MT80-BLE Instruction list

1. Instruction list purpose

1、 Set clear the device parameters.

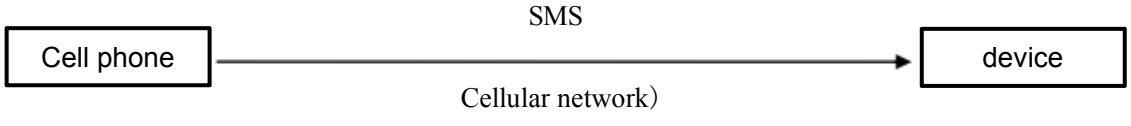
2、 Obtain device setting parameters, positioning data, and other data.

3、 Control the hardware output of the device.

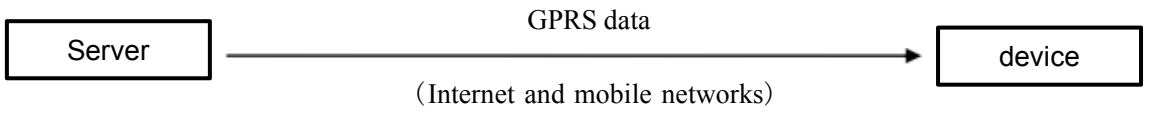
4、 The device sends a request to the server.

2. How to use instructions

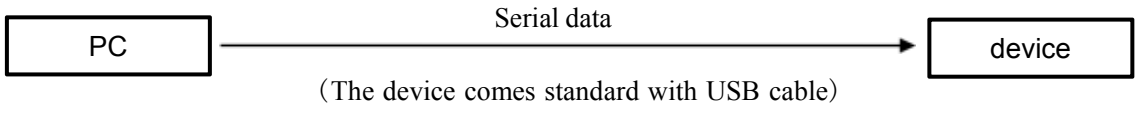
1、 The user sends a text message to the device via the mobile phone.



2、 The user sends GPRS data to the device through the server.



3、 The user sends data to the device through the serial port.



3. Command format

Instruction format refers to the instruction data format sent to the device by mobile phone, server or PC via SMS, GPRS or serial port.

1、 Format 1 (single instruction format)：

<Instruction start flag><Instruction key>;<Instruction>;<Instruction end flag>

Example of SMS command in single command format ： $SMS,000000;R001;!
Single command format GPRS command example ： $GPRS,860719020009480;R001;!
Example of single command format serial port command：$USB,000000;R001;!

2、 Format 2 (multi-instruction format)：

<Instruction start flag><Instruction key>;<Instruction>;<Instruction>;……<Instruction end flag>

Multi-command format SMS command example：$SMS,000000; R001;R002;R003;!
Multi-command format GPRS command example：$GPRS,860719020009480; R001;R002;R003;!
Multi-instruction format serial command example ： $USB,000000; R001;R002;R003;!

Project	Description		
<Command start flag>	Fixed as the character $		
<Command key>	Command key head	SMS	Fixed string SMS

		GPRS data	Fixed string GPRS
		Serial data	Fixed string USB
	Command key content	SMS	Device password
		GPRS data	Device IMEI
		Serial data	Device password
	Example： 1. SMS command key SMS,0000000 2. GPRS data command key GPRS,860719020009480 3. Serial data command key USB,000000		
;	Semicolon, separator.		
<command>	See the contents of the command list (set (W), read (R), clear (C)).		
.....	The ellipsis indicates that more <commands> can be added.		
< End of instruction flag >	Fixed as a character !		
Precautions	1. Commands are not case sensitive； 2. Only the password or IMEI is correct, the command can be recognized by the device； 3. Using multi-command format can effectively reduce the number of commands sent； 4. The maximum length of the instruction is 2000 bytes；		

4. Command feedback data format

The command feedback data format refers to the feedback data format sent to the mobile phone, server or PC via SMS, GPRS or serial port after the device receives the command.

The command feedback data format of SMS and serial port is the same, the format is as follows：

<Instruction start flag><IMEI>;<Instruction feedback>;<Instruction feedback>;……<Instruction end flag>

Example 1：$860719020009480;R001,OK,000000;!
Example 2：$860719020009480;R001,OK,000000;R002,OK,cmnet,user,password;R003,OK,192.168.1.1,7000;!

The command feedback data format of GPRS adds a data length before the data, and the other parts are the same as the command feedback data of SMS and serial port. The format is as follows：

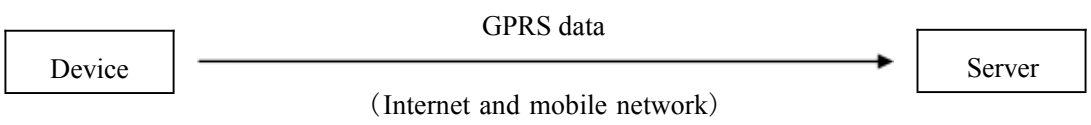
<data length><instruction start flag><IMEI>;<instruction feedback>;<instruction feedback>;……<instruction end flag>

example1：0033$860719020009480;R001,OK,000000;!
example2：0086$860719020009480;R001,OK,000000;R002,OK,cmnet,user,password;R003,OK,192.168.1.1,7000;!

