# OPERATION/PROGRAMMING



# DX7000 Series Digital Video Recorder





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# **GETTING STARTED**

You will need to install your unit before using this manual. Refer to the installation manual supplied with the DX7000 for installation instructions.

Once the system is installed open the front panel of the DVR and press and hold the power switch down until the LED turns green. The operating software of the DX7000 will check the hardware configuration of the system. After a few seconds the Add New Hardware Wizard pops-up on the screen. Install the driver for the monitor by doing the following:

- Click Next
- 2. Select Search for the best driver for you device. Click Next.
- 3. Type **C:**\in the space provided. Click Next.
- 4. Accept the recommended driver by clicking Next.

When configuration is done, the main screen (DISPLAY mode) appears on the monitor (see Figure 1).

Refer to the following pages to learn how to operate and program your DX7000 Series Digital Video Recorder.

**NOTE:** The DX7000 uses an industry standard UL rated ATX case power supply. Pressing and holding the front panel reset switch for less than 5 seconds will only put the operating system in standby mode. You must press and hold down the front panel reset switch for 5 seconds or more to hard reset the system.

# **DISPLAY MODE**

Display mode is the main screen of the DX7000 Series DVR. Use this screen to access Search, Setup, and PTZ modes.

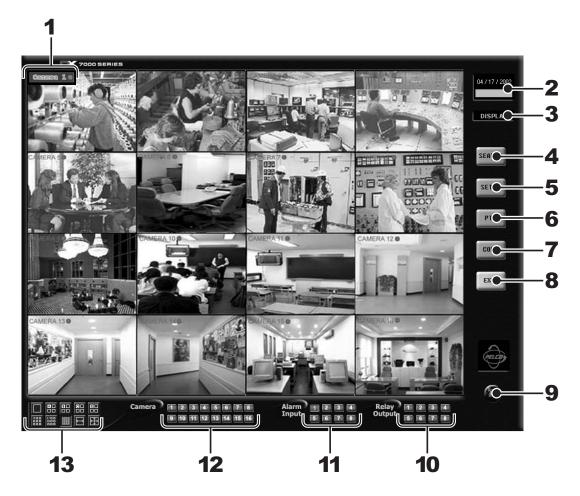


Figure 1. Display Mode

- 1 Camera Name and Recording Status The colored circle located to the right of the on-screen camera name indicates the recording status of the camera. RED indicates that the camera is recording continuously. If the circle is BLUE, camera recording was triggered by motion detection. YELLOW indicates sensor input recording, and a CLEAR circle means the camera is not currently recording.
- **2** Date and Time Indicator Displays current date and time.
- 3 Mode Identifier Identifies the mode displayed on the screen. Available modes include DISPLAY, SETUP, PTZ, and COPY.
- **4** SEARCH Button Click the SEARCH button to search and playback recorded video by date and time. Refer to the *Search* section of this manual for more information.
- 5 SETUP Button Click the SETUP button to program camera settings, customize a recording schedule, set up multiple password levels, and establish pan and tilt protocol. Refer to the System Setup section of this manual for more information.
- **6** PTZ Control Button Click the PTZ button to control pan, tilt, and zoom functions and to set patterns, preset tours, and presets. Refer to the *PTZ Controls* section of this manual for more information.

7 COPY Button (Backup) - Click the COPY button to record to a backup device that is recommended by Pelco.

**NOTE:** The copy button appears only if a backup device, such as Pelco's DX7000CD and software, are installed. Refer to the *How to Copy to a Backup Device* section of this manual for more information.

**8** EXIT Button — Click the EXIT button to exit the DX7000 program and shutdown the system. The following warning appears on the monitor when the EXIT button is selected:



Selecting OK will turn the system off.

To start the system:

- a. Open the front panel of the DVR.
- b. Press and hold the power switch down until the LED turns green.
- **9** Modem This is displayed only if the DX7000EM is installed and the USE MODEM box is checked in Speed Setup. Refer to the *Speed Setup* section of this manual for more information.
- Relay Output Buttons Click a relay button (1-8) to turn the device, such as a light or alarm, connected to the relay output ON/OFF. A blue button indicates a relay is active.
- 11 Alarm Input Buttons A blue button indicates an alarm has been activated. The button will stay blue until the alarm is cleared
- 12 Camera (Motion Detection Status) Buttons A blue button indicates motion is detected. The button will remain blue until motion is no longer detected.
- Single camera display

  Displays cameras 1-9

  Displays cameras 1-9

  Displays cameras 10-16

  Displays cameras 10-16

  Displays all 16 cameras

  \* Displays all 16 cameras

**NOTE:** You can also use the left and right mouse buttons to change the screen division.

Single Camera Display Using the Mouse — Move the cursor to a camera view, and click the left mouse button. A green rectangle appears around the selected view. Click the left mouse button again to display a single camera view of the selected camera. To return to the previous screen display, click the left mouse button again.

the right mouse button to return to previous screen display.

Full-Screen Display Using the Mouse – Click the right mouse button anywhere on a camera scene to remove the menu bars from the display. Click the right mouse button again to return to the previous screen display.

<sup>\*</sup> Settings are not available with DX7008 models. In 9 camera display, the last camera input is disabled.

# SYSTEM SETUP

To set up the DX7000 Digital Video Recorder, click the SETUP button located in the DISPLAY mode. The SETUP mode appears on the screen. To exit the SETUP mode and return to the DISPLAY mode click the EXIT button.

**WARNING:** The DX7000 server will stop recording and all remote site users will be disconnected during system setup. The following message will appear at all remote sites when they are disconnected:



## **SYSTEM SETUP MENUS**



#### **Camera Setup**

Insert camera label, enable camera, and set signal type (NTSC/PAL).



#### **Color Setup**

Adjust contrast, brightness, and picture level.



#### **Schedule Setup**

Specify recording start time, end time, day of week, and recording mode (continuous, motion, or sensor).



#### **Speed Setup**

Set the FPS (frames per second) for continuous recording, motion detection, sensor detection, and pre-alarm recording.



8

#### **Motion Detection Setup**

Select motion detection areas (maximum of 10 areas per camera).



#### **Password Setup**

Password levels include Administrator, Search User, PTZ/Backup User, and Client User.



#### **PTZ Setup**

Select the pan, tilt, and zoom protocol.



#### **Quit To Explorer**

Set a network address and hardware, or change system clock settings using standard Windows™ operations.



## **Update Program**

Update the DX7000 software.

# **CAMERA SETUP**

Use this screen to enable or disable camera inputs, input camera name, and set signal type (NTSC/PAL).

All cameras are enabled the first time the DX7000 DVR is started. Disable any camera input that is not being used. Disabled cameras can increase record rate.



Figure 2. Camera Setup Menu

- 1 CAMERA NAME Box To name a camera drag the cursor over the text in the CAMERA NAME box and type in the new name. Up to 70 characters can be entered in the box.
- 2 SIGNAL TYPE Set the NTSC/PAL signal to the correct camera setting for your location.

**NOTE:** The NTSC/PAL switch located on the back panel of the DVR must also be set for the correct signal. Refer to the installation manual for more information.

- 3 CAMERA SELECTION Button To setup a camera click on the camera selection button for that camera. The scene of the selected camera appears in the viewing window of the Camera Setup Menu.
- 4 CAMERA ENABLE Button Enable each camera connected to the camera inputs. This allows all enabled cameras to be viewed and recorded. If a camera is not connected to an input disable the camera. Enabling or disabling cameras can increase or decrease record rate.

## **HOW TO SET UP A CAMERA SITE**

- a. Click the CAMERA ENABLE button to enable a camera for setup. When the camera is enabled, the button should be a light blue color. If the button color is dark blue, the camera is disabled.
- Click the CAMERA SELECTION button (located above the CAMERA ENABLE button) the camera scene appears in the Camera Viewing Window.
- c. Drag the cursor over the text in the CAMERA NAME box and type in the new name.

