# Tachomaster

# Drivers' Guide to the Digital Tachograph

This Tachomaster Driver Guide has been compiled by Steve Williams.

Steve Williams has been involved in the road haulage sector for over 30 years, beginning as an employed lorry driver then moving on to become an owner-driver, before setting up his own haulage company in 1982.

From 1997 until 2007, Steve worked for the Road Haulage Association, setting up the Association's first regional help desk, before moving on to become Project Manager within the newly formed 'National Operations Centre'.

Steve then joined the Policy Department at RHA Head Office, representing the Trade Association and the wider Road Haulage sector at meetings with Government bodies and agencies.  During this time Steve was directly involved at Government level with the introduction of the Digital Tachograph and the EC Drivers' Hours Regulations which came into force in 2006.

Thanks to this work, Steve is now widely considered to be one of the foremost authorities on Digital Tachographs and Drivers' Hours Regulations.

# Contents

# 1    Introduction

There are presently three manufacturers of digital tachograph vehicle units: Stoneridge, Continental Automotive (formerly Siemens) and Actia. Most vehicles are equipped with the Continental Automotive unit, with the following exceptions:

- Until recently, all Scania trucks and buses were fitted with the Stoneridge device. Scania have recently changed their policy and customers may now specify the Continental Automotive Unit as an option in new vehicles, for an additional cost.
- Actia devices are mainly found in buses and coaches. They can also be found in larger LDV vans and minibuses.

All four smartcards – the driver card, the company card, the workshop card and the control card - can be used in all three types of vehicle unit, as all three devices have to conform to the same European specifications.

This guide covers the general principles of use for Digital Tachograph equipment. Much like video, DVD and even mobile phones, each type of Vehicle Unit does basically the same thing, but in a different way. More detailed help for using each type of Vehicle Unit is therefore included in the appendices.

## 1.1    Drivers' Hours

Please don't forget that whatever type of recording equipment you are using you must comply with the EC Drivers' Hours Regulations at all times.

Whether you use a Digital or Analogue Tachograph, you must **always** be able to provide a record of the current day's activities and records of all work completed during the previous 28 calendar days. If you do not complete a tachograph record for every working day you will be expected to have some other type of evidence of what work, if any, you have carried out. This may be a time sheet, a diary entry or any written evidence of what you did on each specific working day.

Be aware that from April 2009 VOSA examiners have the authority to issue graduated fixed penalties to the **driver** for a list of offences, including:

- failure to ensure that the recording equipment is functioning correctly;
- failure to ensure that the Driver Card is functioning correctly;
- failure to comply with the drivers' hours rules;
- failure to ensure that printing can be carried out correctly in the event of an inspection;
- failure to carry sufficient print roll supplies.

# 2 What is a Digital Tachograph?

A Digital Tachograph is an electronic system for recording driving and rest times for drivers and co-drivers (crew members) of buses, coaches and trucks that are driven under EC drivers' hours rules.

Instead of the familiar Analogue Tachograph Chart Recorder, **all** new vehicles that have been registered within the UK since 1st May 2006 and are subject to the EC drivers' hours rules **must** be fitted with a Digital Tachograph Vehicle Unit (VU). In addition, all drivers operating a Digital Tachograph equipped vehicle are required to hold a Driver Card (issued by the DVLA in Great Britain and the DVLNI in Northern Ireland). The company operating the vehicle is also obliged to obtain a Company Card from the relevant licensing authority.

Details of all your activities are recorded and stored by the Digital Tachograph VU and are also written to your Driver Card whenever you use it in a Digital Tachograph VU. This means that, unlike the Analogue Tachograph system, there is no need to fill out a 'centrefield' at the beginning and end of every working day or whenever you change vehicles during a work period.

## 2.1 The Digital Tachograph Vehicle Unit (VU)

The Digital Tachograph Vehicle Unit (VU) is an electronic device that is able to record and store driver and vehicle records. The VU must have the ability to store this data for at least 365 days and must make it possible to download that data. Operators based in Great Britain are obliged to download the data at least every 56 days, and then store it safely and make it available for inspection by the authorities for the next twelve months.

Data recorded by the VU include vehicle speed, distance travelled and other system related parameters. General vehicle speed data is limited to 24 driving hours and is recorded only in the memory of the Digital Tachograph Vehicle Unit. It is NOT written to the Driver Card. Details of excessive speeds (overspeeds) are recorded however, and analysis of the data can show these events and other useful information such as 'harsh braking'.

Even if the external power supply to the VU is removed, (for example, If the vehicle batteries are disconnected for maintenance), the VU is still able to store data as it is fitted with its own internal battery that must be able to provide power for at least two years. As such, there should not normally be any need to have the internal VU clock reset between calibration dates, which are every two years rather than the six year period for analogue equipment.

## 2.2 Your Driver Card

If you drive a vehicle for commercial purposes, and that vehicle is fitted with a Digital Tachograph, you **must** have been issued with a Driver Card by the relevant authority. This is a so-called 'smartcard' and has an electronic chip on it (similar to the chip on a 'Chip and PIN' credit card). The Driver Card must store at least 28 days worth of data and Operators in Great Britain are **required** to download that data at least every 28 days, although it is recommended that downloading be carried out at least every 21 days where possible.

Your Driver Card holds information that identifies you uniquely and, when used with a Digital Tachograph VU, all relevant information on your activities will be written to it.

Once you have been issued with a Driver Card, you **must** keep it with you **whenever** you are at work, even if you are not using a commercial vehicle with a Digital Tachograph.

The following data will be stored on a Driver Card for at least 28 working days:

- Identification of the vehicles used.
- Activities (driving, working, active and rest times).
- Crew status (1 or 2 driver operation).
- Dates and times of insertion into or withdrawal from a Digital Tachograph VU.
- Location in which the working days begin and end.
- Total distance.
- Identification of the control official and date/time of the last check.
- Tachograph events and errors.

Your Driver Card is your personal property, but you are obliged to make it available to the operator of the vehicle for downloading when required and to any authorised enforcement official on request.

> **It is important to remember that once you have been issued with a Driver Card, you MUST ALWAYS carry it with you when driving commercially, EVEN IF YOU ARE DRIVING A VEHICLE FITTED WITH AN ANALOGUE TACHOGRAPH.**
>
> **When driving a vehicle covered by the EU drivers' hours regulations in Great Britain, you must ALWAYS be able to produce your Driver Card on request by VOSA, even if you have never used it to record drivers' hours.**

### Can I display and print out information stored on my Driver Card?
Yes. The data stored on the Driver Card can be displayed through any VU when the card is in the VU. If necessary, the data can also be printed off via the integrated VU printer.

**Can I be issued with more than one Driver Card?**
No. The authorities in all the 27 European Member States must ensure that a driver is the holder and specific user of only one valid and personal Driver Card. The Driver and Vehicle Licensing Agency (DVLA) are the government agency responsible for issuing the various types of smartcard, including Driver Cards, within Great Britain and DVLNI are the authority responsible for issuing these cards to those resident in Northern Ireland.

## 2.3   The Company Card

Every operator that runs one or more vehicles fitted with a Digital Tachograph **must** apply for a Company Card. This is a different type of smartcard - used to identify the Company - and is required every time a VU is downloaded.

The Company Card does not store any data as such - its function is simply to ensure that the Digital Tachograph Vehicle Unit recognises the operator before allowing any data to be downloaded.

# 3    Introduction to the Operation of the VU

This guide uses the Continental Automotive (formerly Siemens) Digital Tachograph VU in most images, as this is by far the most common type of VU currently in use. For user notes for each type of VU, please consult the relevant appendices at the end of this guide.

## 3.1    Basic use of the VU

Before carrying out any procedure involving the VU, you must ensure that the vehicle ignition is turned on.



When starting a working period you must insert your Driver Card into the correct slot of the VU, ensuring that the 'chip' is facing upwards and towards the front of the tray (i.e. away from you).

If you are to be the driver of the vehicle for this period of activity, you **must** ensure that you insert your card into **'slot 1'**. If the vehicle is being double-manned and you are the crew member, you must insert your card into **'slot 2'**. Once a Driver Card is inserted into either slot on the VU, that slot is locked in the closed position whilst the vehicle is being driven. The slot can only be opened again once the vehicle is stationary.

**The vehicle should NOT be moved or driven until your card has been successfully inserted into the VU.**

If you attempt to insert your Driver Card into the VU once the vehicle is moving, a warning message will be shown on the VU screen to indicate that a card has been inserted whilst driving. You should stop the vehicle, acknowledge and clear the warning and then insert your Driver Card in the normal way. The VU will store an electronic record of an attempt being made to insert a Driver Card while the vehicle was in motion, and this will be made available to the Operator as part of the regular download of the VU.

Once your Driver Card has been accepted and verified, the time of last withdrawal will be displayed and the VU will start processing. Data will be stored in the internal



memory of the VU a copy of that data will be written to the Driver Card as required. If you have carried out any recordable duties since your card was last withdrawn, details of these must now be entered manually. If manual duty entries are not required you can either tell the VU that this is the case, or simply start driving which will cause the VU to terminate the manual duty entry procedure automatically.

Once you have completed the card insertion procedure, and until you start driving, the VU will record your mode of activity as 'Other Work' both in the VU and on your Driver Card.

