Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

21h

COBRA™

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8 CHANNEL
SURVEILLANCE DVR
WITH 4 HD CAMERAS
With Mobile Monitoring Capabilities

Visit our website at: http://www.harborfreight.com
Email our technical support at: productsupport@harborfreight.com

63890

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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WARNING SYMBOLS AND DEFINITIONS	
⚠	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
⚠WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

⚠WARNING

Read all safety warnings and instructions.
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

Installation Precautions

1. **Check federal, state and local surveillance laws before installing video and/or audio surveillance equipment.**

2. Install only according to these instructions. Improper installation can create hazards.

3. **Do not overreach when installing this product. Keep proper footing and balance at all times.** *This enables better control in unexpected situations.*

4. Wear ANSI-approved safety goggles during installation.

5. Keep installation area clean and well lit.

6. Keep children and bystanders out of the area during installation.

7. Do not install when tired or when under the influence of alcohol, drugs or medication.

Use Precautions

1. This product is not a toy. Do not allow children to play with or near this item.

2. Use as intended only.

3. Do not modify.

4. Maintain product labels and nameplates. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

Service

Have your DVR equipment serviced by a qualified repair person using only identical replacement parts. *This will ensure that the safety of the equipment is maintained.*

Camera Safety Warnings

1. To prevent electric shock, do not attempt to disassemble Camera. There are no serviceable parts inside.

2. **Do not expose the Power Adapter to rain or wet conditions.** *Water entering the Power Adapter will increase the risk of electric shock.*

3. **Do not abuse the Power Adapter cord. Never use the cord for unplugging the plug from the outlet. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*

4. Handle Camera with care. Camera could be damaged by improper handling or storage.

DVR Safety Warnings

1. Maintain adequate airflow around DVR.

2. Use supplied Power Adapter only.

3. To prevent electric shock, do not attempt to disassemble DVR. There are no serviceable parts inside.

4. **Do not expose the Power Adapter or DVR console to rain or wet conditions.** *Water entering the Power Adapter or DVR console will increase the risk of electric shock.*

5. **Do not abuse the Power Adapter cord. Never use the cord for unplugging the plug from the outlet. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*

6. Maintain labels and nameplates on the unit. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

7. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

⚠ **SAVE THESE INSTRUCTIONS.**

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Grounding

⚠WARNING

TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.
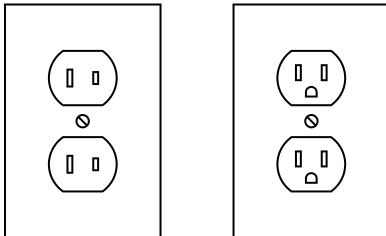
1. The included Power Adapters do not require grounding.

2. The Power Adapters may be used in either of the 120 volt outlets shown in the preceding illustration. **(See Figure A.)**

Figure A: Outlets for 2-Prong Plug

Extension Cords

Note: Do not use an extension cord with the Power Adapters.

Symbology

回	Double Insulated	~	Alternating Current
V	Volts	**A**	Amperes

Record Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 193175452054 when ordering parts.

Specifications

DVR

Hard Drive	1 TB
Video Standard	NTSC (United States, default) / PAL (Europe)
Video Codec	H.264, H.265
Operating System	Linux
Video I/O	Input: 8 BNC
	Output: 1 HDMI / 1 VGA
Audio Codec	G.711
Audio I/O	Input: 4 RCA
	Output: 1 RCA
Recording Resolution (Mainstream)	960x480 720P (1280x720) 1080P (1920x1080) 2K (2560x1440)
Recording Mode	Manual / Schedule / Motion Detection
Motion Detection	Selectable Area and Sensitivity Detection
PTZ Interface	RS485 - Supports Pelco-D, Pelco-P, Coax1 and Coax2 camera (sold separately)
Network Interface	RJ-45 10m/100m Ethernet Interface
USB Interface	USB 2.0
DVR Input Rating	12VDC / 2A
Power Adapter Rating	12VDC / 2A
Operating Temperature	32º - 158ºF

Cameras (included)

Lens Type	Fixed 3.6 mm
Resolution	2MP
Effective Pixels	1920 H x 1080 V
Night Vision Type	Infrared LEDs with Low Light Sensor
Image Type	Daylight: Color Infrared: Black & White
Infrared Distance	100 ft. (Under ideal conditions. Objects may be partially or completely obscured depending on camera position.)
Ingress Protection Rating	IP66 - Protected from powerful water jets
Video Connector	BNC
Camera Input Rating	12VDC / 300 mA
Power Adapter Rating	12VDC / 2A - To power included 4 cameras. **Additional cameras or longer cables will require a higher amperage Power Adapter (all sold separately)**
Cable Length	60 ft.
Operating Temperature	14º - 122ºF

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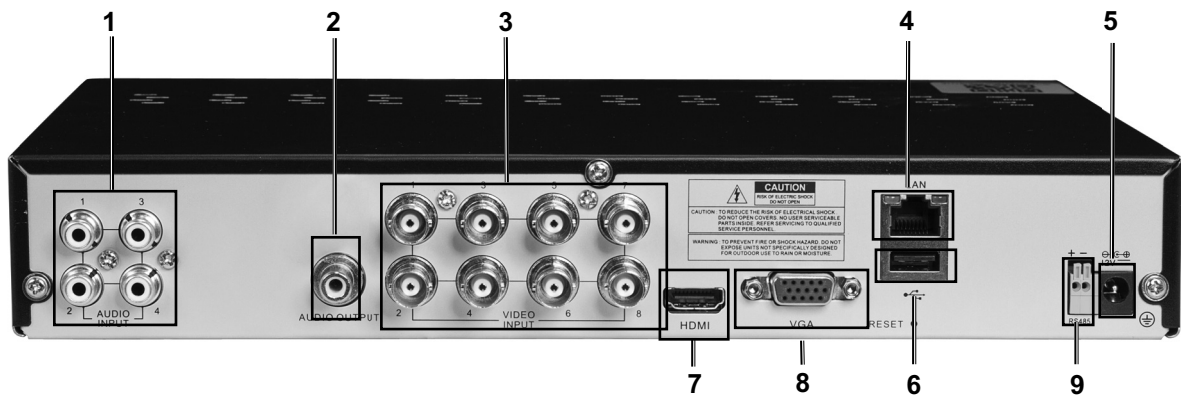
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Components and Controls

⚠️ **Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.**

DVR Front Panel

1	Green Power Indicator - glows when power is on
2	Red Hard Drive Light - flashes when recording
3	USB 2.0 Port

DVR Back Panel

1	RCA Audio Input	4
2	RCA Audio Output	1
3	BNC Video Input	8
4	RJ45 LAN Ethernet Port	1
5	12VDC Power Input	1
6	USB 2.0 Port	1
7	HDMI Video Output	1
8	VGA Video Output	1
9	RS485 PTZ Connector	1

DVR Accessories

Remote Control Functions	
1 - 8	Select Channel
0	No Function
ALL	Toggle between single, 4 and 8 Screen Displays
MENU	Open Menu
MUTE	Mute
SUBMENU	Open Pop-Up Menu
▲	Menu Up
▼	Menu Down
◄	Menu Left
►	Menu Right
SEL	Confirm Selected Operation
◄◄	Rewind
►	Play / Search Records
►►	Fast Forward
●	Record
II	Pause
■	Stop

12VDC/2A Power Adapter

Power (to DVR)

Remote

Note: 2 AAA batteries included

Mouse

Use the Mouse to navigate DVR

Camera and Accessories

12VDC/2A Power Adapter

Power (to Splitter)

Power Splitter

Power (from Adapter)

Power (to Cables)

Mounting Hardware

Screws

Anchors

Cable - 60 ft.