# **COLOR SETUP**

If required, use this screen to adjust the contrast, brightness, and color level settings of a scene.

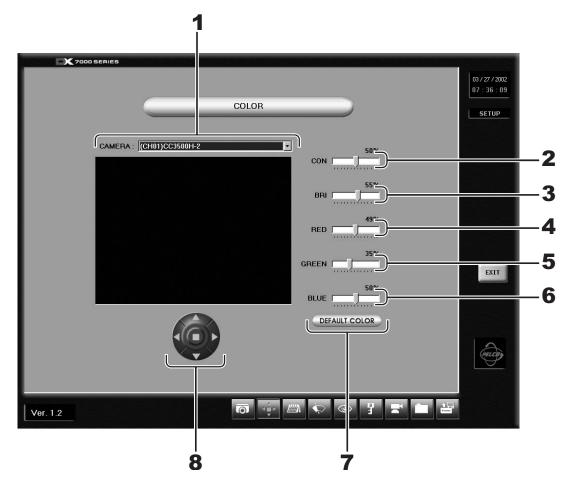


Figure 3. Color Setup Menu

- 1 CAMERA Selection Box Use the drop down menu to the right of the camera selection box to select a camera.
- 2 CON (Contrast) Slider Bar Drag the cursor on the CON bar to change the contrast value of the viewed and recorded scene. Proper adjustment will allow maximum gradations between the darkest and lightest parts of a scene.
- **3** BRI (Brightness) Slider Bar Drag the cursor on the BRI bar to change the brightness value of the viewed and recorded scene. Adjust the brightness of the scene to compensate for differences in lighting.

- 4 RED Slider Bar Drag the cursor on the RED bar to adjust the red color level of the viewed and recorded scene.
- **5** GREEN Slider Bar Drag the cursor on the GREEN bar to adjust the green color level of the viewed and recorded scene.
- **6** BLUE Slider Bar Drag the cursor on the BLUE bar to adjust the blue color level of the viewed and recorded scene.
- 7 DEFAULT COLOR Button Click the Default Color button to return all color settings to their default settings.
- 8 Image Alignment Buttons Use the image alignment buttons (up, down, left, right, and center) to align the image within the camera frame.

## HOW TO ADJUST THE LEVEL SETTINGS FOR A CAMERA SITE

- a. Select a camera by scrolling through the selections in the CAMERA box.
- b. Adjust the viewed image using the level settings.
- c. Align image in the image frame using the Image Alignment buttons.

# **SCHEDULE SETUP**

The default recording schedule for the DX7000 is to continuously record all enabled cameras twenty-four hours a day, seven days a week. Pelco recommends clearing the default setting before programming a schedule. To clear the default setting click the CLEAR ALL SCHEDULE button.

Twenty-four group schedules can be programmed to include the following:

Cameras to record

Day and time to record

Recording method (continuously, motion, and/or sensor detection)

Evaluate the flow of motion at the surveillance site before programming a group schedule using one of the following recording methods:

Continuous – Continuous recording is recommended for surveillance areas with a lot of movement.

Motion – Saves disk space; records only when motion is detected.

Sensor – Saves disk space; records only when an alarm is activated.

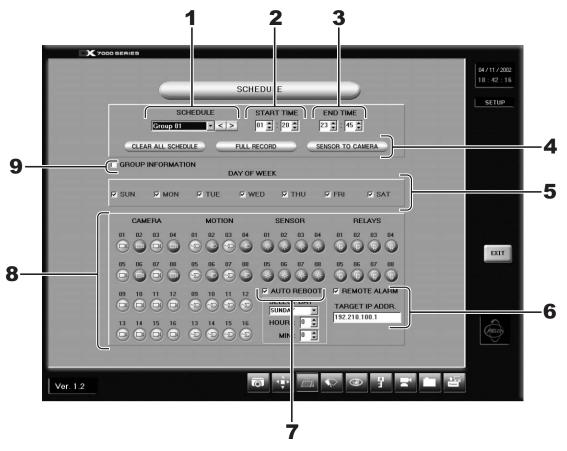
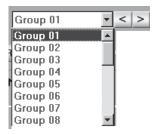


Figure 4. Schedule Setup Menu

1 SCHEDULE (GROUP 01-24) — Use the drop down menu or arrow buttons located to the right of the GROUP window to select a group.



- 2 START TIME Program the time to start recording. If you want GROUP 1 to start recording at 6:30 in the morning, use the arrow keys and set the START TIME to START TIME
- 3 END TIME Program the time to stop recording. If you want GROUP 1 to stop recording at 5:30 in the evening, use the arrow keys and set the END TIME to END TIME

  17 : 30 :

06 🖨 : 30 🕏

- 4 CLEAR ALL SCHEDULE Clears all group schedules. FULL RECORD – Configures Group 1 to record continuously all enabled cameras twenty-four hours, seven days a week. SENSOR TO CAMERA – Automatically selects the camera sensor for a group schedule in a one-to-one ratio (Camera 1, Sensor 1, Group 1).
- **5** DAY OF WEEK Select the days of the week a group schedule will record.
- 6 REMOTE ALARM Check the remote alarm box to notify a remote site when an alarm is set off. TARGET IP ADDRESS – Input the address of the remote site to alert when an alarm is set off.

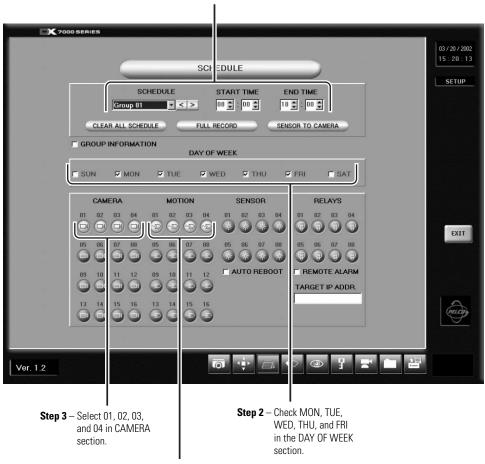
**NOTE:** The Emergency Agent software must be loaded on the remote site PC for the remote alarm function to work. Refer to the *Emergency Agent Software* section of this manual for more information.

- 7 AUTO REBOOT Set the day and time the system will reboot automatically. Pelco recommends that the DX7000 be programmed to reboot weekly. The system will momentarily be unavailable during the reboot; recording and playback functions will not be operational.
- 8 CAMERA, MOTION, SENSOR, AND RELAY Buttons Select the cameras, recording triggers, and relay outputs for the group schedule.
- **9** GROUP INFORMATION Lists schedule conflicts between groups.

## **HOW TO SET A SCHEDULE**

## Example:

Record 4 cameras with motion detection from Monday to Friday, 8:00 AM - 6:00 PM; Saturday 8:00 AM - 2:00 PM; and no recording on Sunday.



**Step 1** – Select GROUP 01 and set the START TIME to 8:00 and END TIME to 18:00.

Step 4 – Select 01, 02, 03, and 04 in MOTION section.

7000 SERIES 03 / 20 / 2002 15 : 24 : 00 DULE SETUP SCHEDULE START TIME END TIME 08 🛊 : 00 🕏 14 🕏 : 00 🏂 **▼** < |> CLEAR ALL SCHEDULE FULL RECORD SENSOR TO CAMERA GROUP INFORMATION □ THU ₩ SAT □ WED □ FRI CAMERA MOTION SENSOR RELAYS EXIT ☐ AUTO REBOOT REMOTE ALARM TARGET IP ADDR. 44032KB Ver. 1.2

**Step 5** – Select GROUP 02 and set the START TIME to 8:00 and END TIME to 14:00.

Step 7 – Select 01, 02, 03, and 04 in CAMERA section. Step 8 – Select 01, 02, 03, and 04 in MOTION section.

