



The eBike Display

KD586

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Product name and Model

E-bike Intelligent LCD display Model: KD586

Specifications

- •24V/36V/48V Power Supply
- •Rated working current: 10mA
- •The maximum working current: 30mA
- •Off-state leakage current: <1µA
- Operating temperature: -20 °C ~ 60 °C
- Storage temperature: -30°C~ 70°C

Appearance and Size

Product appearance and dimensional drawing (unit: mm)







Figure 3

Functions and Button Definition

♦ Function Summary

KD586 has many functions to meet riders' needs. The indicating contents are as follows:

- •Smart battery SOC, real-time voltage or percentage, optional
- •Intelligent indication of Trip, ODO, RT speed, Max. Speed, Avg Speed, Power and Trip
- •Tip time(Min)
- •Assist level adjustment and indication
- $\bullet {\sf Backlight}$ control and lighting indicator
- The push-assist control and indication
- Error code indication
- Various Parameters Settings (e.g., trip clearance, backlight setting, Unit toggling
- •wheel size, speed limit, battery power bar setting, assist level setting, power-on password enable, etc.)

♦ Button Definition:

KD586 remote, K43 has 4 keys, on/off. info, plus and minus. Plus/minus pressing is like pressing the rocker switch. In this manual, we will use ON/OFF, i , + and - to represent those words. Hold means pressing button for 2 seconds and short press means less than 2 seconds pressing.

General Operations

Switching the E-bike System On/Off

To switch on the E-bike system and provide the power supply to the controller, hold the On/Off button for 3s.

To switch off E-bike system, hold the On/Off button for 2s. The E-bike system no longer uses the battery power.

When E-bike system is switched off, the leakage current is less than 1 μ A.

■When the E-bike is parked for approx. 10 minutes, the E-bike system switches off automatically.

♦ Display Interface

After switching on the E-bike system, the display shows Current Speed by default. Press the "**ON/OFF**" button to switch between indication functions below:

Trip distance (Km) \rightarrow ODO (km) \rightarrow Trip time (min) \rightarrow Avg. Speed (Km/h) \rightarrow Max. Speed (Km/h)



Display indication cycle interface

Switching Push-assistance mode ON/OFF

To activate the push-assistance function, press and hold the "-" button. After 2 seconds, Ebike is activated to go at a uniform speed of 6 Km/h while the screen displays

The push-assistance function will be switched off as soon as you release the "-" button.



Push-assistance mode

■Push-assistance function may only be used when pushing the E-bike. Be aware of danger of injury when bike wheels do not have ground contact while using the push-assistance function.

Switching the Lighting On/Off

To switch on E-bike lights, press the "+" button for 2s. The display backlight brightness is automatically reduced while the screen displays "

Likewise, press the "+" button for 2s again, the bike lights can be switched off and display backlight recover its brightness.



Switching the Lighting On/Off Interface

♦ Assist Level Options

Press "+" or "-" button to change the E-bike system assist level and change the motor output power.



Assist Level interface

Motor Power Indicator

The power of the motor can be read via interface below:



Motor Power Indication Interface

♦ Error Code Indication

The components of the E-bike system are continuously and automatically monitored.

When an error is detected, the respective error code is indicated in text indication area.

Refer to detailed definition of the error codes in Attached list 1.



Error Code Indication

■ Have the display inspected and repaired when an error code appears. Or else, you will not be able to ride the bike normally. Please always refer to an authorized bicycledealer.

DisPlay Setting

Press the **ON/OFF** button to switch on the display.

To access Setting page, hold both the "+" button and the "-" button simultaneously for 2s.





All the Settings are operated in the case of a parked E-bike.

◆ Trip Distance Clearance

Trip Reset represents trip distance clearance setting.

To clear trip distance, press "+" button or "-" button to select Yes or No. Yes represents clearing a single ride distance. No represents not clearing a single ride distance.

To store a changed setting, press " i " button.

DisPlay	Setting		DisPlay	Setting
TRIP Reset	NO		TRIP Reset	YES!
Toggle Unit	Metric		Toggle Unit	Metric
Wheel	28Inch	~	Wheel	28Inch
Speed Limit	29Km/h	~	Speed Limit	29Km/h
Set Voltage	36–1		Set Voltage	36–1
Sensitivity	01		Sensitivity	01
BACK			BACK	

Trip Distance Clearance Settings Interface

◆ Toggle Unit km/mile

Toggle Unit represents unit settings. The default value is "Metric (km)". To toggle the unit, press the "+" button or the "-" button to choose the desired setting item.

