15" LCD COLOR OBSERVATION SYSTEM

With Built-In 4 Channel Triplex Digital Video Recorder and 4 Night Vision CCD Cameras

Instruction Manual

English Version 5.0

MODEL:
L15LD400 Series

LOREX®

www.lorexcctv.com

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Thank you for purchasing the L15LD400 Series Observation System. Lorex is committed to providing our customers with a high quality, reliable security product.

The L15LD400 Series observation system is one of the most sophisticated video security systems on the market today with many of the same advanced features you will find in “high security” systems used in banks and casinos. Perfect for any upscale home or office, the L15LD400 is a complete packaged system that includes everything you need; LCD Monitor with built-in 160GB Digital video recorder, cameras, brackets, cables and power supplies.

To learn more about this L15LD400 Series Observation System and to learn about our complete range of accessory products, please visit our website at:

http://www.lorexcctv.com

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO A QUALIFIED SERVICE PERSONNEL

The lightning flash with 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.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

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Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacture process of your video product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to assure your enjoyment and proper use of the video product and accessory equipment. Please read them carefully before operating and using your video product.

Installation

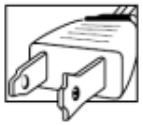
1. **Read and Follow Instructions -** All the safety and operating instructions should be read before the video product is operated. Follow all operating instructions.

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

3. **Heed Warnings -** Comply with all warnings on the video product and in the operating instructions.

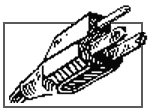
4. **Polarization -** Do not defeat the safety purpose of the polarized or grounding-type plug.

   A polarized plug has two blades with one wider than the other.

   A grounding type plug has two blades and a third grounding prong.

   The wide blade or the third prong are provided for your safety.

   If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet

5. .**Power Sources -** This video product 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 supply to your location, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

6. **Overloading -** Do not overload wall outlets of extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.

7. **Power-Cord Protection -** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

8. **Ventilation -** Slots and openings in the case are provided for ventilation to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video equipment on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.

9. **Attachments -** Do not use attachments unless recommended by the video product manufacturer as they may cause a hazard.

10. **Water and Moisture -** Do not use this video product near water. For example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.

    Caution: Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark of CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

11. **Accessories** - Do not place this video equipment on an unstable cart, stand, tripod, or table. The video equipment may fall, causing serious damage to the video product. Use this video product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the video product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.

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Service

13. **Servicing -** Do not attempt to service this video equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

14. **Conditions Requiring Service** - Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions.

    A. When the power supply cord or plug is damaged.

    B. If liquid has been spilled or objects have fallen into the video product.

    C. If the video product has been exposed to rain or water.

    D. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.

    E. If the video product has been dropped or the cabinet has been damaged.

    F. When the video product exhibits a distinct change in performance. This indicates a need for service.

15. **Replacement Parts -** When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the video product manufacturer can prevent fire, electric shock or other hazards.

16. **Safety Check** - Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.

17. **Wall or Ceiling Mounting** - The cameras provided with this system should be mounted to a wall or ceiling only as instructed in this guide, using the provided mounting brackets.

18. **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Use

19. **Cleaning -** Unplug the video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

20. **Product and Cart Combination** - Video and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the video product and car combination to overturn.

21. **Object and Liquid Entry -** Never push objects for any kind into this video product through openings 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 video product.

22. **Lightning** - For added protection for this video product 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 antenna or cable system. This will prevent damage to the video product due to lightning and power line surges.

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NOTE

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows this manuals guidelines to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

FCC CLASS B NOTICE

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by one or more of the following measures:

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

General Precautions

1. All warnings and instructions of this manual should be followed
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water dampened cloth for cleaning
3. Do not use this unit in humid or wet places
4. Keep enough space around the unit for ventilation. Slots and openings in the storage cabinet should not be blocked
5. During lightning storms, or when the unit is not used for a long time, disconnect the power supply, antenna, and cables to protect the unit from electrical surge

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L15LD400 Series Feature List

Monitor

- 15" High Resolution LCD Monitor with built in DVR
- Mouse control interface (mouse included)
- Trilingual interface (English, Spanish and French)
- Supports DDNS (Dynamic Domain Name Server)
- Commercial grade monitor stand
- Wall or Rack mountable (mounts sold separately)
- A full range of LOREX Pro Series CCTV cameras available for use with this system

Built-In Digital Video Recorder (DVR)

- Triplex Technology allows for recording, playback or viewing simultaneously.
- Network Interface for remote viewing over the internet***
- MJPEG video compression
- USB (Device) port for Firmware Upgrade, Backup and Image Transfer
- HDD cradle - easy to remove/upgrade/archive
- 160GB HDD Designed for Surveillance: Hard Drive is specifically designed for optimal performance in the commercial video security applications.

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Getting Started

The L15LD400 Series comes with the following components:

LCD & DVR COMBO UNIT
WITH INSTALLED 160 GB HDD

4 x CAMERAS
4 x METAL STANDS

1 x POWER ADAPToR

4 x 60 FT. (18M)
EXTENSION CABLES

1 x 4-SPLITTER CAMERA
POWER ADAPTOR

1 x 10’ ETHERNET
CABLE

1 x REMOTE CONTROL
2 x AA BATTERIES

1 x HARDWARE MANUAL
1 x SOFTWARE MANUAL
1 x QUICK START GUIDE
1 x SOFTWARE CD

CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED THE COMPLETE SYSTEM, INCLUDING ALL COMPONENTS SHOWN ABOVE.

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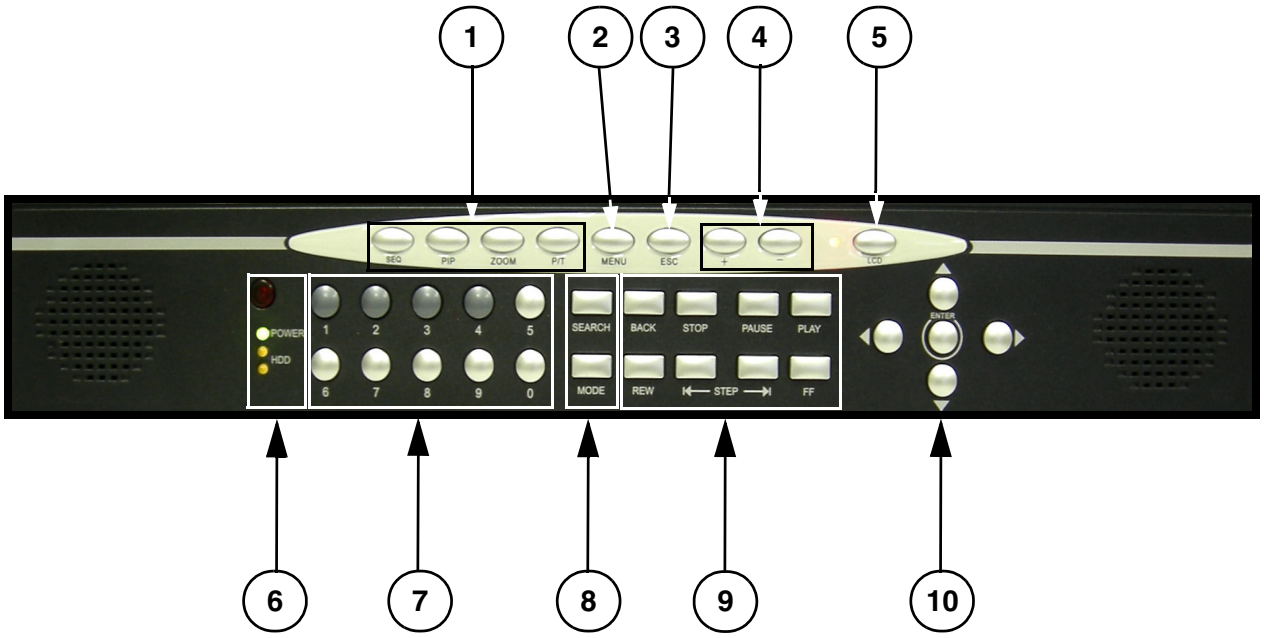
L15LD400 Series - Front



1. **DISPLAY CONTROL BUTTONS** - Control the onscreen display of Cameras:

   - **SEQ** - Displays cameras 1~4 in Full Screen Sequencing Mode
   - **PIP** - Displays cameras in Picture in Picture mode. The displayed cameras can be set by selecting either the main screen or PIP screen, and selecting a number 1~4.
   - **ZOOM** - Zooms in on the currently displayed camera (1x Zoom). Use the direction buttons or mouse and move to the area to be enlarged.
   - **P/T** - Enters PTZ (Pan / Tilt / Zoom) control mode. A PTZ type camera (not included) is required to use the PTZ Functions.

2. **MENU** - Enters the System Menu and Setup.

3. **ESC** - Exits the System Menu and Setup.

4. **+/ - BUTTONS -** Adjusts the System Menu and Setup values.

5. **LCD MONITOR POWER BUTTON** - Turns the LCD Monitor Power ON/OFF.

NOTE: The system will continue to record when the LCD Monitor is powered off.

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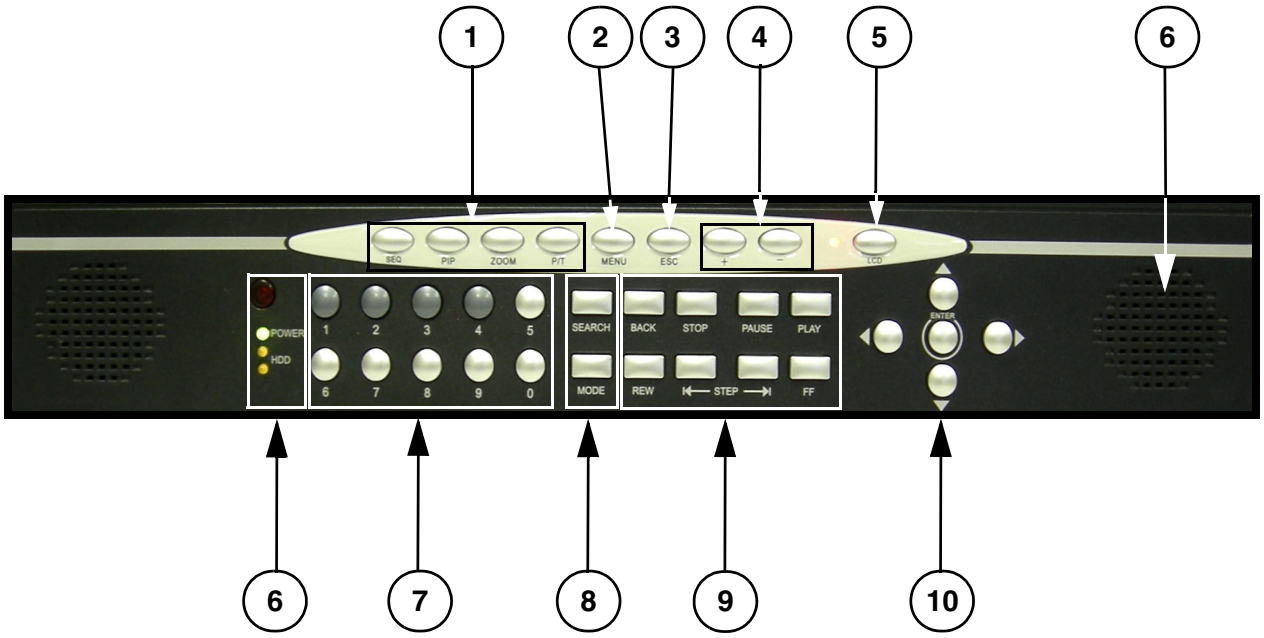
L15LD400 Series - Front



6. IR RECEIVER & LED INDICATORS:

- **IR RECEIVER -** Receiver for the Remote Controller signal.
- **DVR STATUS LEDs**:
  - **POWER** - Power LED indicator for the System power status (ON/OFF).
  - **HDD** - HDD access LED indicated when activity is taking place on the system Hard drive.

7. **0~9 BUTTONS** - Switches the full screen view between channels 1~4. Numbers 0~9 are used to enter the System Password.

8. SEARCH & MODE BUTTONS:

- **SEARCH** - Enters search mode (search through previously recorded data). Search by percentage, date / time, or the event list.
- **MODE** - Switches between full and split screen displays.

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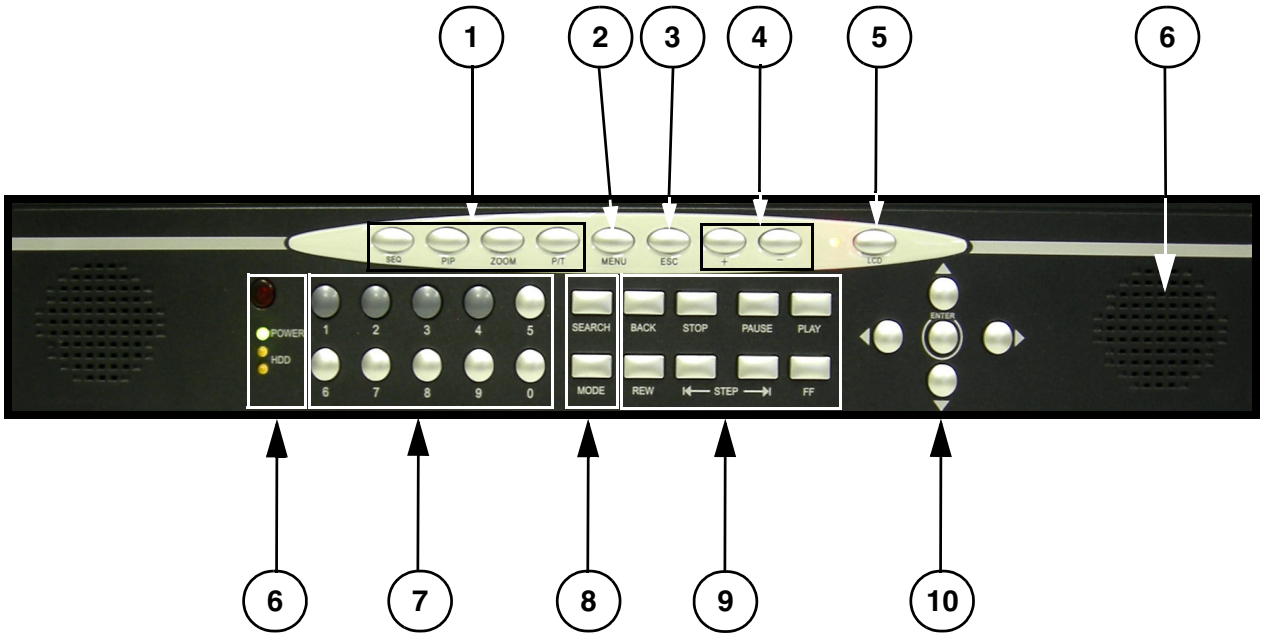
L15LD400 Series - Front



9. PLAYBACK CONTROLS:

- **BACK** – Reverses the playback.
- **STOP** - Stops the playback.
- **PAUSE** – Pauses the playback.
- **PLAY** - Plays back the recorded data.
- **REW** - Fast Rewind of the playback
- **STEP** - Playback step by step (frame by frame)
- **FF** - Fast Forward of the playback

10. DIRECTION ARROWS & ENTER:

- **DIRECTION ARROWS -** Moves the mouse cursor and navigates within the System Menu.
- **ENTER**- Confirms the selected options in the System Menu.

