Digital Camera Station

Installation & Operator's Manual

For Version 4.0 Software

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System overview

The Digital Camera Station (or remote site) is an extremely versatile and capable system. To get the best from your system it is necessary to invest a little time in understanding how to operate the software. The system provides both video storage and transmission facilities activated by external trigger devices such as PIR or door contacts, or via internal video activity sensing software. The camera station is designed to run maintenance free and will save incidents without degradation for as long as the system is operational. It can be configured to self-arm in the event of a power fail from the variety of options available to the user.
Although the Camera Station incorporates many complex functions it is a design aim to minimise complexity to the user. Therefore the monitor may be configured to display minimal information for instance only the “What to do...” panel; this is a major benefit for the untrained user who can see the state of the system at a glance and interpret what action to take, if any is required.
Ease of upgrade is an important benefit of a software based system. The basic configuration may be easily upgraded to incorporate many additional features. In practically all cases upgrades are software only, enabling swift and easy transition without the down time inherent with dedicated hardware platforms.

New Features

For those users familiar with the system the following summary highlights new features added to this product release with reference to the appropriate chapters in this manual.

1. Incident Search Facility. Refer to Section: Reviewing stored incidents-> Incident List Search.
2. Event based or Continuous recording option. Refer to Section: “Setting the Trigger Response” ->“Record”
3. Support Contacts information. Refer to Section: “Displaying contact information”
4. Mobile User: SMS and Pager Support. Refer to Section: Mobile Users Set-up
5. Event View application supplied as standard: A stand alone application for reviewing and printing exported Camera Station incidents: Refer to Event View help file documentation.
6. Smart Timer options extended to incorporate all available trigger options. Refer to Section: Smart Timer.
7. Guard time options incorporates 0 second delay. Refer to Section: Guard Time.

Installation guide

Cables and peripherals connection

The system will arrive with all standard hardware and software pre-installed. You should have the following items as standard. If you have purchased variants please refer to the appropriate appendices supplied as additional documentation.

- Main Computer unit
- VGA colour monitor (optional)
- Keyboard
- Mouse
- Mains cable
- Digital Camera Station master CD ROM
- Windows ‘98 master disks and driver disks
- This documentation.

Figure 1: Unit rear panel

1. Connect the VGA monitor mouse and keyboard into the appropriate sockets. If using dial-out capabilities connect the modem lead into the telephone socket.

2. Power up the unit. After a few seconds Windows ’98 should start.

Camera station software configuration

1. You should be launched directly into the Digital Camera Station software with the “Set-up” panel visible. This is the default configuration for the system. See figure 2.

2. Connect up the required cameras to the video inputs on the rear of the computer unit. See the Technical reference for information on the video source signal. *You will need to connect all required video signals to Camera station whilst in maintenance mode.* The video signals are detected when switching from maintenance mode in order that it can determine loss of video and therefore trigger an event. To determine if a video signal has been detected, view the status panel (see status panel section) and check that “NO VIDEO” message is not present for each camera with a video signal of standard amplitude. If you have made changes to the video signal as a result of this check process, please ensure that you subsequently return to “Maintenance mode” and then back into display mode, by selecting either “RUN ARMED” or “RUN DIS-ARMED”. This will ensure that the video signal has been re-detected.

3. On the assumption that you now have a valid video signal, you are now ready to view the live video. Switch to quad mode and “drag” a camera icon into a vacant window, refer to the screen control section for details.

4. Adjust the camera views as required, considering both day time views, in particular potential blot out by the sun, and night time vision, should the cameras be required for night time use.

5. Wire up the trigger inputs as required, consult the technical reference section for information on wiring and electrical characteristics. Ensure that a good ground cable is used. All connections should use “Volt free contacts”.

6. Return to the set-up mode and configure the trigger inputs as required. Refer to the appropriate sections in this manual under “Setting the Trigger response” and the Technical Specification for a description of the possible trigger connection types.

7. Whilst in maintenance mode select the tab “System resources” and refer to the section “Local Image Storage”. *Set the “Interleaving” option to the maximum number of cameras you are using*. This allows simultaneous event recording from more than one camera, rather than sequential event recording.

8. Confirm that the expected resources are available on your system. If not insert your “Camera station Drivers and Resources” floppy disk as supplied and select the “Upgrade Resources” button to upgrade accordingly.

9. When completed test the system by selecting RUN ARMED and enabling the **Status** panel. Refer to the status panel description for information on determining correct operation. Review saved incidents to ensure that the Camera Station is correctly configured and the trigger inputs are associated with the correct cameras. You will need to refer to the section on **“Local Image Storage”** to configure the drive capacity according to your requirements. Unless the unit has been pre-configured, the system defaults to the *minimum of 1megabyte storage capacity* when first installed

10. Once the store has been correctly configured, check that the system is recording as expected. You should review operation over a period of time to ensure that the recording process is functioning correctly. If you are using “Event” based recording, ensure that the system responds correctly to the events you have programmed. *Each associated event should be tested individually*.

1. Once the recording process has been tested, move on to the communications options. The following will not apply if you are not using the dial-out facilities.

Dial out operation

2. If you are using the dial out facility, enable the dial out function by setting up the required device type under the Communications panel and then set the required Dial out settings under the remote access panel. This will initialise the modem.

3. Set up the site details as described in the Set-up procedures.

4. Perform a series of test dials to the central station to ensure correct operation, and that images are being correctly transferred. Refer to the section on modem problems to check for potential installation problems.

5. Perform a series of test dial ins from the base station into the camera site to ensure that the camera site correctly auto-answers, and that the correct camera view is obtained on dial in.

6. In general the performance of the system will benefit from as much pre-installation checking as is practical.

Keyboard or mouse operation

Many of the viewing options may be controlled without the aid of a mouse. However the Camera Station does require a mouse for initial set-up of the camera views, reviewing images and operation of the sequencing functions.
Keyboard operations are:

- Select full Screen view F5
- Select quad View F6
- Select 9 way camera view F7
- Select 8 way and incident view F8
- Select Camera in full screen (camera 1) 1 - 8
- Select + or - for next camera page
- Select ALT+a arm/disarm operation
- Select ALT+q for exit
- Select ALT+m for maintenance mode

When in maintenance mode you can access the “Short cut menu” by selecting the ALT key. This enables selection of the individual pages within maintenance mode. You can then TAB within the contents of each page using TAB to step forwards and SHIFT+TAB to step back.

Screen control

Selection and control of the screen is handled by dragging the icons into a free panel. Items are closed by overwriting with a new icon or by selecting the  bin icon, which closes the current selection. For instance to select cameras 1 to 4 into the quad camera view:

1. Ensure that all video sources are active and connected to the camera inputs on the camera card. IMPORTANT *You will need to connect all required video signals to the camera station whilst in maintenance mode or before running the application.* The available video sources are sampled when switching from maintenance mode to display mode, in order that loss of video can be detected.
2. Place the mouse pointer over the camera 1 icon  . With the left hand button depressed, drag the icon over the required panel, eg top left hand panel.
3. Release the mouse button when inside the appropriate panel.
4. You should then see a live view of the selected camera.
5. Repeat for the remaining icons within the other three panels.
6. To de-select or change the camera views, either overwrite with a new camera selection, or use the  icon to clear the panel.

You may select any of the other icons in the right hand boundary for display in a panel. The review window  occupies two panels, the images and associated text list entries. *You will need to use the*  *icon to remove this panel.*

Manual PTZ (Fully functional) on screen control

Your on screen camera control will be available only when the PTZ control has been correctly set from the maintenance mode PTZ set-up. You should therefore refer to the PTZ configuration section before attempting to control the camera if you are uncertain about this aspect.

If the selected camera has PTZ control facilities enabled, you will see the PTZ icon  enabled at the lower left portion of the image window. If PTZ tour is enabled, and previously set-up, the camera will automatically start the tour. You may take over manual control by clicking on the ptz button, which will enable the camera control icons, the pre-sets and tour control.

How to control the camera

With the pre-set window active position the mouse in the centre of the screen. Select the left hand button and *keep it depressed* The PTZ head will then position according to mouse movements. Move the mouse up, down, left and right to familiarise with the mouse action. The head will move faster the further the mouse is positioned away from centre screen. Zooming in and out are controlled by the two  icons. Select and hold down the button to zoom camera position according to requirements.

When controlling the camera at high zoom levels, camera positioning may become too coarse. In this case use the speed icon to slow the head. The speed icon remains depressed once selected, click on the button again to resume normal speed settings.

In addition to the camera controls, the user may position the camera to any of the first eight pre-sets positions by pressing the pre-set button icons.

How to resume the tour

To return to the pre-set tour, click on the icon which resumes the current tour procedure.

Main Menus and icons

Main Toolbar

A brief description of the main menus with references to related topics follows:

- **Quit**: Exits the Camera station and returns to the main Windows operating system. The application can only be exited by the Supervisor. An operator logged on at User level will not have this option presented.
- **Maint'**: To place the system in maintenance mode for set-up and configuration options, select this button. Maintenance mode may only be selected *when the system is dis-armed* and the operator is logged on at supervisor level.
- **Secure**: Presents the operator with a password window enabling either the supervisor or user to lock the camera station controls, the system will still respond to dial-ins and alarms (if armed) when secured. Refer to secure operation for more information.
- **Latched output**: Changes the state of the latching output control.
- **Momentary output**: Activates the momentary output control
- **ARM/DISARM** Use this icon to set the system to ARM or DISARMED status.
- **Single** Camera view, full screen
- **Quad** View any four out of the available cameras or any other panel type, such as help.
- **9 Way** View any nine of the available cameras, or any other panel type, such as help.

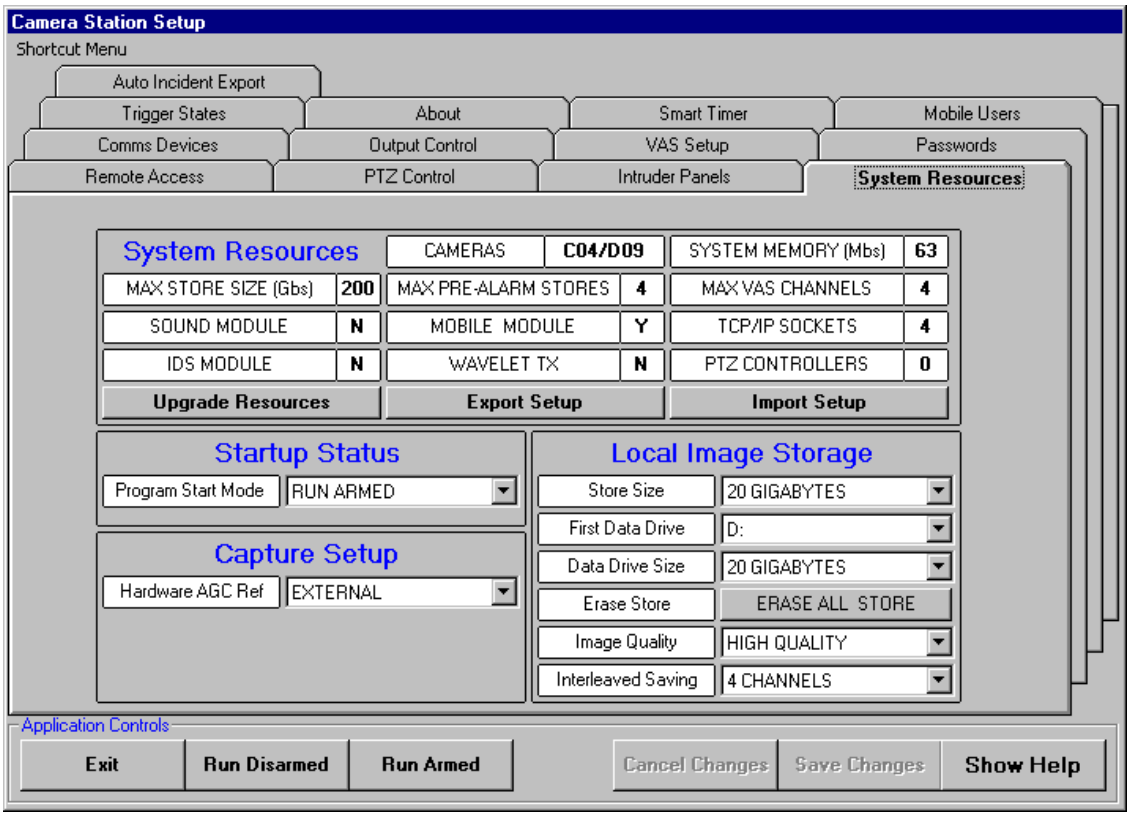
- **8 way**  View any eight of the available cameras, or other panel types, in addition there are two full sized incident panels for incident review.
- **Previous** 8 camera page  if more than 8 channels are installed
- **Cameras** 1 to 32 views 
- **Next:**  View the next 8 camera page if more than 8 channels are installed
- **Status**:  Displays the status window. Refer to the Status topic for detailed information.
- **Help**:  Displays the "What to do" information panel which updates to inform the user what is currently happening and what to do, if action is required. Refer to the "What to do" topic for more information.
- **Timer**:  Displays the current and next timer_zone information for the "Smart Timer" software.
- **Review**:  Opens the remote site store directory and displays the contents of the store as most recent event first. Refer to the section on Remote site store for more information.
- **History Log:**  Provides information on critical activities logged within the system. The activities are listed in the History log chapter.
- **IDS Log**  : Displays all alarm log entries when coupled to an external detection system such as the Menvier TS2500 alarm panel interface. Messages are colour coded according to level of importance. Please refer to the section on IDS Panel for further information.
- **Close Window**:  Closes any open display panels by dragging the icon across to the required panel.

