e DASH PLUS 500W

OWNER'S MANUAL

DASH PLUS 500W MID-DRIVE E-BIKE

SERFAS®

www.serfas.com

SERFAS DASH PLUS 500W MID-DRIVE
OWNER'S MANUAL

Thank you for purchasing a Serfas Dash Plus 500W e-bike! Before riding, please take a moment to review these instructions.

Need service or support? Visit our website for quick answers, manuals, and/or give us a call and we'll find you a solution.

Register at: www.serfas.com/warranty-form

Don't Forget To Register Your Bike!

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DISPLAY / CONTROL SPECIFICATIONS

- 48 Volt Power Supply (500W)
- Current Rated: 10mA
- Maximum Operating Current: 30mA
- Power Off Leakage Current < 1uA
- Operating Current to Controller: 50mA
- Operating Temperature: -20º to 45ºC
- Storage Temperature: -20º to 50ºC
- Waterproof Rating: IP65
- Bearing Humidity: 30% - 70% RH

Figure 1

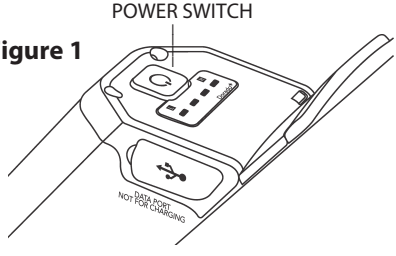


Figure 3

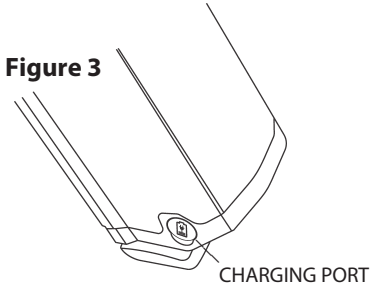
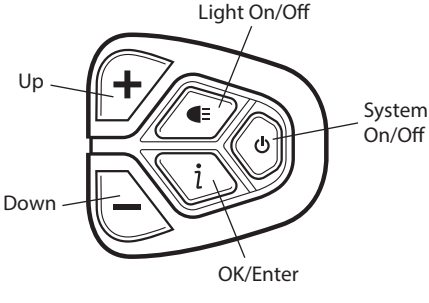


Figure 2



CONTROL & DISPLAY

Model: DP C18.CAN BUS

GETTING STARTED

The Dash Plus 500W is operated using the control pad on the handlebars. The control pad is located near the left-hand brake lever.

Push the power button on the battery to turn on. The current charge level will temporarily display on the LEDs (4=full, 1=near empty), then one green LED to show the battery is turned on. Press and hold the ⏻ button, 2 seconds, on the handlebar controls to turn system on. Display should light up. Now, your e-bike is ready to ride. To turn off, press and hold ⏻ for 2 seconds. The battery will automatically turn off. Automatic system shutdown time is set to 5 minutes by default.

The Dash Plus 500W bike offers pedal assist. When using pedal assist, an electric motor supplements the rider's own effort. To use the pedal assist, simply start pedaling, then push the + button to increase assist or − button to decrease pedal assist. 0 = lowest, 5 = highest. Pedal assist will engage at speeds up to 28 MPH.

The Dash Plus 500W e-bike is equipped with a throttle, which is mounted near the rider's left thumb, to propel the bike without pedaling. To use the throttle, start pedaling (one pedal revolution) then push down on the throttle while pedaling. Once the bike is moving on throttle power, you can stop pedaling entirely and use your thumb to control the speed of the bike. The throttle can propel you at speeds up to 20 MPH.

THE MOTOR STOPS WHEN YOU:
1) Stop pedaling 2) Squeeze the brake levers 3) Release the throttle. Simply begin pedaling again to re-engage the motor.

NORMAL OPERATION

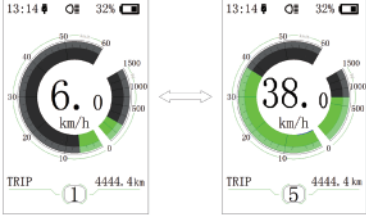
7.7.1 Switching the System ON/OFF

Press and hold ⏻ (>2S) on the display to turn on the system. Press and hold ⏻ (>2S) again to turn off the system.

If the "automatic shutdown time" is set to 5 minutes (it can be set with the "Auto Off" function, See **"Auto Off"**), the display will automatically be turned off within the desired time when it is not in operation. If the password function is enabled, you must enter the correct password to use the system.