To store a changed setting, press the " i " button.

DisPlay		DisPla	y Setting	
TRIP Reset	NO		TRIP Reset	NO
Toggle Unit	Metric		Toggle Unit	Imperial
Wheel	28Inch	ト	Wheel	28Inch
Speed Limit	29Km/h	5	Speed Limit	29Km/h
Set Voltage	36–1		Set Voltage	36–1
Sensitivity	01		Sensitivity	01
BACK			BACK	

Mile and Km Conversion Settings Interface

♦ Wheel Diameter Settings

Wheel represents wheel diameter settings. The default value is 26 inch.

To change basic settings, press the "+" or the "-" button to increase or decrease until the desired value is displayed.

To store a changed setting, press the " i " button.

DisPlay Setting			DisPla	y Setting
TRIP Reset	NO		TRIP Reset	NO
Toggle Unit	Metric		Toggle Unit	Metric
Wheel	18Inch	~	Wheel	28Inch
Speed Limit	29Km/h	5	Speed Limit	29Km/h
Set Voltage	36–1		Set Voltage	36–1
Sensitivity	01		Sensitivity	01
BACK			BACK	

Wheel diameter settings interface

♦ Speed-limit Settings

Speed Limit represents the limit speed settings. When the current speed is faster than speed limit, the E-bike system will be switched off automatically. Speed limit range is 12Km/h to 40Km/h.The default value is 25Km/h.

To change basic settings, press the "+" or the "-" button to increase or decrease until the

desired v	alue is	displayed.	Press the	"i"	button 1	to sav	e a	chang	ged se	etting.	

DisPlay Setting			DisPlay	Setting
TRIP Reset	NO		TRIP Reset	NO
Toggle Unit	Metric		Toggle Unit	Metric
Wheel	28Inch	-	Wheel	28Inch
Speed Limit	29Km/h		Speed Limit	30Km/h
Set Voltage	36-1	200	Set Voltage	36–1
Sensitivity	01		Sensitivity	01
BACK			BACK	

Speed limit settings interface

Battery Power Bar Settings

Set Voltage represents battery voltage settings. Short press + or - button to switch between different battery voltages: 24V, 36V and 48V and then press " i " button to enter the corresponding voltage bar value settings. For example, VOL 1 is first bar voltage value. The default value is 31.5V.

To set battery power bar, press the "+" or the "-" button to increase or decrease the number. To store a changed setting and access the second bar, press " i " button.

In the same manner, after 5 bars voltage values are entered, hold the " i " button to confirm and save the settings and return to the setting page.

DisPlay	y Setting		DisPla	y Setting
TRIP Reset	NO		TRIP Reset	NO
Toggle Unit	Metric		Toggle Unit	Metric
Wheel	28Inch	3	Wheel	28Inch
Speed Limit	29Km/h	~	Speed Limit	29Km/h
Set Voltage	24-1		Set Voltage	<mark>36–1</mark>
Sensitivity	01		Sensitivity	01
BACK			BACK	

Battery power settings interface

DisPlay S	ietting	DisPlay	Setting
TRIP Reset	NO	TRIP Reset	NO
Toralo Unit	Metric	Terrie Unit	Metric
1 - 31.5V	28Inch	1 - 50.0V	28Inch
2 = 44.0V	29Km/h	$ 2 - 80.0 \rangle$	29Km/h
3 = 40.5V	48-1	3 = 80.00	48-1
5 - 40.0V	01	4 60.0V	01
0 40, VI		5 80.04	G

Battery Voltage bar Setting Point

♦ PAS Sensitivity Settings

Sensitivity represents PAS sensitivity settings. The sensitivity value ranges from "1" to "5".

"1" is the strongest, "5" is the weakest. The default value is "1".

Press the +/- button to choose sensitivity value to change the PAS sensitivity settings.

To store a changed setting, press the i button

DisPlay	Setting		DisPlay	Setting
TRIP Reset	NO		TRIP Reset	NO
Toggle Unit	Metric		Toggle Unit	Metric
Wheel	28Inch	-	Wheel	28Inch
Speed Limit	29Km/h		Speed Limit	29Km/h
Set Voltage	36–1		Set Voltage	36–1
Sensitivity	01		Sensitivity	02
BACK			BACK	

Sensitivity settings interface

Advanced Settings

After DisPlay Setting is done, Press Back to return Setting page.

Press + or - button to choose Advanced Settings and press "i " button to enter

Advanced Settings page.

