



# DX7000 Series Digital Video Recorder

Installation/ Operation Manual

C682M-E (11/01)

Pelco • 3500 Pelco Way • Clovis, CA 93612-5699 USA • www.pelco.com In North America and Canada: Tel (800) 289-9100 • FAX (800) 289-9150 International Customers: Tel +1(559) 292-1981 • FAX +1(559) 348-1120

# CONTENTS

IMPORTANT SAFEGUARDS AND WARNINGS	5
DESCRIPTION	
MODELS	6
	7
TWO-WIRE CONTROL SYSTEM INSTALLATION	
PROGRAMMING	
DISPLAY MODE DX7000 SYSTEM SETUP	
CAMERA SETUP	-
COLOR SETUP	-
SCHEDULE SETUP	
SPEED SETUP	
MOTION DETECTION SETUP	
PASSWORD SETUP	
PAN & TILT SETUP	17
QUIT TO EXPLORER	17
UPDATE PROGRAM	17
OPERATION	
RECORDING STATUS	
HDD STORAGE INDICATOR	
VIEW	
PTZ CONTROL MODE	
PATTERN	
PRESETS	19
PRESET TOURS	20
SEARCH CONTROL MODE	
SELECT DATE AND TIME	
BACKUP TO 3.5-INCH DISKETTE	23
PRINT IMAGE CD-RW SEARCH	
CD-RW SEARCH REMOTE VIEWING	-
	23
REMOTE SITE SOFTWARE	24
DESCRIPTION	24
	~ 4
REGISTERED SITE SETUP	
REGISTERED SITE SETUP	20
OPERATION	
VIEW	
PTZ CONTROL MODE	
PATTERN	29
PRESETS	29
PRESET TOURS	30
SEARCH MODE	
SELECT DATE AND TIME	
EMERGENCY AGENT SOFTWARE	33
BACKUP VIEWER SOFTWARE	34
BACKUP VIEWER OPERATION	35
WATERMARKING TOOL	
WATERMARKING TOOL OPERATION	36

INSTALLING THE DX7000CD (CD-RW Drive)	
LOADING THE DIRECTCD SOFTWARE	
HOW TO OPERATE THE CD-RW	41
INITIATE DX7000 COPY BUTTON	
PREPARING CD-RW MEDIA FOR BACKUP	
INITIAL FORMATTING OF CD-RW MEDIA USING THE DX7000 DVR	42
BACKUP WINDOW	44
HOW TO BACKUP (Copy) TO THE CD-RW DRIVE	
DX7000EM (External Modem)	46
CONNECT THE EXTERNAL MODEM TO THE DX7000	46
LOAD THE DRIVER FOR THE MODEM	
SPECIFICATIONS	50
WARRANTY AND RETURN INFORMATION	52

# LIST OF ILLUSTRATIONS

1	Rear View of Back Panel	.7
2	Two-Wire Control System Installation	. 8
3	PTZ Installation	.8
4	Power Adapter Plug for the RS-422 Converter Multiple	. 8
5	Display Mode	.9
6	Channel Setup Menu	
7	Color Setup Menu	11
8	Schedule Setup Menu	12
9	Speed Setup Menu	14
10	Motion Detection Setup Menu	15
11	Password Setup Menu	16
12	Pan and Tilt Protocol Menu	17
13	PTZ Controls	18
14	PTZ Menus	20
15	Search Control Menu	21
16	Playback Control Buttons	
17	DX7000 Series Remote User Software Installation Menu	24
18	Setup Screen	25
19	Online Mode	26
20	PTZ Controls	28
21	Pattern and Preset Bars	30
22	Search Mode	31
23	Playback Control Buttons	32
24	Emergency Agent Window	33
25	Backup Viewer	35
26	The Image Has Not Been Altered	36
27	The Image Has Been Altered	
28	How to Connect the CD-RW Drive to the DX7000 DVR	
29	Backup (COPY) Window	44
30	Storage Indicator is now Labeled BACKUP	
31	How to Connect the External Modem to the DX7000 DVR	46

## LIST OF TABLES

A Video Coaxial Cable Requirements	7
------------------------------------	---

(This page intentionally left blank.)

# IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

- 1. Installation and servicing should only be done by gualified service personnel and conform to all local codes.
- 2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X ,6 or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
- The installation method and materials should be capable of supporting four times the З weight of the unit and equipment.

The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION:
RISK OF ELECTRIC SHOCK. DO NOT OPEN.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

NOTE: 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.

Connecting Power source to System Using 110V power source. Make sure power select switch set to 115V(110V use)

Using 220V power source Make sure power select switch set to 230V(220V use)

NOTICE: For U.S.A and Canada regions; use only UL listed CSA labeled detachable power cord, 3-conductor, 18 AWG, SVT or SJT type, plug rounding typeparallel blade, cord connector body-IEC 320 style to mate with appliance inlet on product.

To reduce the risk of fire, use only No.26 AWG or larger telecommunications line cord.

**IMPORTANT** The only way to disconnect power completely is to unplug the power cord. Make sure at least one end of the power cord is within easy reach so that you can unplug the computer when you need to.



CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY RE-PLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOM-MENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORD-ING TO THE MANUFACTURER'S INSTRUCTIONS.