# SPEED SETUP

Use the Speed Setup window to program the recording rate for each camera and to program the pre-alarm function for motion and sensor recording modes. The total images per second available to be distributed for all enabled cameras varies by the mode selected. In duplex mode the maximum recording speed is 60 fps. In simplex mode the maximum recording speed is 160 fps. In backup mode, the maximum fps is 40. (See item 9 and description for further details.)

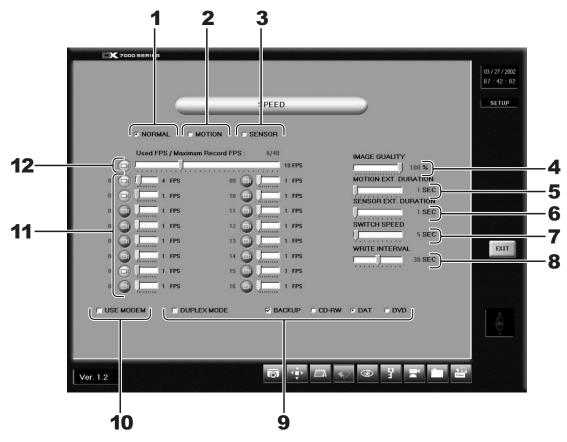


Figure 5. Speed Setup Menu

- 1 NORMAL Button—Opens the recording speed menu for continuous recording. You cannot program motion, sensor or prealarm speeds with this menu.
- 2 MOTION Button—Opens the motion detection and pre-alarm recording speed menu. Refer to the *Motion Speed Menu* section.
- 3 SENSOR Button Opens the sensor detection and pre-alarm recording speed menu. Refer to the *Sensor Speed Menu* section.

- 4 IMAGE QUALITY Slider Bar Sets the quality of the recorded image. Image quality affects storage capacity and transmission rate. More bandwidth and storage capacity is required for high quality images. VHS image quality is equal to 43%.
- **5** MOTION EXT. (Extended) DURATION Slider Bar Sets recording time after motion is detected.
- 6 SENSOR EXT. (Extended) DURATION Slider Bar Sets recording time after a sensor is triggered.
- 7 SWITCH SPEED Slider Bar Sets the sequencing dwell time for cameras connected to the VGA and monitor output.
- 8 WRITE INTERVAL Slider Bar Determines how long images are stored in the buffer before written to the hard drive.

#### 9 SYSTEM MODE

Mode	Definition	Total FPS	How to Program
Simplex	Record or playback recordings. Cannot perform both tasks at the same time.	160	Do not check the selection box labeled DUPLEX MODE or the box labeled BACKUP.
Duplex	Record and playback recordings at the same time.	60	Check the selection box labeled DUPLEX MODE
Backup	Record, playback and archive to a backup device at the same time.	40	Check the selection box labeled BACKUP.

- 10 USE MODEM Selection Box—Only available if modem software is installed.
- 11 RECORDING SPEED Slider Bars -Control the recording rate of each camera separately by adjusting the control bar for each individual camera. The total available fps for all cameras varies per system mode setup (simplex, duplex, or backup).
- **12** Average (A) Recording Rate Slider Bar Equally distributes the total available recording rate to all enabled cameras. All enabled cameras are set to the same fps.

#### Example:

Total # of cameras	Total FPS	Average per camera
16	160	10

#### **MOTION SPEED MENU**

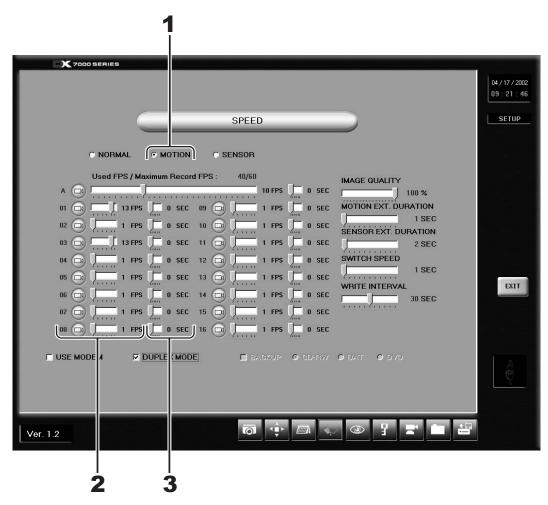


Figure 6. Motion Speed Menu

- 1 MOTION Button— Select the MOTION button to open the motion speed menu. Use this menu to set motion detection and pre-alarm recording speeds.
- 2 Motion Recording Speed Slider Bar —Use the slider bar to set the recording rate for motion detection. If the camera is already set to record continuously, the recording rate for motion can be set to record at a higher speed. The total available fps for all cameras varies per system mode setup (simplex, duplex, or backup).
- 3 Pre-Alarm Function Slider Bar: You can program the pre-alarm function for motion recording. When motion is detected, images are recorded for the programmed duration (five seconds maximum per camera) before an event happens.

#### **SENSOR SPEED MENU**

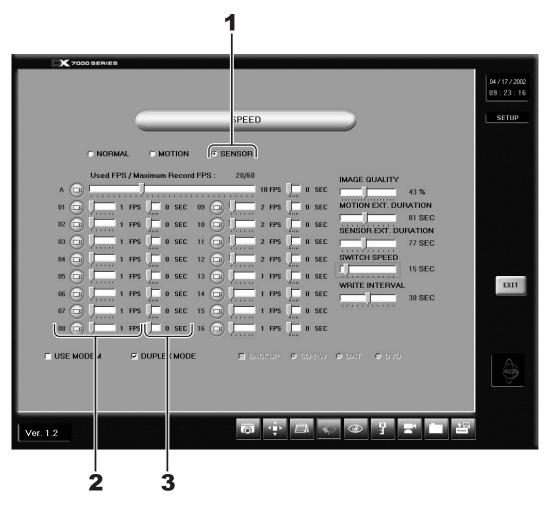


Figure 7. Sensor Speed Menu

- 1 SENSOR Button Select the SENSOR button to open sensor speed menu. Use this menu to set the sensor detection and pre-alarm recording speeds.
- 2 Sensor Recording Speed Slider Bar Use the slider bar to set the recording rate for sensor detection. If the camera is already set to record continuously, the sensor recording rate can be set to record at a higher speed. The total available fps for all cameras varies per system mode setup (simplex, duplex, or backup).
- 3 Sensor Pre-Alarm Function Slider Bar You can program the pre-alarm function for sensor recording. When an alarm is triggered, images are recorded for the programmed duration (5 seconds maximum per camera) before the event happened.

# **MOTION DETECTION SETUP**

Motion detection recording saves hard drive space and makes it easier to search and retrieve recorded data. Use the motion detection menu to select the motion detection areas of a scene. See item 5 for details and limitations.

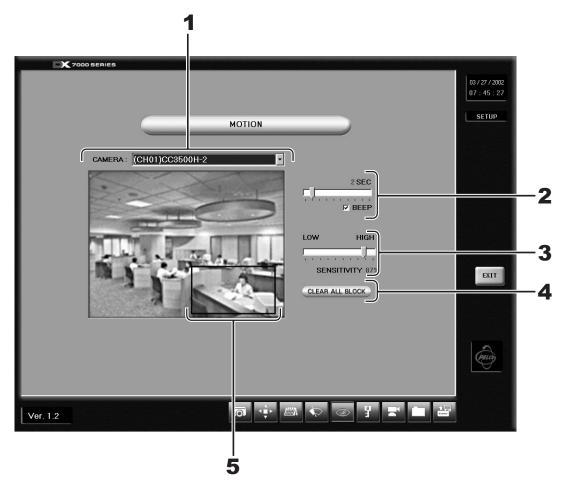


Figure 8. Motion Detection Setup Menu

- 1 CAMERA Selection Box Displays the name of the camera selected for motion detection setup.
- 2 BEEP Selection Box and Slider Bar A global setting that sounds an alarm at the DX7000 server when motion is detected. The alarm can be set to beep for 1 10 seconds. Note: The beep is only heard at the DX7000 server station and not at a remote site.
- 3 SENSITIVITY Slider Bar Adjusts the sensitivity of the detection areas for the selected camera.

