GE
Security

TruVision DVR 10 User Manual



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Chapter 1
Product introduction

Product overview

This is the *TruVision DVR 10 User Manual* for models:

- TVR-1004-250
- TVR-1004-500
- TVR-1004-1T

The TruVision DVR 10 (TVR 10) is a network digital video recorder developed for digital surveillance. The TVR 10 uses an embedded microcontroller unit with the Linux operating system, combining the most advanced technology in video and audio encoding/decoding, hard drive recording, and TCP/IP communication. The TVR 10's firmware is stored directly into the memory, making it more stable and reliable.

The TVR 10 includes the features of both a digital video recorder (DVR) and digital video server (DVS). The device can be used as a standalone system or to build a surveillance network such as those widely used in the retail, education, banking, telecommunications, transportation, manufacturing, warehouse, and irrigation industries.

Features

This section describes the available TruVision DVR 10 features.

Compression

The TVR 10 supports the following video features:

- H.264 video compression algorithm and each channel can be CIF real-time (PAL: 25FPS, NTSC: 30FPS), 4CIF, DCIF, 2CIF, QCIF
- Multiple area motion detection
- Privacy masking
- Tampering alarm view
- Video signal loss alarm
- Changeable OSD position
- Both variable and constant bit rate
- Dual-stream, and the substream can support CIF/QCIF resolution

Storage

The TVR 10 supports the following storage features:

- One SATA interface and HDD up to 1 TB memory
- HDD S.M.A.R.T. technology
- FAT32 file system
- Multiple record modes: schedule record, motion detection record, external alarm record, motion and alarm record, motion or alarm record, manual record
- Overwrite and nonoverwrite record mode
- USB flash drive, USB hard drive, and USB CD-RW/DVD-RW to backup

Preview and playback

The TVR 10 supports the following preview and playback features:

- One main composite video output (for monitor A) and an additional composite video output (for monitor B)
- One VGA output with 1024 x 768 resolution

  Note: VGA has precedence over the main composite video output and both cannot be used at the same time.
- Play forward, backward, pause, frame-by-frame, etc.
- User-defined preview layout
- One playback channel

Network

The TVR 10 supports the following network features:

- TCP, UDP, Multicast, DHCP, etc.

- RTP
- ADSL (PPPoE) dialup function
- Programming and setup through browser interface
- Remote download and playback the recorded files
- Remote upgrade of TVR 10 firmware
- PTZ control using Web browser
- IE for network control
- Remote access to log file

Other features

The TVR 10 supports the following additional features:

- Bidirectional audio
- Watermarks
- Local and remote PTZ control
- Multilevel user management
- Local and remote log searching function

Chapter 2
Installation

Installation environment

When installing your product, consider these factors:

- Ventilation
- Temperature
- Moisture
- Chassis load

Ventilation: Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Ensure that the location planned for the installation of the unit is well ventilated.

Temperature: Consider the TVR 10's operating temperature (14 to 122°F, –10 to 50°C) and noncondensing humidity specifications (10 to 90%) before choosing an installation location. Extremes of heat or cold beyond the specified operating temperature limits may reduce the life expectancy of the TVR 10. Do not install the TVR 10 on top of other hot equipment. Leave 1.75 in. (44 mm) of space between rack mounted TVR 10 units.

Moisture: Do not use the unit near water. Moisture can damage the internal components. To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

Chassis: Equipment weighing less than 35 lb. (15.9 kg) may be placed on top of the TVR 10.

Unpacking the TVR 10 and its accessories

When you receive the product, check the package and contents for damage, and verify that all items are included. There is an item list included in the package. If any of the items are damaged or missing, please contact your local supplier.

Items shipped with the product include:

- IR (infrared) remote control
- Two AAA batteries for the remote control
- USB mouse
- Power supply
- AC power cord
- *TruVision DVR 10 Quick Start Guide*
- *TruVision DVR 10 User Manual* (on CD)

HDD capacity

Storage capacity for the TruVision DVR 10 varies depending on the model. Refer to Table 1 below for more information.

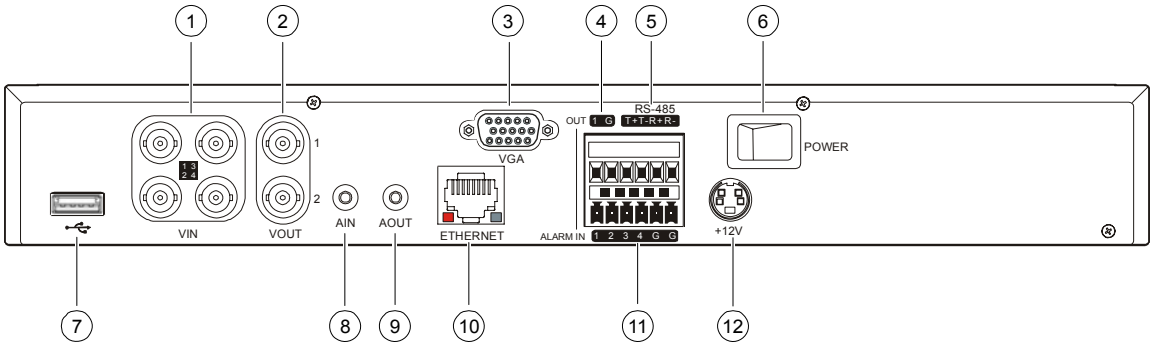
Table 1: TruVision DVR 10 model types

Model number	Description
TVR-1004-250	TruVision DVR Model 10, 4 ch, 250 GB
TVR-1004-500	TruVision DVR Model 10, 4 ch, 500 GB
TVR-1004-1T	TruVision DVR Model 10, 4 ch, 1 TB

Back panel overview

Figure 1 below shows the back panel controls and connectors on a typical TruVision series network digital video recorder. Details may vary for specific models.

Figure 1: Back panel

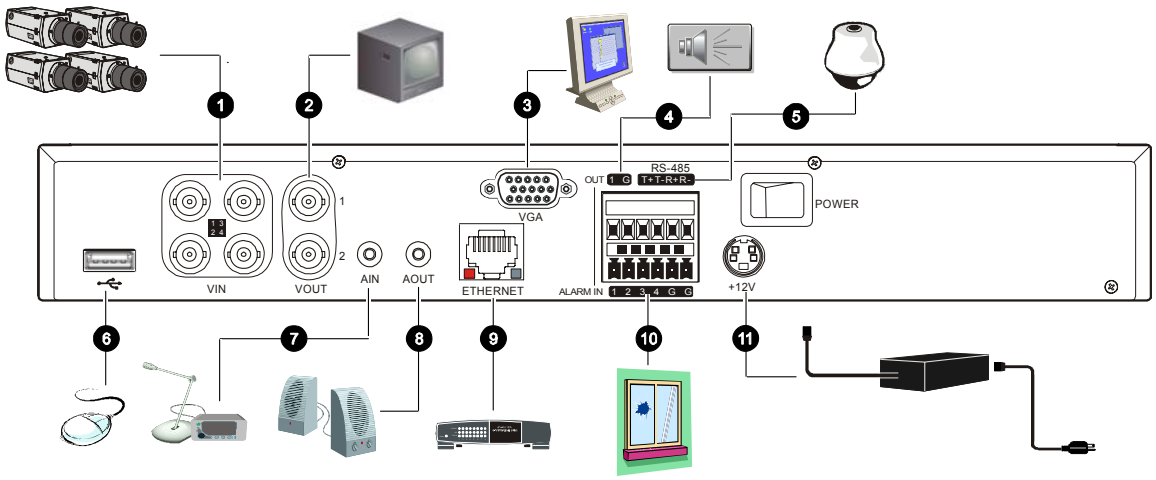


1. Video in
2. Video out
3. VGA interface
4. Alarm out
5. RS-485 T+ T− R+ R−
6. Power switch
7. USB interface
8. Audio in
9. Audio out
10. Ethernet port
11. Alarm in
12. +12 VDC power supply input

Connection diagram

Use Figure 2 below as a visual guide to connect the various peripherals to the TVR 10.

Figure 2: Rear panel connection diagram



1. Connect up to four cameras
2. Connect up to two CCTV monitors (one for main, two for spot)
3. Connect to a VGA monitor
4. Alarm output
5. Connect to a PTZ control
6. Connect to a USB mouse
7. Connect to audio input
8. Connect to speakers
9. Connect to network devices
10. Connect to alarm input cables
11. Connect to the power supply

Chapter 3
Operating instructions

Control interfaces

The TVR 10 has three control interfaces:

- Built-in interface
- Display interface
- Web browser interface

Built-in interface. The built-in interface is displayed on the VBA monitor. It consists of a main menu and several dialog screens that let you configure and control the device. You can invoke the built-in interface using the front panel, remote control, or mouse.

Display interface. The display interface consists of various toolboxes that appear on top of the VBA monitor image. These let you control live or playback video while in PTZ or playback mode. You can invoke the display interface from the built-in interface screens or from the mouse menu. The controls in any toolbox can be operated using the front panel, remote control, and mouse.

Web browser. The Web browser interface uses Internet Explorer to simulate the display and control functions of the VGA monitor on a remote PC. The Web browser interface can only be invoked by a PC with Internet access.

Controlling the TVR 10

You can control the TVR 10 using:

- Front panel control
- IR remote control
- Mouse control

Front panel control. Use the directional arrow buttons to select a command, option, or button on a screen. Use the ENTER button to confirm a selection.

IR remote control. Use the directional arrow buttons to select a command, option, or button on a screen. Use the OK button to confirm a selection.

Mouse. Move the pointer to a command, option, or button on a screen. Click (with the left mouse button) to confirm a selection.

You can use your preferred control method for any procedure, but in most cases we describe procedures using mouse terminology. Optional control methods are given only when they differ substantially from mouse control methods.

Front panel overview

The buttons on the front panel control all DVR functions. The LED indicators light up or flash to alert you of various conditions. See Table 2 below for more information.

Figure 3: Front panel introduction

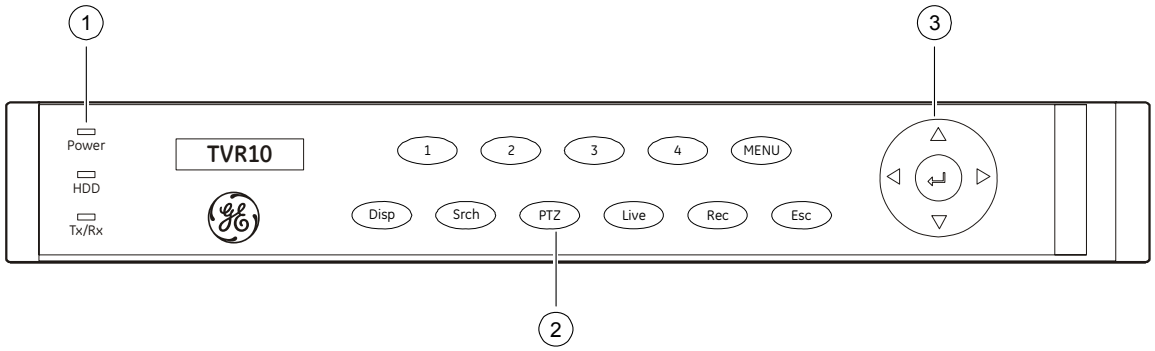


Table 2: Front panel legend

Item	Type	Name	Description
1	Status LEDs	Power	Green indicates the DVR is working. No light indicates the DVR is powered off.

Item	Type	Name	Description
		HDD	Blinking red indicates that video is being recorded. Solid red indicates that the hard drive has an error.
		Tx/Rx	Solid green indicates that the DVR is being accessed by Internet Explorer or Client Software. Blinking green indicates that data is being transferred between the DVR and Internet Explorer or Client Software.
2	Numeric buttons	1 to 4	Enter numbers from 1 to 4.
		MENU	Switches out of display mode to display the main menu.
	Function buttons	ESC	Cancels the current changes and returns to the previous screen or main menu.
		SRCH	Displays the Search screen to search for and play back recorded video.
		REC	Displays the Manual Record screen and options.
		PTZ	Enters PTZ control mode.
		DISP	Multiple screens display. Switch from the main menu to live mode.
		LIVE	Displays Camera 1 in live mode.
3	Directional controls	↑, ↓, ←, → (arrow buttons)	In menu mode, use the Left or Right Arrow buttons to select and the Up or Down Arrow buttons to edit. PTZ direction control. Playback speed control.
		ENTER (central button)	Confirms menu selections. Enters ✓ or × to enable or disable options. Pauses playback.

Using the mouse

Use the USB mouse provided with the TVR 10 to carry out the same operations as the front panel and remote control. The USB mouse lets you navigate and make changes to settings in the user interface.

Connect the mouse to the TVR 10 by plugging the mouse USB connector into the USB port on the back panel. The mouse is immediately operational. You can replace the standard mouse with a wireless mouse. However, the unit may not support all types of wireless mouse.

To use the mouse in live view:

1. Scroll forward and backward between cameras.

   When in full-screen view, use the scroll button on the mouse to scroll forward and backward through the cameras.

2. Double-click to toggle between full-screen and multiview.

   When in multiview, double-click a camera to display its image in full-screen view. Double-click again to return to multiview.

Mouse shortcut menu

To display the mouse control menu, right-click while in live view. The commands on this shortcut menu are shown in Figure 4 below. Table 3 below describes the commands.

Figure 4: Mouse shortcut menu



Table 3: Mouse shortcut menu commands

Command	Description
Main Menu	Displays the main menu.
Camera	Selects an individual camera.
Multi-screen	Selects multiview. The multiview options vary based on the number of cameras connected to the TVR 10. You can choose either a four-screen or single screen display.

Command	Description
PTZ Control	Controls a PTZ camera. Right-click to view the following options: Channel: Selects the camera to control Preset: Selects a preset number to use Exit: Returns to display mode
Search	Displays the Play Back screen. Lets you search for recordings using specific criteria such as by camera, type of event, time, and text. Right-click to return to display mode.
Manual Record	Displays the Manual Record screen.
Open/Close Status	Toggles the on-screen status bar on and off.
Spot Channel	Controls the spot monitor.

Using the IR remote control

Use the IR remote control to carry out functions similar to the front panel buttons.

Figure 5: Controls on the IR remote

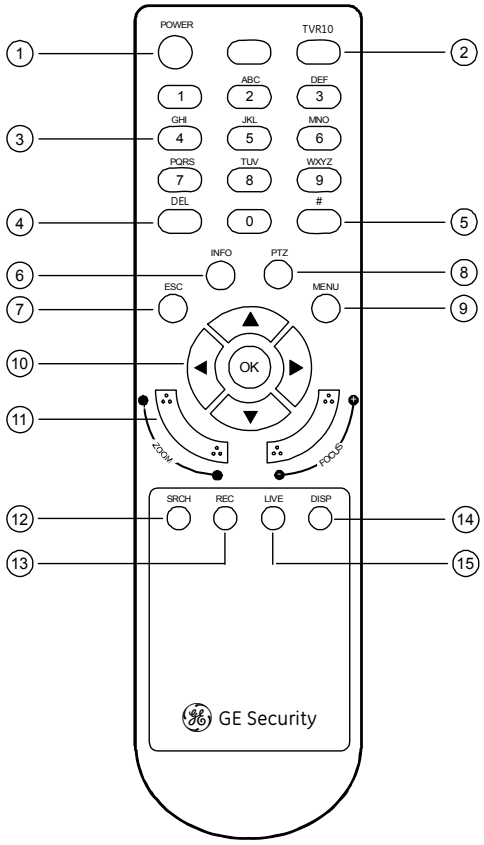


Table 4: IR remote control legend

Item	Name	Description
1	POWER	Turns off the device.
2	TVR 10	Enables the IR remote control to control the TVR 10.
3	Numeric buttons	Enter numbers, lower case or upper case letters, and symbols in edit mode.
4	DEL	Deletes an entry in edit mode.
5	#	Toggles between video inputs or video channels.
6	INFO	Reserved for future use.
7	ESC	Cancels and returns to the main menu.
8	PTZ	Enters PTZ control mode.

