# Content

# Ⅰ. Attention

**1**. Make sure to read this manual carefully before using this product.

**2**. Please insert the SIM card before installing, and make sure the SIM card has no password, otherwise the tracker will not work normally.

**3**. Please make sure that all the cables of the tracker has been connected rightly, and then connect the terminal to host power. Must not install or take down the tracker when it is power on. If you found any troubles or omissions about the connections of cables, please cut off power first, otherwise you will easily damage the tracker.

**4**. The terminal works in wireless communications, so please cut off the host power before your vehicles entering fuel depot and dangerous material place.

**5**. The terminal work voltage is 9V-40V. Please use in the scope of work voltage.

**6**. The host of Compass/GPS terminal is a low-power wireless transmitter and receiver. It receives and sends radio frequency signal when it is working.

**7**. To avoid electromagnetic interference or incompatible configuration, please stop using your terminal in the noticed place.

# Ⅱ. Equipment Compose

The terminal supports all mobile communication network, supports GPS andCompass navigation or positioning system. Terminal serials have 4 types,ON-MTC1x8, ON-MTC2x8, ON-MTC3x8 and ON-MTC6x8.

```
                                VMT-C1 18
    Device Family
    Vehicle Management Terminal

    Product Line
    C1 -- All in one
    C2 -- Basic Tracker
    C3 -- Common Tracker
    C6 -- Multifunction Terminal

    Network Type
    18 -- Lowcost 4 bands GSM
    28 -- 4 bands GSM
    38 -- CDMA 800MHz
    68 -- WCDMA & 4 bands GSM
    88 -- TDD & FDD LTE
```
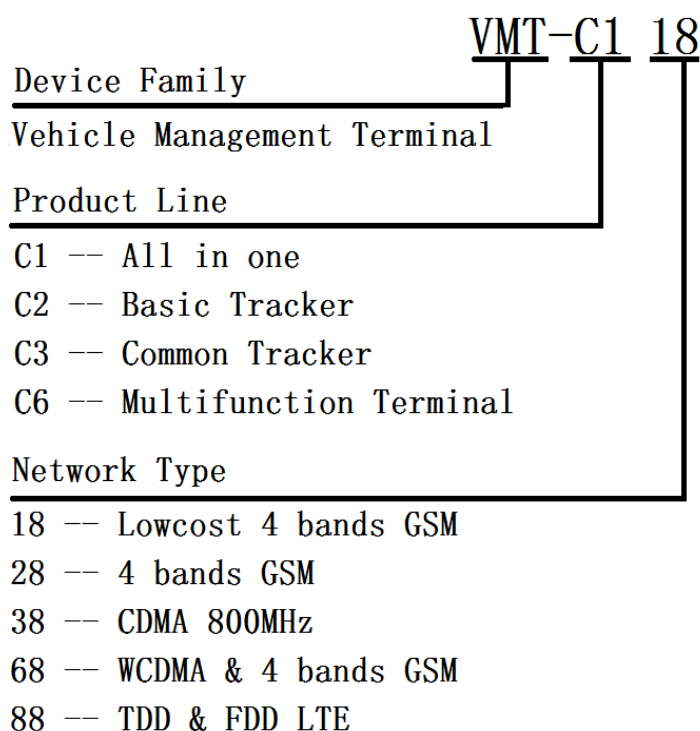
## Start Up：

Put the SIM card in place and installed the terminal in the car, the red indicator light is on. About 20 seconds, the terminal will begin to work and acquire the mobile network signal as well as the GPS/Beidou signals, and the red indicator light will keep flashing every 2 seconds when the mobile module is no communication. When the blue indicator light is on, the terminal has been located.

When terminal uploads the tracking data to server, the red led will be flash at 200ms intervals.

## Ⅲ. Main Function:

1. Positioning and Tracking: Through the on-line Positioning Platform or the cell phone to locates at times, and get the working status. You can choose the Positioning Platform by yourself.

2. Triggering Emergency Alarm: When there is an emergency happened on the vehicle, you can put on the button and the installed unit to send out alarm to the authorized numbers.

3. Remote controlling fuel and circuit: You can control the fuel and circuit via the unit by SMS in anywhere and anytime.

4. Remote Monitoring: In anywhere and anytime, call the phone number in the unit, when it connects, you can monitor the sound around 5 meter from the vehicle.

5. Movement Alert: Send SMS to the unit to start the movement alert function. When the vehicle is moving, the unit will send the movement alert to all authorized numbers.