Video (from Camera)

Power (to Camera)

Video (to DVR)

Power (from Splitter)

Camera

Lens

Video (to Cable)

Power (from Cable)

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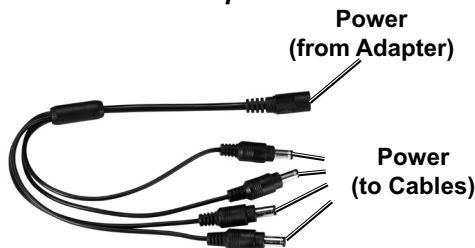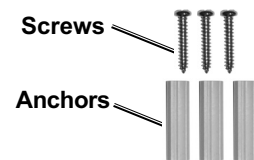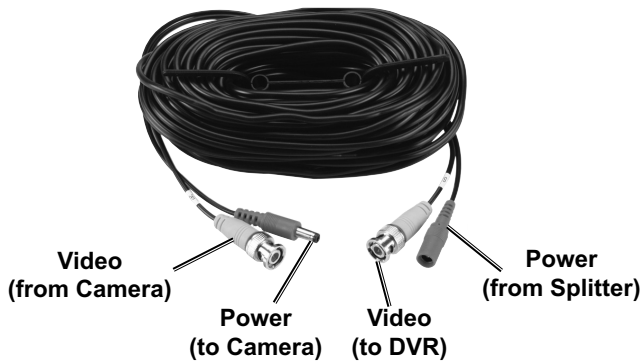
Setup

⚠ **Read the __ENTIRE__ IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.**

__NOTICE:__ CHECK FEDERAL, STATE AND LOCAL SURVEILLANCE LAWS BEFORE INSTALLING VIDEO AND/OR AUDIO SURVEILLANCE EQUIPMENT.

CONNECT AND TEST ALL EQUIPMENT AND CAMERA LOCATIONS __BEFORE__ MOUNTING CAMERAS.

Designate Location for DVR and Monitor

When planning location for DVR and Monitor:

1. Choose a clean, dry, well ventilated, dust-free location indoors with 120V outlet nearby.

2. If setting up Network/Remote access (not required), make sure the DVR is located close to your router.

3. Take into consideration the length of the Camera Cables.

__CAUTION!__ Route the Cables so as to avoid a tripping hazard.

4. Make sure location will remain within Operating Temperature.

Connect Cameras

__NOTICE:__ **Do not join cables together end-to-end. Video loss may occur.** If extra length is needed, longer cables (sold separately) and a higher amperage power adapter (sold separately) should be used.

Cables to Cameras
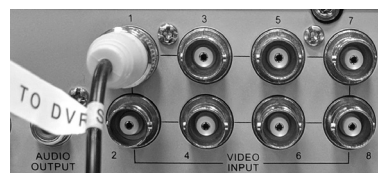
1. Video - Yellow to Yellow.

2. Power - Red to Red

3. **IMPORTANT! WRAP CONNECTIONS WITH ELECTRICAL TAPE.**

Splitter to Power Adapter

Cables to Splitter/DVR

1. Power - Red to Splitter.

2. Video - Yellow to Video Output.

DO NOT PLUG IN OR MOUNT CAMERAS YET!

Connect Monitor or TV

Connect monitor or TV (sold separately)
to back of DVR using:

HDMI or VGA cable (both sold separately).

Connect Mouse

Plug Mouse into front or back USB port.
Mouse will be used to navigate DVR.

Connect Power Adapter to DVR

Plug Power Adapter into 12VDC Power Input.

# Connect Power to Surge Protector (sold separately)

1. Plug in Monitor, DVR Power Adapter
   and Camera Power Adapter.

2. Plug surge protector into 120V outlet.

CAUTION! The surge protector MUST be
plugged in indoors in a clean, dry location.

3. System will boot up, green PWR (power)
   light will glow and red HDD light will blink.

*IMPORTANT! SCREEN WILL TURN BLACK
FOR ABOUT A MINUTE DURING BOOT-UP.
IF SCREEN IS BLANK
FOR MORE THAN 5 MINUTES, GO TO
TROUBLESHOOTING ON PAGE 30.*

4. After initialization is complete, system will
   beep, then display Startup Wizard.

Startup Wizard

*IMPORTANT! NETWORK CONFIGURATION (INTERNET CONNECTION)
IS NOT REQUIRED TO USE THIS PRODUCT!*
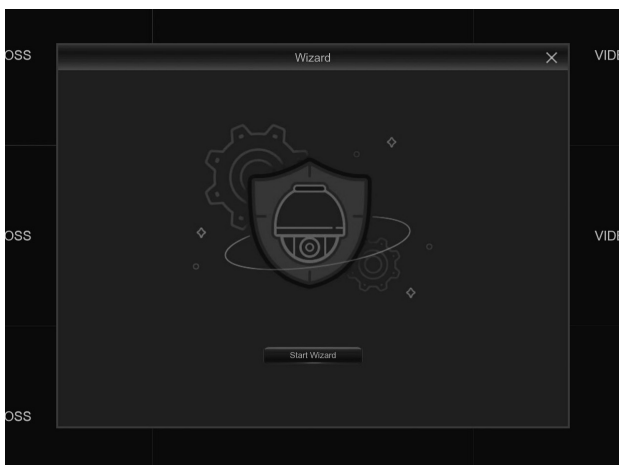
Click Start Wizard to get started.

Note: Click "Don't show this window next time."
to stop Wizard from coming on again.

**NOTICE: If you are locked out of the DVR because
of a password problem, call 1-888-866-5797.**

**Note: Click Next to skip through the Optional
settings if information is unknown. You can
enter the information later if needed.**

Optional - Advanced

- **Disk Management:** Hard Drive Settings.
  Go to Maintain Hard Drive on page 21.
- **Network Configuration:** Network Settings.
  Go to Set up DHCP Network on page 26.

General System Configuration

For instructions, go to **Date, Time, Language, and
Menu on page 12,** then come back here**.**

Changes will be saved when you click Apply.

**Changes will not be saved if you
right click on screen.**

Click Default to restore default settings.

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Test Cameras

IMPORTANT! VIEW CAMERAS ON MONITOR TO MAKE SURE THEY ARE WORKING PROPERLY BEFORE MOUNTING THEM!

Double-click Channel to view in full screen, double-click to return to Live View.

Drag and drop Channels to change Channel positions.

02/17/2018 09:23:14 AM

T-CH1   T-CH2

T-CH3   T-CH4

NOTICE: CHECK FEDERAL, STATE AND LOCAL AUDIO SURVEILLANCE LAWS BEFORE INSTALLING MICROPHONES OR AUDIO ENABLED CAMERAS AND SPEAKER.

Plan Mounting Locations for Cameras

1. Take into consideration the length of the Cables.

CAUTION! Route the Cables so as to avoid a tripping hazard.

2. Choose locations under eaves to shelter Cameras from rain and direct sunlight.

3. Choose locations high enough so that Cameras are visible, but out of reach.

4. Verify that installation surfaces have no hidden utility lines before drilling or driving screws.

5. Make sure no strong light will shine directly into Camera Lenses.

6. Do not point Camera through a window, glaring may occur, resulting in poor quality images.

7. If using Audio function, plug those Cameras into Channels 1 - 4. Only those Channels support Audio.

Mount Cameras

Place Cameras under eaves and cable connections inside walls to shelter them from rain and direct sunlight.

Solid Surface

1. Using a drill bit slightly smaller than the Screws, drill pilot holes into the marked locations.

2. Position Camera so that mounting holes align with pilot holes.

Note: Route Cable through slot on Base to keep Base flush with mounting surface.

3. Drive Screws through mounting holes in Base and into pilot holes until the Camera is securely attached to the mounting surface.

Hollow Surface

1. Using a drill bit slightly smaller than the Anchors, drill holes in the marked locations.

2. Tap Anchors into the holes until they are almost flush with mounting surface.

3. Position Camera so that mounting holes align with anchors.

Note: Route Cable through slot on Base to keep Base flush with mounting surface.

4. Drive Screws through mounting holes in Base and into anchors until the Camera is securely attached to the mounting surface.