Item	Name	Description
9	MENU	Switches from live mode to menu mode and displays the main menu.
10	↑, ↓, ←, → (arrow buttons) OK (central button)	In menu mode, the Left or Right Arrow buttons select commands or options; the Up or Down Arrow buttons edit or select values. OK enters the selection or value. PTZ direction control. Playback speed control.
11	Lens control	FOCUS and ZOOM control for camera lens.
12	SRCH	Displays the Search screen to search for and play back recorded video.
13	REC	Displays the Manual Record screen.
14	DISP	Displays multiscreen. Switches to live mode.
15	LIVE	Displays Camera 1 in live mode.

To place batteries into the IR remote control:

1. Remove the battery cover.
2. Insert the batteries. Make sure that the positive (+) and negative (–) poles are correctly placed.
3. Replace the battery cover.

To connect the remote control to the TVR 10:

1. Turn on the TVR 10 and wait for the live video to appear.
2. On the remote control, press and release the Power button. The remote control is now operational.

To turn off the IR remote control:

1. Press the TVR 10 button while the IR remote control is still controlling the TVR 10.

To turn the TVR 10 off with the remote control:

1. Press and hold the POWER button for several seconds. A power off prompt displays.
2. Enter a password, if required.
3. Select Confirm then switch off the manual power located on the back panel.

Troubleshooting the remote control

If the IR remote control is not functioning properly, perform the following tests:

- Check the battery polarity.
- Check the remaining charge in the batteries.
- Check that the IR remote control sensor is not masked.

If the problem still exists, please contact your administrator.

Using the Web browser

The TVR 10 Web browser lets you view, record, and play back videos as well as manage all aspects of the TVR 10 from any PC connected to your network. The browser's easy-to-use controls give you quick access to all TVR 10 functions.

Figure 6: TVR 10 Web browser

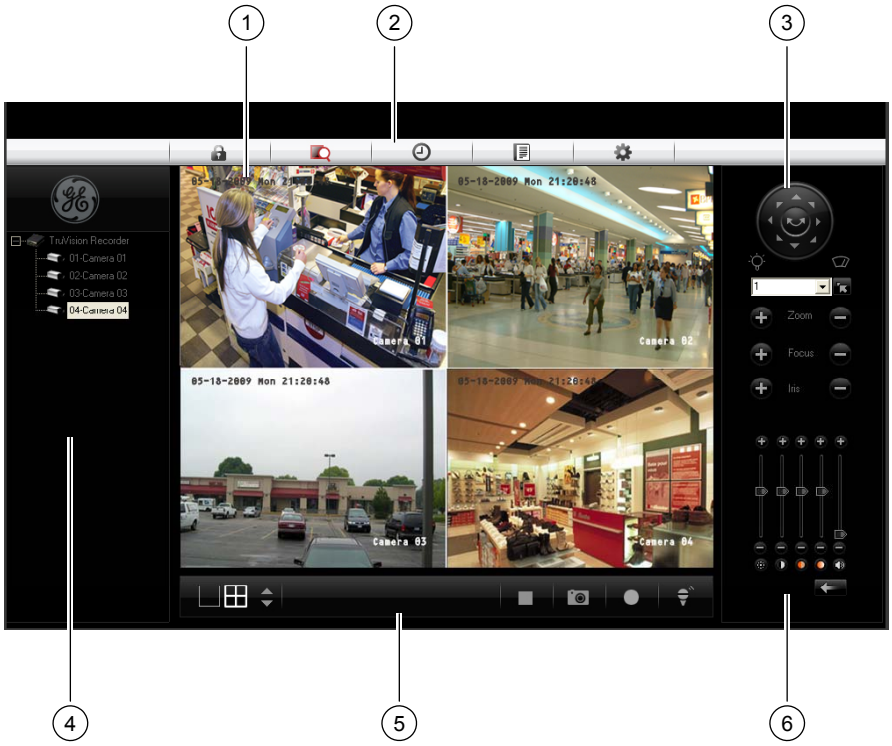


Table 5: Web browser interface layout

Item	Name	Description
1	Viewer	View live or playback video.
2	Navigation bar	Logs you out of the interface. Accesses live or playback video. Displays the TVR 10 logs. Configures the unit remotely.
3	PTZ control	Controls the PTZ functions of camera in live mode.

Item	Name	Description
4	Navigator	View video of the selected camera. Right-click the camera to set the viewing stream type (main stream or sub-stream).
5	Taskbar	Displays single or four-screen views. Selects multiscreen. Captures screen. Archives video. Lets you talk through a microphone to a speaker connected to the TVR 10 (bidirectional audio).
6	Video adjust	Adjusts video image such as brightness, saturation, hue, and audio volume. Restores default settings.

To access the TVR 10, open a Web browser and enter the IP address assigned to the TVR 10 as a Web address. In the login screen, enter the default user ID and password.

User ID: admin
Password: 1234

The Web browser uses the following ports:

Video Port: 8000
HTTP Port: 80

Searching recorded video for playback

To search for recorded video for playback, click the Playback button on the navigation bar. The Search screen displays. Select a play type and a file type in the appropriate boxes and specify a time range. Click the Search button (displayed as a magnifying glass) to start your search.

Search results display below your specified search criteria and are arranged by start time. Double-click a result item to play back video.

Playing back recorded video

Use the playback control bar, shown in Figure 7 below, to control playback video. The playback control bar lets you do the following:

- Control playback speed (fast forward, slow forward, and stop)
- Capture a screen image of the playback video
- Save a video segment onto your desktop
- Download recorded video to your hard drive

Figure 7: Playback control bar



To quickly archive a segment of a video you are playing back, click the Save button to begin archiving and click again to stop archiving. The resulting video file is saved on your desktop.

Click the Download button to download that video file into your hard drive.

Viewing logs

To view logs using the Web browser interface, click the Log button on the navigation bar. The Log screen displays. Use the filter boxes, located on the right of the screen, to narrow the list of logs by defining the event type and date range. Click the Search button (displayed as a magnifying glass) to begin your search.

Use the Save button, located at the bottom right of the screen, to save the log files on your hard drive.

Using the Web browser to configure the device

The Web browser lets you to configure the TVR 10 remotely using your PC. Click the Configure button to display the Remote Configuration screen. This screen lets you configure the server, network, cameras, alarms, and upgrade the firmware.

Setting the stream type

Video stream refers to the flow of network data between the device and the Web browser interface. The higher the stream type specified in the Web browser, the higher the video quality being viewed and recorded. When viewing video in a four-screen layout, data is being transferred into four different streams, which can overload a system with low bandwidth. We strongly recommend that you set your stream type to Sub-stream to avoid overloading your network.

To configure the stream type to sub-stream:

1. Click Configure on the navigation bar to display the Remote Configuration screen.
2. Click the Channel Configuration tab.
3. Select Sub-stream in the Type box.
4. Change the appropriate video quality settings.

   Note: We recommend that you do not change the frame type and iframe.
5. Click Save to save your changes.

Viewing video in sub-stream

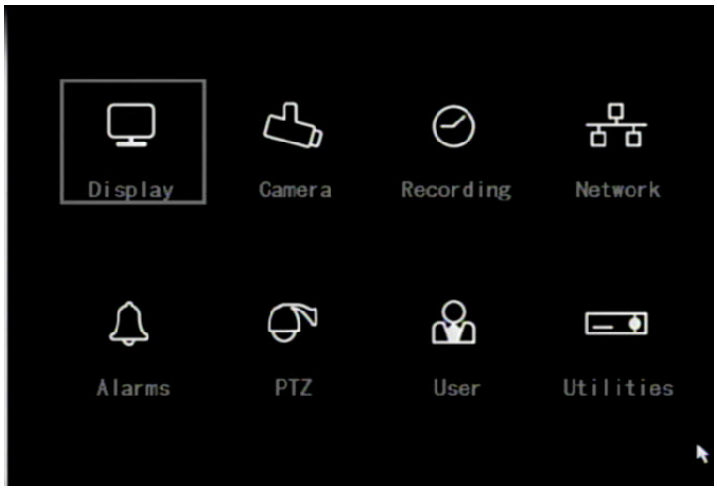
To view video in sub-stream, right-click a camera in the Navigator and select Sub-stream. The camera displays video in sub-stream.

Main menu overview

The built-in interface includes a main menu with eight command buttons. Each command displays a screen that lets you edit a group of TVR 10 settings. The main menu is shown in Figure 8 below. Access to different option screens varies depending on your access privileges. Most screens are available only to system administrators.

The white frame surrounding a command button or option shows that the item is currently selected.

Figure 8: Main menu



Main menu commands options

Table 6 on page 20 provides a list of controls and options available on each screen that you can access from the main menu.

Table 6: Menu commands and screen options

Main menu command	Dialog screen options	Main menu command	Dialog screen options
Display	Device ID Require password Menu timeout Video standard Enable scaler Menu transparency Date and Time Multi-Screen	Camera	Camera Camera title position Adjust video Time and date display Motion detection Advanced settings Copy to camera
Recording	Record mode Camera Stream type Resolution Frame rate Bit rate Record schedule Pre-event time Post-event time Copy to camera	Network	IP address Subnet mask Gateway Port HTTP port Advanced settings PPPoE DDNS
Alarms	Alarm input Input type Alarm handling, policy, and PTZ linkage Alarm rules / PTZ Copy to alarm in Alarm out Duration Alarm out time Copy to alarm out Notifications	PTZ	Camera Baud rate Data bits Stop bits Parity Flow control Protocol PTZ address Preset Preset tour Shadow tour Copy to camera
User	Add/Delete Password/Verify Default privileges Set Privileges	Utilities	System information View log Alarm output Hard disk Firmware upgrade Factory defaults Reboot Power off

Using the main menu

Click a command on the main menu to display the related screen. Alternatively, you can use the Up or Down Arrow buttons to select a menu command or screen option, and then press the ENTER or OK button to confirm the selection.

Table 7 below shows the front panel buttons you can use to display the main menu or various dialog screens.

Table 7: Main menu display

Button	Action
MENU	Display the TVR 10 main menu
SRCH	Display the Play Back screen
REC	Display the Manual Record screen
PTZ	Display the PTZ interface

Note: You must enter a user name and password to display the main menu. The default user name is “admin” with a password of “1234”.

Navigating through dialog screens

Each dialog screen includes various options and buttons as seen in Figure 9 below. The frame surrounding an option or button indicates that this option is currently selected.

Use the mouse to select any option or button on the screen. You can also use the directional arrow buttons (Up, Down, Left, or Right) to navigate through the options. Changes to screen settings can be entered in various ways as shown in Table 8 on page 22.

Figure 9: Camera input adjustment



Table 8: Types of control on the screen

Control	Description
Check box	Provides two values: ✓ indicates enabled and × indicates disabled. You can click the check box or use the ENTER or OK button to switch between values.
List box	Provides more than two values for the option. Only one of them can be selected. Click the scroll arrows at the right-hand side of the box to scroll through the possible values. You can also use the Up or Down Arrow buttons to select a value. For example, the Camera option is a list box that lets you select the camera you want to work with.
Edit box	Lets you enter characters. For more information, see "Using an edit box" below.
Command button	Triggers a special function or lets you display another screen. For example, click the Rules button to display the Rules screen. Click the Confirm button to save your settings and return to the main menu. Click the Cancel button to abandon any changes made on the screen and return to main menu. Command buttons that are unavailable are displayed in gray. They must be enabled before you can click them.

Using an edit box

An edit box lets you type characters to set the value of an option, such as a camera name. You must be in edit mode before you can enter a value.

Note: A full range of alphanumeric characters is only available when using the mouse or remote control.

To enter text in an edit box using the mouse:

1. Click anywhere within the edit box to enter the edit mode and display a virtual keyboard.
2. Click to enter the desired characters into the edit box.
3. When you're finished, click the edit box to accept the value you've entered.

To enter text in an edit box using the remote control:

1. Press OK to enter the edit mode.
2. Press # to select the format and type of character you want to enter.

   While in edit mode, the status bar on the bottom left of the screen displays which type of character will be entered. For example, the figure below indicates that characters will be entered in uppercase.

   Options include number, uppercase, lowercase, or symbols. There are 24 different symbols to select. Press 0 to scroll between four pages of symbols.
3. Enter your characters.

Use the numeric buttons on the remote control to enter characters. Press the numeric buttons repeatedly to cycle through different characters available for that button. The character format and type depends on the value you selected in step 2. Use the Left or Right Arrow buttons to move the cursor within the edit box. Use the DEL button in the remote control to delete the character left of the cursor.

4. Press OK to accept the value you've entered, or ESC to exit from the edit box without saving any changes you've made.

Exiting the main menu

Right-click and then click Camera or Multiview to exit the main menu and return to live mode. Press ESC on the front panel or remote control to exit the main menu and return to live mode.

Chapter 4
Basic operation

Turning on the TVR 10

Before turning the TVR 10 power on, make sure that the power supply matches that of the TVR 10 and the AC adapter is connected correctly. Connect at least one monitor to the video out or the VGA interface. Otherwise, you will not be able to see the user interface and operate the device.

To turn the TVR 10 power on:

1. Connect power supply correctly.
2. Switch on the manual power button on the back panel. Once the TVR 10 is powered, the POWER LED should light up in green.

Live mode

The TVR 10 automatically enters into live mode once powered on. On the display screen, you can see date, time, and camera name. To change the camera name, refer to “Camera name” on page 47. To set system the date and time refer to “System date and time” on page 60.

While in live mode, the TVR 10 also displays the status icon of each camera as shown in Figure 10 on page 26.

Figure 10: Recording status



Camera status

Each icon represents a camera. The icon color shows the camera status. Table 9 below gives the status color code..

Table 9: Camera status

Icon	Color	Status description
	White	No video signal
	Yellow	Standby recording (when recording upon alarm and/or motion)
	Green	Recording
	Blue	Motion detection
	Red	Alarm

Activating/deactivating the on-screen status bar

Mouse	Right-click to open the mouse menu, and then click Status Bar.
Front panel/remote control	Press # to activate or deactivate the status bar.

Cycling through camera views

Right-click and then click Camera or press the numeric buttons to switch to an individual camera display. For example, you can press 2 to view the second camera.

Press DISP to manually toggle through single camera and four-screen views . The single camera display reverts back to camera 1 when switching to single view. You can set the auto live mode on the Display menu.

Viewing in multiscreen

Mouse	Right-click to open the mouse menu, and then click Multi Screen. Select the desired display layout. You can select either a four-screen or single screen view.
Front panel/remote control	Press DISP to switch to multiscreen display viewing.

Connecting the spot monitor

To connect the spot monitor:

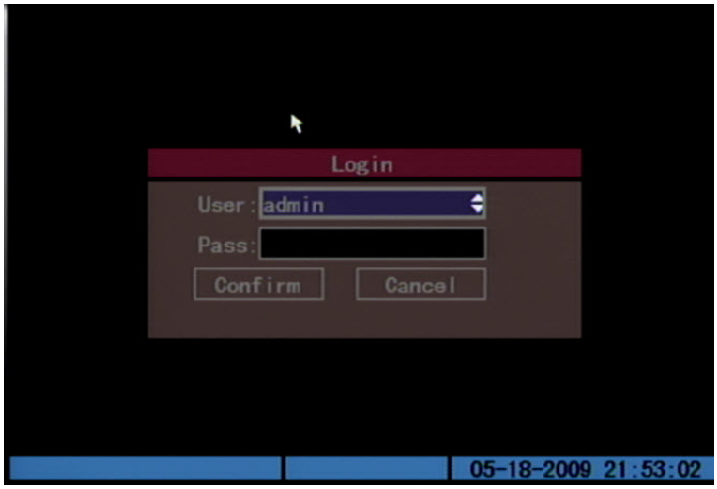
1. Connect Video out 2 with the spot monitor by a cable.
2. While in live mode, right-click and click Spot Channel.
3. You now have access to the secondary monitor.

