REDFLEXlasercamSL

1159

REDFLEXlasercamSL Operator Guide GBR

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Acknowledgements

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Software Version

This version of the REDFLEXlasercamSL Operator Guide GBR is intended to be used in conjunction with version 5.10.1 (or later) of Redflex Traffic Systems' REDFLEXspeed application.

To view your version of REDFLEXspeed, click on the Help menu in the main window. Select About from the drop down menu. The software version number is displayed in a separate window. Click on OK to return to the main window.

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1 REDFLEXlasercamSL's software application

The REDFLEXlasercamSL system is comprised of the hardware and software to run a speed detection and image capture system. REDFLEXlasercamSL runs the REDFLEXspeed software application to perform these tasks. This document describes how to use the REDFLEXspeed application.

2 Entering Information

REDFLEXspeed operates with a touch screen that eliminates the need for a keyboard and computer mouse. It uses a simple on screen keyboard layout for data entry. When a white data entry box is selected the appropriate keyboard or keypad is activated. Any data already in the data entry box will be displayed as the default value in the on screen keyboard.

To enter data using a keyboard, simply select the required key/s. REDFLEXspeed can differentiate between alpha/numeric data entry and displays the appropriate keyboard.

Note: When entering and changing information, each action should be complete before the next one is started. This is to prevent the system from overloading.

2.1 The Data Entry windows

The keyboard layout is as follows:

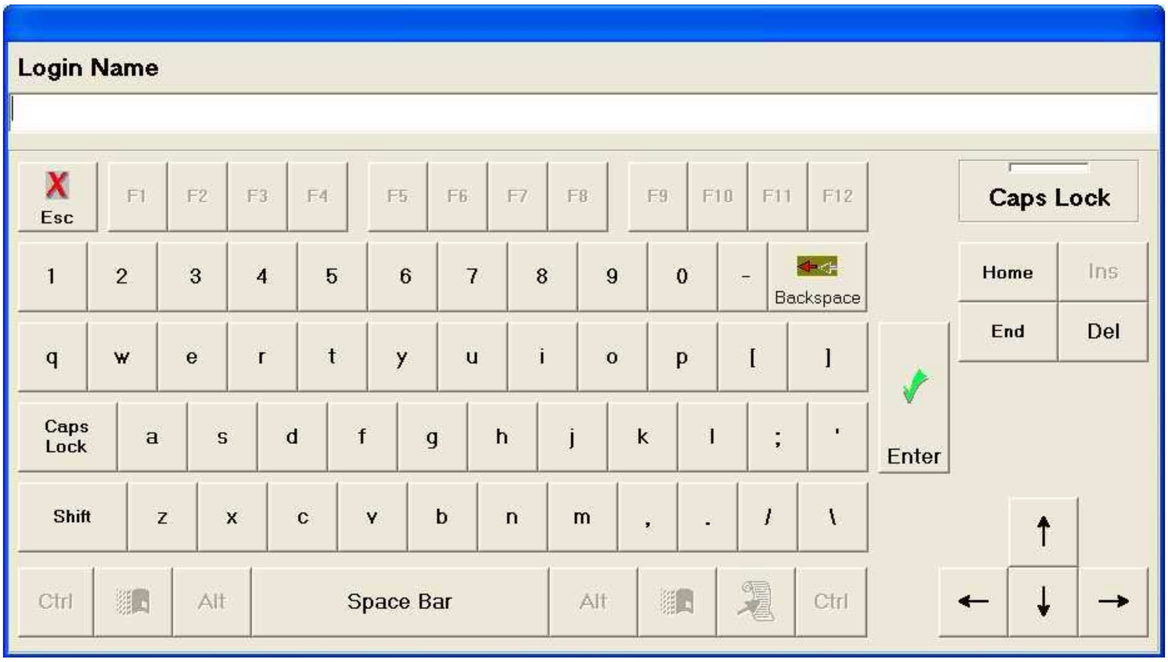

Figure 1: Alphanumeric keyboard

Select **Enter** to save the entered data. This also closes the keyboard. The **Esc** key discards any changes made in this window and returns you to the previous window with the original value.

The numeric keypad layout is as follows:

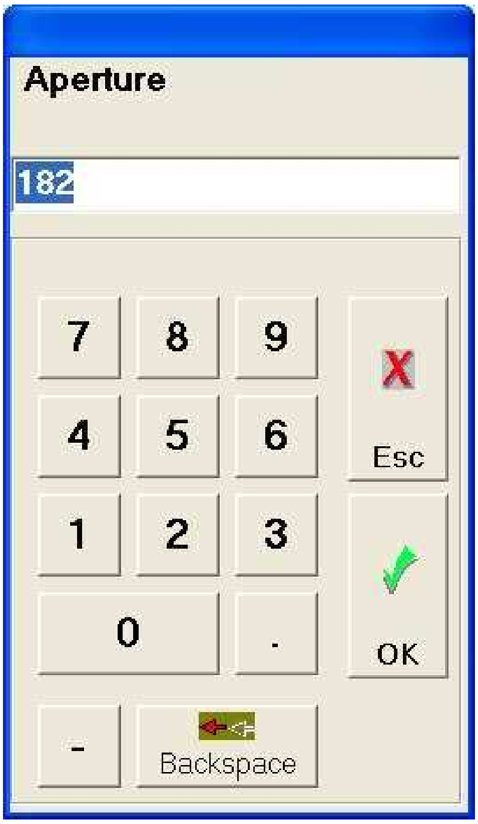

Figure 2: Numeric keypad

Select the **OK** button to save the entered data. This also closes the keypad. The **Esc** key discards any changes made in this window and returns you to the previous window with the original value.

Entering Negative Numbers

To enter a negative number, enter the number and then select the negative symbol.

3 Getting Started

Before using REDFLEXspeed the operator must login via the following window.

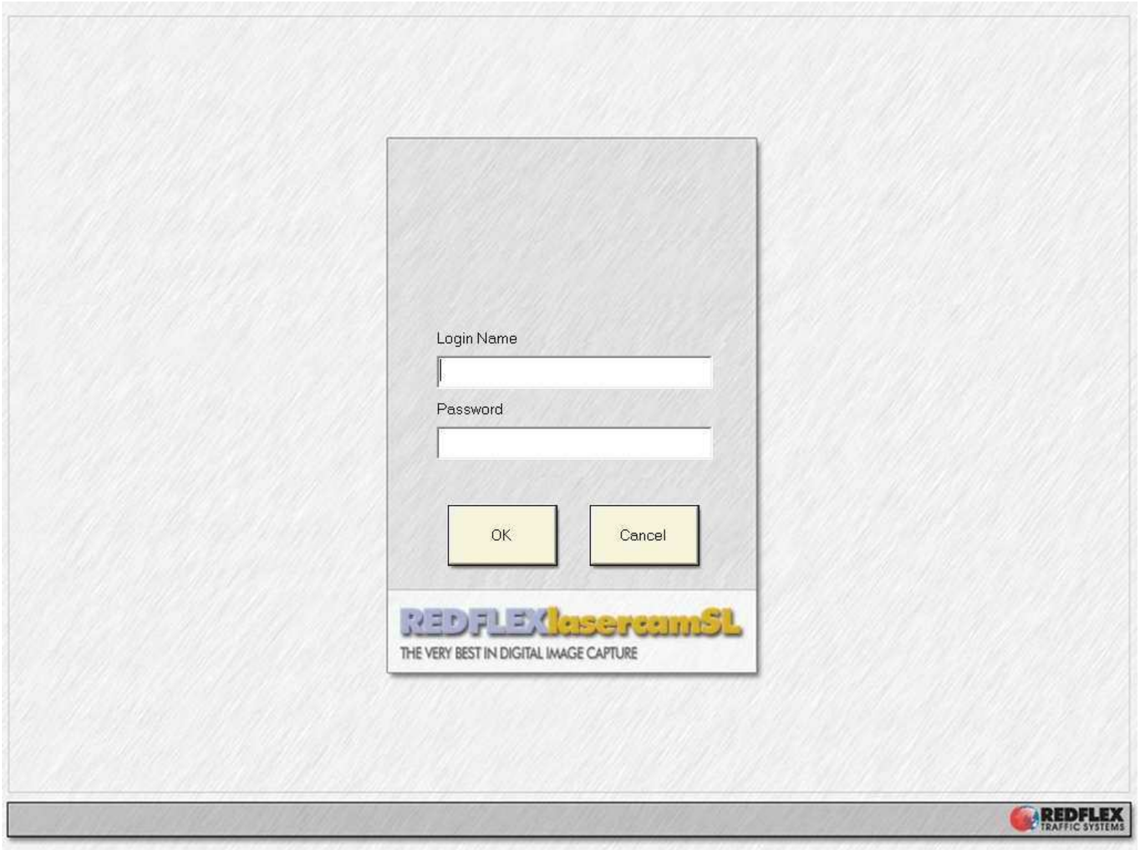

Figure 3: Login window

When the **User Name** and **Password** fields are selected, an alphanumeric keyboard is displayed. To enter data using the keyboard, simply select the required buttons. (The keyboard is shown in section 2.1 on page 6.)

Note that the **User Name** is not case sensitive; therefore it can be entered in either upper or lower case characters. The **Password** is case sensitive and must be entered correctly. The **Password** and **User Name** may consist of a mixture of upper case alphabetical characters, lower case alphabetical characters, punctuation and numerical characters.

After entering the username and password, press **OK** to enter REDFLEXspeed.

Selecting the **Cancel** button cancels the login operation and the computer must be turned off and on again before a login can be attempted again.

4 The REDFLEXspeed Window

The following REDFLEXspeed main window is displayed when login is successful.

