



Terrain Command III User Manual

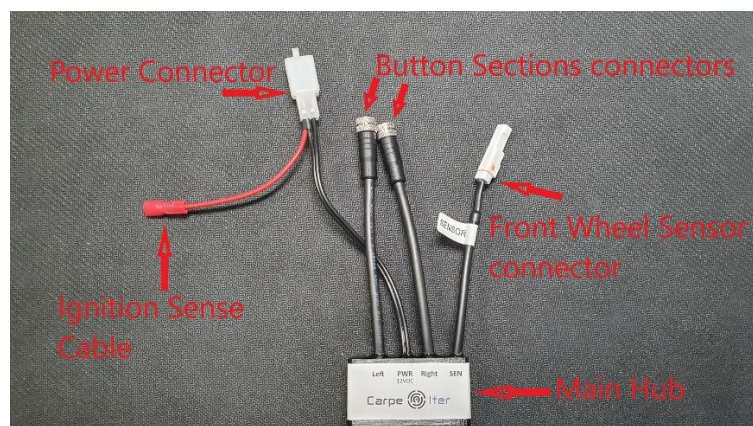
v1.4

SPECIAL MODEL FOR **FANTIC XEF Rally MY23**

Model No. TCMDF0011

1. Description

- 1.1. Terrain Command III is a Bluetooth Low Energy remote controller designed to be mounted on a motorcycle.
- 1.2. The specific model of Terrain Command III marked above ("TCMD3") is specifically designed for installation on Fantic XEF Rally, MY2023 ("Fantic XEF Rally") as part of a complete kit, which comprises the following Carpe Iter equipment:
 - 1.2.1. Terrain Command III,
 - 1.2.2. non-charging Lightweight Holder,
 - 1.2.3. CI Pad v4b,
 - 1.2.4. Power source for CI Pad v4b (specific power source for Fantic XEF Rally – this version of the power source **will only work as part of the kit**),
 - 1.2.5. M8 charging cable.
- 1.3. TCMD3 includes specific connectors to mate with the Fantic XEF Rally without the need for any modifications and is designed to mate with specific version of Carpe Iter power source for CI Pad v4b.
- 1.4. TCMD3 comprises of the following main parts:
 - 1.4.1. Two button sections to be mounted on motorcycle handlebars. The button sections are interchangeable ("**Button Section**");
 - 1.4.2. Main hub, which contains electronics required for TCMD3 operation;
 - 1.4.3. Please refer to the graphics for details:



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1.4.4. Functions:



2. Installation

2.1. Button Sections:


- 2.1.1. Buttons Sections are designed for permanent installation on **22mm** diameter handlebar via the provided mounting brackets and screws.
- 2.1.2. In stock configuration, the Button Sections are on opposite sides of the handlebars.



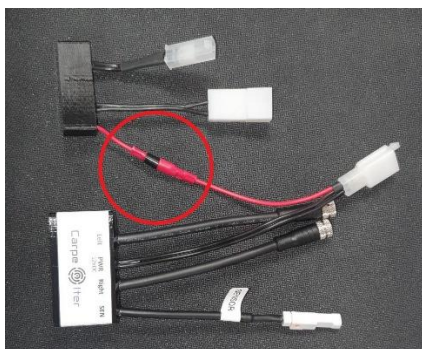
- 2.1.3. Alternatively, the Button Sections can be mounted on one side of the handlebars, next to each other. In case of after-marked TCMD3 installation or side-by-side Button Section installation, create adequate space on handlebar by moving stock control elements. Ideal location is between handlebar grip and stock instrument cluster. Make sure the stock control elements, especially brake and clutch levers, turn-signal and lights switches are still within reach.
 - 2.1.4. Depending on your riding style (mostly on the foot pegs / sitting down) rotate Button Sections to find appropriate angle to have its control elements within reach of your thumb.
 - 2.1.5. Use the provided bracket and M4 screws to secure the Button Sections on the handlebar. Required tool (not provided): 2,5mm HEX key.
 - 2.1.6. Route cables close to the handlebar and secure them with zip ties.
 - 2.1.7. Make sure that neither the Button Sections, nor the cables are obstructing normal operation of your motorcycle instruments, including especially clutch and brake levers. In case you detect any such obstruction, relocate the Button Sections and/or the cables.
- 2.2. Main Hub
- 2.2.1. Place the Main Hub behind your motorcycle faring, ideally behind the front mask.
 - 2.2.2. Route Button Sections cables to the Main Hub and connect to the appropriate socket marked as "Left" and "Right" to the respective Button Section. The marking on the sockets represents that side of the handlebar from rider perspective, on which the Button Sections should be mounted or (if Button Sections are mounted side-by-side) location of Button Sections relative to one another.
 - 2.2.3. Ensure correct Button Section connectors orientation when mating the Button Sections with the Main Hub – mind the locking elements:



