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Project:	MVT340/MVT380/MVT100/ MVT600/T1/MT88/MT80i/MT90	Creation Date:	2010-09-16
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MEITRACK® GPRS PROTOCOL

Document

For MT88/MT80i/MT90

MVT340/MVT380/MVT100/MVT600/T1

V1.24

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I. Command Format

1. GPRS Format

From server to tracker:

@@<package flag><L>,<IMEI>,<command>,<data><*checksum>\r\n

From tracker to server:

\$\$<package flag><L>,<IMEI>,<command>,<data><*checksum>\r\n

Data in each GPRS message from the tracker includes:

Code,<->yy.dddddd,<->xxx.dddddd,yyymmddHHMMSS,Z,N,G,Speed,Heading,HDOP,Altitude,
Journey,Runtime,Base ID,State,AD,RFID/Picture/Fence

Note:

‘,’ is list separator in ASCII (0x2C);

Do not input ‘<’ and ‘>’ when writing a command;

All multi-byte data complies with the following sequence: High byte prior to low byte;

The size of a GPRS package (including data) is about 160 bytes.

2. Annex 1: Description of GPRS data

Parameter	Description	Example
@@	2 bytes. Header of the package from server to tracker. It is in ASCII(0x40)	@@
\$\$	2 bytes. Header of the package from tracker to server, It is in ASCII(0x24)	\$\$
package flag	1 byte. In ASCII from 0x41 to 0x7A	Q
L	Length from its following separator ‘,’ to the ending character ‘\r\n’. It is decimal digit. \$\$<package flag><L>,<IMEI>,<command>,<data><*checksum>\r\n	25
IMEI	Tracker’s IMEI is normally 15 digitals.	353358017784062
command	Command code in Hex string. Please refer to the Command List and Command Details below.	AAA
Code	Event code. Decimal digit Refer to Annex 2 for more details	1
<->yy.dddddd	Latitude: in unit of degree. Decimal digit ‘-’ means south, no minutes means north yy = degrees;	22.756325 -23.256438

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	dddddd = decimal part of degree	
<->xxx.ddddd	Longitude: in unit of degree. Decimal digit '-' means west, no minutes means east xxx = degrees; dddddd = decimal part of degree	114.752146 -114.821453
yymmddHHMMSS	yy = year mm = month dd = date HH = hour MM = minute SS = second Decimal digit	091221102631
Z	GPS status indicator: A = valid, V = invalid	A = Valid
N	Numbers of satellites available. Decimal digit	5
G	GSM signal. Decimal digit (0~31)	12
Speed	KM/h. Decimal digit	58
Heading	Heading, in unit of degree. Decimal digit (0~359)	275
HDOP	Horizontal Dilution of Precision, 0.5-99.9. Decimal digit. HDOP Values below 4 are great and value above 8 are bad HDOP is blank when no GPS fix.	5
Altitude	MSL Altitude, in unit of meter. Decimal digit	118
Mileage	In unit of meter. Decimal digit. The total accumulated mileage and maximum of 4294967295 meters.	564870
Runtime	In unit of second. Decimal digit The total accumulated runtime and maximum 4294967295 seconds.	2546321
Base ID	ID of the base station including MCC MNC LAC CI Note: for SMS report, the Base ID is empty. MCC and MNC are decimal digits; LAC and CI are hexadecimal digits.	460 0 E166 A08B
State	Status of 8 inputs and 8 outputs. Hexadecimal digits Bit0...Bit7 is output state, Bit0 is Output1 state Bit8...Bit15 is input state, Bit8 is Input1 state	0421(HEX String) = <u>0000 0100 0010 0001</u>
AD	Separated by ' '. Hexadecimal digits AD1 AD2 AD3 Battery AD External Power AD Note: for SMS report, AD is empty. Battery AD formula:	123 456 235 1234 324 654 1456 222(HEX String)

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	MT80i/MT88: AD4/4096*3*2 MVT100/MVT340/MVT380: AD4/1024*3*2 MT90/MVT600/T1: AD4/4096*3.3*2 External Power AD formula: MVT100/MVT340/MVT380: AD5/1024*3*16 MVT600/T1: AD5/4096*3.3*16	
RFID	IC Card identity code. Hexadecimal digits Only shown in GPRS Event Code 37	42770680(HEX String)
Picture	Picture name Only shown in GPRS Event Code 39	0918101221_C2E03
Fence	Fence Number Only shown in Event Code 20 and 21	2
*	1 byte. A separator between data and checksum. It is in ASCII(Hexadecimal digits 0x2A)	*
checksum	2 bytes. Indicating the sum of all data (exclude checksum itself and the ending character). It is in HEX String. <u>\$\$<package</u> <u>flag><L><IMEI><command><data><*checksum>\r\n</u>	BE
<u>\r\n</u>	2 bytes. Ending character in ASCII (0x0d,0x0a)	\r\n