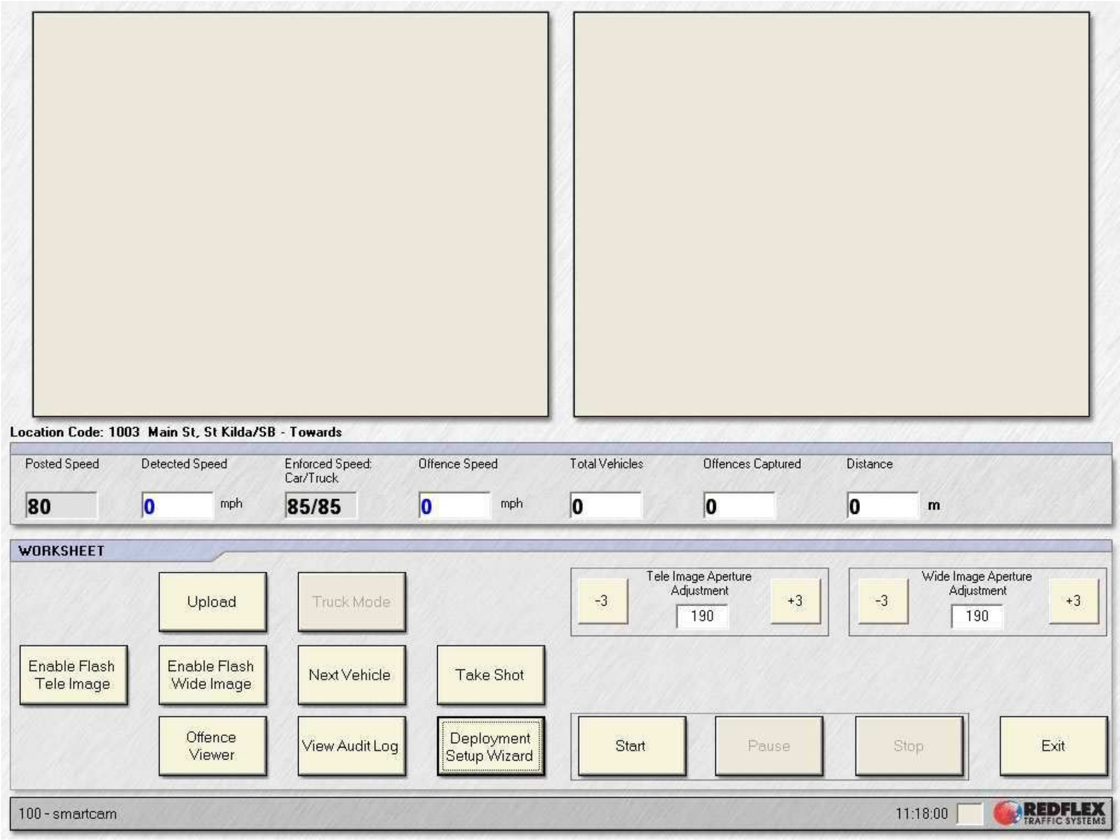

Figure 4: REDFLEXspeed window

4.1 Screen sections

The REDFLEXspeed window has three main areas.

Image panels

The image panels contain the last displayed images; either from the last captured incident or because a **Take Shot** or **Next Vehicle** were performed. One image is a zoomed in (Tele) image of the vehicle showing the number plate. The second image is a zoomed out (Wide) image of the scene.

Speed and Statistics panel

The Speed and Statistics panel displays information regarding the progress of the current deployment session.

Worksheet panel

The Worksheet panel contains the functions that control the running of deployments

The selected Location and Code are shown just above the Speed and Statistics panel. When a deployment is started, the start time and date also appear following the location.

5 Speed and Statistics Panel

REDFLEXspeed records statistical information for every deployment. This information is continually updated to reflect the current deployments progress.

Figure 5: Speed and Statistics panel

Posted Speed	The posted speed limit for the location. (This value cannot be changed as it is stored with the locations details.)
Detected Speed	The speed recorded for each detected vehicle.
Enforced Speed	The speeds at which REDFLEXspeed begins capturing vehicles. These values are entered in the Deployment Setup Wizard. They cannot be changed during a deployment. The left hand value is for cars and the right hand value is for trucks.
Offence Speed	The speed of an offending vehicle. The Offence Speed is recorded ONLY if the vehicle is matching or exceeding the Enforced Speed for the particular vehicle type.
Total Vehicles	The number of vehicles that have been detected by the LIDAR during the current deployment.
Offences Captured	The number of offences that have associated images and accompanying offence data.
Distance	The distance to the detected vehicle for each detected vehicle.

The **Detected Speed**, **Distance** and **Total Vehicles** fields are displayed and updated as soon as REDFLEXspeed starts. When a deployment is started these values are reset to zero.

6 Deployment Wizard

The following step-by-step instructions describe how to start a typical deployment session. The steps in this Operator Guide follow the steps in REDFLEXspeed.

From the REDFLEXspeed main window, select the **Deployment Setup Wizard** button.

The lower part of the window has **Previous** and **Next** buttons. It is recommended that these buttons be used to navigate through the steps to setup the deployment. To return to a particular window, after completing the Wizard, select the icons on the left side of the Deployment Settings window. Select **Save and Close** at anytime to exit from the Deployment Setup Wizard. This also saves any changes made to REDFLEXspeed.

Selecting **Cancel** exits from the Deployment Setup Wizard without saving changes. A confirmation window will be displayed confirming an exit without saving.

6.1 General Settings

From the REDFLEXspeed main window, select the **Deployment Setup Wizard** button. The Deployment Setting window is displayed. The General settings are displayed by default.

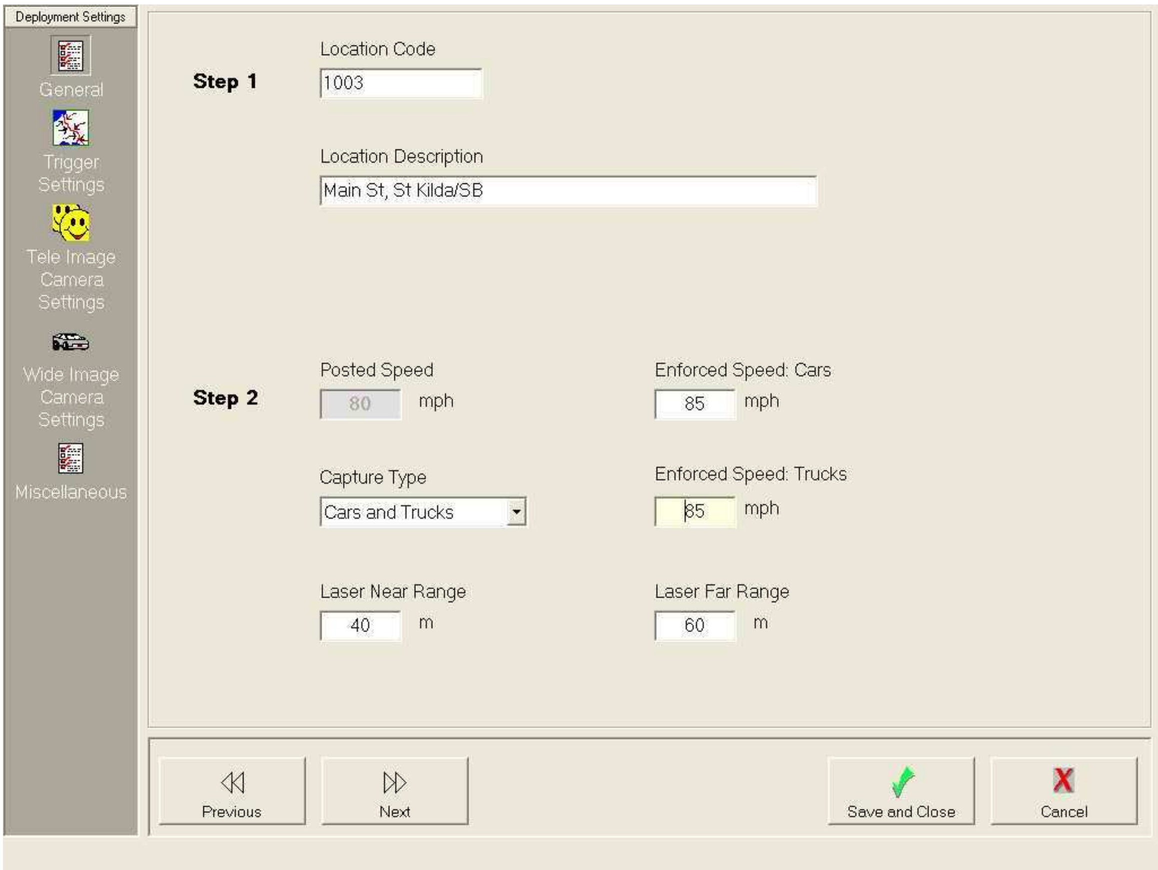

Figure 6: Deployment setup window

6.2 Step 1 – Entering Location Information

Touch the **Location Code** or **Location Description** area to display the Location Details window.

The Location Details window displays the location information that is read from a database loaded on the computer. This information can not be altered by the operator.

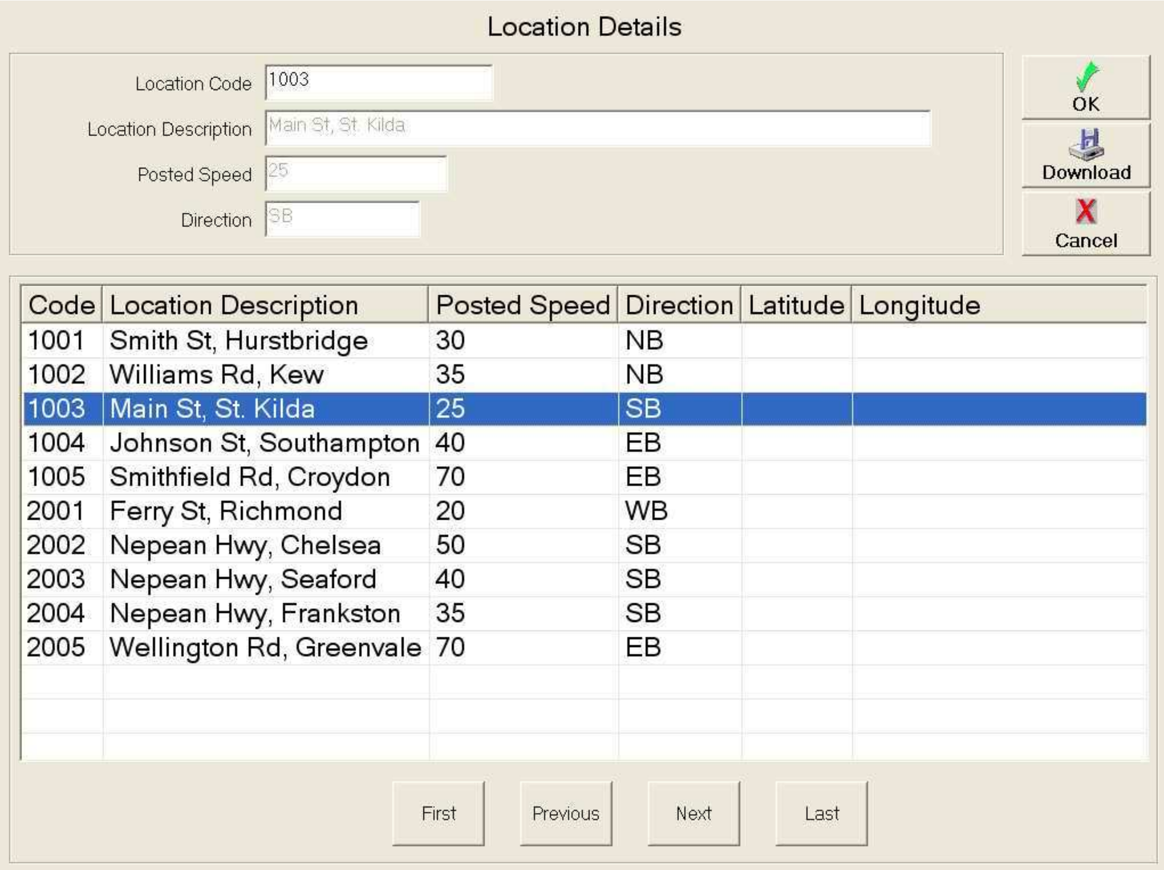

Figure 7: Location details window

Touching the **Location Code** area displays a keyboard so that a location code can be entered. Alternatively the location can be selected from the list.

