



Brief introduction to iOS & Android smartphone app *eMaxMobileApp*

compatible iOS devices:

iPhone 6x and newer models (with at least Bluetooth 4.2)

iPad (with at least Bluetooth 4.2)

mandatory iOS version:

higher or equal 12.0

compatible Android devices:

all models with Bluetooth Low Energy (with at least Bluetooth 4.2)

mandatory Android version:

higher or equal 5.0 (Lollipop)

supported user languages:

English & German

general functionality:

You will find the possibilities of optimizing your bike with our software-based solutions in [this document](#).

licencing:

reading electronical bike data: no licence key necessary

motor performance settings: no licence key necessary

derailleur type modification: no licence key necessary

light settings: no licence key necessary

increasing max. motor support speed (e.g. modification of destination country settings, wheel circumference or max. motor support speed): **licence key necessary**

A licence key for a bike is always valid for *eMax*, *miniMax* and *eMaxMobileApp*, so an already bought licence key can be used for *eMaxMobileApp* too.

supported STEPS8000 drive units:

DU-EP800 (motor firmware 4.0.2 – 4.1.11, **from 4.1.1 ***)

DU-E8000 / DU-E8080 (motor firmware 4.2.7 – 4.9.5, **from 4.9.0 ***)

DUE5000 & DUE5080 (motor firmware 4.2.1 – 4.4.10, modification of destination and wheel circumference only, **from 4.4.2 ***)

DUE6001, DUE6010 & DUE6050 (motor firmware 3.4.7, modification of wheel circumference only)

DUE6002 & DUE6012 (motor firmware 3.4.0, modification of destination and wheel circumference only)

DUE6100, DUE6110 & DUE6180 (motor firmware. 4.4.0 – 4.7.7, modification of destination and wheel circumference only, **from 4.6.0 ***)

DUE7000 (motor firmware 4.4.0 – 4.7.7, **from 4.6.0 ***)

DU-EP801 & DU-EP600 (motor firmware 4.0.0 – 4.2.0, **from 4.0.0 ***)

*** starting with this version any increase of motor support speed is no more possible via Bluetooth.**

However, in most cases you can (temporarily) downgrade to a previous motor firmware version (see [here](#)) and then modify your bike.

supported Shimano Bluetooth devices:

SC-EM800, SC-E8000, SC-E7000, SC-E6100 display, EW-EN100 cockpit, SW-EN600-L switch

A connection via BLE (Bluetooth Low Energy) is only possible when the bike is non – moving.

Firmware updates or downgrades are not possible with *eMaxMobileApp* => use *E-Tube-Project* – software from Shimano instead.

There is no online internet connection necessary for making modifications to the bike.

current release versions while creating this document:

iOS app version 1.71 / February 2024

Android app version 1.71 / February 2024

first impression video (version 1.00) on YouTube:

<https://www.youtube.com/watch?v=Zk4mw3Us-cg&feature=youtu.be>

download of *eMaxMobileApp*

eMaxMobileapp could be searched via exactly this name and then downloaded from the Apple AppStore or from the Google PlayStore with any compatible device.

connecting from the smartphone/tablet to the bike via Bluetooth

There are 2 ways to initiate Bluetooth communications from a STEPS8000 bike with SC-EM800, SC-E8000, SC-E7000, SC-E6100 display, EW-EN100 cockpit or SW-EN600-L:

1.

Switching “on” the bike will automatically start and indicating Bluetooth activity. This so called “advertising” phase in which a smartphone could connect to the bike via Bluetooth is active for quite some time and is still active when the display switches to the normal operating view with speed value set to “0” for some more seconds.

After that time the display will switch to an inactive Bluetooth mode and in this mode is not being able to be recognized from a smartphone.

2.

If the bike is already powered on, you can invoke the Bluetooth advertising mode again in non-moving bike mode manually via the display menu of the **SC-E8000** display. Just select “**Bluetooth LE**”, then “**Start**”. See [here](#) on pages 5-9 and 5-13 for some more information.

Whenever the bike with **SC-E8000** display is in an active Bluetooth connection mode, the display will indicate this state showing „SHIMANO STePS“.

If the bike is already powered on, you can invoke the Bluetooth advertising mode again in non-moving bike mode manually also with **SC-EM800**, **SC-E7000**, **SC-E6100** displays, **EW-EN100** cockpit or **SW-EN600-L**: Just press any electronic switch on the handlebar in non-moving bike mode, e.g. the switch for changing modes (Eco, Trail, Boost).

using Shimano’s Bluetooth *eTube* app

eTube could be used also after modifications made with *eMaxMobileApp* in the usual way.

encountering issues or problems with *eMaxMobileApp*

eMaxMobileApp now already is used worldwide from many different users on many different bikes and works very well.

Please check chapter 15 in this document if *eMaxMobileApp* is not working the way it should.

Whenever you encounter a problem or issue with the newly developed *eMaxMobileApp*, please take a screenshot of the situation with your iOS or Android smartphone or tablet and send the picture with some describing text to our mail address info@eMax-Tuning.com and we will try to help and fix the problem as soon as possible. Please also add the type of iOS or Android device you are using as well as the iOS or Android version. The more details and information you’ll send to us, the easier it will be for us to analyse the issue and the faster you’ll get solution.



legal notice

Using this software, the legally regulated speed limitation for the motor support of a bicycle with Shimano STePS drive unit can be increased.

Using this software, the official approval and homologation for road service as well as the warranty of the bicycle can be void.

A bicycle modified with this software may only be used on private property if some special settings will be modified.

No liability shall be assumed for any damage to objects and / or persons that may occur in relation to using this software.

The user of this software is knowledgeable and self-responsible!

content of document

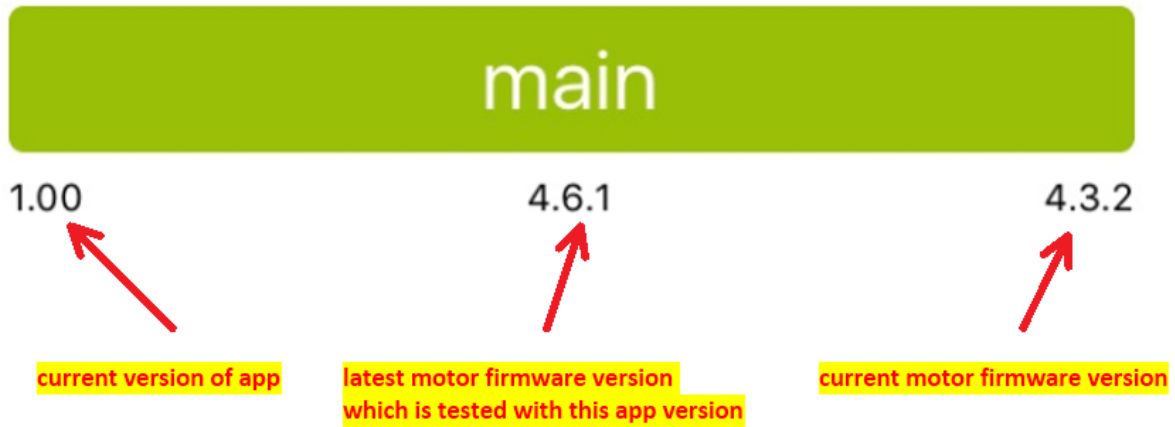
1. history of document	7
2. some help on shown graphical elements	8
2.1 <i>battery state indicator</i>	9
2.2 <i>access to program settings</i>	9
3. main view	10
3.1 <i>main view – connected to SC-E8000 display</i>	11
3.2 <i>main view – bike information reading done, no licence key entered</i>	12
3.3 <i>main view – bike information reading done, valid licence key entered</i>	13
4. about view	14
5. program settings view	15
6. additional licence keys view	16
7. bike information view	17
7.1 <i>bike information view – reading information</i>	18
7.2 <i>bike information view – firmware 4.3.2 information reading complete</i>	19
7.3 <i>bike information view – firmware 4.7.1 information reading complete</i>	20
7.4 <i>bike information view – firmware 4.1.4 information reading complete</i>	21
7.5 <i>bike information view – entering licence key</i>	22
7.6 <i>bike information view – entered licence key is valid</i>	23
8. special settings view	24
8.1 <i>special settings view – light settings view</i>	25
8.2 <i>special settings view – gear mode settings view</i>	26
9. motor performance settings view	27
9.1 <i>motor performance settings view – entering new parameter</i>	28
9.2 <i>motor performance settings view – indicating new parameter (in red)</i>	29
9.3 <i>motor performance settings view – before programming parameters</i>	30
9.4 <i>motor performance settings view – programming parameters done</i>	31
9.5 <i>motor performance settings view – “select default parameters” pressed</i>	32
9.6 <i>motor performance settings view (EP8)</i>	33
9.7 <i>motor performance settings view (EP8) – profile 1 settings</i>	34
9.8 <i>motor performance settings view (EP8) – profile 2 settings</i>	35
10. motor speed modes view - with current motor firmware 4.3.2	36
10.1 <i>motor speed modes view - with current motor firmware 4.7.0</i>	37
11. motor max. speed settings view	38
11.1 <i>motor max. speed settings view – indicating new parameter (in red)</i>	39
11.2 <i>motor max. speed settings view – while programming parameters</i>	40
11.3 <i>motor max. speed settings view – programming parameters done</i>	41
11.4 <i>motor max. speed settings view – “25 km/h (EU default)” pressed</i>	42
11.5 <i>motor max. speed settings view – “20mph [32 km/h] (US default)” pressed</i>	43
12. wheel circumference settings view	44
12.1 <i>wheel circumference settings view – indicating new parameter (in red)</i>	45
12.2 <i>wheel circumference settings view – before programming parameter</i>	46

