

Communication Protocol for Vic-Zone GPS-Tracker (T701,T801)

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1 Overview

This document specifies the communication protocol between the vehicle-mounted terminal and the communication gateway of Shenzhen Vic-Zone Intelligent Transportation System (ITS) Co., Ltd. The protocol sets the messages from the monitoring center to the terminal to be downlink instructions, and the messages from the terminal to the monitoring center to be uplink instructions. By default, the terminal works in the GPRS or CDMA1X mode, and transfers the messages between the terminal and the monitoring center through TCP/IP protocol. When getting out of the GPRS or CDMA1X signal coverage area, the terminal hands over to the SMS text mode automatically; when entering the GPRS or CDMA1X signal coverage area again, the terminal is re-connected to the monitoring center in the GPRS or CDMA1X mode automatically. In the two transfer modes, the message format is the same as message contents, but the data frame format is different.

1.1 Version Update Description

2007-9-6: V1.0:

1. Formulation of fundamental protocol.

2 Message Description

2.1 Definition of Data Type

| Data type | Description |
|-----------------|--|
| CHAR | Single ASCII code character |
| C_STRING | ASCII string. In case the string has a fixed length and the bits are not enough to make the length, the binary space will be added to the right side to make up the length (0x20H). Exception exists if otherwise specified. |
| N_STRING | Digital string that contains 0..9. In case the string has a fixed length and the bits are not enough to make the length, the ASCII code “0” will be added to the left side to make up the length (0x30H). Exception exists if otherwise specified. |
| H_STRING | Digital string that contains 0..F. In case the string has a fixed length and the bits are not enough to make the length, the ASCII code “0” will be added to the left side to make up the length (0x30H). Exception exists if otherwise specified. |

| Data type | Description |
|------------|--|
| HEX_STRING | Hexadecimal string, e.g., “1” is expressed by “31”. In case the string has a fixed length and the bits are not enough to make the length, the ASCII code “0” will be added to the left side to make up the length (0x30H). Exception exists if otherwise specified. |
| BIN | Binary data |
| BYTE | 8-digit integer that contains no symbol, 0..255 |

2.2 Message Format

The messages between the vehicle and the gateway are transferred through data frames. A complete data frame structure in the GPRS mode is defined in the following figure:

| Packet header flag | Message SN/time | Command word |
|--------------------|-----------------|--------------|
| 1 byte | 12 bytes | 4 bytes |

| | |
|-----------------------------------|-------|
| Message body | |
| N byte (N is not greater than 2K) | |

| |
|---------------------|
| Packet trailer flag |
| 1 byte |

A complete data frame structure in the SMS mode is defined in the following figure:

| Packet header flag | Message SN/time | Command word | Terminal ID |
|--------------------|-----------------|--------------|-------------|
| 1 byte | 12 bytes | 4 bytes | 15 bytes |

| | |
|---|-------|
| Message body | |
| N byte (In unicode, the length is not greater than 70 characters. In other code modes, the length is not greater than 140 characters) | |

| | |
|-----------|---------------------|
| Check bit | Packet trailer flag |
| 2 bytes | 1 byte |

Each complete data switching frame must contain packet header flag, SN/Time, command word,

message body and packet trailer flag.

2.3 Definition of Message Field

2.3.1 Packet Header/Packet Trailer Flag Bit

A flag bit indicates the start or the end of a message frame. 0X2AH (i.e., character “*”) serves as a start indicator, and 0X5EH (i.e., character “^”) serves as an end indicator. When transferring binary data, in order to ensure accuracy of data transfer, it is necessary to perform escape processing on the indicators that appear in the form of bytes in the message except packet header, packet trailer and command word. In the current protocol, the escape rules are not enabled, and the terminal program ignores the circumstance that special characters are contained in the message contents. The monitoring center shall avoid special characters 0x2A (*), 0x5E (^), and 0x5C (\) in the message contents.

The definition is as follows:

2AH ← → 7DH + 03H

5EH ← → 7DH + 02H

7DH ← → 7DH + 01H

2.3.2 Command Word

Length: 4 bytes, C_STRING character

Function: Define the type of payload information transferred by the data frame, which indicates the function of the data. The message is defined in the following table:

Table 2 Message definition

| Message category | Message subcategory | Message SN# | Command description | Remarks |
|------------------|--------------------------------------|-------------|--|---|
| D | A | 00 | Message of configuring alarm | Warning and alarm configuration information |
| | | 01 | Red alarm message | |
| | B | 00 | Rollcall message | Terminal parameter information |
| | | 01 | Handshake signal message | |
| | | 03 | Message of reading operation state of terminal | |
| | | 04 | Message of reading operation state of terminal | |
| | | 06 | Message of configuring IP address | |
| 07 | Message of configuring center number | | | |

| Message category | Message subcategory | Message SN# | Command description | Remarks |
|------------------|---------------------|--|--|------------------------------------|
| | | 11 | Message of configuring phone number | |
| | | 12 | Set the maximum speed of vehicle | |
| | | 14 | Set the static back-transmission interval of vehicle | |
| | | 15 | Wiretap command | |
| | | 17 | Read configuration of terminal phone number | |
| | C | 00 | Public message | Ordinary communication information |
| | | 01 | Scheduling information | |
| | | 02 | Radio call contention message (taxi) | |
| | | 03 | Radio call message (taxi) | |
| | | 04 | Navigation message | |
| | D | 00 | Equi-time continuous back-transmission setting | Vehicle positioning information |
| | | 01 | Equi-distance continuous back-transmission setting | |
| | E | 00 | Response to uplink yellow alarm message | Response message |
| | | 01 | Response to uplink red alarm message | |
| | | 07 | Response to passenger deal message (taxi) | |
| | F | | | |
| | G | | | |
| | H | 00 | Circuit control signal | Control signal |
| | | 01 | Fuel route control signal | |
| | | 02 | One-Key Talk configuration command | |
| 03 | | Read One-Key Talk configuration | | |
| X | 00 | Response to universal uplink result resolution | Extended message | |
| | 01 | Message of configuring alarm | | |
| | 02 | Command of configuring terminal functions | | |

