adding the DDNS to Your NVR

After you have registered for a free domain name you will need to add that domain to your NVR.

To do so you will need to access the DDNS settings. Go to the General menu and then to the Network settings and the DDNS section.



#### 1. Set the DDNS field to Enable.

- 2. Verify that the Server field is still set to NIGHTOWL.
- 3. In the *Domain* field, input the domain name that was created during the DDNS registration.
- 4. Input the UserID and Password you created at registration into the *User* and *Password* fields respectively.
- 5. Click Save to apply the changes.

# **CHAPTER 9** GLOSSARY



## Chapter 9: Glossary

**DDNS:** Dynamic Domain Naming System. Method for automatically updating hostnames, address, or other information like a URL on a given name server.

**DHCP:** Dynamic Host Configuration Protocol. A network protocol that allows a server to automatically assign a device and IP address.

FPS: Frames Per Second.

**ISP:** Internet Service Provider. An organization that provides services for accessing or using the Internet.

**IP:** Internet Protocol. Protocol for standard communications across the Internet.

NVR: Network Video Recorder

**PoE:** Power over Ethernet. Run power and video over the same RJ-45 cable.

**PPPOE:** Point-to-Point Protocol Over Ethernet. Specifications needed to connect multiple addresses on a local network to a remote site.

**SSL:** Secure Sockets Layer. Provides a secure connection between web browsers and websites.

SMTP: Simple Mail Transfer Protocol. Standards used for email transmission.

**UPS:** Uninterrupted Power Supply. Device used to keep the NVR and cameras powered when the main power supply is lost or disconnected.

# CHAPTER 10 WARRANTY



## Chapter 10: Warranty

NIGHT OWL, LLC ('Night Owl") provides the following warranty to the original retail purchaser only (the "Purchaser") with respect to this product (the "Product"):

For a period of one (1) year after the date of sale, the Product shall be free from manufacturing defects in material and workmanship. In the event that the Product is defective, the Purchaser must return the Product at Purchaser's cost (no CODs) to the address below, with the original proof of purchase receipt. In its sole discretion, Night Owl will either repair or replace the Product at no additional cost to the Purchaser. Any replacement Product (or parts) will be covered by the same warranty as the original Product through the expiration date of the original warranty period.

#### **Exclusions**

This warranty does not apply to the following parts or upon the following events:

- 1. Bulbs, LEDs and batteries;
- 2. The Product was not used or installed in the manner described in the installation instructions;
- 3. Negligent use of the Product, or misuse or abuse of the Product;
- 4. Electrical short circuits or power surges;
- 5. Use of replacement parts not supplied by Night Owl;
- 6. Product is either tampered with, modified, or repaired by another service provider;
- 7. Product has not been maintained in accordance;
- 8. Accident, fire, flood or other acts of God;
- 9. Failure to use Night Owl approved accessories;
- 10. Defects or damages arising by use of the Produce in other than normal conditions (including normal atmospheric, moisture and humidity conditions).

Except as otherwise prohibited by law, this warranty is in lieu of other warranties, express or implied, and Night Owl neither assumes no authorizes any person to assume for it any other obligation or liability in connection with the sale or service of the Product.

In no event shall Night Owl be liable for any special or consequential damages arising from the use of the Product or arising from the malfunctioning or nonfunctioning of the Product, or for any delay in the performance of this warranty due to any cause beyond its control. This warranty shall not apply to installation or the removal and reinstallation of products after repair.

Night Owl does not make any claims or warranties of any kind whatsoever regarding the Product's potential, ability or effectiveness to prevent, minimize, or in any way affect personal or property damage or injury. Night Owl is not responsible for any personal damage, loss or theft related to the Product or to its use for any harm, whether physical or mental related thereto. Any and all claims or statements, whether written or verbal, by salespeople, retailers, dealers or distributors to the contrary are not authorized by Night Owl, and do not affect this provision of this warranty.

#### **Returns Under this Warranty**

In order to obtain service, please make sure that you have registered your product on-line no later than thirty (30) days after purchase at **www.NightOwISP.com** in the warranty registration section or in any other manner described in the instructions.

#### Disclaimer

Certain uses, publication and/or distribution of video/audio recordings from security cameras and/or audio devices are prohibited or restricted by federal, state and local laws. When enabling and/or using audio recording features with your hidden security camera, be sure to comply with the laws in your country, state and locality.

