

## TelWin Product Specification

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Issue 5



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# TelWin Product Specification

<b>Document Number</b>	<b>MS001-94000-40</b>	<b>Issue:</b>	<b>5</b>
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## Revision History

<b>Issue</b>	<b>Author</b>	<b>Date</b>	<b>Reason for Change</b>	<b>Authorised</b>
1	RS	25 Oct 2005	Initial copy	CS
4	RS	16 May 2006	RAKTEL8010	CS
5	RS	19 Aug 2012	Revision page added	CS

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## Introduction

The TelWin program is an integral part of the Mikros Systems RAKTEL/TEL traffic data logging equipment. The main function of the program is to communicate with the loggers. Secondary functions are data conversion and binary file information viewing. The loggers can be configured and stored information extracted as part of the communication function. Traffic is also viewed in real-time with this program. TelWin provides a comprehensive sensor and logger diagnostic function in addition to the traffic monitoring function. TelWin can record and play back all information viewed online (the RUN file function), for calibration and QA purposes. TelWin allows for the indication of violations that can be pre-selected.

The TelWin program is distributed as a standard to all Mikros Systems RAKTEL/TEL clients.

For more advanced applications, TelWinPlus, TelWinPro, NetTel, TelNetDLL and MoniCar are available in addition to the TelWin program. Refer to the program function summary table for more details.

The communication programs support a range of communication channels, including:

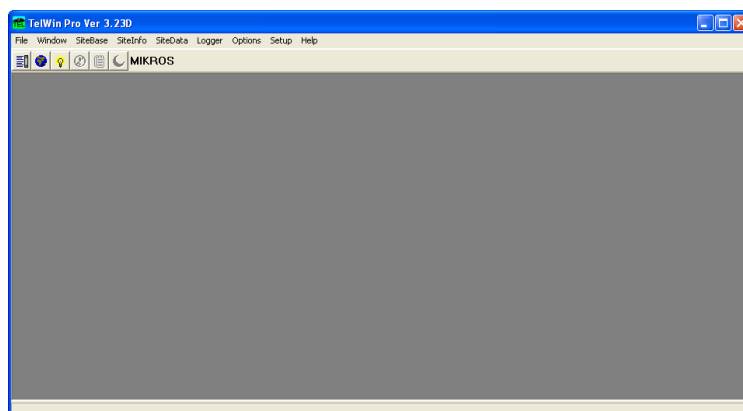
- Direct RS232 serial communication.
- Party-line (multi-drop) on a single RS232 connection. With this option, more than one logger can be addressed from a single RS232 channel, direct or via modem.
- Remote modem accesses.
- GPRS support.
- TCP/IP connectivity (LAN/WAN).

All information is stored in a binary (unpublished) format in the Mikros Systems traffic data loggers. TelWin provides the following standard text converters:

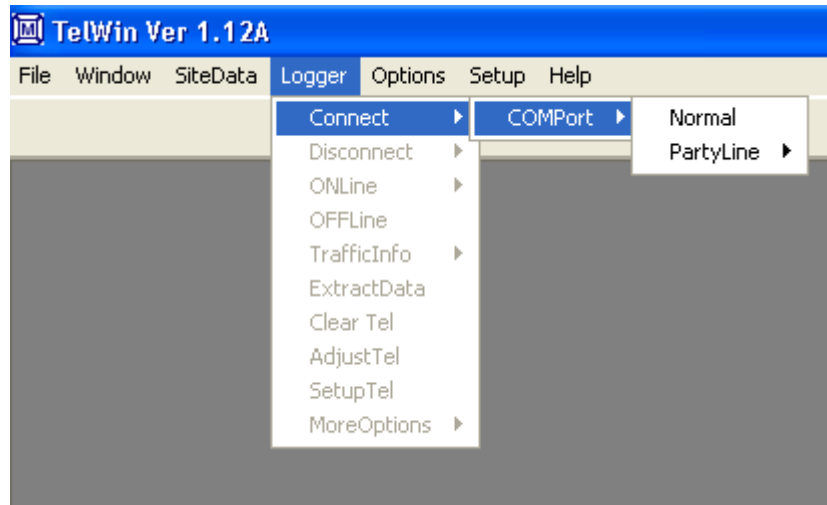
- XTX (Published Mikros Systems extended text format)
- RSA (Published South African Roads Agency text format)
- AustRoad (Published Australian Roads Board text format)

All programs were developed by ProSoft and are distributed under license by Mikros Systems.

