



HYBRIDTM
BIKES

ENGINEERING FOR *Happiness*TM

Hybrid E Bike - Owner's Manual



NEW ZEALAND.COM
Licence No.100235

Proudly designed in New Zealand

Welcome to the Hybrid E Bike Community

Thank you very much for purchasing one of our Hybrid E Bikes. We hope you enjoy riding it as much as we do.

Hybrid Bikes is a New Zealand owned company which specialises in the manufacture of carbon fibre E bikes, offering outstanding strength and performance to all our customers.

Our Hybrid Bikes dealership network is designed to look after you in the best possible way, so you can be fully satisfied with your purchase.

If you ever feel you are not being looked after, please let me know.

Kind regards

Frank Witowski

Managing Director

frank@hybridbikes.co.nz

027 544 3213

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Packaging



NOTE: Your Hybrid E Bike will come fully assembled when you purchase it directly from us or from one of our Hybrid E Bike dealerships.

Contents of box:

- E Bike
- Battery
- Battery Charger
- Display Controller
- Instruction Manual

Hybrid E Bike Models

M18 Speedmaster



F18 Cruiser



M18 Sport Elite Special



F18 Cruise Elite Special



M22 Speedmaster



F22 Cruiser



M22 Sport Elite Special



F22 Cruise Elite Special



Maintenance Tips

The maintenance schedule is based on the average E Bike usage. Your Hybrid E Bike should have its first service after 250km to ensure you are riding safely and efficiently.

Further inspections should then be carried out every 6 – 8 months or around every 1,000km. If these services are missed it may void the warranty of your Hybrid E Bike.

Lubrication:

We recommend lubrication of your derailleur pivot points and derailleur pulleys every 6 weeks, using the correct oil recommended by your Hybrid E Bike dealer.

We recommend you should lubricate the chain, gears and brake lever pivots every 12 weeks using the correct oil recommended by your Hybrid E Bike dealer.

Cleaning of your Hybrid E Bike:

It is recommended you use soapy water to clean your Hybrid E Bike using a cloth. It is NOT recommended to use the garden hose and point it straight onto the battery or any other electrical components. Hybrid E Bikes are designed to be used in the rain but the battery or any other electrical components should not be immersed in water.

The battery should only be cleaned with a damp cloth and dried afterwards to avoid the risk of getting water into the connecting points.

Note: If the Hybrid E Bike is exposed to salty conditions it will need to be serviced and maintained more regularly.

Specifications

Specifications	Parameters
Model	Hybrid all M18 / F18 / M22 / F22 Models
Frame	Carbon Fibre
Packaging Box Size	1475 * 860 * 300mm
Speed Support	45km/h (adjustable)
Max. Load	180 Kg
Voltage	AC 100 - 240V
Charging Time	4.5 - 5 Hours
Power	300 Watt
Max. Km (M18 / F18)	100 Km*
Max. Km (M22 / F22)	150 Km*
Battery (M18 / F18)	36 Volt / 14Ah / 504Wh
Battery (M22 / F22)	36 Volt / 20Ah / 720Wh
Recommended Tyre Pressure	30 - 40 PSI

**The maximum range depends on a variety of factors including hills, terrain, statue of rider, selection of motor assist levels, headwind and N m selection of the motor.*

Controller Display and Control

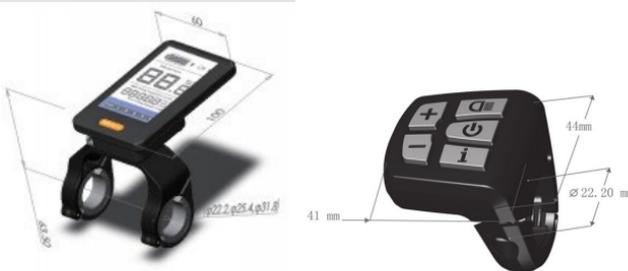
1.1 Specifications and Parameters of the Display

- 36V / 43V / 48V Power Supply
- Rated Current: 10 mA
- Maximum Operating Current: 30 mA
- Power-off Leakage Current: <1uA
- Operating Current Supplied to the Controller: 50 mA
- Operation Temperature: -18 - 60%
- Storage Temperature: -30 - 70%
- Waterproof Grade: IP65
- Storage Humidity: 30% - 70%

1.2 Appearance and Dimensions

1.2.1 Materials and Dimensions

The shell is made of PC. The liquid crystal display is made of hardened PMMA.

