

# DVR Manual (Server)

Version 2.7  
Rev 1.3

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## **System Requirements**

All of the following information is highly recommended for optimum performance and to facilitate a solid understanding for usage and maintenance of this DVR system and its many capabilities. To save time in the future, you can print a copy of this document. Click on the **File** menu and select **Print**, select which printer you want to print from and click **Ok**.

Congratulations on your purchase of the DVR system. To properly operate and control the DVR system you have purchased, the following system requirements are considered to be the absolute minimum:

### ***Server Hardware Requirements***

- 256Mb of system RAM
- 1.8Ghz CPU
- 2 hard disk drives (1 for the O/S, 1 for the recorded video storage)
- 64Mb VGA card
- Video capture/compression card

### ***Server Software Requirements***

- Windows 200/XP (at the time of this release Microsoft Windows Vista and beta packages have not been tested)
- DirectX 8.1 or higher

### ***Client Hardware Requirements***

- 50Mb of available HDD free space
- 256Mb of system RAM
- 1Ghz CPU
- 64Mb VGA card
- Network interface card

### ***Client Software Requirements***

- Windows 2000/Windows XP (at the time of this release Microsoft Windows Vista and beta packages have not been tested)
- DirectX 8.1 or higher

# Installation

## **Install DVR Software**

You should always attempt to install the DVR software application prior to installing the video capture card. The necessary drivers for the hardware are contained in these packages. Insert the DVR software installation disk into your CD/DVD drive. Select which software components you want to install. After you have made your selection, select the **Next** button Until you finish the installation. (Fig 1-0)



(Fig. 1-0)

## **Install DVR Hardware**

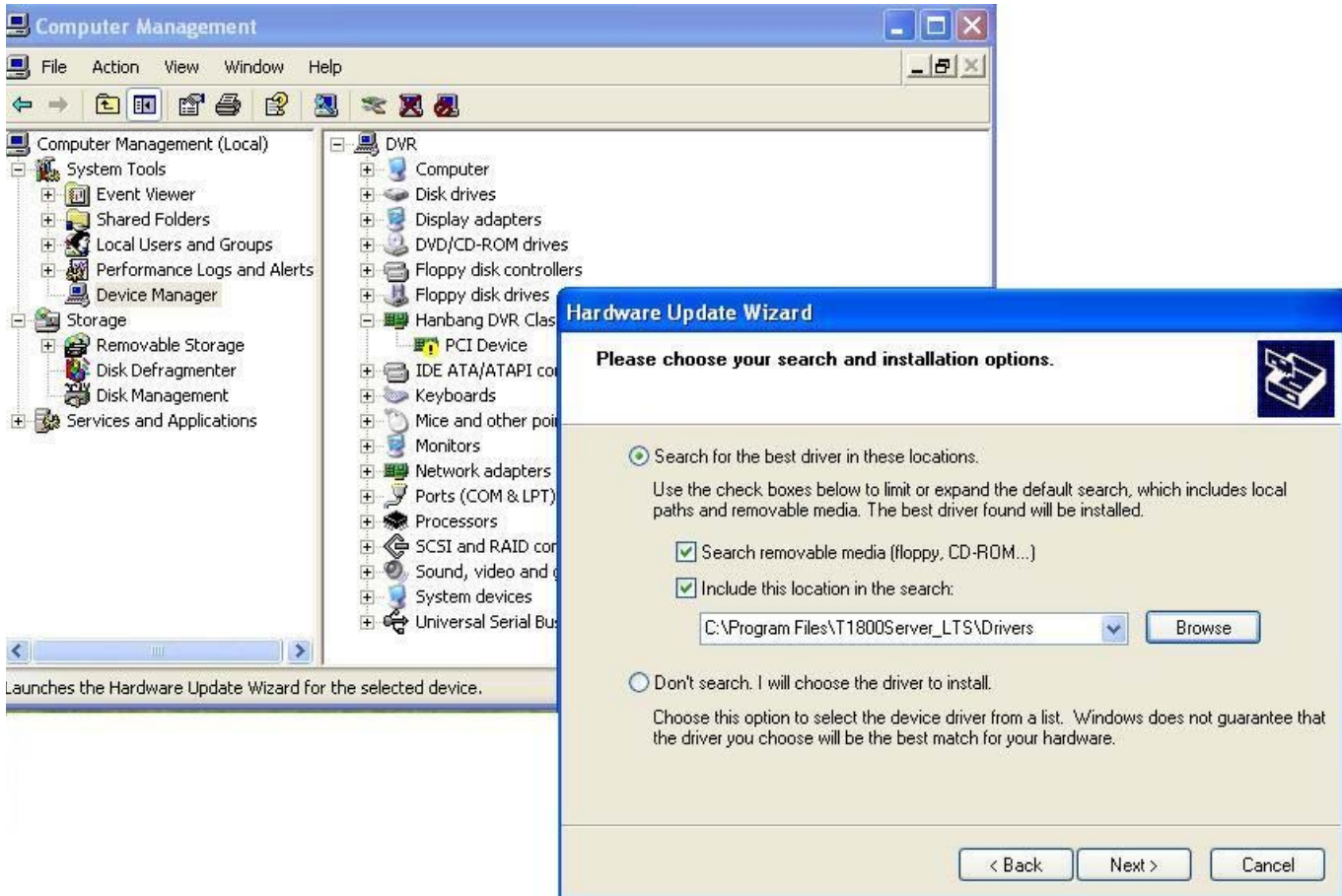
Once the software installation has been completed, it is time to install the required video capture card and its associated driver. For detailed installation instructions, please refer to the **DVR Card Installation Guide** found on the CD. Below is the quick start installation for those familiar with DVR card installations.

Turn off the system and disconnect the power cable. Wait at least 30 seconds to allow any remaining electrical power time to dissipate to prevent possible electrical shot to you or the hardware. Remove the side/top panel of the case according to the manufacturer specifications. Insert the new video capture card being sure to properly seat the card in its appropriate slot. (Fig. 1-1)



(Fig. 1-1)

After you have installed the video capture card re-assemble the case according to the manufacturer specifications. Now start up the DVR machine and install the drivers. You can use the Windows Device Manager to install the drivers manually. The driver folder is located in this path: **C:\Program Files\T1800Server\_LTS\Drivers.** (Fig. 1-2)

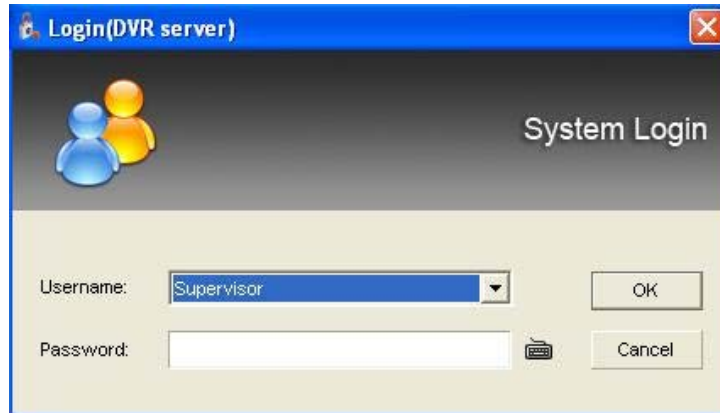


(Fig. 1-2)

## Initial Startup

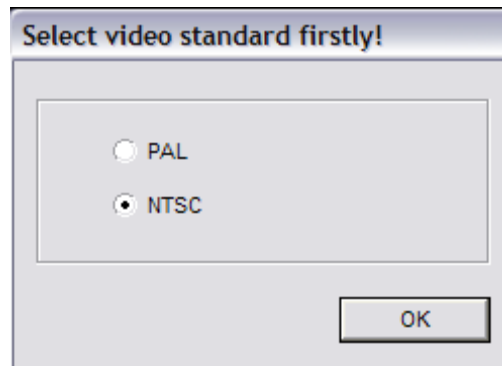
### Initial Setup

Select the shortcut labeled 'HDVR Server'. This icon is a blue monitor that says DVR located on the Windows Desktop. Once the application loads you will be presented with a log-in screen. The default selected username is Supervisor. The password for this user is left blank for the initial setup. To log-in select the **Ok** button. (Fig. 2-0)



(Fig. 2-0)

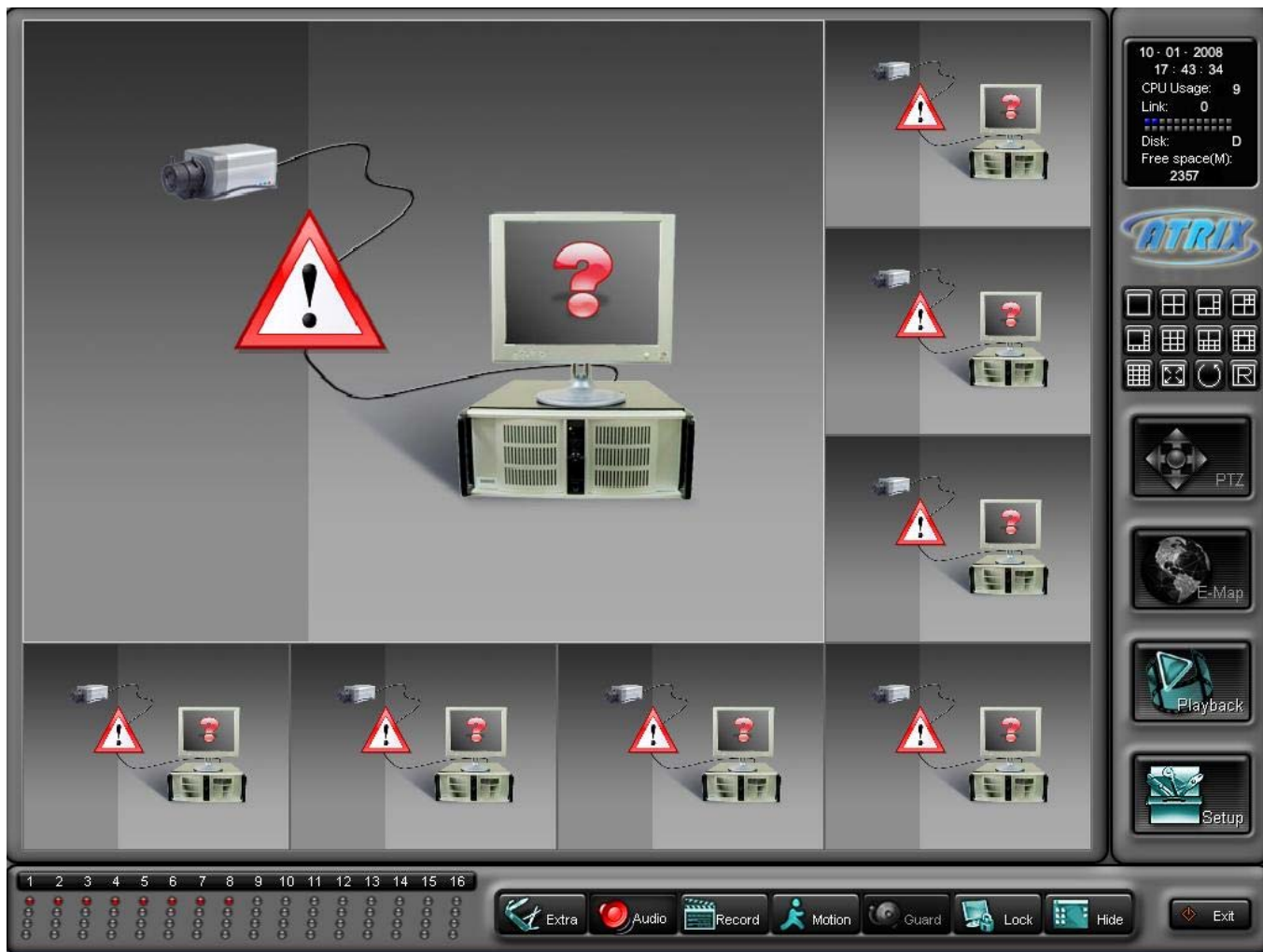
The first time the DVR Server application is run you must select your video standard. If you are inside the United States select the 'NTSC' radio button and click the **Ok** button to finish the Initial Setup. (Fig. 2-1)



(Fig. 2-1)

## Main DVR Screen

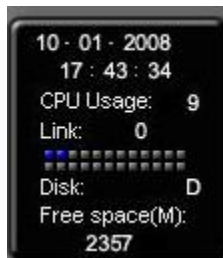
After you started the DVR Server application you will now be looking at the main DVR screen (Live Preview Mode). (Fig. 2-2) This screen contains the DVR Information Window (p. 12), the Camera Status LEDs (p. 12), the Channel Grid (p. 12), the Grid Layout buttons (p. 13), and the DVR Control buttons (p. 14).



(Fig. 2-2)

## DVR Information Window

The top of the DVR Information Window display the current date followed by the current time below. The current time is formatted using the 24 hour time format. The CPU Usage is also displayed. This meter is displayed in % of CPU cycles used from 0% to 100%. Remote client connections are displayed underneath the CPU Usage meter and is labeled Link. This meter will increase by 1 for each channel that the Remote Client application or the Remote Web Client connects to. There are two rows of gray squares. This is the Available Storage display. For each partition configured as a storage location a gray square will light up blue. If the DVR Server application is currently writing video footage to that partition the blue square will be blinking green. The Available Storage display will also tell you which drive letter you are writing to and also how much storage space is currently free (in Mb). (Fig. 2-3)



(Fig. 2-3)

## Camera Status LEDs

The Camera Status LEDs will tell you how each video recording channel is currently functioning. (Fig. 2-4)

- RED: Video signal lost.
- YELLOW: Motion mode recording.
- BLUE: Continuous mode recording.
- GREEN: Manual recording.
- BROWN: Guard Schedule activated.
- GRAY: Video signal confirmed, but not recording.



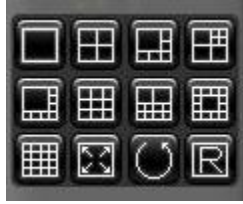
(Fig. 2-4)

## Channel Grid

The Channel Grid contains the Live Video Preview. This is where you will see all of your video camera feeds. You can select each channel by left-clicking the mouse to activate the Live Audio Preview for that channel if live audio is connected to the audio harness for that individual channel. To maximize a video channel, double-click the video feed. To restore the Channel Grid double-click the video feed again. There is also a full screen mode that you can toggle by clicking the right mouse button on any video channel.

## Grid Layout Buttons

The arrangement of the Channel Grid is easily configured by 12 buttons. (Fig. 2-5) Hover your mouse cursor over these buttons for a description of each of the layout button functions.



(Fig. 2-5)

The **Reset Screen Status** button allows you to quickly set the Channel Grid to the original layout as detected by the software on startup. This will allow you to set a grid configuration layout of more than 16 channels for a larger channel DVR Server. (Fig. 2-6)



(Fig. 2-6)

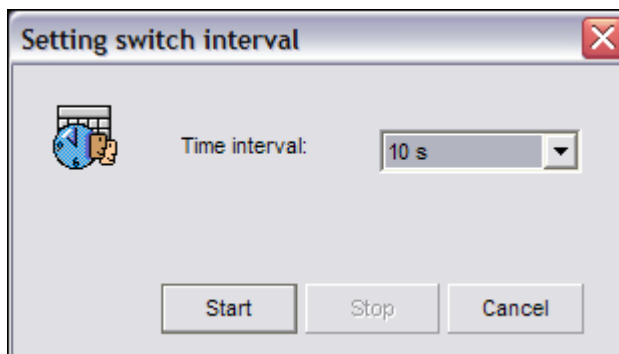
If you choose to display one video channel at a time you can automatically cycle through all connected video feeds. The **Screen Auto Switching** button enables this feature.

(Fig. 2-7)



(Fig. 2-7)

Once you select the **Screen Auto Switching** button the Setting Switch Interval dialog box appears. Here you are able to start and stop the screen switching. You can also set the time interval at which the screen will switch. (Fig. 2-8)



(Fig. 2-8)

## DVR Control Buttons

These buttons will allow you to control and configure the DVR Server application. (Fig.2.9), (Fig. 2-10)



(Fig. 2-9)

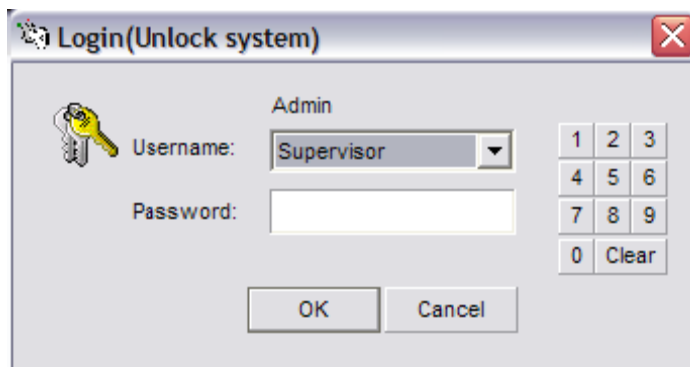


The **Extra** button brings up the Extra Functions dialog box. The **Audio** button toggles the Live Audio Preview for all channels. A red button indicates that Live Preview is currently enabled. The **Record** button toggles manual recording the currently selected video channel. The **Motion** button toggles motion based recording for the currently selected channel. The **Guard** button toggles the alarm sensors on and off. The **Lock** button toggles the availability of all buttons on the main DVR screen until the correct username and password are entered. The **Hide** button will minimize the DVR Server application. The **Exit** button will close the DVR Server application. The **PTZ** button will allow you to control PTZ cameras that are connected to the system. The **E-Map** button will bring up the electronic map. The **Playback** button will switch to the Playback mode. The **Setup** button will allow you to configure the system.

(Fig. 2-10)

## Locking/Unlocking and Exiting

The **Lock** button will allow the use to disable all buttons that appear on the main DVR screen. This locks out unauthorized access to the DVR Server application. Pressing the **Lock** button when the system is already locked brings up the Unlock System dialog box. (Fig. 2-11) Select your username from the Username drop down box, type in your password in the Password field and click the **Ok** button to unlock the system. To exit the DVR Server application, simply select the **Exit** button. A dialog box similar to the Unlock System dialog box appears. Follow the same instructions to exit the DVR software.

