

Installationplan of the digital cable harness, Version C, 11.2019

We know long manuals are annoying, but please take 2 Minutes of your time to read this manual. Thank you for your patience!

Installation:

When your're mounting the C-Box (the „C“ stands for „communication“) you should make sure, that the contacts of the 12V power supply are secured by a 15 - 20A fuse, depending of your bike. The electrical switches inside the C-Box are short circuit protected, but the electrical switches will get hot (up to 150°C) in case of a short circuit what can result in gaps in the casting compound and your C-Box is not more water proof! The dimension of the input cables can go down to 0,1qmm due to the very low current (4mA while switching). The C-Box itself can be fixed with Velcro tape. The C-Boxes and also the control cables should be placed as far as possible from the Ignition cables. The ground connection to the frame should be as short as possible. Also all the control cables should be connected on the shortest way to avoid EMC disturbances from the Ignition unit. The C-Boxes are shielded as good as possible but precaution is a good way to avoid EMC troubles and above that, keep your bike clean from (to long) hidden cables. **It's always a good idea to link the Handlebar ground with the frame ground or the both thick black cables of the two C-Box devices!**

The cable harness (frame unit and handlebar unit) makes the wiring more easy and is nearly invisible comparing to other control Boxes on the market. Both units get connected by the two core shielded communication cable. Right now, the C-Boxes are working already! You „just“ have to wire the inputs and the outputs.

The frame unit:

The C-Box frame unit can be hidden under the seat for example. It could located in the rear part of the bike and work from there. The following named cables come out this box:

Com: This two core and shielded cable is the communication cable. The brown core is the com 1, the white core is the the com 2 and the shield is for the ground line. Just connect com 1 from the frame unit with the brown cable from the handlebar unit and com 2 with the white one. The shield must be connectetd to the thin black cable. **Never wire one of the com cables to plus 12 Volt ! The internal data chips were developed for a work in a very harsh environment and they do their job pretty good, but connecting one pin of the data cables to plus 12 Volt will destroy the data chips and this issue is not claimed by our warranty.**

+ 12V Input: Connect the the supply voltage from the Ignition unit with the +12V cable. **But don't forget to install the 15 - 20A fuse as mentioned above! Keep the fuse holder empty until the bike wiring is complete.**

Outputs for turn lights left and right: These are the ouptuts for the turn lights. A hazard light function can be realized by pressing both push buttons simultaneously.

Output Horn: This is the switchable output for the horn.

Output Rearlight: Here, you can connect the rear light and also the combined rear- and brakelight.

Output start relay: This is the output for the start relay. **Don't connect the starter directly to the C-Box, but always via the present start relay!** The starter output on the C-Box can switch up to 10 Ampere, what is too less for your starter motor direct. Please note that the internal load switches will switch off when the battery voltage drop below 6V. If the battery is too weak the internal load switches would switch off after receiving an impulse from the relay and switch on again after the relay is switched off.

Ignition: This output provides the supply voltages for the ignition. When you press the stop button, this line will be switched off.

Brake light switch: Here you can connect the push button for the brake light.

Side stand switch: This cable is connected to the side stand switch. Please consider that one pin of the switch must be wired to ground for enabling ignition and start. You can enable or disable this function in the manue, what is descibed at page 2.

Neutral switch: This line is be connected to the neutral switch. Please consider that the switch must be wired to ground for enabling ignition and start. You can activate or disable this function.

Oil pressure switch: This Input is for connecting to the oil presure switch.

The handlebar-box:

Com: As already mentioned in the passage of the frame unit, there is a white cable for com1, and a red one for the com2 that must be connected to the white and the red cable of the handle bar unit. The shield (ground) must be connected to the thin black cable.

+ 12V Input: Connect this line to the +12V cable from the ignition key switch.

Outputs for turn lights left and right: These are the switched outputs for the turn lights. Hazard lights can be realized by pressing both push buttons simultaneously.

Output horn / speedo: This output is for supplying either the horn or the speedo. If you want to use the output for the Horn, the wire is only powered when pressing the push button. For using this output as a continuous power supply for your speedo, you have to connect this cable to your speedo and change the setting 6 in the following table.

Output low beam: This output supplies the low beam. While pressing the ignition button and also the start button the low beam will be automatically switched off, to have enough power for the starter.

Output high beam: This output supplies electricity for the high beam light.

Brake light switch: Here you can connect the handle bar brake light switch.

Outputs for control lights: You will find three more cables coming out of the handlebar unit which allow you to connect control lights:

Dark blue wire: Connection for control light „Neutral“
Orange wire: Connection for control light „Turn“
Light blue wire: Connection for control light „Oil“

The **violet cable** is for the connection between the handlebar unit of the C-Box and the the handlebar adaptor(s) which itself, put out wires for the push buttons.