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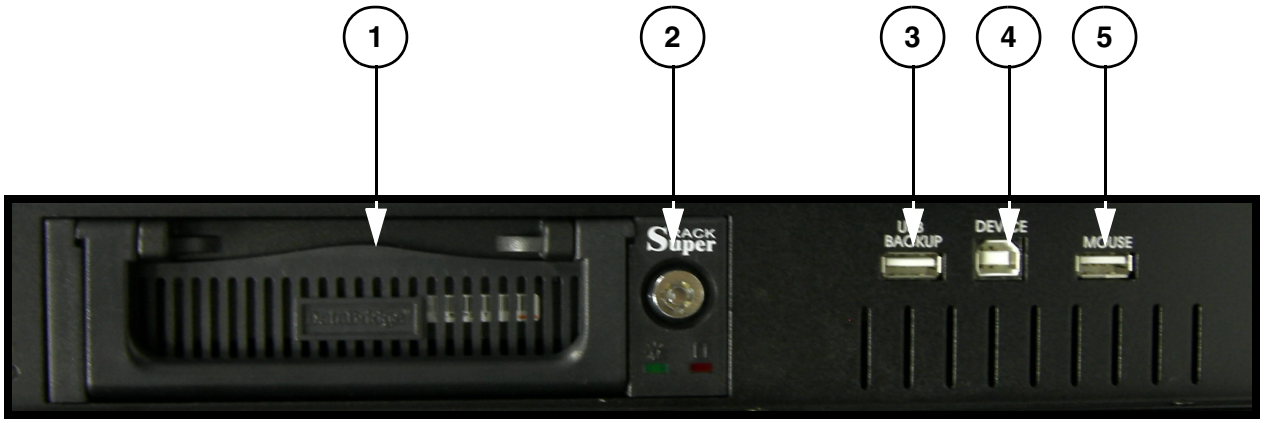
L15LD400 Series - Side



1. **REMOVABLE DRIVE BAY** - Drive bay to install a removable Hard Drive.
2. **DRIVE BAY LOCK** - Locking mechanism for the removable drive.
3. **USB BACKUP PORT -** Connect a USB memory stick or USB HDD for data backup
4. **DEVICE PORT -** Connect to a PC for firmware upgrade.
5. **USB MOUSE PORT -** Connection port for a USB Mouse (alternate control for the System).

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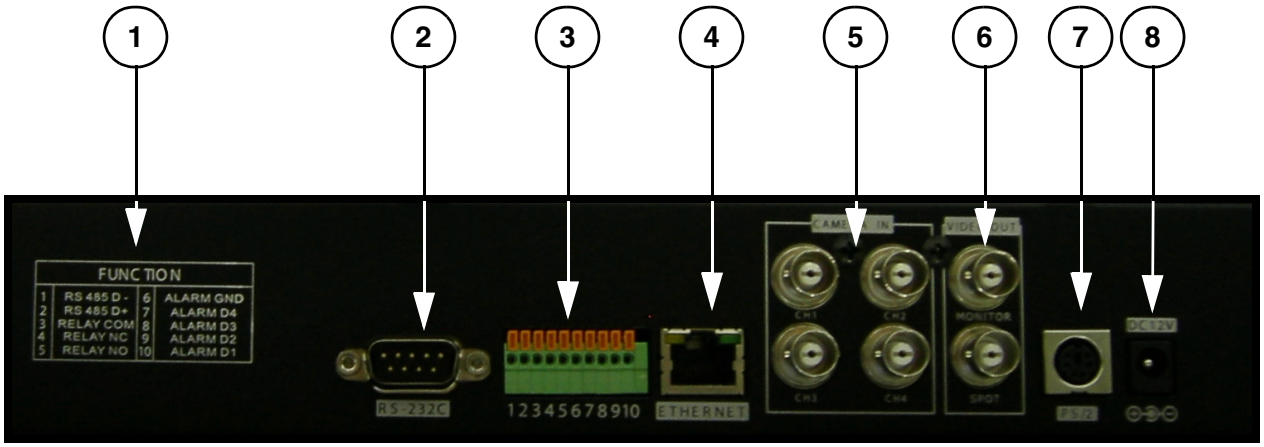
L15LD400 Series - Back



1. **ALARM BLOCK CHART** - Outlines the Alarm Block connections
2. **RS-232C -** Connection port to the PC or for other DVR control devices
3. **ALARM BLOCK & RS485 CONNECTIONS -** Controls Alarm devices, and for direct connection to PTZ cameras. 4 sensor inputs and 1 relay output.
4. **ETHERNET** - Connects the System to a network router or other Ethernet Device.
5. **CH 1~4** - BNC Camera inputs for Channels 1~4.
6. **MONITOR / SPOT OUT PORTS**:
   - MONITOR - Connection to a slave monitor.
   - SPOT- Connection to monitor using SPOT OUT.
7. **PS/2 MOUSE PORT** - Connection for a PS/2 mouse
8. **POWER INPUT PORT** - Connection for the DC Power Input (12V).

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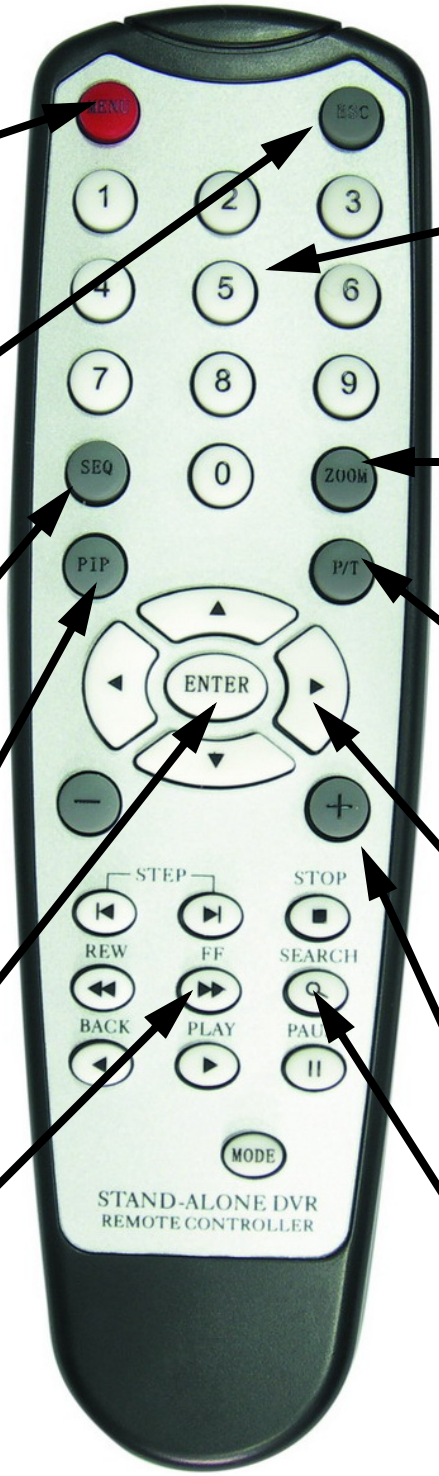
Remote Control

Listed below is a quick reference for the Remote Control.



MENU BUTTON - Opens the Main Menu (system setup)

ESC BUTTON - Returns to the previous selection in Menu Mode. Exits the Menu Setup when in the Main Menu.

SEQUENCE - Turns camera Sequence Mode ON/ OFF.

PIP - Changes the display to Picture in Picture mode

ENTER BUTTON - Applies a configuration change in Menu Mode.

PLAYBACK CONTROLS - Controls the playback of video.

CHANNEL BUTTONS - Press 1~4 to select a specific camera by number. Use 0~9 to enter the system password

ZOOM - Zooms in on the current image

P/T - Controls the PTZ Camera (not included).

NAVIGATION CONTROLS - Navigates in MENU and SEARCH mode. Adjusts the zoomed area in ZOOM mode.

VOLUME + / -

SEARCH BUTTON - Enters the Search Menu.

NOTE: All Buttons described above function the same as the Front Panel buttons - see pages 10-12 for detailed information. Buttons without descriptions do not provide functionality to this unit.

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Camera Installation

Before you install the camera, carefully plan where and how you will position the camera, and where you will route the cable that connects the camera to the System.

Installation Warnings:

- Select a location for the camera that provides a clear view of the area you want to monitor, which is free from dust, and is not in line-of-sight to a strong light source or direct sunlight.
- Plan the cables' route so that it is not close to power or telephone lines, transformers, microwave ovens or other electrical equipment that could interfere with the system.
- Select a location for the camera that has an ambient temperature between 14°F~113°F (-10°C~45°C)
- If you plan to install the camera in a location that has conditions not recommended in this manual, consult with a professional installer and consider use of a separate camera cover or housing
- Before starting permanent installation, have another person hold the camera for you while you verify its performance by observing the image on the monitor.

Camera Stand Installation:

1. Attach the pedestal to the ceiling, wall or other surface by the base using the provided screws.
2. The mounting bracket must be attached to a structural device such as a wall stud or ceiling rafter using the supplied screws.
3. Attach the camera to the pedestal. Adjust the angle of the camera, and tighten the thumbscrew to set the position

NOTE: The Camera can be attached to the stand using the screw point on the top or the bottom (to maintain proper camera alignment). This prevents the image from becoming inverted.

* Camera may not be exactly as shown.

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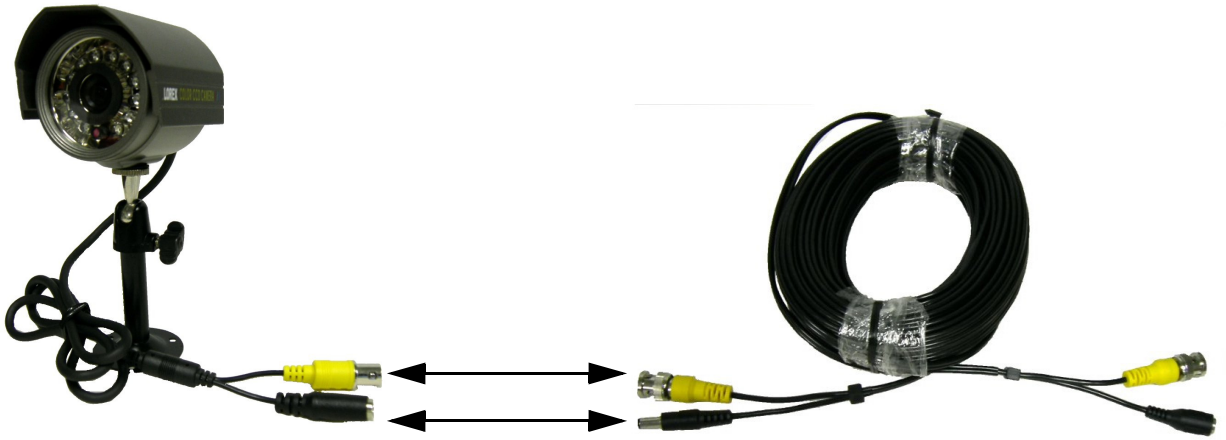
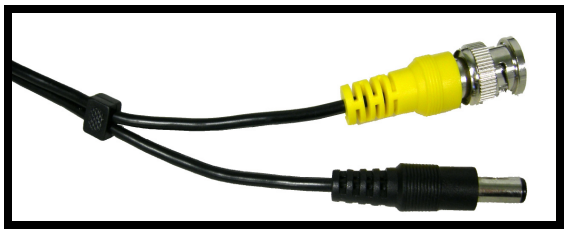
Connecting Cameras

1. Connect the Female BNC end of the supplied 60' extension' cable to the camera. Connect the male Power end of the extension cable to the camera.

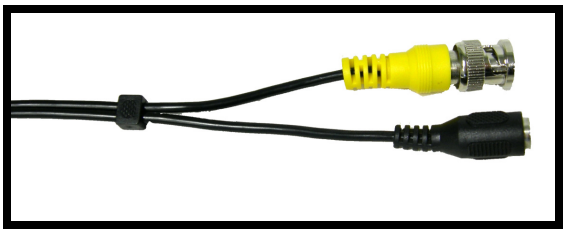


* Camera may not be exactly as shown.

IMPORTANT NOTE: The ends of the extension cable are NOT the same - one end has a Male power port, and the other has a Female power port. Before permanently running the Camera Extension Cable, make sure that the cable has been oriented between the Camera and the unit correctly



Male Power Port - The male power port end of the Extension cable connects to the Camera.



Female Power Port - The female power port end of the Extension cable connects to the System.

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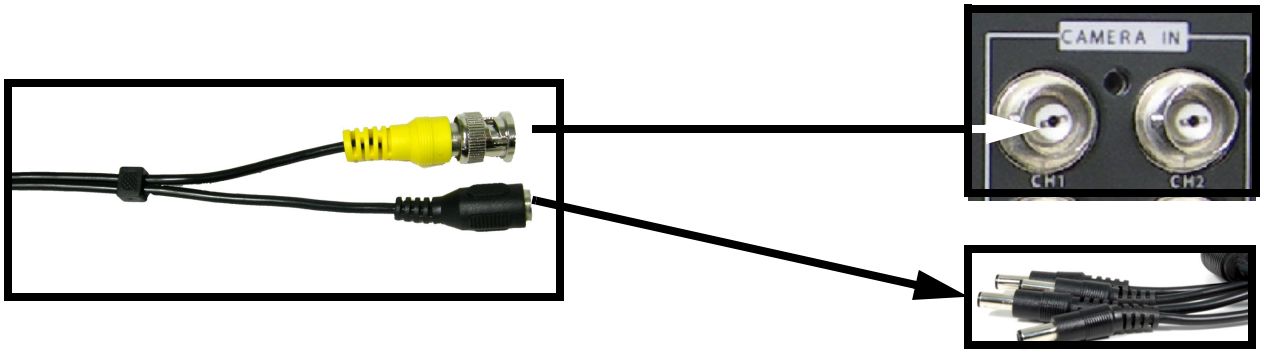
2. Connect the Female end of the supplied 60’ extension cable to an open BNC camera input on the back of the System. Connect the female Power end of the extension cable to the 4-cable power adaptor.



NOTE: To access the Connection Ports for the System, the monitor can be tilted forward (for easier access).

* Camera may not be exactly as shown.

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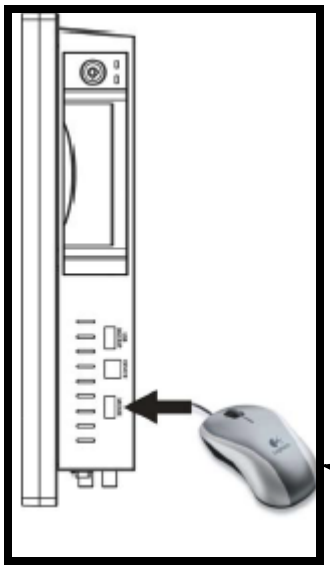
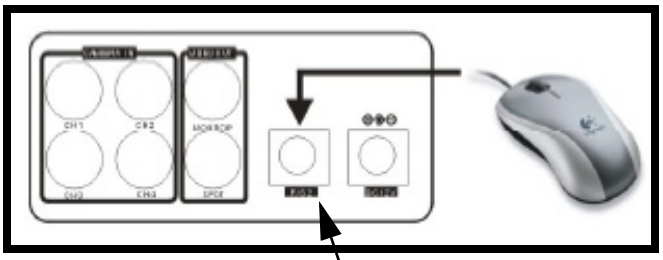
Connecting the Mouse

Connect the supplied mouse to the PS/2 Port on the back of the unit. Alternatively, a mouse can be connected to the USB port located on the side of the unit.





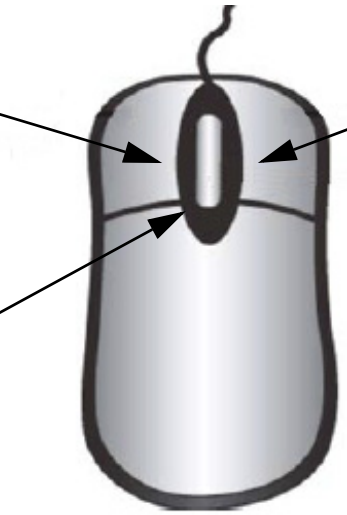
USB Connection - A mouse can be connected to the PS/2 Port on the back of the unit.

USB Connection - A mouse can be connected to the USB Port on the side of the unit. The port will be labelled to indicate the connection type.

Mouse Controls

LEFT MOUSE -
Click to activate a function.
Used to increase values in MENU Mode.

SCROLL WHEEL -
Increases / Decreases values in Menu Mode.
Zooms IN/OUT in ZOOM View mode.
Changes the playback speed.



RIGHT MOUSE -
Used to decrease values in MENU Mode.