2.2.4. Tighten the Button Sections connectors firmly by hand – the mating pairs screw into each other (it is not sufficient to plug the connectors. They will get undone due to vibrations). Do NOT use tools to torque the connectors or you will damage them.

2.2.5.  Connect the Main Hub input power leads to auxiliary power outlet on your motorcycle. The Main Hub is equipped with connector that mates with auxiliary power outlet on Fantic XEF Rally motorcycles – DO NOT modify the connector and wiring. DO NOT connect the Main Hub to motorcycle battery. Hint: apply dielectric grease (battery contacts fat) on the terminals prior to installation to ensure good contact and prevent oxidation.

2.2.6. Connect Ignition Sense Cable to Carpe Iter power source – **this step is mandatory, or your Carpe Iter Pad will not charge.**



2.2.7.  **Installation on other motorcycle than Fantic XEF Rally:**

12VDC nominal voltage and 15W power limitation on the power source for Main Hub is required. The power limitation is satisfied on Fantic XEF Rally motorcycles without user intervention (no user action is required) (subject to adhering to Section 2.2.5). Input polarity is marked by color code on input leads -Black/Red marks the positive lead and Black negative lead. In case of installation on other motorcycle than Fantic XEF Rally and it provides more power than 15W on the auxiliary power outlet or you are connecting Main Hub to the vehicle battery, a slow-blow fuse rated for 32VDC voltage and 0,5A current must be implemented between Main Hub input power leads and your motorcycle. On other motorcycles than Fantic XEF Rally It is recommended to connect the Main Hub to the ignition switched auxiliary power outlet to prevent motorcycle battery drain when stationary for extended periods of time.



- 2.2.8. The total length of input power leads connected to the Main Hub must not exceed 2,5m.
- 2.2.9. TCMD3 has on board auxiliary power source, which can sustain normal TCMD operation for up to 30 minutes even after it is cut from power (motorcycle ignition OFF).
- 2.2.10. Optional: Should you choose to use TCMD3 magnetic sensor reading capability, connect standard magnetic 2 wire reed sensor 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 TCMD3 operation**. The SENSOR connection is polarity ignorant. **DO NOT connect the SENSOR with stock front wheel sensor on your motorcycle** or TCMD3 will be destroyed (different voltage levels). In other words, except connecting the 12VDC and GND terminals, TCMD3 **MUST NOT** be connected to your motorcycle electrical system/electronics through the SENSOR.
- 2.2.11. Secure the Main Hub and associated cable assemblies with zip ties.

3. Use

- 3.1. TCMD3 is not operational as a self-standing device. It requires installation of the companion software – Carpe Control app and enabling certain services to run on your Android powered smart device.
- 3.2. In order to work properly, TCMD3 **MUST** be connected to your Android powered smart device via the companion software – Carpe Control app or the controller will not work properly (it is not enough to make manual Bluetooth pairing via stock Bluetooth manager on your device).

3.3. First connection

- 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. Grant all permissions requested by Carpe Control app during installation. If you deny any of the requested permissions, Carpe Control app (and consequently TCMD3) will not work.
- 3.3.3. Ensure TCMD3 is connected to power (if connected to ignition switched power outlet on your bike, put ignition into ON position). 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.
- 3.3.4. Carpe Control app will try to bond (pair) TCMD3 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 TCMD3 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”).



- 3.3.5. Once the first connection is completed, a bond is created between your Android powered device and TCMD3 and you can start using TCMD3 to control supported applications (see Carpe website for details).
- 3.3.6. TCMD3 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 of TCMD3 – it is not possible to control to which device TCMD3 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 TCMD3 on the one, that you presently do not intent to use together with TCMD3 (please see Section 3.5).