6. Overspeed Alert: Send SMS to the unit to start the movement alert function. When the

vehicle is overspeed, the unit will send the overspeed alert to all authorized numbers.

7. Geo-fence: Set up a geo-fence for the unit to restrict its movements within a district. The unit will send the message to all authorized numbers when it beyond the district.

8. Get the geography information:   read the terminal's location information via SMS.

9. Read terminal address: read the terminal's address information via SMS, this function need to be supported by platform.

10. Auto Tracker Function: set up auto tracking function by SMS or online tracking platform.

11. Mileage statistics, Ignition detecting, cutting off power and alarm.

12. Compatible with the original anti-theft alarm: It will send SMS alarm after the original anti-theft alarm warning.

13. The IP setting can be modified, support IP and web server domain.

14. Support LED advertisement screen. Platform center can send advertisement message to car with this tracker and LED advertisement screen.(OEM)

15. Fuel monitoring function, support voltage type sensor or RS232 type sensor or Ultrasonic fuel sensor. (OEM)

16. Temperature detecting function, support 2 channels NTC temperature sensor.

17. ID card input function, support RS232 type RFID card reader.

18. Overspeed alarm by buzzer output.(OEM)

19. Build-in 3 axis g-sensor, auto saving power consumption.

20. Support OTA function.

21.RS232/485 and CAN bus port support.

22. Hardware watchdog, guarantee 24 hours of trouble free operation.

23. All of terminals has over-voltage and over-current protection function, and opposite connection protection.

24. Each terminal has a compensation function for Blind Area, up 1K~131K pcs.

## Set Up by SMS

### 1. Setup device's IP and ID

The IP address and port of the terminal can be modified and transferred data to other platform. Send SMS

**\*setip, IP ADDRESS,IPPort,ID#**

to the unit. If the platform's IP address and port is 123.45.67.89:1234 and device number is 13480887466, please send SMS"\*setip,123.45.67.89,12345,13480887466#"to the terminal

### 2. Modify Device Web server name and port and ID

The IP address and port of the terminal can be modified and transferred data to other platform. Send SMS

**\*setweb,WEB NAME,IP Port,ID#**

to the unit. If the platform's web name and port arewww.gps.com:1234 and device number is 13480887466,please send SMS"*setweb,www.gps.com,12345,13480887466#"to the tracker.

### 3. Set APN

In order to send GPS data to IP address, you still must set mobile network Access Point Name (APN). If you don't know the APN, you can consult local network service supplier. The format of set APN is

**\*setapn,APN,USER,PWD#**

For example you send SMS "*setapn,CMNET,,#" to the device. The terminal will reply SMS "Set APN ok.".

### 4. Set up Auto-tracking function

**\*track,On INTERVALS,OFF INTERVALS#**

Report a Geo-info at 30 seconds (ignition on intervals) and 1800 seconds (ignition off intervals) to the online position platform: Send SMS "*track,**30,1800"**to the terminal. Send this command to cancel sleep function.

### 5. Set up device sleep-tracking function

**\*sleep,On INTERVALS,OFF INTERVALS#**

Report a Geo-info at 30 minutes (ignition on intervals) and 1800 minutes (ignition off intervals) to the online position platform: Send SMS "*track,**30,1800"**to the terminal. Send this command to cancel realtime tracking function.

### 6. Add the telephone number

If there is an administrator, only the administrator can add number to the terminal. Send SMS

**admin+PASSWORD+SPACE+NUMBER**to device to add a new number. example:**"admin123456 13612345678",**"admin" as instruction, "123456" as password, "13612345678" as added number.

Note: first added number is Admin. Number.

### 7. Delete the telephone number

If there is an administrator, the administrator can delete number to the terminal. Send SMS

**deladmin+PASSWORD+SPACE+NUMBER**

to device to delete a exist number. example:**"deladmin123456 13612345678".**"deladmin" as instruction, "123456" as password, "13612345678" as deleted number.

If the administrator deletes his own number, the tracker is back to the no administrator, and the record numbers deleted automatically.

## 8. Change the Password

Send SMS to device, command as follow format,

**password + OLD PASSWORD + SPACE + NEW PASSWORD**

to change the password. For example: Send SMS "password123456 168168"." password" as instructions, "123456"as old password, "168168" as new password. Password must be six digits. Terminal's initial password is 123456. If there is no administrator number, all number can change the password. If there is already an administrator number, only the authorized number can change the password.

