UNLEASH THE POWER OF YOUR E-BIKE'S MOTOR



USER MANUAL

Version 1.17 for iOS/iPadOS Devices

This user manual explains all of the features of the **ST UNLOCKER** mobile. This manual is provided as a reference for the operation of the app. Please be sure to read through this entire manual completely in order to fully understand the apps functions and capabilities.

TABLE OF CONTENTS

TABLE OF CONTENTS
READ THIS FIRST! (WARNING BEFORE USAGE)
DRIVE UNIT / MOBILE DEVICE COMPATIBILITY
CONNECTING TO YOUR E-BIKE
E-BIKE'S INFO
STANDARD FEATURES - MAIN MENU8
I. PRESETS – OVERVIEW
PRESETS - SAVE A CUSTOM PRESET
II. ASSIST SETTINGS
III. GEARS SETTINGS
IV. OTHER SETTINGS
V. LIGHT SETTINGS
VI. SPEEDOMETER CALIBRATION
VII. STATISTICS
VIII. BLACK BOX
STANDARD APP SETTINGS
GET THE PREMIUM LICENSE
HOW-TO: REQUEST A LICENSE
PREMIUM FEATURES: MAIN MENU (Licensed Version)
IX. PREMIUM FEATURE: MARKET SETTINGS 22
X. PREMIUM FEATURE: DRIVE UNIT ANGLE
XI. PREMIUM FEATURE: WHEEL CIRCUMFERENCE 24
XII. PREMIUM FEATURE: TOP SPEED ADJUSTMENT
XIII. AUTO PRESETS (Configuration)
XIV. IOS 'TODAY VIEW' WIDGET
FAQ / TROUBLESHOOTING
LICENSE AGREEMENT / RELEASE OF LIABILITY

NOTE: The app screenshots shown in this manual are taken from different devices and are meant as examples only; your device version my look slightly different from what is shown.

READ THIS FIRST! (WARNING BEFORE USAGE)



ANY ELECTRIC BIKE MODIFICATION AND/OR TUNING IS DONE <u>AT YOUR OWN RISK!</u>

IF YOU ARE WORRIED ABOUT POSSIBLY VOIDING YOUR WARRANTY, <u>DO NOT USE THIS</u> <u>APP</u>. JUST STICK TO THE FACTORY APP.

THE USAGE OF **ST UNLOCKER** MAY VOID THE MANUFACTURER'S WARRANTY OF YOUR ELECTRIC BIKE AND/OR CAUSE IREVERSIBLE OR PERMANENT DAMAGE TO YOUR E-BIKE, DRIVE UNIT (MOTOR), BATTERY, AND RELATED COMPONENTS. THERE ARE NO GUARANTEES ATTACHED TO THE USAGE OF THE **ST UNLOCKER** APP.

NO LIABILITY IS ASSUMED FOR ANY PAST, PRESENT, OR FUTURE DAMAGES TO EQUIPMENT, PROPERTY, OBJECTS AND/OR PERSONS CAUSED BY THE USAGE AND/OR MODIFICATIONS MADE USING THE **ST UNLOCKER** APP.

ANY ELECTRIC BIKES MODIFIED USING THE **ST UNLOCKER** APP MAY ONLY BE LEGALLY USED ON PRIVATE, ENCLOSED AREAS OR DESIGNATED ROUTES. BE AWARE OF YOUR LOCAL LAWS. MODIFIED ELECTRIC BICYCLES ARE NOT ALLOWED ON PUBLIC ROADS AND ANY OTHER AREAS WHERE TRAFFIC LAWS APPLY.

ALWAYS FOLLOW THE LEGAL REGULATIONS IN YOUR AREA. YOU ARE RESPONSIBLE FOR HOW, WHEN, AND WHERE YOU USE YOUR E-BIKE.

RIDE SAFELY, AND ALWAYS USE A CERTIFIED BICYCLE HELMET.

DRIVE UNIT / MOBILE DEVICE COMPATIBILITY

The following shows the settings and adjustments available through the **ST UNLOCKER** app for iOS/iPadOS based on your E-Bike's drive unit (motor) and system firmware version; you must be running firmware *equal to or older than* the version specified below.