12.3wheel circumference settings view – programming parameter done.....	47
13. destination settings view.....	48
13.1destination settings view – indicating new parameter (in red)	49
13.2destination settings view – programming parameter done.....	50
14. main view – after disconnecting bike with programmed parameters	51
14.1main view – after disconnecting bike with programmed parameters and backup message on display	52
15. the most important 17 hints for having fun with eMaxMobileApp	53
15.1Preferred sequence for successful Bluetooth connection	53
15.2Bluetooth passkey.....	53
15.3Delete existing Bluetooth coupling and forcing new Bluetooth coupling.....	53
15.4Privileges and authentication roles of eMaxMobileApp.....	54
15.5Nearby Bluetooth devices which had been coupled with bike before.....	56
15.6Bike stuck and is not reacting	56
15.7Using Bluetooth eTube App from Shimano.....	56
15.8Exiting apps running in background.....	57
15.9Exiting eMaxMobileApp.....	57
15.10 Repower bike	57
15.11 Bluetooth connection to wrong bike display.....	57
15.12 Set unique Bluetooth name for bike display.....	58
15.13 Sporadic bike resets while riding	58
15.14 Bluetooth refresh.....	58
15.15 Distance between smartphone / tablet and bike display	58
15.16 GPS activation	59
15.17 Further hints.....	59

1. history of document

version	date	author	comment
1.0	06.04.2019	RoadRunner	initial version
1.1	22.04.2019	RoadRunner	real screenshots added
1.2	23.04.2019	RoadRunner	minor corrections and modifications
1.3	28.06.2019	RoadRunner	update according to app version 1.02
1.4	05.07.2019	RoadRunner	update according to app version 1.04
1.5	10.07.2019	RoadRunner	update according to app version 1.05
1.6	06.10.2019	RoadRunner	update according to app version 1.21
2.0	09.11.2019	RoadRunner	update according to app version 1.22
2.1	22.01.2020	RoadRunner	minor corrections and updates
2.2	17.03.2020	RoadRunner	update according to app version 1.31
2.3	27.04.2020	RoadRunner	update according to app version 1.32
2.4	07.05.2020	RoadRunner	minor corrections and updates
2.5	23.05.2020	RoadRunner	update due to new firmware versions
2.6	14.07.2020	RoadRunner	update according to app version 1.34 / DUE80X0 4.8.0
2.7	23.04.2021	RoadRunner	update according to app version 1.42
2.8	13.06.2021	RoadRunner	update according to app version 1.45
2.9	31.07.2021	RoadRunner	link to general document with optimizing possibilities added
2.A	18.07.2022	RoadRunner	update according to app version 1.54
2.B	26.02.2023	RoadRunner	update according to app version 1.59
2.C	02.03.2023	RoadRunner	update according to app version 1.61
2.D	21.03.2023	RoadRunner	update according to app version 1.62
2.E	26.03.2023	RoadRunner	extended chapter 15
2.F	31.03.2023	RoadRunner	update according to app version 1.63
2.G	16.04.2023	RoadRunner	minor correction

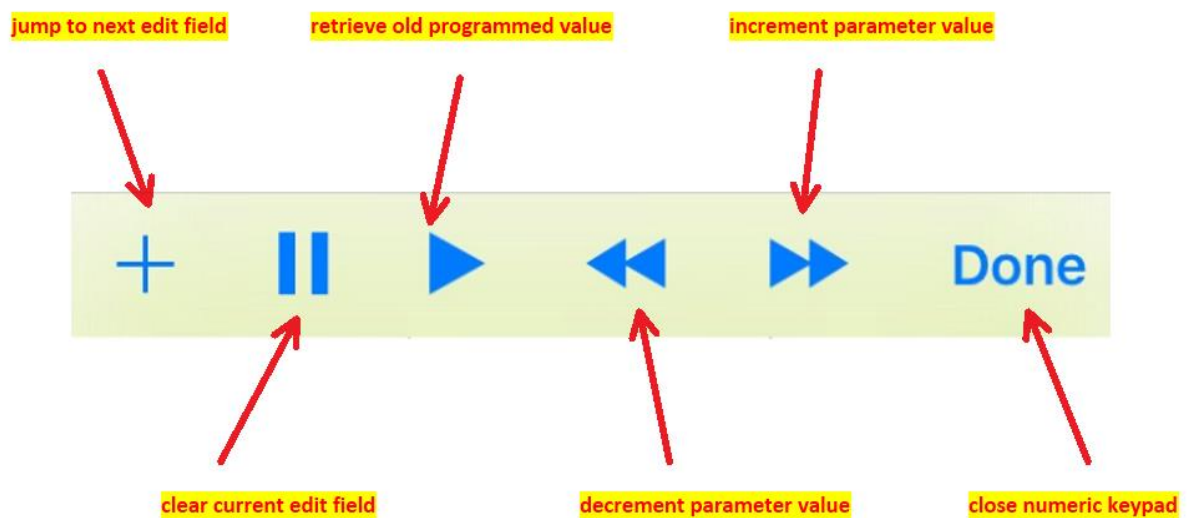
2. some help on shown graphical elements



programming to bike done successfully
- or -
valid licence key entered



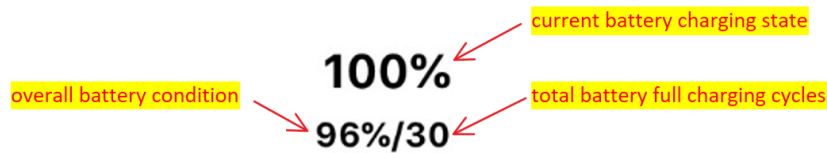
non - valid licence key entered



2.1 battery state indicator

The battery state indicator is located in the upper right corner of the “**bike information**” – view.