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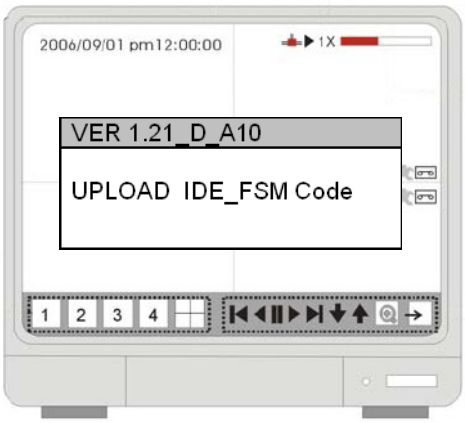
Display Modes

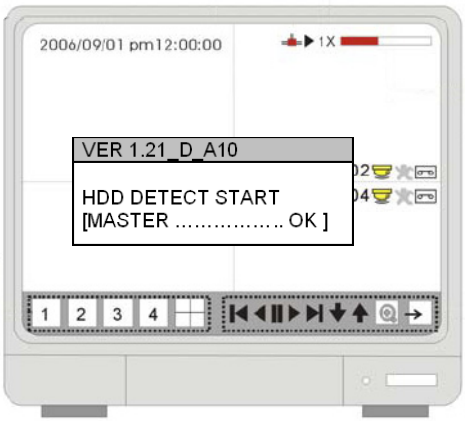
Initial Loading Sequence

- Connect the POWER cable located on the back of the Observation System. The unit will automatically power on.
- The System will load the firmware
- The System will perform a Hard Drive check.
- The unit will initially load to a split screen view, displaying all 4 cameras (if available).

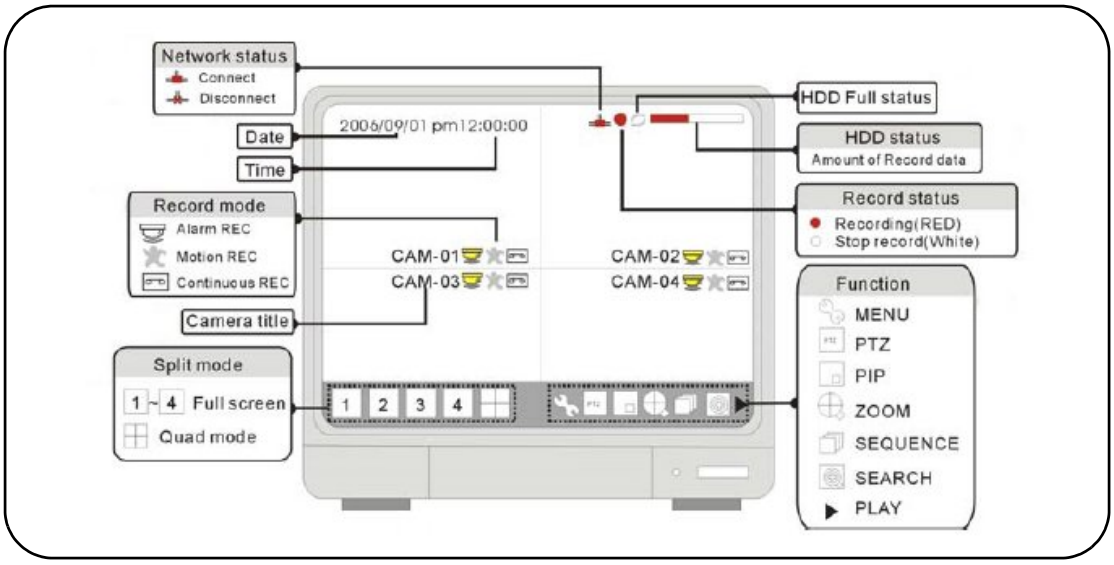


NOTE: If a new **HARD DRIVE** is detected, the system will prompt you to FORMAT the drive. If you do not choose to format the HARD DRIVE, the drive will not be detected by the system.

If you choose to FORMAT a drive in this way, the drive will no longer be readable by a regular PC without using the **HARD DRIVE VIEWER** software included on the CD provided with this unit.



General Display Overview



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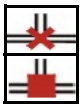
Network Status Indicators

The Network Indicators appear when a remote connection is made to the unit:



• Indicates that there is no client connection.

• Indicates that a client is connected to the system.

Recording Mode Indicators

The Recording Mode Indicators appear in YELLOW when a camera is recording:

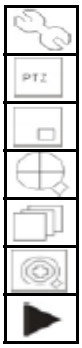
• Indicates that the camera is recording in ALARM Mode.

• Indicates that the camera is recording in MOTION DETECTION Mode.

• Indicates that the camera is recording in CONTINUOUS Mode.

Function Icons

The function icons appear on the main screen, and can be selected using the Mouse.



• Opens the MENU mode.

• Opens the PTZ (Pan / Tilt / Zoom) Camera control mode.

• Switches the display into PIP (Picture in Picture) mode.

• Opens ZOOM Mode (up to 200%)

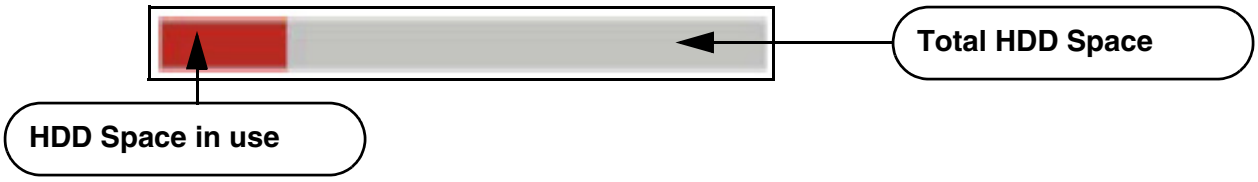
• Switches the display to SEQUENCE display mode.

• Opens SEARCH mode.

• Starts Quick Playback

HDD Status

The HDD Status bar indicates the total hard drive amount, and the amount of drive space currently in use.



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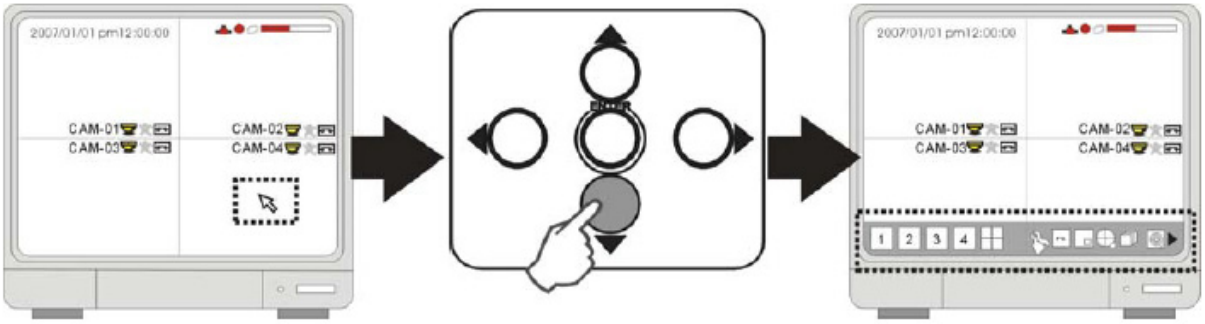
Display Modes

Cameras can be displayed in Single, Quad, Sequence or PIP modes by pressing the buttons on the front panel of the System, or by using the mouse to click on the onscreen icons.

Accessing the Onscreen Setup Menu

To access the onscreen Setup menu:

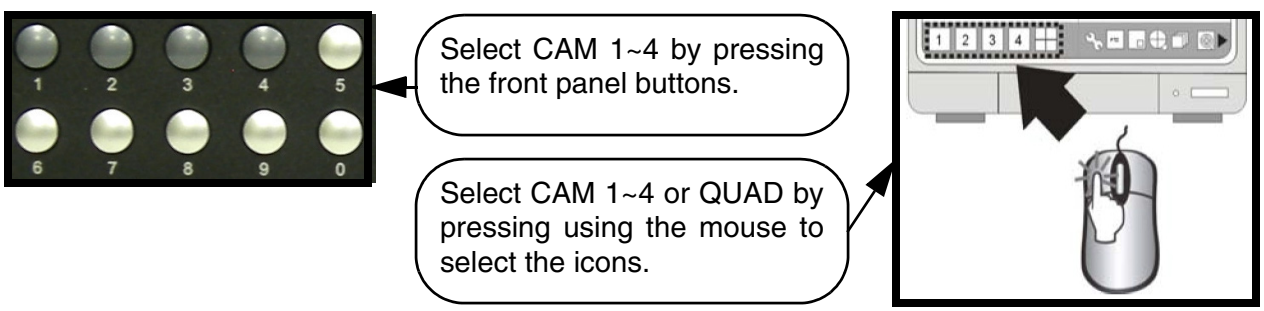
- Drag the mouse pointer to the bottom of the screen (or)
- Press the Down arrow on the front panel key pad until the onscreen menu appears



Once the onscreen menu appears, options can be selected using the left and right arrow keys, or by navigating with the mouse.

Single Channel and QUAD Display Modes

Displays cameras in full screen. Press buttons 1~4 on the front panel of the System, or use the mouse to select the onscreen icons 1~4 or QUAD to select a channel to view.



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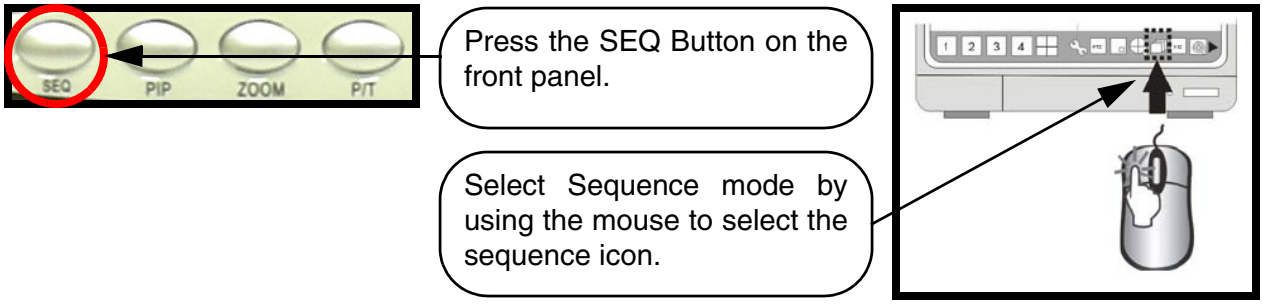
Sequence Display Mode

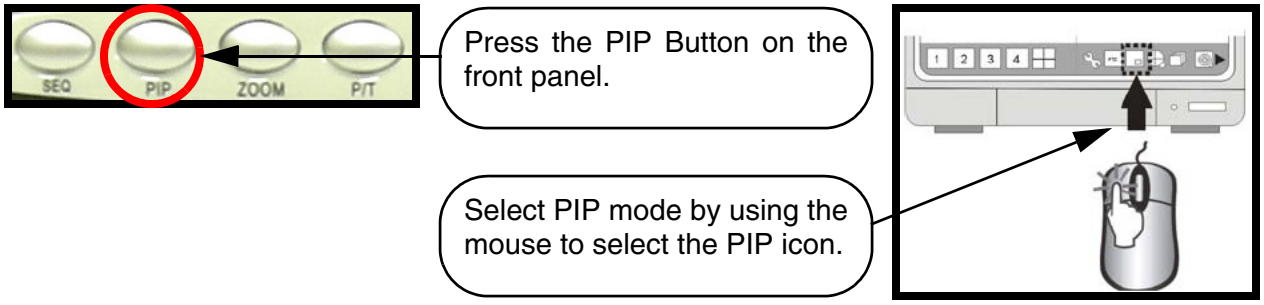
Displays cameras in sequence. Press the SEQ Button on the front panel of the System, or use the mouse to select the onscreen sequence icon.



NOTE: The sequence can be adjusted using the MENU SETUP.

PIP Display Mode

Displays cameras in PIP (Picture in Picture) Mode. Press the PIP button on the front panel of the System, or use the mouse to select the onscreen PIP icon.



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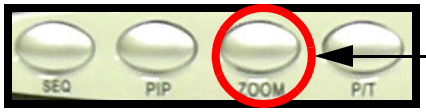
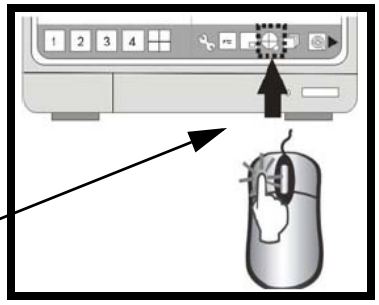
Zoom Mode

Displays a single camera in ZOOM Mode (200% Zoom). Select the channel to ZOOM, and press the ZOOM button on the front panel of the System, or use the mouse to select the onscreen ZOOM icon. The area of ZOOM can be moved using the front panel arrows, or by using the Mouse.



Press the ZOOM Button on the front panel.

Select ZOOM mode by using the mouse to select the ZOOM icon.

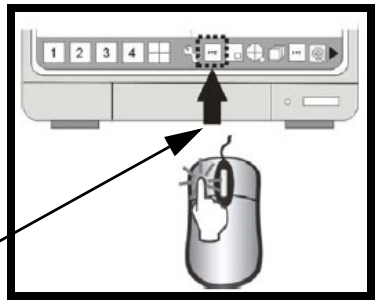


PTZ (Pan/Tilt/Zoom) & Focus Controls

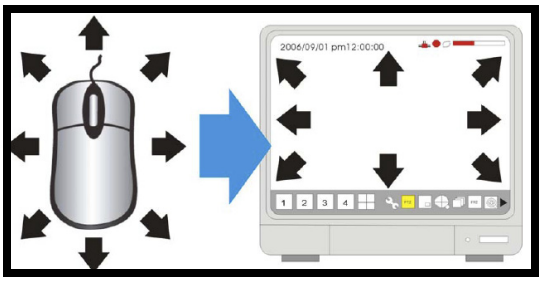
Enters PTZ control for a PTZ type camera installed on Channel 1. Press the P/T button on the front panel of the System, or use the mouse to select the onscreen P/T icon. The PTZ Camera can be moved using the Mouse. Refer to page 25 for PTZ setup instructions.

Press the P/T Button on the front panel.

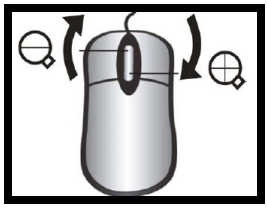
Select P/T mode by using the mouse to select the P/T icon.



After entering the PTZ control mode, use the mouse to control the camera. Direction icons will appear in all corners of the screen.Clicking on a directional arrow will select that direction for movement.



Use the mouse wheel to control zoom in/zoom out.



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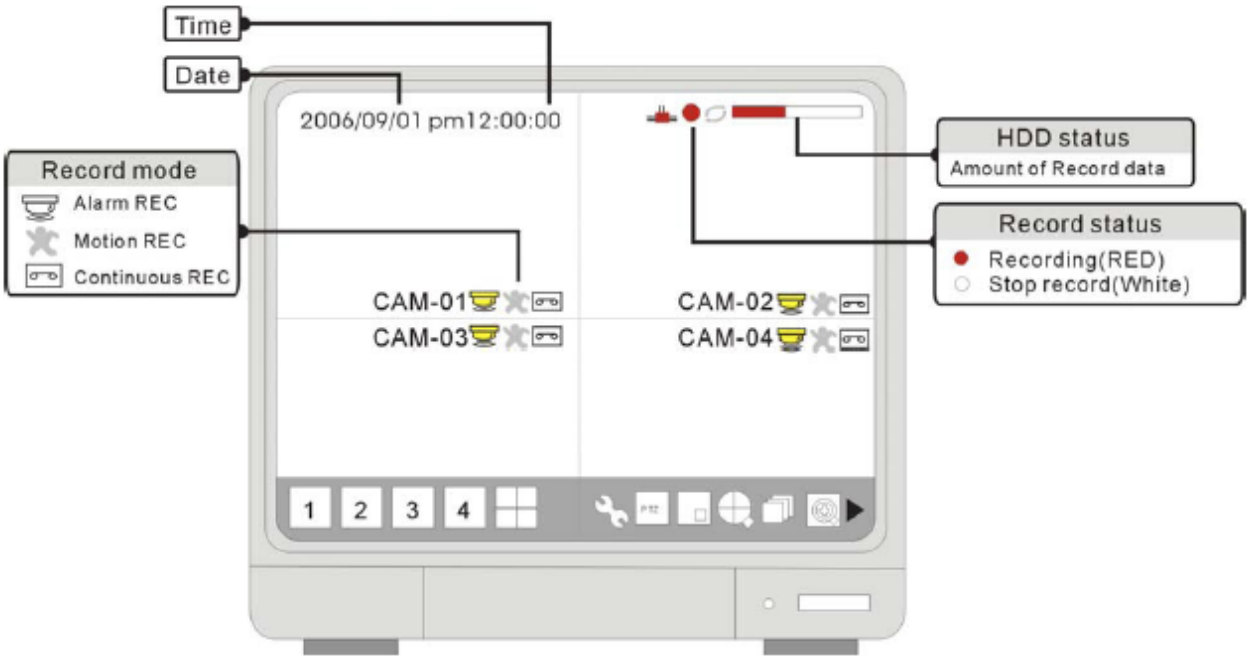
Recording Mode



RECORDING MODE:

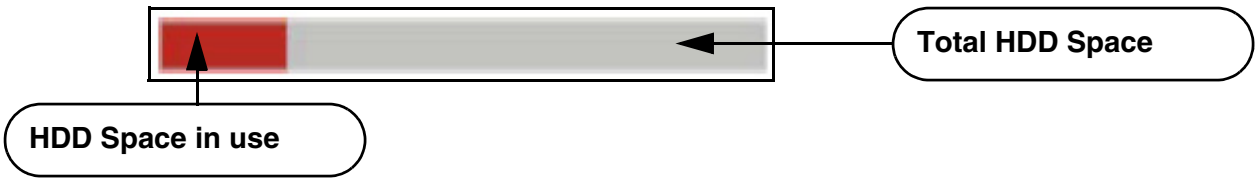
• Indicates that the camera is recording in ALARM Mode.