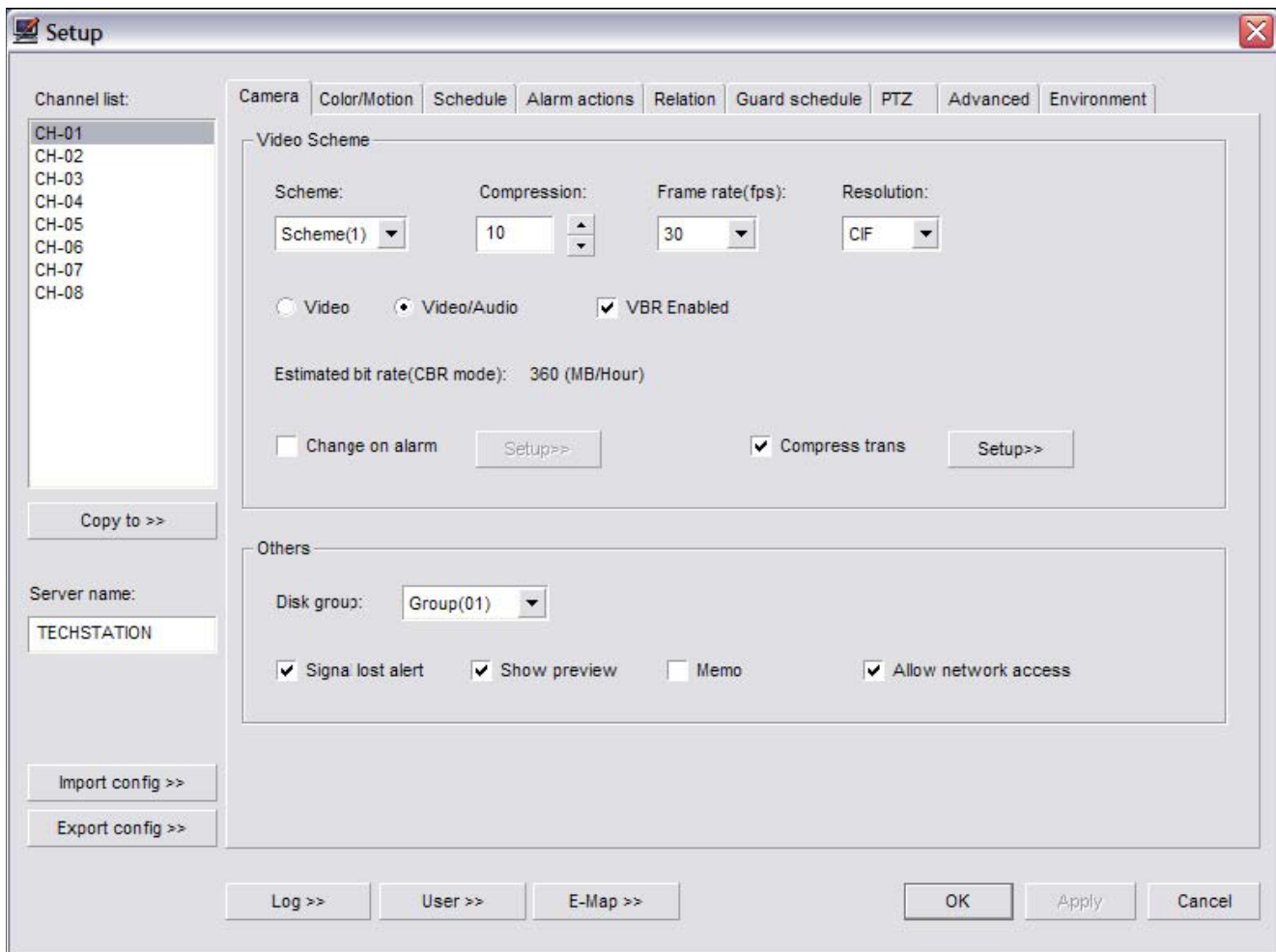


(Fig. 2-11)

# Server Setup

## Setup Button

Selecting the **Setup** button will open the Setup dialog box. The Setup dialog box is divided into nine different tabs: Camera (p. 12), Color/Motion (p. 14), Schedule (p. 15), alarm Actions (p. 18), Relation (p. 20), Guard Schedule (p. 21), PTZ (p. 22), Advanced (p. 24), and Environment (p. 26).

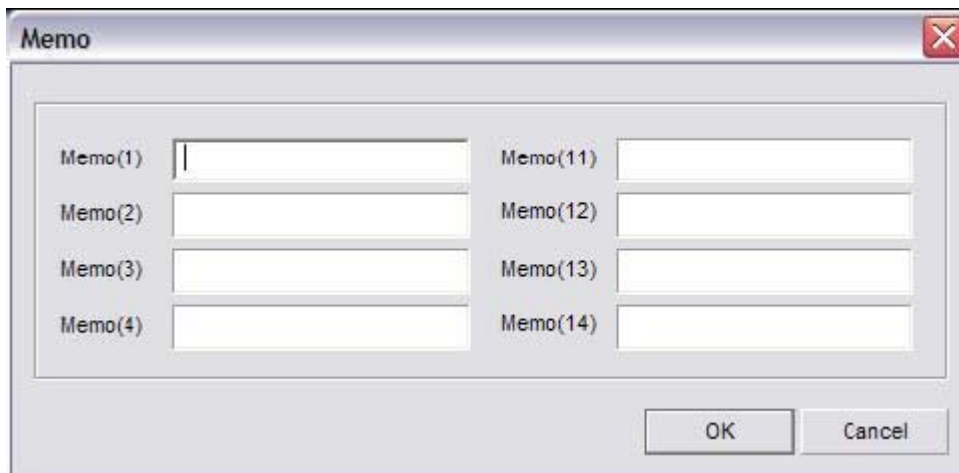


(Fig. 3-0)

## Camera Tab (Fig. 3-0)

Channel Selection: Using the Channel List you can select the desired channel by leftclicking on the channel name. You can configure different settings for each individual channel or apply them to multiple channels using the **Copy To** button.

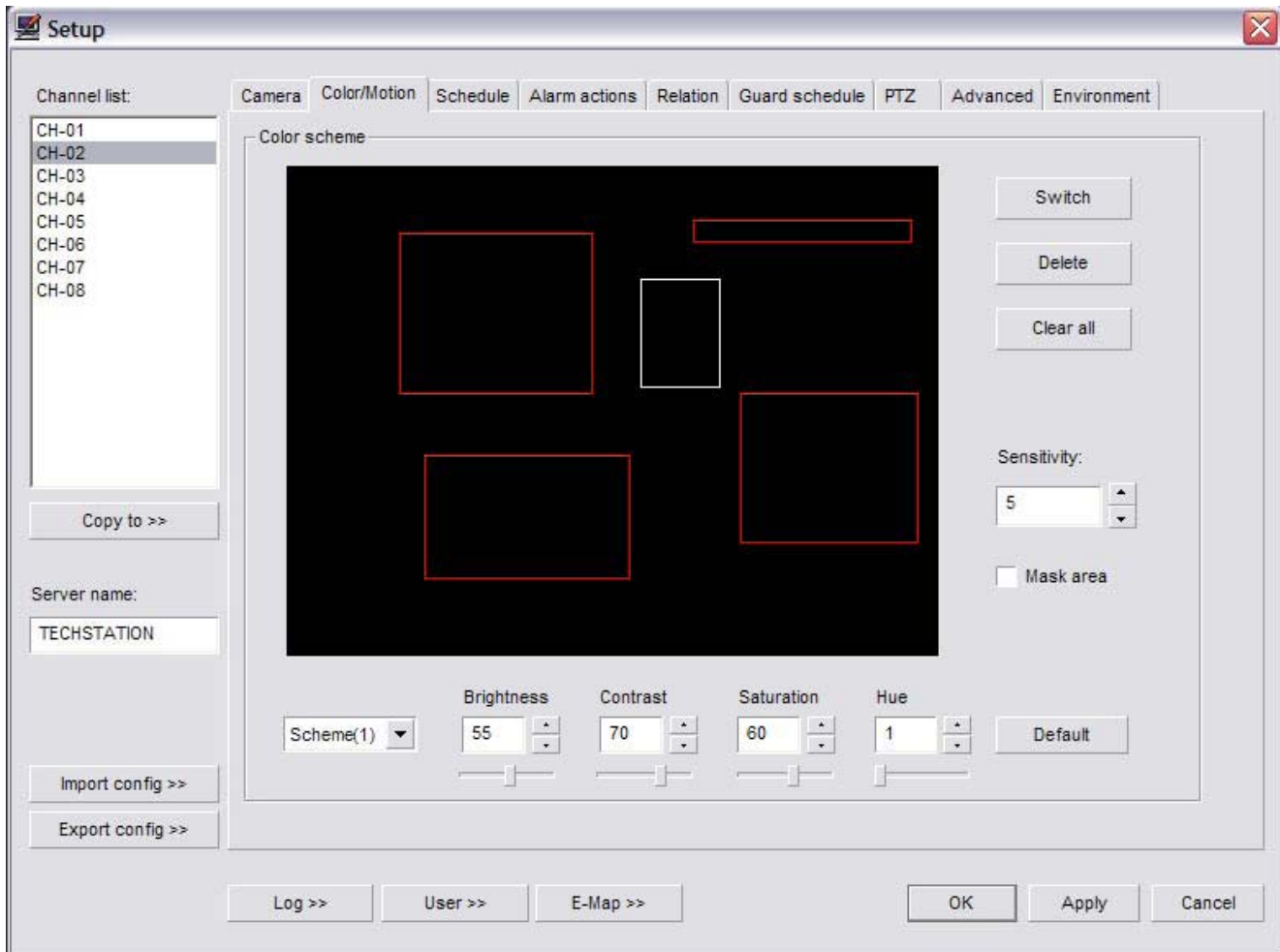
Video Scheme: You can configure up to three different video schemes. 10 levels of Compression are available. 1 is the highest compression which will give you the smallest file size but with lower video quality. You can set the Frame Rate from 1fps to 30fps. The higher the frame rate, the smoother the video. You can also choose to encode the video using VBR by enabling the VBR Enabled check box. VBR is Variable Bit Rate. During low motion situations the bit rate will decrease creating a smaller file size. Depending on the video capture card, there are up to five different resolutions available to record: QCIF – 176x144, CIF – 352x240, DCIF – 528x360, 2CIF – 704x240, and 4CIF – 704x576. The Video and Video/Audio radio buttons set the audio recording mode – either video recording only or video recording with associated audio channels. The Change On Alarm feature allows a separate Video Scheme to be used during an alarm condition. Use the **Setup** button next to the Change On Alarm check box to configure the video settings. Compress Trans, if enabled, allows you to set a different video quality for all the client connections by using the **Setup** button next to the Compress Trans check box. This allows you to raise or lower the client video quality to adjust the bandwidth usage for varying network speeds. Others: The Disk Group drop down box selects which Disk Group each video channel records to. The Signal Lost Alert will write a log entry when a video feed is disconnected from the DVR when enabled. The Show Preview check box will toggle the Live Video Preview on the main DVR screen. The Memo feature allows an additional description for the video channel to be input when the **Manual Record** button is pressed. (Fig. 3-1) The Allow Network Access check box toggles the ability for remote clients to connect to the DVR Server. Server Name: The Server Name identifies the DVR Server. By default this name is taken from the Computer Name that is configured in Microsoft Windows XP/2000.



The image shows a 'Memo' dialog box with a title bar containing the word 'Memo' and a close button (X). The dialog box contains 14 text input fields arranged in two columns. The left column has fields labeled Memo(1) through Memo(4), and the right column has fields labeled Memo(11) through Memo(14). At the bottom right of the dialog box are two buttons: 'OK' and 'Cancel'.

(Fig. 3-1)

## Color/Motion Tab (Fig. 3-2)



(Fig. 3-2)

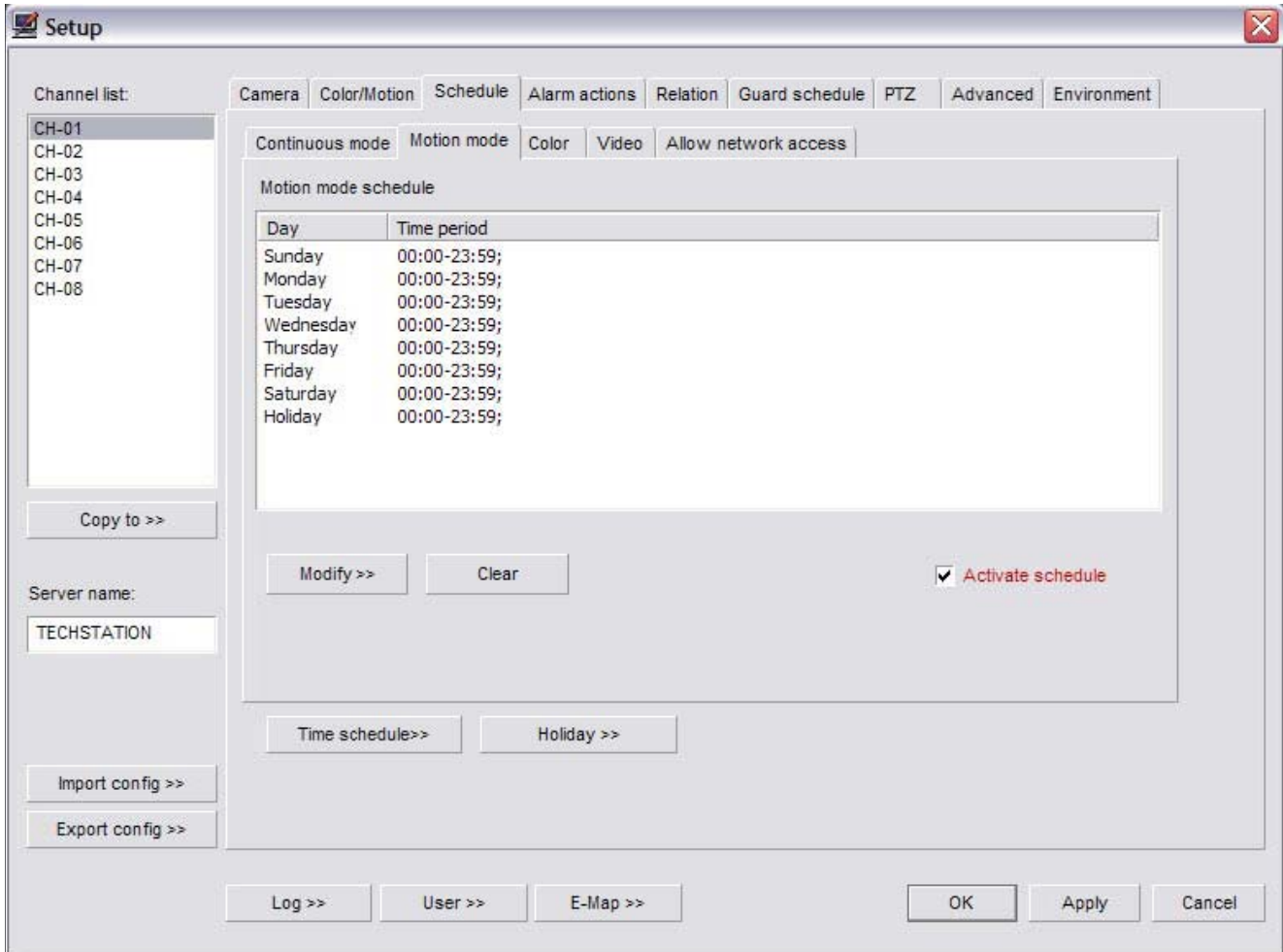
The Color/Motion tab can be used to setup the motion detection areas and the video signal parameters such as brightness, contrast, saturation and hue for each individual video channel.

Multiple motion detection zone can be configured for each selected video channel. A different motion sensitivity can be set for each of these zones. To create a motion detection zone left-click and drag a box around the desired area and set the desired sensitivity level. Set a lower sensitivity for objects that appear closer in the field of view and a higher sensitivity for objects that are further away in the field of view. To switch between motion detection zones use the **Switch** button. The currently selected motion detection zone will highlight white while the others will be red. The **Delete** button will remove the currently selected motion zone while the **Clear All** button will delete all motion detection zones. If no motion detection zones are configured, the entire video feed will act as a single motion detection zone. The **Mask** button will create a black square over the currently selected motion zone. This is a privacy mask and the same black box will appear in the recorded video.

There are 5 configurable Schemes for video signal parameters. You can adjust the brightness, contrast, saturation, and hue for varying video signal situations such as low light and direct sunlight. Pressing the **Default** button will restore the video signal settings back to the factory default for the currently selected scheme.

**Schedule Tab** (Fig. 3-3)

You can set separate schedules for Continuous Mode, Motion Mode, Color, Video, and Allow Network Access. Each different schedule tab has a user definable schedule.