Depending on the used battery type (Shimano or 3rd party manufacturer) and the distributed information data, “**overall battery condition**” and / or “**total battery full charging cycles**” will be shown or not.

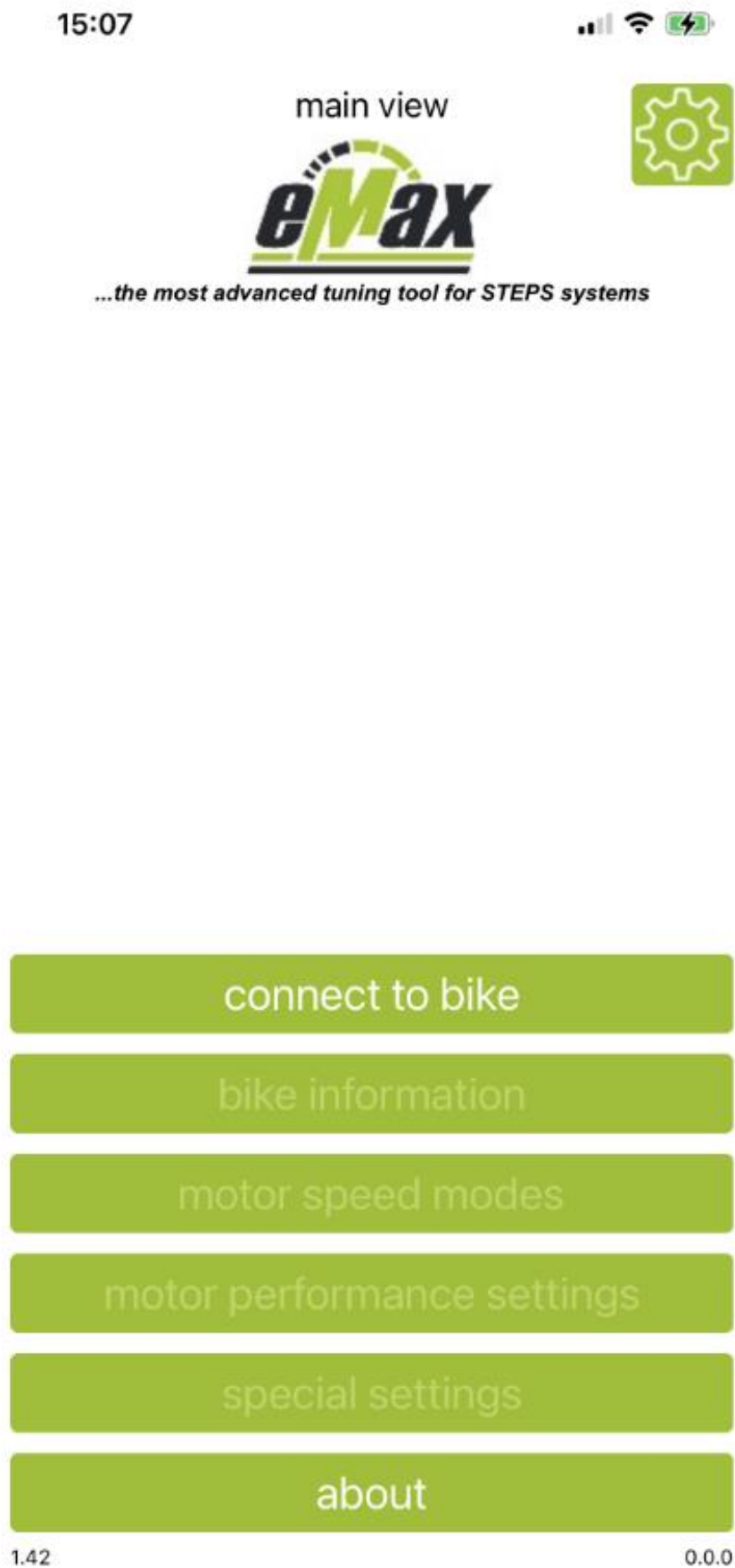


2.2 access to program settings

Touching the cogwheel symbol in “**main**” - view will give you access to the “**program settings**” - view.