Issue 4 of this document pertains to TelWin 1.25A and later.



## Online Functions



### 1 Real time traffic

A number of display modes are available. The tabular format and detail format are given as examples below:

#### Tabular format

Information is displayed in a tabular format for each vehicle passing over the sensors. Various parameters (e.g. vehicle speed, vehicle length) can be selected.

The screenshot shows the 'OnLine Dialog' window with the 'ON-Line' tab selected. The 'Traffic' sub-tab is active, displaying a table of real-time traffic data. The table has columns for PLn, Time, Cls, Length, Spd, C, Ax, T.Spce, and Spacing. The data is as follows:

PLn	Time	Cls	Length	Spd	C	Ax	T.Spce	Spacing
1	14:00:13	01	440	92	L	2	266	266
1	14:00:18	01	440	83	H	2	237	237
1	14:00:20	01	440	86	M	2	263	263
1	14:00:24	01	460	82	M	2	293	293
1	14:00:39	01	420	88	L	2	255	255
1	14:00:42	01	440	88	L	2	253	253
1	14:00:48	03	550	52	H	2	327	327
1	14:01:05	02	960	77	H	3	743	296, 447
1	14:01:08	04	650	60	H	3	451	320, 131
1	14:01:11	01	580	53	M	3	372	297, 75
1	14:01:31	03	580	72	H	2	380	380
1	14:01:32	01	510	70	L	2	281	281
1	14:01:34	01	420	70	L	2	246	246
1	14:01:36	01	450	66	L	2	273	273

The interface also includes a 'Display' panel on the left with 'Pause' and 'Clear' buttons, and 'Restrict Traffic' options for 'Lane' (All Lanes) and 'Vehicle Type' (All Vehicles). A 'Communication Status' section at the bottom shows 'Action' and 'Last Error' fields, and 'Try' (1) and 'Max' (3) values.

## Detail format

In this format, an appropriate vehicle profile is drawn from the actual parameters measured. These parameters are also shown for each observed vehicle. This serves as an instant verification of the vehicle.

Basic		AxleInfo		Shape		Violation Info	
Date & Time	2004/11/16	15:20:30.000	Record No.	-1			
Physical Lane	1		Speed	58		km/hr	
Logical Lane	1		Length	350		cm	
Direction	Forward		Axes	0			
Chassis Code	Medium		Norm.VAC	65			
Class Scheme	RSA Lgt/Hvy		Peak VAC	84			
Class	Light		Occupancy	278		ms	
Description	Light Vehicle		Failure Code	0			
Internal Class	2		J-Factor	0			
Tagged	<input type="checkbox"/>						

Min			50	200	30
Typ			100	220	80
Max			200	400	120
Min			0.1	0.1	
Typ			0.4	0.4	
Max			2.0	2.0	
Min Act			220		
			350		

Which Picture  
 1     2     3     4

## 2 Configuration

The loggers can either be set up from the start or parameters, without a critical influence on logging, can be adjusted. A complete record of actions is kept in the binary files.