Programming the C-Box:

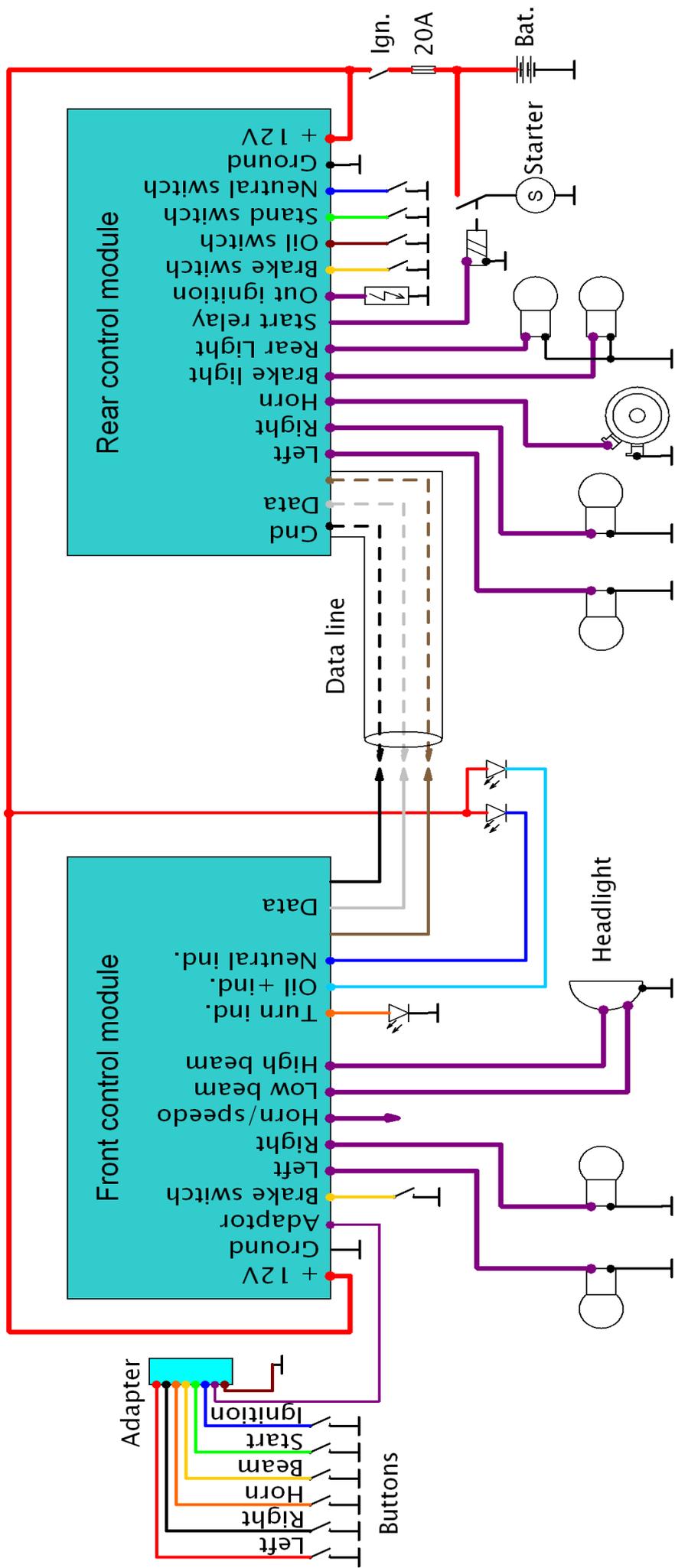
The different functions of the C-Box can be changed instantly and very easy as well. Before switching on the power supply, keep the horn button pressed and switch on power. After releasing the horn button, the C-Box is in the programming mode. A single hazard flashing shows the first menu item. By pressing the turn left or turn right switch you can select the menu items and make your individual selections as shown in the table below. Every press on a direction button bring you to the next menu option and is indicated by a number of flashes. The following options are possible:

Flashing quantity:	Mode:	Turn left push button:	Turn right push button:	Description:
1 x	Show flasher	On	Off	2 flashes at starting and stopping
2 x	Auto off flasher	On	Off	Flashers turns off autonomously after 20 or 40 flashes
3 x	Auto off flasher	40 x	20 x	Adjustment of flash quantity before turn off, if auto off activated.
4 x	Start / Stop-push button	1 push button f. Start / Stop	2 push buttons f. Start / Stop	Using 1 push button for both (start/stop) or 2 separate buttons.
5 x	Sidestand / Idle running switch	Switch activated	Switch not activated	Ignition and starter only active if the switches are connected to ground.
6 x	Horn output at handlebar active	Output is permanently on (for Speedo-use)	Output is switchable via push-button (for Horn-use)	This output is usable for the horn or the speedo (either-or).

The functions will be programmed into the E-Eprom after having pressed a turn button for 6 times, but could be changed again at any time.

Please install the C - Harness only if you have some basic knowledges and experiences of electronic circuits. Don't install it if you do not have any glue about electrical basics. The C-Box works until the battery has reached at least 6V. The producer cannot assume liability for inappropriate use or installation. We declare the disclaimer of liability for damages on material or persons. Please attend the corresponding traffic regulations in your country. The company Axel Joost Elektronik declares above that, that this Elektronikbox device complies to the nameable CE-Norms and ROHS regulations.

For further information please contact: info@elektronikbox.de



Connect all ground cables to the minus pole of the battery !