DRIVE UNIT AND FIRMWARE VERSIONS

			DR	VE UNIT TY	PE	
	E5000*	E6100*	E7000	E8000	EP8***	EP801/EP600****
Standard App Features						
Assist Level	4.4.9	4.7.7	4.7.7	4.9.5	4.1.11	4.1.1
Torque Level	4.4.9	4.7.7	4.7.7	4.9.5	4.1.11	4.1.1
Power Output	4.4.9	4.7.7	4.7.7	4.9.5	-	-
Overall Torque/Power	-	-	-	-	4.1.11	4.1.1
Assist Start Level	-	-	-	-	4.1.11	4.1.1
Gears Adjustment	4.3.0	4.5.0	4.5.0	4.8.0	4.0.2	-
Light Control Settings	4.3.0	4.5.0	4.5.0	4.8.0	4.0.2	-
Speedometer	4.4.9	4.7.7	4.7.7	4.9.5	4.1.11	4.1.1
Calibration						
Black Box Data	4.4.9	4.7.7	4.7.7	4.9.5	4.1.11	4.1.1
Auto Preset	4.4.9	4.7.7	4.7.7	4.9.5	4.1.11	4.1.1
Configuration						
Preset Home Screen	4.4.9	4.7.7	4.7.7	4.9.5	4.1.11	4.1.1
Widgets						
Licensed App Added Fe	atures					
Market Setting	4.3.0	4.5.0	4.5.0	4.8.0	4.0.2	-
Wheel Circumference	4.3.0	4.5.0	4.5.0	4.8.0	4.0.2	-
Drive Unit Mounting	4.3.0	4.5.0	4.5.0	4.8.0	4.0.2	-
Angle						
Top Speed	-	-	-	4.3.2	-	-
Adjustment**						

* E5000/E6100 assist settings MAY reset back to default when powered off.

** Only when equipped with the SC-E8000 display unit or EW-EN100 Junction.

*** EP8 RS is a regular EP8 motor with software power & torque limitations. It has the same firmware as a regular EP8.

**** EP801/EP600 are not supported for the derestriction

MOBILE DEVICE COMPATIBILITY (TUNING INTERFACE)

The **ST UNLOCKER** app is compatible with **Apple iOS/iPadOS** mobile devices with Bluetooth and **iOS version 12.1 or newer** installed.





CONNECTING TO YOUR E-BIKE

Follow the steps below to connect the **ST UNLOCKER** app to your E-Bike. Make sure you have Bluetooth turned ON in your mobile device, then go ahead and open the **ST UNLOCKER** app.

STEP 1

Tap the [CONNECT] button to connect to your E-Bike.

(If you're having trouble connecting to your E-Bike, see the FAQ / TROUBLESHOOTING page for suggestions.)





STEP 2

If this is the first time using the app, you will see the Information pop-up. Follow the instructions to initiate the connection. Tap [**OK**] or [**DON'T SHOW AGAIN**] to go back to the connect screen.

STEP 3

Tap [**CONNECT**] again and after a moment, the Bluetooth name of your E-Bike should show up in the **ST UNLOCKER** app. Tap on your E-Bike 's name to connect.



At this point the **ST UNLOCKER** app will gather and collect your E-Bike's settings and information. Keep your mobile device awake and within range of your E-Bike and allow the app to finish collecting information.

E-BIKE'S INFO

After the **ST UNLOCKER** app has successfully gathered your E-Bike's settings and information, you will be taken to the **E-BIKE'S INFO** screen. The top half of the screen will show your E-Bike specifications and the following information at a glance:

Motor Model			E-B
Shows the type of motor and display	1.5	Moto	or mod
unit equipped on your E-Bike.	1.5	Firm	ware v
Firmware Version	1.5	Seria	ıl
Shows the current firmware of your motor and display unit.	1.5	Seria	ID
• Serial Number	1.8	Tota	distar
This is your E-Bike system serial number.	1.5	Batte	ery stat
• Serial ID	1.5	Batte	ery hea
This is your E-Bike system serial ID (numbers on the motor)	1.5	Mark	tet
Total Distance	1.5	Circu	Imfere
This is the total distance travelled by	1.5	Spee	d corre
vour E-Bike's motor (odometer).		As	sist
Battery State	1.8	Activ	e profi
This is the current charge level of your F-Bike's battery and	1.5	#1 E	co
the battery model	1.5	#1 I	rail
Battery Health	1.8	#1 B	oost
This shows your relative battery health and the total number	1.8	#2 E	со
of charge cycles	1.5	#2 T	rail
Gears (Type Front/Rear)	1.8	#2 B	oost
This shows specified rear mech type, highest mechanical	1.5	Max	speed
gear ratio, and drive unit mounting angle	1.5	Walk	
Light Status and Reserve Time	G	Overa	all Po
Allows you to set a reserve time for ontional LED lighting		Max	Torque
nowered by your	1.5	Min	Torque
F-Bike's ontional light circuit	1.5	Pow	er Limi
		Pow	er Limi
The Annu information which eathings are not factory default		Pow	er Limi
The App informs you which settings are not factory default	G	Gear	S