Project	Description
< Data length >	The length of the data (not including itself), fixed as a four-digit number, range: 0001 to 9999, unit: byte.
< Instruction start flag >	Fixed as a character $
<IMEI>	Device IMEI.
;	Semicolon, separator.
< Instruction feedback >	Please refer to the instruction list (instruction response).
.....	The ellipsis indicates that more <command feedback> can be added ;
< End of instruction flag >	Fixed as a character !
Precautions	1. The maximum length of the feedback command is 255 bytes.

5. Equipment query command

The device query instruction refers to the request instruction sent by the device to the server via GPRS, which can be used to request the basic information of the server or the parameter information set by the client on the server, and it can also be used to request the server to operate the device.



The format of the device query command is as follows:

<Instruction start flag><IMEI>;<Inquiry instruction>;<Inquiry instruction>;……<Instruction end flag>

Example：$860719020009480;Q030;!

Project	Description
<Instruction start flag >	Fixed as a character $
<IMEI>	Device IMEI.
;	Semicolon, separator.
< Query instruction >	See the content of the instruction list (query (Q)).
……	The ellipsis indicates that more <query commands> can be added;
<Instruction end flag >	Fixed as a character !
Precautions	1. The maximum length of the device query command is 255 bytes . 2. After the device successfully sends the query command, the server will use the setting command to send the information to the device or operate the device.

6. Instruction list content

6.1. Instruction list

serial number (Corresponding to the detailed instruction list)	Keyword	Set (W), read (R), clear (C), query (Q) options	Instruction number	Instruction (Black characters indicate fixed characters, red characters indicate non-fixed characters, <*> indicates parameter value, semicolon is the end of the instruction)	definition
1	password	W	001	W001,<1>;	Set device password.
		R		R001;	Reading device password.
		C		C001;	Clear device password.
2	APN	W	002	W002,<1>,<2>,<3>;	Set APN, APN username, APN password.
		R		R002;	Read APN, APN username, APN password.
		C		C002;	Clear APN, APN username, APN password.
3	server address	W	003	W003,<1>,<2>;	Set server IP or domain name, server port.
		R		R003;	Read server IP or domain name, server port.
		C		C003;	Clear server IP or domain name, server port.
4	Device ID	W	004	W004,<1>;	Set the device ID.
		R		R004;	Read the device ID.
		C		C004;	Clear the device ID.
5	GPRS interval	W	005	W005,<1>;	Set GPRS timing upload interval.
		R		R005;	Read GPRS timing upload interval.
		C		C005;	Clear the GPRS timing upload interval.
9	GPRS mode	W	009	W009,<1>;	Set GPRS upload mode.
		R		R009;	Read GPRS upload mode.
		C		C009;	Clear GPRS upload mode.
10	Authorization number	W	010	W010,<1>,<2>,<3>;	Set an authorized number and the functions supported by the corresponding authorized number.
		R		R010,<1>;	Read an authorized number and the functions supported by the corresponding authorized number.
				R010;	Read all authorized numbers and the functions supported by the corresponding authorized numbers.
		C		C010,<1>;	Clear an authorized number and the functions supported by the corresponding authorized number.
				C010;	Clear all authorized numbers and functions supported by the corresponding authorized numbers.
16	Device mode	W	016	W016,<1>;	Set the device mode.
		R		R016;	Read the device mode.
		C		C016;	Clear the device mode.
18	electric	W	018	W018,<1>,<2>,<3>,<4>,<5>;	Set up an electronic fence (geofence).