3. Annex 2: Description of Event Code and SMS Header

Event Code	Event	Default SMS Header (max 16 bytes)	Default GPRS Flag	Default SMS Flag	Default Picture Flag
1	Input 1 Active (SOS pressed)	SOS	Y	Y (Only for the first authorized phone number)	Y
2	Input 2 Active	In2	Y	N	N
3	Input 3 Active	In3	Y	N	N
4	Input 4 Active	In4	Y	N	N
5	Input 5 Active	In5	Y	N	N
9	Input 1 Inactive(SOS released)		N	N	N
10	Input 2 Inactive		N	N	N
11	Input 3 Inactive		N	N	N
12	Input 4 Inactive		N	N	N
13	Input 5 Inactive		N	N	N
17	Low Battery	Low Battery	N	N	N/A
18	Low External Power	Low Power	N	N	N/A
19	Speeding	Speeding	Y	Y	N

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20	Enter Geo-fence	Enter GEO	Y	Y	N
21	Exit Geo-fence	Exit GEO	Y	Y	N
22	External Power On	Power On	N	N	N
23	External Power Off	Power Off	N	N	N/A
24	No GPS Signal	No Fix	N	N	N/A
25	Get GPS Signal	Fix	N	N	N/A
26	Enter Sleep	Enter Sleep	N	N	N/A
27	Exit Sleep	Exit Sleep	N	N	N/A
28	GPS Antenna Cut	Antenna Cut	N	N	N
29	Device Reboot	Reboot	N	N	N/A
30	Impact	Impact	Y	N	N
31	Heartbeat Report	(only for GPRS)	Y	N/A	N/A
32	Heading Change Report	Heading Change	Y	N	N/A
33	Distance Interval Report	Distance	Y	N	N/A
34	Current Location Report	Now	A/A	A/A	N/A
35	Time Interval Report	Interval	A/A	A/A	N/A
36	Tow Alarm	Tow	Y	N	N
37	RFID	(only for GPRS)	Y	N/A	N
39	Picture	(only for GPRS)	A/A	N/A	N/A
65	Press Input 1 (SOS) to Call	/	N/A	N	N/A
66	Press Input 2 to Call	/	N/A	N	N/A
67	Press Input 3 to Call	/	N/A	N	N/A
68	Press Input 4 to Call	/	N/A	N	N/A
69	Press Input 5 to Call	/	N/A	N	N/A
70	Reject Incoming Call	/	N/A	Y	N/A
71	Report Location after Incoming Call	/	N/A	Y	N/A
72	Auto Answer Incoming Call	/	N/A	N	N/A
73	Listen-in (voice monitoring)	/	N/A	N	N/A

Note:

1. Above figures are the Factory Default settings.
2. **Y** = yes; **N** = no; **N/A** = not applicable or unavailable; **A/A** = always available in all status and cannot be changed.
3. You can use commands to define SMS header, add or delete flag for each function.

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II. Command List

Command	Definition	SMS/GPRS	Applicable Model
A10	Track on Demand	GPRS	All
A11	Set Heartbeat Interval	GPRS	All
A12	Track by Time Interval	SMS/GPRS	All
A13	Heading Change Report	GPRS	All
A14	Track by Distance Interval	SMS/GPRS	All
A15	Track Parking by Time Interval	GPRS	MVT100/340/380/600/T1
A16	Track Parking by Time Interval on/off	GPRS	MVT100/340/380/600/T1
A21	Set GPRS	SMS/GPRS	All
A22	Set DNS Server IP	SMS/GPRS	All
A23	Set Back-up GPRS Server	SMS/GPRS	All
A70	Get all Authorized Phone number	SMS/GPRS	All
A71	Set Multiple Functions Phone Number	SMS/GPRS	All
A72	Set Listen-in Phone Number	Call	All
A73	Set Sleep Mode	SMS/GPRS	All
AAA	Auto Event report	GPRS	All
AFF	Delete GPRS Event in Queue	GPRS	All
B00	Get Authorized Phone Number and SMS Event Flag	SMS/GPRS	All
B01	Authorize Phone Number and SMS Event Flag	SMS/GPRS	All
B02	Add SMS Event Flag to Authorized Phone Number	SMS/GPRS	All
B03	Delete SMS Event Flag from Authorized Phone Number	SMS/GPRS	All
B05	Set Geo-fence Alarm	SMS/GPRS	All
B06	Delete Geo-fence Waypoint	SMS/GPRS	All
B07	Set Speeding Alarm	SMS/GPRS	All
B08	Set Tow Alarm	SMS/GPRS	MVT100/340/380/600/T1
B09	Set Tremble Sensitivity (MVT100/MVT340/MVT380)	SMS/GPRS	MVT100/340/380/T1
B20	Set Tremble Sensitivity (MVT600)	SMS/GPRS	MVT600
B31	Set Extended Functions	SMS/GPRS	All
B32	Set GPS Sleep Mode	SMS/GPRS	All
B33	Set Power Down Mode	SMS/GPRS	All
B34	Set Log Interval	SMS/GPRS	MT80i/8890, MVT100/380/600/T1
B35	Time Zone Setting(For SMS Report)	SMS/GPRS	All
B36	Time Zone Setting(For GPRS Report)	SMS/GPRS	All
B91	Set SMS Header for Event	SMS/GPRS	All
B92	Set Event Flag for GPRS Report	GPRS	All
B93	Get Event Flag of GPRS Report	GPRS	All
B96	Set Event Flag for Taking Picture	GPRS	MVT600