| Message category | Message subcategory | Message SN# | Command description | Remarks |
|---------------------|---------------------|-------------|--|---------------------------------------|
| | | 03 | Command of configuring terminal mode | |
| | | 04 | Command of initializing terminal | |
| | | 05 | Command of configuring vehicle-restricted area | |
| Up (uplink message) | A | 00 | Yellow alarm message | Warning and alarm information |
| | | 01 | Red alarm message | |
| | B | 00 | Handshake signal message | Information related to terminal state |
| | | 02 | Response to reading terminal parameters | |
| | | 03 | Response to reading operation state of terminal | |
| | | 04 | Rollcall message | |
| | | 05 | Terminal registration message | |
| | C | 00 | Uplink information | Ordinary communication information |
| | | 07 | Passenger deal message (taxi) | |
| | D | 00 | Equi-time continuous back-transmission message | Vehicle positioning information |
| | | 01 | Equi-distance continuous back-transmission message | |
| | | 02 | Continuous back-transmission end message | |
| | | 04 | Transmit data from break point | |
| | E | 00 | Response to downlink alarm configuration message | Response message |
| | | 01 | Response to downlink red alarm message | |
| | | 04 | Response to scheduling information | |
| | | 05 | Response to reading configuration of phone number | |
| | | 06 | Response to configuration of phone number | |

| Message category | Message subcategory | Message SN# | Command description | Remarks |
|------------------|---------------------|-------------|--|-------------------------|
| | | 08 | Response to equi-time back-transmission setting information | |
| | | 09 | Response to equi-distance back-transmission setting information | |
| | | 10 | Response to setting the static back-transmission interval of vehicle | |
| | | 20 | Response to radio call contention message (taxi) | |
| | | 21 | Response to radio call message (taxi) | |
| | | 23 | Response to navigation message | |
| | F | | | |
| | G | | | |
| | H | 00 | Response to circuit control | Response control signal |
| | | 01 | Response to fuel route control | |
| | | 02 | Response to One-Key Talk configuration query | |
| | X | 00 | Response to universal downlink resolution results | Extended message |

The message SN not defined is reserved for future extension of message.

DX00 and UX00 can be sent anytime to handle emergencies that occur in the message resolution.

2.3.3 Terminal ID

Length: Fixed 15 bytes, C_STRINGType.

Function: This field is optional, and occurs only in the SMS data packet.

2.3.4 Message SN/Time

Length: Fixed 12 bytes, C_STRINGType.

When the monitoring center sends a message that requires response, these 12 bytes represent the serial number (SN) of the message. This SN shall be identical to the SN of the response message from the terminal. In other circumstances, all these 12 bytes constitute the time chop field.

2.3.5 Message Body

Length: Variable, ≤ 1024 bytes, possibly null.

Function: Determine the subscriber data information under the corresponding command word.

2.3.6 Check Code

Length: 2-byte, HEX_STRING Type, appearing on in SMS packet

Check algorithm: Check word exclusive of the packet header, exclusive-OR for all bytes

2.4 Message Sending Mode

Messages are sent primarily in the GPRS mode and secondarily in the SMS mode. When the GPRS mode fails, the message will be sent again in the SMS mode. Since the terminal may work in the SMS mode, the monitoring center shall also be capable of receiving and transmitting short messages. When sending an SMS packet, both the monitoring center and the terminal must ensure the short message length not to be greater than 140 bytes, and one message cannot be sent through more than one short message.

3 Command Information

3.1 Downlink Information

3.1.1 Alarm Configuration Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DA00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | Variable length | |
| Message Contents | DA00ZX...X DA00: Fixed keyword Z: 1 byte, ASCII character X...X: Specific warning contents, ASCII character. Warning contents: 1. Reserved | | | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|----------------|--|------------|-------------------|-------------|
| | 2. Enable line alarm 3. Disable line alarm 4. Enable the function of raising alarm upon power failure 5. Disable the function of raising alarm upon power failure 6. Enable conversation function 7. Disable conversation function 8. Enable hijack alarm function 9. Disable hijack alarm function A. Set the overspeed time interval (A0009 hexadecimal, max. 65535s. Set the overspeed alarm delay to 9s) B. Rest time interval (B0009 _0003 hexadecimal. Stop for 3s after traveling for 9s, max. 65535s) C. Travel astray (C0009 hexadecimal, max. 65535s. Raise an alarm after the vehicle has traveled astray for 9s) | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:*040331141830**DA00** B0009 _0003^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink configuration message, and the message sets the vehicle to stop for 3s after 9s of travel.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|----------------------------------|
| Response | The terminal responds with UE00. |
|----------|----------------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|---|
| Description | This message is applicable to all terminals |
|-------------|---|

3.1.2 Red Alarm Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DA01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |

| | | | | |
|------------------|--|------------|-----------------|--|
| Message Body | Message Contents | C_STRING | Variable length | |
| Message Contents | DA01ZX...X DA01: Fixed keyword Z: 1 byte, ASCII character X...X: Specific alarm contents, ASCII character. Alarm contents: 1. Overspeed travel (SN is fixed, but contents are variable) | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830 DA011 overspeed travel^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink alarm message, and the message is an alert of overspeed travel. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UE01. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. Chinese characters may occur in this message. The message length shall not be greater than 70 characters. |

3.1.3 Primary Rollcall Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|------------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | 3 | |
| Message Contents | LOG | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830DB00LOG ^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink alarm message, and the message is a downlink primary rollcall message. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UB04. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.4 Handshake Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|------------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | 3 | |
| Message Contents | HSO | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830DB01HSO ^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink alarm message, and the message is a downlink response handshake signal message. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | GPRS |
| Description | This message is applicable to all terminals. |

3.1.5 Message of Reading Parameter Configuration of Terminal

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|------------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB03 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | 0 | |
| Message Contents | | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|--|
| Response | The terminal responds with UB02. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.6 Message of Reading Operation State of Terminal

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|------------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB04 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | 0 | |
| Message Contents | | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UB03. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.7 Message of Configuring IP Address

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB06 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | Variable length | |
| Message Contents | DB06L...L DB06: Fixed keyword L...L: IP address and port number of monitoring center. The format is "IP address: Port number"; $9 \leq \text{IP address length} \leq 15$ bytes; and the port number consists of 4 numeral bytes regularly. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830DB06211.144.172.148:2000^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink system parameter configuration message, the IP address of the monitoring center is 211.144.172.148, and the port number is 2000. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UX00. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.8 Message of configuring SMC number

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB07 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | Variable length | |
| Message Contents | DB07M...M_N...N DB07: Fixed keyword M...M: Active control center number. $4 \leq \text{length} \leq 11$ numeral bytes. _: Fixed delimiter. N...N: Standby control center number. $4 \leq \text{length} \leq 11$ numeral bytes. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830DB0708877414141_123456^

The active control center number is 08877414141, and the standby control center number is 123456.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

Response | The terminal responds with UX00.