	fence	R		R018,<1>;	Reading an electronic fence (Geofence).
		C		C018,<1>;	Clear an electronic fence (geofence).
				C018;	Clear all electronic fence (geofence).
20	Time zone	W	020	W020,<1>;	Set time zone（time zone）.
		R		R020;	Read time zone（time zone）.
		C		C020;	Clear time zone（time zone）.
		Q		Q020,<1>;	The device requests the time zone from the server.
28	Data log	W	028		no
		R		R028;	Read the number of GPRS stored data.
		C		C028;	Clear all GPRS storage data.
29	Basic equipment information	W	029		no
		R		R029;	Read the basic information of the device.
		C			no
30	AGPS latitude and longitude	W	030	W030,<1>,<2>;	Set AGPS latitude and longitude.
		R		R030;	Read AGPS latitude and longitude.
		C		C030;	Clear AGPS latitude and longitude.
		Q		Q030,<1>,<2>,<3>,<4>;	The device requests the AGPS latitude and longitude from the server.
31	Function switch	W	031	W031,<1>,<2>,<3>,<4>,<5>,<6>;	Set the function switch.
		R		R031;	Read function switch.
		C		C031;	Clear function switch.
33	Sleep quality detection time (Reserved)	W	033	W033,<1>,<2>;	Set the sleep quality detection time.
		R		R033;	Read the sleep quality detection time.
		C		C033;	Clear the sleep quality detection time.
34	Acceleration sensor status	W	034		No
		R		R034;	Read the accelerometer status.
		C			NO
35	monitor	W	035	W035,<1>;	Turn on monitoring settings
		R		R035;	Read the monitoring status.
		C		C035;	Clear monitoring settings
37	Photoelectric heart rate detection interval	W	037	W037,<1>;	Set the photoelectric heart rate detection interval.
		R		R037;	Read the photoelectric heart rate detection interval.
		C		C037;	Clear the photoelectric heart rate detection interval.
38	temperature check	W	038	W038,<1>;	Set the temperature detection interval time.
		R		R038;	Reading temperature detection interval time.
		C		C038;	Clear the temperature detection interval time.
39	Blood oxygen test (Reserved)	W	039	W039,<1>;	Set the interval of blood oxygen detection
		R		R039	Read the blood oxygen test interval
		C		C039	Clear blood oxygen test interval
40	Backlight setting	W	040	W040,<1>;	Set the screen backlight brightness..
		R		R040;	Read the screen backlight brightness value..
44	Soak Alert	W	044	W044,<1>,<2>;	Set the on/off of the water soaking alarm (1=on, 0=off), and interval time
		R		R044;	Read the status and interval time of soaking water alarm switch
50	Device acquisition parameters	W	050		No
		R			No
		C		C050;	The server sends the parameters to complete.
		Q		Q050;	The device obtains parameters from the server.
51	system time	W	051	W051,<1>;	Set System time
		Q		Q051;	The device requests the system time from the server.
52	Real-time location query	W	052	W052;	Start real-time location query.
		R			No
		C			No
98	Remote Upgrade (Reserved) Only Bluetooth APP upgrade is supported	W	098	W098,<1>;	Start remote upgrade (default data check method: CRC-CCITT).
		R		R098;	Read the remote upgrade status of the device.
		C		C098;	Stop remote upgrade.
99	Factory settings	W	099		No
		R			No
		C		C099;	Clear all parameters (restore factory settings).

100	Remote restart	W	100	W100;	Restart the device remotely.

6.2. Instruction list

6.2.1 Password

Numbering	Instruction description			Functions and precautions
1	Instruction	W001,<1>;		Function: Set device password. When using SMS or serial port to set the parameters of the device, the device password is required. Note:
	Parameter	<1>	Device password, range: 6 characters, default: 000000.	
	Example	W001,000000;		
	Reply	Success	W001,OK;	
		Failure	W001,FAIL;	
	Instruction	R001;		Function: read the device password. Note:
	Parameter	No		
	Example	R001;		
	Reply	Success	R001,OK,000000;	
		Failure	R001,FAIL;	
	Instruction	C001;		Function: Clear device password. Note: After clearing the password, it will be restored to the default password: 000000.
	Parameter	No		
	Example	C001;		
	Reply	Success	C001,OK;	
		Failure	C001,FAIL;	

6.2.2 APN

Numbering	Instruction description			Functions and precautions
2	Instruction	W002,<1>,<2>,<3>;		Function: Set APN, APN username, APN password. When using GPRS to connect to the server, these parameters need to be set. Note: The parameter can be empty, as shown in Example 2.
	Parameter	<1>	APN (Access Point), range: 0~29 characters.	
		<2>	APN username, range: 0~29 characters.	
		<3>	APN password, range: 0~29 characters.	
	Example 1	W002,cmnet,username,password;		
	Reply 1	Success	W002,OK;	
		Failure	W002,FAIL;	
	Example 2	W002,cmnet,,; (Note: In this example, the APN username and APN password are empty.)		
	Instruction	R002;		Function: Read APN, APN user name, APN password. Note:
	Parameter	No		
	Example	R002;		
	Reply	Success	R002,OK,cmnet,username,password;	
		Failure	R002,FAIL;	
	Instruction	C002;		Function: Clear APN, APN username, APN password. Note:
	Parameter	No		
	Example	C002;		
	Reply	Success	C002,OK;	
		Failure	C002,FAIL;	

6.2.3 Server address

Numbering	Instruction description			Functions and precautions
3	Instruction	W003,<1>,<2>;		Function: Set APN, APN username, APN password. When using GPRS to connect to the server, these parameters need to be set. Note: The parameter can be empty, as shown in Example 2.
	Parameter	<1>	Server IP or domain name, range: 0~29 characters.	
		<2>	Server port, range: 0~65535.	
	Example 1	W003,218.133.34.184,7000;		
	Reply 1	Success	W003,OK;	
		Failure	W003,FAIL;	
	Example 2	W003, twinmask.oicp.net,7000; (Note: In this example, the domain name and port are used as server parameters)		
	Instruction	R003;		Function: read server IP or domain name, server port. Note:
	Parameter	No		
	Example	R003;		
	Reply	Success	R003,OK,218.133.34.184,7000;	

		Failure	R003,FAIL;	
	Instruction	C003;		Function: Clear server IP or domain name, server port. Note:
	Parameter	No		
	Example	C003;		
	Reply	Success	C003,OK;	
		Failure	C003,FAIL;	