3. main view



3.1 main view – connected to SC-E8000 display

o2-de 16:10 100 %

main view



...the most advanced tuning tool for STEPS8000

connected to SCE8JAM

disconnect bike

bike information

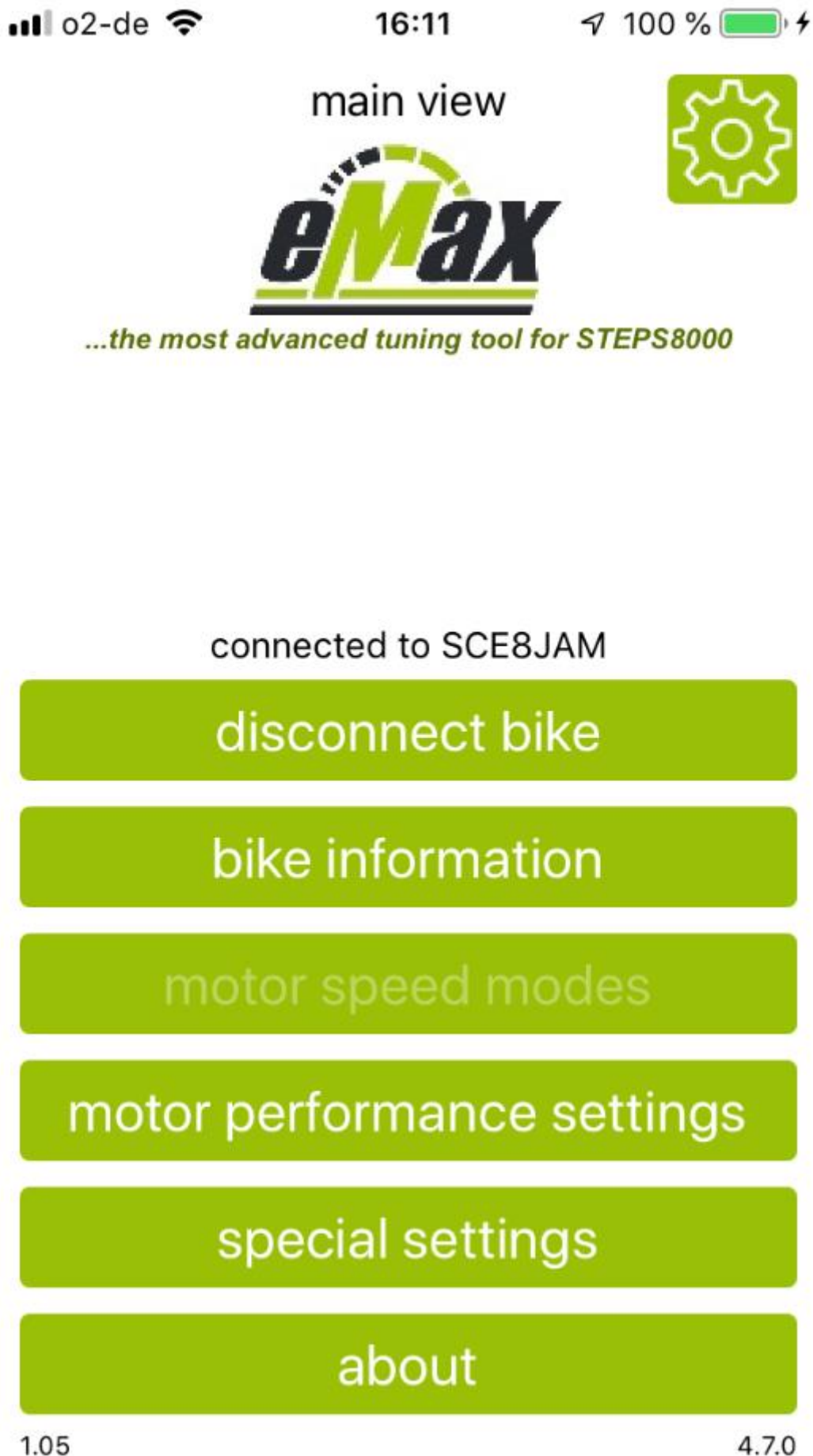
motor speed modes

motor performance settings

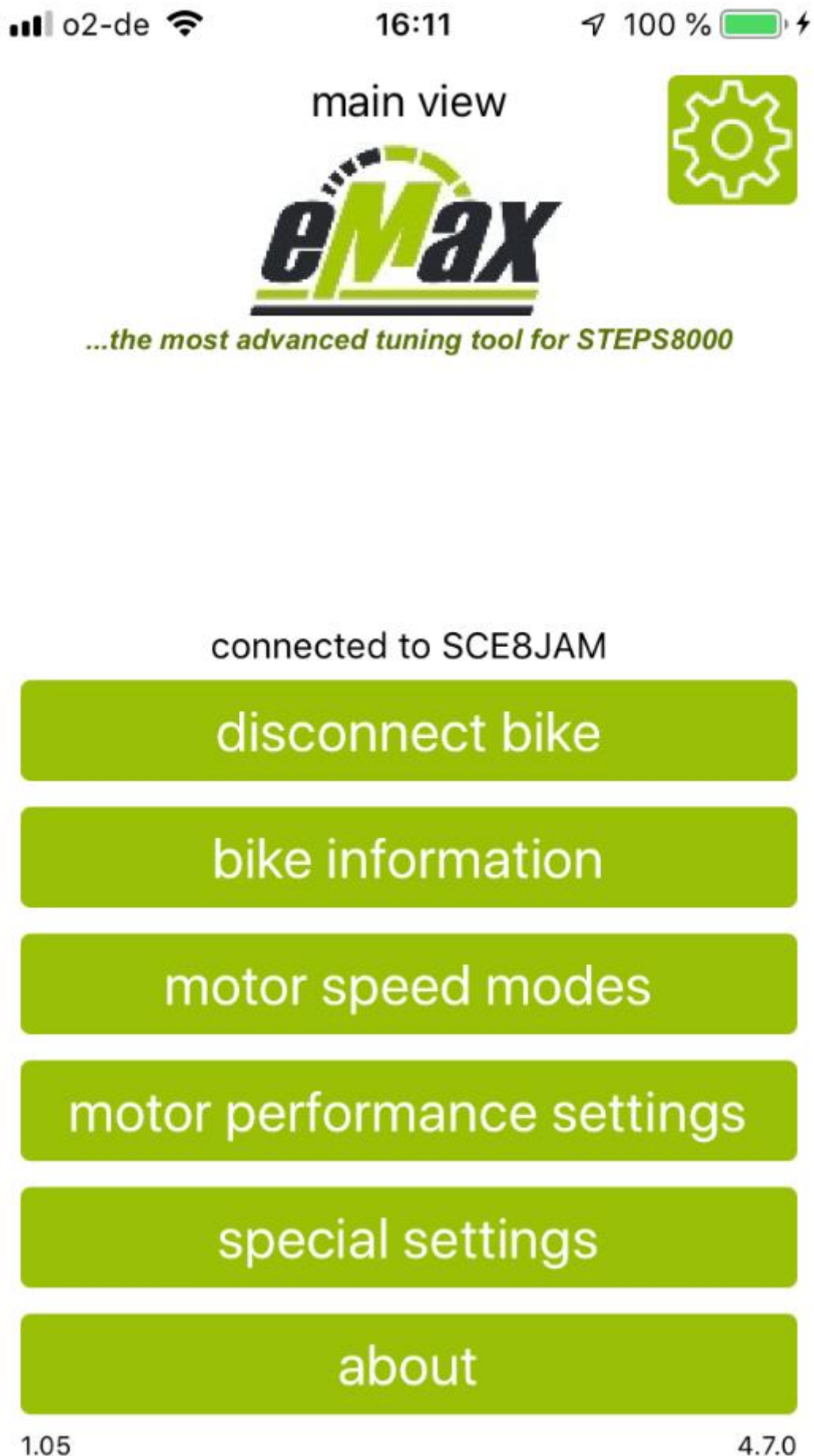
special settings

about

3.2 main view – bike information reading done, no licence key entered



3.3 main view – bike information reading done, valid licence key entered



about view

legal disclaimer

Using this software, the legally regulated speed limitation for the motor support of a bicycle with STEPS motor can be increased.
Using this software, the official approval and homologation for road service as well as the warranty of the bicycle can be void.
A bicycle modified with this software may only be used on private property if some special settings will be modified.
No liability shall be assumed for any damage to objects and / or persons that may occur in relation to using this software.
The user of this software is knowledgeable and self-responsible!



eMaxMobileApp

version 1.54

Copyright © 2022 IBHardSoft All rights reserved.

www.eMax-Tuning.com

main

5. program settings view

o2-de

16:11

100 %

program settings view

German language interface



use additional licence keys



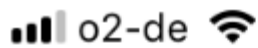
additional licence keys list

main

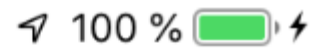
1.05

4.7.0

6. additional licence keys view



16:11



additional licence keys view

1

123456789012345678

2

224000164015201076

3

enter licence key here

4

enter licence key here

5

enter licence key here

6

enter licence key here

7

enter licence key here

8

enter licence key here

9

enter licence key here

10

enter licence key here

back

7. bike information view

o2-de

16:10

100 %

bike information view

licence key

enter licence key here

electronic serial number

00 00 00 00 00 00

get bike information

display type/name	SCE8JAM
display firmware version	0.0.0
motor firmware version	0.0.0
motor bootloader version	0.0.0.0
wheel circumference [mm]	0
gear mode	-----
front wheel size	0
smallest rear wheel size	0
destination	-----

back

1.05

4.7.0

0.0.0

o2-de

16:10

100 %

bike information view

licence key

enter licence key here

electronic serial number

00 00 00 00 00 00

get bike information

display type/name	SCE8JAM
display firmware version	0.0.0
motor firmware version	0.0.0
motor bootloader version	0.0.0.0
wheel circumference [mm]	0
gear mode	-----
front wheel size	0
smallest rear wheel size	0
destination	-----


34%

back

1.05

4.7.0

0.0.0

bike information view		100%
licence key		98%
	210042000003241018	
electronic serial number		
CE B8 1D 23 06 2C		
get bike information		
bluetooth device name	SCE8HC9	
display	SCE8000/4.0.7	
motor	DUE80X0/4.3.2/4.0.8.11	
battery	SIMPLO/100%/98%	
wheel circumference [mm]	2271	
gear mode	electronical	
chainring/smallest rear sprocket size	34/11	
total distance [km]	3.172,055	
destination	eu	

back

bike information view

72%

licence key

98%

✓

210042000003241018

electronic serial number

4D B1 08 80 B4 29

get bike information

bluetooth device name	SCE8JAM
display	SCE8000/4.0.7
motor	DUE80X0/4.7.1/4.0.8.4
battery	PON/72%/98%
wheel circumference [mm]	2314
gear mode	electronical
chainring/smallest rear sprocket size	38/11
total distance [km]	3.111,230
destination	us

100%

back

bike information view

100%

licence key

✓

enter licence key here

electronic serial number

2E 83 A7 40 76 6E

get bike information

bluetooth device name

SCEM8ProD5A

display

SCEM800/4.1.0

motor

DUEP800/4.1.4/5.0.6.1

battery

SIMPLO/Trend Energy TP-SMN-01-35S/100%/100%

wheel circumference [mm]

2180

gear mode

electronical

chainring/smallest rear sprocket size

34/11

total distance [km]