using this icon 💶

- E-DIKes	into
Motor model	DU-EP800 / SC-EM800
Firmware ver	4.1.10 / 4.0.0
Serial	0000-0000-0001
Serial ID	GHX0JA16VTZ
Total distance	150.5 km 🎘
Battery state	55 % (BT-E8010)
Battery health	100 % (2 cycles)
Market 🤱	US (original EU)
Circumference 🤱	2072 mm
Speed correction	0.0 %
Assist Setting	js 🗾 🖍
Active profile	Profile #2
#1 Eco	Lv 3/10 (70%), 49Nm, St 5/5
#1 Trail	Lv 7/10 (240%), 78Nm, St 5/5
#1 Boost	Lv 10/10 (400%), 85Nm, St 5/5
#2 Eco	Lv 2/10 (40%), 49Nm, St 5/5
#2 Trail	Lv 7/10 (240%), 85Nm, St 5/5
#2 Boost	Lv 10/10 (400%), 85Nm, St 5/5
Max speed	32 km/h
Walk	Powerful
Overall Power/T	orque Limiters 🛛 🖍
Max Torque	85 Nm
Min Torque	20 Nm
Power Limit Eco	500 W
Power Limit Trail	500 W
Power Limit Boost	500 W
Gears	/
Туре	Mechanical
Front / Rear (11th) chain ring	34T / 10T
Mount angle	-30*
Light	1
Status	Always On
Reserved time	150 min
Light Output	27.0 W

*Other settings shown (Market, Circumference, Mount Angle, Assist, Speed, etc.) will be covered in more detail later in this manual.

The bottom half of the info screen shows tuning settings. To start tuning your E-Bike, tap on the menu icon at the top-left of the info screen to get to the MAIN MENU.

STANDARD FEATURES - MAIN MENU

If you have an unlicensed version, the **MAIN MENU** of the **ST UNLOCKER** app will have the standard options described below*.

Disconnect from E-Bike Tap and confirm to close the Bluetooth connection ST Unlocker between the app and E-Bike. E-Bike's Info Takes you back to the E-Bike Info screen. • Presets (see section I) Allows you to save the current settings or recall your custom setting presets. **Disconnect from E-Bike** Assist Settings (see section II) E-Bike's Info 1 This is where you can adjust your motor's assist, torque, and maximum power. F Presets Gears Settings (see section III) (4)**Assist Settings** This is where you can specify your rear mech type and highest gear ratio. 00 **Gears Settings** • Other Settings (see section IV) Allows you to change overall Power/Torque settings, if **Light Settings** available. ∃ Other Settings • Light Settings (see section V) Allows you to set a reserve time for optional LED lighting. **Circumference Settings** 60 Speedometer Calibration / Circumference Settings (see section VI) X Statistics Allows you to calibrate the speedometer. A) Black Box Statistics (see section VII) Allows you to see the bike's usage statistics App Settings Black Box (see section VIII) Allows you to view internal data recorded by the drive Get the Premium licence unit (?)Manual (PDF) **Standard App Settings** Application-specific settings. ₽ Exit App

*The availability and functionality of the tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the **DRIVE UNIT / MOBILE DEVICE COMPATIBILITY** section for more information.

I. PRESETS – OVERVIEW

In this section you can select, create, save, and recall system presets for your E-Bike. To get started, the easiest way is to begin with the default (built-in) preset examples.

Presets I **How-To Load Default Presets** To load the built-in preset examples, tap on the Presets sub-menu (the three dots Stock Stock Stock 29" EU 29" US 27.5" on the upper-right corner of the screen). Select and Apply a Preset Stock City To select a preset, simply tap the preset, 27.5" Power save then tap **[OK]** to confirm. **Delete a Preset** To delete a preset, tap and hold the Standard MAX Power Anti-theft preset, then tap [DELETE] in the window that pops up. **Apply a Preset** To apply a preset (load the preset into Apply settings from the preset "Stock 27.5" US" ?

To apply a preset (load the preset into your E-Bike), tap the desired preset. The app will show you the preset's assist settings and ask you to confirm – tap on **[OK]** to load the presets to your E-Bike.

TIP: After you are done tuning and you've exited the **ST UNLOCKER** app, don't forget to power cycle (turn off, then on) your E-Bike before use.

Assist Eco: 60% 30Nm 500W Assist Trail: 90% 70Nm 500W Assist Boost: 300% 70Nm 500W

CANCEL

OK

ł

PRESETS - SAVE A CUSTOM PRESET

You can save your own customized presets into the app for later use. To save your custom presets, you must do the following steps:

STEP 1

Before saving a custom preset, first use the **ST UNLOCKER** app and adjust your E-Bike settings to your liking.

STEP 2

Go to the **PRESETS** screen and tap the empty circle with the **+** symbol.



STEP 3

A window will pop up allowing you to specify a name for your preset, and you can specify which settings to save in the preset. When you are happy with the preset, tap on **[OK]** to save your custom preset.

You should now be able to see your newly made custom preset on the **PRESETS** screen.

	Name	Preset #10		
	Color		ave	
St		Apply Assist settings	ettings	
		Apply Market settings	itings	
	_	Cancel	Ok	

II. ASSIST SETTINGS

This is where you can adjust your motor assist, torque, and maximum power settings for each of the three drive modes (ECO, TRAIL, and BOOST).

• Assist (by Percentage)

This parameter adjusts how much additional assist your E-Bike motor will provide, relative to your pedaling input. For example, setting this to 60% means your E-Bike's motor will add an additional 60% of your input as electric assist (up to maximum torque setting, below).

