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# MEITRACK MT90L GPRS Protocol

**Applicable Model: MT90L**

# Change History

| File Name | MEITRACK MT90L GPRS Protocol | | |
|---|---|---|---|
| Project | MT90L | Creation Date | 2022-04-27 |
| Subproject | GPRS Protocol | Total Pages | 36 |
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# Contents

# 1 Command Format

## 1.1 GPRS Command Format

GPRS command sent from the server to the tracker:

**@@<*Data identifier><Data length>,<IMEI>,<Command type>,<Command content><*Checksum>\r\n*

GPRS command sent from the tracker to the server:

**$$<*Data identifier><Data length>,<IMEI>,<Command type>,<Command content><*Checksum>\r\n*

## 1.2 Tracker Command Format

$$<*Data identifier><Data length>,<IMEI>,<Command type>,<Number of remaining cache records><Number of data packets><Data packet 1><Data packet 2>…<*Checksum>\r\n*

24 24 6D 31 32 36 2C 38 36 37 36 34 38 30 34 36 35 37 33 37 36 30 2C 43 43 45 2C 00 00 00 00 01 00 5C 00 14 00 06 01 23 05 01 06 04 07 09 15 00 FE 69 26 05 08 02 00 09 10 01 0A 16 00 0B 20 00 1A A3 01 07 02 33 7A 57 01 03 5D 5C CC 06 04 5C D4 EB 29 0C 33 0E 00 00 0D D8 40 02 00 1C 01 00 00 00 FE 37 3B 00 00 00 02 0E 0C CC 01 00 00 92 27 5F 12 00 BB FF 4B 06 01 01 03 47 53 4D 2A 45 37 0D 0A Note:

● A comma (,) is used to separate data characters. The character type is the American Standard Code for Information Interchange (ASCII) (hexadecimal: 0x2C).

● Symbols "<" and ">" will not be present in actual data, only for documentation purpose only.

● The size of a GPRS data packet is about 50–1046 bytes.

Descriptions about GPRS packets from the tracker are as follows:

| Parameter | Description | Example |
|---|---|---|
| @@ / $$ | @@: Indicates the GPRS data packet header sent from the server to the device. The header type is ASCII (hexadecimal: 0x40). $$: Indicates the GPRS data packet header sent from the device to the server. The header type is ASCII (hexadecimal: 0x24). | @@ / $$ |
| Data identifier | Contains one byte. The type is the ASCII, and its value ranges from **0x41** to **0x7A**. | m |
| Data length | Indicates the length of characters from the first separator "," to the ending character "\r\n" (including "," and "\r\n"). Decimal. $$<*Data identifier><Data length>,<IMEI>,<Command type>,<Hexadecimal data packet><*Checksum>\r\n* | 126 |
| IMEI | Indicates the device's IMEI number. The number type is ASCII. It has 15 digits generally. | 863922031668560 |
| Command type | Hexadecimal For details, see the chapter 2 "Command List" and chapter 3 "Command Details." | CCE |
| The following data is hexadecimal: | | |

| | | | |
|---|---|---|---|
| Number of remaining cache records | | 0x00 0x00 0x00 0x00<br>Contains four bytes; hexadecimal; little-endian | 0x00 0x00 0x00 0x00<br>The number of remaining cache records is 0. |
| Number of data packets | | Indicates the number of data packets in a piece of data.<br>Contains two bytes; hexadecimal; little-endian<br>Note: If data is cached, upload packets according to the amount of cached storage. | 0x01 0x00<br>There is only one data packet in the piece of data. |
| Length of a data packet | | Contains two bytes; hexadecimal; little-endian | 0x5C 0x00<br>The length of a data packet is 92 bytes. |
| Total number of ID in a data packet | | Contains two bytes; hexadecimal; little-endian | 0x14 0x00<br>There are 20 ID numbers in the data packet. |
| Number of 1-byte parameter ID | | Value range: 0x00–0xFF<br>The length of the following parameter ID numbers is one byte.<br>Note: CCE IDs are not a fixed number and are determined by the selected CCE ID parameter upload. | 0x06<br>There are six parameter ID numbers.<br>0x00: There is no parameter ID number whose length is one byte. |
| Event code | Parameter ID: 0x40 | For details, see the section 1.3 "Event Code." | 0x23<br>The event code is 35. |
| GPS positioning status | Parameter ID: 0x05 | 0x01: The GPS positioning is valid.<br>0x00: The GPS positioning is invalid. | 0x01<br>The GPS positioning is valid. |
| Number of satellites | Parameter ID: 0x06 | Indicates the number of received GPS satellites. | 0x04<br>The number of received GPS satellites is 4. |
| GSM signal strength | Parameter ID: 0x07 | Value range: 0x00–0x31 | 0x09<br>The GSM signal strength is 9. |
| Input port status | Parameter ID: 0x15 | Indicates the status values of eight input ports.<br>Bits 0–7 correspond to status of input ports 1–8.<br>Hexadecimal digits need to be converted to binary digits. | 0x00<br>Status: Input inactive |
| Geo-fence number | Parameter ID: 0x1B | The data is available only when the GPRS event code is 20 or 21. | 0x00<br>There is no geo-fence number. |
| Battery percentage | Parameter ID: 0xFE69 | Remaining battery power | 0x26<br>The remaining battery power is 38%. |
| Number of 2-byte parameter ID | | Value range: 0x00–0xFF<br>The length of the following parameter ID numbers is two bytes. | 0x05<br>There are five parameter ID numbers. |

| | | Note: CCE IDs are not a fixed number and are determined by the selected CCE ID parameter upload. | |
|---|---|---|---|
| Speed | Parameter ID: 0x08 | Unit: km/h; little-endian | 0x02 0x00<br>The driving speed is 2 km/h. |
| Driving direction | Parameter ID: 0x09 | Unit: degree<br>When the parameter value is **0**, the direction is due north. The parameter value ranges from **0** to **359**. Little-endian. | 0x10 0x01<br>The driving direction is 272 degree. |
| Horizontal dilution of precision (HDOP) | Parameter ID: 0x0A | Value range: 5–999<br>Unit: 1/10; little-endian | 0x00 0x16<br>The HDOP is 22. |
| Altitude | Parameter ID: 0x0B | Unit: meter; little-endian | 0x20 0x00<br>The altitude is 32. |
| AD5 | Parameter ID: 0x1A | External power analog <AD5>; little-endian<br>Voltage formula of analog: AD5/100 | 0xA3 0x01<br>Convert the digits to decimal digits.<br>419/100 = 4.19<br>The voltage of the external power supply is 4.19 V. |
| Number of 4-byte parameter ID | | Value range: 0x00–0xFF<br>The length of the following parameter ID numbers is four bytes.<br>Note: CCE IDs are not a fixed number and are determined by the selected CCE ID parameter upload. | 0x07<br>There are seven parameter ID numbers.<br>0x00: There is no parameter ID number. |
| Latitude | Parameter ID: 0x02 | Unit: millionth of a degree; little-endian | 0x33 0x7A 0x57 0x01<br>Convert the digits to decimal digits.<br>The latitude is 22.510131 degrees. |
| Longitude | Parameter ID: 0x03 | Unit: millionth of a degree; little-endian | 0x5D 0x5C 0xCC 0x06<br>Convert the digits to decimal digits.<br>The longitude is 114.056285 degrees. |
| Date and time | Parameter ID: 0x04 | Contains four bytes; little-endian<br>Unit: second<br>Starting time: 1 January, 2000, 00:00:00 am | 0x58 0x40 0xF2 0x29<br>The value is 703742040 seconds.<br>2022-04-20 03:54:15 |
| Mileage | Parameter ID: 0x0C | Indicates the total mileage.<br>Unit: meter; little-endian | 0x33 0x0E 0x00 0x00<br>The total mileage is 3635. |

| Run time | Parameter ID: 0x0D | Indicates the total time. Unit: second; little-endian | 0xD8 0x40 0x02 0x00 The run time is 147672 seconds. |
|---|---|---|---|
| System flag | Parameter ID: 0x1C | The data is available only when the GPRS event code is 35. Bit 0: Whether to modify the EEP2 parameter. When the parameter value is **1**, the EEP2 parameter is modified. Bit 1: Indicates the ACC status. When the parameter value is **1**, the ACC is on. Bit 2: Indicates the anti-theft status. When the parameter value is **1**, the device is in the arming state. Bit 3: vibration flag. When the parameter value is **1**, the device is vibrating. Bit 4: motion flag. When the parameter value is **1**, the device is moving. Bit 5: Whether to connect the external power supply. When the parameter value is **1**, the external power supply is connected. Bit 6: Whether the device is charging. When the parameter value is **1**, the device is charging. Bit 7: Whether to enable the sleep mode. When the parameter value is **1**, the sleep mode is enabled. Bit 8: Whether to connect the FMS. When the parameter value is **1**, the FMS is connected. Bit 9: Whether to enable the FMS function. When the parameter value is **1**, the FMS function is enabled. Bits 10–31: reserved. | 0x01 0x00 0x00 0x00 The device parameters are modified. |
| Step | Parameter ID: 0xFE37 | Unit: step; little-endian | 0x3B 0x00 0x00 0x00 The number of steps is 59. |
| Number of unfixed-byte parameter ID | | Value range: 0x00–0xFF The length of the following parameter ID numbers is unfixed. The following data has no fixed sequences. For details, see the chapter 4 "Appendix 1: Parameter ID" and the chapter 5 "Appendix 2: Data Type." Note: CCE IDs are not a fixed number and are determined by the selected CCE ID parameter upload. | 0x02 There is two parameters ID number. 0x00: There is no parameter ID number whose length is unfixed. |
| Current base | Parameter ID: 0x0E | <Data length><MCC><MNC><LAC><CELL_ID><RX_LEVEL> | 0x0C 0xCC 0x01 0x00 0x00 0x92 0x27 0x5F 0x12 0x00 |