ATTENTION: IL Y A DANGER D'EXPLOSION S'IL Y A REMPLACEMENT INCORRECT DE LA BATTERIE. REMPLACER UNIQUEMENT AVEC UNE BATTERIE DU MENE TYPE OU D'UN TYPE RECOMMANDE PAR LE CONSTRUCTEUR. METTRE AU REBUT LES BATTERIES USAGEES CONFORMENENT AUX INSTRUCTIONS DU FABRICANT.

## DESCRIPTION

The DX7000 Series are high-quality digital video recorders (DVR) that combine the functions of a recorder and multiplexer into a product with versatile recording and playback functions. The units are capable of dual operation and can record and play back video at the same time. All models have an input signal of 120/230 VAC and are NTSC/PAL compatible.

## MODELS

DX7008-030	Eight-channel digital video recorder, 30 GB hard drive space
DX7008-060	Eight-channel digital video recorder, 60 GB hard drive space
DX7008-120	Eight-channel digital video recorder, 120 GB hard drive space
DX7008-180	Eight-channel digital video recorder, 180 GB hard drive space
DX7008-240	Eight-channel digital video recorder, 240 GB hard drive space
DX7008-300	Eight-channel digital video recorder, 300 GB hard drive space
DX7008-360	Eight-channel digital video recorder, 360 GB hard drive space
DX7008-420	Eight-channel digital video recorder, 420 GB hard drive space
DX7008-480	Eight-channel digital video recorder, 480 GB hard drive space
DX7016-060	Sixteen-channel digital video recorder, 60 GB hard drive space
DX7016-120	Sixteen-channel digital video recorder, 120 GB hard drive space
DX7016-180	Sixteen-channel digital video recorder, 180 GB hard drive space
DX7016-240	Sixteen-channel digital video recorder, 240 GB hard drive space
DX7016-300	Sixteen-channel digital video recorder, 300 GB hard drive space
DX7016-360	Sixteen-channel digital video recorder, 360 GB hard drive space
DX7016-420	Sixteen-channel digital video recorder, 420 GB hard drive space
DX7016-480	Sixteen-channel digital video recorder, 480 GB hard drive space

The following accessories are supplied with the DX7000 Series DVR:

#### Oty Description

- 1 Keyboard
- 1 Mouse
- 1 RS-422 communication converter, includes power adapter
- 1 9-pin to 25-pin adapter
- 2 Power cables (1 USA standard and 1 European standard)
- 2 Keys for front panel
- 1 Microsoft Windows<sup>®</sup> 98 CD
- 1 DX7000 Remote Site Software CD
- 4 Mounting screws



# INSTALLATION



Place the DVR on any flat surface (desk or table) or install in any standard 19-inch (48.26 cm) wide console or rack configuration.

Camera Inputs – Refer to Table A for video coaxial cable distances.

,	<b>Camera inputs -</b> Refer to Table A for video coaxial cable distances.
	Alarm Inputs
	Analog Monitor Output
)	Relay Outputs
)	PC Monitor Output
)	LAN Port (Internet or TCP/IP)
)	NTSC/PAL Selection Switches – Setting must correspond with the software setup for NTSC/PAL. Refer to Figure 6, item 2.
	Joystick Port (Not used)
	Microphone Jack (Not used)
	Audio IN/OUT (Not used)
	COM 2 Serial Port - Connection for optional external modem.
	Printer Port
	COM 1 Serial Port - RS-422 two-wire control output; refer to Figure 2.
	USB Connection – For optional USB device (CD-RW).
	Keyboard (PS/2)
	Mouse (PS/2)
	AC Power Output
)	115/230 VAC Power Switch
)	AC Power Input

#### Table A. Video Coaxial Cable Requirements

Cable Type*	Maximum Distance
RG59/U	750 ft (229 m)
RG6/U	1,000 ft (305 m)
RG11/U	1,500 ft (457 m)

\* Minimum cable requirements:

75 ohms impedance

All-copper center conductor

All-copper braided shield with 95% braid coverage

**NOTE:** Set the PAL/NTSC Switch to the proper setting for your application. Refer to **7**.

**NOTE:** An UPS (Uninterrupted Power Supply) is not supplied with the DVR. If required, Pelco recommends a device with the following specifications: Capacity – 350 VA, 210 watts Output voltage – 115 V  $\pm$  8% (on battery) Frequency range – 47 Hz to 63 Hz

## **TWO-WIRE CONTROL SYSTEM INSTALLATION**

**NOTE:** The PTZ must be set to accept 'D' protocol control. For information on setting the receiver address for D-type control, refer to the documentation supplied with the PTZ equipment.  Connect the control wires from the receiver to the RS-422 converter. The DX7000 can support up to 16 PTZ devices. To connect more than one PTZ to the system, refer to Figure 3.

<b>RS-422</b> Converter	Receiver
TX+	RX+
TX-	RX-

- 2. Set the DTE/DCE switch located on the bottom of the converter to DCE.
- 3. Plug the RS-422 converter into the 9-pin to 25-pin adapter.
- 4. Plug the pin converter into the COM 1 Port.
- 5. Attach the power adapter to the RS-422 converter.
- 6. Plug power adapter into a power source. The standard European plug is attached to the power adapter. To convert the adapter to the USA standard loosen the Phillips head screw and remove the European plug (refer to Figure 4).