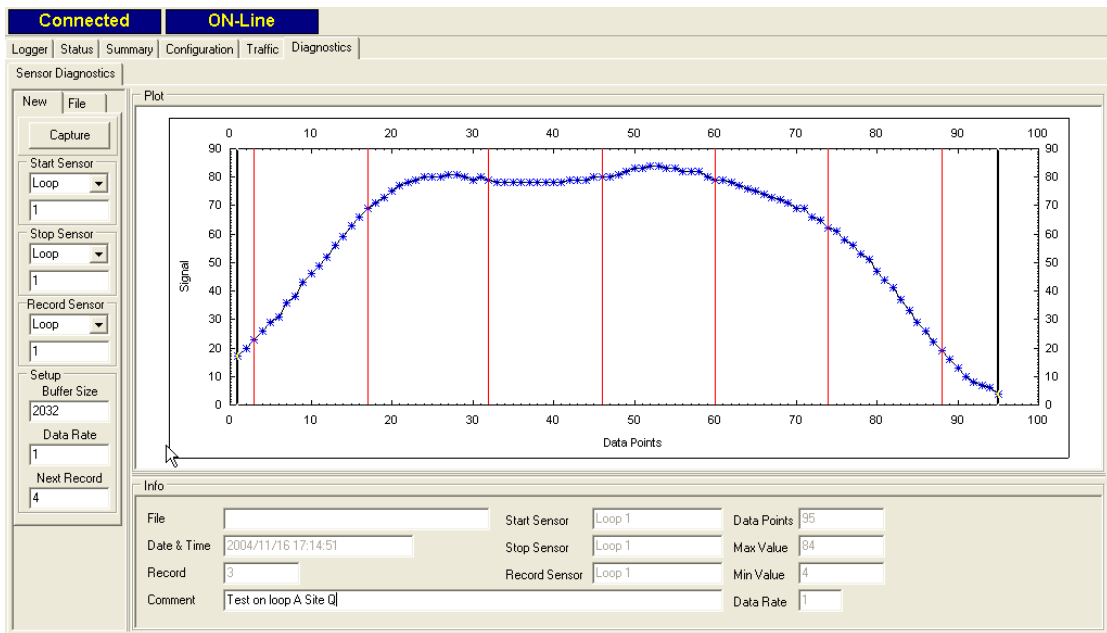
Site&Clock		Data		Configuration		Loop		Axle		Mass		Class		Coms		
Clock																
Local Time	2004/11/12 11:02:09 (Standard)			Local Time	2004/11/12 11:02:09 (Local)											
Logger Date	2004/11/12			Logger Time	2004/11/12 11:02:09 (Local)											
Logger Time	11:02:09			Time Difference	00:00:00 Same											
Set Logger Clock	<input checked="" type="checkbox"/>															
Site Information																
Site Number	5831			Logger Password	2001			Open Access								
Physical Lanes	2			Logical Lanes	2											
Use default Configuration Tables	<input type="checkbox"/>															
Straddle Table																
Lane	1			2												
Adj-Left	0			1												
Direction	X			R												
Adj-Right	2			0												
Direction	R			X												
Reverse-Log Table																
Lane	1			2												
Rev.Lane	2			1												

The following basic parameters can be adjusted:

- Date and time.
- Site number.
- Site configuration.
- Sensor configurations:
  - Dimensions.
  - Thresholds.
  - Sensitivity.
  - Calibration values.
- Classification parameters.
- Commutation configurations (for computer):
  - Com port.
  - BAUD rate.
  - IP address
  - Party line address,
  - Time outs.