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B97	Get Event Flag for Taking Picture	GPRS	MVT600
C01	Output Control	SMS/GPRS	MVT100/340/380/600/T1
C03	Protocol Control	SMS/GPRS	All
C10	GPRS Message Display	GPRS	MVT600
D00	Take Picture	GPRS	MVT600
D01	Get Picture File Name	GPRS	MVT600
D02	Delete Picture	GPRS	MVT600
D03	Take One Picture	GPRS	MVT600
E91	Get Firmware Version and SN	SMS/GPRS	All
F01	Reboot GSM Module	SMS/GPRS	All
F02	Reboot GPS Module	SMS/GPRS	All
F06	Clear Journey and Running Time	SMS/GPRS	All
F09	Clear SMS/GPRS Buffer	SMS/GPRS	MT80i/88/90, T1/MVT100/380/600
F11	Initialization	SMS/GPRS	All

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III. Command Details

1. Track on Demand (GPRS) – A10

GPRS Set:	A10
GPRS Get:	AAA,34,<->yy.dddddd,<->xxx.dddddd,yyymmddHHMMSS,Z,N,G,Speed,Heading,HDOP,Altitude,Journey,Runtime,Base ID,State,AD,
Description:	34 is the GPRS code. Refer to Annex 2 for more information.
Example	
GPRS Tx:	@@Q25,353358017784062,A10*6A\r\n
GPRS Rx:	\$\$Q128,353358017784062,AAA,34,22.543176,114.078448,100313093738,A,5,22,2,205,5,-14,0,60,0 0 10133 4110,0000,149 153 173 2707 914,*91\r\n

2. Set Heartbeat Interval (GPRS) – A11

GPRS Set:	A11,interval
GPRS Get:	A11,OK
Description:	interval = 0, cancel heartbeat (default); interval = [1,65535], set interval in minutes. Heartbeat is recommended to ensure TCP connection when the time interval of tracking is set too long.
Example	
GPRS Tx:	@@S28,353358017784062,A11,10*FD\r\n
GPRS Rx:	\$\$S28,353358017784062,A11,OK*FE\r\n <i>In this example, the below message will be received every 10 minutes</i> \$\$a131,353358017784062,AAA,31,22.913458,114.083183,080229123628,A,9,23,21,83,1,18,1350,127,0 0 10133 4110,0000,169 181 184 2714 919,*4B

3. Track by Time Interval (GPRS) – A12

GPRS Set:	A12,interval,times
GPRS Get:	A12,OK
Description:	interval is in unit of 10 seconds. interval = 0, stop tracking by time interval. Max time interval = 65535*10 seconds times = 0, track by interval continuously; times = [1,65535], set how many times reports will be received from the tracker within the specified time interval.
Example	

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GPRS Tx:	@@V29,353358017784062,A12,6,0*33\r\n
GPRS Rx:	<p>\$\$V28,353358017784062,A12,OK*02\r\n</p> <p><i>In this example, the below message will be received every minute. There is a total of 3 messages to be received.</i></p> <p>\$\$W129,353358017784062,AAA,35,22.540113,114.076141,100313094354,A,5,22,1,174,4,129,0,435,0/0/10133/4110,0000,166/224/193/2704/916,*BE\r\n</p>

4. Heading Change Report (GPRS) – A13

GPRS Set:	A13,degree
GPRS Get:	A13,OK
Description:	<p>When the heading direction of the tracker changes over the preset degree, a message with location data will be sent back to the server by GPRS. This ensures a continuous smooth trace.</p> <p>degree = 0, cancel heading change report (default);</p> <p>degree = [1,359], set degree of direction change.</p>
Example	
GPRS Tx:	@@X29,353358017784062,A13,120*37\r\n
GPRS Rx:	<p>\$\$X28,353358017784062,A13,OK*05\r\n</p> <p><i>In this example, the below data will be received when heading changes over 120 degrees.</i></p> <p>\$\$Y129,353358017784062,AAA,32,22.540968,114.077455,100313094534,A,4,22,1,166,3,175,0,534,0/0/10133/4110,0000,141/138/159/2691/904,*D9\r\n</p>

5. Track by Distance Interval – A14

GPRS Set:	A14,distance
GPRS Get:	A14,OK
Description:	<p>distance = 0, stop tracking by distance interval (default);</p> <p>distance = [1, 4294967295], set interval in meter.</p> <p>If Track by Distance Interval and Time Interval are both set, the GPS location report complies with 'First Reach First Report' rule and the interval for next report is immediately re-calculated.</p>
Example	
GPRS Tx:	@@D30,353358017784062,A14,1000*4A\r\n
GPRS Rx:	<p>\$\$D28,353358017784062,A14,OK*F2\r\n</p> <p><i>In this example, the below message will be received once distance changes over 1000 meters.</i></p> <p>\$\$D131,353358017784062,AAA,33,22.547271,114.047405,080310080929,A,8,21,13,89,1,12,8525,561,0/0/10133/4110,0000,163/185/186/2712/939,*31\r\n</p>

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6. Track Parking by Time Interval (GPRS)—A15