• Indicates that the camera is recording in MOTION DETECTION Mode.

• Indicates that the camera is recording in CONTINUOUS Mode.

HDD STATUS

The HDD Status bar indicates the total hard drive amount, and the amount of drive space currently in use.



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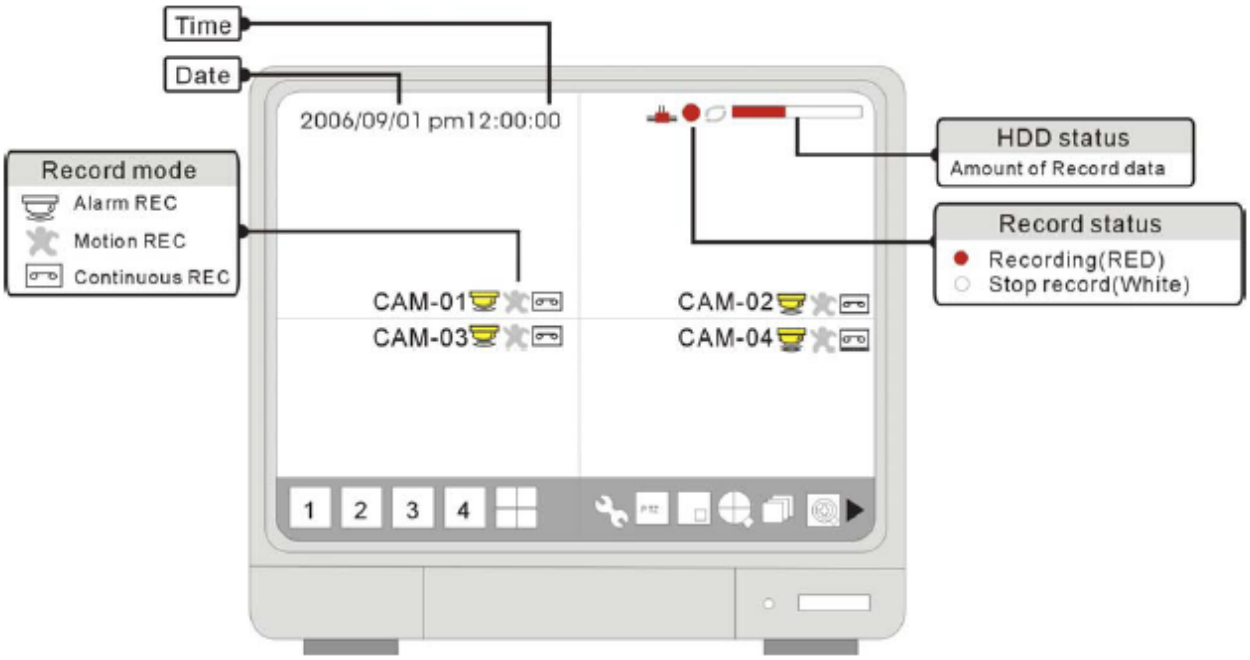
Recording Mode



RECORDING STATUS

• Red Icon: Indicates the system is recording in Schedule, Motion or Alarm Mode.

• White Icon: Indicates that the record schedule is not set to record.

If the unit loses power, recording will automatically resume once power is restored (based on the recording schedule setup). For more information on Regarding Mode Setup, please refer to the RECORD SETUP on page 26-27.

NOTE: The system will stop recording when the following occur:

- No camera video inputs are detected (the cameras are not attached to the system).
- Motion is not detected (when the record mode is set to MOTION).
- When the record schedule is set to Not Record.
- If the HDD is not formatted, or when using the factory defaults after a new HDD is installed.
- When the Overwrite function is OFF, and the HDD full.
- When the system is copying Backup data.
- When the firmware is being updated.
- When the system is in the HDD management section of the Setup Menu.

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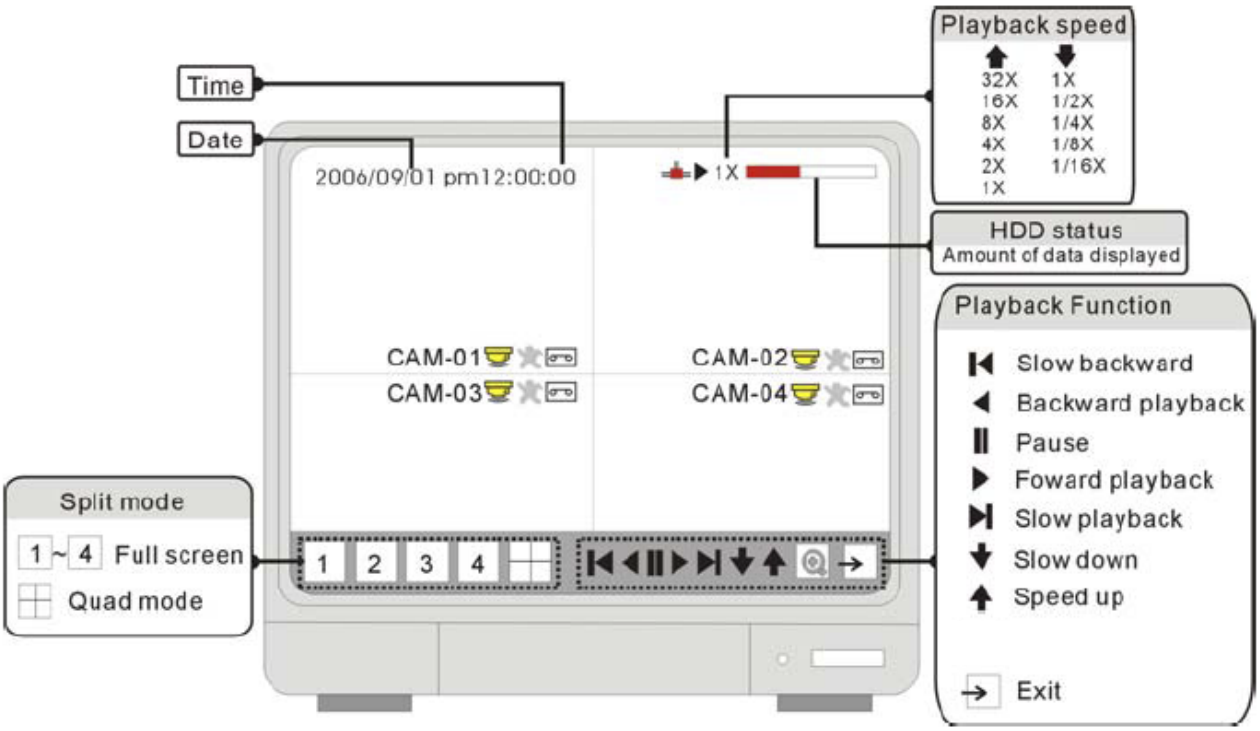
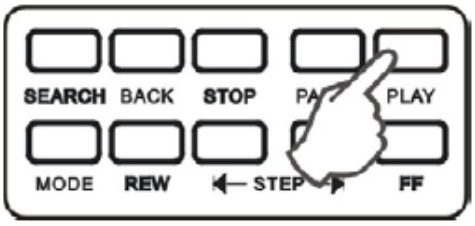
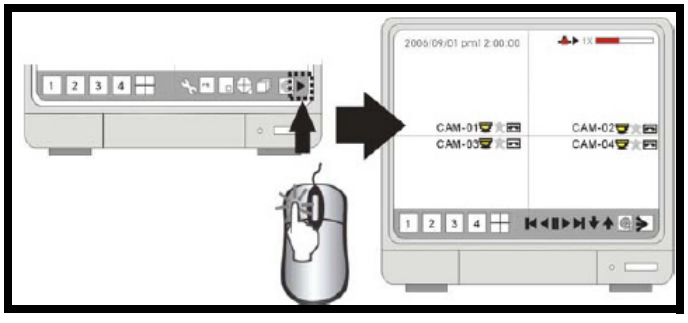
Playback



Starting Playback Mode

Press the PLAY button on the front panel of the System, or click the onscreen PLAY icon to start playback, starting from the most recent recording.





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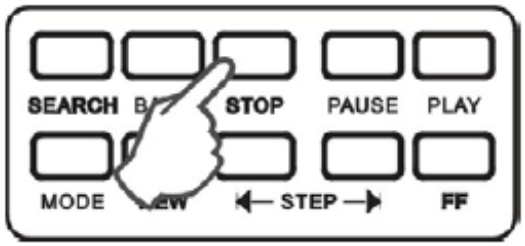
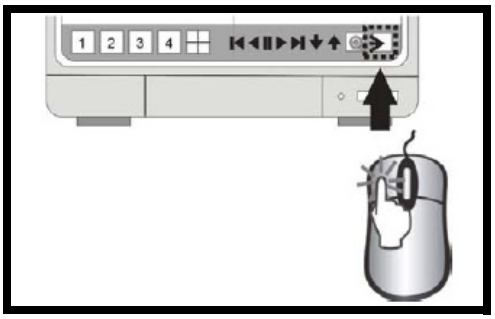
Stopping Playback Mode

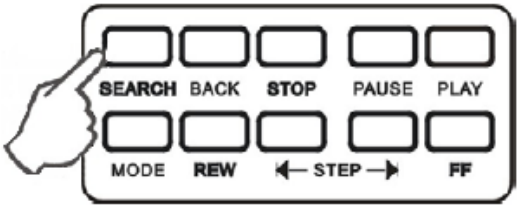
Press the STOP button on the front panel of the System, or click the onscreen STOP icon to stop the playback.

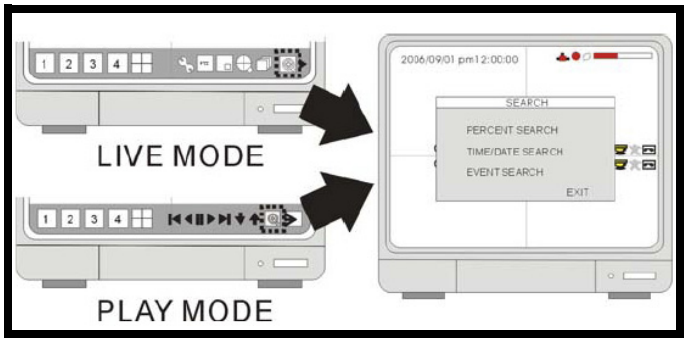




Search Mode

Press the SEARCH button on the front panel of the System, or click the onscreen SEARCH icon to search through previously recorded data.





There are 3 modes for search:

PERCENT SEARCH - Search by appointing a recording percentage.

TIME/DATE SEARCH - Search by appointing a time and date

EVENT SEARCH - Search by Event list.

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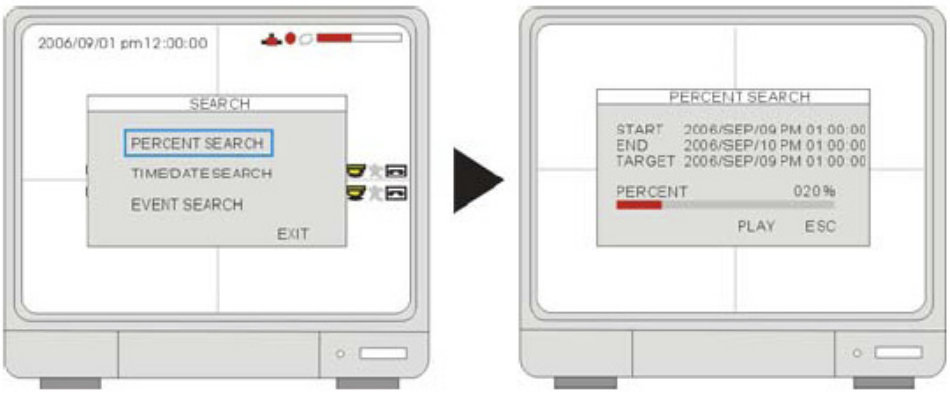
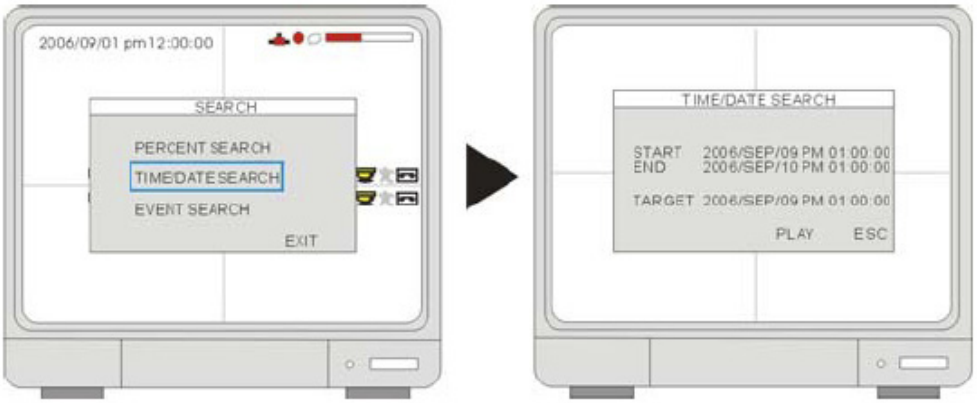
Percent Search

- Use the Mouse wheel to select the recording percentage on the search bar.
- Click “PLAY” to confirm and start the playback.



Time/Date Search

- **START** - Set the start time and date for the recording.
- **END** - Set the end time and date for the recording.
- **TARGET** - Enter the target time and date to start playback. Select the time and date using the Mouse wheel to adjust the numbers. Click **PLAY** to start playback, or **ESC** to cancel.



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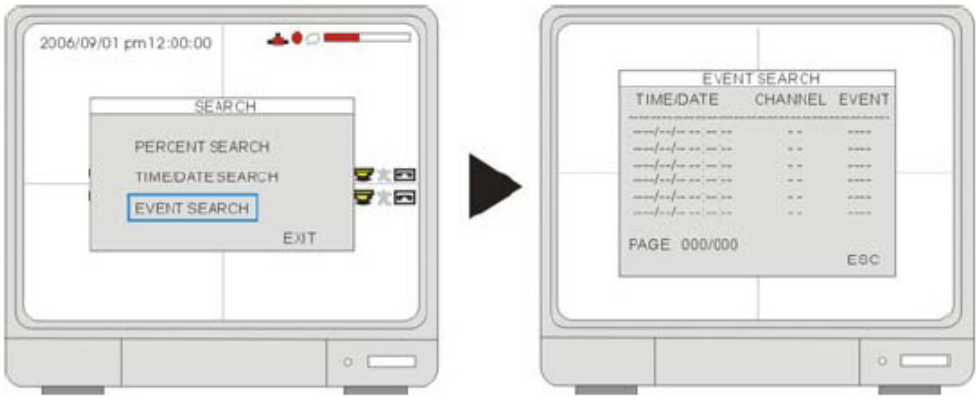
Event Search

- **TIME/DATE** - Displays the event time and date.
- **CHANNEL** - Displays the channel in which the event occurred.
- **EVENT** - Displays the event type:
  - MOT - Motion detection
  - LOS - Image lost
  - ALM- Alarm trigger

The system keeps up to 1000 events in its EVENT LIST. Use the Left Mouse button to select the events, and use the Mouse wheel to switch pages.