   Note: Make sure that there is video signal input; otherwise the spot monitor will only show a blue screen.

Logging on

The TVR 10 is shipped with one predefined user for the system administrator. The default system administrator log on uses “admin” as a user name with a password of 1234. You can modify the admin password but not the admin user name. We recommend that you change the admin password once you have completed the installation and setup to protect against unauthorized access. The administrator can create up to 15 users and define their privileges. For more information, see “User settings” on page 41.

Figure 11: Login screen



To log on to the TVR 10 user interface:

1. In the User box, select a user.
2. Enter the corresponding password in the Password edit box.
3. Click Confirm to enter the main menu.

   If there is no response, it means the user name and password are not matched. The TVR 10 will enter the live mode if you enter unmatched logon credentials three times.

Controlling a PTZ camera

The PTZ control interface lets you control the PTZ operation of the cameras within the TVR 10 user interface. You can control PTZ cameras using the buttons on the front panel and IR remote control as well as utilizing the PTZ control icons accessed with the mouse. To display the PTZ control interface, the user must have PTZ control access privileges.

Displaying the PTZ control interface

While in menu mode, right-click and then click PTZ control to display the PTZ control interface directly. Select a user name and type the correct password in the Login screen. The PTZ control interface displays as shown in Figure 12 on page 29. You can adjust the position of the current camera display on the screen.

Figure 12: PTZ control interface



Selecting a camera

When in PTZ control mode, press the numeric buttons to select a camera. For example, press the number 2 button to select the second camera PTZ.

After selecting the camera PTZ, you can use the control buttons to control the PTZ.

PTZ control buttons description

Table 10 below provides descriptions of the PTZ control buttons.

Table 10: PTZ control buttons description

Button	Description
Up, Down, Left, Right Arrow buttons	Pans left and right. Tilts up and down.
ZOOM+, ZOOM-	Zooms in and out.
FOCUS+, FOCUS-	Focuses in and out.
IRIS+, IRIS-	Opens and closes the iris controls.
REC/SHOT	Calls up a preset position. This feature is camera and protocol-specific.
PLAY/AUTO	Calls up auto panning.

Calling up a preset PTZ position

There are several ways to call up a preset position.

Front panel	Press PTZ to enter PTZ mode. Press REC and enter a preprogrammed three-digit preset number. Preset starts immediately. If you enter a one or two-digit number, depending on your TVR 10 model, you will change the selected camera. This function is only available if the mouse is not connected to the TVR 10.
Remote control	Press PTZ to enter PTZ mode. Press SHOT and enter a preprogrammed three-digit preset number. Preset starts immediately. If you enter a one or two-digit number, depending on your TVR 10 model, you will change the selected camera. This function is only available if the mouse is not connected to the TVR 10.
Mouse	Right-click and select PTZ control to enter PTZ mode. Right-click again and select Preset. Select one of the preset numbers listed.

PTZ preset numbers are preprogrammed.

When you exit PTZ control mode, the camera stays at the current position.

Note: The PTZ preset position must already be configured. Refer to “PTZ settings” on page 76 for more information. You can define up to 128 preset positions.

Exiting PTZ control mode

Press ESC or ENTER to exit and return to the live mode.

Manual recording

When a camera is recording, its corresponding LED on the front panel lights up in green. This green LED is also lit when recording manually. Start or stop a camera recording by pressing the REC button and entering the Manual Record menu.

Note: You must have access privileges to enter the Manual Record dialog screen.

Manual Record screen

To enter the Manual Record screen while in live mode, press REC and enter your user name and password if requested.

Figure 13: Manual Record screen



The controls and options available on the Manual Record screen are described in Table 10 below.

Table 11: Manual Record controls and options

Option	Description
Camera	Lists the number of cameras the TVR 10 has.
Status	Camera work status has four values: • Gray indicates the camera is idle. • Green indicates the channel is recording (including real time recording, alarm recording, motion detection recording). • Red indicates network transmission. • Orange indicates both recording and network transmission.
Start/Stop	The checkmark indicates you can start recording on the corresponding channel . The X mark means you can stop recording.
Start All	Starts recording on all channels.
Stop All	Stops recording on all channels.

Manually starting or stopping a recording

This section describes how to manually start or stop a recording.

To manually start or stop a recording:

1. Right-click and then click Manual Record to display the Manual Record screen. Alternatively, press the REC button on the front panel or remote control.
2. Enter your user name and password if requested.

The Manual Record screen displays listing all cameras. The camera status line shows which cameras are currently recording.

3. Click the camera's Start/Stop line to begin the recording. A checkmark appears on that camera's Start/Stop box.
4. Select the next camera you want to start or stop recording. Repeat step 3.
5. To select all cameras for recording, click Start All.

   All camera status LEDs on the front panel and the on-screen camera status icons on the status bar turns green.
6. Click Stop All to stop recording for all cameras.
7. Right-click or press ESC to save changes and return to the live mode.

Playing back video

The TVR 10 lets you play back recorded video. This section describes the features and methods in playing back video.

Play Back screen

The Play back screen lets you search and view recorded video. You must be in live mode to view video. Search for recorded video using different criteria including:

- Motion detection, alarm, or manually recorded files
- Start and end time of recording

Note: You must have access privileges to enter the Play Back screen.

See Table 12 on page 33 for a description of the Play Back screen controls and options.

Figure 14: Play Back screen



Table 12: Play Back controls and options

Option	Description
Cam	Selects a specific camera.
Search for	Specifies a recorded file type. The file type options include: All, All Time, Motion Detect, Alarm, and Manual.
Time	Specifies a start and end date/time to conduct a search based on a recording period.
Search	Begins your search. If there are no files that match your search criteria, a corresponding screen displays.
Play	Plays back the recorded stream directly based on the time section.
Page No.	Selects a page. In the file list box, each page can only display eight files. If more than eight files match, you can select a page to list other files. 500 pages (4,000 files) can be searched at one time. You can use numeric buttons or the Up or Down Arrow buttons to select page.
File list box	Lists the matched files. File started time and size are displayed in the list box. You can use the Up or Down Arrow buttons to move the scroll bar to select a file.
Media	Selects a device (media) to backup your recorded files. You can select USB flash, USB HDD, or USB CD/DVD drive to backup the files or clips.
Archive	Starts backup.
Archive Today	Backs up all recorded files from today.

Searching for a recorded video

Prior to playing back a recorded video, you must first search for the video files you want to play.

To search for recorded video:

1. Right-click and click Search in live mode or press PLAY on the front panel or the remote control.
2. If requested, enter your user name and password. The Play Back screen displays.
3. Select the camera you want to search video from in the Camera list box.
4. Select the file type of recorded video you want in the Search For list box.
5. For recording periods, enter the start and end dates as well as times in the Time edit boxes.
6. Click Search to begin the search.

   A list of files displays once the search is completed. The list may extend to several pages. The files are listed by date, with the most recent file listed first.
7. Right-click or press ESC to quit playback and return to live mode.

Searching for motion detection video

When searching for motion detection video, if you select Always on the Rec Type box in the Recording Schedule screen, you will not receive any motion detection results. To search for motion detection video, select Motion, Motion or Alarm, or Motion and Alarm on the Rec Type box in the Recording Schedule screen. For more information, see “Defining a recording schedule” on page 65.

Playing back a recorded file

Once you have found the video files using the Play Back screen, you can view video in several different ways:

- Click the Play button. The system starts playing each listed file.

  — or —
- Click a video file in the File List box or select the file and press the ENTER button. Only the selected file is played.

While playing back a video, an information bar displays the following information as shown in Figure 15 on page 36:

- Volume
- Play progress
- Play speed
- Played time
- File total time

Table 13: Playback interface options

Option	Description
MENU	Displays or hides the information bar.
PLAY	Turns the sound on or off.
Right or Left Arrow button	Adjusts the play progress by percentage (%).
Up or Down Arrow button	Adjusts the play speed: Normal speed is "1x." Use the Up Arrow button to increase play speed (2X, 4X). Use the Down Arrow button to decrease play speed (1/2X, 1/4X, 1/8X and single)
ENTER	Pauses or continues playback. If playing video in frame by frame, use this option to play one frame.
PTZ	Press once to copy the segment and again to stop. You will need an external backup device to store the segment in.
ESC	Exits the interface.
SRCH	Mutes audio.
REC	Zooms video.

Note: Performance of playback speed may decrease depending on how much information the TVR 10 is processing.

Exiting playback

There are several ways to exit the playback interface depending on the screen or operating mode you want to access afterwards.

ESC	Takes you to live mode
MENU	Takes you to the main menu
REC	Takes you to the Manual Record screen
PTZ	Takes you to PTZ control mode

Playing back video with a mouse

Playing back video with a mouse provides you with an additional playback control bar as shown in Figure 15 on page 36.

Figure 15: Playback control interface



Table 14: Playback control bar description

Control	Name	Description
	Skip reverse/forward	Skips backward or forward 3% each time.
	Fast forward/ Slow forward	Adjusts the play speed: Normal speed is "1x." Use the Up Arrow button to increase play speed (2X, 4X). Use the Down Arrow button to decrease play speed (1/2X, 1/4X, 1/8X and single)
	Pause	Pauses the video.
	Audio	Toggles between mute and sound. Click once to mute the video. Click again to recover the sound.
	Copy	Copies a video segment. Click once to start the copy. Click again to stop.
	Hide Status	Hides the control bar. Right-click your mouse and click display to display the control bar again.
	Search	Triggers a rectangle area on the screen to zoom into. Use the left mouse button to drag a rectangle around the area, and then double-click to zoom into that area. Click again to return to the playback interface.
	Toggle camera	Switches to the next or previous playback cameras. These options are irrelevant if you only recorded using one camera at that time.

Archiving recorded files

Archive recorded files using an external device. You can also archive specific incidents in a file. You must be in live mode to play back a recorded file.

You can insert a mini-USB hub to the USB port to attach a mouse for navigation and a USB drive for archiving. However, the unit may not support all types of USB hubs.

Note: You must have playback privileges to play back recorded files. Avoid moving the external recording device when backing up information onto it.

Archiving the day's recorded files

Use the Archive Today option on the Play Back screen to archive all the day's recordings. A dialog box displays the backup status.

If the external device is not connected correctly or the TVR 10 does not detect the external device, an alert dialog displays. Please alert the administrator if this occurs.

Archiving recorded files from a file list

You can also archive recorded files displayed in the File List box.

To archive files from the File List box:

1. Search for recorded files.

   For more information on searching for recorded files, see "Searching for a recorded video" on page 33.

2. Select the files that you want to back up.

   In the file list box, click the file you want to archive. The checkmark symbol indicates a selected file. Select additional files you want to archive. You can use the Up and Down Arrow buttons to move through the files as shown in the figure below. Press ENTER to select the file you want to archive.



3. Use the Media box to select the backup device you want to use.
4. Click Archive to start the archiving process.

   When the archiving starts, a corresponding message box displays, indicating the status. If the selected files exceed the capacity of your storage device, an error message displays.

Archiving a video segment

While playing back a recorded file, the TVR 10 lets you archive a specific segment of the video you are watching.

To back up image segments during playback:

1. Enter the playback interface by selecting a recorded file. For more information, see “Playing back a recorded file” on page 34.
2. While the video is playing, press PTZ to begin recording the video, and press PTZ again to stop recording. A video segment is created.
3. You can repeat step 2 to create additional segments. You can generate up to 30 additional segments.
4. After all segments have been created, press ESC. A confirmation message window displays. Press Confirm to begin archiving the selected segments. Press Cancel to abort the archive process.

Playing back the archived files

Use the standard file player software to play back the video segment on your PC.

Turning off the TVR 10

To turn off the TVR 10:

1. On the main menu, click Utilities, and then click Power Off.

   — or —

   Press and hold the Power button on the remote control for at least five seconds. Enter a user name and password if required.

2. Wait 10 seconds then turn off the power switch located on the back of the unit.

Chapter 5
Advanced setup

This chapter covers the advanced setup of your TVR 10. Only users with appropriate access privileges can define and modify advanced configurations. When the following settings are modified and saved, you will be prompted to reboot the TVR 10 in order for the new settings to take effect. You do not need to reboot the device for any other configurations.

- Any network configurations
- Resolution and record schedule
- External alarm sensor type
- View tampering alarm schedule
- Video loss alarm schedule
- Motion detection alarm schedule
- External alarm schedule
- Alarm output schedule

User settings

The TVR 10 is shipped with one predefined user for the system administrator. The default system administrator log on uses admin as a user name with a default password of 1234. You can modify the admin password but not the admin user name.

The administrator can create up 15 users and define their privileges. When new users are added to the list, the administrator can define individual passwords or each user can use a default password.

Modifying your password

Passwords limit access to the TVR 10 and the same password can be used by several users. When creating a new user, the default password is 0000. Each standard user can modify his or her own password. However, only an administrator can assign or unassign a password to a user. Specify an admin password of up to four digits, ranging from 1 to 4, to allow you access to the system from the front panel and without using the remote control or mouse.

Note: Keep the admin password in a safe place. If you should forget the password, you must return the unit to a service center to be reconfigured.

To modify your password using the mouse or remote control:

1. Log on to the main menu.
2. Click User to display the User screen.
3. Select the target user name.

   Click on a user or use the Up or Down Arrow buttons to select a user as shown in the figure below. Click the Password edit box to enter into edit mode.



4. Enter the new password.

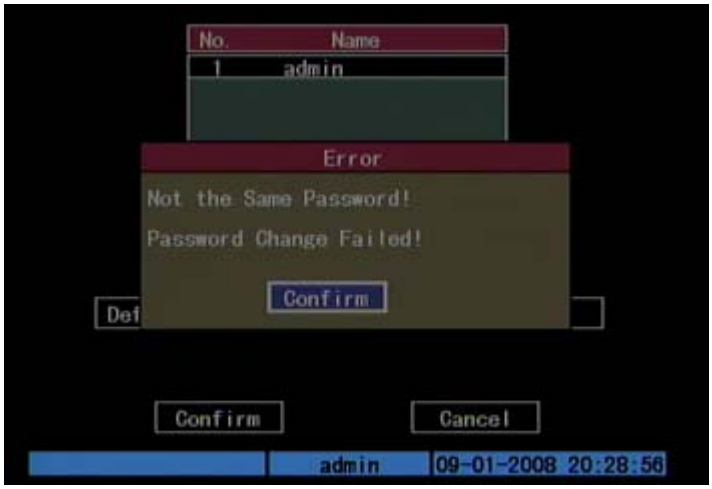
   Use numeric buttons to enter the new password. Passwords can be up to 16 numeric characters. The password edit box can be left blank. This indicates that the selected user does not have a password.

5. Verify the new password.

   Click the Verify edit box, and enter the new password again to verify the change. In the edit box, use the Left or Right Arrow button to move the cursor and press DEL to delete the numeral in front of the cursor.

6. Click Confirm to accept the change and return to the main menu.

If the initial and verify passwords entered are identical, the password is saved and becomes effective immediately. However, if both passwords do not match, a warning message appears as shown in the figure below. Press ENTER to confirm and you are returned to the password edit box to the new password again.

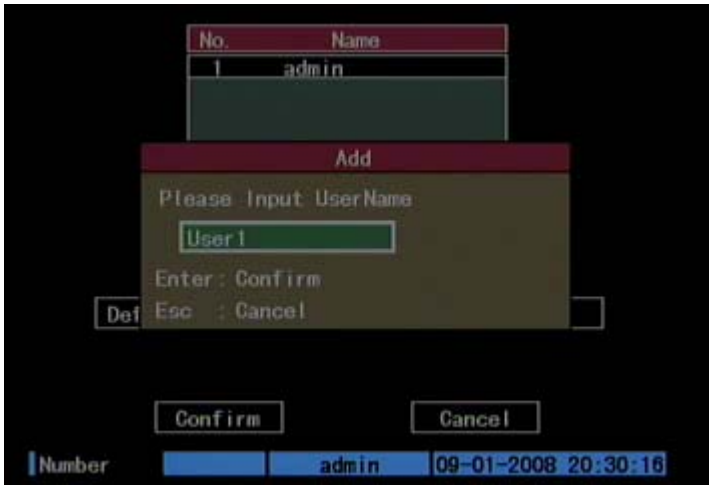


Adding a new user

Only the system administrator can add or delete users. Up to 15 users can be created.

