BMW Control (*BCMDC0081*) User Manual
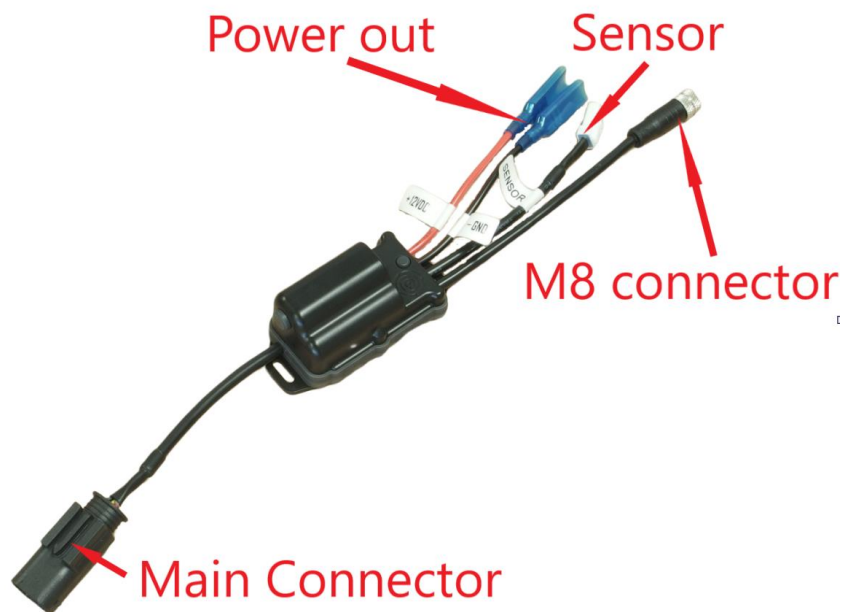
v1.2

Applicable Model: BCMDC0081

1. **Description**

    1.1. BMW Control ("**BCMD**") is a Bluetooth Low Energy remote controller designed specifically for BMW Motorrad motorcycles in the "GS" line-up (subject to limitations stated below). The controllers cannot be used on any other motorcycle models or on other motorcycle brands than BMW Motorrad.

    1.2. BCMD is designed to connect to Android powered smart devices (cell phones, tablets, CI pad).

    1.3. Prerequisites for BCMD compatibility with specific BMW model:

        1.3.1. Manufacturing year 2013 and newer;

        1.3.2. Motorcycle is equipped with BMW Multi-Controller;

        1.3.3. "navigation" option is enabled in the motorcycle firmware. All Adventure models have that option enabled, if they came with the "Preparation for navigation kit" installed as standard accessory. Other models will have the navigation option enabled, if the BMW Navigator V or VI Mount Cradle is installed on them now or was installed in the past. You do **NOT** need the BMW Navigator Mount Cradle to use BCMD Hub;

        1.3.4. Motorcycle models is among "GS" line, unless another specific model is declared by Carpe Iter as compatible (please check our website for list of other compatible models).

    1.4. RECOMMENDATION: If your specific motorcycle does not have "navigation" option enabled in its firmware, visit a BMW specialized workshop and have that option enabled on your motorcycle before purchasing BCMD.

    1.5. BCMD **kit** comprises of the following main parts:

        1.5.1. BMW Control Hub

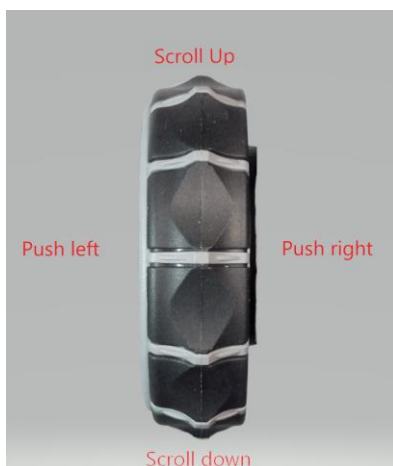   1.5.2. BMW Control Buttons

1.6. You can use only BMW Control Hub without the Buttons. In that case the controller functionality will be limited to 6 function controls (short + long press). In combination with the BMW Control Buttons, you will get 14 function controls (short + long press).