(Fig. 3-3)

Pressing the **Clear** button will clear the schedule for the currently selected schedule tab. The Activate Schedule check box toggles each schedule on and off for each selected video channel in the Channel List. The **Modify** button will bring up the Set-up Time Schedule dialog box and will allow any of the 16 different time schemes to be applied. (Fig. 3-4)

Setup time schedule

Time period: Scheme(3)

Time period(1): 00 : 00 To 07 : 59

Time period(2): 12 : 00 To 13 : 59

Time period(3): 18 : 00 To 23 : 59

Time period(4): : To :

Time period(5): : To :

Time period(6): : To :

Time period(7): : To :

Time period(8): : To :

Copy to

Sunday  Monday  Tuesday  Wednesday

Thursday  Friday  Saturday  Holiday

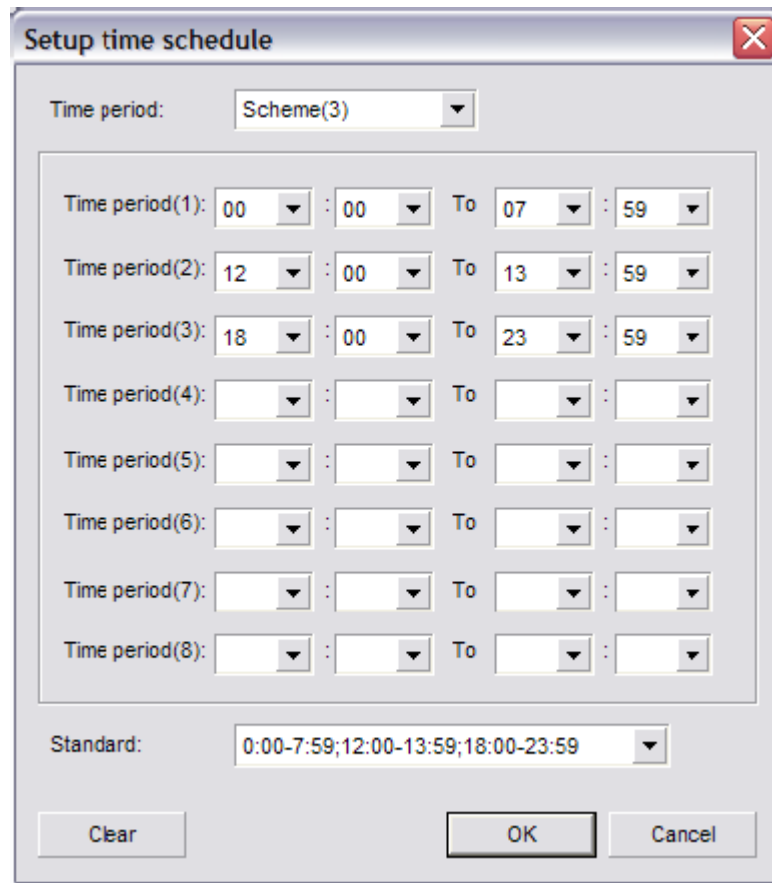
Select all Invert

OK Clear Cancel

(Fig. 3-4)

The Time Period drop down box will allow you to apply any of the 16 different time schemes. To apply the time scheme to any day simply check the box next to the day. Use the **Select All** button to quickly check all days including Holiday. Use the **Invert** button to change the day selection to the opposite of the currently selected. To clear the schedule select the **Clear** button.

The **Time Schedule** button brings up the Setup Time Schedule dialog box. (Fig. 3-5) Here you can change the configured time periods for each of the schemes. Use the Time Period drop down boxes to select the starting hour and minute and the ending hour and minute. You can use the Standard drop down box to quickly apply the pre-configured common time periods. Use the **Clear** button to erase all configured time periods for the selected scheme.



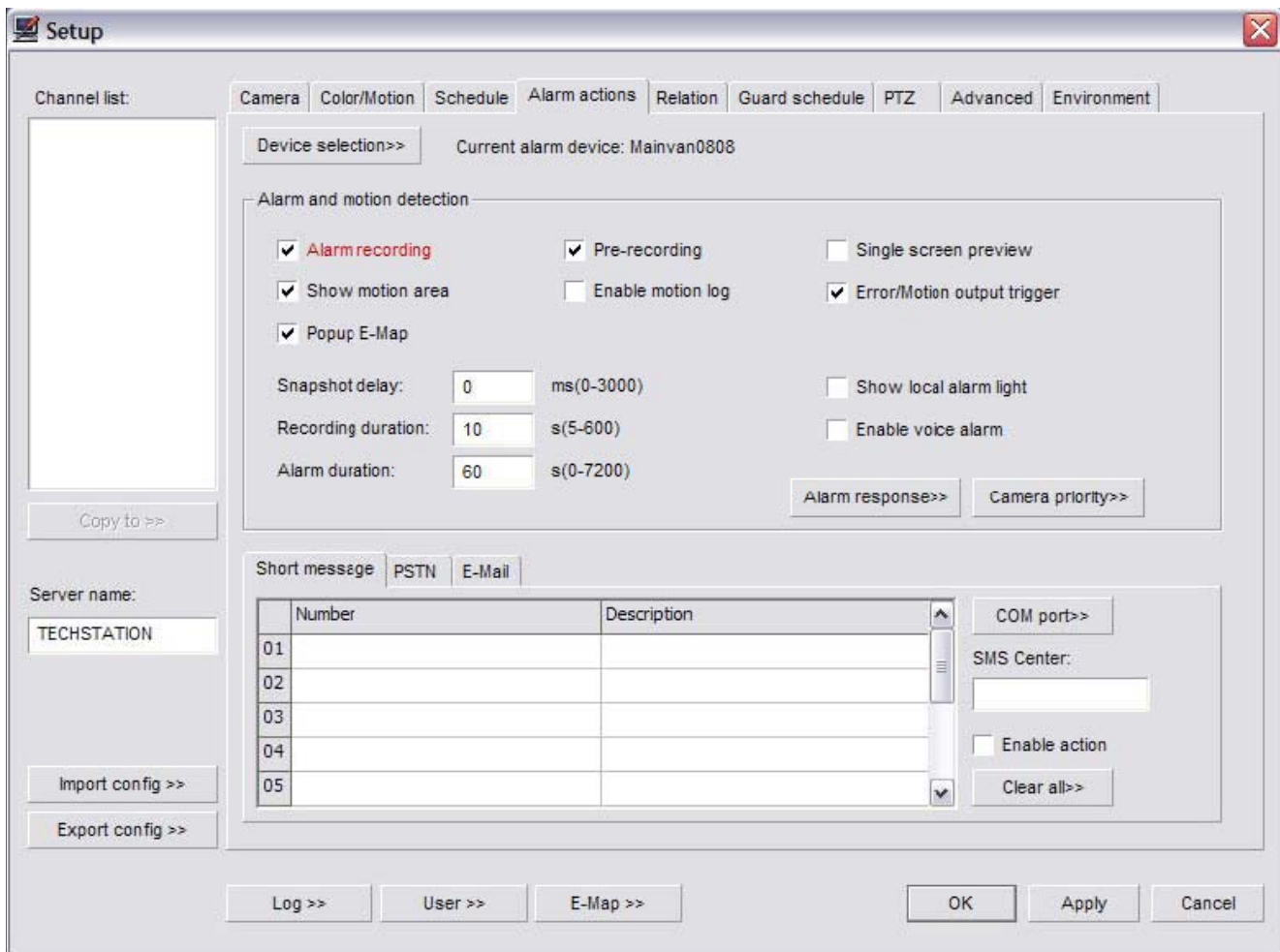
(Fig. 3-5)

The **Holiday** button will bring up the Holiday Setting dialog box. (Fig. 3-6) Use the Select a Date drop down box to bring up a graphical calendar to select individual dates. Click the **Add** button to add the date to the Holiday Date List. Use the **Clear** button to quickly erase all added dates from the list. To delete an individual date left-click the date, then click the **Delete** button.



(Fig. 3-6)

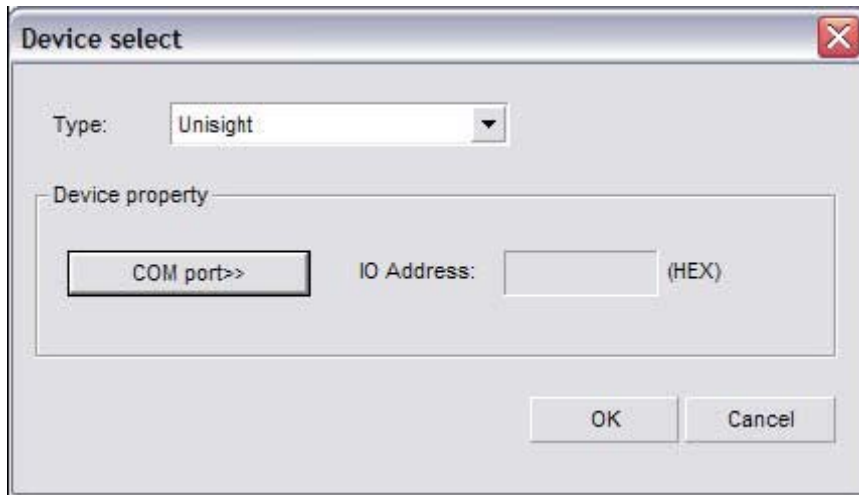
## Alarm Actions Tab (Fig. 3-7)



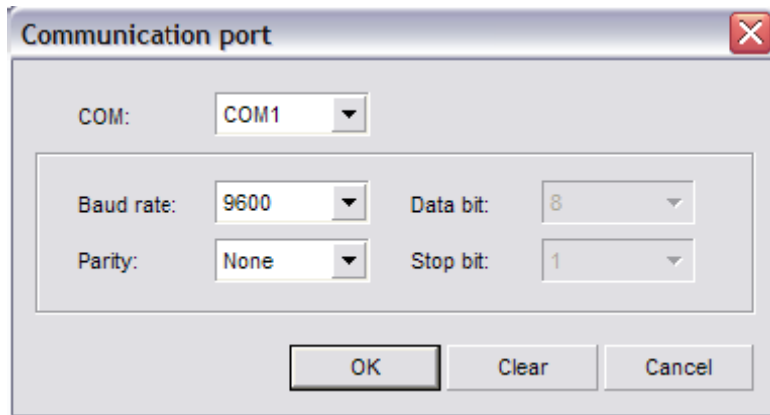
(Fig. 3-7)

The **Device Selection** button will bring up the Device Select dialog box. (Fig. 3-8) Select your supported alarm relay controller from the Type drop down box. To configure the communication settings for your alarm relay controller select the **COM Port** button which will bring up the Communication Port dialog box. (Fig. 3-9) Set the correct device settings, refer to the manufacturer's specifications, using the associated drop boxes.

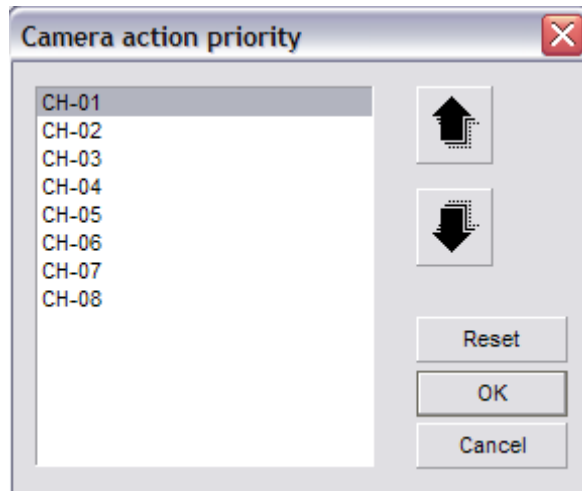
The **Camera Priority** button will open the Camera Action Priority dialog box. (Fig. 3-10) Here you can raise or lower the priority of individual channels. When the Single Screen Preview feature is enabled, the channel with the highest priority will remain visible. This feature brings the alarm condition to your attention and will not change without user input, either by double-clicking the single screen or by selecting one of the **Grid Layout** buttons.



(Fig. 3-8)



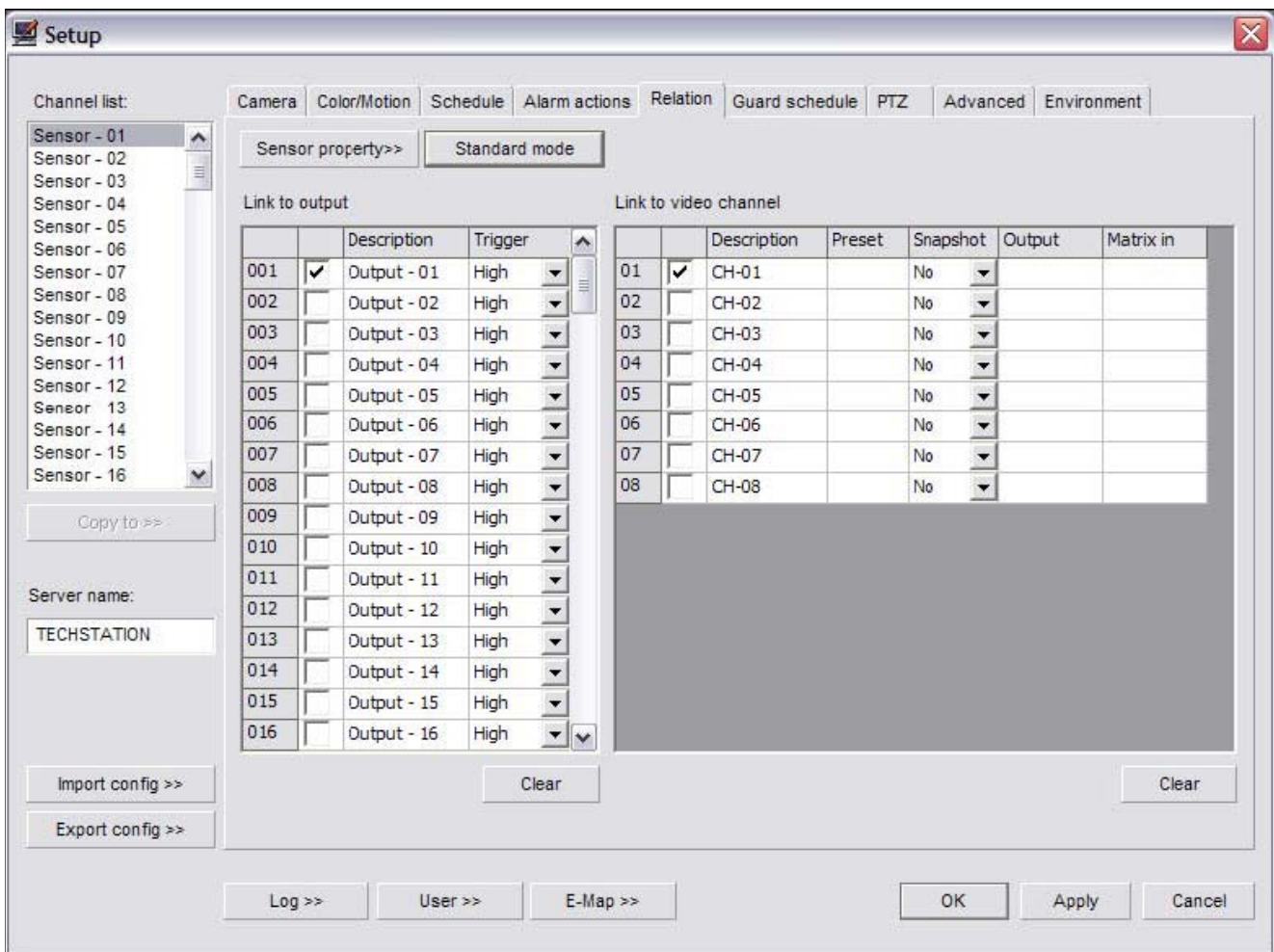
(Fig. 3-9)



(Fig. 3-10)

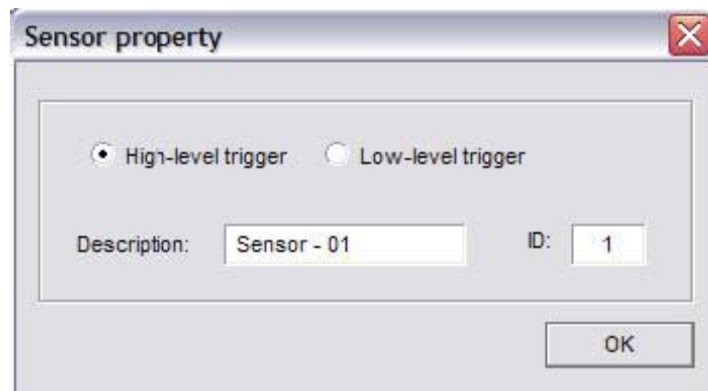
The Alarm Recording check box will toggle alarm recordings. Alarm conditions include motion detection and external sensor triggers. The Show Motion Area check box toggles the motion detection zone box on the Live Preview. (p. 11) The Enable Motion Log check box will enable the motion detection based alarm condition triggering. This must be enabled for the E-map feature to pop-up on motion detection. It is also required for motion detection based E-mail triggering. The Single Screen Preview feature will maximize any video channel that detects motion. If more than one video channel detects motion the Single Screen Preview will show the video channel with the highest priority based on the Camera Priority. (p. 22) The Error/Motion Output Trigger check box will enable motion detection based external alarm relay controller triggering. This must be enabled if you want motion detection to trigger an external alarm device. The Show Local Alarm Light check box toggles the display of a visual alarm light in the center of the screen during alarm conditions. The Enable Voice Alarm check box toggles an audible sound that plays through the speakers connected to the DVR Server when an alarm condition is detected (motion detection/alarm trigger). To select the sound to be played select the **Alarm Response** button. (Fig. 3-11)

**Relation Tab** (Fig. 3-12)



(Fig. 3-12)

The Relation tab allows you to configure any supported alarm relay controller device that you have connected to the DVR Server. To configure an individual sensor connected to the alarm relay controller select the sensor from the Sensor list. Once the sensor is highlighted select the **Sensor Property** button. The Sensor Property dialog box will appear. (Fig. 3-13) Determine if your sensor is a high or low level trigger and select the appropriate radio button. The ID field corresponds to which input you have your sensor connected to on the alarm relay controller. Input the proper number in the ID field. Using the Description field, you can give your sensors different names. Once you have your sensor configured select the **Ok** button to return to the Relation tab.