To add a new user:

1. Click User on the main menu to display the User screen.
2. Click Add to display the Add screen as shown in the figure below.



3. Enter a new user name using alphanumeric characters.
4. Click Confirm (or press ENTER) to confirm. The User screen displays with the new user name listed.

After adding a new user, the password field remains blank. You can leave the password field blank, or you can assign the user a password. For more information, see “Modifying your password” on page 42.

Assigning access privileges

All new users must be granted user privileges as privileges are not automatically defined by the system. Users can be given local privileges to do playback, remote playback, and view logs. You can also grant them more extensive privileges that cover both local and remote privileges. For more information, see “Access privileges” on page 45.

To assign access privileges to a user:

1. Click User on the main menu to display the User screen.
2. In the User Box, select a user to whom you want to assign access privileges.
3. Click Default Privileges to assign default privileges to the user. Default privileges include local playback, remote playback, and viewing logs.
4. Click Set Privileges to allocate more detailed access privileges. The Set Privileges screen displays as shown in the figure below.



5. Assign local and/or remote access privileges to the user.

   Check each item to select it. This enables or disables that item. Users can be given both local and remote access privileges. For more information, see “Access privileges” on page 45.

6. Click Confirm to save the changes and return to the main menu.

Access privileges

Access privileges define what areas in the system a user can access. The TVR 10 access privileges are categorized into two different areas: local and remote.

Local

Local privileges are for local operation, such as the operating the unit using the front panel, IR remote control, and RS-485 interface.

Table 15: Local privileges

Option	Description
PTZ control	Locally controls PTZ
Record	Manual starts or stops recording
Set parameters Setup	Locally sets up the TVR 10 parameters
Log	Locally views the log on TVR 10
Utilities	Locally upgrades firmware, formats the HDD, reboots the TVR 10, and shuts down the TVR 10, etc.

Remote

Remote privileges allow users to use the TVR 10 through a network.

Table 16: User privileges for remote operation

Option	Description
PTZ Control	Remote control PTZ
Record	Remote manual start/stop recording
Set parameters Setup	Remote setup the TVR 10 parameters
Log	Remote view the log on TVR 10
Utilities	Remote upgrade firmware, format HDD, reboot TVR 10, and shut down TVR 10, etc.
Talk	Client talks with TVR 10
Alarm	Remote control TVR 10 alarm output
Local Video Out	Remote control TVR 10 video output
Com Control	TVR 10 RS-232

Setting up the MAC address

Setting up a user with a MAC address from the user's computer prohibits access to the TVR 10 from other computers.

To set up a MAC address:

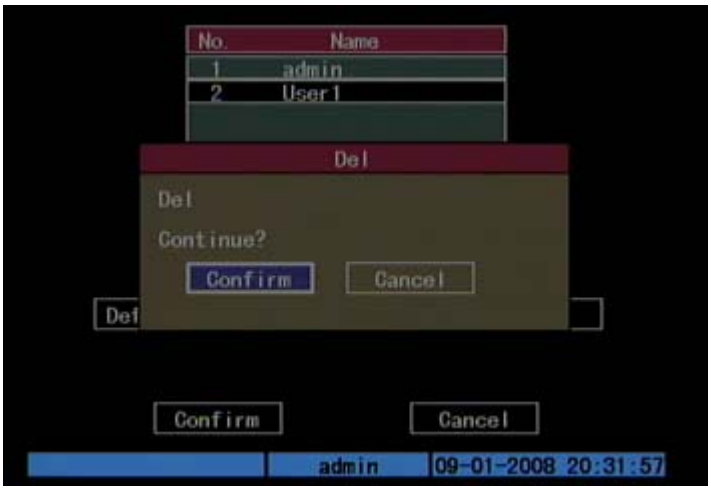
1. At the PC DOS prompt, use the "ipconfig" command to obtain the MAC address of that PC (in 6 bytes).
2. On the TVR 10 User screen, click Set Privileges to display the Set Privileges screen.
3. Click the MAC address edit box. Use the virtual keyboard with the mouse or the number buttons on the IR remote control to enter the MAC address. Press ENTER to accept the entry.
4. Click Confirm to return to the User screen.
5. Click Confirm again to return to the main menu.

Deleting users

Only the system administrator can add or delete users.

To delete a user:

1. On the User screen, select the user you want to delete.
2. Click Del to delete that user. A confirmation dialog displays as shown below.



3. Click Confirm to delete the user and return to the User screen.
4. On the User screen, click Confirm to save the changes and return to the main menu.

Camera settings

This section describes how to change camera settings from the Camera Configuration screen. Camera options that you can configure are listed below. You can change these settings in any order. The options are:

- Name of each camera
- Camera name position on screen
- Camera brightness, contrast, saturation, and hue
- Display properties of each camera
- Area on screen to be masked
- When to view a tamper alarm
- Video loss alarm
- Motion detection alarm

All changes made on the Camera Configuration screen apply only to the selected camera. You can easily copy the camera settings of one camera to another.

Figure 16: Camera configuration screen



Camera name

Each camera can be assigned a camera name which must be unique. If you do not assign a camera name, a default prenumbered camera name is applied.

To change a camera name:

1. Click Camera on the main menu to display the Camera Configuration screen.

2. Select a camera from the Camera box.
3. Enter the new camera name in the Camera Name edit box.

   Click the Camera Name edit box to enter the edit mode. You can enter numerals, uppercase and lowercase letters (see “Using an edit box” on page 22 for more information). The camera name can support 32 characters. Press ENTER to exit the edit mode.
4. Click Confirm to save your changes. Click Cancel or press ESC to abort.

Camera name position

You can position the camera name anywhere on screen. If you do not want to display the camera name, clear the check box next to the Camera Name edit box. You can copy the position settings to any other camera.

To edit a camera’s position:

1. Click Camera on the main menu to display the Camera Configuration screen.
2. Select a camera from the Camera box.
3. Enter the Camera Name Position Setup interface.

   Check the check box on the right side of the camera name, then click Position to enter the Camera Name Position Setup screen.
4. Position the camera name.

   The interface displays a grid with the camera name in the bottom right corner. Drag the camera name or use the directional arrow buttons (Up, Down, Left, or Right) to move the camera name position. When satisfied with the on-screen position, press ENTER to return the Camera Configuration screen.
5. Click Confirm to save the camera position.

On-screen date and time position

In addition to the camera name, the TVR 10 also displays the system date and time on screen. You can modify the on-screen display position (also referred to as OSD) of the system date and time on the Camera Configuration screen.

To position the camera name on screen:

1. Display the Camera Configuration screen and select a camera.
2. Select a display mode for the camera from the Date & Time OSD list box. Display modes include:
   - Solid black

- Solid white
- Not displayed

3. Enter the Date and Time Position Setup interface.

   Click the Date & Time OSD Position button to enter the Date and Time Position Setup interface as shown in the figure below.



4. Position the on-screen date and time.

   The interface displays a grid with the date and time at the top center of the screen. Drag the date and time grid or use the directional arrow buttons (Up, Down, left, or Right) to move the date and time position. When you are satisfied with the on-screen position, press ENTER to return the Camera Configuration screen.

5. Click Confirm to save the camera position.

Adjusting the video image

In order to get the best image quality when capturing video, you may need to adjust the video image settings including brightness, saturation, contrast, and hue. Use the Adjust screen (as shown in Figure 17 on page 50) on the Camera Configuration screen to modify these settings.

You can set up the video adjustments individually, and copy the video adjustments of one camera to another.

Figure 17: Adjust video screen



To adjust the video image:

1. Display the Camera Configuration screen and select a camera.
2. Click the Adjust Video Setup button to display the Adjust Video screen.
3. Make the appropriate video image adjustments.

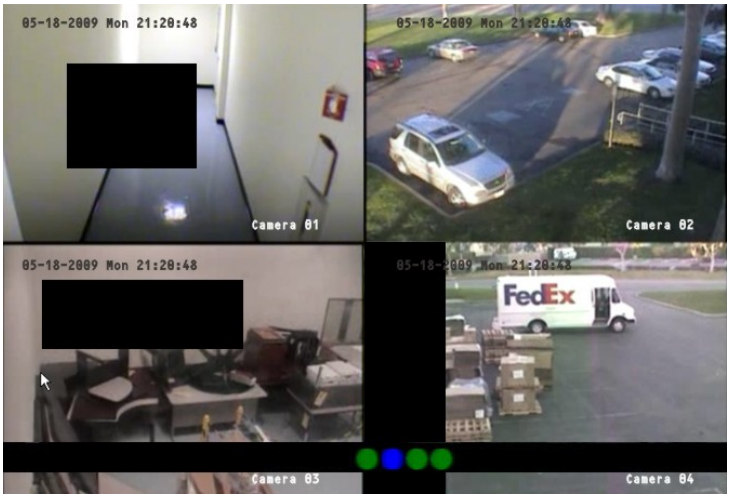
   You can adjust the video image's brightness, contrast, hue, and saturation by clicking the corresponding Adjust button. Click the corresponding Adjust button to display the Adjust screen. The screen displays the camera view with a scroll bar at the bottom of the screen. Use the scroll mouse button or the Up or Down Arrow buttons in the interface to make your adjustments. As you make your adjustments, the camera view displays the corresponding adjustment.
4. When satisfied, click anywhere in the screen to return to the Adjust Video screen.
5. Click Confirm to save your changes.

Privacy masking

The TVR 10 lets you define an area on screen that can remain hidden from view. For example, you can choose to block the view of a camera when overlooking residential premises. This hidden area is referred to as privacy masking. Privacy masking cannot be viewed live or recorded, and appears as a blank screen on display.

Figure 18 on page 51 provides an example of the privacy masking function.

Figure 18: Area masked



To define privacy masking:

1. Display the Camera Configuration screen and select a camera.
2. Click Advanced Settings Setup to display the Advanced Settings screen.
3. Select the Enable the Privacy Masking check box to enable privacy masking.
4. Click Privacy Masking Zone to enter the Mask Area Setup interface.

   The setup interface displays a grid (22 x 18 panes for PAL, 22 x 15 for NTSC). A single pane in yellow is displayed at the top left corner. The yellow pane indicates the area to be masked.
5. Select the areas to be masked.

   Move the pointer and click or use the directional arrow buttons (Up, Down, Left, or Right) to move the yellow pane to the zone you want to mask. Click the mouse again to select that area for privacy masking. The yellow panes turn red, indicating that this area will be hidden from view. Drag the mouse or use the directional arrow buttons to extend or shrink privacy masking as shown in the figure below.



6. Click the mouse to save that area for privacy masking.
7. Press ENTER to return to the Advanced Settings screen.
8. Repeat steps 4 to 7 for additional areas for privacy masking. You can set up four masked areas on a screen.
9. Click Confirm on the Advanced Settings screen to save your changes and return to the main menu.

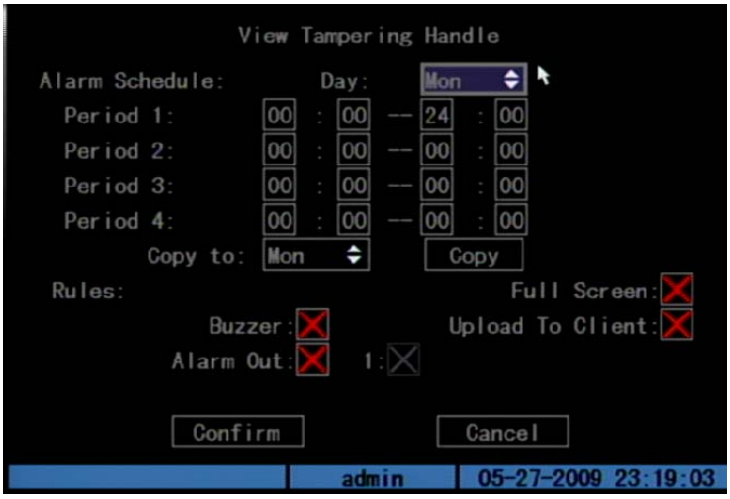
Note: The cancel privacy masking, disable the Privacy Masking option on the Advanced Settings screen.

Camera tamper alarm

The TVR 10 lets you define camera tamper alarms. A camera tamper alarm refers to an alarm triggered when a camera view is blocked (either deliberately or accidentally). For example, the system can trigger an alarm if someone spray paints the camera lens. The alarm displays on the status bar of the screen.

Use the Rules screen (shown in Figure 19 on page 53) to specify a part of the display screen that can detect a tamper that eventually triggers the alarm. In addition, you can define how the system alerts you of the tamper alarm.

Figure 19: View Tampering Handle screen



Defining a camera tamper alarm requires the following tasks:

1. Specify the detection sensitivity level.
2. Define the on-screen area that can trigger a camera tamper alarm.
3. Configure the tamper alarm response.

Note: These tasks define a camera tamper alarm for only a single camera. You will need to perform these tasks for every camera that requires a tamper alarm.

To specify the detection sensitivity level:

1. Display the Camera Configuration screen and select a camera.
2. Click Advanced Settings to display the Advanced Settings screen.
3. Set the detection sensitivity level.

   Select a camera tampering option in the Camera Tampering list box. Values include: Off, Normal, High. If Normal or High is selected, the Area and Rules buttons become available.

To define the on screen area that can trigger a camera tamper alarm:

1. In the Advanced Settings screen, click Camera Tampering Area to display the Camera Tampering Area screen.
2. Define the area for camera tampering.

   Defining an area for camera tampering is similar to masking an area for privacy. See steps 4 to 7 on page 51 for further instructions.
3. When finished, right-click and then click OK to confirm your changes.

   Note: Only one tampering area can be defined for each camera.

To define the tamper alarm response:

1. In the Advanced Settings screen, click Camera Tamper Area to display the Camera Tamper Rules screen.
2. Define an alarm schedule.

   The system's handling of a camera tamper alarm depends on the alarm schedule. In the Rules screen, select the day of the week in the Alarm Schedule list box for which you want to set the response time schedule. Enter the time period for the response in the Period edit boxes. You can enter up to four time periods for each day of the week.
3. Select a response method.

   Check a response method for the system when a camera tamper alarm is triggered. You can check one or more response methods including:

   Full Screen. Displays the alarm on the screen.

   Buzzer. An audible alarm sounds.

   Upload to Client. This feature is currently not supported.

   Alarm Out. Triggers an alarm output. Up to four alarm outputs can be enabled.

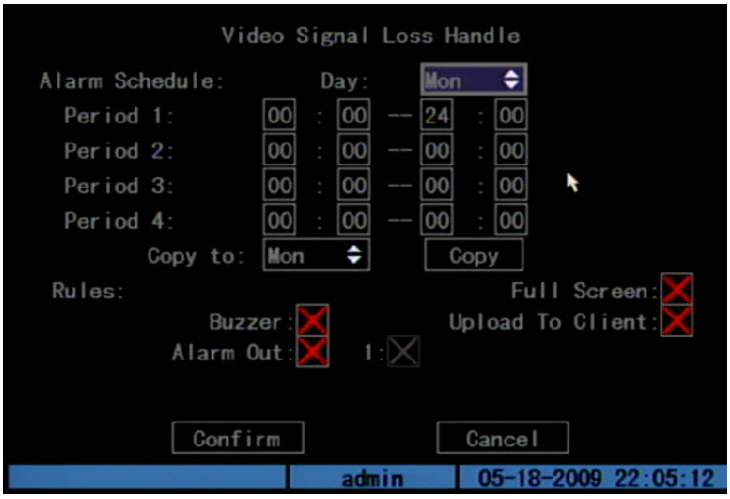
   Check or use the Up or Down Arrow buttons and the ENTER button to enable or disable these options.
4. Click Confirm on the Rules screen to save your setup.