• Max Torque (in Nm)

This parameter adjusts the maximum amount of torque your E-Bike will produce during electric assist, regardless of your pedaling input.

• Power (Maximum, in Watts)*

This parameter limits the maximum amount of total power your E-Bike will produce during assist. A higher setting means more total power.

• Assist Start (Level) **

This parameter affects on assist engage. More level means fastest assist start.

• Assist Max Speed ***

This parameter limits assist by the maximum speed. The Maximum speed is depends on the market settings

• Active Profile ** Sets the active assist profile

"Default" button allows you to change the settings of each mode to default (factory predefined)

≡ Assist Setti	ngs
PROFILE #1	PROFILE #2
Active profile	
Eco	
Assist Level (10)	< Lv.3 70% >
Max torque (Nm)	< 49 >
Assist Start (5)	< Lv.5 >
	Default
Trail	
Assist Level (10)	< Lv.7 240% >
Max torque (Nm)	< 78 >
Assist Start (5)	< Lv.5 >
	O Default
Boost	
Assist Level (10)	< Lv.10 400% >
Max torque (Nm)	< 85 >
Assist Start (5)	< Lv.5 >
	Default
Other settings	
Max speed	< 32 > km/h
Riding characteristi	ics
(uny) ereption to the second s	40 <u>60 80 100</u>
Eco 🖩 Trail 📒 Boost	Rider pedating input Torque (Nm)

*The "Power" adjustment can be disabled in the "App Settings" page to prevent the user from forcing the E-Bike to exceed the system's safe rated output.

** Available for EP8/EP801/EP600 motors only

*** May not be available on your bike because of FW/motor

Use the controls to modify each parameter for each drive mode, then when you're finished tap [UPDATE] to transfer the settings to your E-Bike. If you want to go back to factory settings, simply tap the [DEFAULT] button for each mode, then tap [UPDATE] to adjust your drive modes back to the OEM default parameters.

TIP: After you are done tuning and you've exited the **ST UNLOCKER** app, don't forget to power cycle (turn off, then on) your E-Bike before use.

III. GEARS SETTINGS

This is where you can specify or adjust the gearing on your E-Bike to modify system calibration for accurate system readings.

- **Type** Select the type of shifting system on your E-Bike.
- Chainrings Front*
 Set this parameter to the tooth size of your LARGEST front chainring.
- Chainrings Rear*
 Set this parameter to the tooth size of your SMALLEST rear cassette cog.
- Number of gears* Set this parameter according to the number of gears in your cassette.

≡ Ge	ears Setti	ngs		
Туре	 Mech Elect Mech Elect Mech Elect Elect 	nanical rical/Di2 nanical Int rical Intern nanical Int rical Intern	ernal nal ernal w/ nal w/ Be	Belt elt
Chain rin	gs			
Front		<	34	Teeth
Rear 11t	h	<	10	> Teeth
Number	of gears	<	11	>

*The "Chainrings" adjustments can be disabled in the APP SETTINGS page to prevent the user from modifying the chainring sizing of the E-Bike.

Use the controls to modify each parameter for your gear setup, then when you're finished tap [UPDATE] to transfer the settings to your E-Bike.

In most cases, there is no need to change gear settings when you change the cassette or front sprocket. Often a change will result in an E010 error, in which case you must return to the factory settings.

IV. OTHER SETTINGS

For EP8/EP801/EP600 motors is possible to change overall Power and Torque settings. The App also has presets for turning a full powered motor into an RS version and back.

• Min/Max Torque These are lower and upper limiters for motor output.

• Power limiters

Maximum power output by a motor. The power depends on a max torque and cadence.



Use the arrows to modify each gear parameter, then when you're finished tap [**UPDATE**] to save the settings to your E-Bike.

V. LIGHT SETTINGS

If you have an optional LED light connected to your drive unit's light circuit, here you can set a specific calculated time for your LED lights that will be reserved by the system.

• Status Toggles the reserved preset on/off.

Reserved Time

Set this parameter to the amount of time to reserve for operation of your LED lights (in minutes).

• Light Output

This parameter allows the motor to accurately calculate the remaining battery reserve to keep the light on.

 On Off Always On
< 150 > min
< 27.0 > W

Use the arrows to modify each gear parameter, then when you're finished tap [**UPDATE**] to save the settings to your E-Bike.

VI. SPEEDOMETER CALIBRATION

This is where you can calibrate the speedometer for more accurate speed readings. This does not alter the drive unit's actual top speed; it only affects the speed shown on the display unit.

• Speed Correction (Percentage)*

You can adjust this to calibrate the speed shown on your display unit; the percentage represents the system's speed/odometer internal multiplier from -5% to +5%.

■ Circumference Setti	ngs
Circumference	
Correction	< 0.0 > %

*NOTE: The Speed Correction setting is available for E-8000 (4.7+) or E-7000/E-6000 (4.4+) or EP8/EP801/EP600.