7.7.2 Selection of Support Levels

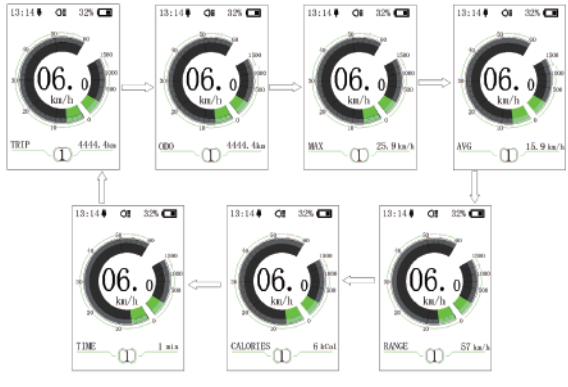
When the display is turned on, press the + or − (<0.5S) button to switch to the support level, the lowest level is 0, the highest level is 5. When the system is switched on, the support level starts in level 1. There is no support at level 0.



7.7.3 Selection Mode

Briefly press the i (0.5s) button to see the different trip modes.

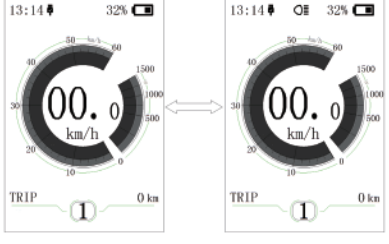
Trip: daily kilometers (TRIP) - total kilometers (ODO) - Maximum speed (MAX) - Average speed (AVG) - Range (RANGE) - Energy consumption (CALORIES(only with torque sensor fitted)) - Travel time (TIME).



7.7.4 Headlights / backlighting

Hold the (>2S) button to activate the headlight and taillights.

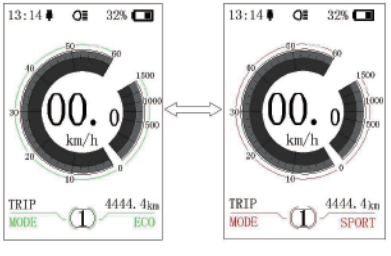
Hold the (>2S) button again to turn off the headlight. The brightness of the backlight can be set in the display settings **"Brightness"**. If the display /Pedelec is switched on in a dark environment, the display backlight/headlight will automatically be switched on. If the display backlight/headlight has been manually switched off, the automatic sensor function is deactivated. You can only turn on the light manually. After switching on the system again.



7.7.5 ECO/SPORT Modus

Press and hold the (<2S) Button, to change from ECO mode to Sport mode.

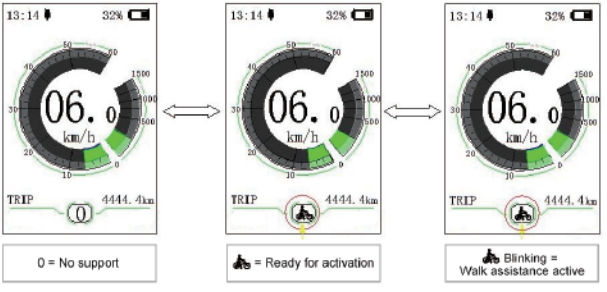
(Depending on the version of the pedelec manufacturer)



7.7.6 Walk Assistance

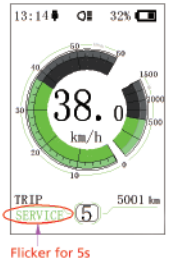
The Walk assistance can only be activated with a standing pedelec.

Activation: Press the — button until this symbol appears. Next hold down the — button whils the symbol is displayed. Now the Walk assistance will activate. The symbol will flashes and the pedelec moves approx. 6 km/h. After releasing the — button, the motor stops automatically an switches back to level 0.

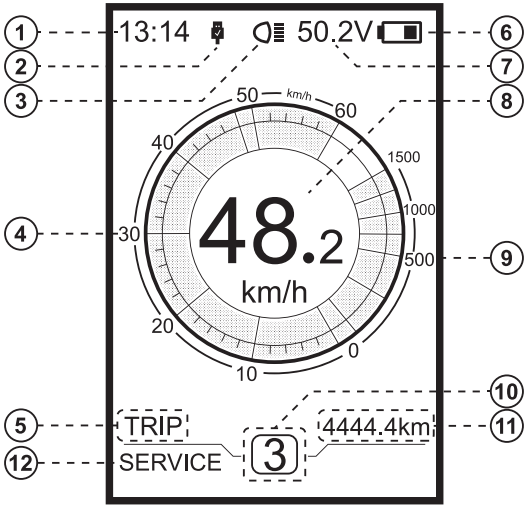


7.7.7 SERVICE

The display shows "Service" as soon as a certain number of kilometers or battery charges has been reached. With a mileage of more than 5000 km (or 100 charge cycles), the “Service" function is displayed on the display. Every 5000 km the display "SERVICE" is displayed every time. This function can be set in the display settings.