   Note: The TVR 10 will prompt you to reboot in order for the schedule to take effect.

Video loss alarm

The TVR 10 lets you define video loss alarms. A video loss alarm refers to an alarm triggered when a video signal is lost or corrupt due to power failure, video cable failure, bad connection, and more. The video loss alarm triggers only if the video loss occurs during a programmed time schedule. The Video Loss screen lets you define video loss alarms as shown in Figure 20 on page 55. The alarm displays on the status bar of the screen.

Figure 20: Video signal loss handle screen



To define a video loss alarm:

1. Display the Camera Configuration screen and select a camera.
2. Click Advanced Settings to display the Advanced Settings screen.
3. Click Video Loss option. The Rules option becomes active.
4. Define the video loss alarm schedule.

   The system's handling of a video loss alarm depends on the alarm schedule. In the Rules screen, select the day of the week in the Alarm Schedule list box for which you want to set the response time schedule. Enter the time period for the response in the Period edit boxes. You can enter up to four time periods for each day of the week.
5. Select a response method.

   Check a response method for the system when a camera tamper alarm is triggered. You can check one or more response methods, including:

   Full Screen. Displays the alarm on the screen.

   Buzzer. An audible alarm sounds.

   Upload to Client. This feature is currently not supported.

   Alarm Out. Triggers an alarm output. Up to four alarm outputs can be enabled.

   Check the check box or use the Up or Down Arrow buttons and the ENTER button to enable or disable these options.
6. Click Confirm on the Rules screen to save your setup.

   Note: The TVR 10 will prompt you to reboot in order for the schedule to take effect.

7. Repeat steps 2 to 6 for additional cameras.

Motion detection alarm

The TVR 10 lets you define motion detection alarms. A motion detection alarm refers to an alarm triggered when a camera detects a motion. The alarm displays on the status bar of the screen.

You can define the level of sensitivity to motion, the area on screen where the motion is detected, and specify which cameras can record the motion when a motion alarm is detected.

If you enable this function, the TVR 10 will display the alarm on the status bar on the screen when motion is detected.

Use the following PTZ buttons to define motion detection areas.

Button	Description
Up, Down, Left, Right Arrow buttons	Moves the yellow pane to any position
Right Arrow button	Increases the motion detection area size from the right
Left Arrow button	Decreases the motion detection area size from the left
Down Arrow button	Increases the motion detection area size downwards
Up Arrow button	Decreases the motion detection area size upwards
PTZ	Selects the whole screen as a motion detection area
#	Clears all motion detection areas
ENTER	Saves changes and returns to the Camera Configuration screen
ESC	Cancels the setup and returns to the Camera Configuration screen

To define motion detection areas:

1. Display the Camera Configuration screen and select a camera.
2. Set the motion detection sensitivity level.

   Select a level from 0 (lowest sensitivity) to 6 (highest sensitivity), as well as the Off option in the Motion Detection list box. Selecting an option other than Off activates the Motion Area and Motion Rules options.
3. Display the Motion Detection Area setup interface.

   The setup interface displays a grid (22 x 18 panes for PAL, 22 x 15 for NTSC). A single pane in yellow is displayed in the top left corner. The yellow pane indicates the area for motion detection.

4. Define the motion detection area.

   Move the pointer or use the directional arrow buttons (Up, Down, Left, or Right) to move the yellow pane to the zone you want to mask. Click to select that area for motion detection. The yellow panes turn red, indicating an alarm will trigger if motion is detected within this area. Drag the mouse or use the directional arrow buttons to extend or shrink the motion detection area.

5. Click in the red area to save that area for motion detection and return to the yellow pane to continue defining areas as shown in the figure below.



6. Repeat steps 4 to 6 for additional motion detection areas. You can set up four masked areas on a screen.

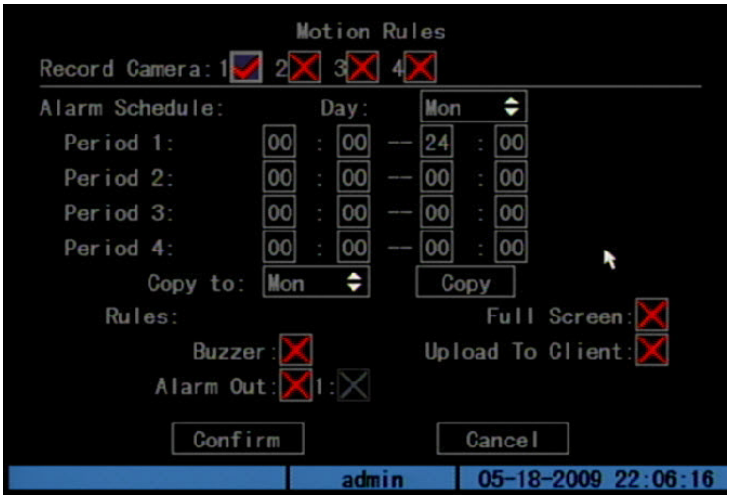
7. To clear part of a motion detection area, move the yellow pane to the motion detection area you want to delete and press REC. To clear all motion detection zones, press #.

8. Click the mouse to return to the Camera Configuration screen.

To define the motion alarm response rules:

1. Display the Motion Detection Alarm Rules screen.

   Click Motion Detection Rules to display the Motion Rules dialog screen as shown in the figure below.



2. Select the cameras you want to record for motion detection.

   Select the cameras you want to begin recording when the system receives a motion detection alarm. Check one of the camera boxes to select that camera. Click again to deselect. You can select more than one camera.

   Note: For cameras to be able to record for a motion detection alarm, you must first configure them for motion recording. See “Defining a recording schedule” on page 65 for more information.

3. Define an alarm schedule.

   The system’s handling of a motion detection alarm depends on the alarm schedule. On the Motion Detection Alarm Rules screen, select the day of the week in the Alarm Schedule list box for which you want to set the response time schedule. Enter the time period for the response in the Period 1 edit boxes. You can enter up to four time periods for each day of the week. The four daily time periods cannot overlap.

   Use the Copy option to copy the same periods to a different weekday.

   Note: You will be prompted to reboot the TVR 10 in order for the schedule to take effect.

4. Select a response method.

   Check a response method for the system when a motion detection alarm is triggered. You can check one or more response methods including:

   Full Screen. Displays the alarm on the screen.

   Buzzer. An audible alarm sounds.

   Upload to Client. This feature is currently not supported.

   Alarm Out. Triggers an alarm output. Up to four alarm outputs can be enabled.

Check the check box or use the Up or Down Arrow buttons and the ENTER button to enable or disable these options.

5. To copy the alarm rules to another day, select a day in the Copy to list box and click Copy.
6. Click Confirm on the Rules screen to save your setup.

   Note: The TVR 10 will prompt you to reboot in order for the schedule to take effect.

Display settings

Use the Display screen to configure how information is displayed on screen. The following options can be configured:

- Device ID
- Password requirement option
- Video output standard
- Video scaling
- Menu transparency
- System time and date
- Multiscreen

Device ID

The device ID provides a means for an IR remote control to connect to the TVR 10. If there is more than one TVR 10 in a setting, you must define a different device ID for each TVR 10. Otherwise, the IR remote control will control all TVR 10s with the same device ID at the same time. The default device ID is 01.

To change the device ID:

1. Click Display on the main menu to open the Display screen as shown in the figure below.



2. Click the Device ID edit box to enter into edit mode.
3. Enter the new device ID. The device ID value ranges from 1 to 255.
4. Click Confirm to save your changes.

Video output standard

The TVR 10 can support NTSC or PAL video output. NTSC is the default format.

To modify the video output standard:

1. Click Display on the main menu to open the Display screen.
2. Select a either PAL or NTSC video output in the Video Standard list box.
3. Click Confirm to save your changes.

System date and time

Configure the TVR 10 system date and time in the Date & Time screen as shown in Figure 21 on page 61. You can also enable Daylight Saving Time (DST) and date format in this screen. The date and time configured on this screen appears on the video display.

Figure 21: Date & time screen



To configure the TVR 10 system date and time:

1. Select Display in the main menu to display the Display Configuration screen.
2. Click Date & Time Setup to display the Date & Time screen.
3. Specify a date format using the Date Display Mode list box.

   The following are available formats:

   - MM DD YY
   - DD MM YY
   - YY MM DD
4. Enter a date.

   Click the Date edit box to enter into edit mode. Use the number buttons to enter a date.
5. Enter the time.

   Click the Time edit box to enter into edit mode. Use the number buttons to enter the time.
6. Check Daylight Saving Time (if applicable).

   Check the Enable DST check box to enable Daylight Saving Time. Select the month, date and time when Daylight Savings starts and stops using the From and To list boxes.
7. Click Confirm to save your changes.

Multi-screen layout

When you turn on the TVR 10, the system automatically enters into the live mode. Use the following buttons to toggle between different display options:

Button	Function
DISP	Toggles between a single screen display to a four screen display
Numeric buttons (1-4)	Switch between cameras on a single screen

The Multi-Screen screen, displayed in Figure 22 below, lets you configure the display properties when in live mode. To display the Multi-Screen screen, click Display on the main menu, and then click Multi-Screen. Click Confirm to save your changes and return to the Display Configuration screen.

Figure 22: Multi-screen screen



Display mode

The Display Mode list box lets you specify how many screens appear during live mode. Use the Up or Down Arrow buttons to select between options. You can select a single screen or four screens.

Dwell time

The Dwell time list box lets you specify amount of time a screen is displayed before moving into a different screen. Use the Up or Down Arrow buttons to select one of the following options:

- 5 seconds
- 10 seconds
- 20 seconds

- 30 seconds
- 1 minute
- 2 minutes
- 5 minutes
- Never

Audio preview

Check the Audio Preview check box if you want the TVR 10 to play the audio of the camera when displaying a single camera.

Display layout setup

Use this option to define the order of the cameras to be displayed when in live mode. If you have selected a four-screen display mode, the video frame should display four panels. Select a panel and press a numeric button corresponding to the camera number you want to display in that panel. Continue for each camera. The preview order is displayed on a status bar below the preview frame as shown in Figure 22 on page 62.

Saving the display setup

Click Confirm to save your setup.

Recording settings

Use the Recording Configuration screen, shown in Figure 23 on page 64, to define how the TVR 10 records video. The following options can be configured:

- Handling of information when the HDD is full
- Audio and/or video recorded
- Bit rate
- Frame rate
- Camera resolution
- Recording schedule of a camera
- Pre and post recording times for alarm recordings

Figure 23: Recording channel configuration



Record mode

This option lets you specify how the TVR 10 responds when the HDD becomes full. Select Stop Recording to trigger a Hard Disk Full exception. Recording will not continue if the HDD is full and you have the Stop recording option selected. Select Overwrite to overwrite the earliest recorded files when the HDD is full to continue recording.

Camera recording

This option lets you specify the camera for which you want to define the recording configuration. Use the Up or Down Arrow buttons to select a camera.

Table 17 below lists the recording options you can configure for your camera.

Table 17: Camera recording options

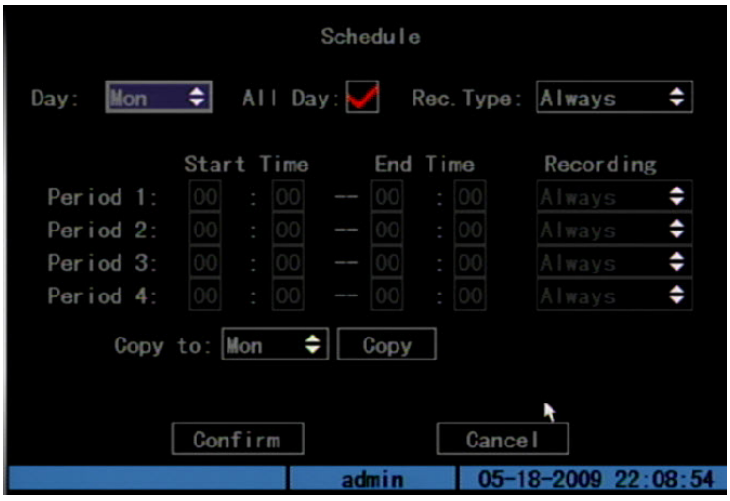
Option	Description
Stream Type	Specifies the stream type you wish to record. Select Video to record video stream only. Select Audio&Video to record both video and audio streams.
Resolution	Specifies the recording resolution. A higher image resolution provides a higher image quality but also requires a higher bit rate. The camera resolution ranges from QCIF (lowest) up to 4CIF (highest). If you make changes to this option, you must reboot the TVR 10 to implement the changes.
Bit rate	Specifies the maximum bit rate. Recommended bit rate depends on the camera resolution.

Option	Description
Frame Rate	Specifies the frame rate for the selected resolution. Options include: 25 (PAL)/30 (NTSC) 22, 20, 18, 16, 15, 12, 10, 8, 6, 4, 2, and 1.
Pre-Event Time	This option is used if you have the motion detection and/or external alarms enabled. Pre-event time refers to the time recorded before a motion or external alarm is triggered and includes the alarm data. If a motion or external alarm occurs and you have set the pre-event time to 5 seconds, the TVR 10 will record and save up to 5 seconds prior to the alarm event. Pre-event time options include: No Prerecord, 5 (default), 10, 15, 20, 25, 30 seconds, and Max Prerecord. Max Prerecord lets you save all data in the Prerecord buffer. Pre-event time relates to the bit rate in that the lower the bit rate, the longer the actual pre-event time.
Post-Event Time	This option is used if you have the motion detection and/or external alarms enabled. When an external or motion alarm is cleared, the TVR 10 will continue recording based on the value specified in this option. Options include: 5 (default), 10, 30 seconds, 1, 2, 5, and 10 minutes.
Record	Enables or disables recording for the selected camera.
Schedule	Defines a recording schedule when you enable camera recording. When you modify the camera recording schedule, you must reboot TVR 10 to implement the changes.

Defining a recording schedule

When enabling a camera for recording, you can define a recording schedule for the selected cameras. You will be prompted to reboot the TVR 10 after making any schedule modifications. Use the Recording Schedule screen to define a schedule as shown in Figure 24 below.

Figure 24: Recording schedule screen



To define a recording schedule:

1. Display the Schedule screen.

   On the Recording Channel Configuration screen, click Record to enable recording. Then click Schedule to display the Schedule screen.

2. Select a day of the week for which you want to set the recording schedule.

   Select a day of the week using the Day list box to define specific periods for recording during that day. If you want to the TVR 10 to record the entire day, check All Day to enable All Day recording.

3. Set the start and end time for recording.

   Click the Start Time edit box and enter a time you want the TVR 10 to begin recording. Click the End Time edit box option to specify an end time.

4. Select a recording type.

   Select one of the recording types:

   - Always
   - Motion
   - Alarm
   - Motion or alarm
   - Motion and alarm
   - Command

   If you checked the All Day recording check box, this box is automatically set to Always. To be able to search for motion detection video, select Motion, Motion or Alarm, or Motion and Alarm in this box. For more information, see “Searching for motion detection video” on page 34.

5. Repeat steps 3 to 4 for additional periods.

   Note: The four daily time periods cannot overlap.

6. Set the schedule periods for the other days of the week as required.

   Use the Copy To option to copy the scheduled periods to another day of the week.

7. Save your changes

   Click Confirm to return to the Recording screen. Click Confirm again to save your changes and return to the main menu.

Notes

- The TVR 10 will prompt you to reboot in order for the schedule to take effect.

- If you set your record type to Motion or other related types, you must define the Motion Detection alarm in order to trigger motion recording. See “Motion detection alarm” on page 56 for more information.
- If record type is Alarm or other related types, you must define alarms to trigger alarm recording. See “Alarm settings” below for more information.