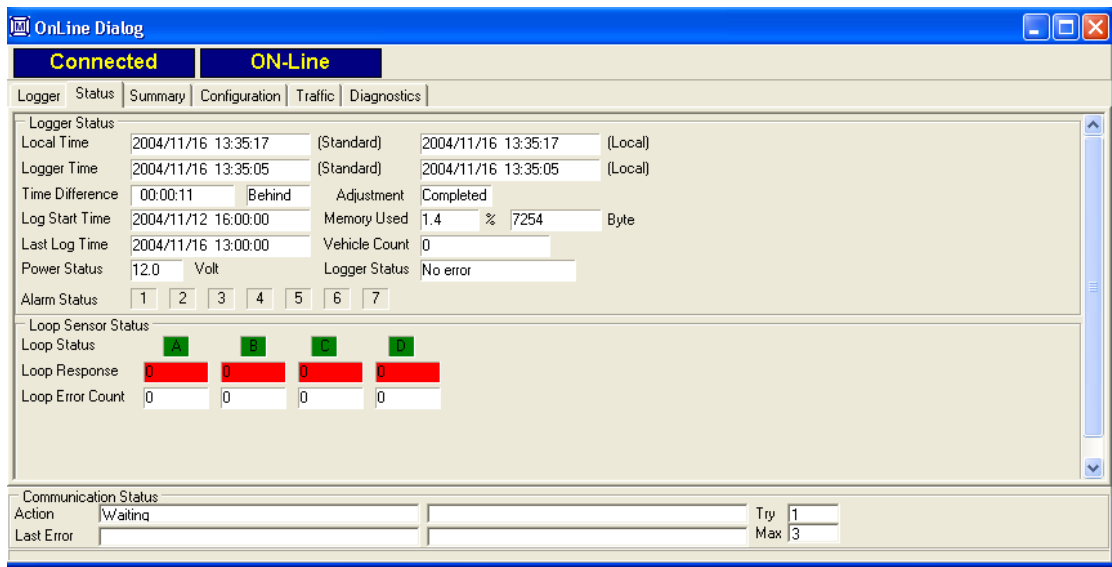
### 3 Diagnostics

A diagnostic plot of connected loops and weigh sensors to the loggers can be obtained to check on the performance of these sensors.



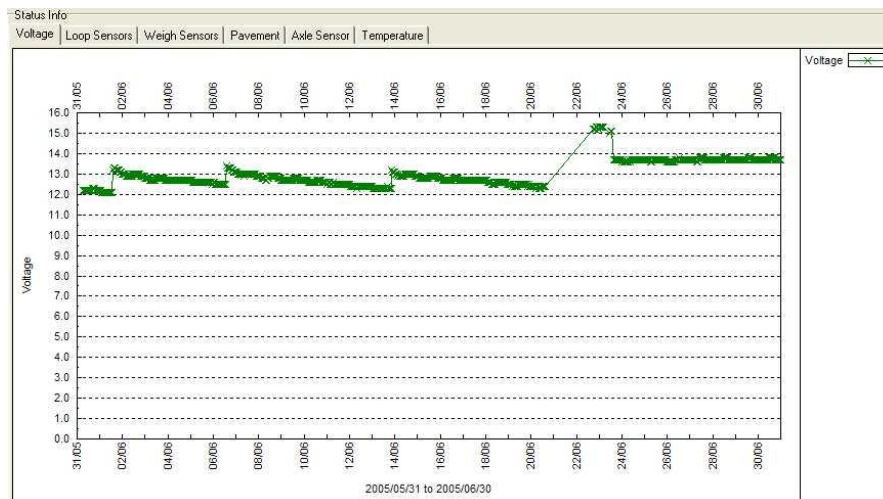
*Typical response trace from a loop as a light vehicle passes over it:*

A complete logger status is available:

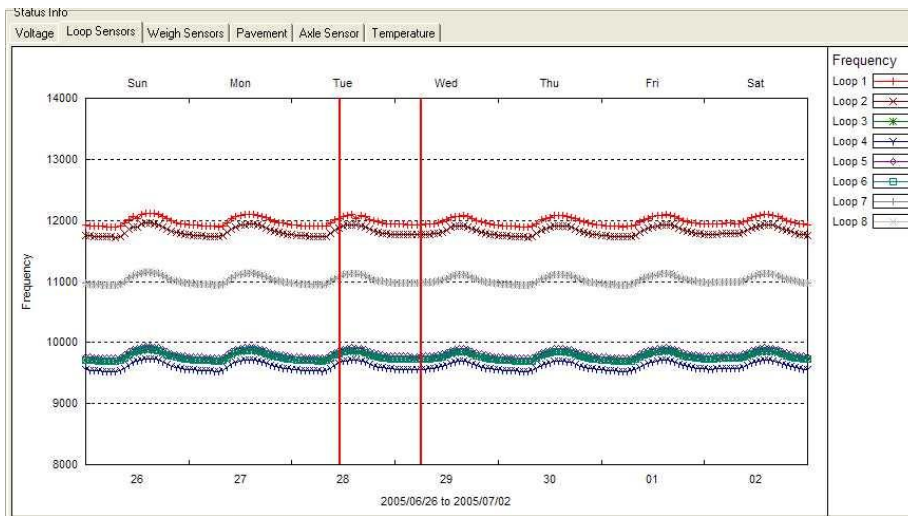


#### 4 Long term status tracking

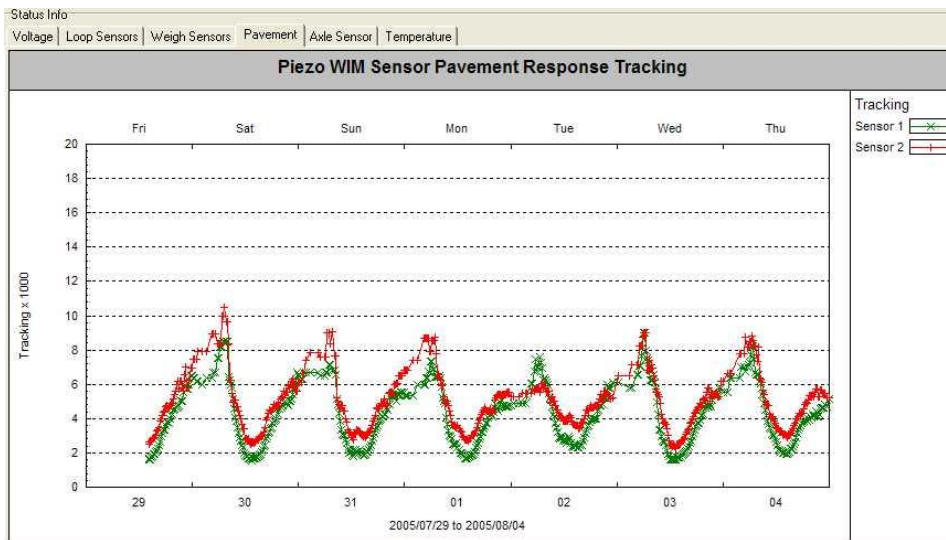
From the recorded data clear long term performance profiles of the loggers sensors and system parameters performance can be displayed.