Once the vehicle starts moving, the display will default to a 'standard' view.

```
10 24 ⊙ 48km/h
⊙ 6724.0km ⊠
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Typically this standard view will display a confirmation that a valid Driver Card has been inserted into **'slot 1'** and the current mode of work being recorded against the driver, the mode that **'slot 2'** is set to (irrespective of whether or not a card has been inserted), the local time, the current speed of the vehicle and the current odometer reading. For more detailed descriptions of the standard view, please consult the relevant appendix in this document or the User Guide for your specific VU.

As soon as the vehicle begins to move, the VU will automatically record 'Driving' as the activity against the card in **'slot 1'** - *irrespective of the mode displayed before the truck started to move* - and this data will be copied onto the Driver Card. As the VU is programmed to record data *at all times*, any vehicle fitted with a Digital Tachograph that is moved or driven without a valid Driver Card being inserted in the VU will record this movement as 'driving by an unknown driver'.

There is no function available that will allow *any* movement of the vehicle to be recorded and calculated as anything other than a period of 'Driving'.

## 3.2   Recording of Duty Period

When a vehicle is stationary, you may select one of three activity modes. The correct activity mode must be used to indicate whether your current activity is 'Other Work', 'Availability' or 'Break/Rest', as defined in the relevant drivers' legislation. There is never any need to explicitly choose 'Driving' as this activity mode is recorded automatically whenever the vehicle is in motion.

**'Other Work'** should be recorded on the 'crossed hammers' activity mode.

**'Availability'** should be recorded on the 'box' activity mode.

**'Breaks'** during the day and daily and weekly **'Rest'** should be recorded on the 'bed' activity mode.

It is important to remember that a Digital Tachograph VU does not work in the same way as the more familiar Analogue Tachograph equipment when it comes to recording 'Breaks' or 'Rest' and that this mode must be selected explicitly when required.

Unlike Analogue Tachograph equipment, a Digital Tachograph will automatically set the mode to 'Other Work' every time a moving vehicle comes to a halt. It doesn't matter what activity mode was chosen before the vehicle was last driven or moved, the VU will **always** default to 'Other Work' when the ignition is on and the vehicle is brought to rest. If you have previously set the mode to 'Availability' or 'Break/Rest' and the vehicle subsequently moves, even by only a few inches, the mode will default to 'Other Work' once the vehicle is stationary again.

To record 'Availability' or 'Breaks/Rest', you must explicitly select the relevant mode once the vehicle has come to a complete standstill and you have applied the handbrake.

You may change modes as required provided that the vehicle is stationary, but remember, unless the handbrake is on even a fractional movement of the vehicle could result in the VU recording a short period of 'Driving' before defaulting to 'Other Work'.

**Remember:** Whenever the vehicle is moving the VU will automatically record 'Driving' as the current activity against the card in **'slot 1'** and will always record a period of 'Other Work' once the vehicle comes to a halt.

## 3.3   Multi-Manning

Whenever a vehicle is 'manned' by more than one driver the current driver of the vehicle must always insert their Driver Card into **'slot1'** and use the associated activity mode change button. The crew member must use **'slot 2'** and the corresponding mode change button for that slot.

When a vehicle begins to move, the activity mode for the current driver will automatically be recorded as 'Driving' and the activity of the crew member will be recorded as 'Availability'. The crew member may manually change the activity mode to 'Other Work' if they required.

Whenever the current driver and crew change places their Driver Cards must be ejected and then re-inserted so that the driver's card is in **'slot 1'** and the crew member's card is in **'slot 2'**.

## 3.4   Driving without a Valid Driver Card

You must have applied for *and been issued with* a Driver Card before you can legally drive a vehicle equipped with a Digital Tachograph.

If a vehicle begins to move and no valid Driver Card has been inserted, a warning message will be displayed on the VU screen and a record of the 'event' will be stored. If you have simply forgotten to insert your Driver Card, you should stop the vehicle as soon as it is safe to do so and simply insert your Driver Card in the normal way.

Even when a Driver Card is not inserted into the VU, all activities are recorded and stored. The information relating to these activities can still be obtained in the normal way, but they will be marked as activities by an 'unknown driver'.

### 3.4.1 Lost, Stolen or Faulty Driver Cards

If your Driver Card is lost, stolen or develops a fault, you **must** apply for a replacement card, to the DVLA in Great Britain or to the DVLNI in Northern Ireland. These authorities are required to issue a replacement card within five working days of receiving a valid application.

In the meantime, *provided that you have had a Driver Card issued to you*, you may continue to operate a Digital Tachograph equipped vehicle if you adhere to the following rules:

- You **must** make one printout at the start of every day's duty and another at the end of the duty period.
- You **must** write your name and driving licence number on the rear of each printout and sign them to confirm the details.
- You **must** keep these printouts available for inspection on request by the appropriate authorities for the next 28 calendar days.
- After 28 days, you must pass the printouts to the vehicle Operator who **must** store them with your records for at least the next 12 months.

You **may not**, under normal circumstances, continue to drive for more than 15 calendar days without using a valid Driver Card.

## 3.5   Ejecting your Driver Card from the VU

You can only eject your Driver Card from the VU when the vehicle is stationary and when the VU is displaying one of the main driving displays, or the VU is in the main menu. Your Driver Card must be treated as your own personal property and it should **always** be withdrawn if the vehicle is to be driven by another driver or if you have to leave the vehicle for any reason. When a Driver Card is withdrawn from a VU an electronic record of the card ejection will be stored.

If the Driver Card is being ejected at the end of the daily duty period, the VU will ask you to confirm your current location. Once you have entered your location, the display will show 'ejecting card' to indicate the card ejection process is under way. There may be a short delay as the VU needs to write some final information to your Driver Card before it is ejected. Don't keep pressing buttons: be patient and wait for the VU to release your card when it is ready!

## 3.6   VU Specification Anomalies

Due to the delay between the ratification of the specification for the manufacture of Digital Tachograph Vehicle Units and the final implementation of Digital Tachograph legislation, there are a number of *known* anomalies in the behaviour of current Digital Tachograph Vehicle Units.

### 3.6.1 Anomaly 1- Recording of Breaks for Crew Members

None of the three types of VU (Continental, Stoneridge or Actia) has the facility to allow the crew member to record 'Break' as an activity when the vehicle is in motion. This is an error in the VU specification and has been recognised by the authorities as such.

In Great Britain, the Vehicle and Operator Services Agency (VOSA) have acknowledged that it is acceptable for a crew member to take a period of 'Break' when the vehicle is in motion. This should be recorded using the 'Availability' mode, as the VU recording device is incapable of storing this mode of activity as 'Break'.

VOSA traffic examiners have been instructed to accept 45 minutes of any crew member 'Availability' record as a 'Break'.

### 3.6.2 Anomaly 2 – Automatic Selection of 'Other Work' Activity Mode

If a vehicle comes to rest after a period of movement, the activity mode shown on the VU screen will automatically change to 'Other Work'. If the vehicle begins to move again after less than approximately 120 seconds (2 minutes), the 'Other Work' duty mode automatically selected *may not* be correctly stored within the VU or copied onto the inserted driver card as an event.

The authorities have acknowledged this recording problem and they may be prepared to consider additional evidence to prove that the record produced by the VU is incorrect due to this specification anomaly.

## 3.8   VU Printouts

Printing is only possible when the vehicle is stationary and the ignition is switched on. A VU has the ability to supply various types of printout relating to the unit itself and to the various smartcards.

### 3.8.1 Printer Rolls

The paper print roll cassette is used to house a roll of print paper. The printer cassette should remain closed at all times, except when fitting a replacement print roll. When a printout is requested the paper will emerge from a slot in the front of the VU. When a print roll is close to running out, a red line will be visible down the side of the paper.

As the driver of the vehicle, it is your responsibility to ensure that there is always a spare print roll available. During a side-of-the-road Vehicle and Driver check, a VOSA Traffic Examiner may ask you to show that you have a spare print roll in the cab. If you cannot provide a printout on request, then you are liable to a £60.00 fixed penalty at the roadside.

### 3.8.2 Things to Note when Printing

Printouts will normally show the record in relation to UTC time (see below). If the duty period started before 00.00 UTC time, after 'withdraw driver card', the VU will automatically print the daily values of the previous day and the current day.

## 3.9   VU Time

### 3.9.1 UTC Time and Local Time

All VUs are programmed to use and record Universal Time Co-ordinated (UTC) as their master reference time. UTC time is an incremental count of the number of elapsed seconds since 1st January 1970 and is approximately equivalent to Greenwich Mean Time (GMT).

UTC time does not change due to seasonal adjustments such as British Summer Time (BST) and irrespective of what time is shown on the front display of the VU, the internal time clock is set and will always record in UTC.

### 3.9.2 Setting Local Time on the Vehicle Unit

If the local time has been manually set on a VU, there will be a large 'dot' (●) next to the time displayed on the VU screen, indicating that this is local time and NOT UTC time. The local 'offset' time may be changed in ±30 minute steps, up to a maximum of ±12 hours from the UTC time

# 4      General Operator Notes

## 4.1    Cleanliness

Smartcard drawers, as fitted to the Stoneridge SE5000 VU, should be kept closed at all times, except when inserting or removing cards.

The paper cassette should be closed at all times, except when changing the printer paper. This will prevent any contamination of the thermal paper. Replacement paper should be kept in its wrapper until it is to be used.

Printouts should be stored in as cool and dark a place as possible as the thermal paper can be easily damaged if it becomes hot and/or damp.