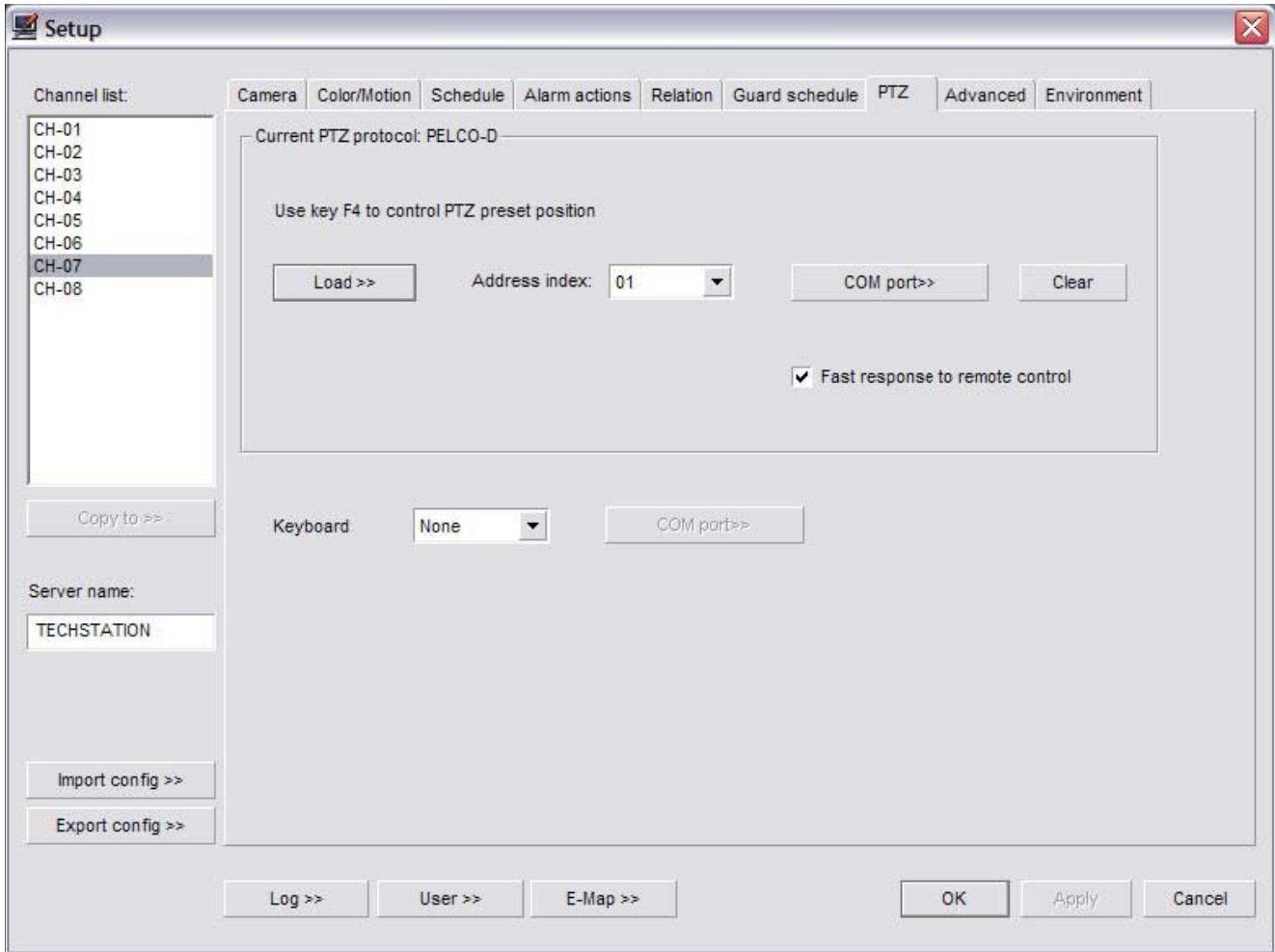
(Fig. 3-13)

You can link each individual sensor to either a video channel or an alarm output on the alarm relay controller. To configure the alarm outputs select the output number that the alarm device is connected to on the alarm relay controller by checking the box in Link To Output. Enter a description and select either High or Low for the Trigger. You can also select a High Level Pulse or a Low Level Pulse. The Pulse will trigger the output for a short time and then turn off. You can link several alarm outputs to a single sensor. To link a sensor to a video channel for recording select the sensor from the Sensor List. Then check the box next to the desired video channel under the Link To Video Channel. The Preset column allows you to enter a PTZ Preset Position number (p. 40) that the PTZ camera will automatically move to when the sensor is triggered. The Snapshot column will allow you to save a snapshot when the sensor is triggered. The Output column allows you to assign an alarm output number that will trigger the corresponding alarm device connected to that specific output on the alarm relay controller. The Matrix In column will display the video channel number that is entered on Public View 01. (p. 39)

### **Guard Schedule Tab**

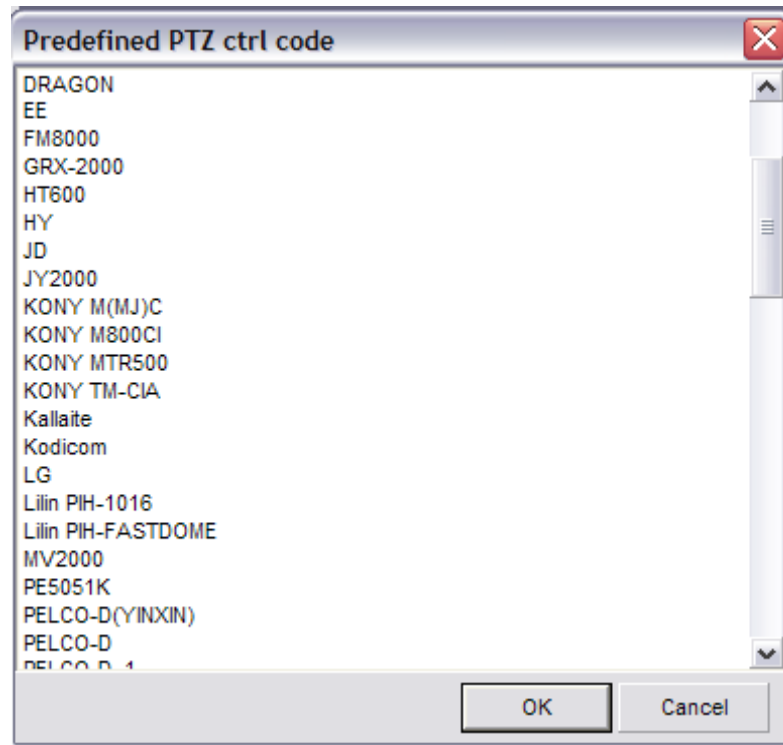
The Guard Schedule tab is where you configure the schedule for each sensor connected to the alarm relay controller. Unless a schedule is set and activated, the sensor(s) attached to the alarm relay controller will be disabled. Refer to the Schedule Tab section for setup. (p. 15)

**PTZ Tab** (Fig. 3-14)

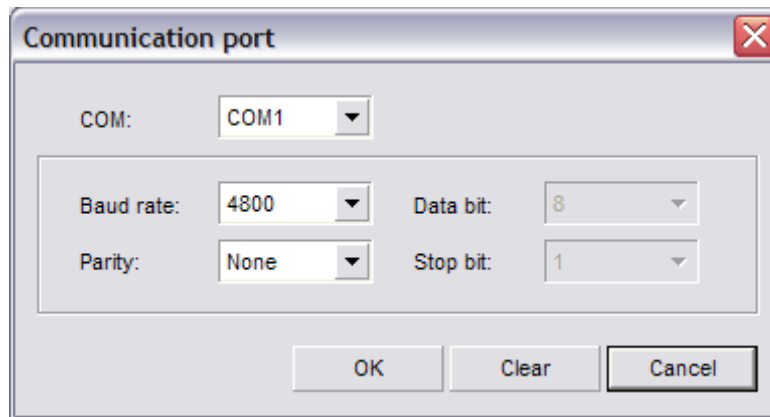


(Fig. 3-14)

To configure a PTZ camera select the video channel that the PTZ camera is connected to in the Channel List. Select the **Load** button to bring up the Predefined PTZ Ctrl Code dialog box. (Fig. 3-15) Locate the supported PTZ camera by scrolling down the list and select it by left-clicking, then select the **Ok** button. Once the protocol is configured, assign the correct address to the PTZ camera using the Address Index drop down box. Select the **COM Port** button to bring up the Communication Port dialog box. (Fig. 3-16) Configure each drop down box as specified by the PTZ camera manufacturer and select the **Ok** button to return to the PTZ tab.



(Fig. 3-15)

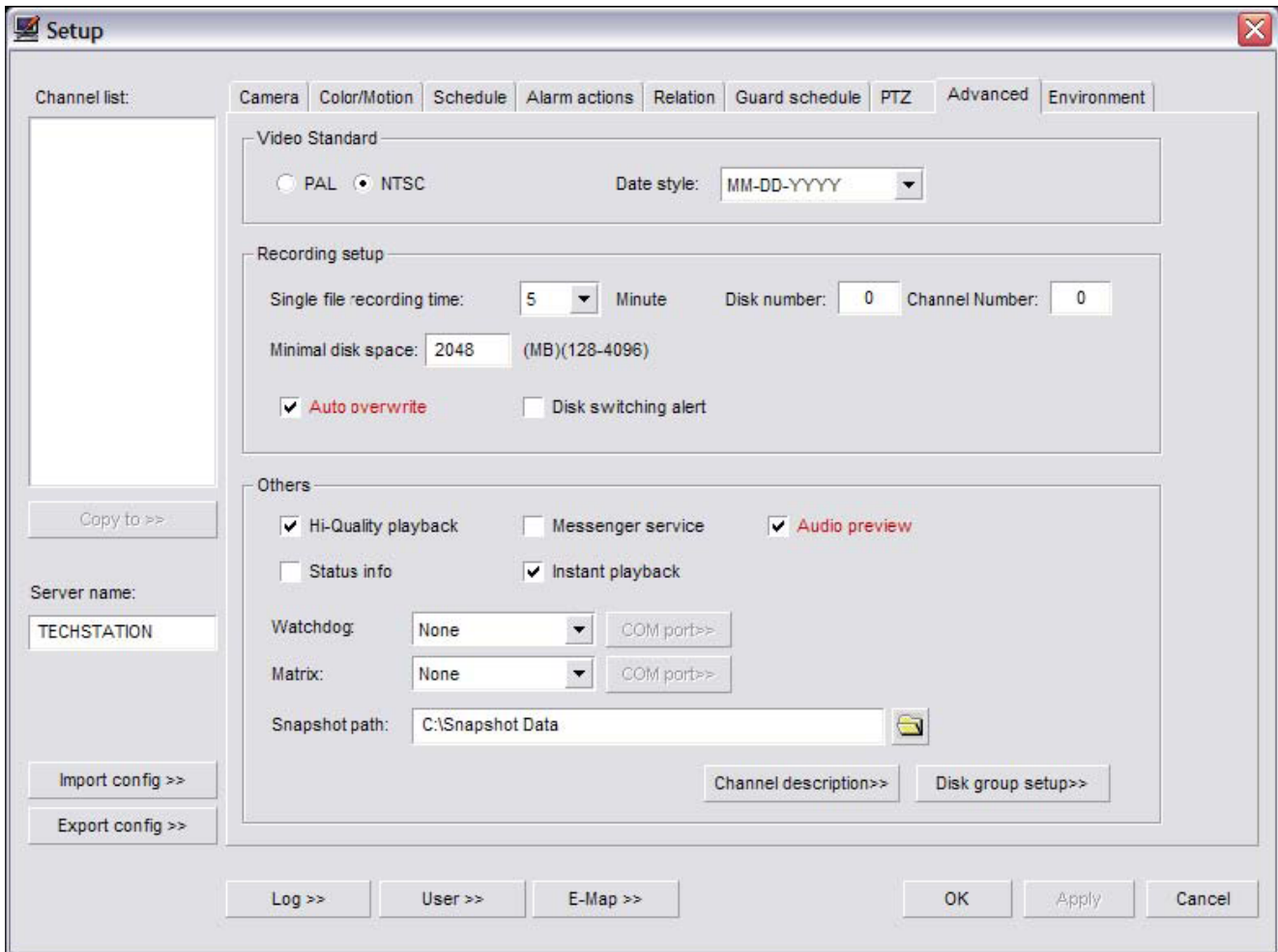


(Fig. 3-16)

To select an external PTZ control device, such as a PTZ joystick, select the supported device from the Keyboard drop down box and select the **COM Port** button to bring up the Communication Port dialog box. (Fig. 3-16) Configure each drop down box as specified by the manufacturer.

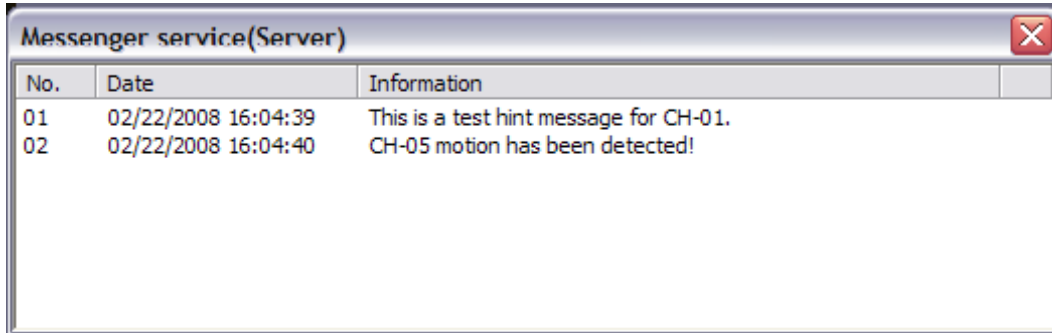
### Advanced Tab (Fig. 3-17)

Video Standard: During the Initial Startup (p. 10) the video standard was already selected and should not need to be configured. Using the Date Style drop down box you can change how the date is displayed on the OSD. Recording Setup: The Single File Recording Time allows you to select the maximum amount of time before a new recording file is created. Remember that you cannot create a clip that spans multiple recording files and that the longer the Single File Recording Time is the longer it will take to load before playing back. The Minimal Disk Space is the amount of free space needed on a partition to record video to. Once this value is reached the DVR Server will automatically free up more disk space to continue to record. The Auto Overwrite feature will automatically free up disk space (this will delete the oldest video recording files) and continue to record. The Disk Switching Alert will open a message box every time the server starts recording video to a different partition. You must click the **Ok** button before the DVR Server will start recording again.



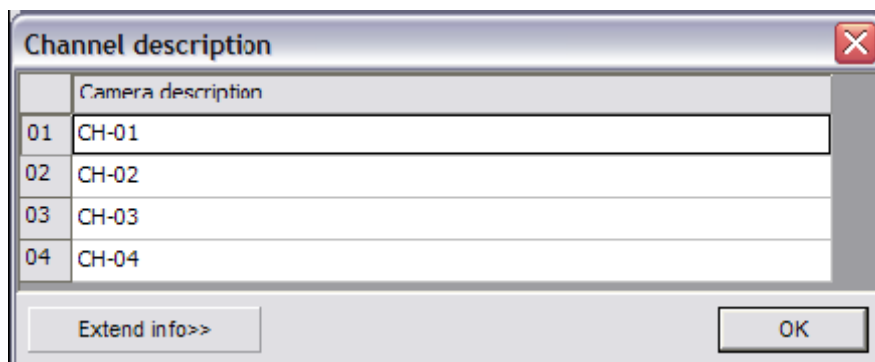
(Fig. 3-17)

Others: The High-Quality Playback check box changes the playback quality. The Voice Chat check toggles the ability to use a microphone and speakers to talk between the Server and the Client. The first time the Voice Chat (p. 39) is activated the Windows Sound Configuration will open and you will need to configure the microphone. The Messenger Service check box enables the Messenger Service dialog box pop-up. (Fig. 3-18) This dialog box will appear at the bottom of the screen and display various messages pertaining to the DVR Server. The Audio Preview check box will toggle the Live Preview Audio in the Main DVR Screen. The Status Info check box toggles the display of the recording status information on each video channel preview image. The Instant Playback check box toggles the Instant Playback feature. (p. 38)



(Fig. 3-18)

The Watchdog drop down box allows you to setup a hardware watchdog. Use the **COM Port** button next to the Watchdog drop down box to configure the watchdog settings according to the manufacturer. The Matrix drop down box will allow you to select any of the supported matrix cards. Depending on the manufacturer you may or may not need to configure the COM port settings using the **COM Port** button. The Snapshot Path is the absolute path where all the snapshots taken will be stored. To select a different location select the **Open** button (open yellow folder) and select the desired directory. To change the name of the video channels select the **Channel Description** button. (Fig. 3-19) Type in a name for each channel in the Camera Description field. You can add an extended description to each channel by clicking the **Extend Info** button. (Fig. 3-20) The Extended Info is only editable here in the Setup Menu, you cannot change the text while viewing the Extended Info in the Live Preview mode.

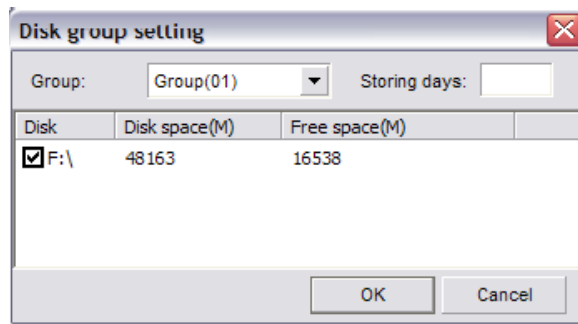


(Fig. 3-19)



(Fig. 3-20)

To configure the storage partitions select the **Disk Group Setup** button. (Fig. 3-21) Select a disk group from the Group drop down box. All available partitions will be displayed. check/un-check the box next to each partition to add/remove it from the disk group. You can assign different disk groups to different video channels.