277.725

destination

US

100%

back

7.5 bike information view – entering licence key

o2-de 16:11 100 %

bike information view

licence key

2100

electronic serial number
4D B1 08 80 B4 29

get bike information

display type/name	SCE8JAM
display firmware version	4.0.7
motor firmware version	4.7.0
motor bootloader version	4.0.8.4
wheel circumference [mm]	2314
gear mode	electronic

Done

1
2 ABC
3 DEF
4 GHI
5 JKL
6 MNO
7 PQRS
8 TUV
9 WXYZ
0

o2-de

16:11

100 %

bike information view

licence key



210042000003241018

electronic serial number

4D B1 08 80 B4 29

get bike information

display type/name	SCE8JAM
display firmware version	4.0.7
motor firmware version	4.7.0
motor bootloader version	4.0.8.4
wheel circumference [mm]	2314
gear mode	electronical
front wheel size	38
smallest rear wheel size	11
destination	eu

back

8. special settings view



special settings view

mounting angle [°]

0

speed adjustment [%]

5.0

program parameter to bike

gear mode settings view

light settings

main

8.1 *special settings view – light settings view*

light settings view

light output activated



light output continuous on



remaining light time [min]

0

light power [W]

27.0

select default parameters

program parameters to bike

back

gear mode settings view

derailleur (chain driven)	<input checked="" type="checkbox"/>
hub (chain driven)	<input type="checkbox"/>
hub (belt driven)	<input type="checkbox"/>
number of gears	<input type="text" value="11"/>
mechanical switching	<input type="checkbox"/>
electronical switching	<input checked="" type="checkbox"/>
chainring size	<input type="text" value="32"/>
smallest rear sprocket size	<input type="text" value="11"/>
largest rear sprocket size	<input type="text" value="46"/>

program parameters to bike

back

9. motor performance settings view

o2-de

16:12

100 %

motor performance settings view

	Eco	Trail	Boost
assist ratio [%]	50	110	300
max. torque [Nm]	30	70	70
power limit [W]	500	500	500

select default parameters

program parameters to bike

main

9.1 motor performance settings view – entering new parameter

o2-de 16:12 100 %

motor performance settings view

	Eco	Trail	Boost
assist ratio [%]	50	110	300
max. torque [Nm]	30	70	70
power limit [W]	500	500	500

+

||

▶

◀◀

▶▶

Done

1

2

ABC

3

DEF

4

GHI

5

JKL

6

MNO

7

PQRS

8

TUV

9

WXYZ

0

⌫

9.2 motor performance settings view – indicating new parameter (in red)

o2-de 16:12 100 %

motor performance settings view

	Eco	Trail	Boost
assist ratio [%]	55	110	300
max. torque [Nm]	30	70	70
power limit [W]	500	500	500

+

||

▶

◀◀

▶▶

Done

1

2

ABC

3

DEF

4

GHI

5

JKL

6

MNO

7

PQRS

8

TUV

9

WXYZ

0

⌫

o2-de

16:12

100 %

motor performance settings view

	Eco	Trail	Boost
assist ratio [%]	55	110	300
max. torque [Nm]	30	70	70
power limit [W]	500	500	500

select default parameters

program parameters to bike

main

o2-de

16:13

100 %

motor performance settings view



assist ratio [%]

Eco

55

Trail

110

Boost

300

max. torque [Nm]

30

70

70

power limit [W]

500

500

500

select default parameters

program parameters to bike

main

o2-de

16:13

100 %

motor performance settings view

	Eco	Trail	Boost
assist ratio [%]	60	90	200
max. torque [Nm]	30	70	70
power limit [W]	500	500	500

select default parameters

program parameters to bike

main

EP8 motor performance settings view

	Eco	Trail	Boost
power limit [W]	500	500	500
max. torque range[Nm]		20 - 85	

select EP8-RS default parameters

select EP8 default parameters

currently active profile

1

program parameters to bike

profile 1 settings

profile 2 settings

main

EP8 motor performance profile 1 view

	Eco	Trail	Boost
assist level	3	5	10
max. torque [Nm]	34	85	85
start characteristic	5	5	5



set also as default

select EP8-RS default parameters

select EP8 default parameters

program parameters to bike

back

EP8 motor performance profile 2 view

	Eco	Trail	Boost
assist level	7	8	10
max. torque [Nm]	27	85	85
start characteristic	5	5	5

this is the currently active profile



set also as default

select EP8-RS default parameters

select EP8 default parameters

program parameters to bike

back

o2-de

16:17

100 %

motor speed modes view

destination settings

destination settings only possible with
motor firmware version 4.5.1 - 4.7.1

wheel circumference settings

motor max. speed settings

main

o2-de

16:13

100 %

motor speed modes view

destination settings

wheel circumference settings

motor max. speed settings

motor max. speed settings only possible
with motor firmware version 4.2.7 - 4.3.2

main

motor max. speed settings view

maximum motor
support speed
[km/h]

Eco

25

Trail

25

Boost

25

25km/h (EU default)

20mph [32km/h] (US default)

program parameters to bike

main

11.1 motor max. speed settings view – indicating new parameter (in red)

o2-de 16:19 100 %

motor max. speed settings view

maximum motor
support speed
[km/h]

Eco

35

Trail

45

Boost

60

25km/h (EU default)

Calculator interface showing a numeric keypad and function buttons.

Buttons: +, ||, ▶, ◀, ▶▶, Done

Keypad layout:

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
	0	⌫

o2-de

16:19

100 %

motor max. speed settings view

maximum motor
support speed
[km/h]

Eco

35

Trail

45

Boost

60

25km/h (EU default)

20mph [32km/h] (US default)

25%

program parameters to bike

main

o2-de

16:19

100 %

motor max. speed settings view



maximum motor
support speed
[km/h]

Eco

35

Trail

45

Boost

60

25km/h (EU default)

20mph [32km/h] (US default)

100%

program parameters to bike

main

11.4 motor max. speed settings view – “25 km/h (EU default)” pressed

o2-de

16:36

100 %

motor max. speed settings view

	Eco	Trail	Boost
maximum motor support speed [km/h]	25	25	25

25km/h (EU default)

20mph [32km/h] (US default)

program parameters to bike

main

11.5 *motor max. speed settings view – “20mph [32 km/h] (US default)” pressed*

o2-de 16:36 100 %

motor max. speed settings view

	Eco	Trail	Boost
maximum motor support speed [km/h]	32	32	32

25km/h (EU default)

20mph [32km/h] (US default)

program parameters to bike

main

12.wheel circumference settings view

o2-de

16:13

100 %

wheel circumference settings view

wheel circumference [mm]

2314

program parameter to bike

main

1.05

4.7.0

12.1 wheel circumference settings view – indicating new parameter (in red)

o2-de

16:13

100 %

wheel circumference settings view

wheel circumference [mm]

2315

||

▶

◀◀

▶▶

Done

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
	0	⌫

12.2 wheel circumference settings view – before programming parameter

o2-de 16:13 100 %

wheel circumference settings view

wheel circumference [mm] 2315

program parameter to bike

main

1.05

4.7.0

12.3 wheel circumference settings view – programming parameter done

o2-de

16:13

100 %

wheel circumference settings view



wheel circumference [mm]

2315

program parameter to bike

main

1.05

4.7.0

13.destination settings view

o2-de

16:16

100 %

destination settings view

[EU] Europe (25km/h)



[US] USA (32km/h)



[AS] Asia (25km/h)



factory reset



program parameter to bike

main

1.05

4.7.0

13.1 destination settings view – indicating new parameter (in red)

o2-de 16:16 100 %

destination settings view

[EU] Europe (25km/h)



[US] USA (32km/h)



[AS] Asia (25km/h)



factory reset



program parameter to bike

main

1.05

4.7.0

13.2 destination settings view – programming parameter done

o2-de

16:16

100 %

destination settings view



[EU] Europe (25km/h)