6.2.4 Device ID

Numbering	Instruction description			Functions and precautions
4	Instruction	W004,<1>;		Function: Set the device ID. The device ID is the identification of the device, and the server distinguishes different devices according to the device ID in the uploaded data. Note: Generally, the IMEI number of the GSM module is used as the device ID.
	Parameter	<1>	Device ID, range: 0-15 characters	
	Example	W004,MyDeviceID;		
	Reply	Success	W004,OK;	
		Failure	W004,FAIL;	
	Instruction	R004;		Function: Read the device ID. Note:
	Parameter	No		
	Example	R004;		
	Reply	Success	R004,OK, MyDeviceID;	
		Failure	R004,FAIL;	
	Instruction	C004;		Function: Clear the device ID. Note:
	Parameter	No		
	Example	C004;		
	Reply	Success	C004,OK;	
		Failure	C004,FAIL;	

6.2.5 GPRS interval

Numbering	Instruction description			Functions and precautions
5	Instruction	W005,<1>;		Function: Set GPRS timing upload interval. When using GPRS to connect to the server, this parameter needs to be set. Note: When set to 0, the GPRS scheduled upload will be cancelled, but the device will still connect to the server, but the scheduled data will not be sent.
	Parameter	<1>	GPRS regular upload interval, range: 0~65535, default: 0, unit: 30 seconds. (For example: set to 2, that is, the regular upload interval is 60 seconds.)	
	Example	W005,2;		
	Reply	Success	W005,OK;	
		Failure	W005,FAIL;	
	Instruction	R005;		Function: Read GPRS timing upload interval. Note:
	Parameter	No		
	Example	R005;		
	Reply	Success	R005,OK;	
		Failure	R005,FAIL;	
	Instruction	C005;		Function: Clear GPRS timing upload interval.. Note: After clearing, the timed upload interval is 0.
	Parameter	No		
	Example	C005;		
	Reply	Success	C005,OK;	
		Failure	C005,FAIL;	

6.2.6 GPRS mode

Numbering	Instruction description			Functions and precautions
9	Instruction	W009,<1>;		Function: Set GPRS upload mode. When using GPRS to connect to the server, this parameter needs to be set. Note: When set to 0, the GPRS function will be cancelled, otherwise the device will connect to the server.
	Parameter	<1>	GPRS upload mode, range: 0~2 (0 means disable GPRS function, 1 means TCP connection, 2 means UDP connection), default: 0.	
	Example	W009,1;		
	Reply	Success	W009,OK;	
		Failure	W009,FAIL;	
	Instruction	R009;		Function: Read GPRS upload mode. Note:
	Parameter	No		
	Example	R009;		
	Reply	Success	R009,OK;	
		Failure	R009,FAIL;	

	Instruction	C009;		Function: Clear GPRS upload mode. Note: After clearing, the GPRS upload mode is 0.
	Parameter	No		
	Example	C009;		
	Reply	Success	C009,OK;	
		Failure	C009,FAIL;	

6.2.7 Authorization number

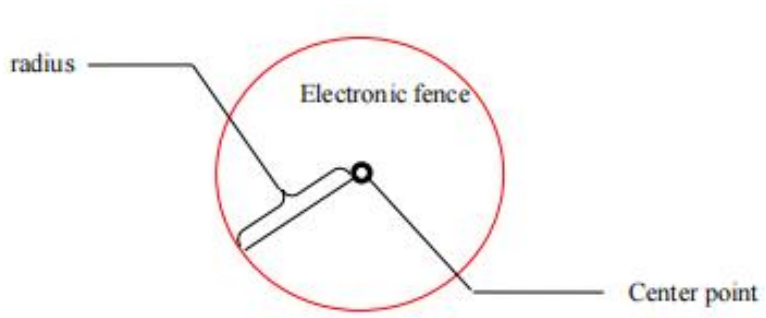
Numbering	Instruction description			Functions and precautions
10	Instruction	W010,<1>,<2>,<3>;		Function: Set an authorized number and the functions supported by the corresponding authorized number. Note:
	Parameter	<1>	Authorization number serial number, range: 1~3	
		<2>	Authorization number, range: 0~19 characters.	
		<3>	A	Electronic fence function, range: 0 or 1 (0 means off, 1 means on), default: 0.
			B	Keep.
			C	SOS outgoing call function, range: 0 or 1 (0 means off, 1 means on), default: 0.
	Example	W010,1,13874557455,100;		
	Reply	Success	W010,OK;	
		Failure	W010,FAIL;	
	Note	1. What is an authorization number? The authorized number is the mobile phone number set by the user and saved in the device. The authorized number can receive the device's location, alarm, and query text messages, but the non-authorized number cannot. 2. Regardless of authorized number and non-authorized number, as long as the password in the instruction is correct, you can use SMS to set the parameters of the device. 3. When using the monitoring function, make sure that the SIM card in the device has the caller ID function. And only authorized numbers can realize the monitoring and call functions.		
	Instruction	R010,<1>;		Function: read an authorized number and the functions supported by the corresponding authorized number. Note:
	Parameter	<1>	Authorization number serial number, range: 1~3.	
	Example	R010,1;		
	Reply	Success	R010,OK,13874557455,100;	
		Failure	R010,FAIL;	
	Instruction	R010;		Function: Read all authorized numbers and the functions supported by the corresponding authorized numbers. Note:
	Parameter	No		
	Example	R010;		
	Reply	Success	R010,OK,13874557455,100,13874557456,110,13874557457,111;	
		Failure	RR010,FAIL;	
	Instruction	C010,<1>;		
	Parameter	<1>	Authorization number serial number, range: 1~3.	Function: Clear an authorized number and the functions supported by the corresponding authorized number. Note:
	Example	C010,1;		
	Reply	Success	C010,OK;	
		Failure	C010,FAIL;	
	Instruction	C010;		Function: Clear all authorized numbers and functions supported by the corresponding authorized numbers. Note
	Parameter	No		
	Example	C010;		
	Reply	Success	C010,OK;	
		Failure	C010,FAIL;	