## 9. Control fuel

**stopoil+ PASSWORD**

to control Fuel. For example send SMS: stopoil123456 "stopoil" as instructions, "123456"as password.

To supply the fuel again,

**supplyoil+ PASSWORD**

to the unit.For example, send SMS "supplyoil123456" to the tracker. "supplyoil" as instruction, "123456" as the password.

## 10. Control Circuit

Send SMS

**stopelec+ PASSWORD**

to control circuit.For example send SMS: **"stopelec123456"."stopelec"** as instructions,"123456" as the password.

To supply the circuit again, send SMS

**supplyelec+ PASSWORD**

to the unit. For example, send SMS "Supplyelec123456" to the tracker. "Supplyelec" as instruction, "123456" as password.

## 11. Monitor mode

There are three mode for monitor.

1) All Monitor Mode: Send SMS

allmonitor to the unit, the unit will return to this mode. In this mode, any number can monitor this unit.

2) Restrict Monitor Mode: Send SMS

restrictmonitor to the unit, the unit will return to this mode. In this mode, authorized number can monitor this unit.

3) Close Monitor Mode: Send SMS

closemonitor to the unit, the unit will return to this mode. In this mode, all number

can't monitor this unit.

## 12. Overspeed alert

Set up: Send SMS

**speed+ PASSWORD +SPACE+Speed**

to the unit. For example, send SMS "speed123456 080". "speed" as instructions, "80" as limit speed, "123456"as password.

Cancel: Send SMS

**speed+ PASSWORD cancel**

to deactivate the speed alert.

## 13. Cell phone positioning

Send SMS

**position**

to the terminal, then the terminal will send SMS with real-time longitude and latitude to the cell phone.

## 14 . Restart the tracker.

Send SMS

**reboot+ PASSWORD**

to the tracker. For example"reboot123456".The terminal will be restarted.

## 15. Resume the initial password

If you forget your password, you can resume the initial password 123456.Send

**resume +PASSWORD**

to the tracker, the tracker will resume the initial password. If there is no administrator number, all number can resume initial password. If there is already an administrator number, only the administrator number can resume initial password.

## 16. Set Time zone

In the default, tracker wills response Geo SMS with UTC time. You can adjust time to your local time. The format is

**zone + PASSWORD +TIME ZONE**

For example "zone123456 8" or "zone123456 -8", "8" stand for east 8 time zone, "-8" stand for west 8 time zone. The tracker will reply SMS "Set Time Zone OK.".

## 17. Set GPS curve angle

In the default setting, tracker has set 15degrees at begin. To change this, you can send SMS to device, the format is

**\*ang,ANGLE#**

For example "*ang,20#", "20" stand for 20 degrees ,when the gps 's angle changing up 20

degrees, tracker will upload GPS data to server at ones. Below 10 is close this function.

**18. Set input voltage as ignition on**

For some special case, custom don't connect the ignition detecting line to the car. Terminal support to set the input power checking as ignition on/off. To set this function, you can send SMS to device, the format is

✉ **\*ignvol,VOL#**

For example "\*ang,9.2#", "9.2" stand for 9.2V,when the input power up 9.2v, terminal will set ignition as on, and continues to upload data at ignition on intervals. If the setting voltage below 2.0v, terminal will close this function. Terminal will reply "Set ign. on vol. OK"**.**

**19. Set G-sensor checking ignition status**

Cause our terminal has built-in G-sensor, terminal can check the ignition status by G-sensor. Freezing or shaking can be set as ignition status, the format is

✉ **\*ignsen,SHKON,FRZOFF#**

For example "\*ignsen,5,10#", this command is to set the ignition status by G-sensor, when shaking for 5 seconds, the ignition is ON; when freezing for 10 seconds, the ignition is OFF.

**20.To get google link by SMS**

✉ **map**

send "map" to terminal, then will reply SMS with google link address information.

**21.To read terminal status by SMS**

✉ **info**

send "info" to unit, then will reply terminal setting and running information by SMS.

the format is MODE,H/W VER, Module, Protocol, SMS Language, Serial Number, IMEI,ID,IP address, IP Port, APN, Username, Password, S/W Date, SETTING,GSM signal, GPS signal, ign.on time, ign. off time, success send times, fail sent times, supply voltage. This command change without notice.