PAS level Settings PAS Level Mode Options

Power Set represents power assist level settings. In assist level settings, there are 8 modes for your choice: 0-3, 1-3, 0-5, 1-5, 0-7, 1-7, 0 -9, 1-9. The default value is 0-5. To change the mode of assist level, press "+" or "-" button to choose the desired

mode and press the "i" button to confirm and access PAS level ratio settings

automatically.

Advanced Set	tings	Advanced Set	tings
Power Set	1-3	Power Set	0-5
Current Limit	7A -	Current Limit	7A
Assistant Num	10	Assistant Num	12
Speed sensor	01	Speed sensor	01
Slow Start	-0-	 Slow Start	-0-
LCD Luminance	100%	LCD Luminance	100%
Password	>	Password	>
BACK		BACK	

PAS level mode settings

PAS Level Ratio Settings

To change the ratio of a certain assist level, press the "+" button or "-" button to choose the desired ratio, and press the " i " button to confirm.

For example, the ratio range is "45-55 percent" for level "1"; percentage can be changed and the default ratio value is 50 percent.

To store a changed ratio setting, press the " i " button and move to the next level ratio setting.

After ratios of all assist levels are input, press the " i " button to confirm.

Please refer to assist level ratio default values in Attached list 2.

Advanced Sett	ings	Advanced Set	tings
Power Set	0-5	Power Set	0-5
Current Limit	22A	Current Limit	22A
Assistant Num	12	Assistant Num	12
1 - 32%	01		01
$\hat{2} - \hat{61\%}$	-1-	2 - 80%	-1-
3 - 73%	100%	3 - 80%	100%
4 - 85%	>	4 - 80%	>
5 - 96%		5 - 80%	

PAS ratio settings interface

Controller Over-current Cut Settings

Current Limit represents controller over-current cut settings. The current value can be changed from 7A to 22A.

To change basic settings, press the "+" or the "-" button to increase or decrease the value of the current.

To store a changed setting, hold the " i " button.

Advanced S	ettings		Advanced S	Settings
Power Set	0–5		Power Set	0–5
Current Limit	7A		Current Limit	12A
Assistant Num	48	~	Assistant Num	48
Speed sensor	01		Speed sensor	01
Slow Start	-0-		Slow Start	-0-
LCD Luminance	100%		LCD Luminance	100%
Password	>		Password	>
BACK			BACK	

Current Limit settings interface

Power Assistant Sensor Settings

Assistant Num represents PAS magnet quantity settings. The setting value is "5" to "24" which refers to the number of magnets on PAS disk. The default value is 12.

To change the magnet quantity of PAS sensor, press the "+" or the "-" button to choose the desired number of PAS magnets.

To store a changed setting, press the " i " button.

Advanced Se	ttings	Advanced Set	ttings
Power Set	0–5	Power Set	0–5
Current Limit	7A	Current Limit	7A
Assistant Num	48	Assistant Num	04
Speed sensor	01	Speed sensor	01
Slow Start	-0-	Slow Start	-0-
LCD Luminance	100%	LCD Luminance	100%
Password	>	Password	>
BACK		BACK	

Assistant numbers settings interface

♦ Speed Sensor

Speed Sensor represents speed sensor settings. The default value is 1.

To change speed sensor settings, press the "+" or the "-" button to select the corresponding quantity of magnet poles (the range is from 1 to 15).

Advanced Set	tings		Advanced Set	tings
Power Set	0–5		Power Set	0–5
Current Limit	7A		Current Limit	7A
Assistant Num	12		Assistant Num	12
Speed sensor	01		Speed sensor	12
Slow Start	-0-	Land	Slow Start	-0-
LCD Luminance	100%		LCD Luminance	100%
Password	>		Password	>
BACK			BACK	

To store a changed setting, press the " i " button.

Speed sensor settings interface

Slow Start up Settings

Slow start represents slow start up settings. The range is "1-4", "4" is the slowest. The default value is "1".

To change slow start up settings, press the +/- button to choose the desired value.

To store a changed setting, press the i button.

Advanced Set	tings		Advanced Settings			
Power Set	0–5		Power Set	0–5		
Current Limit	7A		Current Limit	7A		
Assistant Num	12		Assistant Num	12		
Speed sensor	01	\leq	Speed sensor	08		
Slow Start	-0-		Slow Start	-3-		
LCD Luminance	50%		LCD Luminance	100%		
Password	>		Password	>		
ВАСК			BACK			

Slow start up settings interface

Backlight Brightness Settings

LCD Luminance represents backlight brightness. 100% is the highest brightness.

The less the percentage, the lower the backlight brightness.

