<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Warning &amp; Compliance</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Important Safeguards</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Hardware Overview</strong></td>
<td>3</td>
</tr>
<tr>
<td>PVM Exterior</td>
<td>4</td>
</tr>
<tr>
<td>Back Panel Connections</td>
<td>5</td>
</tr>
<tr>
<td>Remote Control</td>
<td>5</td>
</tr>
<tr>
<td><strong>Display Menu</strong></td>
<td>6</td>
</tr>
<tr>
<td>OSD Menu Overview</td>
<td>7</td>
</tr>
<tr>
<td>Video Menu</td>
<td>7</td>
</tr>
<tr>
<td>Display Menu</td>
<td>8</td>
</tr>
<tr>
<td>Image Modes</td>
<td>8-9</td>
</tr>
<tr>
<td>Audio Menu</td>
<td>9</td>
</tr>
<tr>
<td>System Settings</td>
<td>10</td>
</tr>
<tr>
<td>SD Card</td>
<td>11</td>
</tr>
<tr>
<td><strong>Camera Software</strong></td>
<td>12</td>
</tr>
<tr>
<td>IP Installer - Windows</td>
<td>13-14</td>
</tr>
<tr>
<td>Web Viewer - Mac OSX</td>
<td>15-16</td>
</tr>
</tbody>
</table>
The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**INFORMATION** - This equipment has been tested and found to comply with 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.

**WARNING** - Changes or modifications not expressly approved by the manufacturer could void the user’s authority to operate the equipment.

**CAUTION**: To prevent electric shock and risk of fire hazards:
- Do NOT use power sources other than that specified.
- Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

**RoHS**
This directive restricts the use of six hazardous materials in the manufacture of various type of electronic and electrical equipment.

**USA (FCC)**
This device has been tested and found to comply with the limits of Class A computing device pursuant to part 15 of the FCC rules.

**Europe (CE)**
By affixing the CE marking, the manufacturer assures that the item meets all the essential requirements of all applicable EU directives.

**UL Listed**
UL Listing means that UL has tested representative samples of the product and determined that it meets UL’s requirements. These requirements are based primarily on UL’s published and nationally recognized Standards for Safety.
1. **Read Instructions**
   All the safety and operating instructions should be read before the appliance is operated.

2. **Retain Instructions**
   The safety and operating instructions should be retained for future reference.

3. **Cleaning**
   Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.

4. **Attachments**
   Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

5. **Water and/or Moisture**
   Do not use this equipment near water or in contact with water.

6. **Accessories**
   Do not place this equipment on an unstable cart, stand or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

7. **Power Sources**
   This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company.

8. **Power Cords**
   Operator or installer must remove power and communications connections before handling the equipment.

9. **Lightning**
   For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the equipment due to lightning and power-line surges.

10. **Overloading**
    Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

11. **Objects and Liquids**
    Never push objects of any kind through openings of this equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the equipment.

12. **Servicing**
    Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.

13. **Damage Requiring Service**
    Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    
    A. When the power-supply cord or the plug has been damaged.
    B. If liquid is spilled, or objects have fallen into the equipment.
    C. If the equipment has been exposed to rain or water.
    D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.
    E. If the equipment has been dropped, or the cabinet damaged.
    F. When the equipment exhibits a distinct change in performance —this indicates a need for service.

14. **Replacement Parts**
    When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

15. **Safety Check**
    Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

16. **Field Installation**
    This installation should be made by a qualified service person and should conform to all local codes.

17. **Correct Batteries**
    Warning: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

18. **Tmra**
    A manufacturer's maximum recommended ambient temperature (Tmra) for the equipment must be specified so that the customer and installer may determine a suitable maximum operating environment for the equipment.

19. **Elevated Operating Ambient Temperature**
    If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer’s maximum rated ambient temperature (Tmra).

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

21. **Mechanical Loading**
    Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.

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

23. **Reliable Earthing (Grounding)**
    Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).
Hardware Overview
Warning! **DO NOT POWER WITH 24V INPUT AND POE SIMULTANEOUSLY.**

**BACK PANEL**

- **DC 24V Input**
- **BNC Out**
- **Network Connection**
  - Minimum 15W required for POE
- **SD Card**
- **LAN (POE)**

**REMOTE CONTROL**

- **POWER**
  - Turns display On/Off
- **MUTE**
  - Turns audio On/Off
- **MENU**
  - Shows the On-Screen-Display (OSD) Menu
- **ARROW BUTTONS**
  - Navigates the OSD Menu. Use Right or Left to change a selection
- **EXIT**
  - Closes the OSD Menu or returns to previous menu
- **ENTER**
  - Selects the highlighted OSD Menu option. Press to make adjustments or enter a sub-menu
- **VOLUME**
  - Raises or lowers volume

**Note:** All other buttons not described above are non-functioning for this device.

*When the display is turned OFF, the camera will continue to supply video to a remote display or DVR if connected.*
Display Menu

2
OSD Menu

Using the remote control, or button pad located on the back of the device, press the Menu button. The following selections will appear.