WHAT'S ON THE DISPLAY



1. Time
2. USB charging indicator displays the icon if an external USB device is connected to the display.
3. The display shows this symbol, if the light is on.
4. Speed Graphics
5. Trip: Daily Kilometers (TRIP) - Total Kilometers (ODO) - Top Speed (MAX) - Avg. Speed (AVG) - Range (RANGE) - Energy Consumption (CALORIES(only w/ torque sensor fitted)) - Travel Time (TIME)
6. Real time battery capacity.
7. Voltage indicator in Voltage or %
8. Digital Speed Display
9. Power indicator in Watts / Amperes
10. Support Level / Walking Assistance
11. Data: Display data, which corresponds to the current mode.
12. Service: Please see the service section

IMPORTANT NOTICE

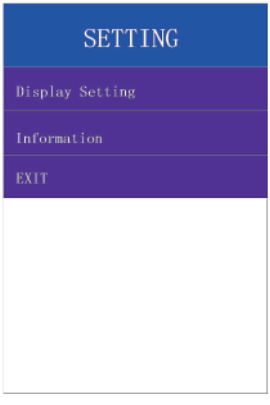
- If the error information from the display cannot be corrected according to the instructions, please contact your reseller.
- The product is designed to be waterproof, it is highly recommended to avoid submerging the display under water.
- Do not clean the display with a stream jet, high-pressure cleaner, or water hose.
- Do not use thinners or other solvents to clean the display. Such substances can damage the surfaces.
- Warranty is not included due to wear and normal use and aging.

7.8 SETTINGS

After the display is turned on, quickly press the button twice, to access the "SETTINGS" menu. By pressing the + or − (<0.5S) button, you can select: Display Settings, Information or EXIT. Then press the (<0.5S) button to confirm your selected option.

Or select "EXIT" and press the (<0.5S) button to return to the main menu, or select "BACK" and press the (<0.5S) button to return to the Settings interface.

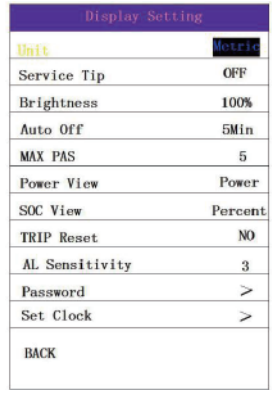
If no button is pressed within 20 seconds, the display will automatically return to the main screen and no data will be saved.



You can quickly press the (<0.5S) button twice at any time, to return to the main screen.

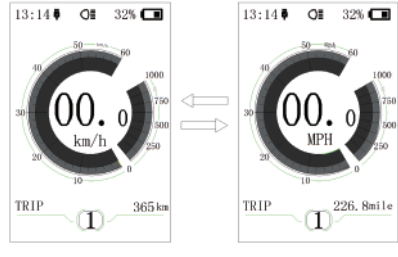
7.8.1 "Display setting"

Press the + or − (<0.5S) button to select Display Settings, and then briefly press the (<0.5S) button to access the following selections.



7.8.1.1 "Unit" Selections in km/Miles

Press the + or − (<0.5S) button to highlight "Unit" in the Display settings menu, and then press the (<0.5S) button to select. Then with the + or − button choose between "Metric" (kilometer) or "Imperial" (Miles). Once you have chosen your desired selection, press the (<0.5S) button to save and exit to the "Display setting" interface.



7.8.1.2 “Service Tip” Switching the notification on and off

Press the + or − (<0.5S) button to highlight “Service tip” in the Display settings menu, and then press i (<0.5S) to select. Then with the + or − button choose between “ON” or “OFF”. Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting" interface.

7.8.1.3 “Brightness” Display brightness

Press the + or − (<0.5S) button to highlight “Brightness” in the Display settings menu. Then press i (<0.5S) to select. Then with the + or − button choose between "100%" / "75%" / "50%" /" 30%"/"10%" . Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting" interface.

7.8.1.4 “Auto Off” Set Automatic system switch off time

Press the + or − (<0.5S) button to highlight “Auto Off” in the Display settings menu, and then press i (<0.5S) to select. Then with the + or − button choose between “OFF”, "9"/"8"/"7"/"6"/"5"/"4"/"3" /"2"/"1", (The numbers are measured in minutes). Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting" interface.

7.8.1.5 “MAX PAS” Support level

(Function not available with ECO/SPORT display)

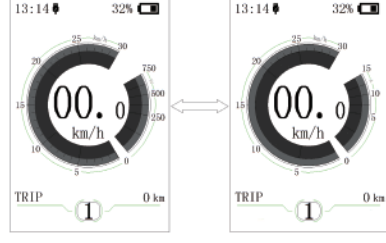
Press the + or − (<0.5S) button to highlight “Max Pass” in the Display settings menu, and then press i (<0.5S) to select. Then with the + or − button choose between “3/5/9” (the amount of support levels). Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting"

7.8.1.6 “Default Mode” Set for ECO/Sport mode

Press the + or − (<0.5S) button to highlight “Default Mode” in the Display settings menu. Then press i (<0.5S) to select. Then with the + or − button choose between “ECO” or “Sport”. Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting" interface.