If it is necessary to clean the outside of the VU, use a very mild detergent solution. Avoid the use of solvents that could permanently damage the plastic fascia.

## 4.2    Protecting the VU System from Damage

Replacement printer paper rolls must be of a type approved by the VU manufacturer. Failure to use approved printer paper may cause permanent damage to the printer mechanism. Tachomaster print rolls, available to buy online at www.tachomaster.co.uk, are of the approved type and standard for all VUs.

Smartcards must be handled with care and must not be flexed or bent. Ensure that the card contacts are kept free from dirt. If it becomes necessary to clean the contacts, simply wipe them clean using a soft damp cloth - solvents or other cleaning agents must **never** be used.

## 4.3    Printer Maintenance

The VU is a sealed unit and the only user serviceable parts are the paper cassette and the printer paper. If the paper cassette is damaged then the complete cassette must be replaced as a single item.

## 4.4   VU Periodic Inspections and Security Checks

An approved calibration workshop must carry out an inspection when a VU is first installed and registered to a vehicle. The VU must then be inspected and recalibrated every 2 years, at which time the internal battery will be checked. This inspection will include checks to ensure that the VU conforms to legislative security requirements.

The 'Tachograph Installation Plaque' can be found on or near to the VU. This provides proof that an inspection was passed as at the date indicated on the plaque itself. If a VU fails an inspection, then the unit will be decommissioned and must be replaced. It should be remembered that within Great Britain, a VOSA Traffic Officer has the authority to stop a vehicle and carry out an inspection of its VU system at any time whilst a vehicle is being driven on the public highway.

A VU must never be opened or manipulated in any way. All seals on the VU and the installation plaque must be intact and show no evidence of tampering. If there is **any** evidence of tampering or other damage the unit will fail its inspection and will have to be replaced.

If a VU has any exterior damage it is recommended that the VU be presented to an approved Digital Tachograph workshop that will check whether the unit still conforms to the inspection security requirements. Whether or not the unit will still pass an inspection will depend on the severity of the damage.

## 4.5   VU Warnings (Events and Faults Conditions)

There are certain events and fault conditions (see Appendix) that will cause the VU to issue a warning. Details of these events and fault conditions are stored by the VU and an appropriate message is displayed (it should be noted that warnings of power-supply interruptions are issued once the power is restored). Any such warning will remain on the display until it has been explicitly acknowledged. As long as a warning remains 'active' (i.e. the condition that caused the warning remains) it will be re-displayed whenever the ignition is turned on, even if it has previously been acknowledged and cleared.

If the VU displays a warning, you should press the **'OK'** (or equivalent) button to acknowledge it. Once you have acknowledged the message, you may need to press the **'OK'** button a second time to clear it from the display. Manufacturer-specific warnings, (i.e. those with a reference number greater than 0x80), require only one button press to acknowledge them and clear the display.

If a warning message is displayed that indicates a VU or other malfunction, you are strongly advised to make a note of the warning and to inform the appropriate person to ensure the fault is dealt with as soon as possible.

# 5    Analysing the Data

As with Analogue Tachograph Charts, the information on both the Driver Card and in the VU needs to be analysed and stored to ensure compliance with the regulations.

The industry standard solution for Digital and Analogue Tachograph analysis is Tachomaster, which enables instant analysis for both types of Tachograph and provides an immediate, comprehensive and transparent view of both Driver and Vehicle activity.

With a secure Internet connection to Tachomaster, the Head Office sees the whole operation at a glance and each Depot Manager can see the information relevant to their depot. Should the company wish to, they may issue each of their drivers with their own personal login, which allows them to view their own Tachograph records online.

Below, you can see one way that Tachomaster clearly shows any infringements on a Driver's Diary with the exact details of the day in question easily viewed simply by clicking on the date.



In addition to the Driver Diary, there are many other useful reports available to all drivers. For example, each driver can view their own 'Time Usage Breakdown', which gives comprehensive details of all hours they have worked, driven etc.

By combining the details from Drivers' Tachographs with the information downloaded from Vehicle Units, Tachomaster provides operators with a wealth of management reports.

With a Digital Tachograph equipped vehicle it is possible to know when the vehicle was driven and by whom, as well as how it was driven. Tachomaster's configurable Vehicle Diary allows operators to fully understand how their vehicles are being used at all times.

Below, you can see one way that Tachomaster lets you to view this information in a clear and concise format.  Operators can look through this information or click on a particular day to see a full breakdown of the vehicle's activity on that day.



Comprehensive cross-company reporting is, of course, standard with Tachomaster. Operators may compare drivers, vehicles and depots for compliance, infringements and productivity, drilling down to driver and vehicle level as required.

If you would like to find out more about *any* aspect of Tachomaster, please visit www.tachomaster.co.uk or email feedback@tachomaster.co.uk for further information.

# 6    Points to Remember

Digital Tachograph Vehicle Units are only machines! If you, as a professional driver, believe that the hours or data the vehicle unit is showing are incorrect, make a written note and keep that note with your records.

> ♦ **Always remember that the Vehicle Unit records any movement of the vehicle as 'Driving'. Even if you have manually changed the mode to 'Other Work' or 'Break', if you subsequently pull on the handbrake and cause even a slight movement of the vehicle, the Vehicle Unit may interpret this movement as a period of 'Driving'!**
>
> ♦ **On most Digital Tachograph Vehicle Units you must manually change the mode to 'Break' if you want to record a break. Unlike the old Analogue Tachograph equipment, once a vehicle stops moving the Digital Tachograph does not automatically start recording the activity that the mode switch was on before the driving period commenced.**

# Appendix 1: User Notes for the Continental Automotive Group (formerly Siemens) VDO DTCO 1381 Digital Tachograph

This appendix relates specifically to the Continental Automotive Group (formerly known as Siemens) VDO DTCO 1381 Digital Tachograph Vehicle Unit. These notes highlight the key features and methods of operation for this type of VU.

## 1    The VDO DTCO 1381 Digital Tachograph Vehicle Unit

This is the most common type of Digital Tachograph Vehicle Unit and it is fitted in the majority of commercial vehicles registered since May 2006 which are subject to the EU drivers' hours rules.



If you regularly operate or drive vehicles fitted with the DTCO 1381 Vehicle Unit, it is strongly recommend that you read the User Manual which should be with the vehicle.

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**IMPORTANT NOTE:**

While the DTCO 1381 VU is generally very simple to use, it is important to note that some default settings for this Vehicle Unit can be specified by the vehicle manufacturer. As a result, there may be slight differences in the way it operates from vehicle-to-vehicle. Notably:

- Some vehicle manufacturers are specifying that the DTCO 1381 will automatically default to **'Break'** after the ignition has been switched off for a period of time.
- The printout menu may default either to **'yes'** or **'no'** when first accessed, depending on the manufacturer's specification.

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# 2    Using the DTCO 1381

## 2.1    Menu Buttons

Before attempting to use this type of VU, the vehicle ignition **must** be switched on.
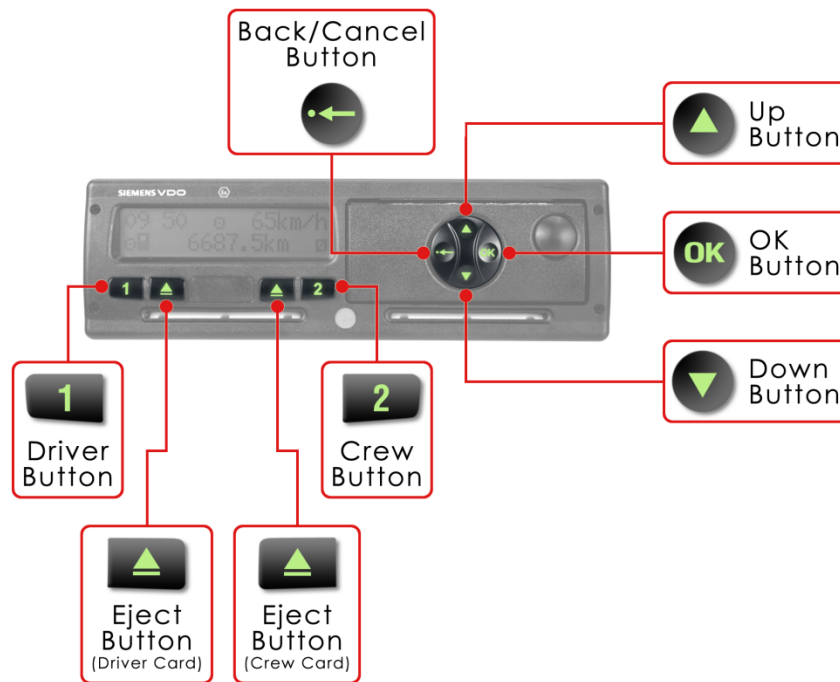


Below the main display are the Driver button (**'1'**) and the Crew button (**'2'**), which are used to select the appropriate activity mode for the driver or crew member. Adjacent to each of these is an **'Eject'** button for the relevant slot. If a Driver Card is inserted in either the driver or crew slot, the associated button is only active when the ignition is switched on and the vehicle is stationary.

This type of VU has a unique and distinctive 'toggle switch' housed in the front of the print roll cassette to the right of the display screen. This is used to navigate the menus and make the appropriate choices. This toggle switch has four functions:

- **Up Button**
- **Down Button**
  Press to:
  - o   Scroll up or down through the main menu and sub-menu options as appropriate.

- **OK Button** (Also referred to as the 'Enter' button)
  Press to:
  - o   Access the main menu of the VU.
  - o   Choose selected menu options.
  - o   Confirm a selected action.

- **Back/Cancel Button**
  Press to:
  - o   Exit the main menu.
  - o   Return from a sub-menu to the next higher level of menu.
  - o   Exit from a selected action without change.

## 2.2    Card Insertion
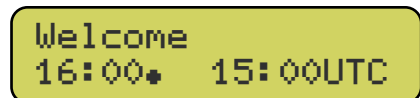
As with all types of VU, the DTCO 1381 uses small electric motors to drive the card mechanisms and the printer. This means that to function fully, you must ensure that the vehicle ignition is switched on. The engine does not need to be running.

The driver of the vehicle must always ensure that they insert their Driver Card into **'slot 1'** and use the Driver button (**'1'**) to make any required mode changes.

If the vehicle is to be operated by two drivers during any duty period, the second driver is known as the 'crew member'. The crew member is a driver who is not physically driving the vehicle, but who is assigned to drive at some other time during the duty period. If you are acting as the crew member, you must insert your driver card into **'slot 2'** and use the Crew button (**'2'**) to make any necessary mode changes.

Card insertion with this type of VU is very straightforward. Simply slide your Driver Card gently into the relevant slot (**'slot 1'** on the left for the driver, **slot '2'** on the right for the crew member), ensuring that the 'chip' is facing upwards and towards the front of the tray (i.e. away from you). The VU will automatically draw the card fully in to the slot.

The VU will then display 'Welcome' and two times: UTC time and local time (even if they are the same) for approximately 3 seconds.
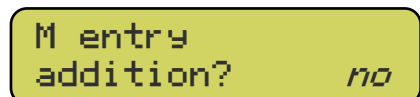
```
Welcome
16:00.   15:00UTC
```

Next, your last name (as stored on the card) will be displayed and a progress indicator will show that the data on the card is being read. Once the VU has read your card, it will display the date and time that you last withdrew your Driver Card from a VU.

## 2.3    'Signing On'

Once your card has been successfully inserted into the VU and the initial read is complete, you will be asked whether you need to make any manual entries for activities undertaken prior to insertion of your card.