Maintenance Mode (Preparing the system)

The maintenance mode requires a mouse or other pointing device for operation.
Maintenance mode provides access to all system set-up and configuration information, it is available only at Supervisor level of operation.
In maintenance mode select the appropriate panel for your requirements by clicking on the TAB buttons. Each of the headings is dealt with in turn.

General settings

Figure 2: Set-up Panel



System Resources

The system resources information panel is not editable. It is automatically updated and displays the information on the current system build. Additional pre-alarm channels, Video activity sensing channels and camera inputs may be purchased separately to update the system capabilities. The serial number is required for upgrade information. The box indicates the maximum available DRAM on the system. You will require approximately 32Mbytes for the basic installation and an additional 4 Mbytes per camera channel on top of this. Therefore a standard four terminal applications will require at minimum 32Mbytes of DRAM, additional performance may be gained from increasing to 64Mbytes.
The system resources also informs of whether wavelet transmission is available and whether any PTZ controllers are installed.

Program Start Mode:

Options:

RUN ARMED
RUN DISARMED
SETUP

Defines the power up state of the system. If you wish the system to arm itself following recovery, for instance, of a power fail, ensure that the program start mode is set to RUN ARMED. The default state is SETUP.

Capture Set-up: AGC Reference

This option is included for support of previous capture cards only (Bt 848 devices) and is not generally required to be changed. For information, AGC reference panel is normally selected for EXTERNAL reference and matches the jumper on the capture card if this facility is applicable to your capture card.

Local Image Storage

Store Size: The user may select up to the maximum available capacity according to the MAX STORE SIZE box on the resources panel. Store size is an upgradeable resource and is set according to the disk capacity available on your system. For instance if you have a single 20 gigbyte drive, you could set this to 20 gigabytes. You can not set this to a capacity greater than the MAX STORE SIZE, but you can set this to less. For instance if half of the drive is required for other operations, you could set this to 10 gigabytes and the store will automatically use a maximum of 10 gigabytes.

First data drive: For a multiple drive system you can set your first drive letter as required. The camera station assumes that the drive sequence is alphabetical and will automatically look for drive “D” as the next drive if drive “C” was specified as the first data drive.

Data drive size: In general you set this to the capacity of your hard disk. You can then set the store size to any value within your resource capacity up to this value. For instance if you wish to use 10 gigabytes from a 20 gigabyte hard disk, set the Data Drive size to 20 gigabytes, and the Store Size to 10 gigabytes. Recording with then utilise up to 10 gigabytes of drive capacity, assuming available space.

For multiple drive installations, eg. two 20 gigabyte drives, assuming the store capacity is set to 40 gigabytes, set the data drive size to 20 Gig, and the first data drive to the first drive letter. The camera station will then store images to the first drive listed (usually C:). Once this is full the next drive in sequence is used until this is full.

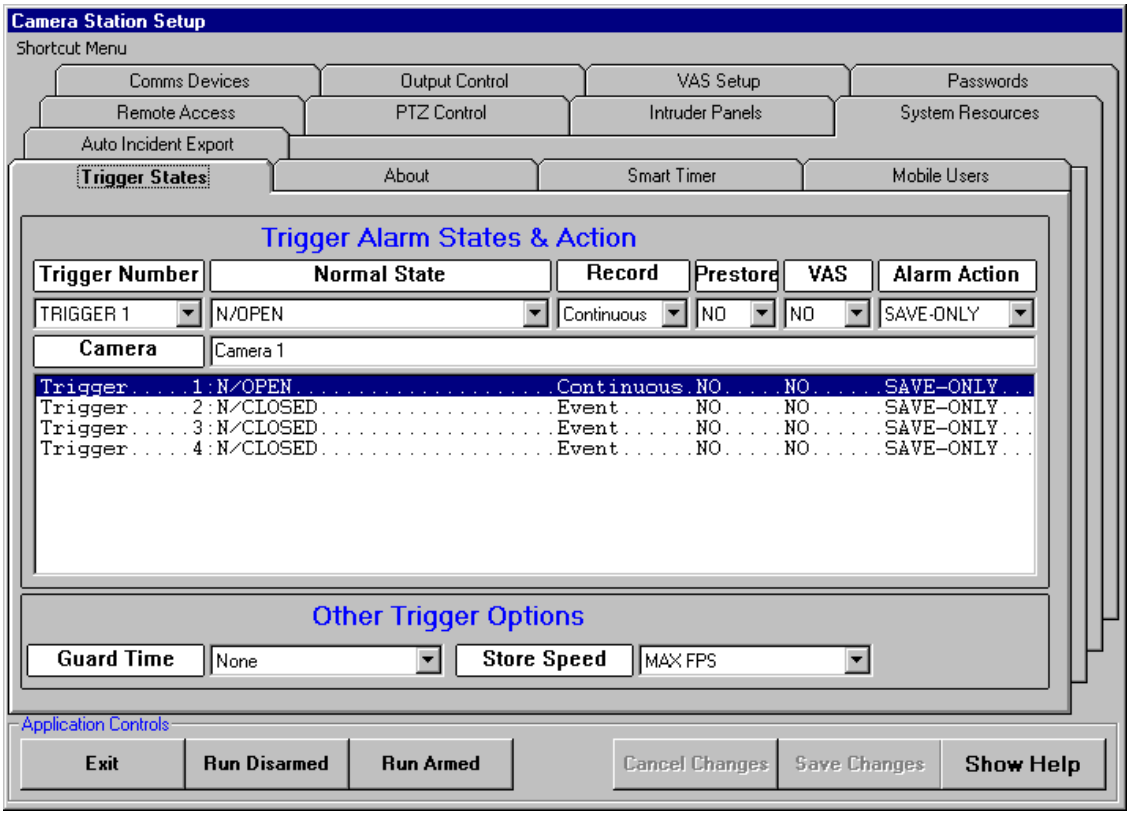
Image Quality: Images may be stored to hard disk in either Normal or High quality settings. This defines the image compression ratio. High quality produces the least loss of image quality when saving, but occupies more disk space. In addition, since the compressed image size is greater when saving using high quality, downloading of stored images to a remote base station will be slower using high quality than under normal. In general when using the system in without remote access, High quality would most likely be selected. If the system is being used for remote access, then Normal quality would most likely be selected.

Interleaved saving: This setting controls the ability to record simultaneous events. In general you should set this to the maximum number of cameras on the system. The interleaving affects the system’s ability to service simultaneous alarm activations. The interleaving enables simultaneous recording on from more than one camera at the expense of recording speed for each individual camera. Interleaving greatly reduces the elapsed time before a second alarm activation is serviced if the system is currently recording. However interleaving affects the speed at which consecutive alarm frames may be stored. Slower machines, therefore this parameter should be set to the minimum for best performance.

Erase Store: Erases the entire contents of the image store. Incidents may be separately exported to floppy disk if required, you will be asked to confirm erasure prior to removing from the disk. *Note that this operation is not recoverable*.

Setting the trigger response

Figure 3: Trigger options



Trigger Alarm States and Action

Each trigger input may be accessed either from the pull down list in the trigger number box, or by clicking on the trigger list in the main window. The blue bar displays the trigger number currently selected.

Trigger Number: Displays the trigger number currently selected. Each trigger number corresponds to a camera number eg. camera 3 refers to trigger number 3.

Normal State: Each trigger may be assigned to one of

1. Normally open
2. Normally closed
3. Normally open single shot (N/O SINGLE)
4. Normally closed single shot (N/CL SINGLE)
5. State change
6. Panel Deset (Isolate)
7. Panel Deset (Save only)

Normally open/closed: Connect to either normally open or closed contacts as required. You should use volt free contacts, for instance for relay contacts

Single shot: Select according to the alarm device in question. Use single shot modes in the case of, for instance, a door contact where the device may be left in the open state after activation and continual recording is not desired. Single shot is automatically re-set once the contact is closed. State change option is similar to the single shot mode, however an incident is recorded, in the case of the door contact when the door both opens and closes, ie changes from one state to another. This can be useful in determining for instance who sets and de-sets an alarm panel.

Panel-Deset Isolated (P-DESET (ISO)): Selects this trigger for use as a remote arm disarm facility. For instance for use with an alarm panel to de-set the system when the alarm panel is de-set. The panel set/de-set facility expects a ***normally closed contact for de-set***. Thus if the panel connection breaks for any reason, the camera station will automatically arm. The Normally open/ Normally closed options do not apply to the alarm panel set/de-set facility. The ISOlate option disables all trigger activity when the panel is de-set.

Panel-Deset Save (P-DESET (SAVE)): Select this option for use as a remote arm disarm facility. For instance for use with an alarm panel to de-set the system when the alarm panel is de-set. The panel set/de-set facility expects a ***normally closed contact for de-set***. Thus if the panel connection breaks for any reason, the camera station will automatically arm. The Normally open/ Normally closed options do not apply to the alarm panel set/de-set facility. The SAVE option disables dial out in response to a trigger but alarm images for both dial out and save only settings will be recorded.

Panel-Deset Isolated or Save (P-DESET (ISO) or P-DESET (SAVE)) with video connected to associated camera source: In addition, if a video source is connected to the camera associated with the alarm panel monitoring input, then an incident will be saved for each panel set and de-set operation even though the other inputs remain disabled. This facility may be used to view who sets or de-sets the alarm panel. Alarm panel Set and De-set incident saving applies to both Isolate and Save options.

Panel-Deset Save (P-DESET (SAVE)): Selects this trigger for use as a remote arm disarm facility. For instance for use with an alarm panel to de-set the system when the alarm panel is de-set. The Normal state, normally open or normally closed options may be applied to this setting. The SAVE option disables dial out in response to a trigger but alarm images for both dial out and save only settings will be recorded.

"**PTZ Input**" In addition to the normal camera trigger options if you are using a PTZ (fully functional) camera, then you may have additional "PTZ only" inputs. These are additional trigger inputs which are available to activate the associated pre-set position from the PTZ camera. There are a maximum of 32 inputs available which are separately purchasable items. Please refer to the section on programming the PTZ cameras for more information.

VAS and Trigger N/Open: This options combines both trigger and video motion detection technologies by using the TRIGGER AND VAS as a means of detection. **WARNING** it relies on the sensor having a duration of alarm condition of at least 2 seconds, to enable the VAS detection to overlap the trigger condition. You should take care to thoroughly test this configuration and ensure your sensor is compatible before using this option. If the sensor alarm condition fails to overlap the VMD sensing, an alarm condition will not be generated. Also if VAS is not enabled, the alarm sensor will fail to activate recording or dial-out. All activations are notified as VAS entries, regardless of whether the TRIGGER AND VAS option is in operation. Use the NORMALLY OPEN (N/Open) setting if your sensor is set to NORMALLY OPEN in the non-alarm condition.

