User Manual

bike macs

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Chapter A, Impressum

User Manual for TOURATECH bike macs

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This document is based on software version 32 for TOURATECH bike macs.

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Chapter B, Safety Guidelines

General Safety Guidelines

All notes given in the individual chapters of the manual are in effect. On principle it is required to follow the undermentioned steps and safety guidelines.
Furthermore pay attention to all instructions made by labour inspectorates, trade associations, vehicle manufacturers as well as all laws, legal ordinances and instructions, which have to be commonly obeyed by a workshop.
the following points are merely an abridgement, which shall not restrict all other safety precautions.

Safety Guidelines for TOURATECH bike macs

In order to avoid incorrect handling and injury of the user or destruction of the device arising from this, pay attention to the following:

- Take all electrical connections with engine standing still
- Check high-voltage cables for damage (marten damage etc.)
- Protect LED display/device against solar radiation
- Protect device and connection cable against hot components
- Protect device against rotating components
- Regularly check connection cable/accessory parts for damage (danger of device destruction due to short circuit)
- Only connect the device according to operator guidance/user manual
- Protect the device against water (it is not water-proof)
- protect the device against strong impacts (do not drop)
- Only technicians authorised by Gutmann Messtechnik are allowed to open the device. Warranty will expire if the protection seal has been broken or unauthorised intervention has been done.
- In case of device troubles please inform Gutmann Messtechnik immediately.

Safety Precautions Regarding High Voltage/Mains Voltage

High voltage via vehicle and mains voltage via in-house network can cause severe injuries or even lead to death, if there is not enough attention to work. Therefore regard the following:

- Very high tensions occur in electrical facilities. Due to voltage flash-over on damaged components (marten damage etc.) or touching live components the risk of electric shock is likely.
- Use original cable sets only
- Check cables regularly for any damage
- Carry out installation work, as connecting the device or component replacement, always when ignition is turned off
- Do not touch live components when ignition is turned on

Safety Precautions Regarding Danger of Suffocation
Carbon monoxide is arising with running engine. This leads to hypoxia in blood if inhaled (danger to life!). Therefore pay attention to the following:

- Ensure sufficient aeration of workspace
- Cut in and connect exhaust extraction system when engine is running

Safety Guidelines Regarding Danger of Getting Burned
When engine is running some components are becoming very hot (considerably more than 100°C/212F). In case of touching them this leads to severe burning or damage of the device or rather connector lines. For preventing this regard the following:

- Always use safety equipment (gauntlets etc.)
- Do not run access lines near hot components

Safety Guidelines Regarding Explosion Hazard
Working on the fuel system means increased risk of fire and explosion hazard due to fuel vapour. Therefore:

- No open fire
- Do not smoke
- Ensure sufficient aeration.

Safety Precautions Regarding Danger of Injury
During working on the vehicle there is a danger of injury through rotating components or inadvertent rolling of vehicle. Therefore pay attention to following:

- Do not reach into rotating parts when engine running
- Do not run supply lines near rotating components (danger of injury through flying parts).
- Additionally turn gear selector to P on vehicles having automatic transmission
- Prevent inadvertent rolling of vehicle (hand brake, wheel chocks etc.)

Safety Precautions Regarding Noise
Some work or repairing on vehicles cause enormous noise. To prevent defects of hearing, pay attention to following:

- Protect workstation near test station against noise
- Use sound insulation equipment

Chapter C, Privacy Protection of Software
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the programme only in as far as it is necessary for using the programme.
Decompilation as well as other kinds of reverse engineering is prohibited.
Removal of copy protection is forbidden.
Data and software/programme must not be supplied to other persons.

Chapter D, Non-Liability

The information contained in the databases (in device or online) have been compiled by Gutmann Messtechnik according to vehicle- and importer data. The company thereby proceeded with high diligence to ensure correct information. Gutmann Messtechnik does not assume liability for eventually wrong conclusions and results arising from this.
The notes given in the device describe the most common fault reasons. But often there are further reasons for existing faults, which cannot be listed here, or there are further sources of error, which are unknown yet. Gutmann Messtechnik does not assume liability for failed or unnecessary repair work.
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The liability of Gutmann Messtechnik is confined to the real price paid for the product.
Gutmann Messtechnik takes no liability for damage or operating troubles arising from non-compliance of the user manual of TOURATECH bike macs and the special safety precautions mentioned there. The burden of proof is on the user of the device, that he has paid attention to technical explanations, notes on operation, equipment care as well as maintenance and safety without exception.