| | | | |
|---|---|---|---|
| station info | | Data length: hexadecimal; indicates the length of the base station data. Unit: byte. The fixed data length is 12 bytes.<br>MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code.<br>MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code.<br>LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.<br>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.<br>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength. | 0x00 0xBB 0xFF<br>0x0C: The data length is 12 bytes.<br>0xCC 0x01: The MCC is 460.<br>0x00 0x00: The MNC is 00.<br>0x92 0x27: The LAC is 10130.<br>0x5F 0x12 0x00 0x00: The cell ID is 4703.<br>0xBB 0xFF: The signal strength is -69 dbm. |
| Base station 1 | Parameter ID: 0x0F | The description is the same as that of the current base station info. | The description is the same as that of the current base station info. |
| Base station 2 | Parameter ID: 0x10 | The description is the same as that of the current base station info. | The description is the same as that of the current base station info. |
| Base station 3 | Parameter ID: 0x11 | The description is the same as that of the current base station info. | The description is the same as that of the current base station info. |
| Base station 4 | Parameter ID: 0x12 | The description is the same as that of the current base station info. | The description is the same as that of the current base station info. |
| Base station 5 | Parameter ID: 0x13 | The description is the same as that of the current base station info. | The description is the same as that of the current base station info. |
| Network Information | Parameter ID: 0x4B | The network information that the device is connecting to.<br>\<ID_Len>\<version>\<Type>\<DescriptorLen>\<Descriptor><br>ID Len: 1 byte<br>Version: 1 byte, 0x01 by default<br>Type：The type of network being connected，1 byte. 0: No Network, 1: Mobile Network, 2:WIFI (Reserved)<br>DescriptorLen: the length of the network descriptor, 1 byte, range: 0~32<br>Descriptor: Network descriptor, string<br>Data type:STRUCT | 06 01 01 03 47 53 4D 06: The data length is 6 bytes<br>01: version<br>01: using mobile network<br>03: The length of the network descriptor is 3 bytes<br>47 53 4D: Network descriptor is GSM |
| Call record | Parameter ID: 0xFE36 | The data is available only when the GPRS event code is 111. | 1C 01 01 31 33 32 35 30 30 36 32 37 35 31 30 00 00 00 00 00 09 |

| | | < Data length >< Protocol version >< Calling type > < Phone number >< Date >< Calling time ><br><br>Data length: hexadecimal; indicates the length of the Call record. Unit: byte.<br>Protocol version: contains one byte.<br>Calling type: contains one byte, 01: Two-way calling. 02: Listen-in.<br>Phone number. The data length is 16 bytes.<br>Date: little-endian. The data length is 6 bytes.<br>Calling time: little-endian. Unit: second | 30 14 07 08 19 10 00 00 00<br><br>1C: The data length is 28 bytes.<br>01: Indicates the protocol.<br>01: Indicates Two-way calling.<br>31 33 32 35 30 30 36 32 37 35 31 30 00 00 00 00: Indicates the phone number.<br>09 30 14 07 08 19: Indicates the date, converted digits: 190807-14:30:09.<br>10 00 00 00: Indicates the calling time; 10 seconds . |
|---|---|---|---|
| Alarm clock info | Parameter ID: 0xFE40 | The data is available only when the GPRS event code is 127.<br>< Data length >< Protocol version >< Alarm clock name ><br>Data length: hexadecimal; indicates the length of the Alarm clock info. Unit: byte.<br>Protocol version: contains one byte.<br>Alarm clock name; contains a maximum of 32 bytes. | 04 01 31 32 33<br><br>04: The data length is 4 bytes.<br>01: Indicates the protocol version.<br>31 32 33: Indicates the alarm clock name; |
| * | | Contains one byte. It is used to separate the command content from the checksum.<br>ASCII (hexadecimal: 0x2A) | * |
| Checksum | | Contains two bytes. Indicates the sum of characters from the packet header "$$"to the asterisk "*" (including the packet header and asterisk).<br>Hexadecimal<br>*$$<Data identifier><Data length>,<IMEI>,<Command type>,<Hexadecimal data packet><*Checksum>\r\n* | E7 |
| \r\n | | Contains two bytes. This is an ending character. The type is ASCII (hexadecimal: 0x0d,0x0a). | \r\n |

Note:

1) If the first byte of ID is 0XFE, it indicates that the ID is an extension ID, and the actual ID is added by the first and second bytes. For example: 0XFE 0X01 means ID:255;0XFE 0X02 means ID:256, and so on.

2) In order to the tracking platform showing that the P88L is online at any time, if the P88L does not upload data to the server in more than 10 minutes, it will automatically send a data format of AAA to keep the network link connected.If there is no need for this, ignore this data or use the ABE command to turn it off.The data format is as follows (the number of commas is fixed):
   $$<Data identifier><Data length>,<IMEI>,AAA,31,,,,,,,,,,,,,,,,,,,,,,,,

## 1.3 Event Code

| Event Code | Event | Default SMS Header (At Most 16 Bytes) |
|---|---|---|
| 1 | **SOS Pressed** | SOS |
| 2 | **Input 2 active** | Input 2 active |
| 17 | **Low Battery** | Low Battery |
| 19 | **Speeding** | Speeding |
| 20 | **Enter Geo-fence** | Enter Fence N (N means the number of the fence) |
| 21 | **Exit Geo-fence** | Exit Fence N (N means the number of the fence) |
| 24 | **GPS Signal Lost** | GPS Signal Lost |
| 25 | **GPS Signal Recovery** | GPS Recovery |
| 26 | **Enter Sleep** | Enter Sleep |
| 27 | **Exit Sleep** | Exit Sleep |
| 29 | **Device Reboot** | Power On |
| 31 | **Heartbeat** | / |
| 32 | **Cornering** | Cornering |
| 33 | **Track By Distance** | Distance |
| 34 | **Reply Current (Passive)** | Now |
| 35 | **Track By Time Interval** | Interval |
| 40 | **Power Off** | Power Off |
| 70 | **Reject Incoming Call** | / |
| 72 | **Auto Answer Incoming Call** | / |
| 73 | **Listen-in (Voice Monitoring)** | / |
| 79 | **Fall** | Fall |
| 111 | **Call Record** | / |
| 127 | **Alarm Clock Info** | Alarm info |
| 154 | **Reset Step** | / |
| 157 | **BLE Lost** | LOST |
| 158 | **BLE Recovery** | RECOVERY |

# 2 Command List

| Command | Command Description |
|---|---|
| A10 | Real-Time Location Query |
| A11 | Setting a Heartbeat Packet Reporting Interval |
| A12 | Tracking by Time Interval |
| A13 | Setting the Cornering Report |
| A14 | Tracking by Distance |
| A19 | Waking the Device Up by Vibration |
| A21 | Setting GPRS Parameters |

| A22 | Setting the DNS Server IP Address |
|-----|-----------------------------------|
| A23 | Setting the Standby GPRS Server |
| A29 | Setting the Man Down Alert |
| A70 | Reading All Authorized Phone Numbers |
| A71 | Setting Authorized Phone Numbers |
| A73 | Setting the Smart Sleep Mode |
| A81 | Setting APN Parameters |
| A83 | Setting the Maximum Working Time of the Woken GPS Module |
| A84 | Setting the Unit of the GPRS Data Interval |
| AA7 | Setting the Audio Playing Function |
| AA8 | Setting an Alarm Clock |
| AA9 | Setting the Bluetooth Function |
| AAB | Setting the Vibration Function |
| AAC | Requesting the Platform Response for the SOS Event |
| AAE | Setting the Response Request Function of the SOS Event |
| AAF | Setting the Calling Mode for Unauthorized Phone Numbers |
| ABE | Setting the interval between long connection handshakes |
| ABF | Setting important events requires the platform to confirm successful reception |
| B05 | Setting a Geo-Fence |
| B06 | Deleting a Geo-Fence |
| B07 | Setting the Speeding Alert |
| B09 | Setting the Vibration Sensitivity Level |
| B10 | Fast Setting the Towing Alert |
| B11 | Setting a Polygonal Geo-Fence |
| B31 | Turning off the LED Indicator |
| B35 | Setting the SMS Time Zone |
| B36 | Setting the GPRS Time Zone |
| B47 | Setting the Audio File |
| B66 | Setting Parameters for Downloading FTP Audio Files |
| B67 | Setting Audio File Operation Parameters |
| B91 | Setting SMS Event Characters |
| B99 | Setting Event Authorization |
| BC8 | Setting whether the device is automatically switched on when charging |
| BC9 | Setting Avoid Voicemail Box Mode |
| C02 | Notifying the Device of Sending an SMS |
| C03 | Setting a GPRS Event Transmission Mode |
| C67 | Setting the Positioning Mode |
| C69 | Setting the Microphone and Speaker |
| C76 | Powering Off the Device by a Command |
| C77 | Setting the Power-off Function of the Power Button |
| C78 | Filtering GPS Data of a Heartbeat Packet |
| C83 | Obtaining Device Hardware Functions |

| CFF | Deleting an Event in the Buffer |
|-----|-------------------------------|
| D73 | Allocating GPRS Cache and GPS Log Storage Space |
| E91 | Reading Device's Firmware Version and SN |
| F00 | Restarting the GSM and GPS Modules |
| F01 | Restarting the GSM Module |
| F02 | Restarting the GPS Module |
| F08 | Setting the Mileage and Run Time |
| F09 | Deleting SMS or GPRS Cache Data |
| F11 | Restoring Initial Settings |

