

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 <u>this</u> <u>document</u>.

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.

DU-EP800 (motor firmware 4.0.2 - 4.2.0, from 4.1.1 *)

DU-E8000 / DU-E8080 (motor firmware 4.2.7 – 4.10.0, from 4.9.0 *)

DUE5000 & DUE5080 (motor firmware 4.2.1 – 4.5.0, 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 – 4.8.0, modification of destination and wheel circumference only, from 4.6.0 *)

DUE7000 (motor firmware 4.4.0 - 4.8.0, from 4.6.0 *)

DU-EP801 & DU-EP600 (motor firmware 4.0.0 - 4.3.0, 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 <u>here</u>) 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 1.77 / July 2024

Android app version 1.77 / July 2024

first impression video (version 1.00) on YouTube:

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

This document is intended only to give a brief introduction to the general functionality of *eMaxMobileApp*!

In <u>this document</u> you will find the latest optimizing possibilities of *eMaxMobileApp* depending on motor type and firmware.

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.

<u>connecting from the smartphone/tablet to the bike via</u> <u>Bluetooth</u>

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 nonmoving bike mode manually via the display menu of the <u>SC-E8000</u> display. Just select "Bluetooth LE", then "Start". See <u>here</u> on pages 5-9 and 5-13 for some more information.

Whenever the bike with <u>SC-E8000</u> 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 <u>SC-EM800</u>, <u>SC-E7000</u>, <u>SC-E6100</u> displays, <u>EW-EN100</u> cockpit or <u>SW-EN600-L</u>: 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 E-Tube-Project software

E-Tube-Project 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 <u>info@eMax-Tuning.com</u> 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!

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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.H	26.03.2024	RoadRunner	update according to app version 1.72
2.I	23.04.2024	RoadRunner	update according to app version 1.73
2.J	20.05.2024	RoadRunner	update according to app version 1.74
2.K	17.06.2024	RoadRunner	update according to app version 1.76
2.L	01.07.2024	RoadRunner	update according to app version 1.77
2.M	11.07.2024	RoadRunner	correction to app version 1.77

2. some help on shown graphical elements



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

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... the most advanced tuning tool for STEPS systems

connect to bike

bike information

motor speed modes

motor performance settings

special settings

about



connected to SCE8JAM

disconnect bike

bike information

motor speed modes

motor performance settings

special settings

about



connected to SCE8JAM

disconnect bike

bike information

motor speed modes

motor performance settings

special settings

about



connected to SCE8JAM

disconnect bike

bike information

motor speed modes

motor performance settings

special settings

about

4.7.0

4. about view

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.

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



eMaxMobileApp

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www.eMax-Tuning.com

5. program settings view





6. additional licence keys view



additional licence keys view 123456789012345678 1 224000164015201076 2 enter licence key here 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

back

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bike information view

licence key

enter licence key here

electronic serial number 00 00 00 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

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bike information view

licence key

enter licence key here

electronic serial number 00 00 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 v licence key	iew	100% 98%
	21004200000324	1018	
	electronic serial num CE B8 1D 23 06	^{ber} 2C)
	get bike informa	tion	
bluetoot	n device name	SCE8F	IC9
display	S	CE8000/4	.0.7
motor	DUE80X0	/4.3.2/4.0.	8.11
battery	SIMPL	.0/100%/9	8%
wheel cir	cumference [mm]	2	271
gear mod	de	electron	ical
chainring	/smallest rear sprocket size	34	4/11
total dist	ance [km]	3.172,0	055
destinati	on		eu



bike in	formation vie	ew	72% 98%
210042	000003241	018	
electro 4D B1	nic serial numb 08 80 B4 2	er 29	
get bik	e informat	ion	
bluetooth device name		SCE8J	AM
display	SC	E8000/4	.0.7
motor	DUE80X0	/4.7.1/4.0.	8.4
battery	PC)N/72%/9	8%
wheel circumference [m	nm]	23	314
gear mode		electron	ical
chainring/smallest rear	sprocket size	38	3/11
total distance [km]		3.111,2	230
destination			us