# PROGRAMMING

Turn the system power ON; the Main Screen (DISPLAY mode) appears.



Figure 5. Display Mode

## DISPLAY MODE

1	Date and Time Indicator - Displays current date and time.			
2	SEARCH Button – Plays back and search recordings by date and time.			
3	SETUP Button - Programs camera settings, customize a recording schedule, set			
_	up multiple password levels, and establish pan and tilt protocol.			
4	<b>PTZ Control Button –</b> Controls pan, tilt, and zoom functions. Sets patterns, tours, and presets.			
6	Copy Button (Backup) - Only appears if CD-RW software and CD-RW drive are			
	installed.			
6	Exit – Closes DX7000 program.			
1	HDD Storage Indicator – Displays percentage of used hard disk storage space.			
8	Activate Relay - Turns connected relay ON/OFF.			
9	Alarm Status Display - Turns button color yellow when an alarm has been activated.			
Ō	Motion Detection Status – Turns button color blue, indicating motion is detected.			
1	Screen Division			
	Single camera display	300 000 000	Displays cameras 1-9	
	Quad display, cameras 1-4	// 0.0 0.000 0.000	Displays cameras 10-16	
	Quad display, cameras 5-8		Displays all 16 cameras	
	Quad display, cameras 9-12	Ð	Sequencing mode – Sequence us- ing single, four, or nine camera dis- plays.	
	Quad display, cameras 13-16	Ð	Full-screen display – Removes menu bars from display. Click the right mouse button to return to	

previous screen display.

## **DX7000 SYSTEM SETUP**





5

Ø

## **COLOR SETUP**



Figure 7. Color Setup Menu

- **CON –** Adjusts the CONTRAST of the viewed and recorded scene.
- **2 BRI** Adjusts the BRIGHTNESS of the viewed and recorded scene.
- 3 **RED –** Adjusts the RED level of the viewed and recorded scene.
- **GREEN –** Adjusts the GREEN level of the viewed and recorded scene.
  - **BLUE –** Adjusts the BLUE level of the viewed and recorded scene.
- 6 **DEFAULT COLOR –** Return all level settings to their defaults.

**Image Alignment Buttons –** Moves the image up, down, left, and right within a channel frame to align multi-screen images.

If required, adjust the level settings of the picture.

- 1. Select a camera by scrolling through the selections in the CHANNEL box.
- 2. Adjust the viewed image using the level settings.
- 3. Align image in the image frame using the Image Alignment buttons.



Evaluate the flow of motion at the surveillance site before programming a schedule. A recording schedule can consist of one of the following modes and/or a combination of all modes:

NORMAL – Continuous recording 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.

#### Example Schedule 1

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.

- 1. Select GROUP 01 and set START TIME to 8:00 and END TIME to 18:00.
- 2. Check MON, TUE, WED, THU, and FRI in the DAY OF WEEK section.
- 3. Select 01, 02, 03, and 04 in the CAMERA section.
- 4. Select 01, 02, 03, and 04 in MOTION section.
- 5. Select GROUP 02 and set the START TIME to 8:00 and END TIME to 14:00.
- 6. Check SAT in the DAY OF WEEK section.
- 7. Select 01, 02, 03, and 04 in CAMERA section.
- 8. Select 01, 02, 03, and 04 in MOTION section.
- 9. Select GROUP 03 and set END TIME at 8:00.

#### Example Schedule 2

Record continuously all week. When a signal input is received from sensor 1, camera 1 starts recording and relay 1 starts operating. A signal input from sensor 2 starts cameras 2 and 3 recording.

- 1. Select GROUP 01 and set START TIME to 0:00 and END TIME to 0:00.
- 2. Check SUN, MON, TUE, WED, THU, FRI, and SAT in the DAY OF WEEK
- 3. Select 01 in CAMERA and 01 in SENSOR and 01 in RELAY.
- 4. Select GROUP 02 and set START TIME to 0:00 and END TIME to 0:00.
- 5. Check SUN, MON, TUE, WED, THU, FRI, and SAT in the DAY OF WEEK.
- 6. Select 02 and 03 in CAMERA and 02 in SENSOR





## MOTION DETECTION SETUP





## **PASSWORD SETUP**



3. Click the ENTER button to apply the password input.

PAN & TILT SETUP



Figure 12. Pan and Tilt Protocol Menu

Select pan and tilt protocol by scrolling through the selections in the RX TYPE box.



# QUIT TO EXPLORER

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

When exiting Windows Explorer the message "System will be shutdown" appears. **Select** cancel to return to the DX7000 system DISPLAY mode.

Do not press OK. Selecting OK will turn the system off. To start the system:

- 1. Open the front panel of the DVR.
- 2. Press and hold the power switch down until the LED turns green.

### **IMPORTANT**

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



### **UPDATE PROGRAM**

To update system software click the Update Program button and follow the on-screen instructions.

## **OPERATION**

## **RECORDING STATUS**

The colored circle located to the right of the on-screen camera title 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.

## HDD STORAGE INDICATOR

The DX7000 DVR automatically overwrites recorded data when the hard disk drive reaches maximum storage capacity. When the HDD Storage Indicator displays 99%, the disk drive is full. Recording continues by overwriting recorded data stored at the beginning of the HDD.