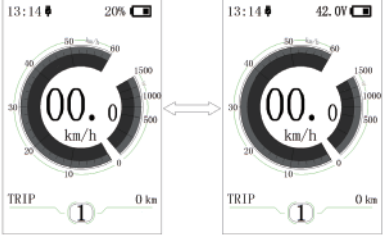
7.8.1.7 “Power View” Setting the power indicator

Press the + or − (<0.5S) button to highlight “Power View” in the Display settings menu, and then press i (<0.5S) to select. Then with the + or − button choose between “Power” or “Current”. Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting" interface.



7.8.1.8 “SOC View” Battery view in volt percent

Press the + or − (<0.5S) button to highlight “SOC View” in the Display settings menu, and then press i (<0.5S) to select. Then with the + or − button choose between “percent” or “voltage “. Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting"



7.8.1.9 “TRIP Reset” Reset mileage

Press the + or − (<0.5S) button to highlight “TRIP Reset” in the Display settings menu, and then press i (<0.5S) to select. Then with the + or − button choose between “YES” or “NO”. Once you have chosen your desired selection, press the i (<0.5S) button to save and exit to the "Display setting"

7.8.1.10 “AL Sensitivity” Automatic headlight sensitivity

Press the + or − (<0.5S) button to highlight “AL-Sensetivity” in the Display settings menu, and then press i (<0.5S) to select. Then with the + or − button choose between "0" / " 1" / " 2"/ "3" / "4"/ "5"/ "OFF". Once you have chosen your desired selection , press the i (<0.5S) button to save and exit to the "Display setting"

7.8.1.11 “Password”

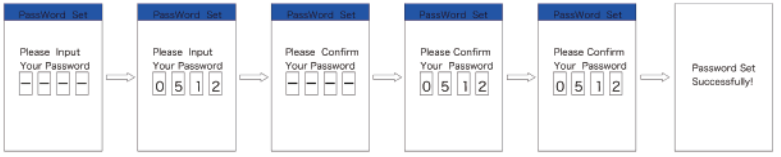
Press the + or − (<0.5S) button to choose Password in the menu. Then by briefly pressing i (<0.5S) to enter the password selection. Now again with the + or − (<0.5S) buttons highlight “Start Password" and press the i (<0.5S) button to confirm. Now again using the + or − (<0.5S) Button choose between “ON” or “OFF” and press the i (<0.5S) button to confirm.

Now you can input your 4-digit pin code. By using the + or − (<0.5S) button choose numbers between "0-9". By briefly pressing the i (<0.5S) button you can move on to the next number.

After entering your desired 4-digit code, you must re-enter the 4-digits you chose, to ensure the code is correct.

After selecting a password, the next time you turn on the system it will ask you to input your password. Press the + or − (<0.5S) button to select the numbers, Then press briefly i (<0.5S) to confirm.

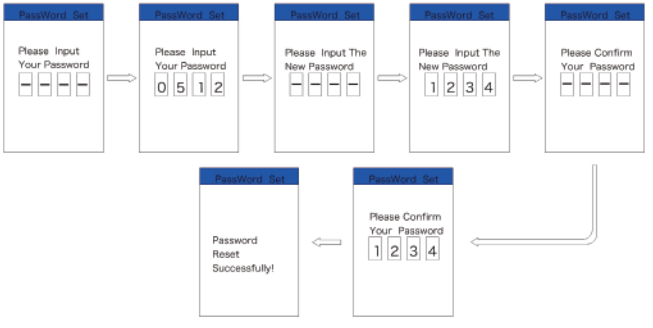
After entering the wrong number three times, the system switches off. If you have forgotten the password, please contact your retailer.



Changing the password:

Press the + or − (<0.5S) button to choose Password in the menu. Then by briefly pressing i (<0.5S) to enter the password section. Now again with the + or − (<0.5S) button highlight "Password set" and press the i (<0.5S) button to confirm. Now with the + or − (<0.5S) buttons and highlight "Reset Password" and with the i (<0.5S) button to confirm.

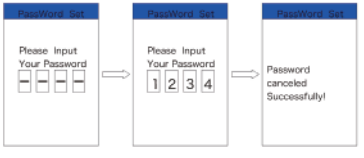
By entering your old password once, followed by inputting the new password twice, then your password will be changed.



Deactivating the password:

To deactivate the password, use the + or − buttons to get to the menu point "Password" and press the i (<0.5S) button to highlight your selection. Press the + or − (<0.5S) button until is shows "OFF". Then press briefly i (<0.5S) to select.

Now enter your password, to deactivate it.