1.7. The BMW Control Buttons have no self-standing functionality without being connected to the BCMD Control Hub.

1.8. BMW Control Buttons will be released following the date of this manual. This manual will be amended with installation instruction for BMW Control Buttons prior to their release.

1.9. BMW Control Hub description:

1.9.1. Default Functions (customization will be possible through Controller app update. Coming soon):

Default configuration at the date of this manual – **please refer to our website for possible future changes**:

"Scroll Up" – Zoom In

"Scroll down" – Zoom out

"Push right" – Map Center/Map Orientation

"Push left" – HUD

"Button A" – pan map left

"Button B" – pan map right

"Button C" – pan map up

"Button D" – pan map down

2. Installation

2.1. BMW Control Hub ("**BCMD Hub**")

2.1.1. Disable Clock and Date synchronization with GPS on your motorcycle or the time and date settings will be overridden when you connect the BCMD Hub (it will keep being overridden every time you start your motorbike!).

2.1.2. Mate the Main Connector (please see graphics above) with the connector for installation of the BMW Navigator Mount Cradle. Please consult the user manual for your motorcycle for the specific location of that connector. On recent motorcycles, the connector is located on the right side of the front fairing subframe:

On older models the connector is located at the front under the motorcycle dashboard.

2.1.3. Zip-tie BCMD Hub and all wiring coming out of it to the front fairing subframe. Make sure that BCMD Hub or the wiring is not obstructing free movement of the motorcycle steering or possibly fatal accidents could occur if the steering gets obstructed while riding.

2.2. BMW Control Buttons
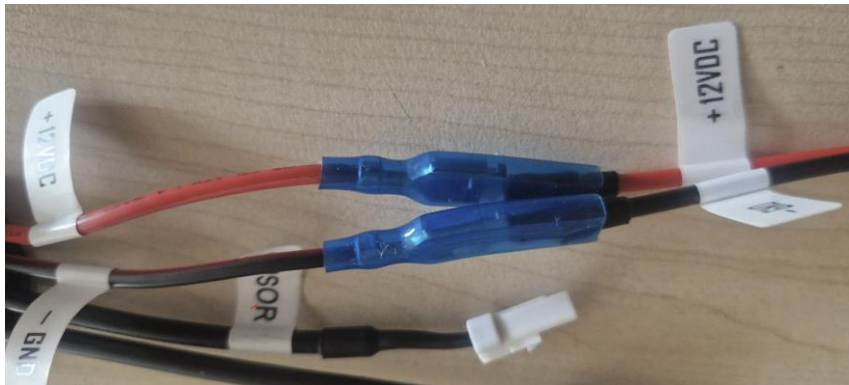
    2.2.1. Instruction for installation of BMW Control Buttons will be amended prior to their release. The BMW control Buttons will be mounted on the motorcycle throttle grip assembly – no relocation of stock controls will be necessary.

2.3. Power outlet

    2.3.1. BCMD Hub includes power outlet for additional accessories on your motorcycle.

    2.3.2. The power outlet connectors are designed to mate with Carpe Iter proprietary power sources, but can be used to power any other device requiring 12VDC input voltage.

    2.3.3. Make sure the connectors on the power outlet do not touch – short circuit will occur. Make sure the pre-installed silicone sleeves are fully covering the whole connector after you attached the accessory you plan to power. The silicone sleeves are long enough to cover the whole connector, when you slide them in to correct position:

    2.3.4. **The power outlet on BCMD Hub is subject to the same limitations** as the stock socket for BMW Navigator Mount Cradle. Please consult the user manual for your motorcycle to establish the maximum currents that can be handled by that socket.

2.4. Front Wheel Sensor

    2.4.1. **Optional**: Should you choose to use BCMD Hub magnetic sensor reading capability, connect standard magnetic 2 wire reed switch to the connector marked as „SENSOR". Connecting SENSOR is only needed, in case you plan to use front wheel revolutions readings and it is **not required for normal BCMD operation**. The SENSOR connection is polarity ignorant. **DO NOT connect the SENSOR with stock front wheel sensor on your motorcycle** or BCMD Hub or your motorcycle electronics could be destroyed or malfunction (different voltage levels and signals). In other words, except connecting the Main Connector (please see graphics above), BCMD Hub MUST **NOT** be connected to your motorcycle electrical system/electronics through the SENSOR.