### Video
Adjust picture settings such as Contrast, Brightness, Saturation, Tint, Sharpness, Color Temperature, and select from video image mode presets.

### Display
Select Aspect Ratio, and select the Display Mode.

### Audio
Raise or lower volume of SD Card content and built-in alarm.

### System Settings
Change Language, OSD Settings, Key Lock, LED, and Message Control settings.

#### Video

- **Contrast**: Adjust to set the white level so that the images are at their brightest without losing definition in the white portions of the image. Setting the too high will result in an oversaturated image.

- **Brightness**: Adjust to set the black level so that the images are at their brightest while the black portions are still black. Do not adjust too high where the black portions of the image become gray or the image will have a “washed out” appearance.

- **Saturation**: Adjust to achieve a life-like separation between colors.

- **Tint**: Adjust if the image has bluish or reddish tint to the white portions of the image.

- **Sharpness**: Adjust lower if the image appears too grainy or pixilated. Increase if the image appears too soft.

**Advanced**

- **Video Mode**: Choose from preset video image modes (Normal, Cinema, Vivid, Natural).

- **Color Temperature**: Select from color temperature presets (Cool, Natural, Warm).


**Aspect Ratio:** Select the display aspect ratio (Full Screen, Cinema Scope, 4:3, Pillar Box Expand, 1:1). Full Screen is the default setting and will display the image without stretching. Use Cinema Scope for a more natural image and to stretch SD Card content to fill the screen.

**Image Mode:** Select from the following 6 video display modes.

*Camera*- Displays live camera image only.

*Switch*- Switches from live camera to SD Card content.

Switch is based upon Camera Time & SD Video Time settings in the Switch Timer sub-menu.

*Motion VOV Camera*- Displays live camera full screen. SD Card content will display in VOV window when motion is sensed.

From the sub-menu, select the number of seconds VOV window will remain on screen after motion is sensed, as well as the VOV window size and position.

---

*Note: Image modes which contain “VOV” refer to “Video-on-video”, where a smaller media window shows on top of the main media content.*
**Motion VOV SD** - Displays SD Card content full screen. Live camera image will display in VOV window when motion is sensed.

From the sub-menu, select the number of seconds VOV window will remain on screen after motion is sensed, as well as the VOV window size and position.

**Motion** - Displays SD Card content full screen. Switches to full screen live video when motion has been sensed.

**SD-Video** - Displays the SD Card content full screen. Camera’s video signal will continue to output to an attached DVR or secondary display.

**Audio**

- **Volume**: Raise or Lower the volume for the SD Card content and chime. Alternatively, you can use the volume buttons on the remote control to set volume level.

- **Output**: Choose the audio output signal (SD-Audio, Chime). Selecting Chime will play the noise when motion is triggered. *Note: Under the “Display” menu, “Image Mode” must be set to a motion mode for Chime to play.*
System Settings

- **Language**: Display the OSD menu in English or Spanish. Note: Changing the Language does not change the flashing on-screen message. This must be changed in the Special Control > Message setting.

- **OSD Timer**: Set the time in seconds before the OSD menu disappears. Turn timer OFF to close the OSD menu upon exit button press only.

- **OSD Transparency**: Set the transparency level of the OSD menu.

- **Key Lock**: This selection is non-functioning on this model.

**Special Control**
- **Message On/Off**: Turn the on-screen message on or off.

- **Message**: Select from preset on-screen messages, or Anti-Theft graphic banner Message Options: Recording in Progress, Welcome, Grabacion en Progresso, Bienvenida). There are also two selections that alternate the English and Spanish versions of these messages (Flash must be set to “ON” for these selections).

- **Flash**: Turning Flash “ON” enables the on-screen message to flash on and off. If bilingual message is selected, this option must be “ON” to see message in both languages.

- **LED Control**: Turn the Flashing LED on the front of the display on or off.

- **LED Control with Panel**: Use this in conjunction with the sleep timer. When this feature is on, and the PVM enters sleep mode, the LED will turn on. Turn this setting off in OSD menu to turn LED off.

- **Image Orbit**: Slightly shifts the screen image to prevent screen image burn-in.

- **Motion Panel Off Time**: Puts the LCD to sleep when no motion is present for the set number of minutes. LCD will turn back on when motion reoccurs.

- **Recall**: Pressing the right arrow button while recall is highlighted will reset the display’s default factory settings. Resets Video, and select System Settings only. Does not effect camera settings.

- **Camera Reset**: Pressing the right arrow button while Camera Reset is highlighted will reset the IP camera settings including the Username and Password.