```
M entry
addition?      no
```

*Either:*

> **No Manual Entries to be Added to the Record**
> If you have not carried out any work activities since last using your Driver Card, you do not need to add any manual entries at this time. Ensure that '*no*' is displayed on the screen, using the **'Up'** (▲) or **'Down'** (▼) button on the toggle switch if required and then press the **'OK'** button on the toggle switch to confirm this selection.

*Or:*
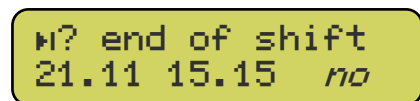
> **Enter Activities Manually**
> If you have carried out work activities since last using your Driver Card, you can manually enter additional data at this time. The DTCO 1381 only allows you to enter manual activities carried out between the previous withdrawal of your card from a VU and the time that you inserted your card into the DTCO 1381.

As such, you may manually enter additional activities covering the end of your previous duty period, activities covering the beginning of the current duty period or activities within the current duty period (i.e. working time between operating one vehicle and another during the current duty period).

To make a manual entry, you should ensure that '**ЧЕ5**' is displayed on the screen, using the **'Up'** (▲) or **'Down'** (▼) button on the toggle switch if required and then press the **'OK'** button on the toggle switch to confirm this selection.

The VU will then display the last time the driver card was withdrawn and ask you whether this is the end of your shift.
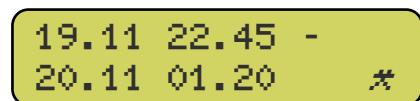
```
н? end of shift
21.11 15.15   no
```

If you need to add manual entries, press the **'Up'** or **'Down'** button until '**no**' is displayed, then press the **'OK'** button.

Two sets of the same date and time will then be displayed, one above the other. You should then use the **'Up'** button to alter the time shown at the bottom of the display, until the correct time for the end of the period of work you need to enter is shown. If the required end time is inadvertently passed, you can use the **'Down'** button to correct this.

Once the correct end time is shown, press the **'OK'** button.

The VU display will then show an activity mode. You should select the correct activity mode for the added time period by pressing the **'Up'** or **'Down'** button until the required activity mode pictogram is shown.