GPRS Set:	A15, Interval,Times
GPRS Get:	A15,OK
Description:	<p>This command is used for vehicle GPS tracker. Set the time interval, it is better reduce the times of sending GPRS data, to save GPRS rate.</p> <p>After setting A15, A16 will be set automatically. For more details of the engines status (on/off), please refer to A16 command as following .</p> <p>Interval is in unit of 10 seconds.</p> <p>Interval = 0, stop tracking by time interval.</p> <p>Max time interval = 65535*10 seconds</p> <p>Times = 0, track by interval continuously (It is used for platform tracking, suggest setting as 0)</p> <p>Times = [1,65535], set how many times reports will be received from the tracker within the specified time interval.</p>
Example	
GPRS Tx:	@@E29,353358017784062,A15,6,0*25\r\n
GPRS Rx:	\$\$E28,353358017784062,A15,OK*F4\r\n

7. Track Parking by Time Interval on/off (GPRS)—A16

GPRS Set:	A16, Status												
GPRS Get:	A16,OK												
Description:	<p>This command is used for vehicle GPS tracker. The first positive input (HIGH) of vehicle tracker should connect engine detection, or the function cannot work. The following are the first positive input of different vehicle tracker:</p> <table> <thead> <tr> <th>Model</th><th>First Positive Input</th></tr> </thead> <tbody> <tr> <td>MVT100</td><td>Input 2</td></tr> <tr> <td>MVT340</td><td>Input 2</td></tr> <tr> <td>MVT380</td><td>Input 4</td></tr> <tr> <td>MVT600</td><td>Input 3</td></tr> <tr> <td>T1</td><td>Input 3</td></tr> </tbody> </table> <p>Status = 1, track parking by time interval works; the GPRS data will be sent by the time interval as below :</p> <p>Engine On : GPRS data will be sent by the time interval of A12</p> <p>Engine Off: GPRS data will be sent by the time interval of A15</p> <p>Status = 0, track parking by time interval close; the GPRS data will be sent by the time interval as below :</p> <p>Engine On : GPRS data will be sent by the time interval of A12</p>	Model	First Positive Input	MVT100	Input 2	MVT340	Input 2	MVT380	Input 4	MVT600	Input 3	T1	Input 3
Model	First Positive Input												
MVT100	Input 2												
MVT340	Input 2												
MVT380	Input 4												
MVT600	Input 3												
T1	Input 3												

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	Engine Off: GPRS data will be sent by the time interval of A12
Example	
GPRS Tx:	@@F27,353358017784062,A16,0*C3\r\n
GPRS Rx:	\$\$F28,353358017784062,A16,OK*F6\r\n

8. Set GPRS – A21

GPRS Set:	A21,X,IP,Port,APN,APN username,APN password
GPRS Get:	A21,OK
Description:	<p>X = 0, close GPRS; X = 1, open TCP; X = 2, open UDP.</p> <p>IP : IP address or domain name, max 32 bytes. Port: max 5 bytes.</p> <p>APN / APN username / APN password: max 32 bytes each. If no username and password required, leave them blank.</p>
Example	
GPRS Tx:	@@H53,353358017784062,A21,1, www.trackingmate.com,8500,CMNET,,*FB\r\n
GPRS Rx:	\$\$H28,353358017784062,A21,OK*F4\r\n

9. Set DNS Server IP – A22

GPRS Set:	A22,DNS Server IP
GPRS Get:	A22,OK
Description:	<p>Your server IP is not properly set if the domain name you set by the command A21 doesn't work. You can first use this command to set DNS Server IP (please check with your DNS server provider for the DNS Server IP) and then redo the command A21.</p> <p>DNS Server IP: max 16 bytes</p>
Example	
GPRS Tx:	@@K38,353358017784062,A22,75.127.67.90*FD\r\n
GPRS Rx:	\$\$K28,353358017784062,A22,OK*F8\r\n

10. Set Secondary GPRS Server – A23

GPRS Set:	A23,IP,Port
GPRS Get:	A23,OK
Description:	<p>IP : max 32 bytes. Port: max 5 bytes.</p> <p>When the tracker fails to send data to the first server set by command A21, it will send data to the secondary server to avoid losing data.</p>
Example	

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GPRS Tx:	@@S43,353358017784062,A23,112.91.12.222,8500*16\r\n
GPRS Rx:	\$\$S28,353358017784062,A23,OK*01\r\n

11. Get all Authorized Phone Numbers – A70

GPRS Set:	A70
GPRS Get:	A70,SOS phone number 1,SOS phone number 2,SOS phone number 3,listen-in phone number 1,listen-in phone number 2
Description:	Get all authorized phone numbers.
Example	
GPRS Tx:	@@T25, 353358017784062,A70*93\r\n
GPRS Rx:	\$\$T85,353358017784062,A70,13811111111,1382222222,1383333333,1384444444,1385555555*21\r\n

12. Authorize Multiple Functions Phone Number – A71

GPRS Set:	A71,phone number 1,phone number 2,phone number 3
GPRS Get:	A71,OK
Description:	Authorize a phone number for SOS alarm, calling for location report, geo-fence alarm, and low battery alarm. Phone Number: 16 characters Max. If no preset phone number, it is empty (default). When the SOS has been pressed, the tracker will dial the numbers 1, 2, 3. The tracker will stop calling when a number answers.
Example	
GPRS Tx:	@@U61,353358017784062,A71,13811111111,1382222222,1383333333*7D\r\n
GPRS Rx:	\$\$U28,353358017784062,A71,OK*06\r\n