    2.4.2. There is a 3-wire connector on SENSOR cable. To accommodate standard magnetic reed switches found on the market, please use the Carpe Iter adapter cable for the SENSOR socket (sold separately). The color code of the adapter cable is red-black-yellow. Connect your reed switch to **black and yellow** wires and leave red blank – simply fold the red wire and wrap it e.g. with electrician's tape. Reed switch is

polarity ignorant – it does not matter how exactly you will wire the reed switch, as long as you connect to black and yellow wire on the adaptor cable.

2.4.3. **Do not cut away our stock connector** on the SENSOR input cable or you lose compatibility with our sensors to be soon introduced as optional accessory (our sensors will be hall effect – virtually limitless life span and reliability).

3. Use

3.1. For full functionality, BCMD Hub requires installation of the companion software – Carpe Control app and enabling certain services to run on your Android powered smart device.

3.2. Motorcycle – BMW Multi-Controller activation

3.2.1. BMW Multi-Controller can be used in conjunction with BMW Control Hub same way like BMW Navigator V and IV.

3.2.2. On motorcycles equipped with TFT dashboard, the "Nav" mode must be enabled by long-pressing UP on the Menu button:

3.2.3. On non-TFT dashboard motorcycles no user action to activate the BMW Multi-Controller is required.

3.3. First connection to Android devices

3.3.1. Download and install Carpe Control app from Play Store (pre-installed on CI Pad). If already installed, update it to the latest version (check for updates on Play Store in case of other than CI Pad device / check for updates in Carpe Manager in case of CI Pad). **DO NOT install Play Store version of Carpe Control app on CI Pad.**

3.3.2. **WARNING:** if you are updating previously installed Carpe Control app, you need to restart the Carpe Accessibility service so that the new protocols for BMCD Hub take effect. Go to you Android device system menu, search for Accessibility and turn Carpe Controller service off and then on.

3.3.3. Grant all permissions requested by Carpe Control app during installation. If you deny any of the requested permissions, Carpe Control app (and consequently BCMD Hub) will not work correctly.

3.3.4. Ensure BCMD Hub is connected to power – start ignition on your motorcycle (engine does not need to be running). Then open Carpe Control app on your Android powered device and follow on-screen instructions. Your Android powered device must be within Bluetooth range, to complete the process. When you are invited to press a button, but BMW Control Buttons are not equipped on your motorcycle, you can spin the BMW Multi-Controller. The Multi-Controller must be enabled first on your motorcycle for the BCMD Hub to be able to detect the inputs – see Section 3.2 and in case your bike has TFT dashboard, the Nav mode needs to be enabled – see Section 3.2.2.

3.3.5. Carpe Control app will try to bond (pair) BCMD Hub with your Android device automatically. Should the automatic connection fail for any reason (the connection page in the Control app will hang for more than 1 minute), pair BCMD Hub manually in the device Bluetooth manager and restart the Control app. When asked by the Control app if you want to connect previously paired controller, confirm (click "Yes").

3.3.6. Once the first connection is completed, a bond is created between your Android powered device and BCMD Hub and you can start using BCMD to control supported applications (see Carpe website for details).

3.3.7. BCMD Hub may be bonded to more than 1 Android powered device. WARNING – make sure only one of the previously bonded devices has active Bluetooth, when both are within range – it is not possible to control to which device BCMD Hub would connect (first come first serve in terms of Bluetooth connection routine). If you must keep Bluetooth active on both previously bonded devices for any reason, you will need to delete connection to BCMD Hub on the one, that you presently do not intent to use together with BCMD (please see Section 3.5).

3.3.8. **Troubleshooting Bluetooth connection**: In case of connectivity issues, delete pairing relationship between BMW Control Hub and your Android device, turn off Bluetooth on your Android device, restart Controller app (close it from the list of apps running on the background), open the Controller app again and follow on-screen instructions.

3.4. Subsequent connections

3.4.1. Following the first connection described in Section 3.2, BCMD will connect automatically when a bonded device is detected. The connection is almost instantaneous under normal conditions.

3.4.2. In order to detect the presence of a bonded device: (A) BCMD Hub must be powered (ignition on your motorcycle ON) (B) Bluetooth must be enabled and within range on the bonded device.