The **Next** button selects the next location in the list. The **Last** button selects the last available location. To move backwards in the list, select the **Previous** button. The **First** button selects the very first location. The scroll bar can also be used to view location information.

The location codes can be sorted on any column by selecting the columns title.

Locations are selected by touching (highlighting) any part of the locations details. The selected location is also shown in the top part of the Location Details window. Select **OK** to save the information.

When you select a **Location Code**, REDFLEXspeed automatically enters the **Location Description**, or vice versa. The **Posted Speed** and **Direction** are also shown when the location information is selected. The **Posted Speed** is the speed limit at this location, as identified by the traffic signs. The **Direction** indicates the path of traffic being monitored (for example, EB for East Bound traffic).

6.2.1 Using New Locations

When using a new location for the first time, REDFLEXspeed uses the deployment settings from the previous location as the default values. These settings are used for the Image settings (for example, *Aperture* and *Exposure*) and the camera triggering settings (for example, *Away Mode* and speed thresholds) and can be changed as required.

6.2.2 Download

Selecting **Download** will attempt to download a new user and location data file from an external drive. Before the download is performed the confirmation window in Figure 8 will be displayed.

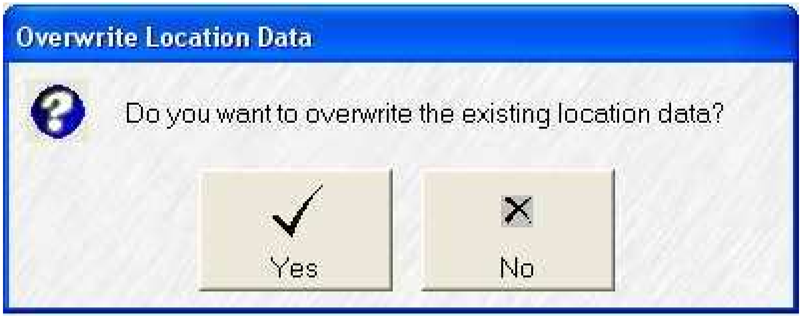

Figure 8: Download confirmation window

Select **Yes** to perform the download or **No** to cancel it.

If the download is performed and is successful the window in Figure 9 will be displayed, the list of locations is updated and the location code will default to the first location in the list.

Figure 9: Download success window

If an error occurs during the download the window in Figure 10 will be displayed and the list of locations is not updated.

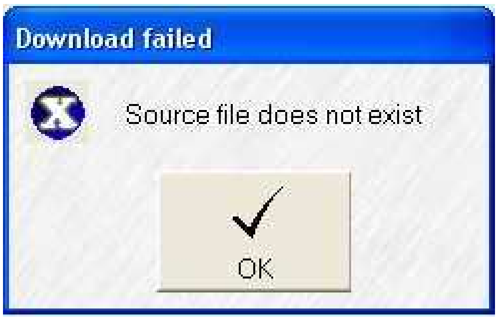

Figure 10: Download failure window

6.3 Step 2 – Entering the Speeds

The **Posted Speed** is entered automatically when the location information is selected and cannot be changed in REDFLEXspeed.

The type of vehicles to capture is selected in **Capture Type**. Depending on the option selected either or both of **Enforced Speed Cars** and **Enforced Speed Trucks** will be displayed.

The **Enforced Speed Cars** and **Enforced Speed Trucks** is the "Offence Trigger Speed". REDFLEXspeed automatically triggers the cameras to capture images of vehicles travelling at or above this enforced speed.

Click on **Next** to continue the deployment setup.

7 The Trigger Settings

The Trigger Settings determine the direction of the enforcement.

Figure 11: Direction of enforcement

Selecting **Away Shots Only** will capture offending vehicles moving away from the camera/LIDAR only.

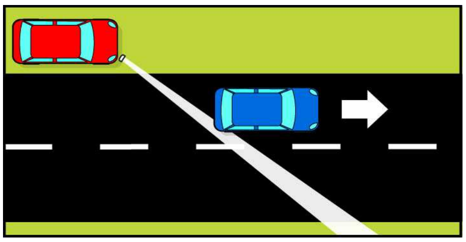

Figure 12: Away mode

Selecting **Towards Shots Only** will capture offending vehicles moving towards the camera/LIDAR only.

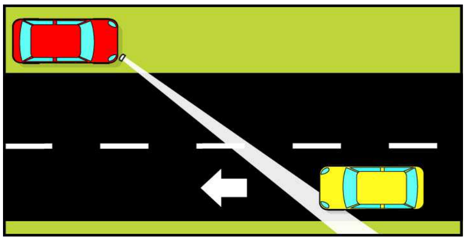

Figure 13: Towards mode

Selecting **Bi-directional Shots** will capture offending vehicles travelling in both directions.

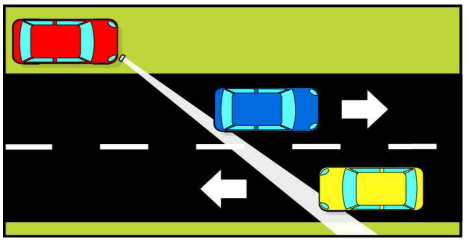

Figure 14: Bi-directional mode

Click on **Next** to continue the deployment setup.

8 Tele Image Camera Settings

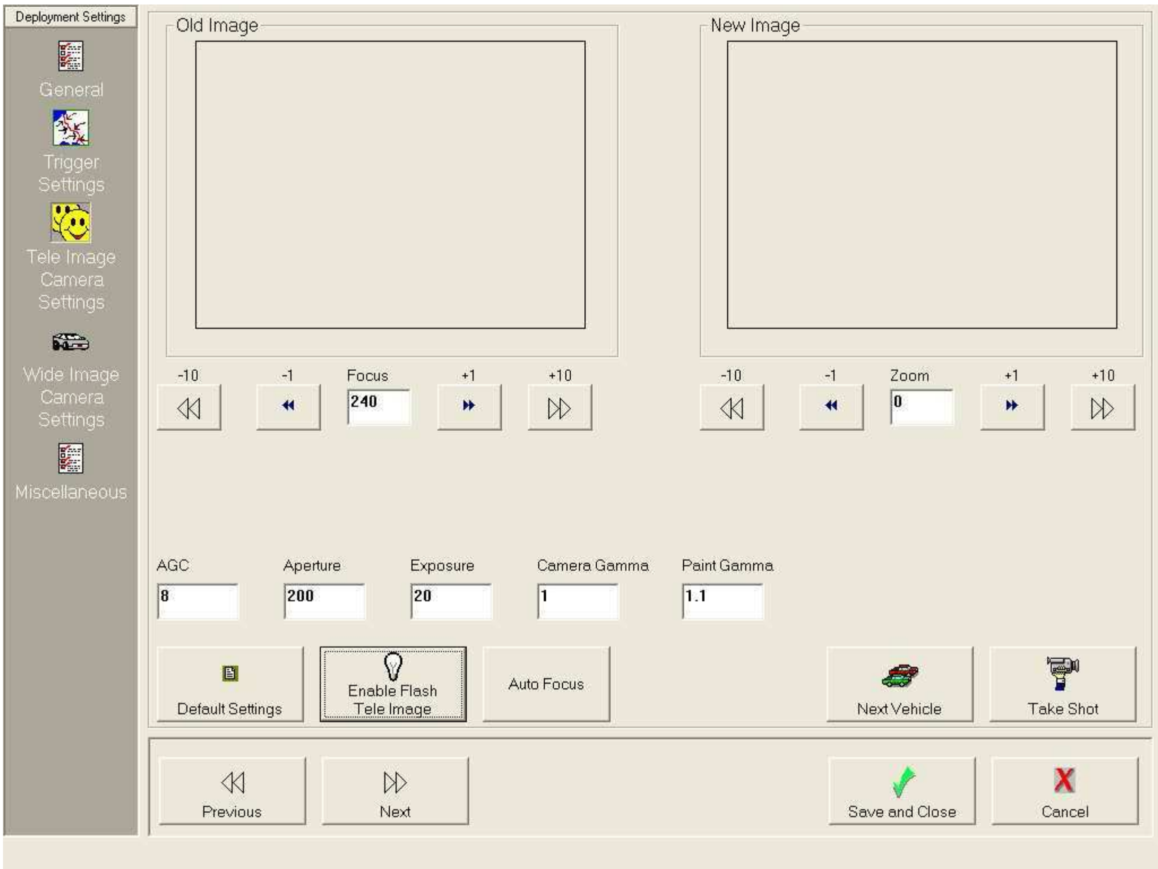

Figure 15: Tele image camera setup window

Before a deployment is started it is important that the cameras are tested to ensure that they are positioned and focused correctly.

The camera settings are stored for each location. When a location is selected, the camera settings are updated to reflect the stored values. Any changes made to the settings are saved and available when the location is used next. Selecting the default settings will apply REDFLEXspeed's default camera settings.

There are two ways of capturing an image and displaying it in REDFLEXspeed:

Take Shot Captures an image immediately. Take Shot operates in the same way as a home camera would when you press the button to take a photo.

Next Vehicle Captures an image triggered by a vehicle detected by the LIDAR. Note that any vehicle is captured – regardless of its speed. This feature is useful for determining the position of a vehicle in the images.

Each time you take an image (either with **Next Vehicle** or **Take Shot**) REDFLEXspeed displays the old (previous) image in the left image panel and the new image (according to the adjusted values) in the right image panel. For the next adjustment setting, the new image becomes the previous image and is shifted (into the left-hand panel) so the current new image can be displayed (in the right-hand panel).

Note: Please allow a few seconds for the camera to physically adjust to the required setting before capturing another image. This is especially important when substantial setting changes are made, for example, changing the Zoom from 10 to 200.

See section 14.1 for instructions on how to view a bigger version of an image.

8.1 Image Adjustments

8.1.1 Zooming

The **Zoom Value** indicates how large or small the vehicle appears in the image (field of view). A smaller value displays a smaller part of the vehicle (zoom in). A higher value displays a greater part of the vehicle in the image (zoom out). When setting the zoom, start with a higher value to have the largest field of view. Then, reduce the zoom value until the vehicle is consistently in the image and is displayed with a high level of detail. Note that it is important, for back office verification, that the image is not zoomed in so much that it prevents a clear view of the scene immediately around the offending vehicle. (Verification requires that the images be reviewed to ensure that there has been no interference with the LIDAR when providing an accurate speed measurement.) See Recommended Camera Settings, on page 18, for examples of image settings.

8.1.2 Focusing

The **Focus Value** controls the sharpness of a vehicle at a given distance. Adjust the focus after the zoom value is set. This provides the sharpest images over the range of the vehicle trigger positions.