13. Set Listen-in (Voice Monitoring) – A72

GPRS Set:	A72,phone number 1,phone number 2
GPRS Get:	A72,OK
Description:	Authorize a phone number to make a silent call to the tracker. The tracker answers the call automatically and allows the caller to listen to what happens around the tracker. There is no voice indication that the call is in progress. Phone Number: Max 2, 16 characters. If no preset phone number, it is empty (default). If no phone number, but reserve comma, the related number will be deleted.
Example	
GPRS Tx:	@@V49,353358017784062,A72,13844444444,1385555555*55\r\n
GPRS Rx:	\$\$V28,353358017784062,A72,OK*08\r\n

14. Set Sleep Mode – A73

GPRS Set:	A73,level
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GPRS Get:	A73,OK
Description:	<p>This setting is for power saving.</p> <p>X=0, turn off sleep mode (default)</p> <p>X=1, normal sleep. GSM module work, GPS module work by sleep mode intermittently. The device can work 25% longer than no sleep mode. Note: this is not recommended for users who set "track by interval" or short time interval, because it will affect the completeness of tracking.</p> <p>X=2, deep sleep, the tracker will enter this mode after it is inactive or stationary(No SOS/any triggered by the button/input/incoming calls/message/movement) for 5 minutes. GPS module stops working and GSM module enters sleep mode. The tracker remains in this mode until it is activated by SOS/any triggered by the button/input/incoming calls/message/movement. After that, it will repeat above processes.</p> <p>Note: MT90 can enter sleep mode under movement , and movement can't wake MT90 from sleep mode.</p> <p>In any condition, the device will directly quit the sleep mode and back to normal working mode by SMS or GPRS command to turn off the sleep mode.</p>
Example	
GPRS Tx:	@@W27,353358017784062,A73,2*D9\r\n
GPRS Rx:	\$\$W28,353358017784062,A73,OK*0A\r\n

15. Auto Event Report – AAA

GPRS Get:	<p>AAA,Code,</p> <p><->yy.dddddd,<->xxx.dddddd,yyymmddHHMMSS,Z,N,G,Speed,Heading,HDOP,Altitude,Journey,Runtime,Base ID,State,AD,</p>
Description:	Unsolicited GPRS event report.
Example	
GPRS Rx:	<p><i>If SOS button is pressed, the following report will be received.</i></p> <p>\$\$G127,353358017784062,AAA,1,22.538169,114.075958,100313095653,A,3,21,4,46,5,581,0,148,0/0/10133/4172,0000,166/204/205/2709/878,*77\r\n</p>

16. Delete GPRS Event in Queue Buffer – AFF

GPRS Set:	AFF, delete relevant quantity
GPRS Get:	AFF,sum of balance,Code,<->yy.dddddd,<->xxx.dddddd,yyymmddHHMMSS,Z,N,G,Speed,Heading,HDOP,Altitude,Journey,Runtime,Base ID,State,AD,
Description:	<p>Delete relevant quantity: HEX string and normally is 1.</p> <p>Sum of balance: HEX string. Total number of events in internal flash memory.</p>
Example	
GPRS Tx:	@@h27,353358017784062,AFF,1*0B\r\n
GPRS Rx:	

17. Get Authorized Phone Number and SMS Event Flag – B00

GPRS Set:	B00,P
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GPRS Get:	B00,P,Phone No,Event Code Flag
Description:	P: 1 to 3. Phone No: max 16 characters. If Phone No is blank, no phone number is authorized. Event Code Flag: 16+8 bytes, HEX String. See Annex 2 for more details.
Example	
GPRS Tx:	@@H27,353358017784062,B00,1*C0\r\n
GPRS Rx:	\$\$H64,353358017784062,B00,1,13420980279,00000000201C001F00000060*D1\r\n

18. Authorize Phone Number and SMS Event Flag – B01

GPRS Set:	B01, P,phone No,event code
GPRS Get:	B01,OK
Description:	P: 1 to 3. Phone No: max 16 characters. Event Code: If no codes stipulated, then it will apply the default flags to the authorized phone number. See Annex 2 for more details of Event Code and default settings.
Example	
GPRS Tx:	@@Z41,353358017784062,B01,1,13420980279,1*95\r\n
GPRS Rx:	\$\$Z28,353358017784062,B01,OK*05\r\n <i>In this example, once the SOS button is pressed, the following message will be received.</i> <i>353358017784062,SOS,22.540768,114.077610,100313100055,A,3,21,1,94,5,255,0,381,,</i> <i>0000,,</i>

19. Add SMS Event Flag to Authorized Phone Number – B02

GPRS Set:	B02, P,event code
GPRS Get:	B02,OK
Description:	P : 1 to 3 Event Code: please refer to Annex 2 for more details.
Example	
GPRS Tx:	@@J30,353358017784062,B02,1,17*65\r\n
GPRS Rx:	\$\$J28,353358017784062,B02,OK*09\r\n <i>In this example, the low battery alarm message will be received when the battery is low.</i>