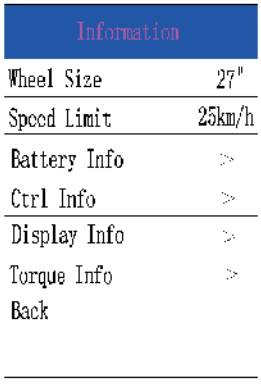
7.8.1.12 "Set Clock"

Press the + or − (<0.5S) Button to access the "Set Clock" menu. Then briefly press the i (<0.5S) button to confirm selection. Now press the + or − (<0.5S) button and input the correct number (time) and press the i (<0.5S) button to move to the next number. After entering the correct time, press the i (<0.5S) button to confirm and save.

7.8.2 "Information"

Once the system is turned on, quickly Press the i (<0.5S) button twice to access the "SETTINGS" menu. Press + or − (<0.5S) button to select "Information", and then press the i (<0.5S) button to confirm your selection.

Or select the point "Back" by confirming with the i (<0.5S) button to return to the main menu.



7.8.2.1 Wheel Size and Speed Limit

The "Wheel Size" and "Speed Limit" cannot be changed, this information is here to be viewed only.

7.8.2.2 Battery Information

Press the + or − (<0.5S) button to access the Battery Info menu, and then press the i (<0.5S) button to select confirm. Now press the + or − (<0.5S) button and select "Back" or "Next Page". Then press the i (<0.5S) button to confirm, now you can read the battery information.

Content	Explanation
TEMP	Current temperature in degrees (°C)
TotalVolt	Voltage (V)
Current	Discharge (A)
Res Cap	Remaining Capacity (A/h)
Full Cap	Total Capacity (A/h)
RelChargeState	Default Loader Status (%)
AbsChargeState	Instant charge (%)
Cycle Times	Charging cycles (number)
Max Uncharge Time	Maximum time in which no charge was made (Hr)
Last Uncharge Time	
Total Cell	Number (individual)
Cell Voltage 1	Cell Voltage 1 (m/V)
Cell Voltage 2	Cell Voltage 2 (m/V)
Cell Voltage n	Cell Voltage n (m/V)
HW	Hardware Version
SW	Software Version

NOTE: If no data is detected, "--" is displayed.

7.8.2.3 Controller Information

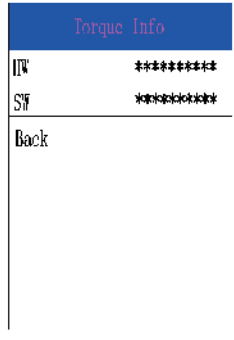
Press the + or − (<0.5S) button and select "CTRL Info", and then press the i (<0.5S) button to confirm. Now you can read the controller information. To Exit press the i (<0.5S) button, once “EXIT” is highlighted to return to the information settings.

7.8.2.4 Display Information

Press the + or − (<0.5S) button and select Display Info, then press the i (<0.5S) button to read the software and hardware data in the display. To Exit press the i (<0.5S) button, once “EXIT” is highlighted to return to the information settings.

7.8.2.5 Torque Information

Press the + or − (<0.5S) button and select “Torque info”, then press the (<0.5S) i button to read the software and hardware data in the display. To Exit press the i (<0.5S) button, once “EXIT” is highlighted to return to the information settings.



7.8.2.6 Error Code

Press the + or − (<0.5S) button and select “Error Code”, and then press the i (<0.5S) button to confirm. It shows error information for the last ten errors of the pedelec. Error code "00"means that there is no error. To return to the menu press the i (<0.5S) button, once "BACK" is highlighted to return to the information settings.

BATTERY AND CHARGING

The Dash Plus 500W uses a Lithium-Ion battery which can be charged on or off the bike. We recommend charging the battery off the bike indoors, in moderate temperature conditions. To charge the battery, plug the charger into the charging port and then connect the charger to a wall outlet (Fig.3). The LED indicator light will be red when charging and will turn green when charging is complete. When finished, unplug the charger from the battery and from the wall outlet.

Take care of the battery to ensure a long service life.

- Charge and store the battery indoors if possible. The battery can be removed from the bicycle for this purpose.
- Avoid extreme hot and cold temperatures.
- **DO NOT** submerge your bike or any of the components in water. This action will void the warranty.

To optimize the performance of the battery over time, try and use it (discharging and charging) at least monthly. But if you won't be riding your Dash Plus 500W for an extended period of time, it's best to store the battery fully charged. **EVERY 2 MONTHS: Put battery on the charger to maintain optimum level.**

After many charging and discharge cycles, runtime and range will be reduced. Replacement batteries are available from Serfas to extend the life of your e-bike. The lifespan of the battery is about 500 charge / discharge cycles for properly maintained batteries.

When you install the baterry on the Dash Plus 500W, it locks into place automatically. To unlock for removal, use the supplied key.

DO NOT ride the bicycle if the battery rattles or moves - it should be firmly attached.

The Dash Plus 500W battery contains a USB port for transmitting diagnostic data only, not for charging. It will not charge or power devices via USB.