3.4. Subsequent connections

- 3.4.1. Following the first connection described in Section 3.3, TCMD3 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) TCMD3 must be powered (in case you connected it to your motorcycle ignition operated auxiliary power outlet, this requires putting the ignition to ON position), (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 TCMD3 can be deleted either manually in the device Bluetooth manager or directly via the function in Carpe Control app – Configuration – Delete controller.

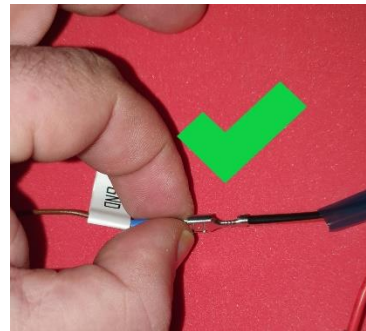
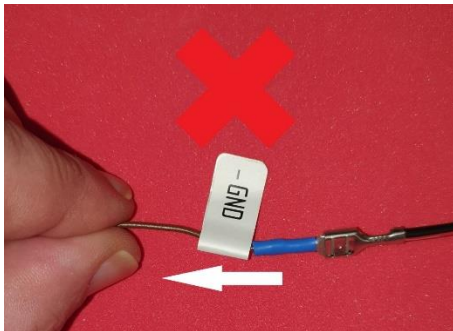
3.6. Initialization routine explained (automatic)

- 3.6.1. Active mode is indicated by blue LED blink on the Main Hub. Any LED color indicates that TCMD3 is powered.
- 3.6.2. Rapid flash of blue LED indicates advertising for Bluetooth pairing.
- 3.6.3. Slow flash of blue LED indicates successful Bluetooth connection to a bonded (previously paired) device and TCMD3 being ready for normal operation.

4. Operating considerations




- 4.1. Never exceed operating parameters stated in Section 5 or TCMD3 will get damaged or destroyed.
- 4.2. Ensure correct polarity of the TCMD3 input leads.
- 4.3. Do not pull on any cables/wires.
- 4.4. When disconnecting the TCMD3 cable assembly from your motorcycle or when disconnecting the magnetic sensor, never pull wires:



- 4.5. Exceeding upper operating temperature range will result in overheating. When overheating occurs, TCMD3 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).
- 4.6. It is recommended not to leave TCMD3 exposed to direct sunshine in high-temperature locations. When parking motorcycle in shade is not an option and in case TCMD3 is not shaded by your motorcycle fairings, cover TCMD3 with a piece of cloth to prevent overheating.
- 4.7. DO NOT apply jet water on TCMD3, especially the Button Sections (e.g. when cleaning your motorcycle, avoid hitting TCMD3 with direct stream from WAP or other jet water system).
- 4.8. 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. Power provided by the power source must be limited to 15W or a fuse with the following specifications must be implemented by the user: slow-blow fuse rated for 32VDC voltage and 0,5A current. Subject to adhering to this manual, **the power limitation is satisfied on Fantic XEF Rally motorcycles without user intervention (no user action is required)**.
- 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.
- Water and dust resistant. Official IP rating has not been done, but TCMD3 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 TCMD3 enclosure by external sources, such as the Sun).
- Storage temperature: minus 15 to 80C° (the upper range includes heat accumulated in the TCMD3 enclosure by external sources, such as the Sun).
- Operating humidity: 0-95%
- Storage humidity: 0-70%



- Control elements:
 - 8x mechanical pushbutton.
- Maximum operating force on control elements: 2kgf.
- Normal operating force on control elements: 0,5kgf.
- User feedback system: 1xRGB LED on Main 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:
 - 6,3mm Faston tab on power input;
 - JST 02R-JWPF-VSLE style connector for SENSOR.
- TCMD3 is not designed to be worn on human body while in operation. Minimum distance between human body and the Main Hub is 40cm.
- Dimensions:
 - Button Section *WxLxH: 19x72x29 (height above handlebar)*
 - Main Hub *WxLxH: 21x56x31 mm (excluding cables)*

6. Disclaimer

- 6.1.  Unless explicitly stated for a specific Carpe Iter item (TCMD3, 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. In 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.

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- 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 our address provided by us for that purpose.
- 7.12. It is strongly recommended that you contact us by email 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.