Camera Adjustment
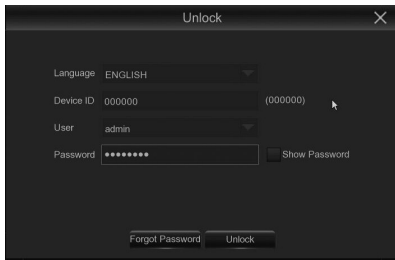
1. Loosen Adjustment Screw, tilt Camera as needed, then tighten Adjustment Screw.

Note: Only loosen Adjustment Screw slightly, do not remove it.

Login

Login is required when setting up and operating DVR.

NOTICE: If you are locked out of the DVR because of a password problem, call 1-888-866-5797.

• **Advanced Users:** If email is set up, click "Forgot Password" and follow prompts.

Default Settings

• Every camera will record all the time: Red R will show on each camera's Live View and red HDD Light on DVR will blink. **To change settings, go to Recording Schedule on page 14.**

• Motion Detected Recording will be OFF: Green M will show on screen if motion is detected, but DVR will not record. **To change settings, go to Recording Schedule on page 14.**

• Menus will time out after 1 minute. **To change settings, go to Date, Time, Language, and Menu on page 12.**

Pop-up Menu

Right-click anywhere on screen or hover over bottom of screen.

Main Menu	Main Menu
Lock Screen/ Shutdown/Reboot	Shortcut to Lock Screen/ Shutdown/Reboot
4-way Split Screen	Display Up To 4 Live Images
8-way Split Screen	Display Up To 8 Live Images
More Layout	Display 6 or 8 Live Images

Start/Stop Sequence	Start and stop rotating through Live Images
Mute	Volume control (if audio hooked up)
Playback	Shortcut to Record Search
Start/Stop Manual Recording	Start/Stop Manual Recording
Info	Shortcut to System Info

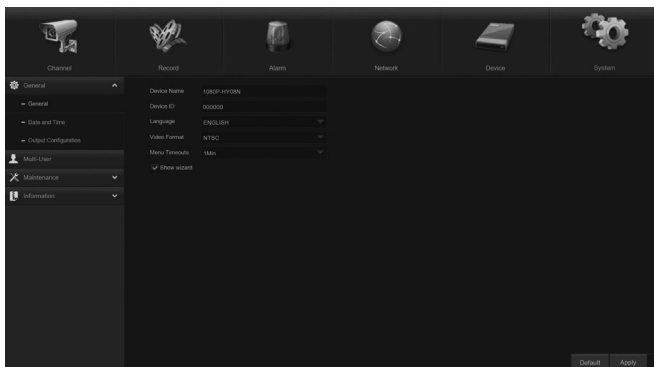# Camera Pop-Up Menu

Click on camera's Live Image on screen.

Manual Capture	Click to take picture
Start/Stop Manual Recording	Start/Stop Manual Recording
Instant Playback	Plays back last 5 minutes
Zoom	Click and drag to zoom

Color Settings	Shortcut to Color Settings
PTZ	PTZ (Pan/Tilt/Zoom) settings (PTZ camera sold separately)
Tags	Add a customized tag

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Basic Settings

Date, Time, Language, and Menu

System > General

1. **Date and Time:**

   a. **Date:** Click calendar icon, select current date.

   b. **Time:** Enter current time.

   c. **Date Format: MM/DD/YY** is selected by default. Change to other format if desired.

   d. **Time Format: 24Hour** is selected by default. Change to **12Hour** if desired, then select **AM** or **PM.**

2. **Language: English** is selected by default. Change if desired.

   Click Save, then right-click on screen. Open Main Menu and language choice will be set.

Note: If using Startup Wizard, do not follow this step.

3. **Video Format:** Default is **NTSC**, which is the standard in the United States. **LEAVE IT SET TO NTSC**.

4. **Menu Timeouts:** Select how long menus will display or set to **OFF** so menus will always display until you close them.

5. **Show Wizard:** Uncheck to stop Setup Wizard from running upon start up.

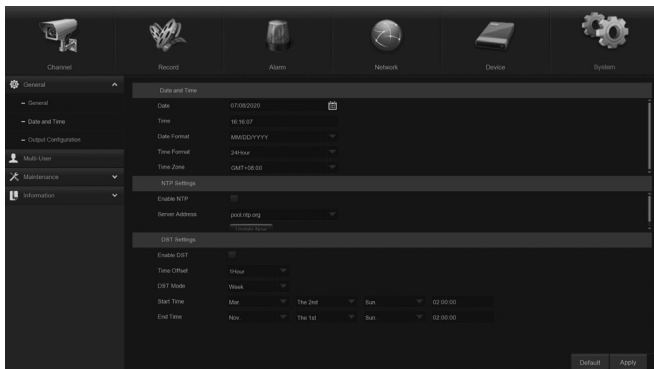**Note:** If using Startup Wizard, this check box is not available.

Changes will be saved when you click Apply.

Changes will not be saved if you right click on screen.

Click Default to restore default settings.

Daylight Saving Time

System > General > DST

1. **DST: Disable** is selected by default. Change to **Enable** to manually enter when time change will happen.

2. **Time Offset: 1Hour** is selected by default. Change to **2Hour** if necessary.

3. **Daylight Saving Time: Week** is selected by default. Change to **Date** if desired.

4. **Start Time:** Set date and time for change to occur.

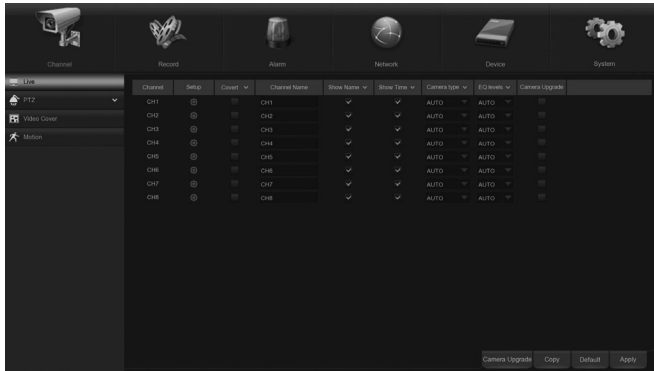5. **End Time:** Set date and time for change to end.

   Changes will be saved when you click Apply.

   Changes will not be saved if you right click on screen.

   Click Default to restore default settings.

Channel - Live View

Channel > Live - Set Camera Names, Viewing Positions, Color and Information to Display on Monitor

1. **Channel**: Select which Channel to set up.

2. **Channel Name**: Enter Channel name (up to 8 characters). For example, "Driveway" or "Backyard".

Note: DVR will detect camera type (TVI or AHD) and add prefix to Channel name. For example: "T-Driveway", where the T indicates TVI.

3. **Show Name: Enable** is selected by default to show channel name on monitor.

4. **Record Time: Enable** is selected by default to show date and time on recordings.

5. **OSD Position:** Select where **Channel Name** will appear on the monitor.

   a. Click **Setup.**

   b. Click and drag **Channel Name** to desired position.

   c. Right click to exit, then click **Save.**

6. **Color:** Click **Setup** to adjust Hue, Brightness, Contrast, and Saturation.

7. **Camera SET:** Leave set to **AUTO** and DVR will determine the type of camera.

8. **Covert: Disable** is selected by default. Select **Enable** to hide live image on monitor.

Note: Camera will still record even if the image can't be seen on monitor.

9. **Show Time: Enable** is selected by default to show date and time on monitor.

10. **Copy:** Copy settings from one Channel to other Channels.

    a. Select Channel to copy from.

    b. Select Channel to copy to or select **ALL.**

    c. Click **Copy**, then click **OK.**
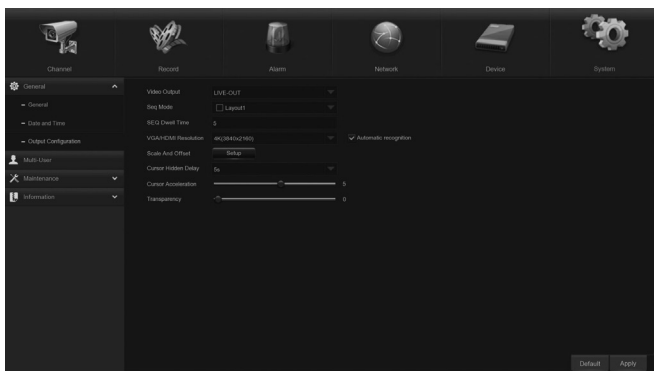
   Changes will be saved when you click Apply.