This non-liability does not hold, if any damage from injuries of body or health is based on deliberate or careless delinquency of Gutmann Messtechnik.

Chapter E, Structure of User Manual

Orientation within Manual
To facilitate the search for certain information, the following help can be supplied:

- The directory at the beginning of the manual gives a general view of the chapters and subchapters.
- The chapter designation can be found on every page bottom right.

Marking of text parts

ATTENTION, CAUTION, WARNING, DANGER

Pay close attention to all texts marked in with these words. They indicate a hazard for the device, environment or the user. The degree of hazard is graduated from slight to severe (see title of this box).

NOTE

Texts marked with NOTE contain important and helpful information.

Text structure
As this user manual is made for specialised technicians, the texts are written shortly and in keywords. This is to reduce reading time.
All points, which have to be carried out, are listed as enumeration. Every step is graphically replenished with the necessary key symbols as ie.:

- Main menu > Settings< ⇕ ↵
- Drop down menu in settings >Contrast< ⇕ ↵

Chapter F, Term Explanation

Fault memory:

If a component malfunction is detected while ECU carries out an internal test, a fault code is set in memory and the corresponding warning lamp is being activated.
A diagnostic device is being connected to the vehicle computer using a system cable.

After establishing communication, the fault memory is being read out.
TOURATECH bike macs displays the fault code in plain text.

Example:

3 FAULTS	
> Fault code:	**10008**
Fault code:	**10010**
Fault code:	**10034**

> CRANKSHAFT SENSOR
----
faulty signal

Parameters/Measured Values

Fault reasons are interpreted differently by the ECU. Fault codes are also not always deposited or no clear statement to the defective component through fault text is possible. In these cases it is not enough to read out fault memory only. Here a diagnosis is possible only, if the corresponding parameters are read out.

Case 1:

Engine temperature is in a range of – 30°C to + 120°C. If sensor is reporting + 9.0°C, but real engine temperature is + 80°C, then ECU will calculate a wrong injection time. No fault code is set, as the reported temperature is plausible for the ECU.

Presentation:

RPM	**1400**	**1/min**
Engine temp.	**9**	**°C**
Lambda reg.		**n. active**
Inject.	**4.6**	**ms**

The ECU cuts lambda regulation and increases injection time. This results in increased fuel consumption and the engine has a bad starting response after a longer driving time.

Case 2:

Fault text: >>faulty Lambda probe signal<<
Presentation:

RPM	**1200**	**1/min**
Engine temp.	**90**	**°C**
Lambda reg.		**n. active**
Inject.	**2.0**	**ms**

Engine temperature and RPM are correctly detected. Lambda regulation does not cut in due to defective probe heating. The system switches into limp-home mode, which causes a lack of performance and jerking during acceleration.

Chapter G, Startup

Unpacking the device

- Open the shipping carton and unpack the device and all equipment
- Check the content for completeness with the help of the enclosed piece list
- Check the device for mechanical damage; ensure that there are no loose parts within the device by very slight shaking.
  Please contact immediately the deliverer, if there should be a transport loss.

CAUTION

If there should be loose parts in the device, do not take into operation: risk of short circuit!

Chapter H, Delivery Contents

TOURATECH bike macs with BMW diagnostic cable

3-pin BMW adapter cable with connector for 12 V socket

User manual Deutsch/English

Chapter I, Front Panel

LCD, 4-line with 20 characters each

Keyboard with protective film

ESC Escape

▲ Cursor upwards

▼ Cursor downwards

▶ Cursor to the right

◀ Cursor to the left

F1 Function key

F2 Function key

F3 Function key

↵ Input/ ENTER

With F1 – F3 it is possible to start certain functions, corresponding to the prevailing programme step.

Chapter J, Settings

Vehicle Selection
Here the vehicle can be chosen, which has to be checked.

Menu point >Vehicle selection< 

C1
F 650
F 800
K 1200

>Model line< 

K 1200	S	05-
K 1200	R	05-
K 1200	GT	06-
K 1200	RS	06-

>Type< 

K	1200 GT	06-
	Fault code	
	Measured values	
>	Settings	

The selected vehicle is now saved as standard vehicle and it is displayed every time TOURATECH bike macs is started. Another vehicle as standard can be selected in menu point >Settings< -> vehicle selection.

Version

The menu point >Version< gives information required about device version.

>Version< 

Software:	**1.10.6**
Data:	**32**
Device No.:	**10x**

Return with >ESC<

Language

Here it is possible to select and indicate the languages available on the device.