- **4** CLEAR ALL BLOCK Button Deletes all motion detection area blocks for the selected camera.
- 5 Camera View A red box indicates an area is set for motion detection. A maximum of 10 detection areas can be set per camera.

## **HOW TO SET UP MOTION DETECTION AREAS**

- a. Select a camera:
  - 1. Click the pull down arrow to the right of the CAMERA window.
  - Select a camera
  - 3. The selected camera appears in the CAMERA window.
- b. Select detection areas:
  - 1. From the camera view window, place the cursor over the area to be selected.
  - 2. Hold down the left mouse button and drag over the detection area.
  - 3. Release the left mouse button to end selection. A maximum of 10 detection areas can be set per camera.
- c. Set the sensitivity of the motion detection area:
  - 1. Place the cursor over the selector of the SENSITIVITY bar.
  - 2. Press and hold down the left mouse button on the selector.
  - 3. Drag the selector over the bar.
  - 4. Release the left mouse button to end selection.

**NOTE:** Pelco recommends setting the sensitivity to 40% for areas with normal movement. If the sensitivity level is set too high, the slightest changes in light level and contrast will trigger motion detection. If the sensitivity is set too low, motion may not be detected.

# PASSWORD SETUP

DX7000 features four levels of password protection to prevent unauthorized changes or use of the system. The following are the four password levels:

Administrator Full rights, able to access and setup all system features.

Search User Has permission to view live video and search recorded video. The user does not have permission to

access any other system features.

PTZ/Backup User Has permission to view live video, use pan, tilt, and zoom controls, and archive files to a backup device.

Use the COPY button located on the DISPLAY mode to backup a file. A file can be archived only if a

backup device and backup software are installed.

Client User Has permission to access the system using the DX7000RX remote site software.

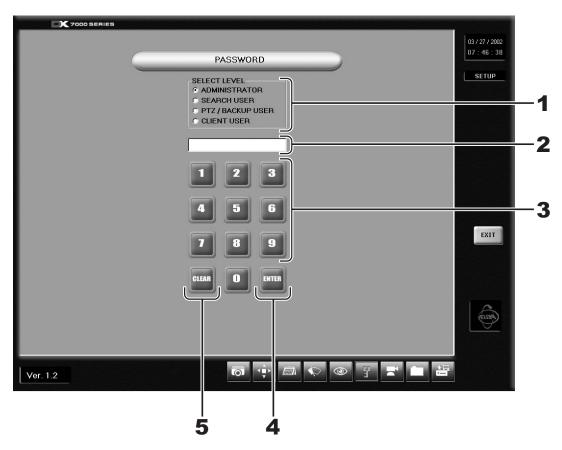


Figure 9. Password Setup Menu

- 1 SELECT LEVEL Use the left mouse button to select a password level.
- 2 INPUT AREA Text Box Password input window.

- **3** Number Buttons Use number buttons to input password.
- **4** ENTER Button Select to apply password to level.
- **5** CLEAR Button Clears password input area.

## To set a password:

- a. Use the left mouse button to select the password level.
- b. Click the number buttons to input a password.
- c. Click ENTER to save the password.

## To clear a password:

- a. Use the left mouse button to select the password level.
- b. Click CLEAR.
- c. Click ENTER.

# PAN AND TILT SETUP

Set the pan and tilt protocol for the DX7000 by scrolling through the selections in the RX TYPE box.



Figure 10. Pan and Tilt Protocol Menu

Do the following to set PTZ protocol:

- a. Click the arrow to the right of the RX TYPE box.
- b. Scroll through the available selections.
- c. Click a selection.

# QUIT TO EXPLORER

The DX7000 uses a Windows-based operating system. To set a network address, add hardware, or change clock settings, click the Quit To Explorer button.

**IMPORTANT:** Consult your network administrator to avoid possible network conflicts and to obtain the information required to setup a network address.

# 岜

# **UPDATE PROGRAM**

To update system software:

- a. Click the Update Program button.
- b. Select the drive and folder with the update software.
- c. Select the update file labeled Setup and then click open.
- d. Follow the instructions that appear on the screen. When update is finished, the system will shutdown and then automatically restart.

# **HOW TO OPERATE PTZ**

To control pan, tilt, and zoom functions and to set patterns, preset tours, and presets, click the PTZ button located in the DISPLAY mode. The PTZ mode appears on the screen. To exit the PTZ mode and return to the DISPLAY mode, click EXIT.

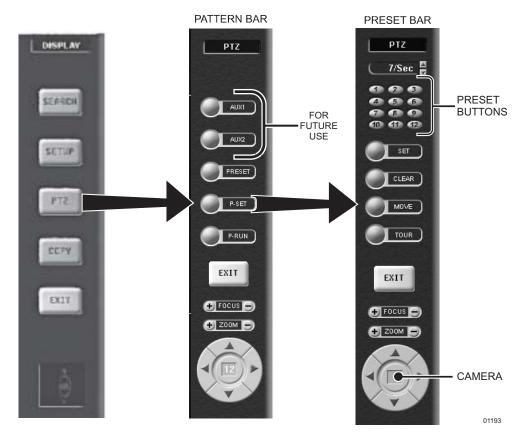


Figure 11. PTZ Menus

# **PTZ CONTROLS**

To operate pan/tilt/zoom functions on controllable systems, do the following:

- a. Select a camera.
  - Move the cursor to a camera screen view. Double-click the left mouse button.
  - A single camera view appears on the screen and the camera number (1 through 16) appears in the center of the pan and tilt control (refer to Figure 12).
- b. Use the left and right arrow buttons to pan left and right.
- c. Use the up and down arrow buttons to tilt up and down.
- d. If required use the FOCUS settings (+/-) to obtain the clearest picture.
- e. Use the ZOOM settings (+/-) to zoom near/far.

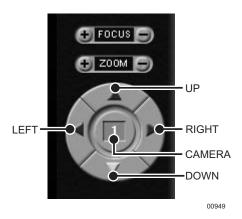


Figure 12. PTZ Controls

## **PATTERNS**

A pattern is a user-defined, viewable camera path with a definite beginning and end. The pattern can consist of any standard pan and tilt or lens commands. Once defined the pattern is easily activated with the press of an on-screen menu button. The pattern will run continuously until it is deactivated with another press of the menu button.

#### **HOW TO PROGRAM A PATTERN**

- a. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- b. Select a camera.
- c. Click P-SET and move the camera through a series of movements using the pan and tilt, zoom, and focus commands.
- d. To stop programming the pattern, click the P-SET button.
- e. To run the pattern, click the P-RUN button. To stop the pattern, click the P-RUN button.

#### **HOW TO CLEAR A PATTERN**

Programming a pattern will replace (clear) the pattern previously programmed.

## **PRESETS**

A preset is a user-defined camera position using pan and tilt, zoom, and focus commands. The DX7000 Series DVR has programming capacity for 12 preset locations.

## **HOW TO PROGRAM A PRESET**

- a. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- b. Click PRESET.
- c. Select a camera by moving the cursor to the desired camera view and clicking the left mouse button.
- d. Move the camera to a desired position.
- e. Click the SET button to turn it ON.
- f. Click a preset button 1-12. To continue setting presets move the camera and click another preset button.
- g. Click the SET button to stop programming preset positions.

**NOTE:** The selected camera is indicated by the number displayed in the center of the PTZ controls.

## **HOW TO MOVE TO A PRESET**

- a. Click MOVE.
- b. Click a preset button 1-12. The camera moves to the programmed preset position.

## **HOW TO CLEAR A PRESET**

- a. Click CLEAR.
- b. Click a preset button 1-12.