   Changes will not be saved if you right click on screen.

   Click Default to restore default settings.

Channel - Output

Channel > Output - Set Camera Layout and Resolution

1. **Video Output:** Cannot modify.

2. **Seq (Sequence) Mode:** Choose Layout for when **Start SEQ** is activated from Pop-Up Menu.

3. **SEQ (Sequence) Dwell Time:** Amount of time, in seconds, that each Channel will display in Live View when **Start SEQ** is activated from Pop-Up Menu.

4. **VGA/HDMI Resolution:** Select resolution for monitor or TV (see monitor's or TV's user manual).

5. **Transparency:** Set transparency of Menus.

6. **Support Overscan:** Click check box to allow full screen viewing on any monitor.
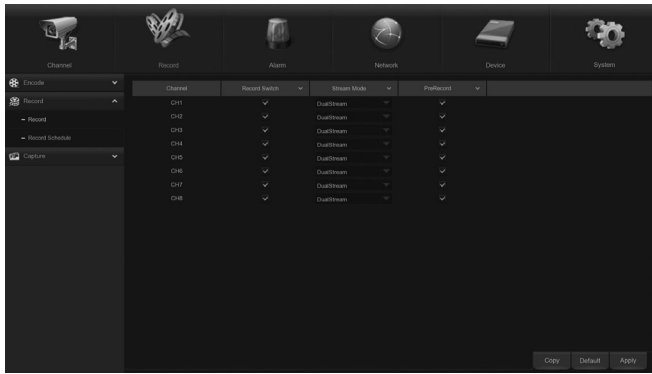
   Changes will be saved when you click Apply.

   Changes will not be saved if you right click on screen.

   Click Default to restore default settings.

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Recording

Record > Record

1. **Channel:** Select Channel.

2. **Record Switch: Enable** is selected by default to record on all channels with connected cameras. Change if desired.

3. **Stream Mode: Mainstream** is selected by default. Leave set to Mainstream.

4. **PreRecord: Enable** is selected by default to start motion event recordings several seconds BEFORE motion is detected.

5. **Copy:** Copy settings from one Channel to other Channels.

   a. Select Channel to copy from.

   b. Select Channel to copy to or select **ALL.**

   c. Click **Copy**, then click **OK.**
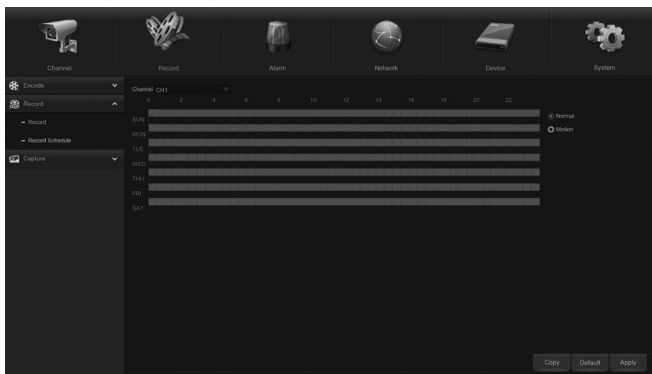
   Changes will be saved when you click Apply.

   Changes will not be saved if you right click on screen.

   **Click Default to restore default settings.**

# Recording Schedule

Record > Record Schedule

Note: All channels are set to record in Normal mode at all times. Recording Schedule is set to 24 hour clock and cannot be modified.

1. To modify Normal recording times:

   a. Click Normal button.

   b. Click or click and drag to select or deselect green boxes.

   c. For example, if you want DVR to record all the time between 6 PM to 6 AM, deselect green boxes after 6 and up to 18.
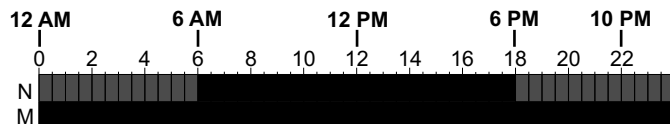
d. During Normal recording:

   • Red R will show on screen and red HDD light on DVR will blink.

   • Motion detected recording will be OFF: Green M will show on screen if motion is detected, but DVR will not record.

2. To schedule Motion detected recording:

   a. Click Motion button.

   b. Click or click and drag to select or deselect yellow boxes.

   c. For example, if you want DVR to record in Motion Detection mode between 6 AM to 6 PM, select yellow boxes after 6 and up to 18.
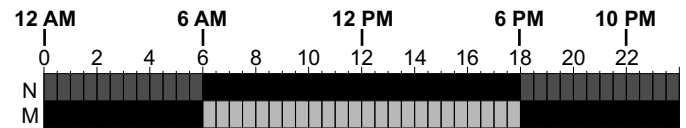
3. **Copy:** Copy settings from one Channel to other Channels.

   a. Select Channel to copy from.

   b. Select Channel to copy to or select **ALL.**

   c. Click **Copy**, then click **OK.**

Note: Red M will show on screen when motion is detected to indicate recording in process.

Changes will be saved when you click Apply.

Changes will not be saved if you right click on screen.

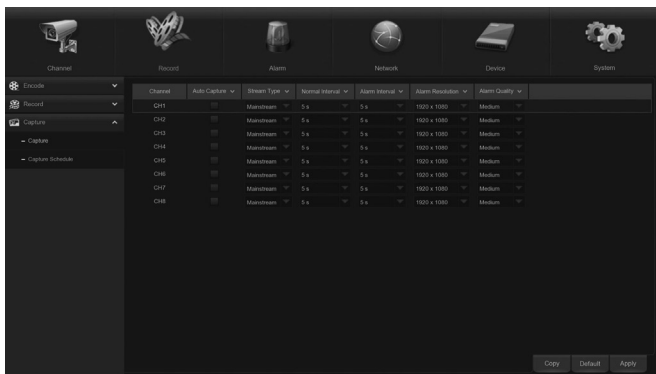**Click Default to restore default settings.**

Screen Capture

Record > Capture - Take Pictures Automatically or Manually

1. **Channel:** Select Channel.

2. **Auto Capture: Disable** is set by default. Set to **Enable** to allow screenshots to be taken in set intervals and/or when motion is detected.

3. **Stream Mode: Mainstream** is set by default.

    a. **Mainstream** is high resolution video that feeds from the DVR to the monitor via cables.

    b. **Substream** is standard/low resolution video that feeds to a remote device via the internet. Set to **Substream** to send screenshots from the DVR to a remote device.
    The DVR must be connected to your network and mobile device for this feature to work.
    Go to Set up DHCP Network on page 26.

4. **Normal Interval:** Set length of time between pictures.

5. **Alarm Interval:** Set length of time alarm will beep. **To set up Alarm, go to Motion Detection on page 17, 3. Buzzer.**

6. **Copy:** Copy settings from one Channel to other Channels.

    a. Select Channel to copy from.

    b. Select Channel to copy to or select **ALL.**

    c. Click **Copy**, then click **OK.**

IMPORTANT! SCREEN CAPTURE SCHEDULE MUST BE SET UP IN ORDER FOR THESE FEATURES TO WORK. Go to page 16.

To view and back up pictures, **go to View and Backup Pictures on page 20.**

Changes will be saved when you click Apply.

Changes will not be saved if you right click on screen.

Click Default to restore default settings.

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Screen Capture Schedule

Record > Capture Schedule - Set Schedule for Pictures
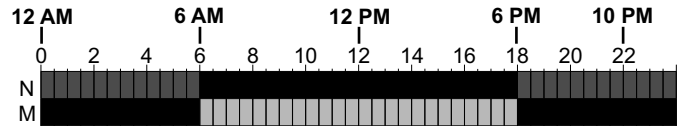

1. **Channel:** Select Channel.