Note: Important events with event codes 1(SOS Pressed),17(Low Battery),29(Device Reboot),40(Power Off),79(Fall), require the server to confirm that data has been received successfully. The CFF command is required to be integrated. If there is no requirement for this, use the ABF instruction to turn this feature off.

# 3 Command Details

## 3.1 Real-Time Location Query – A10

| GPRS Sending | A10 |
|--------------|-----|
| GPRS Reply | $$<Data identifier><Data length>,<IMEI>,<CCE>,<Number of remaining cache records><Number of data packets><Data packet on event 34><*Checksum>\r\n |
| Description | 34: Indicates the event code of the GPRS command. |
| **Example** | |
| GPRS Sending | @@A25,865789020991321,A10*62\r\n |
| GPRS Reply | $$A118,865789020991321,CCE,<00 00 00 00 01 00 54 00 12 00 06 01 22 05 00 06 00 07 15 14 00 15 00 04 08 00 00 09 14 01 0A E7 03 0B 00 00 06 02 25 87 57 01 03 E3 60 CC 06 04 41 3A 2D 20 0C 74 0D 00 00 0D EC 50 03 00 1C 00 00 00 00 02 0E 0C CC 01 01 00 45 A5 8B D4 E9 01 01 FF 1D 08 00 25 86 A7 0B 0A D5 FF>*1D\r\n |

## 3.2 Setting a Heartbeat Packet Reporting Interval – A11

| GPRS Sending | A11,*Interval* |
|--------------|-----|
| GPRS Reply | A11,OK |
| Description | The heartbeat packet function is used to keep the Transmission Control Protocol (TCP) connection open when the interval of scheduled GPRS reporting is long. Interval = 0: function disabled (default). Interval = [1…65535]: function enabled. Set the heartbeat packet reporting interval. Unit: minute. The heartbeat function is available only in conjunction with deep sleep mode. When the device enters the deep sleep mode, a heartbeat packet will be sent at the specified interval. |
| **Example** | |
| GPRS Sending | @@S28,353358017784062,A11,10*FD\r\n |

| GPRS Reply | $$S28,353358017784062,A11,OK*FE\r\n |
|---|---|
| | *After the above command is sent successfully, the device will send a GPRS heartbeat packet to the platform every 10 minutes in sleep mode.* |

## 3.3 Tracking by Time Interval – A12

| GPRS Sending | A12,*Interval* |
|---|---|
| GPRS Reply | A12,OK |
| Description | Default interval unit: x10 seconds. (Users can change the interval by the A84 command.) |
| | Interval = 0: function disabled. |
| | The maximum time interval is 65535 x 10 seconds. |
| | Recommended value: 6 x 10 seconds |
| **Example** | |
| GPRS Sending | @@V27,353358017784062,A12,6*D5\r\n |
| GPRS Reply | $$V28,353358017784062,A12,OK*02\r\n |
| | *After the above command is sent successfully, the device will send a GPRS data packet to the platform every one minute.* |

## 3.4 Setting the Cornering Report – A13

| GPRS Sending | A13,*Angle* |
|---|---|
| GPRS Reply | A13,OK |
| Description | When the driving angle exceeds the preset value, the device will send a GPRS data packet with location information to the server, which ensures smoother travel routes on the platform. |
| | Angle = 0: function disabled (default). |
| | Angle = [1…359]: function enabled. Set the cornering angle. |
| | Recommended value: 30 |
| **Example** | |
| GPRS Sending | @@X29,353358017784062,A13,120*37\r\n |
| GPRS Reply | $$X28,353358017784062,A13,OK*05\r\n |
| | *After the above command is sent successfully, if the cornering angle is greater than 120 degrees, the device will send a GPRS data packet to the server.* |

## 3.5 Tracking by Distance – A14

| GPRS Sending | A14,*Distance* |
|---|---|
| GPRS Reply | A14,OK |
| Description | Distance = 0: function disabled (default). |
| | Distance = [1…65535]: function enabled. Unit: meter. |
| **Example** | |
| GPRS Sending | @@D30,353358017784062,A14,1000*4A\r\n |

| GPRS Reply | $$D28,353358017784062,A14,OK*F2\r\n |
| --- | --- |
| | *After the above command is sent successfully, if the driving distance reaches 1000 meters, the device will send a data packet to the server.* |

## 3.6 Waking the Device Up by Vibration – A19

| GPRS Sending | A19,*X* |
| --- | --- |
| GPRS Reply | A19,OK |
| Description | This function is used to determine whether the device can be woken up from the deep mode by vibration. |
| | X = 0: The device cannot be woken up by vibration. |
| | X = 1: The device can be woken up by vibration (default). |
| **Example** | |
| GPRS Sending | @@H27,353358017784062,A19,1*C9\r\n |
| GPRS Reply | $$H28,353358017784062,A19,OK*F8\r\n |

## 3.7 Setting GPRS Parameters – A21

| GPRS Sending | A21,*Connection mode,IP address,Port,APN,APN user name,APN password* |
| --- | --- |
| GPRS Reply | A21,OK |
| Description | Connection mode = 0: function disabled. |
| | Connection mode = 1: function enabled; use the TCP/IP reporting mode. |
| | Connection mode = 2: function enabled; use the UDP reporting mode. |
| | IP address: IP address or domain name; contains a maximum of 32 bytes. |
| | Port: Contains a maximum of 5 digits. |
| | APN/APN user name/APN password: Contains a maximum of 32 bytes respectively. |
| | If no user name and password are required, leave them blank. |
| | Note: |
| | 1.  If you want to modify a parameter (named **A**), the parameters before **A** cannot be empty. |
| | 2.  If you do not want to modify the parameters after **A**, no comma is required when you edit the command. |
| | 3.  If you want to clear the parameters after **A**, commas are required when you edit the command. |
| | For example, if you want to modify the IP address and port only, send |
| | **A21,1,192.168.1.1,8800**. |
| **Example** | |
| GPRS Sending | @@H58,353358017784062,A21,1,server.meigps.com,8800,CMNET,,*A0 |
| GPRS Reply | $$H28,353358017784062,A21,OK*F4\r\n |

## 3.8 Setting the Standby GPRS Server – A23

| GPRS Sending | A23,*IP address,Port* |
| --- | --- |

| GPRS Reply | A23,OK |
|---|---|
| Description | IP address: Contains a maximum of 32 bytes. |
| | Port: Contains a maximum of 5 digits. |
| | When the device fails to send data to the active server set by the A21 command, data will |
| | be automatically sent to the standby server to prevent data loss. |
| **Example** | |
| GPRS Sending | @@S44,353358017784062,A23,182.92.69.175,8800*35\r\n |
| GPRS Reply | $$S28,353358017784062,A23,OK*01\r\n |

### 3.9 Setting the Man Down Alert – A29

| GPRS Sending | A29,*Switch,Time,Grade* |
|---|---|
| GPRS Reply | A29,OK |
| Description | Switch: Whether to enable the man down alert detection function. The parameter value is **0** or **1**. When the parameter value is **1**, the man down alert detection function is enabled. When the parameter value is **0**, the man down alert detection function is disabled. The default parameter value is **0**. |
| | Time: Indicates the buzzing and vibration time after the device falls to the ground. During this period, users can press any button of the device to clear the alert, so as to avoid misinformation. If no button is pressed during this period, a man down alert will be generated or the device will call the designated contact. Unit: second; value range: 0–255; default value: 10. |
| | Grade: Indicates the man down alert level (sensitivity). The parameter value ranges from **0** to **3** and it is in decimal format. The default parameter value is **1**. The bigger the value is, the higher the alert probability is. |
| **Example** | |
| GPRS Sending | @@S32,353358017784062,A29,1,10,1*BB\r\n |
| GPRS Reply | $$S28,353358017784062,A29,OK*07\r\n |