VAS and Trigger N/Closed: This options combines both trigger and video motion detection technologies by using the TRIGGER AND VAS as a means of detection. **WARNING** it relies on the sensor having a duration of alarm condition of at least 2 seconds, to enable the VAS detection to overlap the trigger condition. You should take care to thoroughly test this configuration and ensure your sensor is compatible before using this option. If the sensor alarm condition fails to overlap the VMD sensing, an alarm condition will not be generated. . Also if VAS is not enabled, the alarm sensor will fail to activate recording or dial-out. All activations are notified as VAS entries, regardless of whether the TRIGGER AND VAS option is in operation. Use the NORMALLY CLOSED (N/Closed) setting if your sensor is set to NORMALLY CLOSED in the non-alarm condition.

Record: The record mode provides two settings: “Event” or “Continuous” mode. Each video input can be individually selected to operate in either mode. Therefore camera 1 may be programmed to respond to external trigger events, whilst camera 2 may be programmed to record continuously.

> Event Mode: With this option the recording process is controlled by the trigger inputs and the VAS activity detection. Each incident is recorded in the incident log as a separate event. Use this mode if your requirements are to record specific events and to filter mundane recording.
>
> Continuous: With this option recording continues independently of the trigger input, in much the same manner that a conventional video recorder would perform. In addition the trigger inputs maintain a higher priority than the background continuous record process. Therefore external events are still monitored and recorded in the incident log. Thus “continuous” mode may be used to mimic the operation of a VCR, but maintain the capability to dial-out and log external trigger events as with the event based recording. Use this mode if you wish to mimic the operation of a VCR as a “record all” device.

Pre-Store: Assign pre-store channels according to requirements and system resources to the respective trigger inputs. The entry level system provides a single pre-alarm channel. Additional channels may be purchased separately. Each pre-store channel provides ten pre-alarm images at approximately two frames per second and ten post alarm images, taken just after the alarm. Channels without pre-alarm storage save twenty images starting from the point of alarm only, at approximately two images per second. Pre-alarm data provides valuable information on events just prior to the alarm activation. Pre-alarm channels may be enabled to the maximum extent of the system resource capabilities. System memory should also be considered when upgrading to more pre-alarm channels. Each channel requires 4 Mbytes of available system RAM. A single pre-store channel will generally require a machine with 16Megabyte total memory capacity. To add further pre-alarm channels the system will require a total of 32mbytes, providing access to a further four pre-alarm channels.

VAS Detection: If Video activity sensing capability is installed on the system then each trigger number may be assigned as a VAS channel, independent of its normal external trigger level detection. Thus for instance trigger 1 may be activated from either a normally open relay contact, or from the in-built video activity sensing software. Refer to the Video activity sensing section which follows.

Alarm Action: The alarm action defines various actions that the system can take on receipt of an alarm.

- **Isolate**: Each trigger may be isolated preventing any action in the event of an alarm. Isolation of one channel has no effect on the status of the other trigger inputs.
- **Save Only**: In this instance the response to a trigger will be to save images to disk only.
- **Dial-out**: If the system is configured for dial-out ie. a modem is installed, correctly configured and “Remote Access” option has been enabled. Then on receipt of an alarm trigger alarm images will be saved to disk and dial out will commence to the first base station number. In addition the time and date of the incident will be recorded within the history log.
- **Dial-out & Mob**. The software combines access to standard mobile text pagers such as the Mercury or British Telecom Page1 Mini-Call pager. This operation can be very effective for mobile monitoring where a dedicated central monitoring station is not available. In Dial-out & Page operation, the base station will contact the central monitoring site through Base station 1. In addition it will dial the pager to provide either confirmation of connection or report failure to connect. A simple text message is reported to the Pager detailing location of the source of alarm. Please consult your system supplier for set-up and further information on the Pager software option. In addition to pager support the software supports SMS text messaging.
- **Mobile Only** The software incorporates access to standard mobile text pagers such as the Mercury or British Telecom Page1 Mini-Call text pagers. Pager only communication provides fast, low cost notification of an event without the need for computer based central monitoring. In Pager only mode, the base station will contact the pager only, and provide a simple text

message reporting the location of the source of alarm. An operator may then dial in to the conventional modem channel to view the cameras as normal. The system supports both Pagers and SMS services. Refer to the appropriate section to configure this facility.

- **Smart Timer**: The “Smart Timer” software enables triggers to be assigned to the smart timer which manages the alarm response according to programmable time zones. In this case the alarm response for the trigger in question will be dictated by the current setting of the smart timer software. Please refer to the section on the Smart timer software for details of operation.

Guard Time

Defines the wait period from time of arming to the time when the system responds to events. It is analogous to the exit period on an intruder alarm panel. You can set the time to various intervals from the pull down menu from 0 seconds upwards.

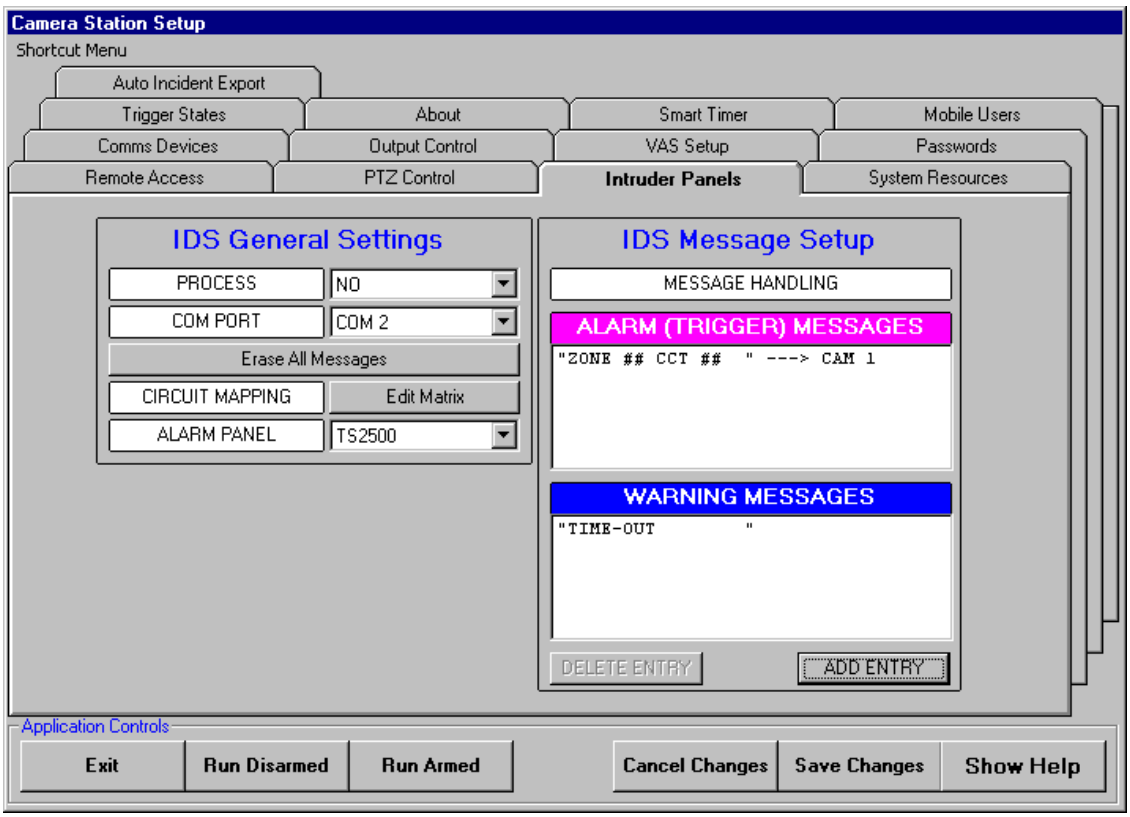
Store Speed

You can select different storage rates from MAX FRAMES to 2 images per second and 1 image per second. The maximum speed is dependent of computer power and disk access speed, for a Pentium 233 MMX machine you should obtain about 10 images per second storage rate. The lower speeds provide controlled saving for both pre and post alarm images, enabling the incident time period to be stretched. This greatly increases the capacity of the hard disk for continuous storage applications. You should set this option to a value consistent with your requirements. For general wide angle views 2 images per second is a typical value.

IDS Panel

To interface to an IDS or external alarm panel, select the IDS tab in the maintenance mode main form. The following options will be displayed.

Figure 4: IDS panel settings



Initial set-up of the IDS alarm panel interface

The following notes apply to the TS2500 alarm panel. Camera recording is initiated either by mapping a circuit reference, comprising a Network number, Xnode and circuit to a specific camera, or by adding a fixed message which is associated to a specific camera. Fixed messages may be of free format up to 16 characters long. Alarm messages can be mapped by editing the circuit mapping matrix. Mapped messages are of format “ALARM ####” where #### refers to the circuit number addressed by the alarm panel. If the appropriate alarm message is not listed, add the message by clicking on the ADD ENTRY button. Type in the message up to 16 characters in length. If the message has an associated circuit reference the “map” option will be available as you enter the four #### characters. If no circuit reference is contained in the alarm message, the entry will be fixed to a specific camera, which is selected from the camera number list box. Refer to the section on Edit matrix for information on how to map a circuit reference.
Once the appropriate alarm and warning messages have been entered, either from the pre-programmed list, or via user input, set the process message option to YES and configure the appropriate communications port. Check that messages are being received. Do this by running the system in either armed or dis-armed mode and display the IDS list entries box. You should see new messages displayed in the text box as they arrive, if you are certain that the alarm panel is generating messages and they are not being received, check firstly the TS2500 DCI unit is correctly installed into the computer port and that the correct port is enabled in the IDS settings. The connection from the DCI unit into the computer is “straight through” i.e. no additional cross over connections are required in the cabling. The baud rate and protocol are automatically set for the alarm panel. Please refer to technical support if you still encounter problems.

IDS General Settings

Process: Select either YES or NO to enable or disable IDS logging and recording.
Comm Port: Select the appropriate communications port for IDS logging. In the case of the TS2500 device, or related panels, this will be the port which is connected to the alarm panel printer port is connected.

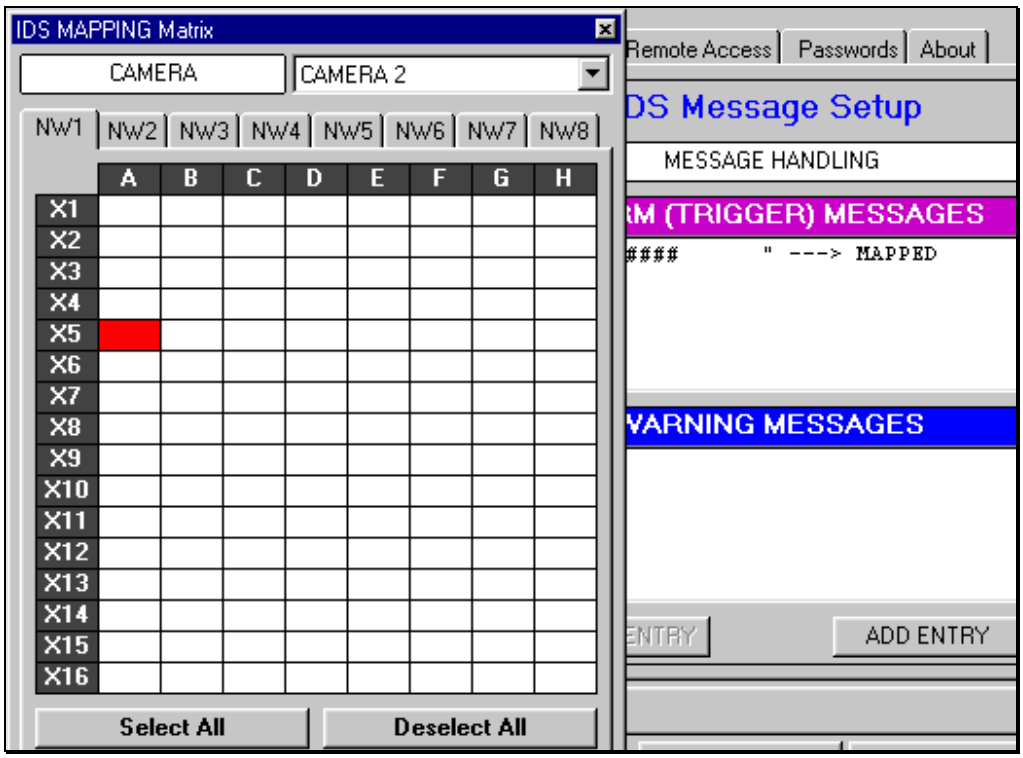
Erase all IDS messages: You can clear all currently stored IDS messages from the system. The system will record up to about 100,000 alarm messages, before overwriting from the beginning by "looping" round, similar to a tape loop format.