MAINTENANCE AND SERVICE

- When cleaning your bike, use a damp cloth and gentle dish soap. **NOTE: DO NOT use a pressure washer or sprayer.**
- Periodically apply a light lubricant to moving parts, including the links of the chain, derailleur pivots, and shifter cable inner wire where it enters the cable housing.
- If you ride in wet / humid environments, clean and dry electric connections and apply an anti-corrosive.

All bicycles will need a periodic tune-up or adjustments by a professional. An annual “check-up” is beneficial. Your bike’s service schedule will depend on the frequency of its use. In-between expert services at a bike shop we suggest:

- Keep tires inflated to their recommend pressure (30-50 PSI / 2.0-3.5 BAR / 200-350 KPA) and check weekly.
- Clean the drivetrain and lubricate the chain (monthly).

STORING YOUR BIKE

From time to time, you may wish to store your bike for an extended period without riding. Proper storage can help prolong the life of your e-bike components and battery.

To ready your bike for storage, first fully charge the battery. Then remove the battery from the bike and store it separately. Removing the battery from the bike puts it into a low-voltage state designed for long term storage.

Keep both the bike ad the battery in a cool, dry place. Avoid both very hot and very cold temperatures. Generally if the environment is comfortable for humans, then it's a good place to store your bike.

Store your bike away from sources of heat, UV light, and ozone - all of which can prematurely age rubber tires and tubes.

All bicycle tubes slowly lose air over time and need to be regularly topped off to maintain proper pressure. This does not mean that your bicycle has a flat tire. Avoid allowing the tires to deflate completely during storage.

SAFETY

You should wear an approved e-bike bicycle helmet every time you ride, regardless of legal requirement to do so. Additionally, some jurisdictions require helmet use when riding Class II and Class III e-bikes like the Dash Plus 500W.

Your Dash Plus 500W comes with reflectors and we encourage you to use them. Reflectors are not a substitute for lights, which are not included with your e-bike. You should purchase, install, and use front and rear facing lights when riding in low light or dark conditions.

Some jurisdictions restrict where e-bikes can and cannot be ridden. These limits may include specific speeds and motor wattages.

Your Dash Plus 500W is a Class III e-bike, 500 Watts with pedal assist up to 28 MPH and throttle up to 20 MPH. You should only ride it where legal and safe.

Some jurisdictions do not allow throttle controlled e-bikes. Your Dash Plus 500W will still run without the throttle plugged in and removed from the bicycle.

ERROR CODES AND TROUBLESHOOTING

The HMI can show the faults of Pedelec. When a fault is detected, the icon will be indicated and one of the following error codes will be indicated too.

Note: Please read carefully the description of the error code. When the error code appears, please first restart the system. If the problem is not eliminated, please contact your dealer or technical personnel.

Error	Declaration	Troubleshooting
04	The throttle is not back in its correct position.	Check the connector from the throttle is correctly connected. If this does not solve the problem, please change the throttle.
05	The throttle has fault.	1. Check the connector and cable of the throttle are not damaged and correctly connected. 2. Disconnect and reconnect the throttle, if still no function please change the throttle.
07	Overvoltage protection	1. Remove and re-insert the battery to see if it resolves the problem. 2. Using the BESST tool update the controller. 3. Change the battery to resolve the problem.
08	Error with the hall sensor signal inside the motor	1. Check all connectors from the motor are correctly connected. 2. If the problem still occurs, please change the motor.
09	Error with the Engine phase's	Please change the motor.
10	The temperature inside the engine has reached its maximum protection value	1. Turn off the system and allow the Pedelec to cool down. 2. If the problem still occurs, please change the motor.
11	The temperature sensor inside the motor has an error	Please change the motor.
12	Error with the current sensor in the controller	Please change the controller or contact your supplier.

Error	Declaration	Troubleshooting
13	Error with the temperature sensor inside of the battery	1. Check all connectors from the battery are correctly connected to the motor. 2. If the problem still occurs, please change the Battery.
14	The protection temperature inside the controller has reached its maximum protection value	1. Allow the pedelec to cool down and restart the system. 2. If the problem still occurs, please change the controller or contact your supplier.
15	Error with the temperature sensor inside the controller	1. Allow the pedelec to cool down and restart the system. 2. If the problem still occurs, Please change the controller or contact your supplier.
21	Speed sensor Error	1. Restart the system 2. Check that the magnet attached to the spoke is aligned with the speed sensor and that the distance is between 10 mm and 20 mm. 3. Check that the speed sensor connector is connected correctly. 4. Connect the pedelec to BESST, to see if there is a signal from the speed sensor. 5. Using the BESST Tool- update the controller to see if it resolves the problem. 6. Change the speed sensor to see if this eliminates the problem. If the problem still occurs, please change the controller or contact your supplier.
25	Torque signal Error	1. Check that all connections are connected correctly. 2. Please connect the pedelec to the BESST system to see if torque can be read by the BESST tool. 3. Using the BESST Tool update the controller to see if it resolves the problem, if not please change the torque sensor or contact your supplier.