# **PRESET TOURS**

A preset tour is a programmed sequential execution of preset positions.

## **HOW TO PROGRAM A PRESET TOUR**

- a. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- b. Click PRESET.
- c. Select a camera by moving the cursor to the desired camera view and clicking the left mouse button.
- d. Click the TOUR button to turn it ON.
- e. Click the SET button to turn it ON.
- f. Click preset buttons in any sequential order to program a tour.
- g. To stop programming the preset tour, click the SET button and then the TOUR button.

## **HOW TO RUN A PRESET TOUR**

- a. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- b. Click PRESET.
- c. Click TOUR.
- d. Click MOVE. The preset tour starts.
- e. To stop the tour click the MOVE and TOUR buttons.

# **HOW TO CLEAR A PRESET TOUR**

- a. Click TOUR.
- b. Click CLEAR. The preset tour is now cleared. A preset tour must be cleared before a new preset tour can be programmed.

To search recorded data on the hard disk drive or secondary device, click the SEARCH button located in the DISPLAY mode. The SEARCH mode appears on the screen. To exit the SEARCH mode and return to the DISPLAY mode, click EXIT.

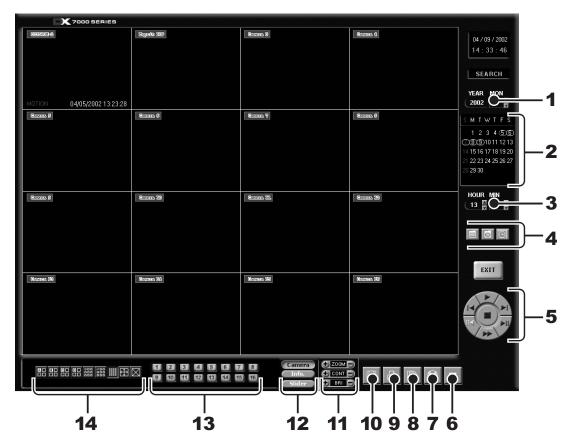
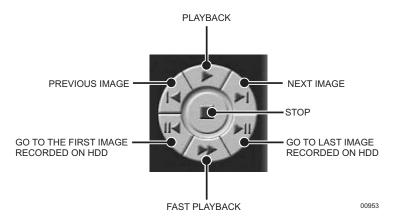


Figure 13. Search Mode

- 1 Year and Month to Search Displays year and month to search.
- 2 Day Search Days with recordings are highlighted with a yellow circle. The day selected is highlighted with a green circle.
- 3 Search Time Select the hour and minute to search.
- 4 Index Search Button Displays search index.
  - Show/Hide Button Shows or hides index.
    - Record Time Background Button— Changes the background color of the recording time. Available settings are blue and clear.

**5** Playback Buttons – Use to search saved data.



- **6** Eject Button Ejects CD-RW.
- 7 Primary/Secondary Device Button Search button for backup (secondary) storage device. It appears only if CD-RW software and CD-RW drive are installed.
- **8** AVI Button Creates and saves an AVI file to a backup storage device. To view saved AVI files use a PC Media Player that supports the AVI file format.
- **9** Print Button Prints image.
- **10** FDD Button Saves recorded image to 3.5-inch diskette.
- 11 Zoom/Contrast/Brightness Buttons Adjusts levels for recorded image. (Use with single display playback only.)
- **12** Camera Button Displays camera enable/selection buttons.

Info Button – Displays the amount of data on the selected drive.

Slider Button – Highlights recordings on display bars.

- **13** Camera Buttons Select cameras to view.
- **14** Screen Division Buttons Select single-camera or multiple-camera views.

NOTE: When in Search mode, select Ctrl V to view software version and build date.

Refer to the following page for instructions on how to use the Search Control mode.

# **DATE/TIME SEARCH**

- **a** Press the Camera button.
- **b** Use the arrow buttons to select the year and date to search.
- Select the day to search. Days with recordings are highlighted with a yellow circle. The selected day is highlighted with a green circle.
- **d** Use the arrow buttons to select the hour and minute to search.
- **e** Use the playback buttons to review a recording.



Figure 14. Date/Time Search

# **SLIDER SEARCH**

- a Press the Slider button.
- **b** Select a camera: Use the arrow buttons to the right of the Camera bars to select a camera. Recordings are highlighted with a green bar.
- **c** Select the hour to search. Recordings are highlighted with a blue bar.



# **INDEX SEARCH**

- a Click the INDEX SEARCH button.
- **b** The Index Data List appears.

Select the event type (motion or sensor) to search.

Enter the START TIME and END TIME of search.

Click the Camera button.

Select a camera to view.

Depending on the amount of data it may take several minutes before an Index List is displayed. Double-click on one of the data files to display the recording.

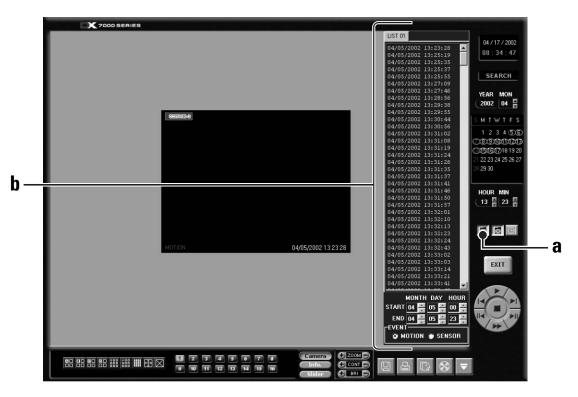


Figure 16. Index Search

# **HOW TO COPY TO A BACKUP DEVICE**

To backup data to an external device, click the COPY button located in the DISPLAY mode.

**NOTE:** The COPY button appears only if a backup device is installed and BACKUP mode, located in the SPEED SETUP menu, is selected.

## **INITIATE DX7000 COPY BUTTON**

**IMPORTANT:** The copy button will not appear in the Display mode if the following procedures are not completed.

- a. Install the backup device and software. Refer to the manual supplied with the backup device for installation instructions.
- b. From the DISPLAY mode of the DX7000, click the SETUP button. The SETUP mode appears.
- c. Click the SPEED button. The SPEED SETUP window appears.
  - Check the Backup box.
  - Check the CD-RW, DAT, or DVD box.

## **BACKUP WINDOW**

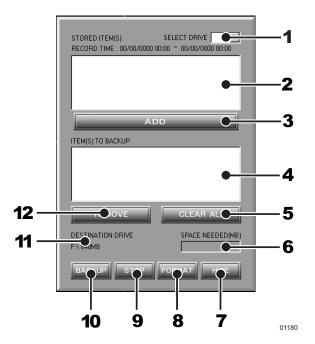


Figure 17. Backup (COPY) Window

- 1 SELECT DRIVE Box Lists drives with files available for backup.
- 2 STORED ITEMS Box Lists all files stored in the selected drive.
- **3** ADD Button Adds stored files to ITEMS TO BACKUP box.
- 4 ITEMS TO BACKUP Box Lists files selected for backup.
- **5** CLEAR ALL Button Clears all files in the ITEMS TO BACKUP box.
- **6** SPACE NEEDED Bndicator Shows the amount of space required to backup selected files.
- **7** HIDE Button Closes the backup window.
- **8** FORMAT Button Use only to format a CD/RW only after the disk has been previously formatted.
- 9 STOP Button If the backup process to the CD/RW has been initiated, the STOP button will end the copying session.
- **10** BACKUP Button Starts to backup (copy) the files in the ITEMS TO BACKUP box to the CD-RW disc.
- 11 DESTINATION DRIVE Identifies the CD-RW drive and its available storage capacity.
- **12** REMOVE Button Deletes selected file/files from the ITEMS TO BACKUP box.

## **HOW TO BACKUP (COPY) TO THE CD-RW DRIVE**

a. From the DISPLAY mode of the DX7000, click the COPY button. The SETUP mode appears.