6.2.8 Device mode

Numbering	Instruction description			Functions and precautions
16	Instruction	W016,<1>;		Function: Set the device mode. Note:
	Parameter	<1>	Device mode, range: 0~2 (0 means personal mode, 1 means smart mode, 2 means car mode), default: 1.	
	Example	W016,1;		
	Reply	Success	W016,OK;	
		Failure	W016,FAIL;	
	Note	1. What is the device mode? There are three device modes: personal mode, smart mode, and car mode. In personal mode, the GPS will automatically turn off regardless of whether the device is in motion. In smart mode, the GPS will automatically turn off when the device is stationary. In car mode, the GPS will not turn off regardless of whether the device is in motion or not.		

		2. Comparison of standby time in different device modes. Standby time from long to short: personal mode, smart mode, car mode.		
	Instruction	R016;		Function: Read the device mode. Note:
	Parameter	No		
	Example	R016;		
	Reply	Success	R016,OK;	
		Failure	R016,FAIL;	
	Instruction	C016;		Function: Clear device mode. Note: After clearing, the device mode is 0; after restoring the factory settings, the device mode is 1;
	Parameter	No		
	Example	C016;		
	Reply	Success	C016,OK;	
		Failure	C016,FAIL;	

6.2.9 Electronic fence

Numbering				Functions and precautions
18	Instruction	W018,<1>,<2>,<3>,<4>,<5>;		Function: Set up an electronic fence. Note: The latitude is a positive number, which means north latitude (N), and the latitude is a negative number, which means south latitude (S); longitude is a positive number, which means east longitude (E), and longitude is a negative number, which means west longitude (W).
	Parameter	<1>	The serial number of the electronic fence, range: 1~5.	
		<2>	The name of the electronic fence, range: 0-9 characters.	
		<3>	Latitude of the center point of the electronic fence, range: -90.00000000~90.00000000, unit: degree.	
		<4>	Longitude of the center point of the electronic fence, range: -180.00000000~180.00000000, unit: degree.	
		<5>	Electronic fence semi-longitude, range: 0.0~1.79E+308, unit: meter.	
	Example 1	W018,1,Home,-22.12345678,114.12345678,500;		
	Reply 1	Success	W018,OK;	
		Failure	W018,FAIL;	
	Example 2	W018,2,School, , ,300; (Note: When setting the electronic fence, do not enter the latitude and longitude, that is, the latitude and longitude is empty, the device will automatically start the GPS to obtain the latest latitude and longitude as the longitude and latitude of the center point)		
	Reply 2	Set successfully	W018,OK,geo2:School start auto center;	
		Set failed	W018,FAIL;	
		Automatically obtain the latitude and longitude of the center point successfully	geo2:School set auto center ok	
		Failed to automatically obtain the center point latitude and longitude	geo2:School set auto center fail	
	Note	1. Electronic fence diagram.  		
	Instruction	R018,<1>;		Function: Reads an electronic fence. Note:
	Parameter	<1>	The serial number of the electronic fence, range: 1~5.	
	Example	R018,<1>;		
	Reply	Success	R018,OK, Home,-22.12345678,114.12345678,500.0;	
		Failure	R018,FAIL;	
	Instruction	C018,<1>;		Function: Clear an electronic fence. Note:
	Parameter	<1>	The serial number of the electronic fence, range: 1~5.	
	Example	C018,1;		
	Reply	Success	C018,OK;	
		Failure	C018,FAIL;	
	Instruction	C018;		Function: Clear all electronic fence. Note:
	Parameter	No		
	Example	C018;		
	Reply	Success	C018,OK;	
		Failure	C018,FAIL;	

6.2.10 Time zone

Numbering	Instruction description			Functions and precautions
20	Instruction	W020,<1>;		Function: Set time zone. Note: After the time zone is modified, the time and date in the SMS data will be updated to the local time and date, while the time and date in the GPRS data will still be Green Time and Date.
	Parameter	<1>	The time zone value. If it is a negative number, please add "-" in front of it. If it is a positive number, do not add it. For example, the Beijing time zone is+8, in hours (8:00 Beijing time).	
	Example	W020,8;		
	Reply	Success	W020,OK;	
		Failure	W020,FAIL;	
	Instruction	R020;		Function: Read time zone. Note:
	Parameter	No		
	Example	R020;		
	Reply	Success	R020,OK,8;	
		Failure	R020,FAIL;	
	Instruction	C020;		Function: Clear time zone. Note: After clearing, the time zone is 0.
	Parameter	No		
	Example	C020;		
	Reply	Success	C020,OK;	
		Failure	C020,FAIL;	
	Instruction	Q020,<1>;		Function: The device requests the time zone from the server. Note:
	Parameter	<1>	Country code, range: 000~999, default: 460.	
	Example	Q020,460;		
	Reply	Success	After the device successfully sends the query command to the server, the server should use the W020 command to set the time zone of the machine according to the country code.	
		Failure	No feedback from the server.	

