



## OPTIMO<sup>2</sup>, MKIII READ & MODIFY, TSG011C

Date 29/10/2021	Initial release	By MBA
Date 22/11/2021	Rev B, update for .3961	By LAD
Date 06/09/2022	Rev C, update for 6.4	By MBA

This user guide introduces the new user interface developed in the Optimo<sup>2</sup> SW version 6.2 MKIII Application for the *Read & Modify* functionality.

This refreshed design allows quicker and easier access to the desired parameter. It allows read capability of new parameters and some will also be writeable, depending on the SE5000 version the Optimo<sup>2</sup> is connected to. Consequently, the interface may return *write errors* if you try and write a new value into an old, read-only version of the Tachograph.

The list of parameters displayed will vary based on the tachograph you are connecting to; 1B, 1C, STONERIDGE, other brands, etc. This guide is based on the **CONNEXT Rev. G**, which features the highest number of parameters. Consequently, some parameters shown here may not be available if you connect to a 7.6 for instance.

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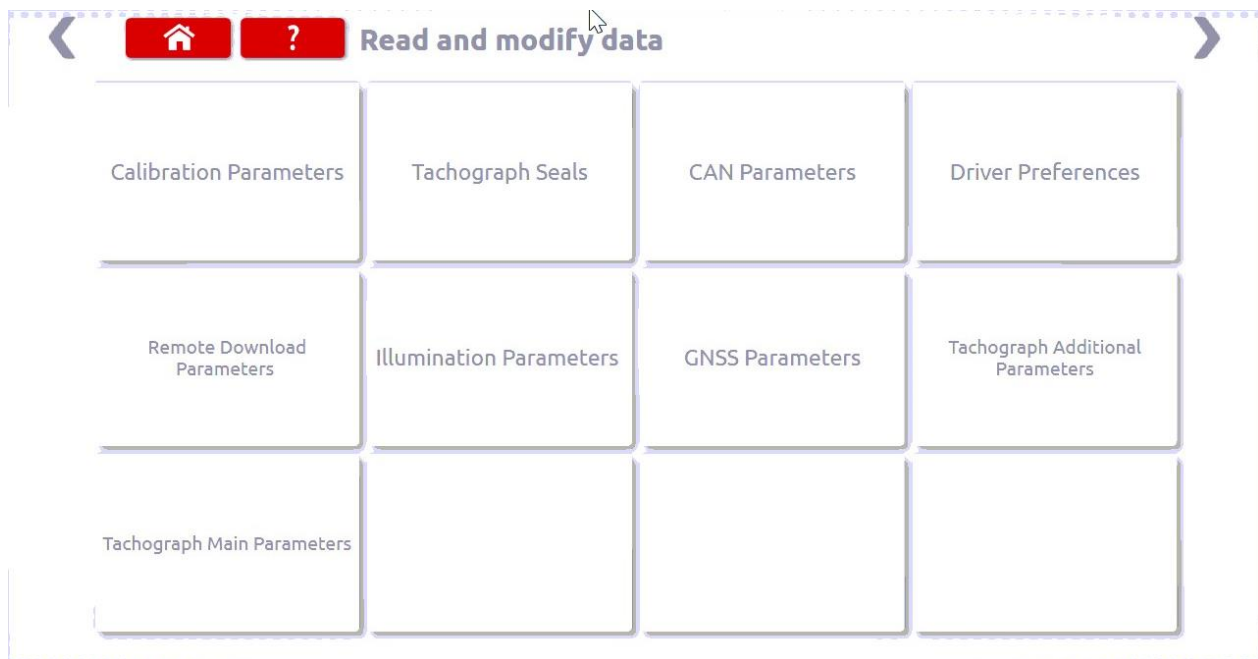
# User Guide

## 1 [New MKIII Read & Modify](#)

Upon selecting the *Read & Modify* functionality in the *MKIII Application*, you will now open a *Tile Menu* page. The first two tiles regroup all the parameters required for a bi-yearly inspection.

Loading a *Tile* will take a few seconds. This is the time required for the Optimo<sup>2</sup> to request each parameter value from the Tachograph.

Once in a *Tile*, you can navigate to the next one using the *top arrow*, or you can press the *Home button* to return to the *Tile Menu* and select another *Tile*. The *Tiles* are grouped from the most used to the least used. Again, for most day-to-day work, when performing a bi-yearly inspection, one will only use the first two *Tiles*.