```
19.11 22.45  -
20.11 01.20   *
```

Once the correct activity is selected, press the **'OK'** button.

Finally, you will be asked to confirm the location that your last duty period ended. Again, use the **'Up'** and **'Down'** buttons as required to and then press the **'OK'** button to confirm your choice.

When you have completed the manual entry procedure, the VU will prompt for confirmation of the start location for your new period of duty. Use the **'Up'** and **'Down'** buttons as required to select the correct country and press the **'OK'** button to confirm your choice.

At this point, the VU will process and store any data for manual activities that you have entered and will write a copy of this data to your Driver Card. While the VU is processing and storing the data, a ▮ symbol will be displayed next to the activity mode pictogram in the lower left hand corner of the display. Once the VU has completed the required processing for the beginning of the duty period, this will be replaced by the driver card symbol, ▯.

You may now begin carrying out your day's duties.

If you have signed on as the driver (i.e. you have placed your Driver Card in **'slot 1'**), the VU will automatically default to the 'Other Work' (crossed hammers, ⚒) activity mode whenever the vehicle is stationary and the 'Driving' (steering wheel, ⚙) activity mode whenever the vehicle is in motion. Activity modes can be changed only when the vehicle is stationary. To change the activity being carried out by the driver, repeatedly press the **'1'** button until the required pictogram is shown at the bottom left hand side of the VU screen.

If you have signed on as the crew member (i.e. you have placed your Driver Card in **'slot 2'**), the VU will automatically default to the 'Availability' (box, ▣) activity mode and will revert to this mode automatically whenever the vehicle is in motion, irrespective of its previous mode. Activity modes can be changed only when the vehicle is stationary. To change the activity being carried out by the crew member, repeatedly press the **'2'** button until the required pictogram is shown at the bottom right hand side of the VU screen.

## 2.4    Screen Displays

A standard display will normally be shown on the VU screen. This differs slightly dependent on whether or not the vehicle is in motion. In addition, the DTCO 1381 can display various types of useful information throughout the duty period.

For full details of the different displays available, consult the VU user manual, which should be kept with the vehicle documentation.

## 2.5    Card Withdrawal

You **must** withdraw your card from the VU if the vehicle is to be driven by another driver or if you have to drive in another vehicle. When your Driver Card is withdrawn from a VU, a record of the card ejection is stored in the VU and on the Driver Card.

A card may be ejected from the VU at any time, provided that the vehicle is stationary and the VU is showing one of the main driving displays or the main menu.

To withdraw your Driver Card from the VU, proceed as follows:

1. Press and hold the **'Eject'** (▲) button adjacent to the **'1'** button. The display screen will then show your name.
2. You will then be prompted to confirm the location where your duty period is finishing. Make the appropriate selection using the **'Up'** and **'Down'** buttons and press the **'OK'** button to confirm your choice.
3. The VU will then ask you if you wish to take a 24-hour printout for your Driver Card by displaying '24h▣▼ day' and asking you to select 'yes' or 'no' in the normal way. Note: Some DTCO 1381 VU's default to 'yes' at this stage and some default to 'no' so, to avoid making unnecessary printouts, it is important you check what is displayed before proceeding.

The same procedure should be followed to eject your card if you are acting as a crew member, but in this case, the **'Eject'** button adjacent to the **'2'** button should be pressed to eject your card.

Please be aware that the ejection of a smartcard can take some time because the VU needs to copy data onto the card relating to the activities you have undertaken. Once all the data is written, your Driver Card will be ejected.

Once your Driver Card has been successfully ejected, the vehicle ignition may be switched off.

## 2.6   Taking Driver and Vehicle Printouts from the VU

It's vitally important that you know how to take printouts from a VU.

If your Driver Card develops a fault, is lost or is stolen, you **must** take a printout from the vehicle record at the start of every duty period and another at the end of every duty period. **Failure to do so could lead to prosecution of both the driver and the operator. Printouts produced by the DTCO 1381 Digital Tachograph Vehicle Unit ALWAYS show UTC time.**

A printout from the vehicle can be taken whether or not there is a Driver Card inserted in the VU. Even if a vehicle is driven with no Driver Card inserted in the VU, the VU will still hold a record of all activities carried out by the vehicle. In such a situation, the activities will be recorded and allocated to an 'unknown driver'.

Printouts can only be made if the vehicle ignition is switched on.

The VU data can be printed as follows:

1.  Ensure that the VU is in the standard display mode, then press the **'OK'** button to enter the main menu:
    Whenever the **'OK'** button is pressed from the main menu, the DTCO 1381 VU always goes directly the option **'printout driver 1'**. This will print the data held on the card in **'slot 1'**.
    If a printout of the data held on the card in **'slot 2'** (the current Crew Member) is required, the 'Down' button should be pressed until **'printout driver 2'** is displayed.
    If a printout of the data held in the VU is required, (for example if you have to carry out your duties without using your personal Driver Card because it is faulty or has been lost or stolen), the **'Down'** button should be pressed until **'printout vehicle'** is displayed.
    Once the required option is displayed, press the **'OK'** button;
2.  The VU will now offer a selection of valid printouts. The default is to make a 24-hour printout for a specific day. Press the **'Down'** button until the required report type is displayed and press **'OK'** to continue;
3.  If appropriate, the VU will now ask for confirmation of the date for which to print the data. Select the required date using the **'Up'** and **'Down'** buttons as required, then press **'OK'** to start the printout.
4.  Once the printout process is complete, the VU should always be returned to the standard display mode: Press the **'Return'** button repeatedly until **'exit main menu?'** is displayed and then press the **'OK'** button.

## 2.7    Changing the Print Roll

Changing the print roll in the DTCO 1381 is very straightforward.

The print cassette is located to the right hand side of the VU. To replace the print roll, first ensure that the vehicle ignition is switched on, then press the cassette drawer switch situated to the right and near the top of the drawer face. The drawer will then open automatically. <span style="color:red">Do not force the drawer or try to withdraw it completely from the VU as it is an integral part of the VU and is not removable.</span>

With the drawer fully open, place the replacement print roll into the cassette, ensuring that the loose end of the print roll is to the top and a small piece of it is hanging over the top front edge of the drawer.

Gently press the cassette drawer back into the VU and the VU printer is now ready for use.

## 3    Advanced Usage

Within this appendix are the basic settings required to correctly operate the DTCO 1381 Vehicle Unit for the first time. If you are to be a regular user of a vehicle fitted with this type of unit, it is strongly recommended that you read the VU user manual. This should be kept with the vehicle documentation.

# Appendix 2: User Notes for the
# ACTIA SmarTach® Digital Tachograph

This appendix relates specifically to the ACTIA SmarTach® Digital Tachograph Vehicle Unit (VU). These notes highlight the key features and methods of operation for this type of VU.

## 1      The ACTIA SmarTach® Digital Tachograph

ACTIA is one of the three manufacturers that presently provide Digital Tachograph Vehicle Units (VU) for use in both goods and passenger transport vehicles operated from within the 27 European member states. This VU is commonly referred to as the SmarTach®.

Although all the Digital Tachograph Vehicle Units that are manufactured must legally be of the same specification, the way in which the SmarTach® is operated is in many ways different to both the Stoneridge SE5000 and the Continental Automotive (previously Siemens) VDO DTCO 1381 versions.

This model of Digital Tachograph Vehicle Unit comes complete with a variety of custom options that will not be found on the other two types of VU. Many of these settings will only ever be accessed and used if the vehicle that the VU is fitted into is largely in the hands of one driver. For instance, you may set the contrast of the display screen, decide whether the reading shown on the display is in kilometres or miles, choose whether you want to be 'bleeped' when changing settings or a warning is activated, or decide whether to make printouts in local time or UTC. There is also the ability to store default settings that cut down on time spent inputting information at the start and end of each day's duty.

If you regularly operate or drive vehicles fitted with the ACTIA SmarTach® VU, it is strongly recommend that you read the ACTIA SmarTach® Tachograph User Manual, reference AC520956, available from the Actia website at
www.actiatachographs.com.

# 2    Using the ACTIA SmarTach® VU

## 2.1    Menu Buttons

Unlike the CAG (Siemens) VDO DTCO 1381 and the Stoneridge SE5000 VUs this type of VU, has a single card insertion and mode selection button for the Driver and another for the Crew Member.
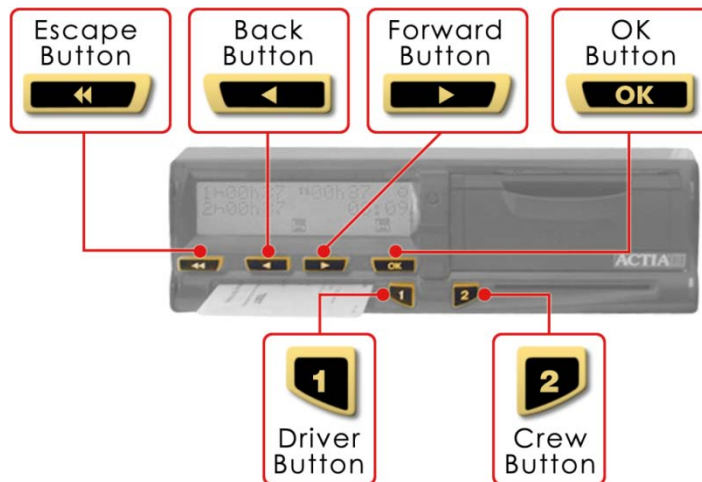


To the right of **'slot 1'** is the Driver button (**'1'**) which must be pressed and held to enable the insertion and withdrawal of the driver's card. Similarly, there is a single Crew button (**'2'**) to the left of **'slot 2'** which allows a crew member to insert or withdraw their card.

The buttons in the panel directly above **'slot 1'** are:

- **Escape Button**:
  Press to:
  - o   Exit the main menu.
  - o   Cancel the current action.

- **Back Button**:
  Press to:
  - o   Go back to the previous item or menu.
  - o   Change the value presently being entered.
  - o   Move/scroll backward within the main menu.

- **Forward Button:**
  Press to:
  - o   Choose the value to be entered.
  - o   Move/scroll forward within the main menu.

- **OK Button:**
  Press to:
  - o   Answer 'Yes' or 'OK'.
  - o   Confirm a choice.
  - o   Acknowledge warnings.

## 2.2   Card Insertion

As with all types of VU, the SmarTach® uses small electric motors to drive the card mechanisms and the printer. This means that to function fully, you must ensure that the vehicle ignition is switched on. The engine does not need to be running.

The driver of the vehicle must always ensure that they insert their Driver Card into **'slot 1'** and use the Driver button (**'1'**) to make any required mode changes.

If the vehicle is to be operated by two drivers during any duty period, the second driver is known as the 'crew member'. The crew member is a driver who is not physically driving the vehicle, but who is assigned to drive at some other time during the duty period. If you are acting as the crew member, you must insert your driver card into **'slot 2'** and use the Crew button (**'2'**) to make any necessary mode changes.

Before carrying out any work, you should insert your Driver Card into the VU as follows:

1. Hold down the Driver button or Crew button as appropriate. This will open the relevant slot, to enable card insertion.
2. When the slot is ready, the display will show ▯ ⇸ **1**, with the '**1**' flashing to indicate that it is expecting the Driver Card. If you are signing on as the crew member, the display will be the same except that '**2**' will be shown instead of '**1**'.
3. Your Driver Card must be inserted into the appropriate slot, with the chip facing up and nearest the VU. You should then slide it gently in until it reaches the stop.

The slot will close automatically when your Driver Card has been successfully inserted.

The display panel on the VU will now indicate that it is reading the card in the relevant slot by showing the symbols ╱ ╴ ╲ in rapid succession to give the impression of a rotating bar.

Once the data on your card has been successfully read, the VU screen will display your last name.