- **Camera Default**: Pressing the right arrow button while Camera Default is highlighted will reset the camera to factory defaults. This does not effect Username and Password.
Upload SD Card Content

The PVM is capable of displaying JPEG images or AVI video files from an SD Card. **Before loading files onto the SD Card, you MUST format the card to FAT-32.** Failure to format the SD Card may result in a black screen showing instead of the desired image or video.

The preferred JPEG image size is 1024 x 768. **Load files directly onto the card. Do not place files into folders.** Skip to step 6 below for using JPEG images.

The preferred video format for Video is AVI with a maximum resolution size of 720 x 540. If you already have a supported video, simply load it onto the SD Card.

To convert an unsupported video to the correct AVI format, follow the procedure below:

1. **Download VLC**
   Download, install, & open the free program VLC. http://www.videolan.org/vlc/index.html

2. **Convert**
   From the **File** menu select **Convert/Stream**.

3. **Drop Media**
   Drag/Drop the desired video into the box that says “**Drop Media Here**”.

4. **Choose Profile**
   A) Under **Choose Profile**, Click the **Customize** button. Select **AVI** under the Encapsulation menu.

   B) Click the **Video codec** tab, under the **Codec** dropdown, select **DIVX 3**. In the **Resolution** field, enter **720** for width, and **540** for height.

   *Note: 640x480 will also work. (The Bitrate and Frame Rate should automatically populate based on the quality of the original video).*

   C) Click **Apply**.

5. **Choose Destination**
   Under **Choose Destination**, click **Save File As > Browse** to select the SD Card in which you would like to save the file to. **(Load files directly onto the card. Do not place files into folders)**. Click **Save** when the progress bar has completed loading.

6. **Insert Card into PVM**
   Insert the SD Card into the PVM with the contacts facing outward (see image on right). Push the card down until it clicks into place.

7. **Power Cycle**
   Power cycle the unit by unplugging the power cord, or pressing the power button on the remote control.

   *Note: When an SD Card is inserted, you MUST power cycle the unit! Not doing so, may result in corrupted SD Card which can effect PVM operation. Press power button on remote control, or remove and replace power cord to power cycle.*

8. **Set Viewing Options**
   In the PVM’s OSD menu, under Display, make sure the image mode is set to a mode which can display SD Card content.

   *Note: If using an Apple Computer, you will not be able to preview an AVI file.*

   *Note: The SD Card player is not High Definition.*

   *Note: If the video is not formatted/sized correctly (too large), the VOV window will display a default blue or black screen.*
Camera Software
IP Installer Software - Windows PC

To complete the installation of your IP camera based PVM, follow the procedure below:

1. Install Software
After the PVM has been installed, download the installation software by inserting the CD-ROM into a Windows PC. The setup page will show up automatically. Select “Intelligent IP Installer” and follow the on-screen installation process to complete the installation.

For latest IP Installer software, visit the Support page on www.clintonelectronics.com

2. Open IP Installer
Click the Clinton Intelligent IP Installer Icon on your desktop. The main page will show up listing all active camera and video server devices. Select the relevant IP camera from the list and double click to enter the camera User Interface. The default web browser for viewing is Internet Explorer.

Note: Internet Explorer is no longer supported on some devices. If you do not see the camera’s image, then copy and paste the IP address URL into an alternate browser such as Chrome, or Firefox.

3. Login to Camera
Enter Username and Password to login to the IP Camera. (Default is admin / admin). Then go to Settings/Compatibility View. Type in the camera’s IP address and click ADD. Once the cameras IP address has been added to the Compatibility View list, click CLOSE.

Note:
Default Username: admin
Default Password: admin
4. Install ActiveX Control
When accessing the IP Camera for the first time, a yellow information bar appears below the address bar: This website wants to install the following add-on: ‘AxvideoView.cab’ and/or ‘AxPlayer.cab’ from ‘Clinton Electronics’. Click Install.

5. Allow IP Camera Pop-Up’s
Depending on your computer’s Privacy settings, an information bar may appear alerting you about blocking a pop-up. Choose to always allow for the IP camera address.

6. Live Viewing
After successfully logging into the camera, the live image from the camera displays in the center of the screen.

**Note:**
Google Chrome, Safari & Firefox do not support recorded video playback. Some options/controls may also be limited to these browsers.
Web Viewer - MAC OSX + Safari

1. Configure Bonjour in Safari
Open the SAFARI browser. For the Web Viewer to function properly, Bonjour must be configured. The Bonjour function does not work in Google Chrome or Firefox.

2. Configure Bonjour
Open Preferences in the Safari Menu bar. Click the “Advanced” tab (gear icon). Click the check box to “Include Bonjour in the Bookmarks menu”.

Go to Bookmarks. Scroll down to the Bonjour bookmark, then click on the IP camera you wish to connect to.

2. Login
Enter user name and password. (Default is admin / admin)
3. Live Viewing
After successfully logging into the camera, the live image from the camera displays in the center of the screen. Options are limited on the MAC (Safari) web viewer compared to the PC (Internet Explorer) version.