We will cover each *Tile* in the subsequent paragraphs, with the following color coding:

Regular use parameters

Read-only parameters

Engineering parameters

Most users would already be familiar with the *Regular use parameters*. Do not try to change the *Read-only parameters*, or the Optimo<sup>2</sup> may return a **x00FF** error. *Engineering parameters* must be modified only on *STONERIDGE Workshop support* directions. Note: some *Engineering parameters* may return a **x00FF** error on older CONNEKT versions, because they are Read & Write only with the Rev. G tachograph.



## 2 [Calibration Parameters](#)

The scroll bar gives you access to all parameters in the *Tile*.

**CAUTION:** on the DELL Optimo<sup>2</sup>, swiping your finger on any part of the screen will also scroll. This may lead you to modify parameters unwillingly, please use the scroll bar.

Parameter	Setting	Parameters
Time	06:52	
Date	29/10/2021	
Time offset	01:00	
Odometer	2136.2	
k factor	8003	
l factor	2510	
w factor	8003	
Tyre size	254r14/25	
Next calibration date	01/01/2100	
Speed authorisation	90	
Vehicle registering nation	I	
Vehicle registration number	TEST	
VIN	12346789TEST90054	
DSRC certification identification	-----	
DSRC Serial Number	000001234503210953	
Motion sensor serial number	000000015509180768	
Installation date	21/10/2021	
Output shaft factor	10.000	

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Card Support	Gen1 & Gen2	Gen1 & Gen2	Gen2 only
Repair shop code			
Programming date	06/07/2022		
Calibration date	06/07/2022		
Calibration equipment Software number	4014		

### 3 [Tachograph Seals](#)

This *Tile* will only be accessible on 1C tachographs.

Seal Record	Seal Number	Options	
Vehicle Unit	un65432134	Keyboard entry	Delete record
Motion Sensor	UN80000207	Keyboard entry	Delete record
Unassigned	??????????	Keyboard entry	Delete record
Unassigned	??????????	Keyboard entry	Delete record
Unassigned	??????????	Keyboard entry	Delete record

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## 4 [CAN Parameters](#)

Parameter	Setting	Parameters			
TCO1 rate	20ms	20ms	50ms		
Reset heartbeat	Enable	Disable	Enable		
CAN trip reset	ISO	MAN	ISO	DAF	
A CAN	Disable	Disable		Enable	
A-CAN type	Standard	Standard	Fast	Fast Extended	VW CAN
A-CAN diagnostics	ISO	ISO	Mercedes	VW	Volvo
A-CAN termination	Enable	Disable		Enable	
C CAN	Disable	Disable		Enable	
C-CAN type	Standard	Standard	Fast	Fast Extended	
C-CAN diagnostics	ISO	ISO		Mercedes	
C2-CAN Type	Fast Extended	Standard	Fast	Fast Extended	
DSRC CAN Selection	C CAN	A CAN	C CAN	C2 CAN	
DSRC CAN Address	7E				
DSRC Parameter Group Number	0000EF00				
A CAN TCO States	Enabled IGN On	Disabled	Enabled IGN On	Enabled IGN Off	Enabled IGN On & Off
C CAN TCO States	Enabled IGN Off	Disabled	Enabled IGN On	Enabled IGN Off	Enabled IGN On & Off
A CAN TCO Events	Enabled IGN Off	Disabled	Enabled IGN On	Enabled IGN Off	Enabled IGN On & Off
C CAN TCO Events	Enabled IGN On	Disabled	Enabled IGN On	Enabled IGN Off	Enabled IGN On & Off
Confirmed driver activity	Disabled	Disabled	Enabled IGN on	Enabled IGN On and VU awake	Enabled VU awake
DDS Format	ISO	SRE		ISO	
Optional CAN Messages 3	0028				
Optional CAN Messages 4	06				
Optional CAN Messages 5	00				
EEC1 source address	3				

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Priority level of TCO1 message	3		
Priority level of tx USDT frames on C-CAN	7		
Min Time Between CFs Transmission On A-CAN	2		
Optional CAN Messages 1	MN transfer case message	Not defined	MN transfer case message