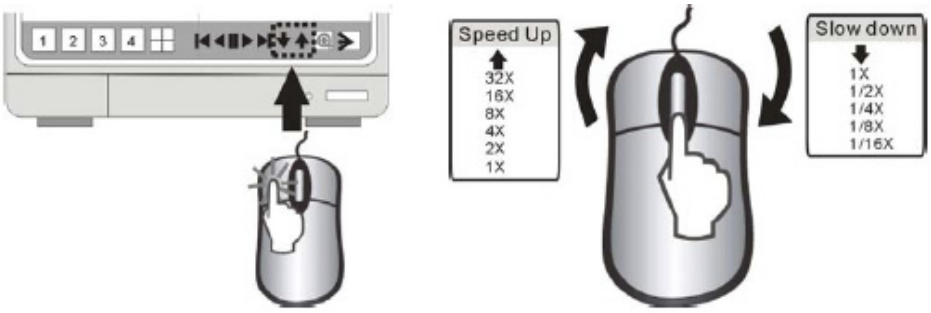


Playback Speed Control

When in playback mode, Click the onscreen playback icons to adjust the playback speed:

- Speed up the playback
- Slow down the playback
- Rewind the playback
- Play

The speed can also be adjusted: 1/16X~1X, 1X~64X.



NOTE: The mouse wheel can be used to adjust the speed as well.

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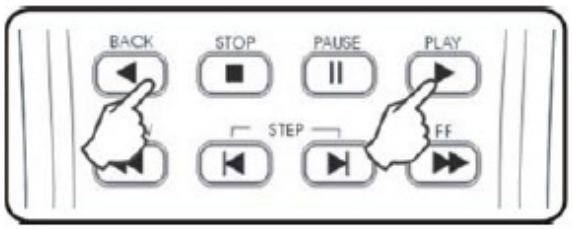
The playback speed can also be adjusted using the Front Panel buttons or Remote Control:

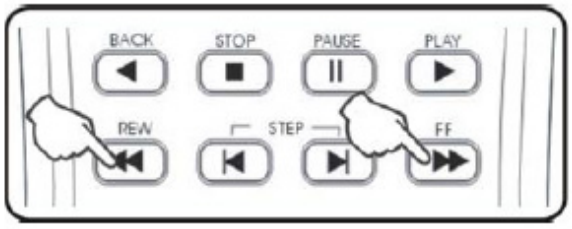
While in playback mode, use the direction keys on the remote control to adjust the speed:

- X times high-speed playback.
- X times low speed playback.
- Rewind.
- Play



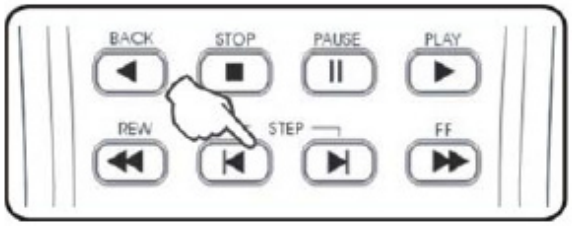
To increase the speed:

- REW key (High-speed backward playback)
- FF key (High-speed forward Playback).
- Press the keys repeatedly to adjust the speed rate.



To decrease the speed

- Use the STEP keys to Slow playback (in reverse or forward).
- Press the keys repeatedly to adjust the speed rate.
- Playback picture by picture by STEP keys (Step playback in backward or in forward).



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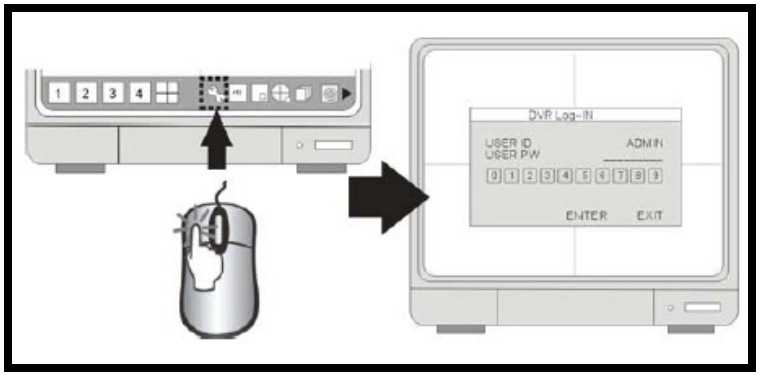
System Setup and Navigation

Press the MENU button on the Front panel or Remote, or click the onscreen MENU icon to log into system:

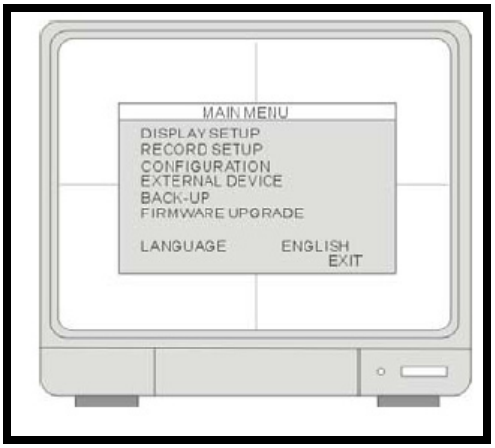
- Click the 0~9 icons (or use the front panel buttons) to enter the password.
- Click ENTER to confirm and enter the system.
- Default ADMIN password: leave blank (No default password. Press ENTER key directly to enter the system)
- Navigate using the arrows. Use ENTER to accept an option, and ESC to exit the menu.



NOTE: It is strongly recommended to change the password after the initial setup. Please keep a record of your current password. Rebooting the System and resetting the factory defaults will not reset the password to the default.

System Menu - Overview

1. **DISPLAY SETUP** - Includes SCREEN SETUP and OSD SETUP.
2. **RECORD SETUP** - Includes RECORD CONFIGURATION and SCHEDULE SETUP.
3. **CONFIGURATION** - Includes HDD MANAGEMENT, TIME/DATE SETUP, CAMERA SETUP, INTERVAL SETUP, ALARM SETUP, BUZZER SETUP, PASSWORD SETUP, and SYSTEM INFORMATION.
4. **EXTERNAL DEVICE** - Includes TCP/IP SETUP, RS232C SETUP, PAN-TILT SETUP.
5. **BACK-UP** - Backs up data to a memory stick or hard drive.
6. **FIRMWARE UPGRADE** - Upgrade the firmware by using a memory stick.
7. **LANGUAGE** - Change the OSD language. Select a language: English, French or Spanish.



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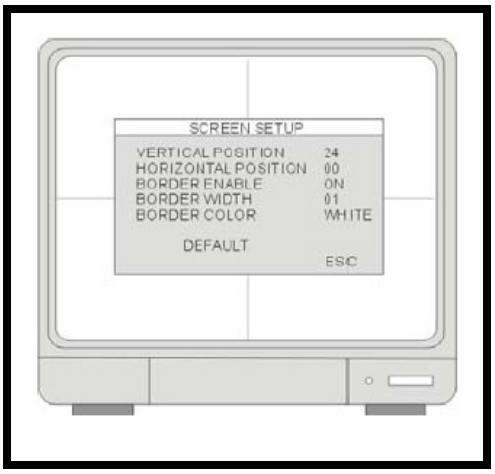
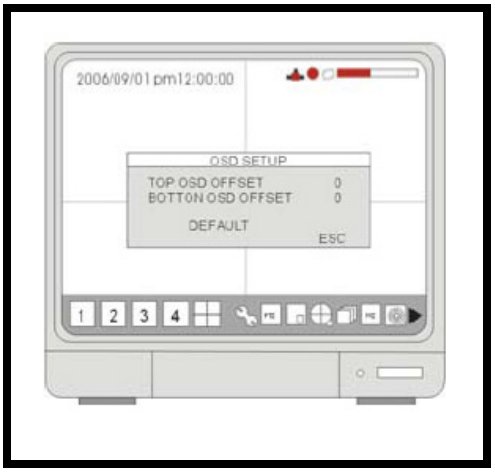
Display Setup - Screen Setup

1. **VERTICAL POSITION** - Adjust the vertical position of the image.
2. **HORIZONTAL POSITION** - Adjust the horizontal position of the image.
3. **BORDER ENABLE** - Enable the display of border.
4. **BORDER WIDTH** - Adjusts the width of border.
5. **BORDER COLOR** - Adjusts the color of the border.



Display Setup - OSD Setup

1. **TOP OSD OFFSET** - Adjusts the position of Top OSD.
2. **BOTTOM OSD OFFSET** - Adjust the position of bottom OSD.



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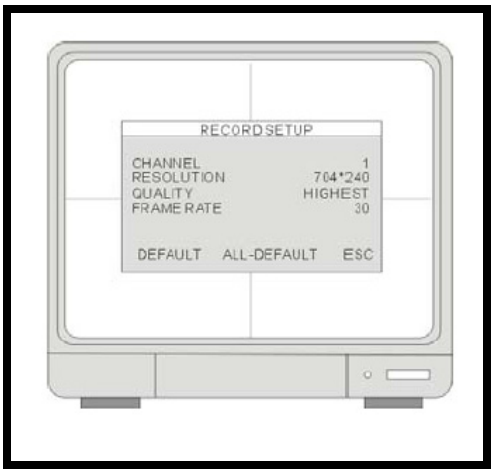
Record Setup

1. RECORD SETUP - Set up recording mode, resolution, picture quality, and recording frame rate.

2. SCHEDULE SETUP - Program the recording schedule.

Record Setup - Record Configuration



1. **CHANNEL** - Select a Channel to configure.

2. **RESOLUTION** - Set the recording resolution:

   • 704×240 (NTSC) / 720×288(PAL)

   • 352×240 (NTSC) / 360×288(PAL)

3. **QUALITY** - Set the recording picture quality to High / Normal / Low.

   NOTE: The Data size of the image in the PAL system is larger than the NTSC system. The total recording time is the same between the PAL and NTSC systems. To transmit more images via the network (and to set a longer recording time) set the Quality to “LOW” or “Mid” and recording at 352×240(360×288).

4. **FRAME RATE** - Set the recording speed (FPS) when an alarm is triggered. NTSC - 1~30 FPS PAL - 1~25 FPS

NOTE: FPS refers to Frames Per Second. 30 FPS is the equivalent of real time video.

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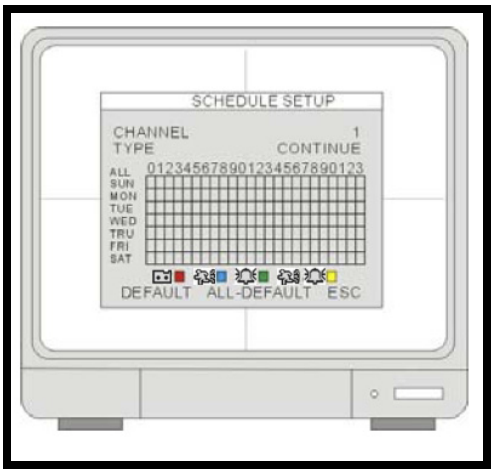
Record Setup - Schedule Setup



1. **CHANNEL** - Select a single channel to setup the schedule.

2. **TYPE** - Select a recording mode:

• Continuous Recording: Recording is constantly occurring.

• Motion: Begins the recording when motion is detected.

• Alarm: Begins the recording when an alarm is detected

• Motion and Alarm: Sets the system to record when Motion and/or an Alarm is detected.

3. **0~24 Hour** - Activate or deactivate the schedule for a particular hour in a week.

4. **SUN~SAT** - Activate or deactivate the scheduled hours in a day. All hours in the day can be activated or deactivated by double clicking on the name of the day (i.e. Mon., Tue etc.).

NOTE: If the DVR is set to MOTION RECORDING and the DVR keeps recording continuously or is not triggered to record as expected, please check the sensitivity settings and the motion mask setup in CONFIGURATION>MOTION SETUP.

If the motion settings are too sensitive, you may want to lower the sensitivity level and define a motion detection area for more accuracy. If the motion is not triggered as expected, you may want to increase the sensitivity level, clear the motion mask, or enlarge the detection area.

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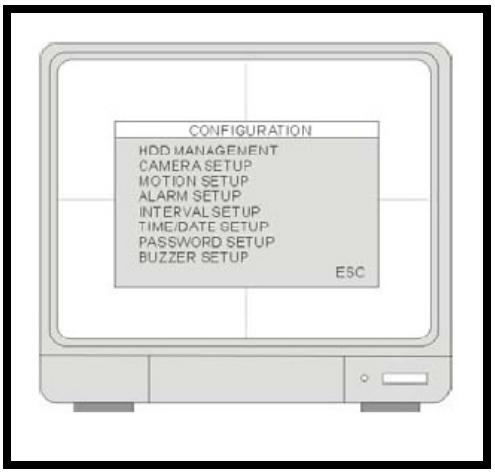
Configuration

1. **HDD MANAGEMENT** - Includes HDD SETUP (HDD Clear), and HDD INFORMATION.
2. **CAMERA SETUP** - Includes CAMERA TITLE and CAMERA COLOR SETUP.
3. **MOTION SETUP** - Includes SENSITIVITY, DURATION, DETECT CELL NUMBER.
4. **ALARM SETUP** - Set up the Alarm mode (N.C. or N.O) and the Alarm Output Duration.
5. **INTERVAL SETUP** - Set up the switch interval of the Full screen and the PIP screen.
6. **TIME/DATE SETUP** - Program the system date and time.
7. **PASSWORD SETUP** - Setup the password.
8. **BUZZER SETUP** - Set the Buzzer ON or OFF at a certain condition.

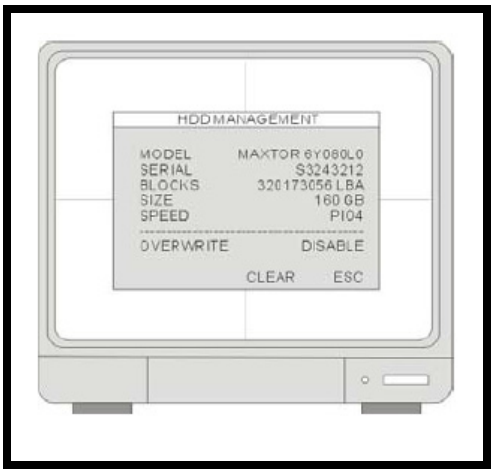


HDD MANAGEMENT

This menu displays the Hard Drive information.

The HDD Management also allows the user to set the OVERWRITE to ENABLE or DISABLE.

NOTE: If the OVERWRITE option is set to ENABLE, data on the Hard Drive will be overwritten (once the drive is full). If DISABLE is selected, the unit will stop recording once the Hard Drive is full.



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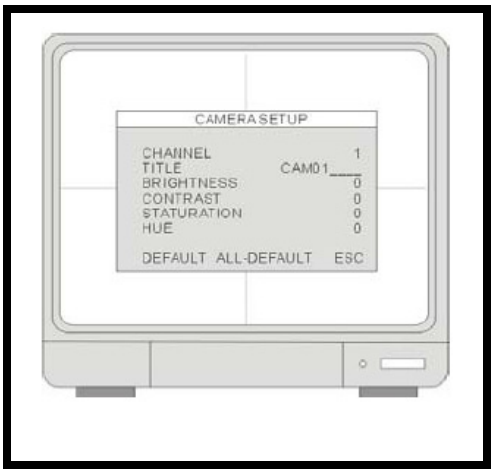
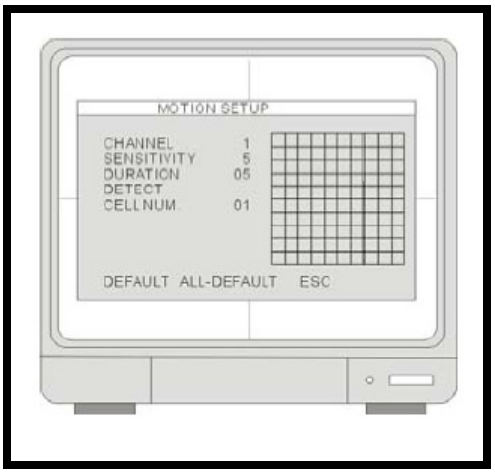
CAMERA SETUP

1. **CHANNEL** - Select the camera to be modified.
2. **TITLE** - Input the camera Title, max. 8 characters.
3. **BRIGHTNESS** - Adjust image brightness (-32~31).
4. **CONTRAST** - Adjust color contrast (-32~31).
5. **SATURATION** - Adjust color saturation (-32~31).
6. **HUE** - Adjust color hue (-32~31).