### VIEW

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 instantly view a single camera or remove the menu bars from the display.

To change screen view:

- 1. Move the cursor to the desired camera view and click with the left mouse button. A single view of the selected camera appears.
- 2. To switch to full screen view (remove menu bars from the display), click the right mouse button on the screen. Click the right mouse button one more time to return to the previous view.
- 3. Click the left mouse button to return to the multiple-screen view.

## PTZ CONTROL MODE

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

- 1. Select a camera.
  - a. Move the cursor to a camera screen view and click the left mouse button.
  - b. 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 13).
- 2. Use the < buttons to pan left and right.
- 3. Use the  $\blacktriangle$  buttons to tilt up and down.
- 4. If required use the FOCUS settings (+/-) to obtain the clearest picture.
- 5. Use the ZOOM settings (+/-) to zoom far/near.



Figure 13. 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

- 1. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- 2. Select a camera.
- 3. Click on P-SET and move the camera through a series of movements using the pan and tilt, zoom, and focus commands.
- 4. To stop programming the pattern, reclick the P-SET button.
- 5. To run the pattern, click the P-RUN button. To stop the pattern, reclick 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.

#### How to Program A Preset

- 1. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- 2. Click the left mouse button on PRESET.
- 3. Select a camera by moving the cursor to the desired camera view and clicking the left mouse button.
- 4. Move the camera to a desired position.
- 3. Click the SET button to turn it ON.
- 5. Click a preset button 1-12. To continue setting presets move the camera and click another preset button.
- 6. 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

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

#### How to Clear a Preset

- 1. Click the CLEAR button.
- 2. 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

- 1. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- 2. Click the left mouse button on PRESET.
- 3. Select a camera by moving the cursor to the desired camera view and clicking the left mouse button.
- 4. Click the TOUR button to turn it ON.
- 3. Click the SET button to turn it ON.
- 5. Click preset buttons in any sequential order to program a tour.
- 6. To stop programming the preset tour, click the SET button and then the TOUR button.

#### How to Run A Preset Tour

- 1. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- 2. Click the left mouse button on PRESET.
- 3. Click the TOUR button.
- 4. Click the MOVE button, the preset tour starts.
- 5. To stop the tour click the MOVE and TOUR buttons.

#### How to Clear a Preset Tour

- 1. Click the TOUR button.
- 2. Click the CLEAR button. The preset tour is now cleared. A preset tour must be cleared before a new preset tour can be programmed.



Figure 14. PTZ Menus

## SEARCH CONTROL MODE



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

## SELECT DATE AND TIME

- 1. Enter the year and month in the SEARCH DATE area of the menu. Click the up or down arrow buttons to make a selection.
- 2. Enter the hour and minute in the SEARCH DATE area of the menu. Click the arrow buttons up or down to make a selection.
- 3. Click the CALENDAR BUTTON.
- 4. The calendar menu appears in the lower left-hand corner of the screen.
- 5. Dates with recordings are highlighted with a yellow circle. Click a highlighted date.
- 6. Use the playback buttons to review a recording. Refer to Figure 16.



Figure 16. Playback Control Buttons

#### **INDEX SEARCH**

- 1. Click the CAMERA SELECTION button; refer to Figure 15. The camera buttons appear.
- 2. Click the INDEX SEARCH button; the Index Data List appears.
- 3. Select the event type (motion or sensor) to search. The EVENT type is located at the bottom of the Index Data List.
- 4. Enter the START TIME and END TIME of search.
- 5. Click on a CAMERA button to select a camera. Only one camera can be index searched at a time. Depending on the amount of data, it may take several minutes before an Index List is displayed.
- 6. Double click on one of the data files to display the recorded image.

**NOTE:** An Index Data List box can contain 32,000 search results. If the index search results in more than 32,000 results, the system will automatically start writing to the next list box. The DX7000 supports 10 list boxes.

## **BACKUP TO 3.5-INCH DISKETTE**

- 1. Press the CAMERA SELECTION button.
- 2. Disable all cameras in search mode. FDD backup cannot be done when the viewing screen is divided.
- 3 Select one camera.
- 4. Click the FDD button. The BACKUP window appears.
- 5. Select how many images will be saved. The total number of copies is limited to 30 images at one time.
- 6. Select file type (BMP or JPG).
- 7. Click on OK.

## **PRINT IMAGE**

- 1. Press the CAMERA SELECTION button.
- 2. Disable all cameras in search mode. Printing an image cannot be done when the viewing screen is divided.
- 3 Select one camera.
- 4. Click the PRINT button. The PRINT window appears.
- 5. Select how many images will be printed. The total number of images that can be printed at one time is limited to 30 images.
- 6. Click on PRINT.

## **CD-RW SEARCH**

Search button for a backup storage device only appears in the Search Mode if CD-RW software and a CD-RW drive are installed.

- 1. Click the Backup search button.
- 2. Click the CALENDAR BUTTON.
- 3. The BACKUP SEARCH menu appears in the lower left-hand corner of the screen.
- 4. Use the playback buttons to review a recording. Refer to Figure 16.