2. To schedule Normal Interval snapshots:

   a. Click Normal button.

   b. Click or click and drag to select or deselect green boxes.

   c. For example, if you want DVR to take Normal Interval snapshots between 6 PM to 6 AM, select green boxes after 18 and up to 6.
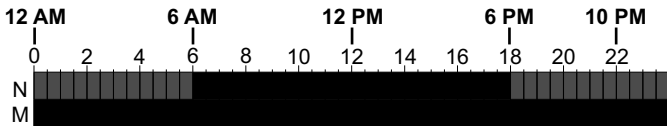
3. To schedule Motion Detected snapshots:

   a. Click Motion button.

   b. Click or click and drag to select or deselect yellow boxes.

   c. For example, if you want DVR to take Motion Detected snapshots from 6 AM to 6 PM, select yellow boxes after 6 and up to 18.

4. Repeat for other days of the week.

5. **Copy:** Copy settings from one Channel to other Channels.

   a. Select Channel to copy from.

   b. Select Channel to copy to or select **ALL.**

   c. Click **Copy**, then click **OK.**

   Changes will be saved when you click Apply.
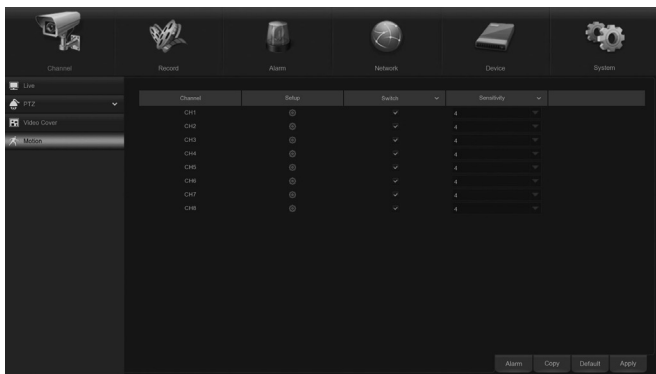
   Changes will not be saved if you right click on screen.

   Click Default to restore default settings.

Motion Detection

Channel > Motion

1. **Channel:** Select Channel.

2. **Enable:** Set to **Enable** by default so that when motion detection is scheduled, the selected camera will record. **To schedule Motion detected recording, go to Recording Schedule on page 14.**

3. **Buzzer:** Set to **Disable** by default. To turn on, click drop-down box and choose length of time for beeping to sound when motion is detected and/or snapshot is captured. **To set up Snapshot, go to Set up DHCP Network on page 26.**

4. **Sensitivity:** Set desired motion sensitivity. 1 is lowest and 8 is highest.

5. **Area:** Click and drag boxes to set desired area(s) where motion detection **will not** trigger an event. For example, if cars passing by trigger an event, select the area where cars pass by.

6. Right click to exit, then click **Save.**

Note: If no areas are set, the entire camera's view will trigger an event.

7. **Show Message:** Set to **ON** by default. When motion is detected by a camera, Red **M** will appear on Live View for that camera.

8. **Send Email:** Set to **ON** by default. The DVR must be connected to your Network for this feature to work. **Go to Set up DHCP Network on page 26.**

9. **Full Screen:** Set to **OFF** by default. Check box so that when motion is detected by the selected camera, Live View will display in full screen mode for that camera.

10. **Record Channel:** This setting allows you to choose which other cameras will record when the selected camera detects motion.

    • For example, if you want motion detection for camera 1 to trigger cameras 3 and 4 to record, mark the boxes accordingly:
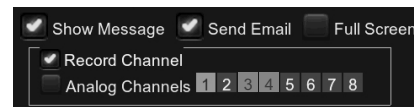
11. **Post Recording:** Select how long recording will continue after motion is detected.

12. **Copy:** Copy settings from one Channel to other Channels.

    a. Select Channel to copy from.

    b. Select Channel to copy to or select **ALL.**

    c. Click **Copy**, then click **OK.**

    Changes will be saved when you click Apply.

    Changes will not be saved if you right click on screen.

    Click Default to restore default settings.

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PTZ Camera (sold separately)

Device > PTZ

Input information according to PTZ camera manufacturer instructions.

System Information

System > Information > Information

Note: You won't need to change Device ID or Device Name unless you have multiple DVRs networked together.

1. **Device ID:** Set to 000000 by default. Change if desired (up to 6 numbers).

2. **Device Name:** Set to 1080P-HY08N by default. Change if desired (up to 21 characters).

3. **QR Code:** Scan QR code with mobile device to connect to DVR. To set up Network and mobile device, **go to Date, Time, Language, and Menu on page 12.**

4. The remainder of settings are informational and cannot be changed.

   Changes will be saved when you click Apply.

   Changes will not be saved if you right click on screen.

   Click Default to restore default settings.

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Playback and Backup Recordings

Playback > Search > General
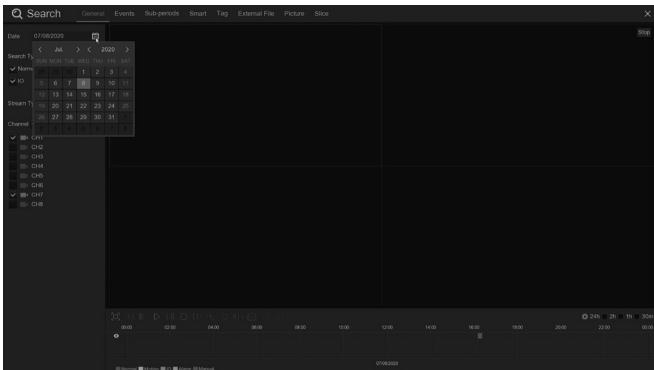
Note: Dates marked with orange triangles have recordings.

1. **Channel: All** is selected by default. Change if desired.

2. **Type:** Select **All**, **Normal**, or **Motion** recordings.

3. Click **Search** to apply **Channel** and **Type** selections.

4. **Select Date:** Today's date is selected by default. Click dates on calendar to search as desired.

5. **Start Time/End Time:** Default is set to search entire day. To search a different time frame, enter **Start Time** and **End Time.**

6. Click **Play.** Playback will start automatically.

7. Use Playback Bar to perform following functions (icon styles may vary):
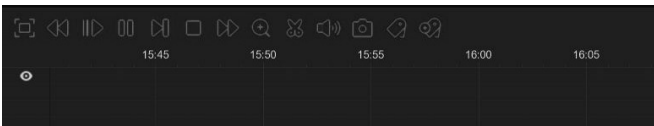
	Enter full screen. Right click to exit.
	Rewind. Click again to rewind faster. Click top-right corner of screen to see speed.
	During play, rewind, or fast forward, click to view at Half Speed.
	Play
	Pause
	Fast Forward
	During play, click and drag box to zoom in. Right click to resume normal view.
	Volume. Click to mute. (If audio hooked up)

8. Backup Section of Recording

    Insert USB flash drive (sold separately) into USB port on front or back of DVR.

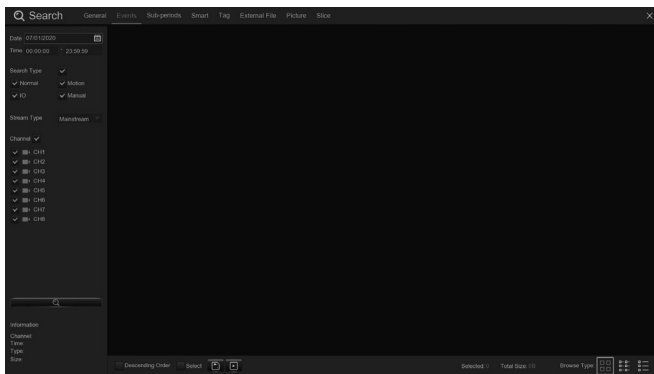**Note:** Some flash drives include special file handling software and may not be compatible.

   a. While playing a recording, click on green Time Bar to mark start time of backup.

   b. Click to capture the start time.

   c. Click on green Time Bar again to mark end time of backup.