20. Delete SMS Event Flag from Authorized Phone Number – B03

GPRS Set:	B03,P,event code
GPRS Get:	B03,OK
Description:	P : 1 to 3 Event Code: please refer to Annex 2 for more details.
Example	
GPRS Tx:	@@F30,353358017784062,B03,1,17*4F\r\n

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GPRS Rx:	<p>\$\$F28,353358017784062,B03,OK*F3\r\n</p> <p><i>This is to cancel the low battery alarm.</i></p>
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21. Set Geo-fence Alarm – B05

GPRS Set:	B05,P,latitude,longitude,radius,in,out
GPRS Get:	B05,OK
Description:	<p>P: 1 to 8. Max 8 Geo-fence waypoints can be set.</p> <p>Latitude: Latitude in decimal degrees of the waypoint center;</p> <p>Longitude: Longitude in decimal degrees of the waypoint center;</p> <p>Radius: [1, 4294967295] in meters.</p> <p>In = 0, turn off the alarm when the tracker enters the waypoint;</p> <p>In = 1, turn on the alarm when the tracker enters the waypoint.</p> <p>Out = 0, turn off the alarm when the tracker exits the waypoint;</p> <p>Out = 1, turn on the alarm when the tracker exits the waypoint.</p>
Example	
GPRS Tx:	@@H55,353358017784062,B05,1,22.91319,114.07988,1000,0,1*31\r\n
GPRS Rx:	<p>\$\$H28,353358017784062,B05,OK*F7\r\n</p> <p><i>Once the tracker goes outside of the circle (center: 22.91319,114.07988 and radius 1000 meters), the following message will be received.</i></p> <p>\$\$J132,353358017784062,AAA,21,22.918046,114.089726,080229123812,A,10,22,12,32,1,21,6667,847,0 0 10133 4110,0000,124 181 183 2714 922,*5A\r\n</p>

22. Delete Geo-fence Waypoint – B06

GPRS Set:	B06,P
GPRS Get:	B06,OK
Description:	P: 1 to 8. Only one waypoint can be deleted by each SMS/GPRS command.
Example	
GPRS Tx:	@@J27,353358017784062,B06,1*C8\r\n
GPRS Rx:	<p>\$\$J28,353358017784062,B06,OK*FA\r\n</p> <p><i>In this example, the first predefined waypoint is deleted.</i></p>

23. Set Speeding Alarm – B07

GPRS Set:	B07, speed
GPRS Get:	B07,OK
Description:	<p>Speed = 0, cancel speeding alarm (default);</p> <p>Speed = [1,255], set speed limit in Km/h.</p>
Example	
GPRS Tx:	@@P28,353358017784062,B07,60*05\r\n

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GPRS Rx:	<p>\$\$P28,353358017784062,B07,OK*01\r\n</p> <p><i>In this example, the following message will be received once the tracker's speed is over 60km/h.</i></p> <p>\$\$k134,353358017784062,AAA,19,22.916675,114.088813,080229123718,A,10,22,61,31,1,21,6635,395,460/0/10133/4110,0000,164/185/181/2712/915,*F7\r\n</p>
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24. Set Tow Alarm – B08

GPRS Set:	B08,time
GPRS Get:	B08,OK
Description:	<p>When the tracker moves or trembles over the pre set time, it will report to the server. The sleep mode should be preset as level 2 through command A73 and the value of "Tremble Time" be set through command B08 before using the tow alarm, otherwise the alarm set doesn't work.</p> <p>time = 0, cancel tow alarm (default);</p> <p>time = [1,255], set period in second.</p>
Example	
GPRS Tx:	@@I27,353358017784062,B08,3*CB\r\n
GPRS Rx:	<p>\$\$I28,353358017784062,B08,OK*FB\r\n</p> <p>In this example, when the tracker moves or trembles for over 3 seconds, the following message will be received.</p> <p>\$\$K133,353358017784062,AAA,36,22.916675,114.088813,080229123718,A,10,22,61,31,1,21,6635,395,460/0/1013/4110,0000,164/185/181/2712/915,*A2</p>

25. Set Tremble Sensitivity (MVT100/MVT340/MVT380/T1) – B09

GPRS Set:	B09,sensitivity
GPRS Get:	B09,OK
Description:	<p>Sensitivity = [1,65535], set sensitivity grade for tremble sensor.</p> <p>The tremble sensor is more sensitive if the grade is lower.</p> <p>Defaulted as 1.</p>
Example	
GPRS Tx:	@@C28,353358017784062,B09,10*F5\r\n
GPRS Rx:	\$\$C28,353358017784062,B09,OK*F6\r\n

26. Set Tremble Sensitivity (MVT600) – B20

GPRS Set:	B20,sensitivity
GPRS Get:	B20,OK
Description:	Sensitivity = [1,65535], set sensitivity grade for tremble sensor.
Example	
GPRS Tx:	@@B28,353358017784062,B20,10*ED\r\n
GPRS Rx:	\$\$B28,353358017784062,B20,OK*EE\r\n