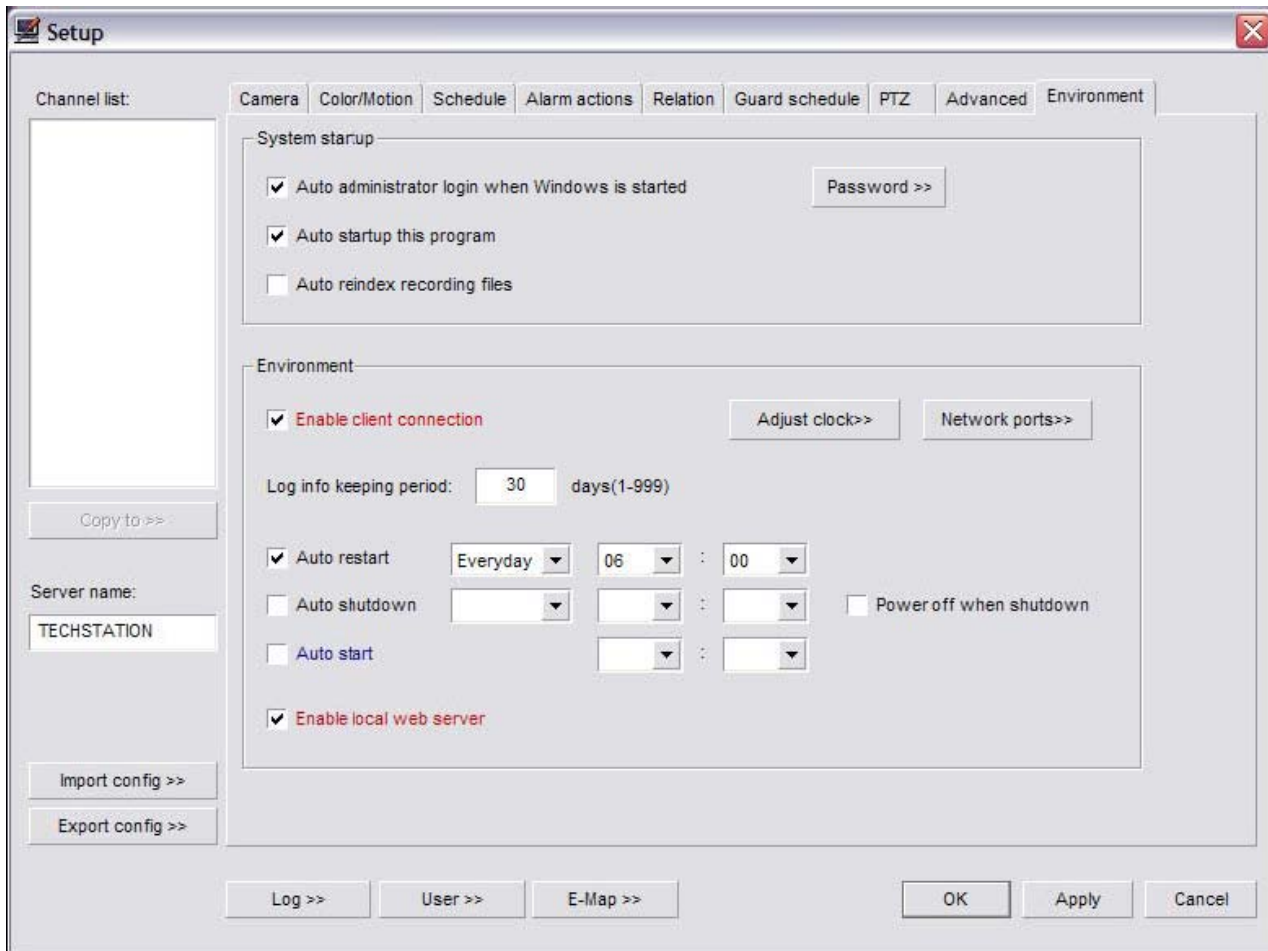
(Fig. 3-21)

The **Import Config** and **Export Config** buttons will appear on all tabs. You can choose to import or export your DVR Server configuration. This allows you to copy your configuration to another DVR Server to quickly setup multiple DVR Servers or to backup your settings in case of emergency. To export your configuration select the **Export Config** button. The standard Windows Save dialog box appears where you will be able to choose the name and location to save your configuration field to. To Import a configuration file select the **Import Config** button. The standard Windows Open dialog box appears where you will be able to select a compatible configuration file to import. Once you import a configuration file, the settings will be automatically applied.

**Environment Tab** (Fig. 3-22) System Startup: To have the DVR Server application automatically log into Windows XP/2000 on startup check the Auto Administrator Login When Windows Is Started check box. If the DVR Server is to be added to a domain select the **Password** button and type in the domain password in the New Password and Retype fields. To have the DVR Server application start when Windows XP/2000 loads check the Auto Startup This Program check box. The Auto Reindex Recording Files check box will reindex all recorded video files after the DVR Server has finished loading.

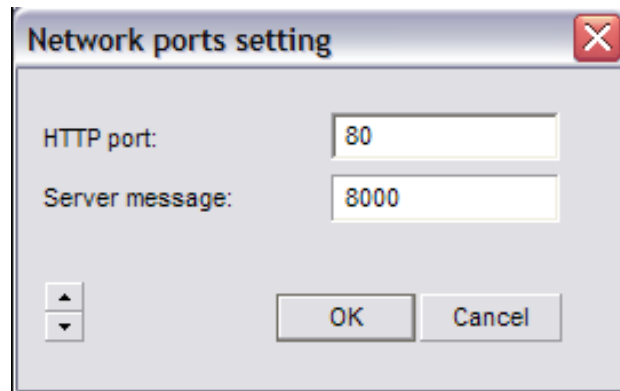
**Environment Tab** (Fig. 3-22)

System Startup: To have the DVR Server application automatically log into Windows XP/2000 on startup check the Auto Administrator Login When Windows Is Started check box. If the DVR Server is to be added to a domain select the **Password** button and type in the domain password in the New Password and Retype fields. To have the DVR Server application start when Windows XP/2000 loads check the Auto Startup This Program check box. The Auto Reindex Recording Files check box will reindex all recorded video files after the DVR Server has finished loading.



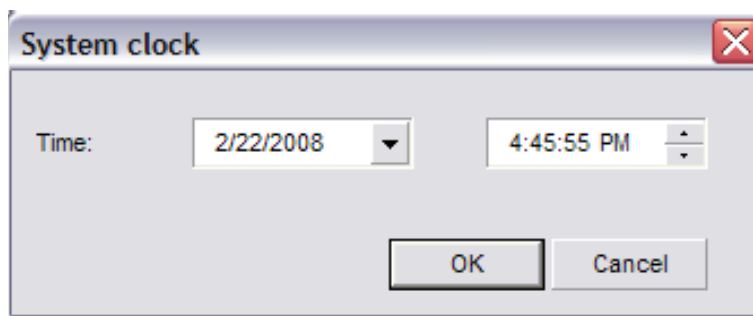
(Fig. 3-22)

Environment: The Enable Client Connection check box needs to be checked to allow remote client users to successfully connect to the server. A log is created for every day that the DVR Server is running. To change the number of days that these logs are stored type in the desired number into the Log Info Keeping Period field. To have the DVR Server automatically restart check the Auto Restart check box. To specify when this restart will happen select the desired day, hour, and minute using the corresponding drop down boxes. It is recommended to restart at least once a week. To shutdown automatically check the Auto Shutdown check box and configure the day, hour, and minute drop down boxes. Auto Shutdown will only exit the DVR Server application. To have the entire PC turn off check the Power Off When Shutdown check box. The server application can be scheduled to automatically start at a specific time. To enable this feature check the Auto Start check box and select the desired hour and minute using the drop down boxes. For the Auto Start feature to function the PC must already be on and Windows XP/2000 must be running. To enable the DVR Web Server check the Enable Local Web Server check box. For the DVR Server/Web Server to be accessible from remote locations you must forward ports through the router to the DVR machine. To configure which port is used select the **Network Ports** button. (Fig. 3-23) Input the desired port number of the HTTP Port, which is used for the Web Server, and the Server Message, which is used for the Client Application.



(Fig. 3-23)

To synchronize the system clock to the local time select the **Adjust Clock** button. (Fig. 3-24) The System Clock dialog box will appear and allow you to change the system time and date.

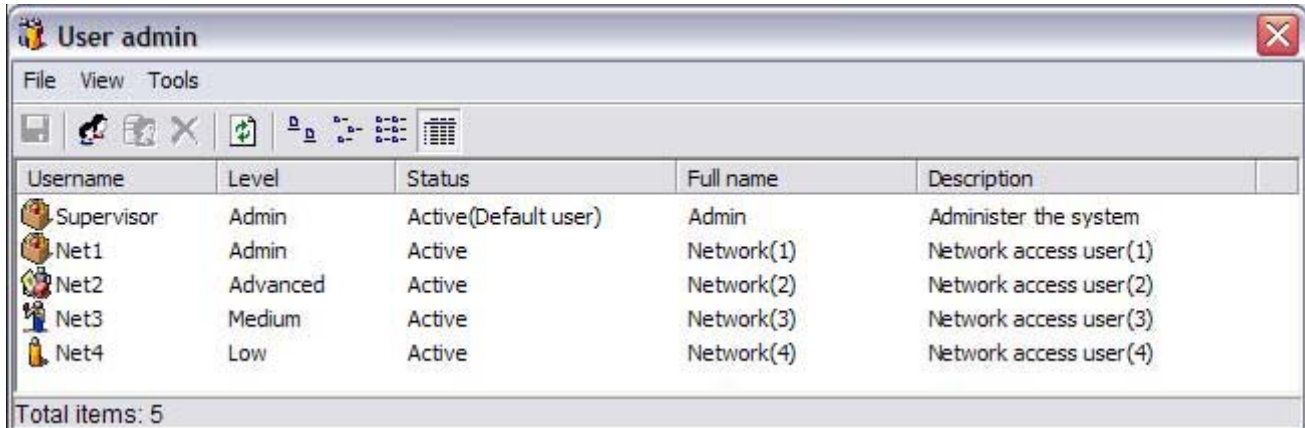


(Fig. 3-24)

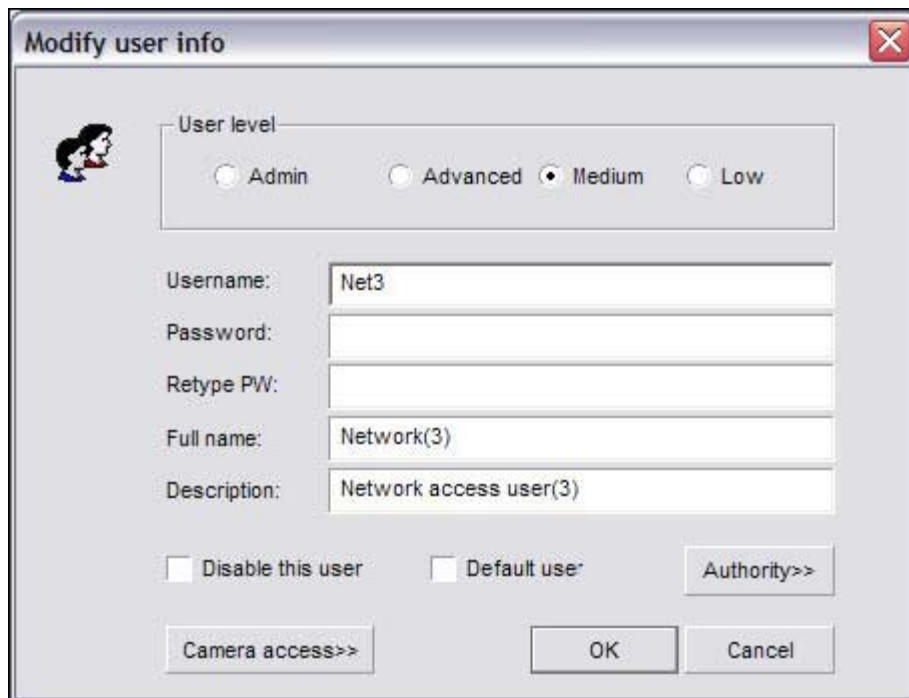
The Auto Reindex Recording Files check box will automatically start the reindexing process after the DVR Server application finishes loading. Due to imperfections in hard disk drive technology data corruption may occur. In this case you will need to reindex the recording files. The reindexing process scans each recorded video file and recreates the index file. Depending on how many recorded video files there are on the storage partitions this process may take up to two hours. If recorded video does not appear in the Playback mode or if the Playback mode takes more than five minutes to load it may indicate that there are missing or corrupt index files, you will need to reindex. During Daylight Savings when the time is set back one hour the DVR Server will have two recordings for that same hour. To correct this situation you must reindex.

## User Button

The **User** button will allow you to add/delete users and to modify their permissions. There are several buttons on the top of the User Admin dialog box. (Fig. 3-25) Hover the mouse cursor over these buttons to see what each of them are. To delete a user from the system select the user from the list and select the **Delete** button. To configure an existing user select the **Modify** button. To add an additional user select the **Add User** button, the Add User dialog box will appear. (Fig. 3-26)



(Fig. 3-25)



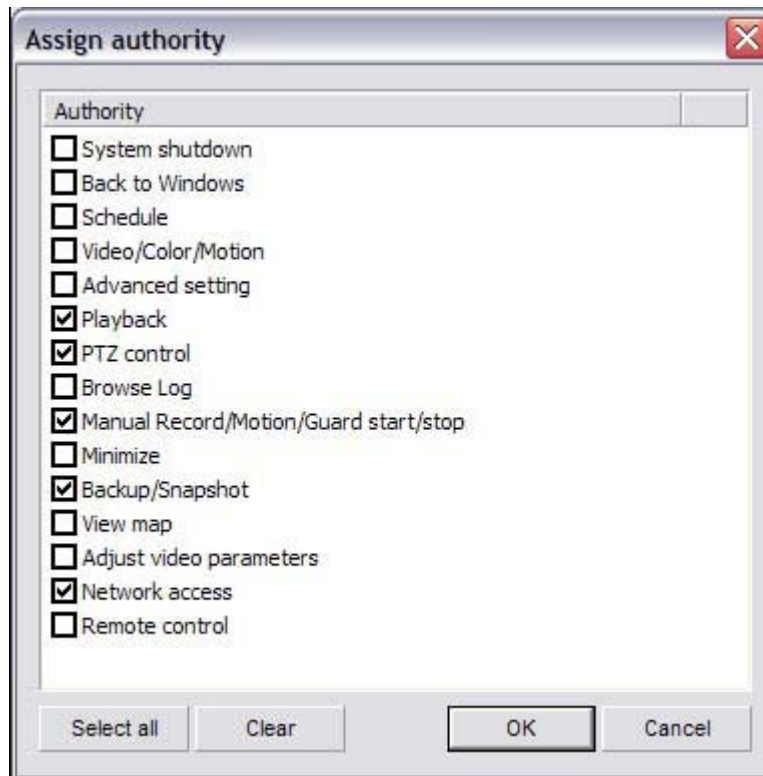
(Fig. 3-26)

Select the User level using the top radio buttons. The User Level determines client side bandwidth priority. If a user with a higher User Level logs into the system and there is not enough bandwidth for all users, the user with the highest User Level will be allocated the required bandwidth. The users with a lower User Level will have their connection interrupted until other users disconnect from the system. Fill in the Username, Password, Retype Password, Full Name, and Description fields. You can disable a user by checking the Disable This User check box. This will not delete the user. To make a user the default user check the Default User check box. The default user is the user that automatically appears in the Lock/Exit dialog boxes. To enable specific cameras to be accessible by the user select the **Camera Access** button. The Camera Access dialog box appears. (Fig. 3-27) Check or uncheck each camera that you want to enable/disable. To quickly enable all cameras select the **Select All** button. To quickly disable all of the cameras select the **Clear** button.



(Fig. 3-27)

To assign permissions to be granted to the user select the **Authority** button. The Assign Authority dialog box will appear. (Fig. 3-28) Check or un-check each of the selectable permissions for the user. To quickly remove all permissions select the **Clear** button. To quickly assign all permissions select the **Select All** button.

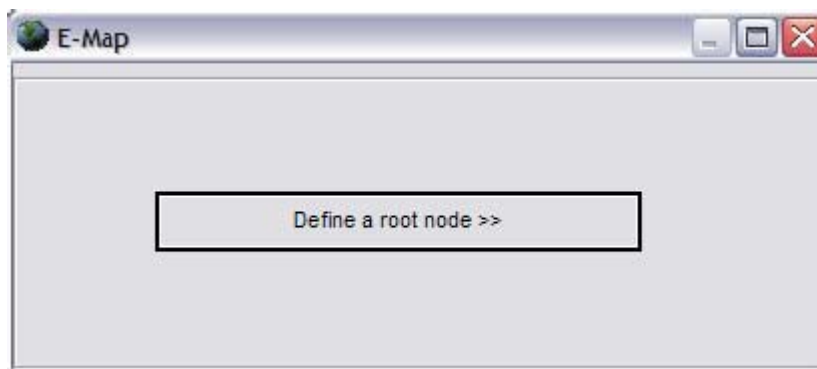


(Fig. 3-28)

To create a backup copy of the configured users select File and then Save As. The standard Windows Save dialog box opens. By default the user backup will save to the Config Files Backup directory inside the DVR Server folder. To restore a User Backup File select File, then Load. The standard Windows Open dialog box will appear. Select the \*.usr file to import.

### **E-Map Button**

If this is the first time you have configured the E-Map you will see the E-Map dialog box. (Fig.3-29) The E-Map feature is an advanced camera/sensor/alarm electronic map capable of embedding smaller maps inside of larger maps.



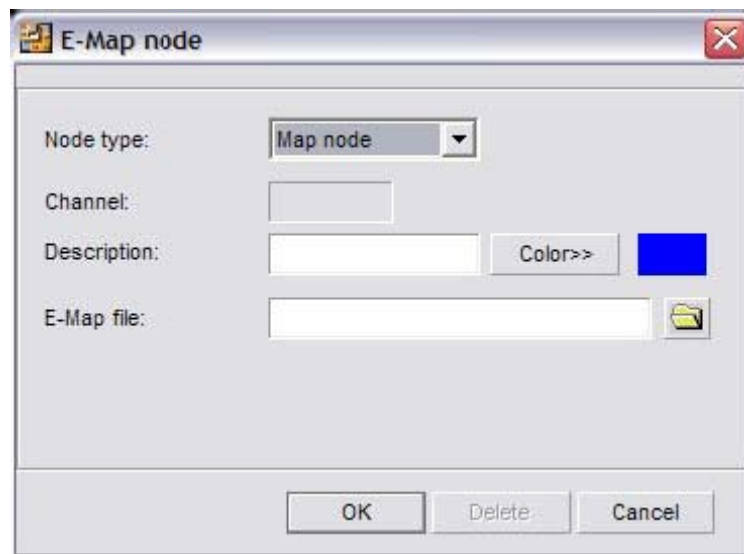
(Fig. 3.29)

Select the **Define A Root Node** button to select the root map, this root map can contain embedded maps, cameras, sensors, and alarms. The standard Windows Open dialog box will appear. The default directory for map images is "C:\Program Files\DVR\Emap". Select the root map image from the list and select the **Ok** button. You will now see the E-Map dialog box with your root map image. The E-Map Control Buttons are on the bottom of the dialog box. (Fig. 3-30) From left to right these are Zoom In, Zoom Out, Return To Parent Map, Fullscreen, Standard Zoom, and Move Thumbnail Map.



(Fig. 3-30)

To embed a map image inside the root map image right-click on the root map image. The E-Map Node dialog box will appear. (Fig. 3-31) Select Map Node from the Node Type drop down box. Input a name for the child map in the Description field. You can change the color of the Description text by using the **Color** button. Select the **Open** button (yellow folder). The standard Windows Open dialog box will appear and you will be able to select the map image.