## 5 Driver Preferences

Driver Preferences				
Parameter	Setting	Parameters		
DDS	On	Off	On	
WTD	Off	Off	On	
DDS warnings configuration	On	Off	On	
DDS warnings	C39F			
Working time periods of availability	Disregard availability in working time calculations	Calculate availability as work in working time calculations	Disregard availability in working time calculations	
Working time first minimum break	45 Minutes	15 Minutes	30 Minutes	45 Minutes
Periods of availability	Calculate availability as break in all non working time related calculations	Calculate availability as break in all non working time related calculations	Disregard availability in all non working time related calculations	
Driver recognise	Vehicle motion not detected			
Tacho card slot 1	Workshop card			
Tacho card slot 2	No card			
Driver 1 Consent Status	Open Data			
Driver 2 Consent Status	Unknown			
Driver 1 preferred language	yy			
Driver 1 preferred language	yy			
Default language	en			
Centralized language	Enable	Disable	Enable	

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Activity change at key on/off	On	Off	On
S1 on	Break or rest	Break or rest	Available
S2 on	Available	Break or rest	Available
S1 off	Available	Break or rest	Available
S2 off	No change	Break or rest	Available
Time Of Change	28.10.2021	Work	No change
Pre overspeed warning time	7	Work	No change
Pre next calibration date	58	Work	No change
Next calibration warning time delay	58	Work	No change
Auto Daylight Saving	Enabled	Disabled	Enabled
Adjust local minute offset	0	ALTA	
Adjust local hour offset	1		
Out of scope	1B Interpretation	1B Interpretation	DDS interpretation
Service delay	125		
Border Crossing Driver Assistance	Enable	Disable	Enable
Lock in time	06/02/2030 00:50:40	<i>Company card details</i>	
Card type	4		
Nation numeric	17		
Owner identification number	40000000355		
Card consecutive index	0		
Card replacement index	0		
Card renewal index	0		
Generation			

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## 6 [Remote Download parameters](#)

Parameter	Setting	Parameters
Remote download activation status	Enable	
Remote download C CAN configuration	Disable	Disable Enable
Remote download A CAN configuration	Enable	Disable Enable
Remote download card writing	Disable	Always set this to <i>Disable</i>
Show remote download	Yes	Yes No
Wake up on CAN	Both	Off A CAN C CAN Both
Remote download activation code	0	
Serial data out	Enable SRE	Disable Enable SRE Enable 2400
CAN answer request	Both	No answer on CAN A CAN C CAN Both A CAN remote session C CAN remote session Both remote session
Maximum length of the remote session	120	
Tester preset timeout	60	
CAN answer request maximum	24	
Show Driver Card Download	Enable	Disable Enable
Request Card Download	0	
Enable driver card download question	Enable	Disable Enable
Enable driver card download menu	Enable	Disable Enable
Driver card download time period	20	
Tacho download time period	60	
Next driver card download warning time delay	5	
Next tachograph download warning time delay	10	



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## 7 [Illumination parameters](#)

Illumination Parameters				
Parameter	Setting	Parameters		
Illumination input	A2 only	Off	A CAN only	A2 only
Backlight select	Colour 2	No colour	Colour 1	Colour 2
Illumination offset	55			
Illumination level	99			
Military blackout lightning mode	Enable	Normal illumination		Enable
Minimum button illumination	2			
Maximum button illumination	38			
Minimum display illumination	10			
Maximum display illumination	20			
Minimum A2 PWM	40			
Maximum A2 PWM	96			
A2 reostat voltage drop	0.0			
Maximum display illumination duty cycle	72			
Maximum button illumination duty cycle	76			
Display variant	TIANMA SSD transfective			
Optional CAN Messages 2	Illumination VW	Not defined	Illumination MAN	Illumination VW



## 8 [GNSS parameters](#)

This *Tile* will only be accessible on STONERIDGE 1C tachographs.

On a CONNEKT Rev A tachograph only the first 5 parameters are available.

Parameter	Setting	Parameters
Latitude	43.5129876	
Longitude	-1.4338748	
Vehicle GNSS-Based Speed	0	
GNSS Antenna Choice	Internal	Internal External
GNSS Speed Quality Limit	5	
GDOP	99.99	<i>Dilution Of Precision</i> values can be used to identify in the truck
PDOP	99.99	An ECU interfering with the GNSS signal and creating errors 0A, 0B, or 0D.
TDOP	99.99	The <i>Tile</i> must be reloaded to refresh those values.
VDOP	99.99	The smaller the xDOP value, the better.
HDOP	99.99	
GNSS fix type	No fix	
Number of satellites	0	
GNSS clock drift	0	
Authentication status	189	
Speed	0.0	

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## 9 [Tachograph Additional parameters](#)

This *Tile* groups rarely used parameters. There are some OEM specific values which may be required for a rev. G tachograph to improve OEM Diag Tool communication.