Time Bar

Start Time   **End Time**
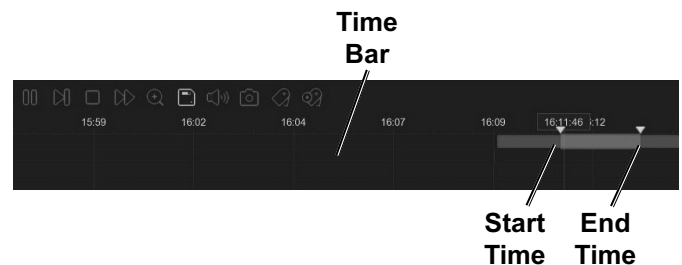
   d. Click to start backup.

   • You will be prompted to choose between **H265**, **H264, AVI** and **MP4**. **MP4** should be chosen in most cases.

   • Click **Save** and wait until **backup is finished** box pops up, then click **Cancel.**

   • The USB flash drive can be plugged into another device to view or transfer recordings.

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Playback and Backup Events

Playback > Search > Events

1. **Select Date:** Today's date is selected by default. Click calendar to search for desired date.

2. **Start Time/End Time:** Default is set to search entire day. To search a different time frame, enter **Start Time** and **End Time.**

3. **Channel: All** is selected by default. Change if desired.

4. **Type:** Select **All**, **Normal**, or **Motion** recordings.

5. Click **Search.** Double-click an event to play recording. Right-click to exit.

6. **Quick Backup:** Back up all files.

   a. Insert USB flash drive (sold separately) into USB port on front or back of DVR.

   Note: Some flash drives include special file handling software and may not be compatible.

   b. Click **Quick Backup.**

   • You will be prompted to choose between **H265, H264, AVI** and **MP4. MP4** should be chosen in most cases.

   • Click **Save** and wait until **backup is finished** box pops up, then click **Cancel.**

   • The USB flash drive can be plugged into another device to view or transfer recordings.

7. **Search:** Backup selected files.

   a. Check Channel box(es) to select events.

   b. Click **Backup** tab on bottom of window.

   • You will be prompted to choose between **H265, H264, AVI** and **MP4. MP4** should be chosen in most cases.

   • Click **Save** and wait until **backup is finished** box pops up, then click **Cancel.**

   • The USB flash drive can be plugged into another device to view or transfer recordings.

8. **Lock:** Check Lock Box(es) to keep selected recordings from being overwritten.

View and Backup Pictures

Playback > Search > Picture

1. **Select Date:** Today's date is selected by default. Click calendar to search for desired date.

2. **Start Time/End Time:** Default is set to search entire day. To search a different time frame, enter **Start Time** and **End Time.**

3. **Channel: All** is selected by default. Change if desired.

4. **Type:** Select **All**, **Normal**, **Motion,** or **Manual** pictures.

5. Click **Search.** Double-click a picture to view. Right-click to exit.

6. **Quick Backup:** Back up all files.

   a. Insert USB flash drive (sold separately) into USB port on front or back of DVR.

   Note: Some flash drives include special file handling software and may not be compatible.

   b. Click **Quick Backup.**

   • Click **OK** and wait until **Backup Successful!** appears on bottom of window, then click **Cancel.**

   • The USB flash drive can be plugged into another device to view or transfer recordings.

7. **Search:** Backup selected files.

   a. Check Channel box(es) to select events.

   b. Click **Backup** tab.

   • Click **OK** and wait until **Backup Successful!** appears on bottom of window, then click **Cancel.**

   • The USB flash drive can be plugged into another device to view or transfer recordings.

Maintain Hard Drive

Advanced > Maintain

Set up Reboot Cycle, Update Software & Firmware, Restore Default Settings
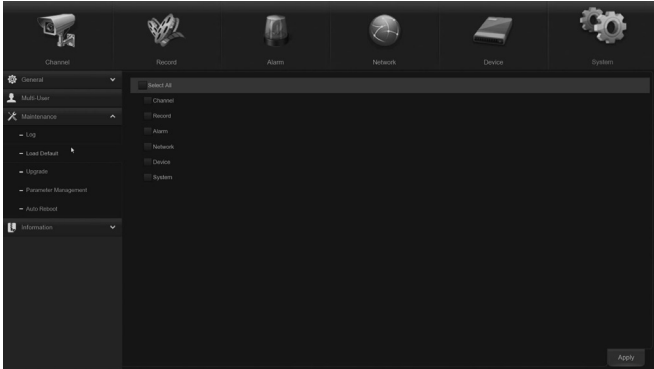
1. **Default User:**
   a. **admin** is selected by default.
   b. Select another user from the list.
   c. Select **OFF** so that any user can access this function.
2. **Auto Reboot: Enable** is selected by default.

3. **Reboot:** By default DVR will Reboot every Sunday at midnight. To change:
   a. Select when to **Auto Reboot.**
      • **Everyday:** Select time.
      • **Every Week:** Select day and time.
      • **Every Month** Select month and time.
4. **Update:** For updating firmware using a USB flash drive. **(Find the most recent firmware updates at http://www.harborfreight.com.)**
5. **Load Default:**
   a. Click to restore system default settings.
   b. Check the settings to restore, click **Save.**

IMPORTANT! Clicking **Save** will delete custom settings you have made.

6. **Load Settings:** Import settings using a USB flash drive.
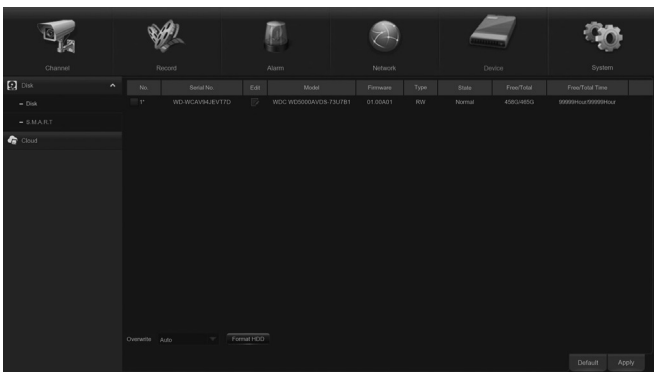7. **Save Settings:** Export settings using a USB flash drive.

   Changes will be saved when you click Apply.

   Changes will not be saved if you right click on screen.

   Click Default to restore default settings.

Hard Drive Information and Formatting

Device > Disk > Disk

No.	ID number of drives
State	**OK -** Hard drive installed
	No HDD - No hard drive installed
	FULL - Hard drive full
Free/total	Free Space/Total Space
Free Time	Recording time available

1. **Overwrite: Auto** is selected by default. The Hard Disk Drive will overwrite itself when full. Change if desired.

Note: HDD will overwrite even when the **State** is **FULL.**

2. **Format HDD:**
   a. Click **Select** box.
   b. Click **Format HDD.**
   c. Click **OK.**
   d. When formatting is finished, click **OK.**

   Changes will be saved when you click Apply.

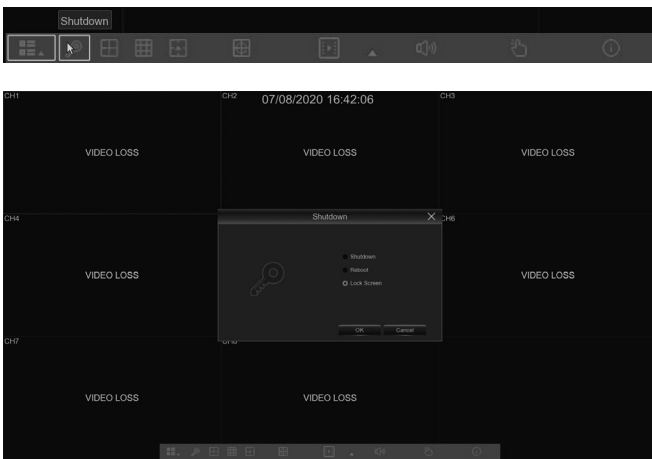   **Changes will not be saved if you right click on screen.**

   Click Default to restore default settings.