### 3.10 Reading All Authorized Phone Numbers – A70

| GPRS Sending | A70 |
|---|---|
| GPRS Reply | A70,*SOS phone number 1,SOS phone number 2,SOS phone number 3,Listen-in phone number 1,Listen-in phone number 2* |
| Description | Read all authorized phone numbers. |
| **Example** | |
| GPRS Sending | @@T25, 353358017784062,A70*93\r\n |
| GPRS Reply | $$T85,353358017784062,A70,13811111111,13822222222,13833333333,13844444444, 13855555555*21\r\n |

### 3.11 Setting Authorized Phone Numbers – A71

| GPRS Sending | A71,*Phone number 1,Phone number 2,Phone number 3,Phone number 4,Phone number* |
|---|---|

| | 5 |
|---|---|
| GPRS Reply | A71,OK |
| Description | Phone number: Contains a maximum of 16 bytes. If no phone numbers are set, leave them blank. Phone numbers are empty by default.<br>Phone number 1/2/3/4/5: SOS phone numbers. When you call the device by using these phone numbers, you will receive an SMS notification about the location, geo-fence alert and low power alert.<br>When the SOS button is pressed, the device will dial phone numbers 1, 2, 3, 4, and 5 in sequence. It will stop dialing when a phone number responds. |
| **Example** | |
| GPRS Sending | @@U86,353358017784062,A71,13811111111,13822222222,13833333333, 13844444444,13855555555*7C\r\n |
| GPRS Reply | $$U28,353358017784062,A71,OK*06\r\n |

## 3.12 Setting the Smart Sleep Mode – A73

| GPRS Sending | A73,*Sleep level* |
|---|---|
| GPRS Reply | A73,OK |
| Description | Set the auto smart sleep mode when the device is idle.<br>Sleep level = 0: function disabled (default).<br>Sleep level = 2: deep sleep. If no event is triggered after five minutes, the GPS module will stop working and the GSM module will enter the sleep mode. Once an event is triggered, the GPS and GSM modules will be woken up. The above actions will be cycled.<br>Sleep level = 3: super deep sleep. If no event is triggered after five minutes, the GPS and GSM module will stop working. Once an event is triggered, the GPS and GSM modules will be woken up. The above actions will be cycled.<br><br>Note：<br>1.  Triggering events include the SOS alert, auxiliary button pressed, vibration, towing alert, USB plug/unplug, charging, alarm clock, reset step event, calling/incoming call (deep sleep mode), SMS receiving (deep sleep mode).<br>2.  The difference between the Super Deep Sleep mode and the Deep Sleep mode is that the GSM module of the former will stop working, and the device cannot be woken up by call and SMS.<br>3.  The heartbeat event is triggered in the Deep Sleep mode and Supper Deep Sleep mode, which is uploaded every one hour by default. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,A73,2*D9\r\n |
| GPRS Reply | $$W28,353358017784062,A73,OK*0A\r\n |

### 3.13 Setting APN Parameters – A81

| | |
|---|---|
| GPRS Sending | A81,*APN,APN_NAME,APN_PW* |
| GPRS Reply | A81,OK |
| Description | APN: Indicates the Access Point Name (APN); contains a maximum of 32 characters. |
| | APN_NAME: Indicates the APN user name; contains a maximum of 32 characters. |
| | APN_PW: Indicates the APN password; contains a maximum of 32 characters. |
| **Example** | |
| GPRS Sending | @@W33,353358017784062,A81,CMNET,,*72\r\n |
| GPRS Reply | $$W28,353358017784062,A81,OK*09\r\n |

### 3.14 Setting the Maximum Working Time of the Woken GPS Module – A83

| | |
|---|---|
| GPRS Sending | A83,*X* |
| GPRS Reply | A83,OK |
| Description | X: Indicates the maximum working time of the GPS module woken up by a heartbeat packet. Decimal; value range: 0–255; unit: minute. The default parameter value is **0**. |
| | X = 0: The GPS module does not work and a heartbeat event will be generated. |
| | X = [1…255]: The GPS module will work for *X* minutes. If the device positioning time exceeds the preset value, a heartbeat event with invalid positioning information will be sent. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,A83,1*D9\r\n |
| GPRS Reply | $$W28,353358017784062,A83,OK*0B\r\n |

### 3.15 Setting the Unit of the GPRS Data Interval – A84

| | |
|---|---|
| GPRS Sending | A84,*X* |
| GPRS Reply | A84,OK |
| Description | X: Indicates the unit of the GPRS data interval. Decimal; value range: 1–255; unit: second. The default parameter value is **10**. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,A84,1*DA\r\n |
| GPRS Reply | $$W28,353358017784062,A84,OK*0C\r\n |

### 3.16 Setting a Positioning Mode – A85

| | |
|---|---|
| GPRS Sending | A85,X |
| GPRS Reply | A85,OK |
| Description | X: decimal; value: 0–3 |
| | X = 0: GPS + LBS positioning |
| | X = 3: LBS positioning(Reserved) |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,A85,2*DB\r\n |

| GPRS Reply | $$W28,353358017784062,A85,OK*0D\r\n |
| --- | --- |

## 3.17 Setting the Audio Playing Function – AA7

| GPRS Sending | AA7,*A1:B1,A2:B2* |
| --- | --- |
| GPRS Reply | AA7,OK |
| Description | A1: The audio playing function is enabled when a low battery alert is generated. The fixed parameter value is **0**. <br><br> A2: The audio playing function is enabled when a man down alert is generated. The fixed parameter value is **1**. <br><br> B1 & B2: Whether to enable the function. When the parameter value is **0**, the function is disabled. When the parameter value is **1**, the function is enabled. <br><br> If you want to read the command settings, send **AA7**. |
| **Example** | |
| GPRS Sending | @@W33,353358017784062,AA7,0:1,1:1*15\r\n |
| GPRS Reply | $$W28,353358017784062,AA7,OK*18\r\n |

## 3.18 Setting an Alarm Clock – AA8

| GPRS Sending | AA8,*Time point 1,…,Time point 24* |
| --- | --- |
| GPRS Reply | AA8,OK |
| Description | Time point format: A:B,C,D,E <br><br> A: Indicates the alarm clock number. The parameter value ranges from **1** to **24**. (At most 24 alarm clocks can be stored.) <br><br> B: Whether to enable an alarm clock. **0**: The alarm clock is disabled. **1**: The alarm clock is enabled. <br><br> C: Indicates a day of a week. The parameter value ranges from **1** to **7**, which means Monday to Sunday respectively. <br><br> D: Indicates the hour. The 24-hour clock is used. The parameter value ranges from **0** to **23**. <br><br> E: Indicates the minute. The parameter value ranges from **0** to **59**. <br><br> If you want to read the command settings, send **AA8**. |
| **Example** | |
| GPRS Sending | @@W36,353358017784062,AA8,1:1,1,8,30*A2\r\n |
| GPRS Reply | $$W28,353358017784062,AA8,OK*19\r\n |

## 3.19 Setting the Bluetooth Function – AA9 (reserved)

| GPRS Sending | AA9,*Mode*,[*Shock,Voice,Buzzer_time,Disconnect_time*] |
| --- | --- |
| GPRS Reply | AA9,OK |
| Description | Mode: The parameter value ranges from **0** to **2**. <br><br> Mode = 0: Normal mode. No other parameters need to be added. <br><br> Mode = 1: Lost & Found mode (work with the app). The parameters **Shock** and **Voice** need to be configured. <br><br> Shock: The parameter value is **0** and **1**. **0**: Disable vibration. **1**: Enable vibration. |

| | |
|---|---|
| | Voice: The parameter value is **0** and **1**. **0**: Disable the sound. **1**: Enable the sound. |
| | Mode = 2: Anti-lost mode (work with the app or connect the Bluetooth of your phone). |
| | The parameters **Shock**, **Voice**, **Buzzer time**, and **Disconnect time** need to be configured. |
| | Shock: The parameter value is **0** and **1**. **0**: Disable vibration. **1**: Enable vibration. |
| | Voice: The parameter value is **0** and **1**. **0**: Disable the sound. **1**: Enable the sound. |
| | Buzzer time: The parameter value ranges from **0** to **4294967295**. Unit: second. |
| | Disconnect time: The parameter value ranges from **0** to **255**. Unit: second. |
| | |
| | If you want to read the parameters, send **AA9**. |
| | Format: A,B1:B2:B3,C1:C2:C3:C4:C5 |
| | A: Indicates the current mode. |
| | B1:B2:B3 means Lost & Found mode:Shock:Voice. |
| | C1:C2:C3:C4:C5 means Anti-lost mode:Shock:Voice:Buzzer time:Disconnect time. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,AA9,0*E7\r\n |
| GPRS Reply | $$W28,353358017784062,AA9,OK*1A\r\n |