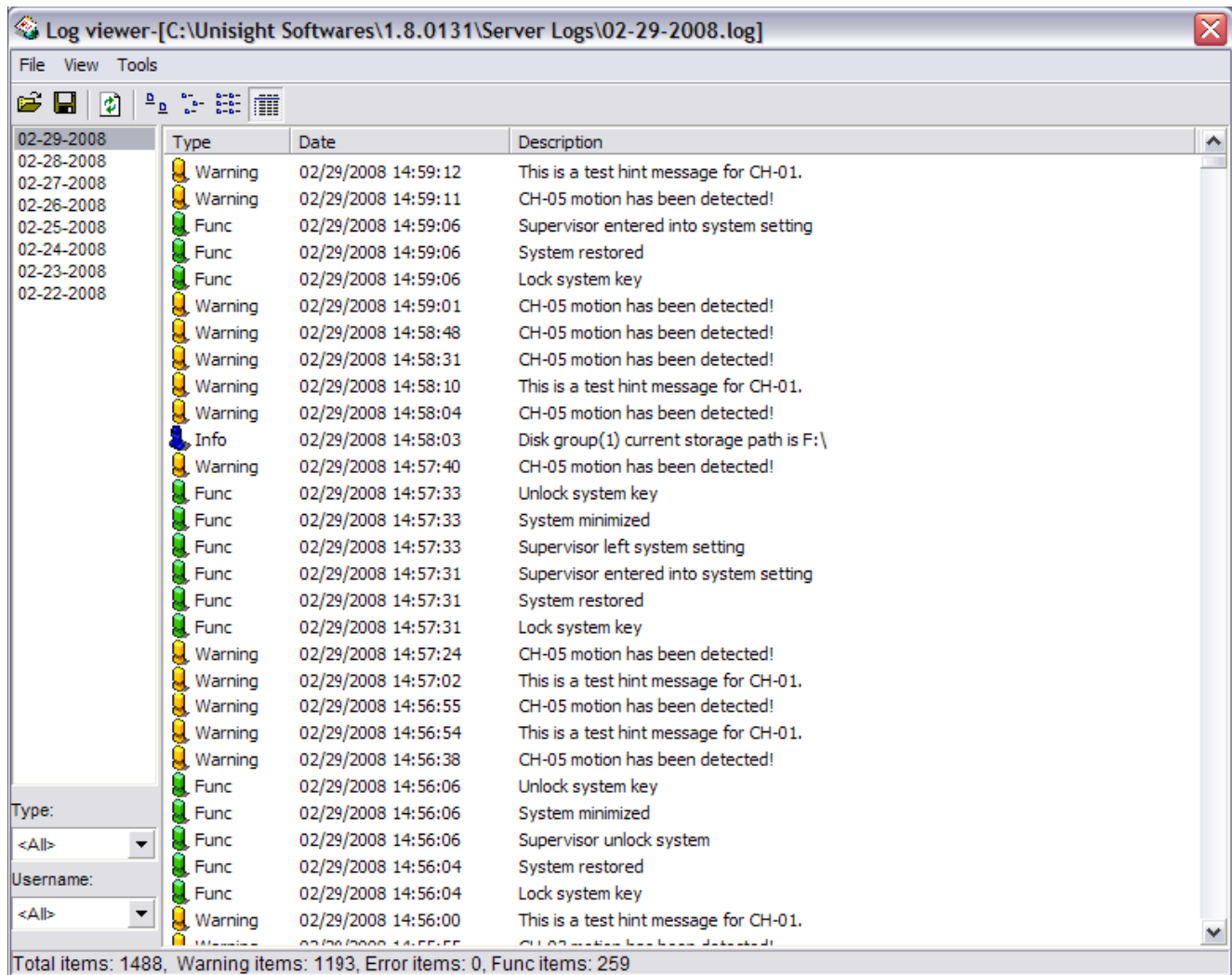
(Fig. 3-31)

Creating Cameras, Alarm Outs, and Sensors will create an icon on the E-Map that will act as a shortcut to the associated video recording channel. To add a camera to the E-Map right-click on the map image to open the E-Map Node dialog box. (Fig.3-31) Select Camera from the Node Type drop down box. Type in the channel number in the Channel field and fill in the Description field. Once the camera icon shows up on the map image you can click and drag the icon to the desired location. Upon closing the E-Map Node dialog box you will be asked to save the changes.

To use the E-Map select the **E-Map** button on the DVR Main Screen. (p. 14) To view an embedded child map double-click the map icon. To bring up a video channel in Single Screen Preview double-click the camera icon. When you double-click the camera icon the EMap will automatically close.

## Log Button

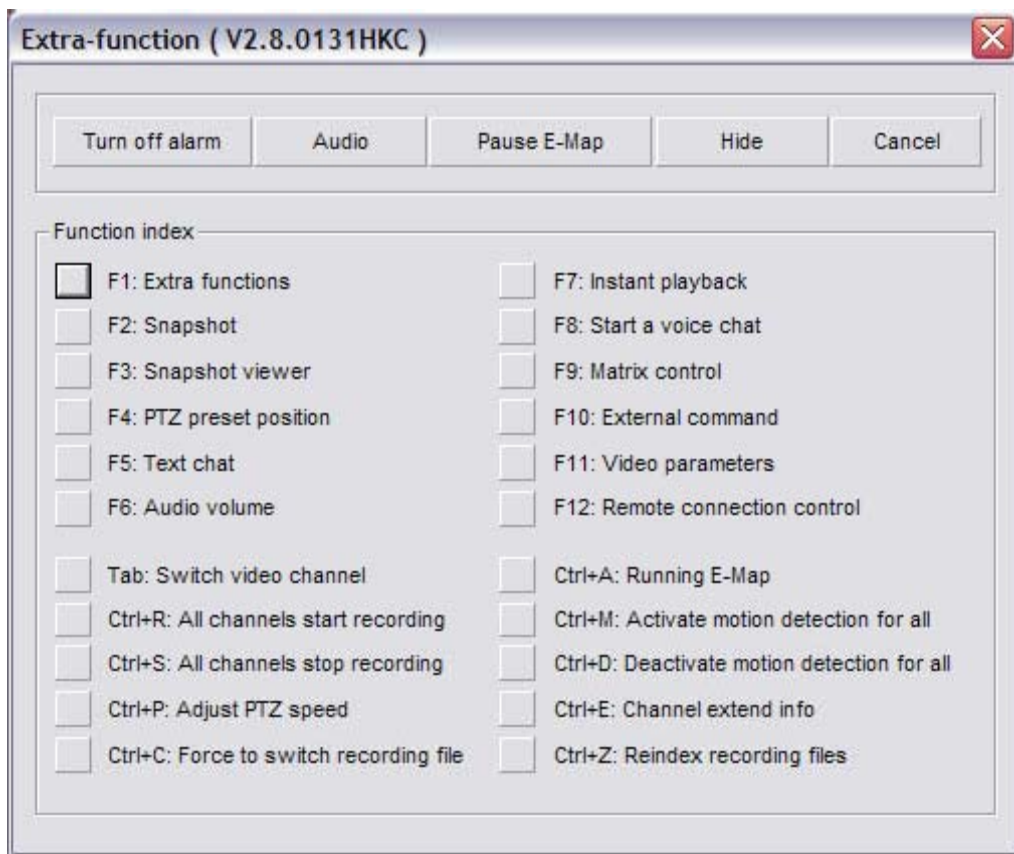
The Log button will open the Log Viewer dialog box. (Fig. 3-32) The log file will provide more information about how the the DVR Server was functioning. Each log file is organized by date, there is one log file per day. You can sort by log entry type using the Type drop down box. You can also sort log entries by user with the Username drop down box. Use the **Save** button to create a backup copy of the log file.



(Fig. 3-32)

## Extra Button

The **Extra** button allows you to determine the version number that you are currently running. (Fig. 4-0) The version number will be displayed in the title bar after the Extrafunction text. Each Extra Function has a shortcut key associated with it that is displayed before the button name. These buttons include Extra Functions (p. 35), Snapshot (p. 35), Snapshot Viewer (p. 35), PTZ Preset Position (p. 35), Text Chat (p. 36), Audio Volume (p. 38), Instant layback (p. 43), Start A Voice Chat (p. 39), Matrix Control (p. 39), External Command (p. 40), Video Parameters (p. 40), Remote Connection Control (p. 40), Switch Video Channel (p. 40), All Channels Start Recording (p. 41), All Channels Stop Recording (p. 47), Adjust PTZ Speed (p. 41), Force To Switch Recording File (p. 41), Running E-Map (p. 47), Activate Motion Detection For All (p. 41), Deactivate Motion Detection For All (p. 42), Channel Extend Info (p. 42), and Reindex Recording Files (p. 42).



(Fig. 4-0)

### Extra Functions

F1: This button will bring up the Extra Functions dialog box.

### Snapshot

F2: This button will take a snapshot of the currently selected channel and will be save to the default directory of C:\Snapshot Data.

### Snapshot Viewer

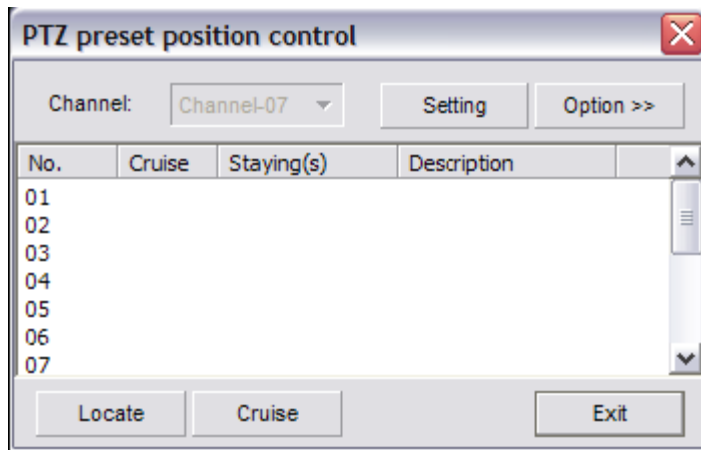
F3: This button will bring up the Image Viewer and allow you to view, edit, and print any snapshot taken. (Fig. 4-1) Select the File menu, then select Open to open a snapshot image. Once the snapshot is loaded you can use various editing tools to enhance the image.



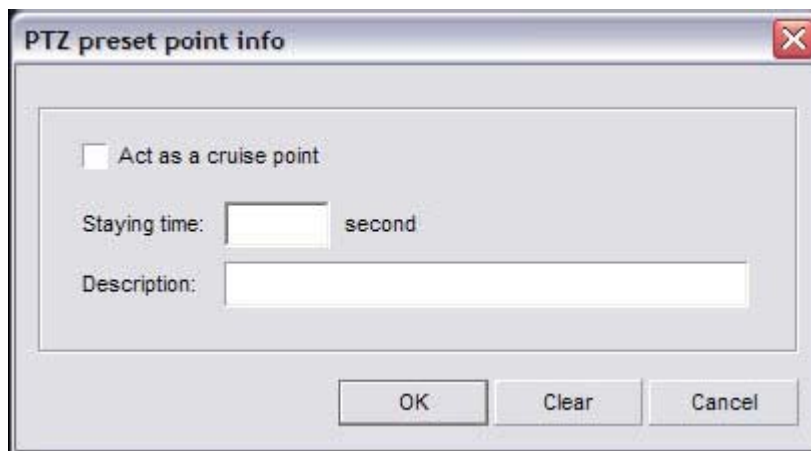
(Fig. 4-1)

### PTZ Preset Position

F4: This button will bring up the PTZ Preset Position Control dialog box. (Fig. 4-2) Begin by selecting the video channel that has a PTZ camera configured in the Live Preview. Select the PTZ button to display the PTZ camera controls. (p. 42) Point the PTZ camera at the desired location and select PTZ Preset Position in the Extra Functions dialog box or by pressing F4 on the keyboard. Left-click number 01 and select the **Setting** button. The **Setting** button stores the PTZ orientation to the selected number. Now select the **Option** button. This will open the PTZ Preset Point Info dialog box. (Fig. 4-3) To have this PTZ preset position be a cruise point check the Act As A Cruise Point check box. To have the PTZ camera pause at this point during cruising enter a number (in seconds) for the Staying Time field. The Description field allows you to assign a name to the cruise point. The **Clear** button will remove the PTZ cruise point information. These cruise points are stored in the PTZ camera itself and cannot be erased by the DVR Server application. To initiate the PTZ Cruising feature select the **Cruise** button. Each time the DVR Server application is closed PTZ cruising is stopped and will not start until the **Cruise** button is selected again. To have the PTZ camera orientate to a saved PTZ Preset Point select the number of the preset and select the **Locate** button.



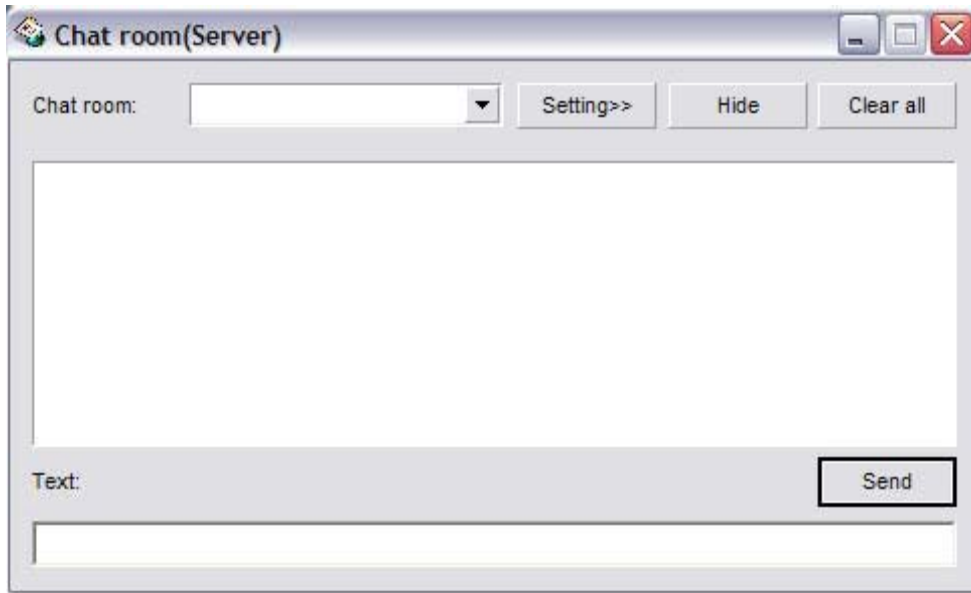
(Fig. 4-2)



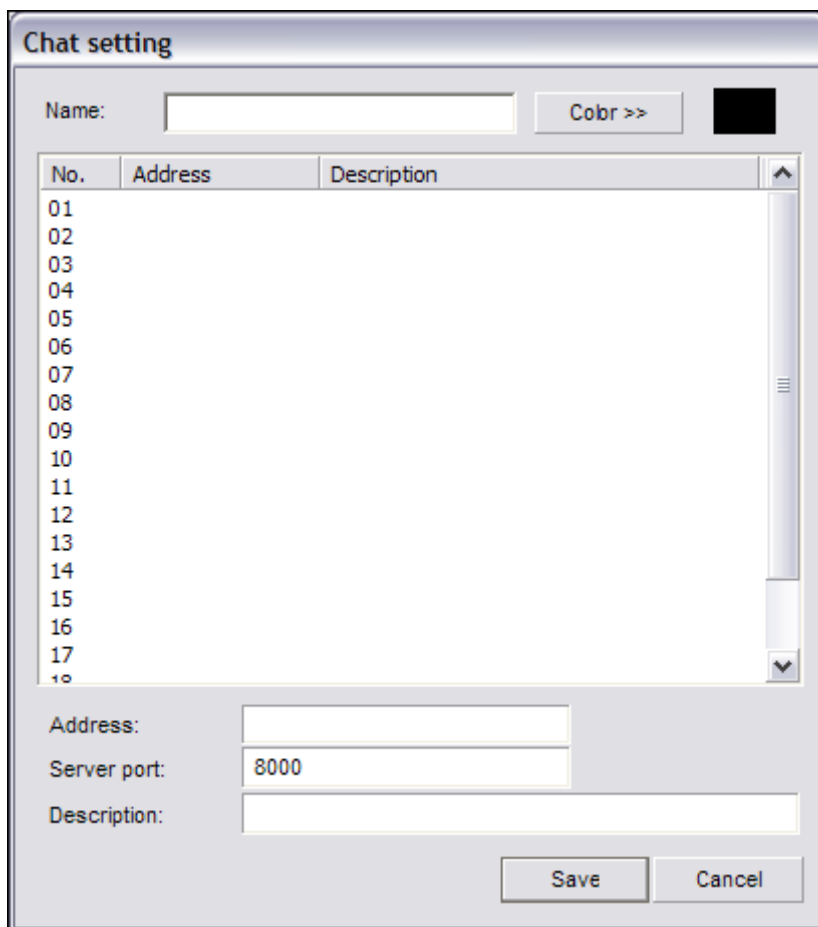
(Fig. 4-3)

### **Text Chat**

F5: This button will bring up the Chat Room dialog box. (Fig. 4-4) To configure a chat room select the **Setting** button. The Chat Setting dialog box will appear. (Fig. 4-5) Set a name for the chat room using the Name field. Input the Address, Server Port, and Description using the fields at the bottom of the window. Select the text color using the Color button. This is the color of the text you type, the other users have their own separate colors. Select the **Save** button to return to the Chat Room dialog box. Type in a message in the bottom text field and select the **Send** button to have your message appear. The Clear All button will remove all sent/received text messages from the chat window.