## **REMOTE VIEWING**

Live and recorded video can be viewed at a remote location using DX7000 Series Remote Site Software. A CD that contains the remote site software is included with the DX7000.

To install and operate the remote site software refer to the *Remote Site Software* section of this manual.

# **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 and Windows 2000.

# INSTALLATION

To install the remote users software:

- 1. Start Windows 98 or Windows 2000.
- 2. Close all programs, including any anti-virus programs.
- 3. Insert the Remote Users Software CD into the CD-ROM drive.
- 4. The Windows 98 Setup wizard starts. Follow the instructions that appear.
- 5. The DX7000 Series software installation program appears.
  - a. Install Microsoft Direct X 7.0.
  - b. Install the Remote Client program.
  - c. Restart the computer.

	700	OSERIES
	DX7000 RX	Manuals
	Emergency Agent	WaterMark Viewer
Re	Back-Up Viewer	Microsoft DirectX 7.0

Figure 17. DX7000 Series Remote User Software Installation Menu

**IMPORTANT:** Screen setup for the Remote User Software:

– 32 bit

– Resolution 1024 x 768

The remote site software may not be compatible with your video card. For best results Pelco recommends the following VGA cards:

- ATI RAGE 128
- ATI RAGE 128Pro
- RIVA TNT2 Model 64/ Model 64 Pro
- GeForce2 MX 400
- S3 PCI Card
- Inter 82815 Graphics
  Controller
- SAVAGE4
- Any video card utilizing the SAVAGE PRO chip set

## **REGISTERED SITE SETUP**



8. Click the EXIT button to finish setup.

# **OPERATION**





- 1. Select the site name by scrolling through the site selection window.
- 2. Enter DOMAIN/IP ADDRESS.
- 3. Click the CONNECT button.

## VIEW

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 instantly view a single camera or remove the menu bars from the display.

To change screen view:

- 1. Move the cursor to the desired camera view and click with the left mouse button. A single view of the selected camera appears.
- 2. To switch to full screen view (remove menu bars from the display), click the right mouse button on the screen. Click the right mouse button one more time to return to the previous view.
- 3. Click the left mouse button to return to the multiple-screen view.

## PTZ CONTROL MODE

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

- 1. Select a camera.
  - a. Move the cursor to a camera screen view and click the left mouse button.
  - b. 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 20).
- 2. Use the  $\triangleleft$  buttons to pan left and right.
- 3. Use the  $\blacktriangle \nabla$  buttons to tilt up and down.
- 4. If required use the FOCUS settings (+/-) to obtain the clearest picture.
- 5. Use the ZOOM settings (+/-) to zoom far/near.



Figure 20. 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

- 1. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- 2. Select a camera.
- 3. Click on P-SET and move the camera through a series of movements using the pan and tilt, zoom, and focus commands.
- 4. To stop programming the pattern, reclick the P-SET button.
- 5. To run the pattern, click the P-RUN button. To stop the pattern, reclick 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.

## How to Move to a Preset

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

## PRESET TOURS

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

## How to Run A Preset Tour

- 1. Click the PTZ button in the DISPLAY Mode. The PTZ Mode appears.
- 2. Click the left mouse button on PRESET.
- 3. Click the TOUR button, the preset tour starts.
- 4. To stop the tour click the TOUR button.



Figure 21. Pattern and Preset Bars

## SEARCH MODE

	7000 SERIES			
620593 2			06/11/2000 12 : 20 : 03 SEARCH	
			VEAR MON 2001 DEC HOUR MR 19 E 27	
GUUSEA B		Constant 6		
			6	
Sun Mor	r tee Wed The FriSat Sum Men Tue Wed The FriSat Sum Men Tu 12 - 2 - 2 - 4 - 5 - 7 - 2 - 3 - 0 - 11 - 12	w Ved Thu Fri Sat 13 14 15 16		
	19 20 21 22 23 24 25 25 27 28 29 20 <sup>(1)</sup> 12 <b>9</b>		00955	
	Fig	ure 22. Search Mode		
1	ate and Time Indicator	- Displays current date and t	me.	
2 Search Date - Selects month and year to search video.				
<b>3</b> s	<b>3</b> Search Time – Selects the time (hour and minute) to search video.			
<b>4</b> s	4 Select Camera – Reviews video of selected camera.			
	<b>Copy and Print Buttons</b> – Saves a recorded image to a diskette, prints an image or creates and saves an AVI file to a backup storage device.			
<b>6</b> E	<b>EXIT –</b> Exits search screen.			
<b>7</b> P	7 Playback Control Buttons – Refer to Figure 23.			
<b>8</b> s	8 Screen Division Buttons			
9 C	alendar – Dates with a yell	ow circle indicate that video w	as recorded on that day.	

## SELECT DATE AND TIME

- 1. Enter the year and month in the SEARCH DATE area of the menu. Click the up or down arrow buttons to make a selection.
- 2. Enter the hour and minute in the SEARCH DATE area of the menu. Click the arrow buttons up or down to make a selection.
- 3. Click the CALENDAR BUTTON.
- 4. The calendar menu appears in the lower left-hand corner of the screen.
- 5. Dates with recordings are highlighted with a yellow circle. Click a highlighted date.
- 6. Use the playback buttons to review a recording. Refer to Figure 23.