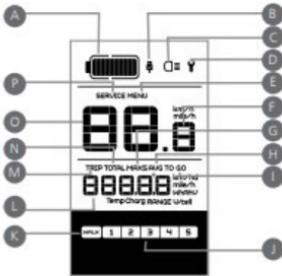


1.3 Function Overview and Key Definitions

1.3.1 Function Overview

- Use of a two-way serial communication protocol, simple operation of the display via the external 5-key keypad
- Speed display: Displaying the real-time speed as SPEED, the maximum speed as MAXS and the average speed as AVG
- Km or mile: The user can choose between km and mile
- Intelligent battery level indication: With an optimised algorithm, a stable display of the battery level is ensured, and the problem of fluctuant battery level indication common with other displays is avoided
- Automatic light-sensitive lights: The headlight, taillight and display light will be automatically turned on depending on lighting conditions
- 5-Level-Support: Setting power levels from 1 to 5
- Trip distance indication: The maximum distance displayed is 99,999. Single-trip distances TRIP or the total distance TOTAL can be displayed
- Display of error messages
- Walk assist

1.3.2 Information on the Display



A: Battery level: 10 segment battery indication; the voltage that each segment represents can be customised

B: USB charge symbol

C: Headlight indication: Only shows when the headlight or backlight is on

D: Error display: When a fault is detected the symbol  will be displayed

E: Service Menu

F: Speed display: display of the speed being km/h or mph

G: Max speed

H: Avg speed

I: Remaining milage

J: Level indication: The chosen level 1-5 will be displayed; if there is no numeric display, it means that there is no assistance by the motor

K: Walk assistance

L: Distance indication: Display of the distance depending on the setting

M: Distance mode: Display of the single and total trip distance

N: Total milage

O: Speed mode: Average speed (AVG km/h), maximum speed (MAXS km/h)

P: Maintenance warning. When there is a need for maintenance the symbol **SERVICE** will be displayed



A: Up

B: Down

C: Headlight

D: On/Off

E: Mode

1.4 Normal Operation

1.4.1 On / Off Switch

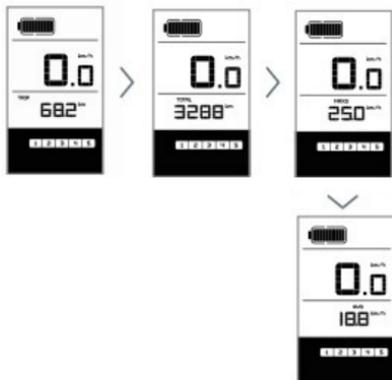
To turn on the device press and hold  for 2 seconds to power on the display. Press and hold  again for 2 seconds to power off the display. If the bike is not used, after 5 minutes (time can be set) the display will be automatically turned off.

1.4.2 Assist Mode Selection

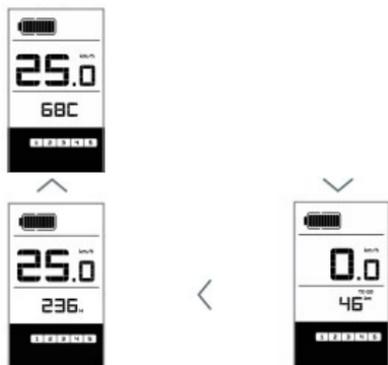
Once the device has been turned on, you can use manual gearshift mode by pressing the  or  to choose the desired level of support by the motor. The lowest is level 1 with the highest being level 5. When the display is turned on, the default mode is level 1. When there is no numeric mode display, there is no power assistance.

1.4.3 Switch between Distance Mode and Speed Mode

Briefly press **i** to switch between distance and speed on your display screen. As you continuously press **i** the following displays will appear as seen below. Firstly Single-trip distance (TRIP km) followed by total distance (TOTAL km) followed by maximum speed (MAX km/h) and finally average riding speed (AVG km/h).