```
1: SMITH

▯        ▤        ▤
```

## 2.3 'Signing On'

Once your Driver Card has been successfully inserted into the VU and the initial read is complete, you have two alternatives:

*Either:*

### No Manual Entries to be Added to the Record

The SmarTach® VU will display the date and time that your Driver Card was last withdrawn from a VU and will ask you whether the date and time displayed was the end of your previous duty period. **'YES'** will be shown as the default option.

If you have not carried out any other duties since last using your Driver Card, simply press the **'OK'** button to confirm this.

SmarTach® will then ask you to confirm that the date shown on the display is correct and that you are starting your duty period on the date shown.

Press the **'OK'** button to confirm the date shown.

After this, the SmarTach® will ask you to confirm that the time shown on the display is correct and that you are starting your duty period at the time shown.

Press the **'OK'** button to confirm the time shown.

Next, the SmarTach® will ask you to confirm that the location shown (e.g. UK) is the correct location at which you are starting this duty period.

Note: The VU specification requires that **'Location'** defines the country where the duty period is to start, for example, **'UK'** if you are beginning your duty period in the United Kingdom.

Select as appropriate or if correctly displayed, simply press the **'OK'** button to confirm that the location shown is correct.

Once all the above has been checked and confirmed, the SmarTach® will ask you to confirm that you have correctly made all the required entries by displaying **'CONFIRM?'** on the display screen and waiting for you to once more press the **'OK'** button.

At this point, it can be assumed that the VU has successfully communicated with the Driver Card and that all the required data has been checked, recorded and copied.

Or:

### Enter Activities Manually

If you have carried out work activities since last using your Driver Card, you can manually enter additional data at this time. The SmarTach® only allows you to enter manual activities carried out between the previous withdrawal of your card from a VU and the time that you inserted your card into the SmarTach®.

As such, you may manually enter additional activities covering the end of your previous duty period, activities covering the beginning of the current duty period or activities within the current duty period (i.e. working time between operating one vehicle and another during the current duty period).

Full and detailed instructions on how to manually enter additional activity data is available in the ACTIA SmarTach® Tachograph User Manual, reference AC520956, available from the Actia website at www.actiatachographs.com.

You may now begin carrying out your day's duties.

If you have signed on as the driver (i.e. you have placed your Driver Card in **'slot 1'**), the VU will automatically default to the 'Other Work' (crossed hammers, �) activity mode whenever the vehicle is stationary and the 'Driving' (steering wheel, ☺) activity mode whenever the vehicle is in motion. Activity modes can be changed only when the vehicle is stationary. To change the activity being carried out by the driver, repeatedly press the **'1'** button until the required pictogram is shown at the bottom and just to the left of centre on the VU screen.

If you have signed on as the crew member (i.e. you have placed your Driver Card in **'slot 2'**), the VU will automatically default to the 'Availability' (box, ▣) activity mode and will revert to this mode automatically whenever the vehicle is in motion, irrespective of its previous mode. Activity modes can be changed only when the vehicle is stationary. To change the activity being carried out by the crew member, repeatedly press the **'2'** button until the required pictogram is shown at the bottom right hand side of the VU screen.

## 2.4   Screen Displays

A standard display will normally be shown on the VU screen. This will differ slightly dependent on whether or not the vehicle is in motion. In addition, the SmarTach® can display various types of useful information throughout the duty period.

There are 8 different data displays available to view as and when required. For details of the displays available, you should read the ACTIA Tachograph User Manual, reference AC520956, which may be downloaded from the Actia website at www.actiatachographs.com.

## 2.5    Card Withdrawal

You **must** withdraw your card from the VU if the vehicle is to be driven by another driver or if you have to drive in another vehicle. When your Driver Card is withdrawn from a VU, a record of the card ejection is stored in the VU and on the Driver Card.

A card may be ejected from the VU at any time, provided that the vehicle is stationary and the VU is showing one of the main driving displays or the main menu.

To withdraw your Driver Card from the VU, proceed as follows:

1. Hold down the Driver button (**'1'**). The display screen on the VU will display the number '**1**' and your last name
2. You will then be prompted to confirm your Driver Card withdrawal request - Press the **'OK'** button to confirm.
3. You will now be asked to confirm the location where the duty period is finishing. Select as appropriate or if correctly displayed, simply press the **'OK'** Button to confirm.

The same procedure should be followed to eject the card for a crew member, but in this case the Crew button (**'2'**) should be pressed to eject the card.

Please be aware that the ejection of a smartcard can take some time because the VU needs to copy data onto the card relating to the activities you have undertaken. Once all the data is written, your Driver Card will be ejected.

Once the card has been successfully ejected, the slot may remain open for up to 3 minutes. Do not try to close the slot manually or press buttons unnecessarily during this period.

The SmarTach® VU automatically goes into standby mode when the vehicle ignition is switched off, however, unlike the CAG (Siemens) VDO DTCO 1381 and the Stoneridge SE5000 VUs , it is possible to change the activity mode on the SmarTach® VU when the ignition is switched off.

## 2.6    Taking Driver and Vehicle Printouts from the VU

It's vitally important that you know how to take printouts from a VU.

If your Driver Card develops a fault, is lost or is stolen, you **must** take a printout from the vehicle record at the start of every duty period and another at the end of every duty period. **Failure to do so could lead to prosecution of both the driver and the operator. This type of printout must be produced showing UTC time.**

> **DON'T FORGET: Printouts from the ACTIA SmarTach® give you the added option of choosing whether to print off in local time or UTC time.**
>
> **BUT REMEMBER: Printouts requested by the authorities MUST be produced and made available in UTC time.**

A printout from the vehicle can be taken whether or not there is a Driver Card inserted in the VU. Even if a vehicle is driven with no Driver Card inserted in the VU, the VU will still hold a record of all activities carried out by the vehicle. In such a situation, the activities will be recorded and allocated to an 'unknown driver'.

Printouts can only be made if the vehicle ignition is switched on.

The VU data can be printed as follows:

1. Press the **'OK'** button to enter the main menu.
2. Press the **'Forward'** button as many times as necessary to find 'settings'.
3. Press the **'OK'** button when 'settings' is shown on the display screen.
4. Press the **'Forward'** button as many times as required to find 'PRINT REPORT'.
5. Press the **'OK'** button when 'PRINT REPORT' is visible on the display screen.
6. Press the 'Forward' button to select the required report. For a vehicle report, press **'OK'** when !✕◫▼ is displayed on the VU screen. For a driver report press **'OK'** when !✕◼▼ is displayed. The selected report will then be printed.

## 2.7    Changing the Print Roll

Changing the print roll in an ACTIA SmarTach® VU is fairly straightforward. The print cassette is located to the right hand side of the VU. To access the print roll cassette, you need to gently pull open the cassette drawer by putting your finger in the ridge at the top of the front of the drawer and pulling down the front cover.

The cover will drop down on a hinge and a red piece of plastic will then be visible. Pull the red plastic out to the front of the cassette drawer and place a new print roll onto it. Push the front of the plastic back into the cassette drawer with the print roll on top of it, then lift up and close the cassette front. Ensure that the loose end of the print roll is drawn out over the top of the cassette drawer front when it has been latched back into place. The VU printer is now ready for use.

# 3 SmarTach® Specific Options

## 3.1 Driver Activity Reminders

The SmarTach® has an optional activity reminder that issues an alert to remind you to check the settings on the VU when the vehicle is switched on or off. In addition, the SmarTach® allows you to select default activities that can be automatically activated by the VU every time the vehicle ignition is switched off. This can reduce your workload at the end of each daily duty period.

## 3.2 Warning Alarms

Another innovative idea that has been programmed into the SmarTach® VU is an independent visible warning light on the front of the VU and the option to set warning 'beeps'.

### 3.2.1 Warning Light

The warning light flashes to warn that:

- The VU has detected a warnable event or a fault.
- The driver or crew member has requested an action that is not possible at this time.
- The manual entry of activities has not been completed.

### 3.2.2 Warning 'beep'

When the warning light flashes on the front of the VU, a 'beep' may sound. The warning 'beep' sounds several times when:

- A warning has been triggered.
- No key is pressed for more than 30 seconds during manual entry of activities.

### 3.2.3 Keyboard 'beep'

A keyboard 'beep' can be set on or off through the main menu so that any selections or settings made will be audibly confirmed by a 'beep' when the button is pressesd.

- One 'beep' for a positive answer.
- Two consecutive 'beeps' for a negative answer.

## 3.3 Printout Options

Another unique feature of the SmarTach® VU is the option it provides to print data from the mass memory in either local time or UTC time. Care must be taken to ensure that UTC time is **always** used when taking printouts that may be required by or submitted to the enforcement authorities.

# 4    Advanced Usage

The ACTIA SmarTach® has a vast menu of additional settings and options over and above the standard settings legally required to comply with the European specification.

Within this appendix are just the basic settings and operations required to correctly operate the ACTIA SmarTach® VU for the first time. If you are to be a regular user of a vehicle equipped with this type of VU, it is strongly recommended that you familiarise yourself with the ACTIA Tachograph User Manual, reference AC520956, which may be downloaded from the Actia website at www.actiatachographs.com.

# Appendix 3: User Notes for the Stoneridge SE5000 Digital Tachograph

This appendix relates specifically to the Stoneridge SE5000 Digital Tachograph Vehicle Unit (VU). These notes highlight the key features and methods of operation for this type of VU.

## 1    The Stoneridge SE5000 Digital Tachograph Vehicle Unit

This model of Digital Tachograph vehicle unit is generally to be found in Scania vehicles.

At the time of writing there is speculation that DAF are considering the fitment of the Stoneridge SE5000 into their vehicles in the future, whereas Scania have recently agreed to give customers the option of having a Continental Automotive Group VDO DTCO 1381 fitted in place of the Stoneridge SE5000.

The settings and methods of input used by the SE5000 are also substantially different from those found when using an ACTIA SmarTach® VU, although the SE5000 does share some of the characteristics of the Continental Automotive Group (formerly Siemens) VDO DTCO 1381.

There are three very significant differences in operation of the SE5000 Vehicle Unit when compared to the SmarTach® and the DTCO 1381 Vehicle Units:

1. When inserting a Driver Card into the Vehicle Unit, you do **not** insert your card into a slot on the front of the VU as you would with the DTCO1381 and SmarTach® Vehicle Units. Instead, the SE5000 has a smartcard drawer which must first be ejected. Your Driver Card then has to be placed on the drawer and the drawer has to be pushed back into the VU before any processing can begin.
   **Important Note:** The smartcard drawers on the SE5000 VU are **not** designed to support weight when in the open position.
2. The loading procedure for the print roll is significantly more involved than that for either the DTCO 1381 of the SmarTach® units and unlike the other two types of unit, the printer feeds the paper from underneath the printer cover.
3. The third major difference will only be apparent to operators, when they download data from the vehicle unit. Rather than having a simple connector for the download tool on the front of the VU, the SE5000 requires the operator to remove the print roll cassette. This reveals a 5-pin plug to which the download tool may be connected.

If you regularly operate or drive vehicles fitted with the Stoneridge SE5000 VU, it is strongly recommend that you read the SE5000 Tachograph User Manual (part number 6800-900), available from the Stoneridge website at www.stoneridge-electronics.info.

# 2    Using the SE5000

## 2.1    Menu Buttons
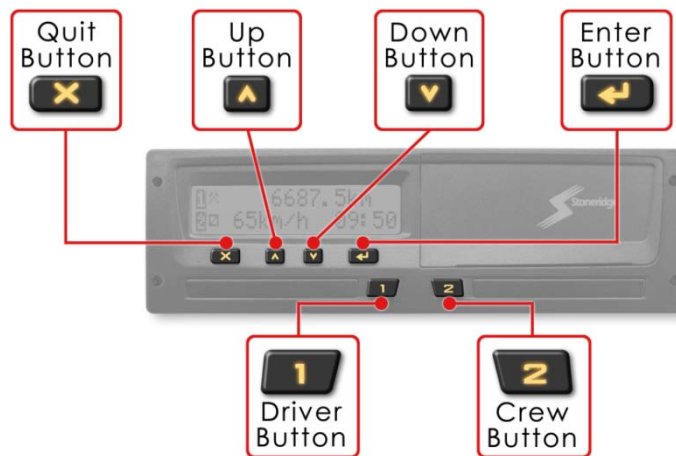


To the right of **'slot 1'** there is a single Driver button (**'1'**) and to the left of **'slot 2'** is the Crew button (**'2'**). When pressed **briefly**, these buttons are used to select the appropriate activity mode for the driver or crew member, as appropriate. Activity mode changes may only be made when the vehicle is stationary.

If the Driver button (**'1'**) or Crew button (**'2'**) is pressed and held, it will initiate the card insertion or ejection sequence as appropriate. These buttons are not active when the electrical supply to the VU is interrupted, so if it is not possible to restore the power, it will be necessary to send the vehicle to a Tachograph Workshop to have the card released.

The buttons in the panel directly above **'slot 1'** are:

- **Quit Button**:
  Press to:
    o  Cancel processes.
    o  Return to the previous display.

- **Up Button**:
  Press to:
    o  Increase values.
    o  Select options.

- **Down Button:**
  Press to:
    o  Decrease values.
    o  Select options.

- **Enter Button:**
  Press to:
    o  Confirm entries.
    o  Acknowledge messages.
    o  Acknowledge warnings.

## 2.2   Card Insertion

As with all types of VU, the SE5000 uses small electric motors to drive the card mechanisms and the printer. This means that to function fully, you must ensure that the vehicle ignition is switched on. The engine does not need to be running.

The driver of the vehicle must always ensure that they insert their Driver Card into **'slot 1'** and use the Driver button (**'1'**) to make any required mode changes.

If the vehicle is to be operated by two drivers during any duty period, the second driver is known as the 'crew member'. The crew member is a driver who is not physically driving the vehicle, but who is assigned to drive at some other time during the duty period. If you are acting as the crew member, you must insert your driver card into **'slot 2'** and use the Crew button (**'2'**) to make any necessary mode changes.

Before carrying out any work, you should insert your Driver Card into the VU as follows:

1. Press and hold the Driver button (**'1'**) until the ejection process for the tray in **'slot 1'** starts.
2. When the tray is ejected place the driver card onto the tray, with the chip facing upwards and nearest the VU.
3. Push the tray gently and firmly back into the VU.

The display panel on the VU will then indicate that it is reading your Driver Card. Be patient as this initial download process may take several minutes.