Circuit mapping: Edit Matrix:

You can edit the circuit reference for any alarm message with a four digit "####" reference. For example "24 Hr ALARM ####" This is accomplished by editing the mapping matrix. Click on the Edit matrix button to display the list of networks and Xnodes. Map any of the network nodes and circuits within the Xnodes to specific cameras. Mapping is performed by clicking on the appropriate cell, which is then highlighted in red. *Please note, the mapping facility will only be enabled if four # symbols are entered in the alarm message.* You can associate more than one camera to the same circuit reference, to obtain more than one recorded view of an incident. Use the "Select All" and "Deselect All" buttons to control selection of the entire network.

There are a total of eight network tabs, corresponding to the number of available networks within the TS2500 unit. Click on each of the tabs to select the networks as required. The enclosed figure shows the selection for network 1, camera 2; circuit 33

Figure 5: IDS Mapping Matrix



Close the mapping matrix once all circuit references have been added, by clicking on the cross in the top right hand corner of the matrix box. Please refer to your alarm panel users guide for details on the circuit wiring and various components associated with the circuit reference.

Check that recording is correctly programmed by arming the system and generating an alarm.

IDS message setup

There are standard alarm messages which are supplied with the system, you can view the alarm and warning message entries from the "message handling" list box. Entries in the alarm message box will generate a recording for the associated camera. For instance "ALARM #### ---→CAM 1" indicates that camera 1 will record on alarm from appropriately mapped circuit references.

Additional messages may be added as required by adding NEW ENTRIES into the list. You can also add references which are not mapped i.e. fixed to a specific entry, for instance ACCESS FAILED could be

used to generate recording on camera 1 by adding this message to the alarm message list with an association of camera 1.
In addition to messages which generate recording, you can designate specific messages as warning messages which are colour coded in blue for easy identification.

Video Activity Sensing

Video activity sensing detects movement through the camera lens by sensing changes in the picture elements (pixels). **Before using this type of sensing you should consider carefully the intended use.** The video activity sensing is not generally suitable as a means to trigger dial-out in external situations. The sensing works by detecting changes in light intensity, therefore shadows or car head lamps can often cause false triggering. Video activity sensing can be used very effectively as a "Save only" facility, eliminating the clutter associated with continuous recording and providing instant access to incidents with activity.

The software incorporates detailed masking capabilities, enabling small or large areas to be masked, thus improving the filtering of routine movements. There are also three sensitivity levels, these can be used to improve filtering of events and reduce susceptibility to noisy video signals. You can select the channel associated with activity sensing and purchase additional channels as a software upgrade.

Before arming the system you should carefully test the response of the sensing software by using the Visual check simulation.

Setting up Activity Sensing:

1. Select the VAS Set-up tab on the Station set-up form. Select the camera number for the activity sensing channel, a single frame is then captured for that camera. You can then exclude tiles or include tiles by clicking the mouse within the tiled image area. By default the entire image is included. Therefore start by excluding tiles outside the region of interest. You can select whole rows or columns by clicking on the border buttons. To include previously excluded tiles, select the "include tiles" button and repeat the above process. A minimum of two active tiles in each direction are required as the smallest detection area.

2. Set the sensitivity level by starting with the normal setting and running the VAS Check which simulates the detection process.

3. The VAS Check simulation displays the masked regions in blue (cold areas out of the region of interest) and areas within the region of interest in red (hot areas). Tiles displaying movement are shown as tiles of normal video, in addition the PC speaker will click when the threshold of detection has been exceeded, thus causing an event. Each audio click corresponds to a VAS event being generated.

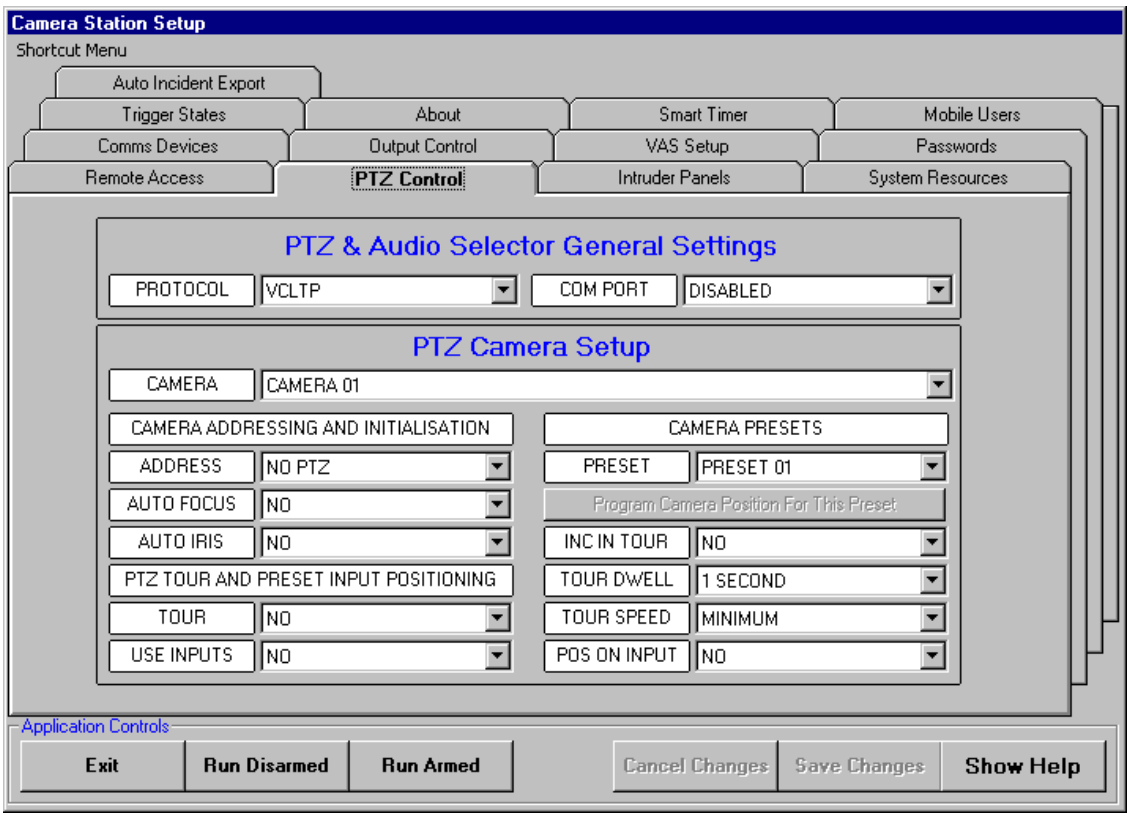
4. Once the VAS Check is running you will not be able to alter other settings, therefore once you have completed the check, select the End VAS button which returns the system to set-up mode. Repeat the above with different sensitivity levels if required, until you are happy with the response. Ensure you have saved the changes before arming the system.

Show activation on Replay: This facility displays the elements responsible for triggering the activation within the review window. It can be used to good effect in resolving unexpected activations. For instance florescent light variations which may cause activation can be readily identified using this facility. Only the *alarm image* displays the activation squares. Show activation is enabled on a per camera basis. Therefore you need to select the appropriate camera and enable "Show Activation" for all required cameras. If you de-select the then the activation squares will be hidden.

PTZ (Fully Functional Camera) Configuration

Before programming your PTZ camera source, you should ensure that a suitable driver for the particular camera is available. Please consult your supplier for a list of supported devices and protocols.

Figure 6: PTZ (Fully functional) Configuration



Protocol: Before you can programme the pre-sets and the tour you must select the correct camera protocol from the list included. Please consult your supplier for a list of supported devices and protocols.

Com Port: Select the communications port which will be used to communicate with the PTZ camera. The data transfer rate etc is automatically set from the protocol selection. The port uses RS232 interface, therefore you will require an external RS232 to RS422 (referred to as twisted pair) converter to enable direct communication with the PTZ camera head. "I*n coax" protocols are not supported directly*. Please consult your supplier if you are uncertain about this aspect of the hardware installation. In general a small RS232 to RS485 converter can be supplied to meet requirements. You should ensure that you select a port not utilised by the modem or terminal adapter used for image transfer. If you do select this, the conflict will be indicated by the "Device failure" notification in the status window when you run the system.

Camera: PTZ facilities can be enabled onto any camera as required. All operations will now apply specifically to that camera, including pre-set positions. You can thus have up to 32 pre-set positions for each camera.

Address: The first operation is to select the required camera for PTZ control. Set the address of the unit for communications eg "80h" the default VCL camera address.

Auto Focus/Iris: Select these controls as required to suite the camera specification

PTZ Tour and pre-set input positioning: From this setting you can select whether you want the camera tour to automatically start when the application is started or not. The **Use Inputs** facility enables you to determine whether the PTZ camera will change to the pre-set position when the associated alarm input (trigger input) is activated. This separate control facility enables the operator to quickly enable or disable a tour or automatic pre-set positioning, without losing the pre-set position already programmed.

Setting the PTZ Pre-set positions

Select the pre-set number required from the list from 1 to 32. Then select the “programme camera position for this pre-set”. A separate window will appear enabling pre-view of the existing camera pre-set position, and control to locate the new position.

Figure 7: Pre-set PTZ programming

How to control the camera

With the pre-set window active position the mouse in the centre of the screen. Select the left hand button and *keep it depressed* The PTZ head will then position according to mouse movements. Move the mouse up, down, left and right to familiarise with the mouse action. The head will move faster the further the mouse is positioned away from centre screen. Zooming in and out are controlled by the two icons. Select and hold down the button to zoom camera position according to requirements.

When controlling the camera at high zoom levels, camera positioning may become too coarse. In this case use the speed icon to slow the head. The speed icon remains depressed once selected, click on the button again to resume normal speed settings.

Once the desired camera position has been obtained, select the tick to save changes or the cross to cancel changes.

Setting up the tour

Once the desired position has been set, you can include this pre-set within the tour or not, by selecting “include in tour” for the associated icon. Set the dwell time and tour speed for each pre-set position as required. You have several speed options available which range from very slow to maximum dome speed. Please also refer to the next section on *setting pre-set positioning* before leaving this topic. Also note if you

wish to disable the tour, you can do this be selecting “NO” to the TOUR option, without losing your pre-set programming.

Setting the pre-set positions on alarm

When setting the tour also decide on whether you wish this pre-set position to be associated with an alarm input. You can select any input from 1 to 32 for any pre-set position. For instance pre-set position 10 may be activated by trigger input number 32. You can therefore “converge” two or more cameras to the same scene, at the same time, by selecting a common trigger input. This operation can be used to good effect in critical event recording, such as panic alarms. Also note if you wish to disable positioning on alarm, you can do this be selecting “NO” to the use inputs option, without losing your pre-set programming.

Smart Timer

The “Smart Timer” software allows the user to programme the system response according to different time zones. Each time zone may be set to a resolution of 15 minutes by dragging the slider bars. The new time zones are reflected in the entry panels at the side of the panel. You can use the LEFT and RIGHT keyboard arrows to move the time zones having first highlighted the correct zone with the mouse. This provides much easier control over individual time zone settings than using the mouse control.