**NOTE:** If the COPY button is not available, it has not been initiated. Refer to the *Initiate DX7000 Copy Button* section of this manual.

- b. Click the COPY button. The backup window appears.
- c. Select a drive from the SELECT DRIVE box. After several minutes a list of files will appear in the STORED ITEM(S) box.
- d. Use the left mouse button to select file/files to backup. Click the ADD button. The selected files appear in the ITEM(S) TO BACKUP box.
- e. To finish the backup process click the BACKUP button. An HDD indicator located at the bottom right-hand corner of the screen, labeled BACKUP, signifies that the files are being written to the CD-RW drive (refer to Figure 17).
- f. To exit the backup window, select the HIDE button.



Figure 18. Storage Indicator Is Now Labeled BACKUP

## **REMOTE SITE SOFTWARE**

#### **DESCRIPTION**

Free remote site software is included with the DX7000 to provide remote site viewing of live and recorded video. The software is compatible with Windows 98, Windows 2000, Windows XP, and Windows NT 4.0 Service Pack 6.

### **INSTALLATION**

To install the remote users software:

- a. Start Windows 98, Windows 2000, Windows XP, or Windows NT 4.0 Service Pack 6.
- b. Close all programs, including any anti-virus programs.
- c. Insert the Remote Users Software CD into the CD-ROM drive.
- d. The Windows Setup wizard starts. Follow the instructions that appear.
- e. The DX7000 Series software installation program appears.
  - 1. If required, install Microsoft Direct X.
  - 2. Install the Remote Client program.
  - 3. Restart the computer.

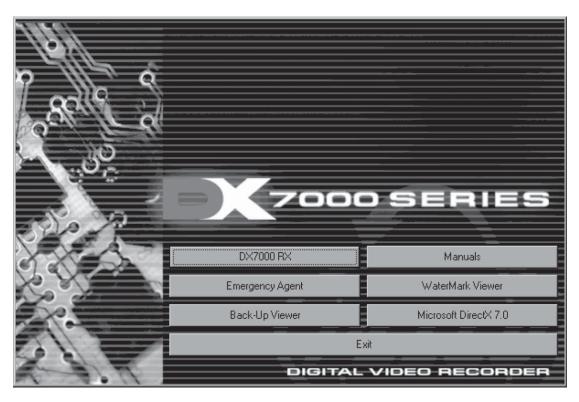


Figure 19. DX7000 Series Remote User Software Installation Menu

#### **IMPORTANT**:

#### **Minimum PC Requirements for Remote Site Software:**

Pentium® III processor, 700 MHz; 128 MB of memory; 1024 x 768 minimum display setup; 32-bit color display; 32 MB video card. (Do not change screen resolution when program is running.)

#### **Recommended VGA Cards:**

ATI RAGE 128, ATI RAGE 128Pro, NVIDIA RIVA TNT2 Model 64, NVIDIA RIVA TNT2 Model 64 Pro, NVIDIA GE Force2 MX400, Savage4, or Savage4 Pro. All cards should have a minimum of 16 MB of video RAM.

## **REMOTE SOFTWARE REGISTERED SITE SETUP**

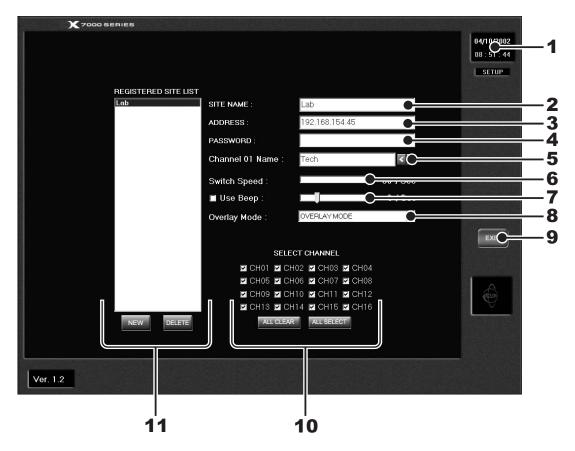


Figure 20. Setup Screen

- 1 Date and Time Indicator Displays current date and time on the local machine.
- 2 SITE NAME Box Enters the name of the site.
- **3** ADDRESS Box Inputs the IP address or phone number of site.
- **4** PASSWORD Box Use only if the DX7000 registered site is CLIENT USER password-protected. The password must be the same as the registered site password for CLIENT USER.
- **5** CHANNEL NAME Box Defaults to the server camera name. To rename camera for remote site, type the new name in the box.
- **6** SWITCH SPEED (Sequencing speed) Box Set the sequencing time between cameras for the remote site.

- **7** USE BEEP Selection Box and Slider Bar Beeps when Motion is detected.
- 8 OVERLAY MODE Box Select NON-OVERLAY MODE if your PC video card does not support multi-layering.
- **9** EXIT Button Exits setup screen.
- 10 SELECT CHANNEL Selection Boxes and Buttons Selects cameras to view.
- 11 REGISTERED SITE LIST Box and Buttons Creates a new registered site or deletes a registered site from the list.

#### **HOW TO SET UP A REGISTERED SITE**

- Start Windows.
- b. Click the icon for the DX7000 Remote Client Software.
- c. Click the SETUP button.
- d. At the bottom of the REGISTERED SITE LIST, click NEW.
- e. Input the site name, IP address or phone number, and client password.
- f. Check the desired cameras to be displayed.
- g. Click the EXIT button to finish setup.

**NOTE:** Windows NT does not support overlay mode.

### **HOW TO CONNECT TO A REMOTE SITE**

- a. Select the site name by scrolling through the site selection window.
- b. Click on the site name.
- c. Click the CONNECT button.

It is not necessary to use the screen division buttons located in the lower left corner of the screen to change the camera view. You can use the left and right mouse buttons to view a single camera instantly or remove the menu bars from the display.

# **REMOTE SOFTWARE OPERATION**



Figure 21. Online Mode

- **1** Date and Time Indicator Displays current date and time.
- **2** SEARCH Button Plays back and searches recordings by date and time.
- **3** PTZ Control Button Controls pan, tilt, and zoom functions.
- 4 CONNECT/DISCONNECT Button Connects to the domain site or disconnects from the domain site.
- **5** AVI Button Creates and saves an AVI file to the C: drive or a backup storage device. To view saved AVI files use a PC Media Player that supports the AVI file format.

- **6** RELAY OUTPUT Buttons Turn relays connected to DX7000 DVR ON/OFF.
- 7 DOMAIN/IP ADDRESS Text Box Displays address of domain site.
- 8 SITE NAME Text Box Displays name of domain site.
- **9** Screen Division Buttons



Quad display, cameras 1-4

\* Bisplays cameras 10-16
Not available in non-overlay mode

Quad display, cameras 5-8

\* Displays all 16 cameras
Not available in non-overlay mode

Quad display, cameras 9-12
Not available in non-overlay mode

Sequencing mode — Sequence using a single-, four-, or nine-camera display.

Quad display, cameras 13-16
Not available in non-overlay mode

Full-screen display – Removes menu bars from display. Click the right mouse button to return to previous screen display.

**NOTE:** You can also use the left and right mouse buttons to change the screen division.

Single Camera Display Using the Mouse — Move the cursor to a camera view, and click the left mouse button. A green rectangle appears around the selected view. Click the left mouse button again to display a single camera view of the selected camera. To return to the previous screen display, click of the left mouse button again.

Full-Screen Display Using the Mouse – Click the right mouse button anywhere on a camera scene to remove the menu bars from the display. Click the right mouse button again to return to the previous screen display.

<sup>\*</sup> Settings are not available with DX7008 models.