```
1       Busy
      processing    ⌛
```
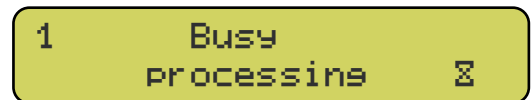
Once the data on your card has been successfully read, the VU screen will display your name as held on your Driver Card.

## 2.3   'Signing On'

Once your card has been successfully inserted into the VU and the initial read is complete, you will be asked whether this insertion is the continuation of your duty period.

```
►?►Cont. day.?      ✓
16:22 22.11.2008    ✗
```
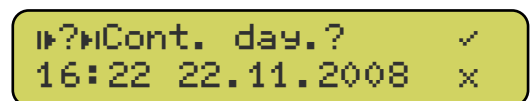
At this point, you have two alternatives:

*Either:*

> **No Manual Entries to be Added to the Record**
> If you have not carried out any work activities since last using your Driver Card, you do not need to add any manual entries at this time. Simply press the **'Quit'** button.
>
> You will then be asked to confirm the start location in the European Community for your current period of duty. Use **'Up'** or **'Down'** buttons as required and once the correct location is displayed, press the **'Enter'** button to confirm your choice.

Or:

**Enter Activities Manually**

If you have carried out work activities since last using your Driver Card, you can manually enter additional data at this time. The SE5000 only allows you to enter manual activities carried out between the previous withdrawal of your card from a VU and the time that you inserted your card into the SE5000.

As such, you may manually enter additional activities covering the end of your previous duty period, activities covering the beginning of the current duty period or activities within the current duty period (i.e. working time between operating one vehicle and another during the current duty period).

The SE5000 only allows the input of up to 16 manual entries in each 24-hour period.

If the current duty period is a continuation of your working day, use the **'Up'** or **'Down'** button to ensure that the tick (✓) is highlighted in the display. If you have activities to add relating to your previous working day, ensure that the cross (✗) is highlighted. Once you have made the appropriate selection, press the **'Enter'** button to continue.

You will then be prompted to the dates and times of any additional activities that you have carried out. Use the **'Up'** and **'Down'** buttons to make the appropriate selections, and use the 'Enter' button to confirm your entries at each stage.

Full and detailed instructions on how to manually enter additional activity data is available in the SE5000 Tachograph User Manual (part number 6800-900), available from the Stoneridge website at www.stoneridge-electronics.info.

You may now begin carrying out your day's duties.

If you have signed on as the driver (i.e. you have placed your Driver Card in **'slot 1'**), the VU will automatically default to the 'Other Work' (crossed hammers, ✶) activity mode whenever the vehicle is stationary and the 'Driving' (steering wheel, ⊙) activity mode whenever the vehicle is in motion. Activity modes can be changed only when the vehicle is stationary. To change the activity being carried out by the driver, repeatedly press the **'1'** button until the required pictogram is shown to the right of the ▯ symbol at the left hand side of the upper row of the display.

If you have signed on as the crew member (i.e. you have placed your Driver Card in **'slot 2'**), the VU will automatically default to the 'Availability' (box, ▣) activity mode and will revert to this mode automatically whenever the vehicle is in motion, irrespective of its previous mode. Activity modes can be changed only when the vehicle is stationary. To change the activity being carried out by the crew member, repeatedly press the **'2'** button until the required pictogram is shown to the right of the ▯ symbol at the left hand side of the lower row of the display.

## 2.4    Screen Displays

A standard display will normally be shown on the VU screen. This differs slightly dependent on whether or not the vehicle is in motion. In addition, The SE5000 can display various types of useful information throughout the duty period.

For full details of the different displays available, consult the SE5000 Tachograph User Manual (part number 6800-900), available from the Stoneridge website at www.stoneridge-electronics.info.

## 2.5    Card Withdrawal

You **must** withdraw your card from the VU if the vehicle is to be driven by another driver or if you have to drive in another vehicle. When your Driver Card is withdrawn from a VU, a record of the card ejection is stored in the VU and on the Driver Card.

A card may be ejected from the VU at any time, provided that the vehicle is stationary and the VU is showing one of the main driving displays or the main menu.

To withdraw your Driver Card from the VU, proceed as follows:

1.  Press and hold the Driver button ('**1**') until the ejection sequence starts.
2.  You will now be asked to confirm the location where the duty period is finishing. Select as appropriate or if correctly displayed, simply press the **'Enter'** Button to confirm.
3.  Once the card tray has been successfully ejected, you will need release your Driver Card from the tray. There is an opening in the tray to allow you to push your card upwards from underneath.

The same procedure should be followed to eject the card for a crew member, but in this case, the Crew button ('**2**') should be pressed to eject the card.

Please be aware that the ejection of a smartcard can take some time because the VU needs to copy data onto the card relating to the activities you have undertaken. Once all the data is written, your Driver Card will be ejected.

Once you have removed your Driver Card, you should always slide the card tray back into the VU before switching the vehicle ignition off.

The Stoneridge SE5000 VU automatically goes into standby mode approximately 10 seconds after the vehicle ignition is switched off.

## 2.6 Taking Driver and Vehicle Printouts from the VU

It's vitally important that you know how to take printouts from a VU.

If your Driver Card develops a fault, is lost or is stolen, you **must** take a printout from the vehicle record at the start of every duty period and another at the end of every duty period. **Failure to do so could lead to prosecution of both the driver and the operator. Printouts produced by the DTCO 1381 Digital Tachograph Vehicle Unit ALWAYS show UTC time.**

A printout from the vehicle can be taken whether or not there is a Driver Card inserted in the VU. Even if a vehicle is driven with no Driver Card inserted in the VU, the VU will still hold a record of all activities carried out by the vehicle. In such a situation, the activities will be recorded and allocated to an 'unknown driver'.

Printouts can only be made if the vehicle ignition is switched on.

The VU data can be printed as follows:

1. Press the **'Enter'** button to go to the main menu.
2. Press the **'Up' or 'Down'** button until the 'Print Menu' screen is shown.
3. Press the **'Enter'** again to enter the print sub-menu, and use the **'Up'** or **'Down'** button to scroll through the list of available printouts until the required option is displayed.
4. Press the **'Enter'** button again to start the printout.

Once a printout has been started, it can only be stopped by pressing and holding the **'Quit'** button. A warning message will then be displayed to acknowledge that printing has been cancelled. If there is a problem with the printer, an appropriate warning message will be displayed.

Full details of the various printouts available from the SE5000 can be found in the SE5000 Tachograph User Manual (part number 6800-900), available from the Stoneridge website at www.stoneridge-electronics.info.

## 2.7 Changing the Print Roll

Unlike the DTCO 1381 and SmarTach® VUs, the SE5000 has a paper cassette that must be completely withdrawn from the VU to allow loading of a new print roll. Great care needs to be taken when loading a print roll to ensure that it is loaded correctly and that the cassette mechanism is not damaged.

To remove the cassette mechanism, first press the upper edge of the printer cover on the right hand side of the VU.

The panel hinges out from the top, allowing the cassette mechanism to be removed by pulling firmly but gently on the lower edge of the panel.

The paper roll should now be inserted into the top of the cassette, and the free end of the paper should be fed around the rear of the cassette, over the roller and then underneath the cassette mechanism, towards the front of the panel.

---

**IMPORTANT:**

**If, at any stage, undue resistance is felt or the paper becomes torn of damaged, remove the cassette and check that the print roll is correctly inserted. Do NOT force the cassette home as this can cause severe damage to the VU.**

---

Once loaded, the cassette should be slid carefully back onto the rails of the back into the VU  by pressing on the centre of the panel until it engages and ensuring that loose end of the print roll remains protruding from underneath the cassette drawer. The VU printer is now ready for use.

## 3    Advanced Usage

Within this appendix are just the basic settings and operations required to correctly operate the Stoneridge SE5000 VU for the first time. If you are to be a regular user of a vehicle fitted with this type of VU, it is strongly recommended that you familiarise yourself with the SE5000 Tachograph User Manual (part number 6800-900), available from the Stoneridge website at www.stoneridge-electronics.info.

# Appendix 4: Digital Tachograph Display Symbols

## 1    Basic Display Symbols

| **People** | **Actions** | **Modes of Operation** |
|---|---|---|
| Company | | Company Mode |
| Controller | Control | Control Mode |
| Driver | Driving | Operational Mode |
| Workshop/Test Station | Inspection/Calibration | Calibration Mode |
| Manufacturer | | |

| **Activities** | **Duration** |
|---|---|
| Available | Current Availability Period |
| Driving | Continuous Driving Time |
| Rest | Current Rest Period |
| Work | Current Work Period |
| Break | Cumulative Break Time |
| Unknown | |

| **Equipment** | **Functions** | **Equipment** | **Functions** |
|---|---|---|---|
| 1 Driver Slot | | 2 Co-Driver Slot | |
| Card | | Clock | |
| Display | Displaying | External Storage | Downloading |
| Power Supply | | Printer/Printout | Printing |
| Sensor | | Tyre Size | |
| Vehicle/Vehicle Unit | | | |

### Specific Conditions

OUT    Out of Scope

Ferry/Train Crossing

### Miscellaneous

| | | | | | |
|---|---|---|---|---|---|
| ! | Events | ✕ | Faults | | Menu |
| | Start of Daily Work Period | | End of Daily Work Period | ✳ | Settings |
| | Location | M | Manual Entry of Driver Activities | Σ | Busy |
| | Security | > | Speed | | Contrast |
| | Time | Σ | Total/Summary | | Invert |
| | Eject | | Lock | | Enter |
| | Case Opened | P | Paper | | Activation |
| ↑° | High Temperature | ↓° | Low Temperature | ↕° | High or Low Temperature |

### Qualifiers

| | | | |
|---|---|---|---|
| 24h | Events | I | Weekly |
| II | Two Weeks | + | From or To |

# 2    Display Symbol Combinations

#### Miscellaneous

| | | | |
|---|---|---|---|
| ▯● | Control Place | ◲+ | From Vehicle |
| ●ⅠⅠ► | Location Start of Daily Work Period | ►Ⅰ● | Location End of Daily Work Period |
| ◷+ | From Time | +◷ | To Time |
| OUT ++ | Out of Scope Begin | +OUT | Out of Scope End |

#### Cards

| | | | |
|---|---|---|---|
| ◷▣ | Driver Card | ◲▣ | Company Card |
| ▯▣ | Control Card | T▣ | Workshop Card |
| ▣- - - | No Card | | |

#### Driving

| | | | |
|---|---|---|---|
| ◷Ⅰ | Driving Time for One Week | ◷Ⅱ | Driving Time for Two Weeks |

#### Printouts

| | | | |
|---|---|---|---|
| 24h▣▼ | Driver Activities from Card Daily Printout | 24h◲▼ | Driver Activities from VU Daily Printout |
| !×▣▼ | Events and Faults from Card Printout | !×◲▼ | Events and Faults from VU Printout |
| T◷▼ | Technical Data Printout | >>▼ | Over Speeding Printout |

#### Manual Entries

| | | | |
|---|---|---|---|
| ►►?►Ⅰ | Still Same Daily Work Period? | ►Ⅰ? | End of Previous Work Period? |
| ●ⅠⅠ►? | Enter Location of Start of Work Period | ►Ⅰ●? | Confirm or Enter Location of End of Work Period |

# Appendix 5: Digital Tachograph Events and Warnings

## 1    General Events Warning Messages

| Message Description | Warning Message | Warning Reference Number | Reason for Occurring and Required Action to be Taken |
|---|---|---|---|
| Insertion of a Non-Valid Card | !▣ Insertion of a non-valid card | 0x01 | The card may be faulty, out of date or the wrong type. Eject the card and check as described below |
| Card Conflict | !▣▣ Card Conflict | 0x02 | This will occur either if Workshop and Driver Cards <u>or</u> any combination of Workshop, Control or Company Cards is inserted in slots 1 and 2 at the same time. Eject one of the cards to stop the card conflict. |
| Time Overlap (Note: 2 displayed for slot 2) | !⊚⊚1 Card 1 time overlap | 0x03 | The smartcard just inserted has a last card withdrawal time that is later than the Current VU UTC time. Check Current VU UTC time is correct. Adjust VU UTC time if necessary. If VU UTC time more that 20 minutes inaccurate, the VU system must be sent to a Tachograph Workshop for recalibration. |
| Driving without an appropriate Card | !⊚▣ Driving w/o valid card | 0x04 | The vehicle is in motion and there is no valid Driver or Workshop Card inserted in the driver smartcard drawer. Stop driving and insert a valid Driver Card in the VU. |
| Card Insertion While Driving | !▣⊚ Card ins. While driving | 0x05 | A card has been inserted whilst the vehicle is in motion. If card is valid continue driving. |
| Last Card Session Not Correctly Closed (Note: 2 displayed for slot 2) | !▣A1 Last sess. Not closed OK | 0x06 | The card was removed erroneously from the last VU in which it was inserted or the previous withdrawal of the card was not terminated correctly by the VU. Eject the card and check as described in note1 below. |
| Over Speeding | >> Over Speeding | 0x07 | The vehicle has travelled faster than the set over-speed limit for 1 minute and the event will be stored. The vehicle speed must not increase above the speed limiter setting. |
| Power Supply Interruption | !✦ Power supply interruption | 0x08 | The VU supply voltage has dropped below the minimum limit or above maximum limit for the correct operation of the VU. If the reason for the warning message is unknown (note: the message will be displayed if the battery is disconnected to enable welding to be carried out for example), then the vehicle must be returned to a Tachograph Workshop fro VU investigation. |
| Motion Data Error | !Ⲗ Sensor data error | 0x09 | The data from the vehicle motion sensor is erroneous. The vehicle must be returned to a Tachograph Workshop for VU investigation. |

## 2    Recording Equipment Faults Warning Message

| Message Description | Warning Message | Warning Reference Number | Reason for Occurring and Required Action to be Taken |
|---|---|---|---|
| VU Internal error | ×Ａ VU internal error | 0x31 | The VU has detected an internal fault during self-test. The vehicle **must** be returned to a Tachograph Workshop for VU investigation. |
| Printer Fault | ×▼ Printer fault | 0x32 | The VU has detected an internal fault during the printer test. Check printer operation. Check paper cassette and printer and replace if necessary. If the printer still fails the vehicle **must** be returned to a Tachograph Workshop for VU investigation. |
| Time Overlap (Note: 2 displayed for slot 2) | ×▢ Display fault | 0x33 | The VU has detected an internal fault with the display. If the display is unreadable the vehicle **must** be returned to a Tachograph Workshop for VU investigation. |

# 3 Standard Digital Tachograph Vehicle Unit Warnings

| Message Description | Warning Message | Warning Reference Number | Reason for Occurring and Required Action to be Taken |
|---|---|---|---|
| Quarter Left reminder | >4'½h? Quarter left reminder | 0x81 | The Driver has 15 minutes of driving time left until they reach 4.5 hours of continuous driving time. |
| Time for Break reminder | >4'½h? Time for break reminder | 0x82 | The Driver must complete their 45–minute cumulative break following 4.5 hours of continuous driving. |
| Unable to Open Slot 1 (note: 2 displayed for slot 2) | ×1∠× Unable to open slot | 0x83 | The appropriate smartcard slot will not open. Check Drawer operation. If Drawer will not eject the vehicle must be returned to a Tachograph Workshop for VU investigation. |
| Printing Cancelled | ▼×▼ Printing cancelled | 0x85 | The current printout has been cancelled. |
| Printing Stopped-No Paper | ▼₧× Printer out of paper | 0x86 | The current printout has stopped because there is no paper left. Replace paper. If printer will not work the vehicle must be returned to a Tachograph workshop for VU investigation. |
| Printer Stopped- Low Power | ▼↓‡ Printer low power | 0x87 | The current printout has stopped because the input VU voltage has dropped below the minimum allowed. Check vehicle battery voltage if OK take vehicle to Tachograph Workshop for VU Investigation. |