You can select the desired action from the drop down list box according to the time zones indicated. NEW FEATURE: The Smart Timer options include all the available trigger options. Thus the user may easily tailor the system response, for instance to enable dial-out to Mobile users during the day, but revert to centralised monitoring via ISDN at night. As an illustration, to obtain dial out from camera 1 outside office hours of 9.00 to 17:00:

- Set the camera zones to the correct intervals
- Select the correct response required in each time zone
- Set the Macro to apply to Camera 1 only for all days
- Apply the Macro

Then to set the required conditions for say Saturday and Sunday

- Set the left hand Day panel to Saturday and Modify the response as required
- Save the changes and repeat for Sunday

The Smart timer current and next time zones are viewable by dragging the  icon onto a vacant panel.

This programme provides a swift and versatile method to automatically control the response of the system according to changing daily requirements.

Output: Latched and Momentary Output Control

The camera card provides two output controls for each camera card. These are TTL type levels with 5 volt swing (see technical specification for details and wiring information) They can be used to drive external circuitry such as barrier controls and lights. There are two options for the output control. You can define the power up state for the latched output as open or closed. You can also set the reset delay for the momentary output by selecting a value from the list. Once activated, the momentary output will return to its power on state following the reset delay.

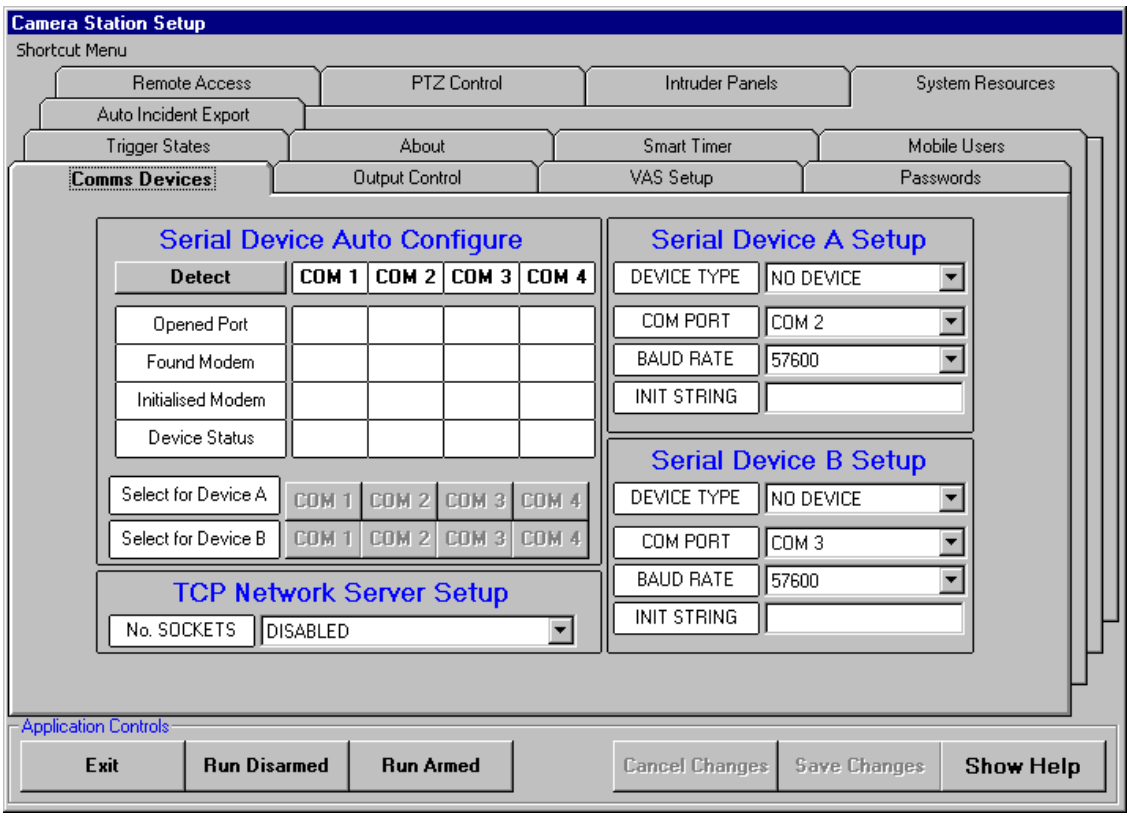
Voice Messaging (Audio Challenging)

The voice messaging set-up is located under the Output control tab.

If you have purchased the voice messaging software then you can test the voice messaging and set-up the voice message identity text from this panel. Please refer to the voice messaging software for information and set-up for this facility.

Comms: Setting the Communications

Figure 8: Communications set-up



Serial Device Auto Configure

There are four communications ports available. Selecting the "Detect" button analyses the state of the system. To select a valid Hayes compatible device click either Device A or B buttons at the bottom of the respective column. You can select different devices for each port. For instance device A could be an ISDNII line with device B a PSTN modem used as a back-up.

Serial Device A and B Set-up

In general if you have selected the device from the autodetection menu, you will not need to select the device from the comm port setting. If using a modem the speed should be set as default to 115,200 baud. This will cope with most modems independent of the actual telephone line connection rate. The dial string by default works well with most **ROCKWELL** based chipset modems (such as "Mr. Modem"; "Lasat" and "Apache" modems). If you are using a non-rockwell chipset based modem and you are having difficulties with connection, you should first consult the modem manual for assistance, then consult your supplier for technical assistance.

The camera station supports ISDNII with either single or dual line transmission. Please consult your supplier for a list of approved terminal adapters if you wish to purchase one separately.

The RS232 device type selection will enable connection across twisted pair or Radio Modem type connections. Please consult you supplier for details of compatible Radio Modem devices.

To disable a device, select NO DEVICE, which inhibits dial-out from the associated device.

TCP Network Server Set-up

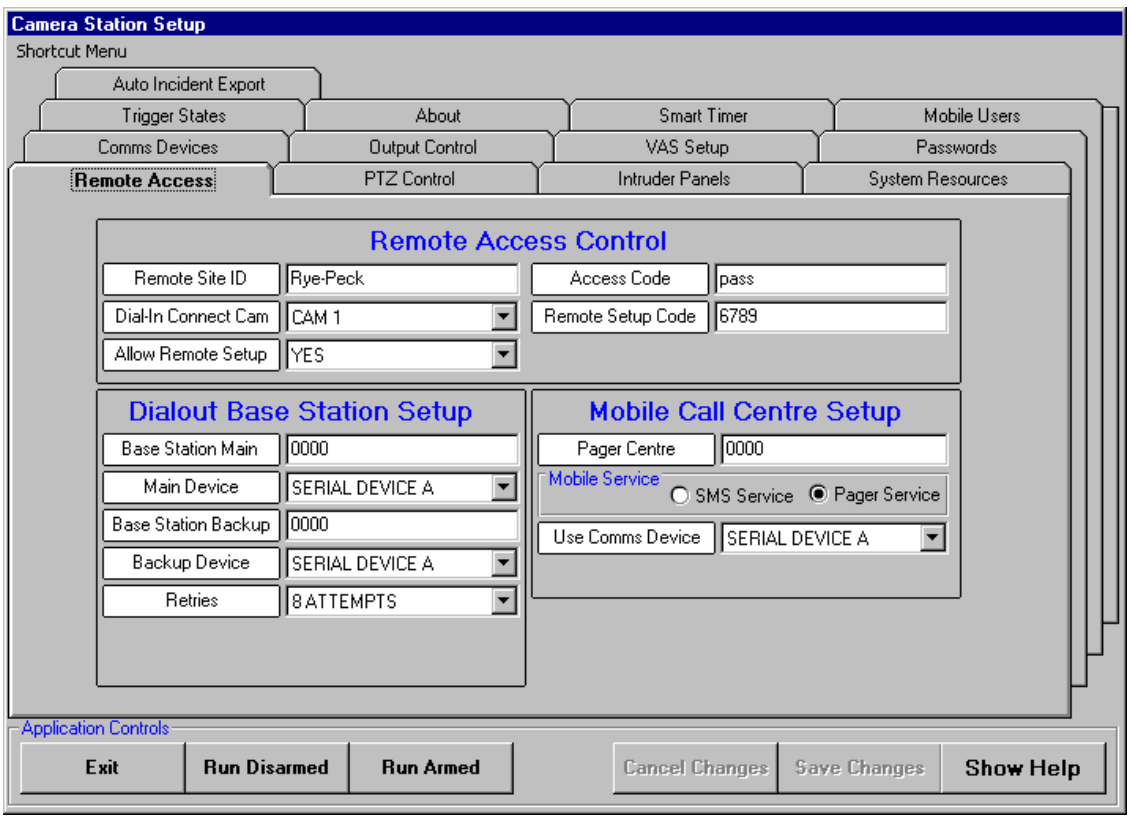
Figure 9: Network server setup

The camera station will automatically detect the presence of a network connection if the TCP/IP socket is enabled. The number of available sockets determines the number of Networked viewing stations that can communicate with the software. You should set this to the maximum number of network viewing stations that you currently have on your system. This setting is not relevant to dial-in software such as the base station. You do not need to configure any other settings for this operation since the software will automatically detect communication from compatible networked viewing software.

Remote Access

Remote Site ID: Set this to the site name to be reported to the base station on connection. It is not case sensitive, but must be precisely typed in order that the base station can identify this site in its internal database. By default a unique code is supplied, however this should be changed to a more recognisable identity such as “Verdant” You may use up to 28 characters.

Figure 10: Remote Access Control



If the system has no modem installed, or is not required for remote access, set the device type to NO DEVICE in the communications panel. This prevents the system from detecting the presence of a modem. If remote access is required, set this option to your specified modem or terminal adapter type. In this case the system will automatically look for the presence of a modem using the most recent settings, on power up. The presence or not of a detected modem is reported in the status panel.

Access Code: Available for operation with remote access . This option sets the access code which the remote access software must use to gain access to the system. It is case sensitive and may be up to four characters in length. The default setting is "pass".

Dial Out Base Station Set-up: Enter the telephone number of the main and back-up lines. Then enter the device associated with each entry. You can then use for instance ISDN as the main number and PSTN as the back-up device configured as device B. The camera station will attempt up to connect to the base station using first the main number and then the back-up number. Each attempt is recorded in the History log. The system automatically retries 8 times (4 attempts main and 4 attempts back-up). If the first connection fails after 1 minute of waiting for connection, it will immediately dial the back-up number. There is then a wait of 2 minutes before the cycle restarts. If connection fails a system error message is entered into the history log.

Number of Retries: You can select either 8 retries, or "Until connected" which implies the system will keep trying until connection is established. *Care should be taken when using "Until connected"* option with dial-up systems, since the system will continue to dial out until connection has been established.

***Mobile Call Centre Set-up* :** You will not be able to access this settings panel unless you have purchased the Mobile users resources option. Check in your system resources panel to verify whether this resource is present. According to whether you wish to use Pager or SMS services select the appropriate radio button control. Then enter the telephone number for the automated SMS or Pager service number. This is a direct dial facility and will directly access the Pager or SMS modem bank via the PSTN modem installed in the Camera Station. Please note that at time of printing the pager and SMS services support PSTN modems only, (ISDNII connection is not currently supported).

IMPORTANT NOTE: Please note, whilst typical message transmission delays via the service provider may be acceptable, the SMS messaging is prone to a significant delays of perhaps several days. *Therefore the SMS messaging system should not be used for alarm critical applications where response time is important.* The Pager service is designed for emergency operations and should be used where response time matters. Refer to your Pager service provider for service details.

Refer to the section **Mobile Users Set-up** for details on configuring the Mobile users tab.

Passwords

There is a single Supervisor password, which allows access to the maintenance mode. In addition there are 20 user passwords available which allow restricted access to the system. Add these as required.

The default **supervisor** password is "Super" and the default **user** password is "User". If you wish to change Supervisor access type in the current password followed by the new password and the password confirm. The Start-up Access panel enables selection of either locked, supervisor or user states. In the Locked state, the system requires the user to log-on before any operation may be undertaken on the system. Supervisor access allows full rights over the system on power up. User access disables Maintenance mode and prevents the user from closing down the software**.**
Startup Access: This defines the access level on power up. You can lock the system so that in the event of power fail recovery, access via password is still required.
Auto-Secure: The Auto-Secure option automatically logs the user off if no user activity is detected within a selectable time period. Please refer to securing the system for details.