## **EMERGENCY AGENT SOFTWARE**

😹 Emergency Agent	×
<u>F</u> ile	
Site	
Received Image	
Channel	
	00950

Figure 24. 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 popup 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.

To install the Emergency Agent software:

- 1. Start Windows 98.
- 2. Close all programs, including any anti-virus programs.
- 3. Insert the Remote Users Software CD into the CD-ROM drive.
- 4. The Windows 98 Setup wizard starts. Follow the instructions that appear.
- 5. The DX7000 Series software installation program appears. Click on the Emergency Agent software button and follow the instructions.
- 6. 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 setup the DX7000 DVR for remote alarm operation, refer to the Schedule Setup section of the DX7000 Series Digital Video Recorder Installation and Operation Manual.

# **BACKUP VIEWER SOFTWARE**

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

To install the Backup Viewer:

- 1. Start Windows 98.
- 2. Close all programs, including any anti-virus programs.
- 3. Insert the Remote Users Software CD into the CD-ROM drive.
- 4. The Windows 98 Setup wizard starts. Follow the instructions that appear.
- 5. The DX7000 Series software installation program appears. Click on the Backup Viewer software button and follow the instructions.
- 6. Restart the computer.

## **BACKUP VIEWER OPERATION**



# 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. To install the Watermark Viewer:

- 1. Start Windows 98.
- 2. Close all programs, including any anti-virus programs.
- 3. Insert the Remote Users Software CD into the CD-ROM drive.
- 4. The Windows 98 Setup wizard starts. Follow the instructions that appear.
- 5. The DX7000 Series software installation program appears. Install the Watermark Viewer software.
- 6. Restart the computer.

## WATERMARK TOOL OPERATION

- 1. Load the Watermark Tool.
- 2. Click the File menu. Select the directory where the JPG or BMP image is located.
- 3. Select an image file.



Figure 26. The Image Has Not Been Altered


Figure 27. The Image Has Been Altered

There are three indications that an image has been altered:

- 1. A red frame around the image.
- 2. The image is shaded.
- 3. The message "Image has been altered or has not been watermarked" appears in the lower left-hand corner of the screen.

# **INSTALLING THE DX7000CD (CD-RW DRIVE)**

1. Connect one end of the USB data cable to the CD-RW drive. Connect the other end of the USB data cable to the USB serial port (1 or 2) located on the back panel of the DX7000 DVR. Do not connect the power supply to the CD-RW drive at this time. Refer to Figure 28. BACK OF CD-RW USB DATA CABLE DO NOT CONNECT POWER TO THE CD-RW DRIVE UNTIL THE DRIVER SOFTWARE DISK HAS BEEN INSTALLED IN THE A:\ DRIVE OF THE DX7000 SYSTEM. BACK OF DX7000 USB DATA CABLE USB SERIAL PORTS 01176 Figure 28. How to Connect the CD-RW Drive to the DX7000 DVR 2. Turn the DX7000 system power ON if it is OFF. From the DISPLAY mode of the DX7000 click the SETUP button. The SETUP mode appears. 3. Click the EXIT TO EXPLORER button. Windows Explorer appears. 4. Open the door to the front panel of the DX7000. Place the Driver Installation Diskette supplied with the CD-RW drive into the floppy disk drive of the DX7000. 5. Connect the power cable to the CD-RW drive. After a few seconds the Add New Hardware Wizard pops-up on the screen with the following message: Add New Hardware Wizard This wizard searches for new drivers for: HP USB CD-Writer Plus A device driver is a software program that makes a hardware device work. Next> Cancel

6. Click Next. The following message appears:

Add New Hardware Wiz	zard
	What do you want Windows to do?  Search for the best driver for your device. Recommended).  Display a list of all the drivers in a specific location, so you can select the driver you want.
	< <u>B</u> ack Next> Cancel
	01182

7. Select Search for the Best Driver for Your Device. Click Next and the following window appears:

Add New Hardware Wiz	fizard Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
	Floppy disk drives
	🗖 CD-ROM drive
	Microsoft Windows Update
	Specify a location:
	C:\ATI\support\WME_R128_4_13_7078\ATIDR
	Browse
	< <u>B</u> ack Next > Cancel

8. Select Floppy Disk Drives and click Next. The following appears:

Add New Hardware Wiz	Add New Hardware Wizard		
Add New Hardware Wiz	Windows driver file search for the device: HP USB CD Writer Plus Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.		
	Location of driver: A:\HPUATA.INF < <u>Back</u> Cancel		

- 01184
- 9. Accept the recommended driver by clicking Next. The following window appears:

		Add New Hardware Wiz	zard
			HP USB CD Writer Plus Windows has finished installing the software that your new hardware device requires.
			K Back Finish Cancel
10.	Click	Finish.	01185

- 11. After installing the driver remove the floppy disk from the A:/ drive. Exit Explorer, and then select OK to shutdown the system.
- 12. Restart the DX7000 system by pushing the ON/OFF switch located on the front panel.

# LOADING THE DirectCD SOFTWARE

- 1. From the DISPLAY mode of the DX7000 click on the SETUP button. The SETUP mode appears.
- 2. Click the EXIT TO EXPLORER button. Windows Explorer appears.
- 3. Insert the hp cd-writer installation software disc 1 into the CD-RW drive.
- 4. Select the CD-RW drive and click Setup. The Start Installation window appears.