*Long term battery voltage plot.*



*Long term loop response plot.*

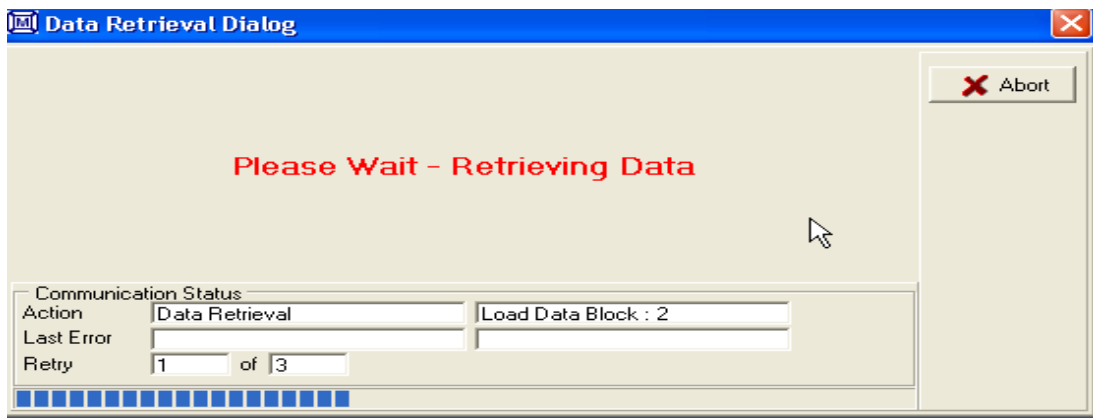


*Long term Piezo WIM sensor response plot.*



## 5 Data extraction

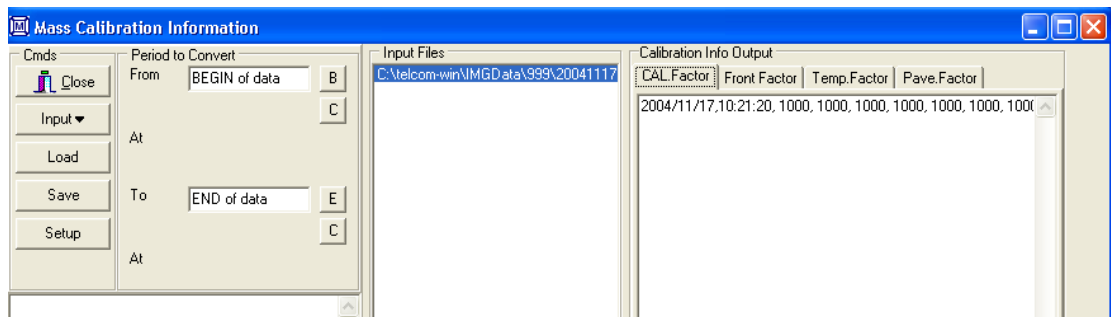
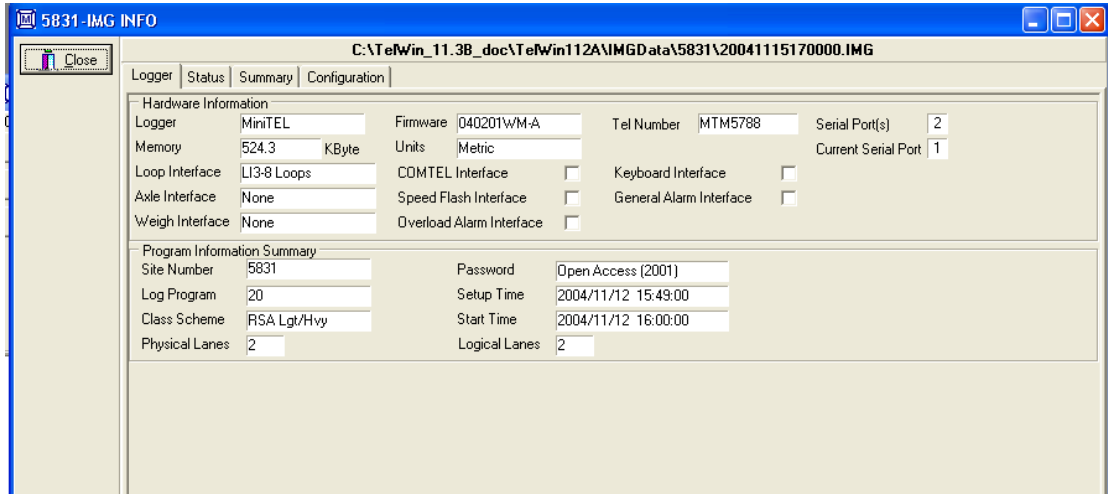
Data can be extracted and left on the logger or extracted and cleared from the logger.