The **Zoom** and **Focus** value settings are adjusted by either entering the values or by using the buttons to adjust, up or down, in intervals of 1 or 10. The values range from 0 to 255.

8.1.3 Auto Focus

The **Auto Focus** button causes the camera to focus on what is currently in its field of view. Please ensure that the camera is properly aligned on an object at the appropriate distance before selecting this button.

8.1.4 Other Settings

The cameras can be fined-tuned with five additional settings to produce the best possible images.

AGC	Automatic Gain Control. This controls the image’s brightness. Increasing the value adds more light and gives a ‘grainy’ effect. If you are capturing images in an area with low lighting, it may be beneficial to use a value around 80.
Aperture	This controls the opening of the Iris. 100 = Closed Iris and 255 = Wide Open Iris.
Exposure	This specifies how long the shutter is to be open. This can be from 0 to 1000 milliseconds. A lower value is recommended. Too high a value allows too much light onto the image. The default value is 10.
Camera Gamma	This is a measure of brightness, or darkness, and is applied to the images as captured by the cameras. A value of 1.0 is the default. A value of 0.0 produces a black image. Adjust in small steps; e.g. 0.1.

Paint Gamma This is applied to the images as they appear in the image panels (i.e. on the screen). **Paint Gamma** does not affect the actual captured image. It works in the same way that **Camera Gamma** works.

8.2 Recommended Camera Settings

The following settings are recommended for general deployments during daylight and having two lanes enforced. Note that the settings may need to be varied for different lane enforcements and varying light conditions.

	Tele Image			**Wide image**		
	Normal	**Bright**	**Dark**	**Normal**	**Bright**	**Dark**
AGC	8	6	20	8	6	20
Aperture	200	180	250	160	150	250
Exposure	20	15	20	15	10	20
Gamma	1.0	1.0	1.2	1.0	1.0	1.2
Zoom	0	0	0	50	50	50

Table 1: Camera settings

8.3 Enabling the Flash Units

The Camera Setup tabs and the main window contain **Enable Flash Tele Image** and **Enable Flash Wide Image** buttons to enable and disable the camera's flash units.

When either button is enabled, it changes to a Disable Flash button. It is recommended that the flashes be enabled for all day and night image capturing to reduce the affect of shadows that may appear over the detected vehicle.

Click on **Next** to continue the deployment setup.

9 Wide Image Camera Settings

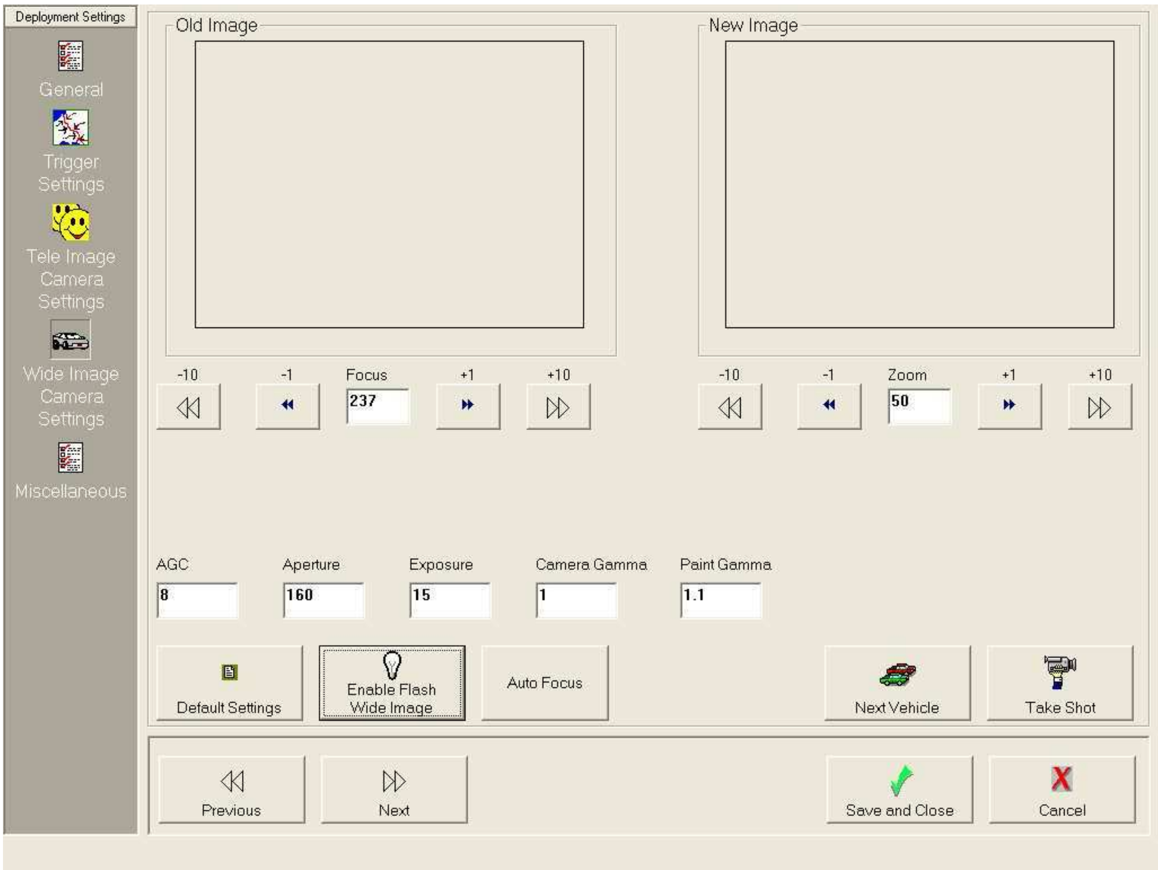

Figure 16: Wide image camera setup window

The Wide Image Camera Settings window contains the same camera adjustment settings as the Tele Image Camera Settings window, see Tele Image Camera Settings, on page 16, for more information.

Click on **Next** to continue the deployment setup.

10 Miscellaneous Settings

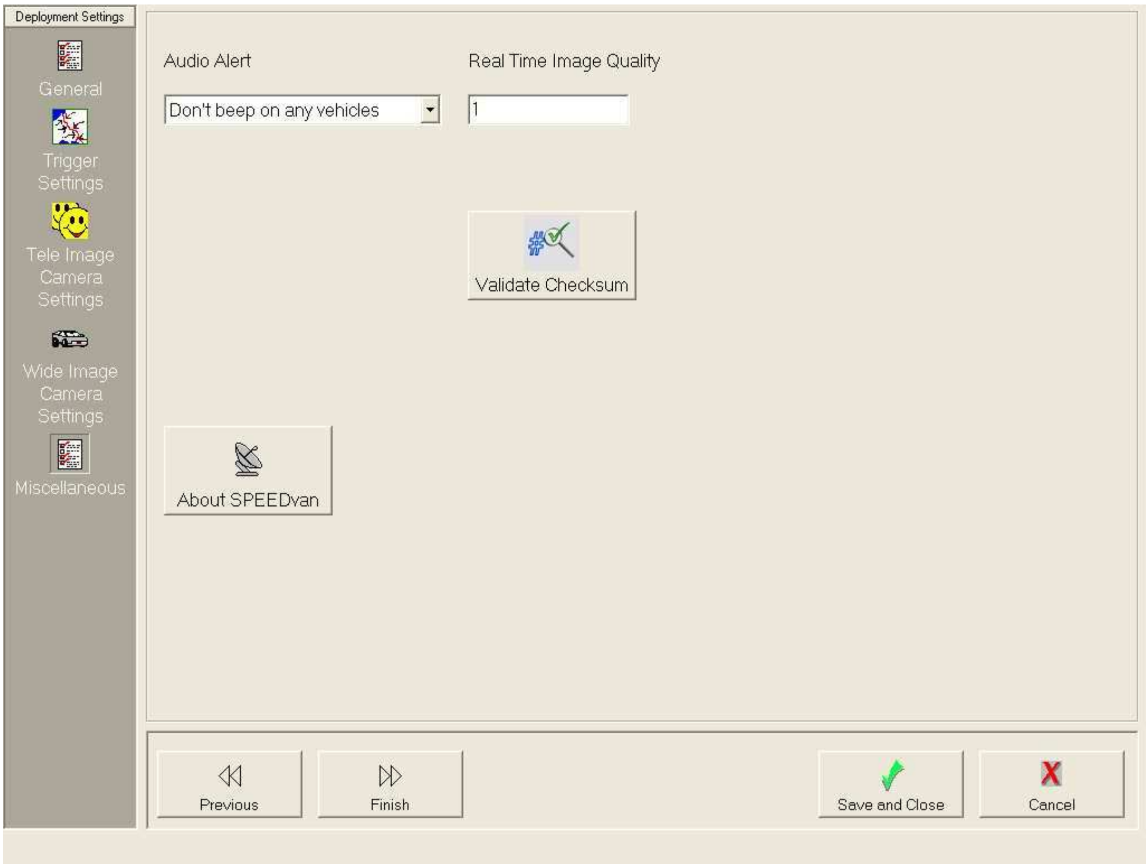

Figure 17: Miscellaneous settings window

Audio Alert

The alert can be set to beep on all passing vehicles, only those vehicles exceeding the **Enforced Speed** limit (Beep only on Offending Vehicles) or it can be disabled.

When Beep on All Vehicles is selected, a different beep tone is emitted for vehicles detected at, or above, the **Enforced Speed**.

Real Time Image Quality

This determines the display clarity of images as they appear in the REDFLEXspeed window during the deployment (i.e. real time). This value should be set to a range between 1 and 7. Setting the value to 1 produces optimal images although the redisplay is slower. Setting the values to 7 produces a poorer (but identifiable) quality image but the display is much faster. The recommended value is 1.

Note that the **Real Time Image Quality** setting controls the images as they currently appear in the REDFLEXspeed window. The actual enforcement images are saved using the settings specified in the **Tele Image Camera** and **Wide Image Camera Setting** windows. This setting does not compromise image quality when they are used in citations.

Validate Checksum

Verifies that the REDFLEXspeed executable being used is valid. (See Validate Checksum, on page 21, for more information.)

About SPEEDvan Button

This displays information about REDFLEXspeed.

10.1 Validate Checksum

Pressing the **Validate Checksum** button will check the REDFLEXlasercamSL checksum.

If the checksum does not match, a dialog box similar to that shown in Figure 18 will be displayed. REDFLEXspeed will exit when the Ok button is selected.

Figure 18: Invalid checksum window

If the checksum matches, a dialog box similar to that shown in Figure 19 will be displayed and REDFLEXspeed will continue when the Ok button is selected.

Figure 19: Valid checksum window

The checksum is also verified each time an operator attempts to login to REDFLEXspeed. REDFLEXspeed will display the invalid checksum window and will not start if the checksum is invalid.

11 Saving deployment information

Once all the fields in the Deployment Setup Wizard are entered select **Save and Close** to save the information and return to the main window.