Sending Mode | SMS, GPRS

Description | This message is applicable to all terminals.

3.1.9 Message of Configuring Phone Number

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB11 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Message Body | Message Contents | C_STRING | Variable length | |
| Message Contents | <p>DB11Z...Z_H...H_F...F_ C...C_B1...B1_B2...B2</p> <p>DB11: Fixed keyword.</p> <p>Z...Z: Phone number of the center, of which $3 \leq \text{value} \leq 15$.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>Z...Z: Phone number of the traffic department, of which $3 \leq \text{value} \leq 15$.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>F...F: Phone number of the branch center, of which $3 \leq \text{value} \leq 15$.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>C...C: Phone number of the enterprise, of which $3 \leq \text{value} \leq 15$.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>B1...B1: Starting phone number segment 1, of which $3 \leq \text{value} \leq 15$.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>B2...B2: Ending phone number segment 2, of which $3 \leq \text{value} \leq 15$.</p> <p>A maximum of 6 phone numbers can be configured.</p> <p>After the terminal receives this instruction, if the corresponding number exists on the terminal, the existing number will be replaced; if no corresponding number exists, the corresponding number will be added; if a number exists on the terminal, but the number in the configuration instruction is empty, the corresponding will delete the corresponding number. If the center needs to modify, cancel or add any number, configuration must be performed through this message.</p> | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| Example: |
|---|
| <p>*040331141830DB11 monitoring center:02389183666_ Traffic department:0237890123_enterprise:02388888888_ Branch center: 13088888888_ Start of internal number: 13768326516_ Ending number segment: 13768321675^.</p> <p>Monitoring center number: 02389183666; enterprise monitoring center number: 02388888888; branch center number: 13088888888.</p> <p>Note: If the phone number is shorter than 6 digits, leave “_” at the vacant digit.</p> |
| <p>In this example, red indicates Start Identifier and End Identifier, bold green indicates Command Word, non-bold green indicates message SN, cyan indicates Check Word, dark yellow indicates</p> |

| | |
|---|--|
| Terminal ID, blue indicates packet length, and black indicates packet contents. | |
| Response | The terminal responds with UE06. |
| Sending Mode | GPRS |
| Description | This message is applicable to all terminals. |

3.1.10 Set the Maximum Speed of Vehicle

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|------------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB12 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | Variable length | |
| Message Contents | Speed (km) | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830 DB1225^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink maximum speed limit of vehicle.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|--|
| Response | The terminal responds with UX00. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.11 Set the Static Back-transmission Interval of Vehicle

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Command Word | DB14 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | 4 | |
| Message Contents | DB14XXXX DB14: Fixed keyword XXXX: Time interval (s), H_STRING 4-byte fixed length, max. 65535s | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830 DB1401F4^

This message means: The message is sent at 14:18:30 on 2004-3-31; message type: The downlink vehicle zero point back-transmission interval is 500s.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|----------------------------------|
| Response | The terminal responds with UE10. |
|----------|----------------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|--|
| Description | This message is applicable to all terminals. |
|-------------|--|

3.1.12 Wiretap Command

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB15 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | Message Contents | C_STRING | Variable length | |
| Message Contents | DB15X...X DB15: Fixed keyword XXXX: Wiretap phone number. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830 DB150296789281^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is to start vehicle wiretapping, and phone number is 0296789281. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.13 Read Configuration of Terminal Phone Number

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DB17 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UE05. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.14 Public Information

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DC00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | DC00X...X DC00: Fixed keyword X...X: Information about weather, water level and sea route. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830DC00 **an organization: It is fine today**^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink public message, and the message indicates the weather is fine today, and **is sent by an organization**.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|--------------------------|
| Response | No response is required. |
|----------|--------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|--|
| Description | This message is applicable to all terminals. |
|-------------|--|

3.1.15 Scheduling Information

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DC01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Message Contents | DC01Y...YX...X DC01: Fixed keyword Y...Y: Message SN, which is of a fixed length of 20 bytes. X...X: Text information about scheduling. The Chinese characters are national standard codes. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830DC0120060608090102001101 **Passenger in Nanning needs service of your vehicle ...**^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink scheduling message, and the scheduling SN is: 20060608090102001101;

Contents: **Passenger in Nanning needs service of your vehicle ...**

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

Response The terminal responds with UE04.

Sending Mode SMS, GPRS

Description This message is applicable to all terminals.

3.1.16 Radio Call Contention Message (Taxi)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DC02 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | DC02Y...YX...X DC02: Fixed keyword Y...Y: Message SN, which is of a fixed length of 20 bytes. X...X: Text information. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830DC0220060608090102001101 Passenger at Yangtze Road needs service of your vehicle [^] | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink scheduling message, and the scheduling SN is: 20060608090102001101; | |
| Contents: Passenger at Yangtze Road needs service of your vehicle. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UE20. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.17 Radio Call Message (Taxi)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DC03 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | DC03Y...YX...X DC03: Fixed keyword Y...Y: Message SN, which is of a fixed length of 20 bytes. X...X: Text information. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | [^] | CHAR | 1 | |

| | |
|--|--|
| Example: | |
| *040331141830DC0320060608090102001101 Passenger at Yangtze Road needs service of your vehicle [^] | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink scheduling message, and the scheduling SN is: 20060608090102001101; | |
| Contents: Passenger at Yangtze Road needs service of your vehicle. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command | |

| | |
|---|--|
| Word, non-bold green indicates message SN, cyan indicates Check Word, dark yellow indicates Terminal ID, blue indicates packet length, and black indicates packet contents. | |
| Response | The terminal responds with UE21. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.18 Navigation Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DC04 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | DC04X...X DC04: Fixed keyword X...X: Navigation information. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