## Offline Functions

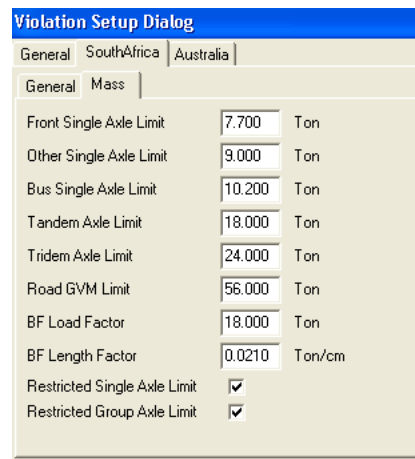
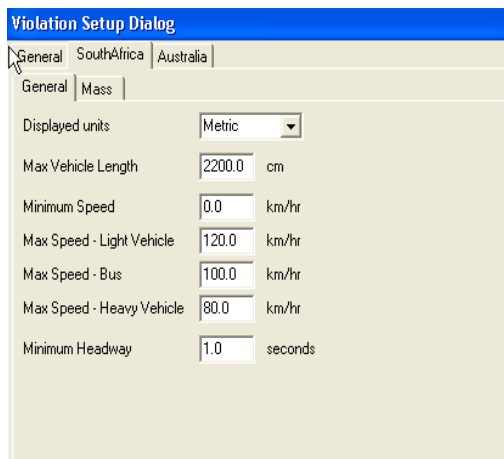
### 1 Binary file information display

This function provides complete logger set-up information and logged data details of a recorded binary file.



### 2 Violation set-ups

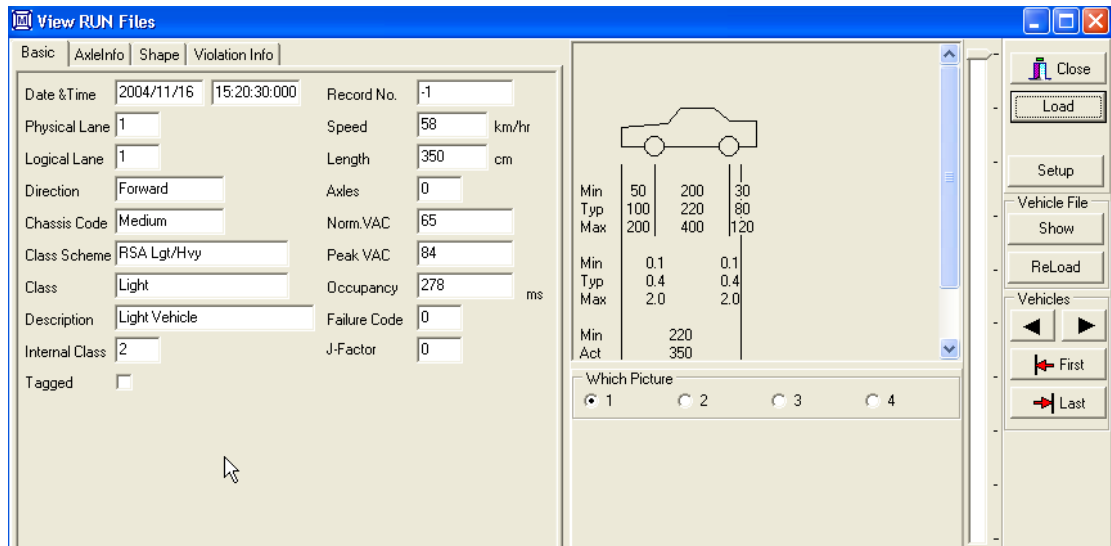
In order to be flagged on specific violations, a complete violation-set is catered for in TelWin. Violation priorities can be set if a vehicle has more than one violation.



### 3 Run-file recording and playback

When traffic is viewed in real time, it can be captured to a RUN file for later playback. In this mode vehicles can be TAGGED so that the data is marked for later use.