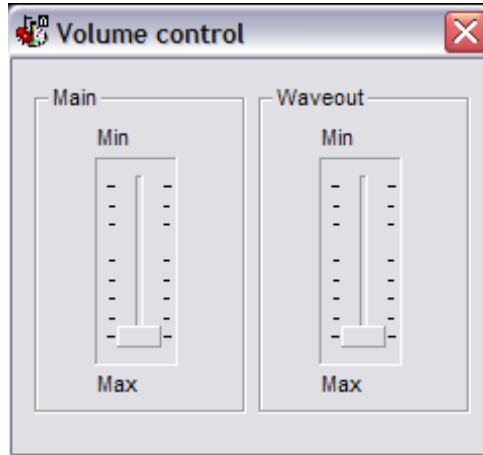
(Fig. 4-4)



(Fig. 4-5)

## Audio Volume

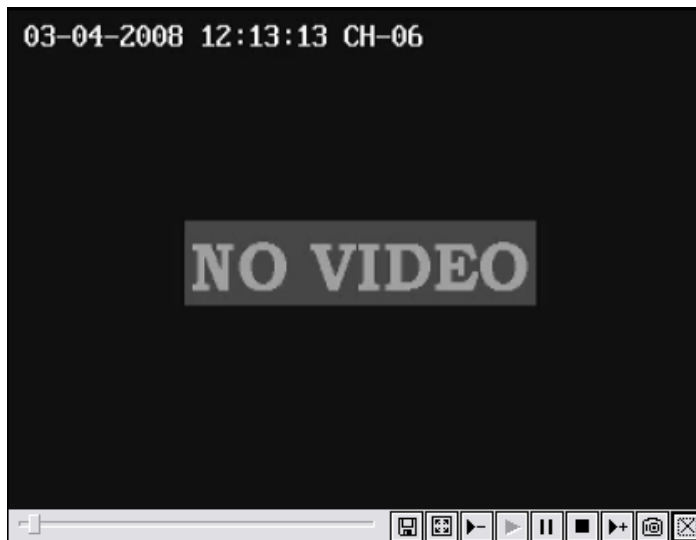
F6: This button will allow you to adjust the volume of both the Waveout volume and Main Volume. (Fig. 4-6)



(Fig. 4-6)

## *Instant Playback*

F7: This button will open the Instant Playback dialog box. (Fig. 4-7) Use the Time Slider under the video feed to quickly fast forward/backward. The buttons (from left to right) are Save , Fullscreen Mode, Decrease Speed, Play, Pause, Stop, Increase Speed, Snapshot, and Exit. The **Save** button will open the standard Windows save dialog box and allow you to backup the Instant Playback video. The **Fullscreen Mode** button will maximize the Instant Playback video. To return from Fullscreen Mode right-click the mouse button anywhere on the screen. Use the **Increase/Decrease Speed** buttons to make the video play faster or slower. You can play as slow as  $\frac{1}{4}$  real time speed and as fast as 16x real time speed. The **Pause** button will freeze playback. The **Stop** button will stop playback and move the time slider to the beginning of the Instant Playback video. The Play button will resume playback starting where the time slider is positioned. The **Snapshot** button will take a still image and allow you to save it. The **Exit** button will close the Instant Playback dialog box.



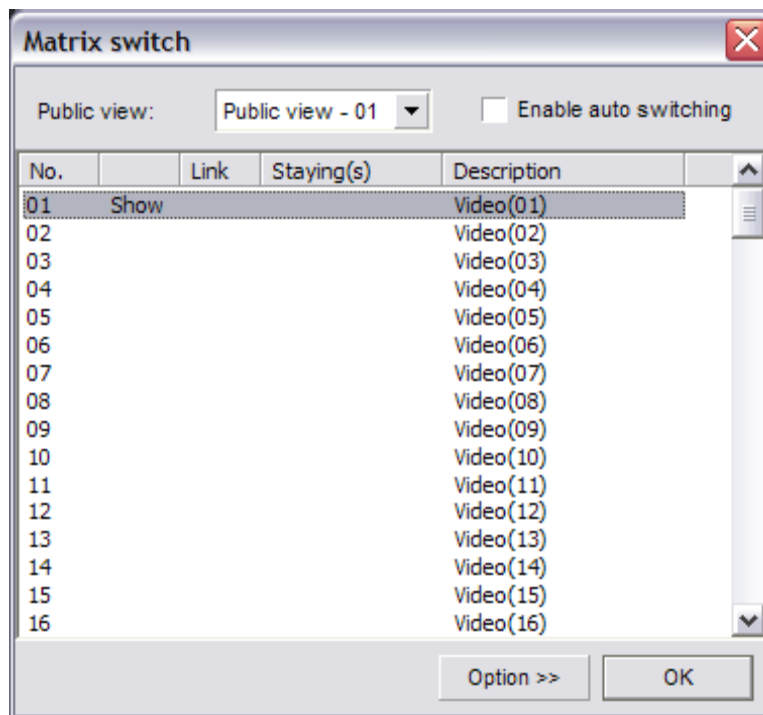
(Fig. 4-7)

## Start A Voice Chat

F8: This feature is a 2-way full duplex voice chat. It is initiated on the client side. Refer to Client Software Manual

## Matrix Control

F9: This button opens up the Matrix Switch dialog box. (Fig. 4-8) The Public View drop down box will select the Public View grid number. Public View 01 is the analog monitor connected to the first port of the Matrix card. Public View 02 is the analog monitor connected to the second port of the Matrix card. Once you have selected the Public View select any video channel to be shown on that Public View by left-clicking the channel number from the list. Once selected it will display Show next to it.



(Fig. 4-8)

The **Option** button will open the Matrix Control Info dialog box for the currently selected video channel number. (Fig. 4-9) The Description field allows you to rename the video channel. The Relation To Public View check box will add that video channel number to the Auto Switching List. The Switch Interval field allows you to input the number of seconds you want that video channel to be displayed before switching to the next video channel. Select the **Ok** button to save the changes. The Enable Auto Switching check box on the Matrix Switch dialog box must be checked for the Public View to start the Auto Switch feature.



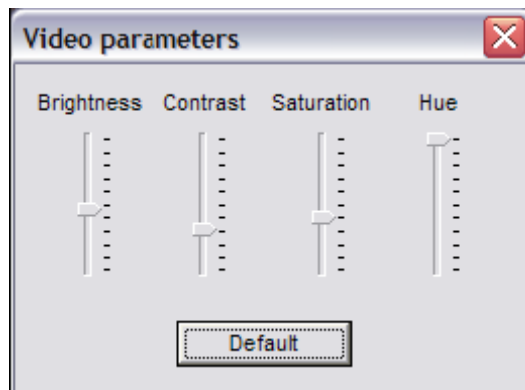
(Fig. 4-9)

### **External Command**

F10: This button will execute any external command that has been configured.

### **Video Parameters**

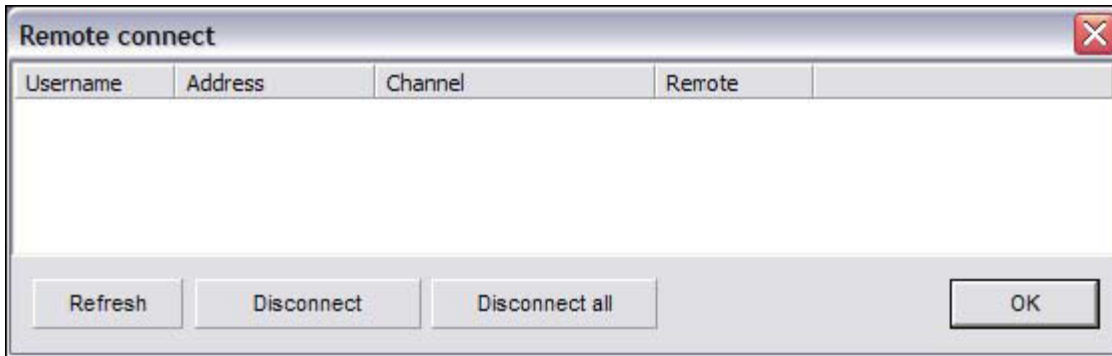
F11: This button will open the Video Parameters dialog box. (Fig. 4-10) You will be able to adjust the brightness, contrast, saturation, and hue for the currently selected video channel. Select the **Default** button to restore all parameters to their original values.



(Fig. 4-10)

### **Remote Connection Control**

F12: This button will open the Remote Connect dialog box. (Fig. 4-11) This window will display each connected user, their IP address, and which video channel they are connected to. This list is automatically updated. To force an update and get the latest list select the **Refresh** button. To disconnect all connected remote clients select the **Disconnect All** button. To disconnect a single video channel connection select the desired channel and select the **Disconnect** button.



(Fig. 4-11)

**Switch Video Channel**

Tab: This button will cycle the video channel selection to the next video channel. You will notice the white highlight box surrounding the currently selected video channel.

**All Channels Start Recording**

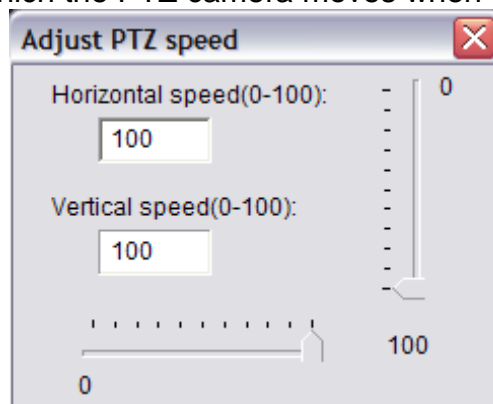
Ctrl+R: This button will start a recording in Manual recording mode on all channels if not currently recording. If a channel is disconnected recording will not start.

**All Channels Stop Recording**

Ctrl+S: This button will stop recording on all channels if not currently recording in Continuous Mode. If motion is detected the DVR Server will start recording again.

**Adjust PTZ Speed**

Ctrl+P: This button will allow you to change the speed at which the PTZ camera moves. This is especially useful when panning/tilting when zoomed in. Pressing Ctrl-P on the keyboard will bring up the Adjust PTZ Speed dialog box. (Fig. 4-12) Use the Horizontal/Vertical Speed sliders or enter a number in the Horizontal/Vertical Speed fields. This will not change the speed at which the PTZ camera moves when the PTZ camera in Cruising.



(Fig. 4-12)

### **Force To Switch Recording File**

Ctrl+C: This button will create a new recording file for the currently selected video channel even if the Single File Recording Time (p. 24) has not been reached.

### **Running E-Map**

Ctrl+A: This button will open the E-Map dialog box only if the E-Map has already been configured.

### **Activate Motion Detection For All**

Ctrl+M: This button will start motion detection based recording on all channels if the Motion Schedule is not already set.

### **Deactivate Motion Detection For All**

Ctrl+D: This button will stop motion detection based recording on all channels if the Motion Schedule is not already set.

### **Channel Extend Info**

Ctrl+E: This button will open the Notice dialog box. This is only a display, the text is not editable. To edit the Channel Extend Info use the **Extend Info** button. (p. 25)

### **Reindex Recording Files**

Ctrl+Z: This button will start the Reindexing process. (p. 28)

## **PTZ Button**

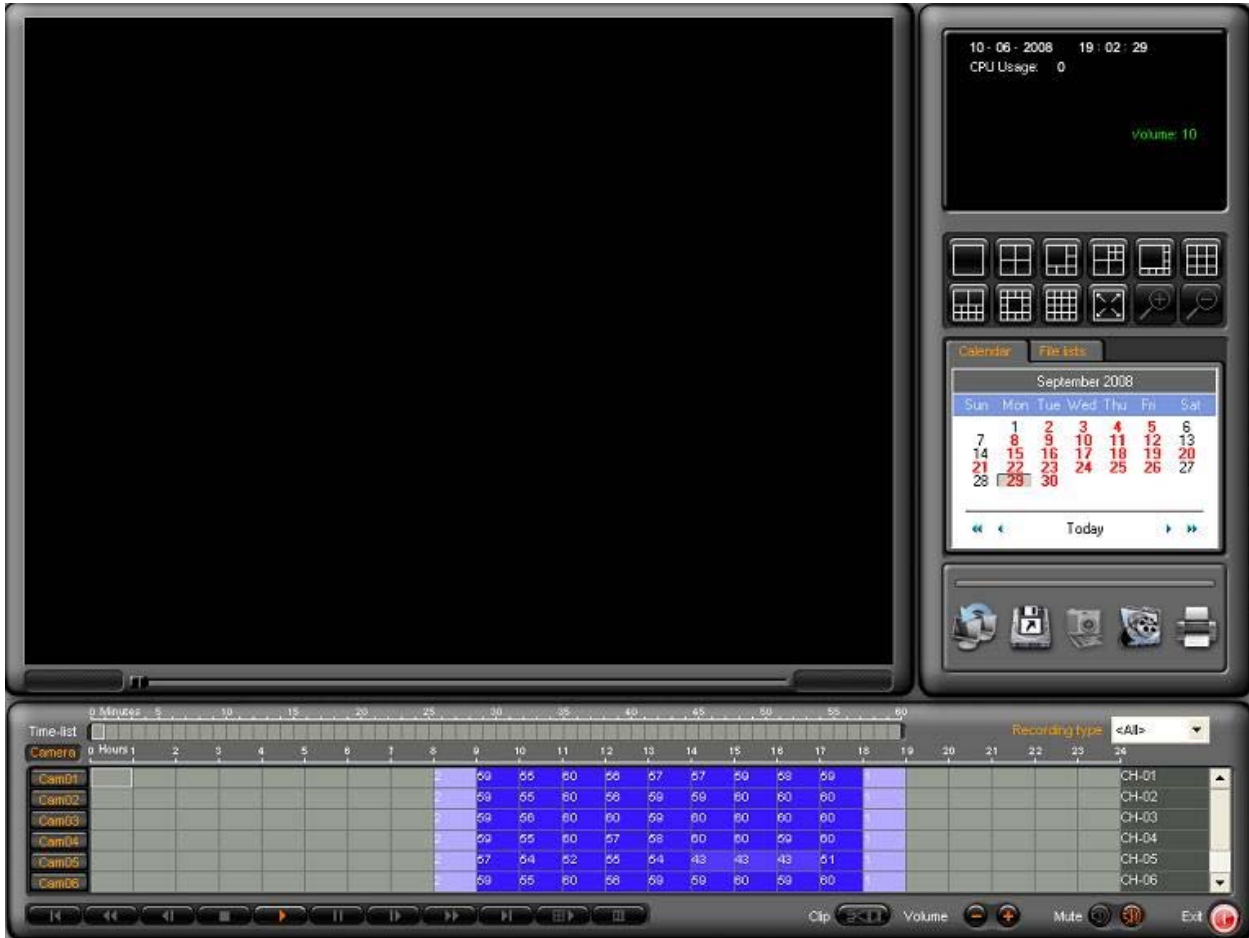
To gain control of a configured PTZ camera start by selecting the channel in the Live Preview. Select the **PTZ** button, the panel will expand the PTZ controls. (Fig. 5-0) Use the arrows to pan and tilt. The + and – buttons will focus, open/close the iris, and zoom in and out. The **Auto Rotation** button will slowly rotate the PTZ camera and may not be supported on all PTZ cameras. There are three other **Function** buttons that operate special PTZ camera functions such as wipe/clean glass and heater control. The **F1/F2/F3** buttons may not be supported on all PTZ cameras.



(Fig. 5-0)

## Playback Mode

The Playback mode allows you to review and backup recorded video files. (Fig. 6-0) You can playback a maximum of 16 channels at once. You can fast forward at 16x. Take note that playback at 16x on all 16 channels would be the same as playing back 256 channels at normal speed. Playback at 4x on all 16 channels would be the same as playing back 64channels at normal speed. The PC system used for playback may not have the system resources to playback that many channels at once or at that playback speed. Be sure to monitor your CPU Usage in the Playback Information Window (p. 44) when playing back recorded video files to avoid unwanted issues.



(Fig. 6-0)

### **Playback Information Window**

The Playback Information Window displays the current date, time, and CPU usage in white on the top of the display. (Fig. 6-1) The channel number, video file size (in Mb), video file length (in seconds), bandwidth (in Mbps), video file start time, volume level, playbackspeed, and current playing time in green.



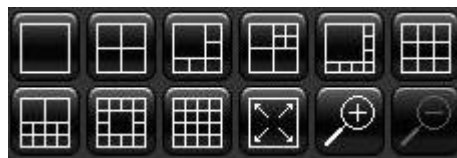
(Fig. 6-1)

### **Channel Grid**

The channel grid contains the playback video. This is where you will see all of your video recordings. You can select each channel by left-clicking on the desired grid square, this will also activate the audio for that channel. There is a full screen mode that you can toggle by clicking the right mouse button on the video feed.

### **Grid Layout**

The arrangement of the Channel Grid is easily configured by 10 buttons. Hover your mouse cursor over these buttons for a description of each of the layout buttons. (Fig. 6-2) You can also zoom in and out by using the two buttons with the magnifying glass. Once zoomed in place your cursor over the edge of the video channel (the cursor will change to a pointing hand) and left-click to pan across the video feed.



(Fig. 6-2)

### **Calendar**

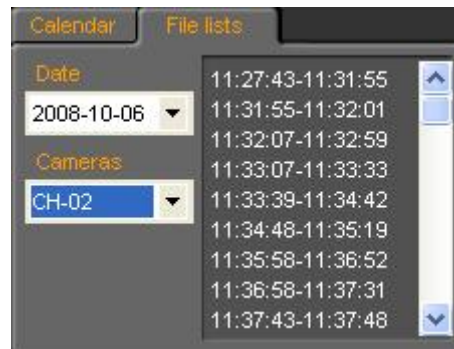
The calendar displays days that have recorded video footage in red, days with no video footage are displayed in black. (Fig. 6-3) To change months use the blue single arrow buttons. To change years use the blue double arrow buttons. To quickly change to the current date select the **Today** button.



(Fig. 6-3)

## File List

You can also search for video recordings using the File List. (Fig. 6-4) Simply select the date from the Date drop down box and the channel name from the Cameras drop down box. You will see a range of time indexes. Each time index is a single video recording file. To playback a recorded file select the desired time index and select the **Play** button.



(Fig. 6-4)

## Playback Controls

These controls will allow you to control the various aspects of playback. (Fig. 6-5) From left to right these are Previous File, Decrease Speed, Step Backward, Stop, Play, Pause, Step Forward, Increase Speed, Next File, Multiplay, and Stop All.