6.2.11 Data log

Numbering	Instruction description			Functions and precautions
28	Instruction	R028;		Function: read the number of GPRS stored data Note:
	Parameter	No		
	Example	R028;		
	Reply	Success	R028,OK,128;	
		Failure	R028,FAIL;	
	Instruction	C028;		Function: Clear all GPRS stored data. note:
	Parameter	No		
	Example	C028;		
	Reply	Success	C028,OK;	
		Failure	C028,FAIL;	

6.2.12 Basic equipment information

Numbering	Instruction description			Functions and precautions
29	Instruction	R029;		Function: Read the basic information of the device. Basic equipment information includes: 1.MT70_ALPHA_20131223-1_standard,firmware version number. 2. spiflash ok, external storage chip status. 3. gsensor ok, acceleration sensor status. 4. gps fix 062917.00 241213, the latest GPS positioning time (UTC time and date). note:
	Parameter	No		
	Example	R029;		
	Reply	Success	R029,OK,MT70_ALPHA_20131223-1_standard,spiflash ok,gsensor ok,gps fix 062917.00 241213;	
		Failure	R029,FAIL;	

6.2.13 AGPS latitude and longitude

Numbering	Instruction description			Functions and precautions
30	Instruction	W030,<1>,<2>;		Function: Set AGPS latitude and longitude. Note:
	Parameter	<1>	AGPS latitude, range: -90.00000000~90.00000000, unit: degree	
		<2>	AGPS longitude, range: -180.00000000~180.00000000, unit: Degree.	
	Example	W030,22.639788,114.043863;		
	Reply	Success	W030,OK;	
		Failure	W030,FAIL;	

	Instruction	R030;		Function: Read AGPS latitude and longitude. note:
	Parameter	No		
	Example	R030;		
	Reply	Success	R030,OK,22.639788,114.043863;	
		Failure	R030,FAIL;	
	Instruction	C030;		Function: Clear AGPS latitude and longitude. Note: After clearing, the latitude and longitude are all 0.
	Parameter	No		
	Example	C030;		
	Reply	Success	C030,OK;	
		Failure	C030,FAIL;	
	Instruction	Q030,<1>,<2>,<3>,<4>;		Function: The device requests AGPS latitude and longitude from the server. note:
	Parameter	<1>	Mobile country code（MCC）.	
		<2>	Mobile network number（MNC）.	
		<3>	Base station location area code（LAC）.	
		<4>	Base station cell identification code（Cell ID）	
	Example	Q030,460,07,262C,0F54;		
	Reply	Success	After the device successfully sends the query command to the server, the server should use the W030 command to set the AGPS latitude and longitude of the machine according to the base station information.	
		Failure	No feedback from the server.	

6.2.14 Function switch

Numbering	Instruction description			Functions and precautions
31	Instruction	W031,<1>,<2>,<3>,<4>,<5>,<6>;		Function: Set the function switch. Note: After the wrist strap function is turned off, the software can be turned off whether the wrist strap is connected or not.
	Parameter	<Reserved>	Range: 0 or 1 (0=off, 1=on), default: 0. (Reserved)	
		<2>	Pedometer function switch, range: 0 or 1 (0 means off, 1 means on), default: 1.	
		<3>	Fall down function switch, range: 0 or 1 (0 means off, 1 means on), default: 1.	
		<4>	Wristband function switch, range: 0 or 1 (0 means off, 1 means on), default: 1.	
		<Reserved>	Range: 0 or 1 (0=off, 1=on), default: 0. (Reserved)	
		<Reserved>	Range: 0 or 1 (0=off, 1=on), default: 0. (Reserved)	
	Example	W031,011100;		
	Reply	Success	W031,OK;	
		Failure	W031,FAIL;	
	Instruction	R031;		Function: read function switch. Note:
	Parameter	No		
	Example	R031;		
	Reply	Success	R031,OK,011100;	
		Failure	R031,FAIL;	
	Instruction	C031;		Function: Clear function switch. Note:
	Parameter	No		
	Example	C031;		
	Reply	Success	C031,OK;	
		Failure	C031,FAIL;	

6.2.15 Sleep quality test time (Reserved)

Numbering	Instruction description			Functions and precautions
33	Instruction	W033,<1>,<2>;		Function: Set the sleep quality detection time. Note: When the start time and end time are both 0, it means that the sleep quality detection function is turned off.
	Parameter	<1>	Start time, range: 0~23, default: 22.	
		<2>	End time, range: 0~23, default: 8.	
	Example	W033,12,20;		
	Reply	Success	W033,OK;	
		Failure	W033,FAIL;	
	Instruction	R033;		Function: Read the sleep quality detection time. note:
	Parameter	No		
	Example	R033;		
	Reply	Success	R033,OK,12,20;	
		Failure	R033,FAIL;	
	Instruction	C033;		Function: Clear the sleep quality detection time.
	Parameter	No		