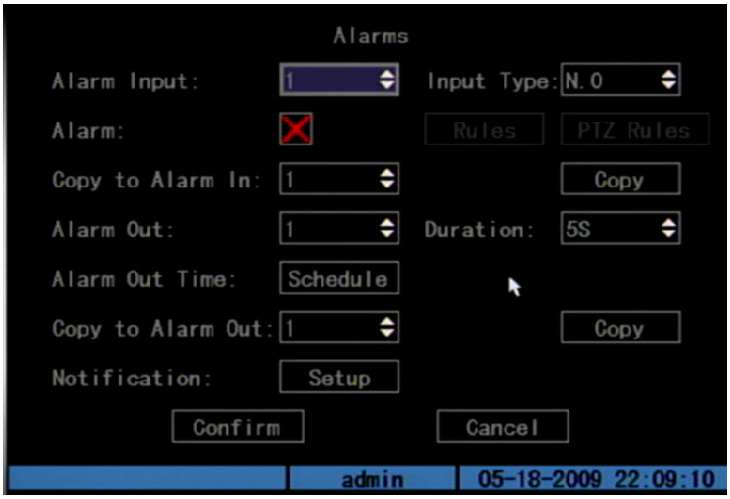
Alarm settings

Use the Alarms screen to define how the TVR 10 handles alarms. You can select how the alarm settings should be handled such as:

- An external alarm input
- An internal alarm input
- Notification settings

Click Alarms on the main menu to display the Alarms screen as shown in Figure 25 below.

Figure 25: Alarms screen



To set up an external alarm input:

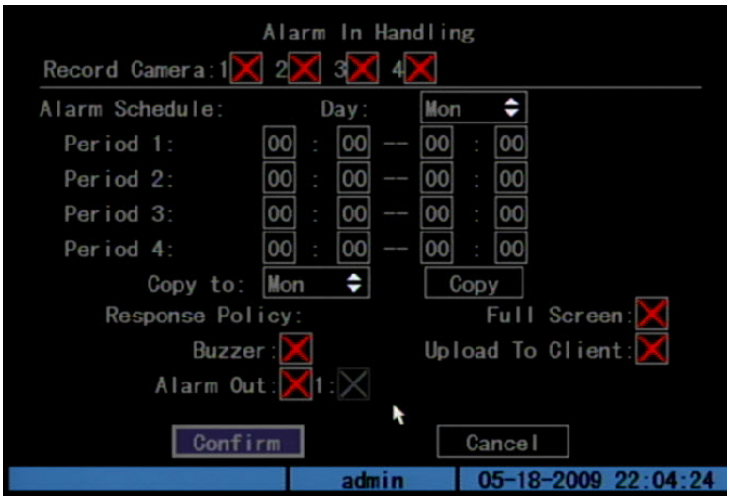
1. Select an alarm input in the Alarm Input box.
2. Select an input type in the Input Type box.

   Alarm input type refers to the sensor type. You can select Normal Open or Normal Close according to the sensor type.
3. Enable the alarm input.

Select the Alarm check box to enable that alarm input. The Rules and PTZ Rules options become active.

4. Select your cameras for alarm handling.

   Click Rules to display the Alarm In Handling screen as shown below.



   Check the cameras from which you want to record an alarm input in the Record Camera check boxes to enable or disable the camera channel.

   Note: In order for a camera to record an alarm, the recording option and type must be enabled on the Schedule screen. See “Defining a recording schedule” on page 65 for more information.

5. Define your alarm handling schedule.

   In the Alarm Schedule section of the Alarm In Handling screen, define a schedule for when the TVR 10 will respond to an external alarm. Select the day of the week and under Period 1 enter the start and end time periods for the selected day.

6. Specify your response method.

   Select how you want to be notified of an external alarm. Check one or more of the following response methods:

   Full Screen. Displays the alarm on the screen.

   Buzzer. An audible alarm sounds.

   Upload to Client. This feature is currently not supported.

   Alarm Out. Triggers an alarm output. Up to four alarm outputs can be enabled.

7. Click Confirm to save your settings and return to the Alarms screen.

   Note: The TVR 10 prompts you to reboot in order for the schedule to take effect.

8. Set a PTZ link to the alarm.

In the Alarms screen, click PTZ Rules to display the PTZ Rules screen, as shown in the figure below.



Select a camera, and then click one or more of following PTZ linkages: Preset, Preset tour, Enable Cruise (shadow tour). When an option is enabled, enter the number for the PTZ preset to be used. See “PTZ settings” on page 76 for more information on defining PTZ presets.

Note: Make sure that the PTZ you are using can support preset, preset tour, and shadow tour functions. An external alarm input can trigger a camera’s PTZ linkage.

9. Click Confirm to save and return to the Alarms screen.
10. To copy the alarm input parameters to another alarm input, select the new alarm input from the Copy to Alarm In list box, and then click Copy.
11. Click Confirm on the Alarms screen to save your changes and return to the main menu.

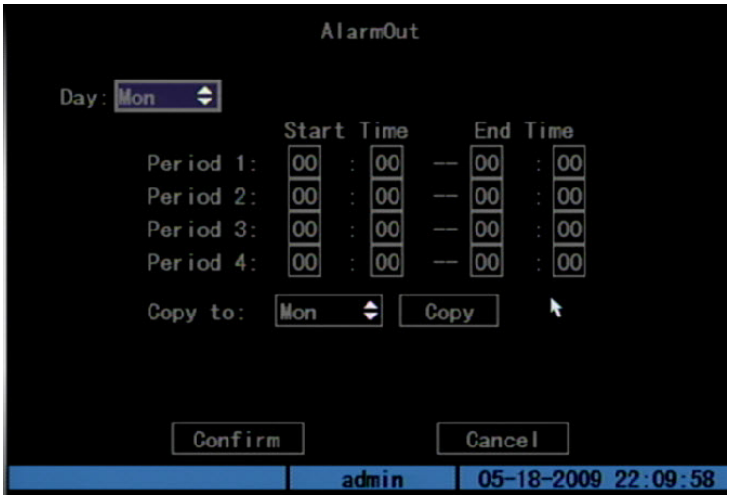
To set up an alarm relay output:

1. Select an alarm output in the Alarm Out box.
2. Select the alarm output duration.

   The alarm output duration is the length of time that an alarm output displays before stopping. Options include: 5, 10, and 30 seconds, 1,2, 5, and 10 minutes, and Manual Stop. Manual Stop indicates the alarm output will not stop until you specify Stop in the Alarm Output option on the Utilities screen. See “Acknowledging an alarm” on page 86 for more information.
3. Define an alarm out schedule.

   Click Alarm Out Time Schedule on the Alarms screen to enter the AlarmOut schedule as shown in the figure below. Select the day of the week and under

Period 1 and enter the start and end time periods for the selected day. Each day can have up to four time periods.



Repeat for each day of the week. If the desired times for this alarm output are identical to those for other days, click Copy To and specify the day of the week to which you want to copy this schedule. Select All if the same schedule is used all week. Click Copy.

4. Click Confirm to save your settings and return to the Alarms screen.
5. Copy the alarm output settings to another alarm output if required.

   To copy the settings to another alarm output, select an alarm output on the Copy to Alarm Out list box then click Copy. A confirmation message displays. Select OK to accept.
6. Click Confirm on the Alarms screen to save your alarm output settings.

   Note: The TVR 10 will prompt you to reboot in order for the schedule to take effect.

Notifications

Notifications refer to internal errors that occur within the system. Table 18 below provides a list of these exceptions.

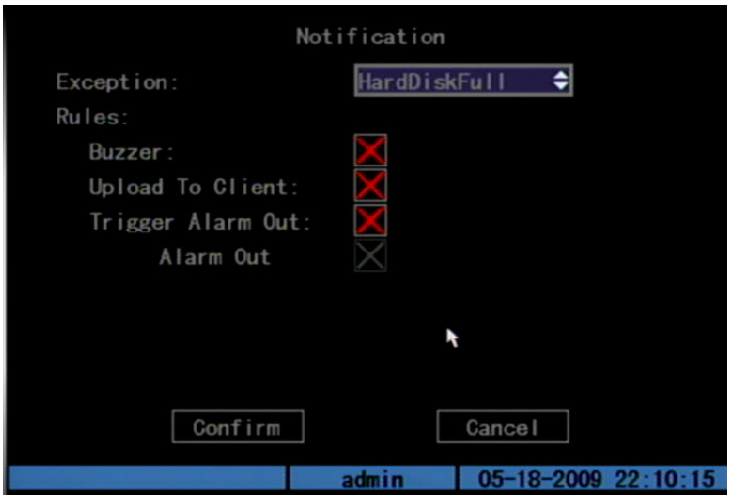
Table 18: List of exceptions

Condition	When alarm occurs
HDD full	Hard drives are full. Notification only occurs if you disable overwrite.
Hard disk error	An error occurred in the hard drive.
Illegal access	Log on failed on the unit.
IP address conflict	Two devices on the network have the same IP address.

Condition	When alarm occurs
Network failure	Network connection was lost.
NTSC/PAL mismatch	The input and output have a different video format.

Use the Notification screen (displayed in Figure 26 below) to define how you want to be notified of these exceptions. To display the Notification screen, click Notification Setup on the Alarms screen.

Figure 26: Notification screen



Use the Exception list box to select an exception, and then check one or more of the following notification methods:

Buzzer. An audible alarm sounds.

Upload to Client. This feature is currently not supported.

Trigger Alarm Out. Triggers an alarm output.

Alarm Out. Triggers an alarm output. Up to four alarm outputs can be enabled.

When finished, click Confirm to save your settings and return to the Alarms screen.

Network settings

Accessing the TVR 10 through a network requires that you define certain network settings. Use the Network screen to define the network settings of the TVR 10. The following options can be configured:

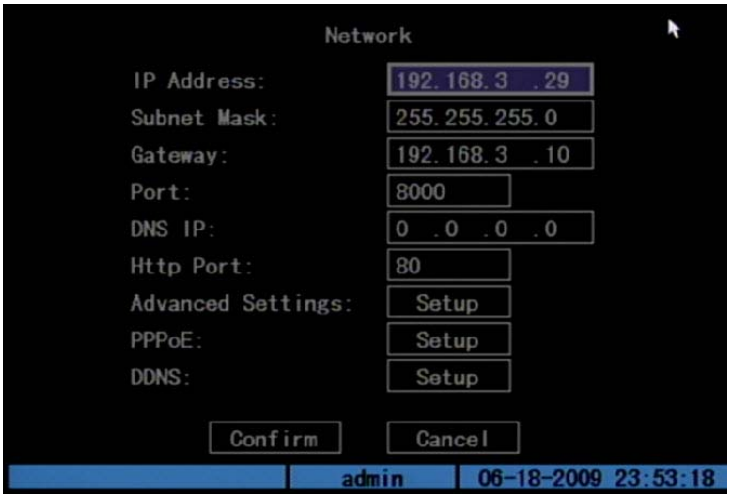
- IP address and settings

- Subnet mask
- Gateway IP
- Network communication port
- HTTP port
- PPPoE (Point-to-Point Protocol over Ethernet)
- DDNS (Dynamic Domain Name System)

Note: When a network parameter is modified, the TVR 10 will prompt you to save and reboot the unit.

To display the Network screen, click Network. The Network screen displays as shown in Figure 27 below.

Figure 27: Network setup



Network settings

Table 19 below describes the Network screen options.

Table 19: Network screen options

Option	Description
IP address	Specifies the network's IP address. The IP address configured here must not conflict with another IP address. If there is a DHCP server within the network, you can set the IP as "0.0.0.0" then save and reboot the TVR 10. In the reboot process, the TVR 10 searches the DHCP server and retrieves one dynamic IP address. This value displays as the dynamic IP address. If the TVR 10 is utilizing the PPPoE function, the TVR 10 also connects to the Internet and this value displays as the dynamic internet IP address. Default value is 192.168.111.111.

Option	Description
Port	Specifies the network access port number. This value must be greater than 2000.
Mask	Specifies the subnet mask. Default value is 255.255.255.0.
Gateway	Specifies the gateway IP address. The gateway IP is used to communicate in different network segments.
Http Port	Specifies the port used for the Internet Explorer (IE) browser. The default value is 80. This value can be modified.
Advanced settings	Specifies the advanced IP settings. See "Advanced IP settings" below for more information.

Advanced IP settings

Table 20 below describes the advanced IP settings.

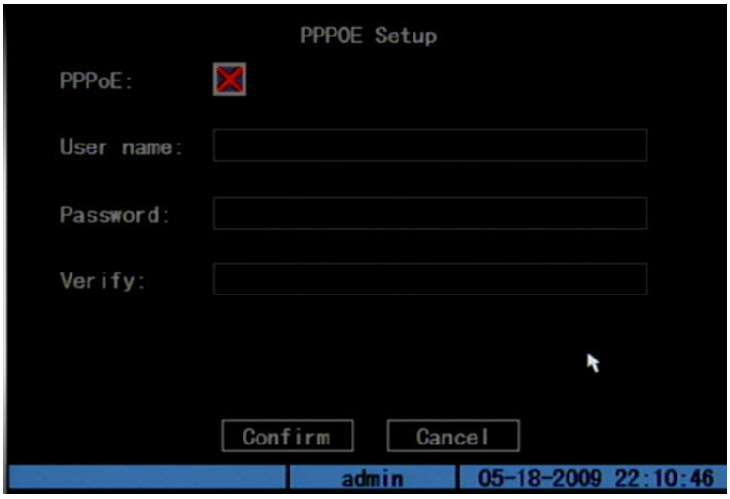
Table 20: Advanced IP settings

Option	Description
Mac	Specifies the physical address of the device. This value can not be overwritten.
NIC type	Specifies the NIC type. Default is 10M/100M Auto. Other options include: 10M Half-Dup, 10M Full-Dup, 100M Half-Dup and 100M Full-Dup.
IP server address	Use this option if the TVR 10 is utilizing the PPPoE function, and retrieves one dynamic IP address. If you define the DNS IP with one fixed Internet IP address, the TVR 10 sends information such as TRV10 name, serial number, and current IP address to that fixed IP address. The fixed IP address is referred to as the DNS IP. The DNS server with that fixed Internet IP address can receive the TVR 10 information and be used to resolve the TRVR10 dynamic IP address. This IP server is a unique software and does not fall into the normal domain name server. You can use the SDK provided to develop this DNS software.
Multicast IP	Specifies a D-class IP address between 224.0.0.0 to 239.255.255.255. You do not need to specify this option if you are not using the multicast function. Some routers prohibit the use of multicast function in case of a network storm.
Remote Host IP and Port	If an alarm and exception occur, the TVR 10 sends information to the host IP you specify in this option. The site that has this IP can remotely receive the alarm and exception information from the TVR 10.

PPPoE setup

Use the PPPoE Setup screen (shown in Figure 28 below) to define settings for the PPPoE function.

Figure 28: PPPoE setup



To use the PPPoE function:

1. Click Advanced Settings on the Network screen to display the Network Advanced Settings screen.
2. Select an NIC type. Press Confirm to save and return to the Network screen.
3. Enter a port number.

   In the Port edit box, use numeric keys to enter the port number. The port number must be higher than 2000.
4. Enter the IP Server address.

   Display the Advanced Settings screen. Enter a fixed Internet IP address where the IP analyst software (IP Server) is run in the IP Server edit option.
5. Display the PPPoE Setup screen and enter the PPPoE settings.

   To display the PPPoE Setup screen, click PPPoE Setup on the Network screen. This enables PPPoE function. Enter the PPPoE username, password and verify password that ISP provided.
6. Save your settings.