All the information entered is saved against the selected location code. The next time that this location code is selected the saved values will be automatically loaded, meaning that no, or only minimal, changes should be required before running a deployment.

12 Running a Deployment

12.1 Starting a Deployment

Select **Start**, on the REDFLEXspeed main window, to begin a deployment session.

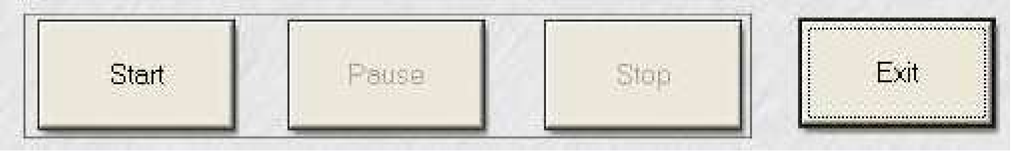

Figure 20: Starting a deployment

As REDFLEXspeed's cameras capture offending vehicles, they are continually displayed in the Tele and Wide panels. (All images taken with **Next Vehicle** are also displayed in these panels.) If, during a deployment session, a Next Vehicle is performed by selecting **Next Vehicle** and the next vehicle detected is travelling over the **Enforced Speed** an offence is captured for the vehicle

To optimize the offences captured, priority has been given to the capturing processes rather than the display process. Where two or more offenders are detected immediately following one another, all the images may not be displayed on the REDFLEXspeed window. The last offence captured is displayed once processes are available. To view the offences that were not displayed in the REDFLEXspeed window, please use the Offence Viewer.

12.2 Truck Mode

This button only becomes available if the vehicle capture type has been set to **Cars and Trucks** or **Trucks Only**. A LIDAR cannot distinguish between cars and trucks so if used in a location where there are different enforced speeds for cars and trucks, the operator must press the **Truck Mode** button during a deployment to mark the next captured vehicle as a truck. Once a vehicle is captured as a truck the system goes back to enforcing vehicles as cars; the operator must press the **Truck Mode** button for every truck that needs to be captured so that it can be processed as a truck.

12.3 Pausing a Deployment

During a deployment session you can pause REDFLEXspeed to stop it from capturing images without having to stop the deployment. Selecting **Pause** temporarily stops REDFLEXspeed.

When REDFLEXspeed is in **Pause** mode, you can make changes to the **Camera** and **Trigger** settings but not change the **Enforced Speed** settings or view the currently captured images in the Offence Viewer.

Placing the system in **Pause** mode stops the accumulation of statistical data. Resuming a deployment continues from the last figures displayed. (Note that **Pause** does not stop the current deployment. When REDFLEXspeed is in **Pause** mode, the buttons may be temporarily disabled as it completes its processing of offence images.)

Selecting **Start** restarts the deployment.

12.4 Stopping a Deployment

Select **Stop** to end a deployment session. Note that this only stops a deployment session; it does not stop REDFLEXspeed or shut down the computer.

Stopping a deployment completes the session. All files and statistical information is written to disk. Also, the statistical information is reset for the next deployment session. The following window will be displayed; it lists the statistics for the deployment just finished.

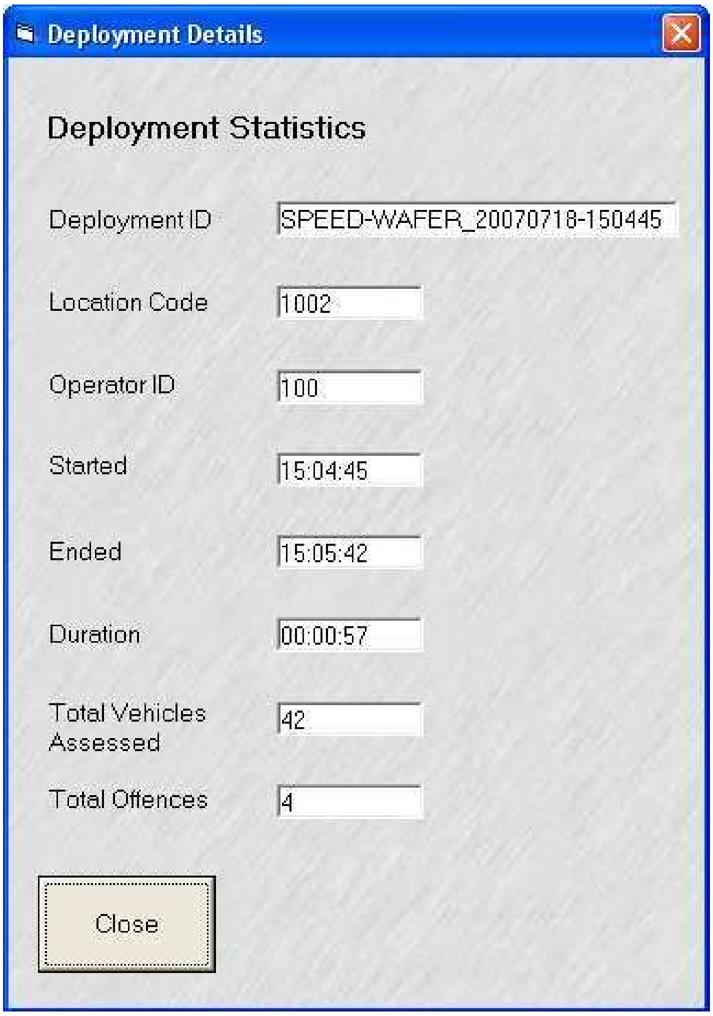

Figure 21: Deployment statistics window

12.5 Stopping the REDFLEXlasercamSL System

To completely stop the REDFLEXlasercamSL system, select the **Exit** button.

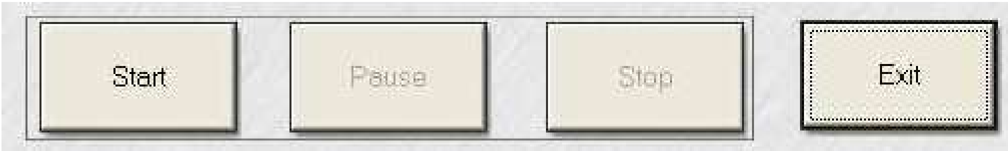

Figure 22: Stopping REDFLEXlasercamSL

Selecting **Exit** stops both REDFLEXspeed and Windows XP to allow the computer to be turned off. A confirmation window is displayed before the REDFLEXspeed window can be closed down. (Note **Exiting** also completes the deployment if the session has not previously been stopped. All files and statistical information are written to disk.)

12.6 Deployment recovery

If for any reason REDFLEXspeed is not stopped or closed as described above (for example, if the batteries run flat), it is important to restart REDFLEXspeed as soon as possible. Once restarted, the software recovers the deployment by completing the session details as described above and displays the message box in Figure 23. It is also important to leave the deployment files in their original location until this recovery has been completed. If the files are moved then REDFLEXspeed cannot recover the deployment details.

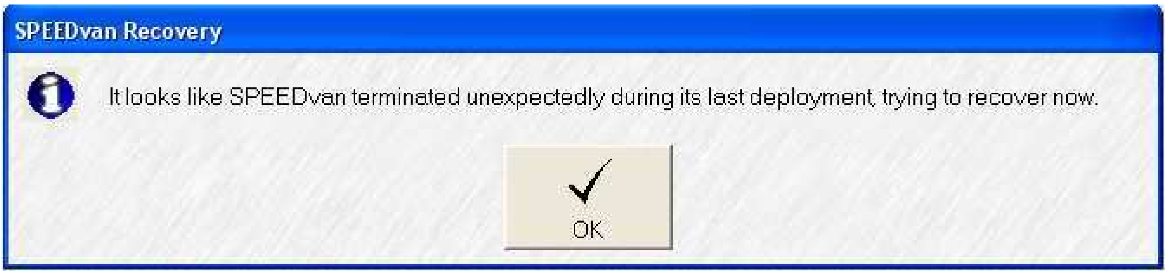

Figure 23: Recovering a deployment

13 Alignment Tests

REDFLEXspeed will run alignment tests at the start of a deployment and at the end of a deployment. These tests are used to ensure that the cameras and LIDARS are aligned correctly.

When the **Start** button on the REDFLEXspeed window is selected the following window is displayed.

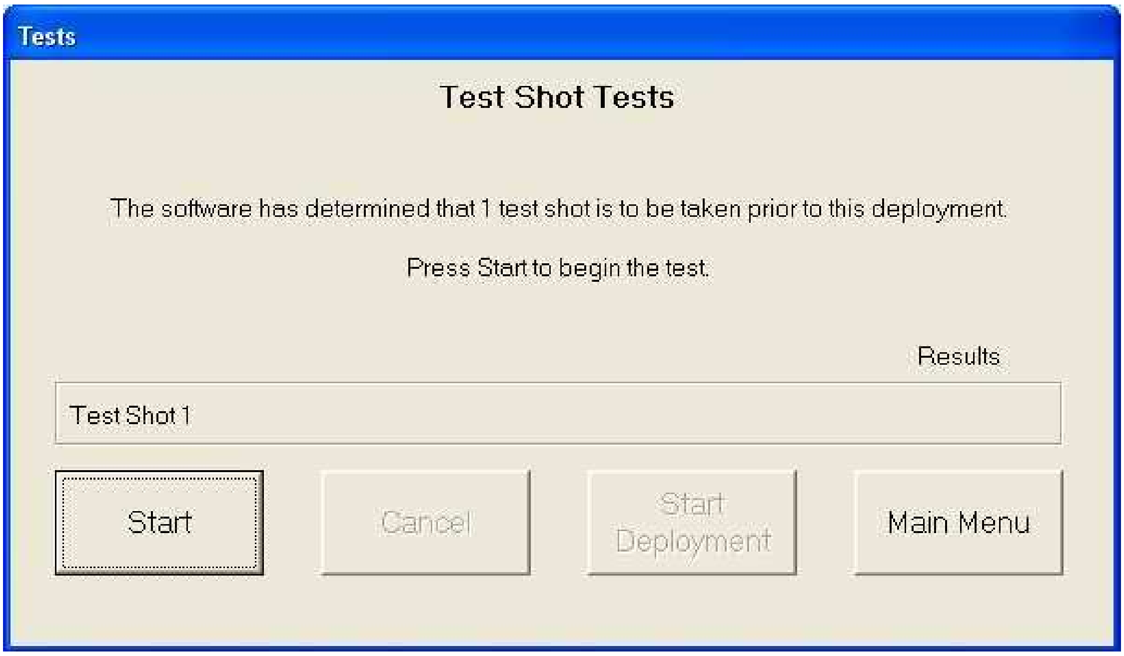

Figure 24: Start alignment test

The Test window has the following settings:

Start	Start the tests.
Cancel	Cancel the tests. This button is highlighted after the tests have started.
Start Deployment	Starts the deployment. This button is highlighted only when the deployment can be started.
Main Menu	Returns to the Main screen.
Results	The result of the test.