Parameter	Setting	Parameters
Additional event recording	Enable	Disable Enable
Engine speed recording	Enable	Disable Enable
Vehicle speed recording	Enable	Disable Enable
Speed mean filter	Disable	Disable Enable
Speed mean filter parameters	Default	DAF
Number of teeth on phonic wheel	0	
Identifier version	Normal	Normal DC24
Priority level of USDT frames	8	
Quit remote command	Normal	
Printer drawer state	Open	
MS power under current limit	0.002	
MS power over current limit	0.025	
Secondary DTC Supply Under Voltage	0	
Secondary DTC Supply Over Voltage	255	
Mercedes Car Group HW Part Number		
Mercedes Truck HW Part Number	i	
Mercedes Truck SW Part Number	t	
HW Version Information	0002	
SW Version Information	0007	
HW Supplier Information	0054	
SW Supplier Information	005B	

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Subsystem Identification ID	00
Subsystem Identification Message	FC0A
ECU Supplier Number	5
ECU Production Test System Number	e
ASAM ODX File Identifier	4u
ASAM ODX File Version	t8
VW FAZIT Identification String	03.02.21
VW Supplier Number	0
VW ECU Hardware Version Number	9
VW Workshop System Name	19
VW data set number	6
VW data set version number	0
<b>VRESD Range 1</b>	<b>600.000</b>
VRESD Range 2	800.000
VRESD Range 3	1000.000
VRESD Range 4	1100.000
VRESD Range 5	1200.000
VRESD Range 6	1300.000
VRESD Range 7	1400.000
VRESD Range 8	1500.000
VRESD Range 9	1700.000
VRESD Range 10	1900.000
VRESD Range 11	2100.000
VRESD Range 12	2300.000
VRESD Range 13	2500.000
VRESD Range 14	2700.000
VRESD Range 15	3000.000

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VRVSD Range 1	10
VRVSD Range 2	20
VRVSD Range 3	30
VRVSD Range 4	40
VRVSD Range 5	50
VRVSD Range 6	60
VRVSD Range 7	70
VRVSD Range 8	75
VRVSD Range 9	80
VRVSD Range 10	85
VRVSD Range 11	90
VRVSD Range 12	100
VRVSD Range 13	110
VRVSD Range 14	120
VRVSD Range 15	150

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## 10 Tachograph Main parameters

This *Tile's* most important parameters are setting the D4/D5/D6 outputs, and the Ignition ON/OFF levels.

Parameter	Setting	Parameters		
D4 pin function	Disable	Disable	Low speed	DTC active System event
D5 pin function	Disable	Disable		Enable
D6 pin function	Off	Off	Speedometer (50%)	Speedometer (ISO)
Pin D6	ISO	ISO		Open collector
Filter on speed sensor signal pin B3	Enable	Disable		Enable
Speedometer output factor	8000			
Low speed limit	5			
Revs Input C3/CAN	CAN enable on A CAN	CAN enable on A CAN		C3 enabled
Sleep mode	Enable	Disable		Enable
Awake wait timeout	240			
Awake wait short timeout	240			
RPM factor C3	0.012			
No Ignition Warning Delay	5			
Ignition Off Level	40			
Ignition On Level	85			
ROE light	Enable	Disable		Enable
DM1 light	Disable	Disable	Enable	Continuous
Non valid card handling	Eject physically	Eject logically		Eject physically
Chassis Identification				
Diagnostic Standard	14229TC002			

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Application Software Identification	23081373P02	
Application data identification		
Active diagnostic session		DefaultSession* * ProgrammingSession n** ExtendedSession n** EndOfLineSession** on**
Vehicle manufacturer spare part number	???????	
Vehicle manufacturer ECU software number	202020202020202020	
Vehicle Manufacturer Hardware Number	TEA2 +010122075981P01SERIALNR	
System name		
System Supplier Identifier	Stoneridge	
System Supplier ECU Hardware Version Number	35R01	