Menu point >Language< 

>	**Deutsch**
	English

Desired language 

Accept language
and restart ?
ENTER (yes)
ESC (no)

Confirm your selection. TOURATECH bike macs is working with the selected language.

Contrast

Setting of the display contrast

Menu point >Contrast< 

>	**Brighter**
	Darker

Select contrast level and change with ENTER.
Return with >ESC<.

Simulation

The >Simulation < menu delivers a programme, with which the user can practice dealings with TOURATECH bike macs.
The simulation holds for >Fault Code Reading/Deleting< and >Parameter< applications.

Attention
If a vehicle is being connected, when simulation is on, no communication to the selected system will be established. The values indicated are wrong.
After restarting TOURATECH bike macs, simulation is not active any longer.

>Simulation< 

> on< or >off < 

Return with >ESC<

Simulation is switched on/off.

Chapter K, Reading/Deleting Fault Code

Attention
A correct communication to the ECU is possible only if:

- the diagnostic connector is linked to vehicle
- all pins on diagnostic socket are assigned correctly
- the vehicle is identified correctly
- voltage of vehicle electrical system is not lower 11.5 V
- all power consumers are off, in as far as possible
- ignition is on

Note
Always turn off ignition, before connecting or disconnecting diagnostic connector to vehicle! If you wish to read out several fault memories one after the other, turn off ignition after every readout process and turn on again for the next process.

Installation points of diagnostic connector with BMW

Model	Model year	Type	Installation point
C1	00 - 03	10 - pin	Behind backrest cover
F 650	99 -	10 - pin	On fan housing FR
F 800	06 -	10 - pin	Under seatbench
K 1200	-98	3 - pin	Under seatbench
	98-	10 - pin	Under saddle left above suspension strut
	05-	10 - pin	Under seatbench
R 1100	- 98	3 - pin	Under seatbench
	98-	10 - pin	Under saddle left above suspension strut
R 1150	01-	10 - pin	On air filter cap under driver's seat
R 1200	05-	10 - pin	Under seatbench
R 850	01-	10 - pin	Under driver's seat in tail end

Connecting and Reading out

1. Connect TOURATECH bike macs according to list

Connect receptacle (device's side) and connector (vehicle's side) as follows:

Turn bayonet lock on the receptacle to the left until stop.	⬅
Align receptacle and diagnostic connector according to arrows and interlock.	Receptacle (device)  Connector (vehicle)
Turn bayonet lock on the receptacle to the right until stop; connection is closed.	Receptacle (device)  Connector (vehicle)

TOURATECH bike macs is then starting with following indication:

K	**1200**	**06-**
>	**Fault code**	
	Measured values	
	Settings	

2. >Fault code< ↕↵

>	**Engine**
	ABS
	Comfort
	Suspension

3. >System Group< ↕↵

>	**Bosch BMS-K**

4. >System< ↕↵
5. Follow the instructions on the display
6. Communication is being established
7. Fault memory content is being displayed

3	**Fault**	
>	**Fault code**	**10008**
	Fault code	**12468**
	Fault code	**10034**

TOURATECH bike macs contains information about fault codes.

> Fault code< 

>	**CRANKSHAFT SENSOR**

	- faulty signal

The following information is deposited:

Component designation, fault text, possible effects and reasons of the fault

Deleting fault memory content

The fault memory content will be deleted after repairing the vehicle.

Steps:

1. Read out fault memory again
2. Press >F3<, communication is re-established and the following display will be shown after a certain time:

>	**Fault has been deleted**
	----------

3. Return with >ESC<

Chapter L, Reading measured values

1. Connect TOURATECH bike according to list

K	**1200**	**06-**
	Fault code	
>	**Measured values**	
	Settings	

2. >Measured values< 

The continuing procedure is described in chapter >**K**<.

Parameters are displayed either as numerical value or as state.

RPM	**1200**	**1/min**
Battery	**13.8**	**V**
Engine temp.	**95**	**°C**
Inject.	**2.8**	**ms**

Selecting measured values

NOTE

Those measured values are displayed, which were selected during the last communication with the system.

Reading out measured values.

RPM	1200	1/min
Battery	13.8	V
Engine temp.	95	°C
Inject.	2.8	ms

Press >F3<

>	*	1	RPM
	*	2	Battery voltage
	*	3	Engine temp.
	*	9	Injection time

The measured values marked with a >*< are activated.

Deactivating:

Either all with >F2<

or

>Measured value< 

Activating:

>Measured value< 

Communication can be re-established with >ESC<.