In this example, red indicates Start Identifier and End Identifier, bold green indicates Command Word, non-bold green indicates message SN, cyan indicates Check Word, dark yellow indicates Terminal ID, blue indicates packet length, and black indicates packet contents.

| | |
|--------------|--|
| Response | The terminal responds with UE23. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.19 Equi-time Continuous Back-transmission Setting

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Command Word | DD00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 8 | |
| Message Contents | <p>DD00XXXXYYZZ</p> <p>DD00: Fixed keyword</p> <p>XXXX: Time interval of continuous back-transmitted messages. Unit: Second, total 4 bytes, H_STRING, max. 65535s. In case XXXX = 0, continuous back transmission is stopped.</p> <p>YYZZ: Total time of equi-time back-transmission, unit: YY: hour, ZZ: minute. Total 4 bytes, H_STRING, max. FFFF, i.e., 255 hours and 255 minutes. In case YYZZ = 0, the message is transmitted back continuously at the time interval.</p> <p>When neither XXXX nor YYZZ is 0, the message is transmitted back continuously at the time interval until the total duration is reached.</p> | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| *040331141830DD0000050014^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink regular continuous back-transmission setting, the GPS data is transmitted back every another 5 seconds, and the total duration of back-transmission is 20 minutes. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UE08. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. When the data is transmitted back continuously in the SMS mode, if the set time interval is less than the minimum time interval (set by the terminal manufacturer through the configuration message), the data will be transmitted back continuously at the minimum time interval. Otherwise, it will be transmitted back continuously at the set time interval. The data mode is the same as the SMS mode. |

3.1.20 Equi-Distance Continuous Back-transmission Setting

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DD01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 8 | |
| Message Contents | DD01XXXXYYYY DD01: Fixed keyword XXXX: Distance interval of continuous back-transmitted messages. Unit: Meter, total 4 bytes, H_STRING, max. 65535m. In case XXXX = 0, continuous back transmission is stopped. YYYY: Total distance of equi-distance back transmission. Unit: Kilometer, total 4 bytes, H_STRING. This message will be sent after total distance * 10 is reached, i.e., max. 65535/10 = 6553.5km. In case YYYY = 0, the message is transmitted back continuously at the distance interval. When neither XXXX nor YYYZ is 0, the message is transmitted back continuously at a distance interval until the total distance YYYY/10 is reached. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830DD0101F400FA^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink regular continuous back-transmission setting, the GPS data is transmitted back every another 500 meters, and the total distance of back-transmission is 25 km.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

Response The terminal responds with UE09.

Sending Mode SMS, GPRS

Description This message is applicable to cost-effective terminals and navigation-type terminals. The response message is uplink equi-distance continuous back-transmission message. When the total back-transmission distance is reached, the system will send a message of stopping continuous back-transmission to the center.

3.1.21 Response to Uplink Yellow Alarm Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DE00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | DE00X DE00: Fixed keyword X: Type of uplink yellow alarm message UA00X, which is a 1-byte, hexadecimal ASCII character. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830DE001^

This message means: The message is sent at 14:18:30 on 2004-3-31, and the message type is a response to uplink overspeed alarm.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|--------------------------|
| Response | No response is required. |
|----------|--------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|--|
| Description | This message is applicable to all terminals. |
|-------------|--|

3.1.22 Response to Uplink Red Alarm

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DE01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Message Contents | DE01X DE01: Fixed keyword X: Type of uplink red alarm message UA01X, which is a 1-byte, hexadecimal ASCII character. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830DE012^

This message means: The message is sent at 14:18:30 on 2004-3-31, and the message type is a response to uplink vehicle hijack alarm.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|--|
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.23 Response to Passenger Deal Message (Taxi)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DE07 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830 DE07^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is a response to the passenger deal message. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.24 Circuit Control Signal (I01)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DH00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | XYZ | C_STRING | 3 | |
| Message Contents | DH00YY DH00: Fixed keyword YY: Message SN, which is of a fixed length of 2 bytes. 00: Off 01: On | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *070321152847DH0000^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, and the message type is downlink circuit control signal. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UH00. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.25 Fuel Route Control Signal (I02)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DH01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | XYZ | C_STRING | 3 | |
| Message Contents | DH01YY DH01: Fixed keyword YY: Message SN, which is of a fixed length of 2 bytes. 00: Off 01: On | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*070321152847DH0101^

This message means: The message is sent at 14:18:30 on 2004-3-31, and the message type is downlink fuel route control signal.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|----------------------------------|
| Response | The terminal responds with UH01. |
|----------|----------------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|--|
| Description | This message is applicable to all terminals. |
|-------------|--|

3.1.26 One-Key Talk Configuration Command

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DH02 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Message Body | XYZ | C_STRING | 3 | |
| Message Contents | DH02XY...Y DH02: Fixed keyword X: 0 means to disable the One-Key Talk function, and 1 means to enable the One-Key Talk function. Y...Y: Phone number of the monitoring center. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830 DH02**10296789281**^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is to enable the One-Key Talk function, and phone number of the monitoring center is 0296789281. The phone number may be vacant.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

Response The terminal responds with UH02.

Sending Mode SMS, GPRS

Description This message is applicable to all terminals.