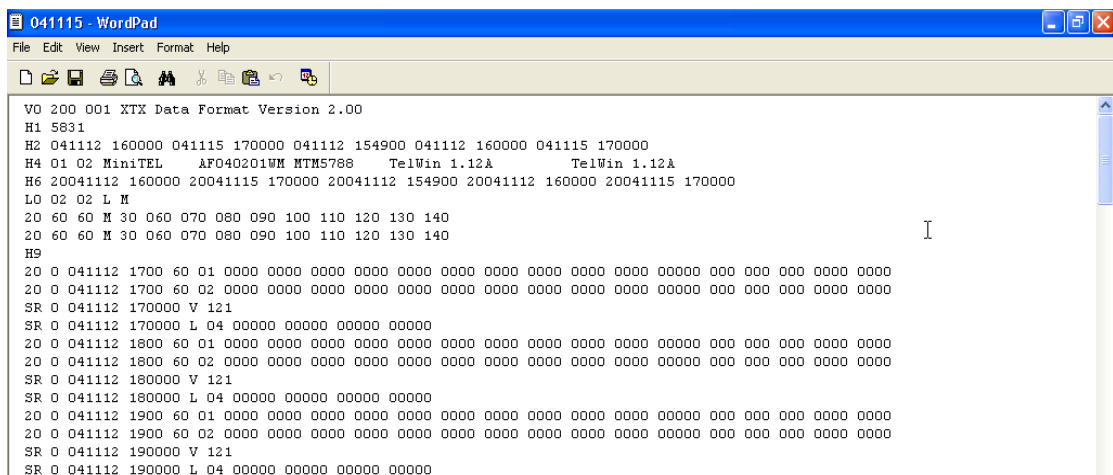
A display of the playback mode on on-line screens is shown below:



### 4 Data conversion to text formats

Data can be automatically converted during extraction or done later.

The text file can be viewed with any normal text editor such as WordPad.



## Summary of RAKTEL/TEL Communications Software

Program	Function Summary
TelWin	<ul style="list-style-type: none"> <li>○ Basic logger communications.</li> <li>○ Set-up loggers (configure and adjust parameters).</li> <li>○ Real-time traffic monitoring.</li> <li>○ Perform sensor and logger diagnostics.</li> <li>○ Long term status monitoring.</li> <li>○ Data extraction.</li> <li>○ Data conversion to standard formats (that do not require SDB).</li> <li>○ Viewing of extracted binary file information.</li> </ul>
TelWinPlus	<ul style="list-style-type: none"> <li>○ The same as TelWin and additionally:</li> <li>○ Site Database support (SDB).</li> <li>○ Setup of loggers from SDB.</li> <li>○ Dynamic Run File view (direct access to saved traffic information).</li> <li>○ Video frame grabbing.</li> <li>○ Data conversion to formats requiring SDB. (US FHWA).</li> </ul>
TelWinPro	<ul style="list-style-type: none"> <li>○ The same as TelWinPlus and additionally:</li> <li>○ Comprehensive automated dialer.</li> <li>○ Full compressed video support.</li> <li>○ Basic reports from raw data.</li> </ul>
NetTel	<ul style="list-style-type: none"> <li>○ Network logger communication.</li> <li>○ Automated simultaneous data extraction and conversion. *</li> <li>○ Monitor of traffic and system status (simultaneous mode).</li> <li>○ Automatic updates of site data.</li> <li>○ Scheduled data conversion.</li> <li>○ Support for SQL DB.</li> </ul>
TelNetDLL	<ul style="list-style-type: none"> <li>○ DLL software interface for user logger network applications.</li> <li>○ Windows DLL that enables users to link to the Mikros Loggers with their own software.</li> <li>○ Enables protocol control.</li> </ul>
MoniCar	<ul style="list-style-type: none"> <li>○ Web based monitoring of online loggers.</li> <li>○ Comprehensive graphical interface.</li> <li>○ Comparison with historical traffic patterns.</li> </ul>

Notes: \* Limited to hardware performance from CPU and available bandwidth.

All programs require a Windows XP platform or later and Pentium IV 1500 MHz with 256 Kbyte RAM as a computer or higher.

**Various functionalities are configured with license control**

**Mikros Systems reserves the right to change product specification at any time without prior notice.**