## 3.20 Setting the Vibration Function – AAB

| | |
|---|---|
| GPRS Sending | AAB ,A\|B\|C\|D\|E\|F\|G,A1\|B1\|C1\|D1\|E1\|F1\|G1 |
| GPRS Reply | AAB,OK |
| Description | 01 decimal |
| | 02 Group 1, A: Vibration Switch B: Call C:SOS D: button E: alarm clock F: drop G: other vibration functions of this type can be set as.    0: Off 1: On |
| | 03 Group 2, A1: Sound Switch B1: Call C1:SOS D1: button E1: alarm clock F1: drop G1: Other sound functions of this type can be set as.    0: Off 1: On |
| | 04 can be set separately, vibration or sound, but each group should have parameters. If the second group should be set separately, ", "should be added in front to separate it |
| | 05 If you want to read the command settings, send **AAB**. |
| **Example** | |
| GPRS Sending | @@V27,353358017784062,AAB, 1\|1\|1\|1\|1\|1\|1,0\|0\|0\|0\|0\|0\|0*D5\r\n |
| GPRS Reply | $$S28,353358017784062,AAB,OK*FE\r\n |

## 3.21 Requesting the Platform Response for the SOS Event – AAC

| | |
|---|---|
| GPRS Sending | AAC,*X* |
| GPRS Reply | AAC,*X* |
| Description | X: Indicates the event code. The default event is SOS, and its event code is 1. |
| | Data can be sent from the platform only after the platform receives the data from the device. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,AAC,1*F2\r\n |
| GPRS Reply | $$W27,353358017784062,AAC,1*BA\r\n |

### 3.22 Setting the Response Request Function of the SOS Event – AAE

| | |
|---|---|
| GPRS Sending | AAE,X |
| GPRS Reply | AAE,OK |
| Description | X = 0: function disabled. X = 1: function enabled (default).<br>This command is used to confirm whether an SOS event is sent to the server successfully.<br>(For details about the server response, see the command AAC.)<br>If you want to read the command settings, send **AAE**. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,AAE,1*F4\r\n |
| GPRS Reply | $$W28,353358017784062,AAE,OK*26\r\n |

### 3.23 Setting the Calling Mode for Unauthorized Phone Numbers – AAF

| | |
|---|---|
| GPRS Sending | AAF,X |
| GPRS Reply | AAF,OK |
| Description | X = 0(by default): Reject unauthorized number calls<br>X = 1: Allow unauthorized number calls<br>If you want to read the command settings, send **AAF**. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,AAF,1*F5\r\n |
| GPRS Reply | $$W28,353358017784062,AAF,OK*27\r\n |

### 3.24 Setting the interval between long connection handshakes – ABE

| | |
|---|---|
| GPRS Sending | ABE,X |
| GPRS Reply | ABE,OK |
| Description | X: Maximum value is 65535, unit: s, default is 600 seconds, X =0 turn off this function<br>If you want to read the command settings, send **ABE**. |
| **Example** | |
| GPRS Sending | @@W27,353358017784062,ABE,600*E0\r\n |
| GPRS Reply | $$W28,353358017784062,ABE,OK*12\r\n |

### 3.25 Setting important events requires the platform to confirm successful reception –

### ABF

| | |
|---|---|
| GPRS Sending | ABF,X |
| GPRS Reply | ABF,OK |
| Description | X = 0: function disabled. X = 1: function enabled (default).<br>If you want to read the command settings, send **AB0**.<br>Important events with event codes 1(SOS Pressed),17(Low Battery),29(Device Reboot),40(Power Off),79(Fall),127(Alarm Clock Info),152(Start Trip) and 153(End Trip) require the server to confirm that data has been received successfully. The CFF command is required to be integrated. If there is no requirement for this, use the ABF instruction to turn this feature off |

| Example | |
|---|---|
| GPRS Sending | @@W27,353358017784062,ABF,1*E0\r\n |
| GPRS Reply | $$W28,353358017784062,ABF,OK*12\r\n |

## 3.26 Setting a Geo-Fence – B05

| GPRS Sending | B05,*Geo-fence number,Latitude,Longitude,Radius,Enter Geo-fence alert,Exit Geo-fence alert* |
|---|---|
| GPRS Reply | B05,OK |
| Description | Geo-fence number: The parameter value ranges from **1** to **8**. A maximum of eight geo-fences can be set.<br><br>Latitude: Indicates the latitude of the geo-fence center; decimal; accurate to six digits placed after the decimal point. If there are only four digits placed after the decimal point, add two digits 0. Otherwise, the command cannot be used successfully.<br><br>Longitude: Indicates the longitude of the geo-fence center; decimal; accurate to six digits placed after the decimal point. If there are only four digits placed after the decimal point, add two digits 0. Otherwise, the command cannot be used successfully.<br><br>Radius: The parameter value ranges from **1** to **4294967295**. Unit: meter. Take coordinates of the above latitude and longitude as the center point and draw a circle with this radius.<br><br>Enter Geo-fence alert = 0: function disabled.<br>Enter Geo-fence alert = 1: function enabled.<br>Exit Geo-fence alert = 0: function disabled.<br>Exit Geo-fence alert = 1: function enabled. |
| **Example** | |
| GPRS Sending | @@H57,353358017784062,B05,1,22.913191,114.079882,1000,0,1*96\r\n |
| GPRS Reply | $$H28,353358017784062,B05,OK*F7\r\n<br>*When the device exits the geo-fence (latitude: 22.913191; longitude: 114.079882; radius: 1000 meters), it will send a PRS data packet about an Exit Geo-fence alert to the server.* |

## 3.27 Deleting a Geo-Fence – B06

| GPRS Sending | B06,*Geo-fence number* |
|---|---|
| GPRS Reply | B06,OK |
| Description | Geo-fence number: The parameter value ranges from **1** to **8**. Only one geo-fence can be deleted each time by sending an SMS or GPRS command. |
| **Example** | |
| GPRS Sending | @@J27,353358017784062,B06,1*C8\r\n |
| GPRS Reply | $$J28,353358017784062,B06,OK*FA\r\n<br>*After the above command is sent successfully, the first geo-fence will be deleted.* |

### 3.28 Setting the Speeding Alert – B07

| GPRS Sending | B07,*Driving speed* |
|---|---|
| GPRS Reply | B07,OK |
| Description | Driving speed = 0: function disabled (default). |
| | Driving speed = [1…255]: function enabled. When the driving speed reaches the preset value, a speeding alert will be sent. Unit: km/h. |
| **Example** | |
| GPRS Sending | @@P28,353358017784062,B07,60*05\r\n |
| GPRS Reply | $$P28,353358017784062,B07,OK*01\r\n |
| | *After the above command is sent successfully, if the device's driving speed reaches 60 km/h, it will send a GPRS data packet about a speeding alert to the server.* |

### 3.29 Setting the Vibration Sensitivity Level – B09

| GPRS Sending | B09,Sensitivity level |
|---|---|
| GPRS Reply | B09,OK |
| Description | The vibration sensitivity level is used to detect whether the tracker stops moving, starts moving or is woken up by vibration, or a towing alert is generated. |
| | Sensitivity level: The parameter value ranges from 1 to 127. The default value is 1, and the parameter value cannot be 0. The smaller the parameter value is, the stronger the sensitivity is. |
| **Example** | |
| GPRS Sending | @@I27,353358017784062,B09,1*CA\r\n |
| GPRS Reply | $$I28,353358017784062,B09,OK*FC\r\n |

### 3.30 Fast Setting the Towing Alert – B10

| GPRS Sending | B10,*Consecutive vibration time,Idling time* |
|---|---|
| GPRS Reply | B10,OK |
| Description | Consecutive vibration time = 0: function disabled (default). |
| | Consecutive vibration time = [1…255]: function enabled. Set the consecutive vibration time. Unit: second. |
| | Idling time: The default parameter value is **2**. Unit: minute. |
| | Idling time = 0: The power-saving mode is disabled. |
| | Idling time = [1…255]: The power-saving function is enabled. When the idling time exceeds the preset value, the device will enter the power-saving mode. |
| **Example** | |
| GPRS Sending | @@I27,353358017784062,B10,3*6E\r\n |
| GPRS Reply | $$I28,353358017784062,B10,OK*9E\r\n |
| | *After the above command is sent successfully, if the device vibrates for more than three consecutive seconds, it will send a GPRS data packet about a towing alert to the server.* |

### 3.31 Setting a Polygonal Geo-Fence – B11

| | |
|---|---|
| GPRS Sending | B11,*Geo-fence number,Latitude 1,Longitude 1,Latitude 2,Longitude 2...Latitude N,Longitude N,Enter Geo-fence alert,Exit Geo-fence alert* |
| GPRS Reply | B11,OK |
| Description | Geo-fence number: The parameter value ranges from **1** to **8**. (The maximum value varies depending on customization projects.) |
| | Latitude: accurate to 6 digits placed after the decimal point. For example, 22.512517 or -22.512517. |
| | Longitude: accurate to 6 digits placed after the decimal point. For example, 114.057200 or -114.057200. |
| | Enter Geo-fence alert: The parameter value is **0** or **1**. **0**: An alert will not be generated when the device enters the geo-fence. **1**: An alert will be generated when the device enters the geo-fence. |
| | Exit Geo-fence alert: The parameter value is **0** or **1**. **0**: An alert will not be generated when the device exits the geo-fence. **1**: An alert will be generated when the device exits the geo-fence. |
| | If the command only contains the parameter **Geo-fence number**, related geo-fences will be deleted. |
| | If the geo-fence is circular, the command to be sent is **B11,*Geo-fence number,Latitude,Longitude,Radius (meter),Enter Geo-fence alert,Exit Geo-fence alert***. |
| **Example** | |
| GPRS Sending | @@I113,353358017784062,B11,1,22.913231,114.079882,22.913191,114.079784, 22.912131,114.075882,22.913191,114.079882,1,1*3A\r\n |
| GPRS Reply | $$I28,353358017784062,B11,OK*F5\r\n |