When the **Start** button on the Alignment Test window is selected the system prepares for the test and the following window is displayed.

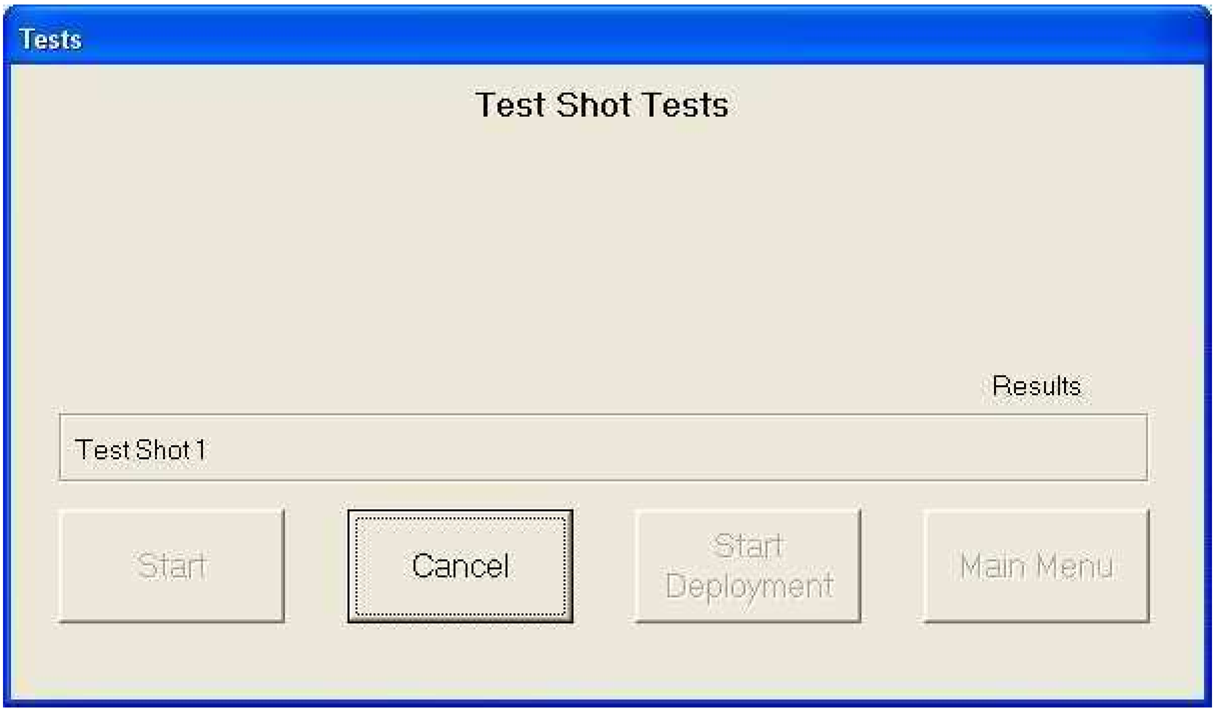

Figure 25: Alignment test started

If the **Cancel** button is selected the tests are cancelled and the system returns to that in Figure 24.

Triggering the LIDAR at this point causes the test to be performed. The system beeps when a test has been recorded. The screen is updated with the result of the test (see Figure 26).

The system sounds one beep if the test speed passed and two beeps if the test failed.

When the test has been run and passed the **Start Deployment** button is enabled (see Figure 26). Select the **Start Deployment** button to begin a deployment.

Figure 26: Alignment test passed

If the test failed the word “Failed” will appear in the Results column and the **Start Deployment** button remains disabled. The test can be repeated by selecting **Start** again or cancelled by selecting **Main Menu** to return to the main window.

The procedure for running the test at the end of the deployment is the same to running it at the start.

14 Tailoring Images

14.1 Viewing Larger Images

Images displayed on any screen can be viewed in a larger size and can be zoomed. Select the required image and an additional window is displayed. The images can be adjusted further by touching the image area to be zoomed in. Alternatively, adjust the image with the **Zoom In** and **Zoom Out** buttons. Select the **Close** button to remove the window.

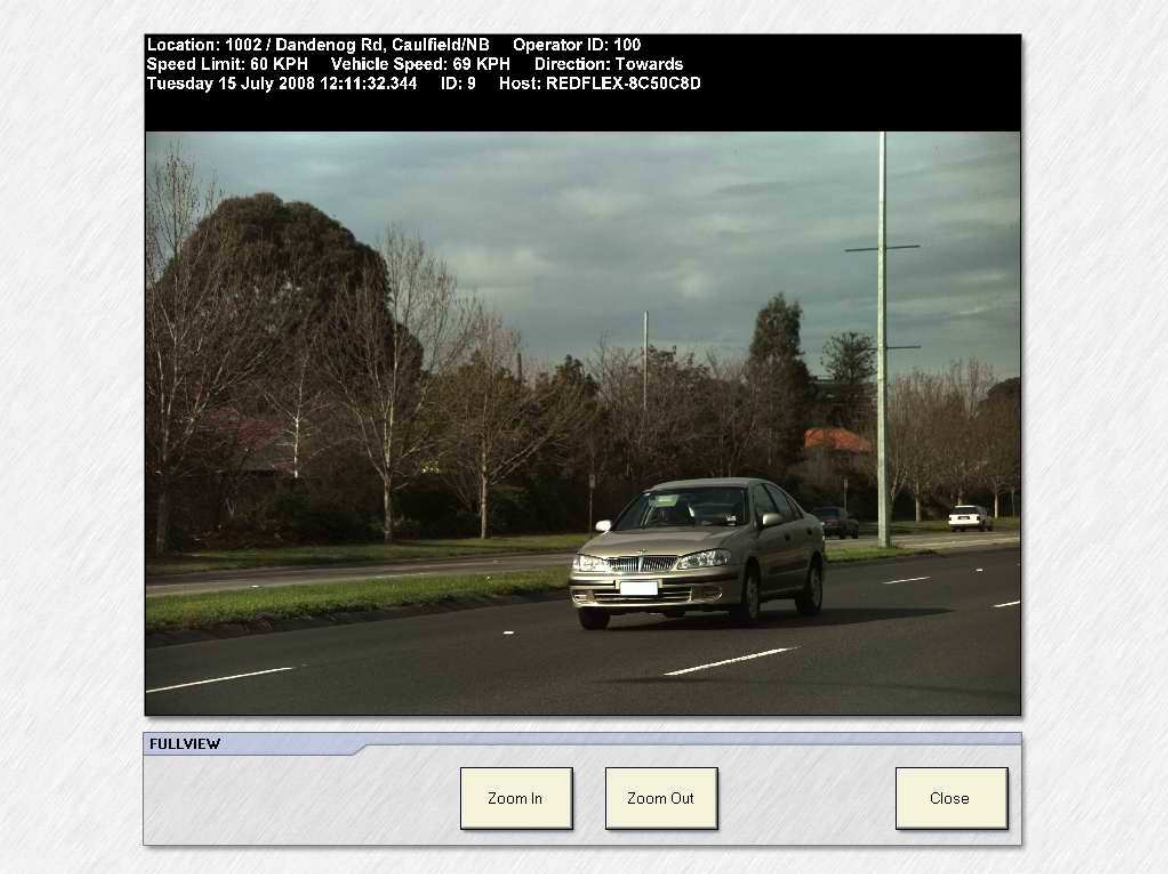

Figure 27: Full view window

14.2 Activating Flash Units

Buttons located on the main screen can be used to turn the flash units on and off at any time – including while a deployment is running. These buttons function in the same was as the Flash buttons in the Deployment Setup Wizard.

14.3 Test Images

REDFLEXspeed has two options for taking test images and test offences.

Take Shot Take Shot instantly captures Tele and Wide images. This may be used when no vehicles are present to test the cameras.

Next Vehicle Next Vehicle captures the Tele and Wide images of the next passing vehicle - regardless of its speed. This allows you to determine that the camera settings are correct.

When **Next Vehicle** is selected, the button is renamed with **Cancel Next Vehicle** until a vehicle is detected. The button is renamed to **Next Vehicle** when the images are captured and displayed.

Selecting **Cancel Next Vehicle** aborts the Next Vehicle image and renames the button back to **Next Vehicle**.

If **Next Vehicle** is selected when a deployment is running and the vehicle is at or above the Enforced Speed, then the vehicle is captured as an offence.

15 Uploading Deployments

REDFLEXspeed can upload the deployments to a USB device.

Select the **Upload** button to display the Upload window, see Figure 28.

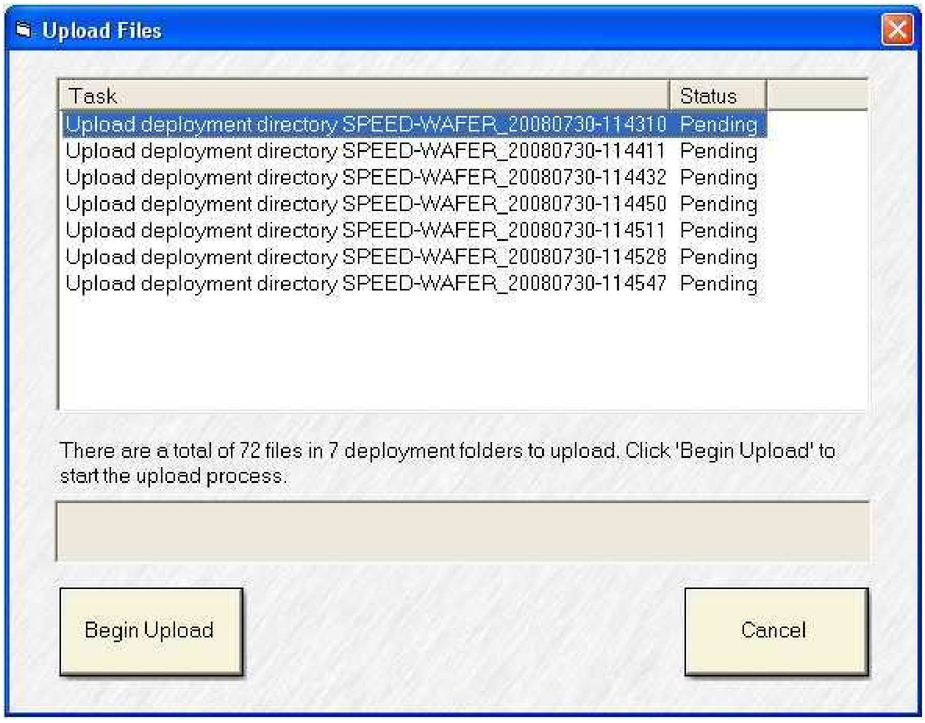

Figure 28: Upload window

Select the **Begin Upload** button to begin the upload. The deployments are uploaded to the location as configured by the REDFLEXspeed setup program. Select **Cancel** to return to the main window without performing the upload.