| Printing stopped- Low Temperature | ▼↓° Printer low temperature | 0x88 | The current printout has stopped because the ambient temperature has dropped below the minimum allowed value for the printer. The vehicle cab ambient temperature must increase to allow the printer to work. |
| Printing Stopped-High Temperature | ▼↑° Printer high temperature | 0x89 | The current printout has stopped because the ambient temperature has risen above the maximum allowed value for the printer. The vehicle cab ambient temperature must decrease to allow the printer to work. |
| Printing stopped – High or Low Temperature | ▼‡!° ° Printer high temperature | 0x8A | The current printout has stopped because the printer temperature is outside the range of allowed temperatures. Wait until the printer temperature is within allowable range and try to print again. |
| Card Withdrawn without proper saving (Note:2 displayed for slot 2) | !₧→×1Card eject without saving | 0x8B | The card was removed after a failure to write data to the card. Check card and replace with a new card if necessary. |
| Wanted Function Not Possible to perform | Fn× Function not possible | 0x8C | The last function request was not possible. |
| Over Speeding – Pre Warning | >>? Overspeeding pre-warning | 0x8D | The vehicle is travelling faster than the set over-speed limit (Note: 1 minute continuous overspeeding will result in an overspeed event being stored). The vehicle speed must not increase above the speed limiter setting. |
| Timeout – Card insertion of withdrawal Passivity | ₧→⊚ Timeout No key pressed | 0x8E | A user has tried to insert (or withdraw) a smartcard and has not answered the required questions within the allowance time limits. |
| Driving Cannot Open Slot | ⊚₧/₨× Driving can't open slot | 0x8F | A user has attempted to open a smartcard drawer whilst the vehicle is in motion. A smartcard may not be accessed whilst a vehicle is moving. |
| Pairing | ▼→Д... Sensor pairing | 0x90 | The Motion Sensor and VU are in the process of pairing - message only relevant to Tachograph Workshops. |
| Pairing Complete | ▼→Д...✓ Pairing complete | 0x91 | The Motion Sensor–VU pairing process has been completed successfully – message only relevant to Tachograph Workshops. |
| Pairing Failed | ▼→Д...× Pairing failed | 0x92 | The Motion Sensor –VU pairing process has failed - message only relevant to Tachograph Workshops. |
| Lock-in Complete | ſ→✓ Lock-in complete | 0x93 | VU Company Data Lock-In has been successful. |
| Lock – Out Complete | →ſ✓ Lock-out complete | 0x94 | VU Company Data Lock-Out has been successful |
| Inserted Valid Card Expired (note: 2 Displayed for slot 2) | ⊚₧1 Card expired | 0x96 | The inserted card is valid, but has now expired. Eject card and replace with valid card. |
| Activation | ₿ Activation | 0x97 | The VU is being activated for use – message only relevant to Tachograph Workshops. |
| Activation Complete | ₿✓ Activation complete | 0x98 | The VU activation process has been completed successfully – message only relevant to Tachograph Workshops. |
| Please wait ejecting Slot 1 (Note: 2 displayed for slot 2) | Ejecting Card 1 | 0xEC | A request has been made to reject a card – the message will be displayed until the VU is ready to eject the card. |
| No Driver or Workshop card inserted | !⊚/₸₧ No driver/ workshop card | 0xED | The user has tried to interface with a card and there is no Driver or Workshop Card present in either drawer. Insert a valid card as required. |
| Enter PIN | 1 PIN? | 0XEE | Used to inform the user to enter a pin code to activate a VU or to enter the VU Calibration Mode - A message only relevant to Tachograph Workshops. |
| Memory Full | M.....! Memory full! | 0XEF | The maximum number of manual duty entries has been reached. |
| More than 24 hours since last card withdrawn | >24h ₧→last card withdrawal >24h | 0XF0 | The card just inserted was last withdrawn from a VU more than 24 hours ago. |
| Downloading Busy | ₸₨ Downloading busy | 0XF1 | The VU is downloading data. Wait for the download procedure to complete. |
| Downloading incomplete | ₸×₸ Download failed | 0XF2 | The VU Download process has failed. Check external download equipment and connections. If a VU is the cause of repeated download failures the vehicle must be returned to a Tachograph workshop for VU investigation. |
| Downloading Complete | ₸✓₸ Download completed | 0XF3 | The VU download process has been completed successfully. |

# Appendix 6: The Traffic Commisioner's Guidelines for Dealing with Driving Offences Committed by Vocational Drivers

If you hold vocational categories on your driving licence to drive commercial vehicles, buses and coaches, you are liable to have action taken against you by the Traffic Commissioner if you commit **any** driving offences, whether in your private car or while employed as a commercial vehicle driver.

Although the courts initially deal with such offences as speeding, dangerous driving, drink-driving etc., the Traffic Commissioner can decide to take additional action over and above the court decision if it is felt that a vocational driver should be dealt with in a harsher way. The Traffic Commissioner has unlimited powers to take action against vocational drivers and Goods Vehicle Operators.

The Senior Traffic Commissioner has published guidelines on action to be taken with regard to various driving offences. Here is a brief summary of the guidance:

| Offence | Action |
|---|---|
| Defective Speed Limiter (not reported) | One-month suspension |
| Interference with Speed Limiter | Suspension of driving licence for 2-4 months / revocation or disqualification of driver. |
| Use of device to disable the speed limiter | Revocation or disqualification of 6-12 months. |
| Tachograph offence | Employers may treat this as a case for dismissal. Courts may decide upon a prison sentence. |
| Failure to keep a suitable record of drivers' hours | From a formal warning to a one-month suspension of vocational driver. |
| Deliberate falsification of drivers' hours records | Suspension / revocation / disqualification dependent on scale or degree:<br>• One-month suspension per offence for up to three offences.<br>• Revocation or disqualification for up to six months for up to five offences.<br>• Revocation or disqualification for up to 12 months for six or more offences. |
| Use of any device to interfere with tachograph equipment | Revocation or disqualification of driving licence for 12 months. |
| Drivers' Hours offences (isolated or infrequent) | Formal warning. |
| Drivers' Hours offences (persistent or habitual) | Minimum of four weeks' suspension to be increased according to the number of offences. |

| Offence | Action |
|---|---|
| Breach of Traffic Commissioner's orders (driving under suspension / disqualification / revocation) | Revocation and disqualification for an indefinite period will be considered. |
| Penalty-point endorsements (new applicants and renewals) | The Traffic Commissioner will decide how long a driver will have to wait to reapply if disqualified. This depends on the nature of the endorsement or conviction. Offenders under the New Drivers Act will have their application refused/delayed but be given a chance to appeal to the Traffic Commissioner directly. |
| Drink-driving (new applicants and renewals) | An application following a first disqualification for 12 months or less will normally be granted. A first disqualification for more than 12 months, but less than three years, will result in a refusal/delay with the right to a formal hearing. For a second and subsequent disqualification, the Traffic Commissioner will review matters individually. |

**NOTE:** The Traffic Commissioner has the authority to require a vocational driver to take a re-test if an LGV or PCV has not been driven for five years or longer.

## Graduated Fixed Penalties issued at the roadside

Since April 2009 VOSA examiners have been able to issue fixed penalty notices to drivers of heavy goods vehicles from both the UK and abroad, in addition to immobilising vehicles where offences under driving hours rules are detected.

The level of fixed penalty ranges from £60.00 to £200.00. Drivers' hours offences will be subject to graduated fixed penalties, which are dependent upon the seriousness and circumstances of the offence. The penalties that may be imposed are set out in the Fixed Penalty (Amendment) Order 2009 (S.I. 2009/488, which amends the Fixed Penalty Order 2000).

# Appendix 7: The New Drivers' Hours Regulations – A Brief Update

The recognised European Drivers' Hours Rules, (EC) Regulation 3820/85, were replaced in May 2006 by (EC) Regulation 561/2006.

## 1 Basics Driving Times and Breaks Remain the Same

The basic limits to driving are unchanged; although it should be remembered that all driving, whether on road or what was previously seen as 'off road', now counts towards the daily and weekly driving limits. Only journeys that take place from start to finish entirely off road can be recorded as 'out-of-scope'. For instance, if a load is picked up in one area of a distribution depot or quarry and is transported to another part of the same distribution depot or quarry and no part of the movement of the vehicle takes place on the public highway, then that period of movement can be recorded and calculated as 'Other Work' / 'out-of-scope' rather than driving. Any journey that involves movement on the public highway, however brief, must be recorded and calculated as 'driving'.

The maximum continuous or accumulated driving period is still 4½ hours, after which a 45-minute break must be taken. **This break can no longer be split into 3 X 15 minutes sections.** From 11th April 2007, if the 45 minute break requirement is to be spilt up the first period of break must now be <u>at least</u> 15 minutes and the second period must be <u>at least</u> 30 minutes, in that order. Breaks must also be distributed throughout the driving period. The only other alternative is to take the whole 45 minutes once 4½ hours driving has been completed.

The daily driving limit is still 9 hours, which may be extended, twice in a week (a week runs from 00:00 Monday to 24:00 Sunday), to no more than 10 hours. A new weekly limit of 56 hours has been introduced. The fortnightly limit of 90 hours' driving remains unchanged.

## 2 Daily Rest Periods

Daily rest remains unchanged at 11 hours within the 24-hour period from the end of the previous rest period. A driver may reduce their daily rest to no less than 9 consecutive hours, up to 3 times between weekly rest periods. 'Compensation' is no longer required for this 'reduced daily rest', although compensation for reduced 'weekly rest' is still required – see below.

If working a 'split shift', drivers must have 1 period of at least 3 hours of rest followed by an additional 9 hour rest period within the 24-hour cycle. Where a vehicle is double manned, the daily rest requirement is now 9 hours in 30 hours. An additional point to note with crewed vehicles is that during the first hour, the presence of the second driver is optional. After that first hour it is mandatory for both drivers' to be present in the vehicle throughout the whole period.

## 3 Weekly Rest Periods

After no more than 6 X 24 - hour periods – following the end of the last weekly rest period – a new regular weekly rest period must be started. A regular weekly rest period is at least 45 hours. **It may be reduced to no less than 24 hours – a reduced weekly rest period.** If a reduced rest is taken one week, the next weekly rest period <u>must</u> be at least 45 hours.

Additionally, any reduction in weekly rest from 45 hours down to at least 24 hours must be compensated by taking an equivalent amount of rest 'en bloc' by the end of the third week following the week of reduction. This compensation can be taken added on to either a daily or weekly rest period.

## 4 Keeping Records Correctly

**All drivers, irrespective of what type of recording equipment they are using, shall make available, on request at the roadside by authorised inspecting officers, records sheets for the current day and those completed in the previous 28 calendar days**.

NOTE: *This isn't the previous 28 <u>working</u> days, it is records for the previous 28 '<u>calendar days</u>'*

**Records of drivers' hours,** including analogue charts and printouts from digital tachograph vehicle units, **must be kept** by operators for at least twelve months, **in chronological order\***, and made easily available for inspecting officers.

\*Article 26 requires that records and printouts are kept in chronological order. In the case of a damaged Driver Card the regulation requires the driver to print out the details of the vehicle at the start of the journey and enter the details to enable the driver to be identified and signature; at the end of the journey print out the information relating to the period of time recorded by the equipment and again enter details that will identify the driver and signature.

All drivers, irrespective of what type of recording equipment they are using, must record '**Other Work'** under: ⌗ \*

**'Availability'** must be recorded under: ▨ to ensure compliance with the Road Transport (WTD) Regulations 2005.

\*Article 26 stipulates that 'Other Work', including work for another employer within or outside the sector, is recorded under the first symbol shown above and that 'Availability' is now recorded under the second symbol.

# 5    EC Drivers' Hours – Since 11ᵗʰ April 2007

| | |
|---|---|
| **Daily Driving** | **The daily driving time shall not normally exceed 9 hours**, although the daily driving limit may be extended to at most 10 hours, not more than twice during the week.<br><br>Increases to 10 hours daily driving no longer require any compensatory daily rest to be taken. |
| **Weekly Driving** | **The weekly driving time shall not exceed 56 hours** and shall not result in the maximum weekly driving time laid down in the Road Transport Directive 2002/15/EC being exceeded.<br><br>Previously (before 11.04.07) no weekly driving limit was specified as part of EU drivers' hours legislation. |
| **Fortnightly Driving** | **Maximum 90 hours** in any two consecutive weeks.<br><br>Previously (before 11.04.07) maximum 90 hours in any fortnight - just a wording change. |
| **Breaks from Driving** | **45 minutes break** in or immediately following 4½ hours driving – can be broken down into an initial minimum period of **at least 15 minutes, followed by at least a 30 minute break** period, in that order.<br><br>Previously (before 11.04.07) could be broken down into 3 minimum periods of 15 minutes. Not any more. |
| **Daily Rest** | **11 hours daily rest**, may be replaced by a reduced daily rest of it is at least 9 hours – a reduced daily rest may be taken up to 3 times between any two weekly rest periods – no compensation required.<br><br>Previously (before 11.04.07) compensation for reduced daily rest was required. |
| **Weekly** | **A regular weekly rest period is at least 45 hours**, which can be reduced to a reduced weekly rest period of at least 24 hours, in alternate weeks. Any rest taken as compensation for a reduced weekly rest must be made up by the end of the 3rd week following, attached to a rest period of at least 9 hours.<br><br>Previously (before 11.04.07) 45 hours regular weekly rest could be reduced to 36 hours at base or 24 hours away from base, with compensation made up by the end of the 3rd week, added to a rest of at least 8 hours. |
| **Multi-manning** | **9 hours rest in 30 hours** permitted, with further allowance for a driver to operate the 1ˢᵗ hour solo.<br><br>Previously 8 hours rest in 30 hours for each driver, with the need for all crew members to be present with the vehicle at all times within that period. |

**THE ABOVE EC DRIVERS' HOURS HAVE BEEN LEGALLY BINDING SINCE 11ᵀᴴ APRIL 2007**

The requirement to be able to produce records for the current day and any completed in the previous 28 calendar days became a legal requirement on 1ˢᵗ January 2008.

The requirement to be able to produce a driver card if one has been issued, even if it has never been used, came into force in May 2006. Failure to do so can lead to prosecution for 'failing to produce sufficient records'.

**ALWAYS USE THE CORRECT MODE SWITCH ON THE TACHOGRAPH.**

**IT IS INCORRECT TO LEAVE A TACHOGRAPH ON THE 'BED' MODE WHEN YOU ARE CARRYING OUT OTHER DUTIES, WHATEVER TYPE OF TACHOGAPH RECORDING EQUIPMENT YOU ARE USING.**

MOST DIGITAL TACHOGRAPH VEHICLE UNITS DO NOT RECORD BREAK OR REST UNLESS YOU PHYSICALLY CHOOSE THE 'BED' MODE AND SWITCH THE MODE YOURSELF WHEN YOU STOP THE VEHICLE.

# Appendix 8:
# Useful Contacts

## 1    Tachomaster

For more information about Tachomaster, please visit our website at
www.tachomaster.co.uk or email us at feedback@tachomaster.co.uk.

## 2    Digital Tachograph Cards

Digital Tachograph cards are issued by the DVLA in Great Britain and the DVLNI in
Northern Ireland.

For more information on Digital Tachograph Cards and details on how to apply for
them, please either the VOSA Digital Tachograph site or the DVLNI website.

They may also be contacted by phone on 0870 850 1074 for the DVLA and 0845 402
4000 for the DVLNI.