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Shutdown/Reboot
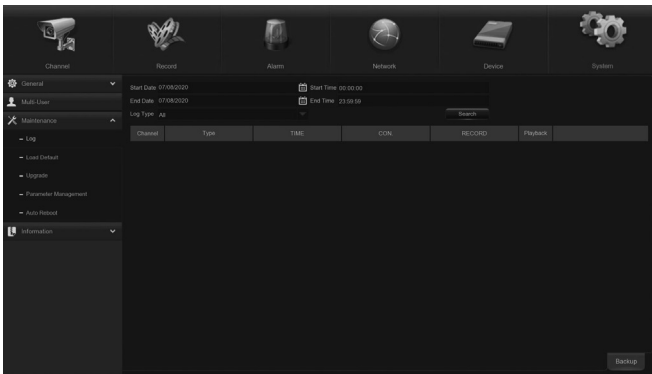
Shutdown

Manually shutdown DVR before unplugging or reboot as needed.

<u>NOTICE:</u> Save settings before Shutdown or Reboot or they will be lost.

1. Enter **User Name** and **Password.**

2. Select **Shutdown, Reboot** or **Cancel.**

    • DVR is set to automatically Reboot once a week. To change settings **go to Maintain Hard Drive on page 21.**

View DVR's Activity

System > Log

1. **Start Date End Date:** Today's date is selected by default. Click calendar to search for desired date(s).

2. **Start Time/End Time:** Default is set to search entire day. To search a different time frame, enter **Start Time** and **End Time.**

3. **Log Type: All** is selected by default. Change to search for specific type:

    a. **System -** Logs when DVR starts up, shuts down, reboots or time settings are changed.

    b. **Config** - Logs when settings are changed.

    c. **Alarm -** Logs when motion events start and end; and when there is video loss.

    d. **Account -** Logs when users login and logout.

    e. **Record -** Logs when manual recordings start and stop; and when records are searched, played back and backed up.

    f. **Storage -** Logs when the hard drive has been formatted.

4. Click **Search** to populate table with list of log entries.

<u>Note:</u> If the list is long, enter the page number you wish to view, then click blue arrow.

5. Double-click any log entry for details and ability to Play recordings.

6. **Backup Log:**

    Insert a USB flash drive (sold separately) into either USB port on back of DVR.

<u>Note:</u> Some flash drives include special file handling software and may not be compatible.

    • Click **Backup** to backup log file, then click **OK** when backup finished.

    • The USB flash drive can be plugged into another device to view or transfer log file(s).

Channel Information

System > Info > Channel Info

View settings for each channel.

Recording Information

System > Info > Record Info

View settings for each channel with a camera connected.

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Advanced Settings

Mainstream Recording and Audio

Record > Encode > Mainstream

High resolution video that feeds from the DVR to the monitor via cables.

1. **Channel:** Select Channel.

2. **Resolution:** 1920 x 1080 (best) is set by default. Set to 1280 x 720 or 960 x 480 if desired for lower quality and longer recording times.

3. **FPS (Frames per Second):** 15 FPS (highest with 1920 x 1080 resolution) is set by default. Change as desired. The higher the FPS, the smoother the recording will be and more storage will be taken up, reducing recording times.

Resolution	Camera Qty	FPS	*Approximate* Recording Time (hours)
1920 x 1080 Best Quality	4	15	210
	1	15	840
1280 x 720 Better Quality	4	30	156
	1	30	576
1280 x 720 Good Quality	4	15	288
	1	15	1128

5. **Bitrate Control:** Bitrate is the number of bits that are processed per unit of time.

   a. **CBR (Constant Bitrate)** is set by default. The same amount of bits are used for every second of video but video quality can vary. Use CBR when quality of video is less important than file size.

   b. **VBR (Variable Bitrate)** allows the bit rate to vary and video quality remains the same, but it will use up more storage. Use VBR when file size is less important than quality of video.

6. **Bitrate Mode:**

   a. **Predefined:** Select bitrate from a static list.

   b. **User-Defined:** Enter actual desired bitrate.

7. **Bitrate:** Select or enter bitrate based on Bitrate Mode.

NOTICE: CHECK FEDERAL, STATE AND LOCAL AUDIO SURVEILLANCE LAWS BEFORE INSTALLING MICROPHONE-ENABLED CAMERA.

8. **Audio:** Check box to record audio if audio surveillance microphone or audio enabled camera (sold separately) is being used.

   • Connect audio surveillance microphone or audio enabled camera (sold separately) to Audio Input.

   • Connect Monitor, TV, or speaker (all sold separately) to Audio Output.

Note: Audio is only available on camera Channels 1 - 4. Audio from these channels can be heard:

   a. When playing back recordings.

   b. In real time, double-click on Channel in Live View.

9. **Copy:** Copy settings from one Channel to other Channels.

   a. Select Channel to copy from.

   b. Select Channel to copy to or select **ALL.**

   c. Click **Copy**, then click **OK.**

   Changes will be saved when you click Apply.

   Changes will not be saved if you right click on screen.

   Click Default to restore default settings.

Substream Recording and Audio

Record > Encode > Substream

Standard/low resolution video that feeds to a remote device via the internet.

1. **Channel:** Select Channel.

2. **Resolution:** Cannot modify.

3. **FPS (Frames per Second):** 4 FPS is set by default. The higher the FPS, the smoother the recording will be and more storage will be taken up. Change as desired.

4. **Bitrate Control:** Bitrate is the number of bits that are processed per unit of time.
   a. **CBR (Constant Bitrate)** is set by default. The same amount of bits are used for every second of video but video quality can vary. Use CBR when quality of video is less important than file size.
   b. **VBR (Variable Bitrate)** allows the bit rate to vary and video quality remains the same, but it will use up more storage. Use VBR when file size is less important than quality of video.

5. **Bitrate Mode:**
   a. **Predefined:** Select bitrate from a static list.
   b. **User-Defined:** Enter actual desired bitrate.

6. **Bitrate:** Select or enter bitrate based on Bitrate Mode.

NOTICE: CHECK FEDERAL, STATE AND LOCAL AUDIO SURVEILLANCE LAWS BEFORE INSTALLING MICROPHONE-ENABLED CAMERA.

7. **Audio:** Check box to record audio if audio surveillance microphone or audio enabled camera (sold separately) is being used.
   • Connect audio surveillance microphone or audio enabled camera (sold separately) to Audio Input.
   • Connect Monitor, TV, or speaker (all sold separately) to Audio Output.

Note: Audio is only available on camera Channels 1 - 4. Audio from these channels can be heard when playing back recordings.

8. **Copy:** Copy settings from one Channel to other Channels.
   a. Select Channel to copy from.
   b. Select Channel to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**

   Changes will be saved when you click Apply then OK.

   Changes will not be saved if you click Exit or right click on screen.

   Click Default to restore default settings.

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DHCP Network and Mobile Device Setup

IMPORTANT! IF YOU CANNOT ACHIEVE REMOTE CONNECTION USING THE FOLLOWING INSTRUCTIONS, CONTACT YOUR ROUTER'S MANUFACTURER, INTERNET SERVICE PROVIDER AND/OR HIRE AN IT SPECIALIST TO SET UP YOUR NETWORK!

What you will need (sold separately):	
• High Speed Internet	• Router
• Ethernet Cable	• Mobile Device with Android or iOS

Set up DHCP Network

This system uses Dynamic Host Configuration Protocol (DHCP) to automatically connect the DVR to the Internet.

1. Connect DVR to Router:

   a. Connect one end of Ethernet Cable to LAN port on DVR.

   b. Connect other end to open LAN port on Router.