	Example	C033;		Note: After clearing, the start time and end time are both 0, that is, the sleep quality detection function is turned off.
	Reply	Success	C033,OK;	
		Failure	C033,FAIL;	

6.2.16 Acceleration sensor status

Numbering	Instruction description			Functions and precautions
34	Instruction	R034;		Function: Read the state of the acceleration sensor. Note: After sending this command, there may be a 30-second delay in the feedback result.
	Parameter	No		
	Example	R034;		
	Reply	Success	R034,OK,gsensor ok; (Description: indicates that the acceleration sensor is normal.)	
			R034,OK,gsensor fail; (Note: the acceleration sensor indicates a problem.)	
		Failure	No feedback.	

6.2.17 Monitoring

Numbering	Instruction description			Functions and precautions
35	Instruction	W035,<1>;		Function: Set up monitoring. Note: Only authorized numbers can realize the monitoring function.
	Parameter	<1>	Monitor function switch, range: 0 or 1 (0 means off, 1 means on), default: 0.	
	Example	W035,1;		
	Reply	Success	W035,OK;	
		Failure	W035,FAIL;	
	Instruction	R035;		Function: Read monitoring status. note:
	Parameter	No		
	Example	R035;		
	Reply	Success	R035,OK,1;	
		Failure	R035,FAIL;	
	Instruction	C035;		Function: Clear monitor. Note: Clearing the monitoring setting is equivalent to turning off the monitoring.
	Parameter	No		
	Example	C035;		
	Reply	Success	C035,OK;	
		Failure	C035,FAIL;	

6.2.18 Photoelectric heart rate detection interval

Numbering	Instruction description			Functions and precautions
37	Instruction	W037,<1>;		Function: Set the interval of photoelectric heart rate detection. note:
	Parameter	<1>	Photoelectric heart rate detection interval, range: 0~65535 (0 means off), default value: 120, unit: 30 seconds. (For example: set to 120, that is, the photoelectric heart rate detection interval is 1 hour (3600 seconds).)	
	Example	W037,10;		
	Reply	Success	W037,OK;	
		Failure	W037,FAIL;	
	Instruction	R037;		Function: Read the photoelectric heart rate detection interval. note:
	Parameter	No		
	Example	R037;		
	Reply	Success	R037,OK,20;	
		Failure	R037,FAIL;	
	Instruction	C037;		Function: Clear the photoelectric heart rate detection interval. Note: After clearing, the photoelectric heart rate detection interval becomes 0.
	Parameter	No		
	Example	C037;		
	Reply	Success	C037,OK;	
		Failure	C037,FAIL;	

6.2.19 Body temperature detection

Numbering	Instruction description			Functions and precautions
38	Instruction	W038,<1>;		Function: Set the temperature detection interval time. note:
	Parameter	<1>	Temperature detection interval, range: 0~65535 (0 means off), default value: 60, unit: 30 seconds. (For example: set to 60, that is, the temperature detection interval is 30 minutes (1800 seconds).)	

	Example	W038,10;		
	Reply	Success	W038,OK;	
		Failure	W038,FAIL;	
	Instruction	R038;		Function: Read the temperature detection interval time. note:
	Parameter	No		
	Example	R038;		
	Reply	Success	R038,OK;	
		Failure	R038,FAIL;	
	Instruction	C038;		Function: Clear the temperature detection interval time. Note: After clearing, the temperature detection interval is 0
	Parameter	No		
	Example	C038;		
	Reply	Success	C038,OK;	
		Failure	C038,FAIL;	

6.2.20 Blood oxygen test (Reserved)

Numbering	Instruction description			Functions and precautions
39	Instruction	W039,<1>;		Function: Set the interval of blood oxygen detection. Note: The automatic blood oxygen detection function is turned off by default
	Parameter	<1>	Blood oxygen detection interval, range: 0~65535 (0 means off), default: 0 (0: off, 1: on), unit: 30	
	Example	W039,10;		
	Reply	Success	W039,OK;	
		Failure	W039,FAIL;	
	Instruction	R039;		Function: Read the interval time of blood oxygen detection. note:
	Parameter	No		
	Example	R039;		
	Reply	Success	R039,OK;	
		Failure	R039,FAIL;	
	Instruction	C039;		Function: Clear the interval of blood oxygen detection. Note: After clearing, the blood oxygen detection interval is 0
	Parameter	No		
	Example	C039;		
	Reply	Success	C039,OK;	
		Failure	C039,FAIL;	