Once an upload has begun the window will look like that in Figure 29. The top section shows the deployments to be uploaded and their current status. The possible statuses are:

1 Successful: the deployment has been successfully uploaded

2 Uploading: the deployment is currently being uploaded

3 Paused: the upload was paused during the uploading of this deployment

4 Pending: the deployment is waiting to be uploaded

The bottom section shows the current file being uploaded, how many files in how many deployment folders there are still to upload and a progress. This information is updated each time a file is uploaded.

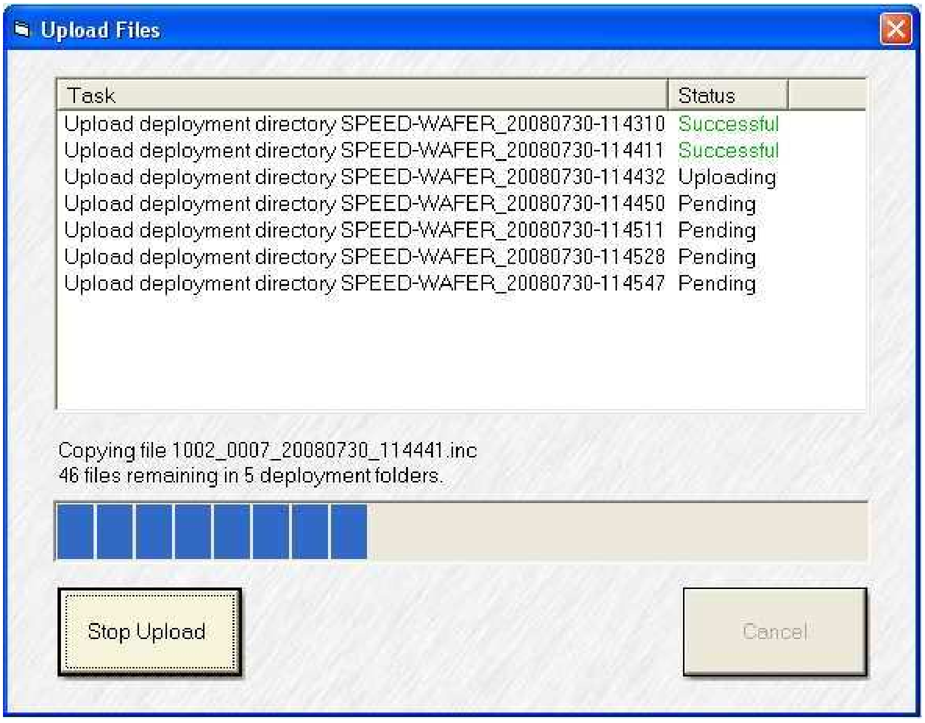

Figure 29: Upload stop window

By selecting the **Stop Upload** button the upload shall be halted. The window in Figure 30 shall be displayed, showing the deployment that being uploaded as Paused.

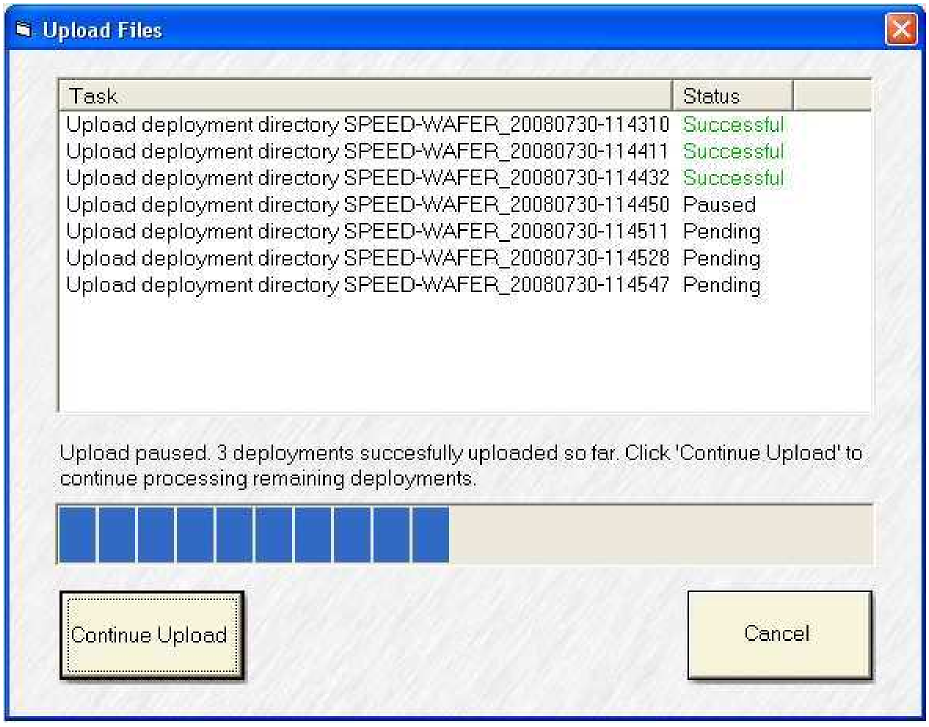

Figure 30: Upload continue window

Select the **Continue Upload** button to continue uploading the deployments. Select **Cancel** to end the upload and return to the main window.

Should **Cancel** be selected, the next time an upload is performed it shall continue from where it last finished.

Once the upload is complete the upload window will look like that in Figure 31. Select **OK** to return to the main window.

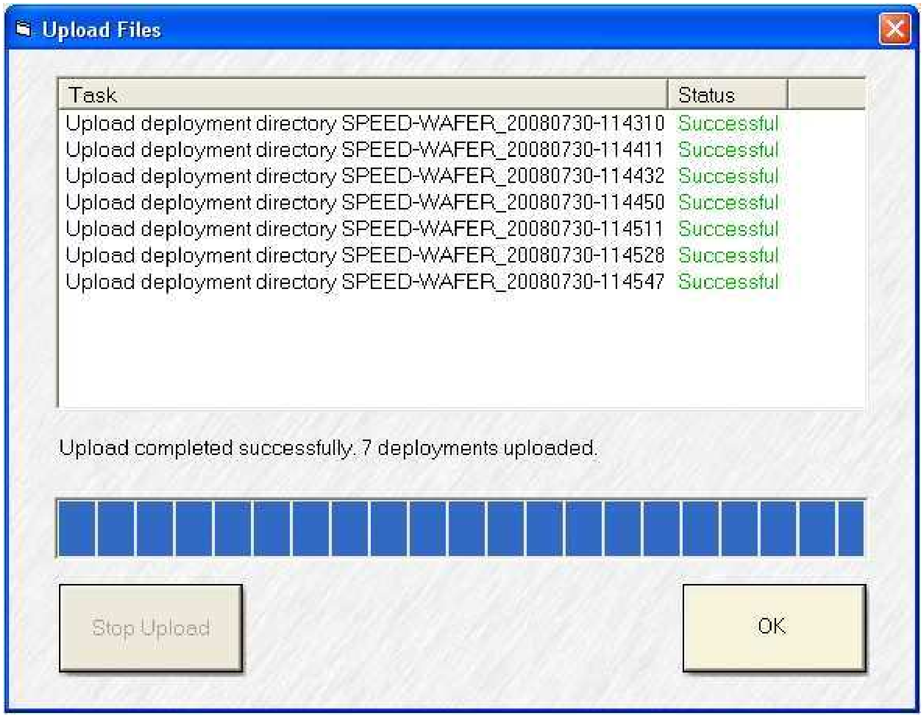

Figure 31: Upload completed window

16 Reviewing Offence Images

Offence images captured throughout a deployment session can be examined during or after the deployment session. Select the **Offence Viewer** button. The Offence Viewer window is displayed.

The images for each deployment session are saved in a sub-directory. This directory follows a specific naming format using the date and time the images were captured. The format is *C:\Deployment\COMPUTERNAME_YYYYDDMM-HHMMSS* and this is shown at the lower part of the Offence Viewer window. REDFLEXspeed automatically shows the files, containing the offence images, for the current deployment session.

The General tab displays the Tele and Wide shots. The **Advanced** tab displays the associated offence data saved with the offence.

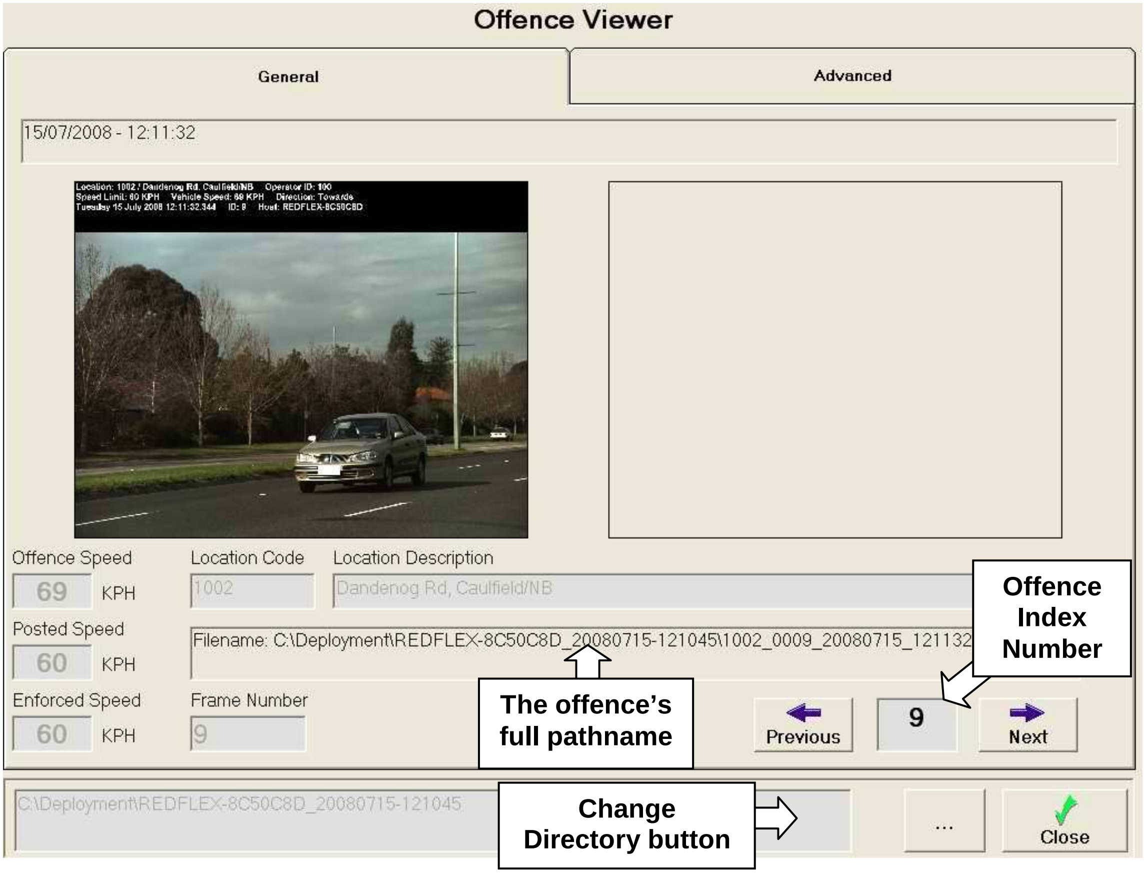

Figure 32: Offence viewer window

The Offence Viewer window displays the last Tele and Wide shot captured during the current deployment. Information on the deployment and the detected speeds for the offence are also shown.