### 3.32 Turning off the LED Indicator – B31

| | |
|---|---|
| GPRS Sending | B31,*AB* |
| GPRS Reply | B31,OK |
| Description | When the value of **A** is **0**, the device's LED indicator is turned on (default). Users can query the device's running status according to the indicator status. |
| | A = 1: The device's LED indicator is turned off. |
| | B = 0: The buzzer's sound is enabled (default). |
| | B = 1: The buzzer's sound is disabled. |
| **Example** | |
| GPRS Sending | @@J28,353358017784062,B31,10*F7\r\n |
| GPRS Reply | $$J28,353358017784062,B31,OK*F8\r\n |

### 3.33 Setting a Log Interval – B34

| | |
|---|---|
| GPRS Sending | B34,*Log interval* |
| GPRS Reply | B34,OK |

| Description | Set the interval for recording data to device's memory when the GPS signal is valid. When there is no GPS signal, data will not be recorded. **Recorded logs can only be read by Meitrack Manager software.**<br>Log interval = 0: function disabled (default).<br>Log interval = [1...65535]: function enabled. Set the log interval. Unit: second. |
|---|---|
| **Example** | |
| GPRS Sending | @@N28,353358017784062,B34,60*03\r\n |
| GPRS Reply | $$N28,353358017784062,B34,OK*FF\r\n |

## 3.34 Setting the SMS Time Zone – B35

| GPRS Sending | B35,*SMS minute* |
|---|---|
| GPRS Reply | B35,OK |
| Description | The default time zone of the device is GMT 0. Users can send the B35 command to change the time zone of an SMS report to the local time zone. The time zone of SMS reports is different from that of GPRS data packets.<br>SMS minute = 0: The time zone is GMT 0.<br>SMS minute = [-720...780]: Set time zones. |
| **Example** | |
| GPRS Sending | @@O29,353358017784062,B35,480*3C\r\n |
| GPRS Reply | $$O28,353358017784062,B35,OK*01\r\n<br>*After the above command is sent successfully, the device's SMS time zone will be changed to UTC+08:00 (China time zone).* |

## 3.35 Setting the GPRS Time Zone – B36

| GPRS Sending | B36,*GPRS minute* |
|---|---|
| GPRS Reply | B36,OK |
| Description | GPRS minute = 0: The time zone is GMT 0 (default). The MS03 platform can automatically detect users' time zone, so that the GPRS time zone does not need to be changed. If the GPRS time zone is changed, data will be inaccurate.<br>GPRS minute = [-720...780]: Set time zones. |
| **Example** | |
| GPRS Sending | @@P29,353358017784062,B36,480*3E\r\n |
| GPRS Reply | $$P28,353358017784062,B36,OK*03\r\n<br>*After the above command is sent successfully, the GPRS time zone will be changed to UTC+08:00 (China time zone).* |

## 3.36 Setting the Audio File – B47

| GPRS Sending | B47,*X,Time* |
|---|---|
| GPRS Reply | B47,*X,Time* |
| Description | X: Indicates the audio file name; contains a maximum of 32 bytes (spaces included). |

| | Time: Indicates the playing times of the audio file. If this parameter is not set, the audio file plays only once. |
|---|---|
| **Example** | |
| GPRS Sending | @@P33,353358017784062,B47,1.MP3,1*2B\r\n |
| GPRS Reply | $$$P33,353358017784062,B47,1.MP3,1*F3\r\n |

## 3.37 Setting Parameters for Downloading FTP Audio Files – B66

| GPRS Sending | B66,*H*,*Username*,*Password*,*Host*,*Port*,*Path* |
|---|---|
| GPRS Reply | B66,OK |
| Description | H: The parameter value is **0**, **1**, or **2**. **0**: Disable the FTP downloading function. **1**: Enable the FTP downloading function. **2**: Clear existing parameters. |
| | Username: Indicates the user name; contains at most 50 bytes. |
| | Password: Indicates the password; contains at most 50 bytes. |
| | Host: Indicates the domain name; contains at most 50 bytes. |
| | Port: Indicates the port number; contains at most 5 bytes. |
| | Path: Indicates the domain name; contains at most 100 bytes. |
| | If you do not want to change the parameters, the commas in this command need to be remained. |
| | If you want to read the command settings, send **B66**. |
| **Example** | |
| GPRS Sending | @@P27,353358017784062,B66,2*D5\r\n |
| GPRS Reply | $$P28,353358017784062,B66,OK*06\r\n |

## 3.38 Setting Audio File Operation Parameters – B67

| GPRS Sending | B67,*H*,*File name* |
|---|---|
| GPRS Reply | B67,*H*,*PARAM* |
| Description | H: The parameter value ranges from **0** to **4**. |
| | H = 0: Download the audio file. File name: Indicates the name of the audio file to be downloaded. |
| | GPRS reply: B67,0,*File name*,*Result* |
| | Result: The parameter value ranges from **1** to **5**. **1**: The file is downloaded successfully. **2**: The memory space is not enough. **3**: The file fails to be downloaded. **4**: The number of files to be downloaded exceeds the upper limit. **5**: The file has already existed. |
| | |
| | H = 1: Delete the audio file. File name: Indicates the name of the audio file to be deleted. |
| | GPRS reply: B67,1,*File name*,*Result* |
| | Result: The parameter value is **1** and **2**. **1**: The file is deleted successfully. **2**: The file fails to be deleted. |
| | |
| | H = 2: Obtain the memory size. |
| | GPRS reply: B67,2,*Total memory size*,*Memory left* |
| | Unit: byte |

| | |
|---|---|
| | H = 3: Obtain the audio file list. |
| | GPRS reply: B67,4,*File name 1*(*Size of file 1*),…*File name N*(*Size of file N*) |
| | |
| | H = 4: Update the audio file. |
| | GPRS reply: B67,4,*File name,Result* |
| | Result: The parameter value ranges from **1** to **4**. **1**: The file is downloaded successfully. **2**: The memory space is not enough. **3**: The file fails to be downloaded. **4**: The number of files to be downloaded exceeds the upper limit. |
| | |
| | Note: |
| | 1. The file name contains a maximum of 32 bytes. |
| | 2. The parameter **\*** indicates that all audio files are deleted. When the value of parameter **H** is **2**, **3**, or **4**, the parameter **\*** does not exist. |
| **Example** | |
| GPRS Sending | @@P33,353358017784062,B67,0,1.MP3*2C\r\n |
| GPRS Reply | $$P235,353358017784062,B67,0,1.MP3,1*85\r\n |

## 3.39 Setting SMS Event Characters – B91

| | |
|---|---|
| GPRS Sending | B91,*SMS event code,SMS header* |
| GPRS Reply | B91,OK |
| Description | Header: Contains a maximum of 16 bytes. |
| **Example** | |
| GPRS Sending | @@R31,353358017784062,B91,1,SOS*F0\r\n |
| GPRS Reply | $$R28,353358017784062,B91,OK*06\r\n |
| | *After the above command is sent successfully and the SOS button (input 1) is pressed, the device will send an SMS alert whose header is SOS to preset authorized phone numbers.* |

## 3.40 Setting Event Authorization – B99

| | |
|---|---|
| GPRS Sending | B99,<SMS>/<0>,<*Phone number location*>/<*Authorized phone number*>,<*Operation code*>,[*Event code 1*]…[*Event code n*] |
| | B99,<CALL>/<1>,<*Phone number location*>/<*Authorized phone number*>,<*Operation code*>,[*Event code 1*]…[*Event code n*] |
| | B99,<GPRS>/<2>,<*Operation code*>,[*Event code 1*]…[*Event code n*] |
| | B99,<CAMERA>/<3>,<*Operation code*>,[*Event code 1*]…[*Event code n*] |
| | B99,<BUZZER>/<4>,<*Operation code*>,[*Event code 1*]…[*Event code n*]. |
| GPRS Reply | B99,<SMS>/<0>,<*Phone number location*>,<*Authorized phone number*>,[*Event code 1*]…[*Event code* n] |
| | B99,<CALL>/<1>,<*Phone number location*>,<*Authorized phone number*>,[*Event code 1*]…[*Event code* n] |
| | B99,<GPRS>/<2>,[*Event code 1*]…[*Event code* n] |
| | B99,<CAMERA>/<3>,[*Event code 1*]…[*Event code* n] |

| | B99,<BUZZER>/<4>,[*Event code 1*]…[*Event code* n] |
|---|---|
| Description | Fields SMS, CALL, GPRS, CAMERA, and BUZZER can be presented by 0–4 in decimal string. Operation codes GET, SET, ADD, and DEL can be presented by 0–3 in decimal string. These characters are not case-sensitive.<br><br>Note: Before using the B99 command to set the SMS or CALL event code, ensure that an authorized phone number is set in advance by using the A71 command or the parameter configuration tool. The device will compare the authorized phone number included in the B99 command with the authorized phone number (excluding +86 characters) set before. If the phone numbers are the same, the new event code will be stored. If not, an SMS with error information will be sent. |
| **Example** | |
| GPRS Sending | @@B34,863070010825791,B99,gprs,get*BC\r\n |
| GPRS Reply | $$B33,863070010825791,B99,1,17,18*B5\r\n |