Error	Declaration	Troubleshooting
26	Speed signal of the torque sensor has an error	1. Check that all connections are connected correctly. 2. Please connect the pedelec to the BESST system to see if speed signal can be read by the BESST tool. 3. Change the Display to see if the problem is solved. 4. Using the BESST Tool update the controller to see if it resolves the problem, if not please change the torque sensor or contact your supplier.
27	Overcurrent from controller	Using the BESST tool update the controller. If the problem still occurs, please change the controller or contact your supplier.
30	Communication problem	1. Check all connections on the pedelec are correctly connected. 2. Using the BESST Tool run a diagnostics test, to see if it can pinpoint the problem. 3. Change the display to see if the problem is solved. 4. Change the EB-BUS cable to see if it resolves the problem. 5. Using the BESST tool, re-update the controller software. If the problem still occurs please change the controller or contact your supplier.
33	Brake signal has an error (If brake sensors are fitted)	1. Check all connectors are correctly connected on the brakes. 2. Change the brakes to see if the problem is solved. If problem continues Please change the controller or contact your supplier.
35	Detection circuit for 15V has an error	Using the BESST tool update the controller to see if this resolves the problem. If not, please change the controller or contact your supplier.
36	Detection circuit on the keypad has an error	Using the BESST tool update the controller to see if this resolves the problem. If not, please change the controller or contact your supplier.

Error	Declaration	Troubleshooting
37	WDT circuit is faulty	Using the BESST tool update the controller to see if this resolves the problem. If not, please change the controller or contact your supplier.
41	Total voltage from the battery is too high	Please change the battery.
42	Total voltage from the battery is too low	Please Charge the battery. If the problem still occurs, please change the battery.
43	Total power from the battery cells is too high	Please change the battery.
44	Voltage of the single cell is too high	Please change the battery.
45	Temperature from the battery is too high	Please let the pedelec cool down. If problem still occurs, please change the battery.
46	The temperature of the battery is too low	Please bring the battery to room temperature. If the problem still occurs, please change the battery.
47	SOC of the battery is too high	Please change the battery.
48	SOC of the battery is too low	Please change the battery.
61	Switching detection defect	1. Check the gear shifter is not jammed. 2. Please change the gear shifter.
62	Electronic derailleur cannot release.	Please change the derailleur.
71	Electronic lock is jammed	1. Using the BESST tool update the Display to see if it resolves the problem. 2. Change the display if the problem still occurs, please change the electronic lock.
81	Bluetooth module has an error	Using the BESST tool, re-update the software onto the display to see if it resolves the problem. If not, Please change the display.

ADDITIONAL TROUBLESHOOTING

Having trouble with your Dash Plus 500W? Most problems are easy to correct.

1. Start by making sure you have a charged battery.

2. If the motor of your bike will not engage, or only engages intermittently, double check the cable connection where the motor plugs into the rest of the system. This connector must be firmly and fully plugged in to function correctly. If necessary, loosen the clips holding the cable to the frame to create additonal slack in the cable, then re-tighten the clips after you have the motor cable firmly plugged in.

3. The throttle on the Dash Plus 500W will only engage after the motor is turned on via pedal assist. This is a safety feature designed to prevent you from accidentally engaging the throttle while parking or walking the bike. If you are having difficulty with the throttle, remember to make one revolution of the pedals first, then engage the throttle. You can stop pedaling after the throttle function turns on.

4. If you bent the derailleur hanger on your Dash Plus 500W in a fall, don't worry. It's actually designed to fail, sparing the more expensive frame, and is inexpensively replaceable for this reason. If you need another, they are available on www.serfas.com or at partner bike shops.

5. If your bike powers up normally and shows no error messages, but will not run when you turn the pedal assist on, check to ensure the cadence sensor under the left crankarm is plugged in.

BATTERY TROUBLESHOOTING

Your Dash Plus 500W e-bike battery uses several sophisticated monitoring systems to prevent damage from overcharging, overheating, deep battery discharge, charging with the wrong voltage, and other errors.

Please use the specific charger supplied with your e-bike. Other chargers may not supply the correct voltage required for charging. Those that do may not be programmed to initiate the charge cycle. To resolve this:

1. Remove battery from the bike.
2. Plug the charging tip into the battery.
3. Plug the charger into wall power.
4. Tap the power button on the battery once to turn it on.
5. Charge the battery overnight.
6. When charging is complete, put the battery back on the bike and check for proper operation. Having trouble with your Dash Plus 500W? Most problems are easy to correct.

If a situation occurs that could damage the battery, the battery can go into a protective “sleep mode” - the battery cells inside are OK, but the battery won’t turn on and won’t take a charge. To “wake up” the battery, please follow this procedure:

1. Put the battery on the bike.
2. Plug the chaging tip into the battery.
3. Plug the charger into wall power.
4. Tap the power button on the battery once to turn it on.