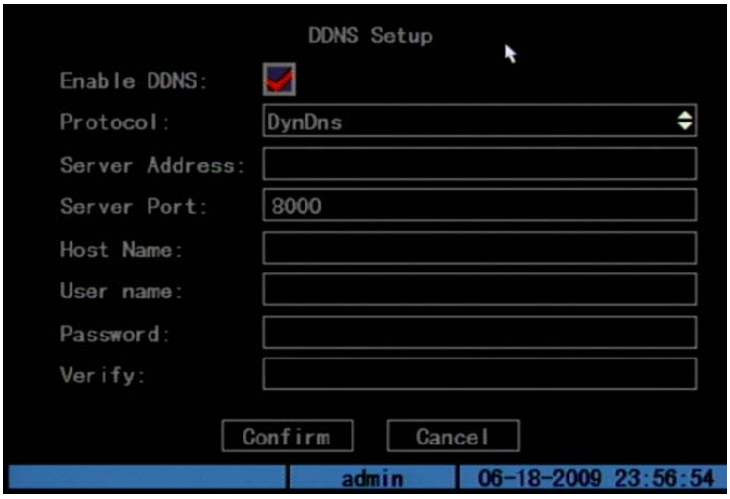
   Click Confirm to save your settings and return to the Network screen. Click Confirm on the Network screen to return to the main menu. The TVR 10 prompts you to reboot to implement your network changes. In the reboot process, the TVR 10 starts the dialup using the PPPoE function. If the TVR 10 dialup Internet

connection is successful, the TVR 10 displays the dynamic Internet IP address on the Network screen.

DDNS setup

Use the DDNS setup screen (shown in Figure 29 below) to define the settings for the DDNS function. Before you can configure the DDNS settings, you must first create an account through the DynDNS Web site (www.dyndns.com).

Figure 29: DDNS setup



To define the DDNS settings:

1. Click DDNS Setup on the Network screen to display the DDNS Setup screen.
2. Ensure that the protocol is set to DynDns.
3. Enter the server address and server port.
4. Enter the host name as created through the DynDns Web site.
5. Enter the user name for the account you created through the DynDns Web site.
6. Enter the password for the account.
7. Enter the password on the Verify field to verify your password.
8. Click Confirm to save your settings. The TVR 10 prompts you to reboot.

PTZ settings

Use the PTZ screen, shown as Figure 30 below, to define PTZ functions for cameras connected to your TVR 10. An RS-485 port is available at the TVR 10 back panel for PTZ control. You can define RS-485 settings to match your PTZ protocol such as:

- PTZ parameters (including baud rate, data bits, stop bits, parity, and flow control)
- PTZ protocol
- PTZ address
- Preset parameters
- Preset tour
- Shadow tour

To display the PTZ screen, click PTZ on the main menu.

Figure 30: PTZ screen



PTZ screen options

Table 21 below describes the PTZ screen options.

Table 21: PTZ screen options

Option	Description
Select camera	Selects a PTZ camera.
PTZ parameters	Parameters include: baud rate, data bit, stop bit, parity, and flow control. These parameters must be the same as the PTZ protocols.
PTZ address	Specifies the PTZ address. Each PTZ has a different address.

Option	Description
PTZ type	Specifies the PTZ protocols. See Appendix D “PTZ protocols” on page 101 for a list of PTZ types. Note: If you select the Pelco-P protocol, define the PTZ address plus or minus 1 the Camera ID. For example, if the camera ID is 2, the TVR 10 PTZ address should be set as 3.
Preset setup	Displays the Preset Setup screen.
Preset tour setup	Displays the Preset Tour Setup screen.
Shadow tour setup	Displays the Shadow Tour Setup screen.

PTZ types

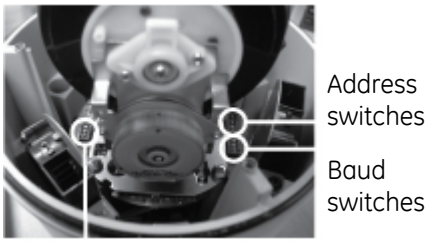
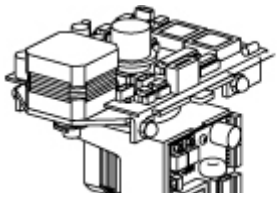
For a list of support PTZ types, see Appendix D “PTZ protocols” on page 101.

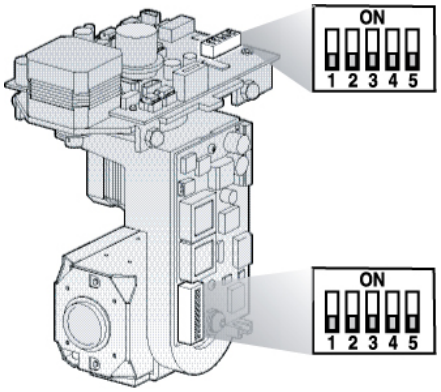
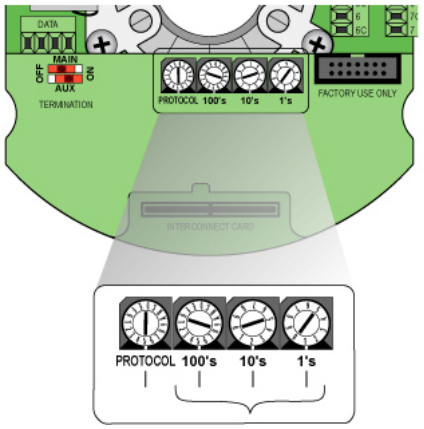
Configuring the PTZ protocols for GE Security cameras

Before the PTZ cameras are assembled in their housings, set their protocol and address DIP switches for the TVR 10. for the different GE Security’s PTZ camera configurations. See Table 22 below for different GE Security PTZ camera settings.

If you are using PTZ cameras from another company, please refer to their configuration instructions.

Table 22: Configuring GE Security PTZ cameras

Camera	Switch setting		
TruVision Dome 16 PTZ	Protocol switches	1011	 Protocol switches
	Address switches	0000	
	Baud rate	0000	
Cyberdome	Protocol switches	Auto	

Camera	Switch setting		
	Address switches	0000000000	
CyberDome II	Protocol switches	0000	
	Address switches	0000	
Legend	Protocol switches	5	
	Address switches	0000	

Preset position

Preset position represents the camera's position, zoom, focus, and iris. You can save up to 128 preset positions. Make sure your PTZ supports the preset function before you configure your presets.

To display the Preset Setup screen, click Preset Setup on the PTZ screen.

Note: The instructions below do not cover all PTZs.

To define a PTZ preset position:

1. Click Preset Setup on the PTZ screen to display the Preset Setup screen.
2. Enter a preset number (from 1 to 128) in the Preset edit box.
3. Click Edit to display the PTZ control interface.
4. Use directional arrow buttons to adjust the PTZ position.

5. Use the IRIS±, FOCUS±, and ZOOM± buttons to adjust the iris, focus, and zoom.
6. When finished adjusting, click Save to save that preset number.
7. Repeat steps 2 to 6 for additional presets.
8. Click Return to return to the PTZ screen.
9. Click Confirm on the PTZ screen to save all changes.

To delete a PTZ preset position:

1. Select a preset number on the Preset Setup screen.
2. Click Delete.
3. Repeat steps 1 to 2 for additional presets you want to delete.
4. Click Return to return to the PTZ screen.
5. Click Confirm on the PTZ screen to save all changes.

Preset tour setup

Each preset tour is made up of several preset points. A preset point includes:

- A preset position.
- A dwell time. This is the time duration when the PTZ camera stays at the preset position.
- A dwell speed. This is the speed at which the PTZ moves to the preset position.

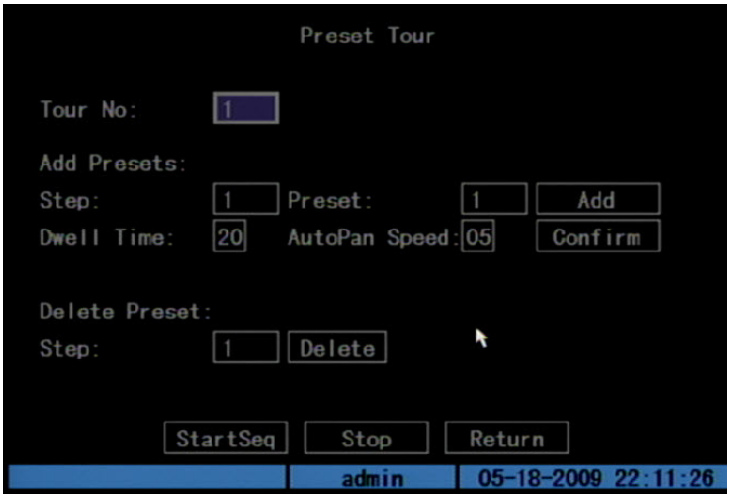
You can save up to 16 preset tour sequences. Make sure your PTZ supports the preset tour function before you configure your preset tours.

Note: The TVR 10 does not support preset tours for GE domes.

To display the Preset Tour Setup screen, click Preset Tour Setup on the PTZ screen. The Preset Tour Setup screen displays as shown in Figure 31 on page 80.

Note: The instructions below do not cover all PTZs.

Figure 31: Preset sequence screen



To define a preset tour sequence:

1. Click Preset Tour Setup on the PTZ screen to open the Preset Tour Setup screen.
2. Enter a Tour Number.

   You can define up to 16 different preset tour sequences. Each preset tour sequence is comprised of preset points, and each preset point includes a preset position, dwell, time, and speed.
3. Define a preset point.

   For each preset point, enter a cruise point number, preset number, dwell time, and dwell speed. Select Add to create that new cruise point.
4. Click Confirm to save that preset point into the sequence.
5. Repeat steps 3 to 4 for additional preset points.
6. Click StartSeq to check the tour sequence. The preset tour sequence runs To stop the preset from running, click Stop.
7. To delete a preset point, specify the preset point number on the Delete Preset section of the screen and click Delete.
8. When finished defining a preset tour sequence, click Return to return to the PTZ screen.
9. Click Confirm on the PTZ screen to save your changes.

Shadow tour

The shadow tour function recalls the PTZ movement track. Make sure your PTZ supports the shadow tour function before you configure your shadow tours.

Use the Shadow Tour Setup screen to define shadow tours. To display the Shadow Tour screen, click Shadow Tour Setup

Note: The instructions below do not cover all PTZs.

To define a shadow tour:

1. Click Shadow Tour Setup on the PTZ screen to display the Shadow Tour Setup screen.
2. Click Rec to display the PTZ control interface.
3. Use the directional arrow buttons to control the PTZ camera movement.
4. Click anywhere in the screen to save the operation track and return to the Shadow Tour Setup screen.
5. Click Start to view the PTZ movement track. Click Stop to stop the preview.
6. Click Return to return to the PTZ screen.
7. Click Confirm on the PTZ screen to save your changes.

Chapter 6
Utilities settings

The Utilities Configuration screen lets you configure the following system settings:

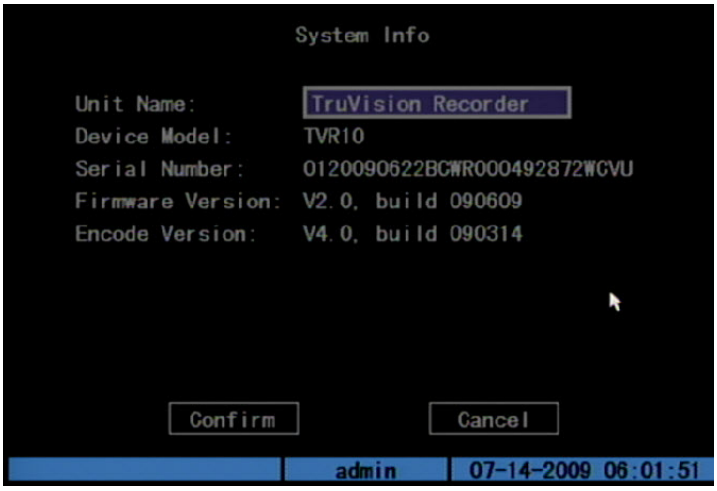
- Modify system information
- View logs
- Acknowledge an alarm
- Manage HDD
- Upgrade the firmware
- Restore factory defaults
- Reboot the TVR 10
- Power off

Modifying the device name

The system information provides reference information about your TVR 10 such as the unit name, serial number, firmware version, and device model. Only the unit name can be modified in the system information. The unit name provides a description of the device for reference.

To modify the device's unit name:

1. Click Utilities on the main menu to display the System Configuration screen.
2. Click System Information on the Utilities Configuration screen. The System Info dialog screen displays as shown in the figure below.



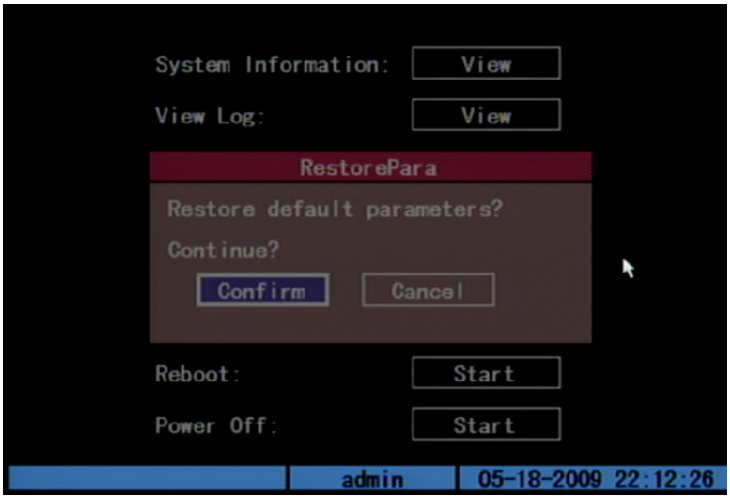
3. The default unit name is “TruVision Recorder.” Click the Unit Name edit box to enter into edit mode.
4. Enter the new unit name.

   See “Using an edit box” on page 22 for more information on entering text.
5. Click the edit box to exit the edit mode.
6. Click Confirm to save your changes.

Restoring to factory defaults

Use the Factory Defaults Restore button on the Utilities screen to restore the TVR 10 to its factory settings. Click Confirm at the prompt to confirm your changes, as shown in Figure 32 below, and the system will automatically reboot.

Figure 32: Restore parameters



Managing the hard drive

Use the Hard Disk screen, as shown in Figure 33 below, to manage your hard drive. To display the Hard Disk screen, click Hard Disk Manage on the Utilities screen.

Figure 33: Hard Disk screen



Checking the HDD status

Select the HDD (hard disk drive) required in the Select HD list box. The following information appears:

- Capacity
- Free space
- Idle
- Status

Formatting the HDD

Before formatting the HDD, stop all recording. Once formatting is completed, reboot the TVR 10. Otherwise, the unit will not function properly.

To format the HDD:

1. Click Hard Disk Manage on the Utilities screen to display the Hard Disk screen.
2. Select the HDD you want to format in the Select HD list box.
3. Click Format. A screen appears showing the formatting status.

4. When formatting is completed, click OK. The Hard Disk screen displays.
5. Click Return to the return to the Utilities screen.

Acknowledging an alarm

Click Alarm Output Stop on the Utilities screen to acknowledge an alarm. This command only applies if the Alarm Output has been set to manual. See “Alarm settings” on page 67 for more information.

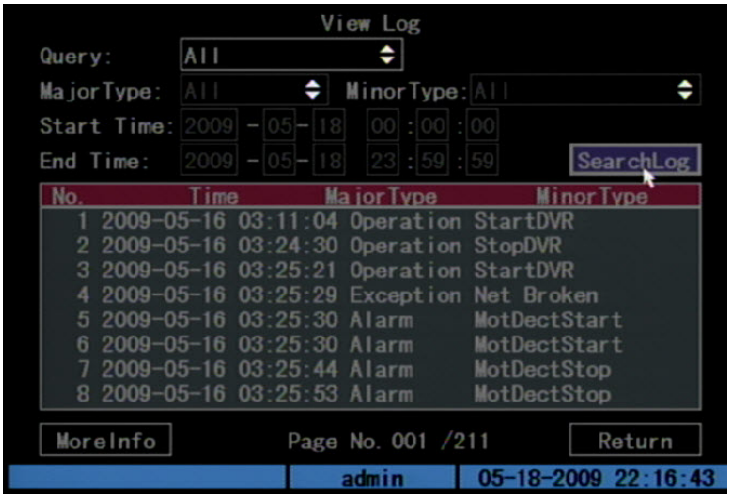
Rebooting the TVR 10

To reboot the TVR 10, click Reboot Start on the Utilities screen.