If you make any changes above, don't forget to tap [UPDATE] to save the changes.

*The availability and functionality of the premium tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

TIP: After you are done tuning and you've exited the **ST UNLOCKER** app, don't forget to power cycle (turn off, then on) your E-Bike before use.

VII. STATISTICS

This is where you can view bike's statistics**



*The availability and functionality of the options above are dependent on the motor and the firmware installed in the motor

** The statistics on the screenshot are only available for EP8/EP801/EP600 motor. For other motors the stats will be limited.

VIII. BLACK BOX

This is where you can view internal data recorded by the drive unit, plus various other information. To load the data, you must first tap on **[READ]** to export the data from the system and into the **ST UNLOCKER** app.

- Time of Use Time of usage since last reset.
- Distance Distanced travelled since last reset.
- Total Distance
 Total distance travelled by the system (odometer);
 NOT RESETTABLE.
- Avg. Speed
 Average speed since last reset
- Max Speed Maximum speed reached by the system; <u>NOT</u> <u>RESETTABLE</u>.
- Regulation Log (EP8/EP801/EP600 only) The motor stores all regulation changes such as market settings and wheel circumference settings

	Box
	MOTOR DISPLAY SWITCH
Stored data	
0x00	And a second
Time of use	0h 05m
Distance	1.2 km
Total distance	1.2 km
Avg speed	12.6 km/h
Max speed	46.6 km/h
Error data	

≡ Black	Box		
REGULATION LOG	MOTOR	DISPLAY	SWITCH
44 107 100 0 0	0.022		
11/2//20 8:24	4 AM		
11/2//20 8:24 Market	4 AM		
Market Circumference	4 AM US 2300	mm	

*The availability and functionality of the options above are dependent on the motor and the firmware installed in the motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

STANDARD APP SETTINGS

Here you can adjust other miscellaneous application settings, as described below.

- Language Select your desired language.
- Auto Connect to E-bike
 When checked, just press the
 CONNECT button when you first start the app, and
 the app will connect to your E-bike automatically as
 soon as the E-bike is powered on.
- Auto Connect at startup When checked, the app will immediately connect to the bike when launched
- Allow to change Assist Power Enables or disables the "Power" adjustment slider on the ASSIST SETTINGS page.



- Allow to change Chain Rings Size
 Enables or disables the chain ring adjustment sliders on the GEARS SETTINGS page.
- Show Info message before connecting Enables or disables the "How to Connect" pop-up information message.
- Try to retrieve all historical data

If this option is enabled, on the **BLACK BOX** page the App will attempt to retrieve all data from the Motor memory, including unidentified data.

- Use Default PIN Check to force the app to use the default Bluetooth access PIN code (000000)
- Bluetooth Access PIN If you are using a custom PIN code to connect to your E-Bike, enter it here.

If you make any changes above, don't forget to tap [APPLY] to save the changes.

GET THE PREMIUM LICENSE

To unlock more tuning options for your E-Bike you can request a license.

The Premium license costs 30 EURO (~ 30 USD) excluding VAT.

A licensed app will unlock premium tuning options and other features*:

- Market Settings
- Drive Unit Mounting Angle
- Wheel Circumference
- Top Speed Adjustment



HOW-TO: REQUEST A LICENSE

1. Go to the Main Menu and tap "Send A License Request."

2. Your mobile device will open the built-in Mail app and pre-fill your E-Bike information in the Message field.

3. Simply tap **Send** to send the email request. Shortly you should receive a reply with a payment request.

Cancel	License request	Send
To: info@stun	locker.com	(
Cc/Bcc, From:		
Subject: Licer	nse request	
License requ	lest for:	
Motor mode	I: DU-E8000 / SC-E8000	
Firmware ver	r: 4.3.2 / 4.0.6	
Serial:	11117/1110	
	12-2-25-15-22-221	

*The availability and functionality of the premium tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

PREMIUM FEATURES: MAIN MENU (Licensed Version)

If you have upgraded to the licensed version, the **MAIN MENU** of the **ST UNLOCKER** app will have additional tuning options*.

• Market Settings (See section IX) ST Unlocker Allows you to set the assist maximum speed limit cut-off based on the drive unit's market destination. Drive Unit Angle (See section X) Allows you to adjust the mounting angle parameter of your drive unit. **Disconnect from E-Bike** E-Bike's Info Wheel Circumference (See section XI) Ê Presets Specify your wheel circumference for accurate Assist Settings speedometer calibration. 00 **Gears Settings** Top Speed Adjustment • **Light Settings** (See section XII) Allows you to raise the motor assist speed limit cut-∃ Other Settings off point (also known as "derestricting"). Market Settings 690 **Circumference Settings Speed Settings** (25)Black Box App Settings Manual (PDF) F Exit App

*The availability and functionality of the premium tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

IX. PREMIUM FEATURE: MARKET SETTINGS

This is where you can select your motor's "market setting" to specify the maximum speed limit cut-off for your E-Bike's assist.