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5. Press and hold ⏻ on the controls to turn on the display.
6. Allow the battery to charge overnight.
7. Once charged, remove from wall power and check for proper operation.

Under specific circumstances you might see one single LED flashing constantly on the battery. One blinking LED is a warning of excessive strain on the battery for its charge level. To correct this issue:

1. Reduce the strain on the battery and charge the battery. If it will not take a charge, please take the previous steps to resolve the issue.

FREQUENTLY ASKED QUESTIONS

- **Do components from the Dash 350/500W and Dash Plus 500W interchange?**

  Some components interchange across the line of Dash e-bikes, like saddles, seatposts, handlebars, and grips. The ebike specific components, however, like batteries, controllers, displays, and motor do not interchange. Dash 350W is a 36V system vs 48V of the Dash Plus 500W and these parts are not compatible.

- **My Dash e-bike is too fast, or exceeds my local speed limit, or only Class I e-bikes are allowed on my favorite bike path.**

  Dash e-bikes can have the speed limit changed using the settings in the control panel and can be set as low as 14 MPH if desired to comply with local laws. Dash e-bikes can also have the throtlle unplugged and removed (but will continute to run on pedal assist) if desired in locations where throttle bikes are not permitted.

- **On the Dash line of e-bikes, I can't use the throttle from a dead stop, only once I'm pedaling. Why?**

  This is a safety feature to prevent you from accidentally engaging the throttle while parking or standing with the bike, if you forget to turn it off and then hit the throttle accidentally. You can engage the throttle at any time while you are pedaling. If you are at a dead stop, you can push the throttle, start pedaling (about one pedal revolution), then stop pedaling, and the bike will stay in throttle mode.

- **How many times can I recharge my e-bike battery?**

  Lithium-Ion e-bike batteries use a similar technology to your laptop or smartphone. They can absorb about 500 charging cycles before performance degrades. Afterwards, they can continue to be recharged, however, their capacity will decrease.

- **Can I put a suspension fork on the Dash e-bike?**

  Yes, it is possible to put a suspension fork on the Dash line of e-bikes. You would need a replacement fork with these specs: 1 1/8” to 1.5” tapered steerer tube, 51mm IS mount for disc brakes (or a 74mm mount with an add-on adapter to 51mm), 27.5” / 650B wheel size, and the quick release / open type dropout style. Selecting and installng a suspension fork is probably a job for a bike shop.

- **Do I have to wear a helmet when riding an e-bike?**

  We suggest you do. This depends on your age, and your state. Please check your local laws.

- **What rear rack fits the Serfas Dash e-bikes?**

  We recommend to check with your local bike shop.

- **How should I care for my e-bike battery?**

  Please refer to the *Battery and Charging* section of your Dash Plus 500W owner’s manual.

- **How can I calculate the capacity of an e-bike battery?**

  E-bike battery capacity is measured in Watt-Hours, or Wh. This is the size of the “fuel tank” on the e-bike. Like a car, some motors guzzle fuel, others sip. To calculate capacity, multiply the voltage (V) used on the bike by the Ampere-Hour (Ah) rating.

  For the Serfas Dash Plus 500W, for example, multiply 48V by 11.6Ah = 556.8Wh. More Watt-Hours equals more range for your e-bike.

- **Why does the remaining battery amount shown on the LEDs on the battery not match the “Energy Bar” on the display?**

  The LEDs on the battery itself shown the remaining charge left in the battery, but this doesn’t account for how you are using the bike. The Energy Bar function on the display is designed to account for the charge on the battery plus other factors, like speed, throttle usage, and riding conditions like hills or wind. You’ll see it fall more quickly under heavy usage, and more slowly when you are not taxing the motor.

- **What are the weight limits for the Dash Plus 500W?**

  Max. Rider Weight: 250 lbs / 113.3 kg
  Max. Cargo Weight: 50 lbs / 22.6 kg

WARRANTY POLICY

The specific warranty covering your Serfas bicycle is governed by the law of the state or country in which it was purchased, and applies only to bicycles purchaed from Authorized Serfas Retailers.

FRAMES AND FORKS:
Serfas frames made from steel or aluminum (Dash e-bikes) are warranted by Serfas Bikes, 2333 W. Utopia Rd., Phoenix, AZ 85027 against manufacturing defects in materials and/or workmanship for the lifetime of the original owner.

COMPONENTS:
All other components, frame fixtures, and finishes (paint and decals) are warranted against manufacturing defects in materials and/or workmanship for a period of one year from the date of original retail purchase. Forks (other than those made by Serfas - for example, a Rockshox suspension fork) are not covered by this limited warranty, but are separately covered by the stated warranty of their manufacturer. Stripped threads due to user error are not covered by this warranty.

Register at: www.serfas.com/warranty-form

www.serfas.com