About

The about panel displays information about the Digital Camera Station application together with system version information.

Setting up site details

To access the site details ensure the system is disarmed. Enter Set-up mode and view the "Communications" panel by selecting the appropriate tab control.
If you intend to operate the system with a modem for dial-out operations you must enter the following data at minimum:
Communications Panel:

- A valid device type under the communications Serial Device A set-up.

Now open the "Remote access" panel and enter the following:
Remote Access Panel:

- Base station telephone number
- Base station back-up number
- Remote site ID
- Access code

The remote access control informs the system that a communications device is present and that it should try to initialise this when running. You can check that the device is operating correctly by viewing the status panel when running the system. See the section on Status Panel.

The base station numbers are the central station telephone numbers which the system will use when dialling out following an alarm. In the event of a connection failure with the Main number the system will attempt to connect using the Back-up number. Eight re-try attempts will be made. In the event of failure to connect the history log will be updated and the "What to do" panel will indicate failure to connect.

See also: Setting the trigger response and setting the communications for information on how to initiate dial out.

Supervisor and user modes

The supervisor mode provides complete access to the system including program exit rights. It is intended that the supervisor should manage the system set-up, control access to the telephone numbers and the dial out activity.
The user has access to all operations except maintenance mode and the ability to quit the application.
The default password for supervisor level is "Super" typed exactly as shown without the quotation marks.
The default user password is "User". To change these to your own settings refer to the password section under Set-up accessed via the Maintenance mode.

Securing the system

The current state may be frozen at any time to prevent operator tampering by selecting the secure option  icon. In this state the camera station will respond to dial-ins and save events according to the current set-up, however the operator will not be able to access the menus. You may log on either as a user or supervisor to re-gain access to the system. Passwords are defined and saved under the Maintenance mode setup facilities. In addition the auto secure facility which can be programmed from the Passwords panel under maintenance mode, allows timed auto secure after selectable periods in the event of no operator activity. This provides a useful means to prevent inadvertently leaving the system open, if locked operation is required.

Displaying Contact information

NEW FEATURE: Select the small  icon on the main titlebar across the top of the screen. This will display support contact information. The box will automatically close after 5 seconds to prevent interruption to the recording process.

Viewing live cameras

To view a live camera image first place the mouse pointer over the camera 1 icon  . With the left hand button depressed, drag the icon over the required panel, eg top left hand panel. Ensure that all video sources are active and connected to the camera inputs on the camera card. IMPORTANT *You will need to connect all required video signals to video connectors whilst in maintenance mode or before running the application.* Available camera sources are determined when switching from maintenance mode to display mode, in order that loss of video may be detected. To check for the presence of video enable the status window  and check if the associated camera input is displaying NO VIDEO. If so check the video source and re-enter maintenance mode before re-selecting the camera source.

Single camera View

The single camera view displays a full screen image of the selected camera. You need to initially select the camera from the right hand menu. This setting will be saved as you switch between screen modes. To change mode click on the respective screen icon. The full screen mode can be used very effectively with sequencing. See the section on sequencing cameras for further information.

9 Way View

 The nine way view is used mainly for basic multi-camera viewing. The review facilities and sequencing are not available in this mode. You need to initially select the camera from the right hand menu. This setting will be saved as you switch between screen modes. To change mode click on the respective screen icon

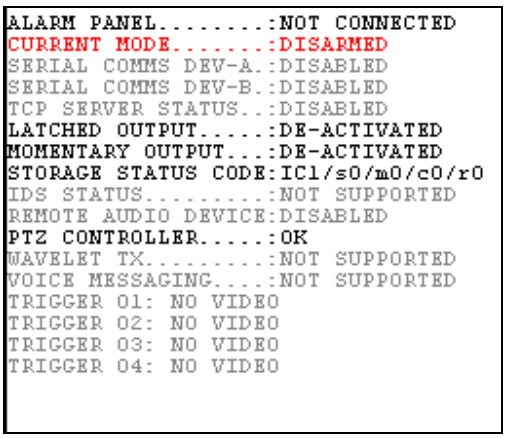
8 Way View

The  8 way view with replay can be used very effectively to display up to eight cameras whilst reviewing disk incidents. You need to initially select the camera from the right hand menu. This setting will be saved as you switch between screen modes. To change mode click on the respective screen icon.

The Status Panel

To view the status panel select the  icon from the main toolbar and drag this into a vacant window.

Figure 11: Status Window



The status panel provides general information and more specific engineering information about the state of the system. The engineering codes provide a useful diagnostic tool for fault finding.

The panel is accessed and closed by clicking on the status information icon in either armed or disarmed modes.

Description of entries:

- **Alarm Panel State**: Shows the state of the remote alarm panel input if this option is connected.

  Displays either “Set” or “De-Set (isolate)” or “De-Set (Save)” The set state implies that both the camera station and the alarm panel are armed. The de-set state depends on whether the use has selected the option to isolate the system entirely or isolate only dial-out activities.

- **Current Mode**: Informs the user whether the system is armed or disarmed.

- **SERIAL COMMS DEV-A and B**: Reflects the state of a modem if installed. If not installed this message reports **DISABLED**. If a device is present then the response will be one of:

  - **On hook**: modem is in the idle state but is active.
  - **Off hook**: modem has commenced dial out or is connected to the base station
  - **Port failed**: Failed to find a communications port
  - **Modem failed**: Failed to correctly initialise the modem
  - **Dialling**: Dialling the base station, dial out may be aborted by holding down the ALT key and pressing A.

- **Latched output**: Informs the user of the state of the latched output.

- **Momentary output**: Informs the user of the state of the momentary output.

- **Storage status code**: Used for system diagnostic purposes the first entry displays the level of interleavin in the system. The second entry defines the maximum number of image log files currently stored, there will be a maximum figure of 20. The third entry defines the current image log file being used. The fourth entry is either r0 or r1 indicating whether the image logging system has returned back to the beginning or is still on the first pass. If you encounter problems with the system it is advisable to note this code at the time the fault occurs, since it will assist in problem solving.

- **IDS STATUS**: If connected to an external alarm panel this code the refelects either DISABLED, for no panel enabled. PORT FAILED when the IDS channel has been selected, but the communications port is unavailable. MONITORING indicates the normal listening status for the port. IDS OFFLINE Temporary suspension of IDS monitoring due audit trail export. The audit trail export temporarily halts reception on new messages whilst the operator is compiling the text output. There is an automatic timeout on this facility to prevent locking the system.
- **PTZ controller**: Indicates whether a PTZ device has been enabled, if so whether the communication port has been successfully initialised at the computer.
- **Wavelet Support**: Indicates whether wavelet transmission has been added to the system. Wavelet transmission provides faster image refresh rates for the normal and fast settings across transmission telephone and ISDN networks.
- **TRIGGER X**: Reflects the status of the trigger inputs and video activity sensing software if enabled. Options are:
    - TRIGGER X: NO VIDEO: Video was not detected on the input when swapping from maintenance mode to either disarmed or armed status, or when running the system application. If a video channel has subsequently been added then you will need to enter maintenance mode and return to either disarmed or armed state to re-set this message.
    - TRIGGER X: (PS, ,T) MONITORING: Shows that the trigger input is monitoring and that the channel has pre-store capability and that it is "charged" i.e. pre-alarm frames are being held in memory. The final entry can be one of the following:
        - T: Trigger under control of the smart timer software
        - S Trigger in save to disk only
        - C Trigger will dial central station number in response to an alarm
        - R Trigger will dial reserved or Base station in response to an alarm
        - P: Trigger has been designated as an alarm panel control input.
        - VAS: Video activity sensing is active and awaiting trigger.
    - GUARDING (x): The trigger guard time is active before monitoring starts, (number of seconds of guard time left).

Help panel

The help panel provides an operator with a simple guide to the status of the system and how to respond. Information on the status of the system, who is logged on, whether armed or dis-armed, and the number of new incidents since the reset button was last actioned.
There is a simple "What to do…" message which prompts the user to respond according to the current state of the system.
This help facility may be accessed at any time by pressing the F1 key.

Reviewing stored incidents

The system allows reviewing whilst recording, therefore you do not need to disarm the system before reviewing incidents saved onto the store.

To enable the review panel, drag the  icon onto an available panel. The panel does not need to be vacant, the view will automatically change when the review panel is selected. If you are sequencing, the review panel will override the camera display whilst the review panel is active. You can only review within

the larger format panels of the full screen or quad format. The review facility displays two panels. The upper panel is the saved image, the lower panel lists the stored entries on disk. Each entry provides the incident number, the time and date of the alarm activation, and the camera number associated with the event. On the left hand side of the incident list are the list controls. The up and down arrows  scrolls the log by an incident on each click. The  arrow and down arrow scrolls the log one page from the current cursor position ie 24 incidents. You can also use the slider bar to move up and down within the log.

The top of the bar is the start of log and the end of the bar the most recent entry. Clicking within the bar re-positions the cursor proportionally within the listing. You can also drag the pointer to a new position. In the final column of the listing, a simple coding shows the type of incident recorded. An > followed by an number and > indicates that the store was from camera x; the incident has both pre and post alarm frames and was generated by an external trigger. If the arrows are replaced by "~" signs then the incident was generated by a video activity sensing channel. If the incident was generated by a user "snap shot" then a ## symbol is used. If the incident was created by an alarm panel event then the display will show "IDS=x". Finally is the camera number follows the two signs e.g. >>1, then the channel contains only post alarm frames and the alarm frame is therefore image number 1.

The incident replay controls are as follows:

-  Beginning of incident
-  Step back one frame
-  Stop re-play
-  Play incident
-  Continuous play of incidents
-  Step forward one frame
-  Go to end of incident

The frame control icons enable single frame  or auto-play from one incident to the next, ie continuous re-play.

Incident updating and reporting

Three icons control the updating and reporting of the incident list.

These are:

 When enabled, incidents are automatically appended to the end of the log. Each time a new entry is recorded, the selection bar will append this to the end of the list. In addition the image window will display the alarm image associated with the new entry. In this manner you can use the review list to easily display new events as they arrive. However this mode of operation can be distracting if you are searching or reviewing the list whilst new events are being frequently recorded, since the incident bar will automatically jump to the end of list each time a new incident

arrives. To resolve this, you can use the  icon for manual update of the list entry. Clicking on this icon will append all new *completed* entries into the event log.

Incident List Search .

To assist with searching and replay of incidents, the system provides an incident search facility.

The search dialogue box is displayed by clicking on the  icon.. This will then show the search dialogue box as in figure 12.

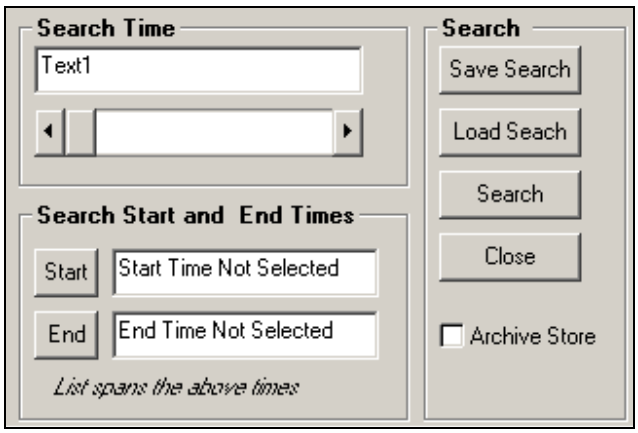


Figure 12: Incidents Search

The top text entry “Search Time” displays the earliest time available in the incidents log. Underneath is the slider bar which scrolls between earliest available time and the current time. Slide this bar along or use the left right arrows to locate your chosen start time. Once this is displayed press the “Start” button which enters the time in the start time below. Then use the Search time slider bar to locate the approximate end time of the search period. Once you have found this click on the “End” button.
When the approximate times have been selected, click on the search button and the incident list will shrink to the desired period. You can save a single search and reload this so that you can easily return to the previous search at any time. Saving an new search will overwrite the previous saved search.
Once you have completed the search operation, close the search window using the “Close” button.
It is not necessary to find an exact time, use the search control to span the approximate time you are looking for. Please note the search facility will span the period of interest, thus you will normally obtain times both earlier and later than the exact period you are looking for. The search control simply narrows the incident list to approximately the range of interest and you scroll as normal within the resulting incident list.
You may now scroll up and down the incident list displaying only the region of interest.