3.1.27 Read One-Key Talk Configuration

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DH03 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830 DH03^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is to query the One-Key Talk configuration. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UH02. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.28 Response to Universal Uplink Resolution Results

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DX00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | DX00 + uplink message command word (4 bytes) + operation result (1 byte) + error code (2 bytes) + additional contents (depending on the uplink message) The operation result byte is defined below: 0: Failure 1: Success Other characters make no sense. The error code is defined below: 00: Unknown message that cannot be resolved. 01: Check error | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.29 Alarm Configuration Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DX01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 10 | |
| Message Contents | B0 (byte 1: Raise an alarm upon power failure) 0: Disable 1: Enable Other characters make no sense. B1 (hijack configuration) 0: Disable 1: Enable Other characters make no sense. B2 (burglarproof configuration) 0: Disable 1: Enable B3: Region restriction B4: Overspeed alarm B5: Route deviation alarm B6: Travel time alarm Other characters make no sense. Other bytes are reserved and make no sense. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UX00. The additional contents of UX00 are the ON/OFF state of the current parameters. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.30 Command of Configuring Terminal Functions

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DX02 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 16 | |
| Message Contents | B0 (byte 1) indicates call configuration. 0: Disable the call function; 1: No restriction; 2: Outgoing call restricted; 3: Incoming call restricted. Other characters make no sense. B1 (byte 2) indicates SMS function: 0: Disable the function; 1: No restriction; 2: Outgoing SMS restricted; 3: Incoming SMS restricted. Other characters make no sense. Other characters make no sense, and are extended bytes. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UX00. The additional contents of UX00 are 16 bytes which represent the Enable/Disable state of the current function. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.31 Command of Configuring Terminal Mode

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DX03 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 10 | |
| Message Contents | B0 (byte 1): 0: SMS; 1: GPRS mode. Other characters make no sense. B1 (byte 2) indicates hidden mode. 0: Do not transmit the location information back automatically; 1: Transmit the location information back automatically Other characters make no sense, and are extended bytes. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|--|
| Response | The terminal responds with UX00. The additional contents of UX00 are 10 bytes which represent the Enable/Disable state of the current modes. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.32 Terminal Initialization Command (Change ID, Initialization, Restart)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DX04 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 16 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Message Contents | X+Terminal ID X has the following values: 0: Restart 1: Initialize configuration 2: Change ID, the latter 15 bytes make sense. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|--|
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.1.33 Message of Configuring Vehicle-Restricted Area

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | DX05 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | B0 indicates the longitude and latitude of the start point of the area and the end point of the area, start time, and end time. The fields are separated with comma. B0 has the following values: 0: This area is always valid, without time field. 1: The time segment is the continuous valid time of the area. 2: The time segment is the daily time segment. 3: Only query the configuration state of the area restriction alarm. Other characters behind it make no sense. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The terminal responds with UX00. In case of success, the corresponding contents indicate the configuration of the current restricted area. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.2 Uplink Information

3.2.1 Yellow Alarm Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UA00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | UA00XZ...Z+GPS data UA00: Fixed keyword X: Specific warning information code, hexadecimal, composed of 1 byte. Warning information: 1. Overspeed alarm: Road name _ overspeed duration (s) _ restricted time speed _ speed before warning (km) _ overspeed distance (m) 5. Violation of rest time: Road name _ max. time of travel (s) _ compulsory rest time (s) 6. Violation of travel time: Road name _ allowed travel time A. Alarm of restricted area: Area name _ start of allowed operation time segment _ end of allowed operation time segment | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The center responds with DE00 |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.2.2 Red Alarm Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UA01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | UA01XZ...Z+GPS data UA01: Fixed keyword X: Specific alarm information code, hexadecimal, composed of 1 byte. Alarm information: 0: Vehicle power failure (the system responds automatically. This message is sent only once.) 1: Fault occurs (the alarm is reported every 3 seconds before receiving a response until it is reported for 8 times. After a response is received, the alarm will not be reported any more) 2: Vehicle hijack alarm (the alarm is reported every 3 seconds before receiving a response until it is reported for 8 times. After a response is received, the alarm will not be reported any more) 3: Vehicle burglarproof alarm (the alarm is reported every 3 seconds before receiving a response until it is reported for 8 times. After a response is received, the alarm will not be reported any more) | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830UA012 vehicle hijack alarm 061825A2934.0133 N10627.2544E000.0040331309.6200000000L000000^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, and the message type is uplink red alarm message indicative of vehicle hijack. The GPS data is collected at 06:18:25 on 2004-03-31. The data is valid. The position is N29°34.0133' and E106°27.2544', the speed is 0, and the included angle against north is 309.62°. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The center responds with DE01. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.2.3 Handshake Signal Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UB00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 3 | |
| Message Contents | HSO | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830UB00HSO^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is uplink data handshake message. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | The center responds with DB01. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.2.4 Response to Reading Terminal Parameters

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UB02 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | <p>UB02X..X_I.I_L...L_M...M_AA_BB_CC_DD_EE_UU_VV_HHHH_II_II_JJJJ_ RRRR_SSSS_TTTT_UUUU</p> <p>UB02: Fixed keyword.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>X..X: Terminal ID.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>I.I: IP address and port number. Format: "IP address: Port number", of which $14 \leq \text{the length} \leq 20$ bytes.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>L...L: Active SMS number</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>M...M: Standby SMS number</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>AA: Road alarm state. 1: Enable; 0: Disable</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>BB: Power failure alarm state. 1: Enable; 0: Disable</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>CC: Hijack alarm state. 1: Enable; 0: Disable</p> <p>_: Fixed delimiter. 1 byte.</p> <p>DD: Talk state. 1: Enable; 0: Disable</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>EE: Alarm voice state. 0: Ordinary; 1: Voice</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>UU: Shortest time interval of equi-time back-transmission in the data mode, composed of 4 bytes, hexadecimal, measured in seconds.</p> <p>_: Fixed delimiter, composed of 1 byte.</p> <p>VV: Shortest time interval of equi-time back-transmission in the SMS mode, composed of 4 bytes, hexadecimal, measured in seconds.</p> | | | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|----------------|-------------|------------|-------------------|---|
| | _: | | | Fixed delimiter, composed of 1 byte. |
| | HHHH: | | | Shortest distance interval of equi-distance back-transmission in the data mode, composed of 2 bytes, hexadecimal, measured in meters. |
| | _: | | | Fixed delimiter, composed of 1 byte. |
| | IIII: | | | Shortest distance interval of equi-distance back-transmission in the SMS mode, composed of 2 bytes, hexadecimal, measured in meters. |
| | _: | | | Fixed delimiter, composed of 1 byte. |
| | JJJJ: | | | Zero point back-transmission interval. composed of 4 bytes, hexadecimal, measured in seconds. |
| | _: | | | Fixed delimiter, composed of 1 byte. |
| | RRRR: | | | Overspeed delay interval, composed of 4 bytes, hexadecimal, measured in seconds. |
| | _: | | | Fixed delimiter, composed of 1 byte. |
| | SSSS: | | | Route deviation back-transmission interval, composed of 4 bytes, hexadecimal, measured in seconds. |
| | _: | | | Fixed delimiter, composed of 1 byte. |
| | TTTT: | | | Maximum travel time interval, composed of 4 bytes, hexadecimal, measured in seconds. |
| | _: | | | Fixed delimiter, composed of 1 byte. |
| | UUUU: | | | Rest time interval, composed of 4 bytes, hexadecimal, measured in seconds. |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830UB02CW9999C99999998_211.144.172.148:2000_1234
_2345_0_1_0_1_1_05_000A_000B_000C_FFFF_0009_0008_0006_0003^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is a response to reading terminal parameters in the uplink direction. Terminal ID: CW9999C99999998; IP address and port number: 211.144.172.148:2000; active SMS number: 1234; standby SMS number: 1234; route alarm state: Disable; power failure alarm: Enable; hijack alarm: Disable; conversation state: Active; alarm sound: Voice; shortest back-transmission time interval in data mode: (05) 5s; shortest back-transmission time interval in the SMS mode: (0A) 10s; shortest back-transmission distance interval in the data mode: (0B) 11m; shortest back-transmission distance interval in the SMS mode: (0C) 12m; zero point back-transmission interval: (FFFF) 65535s; overspeed delay interval: 9s; route deviation travel back-transmission every 8 seconds; maximum operation time: 6s; compulsory time interval: 3s.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|--|
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.2.5 Response to Reading Operation State of Terminal