MOTION SETUP

1. **CHANNEL** - Select a channel for the setup.
2. **SENSITIVITY GRADE** - Adjusts the motion detection sensitivity. 1 (LOW)~5 (VERY HIGH)
3. **RECORD DURATION** - Sets the record duration from the time that motion is detected. If the system detects continuous motion, it keeps recording throughout the event, and for the duration after the last motion event.
   - For example, the duration is set to 10 seconds, and the motion last for 3 minutes. The system records for 3 minutes and 10 seconds.
4. **DETECT CELL NUMBER** - Recording will only be triggered when the cells in motion are MORE THAN the number the user has set. The smaller the number, the more sensitive the detection is.
5. **MOTION MASK** - Area detection setup - sets which areas detect motion and which areas do not to detect motion.
   - The area that is not detecting motion is Grey.
   - Click the left mouse button and drag the zone WITHOUT motion detect
   - Click the right button of mouse and drag the zone WITH motion detect.



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ALARM SETUP

1. **CHANNEL** - Select a channel for the setup.

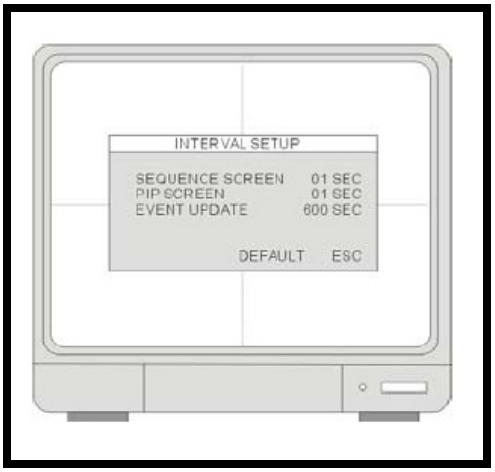
2. **ALARM INPUT** - Set up the Alarm Input type.

   - NORMALLY CLOSED - The Alarm is triggered when the circuit is closed (ON).
   - NORMALLY OPEN - The Alarm is triggered when the circuit is opened (OFF).

3. **DURATION** - Setup for the post-alarm recording duration, and the alarm output duration. The duration setting is applied to both functions. The setting range is from 1 second to 99 seconds.

NOTE: Alarm output can be triggered by alarm input and video loss. Motion cannot trigger an alarm output.

INTERVAL SETUP



1. **SEQUENCE SCREEN** - Full Screen Sequence Interval setup (1~99 SEC).

2. **PIP SCREEN** - Picture in Picture- setup for the sub-picture's sequence interval (1~99 SEC).

3. **EVENT UPDATE** - The Event Update Time prevents the system from recording the event logs from the same event. The event types include A

   - Alarm
   - Motion
   - Video loss.

When an event is triggered, it is possible that the same event type continues to be triggered for a period of time (i.e. Motion starts, then stops for a short period, then starts again).

With the Event Update Time setting, whenever there is an event, the system records the starting time and information of the event in the Event Log, and ignores the following events within the duration set in the Event update time. The setting range of the Event Update time is from 10 seconds to 990 seconds.

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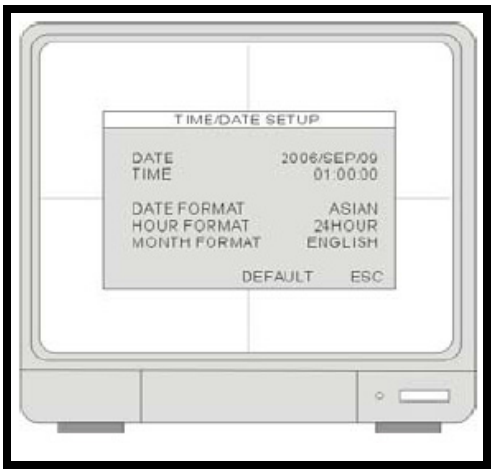
TIME/DATE SETUP

The date and time set by the manufacturer may be different from your time zone. It is very important to configure the system date and time before starting recording. Set the date and time by using Mouse wheel:

- DATE FORMAT- Asia/American/European
- TIME FORMAT- 12 hours/24 hours
- MONTH FORMAT- English/Numeric

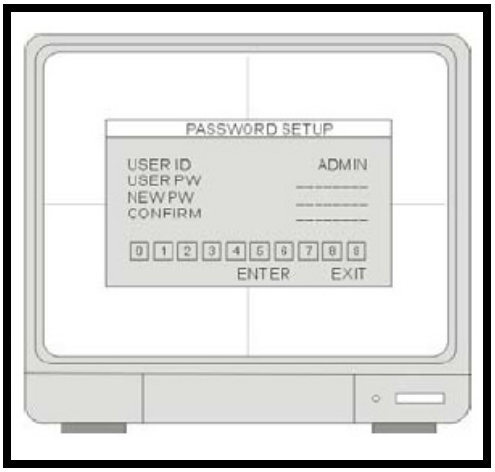
NOTE: It is strongly recommended to Set the time/ date, Reset all factory defaults and CLEAR the Hard Drive.



PASSWORD SETUP

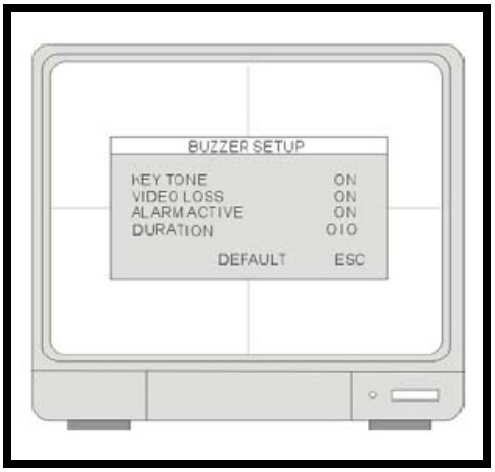
The password consists of 1 to 8 digits. Click the 0~9 icons (or front panel buttons) to enter the password. Then click ENTER to confirm and enter the system.

1. **USER ID** - Display User ID.
2. **USER PW** - Enter the current password.
3. **NEW PW** - Enter the new password.
4. **CONFIRM PW** - Enter the new password again for confirmation.



BUZZER SETUP

1. **KEY TONE** - Turn the system beep ON/OFF (when buttons are pressed on the front panel or remote control).
2. **VIDEO LOSS** - Turn the beep ON/OFF when a Video Loss event is detected.
3. **ALARM ACTIVE** - Turn the beep ON/OFF when an Alarm event is detected.
4. **DURATION** - Sets the duration for the alarm (10~590 seconds)



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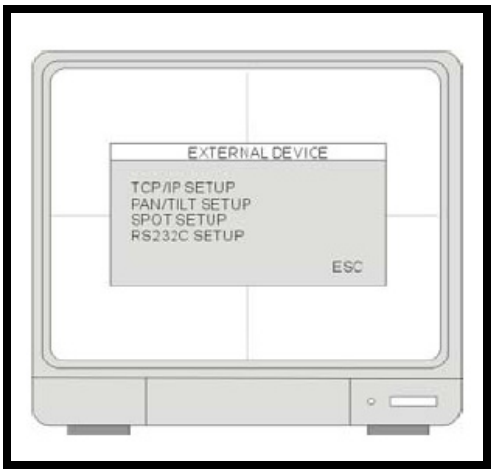
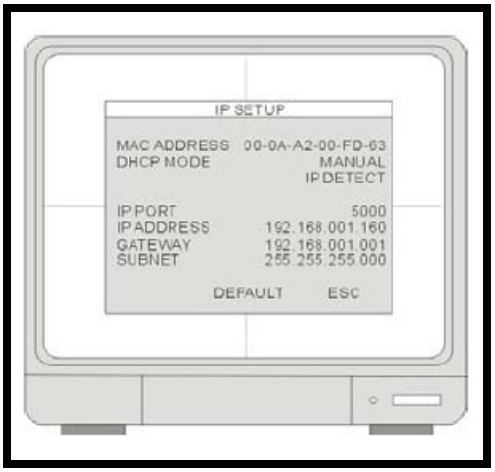
EXTERNAL DEVICE

1. **TCP/IP SETUP** - Configure the system Networking information.
2. **PAN/TILT SETUP** - Set up the parameters of the PTZ control.
3. **SPOT SETUP** - SPOT output setup.
4. **RS232C SETUP** - Set up the parameters of the RS232 port.



TCP/IP SETUP - IP SETUP

1. **MAC ADDRESS** - Displays the MAC address. MAC address cannot be changed and is unique to each system.
2. **DHCP MODE** - Set the DHCP mode to Manual or Automatic.
   - When DHCP is set to Automatic, the settings will be retrieved from the network router - and settings cannot be changed manually.
   - To turn off the DHCP automatic detection, set the DHCP MODE to DISABLE.
3. **IP PORT** - Manually Enter an IP Port number. The default port is 50000
4. **IP ADDRESS** - Manually set the IP address.
5. **GATEWAY** - Manually set the GATEWAY.
6. **SUBNET** - Manually set the SUBNET MASK.



TCP/IP SETUP - DDNS SETUP

1. **DDNS ENABLE** - Turns the DDNS Function ON/ OFF.
2. **DNS SERVER** - Enter the DNS Server's IP address. Use Mouse Wheel to change the value. The default IP is 202.133.244.128

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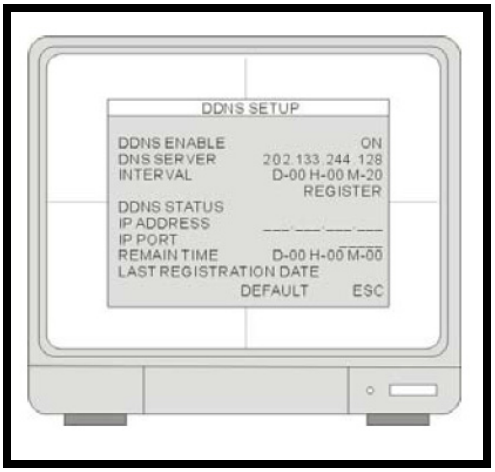
3. **INTERVAL** - Set the interval for the system to report its IP address to the DDNS server automatically. (D- day / H- hour / M- minute). Use the Mouse Wheel to change the value.

4. **REGISTER** - Connect to the DDNS server and register the system information to the server. Click REGISTER to start the registration.

5. **DNS STATUS** - Indicates the current status of DDNS connection

   - IP ADDRESS: Indicates the current IP address recorded in the server
   - IP PORT: Indicates the current IP port recorded in the server.
   - REMAIN TIME: Indicates the remaining time until the next connection to the server.

6. **LAST REGISTRATION DATE** - Displays the time of the last registration.



TCP/IP SETUP - SPEED

Controls the system bandwidth use (network speed). Settings between 1 (low) ~ 9 (high)

PAN/TILT SETUP - COMMAND SETUP

1. **CHANNEL** - Select the channel for PTZ (PAn/TILT/ ZOOM) Camera control. PTZ Camera is not included with the system.

2. **MODEL** - Select PTZ protocol.

3. **PTZ ID** - Select PTZ ID.

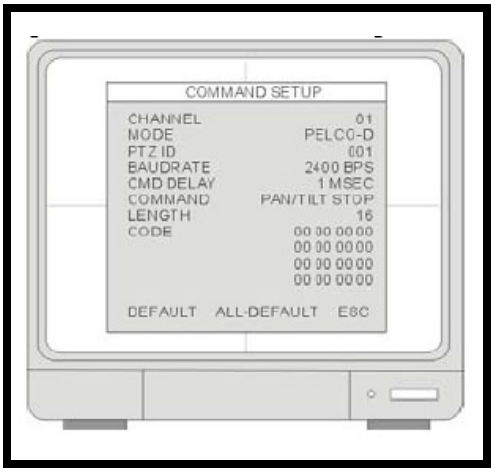
4. **BAUDRATE** - Select Baud Rate of PTZ control code.

5. **CMD DELAY** - Set up a delay time to run the command.

6. **COMMAND** - Pick up PTZ CMD.

7. **LENGTH** - Displays the length of PTZ control code.

8. **CODE** - The control code of PTZ CMD.



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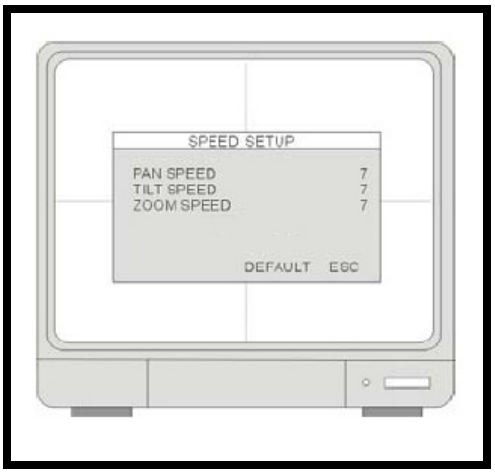
PAN/TILT SETUP - SPEED SETUP

1. **PAN SPEED** - Set the PANing speed (0 low ~ 7 high).
2. **TILT SPEED** - Set the TILTing speed (0 low ~ 7 high).
3. **ZOOM SPEED** - Set the speed of ZOOM IN/OUT (0 low ~ 7 high).



SPOT SETUP

1. **SWITCH INTERVAL** - Sets the sequence switching time (01 ~ 99 sec.).
2. **ALARM POP UP** - When an Alarm is detected, the corresponding channel (connected to the Alarm sensor block) pops up onscreen.
3. **MOTION POP UP** - Sets the MOTION detection pop-up to ON/OFF.
4. **EVENT POP UP DURATION** - If ALARM or MOTION events occur concurrently on several channels, then Channel 1 has first priority for onscreen POP UP.

   • For example, if an events occurs on Channel 1, Channel 2 and Channel 4 at the same time, Channel 1 pops up. If motion stops on channel 1, then channel 2 pops up for the set duration. If motion occurs on Channel 1 again (within the duration), Channel 2 continues to display. If motion on Channel 1 keeps on going even after the duration, Channel 1 pops up again.

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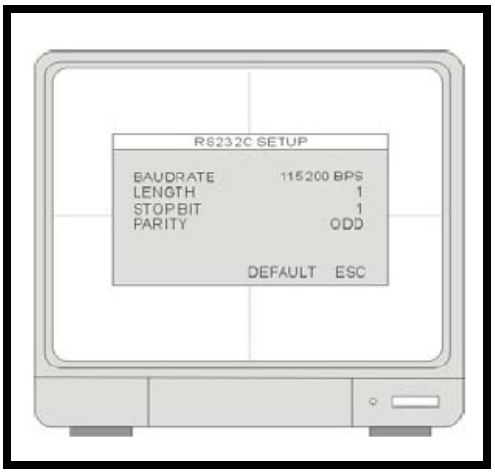
RS232C SETUP

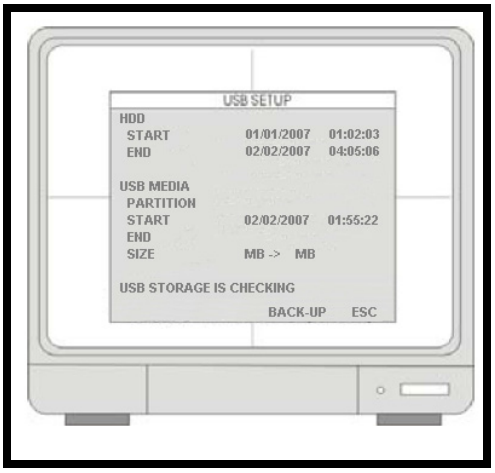
Users can connect the System to a PC through the RS232 port. Other system control devices can also be connected through the RS232 port. The ASCII-Code information is in Serial port setup (Users cannot change value in this setting).



1. **BAUDRATE** - The transmission baudrate is 19200bps.
2. **LENGTH** - The transmission length is 8 bits.
3. **STOP BIT** - The stop bit is 1.
4. **PARITY** - The parity is none.