## 3.41 Setting whether the device is automatically switched on/off when charging– BC8

| | |
|---|---|
| GPRS Sending | BC8,*X* |
| GPRS Reply | BC8,OK |
| Description | X: 0, power on after charging;<br>X: is 1, power off when charged;<br>X: Is 2. Charging does not change the state of the device.<br>This function can be set through the command, the default power on after charging.<br>To turn on the charging shutdown function, press the auxiliary key once to connect MM configuration each time. |
| **Example** | |
| GPRS Sending | @@P33,353358017784062,BC8,1*2B\r\n |
| GPRS Reply | $$$P33,353358017784062,BC8,OK*F3\r\n |

## 3.42 Setting Avoid Voicemail Box Mode – BC9

| | |
|---|---|
| GPRS Sending | BC9,A,B |
| GPRS Reply | BC9,OK |
| Description | 1 A:0 Normal mode (default)<br>2. Reject Voicemail Box<br>3 B=0: after triggering SOS, call all authorized numbers, loop until the last one is not respond, and continue to start from the beginning<br>B=1: after triggering SOS, call the authorized numbers and loop until the last one is not respond,then send ' Emergency, please call back soon!!!', and enter automatic answer mode |
| **Example** | |
| GPRS Sending | @@P33,353358017784062, BC9,A,B*2B\r\n |
| GPRS Reply | $$P33,353358017784062,BC9,OK*F3\r\n |

### 3.43 Notifying the Device of Sending an SMS – C02

| GPRS Sending | C02,*X,Phone number,Content* |
|---|---|
| GPRS Reply | C02,OK |
| Description | This command is used for the platform to notify the device of sending an SMS to a mobile phone.<br><br>X = 0: The TEXT encoding mode is used.<br><br>X = 1: The Unicode encoding mode is used.<br><br>Phone number: Contains a maximum of 16 digits.<br><br>Content: Contains a maximum of 140 characters.<br><br>After receiving this message, the device will send the **Content** parameter to the specified phone number. |
| **Example** | |
| GPRS Sending | @@f47,353358017784062,C02,0,15360853789,Meitrack*B1\r\n |
| GPRS Reply | $$f28,353358017784062,C02,OK*13\r\n |

### 3.44 Setting a GPRS Event Transmission Mode – C03

| GPRS Sending | C03,*X* |
|---|---|
| GPRS Reply | C03,OK |
| Description | X = 0: auto event report (default value: CCE)<br><br>X = 1: Before another event can be transmitted, existing event reports need to be confirmed and deleted on the server by the CFF command. |
| **Example** | |
| GPRS Sending | @@f27,353358017784062,C03,0*E1\r\n |
| GPRS Reply | $$f28,353358017784062,C03,OK*14\r\n |

### 3.45 Setting the Positioning Mode – C67

| GPRS Sending | C67,*Positioning mode* |
|---|---|
| GPRS Reply | C67,ok |
| Description | Positioning mode: The parameter value ranges from **0** to **2**. Decimal.<br><br>Positioning mode = 0: GPS + GLONASS positioning (default)<br><br>Positioning mode = 1: GLONASS positioning<br><br>Positioning mode = 2: GPS positioning |
| **Example** | |
| GPRS Sending | @@f27,353358017784062,C67,2*ED\r\n |
| GPRS Reply | $$f28,353358017784062,C67,OK*1E\r\n |

### 3.46 Setting the Microphone and Speaker – C69

| GPRS Sending | C69,*Microphone volume,Speaker volume* |
|---|---|
| GPRS Reply | C69,OK |

| Description | Microphone volume: decimal. The parameter value ranges from **0** to **8**. When the parameter value is **0**, the microphone will be muted. |
|---|---|
| | Speaker volume: decimal. The parameter value ranges from **0** to **5**. When the parameter value is **0**, the speaker will be muted. |
| **Example** | |
| GPRS Sending | @@f29,353358017784062,C69,1,1*4D\r\n |
| GPRS Reply | $$f28,353358017784062,C69,OK*20\r\n |

### 3.47 Powering Off the Device by a Command – C76

| GPRS Sending | C76 |
|---|---|
| GPRS Reply | C76,OK |
| Description | The device will be turned off automatically after receiving the command. |
| **Example** | |
| GPRS Sending | @@f25,353358017784062,C76*8D\r\n |
| GPRS Reply | $$f28,353358017784062,C76,OK*1E\r\n |

### 3.48 Setting the Power-off Function of the Power Button – C77

| GPRS Sending | C77,*Value* |
|---|---|
| GPRS Reply | C77,OK |
| Description | Value = 1: Users can turn off the device by its power button. |
| | Value = 0: Users cannot turn off the device by its power button. |
| **Example** | |
| GPRS Sending | @@f27,353358017784062,C77,1*ED\r\n |
| GPRS Reply | $$f28,353358017784062,C77,OK*ED\r\n |

### 3.49 Filtering GPS Data of a Heartbeat Packet – C78

| GPRS Sending | C78,*X,Y* |
|---|---|
| GPRS Reply | C78,OK |
| Description | X: Indicates the number of GPS satellites. |
| | Y: Indicates the GPS HDOP. Unit: x0.1. |
| **Example** | |
| GPRS Sending | @@f29,353358017784062,C78,4,1*50\r\n |
| GPRS Reply | $$f28,353358017784062,C78,OK*20\r\n |

### 3.50 Obtaining Device Hardware Functions –C83

| GPRS Sending | C83 |
|---|---|
| GPRS Reply | C03,*Function version* |
| Description | This command is used to check the hardware version (F0 or F1). |
| **Example** | |
| GPRS Sending | @@f25,353358017784062,C83*8B\r\n |
| GPRS Reply | $$f28,353358017784062,C83,OK*1C\r\n |

### 3.51 Deleting an Event in the Buffer – CFF

| | |
|---|---|
| GPRS Sending | CFF,*Quantity of deleted data* |
| GPRS Reply | CFF,*CFF data packet* |
| Description | Quantity of deleted data: hexadecimal. In general, the parameter value is **1**. The data identifiers from the device and server must be consistent. Otherwise, data will not be deleted from the device. If data is transmitted in CFF format, send **CFF,FFFF** to delete all cache records and ensure that the data packet number sent from the server is consistent with that sent from the device. CFF is generally used to send data with some important event alarm and UDP to ensure that the server has received the data; |

### 3.52 Allocating GPRS Cache and GPS Log Storage Space – D73

| | |
|---|---|
| GPRS Sending | D73,*X,Y* |
| GPRS Reply | D73,OK |
| Description | X: Set the storage percentage of GPRS cache. The parameter value is a decimal character. Y: Set the storage percentage of GPS logs. The parameter value is a decimal character. The sum of *X* and *Y* must be 100. |
| **Example** | |
| GPRS Sending | @@W31,353358017784062,D73,50,50*9B\r\n |
| GPRS Reply | $$f28,353358017784062,Dd73,OK*80\r\n |

### 3.53 Reading Device's Firmware Version and SN – E91

| | |
|---|---|
| GPRS Sending | E91 |
| GPRS Reply | E91,*Version,SN* |
| Description | This command is used to read the device's firmware version and SN. |
| **Example** | |
| GPRS Sending | @@W25,353358017784062,E91*7D\r\n |
| GPRS Reply | $$W38,353358017784062,FWV1.00,12345678*1C\r\n |

### 3.54 Restarting the GSM and GPS Modules – F00

| | |
|---|---|
| GPRS Sending | F00,GSM,GPS |
| GPRS Reply | F00,OK |
| Description | GSM: The parameter value is **0** or **1**. **0**: no action. **1**: Restart the GSM module. GPS: The parameter value is **0** or **1**. **0**: no action. **1**: Restart the GPS module. |
| **Example** | |
| GPRS Sending | @@j29,353358017784062,F01,1,1*46\r\n |
| GPRS Reply | $$j28,353358017784062,F00,OK*18\r\n |

### 3.55 Restarting the GSM Module – F01

| | |
|---|---|
| GPRS Sending | F01 |
| GPRS Reply | F01,OK |
| Description | This command is used to restart the GSM module. |
| **Example** | |
| GPRS Sending | @@j25,353358017784062,F01*88\r\n |
| GPRS Reply | $$j28,353358017784062,F01,OK*19\r\n |

### 3.56 Restarting the GPS Module – F02

| | |
|---|---|
| GPRS Sending | F02 |
| GPRS Reply | F02,OK |
| Description | This command is used to restart the GPS module. |
| **Example** | |
| GPRS Sending | @@Z25,353358017784062,F02*79\r\n |
| GPRS Reply | $$Z28,353358017784062,F02,OK*0A\r\n |