2. Go to Network > General:
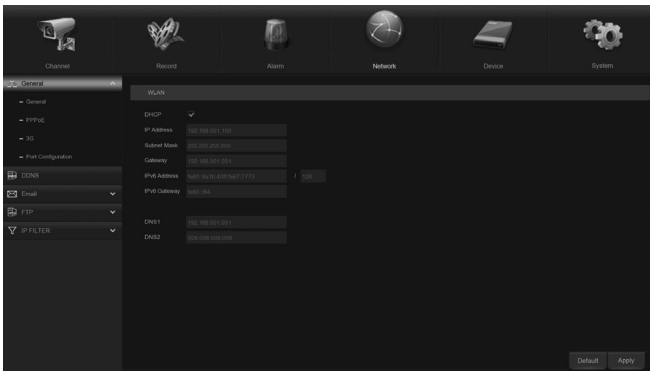

   a. Make sure DHCP is selected, then click Save.

   b. IP Address, Subnet Mask, Gateway and DNS1 should automatically fill in.

   c. Enable UPNP, then click Save.

IMPORTANT! PPPoE, Static, and 3G are for users with advanced networking knowledge. No instructions are available for these Network types.

IF YOU CANNOT ACHIEVE REMOTE CONNECTION USING DHCP, CONTACT YOUR ROUTER'S MANUFACTURER, INTERNET SERVICE PROVIDER AND/OR HIRE AN IT SPECIALIST TO SET UP YOUR NETWORK!

Set up Mobile Device

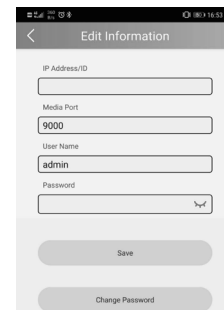3. Install RXCamView app to Mobile Device:

   a. For Android, go to Google Play Store.

   b. For iOS, go to App Store.

   c. Download and open app.

   d. Tap Device List icon.
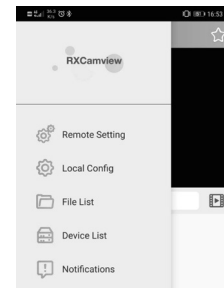
   e. Tap + to add device.

   f. Tap Manual to manually input information from DVR.
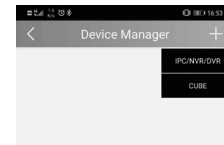
   g. IP address/ID: IP address or ID of the DVR

   h. Media Port: 9000.

   i. Password: Use DVR Password (5 - 16 characters).

   j. Click Save.

Remote Notifications

Email

Parameter > Network > Email

**Note:** If you are not familiar with your email settings, contact your Email Provider.

1. **Email:** Set to **Enable.**
2. Enter appropriate information.
3. Set up Email Schedule.

Email Schedule

Parameter > Email Schedule

Note: All channels are set to send emails for Motion Detected or Exception events at all times.

1. To modify Motion email schedule:
   a. Click Motion button.
   b. Click or click and drag to select or deselect green boxes.
   c. For example, if you want DVR to send Motion driven emails between 6 PM to 6 AM, deselect green boxes after 6 and up to 18.

2. To modify Exception (HDD full, HDD error, Video Loss) email schedule:
   a. Click Exception button.
   b. Click or click and drag to select or deselect red boxes.
   c. For example, if you want DVR to send Exception driven emails between 6 AM to 6 PM, select red boxes after 6 and up to 18.
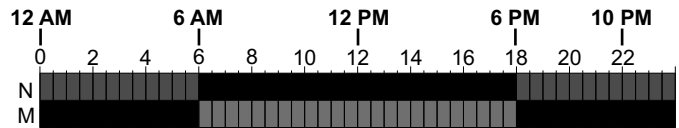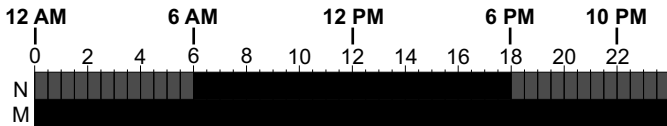
DDNS

Parameter > DDNS

1. **DDNS:** Set to **Enable.**
2. **Server:** Sign up online with one of the services on the drop-down list.
3. Follow instructions on DDNS service's website to finish setup.
4. Click **Test DDNS** button to check the connection.

Changes will be saved when you click Apply.

Changes will not be saved if you right click on screen.

Click Default to restore default settings.

5. Add DVR to mobile device.

RTSP

Parameter > RTSP

Access DVR using VLC Media Player with RTSP (Real Time Streaming Protocol).

Note: Set up this function only if you have advanced networking skill.

FTP

Parameter > FTP

Note: You will need to have an FTP site to set up this feature.

1. **FTP Enable:** Set to **Enable.**
2. Enter appropriate information.

Cloud

Device > Cloud

Note: You will need a Dropbox account and be familiar with the Cloud to set up this feature.

1. **Cloud Storage:** Set to **Enable.**
2. Enter appropriate information.

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Software

Note: Some antivirus programs or firewalls may prevent full installation.

1. Insert Software CD into computer.

2. If you have a MAC, open **Software for Mac** folder:

   a. **Surveillance Client** connects the DVR to your computer.

   b. **Video Player** plays recordings from a flash drive.

3. If you have a PC,open **Software for PC** folder:

   a. **Surveillance Client** connects the DVR to your computer.

   b. **Video Player** plays recordings from a flash drive.

Maintenance Instructions

⚠️ **Procedures not specifically explained in this manual must be performed only by a qualified technician.**

DVR Maintenance

⚠️WARNING

TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK:
Shut down the DVR and unplug the Power Adapter from its electrical outlet
before inspection, maintenance, or cleaning.

1. **PERIODICALLY,** inspect the general condition of the DVR. Check for:
   - leaking, swollen, or cracked battery pack,
   - loose hardware,
   - damaged cord/electrical wiring,
   - cracked or broken parts, and
   - any other condition that may affect its safe operation.

2. **PERIODICALLY,** wipe external surfaces of DVR with clean cloth.

3. **ONCE A MONTH,** blow compressed air into vents to remove dust buildup.

Camera Maintenance

⚠️WARNING

TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK:
Unplug the Power Adapter from its electrical outlet
before inspection, maintenance, or cleaning.

1. **PERIODICALLY,** inspect the general condition of the Camera. Check for:
   - leaking, swollen, or cracked battery pack,
   - loose hardware,
   - damaged cord/electrical wiring,
   - cracked or broken parts, and
   - any other condition that may affect its safe operation.

2. **PERIODICALLY:**
   - Wipe external surfaces of Camera with clean cloth.
   - Clean Camera lens by applying lens cleaning solution to scratch-free cloth, then wiping lens. **Do not apply solution directly to lens.**

3. Maintain area surrounding Camera, making sure obstacles don't interfere with visibility, such as overgrown bushes.

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BASIC

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ADVANCED

MAINTENANCE
TROUBLESHOOTING

Troubleshooting

Problem	Possible Causes	Likely Solutions
Screen blank after initialization	Incompatible resolution. Monitor/TV is not capable of supporting resolution.	Connect DVR to different Monitor/TV. Change output to resolution compatible with monitor. **See Channel - Output on page 13.**
DVR makes beeping sound (other than motion detection)	1. Camera is unplugged. 2. Hard drive is full. 3. Hard drive is damaged. (Red H on screen)	1. Check Camera connection at DVR and at Camera. 2. **Go to Device > Disk > Disk on page 21** and set Overwrite to Auto. 3. Have a qualified technician repair DVR.
Password Problem	Forgot Password	Have Device ID p. 30 ready and date stated on DVR at time of call. Call 1-888-866-5797
No image(s) in Live View	1. Covert is enabled. 2. Loose or incorrect connections. 3. Longer cables used without sufficient amperage from power adapter. 4. Monitor needs adjustment.	1. **Go to Channel - Live View on page 13** and disable Covert. 2. Check that all connections are secure and in the correct locations. 3. Use power adapter with proper amperage rating. 4. Adjust the image settings on the monitor.
DVR freezes	Hard Drive crash.	Unplug DVR, wait 30 seconds, then plug back in.
Remote won't work	Batteries need replacing.	Replace batteries.
Error codes when trying to install software	Interference from antivirus or firewall programs.	Follow antivirus or firewall program's instructions to resolve interference.

<u>FCC STATEMENT</u>

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. To the extent that this product is used with software other than what is provided, we shall in no event be liable for any damage to your computer or loss of data. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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