BACKUP

USB BACKUP SUBMENU



1. **HDD** - Indicates the start and the end recording date and time on the Hard Drive.
2. **USB** - Select a starting date and time for backup. Use Mouse wheel to change the value, then select the SIZE to choose a backup size.
3. **SIZE** - Insert the USB device, and the system will automatically check the disk size and display the available space onscreen. Use Mouse wheel to change the value. The system will automatically calculate the end date and time for backup.
4. **BACK-UP** - Move the cursor to BACK-UP and Click it to begin the backup process. The System will save the file in AJP format. Users have to install the LorexPlayer 2.0 Backup Software to playback the file. Please refer to the provided Software Guide for further details.

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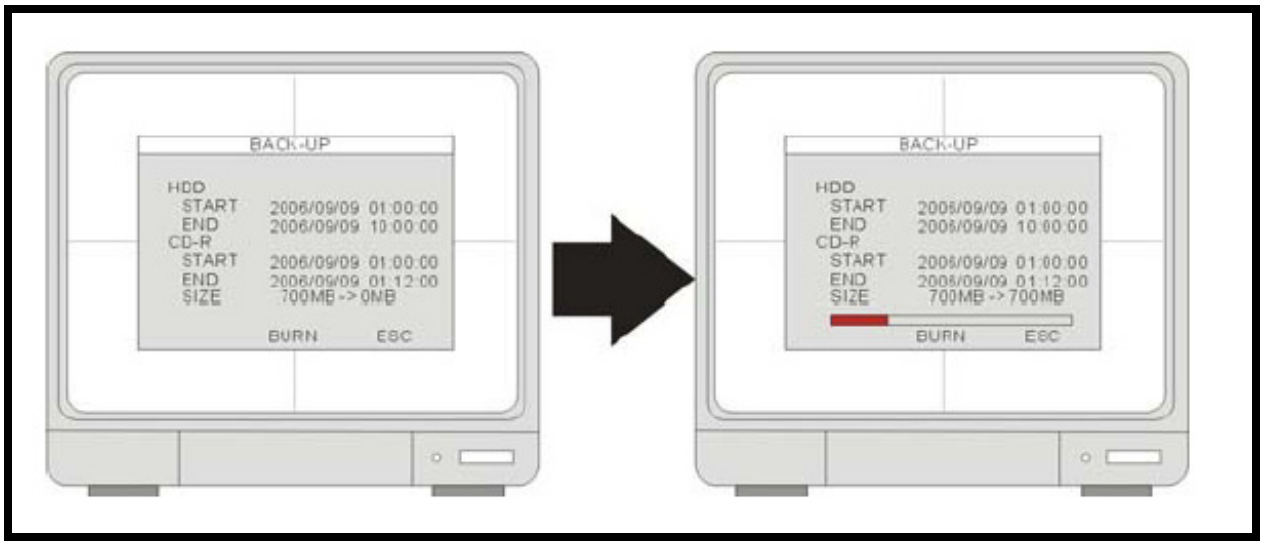
Data Backup

System status messages:

- USB STATUS - Insert USB Key - the system will check the available space.

When choosing a backup size, leave 20MB as a buffer and do not use the full space of the USB Stick.



FIRMWARE UPGRADE

The system firmware can be updated using a USB Memory stick:

1. Select the FIRMWARE UPGRADE menu and insert the Memory Stick containing the firmware.
2. Click the CD-CHECK.
3. Once the CD-CHECK is complete, click UPGRADE.
4. An onscreen message will indicate that the firmware upgrade is successful as “POWER OFF AND POWER ON” at the bottom. Turn the system OFF and ON to finish the upgrade process.

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Troubleshooting

When a malfunction occurs, it may not be serious and can be corrected easily. The following describes the most common problems and solutions. Please refer to the following before calling Lorex Technical Support:

Problem:

Observation System Unit is not receiving power, or is not powering up

Check:

- Confirm that all cables are connected correctly.
- Confirm that the power adaptor is securely connected to the back of the unit.
- Confirm that there is power at the outlet:
  - By connecting the power cable to another outlet
  - Test the outlet with another plugged device (such as an electric calculator or phone charger)
- 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.
- Confirm that the unit is powered on (LED indicators on the front should be ON).

Problem:

Observation System is not detecting the Hard Drive.

Check:

- Confirm that the hard drive is securely installed, and locked into the unit using the provided key.
- Check that the drive is set to MASTER (see Appendix #8 for details)

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Observation System Specifications - Appendix #1

Monitor Specifications

LCD Panel	Diagonal: 15.0” TFT, Input: TTL / LVDS.
LCD Display Resolution	1280 x 1024
Video Input	4CH (4 x BNC)
Video Output	Monitor / Spot (BNC x 1)
Split Screen	Full screen, Quad split
Zoom	Available
PIP (Picture in Picture)	Available
LCD Color Resolution	16.7 M (8 bits)
LCD Pixel Pitch	0.297mm (H) x 0.297mm (V)
LCD Brightness	300 cd/m^2
Control Device	Remote Controller, Mouse (USB and PS2), RS232
Power Supply	DC Adapter (12V DC 8A)
Dimension	395mm(W) x 159mm(D) x 391mm(H)
Weight (N.W)	8kgs (W/O HDD)
Operation Temperature	41°F~104°F (5°C~40°C)
Operation Humidity	Less than 90%

DVR Specifications

Storage Capacity		1 HDD , 160GB preinstalled
Triplex		View/ Playback / Record simultaneously
Compression		Modified MJPEG Algorithm
Recording Speed		120fps (NTSC)/ 100fps (PAL)
Recording Resolution	FULL	704 x 240(NTSC), 704 x 288(PAL)
	CIF	352 x 240(CIF), 352 x 288(PAL)
Display		Real time for all channels
Recording Mode		Continuous, Motion, Schedule, Alarm
Search Mode		Percentage Search, Date/ Time Search, Event Search
Password Protection		Yes
Alarm Input		4 Alarm (NO/NC)
Relay Output		1 (NO/NC)
Backup		USB2.0(HOST) back-up , Download via Network
Network (TCP/IP)		Remote live view, playback, and download as AVI file
Firmware upgrade		USB port for firmware upgrade

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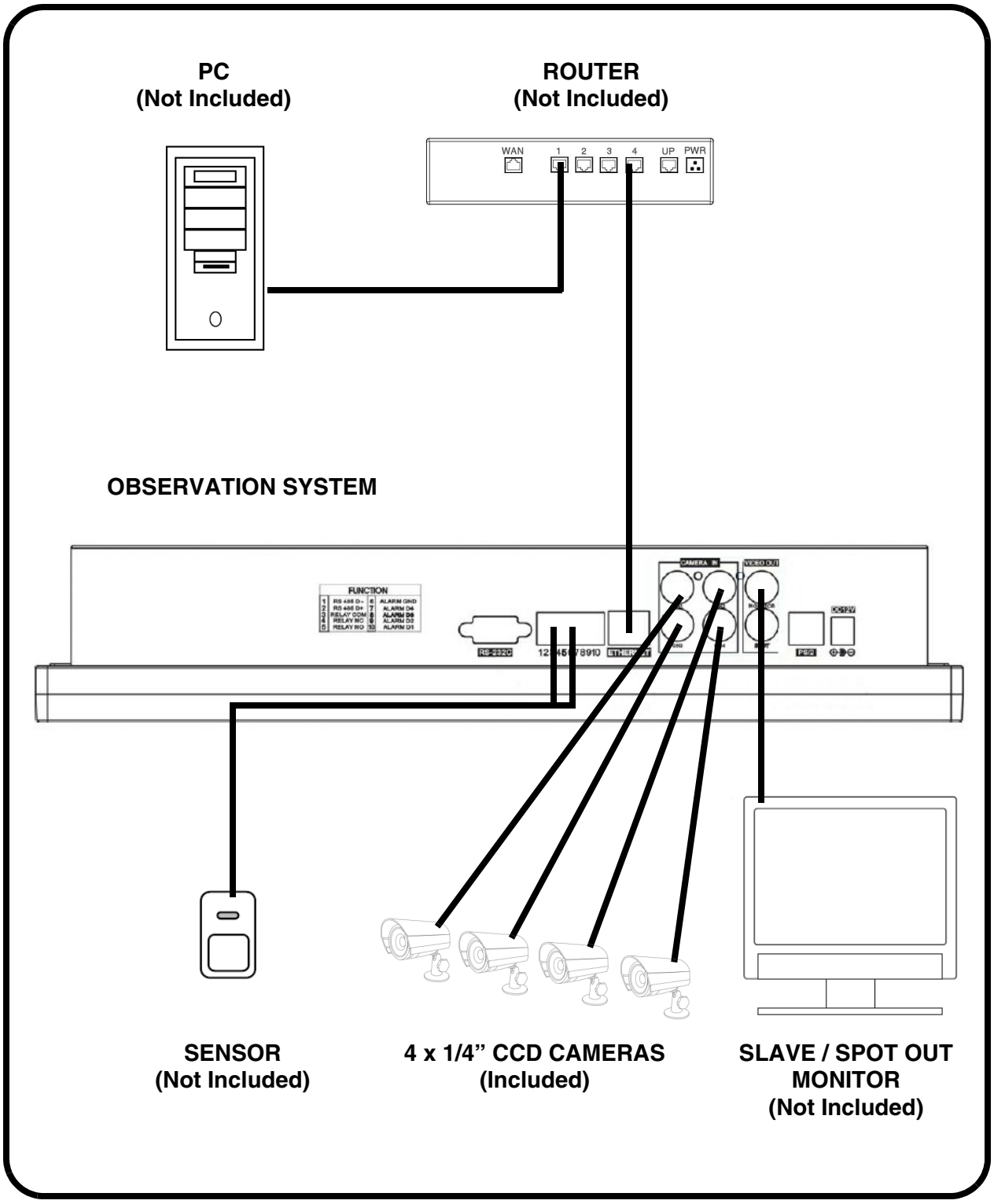
Full Connectivity Diagram - Appendix #2

The following diagram outlines a general set of connections available with the Observation System.



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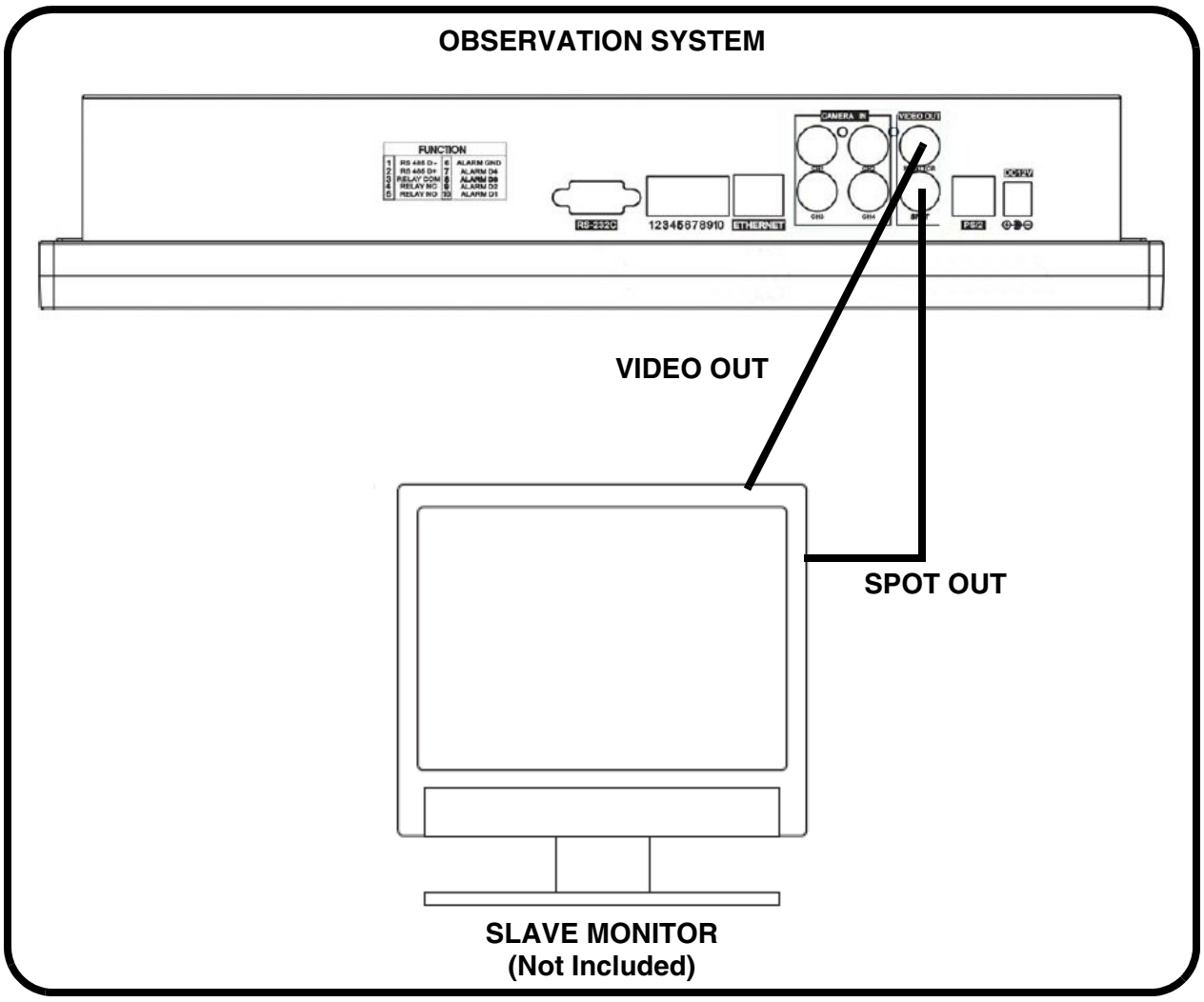
Connecting a Slave (Spot-Out) Monitor - Appendix #3

Connections to a Slave Monitor / Spot-Out Monitor (not included with the System) can be made through the VIDEO OUT and/or the SPOT OUT ports on the back of the Observation System. A slave monitor can be a TV or Computer Monitor with VGA inputs.

A Slave Monitor is used as a View Only device. A Slave Monitor can only display camera data as it is sent from the Observation System (based on settings in the Spot Out Menu options).

- **VIDEO OUT** - Connect the VIDEO OUT port on the back of the Observation System to the VIDEO IN port on the back of the Slave Monitor. This will output all onscreen video to a secondary monitor.
- **SPOT OUT -** Connect the SPOT OUT port on the back of the Observation System to the VIDEO IN port on the back of the Slave Monitor

NOTE: The Video OUT and Slave out can be used at the same time, however separate monitors will need to be used.



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Connecting Motion / Alarm Device - Appendix #4

Motion detection and Alarm controls are enabled through the Menu system on the Observation System. Additional motion sensor devices can be connected to the system (Motion Sensors, Door/Window Sensors).