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27. Set Anti-theft – B21

GPRS Set	B21,Status		
GPRS Get	B21, OK		
Description:	Status =1, set anti-theft successfully (default); The device of MVT series will alarm when the first negative input and the first positive input are active except SOS.		
	Status = 0, cancel anti-theft; The device of MVT series will not alarm when the first negative input and the first positive input are active except SOS.		
	Note: this function is only applied in vehicles trackers of MVT series. The relations between inputs are as follows:		
	Model	Negative Input	Positive Input
	MVT100	-	Input 2
	MVT340	-	Input 2
	MVT380	Input 2	Input 4
MVT600	Input 2	Input 3	
T1	Input 2	Input 3	
Example			
GPRS Tx:	@@C27,353358017784062,B21,1*BE\r\n		
GPRS Rx:	\$\$C28,353358017784062,B21,OK*F0\r\n		

28. Set Extended Functions – B31

GPRS Set:	B31,AB
GPRS Get:	B31,OK
Description:	<p>A=0, all LED lights work normally (default);</p> <p>A=1, all LED lights are off when the tracker is working;</p> <p>B, reserved.</p>
Example	
GPRS Tx:	@@J28,353358017784062,B31,10*F7\r\n
GPRS Rx:	\$\$J28,353358017784062,B31,OK*F8\r\n

29. Set Log Interval – B34

GPRS Set:	B34,interval
GPRS Get:	B34,OK
Description:	<p>Set the interval for storing valid GPS data into tracker's flash memory.</p> <p>interval = 0, turn off logging (default);</p> <p>interval = [1,65535], set logging interval in second.</p>
Example	
GPRS Tx:	@@N28,353358017784062,B34,60*03\r\n
GPRS Rx:	\$\$N28,353358017784062,B34,OK*FF\r\n

30. Time Zone Setting (for SMS Report) – B35

GPRS Set:	B35,minute
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GPRS Get:	B35,OK
Description:	Default time of the tracker is GMT. You can use this command to correct it to your local time for SMS report. minute = 0, GMT (default); minute = [-32768,32767], set time difference in minutes to GMT. Time zone for SMS is separate from GPRS.
Example	
GPRS Tx:	@@O29,353358017784062,B35,480*3C\r\n
GPRS Rx:	\$\$O28,353358017784062,B35,OK*01\r\n
<i>In this example, time zone of the device is set as GMT +8.</i>	

31. Time Zone Setting (for GPRS Report) – B36

GPRS Set:	B36,GPRS minute
GPRS Get:	B36,OK
Description:	minute = 0, GMT (default); Note: MS02 will automatically recognize the user's time zone from computer system. Please don't change GPRS time zone, and remain the device's default GPRS time zone as 0. If changed, it may occur discrepancy between the tracking time and the actual time. minute = [-32768,32767], set time difference in minutes to GMT.
Example	
GPRS Tx:	@@P29,353358017784062,B36,480*3E\r\n
GPRS Rx:	\$\$P28,353358017784062,B36,OK*03\r\n
<i>In this example, time zone of the device is set as GMT +8.</i>	

32. Set SMS Header for Event – B91

GPRS Set:	B91, event code, header
GPRS Get:	B91,OK
Description:	Header: max 16 bytes. Please refer to Annex 2 for more details
Example	
GPRS Tx:	@@R31,353358017784062,B91,1,SOS*F0\r\n
GPRS Rx:	\$\$R28,353358017784062,B91,OK*06\r\n
<i>After pressing the SOS button (input1), it shows 'SOS' in the beginning of the alarm message.</i>	

33. Set Event Flag for GPRS Report – B92

GPRS Set:	B92,GPRS event code flag
GPRS Get:	B92,OK
Description:	Set one or more event flag to the GPRS report. Please refer to Annex 2 for more details of the Event Code. Default authorized codes are

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	<p>stipulated in Annex 2.</p> <p>GPRS Event Flag: 16 hex string for max. 64 events (64 bits event flag).</p> <p>MSB (bit63) = 1 means the 64th event is enabled in GPRS report;</p> <p>MSB (bit63) = 0 means the 64th event is disabled in GPRS report.</p> <p>LSB (bit0) = 1 means the 1st event (SOS) is enabled in GPRS report;</p> <p>LSB (bit0) = 0 means the 1st event (SOS) is disabled in GPRS report.</p>
Example	
GPRS Tx:	@@q42,353358017784062,B92,1234567890ABCDEF*62\r\n
GPRS Rx:	\$\$q28,353358017784062,B92,OK*26\r\n

34. Get Event Flag of GPRS Report – B93

GPRS Set:	B93
GPRS Get:	B93,GPRS event code flag
Description:	Read the preset event code of GPRS report.
Example	
GPRS Tx:	@@V25,353358017784062,B93*7B\r\n
GPRS Rx:	\$\$V42,353358017784062,B93,00000007E01C001F*B5\r\n

35. Set Event Flag for Taking Picture –B96

GPRS Set:	B96,event code flag
GPRS Get:	B96,OK
Description:	<p>Set one or more events to take a picture. Once each event is activated, the camera takes a picture and stores it in its SD card memory.</p> <p>In default mode, once the SOS button is pressed, the tracker will automatically take a picture and store it in its SD card memory.</p> <p>Please refer to Annex 2 for more details of the Event Code.</p> <p>Use command D00/D01 to get pictures.</p>
Example	
GPRS Tx:	@@A42,353358017784062,B96,0000000000000001*95\r\n
GPRS Rx:	\$\$A28,353358017784062,B96,OK*FA\r\n