[US] USA (32km/h)



[AS] Asia (25km/h)



factory reset



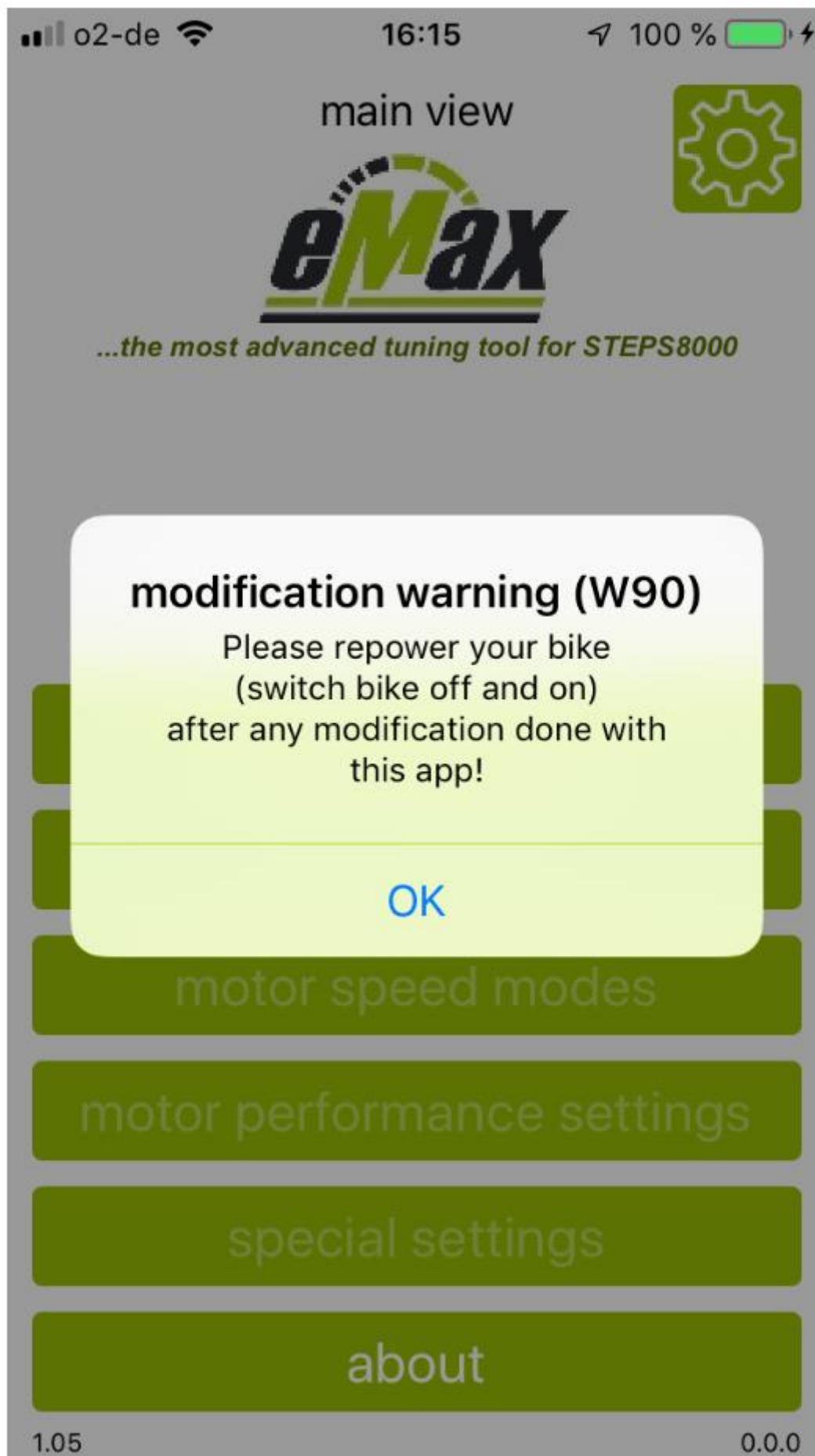
program parameter to bike

main

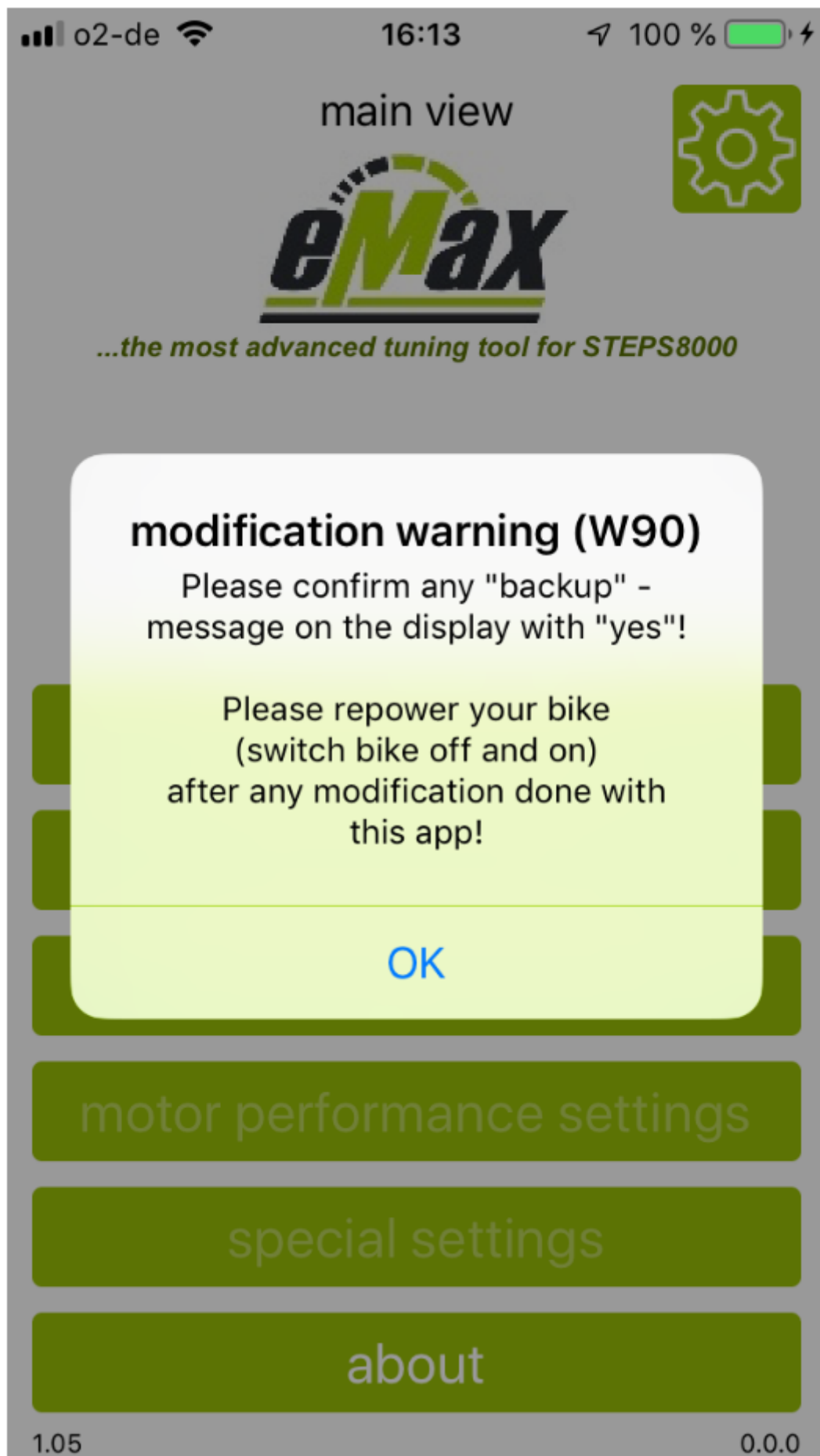
1.05

4.7.0

14.main view – after disconnecting bike with programmed parameters



14.1 main view – after disconnecting bike with programmed parameters and backup message on display



15.the most important 18 hints for having fun with *eMaxMobileApp*

Whenever any question mark (,?) is shown in the „bike information“ view, something is not working properly! Most probably there is a problem with the current Bluetooth connection.