The **Frame Number** is a sequential number for the shots captured in the current deployment session. They are for the shots captured for offences and exclude test shots that were taken at the start of the deployment.

16.1 Selecting Offence Images

The Offence Viewer window displays the available Tele and Wide shots captured during deployments. When the window is displayed, it presents the last captured shot for the current deployment session. Select the **Previous** button to view the preceding shots. The **Next** button displays the subsequent shots.

To view specific offence shots, select the **Offence Index Number** field. A numeric keyboard is displayed. Enter the required Offence Number to display the corresponding Tele and Wide shots.

If not all the offences from a current deployment are available in the Offence Viewer window it is probably because the most recent offence had not been saved to disk when the Offence Viewer window was opened. Close the Offence Viewer window and wait for a minute and try again. The offence should be visible now.

16.2 Viewing Offence Information

Each captured offence has a text file recording information for the incident. An offence's file can be viewed by selecting the **Advanced** tab in the Offence Viewer window. This information includes details on the deployment site, image timestamps, speed limit and the offending vehicle's detected speed.

16.3 Viewing Images from Another Deployment

The default folder for saved image files is *C:\Deployment\COMPUTERNAME_YYYYDDMM-HHMMSS*. To view images from another deployment session, select the **Change Directory** button (the button with the three dots). A Browse window is displayed.

To view another deployment session double click on the **Deployment** folder. This will show a list of all the deployment folders that are stored on the hard disk (see Figure 33).

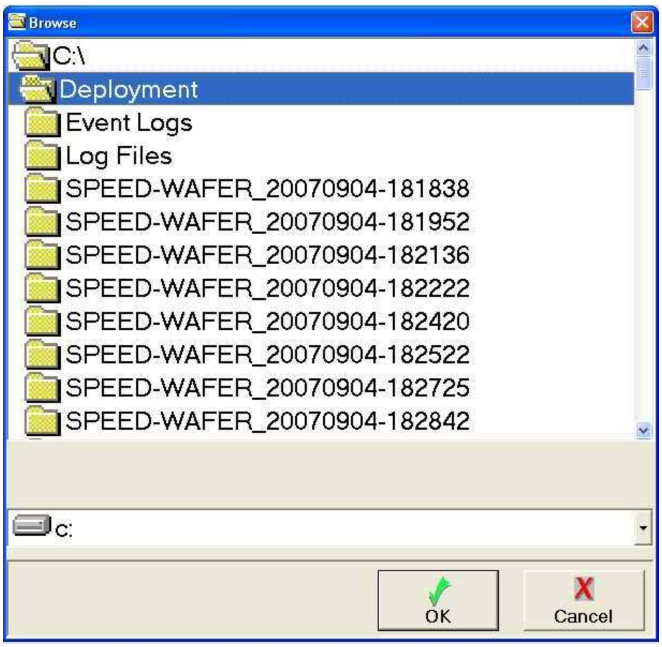

Figure 33: All deployment directories

Scroll to the required folder and double click on it. The window in Figure 34 is displayed.

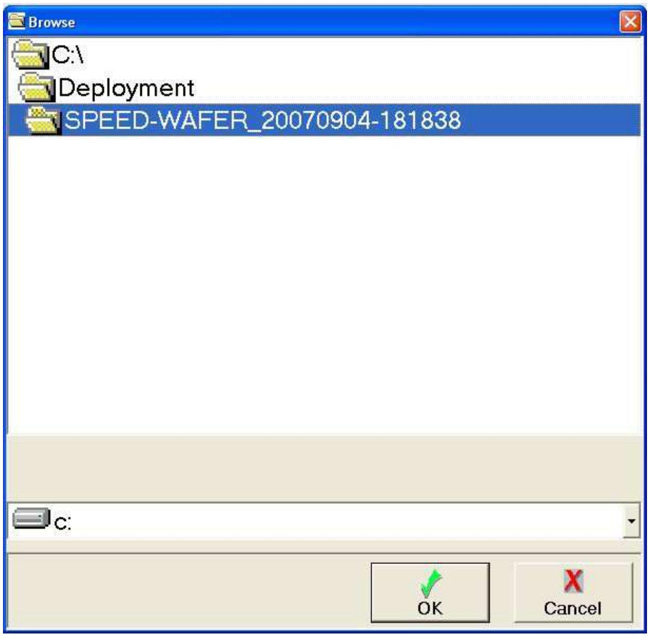

Figure 34: Selected deployment directory

Select **OK** to load the offence files for viewing.

17 Audit Logs

All messages received and generated by REDFLEXspeed are recorded in a log file. This log file is created under a log file subdirectory as soon as the application is started. Once a deployment is stopped, the log file is renamed and moved to the appropriate deployment directory.

Note that if REDFLEXspeed is started and then exited – without starting and stopping a deployment – the details are recorded and remain in the daily log file. This daily log file is still active when REDFLEXspeed is started again. All data is still logged to this file. When the deployment is stopped, the file (including the details from the previous running of REDFLEXspeed without starting a deployment) is moved to the deployment directory. If a deployment is not started, and stopped, until the following day, the data from the previous run remains in the daily log.

17.1 Viewing Log Files

The logged information can be viewed from REDFLEXspeed. To view the log, select the View Audit Log button on the REDFLEXspeed main window.

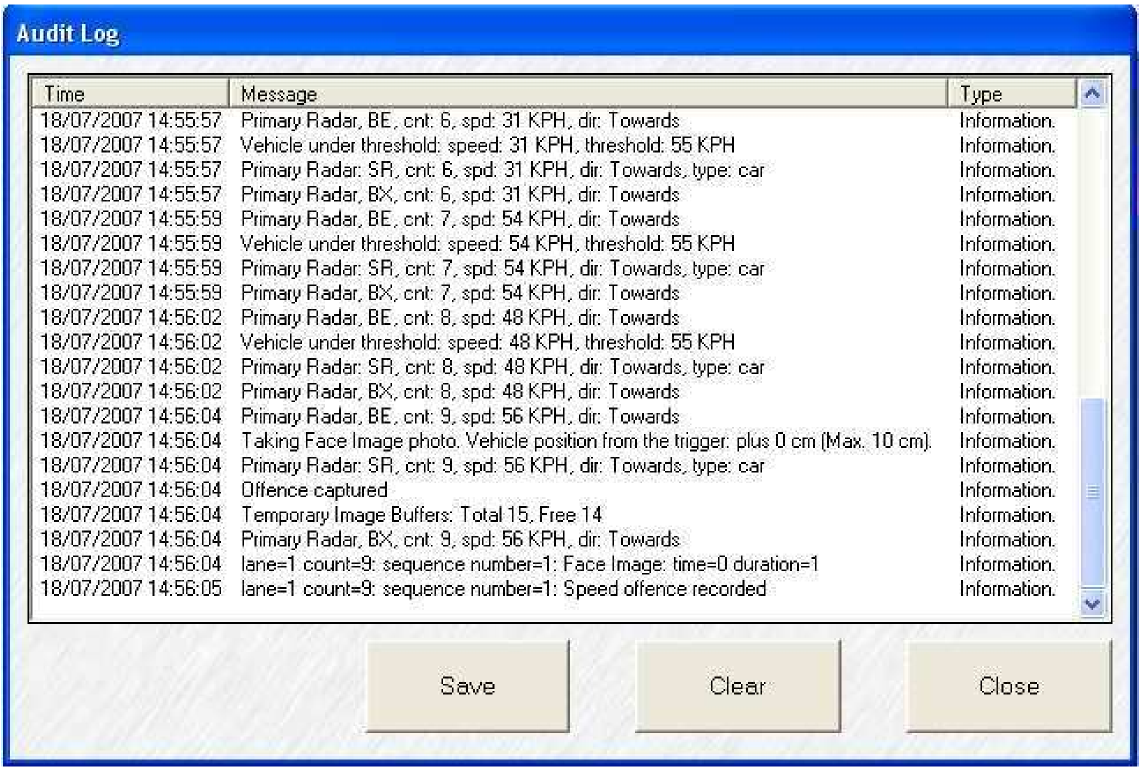

Figure 35: Audit log window

Audit Logs are constantly generated during all deployment sessions. There are three types of messages that can be generated:

Information	Messages that inform you of an event (for example, when a deployment is started or stopped, or when a vehicle passes through the LIDAR beam).
Warning	Messages that inform you of an event for information purposes.
Error	When an error message occurs, the Audit Log window is automatically displayed and the system stops capturing images. The error must be corrected before you can continue with the deployment session.

This log is continually updated with the system's activity. Each message is given a timestamp along with a brief description of the message's activity. The **Clear** button removes all the recorded log information.

Note: There is a maximum of 1000 messages that can be displayed in the Audit Log window. To view messages prior to this, open the saved audit log.

APPENDIX A Definitions

The following definitions apply throughout this document:

Term	Definition
Camera	Each individual camera located within a camera unit.
Camera System	All units required on site to operate the traffic enforcement
Camera Enclosure	Armoured housing containing camera units and control computer.
Face Shot	A face shot is zoomed in on the front of the vehicle to obtain an image of the drivers face. This image is then used to identify the driver of the vehicle at the time of the offence. This shot is optional.
Flash Enclosure	Housing containing Xenon flash unit.
FPGA	Field Programmable Gate Array. The FPGA accurately measures the time it takes for a vehicle axle to travel from one piezo to another so the speed of the vehicle can be measured.
GUI	Graphical User Interface
GUID	Globally Unique Identifier. A field used to establish a unique identifier for reproduction (for example, records and tables).
Hostname	The name given to a camera unit when installed at a site.
Image	Photographic representation of an object taken by a camera.
Loop	Vehicle presence detection sensor.
Offence	An illegal traffic violation.
Phase Signal	The traffic signal sequence, i.e. red, amber and green.
Piezo Sensor Strip	In-road axle detector.
Plate Shot	A plate shot is zoomed in on the vehicle's license plate area.
Redflex/RTS	Redflex Traffic Systems Australia
RS232	Serial communication interface standard.
Scene Shot	A scene shot at the time of the offence.
SDCM	Site Detection & Controller Module
SMARTCAM	This software module controls the Camera Unit operations.
SMARTCAMconsole	The software module provides the Graphical User Interface for both SMARTCAM and SMARTCAMcentral.
Vehicle Messages	Messages shown on the Debug screen that contains information that is obtained for a vehicle passing over the detection sensors.
Violation Bar/Stop Bar	A white painted strip on the roadway signifying the entrance to the intersection.