# **REMOTE SOFTWARE PTZ CONTROL MODE**

To operate pan/tilt/zoom functions on controllable systems, do the following:

- Select a camera.
  - Move the cursor to a camera screen view and double-click the left mouse button.
  - A single camera view appears on the screen and the camera number (1 through 16) appears in the center of the pan and tilt control (refer to Figure 21).
- b. Use the **◄** ▶ buttons to pan left and right.
- c. Use the ▲▼ buttons to tilt up and down.
- d. If required use the FOCUS settings (+/-) to obtain the clearest picture.
- e. Use the ZOOM settings (+/-) to zoom near/far.

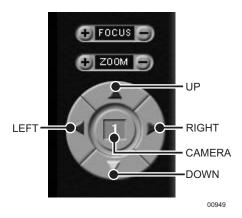


Figure 22. PTZ Controls

### **PATTERN**

A pattern is a user-defined, viewable camera path with a definite beginning and end. The pattern can consist of any standard pan and tilt or lens commands. Once defined the pattern is easily activated with the press of an on-screen menu button. The pattern will run continuously until it is deactivated with another press of the menu button.

#### **HOW TO PROGRAM A PATTERN**

- a. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- b. Select a camera.
- c. Click P-SET and move the camera through a series of movements using the pan and tilt, zoom, and focus commands.
- d. To stop programming the pattern, click the P-SET button.
- e. To run the pattern, click the P-RUN button. To stop the pattern, click the P-RUN button.

## **PRESETS**

A preset is a user-defined camera position using pan and tilt, zoom, and focus commands. The DX7000 Series DVR has programming capacity for 12 preset locations.

**NOTE:** The selected camera is indicated by the number displayed in the center of the PTZ controls. Refer to Figure 22.

### **HOW TO MOVE TO A PRESET**

- a. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- b. Click PRESET.
- c. Click the MOVE button.
- d. Click a preset button 1-12. The camera moves to the programmed preset position.

NOTE: The remote site software can run only presets and preset tours. Presets can be programmed only with the DX7000 DVR.

## **PRESET TOURS**

A preset tour is a programmed sequential execution of preset positions from the DX7000 DVR.

### **HOW TO RUN A PRESET TOUR**

- a. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- b. Click PRESET.
- c. Click the TOUR button. The preset tour starts.
- d. To stop the tour click the TOUR button.

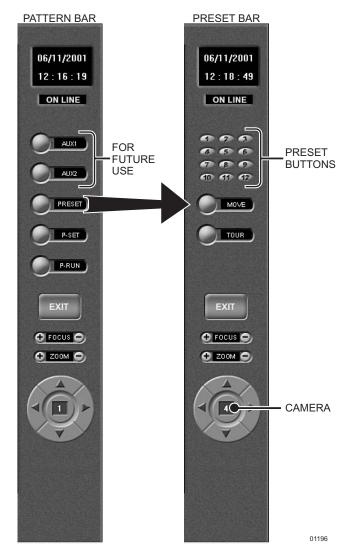


Figure 23. Pattern and Preset Bars

# **REMOTE SOFTWARE SEARCH MODE**

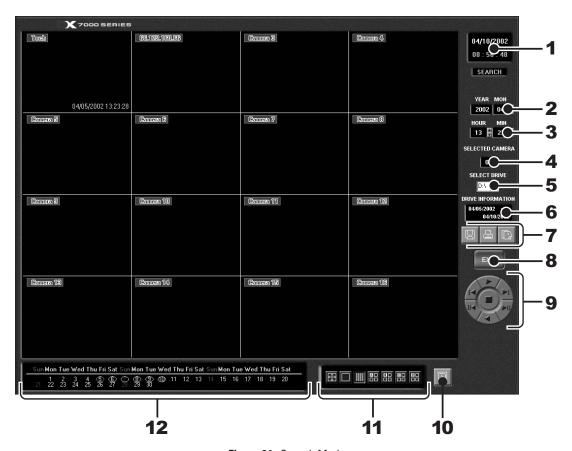


Figure 24. Search Mode

- **1** Date and Time Indicator Displays current date and time.
- **2** Search Date Selection Boxes Selects month and year to search video.
- **3** Search Time Selection Boxes Selects the time (hour and minute) to search video.
- 4 Selected Camera Selection Box Reviews video of selected camera.
- 5 Select Drive Selection Box
- 6 Drive Information Box

- 7 Copy and Print Buttons Saves a recorded image to a diskette, prints an image, or creates and saves an AVI file to a backup storage device.
- **8** EXIT Button Exits search screen.
- **9** Playback Control Buttons
- **10** Use this button if the time stamp is not visible. The background color of the recording time will change. Available background settings are blue and clear.
- **11** Screen Division Buttons
- **12** Calendar Dates with a yellow circle indicate that video was recorded on that day. The day selected is highlighted with a green circle.

**NOTE:** When in Search mode, select Ctrl V to view software version and build date.

## **SELECT DATE AND TIME**

- a. Enter the year and month in the SEARCH DATE selection boxes. Click the up or down arrow buttons to make a selection.
- b. Enter the hour and minute in the SEARCH DATE selection boxes. Click the arrow buttons up or down to make a selection.
- c. Select drive.
- d. Select the date from the calendar. Dates with recordings are highlighted with a yellow circle. Click a highlighted date.
- e. Use the playback buttons to review a recording.

# **EMERGENCY AGENT SOFTWARE**



Figure 25. Emergency Agent Window

Emergency Agent software alerts the remote site client of any triggered alarm at the surveillance site. When an alarm is triggered, a pop-up widow appears on the monitor of the remote site client. The window displays a detailed list (date and time) of all images recorded during the alarmed event.

To view the transmitted images, use the playback buttons located at the bottom of the Emergency Agent software window.

### **HOW TO INSTALL THE EMERGENCY AGENT SOFTWARE**

- a. Start Windows.
- b. Close all programs, including any anti-virus programs.
- c. Insert the Remote Users Software CD into the CD-ROM drive.
- d. The Windows Setup wizard starts. Follow the instructions that appear.
- e. The DX7000 Series software installation program appears. Click the Emergency Agent software button and follow the instructions.
- f. Restart the computer.

**NOTE:** For the Emergency Agent Software to operate, the DX7000 System at the surveillance site must be setup for remote alarm operation. To set up the DX7000 DVR for remote alarm operation, refer to the *Schedule Setup* section.

# **BACKUP VIEWER SOFTWARE**

Use the Backup Viewer software to search images stored on backup media, DAT tape, or DVD disc.

### **HOW TO INSTALL THE BACKUP VIEWER**

- a. Start Windows.
- b. Close all programs, including any anti-virus programs.
- c. Insert the Remote Users Software CD into the CD-ROM drive.
- d. The Windows Setup wizard starts. Follow the instructions that appear.
- e. The DX7000 Series software installation program appears. Click the Backup Viewer software button and follow the instructions.
- f. Restart the computer.

## **BACKUP VIEWER OPERATION**

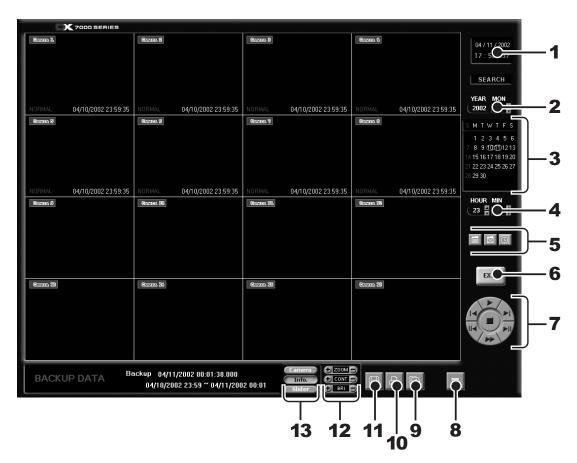


Figure 26. Backup Viewer

- 1 Date and Time Indicator Displays current date and time.
- 2 Year and Month Selection Boxes Displays the year and month to search. Use the up and down arrows to select a date.
- **3** Day Search Selection Box Days with recordings are highlighted with a yellow circle. The day selected is highlighted by a green circle.
- **4** Search Time Selection Boxes Select the hour and minute to search.
- 5 Index Search Button Displays search index.
  - Show/Hide Button Shows or hides index.
  - Record Time Background Button Use this button if the time stamp is not visible. The background color of the recording time will change. Available background settings are blue and clear.