(Fig. 6-5)

**Previous File** – Jumps to the beginning of the previous video recording file.

**Decrease Speed** – Slows down the playback speed to a minimum of ¼ real time speed.

**Step Backward** – Moves the time slider back one frame and also pauses the video playback.

**Stop** – Stops playback of the currently selected video recording file.

**Play** – Starts playback of the currently selected video recording file from the beginning of the file.

**Pause** – Freezes playback of the currently selected video recording file.

**Step Forward** – Moves the time slider forward one frame and pauses the video playback.

**Increase Speed** – Increases the playback speed up to 16x real time speed.

**Next File** – Jumps to the beginning of the next video recording file.

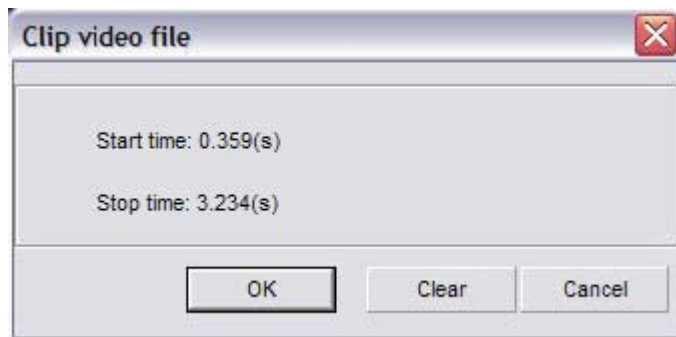
**Multiplay** – Starts playback of all selected video channels. To select/de-select a video channel left-click on the **Cam** buttons in the Camera column. To quickly select all video channels double-click any of the **Cam** buttons. To quickly de-select all channels right-click any of the **Cam** buttons.

**Stop All** – Stops playback on all video channels. The **Volume** Buttons will increase/decrease the volume of all video channels. The **Mute** buttons will enable/disable the audio playback. The **Exit** button will close the Playback mode and return to Live Preview. (Fig. 6-6)



(Fig. 6-6)

The **Clip** button will allow you create a clip of the currently playing video file. (Fig. 6-6) To start a clip select the **Clip** button. The Clip Video File dialog box will appear. (Fig. 6-7) A Start Time will be displayed but no Stop Time. Select the **Ok** button to start recording a clip. The Clip Video File dialog box will disappear. Once you have passed the video portion that you want in the clip select the **Clip** button again. The Clip Video File dialog box will appear. (Fig. 6-7) A Start Time and Stop Time with both be displayed. To save the clip select the **Ok** button. The Files Backup Manager will appear. (Fig. 6-8)

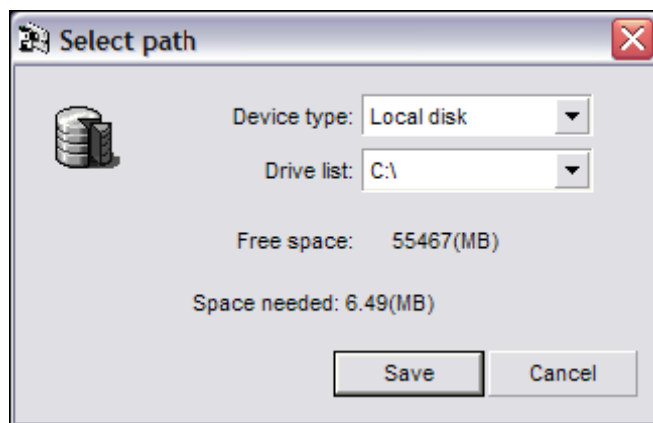


(Fig. 6-7)



(Fig. 6-8)

Type in a name for the clip using the Filename field. Input a label using the Label field. Past labels will be displayed in the Label drop down box. Select the **Backup** button to continue. The Select Path dialog box will appear. (Fig. 6-9) Select the device to save the clip file to using the Device Type drop down box. Select the appropriate drive to save the clip file to using the Drive List drop down box. The Free Space and Space needed displays will automatically update. Select the **Save** button to finish the clip creation process.



(Fig. 6-9)

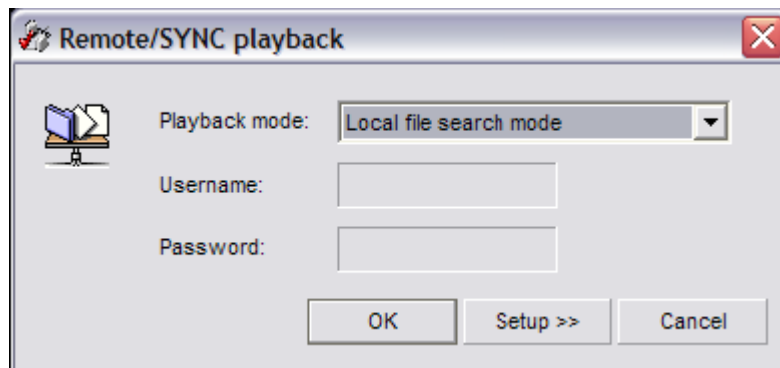
The **Smart Search** button will open the Smart Search dialog box. (Fig. 6-10) The Smart Search is divided into two sections, the Video Preview Windows and the Smart Search Control Set. The Video Preview Windows display the Playback video and the Search video. The Control Set displays all the Smart Search buttons along with the Video Results. With the Smart Search feature you are able to search through previously recorded video files for motion in the motion zones you create. You can also backup a Smart Search session for later review.

## **Remote/SYNC Playback**

In local Playback there are two modes, the Local File Search Mode and the Local Synchronizer Search Mode. Select the **Remote/SYNC Playback** button. (Fig. 6-10) The Remote/SYNC Playback dialog box will appear. (Fig. 6-11) Using the Playback Mode drop down box you can choose between the two modes. The Local File Search Mode will playback the recorded video files directly from the recorded video file. This means that if you set the Single File Recording Time to 30 minutes the DVR Server will load that entire 30 minute video recording file before it starts playing back. The larger the Single File Recording Time the longer it will take to load each recorded video file. The Local Synchronizer Search Mode will stream the video from the recorded video file. Playback will start immediately but many of the Playback Controls will be unavailable due to the video stream. Local Synchronizer Search Mode will also playback selected video recording files in synchronization whereas the Local File Search Mode will not synchronize the playback



(Fig. 6-10)



(Fig. 6-11)

## **Snapshot**

The **Snapshot** button will take a still image of the currently selected video file. (Fig. 6-12) You can then save this image for later review. (p. 35)



(Fig. 6-12)

## **Browse And Print Image File**

The **Browse And Print Image File** button allows you to view previously saved snapshots and print them out. (Fig. 6-13) (p. 35)



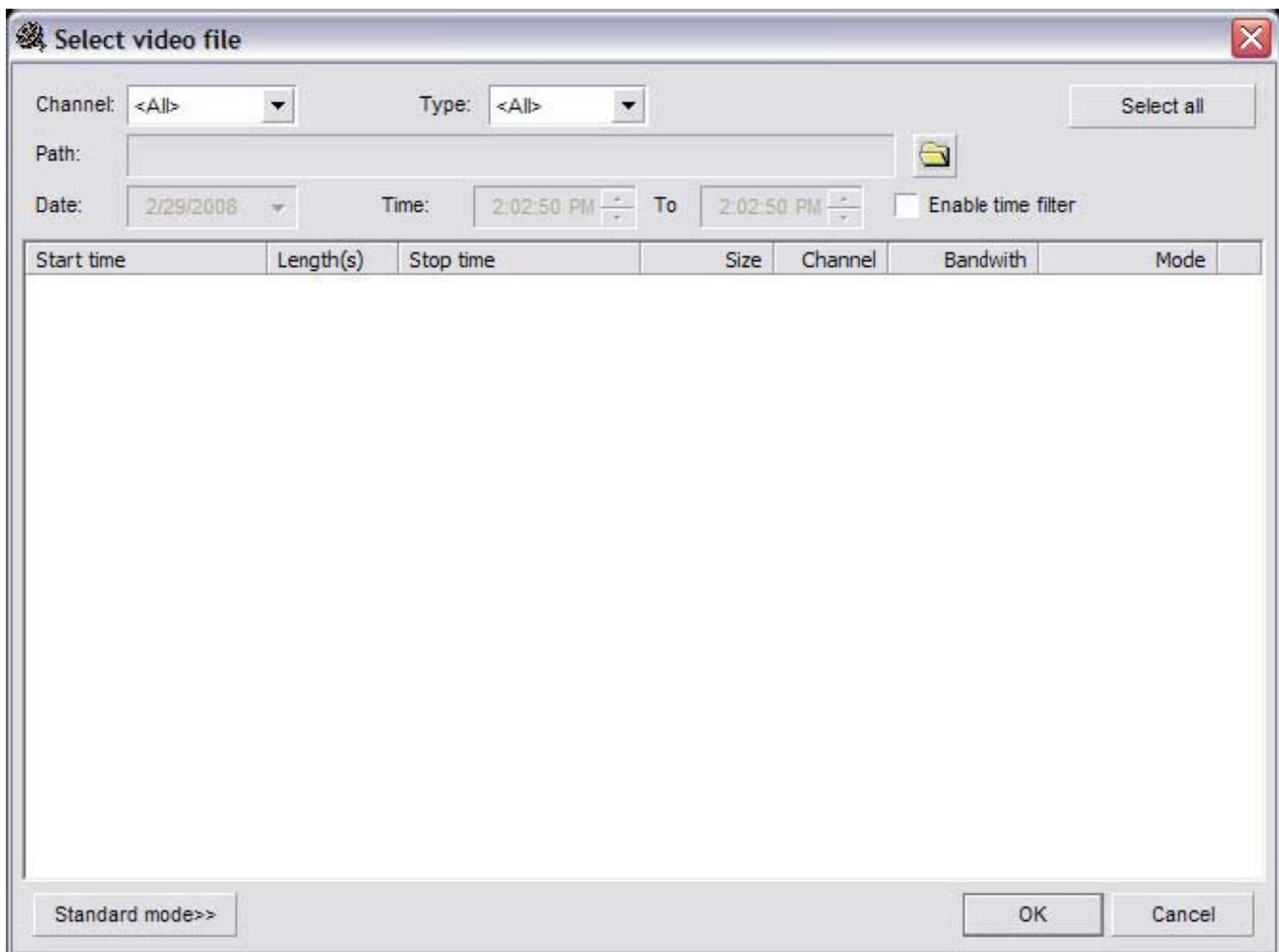
(Fig. 6-13)

## Manual Selecting File

If you have recorded video files stored in a location other than the default directory the video recordings will not show up in the Calendar or the File List. Use the **Manual Selecting File** button to access the recorded video files. (Fig. 6-14) To browse for recorded video files select the **Open** button (yellow folder). (Fig. 6-15) The standard Windows Browse dialog box will appear. Locate the folder that the recorded video files are stored in and select the **Open** button. You will be returned back to the Select Video File dialog box. You can sort the recorded video files by channel, recording type, and by time index. Once you locate the recorded video file you wish to play left-click on it so that it highlights. Select the **Ok** button and the video file will begin to play.



(Fig. 6-14)



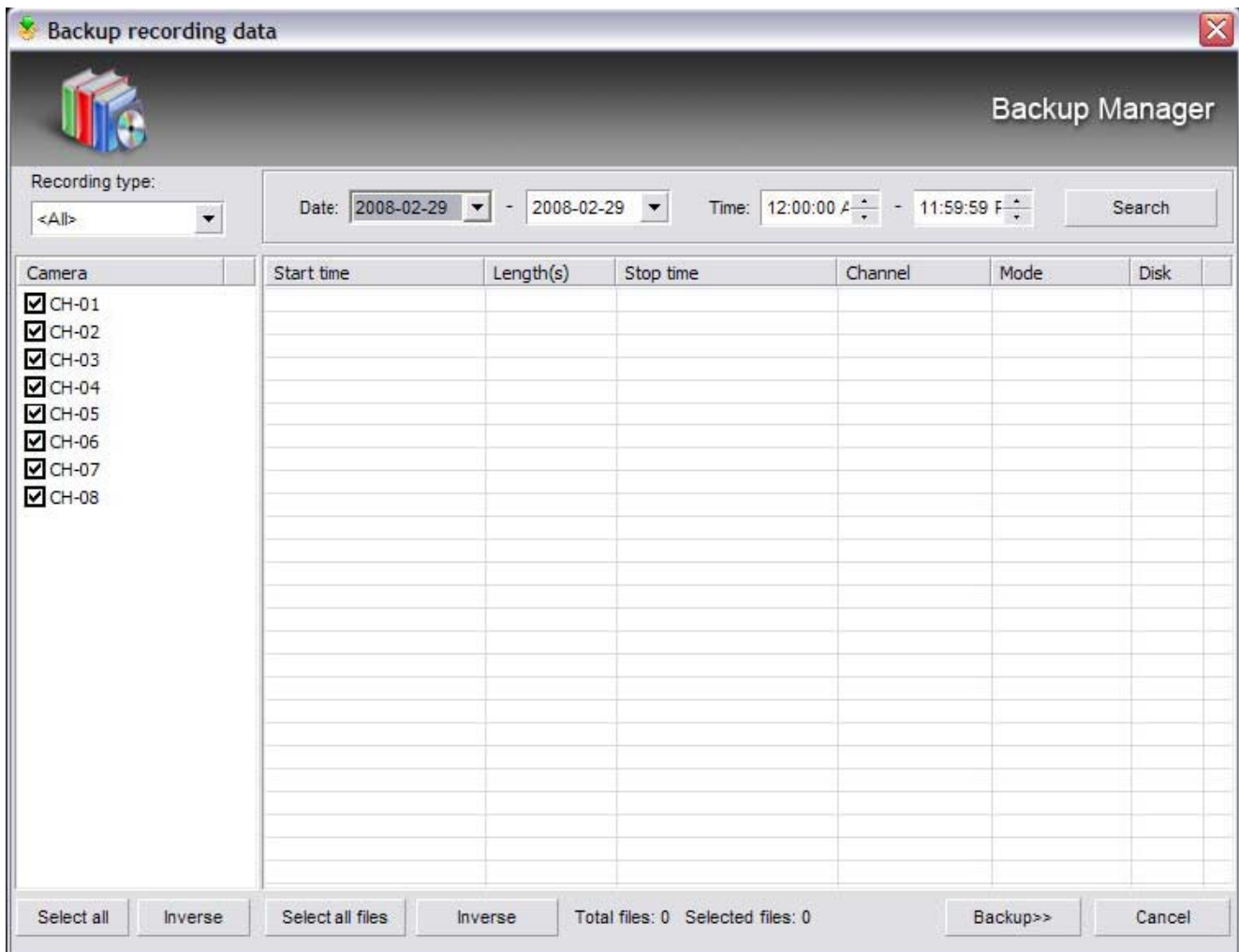
(Fig. 6-15)

## **Backup Files**

The **Backup Files** button (Fig. 6-16) will open the Backup Recording Data dialog box. **Error! Reference source not found.**) From here you are able to backup multiple cameras simultaneously. During the last part of the backup the player software is automatically copied over along with the recorded video files. No other software is needed to review the saved video on a different PC system.



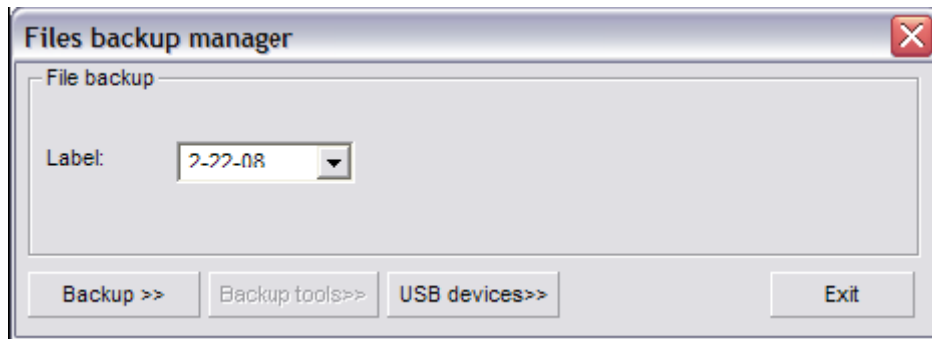
(Fig. 6-16)



(Fig. 6-17)

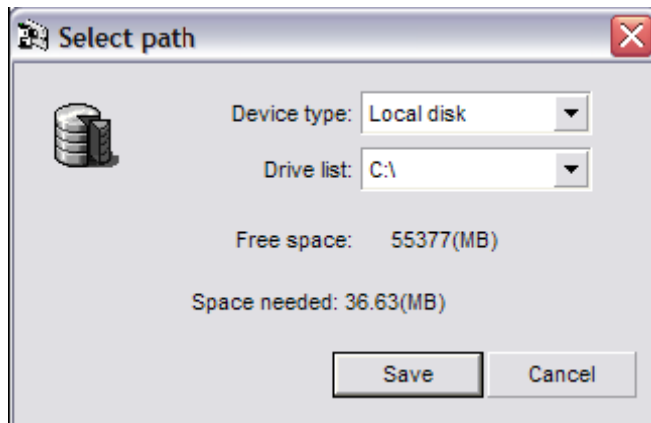
Use the Date drop down box to set a date ranger to filter the results. Use the Time fields to set a start time and end time to filter the results. The Recording Type drop down box will allow you to further filter the results by searching for only Motion/Manual/Continuous/ Network/Alarm based recordings. To search through multiple cameras check the box next to the channel name. The **Select All** button will automatically check all cameras. The **Inverse** button will select the exact opposite of the currently selected cameras. Select the

**Search** button to begin the recorded video file search. In the results the Start/Stop Time, Length, Channel, Mode, and Disk will be displayed. Left-click a video file to select it. Hold down the ctrl key and left-click to select multiple recorded video files to backup. The **Select All Files** button will select all results. The **Inverse** button will select the exact opposite of the currently selected video files. The **Cancel** button will exit the Backup Recording Files dialog box. When you have selected the desired recorded video files select the **Backup** button. The Files Backup Manager dialog box appears.**Error! Reference source not found.**)



(Fig. 6-18)

The **Backup Tools** button will open up Nero (if configured in .ini file) and allow you to add more files to a CD session. The **USB Devices** button will allow you to remove USB devices that you do not want to show up in the Device Type drop down box when finishing the backup process. Type in a name for the backup in the Label drop down box. Select the **Backup** button. The Select Path dialog box will appear. **Error! Reference source not found.**)



(Fig. 6-19)

Select the backup device using the Device Type drop down box. If you select Compact Disc the Drive List drop down box will automatically select the CDR/W drive. Select the **Save** button to complete the backup process.