- Europe (25 km/h limit) Select this to restrict your E-Bike assist to 25 km/h (15.5 mph) max.
- United States (32 km/h limit) Select this to restrict your E-Bike assist to 32 km/h (19.9 mph) max.
- Japan (25 km/h limit) Select this to restrict your E-Bike assist to 25 km/h (15.5 mph) max.
- Taiwan (25 km/h limit) Select this to restrict your E-Bike assist to 25 km/h (15.5 mph) max.
- Korea (25 km/h limit) Select this to restrict your E-Bike assist to 25 km/h (15.5 mph) max.

If you make any changes above, don't forget to tap [UPDATE] to save the changes.

*The availability and functionality of the premium tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

TIP: After you are done tuning and you've exited the **ST UNLOCKER** app, don't forget to power cycle (turn off, then on) your E-Bike before use.

	Market Settings
Mar	ket
(Europe (25 km/h limit)
	United States (32 km/h limit)
C) Japan (25 km/h limit)
C	Taiwan (25 km/h limit)
C) Korea (25 km/h limit)

X. PREMIUM FEATURE: DRIVE UNIT ANGLE

As an added premium feature to the **GEARS** section, this is where you can adjust the parameter of your E-Bike's drive unit mounting angle; this parameter can increase the WALK speed on certain model E-Bikes.

•	Other settings (Mount Angle)*	
	Use this to adjust the mounting angle	
	parameter of your drive unit; altering	
	the mounting angle may increase the	
	top speed of WALK MODE when	
	activated.	

\equiv Gears Set	tings				
() Me	echanical				
O Ele	Electrical/Di2				
Me	O Mechanical Internal				
Ele	O Electrical Internal				
	O Mechanical Internal w/ Belt				
	ectrical Internal w/ Belt				
Chain rings					
Front	< 34 > Teeth				
Rear 11th	< 10 > Teeth				
Number of gears	< 11 >				
Other settings					
Mount angle	< -30 > °				

If you make any changes above, don't forget to tap [UPDATE] to save the changes.

*The availability and functionality of the premium tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

TIP: After you are done tuning and you've exited the **ST UNLOCKER** app, don't forget to power cycle (turn off, then on) your E-Bike before use.

XI. PREMIUM FEATURE: WHEEL CIRCUMFERENCE

As an added premium feature to the **CIRCUMFERENCE** section, his is where you can select and/or calibrate your E-Bike's wheel size specification for accurate speedometer readings.

- **Circumference Presets** Select 29", 27.5", 26", or 700c to match the actual wheel size of your E-Bike.
- Circumference (Custom) If you select "Custom", use the slider to set your actual tire circumference as measured in millimeters

Circum	ference Settings				
Circumference					
O 29"					
O 27.5"					
O 26"					
O 700c					
O Custom					
2200 mm					
Speed correction					
0.0%	——				

If you make any changes above, don't forget to tap [UPDATE] to save the changes.

*The availability and functionality of the premium tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

XII. PREMIUM FEATURE: TOP SPEED ADJUSTMENT

This is where you can raise or lower the motor assist speed limit cut-off point (also known as "derestricting") for each of the three drive modes (ECO, TRAIL, and BOOST).

Speed Settings*
 When you set a speed, your E-Bike's motor will continue to provide assist until you reach this speed. Raising the speed means you'll have more assist beyond the OEM speed limit.

\equiv	Speed Settings
Speed	
Eco 32km/h	— —
Trail 40km/h	— — —
Boost 48km/h	

Use the sliders to modify each parameter for each drive mode, then when you're finished tap [UPDATE] to transfer the settings to your E-Bike.

***NOTE: This setting is only available for E-bikes that are equipped with the DU-E8000** drive unit with **firmware 4.3.2** and the **SC-E8000** display unit only.

*The availability and functionality of the premium tuning options above are dependent on the firmware installed in your motor; to see what firmware versions are compatible, please see the DRIVE UNIT / MOBILE DEVICE COMPATIBILITY section for more information.

TIP: After you are done tuning and you've exited the **ST UNLOCKER** app, don't forget to power cycle (turn off, then on) your E-Bike before use.

XIII. AUTO PRESETS (Configuration)

As an added feature to the **APP SETTINGS** section, this feature allows you to select two Presets (see the **PRESETS** section) that will automatically be loaded into your E-Bike when used in conjunction with the **ST UNLOCKER** app home screen Icon or in "Today View" using the **ST UNLOCKER** app widget.

- Preset for Widget/Shortcut
 Here you can select one of your
 PRESETS to become the WIDGET
 PRESET; leave this setting at "None"
 to disable this feature.
- Preset for the bike restriction (Panic) Here you can select one of your PRESETS to become the PANIC PRESET; leave this setting at "None" to disable this feature.