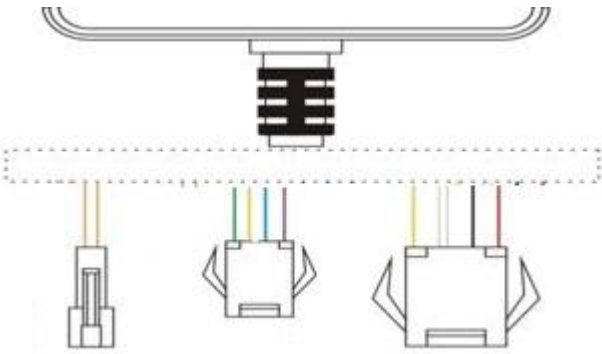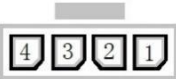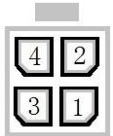Note: You can ask your vendor for more SMS commands.

## Ⅳ. Installation Diagram

## Installation Diagram of the Tracker:

ON-MTC1x8 interface diagram

| Interface Outlook |
| --- |

| Type | | | | |
|---|---|---|---|---|
| | 4 3 2 1 | | | |
| Model | SM-4 connector | | | |
| Description | Pin | Function | Pin | Function |
| | 1 | Grand | 3 | Ignition Detection |
| | 2 | Fuel control | 4 | Power in, 9~55V |
| Type | | | | |
| | 4 2 / 3 1 | | | |
| Model | Molex 3.0mm connector | | | |
| Description | Pin | Function | Pin | Function |
| | 1 | 5V out | 2 | RS232_TXD |
| | 3 | GND | 4 | RS232_RXD |
| Type | | | | |
| | 2 1 | | | |
| Model | SM-2 connector | | | |
| Description | SOS or Temperature sensor , OEM pins | | | |

## Vehicle Terminal Installation

Vehicle terminal should be installed by technical professional of local service center. Without permission, the user can't repair and move the tracker randomly. If users do, any unfortunate damage should be compensated by himself. Installation steps (caution: the following installation should under no power, otherwise will be dangerous)

**1.Power supply line: The red wire connects 12V"+",Black wire connects to 12V"-"**

**2. Wire for cutting off fuel of the tracker**

Yellow wire connects the relay pin 86,85 pin connect to 12 V DC , 87 pin and 30 pin in series power supply circuits. Caution: Wrong connection of yellow wire will damage the tracker.
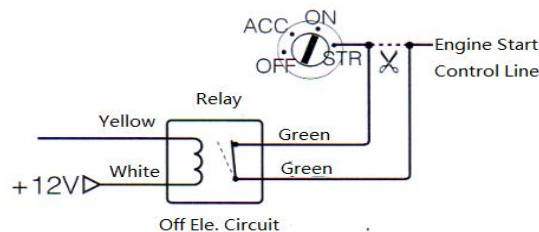
**Car Oil Control**
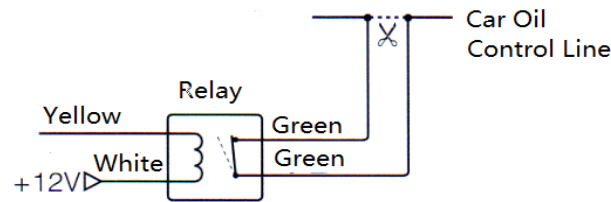


### 3. Wire for cutting off circuit of the tracker

White wire connects relay pin 86,85 pin to 12 V DC, 87 pin and 30 pin are in series power supply circuits. Caution: Wrong connection of yellow wire will damage the tracker.

**Electricity Control**



### 4. Emergency triggering alarm

The blue wire connects the positive of the alarm button, and the black wire connects the negative of the alarm button.

## Ⅴ. Application:

1. Global positioning, Vehicle locating

2. Real-time monitoring, Timing tracking

3. Cutting off power and circuit by remote control

4. Vehicle rental / Fleet management etc.

5. ON-MTC1x8 main uses for e-bike, e-moto and car monitoring tracking.

6. ON-MTC1x8 has 1 RS232 interface.

7. ON-MTC2x8 has 1 RS232 and 8 input/output ports, suitable for tracking and management.

8. ON-MTC3x8 has 2 RS232 and 8 input/output ports, and it can be OEM adding RS485 &CAN interface.

9. ON-MTC6x8 has 5 RS232 and 20 input/output ports.

10. ON-MTC3x8 and C6x8 are multifunction tracking device, it can connect to many type of RS232 device, likes RFID,LCD despatcher, LED advisement, Camera, ultrasonic fuel sensor etc.