In the current app version 1.22 we support all Bluetooth capable displays of the STEPS8000 system (SC-E8000, SC-E7000, SC-E6100, EW-EN100).

However, if you've got any question marks in combination with an SC-E8000 display, please read carefully the hints followed now to solve the problem.

15.1 Preferred sequence for successful Bluetooth connection

The development team of **eMaxMobileApp** prefers the following sequence to get a successful Bluetooth connection to the bike:

- Exiting all active (background-) apps on the iOS or Android device
- Starting **eMaxMobileApp** on the iOS or Android device
- Pressing button „connect to bike“
- Power on bike

Now, quite soon **eMaxMobileApp** should detect the display of the bike and show its name. Also the now active button „bike information“ could be selected.

15.2 Bluetooth passkey

When connection the first time with an iOS or Android device to the bike via Bluetooth the so called Bluetooth passkey (a 6-digit number) has to be entered. This passkey normally is “000000” (6 times zero). If this passkey was changed previously and could not get remembered anymore, this passkey could be reset or changed via a PCE1/PCE02 interface from Shimano and the Windows based **eTube** software. Select “E-Bike”, then further “Bluetooth LE settings” in **eTube** to do so.

15.3 Delete existing Bluetooth coupling and forcing new Bluetooth coupling

If there are periodic problems when establishing a Bluetooth connection, sometime it could be very helpful to delete an already known Bluetooth connection coupling setting to a bike display on the iOS or Android device and initiate the related Bluetooth coupling once again.

Deleting an existing Bluetooth coupling data set could be established on an iOS device **in currently non-connected mode** via “Settings”/”Bluetooth”/”My devices”, then selecting the name of the bike display and pressing the (i) icon on the right hand side. Now press “ignore this device” in the newly shown page view. Normally then you have to enter the 6 digit Bluetooth passkey again when trying to connect to the bike display the next time. On an Android device deleting an existing coupling is done in a quite similar way via Android - “Settings”/”Bluetooth”...

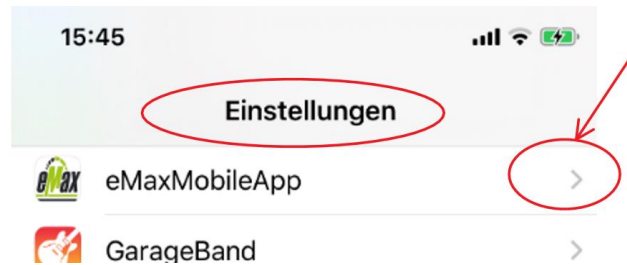
Due to the fact that Shimano – Bluetooth is in some ways very special, it is best to create the new Bluetooth coupling data set directly from inside the Shimano E-Tube-Project app instead of using the global Bluetooth settings function from the smartphone.

15.4 Privileges and authentication roles of eMaxMobileApp

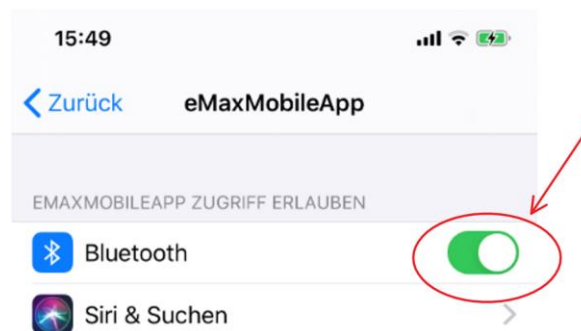
If you e.g. get a warning message “W83” using **eMaxMobileApp** or you cannot access your bike via Bluetooth due to other reasons, please check if **eMaxMobileApp** has sufficient privileges and authentication roles. Normally these roles will be set correctly when downloading and installing **eMaxMobileApp** the first time with accepting the initial questions, but sometimes you have to do this manually in your system.

iOS:

Go to “**iOS – settings**”, then search for **eMaxMobileApp**, use the right corner arrow:



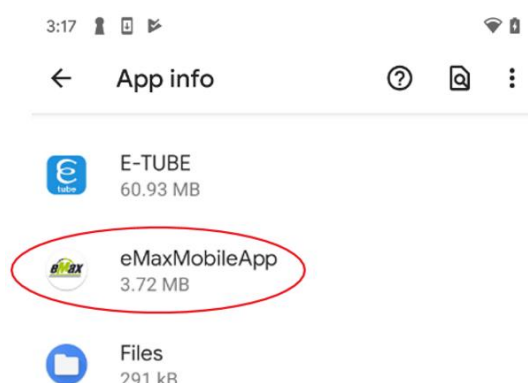
Check if Bluetooth is enabled for **eMaxMobileApp** (if not enabled, please enable Bluetooth now):



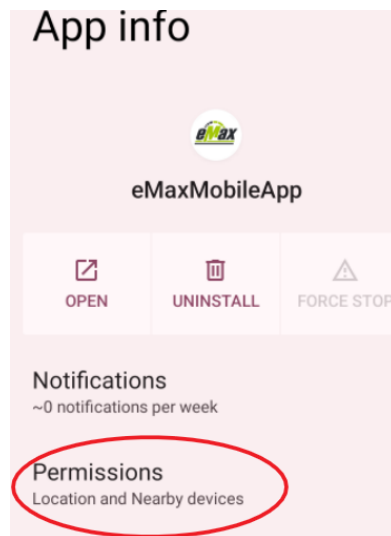
Android:

Take care: On Android systems, the used wording in the following section can slightly differ on each system depending on the Android version and the type of manufacturer branding.

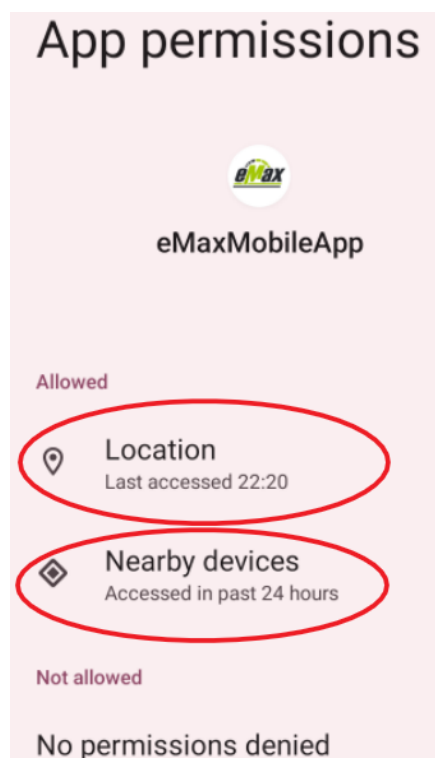
Go to “**Android – settings**”, then “**Apps & Notifications**”, then search for **eMaxMobileApp** and tap on the icon:



Check if the **“Location”** permission is enabled:



Tap on **“Permissions”**, if **“Location”** is not enabled then enable permission for **“Location”**:



If there is also a setting for **“Nearby devices”** (most probably if using Android version 12 and above), then also enable permission for this **“Nearby devices”** setting!

15.5 Nearby Bluetooth devices which had been coupled with bike before

One of the most often occurring hindrances getting a stable Bluetooth connection to **eMaxMobileApp** are nearby devices which had been coupled with the bike display before and still have stored valid coupling data.