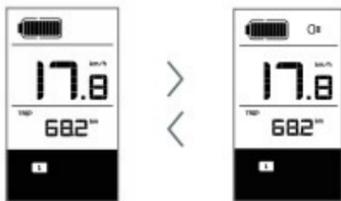


Note, there are some further functions as seen below which will appear when pressing **i** beyond the above four pictures, but these are not programmable at this stage.



1.4.4 Headlight / Display Backlight Switch

By pressing the  icon for 2 seconds, this will turn on the backlight of the display as well as the headlight and taillight. By pressing  again for 2 seconds, this will turn the lights off. If you are in a dark environment the display backlight, headlight and taillight will be turned on automatically for you.

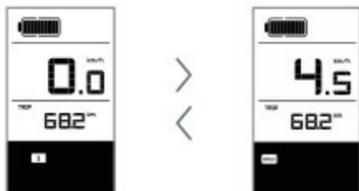


Display backlight, headlight and taillight

There are 5 levels of backlight brightness that can be selected by the user.

1.4.5 Walk Assist

By pressing the  symbol continuously, allowing 2 seconds for the function to begin, the E Bike will enter walk assist mode and the symbol WALK is displayed. Once the  button is released, the E Bike will exit the walk assistance mode.



Switch between power assistance and walk assistance mode

1.4.6 Battery Status Indication

When the battery status is displayed, a certain number of the battery LCD segments as well as the border will light up according to the actual quantity of charge. If the battery is showing with no remaining segments and the border is blinking, the battery needs to be charged immediately.

Note: To preserve battery life, please do not let the battery run down to less than 3 bars / segments of charge.



Battery status indication as the battery level decreases.

1.5 Parameter Setting

1.5.1 Items to be set:

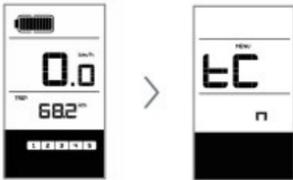
- 2: ➤ Data reset
- 3: ➤ Km / mile
- 4: ➤ Light sensitivity
- 5: ➤ Display backlight brightness
- 6: ➤ Automatic off time
- 7: ➤ Maintenance warning setting

Note: When moving through the parameters and undertaking any of the relevant actions, you will need to do so in a timely manner for the screen to respond accordingly. We recommend reading the instructions first and then performing the actions.

1.5.1 Setting Preparation

When the display is active, press **i** twice (leaving 0.3 seconds between each press). The system will then enter the parameter setting state where tC is displayed, in which the various parameters can be set (as outlined further below). You can then briefly press **i** to progress between each parameter which can be set.

To return to the main menu, press **i** twice again (leaving 0.3 seconds between each press). Where no operation is performed for 10 seconds, the display will return to the normal riding display.

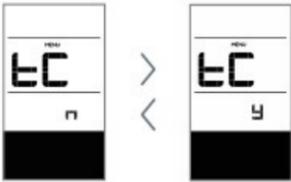


1.5.2 Data Reset

By following the instructions per '1.5.1 Setting Preparation' to press **i** twice (leaving 0.3 seconds between each press), the display will enter the MENU state where the tC is displayed. You will then need to press **+**, to ensure a y is also displayed. In this screen the temporary data such as maximum speed (MAXS), average speed (AVG) and single-trip distance (TRIP) can be reset. To reset this data, you will need to press **i** twice then **+** once and **i** twice again.

After you have reset your data, you can press **i** once to progress to the km / mile setting or press **i** twice (leaving 0.3 seconds between each press) to return back to the main menu.

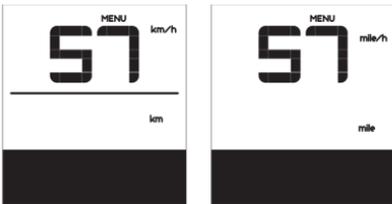
If the user does reset the data, the single trip distance and the accumulated total riding time will be automatically cleared when the accumulated total riding time exceeds 99 hours and 59 minutes.



1.5.3 Km / Mile

By following the instructions per '1.5.1 Setting Preparation' to press **i** twice (leaving 0.3 seconds between each press), the display will enter the MENU state where the tC is displayed. You will then need to briefly press **i** until you reach the km / mph setting interface to show S7 on the screen.