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UB03 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UB03X..X_I.I_Y..Y_Z..Z_K..K_D..D_J..J_Z..Z_LL_MM_L..L UB03: Fixed keyword. The following contents are the manufacturer configuration data read from the flash: _: Fixed delimiter, composed of 1 byte. X..X: Terminal ID. I..I: IP address and port number. Y..Y: Hardware version number. Z..Z: Software version number. K..K: Warning software version number. H..H: Route filename (empty. Avoid Chinese characters) D..D: Back-transmission interval. J..J: Operation time LL: Mobile phone signal value MM: GPS signal value L..L: Maximum speed (km) | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| *040331141830UB03CW9999C99999998_220.292.10.29:8012_ 2004-06-07_2006-09-09_2006-09-10__20_23:25 _12_03_80^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is: Reading operation state of terminal in uplink direction. Terminal ID: CW9999C99999998; IP: 220.292.10.29:8012; hardware version number: 2004-06-07; software version number: 2006-09-09; warning software: 2006-09-10; route file; back-transmission interval: 20s; operation time: 23:25; mobile phone signal: 12; satellite signal: 04. Maximum speed limit: 80 km | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.2.6 Response to Rollcall Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UB04 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UB04X...XY+GPS data UB04: Fixed keyword. X...X: Terminal ID. composed of 8 bytes. Y: Composed of 1 byte, which is fixed 0, 1, 2, 3, 4, 5 or 6. 0: Network provides no coverage or does not support dialing. 1: Network dial-up succeeds, but cannot establish a SOCKET connection (Note: The current IP address and port number should follow behind it). 2: No IP address exists, and an IP address should be configured. 3: Voice (SMS) state, which enables conversation. 4: Primary response to rollcall at the center. 5: The GPS is faulty. No GPS data is reported when the GPS is faulty. 6: The GPS is data is invalid. In this case, no GPS data will be reported. | | | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|----------------|-------------|------------|-------------------|-------------|
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830UB0499999984061825A2934.0133N

10627.2544E000.0040331309.6200000000L000000^

The message is sent at 14:18:30 on 2004-03-31. The message type is uplink terminal state message (response to rollcall at the center). The Terminal ID is CW9999C99999998. The GPS data collection date is 06:18:25 on 2004-03-31. The data is valid. The position is N29°34.0133' and E106°27.2544'. The speed is 0. The included angle against north is 309.62°.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|--------------------------|
| Response | No response is required. |
|----------|--------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|--|
| Description | This message is applicable to all terminals. |
|-------------|--|

3.2.7 Terminal Registration Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UB05 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UB05XXYYZZLM...M+GPS data 15-digit Terminal ID | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates

| | |
|---|--|
| Terminal ID, blue indicates packet length, and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | GPRS |
| Description | This message is applicable to all terminals. |

3.2.8 Text Information

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UC00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UC00Z..Z+GPS data UB04: Fixed keyword. Z..Z: ASCII string, with a variable length | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

In this example, red indicates Start Identifier and End Identifier, bold green indicates Command Word, non-bold green indicates message SN, cyan indicates Check Word, dark yellow indicates Terminal ID, blue indicates packet length, and black indicates packet contents.

| | |
|--------------|--|
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals. |

3.2.9 Passenger Deal Message (Taxi)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Command Word | UC07 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 20 | |
| Message Contents | UC07X...X UC07: Fixed keyword X...X: SN of the previous radio call message, composed of 20 bytes | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830UC0720060700454054053^

This message means: The message is sent at 14:18:30 on 2004-3-31, and the uplink radio call passenger deal is concluded.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

Response The center responds with DE07.

Sending Mode SMS, GPRS

Description The message is applicable to all terminals with new screens. After the message in response to DE07 is received successfully, the previous radio call record will be cleared. If no radio call message exists and you press <OK>, no passenger deal information will be sent.