Mac and Mac OS X are registered trademarks of Apple Inc. Windows, Windows XP, Windows Vista, Windows 7 and Windows 8 are registered trademarks of Microsoft Corporation in the United States and/or other countries.

# **CHAPTER 11** TROUBLESHOOTING



NVR10 Series Users Manual

## Chapter 11: Troubleshooting

If a problem occurs, you may be able to easily correct it yourself. The following table describes some common issues and their most likely solutions. Please refer to the table before calling technical support.

Error	Possible Causes	Solutions
	Cable from power adapter is loose or is unplugged.	<ol> <li>Confirm that all cables are connected correctly.</li> <li>Confirm that the power adapter is securely connected to the back of the unit.</li> </ol>
System is not receiving power, or is not powering up.	Cables are connected, but system is not receiving sufficient power.	<ol> <li>Confirm that the system is powered ON (LED indicators on the front should be ON).</li> <li>If the unit is connected through a power bar or surge protector, try bypassing the bar and connecting the power directly to the wall outlet.</li> <li>Confirm that there is power at the outlet.</li> <li>Connecting the power cable to another outlet.</li> <li>Test the outlet with another plugged device (such as a phone charger).</li> </ol>
Remote control is not detected	Battery in the remote control is drained.	Install two fresh AAA alkaline
by the system.	There are no batteries in the remote control.	batteries in the remote control.
Hard drive is not detected by	Hard drive cables are loose or not properly connected.	Remove the cover and check that the hard drive cables are firmly connected.
the system.	There is no hard drive in the system.	Open the cover and install a 3.5" SATA hard drive.
Hard drive is full (0%) and the unit is no longer recording.	Overwrite is not enabled.	Go to the Device Menu > HDD and ensure that <b>Overwrite</b> is set to <b>Auto</b> .
	Mouse cable is not firmly connected to the system.	Firmly connect the mouse cable
	Mouse is not connected to the system.	to the USB Mouse port on the front panel.
Mouse not detected by system.	System needs to be reset.	Power off the system (disconnect power cable). Firmly connect a USB mouse to the USB Mouse port on the front panel of the system. Reconnect the power cable to the DC 19V port on the real panel.

Error	Possible Causes	Solutions
There is no picture on selected channels/camera picture Is not being displayed.	Camera cables are loose of have become disconnected.	<ol> <li>Check the camera video cable and connections.</li> <li>Disconnect and reconnect the cable at the system and at the camera.</li> <li>Try moving the camera to another channel or use another cable.</li> </ol>
	Audio cables are loose or have been disconnected.	Check the AUDIO connection to the NVR.
The image on the NVR appears, but does not have sound.	Audio channels are disable.	Left click in Live View to bring up the <b>Volume</b> control and ensure that the channel(s) are not low or muted.
	Volume on external speakers (not included) is low or off.	Increase volume on external speakers (not included).
A "whirring" noise is coming from the system.	Fan is active.	The noise means the exhaust fan is working normal.
The system beeps at startup.		The beep at startup is normal.
The system beeps during motion detection.	Motion detection is enabled, but the alarm buzzer is activated.	Go to the General Menu > Alarm, select the channel and turn <b>Buzzer</b> to <b>OFF</b> .
I am not receiving email	Email notification is disabled.	See section 7.1.2. for details on
notifications.	Default setting is disabled, but you have not entered your own SMTP information.	email configuration.

# **CHAPTER 12** CUSTOMER SUPPORT



NVR10 Series Users Manual

## Chapter 12: Customer Support

Before you return to the store, we might be able to save you a trip:

#### **ONLINE**

- www.NightOwISP.com
- 24/7 Product Support
- How-To Videos
- Manuals
- Firmware Updates, etc.

#### **EMAIL**

- Technical Support: support@NightOwISP.com
- Sales Support: sales@NightOwISP.com

#### PHONE (English & Spanish)

- Technical Support: register at www.NightOwISP.com to receive technical phone support.
- Sales Support: 1.561.265.5272
- Professional Installation: 1.800.806.5513

# **CHAPTER 13** USER INFORMATION



## Chapter 13: User Information

Be sure to write down all the important information below and place it in a secure location.

#### **General NVR Information**

Admin Password:
User Password:
Mac Address:
Serial Number:
Internet Login Information
Internal IP Address:
Public IP Address:
DDNS Name:
DDNS UserID:
DDNS Password:
Media Port:
Web Port:





www.NightOwISP.com