### 3.57 Setting the Mileage and Run Time – F08

| | |
|---|---|
| GPRS Sending | F08,*Run time*,*Mileage* |
| GPRS Reply | F08,OK |
| Description | Run time: The parameter value ranges from **0** to **4294967295**. Decimal; unit: second. If you do not want to set the parameter, leave it blank.<br>Mileage: The parameter value ranges from **0** to **4294967295**.Decimal; unit: meter. If you do not want to set the parameter, leave it blank. |
| **Example** | |
| GPRS Sending | @@D40,353358017784062,F08,0,4825000*51\r\n |
| GPRS Reply | $$D28,353358017784062,F08,OK*FA\r\n |

### 3.58 Deleting SMS or GPRS Cache Data – F09

| | |
|---|---|
| GPRS Sending | F09,*Number* |
| GPRS Reply | F09,OK |
| Description | Number = 1: SMS cache data to be sent is deleted.<br>Number = 2: GPRS cache data to be sent is deleted.<br>Number= 3: SMS and GPRS cache data to be sent is deleted. |
| **Example** | |
| GPRS Sending | @@E27,353358017784062,F09,1*CA\r\n |
| GPRS Reply | $$E28,353358017784062,F09,OK*FC\r\n |

### 3.59 Restoring Initial Settings – F11

| | |
|---|---|
| GPRS Sending | F11 |
| GPRS Reply | F11,OK |
| Description | This command is used to restore initial settings except the SMS password. |
| **Example** | |
| GPRS Sending | @@[25,353358017784062,F11*7A\r\n |
| GPRS Reply | $$[28,353358017784062,F11,OK*0B\r\n |

## 4 Appendix 1: Parameter ID

| No. | Parameter ID | Parameter | Data Analysis | Data Type | Data Length (Byte) |
|---|---|---|---|---|---|
| 1 | 0X01 | Event code | For details, see the section 1.3 "Event Code." | BYTE | 1 |
| 2 | 0X02 | Latitude | Unit: millionth of a degree | SINT32 | 4 |
| 3 | 0X03 | Longitude | Unit: millionth of a degree | SINT32 | 4 |
| 4 | 0X04 | Date and time | Unit: second<br>Starting time: 1 January, 2000, 00:00:00 am | DWORD | 4 |
| 5 | 0X05 | GPS positioning status | 01: The GPS positioning is valid.<br>00: The GPS positioning is invalid. | BYTE | 1 |
| 6 | 0X06 | Number of satellites | Indicates the number of received GPS satellites. | BYTE | 1 |
| 7 | 0X07 | GSM signal strength | Value range: 0–31 | BYTE | 1 |
| 8 | 0X08 | Speed | Unit: km/h | WORD | 2 |
| 9 | 0X09 | Driving direction | Unit: degree<br>When the parameter value is **0**, the direction is due north. The parameter value ranges from **0** to **359**. | WORD | 2 |
| 10 | 0X0A | HDOP | Value range: 5–999<br>Unit: 1/10 | WORD | 2 |
| 11 | 0X0B | Altitude | Unit: meter | SINT16 | 2 |
| 12 | 0X0C | Mileage | Indicates the total mileage.<br>Unit: meter | DWORD | 4 |
| 13 | 0X0D | Run time | Indicates the total time.<br>Unit: second | DWORD | 4 |
| 14 | 0X0E | Base station info | <MCC><MNC><LAC><CELL_ID><RX_LEVEL><br>MCC: 16-bit unsigned; little-endian;<br>indicates the Mobile Country Code. | STRUCT | 12 |

| | | | MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code. LAC: 16-bit unsigned; little-endian; indicates the Location Area Code. CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID. RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength. | | |
|---|---|---|---|---|---|
| 15 | 0X0F | Base station 1 | <MCC><MNC><LAC><CELL_ID><RX_LEVEL> MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code. MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code. LAC: 16-bit unsigned; little-endian; indicates the Location Area Code. CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID. RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength. | STRUCT | 12 |
| 16 | 0X10 | Base station 2 | <MCC><MNC><LAC><CELL_ID><RX_LEVEL> MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code. MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code. LAC: 16-bit unsigned; little-endian; indicates the Location Area Code. CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID. RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength. | STRUCT | 12 |
| 17 | 0X11 | Base station 3 | <MCC><MNC><LAC><CELL_ID><RX_LEVEL> MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code. MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code. LAC: 16-bit unsigned; little-endian; indicates the Location Area Code. CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID. RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength. | STRUCT | 12 |
| 18 | 0X12 | Base station 4 | <MCC><MNC><LAC><CELL_ID><RX_LEVEL> MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code. | STRUCT | 12 |

| | | | MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code.<br>LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.<br>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.<br>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength. | | |
|---|---|---|---|---|---|
| 19 | 0X13 | Base station 5 | <MCC><MNC><LAC><CELL_ID><RX_LEVEL><br>MCC: 16-bit unsigned; little-endian; indicates the Mobile Country Code.<br>MNC: 16-bit unsigned; little-endian; indicates the Mobile Network Code.<br>LAC: 16-bit unsigned; little-endian; indicates the Location Area Code.<br>CELL_ID: 32-bit unsigned; little-endian; indicates the cell ID.<br>RX_LEVEL: 16-bit signed; little-endian; indicates the signal strength. | STRUCT | 12 |
| 20 | 0X15 | Input port status | Indicates the status values of eight input ports.<br>Bits 0–7 correspond to status of input ports 1–8. | BYTE | 1 |
| 21 | 0X1A | AD5 | External power analog <AD5> | WORD | 2 |
| 22 | 0X1B | Geo-fence number | The data is available only when the GPRS event code is 20 or 21. | BYTE | 1 |
| 23 | 0X1C | System flag | The data is available only when the GPRS event code is 35.<br>Bit 0: Whether to modify the EEP2 parameter. When the parameter value is **1**, the EEP2 parameter is modified.<br>Bit 1: Indicates the ACC status. When the parameter value is **1**, the ACC is on.<br>Bit 2: Indicates the anti-theft status. When the parameter value is **1**, the device is in the arming state.<br>Bit 3: vibration flag. When the parameter value is **1**, the device is vibrating.<br>Bit 4: motion flag. When the parameter value is **1**, the device is moving.<br>Bit 5: Whether to connect the external power supply. When the parameter value is **1**, the external power supply is connected. | DWORD | 4 |

| | | | Bit 6: Whether the device is charging. When the parameter value is **1**, the device is charging.<br>Bit 7: Whether to enable the sleep mode. When the parameter value is **1**, the sleep mode is enabled.<br>Bit 8: Whether to connect the FMS. When the parameter value is **1**, the FMS is connected.<br>Bit 9: Whether to enable the FMS function. When the parameter value is **1**, the FMS function is enabled.<br>Bits 10–31: reserved. | | |
|---|---|---|---|---|---|
| 24 | 0xFE36 | Call record | 1C 01 01 31 33 32 35 30 30 36 32 37 35 31 30 00 00 00 00 09 30 14 07 08 19 10 00 00 00<br><br>1C: The data length is 28 bytes<br>01: Indicates the protocol version; contains one byte.<br>01: Indicates the calling type. 01: Two-way calling. 02: Listen-in.<br>31 33 32 35 30 30 36 32 37 35 31 30 00 00 00 00: Indicates the phone number. The data length is 16 bytes.<br>09 30 14 07 08 19: Indicates the date; little-endian. Converted digits: 190807-14:30:09.<br>10 00 00 00: Indicates the calling time; little-endian. | STRUCT | |
| 25 | 0xFE37 | Step | 09 00 00 00<br>The number of steps is 9. | dword | 4 |
| 26 | 0xFE40 | Alarm clock info | 04 01 31 32 33<br>04: The data length is 5 bytes.<br>01: Indicates the protocol version.<br>31 32 33: Indicates the alarm clock info; contains a maximum of 32 bytes. | STRUCT | |
| 27 | 0xFE69 | Battery percentage | 0x2E<br>The remaining battery power is 46%. | BYTE | 1 |

# 5 Appendix 2: Data Type

| Data Type | Description | Transmission Rule |
|---|---|---|
| BYTE | Unsigned; 1 byte (8 bits) | The data is transmitted as a stream of bytes. |
| WORD | Unsigned; 2 bytes (16 bits) | Little-endian |

| DWORD | Unsigned; 4 bytes (32 bits) | Little-endian |
|---|---|---|
| BYTE[n] | *n* bytes | The data is transmitted as a stream of bytes. |
| BCD[n] | BCD-8421 encoding; *n* bytes | The data is transmitted as a stream of bytes. |
| STRING | GBK encoding<br>If no data is generated, leave the parameter blank. | Little-endian |
| SINT8 | Signed; 1 byte | The data is transmitted as a stream of bytes. |
| SINT16 | Signed; 2 bytes | Little-endian |
| SINT32 | Signed; 4 bytes | Little-endian |
| STRUCT | Depend on data descriptions. | Transmit data based on a struct. |

**If you have any questions, do not hesitate to email us at info@meitrack.com.**