- **6** EXIT Button Exits Backup Viewer.
- 7 Playback Buttons
- **8** Eject Button CDRW eject button. It appears only if DX7000CD is installed.
- **9** AVI Button Creates and saves an AVI file to a selected drive.
- **10** Print Button Prints image.
- **11** FDD Button Saves recorded image to a 3.5-inch diskette.
- 12 Zoom/Contrast/Brightness Buttons Adjust levels for recorded image. Use with single display playback only.
- **13** Camera Button Displays camera enable/selection buttons.

Info Button – Displays the amount of data on the selected drive.

Slider Button — Highlights recordings on display bars.

## **BACKUP VIEWER DATE/TIME SEARCH**

- **a** Press the Camera button.
- **b** Use the arrow buttons to select the year and date to search.
- Select the day to search. Days with recordings are highlighted with a yellow circle. The selected day is highlighted with a green circle.
- **d** Use the arrow buttons to select the hour and minute to search.
- **e** Use the playback buttons to review a recording.



Figure 27. Date/Time Search

### **SLIDER SEARCH**

- a Press the Slider button.
- **b** Select a camera: Use the arrow buttons to the right of the Camera bars to select a camera. Recordings are highlighted with a green bar.
- **c** Select the hour to search. Recordings are highlighted with a blue bar.



Figure 28. Slider Search

### **BACKUP VIEWER INDEX SEARCH**

- a Click the INDEX SEARCH button.
- **b** The Index Data List appears.

Select the event type (motion or sensor) to search.

Enter the START TIME and END TIME of search.

Click the Camera button.

Select a camera to view.

Depending on the amount of data it may take several minutes before an Index List is displayed. Double-click on one of the data files to display the recording.

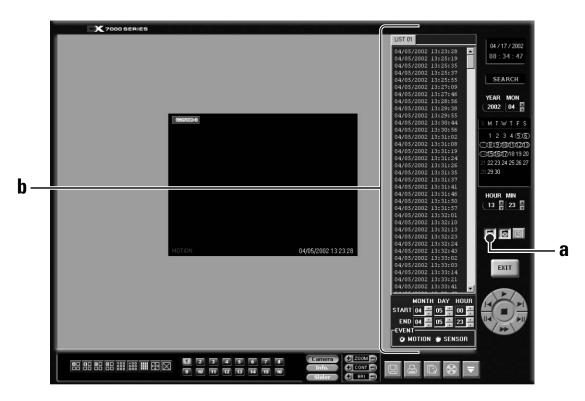


Figure 29. Index Search

## **WATERMARK TOOL**

The Watermark tool allows you to verify if an original image has been altered. The Watermarking Viewer software is available on the Remote Site Software CD. If the image has not been altered the following message will appear in the lower left corner of the window: "The Image has not been altered." Refer to Figure 30.

If the image has been altered a red outline will appear around the image and it will appear distorted. The following message will also appear in the lower left corner of the window: "Image has been altered or has not been watermarked." Refer to Figure 31.

To install the Watermark Viewer:

- a. Start Windows.
- b. Close all programs, including any anti-virus programs.
- c. Insert the Remote Users Software CD into the CD-ROM drive.
- d. The Windows Setup wizard starts. Follow the instructions that appear.
- e. The DX7000 Series software installation program appears. Install the Watermark Viewer software.
- f. Restart the computer.

### WATERMARK TOOL OPERATION

- a. Load the Watermark Tool.
- b. Click the File menu. Select the directory where the JPG or BMP image is located.
- c. Select an image file.

WARNING: Renaming a file could result in the loss of the watermark, making it inadmissible in court.



Figure 30. The Image Has Not Been Altered

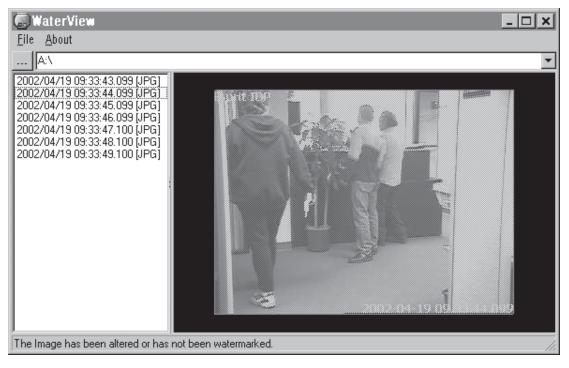


Figure 31. The Image Has Been Altered

## **SPECIFICATIONS**

### **ELECTRICAL/VIDEO**

Input Voltage: 100-240 VAC switchable, 50/60 Hz

Signal System: NTSC/PAL

CPU & RAM

DX7008: Celeron®, 128 MB
DX7016: Pentium® III, 128 MB

Resolution

NTSC: 320 x 240 PAL: 384 x 288 Compression: M-JPEG

Compressed Image Size: 352 x 240; average 6 KB
Video Inputs: 8 or 16, depending on model
Video Outputs: 2 (1 SVGA, 1 analog)

Alarm Inputs: 8
Control Outputs: 8

Remote Control: Full remote control via PSTN, ISDN, TCP/IP

Pan/Tilt/Zoom Control: RS-422 interface to receivers

#### **GENERAL**

Operating Temperature: 41° to 104°F (5° to 40°C).
Relative Humidity: Maximum 80% non-condensing

Dimensions: 7 (H) x 17 (W) x 18 (D) inches (17.78 x 43.18 x 45.72 cm)

Unit Weight (Approximate)

DX7008-030, DX7008-060,

DX7016-060: 37.19 lb (18.87 kg) 39.19 lb (17.78 kg) DX7008-120, DX7016-120: DX7008-180, DX7016-180: 41.19 lb (18.68 kg) 43.19 lb (19.59 kg) DX7008-240, DX7016-240: DX7008-300, DX7016-300: 45.19 lb (20.50 kg) DX7008-360, DX7016-360: 47.19 lb (21.41 kg) DX7008-420, DX7016-420: 49.19 lb (22.31 kg) DX7008-480, DX7016-480: 51.19 lb (23.22 kg)

(Design and product specifications subject to change without notice.)

#### **REGULATORY NOTICES**

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

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

#### **WARRANTY AND RETURN INFORMATION**

#### WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment. Exceptions to this warranty are as noted below:

- Five years on Pelco manufactured cameras (CC3500/CC3600/CC3700 and MC3500/MC3600 Series); two years on all other cameras.
- Three years on Genex® Series (multiplexers, server, and keyboard).
- Two years on cameras and all standard motorized or fixed focal length lenses
- Two years on Legacy®, Camclosure™ Camera Systems, CM6700/CM6800/CM8500/CM9500/ CM9740/CM9760 Matrix, DF5 and DF8 Series Fixed Dome products.
- Two years on Spectra®, Esprit™, and PS20 Scanners, including when used in continuous motion applications.
- Two years on WW5700 series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products, Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

- I. Model and serial number
- Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
- 3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco

#### RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico:

Service Department Pelco 3500 Pelco Way Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico.

 Intermediate Consignee
 Ultimate Consignee

 American Overseas Air Freight
 Pelco

 320 Beach Road
 3500 Pelco Way

 Burlingame, CA 94010
 Clovis, CA 93612-5699

 USA
 USA

#### **REVISION HISTORY**

Manual #	Date	Comments
C665M	4/02	Original version.
C665M-A	5/02	Revised programming instructions.
C665M-B	8/02	Added Regulatory Notices.
C665M-C	5/03	Added instructions for Slider Search

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<sup>®</sup> Pentium and Celeron are registered trademarks of Intel Corporation.



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