

# Manual for the EHC 04 and EHC 58 from July 2020

You don't like to read manuals? We too... However, it will take only 2 minutes of your time to read it and 10 minutes for the installation and you will have more fun with your new EHC :-)

Just connect the d - sub connector(s) to the EHC. and screw it gentle. **We suggest to fill the connectors with Di-electric grease before of the installation what helps to prevent the connectors against moisture.** Every output is short circuit protected and will limit the maximum current between 6 and 20 Ampere after some seconds. The starter solenoid output is rated with maximum currents up to 20 Ampere depending of the short circuit current and the temperature. **However, we suggest to wire an inline 25 A fuse in the + 12 Volt line to the harness what will protect the EHC in case of a short circuit at the starter solenoid wire.** A short circuit increase the temperature of a part in the EHC very fast up to 150 degree Celsius what result in small gaps in the potting material, following that the box is not waterproof anymore and the durability of the EHC is decreased if you like to ride in the rain...

## Adjustment of the different functions:

The EHC can be used in most circumstances without any modification. However, you can easily change a few functions in the EHC without being a software specialist. Press the "horn" button while switching on the ignition switch and you are in the "setup" mode. A one time flash will indicate the first option, what is the "Show flasher" function. Just press the "right" button if you would like to activate it or the "left" button if you want to switch off this function. After a press on a direction button you will come immediately to mode 2 what is indicated with 2 flashes of the turn signals. The following options are possible:

Number of flashes	Mode	Left flasher button	Right flasher button	Description
1 x	Show flasher	Off	On	1 emergency flash when power on the box
2 x	Flasher auto off	Off	On	The flasher switches off after 40 times
3 x	Brake light mode	The rear light glow with 30 % if not braked (EU - mode)	Brake light / rear light combination (US - mode)	European / US mode for the rear light / brake light / direction indicators
4 x	Brake light flasher	Off	On	The brake light flashes 3 times before it is permanent on when you a brake
5 x	Head light off	Head light on	Head light off	Head light status when switching on the ignition key.
6 x	Neutral / Starter	Neutral switch ignored	Neutral switch active	Starter function depending of the neutral switch in the gearbox
7 x	Head light / Ignition	Head light off	Head light on	The head light switch off or stay on when you switch off the ignition
8 x	Ignition status	Key switch (EU mode)	Run button (US mode)	You turn on the ignition with the "run" button or with the key switch

**Your settings are stored after choosing the last option.** You are done ! The EHC will keep your settings after a power off. However, you can change the settings any time you want.

The following new functions are integrated:

- You can switch off your head light by pressing the head light button for 2 seconds. A further short press switch on the head light again.
- The starter output is protected and switch off after 10 seconds pressing the start button
- You can start the bike if the neutral switch is closed, but not if the gear box is not in "Neutral" position.
- Three led at the side indicate the battery voltage: 1 blue led: < 8 Volt, 2 blue led: between 8 Volt and 18 Volt, red led: > 18 Volt. Please check the battery voltages after the installation at about 2000 rpm when the engine is on.
- A Bluetooth module is available as option. You can download the free Android app from our website and control all bike functions or check the battery voltage via a simple touch on your smart phone.

## Additional wires at the EHC 04:

**+ 12 Volt Input (red):** This cable is wired to the plus pole of the battery.

**Ground (black):** This cable is wired to the minus pole of the battery or chassis ground. **Pls. take care that there is rust or paint under the ground connection ! A lost or bad ground connection can result in a damage of the EHC !**

**Comp. relief (green):** This output opens the decompression valves if the starter button is pressed and the starter solenoid is active.

**Starter solenoid (green):** This output controls the starter solenoid.

**Horn (gray):** This output is connected to the horn.

## Installation of the Bluetooth module

The Bluetooth module is easy to install. Just download and install the free Big Dog Remote Android app from our website [http://elektronikbox.de/ehc\\_uk.html](http://elektronikbox.de/ehc_uk.html). Then connect the Bluetooth module to the 4 pin connector on the EHC, switch on your bike and pair your phone with the Bluetooth module. Type "007007" as password in case if your phone asks for it. That's it. Now you can start your bike with a finger tip on your phone. No worry, the start function via phone is only active if the gearbox is in "Neutral" position, no matter if the option 6 is set or not. I (the developer) want that you have fun and not somebody else who likes to see your bike running alone for a few meters... ;-)

The EHC was developed for an implementation in BD bikes. It should be installed by professional well trained engineers only. **The EHC can be damaged in case of reverse polarity or if the EHC is not connected against chassis / - 12 Volt. The Big Dog OEM charging system must be replaced with a CompuFire or Cycle Electric system for Elektronik's 2 year warranty to apply, cause a fail of the original charging system is often responsible for overvoltages above 20 Volt, what might destroy the EHC, even with the implemented overvoltage protection. All warranty claims are become invalid in this case.**

We strongly suggest you to use the implemented rubber damper in order to reduce unwanted vibrations at the box and connectors. Please check your local regulations regarding the traffic light rules in your country before of the use of the EHC on your bike. Please be aware that we are not responsible for any hazards, damages or disadvantages due to the use of the EHC. The elektronikbox devices are registered under the number DE54933725 WEEE as B2C device. We also declare that the EHC is conform to the CE and ROHS regulations for the European market.

We tried to keep the functions of the EHC and this manual as simple as possible. If you have any questions while the installation please don't hesitate to contact us at: [info@elektronikbox.de](mailto:info@elektronikbox.de)

### Technical specifications:

Dimensions: 104 mm x 50 mm x 23 mm

Material: ABS, casted with 2 K epoxy resin

Temperature range: -20 degrees C to +70 degrees C.

IP53 according to DIN EN 60529

Power supply: 8 - 20 volts

Current consumption in idle state: about 80 uA

Max. Power consumption during operation: 20 Ampere for about 20 seconds, 7 Ampere permanent

Outputs: short-circuit protected between 6 and 15 Ampere, self-resetting after cooling down.

**We wish you to have a lot of fun with your new EHC in your bike and of course always Ride Safe!**