When S7 is displayed, press **+** and **-** to switch between km / mph. After you have chosen which measurement to display, briefly press **i** once to enter the next setting interface being light sensitivity or you can press **i** twice (leaving 0.3 seconds between each press) to return to the main menu.



1.5.4 Light Sensitivity

By following the instructions per '1.5.1 Setting Preparation' to press  twice (leaving 0.3 seconds between each press), the display will enter the MENU state where the tC is displayed. You will then need to briefly press  until you reach the display showing bL0.

You can then use the symbols  and  to choose a figure between 0 and 5. The higher the chosen figure, the higher the light sensitivity. After this has been set, briefly press  to enter the setting interface of backlight brightness or you can press  twice (leaving 0.3 seconds between each press) to return to the main menu.



1.5.5 Display Backlight Brightness

By following the instructions per '1.5.1 Setting Preparation' to press  twice (leaving 0.3 seconds between each press), the display will enter the MENU state where the tC is displayed. You will then need to briefly press  until you reach the field displaying bL 1.

You can then press the symbols  and  to choose a figure between 1 and 5. The figure 1 represents the lowest brightness while the figure 5 indicates the highest brightness. After this has been set, briefly press  to enter the setting interface of automatic off time or you can press  twice (leaving 0.3 seconds between each press) to return to the main menu.



1.5.6 Automatic Off Time

By following the instructions per '1.5.1 Setting Preparation' to press  twice (leaving 0.3 seconds between each press), the display will enter the MENU state where tC is displayed. You will then need to briefly press  until you reach the screen displaying OFF.

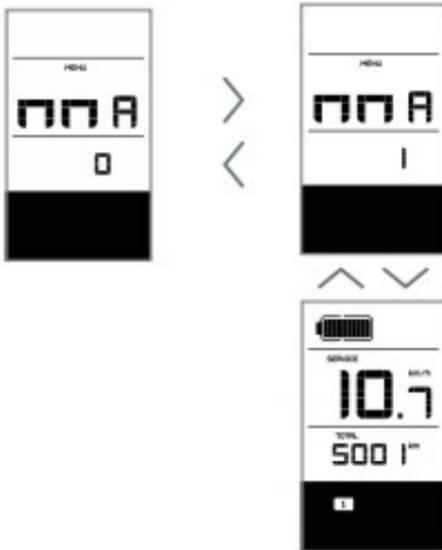
You can then press the symbols  and  to choose a figure between 1 and 9. The numbers indicate the minutes that it takes to automatically shut down the display. After this has been set, briefly press  to enter the setting interface of the maintenance warning or you can press  twice (leaving 0.3 seconds between each press) to return to the main menu.



1.5.7 Maintenance Warning (can be deactivated)

By following the instructions per '1.5.1 Setting Preparation' to press  twice (leaving 0.3 seconds between each press), the display will enter the MENU state where tC is displayed. You will then need to briefly press  until you reach the screen displaying nNA.

You can then press the symbols  and  to choose either 0 to disable the function or 1 to enable the function. After you have chosen your preferred setting, you can press  twice again (leaving 0.3 seconds between each press) to return back to the main menu.



1.6 USB Charging

You can charge an external device such as your cell phone using the USB port found on left hand side of the display unit (under the discrete cover). When the device is charging you will see the charging symbol appear. The maximum charging current is 500mA.



1.7 Error Code Definitions

Error Code	Error Description	Error-shooting Method
"03"	Brake enabled	Check whether a brake cable is stuck
"04"	The throttle has not returned home	Check if throttle has returned home
"05"	Throttle fault	Check the throttle
"06"	Low voltage protection	Check the battery voltage
"07"	Overvoltage protection	Check the battery voltage
"08"	Motor hall signal cable fault	Check the motor module
"09"	Motor phase cable fault	Check the motor module
"10"	The motor temperature has reached the threshold.	Stop the bicycle until the error code "10" disappears from the screen.
"11"	Controller temperature sensor failure	Check the controller
"12"	Current sensor failure	Check the controller
"13"	Battery temperature fault	Check the battery
"21"	Speed sensor fault	Check installation position of speed sensor
"22"	BMS communication fault	Replace the battery
"30"	Communication fault	Check the controller connection



Error display

Note: Error Code 10 will probably appear on the display when the e-bike is climbing for a long time. This indicates that the motor temperature has reached the protection value, in which case the user needs to stop the e-bike for a rest. If the user continues to run the e-bike, the motor will automatically cut off the power.