- 5. Click Start Installation and follow the instructions that appear on the screen. When the installation is finished, the system will shutdown and then automatically restart.
- 6. Remove the **hp cd-writer installation software disc 1** from the CD-RW drive.

# HOW TO OPERATE THE CD-RW

## **INITIATE DX7000 COPY BUTTON**

- 1. From the DISPLAY mode of the DX7000 click the SETUP button. The SETUP mode appears.
- Click the SPEED button. The SPEED SETUP window appears.
   a. Check the Backup box.
  - b. Check the CD-RW box.
- 3. UPGRADE NOW window appears.

Check the box for **Do not show this dialog again**. Click Cancel.



4. Exit the SETUP mode. The COPY button now appears in the DISPLAY mode.

### PREPARING CD-RW MEDIA FOR BACKUP

**NOTE:** The initial format of a CD-RW disk can take a considerable amount of time, approximately three hours. To speed up the procedure of copying files to a backup device, always have a formatted CD-RW disc readily available.

The Initial Formatting of CD-RW Media Using the DX7000 DVR

The following procedure is recommended for the initial format of a CD-RW disk.

- 1. Insert the CD-RW disc in the CD-RW drive.
- From the DISPLAY mode of the DX7000 click the SETUP button. The SETUP mode appears.
- 3. Click the EXIT TO EXPLORER button. Windows Explorer appears.
- 4. From Explorer open the Program Files folder.
- 5. Open the HP CD-Writer folder.
- 6. Select the Direct CD folder and click the DirectCD icon. The following appears:

Adaptec DirectCD Wizard 3.01d S54		
	Welcome	
	Welcome to the Adaptec DirectCD Wizard! DirectCD allows you to read and write directly to your CD-Recordable/CD-ReWritable disc.	
	This wizard will configure your disc by:	
	<ul> <li>Checking the status of a CD in your drive.</li> <li>Preparing the CD-R/CD-RW disc so you can read and write it.</li> <li>Managing the final data when ejecting a DirectCD disc.</li> </ul>	
6	Once the CD-R/CD-RW disc is configured for DirectCD, you will be able to read from and write to the disc in much the same way you would a floppy diskette. This includes access from Windows Explorer, or any other Windows application such as Microsoft Word.	
<u>H</u> elp	Cancel < Back Next > Einish	

7. Select Next. The following appears:

Adaptec DirectCD Wize	ard 3.01d S54 🔹 🕺 🗙
	Drive Information
ta la	Please select a CD-R/CD-RW drive to continue
197	My Computer  NEW (F:)
	Device: Unlocked
	HP CD-Writer+ 8200f Properties
	Media Status:
6	CD-RW disc with read-only files/folders. This disc can be formatted to DirectCD for read and write access.
<u>H</u> elp	Cancel < <u>B</u> ack <u>Next &gt;</u> Finish
	0120

01207

8. Select the CD-RW drive and click Next. The following appears:

Adaptec DirectCD Wize	ard (Drive F:) 3.01d S54
	Name Your Disc
LAK	Type a name for your disc:
27	NEW (Maximum length: 11 characters)
	Note: This name will help to distinguish between discs in the future to make finding your files easier.
6	Enable compression on this disc.
<u>H</u> elp	Cancel < <u>B</u> ack <u>N</u> ext> <u>Einish</u>
	01209

9. Type the title of the CD-RW in the place provided, and then select Finish. The following dialog box appears.

Adaptec	DirectCD Wizard (Drive F:)
$\bigcirc$	DirectCD Wizard is about to format the CD-RW disc in drive (F:).
Ŷ	It will take approximately 3 minutes for processing, proceed now?
	Cancel
	0121

10. Select OK; fast format is initiated. Approximately three minutes will pass and the following dialog box appears:

🚰 Adaptec DirectCD Wizard (Drive F:) 🔳 🔲 🔀		
Continue preparing disc in the background		
Estimated completion time	: 01:05:06	2
Time elapsed:	00:00:23	
		01206

The dialog box indicates that fast format has been initiated. Although it will still take about three hours to completely format the disc, fast format operates in the back-ground allowing you access to the formatted portion of the disc.

11. Exit Explorer. Select Cancel when the dialog box appears to return to the DX7000 DISPLAY mode.

**NOTE:** You can safely interrupt fast formatting by ejecting the disc. The disc is still readable in other CD-RW drives, but you cannot write data to it until formatting is complete. When you re-insert the disc in a drive using HP fast format, the formatting continues from where it left off.

# **BACKUP WINDOW**



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

1. 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.

- 2. Click the COPY button. The backup window appears.
- 3. Select a drive from the SELECT DRIVE box. After several minutes a list of files will appear in the STORED ITEM(S) box.
- 4. Use the left mouse button and select file/files to backup. Click the ADD button, the selected files appear in the ITEM(S) TO BACKUP box.
- 5. To finish the backup process click the BACKUP button. The HDD indicator located at the bottom right-hand corner of the screen is now labeled BACKUP, signifying that the files are being written to the CD-RW drive (refer to Figure 30).