6.2.21 Backlight Setting

Numbering	Instruction description			Functions and precautions
40	Instruction	W040,<1>;		Function: Set the screen backlight brightness. Note:
	Parameter	<1>	Screen backlight value, range: 0~100	
	Example	W040,100;		
	Reply	Success	W040,OK;	
		Failure	W040,FAIL;	
	Instruction	R040;		Function: Read the screen backlight brightness value. Note:
	Parameter	No		
	Example	R040;		
	Reply	Success	R040,OK,100;	
		Failure	R040,FAIL;	

6.2.22 Soak Alert

Numbering	Instruction description			Functions and precautions
44	Instruction	W044,<1>,<2>;		Function: Set the switch of the soaking water alarm function, the detection interval time Note: The detection time setting must be greater than 0
	Parameter	<1>	Water soak alarm on/off (1=on, 0=off)	
		<2>	The detection time of bubble alarm is 20 minutes by default, with 100 milliseconds as the unit, 1min=600ms, and the range is 1-65535. (For example: set to 12000, that is, 20min * 600ms =12000)	
	Example	W044,1,12000;		
	Reply	Success	W044,OK;	
		Failure	W044,FAIL;	
	Instruction	R044;		Function: View the status and detection time interval of the equipment soaking in water alarm function Note:
	Parameter	No		
	Example	R044;		
	Reply	Success	R044,OK,1,12000;	

		Failure	R044,FAIL;	

6.2.23 Device get parameters

Numbering	Instruction description			Functions and precautions
50	Instruction	C050;		Function: After the server sends an instruction to set the parameters successfully, you can issue this instruction to make the device actively disconnect from the server, and then reconnect to the server according to the parameters. Note: If the reconnected server is different, the feedback data will be sent to the last connected server.
	Parameter	No		
	Example	C050;		
	Reply	Success	C050,OK;	
		Failure	C050,FAIL;	
	Instruction	Q050;		Function: The device sends this instruction to request the server to set the parameters of the device. note:
	Parameter	No		
	Example	Q050;		
	Reply	Success	After the device successfully sends the query command to the server, the server should immediately set the parameters of the device.	
		Failure	No feedback from the server.	

6.2.24 System time

Numbering	Instruction description			Functions and precautions
51	Instruction	W051,<1>;		Function: Set the system time. Note: Please use Greenwich Mean (GMT) time to set.
	Parameter	<1>	System time, format: YYYY-MM-DD HH:MM:SS (Year Year Year-Month Month-Day Day Hour: Minute: Second Second). (Note: the date and time are separated by spaces.)	
	Example	W051,2014-09-19 07:39:19;		
	Reply	Success	W051,OK;	
		Failure	W051,FAIL;	
	Instruction	Q051;		Function: The device requests the system time from the server. note:
	Parameter	No		
	Example	Q051;		
	Reply	Success	After the device successfully sends the command to the server, the server should immediately set the system time of the device.	
		Failure	No feedback from the server.	

6.2.23 Real-time location query

Numbering	Instruction description			Functions and precautions
52	Instruction	W052;		Function: Start real-time location query. note:
	Parameter	No		
	Example	W052;		
	Reply	Success	After receiving the real-time location query instruction, the device will first locate it, and then reply the real-time location information to the mobile phone or platform after the positioning is successful or timeout. (Note: When the instruction is issued by the mobile phone, the real-time location information will be replied to the mobile phone and the server; when the instruction is issued by the server, the real-time location information will only be replied to the server.)	
		Failure	No feedback.	

6.2.24 Remote upgrade (Reserved) Only Bluetooth APP upgrade is supported

Numbering	Instruction description			Functions and precautions
98	Instruction	W098,<1>;		Function: Start remote upgrade (default data check method: CRC-CCITT). note:
	Parameter	<1>	Upgrade firmware name, range: 0~49 characters.	
	Example	W098,tracker.bin;		
	Reply	Success	W098,OK,upgrade start; (Description: Indicates the start of remote upgrade.)	
			W098,OK,upgrade fail; (Description: indicates that an error occurred during the remote upgrade process.)	
			W098,OK,upgrade finish; (Description: indicates that the remote upgrade is successful.)	
		Failure	W098,FAIL; (Explanation: indicates that the command format is wrong.)	
	Instruction	R098;		Function: Read the remote upgrade status of the device. note:
	Parameter	No		
	Example	R098;		

	Reply	Success	R098, OK, upgrade firmware name, received package number, total package number, verification method; (Note: The check method is 0 means no check, 1 means CRC-CCITT check.)	
		Failure	R098,FAIL;	
	Instruction	C098;		Function: Stop remote upgrade. note:
	Parameter	No		
	Example	C098;		
	Reply	Success	C098,OK;	
		Failure	C098,FAIL;	

6.2.25 Factory settings

Numbering	Instruction description			Functions and precautions
99	Instruction	C099;		Function: Clear all parameters (restore factory settings). note:
	Parameter	No		
	Example	C099;		
	Reply	Success	C099,OK;	
		Failure	C099,FAIL;	

6.2.26 Remote restart

Numbering	Instruction description			Functions and precautions
100	Instruction	W100;		Function: Restart the device remotely. Note: The device will not restart until 15 seconds after receiving the remote restart command.
	Parameter	No		
	Example	W100;		
	Reply	Success	W100,OK;	
		Failure	W100,FAIL;	