3.5. Unpairing

3.5.1. Pairing relationship between your Android powered device and BCMD Hub can be deleted either manually in the device Bluetooth manager or directly via the function in Carpe Control app – Settings – Delete controller. Preferred way of deleting the pairing relationship should be through the Carpe Control app.

3.6. Initialization routine explained (automatic)

3.6.1. Active mode is indicated by blue LED blink on the Main Hub. Any LED color indicates that BCMD Hub is powered.

3.6.2. Rapid flash of blue LED indicates advertising for Bluetooth pairing.

3.6.3. Steady blue LED indicates successful Bluetooth connection to a bonded (previously paired) device and BCMD being ready for normal operation.

4. Operating considerations

⚠️

4.1. Never exceed operating parameters stated in Section 5 or BCMD Hub will get damaged or destroyed.

4.2. Ensure correct polarity of the BCMD Hub input leads (no need check anything unless you modified the stock connectors on your motorcycle).

4.3. Do not pull on any cables/wires.

4.4. Exceeding upper operating temperature range will result in overheating. When overheating occurs, BCMD Hub will resume its normal operation after it cools down to normal operating temperature (unless the heat exceeded the operating parameters to such degree to inflict permanent damage).

4.5. DO NOT apply jet water on BCMD Hub, especially the Button Sections (e.g. when cleaning your motorcycle, avoid hitting BCMD Hub with direct stream from WAP or other jet water system).

4.6. DO NOT use button combos (pressing more than one button at the same time) during normal operation – it may lead to unexpected behavior.
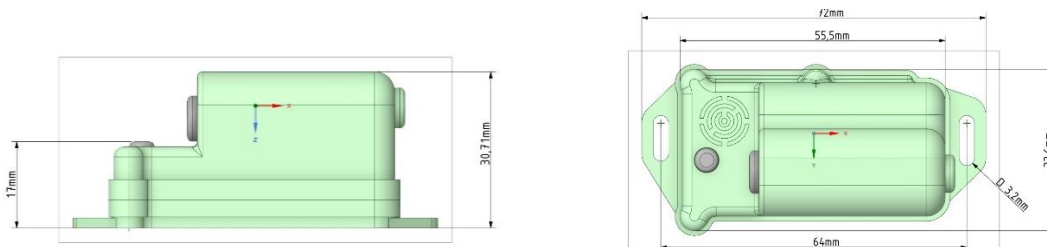
5. Specifications

- ⚠️ Operating voltage: 10-16V DC.

- Average power consumption when in use: 5mA@12V (BT Connected, Wheel Sensor being used).

- Onboard auxiliary power supply (super capacitors) that will ensure up to 30 minutes of self-standing operation after disconnecting from power, when fully charged. When operating on back-up power, only the BMW Control Buttons will function. BMW Multi-Controller is only functional, when the motorcycle ignition is on.

- Water and dust resistant. Official IP rating has not been done, but BCMD Hub is designed to survive on a motorcycle in any weather conditions (subject to operating limitations stated in Section 4).

- Operating temperature: minus 15 to 60 C° (the upper range includes heat accumulated in the BCMD Hub enclosure by external sources, such as the Sun).

- Storage temperature: minus 15 to 60C° (the upper range includes heat accumulated in the BCMD Hub enclosure by external sources, such as the Sun).

- Operating humidity: 0-95%

- Storage humidity: 0-70%

- Control elements:

- BMW Control Hub: none

  - BMW Control Buttons: 4x mechanical pushbutton.

- Maximum operating force on BMW Control Buttons control elements: 2kgf.

- Normal operating force on control elements: 0,5kgf.

- User feedback system: 1xRGB LED on BMW Control Hub.

- Maximum SENSOR frequency: 40Hz (that equals to more than 300km/h with 21-inch wheel). Subject to correct function of the reed switch.

- Radio:

  - Operating frequency: 2,402 – 2,480 GHz

  - TX power: < 10dBm e.i.r.p.

  - Modulation type: wide band modulation

  - BT 5.0 compliant

- Connectors on BMW Control Hub:

  - 6,3mm Faston female on power output;

  - JST 03R-JWPF-VSLE style connector for SENSOR;

  - M8 8 pin connector to attach BMW Control Buttons.