Once you are finished with the search operation click on the refresh button  to cancel the search and return to the full incident list. Please note, whilst the search control is active new events arriving will not be displayed at the end of the log, but are still being stored. These new events will come into view once the search operation has been cancelled.

Archive Store: Reserved for future use.

Sequential or Single camera replay

Click on the  icon to display the option box to replay either from a single camera or sequentially through the log. This is a preference setting and the state will be remembered until changed. Thus if you wish to “demultiplex” the cameras and continuously play for example only Camera 1 select “Single camera” option and close the box via the tick icon. Then click on the required camera from the incident log to commence continuous play from that point.

Alternatively to play all cameras in sequence from a given time select “All incidents Sequentially” and repeat as above.

Full Screen Replay

You can review incidents in full screen mode as well as standard quarter screen format by selecting the  icon. The image is zoomed by pixel replication, so will loose some clarity against the quarter screen format. In full screen mode you can still scroll between incidents and have the full use of the replay controls, however the event log list is not displayed. To return to the normal quarter screen format, click on the  icon which restores the previous screen layout.

Clearing the Review Panel

Once reviewing is complete, select the  icon and drag this over either or the review window panels, the contents will then clear.

Printing and Exporting Images and Incidents

Exporting an incident

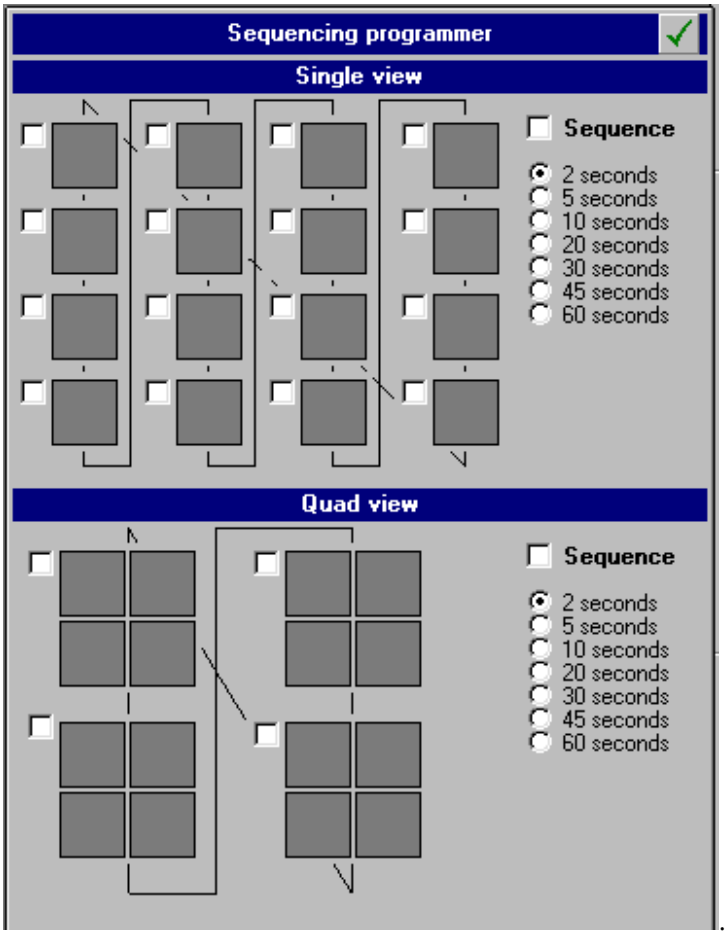
To export an entire incident of 20 images, first identify the incident of interest using the selection bar, then select the  icon from the review panel. Ensure that a blank formatted floppy disk is inserted in the floppy drive, if exporting to floppy. The print and export panel will request the type of export and an appropriate filename of up to 15 characters long. A series of files will then be exported to disk. These may be viewed and imported to the Event View software available as part of the software suite, which is a standalone remote viewing and printing software package.
You can also export single images to various formats. These are JPEG (.JPG) and Windows Bitmap (.BMP). The JPEG format is a compressed image format suitable for applications such as Internet Explorer enabling fast and easy e-mail of specific images. Most other graphics packages will support .BMP format. This can be used for image enhancement within packages such as Paint Shop Pro etc.

Printing an image

Image printing is available from the  icon. The image will be printed with associated time and date information together with message lines for adding comments.

Sequencing

The camera station supports both single screen and quad screen sequencing. To enable the sequencing set-up, move the mouse pointer across the  or the  icon and click on the *RIGHT* hand mouse button whilst the pointer is over the icon. The sequencing programmer will then be displayed.



To set-up a sequence, drag the camera or any other appropriate icon, such as the help panel, from the icon bar onto the sequencing panel and enable the frame from the tick box entry at the corner of the camera box  . You can enable up to 16 transitions for the single camera sequencing and four transitions for the quad sequencing. Sequences may consist of a combination of camera views and other information, such as help information.

Once the frame sequence has been determined, select the dwell time using the button selection provided. Finally click on the sequence tick box to enable the sequencing facility and then click on the apply button to close the sequencing panel. The sequence programme will run automatically. Sequencing is indicated by the  icon. You can suspend sequencing by clicking on the *RIGHT* hand mouse button on any of the image panels. If you wish to stop using the sequencing facility, display the sequencing programmer and de-select the sequence tick in the appropriate set-up panel.

Snap shots

The  icon provides a quick method to store a snap shot incident of 20 images. If the system has pre-alarm channels active, then the snap shot will provide pre-activation images as well as post, therefore you will records from a few seconds before to a few seconds after the icon is pressed.

The Timer control

This panel indicates the status of the present time slot, and the status of the next time slot within the smart timer programme. It provides a quick guide to what the smart timer is doing and what it is about to do.

Viewing the History log

Display the history log by clicking on the  icon. The following types of events are recorded in the log together with time and date of the event, an explanation is included here in *italics*.
History log messages:

Process.start.disarmed *In grey text, shows the state of the programme, when display mode was entered, ie disarmed.*
Process.start.armed *In grey text shows the state of the programme, when display mode was entered, ie armed.*
Process.end *In grey text shows that display mode was exited, either by returning to maintenance or exiting the programme.*
System.disarmed *In blue text shows that the operator currently logged on has disarmed the system.*
System.armed *In blue text shows that the operator currently logged on has armed the system.*
Alarm.panel.set *In red text indicates that an external trigger designated as the alarm panel set/deset has been set.*
Alarm.panel.de-set(ISO) *In red text indicates that an external trigger designated as the alarm panel set/de-set has been de-set and the system has isolated all trigger inputs including VAS detection.*
Alarm.panel.de-set(SAVE) *In red text indicates that an external trigger designated as the alarm panel set/de-set has been de-set and that dial-out capability has reverted to save to disk only, all other save to disk functions remain the same.*
Start-up.system.lock *In grey text, shows that the system has entered display mode in the locked state.*
System.Locked *In blue text, indicates that the currently logged on operator has locked the system.*
Supervisor.Logged.on *In blue text indicates that the supervisor has successfully logged on.*
User.Logged.on *In blue text indicates that the user has successfully logged on.*
Set-up.Mode.*Entered* *In red text indicates that the system has been put into maintenance mode.*
Store.Erased *In red text indicates that the image database has been erased.*
No-Activity.System.Lock *In red text indicates that the system has automatically logged off the current operator due to no activity.*
Startup.user.access *In grey text indicates that the system entered display mode under user access rights.*
Startup.Super.access *In grey text indicates that the system entered display mode under supervisor access rights.*
CamStn*RS*Executed *In red text shows that the Camera station has been run.*
CamStn*RS*Terminated *In red text shows that the application has been shut down.*
Unknown-Message-code *In blue text indicates that the system has detected an illegal message code, probably due to file corruption, you should seek technical support in this case.*

The history log may be scrolled up and down using the up down arrow keys. The entry at the top of the panel displays the current page number from the total number of pages stored on the system.

The  icon moves to the start and the reverse to the end of the listing and the  icon moves by pages. The history log may be exported to disk as a text file or printed to a standard Windows printer from the  icon.

Viewing the IDS log

The alarm panel log is available only if the resources include alarm panel monitoring. Check the resources panel under maintenance mode to confirm availability. If the alarm panel is included the IDS module will display a "Y" entry.

The IDS alarm panel log is displayed in either armed or dis-armed mode by dragging the 

icon into an empty or appropriate display panel. A list of entries will be displayed which can be scrolled up or down as required. The  icon moves to the start and the reverse to the end of the listing and the  icon moves by pages. The page 1 of x indicated the total number of pages available on the system. The listing holds up to 1000 lines of text. Once this limit has been reached the log will automatically loop to the beginning.
The IDS log may be exported to disk as a text file or printed to a standard Windows printer from the  icon.

Incident colour coding

The log is colour coded according to priority. Red text indicates that an associated camera recording has been generated for this entry. Blue text entries designate warning messages, these are identified as higher priority than standard messages, however no image recording is generated for these entries. Black text indicates routine message entries. You can view the list of messages according to their priority by viewing the entries under the IDS tab, when in maintenance mode. See figure 4: IDS Mapping Matrix

Locating incidents with recorded images

The recording is automatically located by clicking on the red text in the IDS window. VVS32 will then automatically search and retrieve the alarm frame associated with that IDS listing. You can then use the incident viewing controls to review, print and export the images as required. See the section: reviewing stored incidents.
All entries from the IDS system are recorded. In addition messages generated by the VVS32 system and included within the log are prefixed by "IDS=".
You can view the IDS log in either full screen or quad formats.

Adding new entries

New entries may be added either automatically or under manual "refresh" control.

If the  icon is active, messages are added automatically as they arrive to the bottom of the list.

Alternatively the message list can be updated under user control by de-selecting the  icon and using the  icon to refresh the list. This mode of operation is helpful if you are searching the list whilst new entries are being added, and prevents the display from returning to the last entry as new messages are generated.

Mobile Users' Set-up

NEW FEATURE: The mobile user facility provides a versatile means for end users and installers alike to monitor incidents and activity remotely without the need for central monitoring stations and sophisticated video monitoring and transmission systems.
It is ideal for mobile patrol facilities, or keyholders who need to keep in touch with activity on site round the clock.
The mobile monitoring facility supports both pagers and SMS mobile phone services alike.

Summary of features:

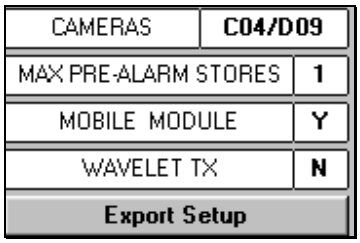
- Up to 5 fully programmable users
- Either SMS mobile phone support, or pager support for more sensitive monitoring applications. All you need to do is select the appropriate service and add the call centre communications telephone number.
- Individually editable text messages for each type of activity
- Individual profiles for each user
- Individual users may be selectively activated or de-activated without loss of settings

How to set up either paging or SMS monitoring

Step1

Check that you have the Mobile support package available on your system as in figure 1.

Figure 13:Mobile Module Support



Step 2

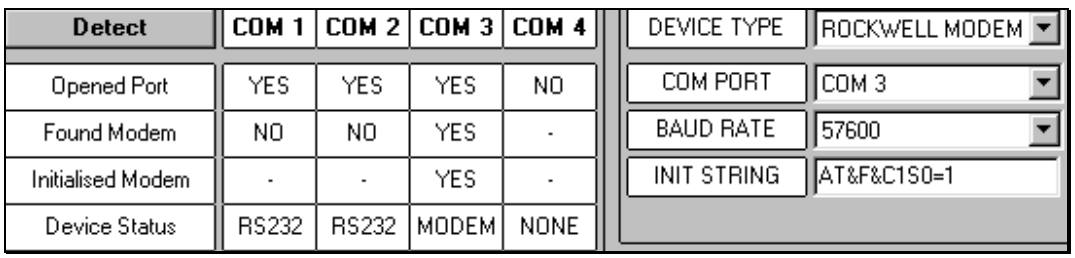
Configure your SMS call centre number or Pager Centre Number as provided by your service provider. Eg. Bt Pager messaging service on 08457 581354 (this number is not guaranteed for accuracy). This is entered by selecting the Pager option in the Remote Settings menu (default) and entering the appropriate number.