A motion detection or sensor unit can be used to send a signal to the Observation System to begin camera viewing on the matching Video Channel (when enabled in the Menu, see page 39):

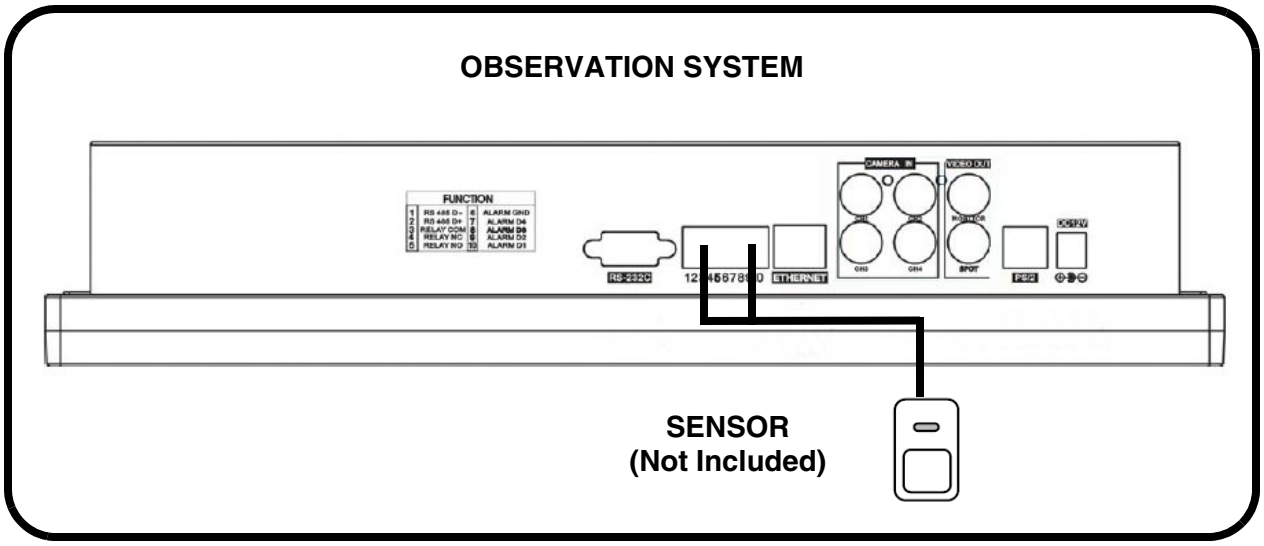
- Example: A Window sensor unit has been installed on Alarm Block port #4. When this sensor is activated, the camera on DIN or BNC VIDEO port #4 will become active (if enabled in the MENU on the Observation System)

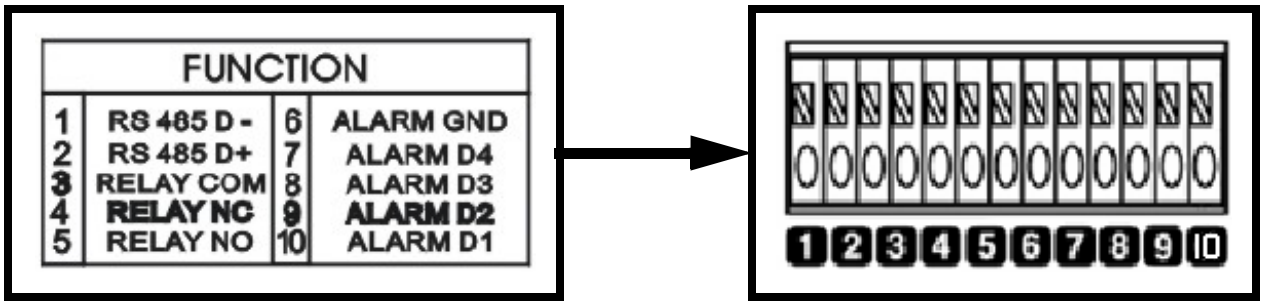
Installing a Sensor

1. Connect the GROUND Cable to the GND port on the Alarm Block on the Observation System (ports 3, 4, 5 or 6 - see FUNCTION chart below).

2. Connect the SIGNAL Cable to a numbered port (ports 7, 8, 9 or 10 - see FUNCTION chart below).

To start ALARM RECORDING on the System, refer to page 39 for menu configurations.





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Connecting PTZ Cameras - Appendix #5

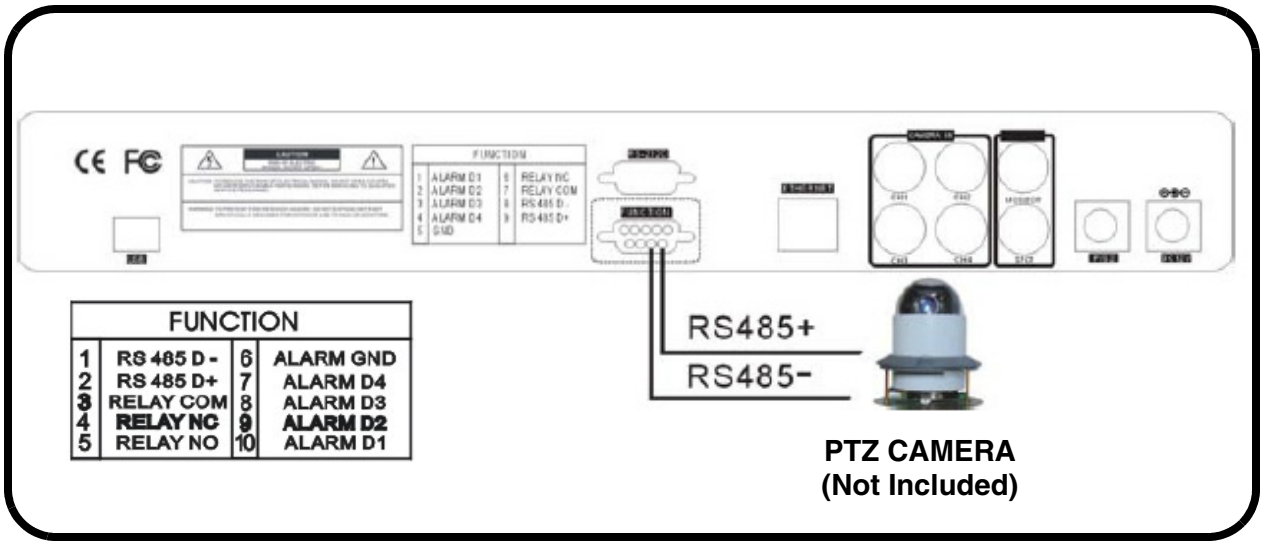
PTZ Cameras (not included with this system) can be connected to the PTZ Control Block on the back panel of the System. The PTZ Controls are enabled through the Menu system on the Observation System. Additional PTZ Cameras are available at http://www.lorexcctv.com

Installing a PTZ (RS-45 Type) PTZ Camera:

1. Connect the Transmit Cable to the D+ port on the PTZ Control Block on the Observation System.

2. Connect the Receive Cable to the D- port on the PTZ Control Block on the Observation System.

3. Connect the Camera to BNC Channel 1 (DIN Channel 1 must be empty).



4. Configure PTZ Menu options - refer to page 25. The PTZ Camera Settings will depend on the Type of Camera - refer to the specific Camera Manual for your brand and model of PTZ Camera.

   • MODEL - Select a PTZ protocol

   • PTZ ID - Enter the PTZ's ID / address.

   • BAUD RATE - Enter the PTZ's transmission baud rate

   • CMD DELAY - Set the delay time of the command transmission between bytes. Please refer to the PTZ user manual for the manufacturer's recommendations.

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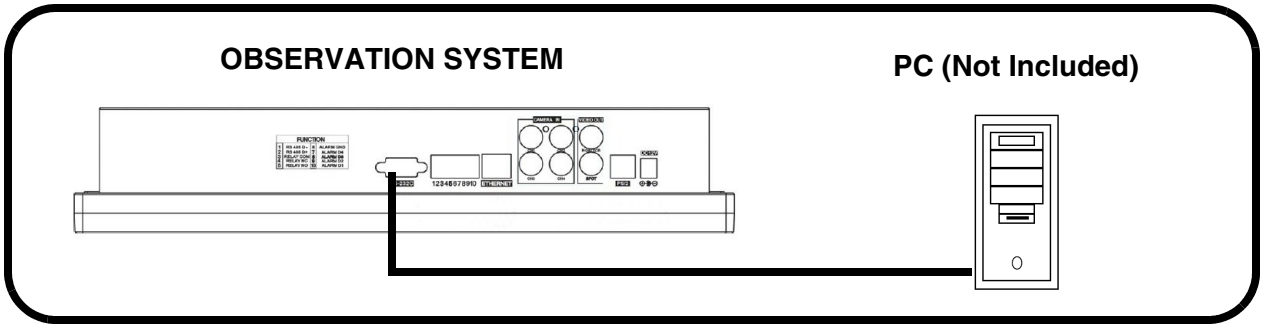
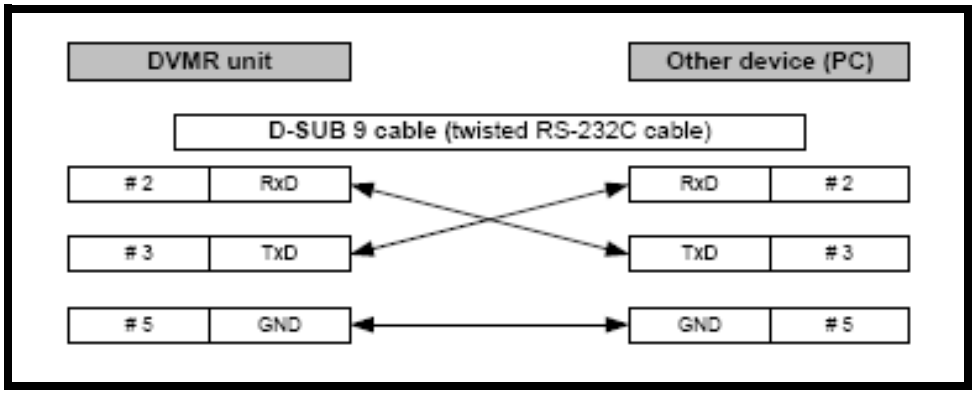
Connecting to a PC using the Serial Port - Appendix #6

The Observation System can be connected directly to a PC COM Port by using the Serial Port located on the back of the system.

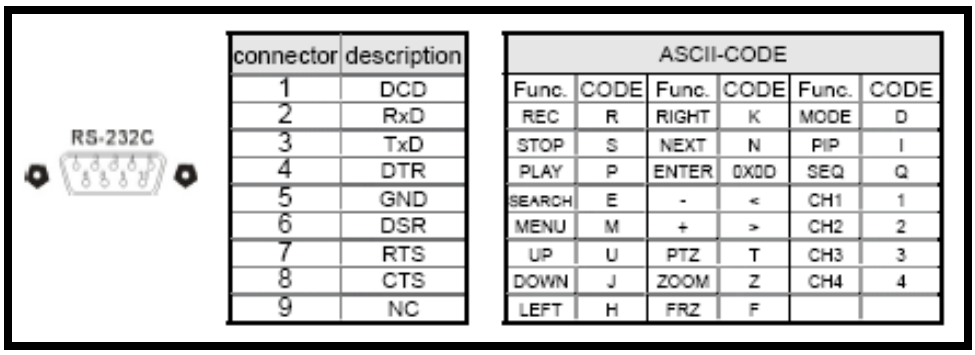
- To connect DVR to a PC, users must use a twisted RS232 cable (See below).
- The RS232 settings (baudrate/ parity/ length/ stop bit) are NOT adjustable. The transmission baudrate is 19200bps, length 8 bits, stop bit 1, and the parity is none. ASCII-CODE is 1 BYTE.



Twisted RS232 Cable Configuration



RS232 Port Diagram



connector	description
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	NC

ASCII-CODE					
Func.	CODE	Func.	CODE	Func.	CODE
REC	R	RIGHT	K	MODE	D
STOP	S	NEXT	N	PIP	I
PLAY	P	ENTER	0X0D	SEQ	Q
SEARCH	E	-	<	CH1	1
MENU	M	+	>	CH2	2
UP	U	PTZ	T	CH3	3
DOWN	J	ZOOM	Z	CH4	4
LEFT	H	FRZ	F		

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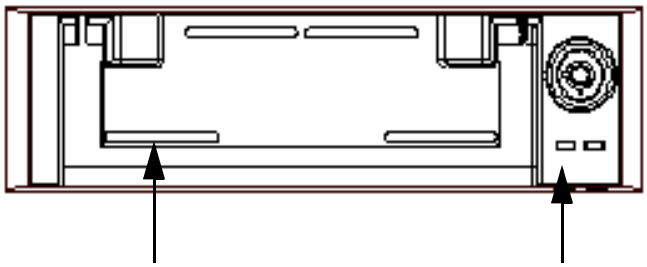
Hard Drive Replacement - Appendix #7

The Hard Drive serves the same purpose in an Observation System as a video cassette does in a VCR. Please follow the steps carefully in order to ensure proper installation.

The compartment located on the front panel of the DVR is the removable Cartridge Casing in which you insert the Hard Drive. The various parts of the Cartridge Casing are labeled for your reference.

STEP 1: Remove the Cartridge Casing from the DVR.

- Lift the Handle and pull towards you. The Cartridge Casing will slide out of the DVR.



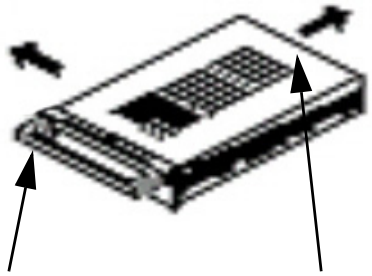
Handle

Keyhole & LED Indicator Lights (Power Indicator and Hard Drive access lights)

NOTE:
You may find that the cartridge casing is locked. In this case, skip ahead to step 7 to find instructions on unlocking the cabinet, then return to Step 2

STEP 2: Remove the Cover from the Cartridge Casing

- Un-clip the release latch with the word “OPEN” printed beside it by gently pushing on the latch.
- Slide the cover off to where it locks or catches the stopper and lift the Cartridge Casing to remove it.

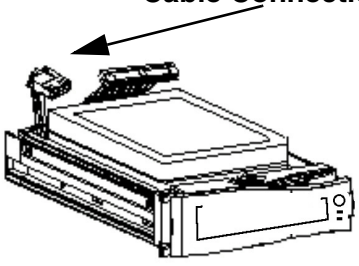


Release Latch

Slide Cover

STEP 3: Connect the Hard Drive into the Cartridge Casing.

Cable Connection



- Take the Hard Disk Drive and Connect the two cables from the back of the Cartridge Casing to the Hard Drive.
- The cables should be pushed in firmly, but not forcibly.
- The 4 Pin connection is the DC Power cable, and the wider cable is the standard Hard Drive IDE type connection.
- Confirm that the new drive is set to master (refer to the general jumper pin setting on the HDD surface, generally located on a sticker on the top of the drive. Set the jumper pin set to master (1 drive). Use a Hard drive model with a power supply rated udma66 or higher.

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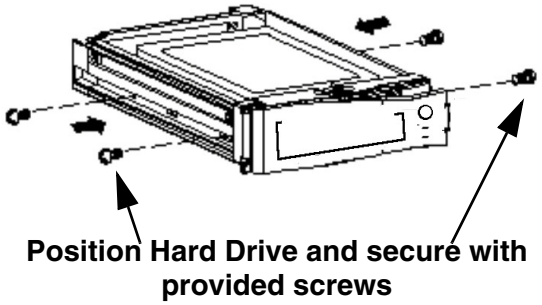
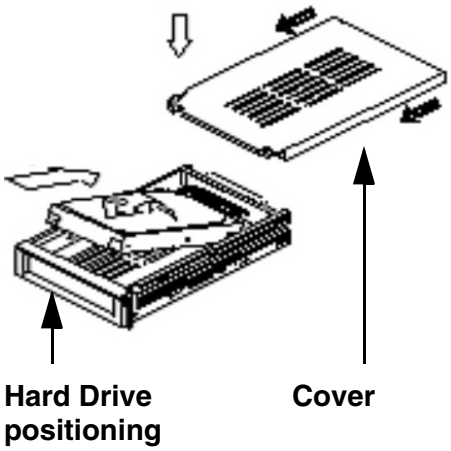
STEP 4: Secure the Hard Drive in the Casing

- Use screws and tighten them, positioning the Hard Drive into place. This step is optional, but it is recommended.



STEP 5: Slide the top Cover over the Cartridge Casing

- Slide the Cover forward over the Cartridge Case. Ensure it is secured in place over the release latch.

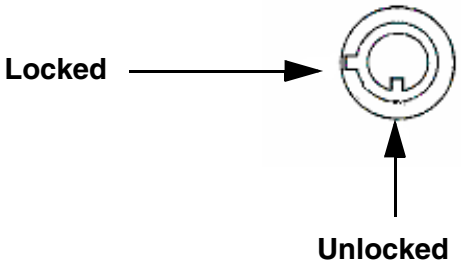


STEP 6: Reinsert the Cartridge Casing into the DVR

- Fully insert the Cartridge Case into the DVR.

STEP 7: Lock the Cabinet

Lock the cabinet by turning the key clockwise.



NOTE:
If you do not lock the cabinet, the system will **NOT DETECT THE HARD DRIVE** and will not function properly. Refer to the Side Panel (Removable Hard Drive Cartridge) on page 13 for lock location.

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Optional Accessories

The following accessories are available to add to your existing system:

SLAVE / SPOT OUT MONITOR

Slave / Spot Out Monitors - View selected Cameras on a second Monitor

BNC TYPE CAMERAS

Additional BNC Type Cameras

EXTENSION CABLE

Extends the length between the CAMERA and MONITOR. Available in 60’ length.

PTZ CAMERAS

Accessory PTZ Cameras for additional view control.

PRO SERIES CAMERAS

Additional BNC Type Cameras

CAMERA ACCESSORIES

Night Vision Accessory with 68 LED illuminators for viewing in total darkness

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