100%

	back	
1.32	4.7.1	* 4.7.1

	bike information v licence key	iew	100% 100%
	enter licence key electronic serial num 2E 83 A7 40 76	here ^{ber} 6E)
	get bike informa	ation	
bluetoo display	th device name S	CEM8ProE CEM800/4	05A 1.1.0
motor	DUEP80	0/4.1.4/5.0).6.1
battery	SIMPLO/Trend Energy TP-SMN-	01-355/100%/	100%
wheel c	ircumference [mm]	2	180
gear mo	ode	electron	ical
chainrin	g/smallest rear sprocket size	34	4/11
total dis	stance [km]	277.	725
destina	tion		us

100%



ull o2-de 奈 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 4.7.0 motor firmware version 4.0.8.4 motor bootloader version 2314 wheel circumference [mm] alaatraniaal - ----Done 1 З 2 ABC DEF 6 4 5 м н о GHI JKL 8 9 / WXYZ PQRS тих \propto n

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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	
1.05	4.7.0	* 4.7.0

8. special settings view



program parameter to bike

gear mode settings view

light settings

light settings view



select default parameters

program parameters to bike

back

8.2 special settings view – gear mode settings view



gear mode settings view

program parameters to bike

back

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motor performance settings view



select default parameters

program parameters to bike



motor performance settings view



+ 11 1		Done
1	2 АВС	3 def
4 6н1	5 JKL	6 мно
7 pqrs	8 TUV	9 wxyz
	0	$\langle \times \rangle$

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motor performance settings view





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motor performance settings view



select default parameters

program parameters to bike

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motor performance settings view



select default parameters

program parameters to bike

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motor performance settings view



select default parameters

program parameters to bike

EP8 motor performance settings view





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



EP8 motor performance profile 2 view





10.motor speed modes view - with current motor firmware 4.3.2

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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

10.1 motor speed modes view - with current motor firmware 4.7.0

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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



motor max. speed settings view

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

25km/h (EU default)

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

program parameters to bike



support speed [km/h]	35	45	60

25km/h (EU default)

+ 11		Done
1	2 АВС	3 Def
4 6ні	5 JKL	6 мно
7 pqrs	8 TUV	9 wxyz
	0	$\langle \times \rangle$

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motor max. speed settings view



25km/h (EU default)

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

25%

program parameters to bike

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I6:19 <a>✓ 100 %
motor max. speed settings view
Settings view
Eco Trail Boost
Boost
[km/h]
Settings
IS:19 <a>✓ 100 %
IS:10 <a>✓ 100 % <a>✓ 100 %
IS:10 <a>✓ 100 % <a

25km/h (EU default)

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

100%

program parameters to bike

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

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motor max. speed settings view

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

25km/h (EU default)

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

program parameters to bike

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



motor max. speed settings view

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

25km/h (EU default)

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

program parameters to bike



wheel circumference [mm] 2314

program parameter to bike



2315

wheel circumference [mm]





2315

wheel circumference [mm]

program parameter to bike





wheel circumference [mm]

2315

program parameter to bike



program parameter to bike



program parameter to bike



program parameter to bike

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 <u>in currently</u> <u>non-connected mode</u> 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.

<u>iOS:</u>

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:

	App in	fo	
	el	eivex MaxMobileA	рр
	OPEN	UNINSTALL	A FORCE STOP
Notifications ~0 notifications per week			
(Permission Location and Ne	Searby devices)

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

App permissions
eMaxMobileApp
Allowed
Location Last accessed 22:20
Nearby devices Accessed in past 24 hours
Not allowed
No permissions denied

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!

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 stucks and is not reacting

Another scenario which also happens quite often is that the bike display seems to be stucked 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 <u>here</u>).

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 <u>is not too low</u> 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 <u>here</u> and <u>here</u> on pages 5-9 and 5-13 as well as <u>here</u> in the German Pedelecforum.