Please try to deactivate Bluetooth functionality on all these devices or at least delete Bluetooth coupling data to the bike display on these devices (see former item). Also try to find a location with no nearby Bluetooth devices.

It is a good advice to create a valid Bluetooth connection coupling dataset to your bike display only on a single device (smartphone or tablet). Otherwise the chances that the bike will connect automatically to another unexpected device when powering up are quite high.

15.6 Bike stuck and is not reacting

Another scenario which also happens quite often is that the bike display seems to be stuck in the initialization process when powering up the bike. The SCE8000 display then continuously shows „SHIMANO STEPS“ and never moves further on the speed view which normally will be shown after some seconds.

In this case most probably the bike when powering up has automatically established a Bluetooth connection to a nearby device which was coupled to the bike before. Also most probably on this device a Bluetooth related app (e.g. **eTube** or **eMaxMobileApp**) is still active (maybe in the background) and was not terminated properly before.

In this case assure that all apps got terminated on that device, Bluetooth is deactivated or at least all coupling data to the bike display is deleted.

15.7 Using Bluetooth eTube App from Shimano

When using **eMaxMobileApp** the first time please ideally verify that you already have established a working Bluetooth (BLE) connection from your iOS or Android smartphone to your bike and could connect to your bike and access data with Shimano's **eTube** smartphone app (see [here](#)).

If this first step works without problems, then close (terminate!) the **eTube** app and open the **eMaxMobile** app which normally should then should connect and work perfectly with your bike.

TAKE CARE: Unfortunately, Shimano's Bluetooth eTube app is not working properly with iOS versions less than 10.0, so e.g. on an iPhone 4x / 5x. So, with these older iOS devices there are problems in creating a Bluetooth connection to the bike with **eTube**. However, **eMaxMobileApp** works great on these older devices if the bike is equipped with a SC-E8000 display. For connecting to a SC-E7000, SC-E6100 or EW-EN100 an iPhone 4x / 5x will not work!

15.8 Exiting apps running in background

For correct working of **eMaxMobileApp** it is mandatory, that there are no other active apps running in background, especially if they also use Bluetooth connections, e.g. **eTube** from Shimano.

For this reason, please terminate all apps on the iOS or Android device which are running in background.

Terminating an app is mostly done via double-click on the home button and swiping the app to the top, but on some new devices without a dedicated home button via swiping the app to the left border and then to the top, see also in the iOS manual. Please have a look to the user manual if you are using an Android device on how to properly exit an app.

15.9 Exiting eMaxMobileApp

Please also terminate **eMaxMobileApp** after each modification session. Don't let run **eMaxMobileApp** in the background, because this could initiate unforeseen attempts to connect to your bike.

Terminating an app is mostly done via double-click on the home button and swiping the app to the top, but on some new devices without a dedicated home button via swiping the app to the left border and then to the top, see also in the iOS manual. Please have a look to the user manual if you are using an Android device on how to properly exit an app.

15.10 Repower bike

Please repower the bike (switch off and on) after each modification made with **eMaxMobileApp**!

15.11 Bluetooth connection to wrong bike display

In some less frequently cases it can happen that **eMaxMobileApp** tries to connect with the wrong bike display. This scenario is possible if there are some STEPS8000 bikers and they all start their bikes simultaneously and **eMaxMobileApp** tries to establish a connection to a bike display.

On the long run the best idea in this case is to set a unique display name to the bike (see next item).

On the short run it is best to switch off the bike and restart the app and then initiate a new connection sequence once again after some seconds or minutes after all the other bikes already have terminated their Bluetooth activity automatically.

15.12 Set unique Bluetooth name for bike display

In some environment with a larger number of STEPS8000 bikes it could be a good advice to change the Bluetooth name of the bike display to a unique name to identify your bike instantly. The default name for e.g. the SCE8000 display is "SCE8000". The Bluetooth name of the display could be changed with a PCE1/PCE02 interface and the Windows based **eTube** software. Select "E-Bike", then further "Bluetooth LE settings" in **eTube** to do so. The name can consist of 7 characters and it is a good advice to still keep the display type in it. So the following nomenclature is preferred „SC8xxxxx“, where xxxx indicate placeholders for representing the individual name of the display.

15.13 Sporadic bike resets while riding

If you encounter any problem with sporadic interrupts while riding, mostly a previously with the bike coupled and still Bluetooth -active and nearby smartphone or tablet causes that problem. In this case either deactivate the Bluetooth functionality of the smartphone or at least reset the Bluetooth coupling process on that smartphone or tablet for the specific bike display connection ("SC-E8000") via "ignore this device" in Bluetooth - settings.

Also exit **eMaxMobileApp** after all bike modifications are done (this is mostly done via double-click on the home button and swiping the app to the top, but on some new devices without a dedicated home button via swiping the app to the left border and then to the top, see iOS manual). Please have a look to the user manual if you are using an Android device on how to properly exit an app.

15.14 Bluetooth refresh

On some very rare Android smartphones it can be mandatory to deactivate the so called "**Bluetooth refresh**" functionality. This function could be accessed via system settings (cogwheel icon in the upper right corner of the main menu) on the Android version of **eMaxMobileApp**.

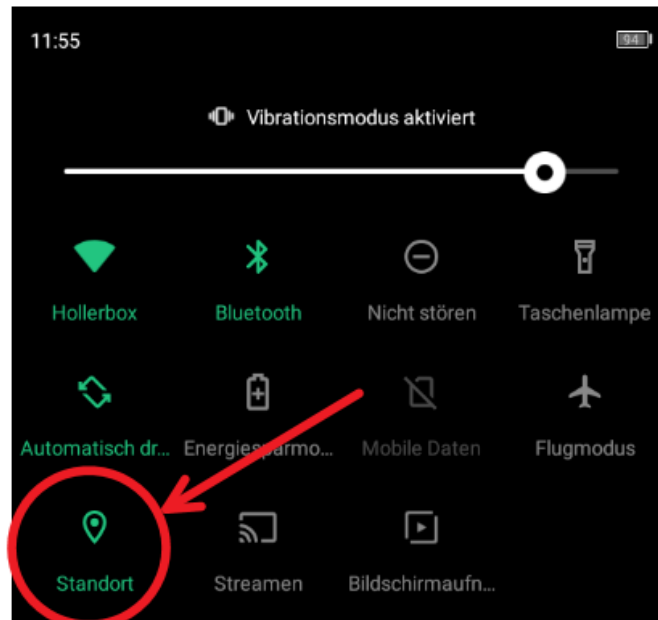
15.15 Distance between smartphone / tablet and bike display

Please take care that the distance between smartphone / tablet and bike display **is not too low** and not too high and that the smartphone / tablet and bike will not be moved while wireless data transfer is active. The perfect distance between these devices is 0,5 – 2 meters. If the distance is too small, so called "electronical crosstalk" can have a negative impact on the wireless communication.

15.16 GPS activation

Starting with Android version 9.x, it is mandatory for a correct working Bluetooth BLE connection that you enable the GPS functionality additionally to the location setting (see chapter 15.4)!

Please swipe on the Android - home screen from top to bottom, then scroll the quick start icons unit you will find the fixing pin – icon with the indication “location”. Tap on this symbol to activate GPS:



15.17 Clear cache and reset smartphone

Starting with Android version 12.x, on some smartphones it can happen that despite setting all permissions correctly (see chapter 15.4) **eMaxMobileApp** will not work properly! This mostly happens if **eMaxMobileApp** already had been installed in an older version on the smartphone before and then was updated to a newer version. In this case please clear the internal cache of the smartphone and power off, then power on the smartphone.

15.18 Further hints

Further hints regarding Bluetooth connection issues you could find [here](#) and [here](#) on pages 5-9 and 5-13 as well as [here](#) in the German Pedelecforum.