Battery Instructions

Dust cap to prevent water and dirt getting into the battery pack.



The Hybrid E Bike battery can be charged on or off the bike. The charger light when in use indicates:

- 1) Red light: Battery is still on charge
- 2) Green light: Battery is fully charged and can be disconnected

By using the keys supplied you can remove the battery from the frame. When the charger is plugged into the battery you may see a little spark if your battery still has some charge but this nothing to be concerned about.

All Hybrid E Bikes use Samsung SDI batteries being high quality Lithium batteries. These batteries are highly efficient and will be an excellent power pack for many years to come. An average battery life depends on its use and its care. Conservatively, a Li-Ion battery will last around 500 cycles.

A lithium-ion battery left with low charge will deteriorate much faster than a fully charged battery. Lithium-ion batteries are best stored at a 40–60% charge level. During long term storage, recharge your battery to 40–60% every 90 days. You should also fully charge your battery before each ride but please **do not leave the battery on charge for extended periods of time once fully charged.**

Warranty

What the Warranty covers:

The “Hybrid Bikes Ltd” limited warranty covers defects in materials and workmanship on the frame, forks, motor, brakes, battery and on parts which are fitted onto the Hybrid branded E Bikes by Hybrid Bikes Ltd or any authorised Hybrid E Bikes dealer and sold directly to the customer.

The “Hybrid Bikes Ltd” limited warranty covers a lifetime warranty on the frame; two years or 5,000km (whichever comes first) warranty on the motor; two-year warranty on forks, brakes and battery; one year for all other parts from the date of purchase.

Note: The warranty will be dependent on compliance with the service maintenance schedule. All maintenance should be carried out by an authorised “Hybrid Bikes” E Bike dealer, or any other qualified E Bike mechanic and the service document should be filed in and provided with any claim of fault or damage. Should the annual maintenance service be missed the warranty will be invalid. Costs for maintenance and service will need to be borne by the owner of the product.

The “Hybrid Bikes Ltd” limited warranty is valid from the date of purchase of the product and is limited to the first purchaser of this product. All warranties are not transferable.

The “Hybrid Bikes Ltd” limited warranty covers all parts which fall under the warranty but excludes the labour to fit them.

What the Warranty does not cover:

The “Hybrid Bikes Ltd” limited warranty does not cover any defect caused by “wear and tear”, accident, neglect, improper handling, colour fade due to exposure to sunlight, abuse, misuse, an act of god or improper assembly if done by the buyer.

The “Hybrid Bikes Ltd” limited warranty does **not cover** the Lithium battery if it has been uncharged for an extended length of time or sustained water damage which can lead to problems in the electrical circuit.

The “Hybrid Bikes Ltd” limited warranty does not cover the E Bike and any of the original parts if they have been modified or changed in any way without approval from “Hybrid Bikes Ltd”.

The “Hybrid Bikes Ltd” limited warranty does not cover labour time.

To Claim under the Warranty:

You must claim the limited warranty from the authorised “Hybrid Bikes” dealer from whom the E Bike was purchased or from “Hybrid Bike Ltd” direct if purchased online within the warranty period. You must return the “Hybrid” E Bike part or the “Hybrid” E Bike in a timely manner at your own expense. Note: you will also need to provide your proof of purchase for investigation.

In case of replacement or refund, the returned products become the property of “Hybrid Bikes Ltd”.

Service Record:

Recommended Service Schedule:

1. First service after 250km or 3 months (whichever comes first)
2. Every 1,000km or every 6-8 months (whichever comes first)

NOTE: Please keep all receipts with your service history.

Service History:

Registration Form (for your records):

Hybrid E Bike Serial Number:

Note, the serial number can be found on the underside of the bike frame or on your invoice (e.g., HYF18001111 or HYM18001112)

Model: _____

Date of Purchase: _____

Dealer's Name/Location:

NOTE: Please register your Hybrid E Bike with the authorised dealer you made your purchase from or online [here](#). You must register your Hybrid E Bike within 30 days of purchase for the warranty to remain valid.