3.2.10 Equi-time Continuous Back-Transmission Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UD00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UD00+GPS data | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. After the total continuous back-transmission time is reached, the back-transmission will stop automatically, and the continuous back-transmission end message will be sent to the center. |

3.2.11 Equi-distance Continuous Back-transmission Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UD01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UD01+GPS data | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. After the total continuous back-transmission distance is reached, the back-transmission will stop automatically, and the continuous back-transmission end message will be sent to the center. |

3.2.12 Continuous Back-transmission End Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UD02 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UD02+GPS data | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|---|
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. After the total continuous back-transmission time/distance is reached, or after the message of stopping continuous back-transmission sent from the center is received, a continuous back-transmission end message will be sent to the center. |

3.2.13 Transmit Data Back at Break Point

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UD04 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UD04+GPS data | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. The line disconnection data is transmitted back in this format. The back-transmission mechanism transmits back 10 data entries after each success of handshake. The saving of the break-point data starts from the data between two handshakes. If the new handshake succeeds, the data will be discarded, and the saving of the data between the handshakes will continue. |

3.2.14 Response to Downlink Alarm Configuration Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| *040331141830UE00^ | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. |

3.2.15 Response to Downlink Red Alarm Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UE01Z + GPS data UE01: Fixed keyword. Z: Serial number | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830UE011 overspeed GPS^

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

Response No response is required.

Sending Mode SMS, GPRS

Description This message is applicable to cost-effective terminals and navigation-type terminals.

3.2.16 Response to Scheduling Information

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE04 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UE04Y...Y UE04: Fixed keyword Y...Y: Message SN, which is of a fixed length of 20 bytes. | | | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|----------------|-------------|------------|-------------------|-------------|
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| *040331141830UE0420060608090102001101^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is a response to the scheduling message, and the scheduling SN is: 20060608090102001101 | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. |

3.2.17 Response to Reading Configuration of Phone Number

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE05 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UE05 Z...Z_H...H_F...F_ C...C_B1...B1_B2...B2 UE05: Fixed keywordZ...Z: Phone number of the center, of which $3 \leq \text{the value} \leq 15$. _: Fixed delimiter, composed of 1 byte. Z...Z: Phone number of the traffic department, of which $3 \leq \text{the value} \leq 15$. _: Fixed delimiter, composed of 1 byte. F...F: Phone number of the branch center, of which $3 \leq \text{the value} \leq 15$. _: Fixed delimiter, composed of 1 byte. C...C: Phone number of the enterprise, of which $3 \leq \text{the value} \leq 15$. _: Fixed delimiter, composed of 1 byte. | | | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|----------------|--|------------|-------------------|-------------|
| | B1...B1: Starting phone number segment 1, of which $3 \leq \text{the value} \leq 15$. _: Fixed delimiter, composed of 1 byte. B2...B2: Ending phone number segment 2, of which $3 \leq \text{the value} \leq 15$. A maximum of 6 phone numbers can be configured. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830UE05 monitoring center: 02389183666_traffic department: 0237890123_
enterprise: 02388888888_branch center: 13088888888___start of internal number:
13768326516_ending number segment: 13768321675^.

Monitoring center number: 02389183666; enterprise monitoring center number: 02388888888;
branch center number: 13088888888.

Note: If the phone number is shorter than 6 digits, leave “_” at the vacant digit.

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is a response to reading phone number configuration of vehicle.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|---|
| Response | No response is required. |
| Sending Mode | GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. |

3.2.18 Response to Phone Number Configuration

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE06 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | UE06 Z...Z_H...H_F...F_ C...C_B1...B1_B2...B2 UE06: Fixed keyword. | | | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|----------------|---|------------|-------------------|-------------|
| | Z...Z: Phone number of the center, of which $3 \leq$ the value ≤ 15 . _: Fixed delimiter, composed of 1 byte. Z...Z: Phone number of the traffic department, of which $3 \leq$ the value ≤ 15 . _: Fixed delimiter, composed of 1 byte. F...F: Phone number of the branch center, of which $3 \leq$ the value ≤ 15 . _: Fixed delimiter, composed of 1 byte. C...C: Phone number of the enterprise, of which $3 \leq$ the value ≤ 15 . _: Fixed delimiter, composed of 1 byte. B1...B1: Starting phone number segment 1, of which $3 \leq$ the value ≤ 15 . _: Fixed delimiter, composed of 1 byte. B2...B2: Ending phone number segment 2, of which $3 \leq$ the value ≤ 15 . A maximum of 6 phone numbers can be configured. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| *040331141830 UE06 ^. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. |

3.2.19 Response to Equi-time Continuous Back-transmission Setting

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE08 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 8 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Message Contents | <p>UE08XXXXYYZZ</p> <p>UE08: Fixed keyword</p> <p>XXXX: Time interval of continuous back-transmitted messages. Unit: Second, total 4 bytes, H_STRING, max. 65535s. In case XXXX = 0, continuous back transmission is stopped.</p> <p>YYZZ: Total time of equi-time back-transmission, unit: YY: hour, ZZ: minute. Total 4 bytes, hexadecimal, max. FFFF, i.e., 255 hours and 255 minutes. In case YYZZ = 0, the message is transmitted back continuously at a time interval.</p> <p>When neither XXXX nor YYZZ is 0, the message is transmitted back continuously at a time interval until the total duration is reached.</p> | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| *040331141830UE0800050014^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink regular continuous back-transmission setting, the GPS data is transmitted back every another 5 seconds, and the total duration of back-transmission is 20 minutes. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. When the data is transmitted back continuously in the SMS mode, if the set time interval is less than the minimum time interval (set by the terminal manufacturer through the configuration message), the data will be transmitted back continuously at the minimum time interval. Otherwise, it will be transmitted back continuously at the set time interval. The data mode is the same as the SMS mode. |

3.2.20 Response to Equi-distance Continuous Back-transmission Setting

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE09 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 8 | |
| Message Contents | <p>UE09XXXXYYYY</p> <p>UE09: Fixed keyword</p> <p>XXXX: Distance interval of continuous back-transmitted messages. Unit: Meter, total 4 bytes, H_STRING, max. 65535m. In case XXXX = 0, continuous back transmission is stopped.</p> <p>YYYY: Total distance of equi-distance back transmission. Unit: Kilometer, total 4 bytes, Hexadecimal. This message will be sent again after total distance * 10 is reached, i.e., max. 65535/10 = 6553.5km. In case YYYY = 0, the message is transmitted back continuously at a distance interval.</p> <p>When neither XXXX nor YZZZ is 0, the message is transmitted back continuously at a distance interval until the total distance YYYY/10 is reached.</p> | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830UE0901F400FA^

This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is downlink regular continuous back-transmission setting, the GPS data is transmitted back every another 500 meters, and the total distance of back-transmission is 25 km.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|---|
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. |