Once you set your Auto Presets, you can activate them automatically from your mobile device's home screen through the ST UNLOCKER app icon. Simply press and hold the icon and a small menu will pop up:

• Panic (Restrict)

Example: Use when you want to quickly configure your E-Bike back to standard (stock) settings.

• With Preset

Ideally used with E5000 and E6100 systems where the system may sometimes reset all parameters with each E-Bike restart.

• Connect

Quick-connects the **ST UNLOCKER** app to your E-Bike without applying a Preset.





XIV. IOS 'TODAY VIEW' WIDGET

You can add the **ST UNLOCKER** app widget to your iOS 'Today View' screen to allow you to quickly activate your **AUTO PRESETS** without having to unlock your mobile device.

- Add A New Widget Scroll to the bottom of the 'Today View' screen and press 'EDIT'.
- In the MORE WIDGETS list find the ST UNLOCKER app widget and tap the green (+) icon to add it to your device's 'Today View' screen.

You will now have one-tap access to your **AUTO PRESETS** you configured, without having to unlock your mobile device or open the **ST UNLOCKER** app.





FAQ / TROUBLESHOOTING

First time connecting to your E-Bike?

Before you attempt to use the **ST UNLOCKER** app, you must first already establish a Bluetooth Low-Energy (BLE) paired connection between the "E-T*be" app (on your mobile device) and your E-Bike. To do this, go to the App Store on your device and download the "E-T*be" app. Launch the "E-T*be" app and follow the directions to pair the to your E-Bike. Once you have successfully paired your device, you do not have to do it again. You can close the "E-T*be" app and begin using the **ST UNLOCKER** app.

I'm having trouble connecting ST UNLOCKER to my E-Bike?

If you can connect with the "E-T*be" app (see above) but you're having trouble connecting with **ST UNLOCKER**, try the following, in order:

- 1. Turn your E-Bike off and completely close ALL device apps
- 2. Restart ST UNLOCKER app first.
- 3. Turn your E-Bike on, then tap "Connect" in the ST UNLOCKER app.

I can connect, but then the ST UNLOCKER app loses the initial connection to my E-Bike?

If it looks like you made a successful initial connection but then the app gets disconnected, this means that the PIN code in the **ST UNLOCKER** app's **APP SETTINGS** page <u>does not match</u> the PIN code set in your E-Bike. Go to the **APP SETTINGS** page, enter correct PIN, then try again.

I'm pretty sure my PIN is correct; how can I check this to be sure?

If you believe that the PIN code you know is correct and original "E-T*be" App works fine with your bike try uninstalling the "E-T*be" app, then reinstall it from the app store. The first time you open the "E-T*be" app it will ask you for your E-Bike's PIN. Enter the PIN you know and see if it connects; if it doesn't, then you have the wrong PIN code. If you forgot your PIN code you can reset it with Factory Windows app with the PCE interface, or go to your local E-Bike dealer and have them reset the PIN code for you.

I tried all of the above, I still can't connect to my E-Bike?

If you still can't connect, go to your mobile device's BLUETOOTH settings and if you see your E-Bike listed, unpair it first, then restart the **ST UNLOCKER** app and try again.

I tried using this app with my E-Bike, and nothing seems to be happening?

We have tested the app extensively on numerous bikes, firmware versions, mobile devices, and configurations listed in this manual with success. Many customers have also had success. However obviously we cannot test EVERY system available. That said, there are no guarantees that the app will be compatible with your specific E-Bike/system/firmware.

If you have tried all the other suggestions above and you still can't connect, try updating the firmware to the current version using the factory "E-T*be app.

What is the default Bluetooth passkey for my E-Bike?

The default Bluetooth passkey is "000000".

Is the app compatible with the EW-EN100 Junction?

Yes.

What happens to my ST UNLOCKER settings if I use the E-Bike's factory app?

If you connect to your E-Bike using the E-Bike's factory app and make any changes, this will override any changes you made using **ST UNLOCKER** back to the factory default ranges, including maximum assist, torque, and any speed limit modifications. Thus, to take advantage of all the capabilities of **ST UNLOCKER**, we suggest that you <u>do not use the E-Bike's factory app</u> concurrently and just use the **ST UNLOCKER** app for all tuning.

My display unit showing the wrong speed, how do I fix this?

First, make sure you selected the correct wheel diameter for your E-Bike in the CIRCUMFERENCE SETTINGS area – you can use the presets, or measure your wheel to get the exact diameter. Next, determine which direction to make adjustments: if your display is showing slower than your actual speed, reduce the wheel diameter. If your display is showing faster than your actual speed, increase the wheel diameter. NOTE: If you're using **E-8000 (firmware 4.7+)** or **E-7000/E-6000 (4.4+)** or **EP8/EP801/EP600** you can keep your wheel circumference the same, and just adjust the speed displayed in +/-5% increments with the SPEED CORRECTION setting.

Can I use this app to downgrade my firmware?

No, the **ST UNLOCKER** app does not downgrade firmware. You only need the E-T*be app and earlier firmware files to downgrade.