- BCMD Hub is not designed to be worn on human body while in operation. Minimum distance between human body and the Main Hub is 40cm.

- Dimensions:

  - BMW Control Hub *WxLxH: 33,6x55,5x31 mm (excluding cables)*

6. Disclaimer

6.1. ⚠️ Unless explicitly stated for a specific Carpe Iter item (BCMD Hub, CI Pad, Holder, their accessories, brackets and other Carpe Iter equipment) ("**Item**") otherwise, no testing or homologation procedures were taken to ensure compliance with regulations associated with using the Items in regular traffic – on the streets. Use at your own risk.

6.2. Make sure that Items with sharp edges are positioned so that the sharp edge does not face the rider. Always dismount Items, which you are not currently using – especially empty holders and brackets (which may form a sharp edge when empty).

6.3. Even if the Items are mounted to your vehicle properly, you might suffer an injury to your body (bruises, tearing, fractures, etc.) or damage to your gear (tearing, breakage, etc.) especially in case of an accident (e.g. dismounting your vehicle in other than standard way).

6.4. Manuals and use instructions are only provided in electronic form and can be viewed and/or downloaded on our website. Manuals and instructions for use shall not be provided in printed form.

6.5. Our manuals and instructions for use assume casual experience with smart devices (such as smartphones) and basic manual dexterity. I case of doubt, installation of Items on a vehicle must be performed by a specialized workshop.

6.6. Manuals and instructions for use, as well as technical support are only provided in English.

7. Warranty

7.1. Carpe provides world-wide warranty in the scope set forth below for defects, which exist upon delivery of an Item to the shipping address provided by you upon purchase and which shall manifest within the period of 2 year as of the date of the original purchase, if you are a consumer, and 1 year as of the date of the original purchase, if you are a business (you provided business identification number or VAT number upon purchase). This warranty does not apply to software and batteries (see below). The date of dispatch of an Item to your shipping address is deemed to represent the date of original purchase.

7.2. Limited 6 months warranty is provided for batteries included in an Item or, as the case may be, sold separately. In the course of this limited battery warranty, we guarantee that the battery will retain at least 60% of its nominal capacity. No warranty is provided for batteries beyond the period of 6 months following the date of original purchase. Warranty for batteries is subject to adhering to the use instructions set forth above.

7.3. Our warranty only covers defects that preclude the use of an Item for its purpose. In view of the intended purpose of use of the Items, our warranty does not cover in particular: defects of cosmetic nature, such as discoloration, paint fading, rusting that does not hinder the use, etc.

7.4. Our warranty is subject to adhering to manuals and use instructions published on our website or stated above in this manual for individual Items. Our warranty does not cover defects occurring due to misuse of Items and lack of their maintenance. Our warranty does not cover usual wear and tear.

7.5. No warranty is provided for software.

7.6. No warranty is provided for defects occurring as a result of outside forces (abrasion, shock, water, pressure, vibration, UV light, etc.).

7.7. Plastic and rubber parts of Items are considered expendable material.

7.8. Item, in respect of which our defect warranty is claimed, including a detailed written description of the defect, must be delivered for inspection to the address published for that purpose on our website. Any and all cost associated with the delivery, including without limitation fees and other duties incurred by us in association with re-importing the Items into EU, will be borne by you and we will be entitled to request the respective reimbursement to be credited to our bank account before your warranty claim is processed.

7.9. We shall be free to choose any of the following actions to satisfy your warranty claim:

7.9.1. repair, if repair is economical;

7.9.2. adequate monetary compensation;

7.9.3. replacement of the defective Item. We may choose to replace the defective Item with newer generation or, if the Item was discontinued, with an Item offering similar features.

7.10.   We may always choose to replace a defective Item instead of carrying out a repair or providing monetary compensation.

7.11.   Your warranty claim shall be reviewed and responded to within 30 days following the delivery of the defective Items to our address provided by us for that purpose.

7.12.   It is strongly recommended that you contact us through **Support ticket system** on our website before dispatching an Item, in respect of which you plan to claim warranty. We might choose to satisfy your claim without the need to return the defective Item, which will save time and shipping cost.