To change the backlight brightness, press the "+" button or the "-" button to choose the desired percentage.

Power Set 0 - 50 - 5Power Set Current Limit 7A Current Limit 7A Assistant Num **Assistant Num** 12 12 Speed sensor 01 Speed sensor 01 Slow Start Slow Start -0--0-LCD Luminance LCD Luminance 100% 50% Password Password > > BACK BACK

To store a changed setting, press the " i " button.

Backlight Brightness Settings Interface

Power-on password settings:

Press + or - button to choose 'Password' and press i to confirm. Meanwhile press +/- button to choose 'Start Password' and press i to confirm. Press + or - to shift from 'OFF' to 'ON'.



Power-on password settings interface

Power-on password enable/disable

In "Start PassWord" interface, choose 'ON' and short press(less than 0.5S) i button to confirm. Meanwhile, display interface prompts for a password. Press + or - button to shift numbers from 0 to 9 and press i button to confirm and input the next digit. After the input is done, the interface will prompt for entering the password again. If two inputs are consistent, the system prompts that the password is set successfully. If two inputs are inconsistent, the first input is to be repeated and confirm the new password again. The interface will be redirected to original settings page 2 seconds after the password is set successfully. Hold i button for more than 2 seconds to exit to the main page or by route' BACK' \rightarrow 'EXIT'. The operation steps are as follows:



Password enable/disable interface

Password Reset.

When password is enabled, 'Reset password' will add to Password interface. Press(less than 0.5s) +/- button to choose 'Reset Password' and press(less than 0.5s) i button to confirm. Meanwhile, the interface prompts for current password input. The display will be powered off automatically when the password is entered incorrectly after 10 inputs. When a correct password is input, the interface prompts for a new password. Then follow the operations of setting a new password. The interface will be redirected to original settings page 2 seconds after the password is reset successfully. Hold i button for more than 2 seconds to exit to the main page or by route' BACK' \rightarrow 'EXIT'. The operation steps are as follows:



Password reset interface

Password Disable

In "Start PassWord" interface, choose 'OFF' and short press (less than 0.5S) i to confirm. Meanwhile, display interface prompts for a password. The display will be powered off automatically when the same password is entered incorrectly after 10 inputs. When a correct password is input, the display will give a prompt of 'password function disabled'. After 2 seconds, the interface will be redirected to original settings page. Hold i button for more than 2 seconds to exit to the main page or by route' BACK' \rightarrow 'EXIT'. The operation steps are as follows:



■If there is no operations in one minute; the display will exit the settings state.

Quality Assurance and Warranty Scope

I Warranty

- 1. The warranty will be valid only for products used in normal usage conditions.
- 2. The warranty is valid for 24 months after the shipment or delivery to customers

Il the following cases do not belong to our warranty scope.

- 1. The display is demolished.
- 2. The damage of the display is caused by wrong installation or operation.
- 3. Shell of the display is broken when the display is out of the factory.
- 4. Wire of the display is broken.

5. The fault or damage of the display is caused by the force majeure (e.g., fire, earthquake, etc.).

6. Beyond Warranty period.

Connection Layout

Connector wire sequence



Connector to controller

Display end

Connection wire end to display end

wire sequence table

Wire	Color	Function
1	Red (VCC)	+
2	Blue (K)	Lock
3	Black (GND)	-
4	Green (RX)	RX
5	Yellow (TX)	ТХ

■Some products have wire connection with water-proof connectors; users can't see the color of lead wires in the harness.

Warnings:

1. Use the display with caution. Don't attempt to release or link the connector when battery is on power.

2. Try to avoid hitting the display.

3. Don't modify system parameters to avoid parameter disorder. Or else, you will not be able to ride the bike normally.

4. Make the display repaired when error code appears.

This manual instruction is a universal version for **DISPLAY KD586**. Some versions of this

display may be different from specification to specification as to the software. Please always

refer to an actual version.

Error Code	Definition
21	Current Abnormality
22	Throttle Abnormality
23	Motor Phase Abnormality
24	Motor Hall Signal Abnormality
25	Brake Abnormality
30	Communication Abnormality

Attached list 1: Error code definition

Attached list 2: Assist level ratio defaults

Level Assist Level Mode	1	2	3	4	5	6	7	8	9
0-3/1-3	50%	74%	92%	_			_		_
0-5/ 1-5	50%	61%	73%	85%	96%		_		_
0-7/ 1-7	40%	50%	60%	70%	80%	90%	96%		
0-9/ 1-9	25%	34%	43%	52%	61%	70%	79%	88%	96%