Figure 14: Mobile Call Centre

Step 3

Ensure that you have a suitable modem enabled on your system as shown via the communications set-up

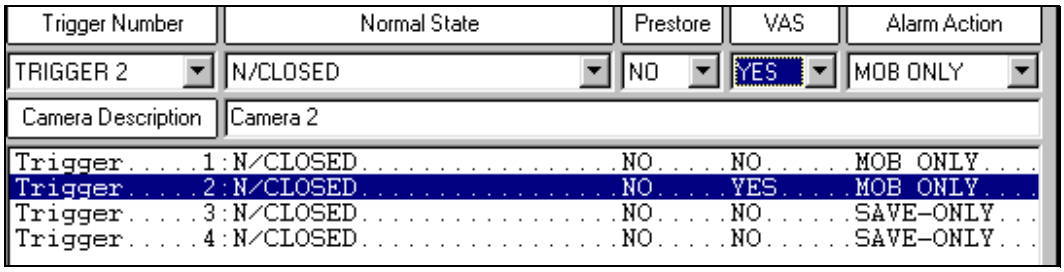
Figure 15: Modem Setup



Step 4

Select the appropriate cameras or trigger inputs required for SMS or Pager monitoring.

Figure 16: Selection of dial out to Mobile Services



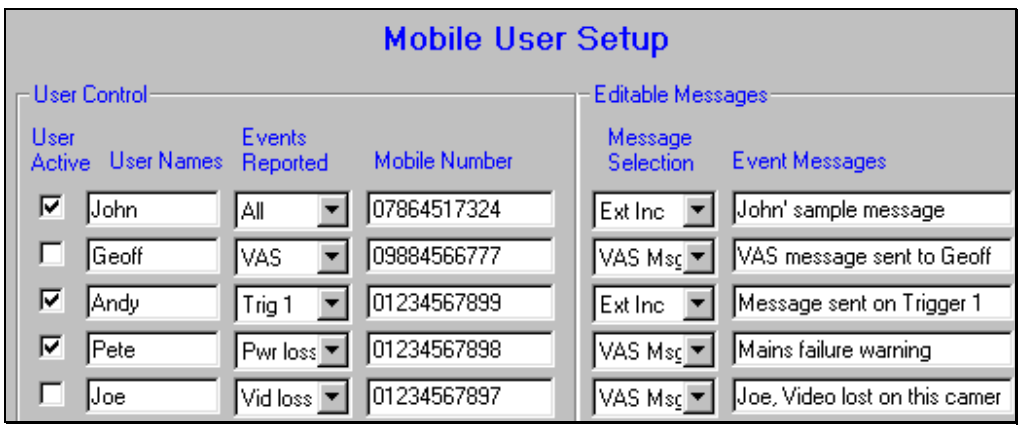
Step 5

Configure your mobile user telephone number and mobile messages from the Mobile setup screen. *Please note that user 1 is always enabled* and will *receive "All" reported* messages, this is to ensure that the user can not inadvertently deselect all users and therefore not receive mobile messages.
You can edit the preformatted messages to each type of reported event according to your requirements.

Entering the mobile handset number

Enter the number without international prefix (+44), this is added automatically if required. You enter the standard telephone number as in the following figure. Please remove all space characters as below.

Figure 17: Mobile user setup



Step 6

Arm the system and test your mobile facility by sending a mobile message to all required users. The Mobile facility will send messages to all enabled users in a *single transmission*. Thereby speeding the response to alarm activations.

Event Reporting

The mobile facility will report the following types of messages:
All: All types of mobile message
VAS: Only video activity triggered messages
Power Loss: Messages generated in response to the Power Alarm input

Video Loss: Messages generated in response to Video loss on a previously active camera
Trigger input xx: Messages generated by activation of a specific trigger input

Message Selection

You can edit each of the associated text messages for each individual user, so that each user can receive a different message in response to the same event.
Thus you can easily tailor the response to suit different user's needs.
Eg on trigger 1 activity:

User 1: Back door contact activated
User 2: Rear door activation, contact supervisor

Response times

IMPORTANT NOTE: Please note, whilst typical message transmission delays via the service provider may be acceptable, response times vary greatly and the SMS messaging service is prone to a significant delays of perhaps several days. *Therefore the SMS messaging system should not be used for alarm critical applications where response time is important.* The Pager service is designed for emergency operations and should be used where response time matters. Refer to your Pager service provider for service details.

Modem Troubleshooting

Initial Tests

1. If on dial out from an alarm trigger, no dial out tone is heard check that the modem is powered up (external modems) and is connected to the phone jack in the wall.
2. **If you are experiencing problems, be sure to enable the modem speaker to monitor connection progress. If not enabled by default add "M0" to the modem initialisation string in the communications setup menu.**
3. If the modem dials out but no connection is made check that the number for dial out has been correctly entered including the national code extension where appropriate. Also ensure that the remote system is on line and running, ready to receive calls.
4. If the modem responds with BUSY; check the modem lead to the wall socket and that the remote station "Auto-dial active " option is set.
5. Also try using an ordinary handset to dial the remote station and listen to see if the modem answers. This will help to diagnose whether the error lies at the central station or the remote station end.
6. To cope with the variety and different types of Modem currently available the Software uses a minimum number of Hayes commands. This implies that the modem should be INTELLIGENT in that the modem internal registers are set by the MODEM itself, either through NVRAM (non-volatile RAM) or ROM internal read only memory.
7. The software is designed to be compatible with and Standard Hayes type modem of speed V32 (9600 Baud) up to and including the new V33,600 style modems.
8. **Use of the product over exchanges**: The product is NOT designed to operate over private exchanges and requires the use of a **DEDICATED TELEPHONE LINE**. If you have concerns relating to this please contact your representative.

Error Correction

1. When using this product over PSTN telephone lines it is **absolutely essential** to use an error correcting modem, supporting an error correction protocol such as V42 (LAP-M) and or MNP (Microcom Networking Protocol) 2,3,4 and above. Without this a "reliable link" can not be established and the product will not operate. Most high speed modems for data purposes support one of the above as standard, and will not normally require any further configuration.

Data compression

1. Since the product has its own image compression facility, data compression techniques such as MNP5 and MNP10 have little or no transmission speed benefit, and may result in degrading performance, therefore these should be disabled if problems with transmission speed occur.

Flow Control

1. Hardware Flow control is required by the software which should be supported by the modem and set to RTS/CTS flow control.
2. Please note that if you have **CALL WAITING** option on your phone line this will interfere and cause interruptions if another call comes in during transmission.
3. The dial string conforms to the Hayes command protocol and will therefore respond to the following:
4. Pulse dialling

   Adding the character "P" as the first letter of the dial string causes the modem to revert to PULSE dialling for exchanges with no tone capability.

5. Pause

   Adding a "," to the string forces the modem to wait one second at the point where the comma is placed, e.g. "1122,3344" causes the modem to wait one second after dialling "2" and before dialling the "3".

Dial string Problem finding

1. In order to *respond to an incoming call* you must have register S0 set to greater than or equal to 1 i.e. **S0=1**.
2. If you encounter the problem of the modem displaying *Waiting for header* although no incoming call has been established this is likely to be due to the default setting of your modem's **DCD option**. Refer to you modem handbook regarding this. Generally the modification is simply to add &C1 to the dial string *after* modem reset or restore commands such &F.

Telephone installation considerations

1. The communications uses high speed data transmission and therefore will *not cope well with multiple loads on the same telephone socket. You should therefore have only one connection* to the incoming telephone point otherwise the signal level may be too weak.
2. Contact your representative if you are experiencing problems with modem transmission or compatibility.

Technical Support

Please refer to your supplier for first line technical support. It may be helpful in diagnosis of a problem to have information on the storage status code if the application has been running. Technical support may also be obtained by fax from Verdant Technologies Ltd. on 01932-222838 during office hours only.

Technical Reference information

Video source

The Camera station supports PAL-N video standard with composite video of RS343 signal levels and tolerances. Input is AC coupled and provides 75ohm input impedance. Both monochrome and colour signals may be applied.

Video connections

Video 1 source: nearest "D" connector
Video 4 source bottom connector

External inputs connections

Pin	Signal
1	Momentary Output
2	Reserved
3	Ground
4	Ext Video I/P
5	Latched Output
6	Trigger input 1
7	Trigger input 2
8	Trigger input 3
9	Trigger input 4

Trigger input specifications: Input pulled up to 5volt DC with 2K2 resistance, input impedance greater than 1Mohm. Required to be stable for greater than 1 second.
Output level specifications: 5volt DC level switch.
Max source current -3.2mA @ min rated high output level
Max sink current -24mA @ max. rated low output level

Personal computer requirements

Camera station

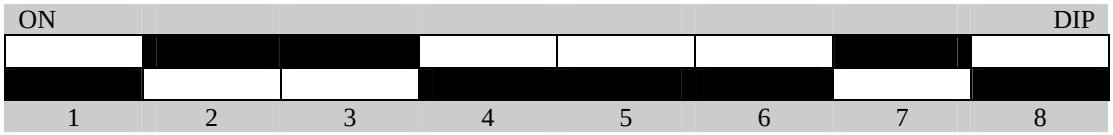
Hardware/Software	Requirements
Computer	Pentium 233Mhz MMX (min) and above
PC Ram	16mbytes and above; 4 Megabytes required for each additional pre-alarm channel
Display	16bit or 24bit SVGA at 800x600
Hard drive	100mbytes or greater free capacity (recommended 600MBytes)
Floppy drive	3.5” 1.44 Mbytes
Pointing device	Serial or MS mouse or compatible
Printer support	Parallel port
Operating system	Windows ‘95 or later
Expansion slots	Single PCI slot (min.) for 4 camera system
Modem	Rockwell chip-set based internal type modem; V34 standard (please consult your supplier for a list of compatible devices).

Base station

Hardware/Software	Requirements
Computer	Pentium 75Mhz (min) and above (233Mhz MMX recommended)
PC Ram	16mbytes and above
Display	16bit or 24bit SVGA at 800x600
Hard drive	100mbytes or greater free capacity (recommended 600MBytes)
Floppy drive	3.5” 1.44 Mbytes
Pointing device	Serial or MS mouse or compatible
Printer support	Parallel port
Operating system	Windows ‘95 or later
Modem	Rockwell chip-set based internal type modem; V34 standard (please consult your supplier for a list of compatible devices).

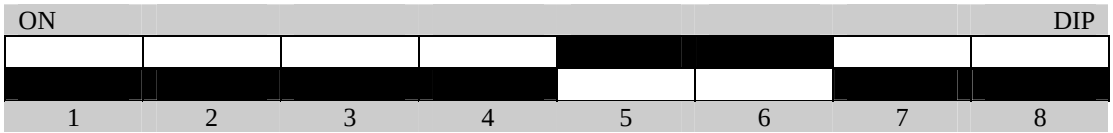
Expansion card Jumper settings

SECOND EXPANSION CARD FOR 8 CAMERAS TOTAL

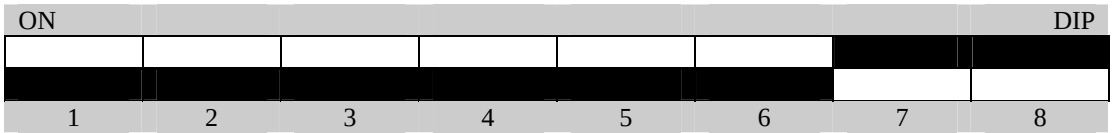


THIRD EXPANSION CARD FOR 12 CAMERAS TOTAL

FOURTH EXPANSION CARD FOR 16 CAMERAS TOTAL



FIFTH EXPANSION CARD FOR 20 CAMERAS TOTAL



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