Minten 2		17200. A 🧶		097107200 09:07:57
				DISPLAY
	Backup Status			SEARCH
	Destination File : F:\_	nde_\0624civ nde_\0627ua2 42115		SETUP
Broom B	ITEM(S) TO BACKUP D: 08/13/2001 03:	42 - 08/13/2001 03:43		PTZ
	REMOVE	CLEAR ALL SPACE NEEDED(MB)		EXIT
	F\\433MB	48		
Motion			Relay 1 2 5 4	
Motion	1234	Alarm 1 2 3 4 Input 5 6 7 8	Relay 1 2 3 4 Output 5 6 7 8	Backup
	STORAGE INDI	CATOR IS NOW L	ABELED BACKU	<sub>JP</sub> _

6. To exit the backup window, select the HIDE button.

01179

Figure 30. Storage Indicator is now Labeled BACKUP

# **DX7000EM (External Modem)**

# CONNECT THE EXTERNAL MODEM TO THE DX7000

- 1. Connect the 25-pin end of the RS-232 cable (supplied with the modem) to the serial port located on the back panel of the modem.
- 2. Connect other end of the RS-232 cable to the COM 2 serial port located on the back panel of the DX7000.
- 3. Connect one end of the supplied telephone cable to the modem port labeled JACK.
- 4. Connect the other end of the cable to the telephone wall jack.
- 5. Set the modem DIP switches 3 and 8 to the ON position.
- 6. Connect one end of the supplied power adapter to the modem and the other end to a standard AC power outlet.





# LOAD THE DRIVER FOR THE MODEM

- 1. From the DISPLAY mode of the DX7000, click the EXIT button. A dialog box appears. Select Yes. The DX7000 shuts off.
- 2. Turn ON the modem and restart the DX7000 system by pushing the ON/OFF switch located on the front panel.
- 3. The DX7000 detects the new hardware. After a few seconds the Add New Hardware Wizard pops-up on the screen with the following message:



4. Click Next and the following appears:



5. Select Search for the Best Driver for Your Device. Click Next, the following appears:



6. Type C:\Windows\System in the space provided. Click Next, the following appears:

Add New Hardware Wiz	zard
	Windows driver file search for the device: Standard Modem Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue. Location of driver: C:WINDOWSVINF\MDMGEN.INF
	< <u>B</u> ack Next> Cancel
	01190

7. Accept the recommended driver by clicking Next. The following window appears:

Add New Hardware Wiz	zard
	Standard Modem Windows has finished installing the software that your new hardware device requires.
	< Back Finish Cancel
	01191

- 8. Click Finish, the DX7000's DISPLAY mode appears.
- 9. From the DISPLAY mode of the DX7000 click the SETUP button. The SETUP mode appears.
- 10. Click the SPEED button. The SPEED SETUP window appears.
  - a. Check the Use Modem box.b. Check the Duplex box.
- 11. Exit SETUP to return to the DISPLAY mode.

# **SPECIFICATIONS**

# ELECTRICAL/VIDEO

100-240 VAC switchable, 50/60 Hz
NTSC/PAL
Celeron, 128 MB Pentium <sup>®</sup> III, 128 MB
320 x 240 384 x 288
M-JPEG
52 x 240; average 6KB
8 or 16, depending on model
2 (1 SVGA, 1 analog)
8
8
Full remote control via PSTN, ISDN, TCP/IP
RS-422 interface to receivers
41° to 104°F (5° to 40°C).
Maximum 80% non-condensing
7 (H) x 17 (W) x 18 (D) inches (17.78 x 43.18 x 45.72 cm)
37.19 lb (18.87 kg) 39.19 lb (17.78 kg) 41.19 lb (18.68 kg) 43.19.lb (19.59 kg) 45.19 lb (20.50 kg) 47.19 lb (21.41 kg) 49.19 lb (22.31 kg) 51.19 lb (23.22 kg)

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


### **PRODUCT 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 FT/FR8000 Series fiber optic products.
- Three years on Genex<sup>®</sup> Series products (multiplexers, server, and keyboard).
- Three years on Camclosure<sup>®</sup> and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- · Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit<sup>®</sup> and WW5700 Series window wiper (excluding wiper blades).
- · Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura<sup>™</sup> Series distributed network-based video products.
- · 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:

1. Model and serial number

- 2. 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, send goods to: Service Department

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

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco 3500 Pelco Way Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to: Pelco c/o Expeditors 473 Eccles Avenue South San Francisco, CA 94080 USA Phone: 650-737-1700 Fax: 650-737-0933

### **REVISION HISTORY**

Manual #	Date	Comments
C682M	4/01	Original version.
C682M-A	5/01	Added GUI software changes to manual.
C682M-B	6/01	Added PTZ control functions.
C682M-C	7/01	Added GUI software changes to manual. Added instructions for Remote Site Software.
C682M-D	10/01	Added installation instruction for the DX7000CD and the DX7000EM.
C682M-E	11/01	Added information on Overlay Mode.

® Pelco, the Pelco logo, Spectra, Genex, and Legacy are registered trademarks of Pelco.
 ™ Esprit and Camclosure are trademarks of Pelco.
 ® Windows is a registered trademark of Microsoft.

® Pentium is a registered trademark of Intel.

™ DirectCD is a trademark of Adaptec, Inc.

© Copyright 2001, Pelco All rights reserved.