3.2.21 Response to Setting the Static Back-transmission Interval of Vehicle

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE10 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 4 | |
| Message Contents | UE10XXXX UE10: Fixed keyword XXXX: Current time interval setting, measured in seconds, H_STRING, max. 65535s. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*040331141830 UE1001F4^

This message means: The message is sent at 14:18:30 on 2004-3-31; message type: The interval of responding to zero point back-transmission of vehicle is 500s.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|--------------|---|
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to cost-effective terminals and navigation-type terminals. |

3.2.22 Response to Radio Call Contention Message (Taxi)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE20 | C_STRING | 4 | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UE20X..XY....Y UE20: Fixed keyword X: Message SN, which is of a fixed length of 20 bytes. Y: Original text information. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| Example: | |
|---|--|
| *070321152847UE2020060608090102001101 ^ | |
| Response to the radio call message numbered 20060608090102001101. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to taxi terminals |

3.2.23 Response to Radio Call Message (Taxi)

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE21 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UE21X..XY....Y X: Message SN, which is of a fixed length of 20 bytes. Y: Original text information. UE21: Fixed keyword | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| *070321152847UE2120060608090102001101 ^ | |
| Response to the radio call message numbered 20060608090102001101. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to the taxi terminal. It is an automatic response to UE21, updates the radio call record and saves it for ease of responding to the future passenger deal. |

3.2.24 Response to Navigation Message

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|-------------|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UE23 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 0 | |
| Message Contents | | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to navigation-type terminals. |

3.2.25 Response to Power Failure Control

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UH00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 2 | |
| Message Contents | YY: Serial number of message, which is of a fixed length of 2 bytes and indicative of the current circuit state. 00: Off 01: On | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*070321152847UH0000^

Response to the circuit-off signal.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|--------------------------|
| Response | No response is required. |
|----------|--------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|---|
| Description | This message is applicable to all terminals |
|-------------|---|

3.2.26 Response to Fuel Failure Control

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|----------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UH01 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | 2 | |
| Message Contents | YY: Serial number of message, which is of a fixed length of 2 bytes and | | | |

| Message Field | Field Value | Type | Length (in bytes) | Description |
|----------------|--|------------|-------------------|-------------|
| | indicative of the current fuel route state. 00: Off 01: On | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

Example:

*070321152847UH0100^

Response to the fuel route off signal.

In this example, red indicates **Start Identifier** and **End Identifier**, bold green indicates **Command Word**, non-bold green indicates **message SN**, cyan indicates **Check Word**, dark yellow indicates **Terminal ID**, blue indicates **packet length**, and black indicates packet contents.

| | |
|----------|--------------------------|
| Response | No response is required. |
|----------|--------------------------|

| | |
|--------------|-----------|
| Sending Mode | SMS, GPRS |
|--------------|-----------|

| | |
|-------------|---|
| Description | This message is applicable to all terminals |
|-------------|---|

3.2.27 3.2.27 Response to One-Key Talk Configuration

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|---|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UH02 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UH02XY...Y UH02: Fixed keyword X: 0 means to disable the One-Key Talk function, and 1 means to enable the One-Key Talk function. Y...Y: Phone number of the monitoring center. | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|---|
| Example: | |
| *040331141830 UH0210296789281^ | |
| This message means: The message is sent at 14:18:30 on 2004-3-31, the message type is response to the One-Key Talk function setting information, currently the One-Key Talk is enabled, and the phone number is 0296789281. | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates Terminal ID , blue indicates packet length , and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals |

3.2.28 Response to Universal Downlink Message Resolution Results

| Message Field | Field Value | Type | Length (in bytes) | Description |
|------------------|--|------------|-------------------|-------------|
| Start Identifier | * | CHAR | 1 | |
| SN/Time | | C_STRING | 12 | |
| Command Word | UX00 | C_STRING | 4 | |
| Terminal ID | Terminal ID | C_STRING | 15 | |
| Message Body | | C_STRING | Variable length | |
| Message Contents | UX00 + downlink message command word + operation result + error code + additional field (maybe empty) The operation result byte is defined below: 0: Failure 1: Success Other characters make no sense. The error code is defined below: 00: Unknown message that cannot be resolved. 01: Check error | | | |
| Check Word | | HEX_STRING | 2 | |
| End Identifier | ^ | CHAR | 1 | |

| | |
|---|--|
| Example: | |
| | |
| In this example, red indicates Start Identifier and End Identifier , bold green indicates Command Word , non-bold green indicates message SN , cyan indicates Check Word , dark yellow indicates | |

| | |
|---|---|
| Terminal ID, blue indicates packet length, and black indicates packet contents. | |
| Response | No response is required. |
| Sending Mode | SMS, GPRS |
| Description | This message is applicable to all terminals |

4 Appendix

Definition of GPS Location Information Format

| Message Field | Field Value | Type | Length (in bytes) | Description |
|--------------------------|-------------|----------|-------------------|---|
| Time | YYMMDD | N_STRING | 6 | Year, month and day occupy 2 bytes respectively. |
| GPS positioning is valid | | CHAR | 1 | “A” or “V”. “A” means the GPS data is valid, and “V” means the GPS data is invalid. |
| Latitude | | N_STRING | 9 | The unit of the former 2 bytes is degree, and the value ranges from 0 to 90; the unit of the latter 7 bytes is minute. |
| Latitude flag | “N” or “S”. | CHAR | 1 | “N” means north latitude, and “S” means south latitude |
| Longitude | | N_STRING | 10 | The unit of the former 3 bytes is degree, and the value ranges from 0 to 180; the unit of the latter 7 bytes is minute. |
| Longitude flag | “E” or “W” | CHAR | 1 | “E” means east longitude, and “W” means west longitude |
| Speed | | N_STRING | 5 | |
| Time | HHmmSS | N_STRING | 6 | Hour, minute and second occupy 2 bytes respectively. |
| Direction | | N_STRING | 6 | |
| IO state | | C_STRING | 8 | 8-digit IO |
| Mileage flag | | CHAR | 1 | “L” indicates provision of mileage |
| Mileage data | | | 6 | Mileage data, measured in meters |