## Ⅵ. Specification:

| Item | Terminal | | | |
|---|---|---|---|---|
| | ON-MTC1x8 | ON-MTC2x8 | ON-MTC3x8 | ON-MTC6x8 |
| GSM | 850MHz,900MHz,1800MHz,1900MHz | | | |
| CDMA | 800MHz | | | |
| WCDMA | 2100/1900/900/850MHz | | | |
| FDD-LTE | 800/850/900/1800/2100/2600MHz | | | |
| GPS Chip | Ublox7/Compass | | | |
| GPS Sensitivity | -160dBm | | | |
| GPS Accuracy | 3 – 30m | | | |
| Network | SMS,GPRS,CDMA 1x,3G,4G | | | |
| Way of Tracking | Cell Phone or Platform | | | |
| Dim. | 66*46*25mm | 86*56*25mm | 86*63*27mm | 114*90*30mm |
| Weight | 0.126Kg | 0.146Kg | 0.158Kg | 0.238Kg |
| Operation Temp. | -20℃to+70℃ | | | |
| Storage Temp. | -40℃to+85℃ | | | |
| Work Humidity | 5-95%RH | | | |
| Work Voltage | DC　9V－40V | | | |
| Battery | 3.7V / 300mAh | | | |
| Standby Work Current | ＜50mA | | | |
| Temperature Range | -20~90℃ | | | |
| Fuel signal out voltage | 0~6.6V | | | |

Note：The terminal only supports one working network, please ask your vendor before order.


## Ⅶ. Important Safety Precautions

1. Because of the tracking function, user must use this product in legitimate scope. If used in illegal application (such as: intentionally used to violate another's privacy, etc.) and results in the damage of another's rights and interests, user must take responsible for himself.

2. Before using this product, ensure the correct operation of this product, be sure to read the notes and instructions in this manual, avoid improper operation causing accidents and injuries.

3. The product obtains the corresponding location information through the satellite positioning (GPS), satellite-based positioning will be affected by the weather and environmental factors, in some circumstances there will have smaller error in location information is normal.

4. The product uses mobile communication system to send location information, before using, please confirm to the local mobile telecom you SIM card has open data service.

5. Please handle with care of the product, avoid mechanical vibration of shaking.

6. Please use dry cloth to clean this product shell, cannot use chemical, cleaning agents, or strong detergents to clean this product.

7. Do not use any paint daub this product. This will clog sundries in the moving parts, thus

affecting the normal operation of this product.

8. Do not demolish antenna yourself, and also cannot use other antennas of other objects to replace, this may seriously affect the quality of communication, and may even change the antenna radiation harmful to your health.

9. When using this product user should put the product on proper place avoid a strong impact, vibration or throw the product, resulting in damage occurred in various parts.

10. The product and the accessories (including batteries and chargers, etc.), do not have waterproof feature, please used with caution.

11. Please use the accessories designated by manufacturer (including batteries and charger), the use of any other accessories will make warranty service invalid. Due to the use of non-original accessories and caused damage, the product manufacturer will not take any warranty responsibility.

12. Do not allow metal objects (such as the key in your pocket) near the battery, avoid generate short-circuit of battery contact.

13. Do not bend or force open the battery, or put the battery in water or fire.

14. Battery power using up or discharged batteries, please dispose of used battery according to your local environmental laws and guidelines.

15.  Do not stamp any of the fire source (such as: the candles have been lit) on the product.

16. Do not place this product humid, high temperature, or too much dust, so as to avid failure.

17. Do not place this product in the microwave or other high-voltage devices, in order to avoid damage of the accessories.

18. This product is a high-frequency equipment, cannot be used in non-volatile liquid environment, in order to avoid and explosion or injury.

19. Do not unauthorized dismantling of all parts of the product or to ensure the normal use of this product.

## Ⅷ. Guarantee

| Guarantee | Please preserve this card for free |
| --- | --- |

User File:Date:

| User name | | | |
| --- | --- | --- | --- |
| Address | | | |
| Telephone | | Zip | |
| Purchasing address | | | |
| Retail price | | Purchasing No. | |
| Commodity name and specification | | Model No. | |
| Signature of Dealer | | User Signature | |

Guarantee Item:

1. Three months upon date of purchase, if there is function problem, we should offer the same item subject to goods and packing maintain perfect.

2. One year upon date of purchase, we will guarantee to keep the goods in repair.(not including fittings)

3. Guarantee service is subject to normally using.

4. All of damage by man-made(tear open the housing, tear off the sticker, unmorally using),or losing this card, we will not guarantee.