Viewing logs

Up to 2,000 recorded logs can be stored in the TVR 10. When this capacity is reached, the system starts deleting older logs. To view recorded logs based on default options, click View Log on the Utilities screen. The View Log screen displays as shown in Figure 34 below.

Figure 34: View log



Searching for logs

You can also search for recorded logs by the following:

Options. There are four log options: All, Category and Time, Time, and Category.

Main information types. There are four main information types: All, Alarm, Notification, and Operation.

Sub information types. There are several different types of sub information depending on the main type selected. See Table 23 below for more information.

Date and time. Logs can be search by date as well as start and end recording times.

Table 23: Sub information type by main type

Main information type	Sub information type by main information type
All	All
Alarm	External Alarm In, External Alarm Out, Motion Detect Start, Motion Detect Stop, View Tamper Start, and View Tamper Stop
Notification	Video Signal Loss, Illegal Access, Hard Disk Error, Hard Disk Full, IP Conflict, and DCD Lost
Operation	Power On, Shut Down, Abnormal Shut, Panel Login, Panel Logout, Panel Config, Panel File Play, Panel Time Play, Local Start Record, Local Stop Record, Panel PTZ, Panel Preview, Panel Set Time, Local Upgrade, Net Login, Net Logout, Net Start Record, Net Stop Record, Net Start Transparent Channel, Net Stop Transparent Channel, Net Get Parameter, Net Config, Net get Status, Net Alert On, Net Alert Off, Net Reboot, BiComStart (Start Voice Talk), BiComStop (Stop Voice Talk), Net Upgrade, Net File Play, Net Time Play, Net PTZ

To search logs by type:

1. Display the View Log screen.
2. Select one of the four search criteria in the Search By list box: All, Category and Time, Time, and Category.

   If the All or Time criteria is selected, the main and sub type options are not available.
3. Select one of the types listed in the Main Type list box.
4. Select one of the types listed in the Sub Type list box.
5. Click Search Log to start your search.
6. If you want further information on the logs, click More Info .
7. Click Return to the return to the main menu.

To search logs by date and time:

1. Display the View Log screen.
2. Enter a start time using the Start Time edit box.
3. Enter an end time using the End Time edit box.
4. Click Search Log to start your search.
5. If you want further information on the logs, click More Info .
6. Click Return to the return to the main menu.

Chapter 7
Upgrading the firmware

The TVR 10 firmware is stored in the flash memory. Use the upgrade function to write the firmware file (*digicap.DAV*) into the flash memory.

You need to upgrade firmware when it has become outdated.

Upgrade methods

There are several ways to upgrade your firmware:

- Use the USB function of the Upgrade screen on the Utilities screen. Make sure the firmware file is placed under root directory of USB flash memory.
- Use the client software to upgrade the firmware file.
- Use the FTP function of the Upgrade screen on the Utilities screen. You need one host PC to run the FTP server software and place the firmware file. Make sure the TVR 10 and PC are in the same subnet.

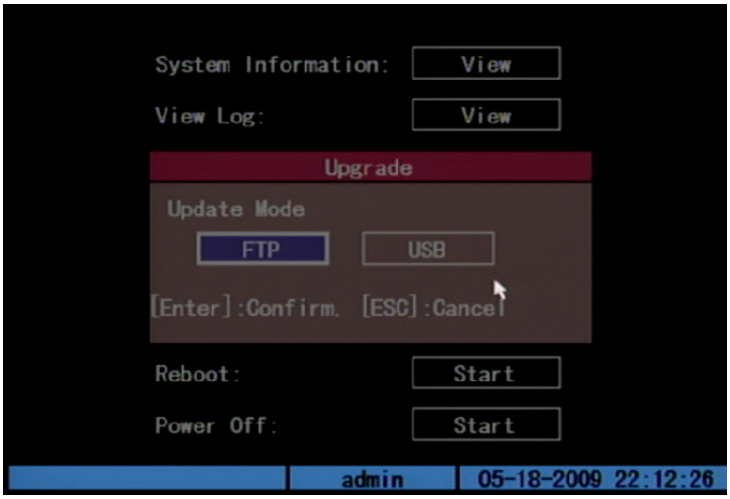
We strongly recommend that you upgrade the firmware using the client software or the USB function.

Upgrading with a USB flash memory

Use the Firmware Upgrade button on the Utilities screen to upgrade your firmware. When upgrading your firmware, you retain all your existing settings. Only new features are added with their default settings.

To upgrade the firmware:

1. Click Firmware Upgrade on the Utilities screen. The Upgrade dialog appears as shown in the figure below.



2. Select the USB upgrade mode.

   Connect a USB flash memory to the TVR 10 and confirm that the firmware file is in the root directory. Click USB to start the upgrade.

   Note: The firmware must be downloaded to the USB main directory and the file named “digicap.”

3. When finished, right-click or press ESC to return to the main menu.
4. Reboot the TVR 10.

Upgrading through the Web browser

You can log in to the TVR 10 Web browser to perform a firmware upgrade. Prior to upgrade, ensure that you have the *digicap.DAV* file in the workstation you are accessing the TVR 10 from.

To upgrade the firmware through the Web browser:

1. Log in to the TVR 10 Web browser.
2. Select the Configure button.
3. Select the Others tab.

   You will need to scroll right through several tabs to locate the Others tab.

4. Click Remote Upgrading.
5. Click Explore and locate the *digicap.DAV* file in your workstation.
6. Click Upgrade. You will receive a prompt asking you to reboot the TVR 10.
7. Click Reboot to reboot the TVR 10.

Note: The TVR 10's on-screen display will not provide any status indication prior to rebooting.

Setting up the wftp32 FTP server

This section describes how to configure your FTP server.

To set up the wftp32 FTP server:

1. Start the wftp32 program.
2. Display the User/Rights Security screen by clicking Security and User/Rights.
3. Set the user and its rights.
   a. Click New User.
   b. Create a user named "target" and set its password.
   c. Choose the target user in the User Name list.
   d. Enter the path where the firmware is placed in the Home Directory box, and then click Done to finish the configuration.

   An example of the completed screen is shown below.



Upgrading using the FTP server

To upgrade using the FTP server:

1. Display the Utilities screen of the main menu.
2. Display the Firmware upgrade screen.
3. Select the FTP upgrade mode.
4. Enter the FTP Server's IP Address (The IP of the computer where wfp32 runs) and click anywhere in the screen to confirm. The TVR 10 will connect to the FTP server

through the network and download the firmware file. Click Confirm at the prompt to begin the upgrade process.

5. When finished, the system needs to reboot. Click Confirm to start the reboot or press Cancel to reboot later. The new firmware will start to work after rebooting.

Appendix A
Mouse control function

Display interface

Table 24: Display interface

Mouse control	Function
Double-click	Toggles between single camera to multiscreen views. Displays single camera view of camera you double-clicked on from the multiscreen view
Scroll wheel forward	Switches to previous screen
Scroll wheel backward	Switches to the next screen
Right-click	Displays the mouse menu

PTZ interface

Table 25: PTZ interface

Mouse control	Function
Double-click	Moves to the center of the screen (for SAE\YAAN protocol)
Drag	Selects an area to zoom in (for SAE\YAAN protocol)
Click	If you select an area for zooming in this action, which will save the poison as No.60 and zoom in the area (for SAE\YAAN protocol)
Scroll wheel forward	Switches to previous channel
Scroll wheel backward	Switches to the next channel [1]

Mouse control	Function

[1] Using the mouse can only call the first 96 of the 128 presets.

Camera name position configure interface

Table 26: Channel name or OSD position configure interface

Mouse control	Function
Drag	Camera name position follows the pointer.
Right-click	Displays menu with these commands: • Confirm • Cancel • Style (for OSD only)

Area configure interface

Table 27: Area configure interface

Mouse control	Function
Right-click	Displays menu with these commands: • Confirm • Cancel • Clear • Full (appears only for motion detect area configuration)
Drag	Extends or shrinks an area
Pointer	The primary grid follows with the pointer

Text input interface

Table 28: Test input interface

Mouse control	Function
Click	Displays virtual keyboard, input text, and save and exit
Right-click	Cancels the text and exit the edition
Scroll wheel	Cursor goes to the previous or next character

Playlist interface

Table 29: Playlist interface

Mouse control	Function
Click	Selects the file to copy or cancel
Scroll wheel forward	Selects the previous file
Scroll wheel backward	Selects the next file
Right-click	Cancels and returns back to the Display interface.
Double-click	Plays the selected file

User interface

Table 30: User interface

Mouse control	Function
Double-click	Enters the selected user's privileges setting interface
Right-click	Cancels the operations you did and back to previous interface
Scroll wheel forward	Selects previous user
Scroll wheel backward	Selects next user

Appendix B
Specifications

Model	TVR 10
Video compression	H.264
Display resolution	PAL: 704 × 576, NTSC: 704 × 480, VGA: 1024 x 768
Playback resolution	QCIF/CIF/2CIF/DCIF/4CIF
Video input	4 channels, BNC (1.0 Vp-p, 75 Ω)
Main output	1 channel, BNC (1.0 Vp-p, 75 Ω)
Spot output	1 channel, BNC (1.0 Vp-p, 75 Ω)
Frame rate (per channel)	4CIF: 6 fps DCIF: 12 fps 2CIF: 15 fps CIF: 25(P)/30(N) fps
Audio compression	OggVorbis, 16 Kbps
Audio input	1 channel, RCA (2.0~2.4 Vp-p, 1 KΩ)
Audio output	1 channel, RCA (2.0~2.4 Vp-p, 600 Ω)
Stream type	Video/Video&Audio
Support dual stream	Yes
Bit rate	32 Kbps ~ 2 Mbps, user-defined
HDD interface	1 SATA interface can support 1 SATA HDD up to 1 TB
Communication interface	1 RJ45 10M/100M self-adaptive Ethernet Interface 1 RS-485 interface
USB interface	1 USB interface can support USB disk, USB HDD, USB CD-RW, and DVD-RW
VGA interface	1 VGA interface can support resolution: 1024 x 768/60 Hz
External alarm in	4

Model	TVR 10
Relay output	1
Voice talk	1 channel (using audio in)
Support Buzzer	Yes
Power supply	12 VDC
Power consumption	40 W
Operating temperature	14 to 131°F (–10 to 55°C)
Relative humidity	10% to 90%
Dimensions (W x H x D)	12.36 x 1.77 x 8.88 in (314 x 45 x 225 mm)
Weight	Approx. 3.5 lb. (1.6 kg) with 1 HDD

PAL: 176×144(QCIF), 352×288(CIF), 704×288(2CIF), 528×384(DCIF), 704×576(4CIF);

NTSC: 176×120(QCIF), 352×240(CIF), 704×240(2CIF), 528×320(DCIF), 704×480(4CIF).

Battery removal

The TVR 10 unit contains one 3 V Lithium battery. This battery can only be removed by a recycling or service technician. The remote control comes with two AAA alkaline batteries.

To remove the remote control batteries:

1. Detach the remote control's back cover.
2. Replace the batteries with any standard AAA batteries.
3. Reattach the cover.
4. Dispose of the batteries as required by local ordinances or regulations.

Appendix C
Troubleshooting

Place the TVR 10 in well-ventilated space so that it operates within the allowed range of temperature and humidity as in specification.

If the circuit board is wet, dust on circuit board can cause a short circuit. The circuit board, plug and socket, housing fan and housing should be cleaned by brushing regularly.

Failure	Possible reasons
After plugging in and turning on the unit, the POWER light on the front panel does not turn on, and the fan does not work.	Power cable is not functioning. Power supply is not functioning.
After plugging in and turning on the unit, the POWER light on the front panel turns green but the fan does not work.	Front panel cable is not functioning. Fan is not functioning.
After plugging in and turning on the unit, the POWER light on the front panel turns green and the indicator lights on the panel turn on, but the fan does not work.	The ATX plug in main board is not plugged in.
TVR 10 continuously reboots after starting up every 10 seconds.	Upgraded using the wrong firmware Main board failure
There are no images in the monitor connected with VOUT after TVR 10 is started.	The cable connected with the monitor is not functioning. Main board of TVR 10 failure.
Cannot find the hard disk in reboot process.	Hard drive cable is not functioning. The power cable of the hard drive is not connected. Hard drive failure.
TVR 10 cannot control PTZ through RS-485/422 port.	RS-485/422 cable is not connected properly or not functioning. PTZ parameters error. RS-485 port failure.

Failure	Possible reasons
Client software cannot view the TVR 10 live image.	Network error. Connected using wrong TVR 10 parameters (IP address, port number, username or password, etc).

Appendix D
PTZ protocols

The following table lists the PTZ protocols in alphabetical order.

A01	EVI-D30	M-PANEL	SP9096X
ACES	GE RS-422 [1]	NAIJIE	ST-2C160
ADR8060	GE RS-485	Netstreamer	ST-832
ALSON	HD600	NK08G	Tc Pelco P
Anten	HIKVISION	NK16	Tc Pelco-D
Auto-H	Howell	Panasonic	TDWY
Auto-M	HUNTER	PARCO	TECHWIN
BBV	HY	PE60	TL Pelco-p
CAT-KING	Infinova	PEARMAIN	TLHHX-2000
Celotex	INV3609HD	Pelco-D	TWHC
ChangLin	JC-4116	Pelco-d WX	TX-CONTROL-232
DaLi	KC3360S	Pelco-P	USNT
DeltaDome	KLT-NVD2200PS	Philips	VCL-SPEED-DOME
Demo-Speed	LC-D2104	PIH-7625	VCOM VC-2000
Dennard Dome	LCU	PLD	VIDO-B01
DH-CC440	LG	RM110	WEIHAN
DM Dynacolor	LG-Multix	SAE QUICK	XYM-12
D-Max	LiAo	SAE/YAAN	YH-06
DM-Pelco-D	LiLin	Sample	YouLi
ENKEL	M-MV2050	Samsung	YT-PelcoD

[1] The TVR 10 has RS-422 support. However, the TVR 10 must be installed before the first keypad at the beginning of the Digiplex (RS-422) system in order to avoid interfering with keyboard control. You can have the TVR 10 driving a dome directly in a standalone system.

Appendix E
Factory defaults

Menu defaults

Function	Setting
Date format	MM/DD/YY
Normal record speed	30 frames per second (NTSC), 25 frames per second (PAL) at CIF
Stream type	Audio & Video
Menu timeout	1 minute
Video standard	NTSC
Disk overwrite mode	Overwrite
Brightness	50%
Contrast	50%
Hue	50%
Saturation	50%
Daylight Savings Time	Off

Network defaults

Function	Setting
IP address	192.168.111.111
Subnet mask	255.255.255.0
Gateway address	0.0.0.0

Function	Setting
Port	8000
Http port	80

Appendix F
Warranty and support

Warranty information

The warranty period for the TVR 10 is three years from the date of delivery.

Contacting support

For help installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, contact us during business hours (Monday through Friday, excluding holidays).

Table 31: Technical support

North America	
T	888 GE Security (888.437.3287) Toll-free in the US, Puerto Rico, and Canada.
	503.885.5700 outside of the toll-free area.
F	888.329.0332 (Tualatin tech support)
	561.998.6232 (Boca Raton tech support)
E	nstechsrv@ge.com
	gesecurity.customerservice@ge.com
Australia	
E	techsupport@gesecurity.com.au
Latin America	
T	1 305.593.4301

Latin America	
F	1 305.593.4300
E	InfraSec.TechnicalServicesLatinAmerica@ge.com
	InfraSecCustomerService.LatinAmerica@ge.com
Europe, Middle East, and Africa	
W	Select Customer Support at www.gesecurity.eu
China, India, Singapore, Taiwan, Southeast Asia	
E	ges.asiatechservice@ge.com

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