Can you tell me where to download earlier firmware or send me the files?

No, because we don't want to be blamed if you try to install it but fail and brick your e-Bike (it's possible to recover it using PCE interface).

HELP! I tried to downgrade my firmware, but now my E-Bike isn't working!

Sorry to hear that. Please read page 3. Anyway, you can recover it using PCE interface.

If I have to get my bike serviced under warranty, will they know/can they find out if I've used an app to modify my E-Bike?

It's possible. It depends. At this point, we have no evidence to prove that dealers can determine the use of the **ST UNLOCKER** app. The **ST UNLOCKER** does not write anything to the regulation log (for EP8/EP801/EP600 motor). <u>We strongly recommend that you change ALL settings to factory defaults</u> (region, circumference, assistant settings, lights, etc.) and upgrade the firmware to the latest version using E-T*be app BEFORE visiting a service center. If you're afraid you might void your warranty coverage if something goes wrong with your E-Bike and you have to take it to a service center, then simply don't use the ST UNLOCKER app – stick to the factory E-T*be app instead.

Can you guarantee that I won't mess anything up using this app?

Of course not! Just because the **ST UNLOCKER** app can modify your E-Bike system do these extra things, it doesn't mean that everyone who uses it will have 100% trouble-free success. We don't know how you will use the app, so we don't know if you'll use it right or be stupid and try to force your E-Bike to do things it shouldn't do. The **ST UNLOCKER** app is just a tool; what you do with the tool and how you use it is your responsibility.

LICENSE AGREEMENT / RELEASE OF LIABILITY

This is a legal agreement between you, the "END USER", and the stunlocker.com software author ("AUTHOR"). Use of this software and manual (the "PRODUCT") written by the AUTHOR indicates your acceptance of these terms.

The **ST UNLOCKER** app is provided "as is", without warranty of any kind, express or implied, including but not limited to the warranties of merchantability, fitness for a particular purpose and non-infringement. In no event shall the AUTHOR or copyright holder be liable for any claim, damages, personal injury or other liability, whether in an action of contract, tort or otherwise, arising from, out of or in connection with the **ST UNLOCKER** app, manual or the use or other dealings in the product.

1. GRANT OF LICENSE. AUTHOR hereby grants you the right to use the PRODUCT on a single device. The PRODUCT is considered in use on a device when it is loaded into temporary memory or installed into permanent memory.

2. PROPRIETARY RIGHTS. The PRODUCT is owned exclusively by the respective AUTHOR, and this license does not transfer any ownership of the PRODUCT to you.

3. NON-PERMITTED USES. You may not translate, reverse program, disassemble, decompile or otherwise reverse engineer the PRODUCT.

4. NO WARRANTY. THIS PRODUCT IS LICENSED TO YOU "AS IS," AND WITHOUT ANY WARRANTY OF ANY KIND, WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. AUTHOR DOES NOT WARRANT THAT THIS PRODUCT DOES NOT INFRINGE ANY RIGHTS OF THIRD PARTIES.

5. LIMITATION OF LIABILITY. AUTHOR grants the license to the PRODUCT hereunder and the END USER accepts the use hereof on an "AS IS" and "WITH ALL FAULTS" basis. Furthermore, the END USER understands and agrees that IN NO EVENT WILL AUTHOR OR ANY OF ITS SUPPLIERS BE LIABLE TO LICENSEE FOR SPECIAL OR CONSEQUENTIAL DAMAGES which might arise out of or in connection with the performance or non-performance of this Agreement or of the PRODUCT hereunder, even if the AUTHOR has been advised of the possibility of such damages, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS due to errors, inaccuracies, omissions, incompleteness or insufficiency of the PRODUCT or materials, nor for the usefulness of the PRODUCT to the END USER. In no event shall the AUTHOR liability related to any of the PRODUCT exceed the license fees, if any, actually paid by you for the PRODUCT. AUTHOR shall not be liable for any damages whatsoever arising out of or related to the use of or inability to use the PRODUCT, including but not limited to direct, indirect, special, incidental, or consequential damages.

TRADEMARK LEGAL NOTICE

ST UNLOCKER is not affiliated with Apple, Inc. Apple, App Store, iOS, iPadOS, and Mac are trademarks of Apple Inc., registered in the U.S. and other countries.

All product names, trademarks and registered trademarks are property of their respective owners. All company, product and service names used in this website are for identification purposes only. Use of these names/trademarks and brands does not imply endorsement. All other trademarks cited herein are the property of their respective owners.

The **ST UNLOCKER** logo, app manual and related materials cannot be reproduced, retransmitted, distributed, disseminated, sold, published, broadcasted or circulated without prior written consent or license from stunlocker.com.

ST Unlocker version 1.17 for iOS/iPadOS © 2023 Raine & stunlocker.com Original ST Unlocker Manual 1.0-1.9i for iOS/iPadOS by Raine