36. Get Event Flag of Taking Picture –B97

GPRS Set:	B97
GPRS Get:	B97,event flag
Description:	To know which event(s) have enabled the function of taking pictures.
Example	
GPRS Tx:	@@C25,353358017784062,B97*6C\r\n
GPRS Rx:	\$\$C42,353358017784062,B97,0000000000000001*60\r\n

37. Output Control – C01

GPRS Set:	C01,speed,ABCDE
GPRS Get:	C01,OK

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Description:	<p>Speed = 0, no speed limit</p> <p>Speed = [1,255], in km/h, set conditional speed limit for output control.</p> <p>When speed is below the set speed, output is activated.</p> <p>A=0, close output (OUT1) -open drain;</p> <p>A=1, open output (OUT1) -connect to GND;</p> <p>A=2, remain previous status.</p> <p>B=0, close output (OUT2) -open drain;</p> <p>B=1, open output (OUT2) -connect to GND;</p> <p>B=2, remain previous status.</p> <p>C=0, close output (OUT3) -open drain;</p> <p>C=1, open output (OUT3) -connect to GND;</p> <p>C=2, remain previous status.</p> <p>D=0, close output (OUT4) -open drain;</p> <p>D=1, open output (OUT4) -connect to GND;</p> <p>D=2, remain previous status.</p> <p>E=0, close output (OUT5) -open drain;</p> <p>E=1, open output (OUT5) -connect to GND;</p> <p>E=2, remain previous status.</p>
Example	
GPRS Tx:	@@M35,353358017784062,C01,20,10122*19\r\n
GPRS Rx:	\$\$M28,353358017784062,C01,OK*F9\r\n

38. Protocol Control – C03

GPRS Set:	C03, X
GPRS Get:	C03,OK
Description:	<p>X = 0, Auto Event Report (default);</p> <p>X = 1, Event report needs server's confirmation by AFF command.</p>
Example	
GPRS Tx:	@@f27,353358017784062,C03,0*E1\r\n
GPRS Rx:	\$\$f28,353358017784062,C03,OK*14\r\n

39. GPRS Message Display – C10

GPRS Set:	C10, grade,sender,type,txt
GPRS Get:	C10,OK
Description:	<p>Grade: 0=Normal Message, 1=Urgent Message.</p> <p>Sender: The sender's name. Must Be ASCII String, Max 16 Bytes.</p> <p>Type: Encoding mode. E=ASCII, U=UNICODE2.</p> <p>Txt: Message content. Max 150 Bytes.</p>
Example	
GPRS Tx:	@@C47,353358017784062,C10,1,GPRS,E,Test Message*49\r\n
GPRS Rx:	\$\$C28,353358017784062,C10,OK*EF\r\n

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40. Get Picture – D00

GPRS Set:	D00,file name,index1
GPRS Get:	D00, file name,total,index2,data
Description:	<p>Before getting pictures from the tracker, use command D01 to get picture list and picture names.</p> <p>File Name: The file name of the picture you want to get from tracker's SD card memory.</p> <p>Index1: The starting sequence number of the picture package. Min = 0 (one picture will be split into a number of packages).</p> <p>Total: Total number of the packages for each picture. Min = 1.</p> <p>Index2: The current sequence number of picture package getting from the tracker.</p> <p>Data: Picture data of each package. Hex code. A full picture is composed when all packages are received in the server.</p>
Example	
GPRS Tx:	@@O48,353358017784062,D00,0215080432_C2E03.jpg,0*DB\r\n
GPRS Rx:	\r\n

41. Get Picture List – D01

GPRS Set:	D01,index1
GPRS Get:	D01, total,index2,file(1) file(2) ...file(n)
Description:	<p>File(n): File name of the pictures separated by ' '. Index1: Starting sequence number of the picture list. Min = 0. For example, if Index1 = 0, the file names received will start from the 1st picture list and if Index1 = 4, the file name will start from the 5th picture list.</p> <p>Total: Total number of picture lists. Min = 0.</p> <p>Index2: Current sequence number of the picture list from the tracker.</p>
Example	
GPRS Tx:	@@A27,353358017784062,D01,0*BB\r\n
GPRS Rx:	<p>\$\$A480,353358017784062,D01,3,0,0506162517_C1E03.jpg 0506162517_C1E11.jpg 0506162624_C1E03.jpg 0506162630_C1E11.jpg 0506162720_C1E03.jpg 0506162721_C1E03.jpg 0215080547_C1E03.jpg 0215080547_C1E11.jpg 0215080626_C1E03.jpg 0215080626_C1E11.jpg 0215080827_C1E03.jpg 0215080827_C1E11.jpg 0215080850_C1E03.jpg 0215080850_C1E11.jpg 0507145426_C1E03.jpg 0507145426_C1E11.jpg 0507145512_C2E03.jpg 0507145512_C2E11.jpg 0215080050_C3E03.jpg 0215080050_C3E11.jpg 0215080459_C3E03.jpg 021508050*41\r\n</p>

42. Delete Picture – D02

GPRS Set:	D02, file(1) file(2) ...file(n)
GPRS Get:	D02,OK
Description:	File(n): File name of picture(s) you want to delete, separated by ' '. Example
GPRS Tx:	@@E110,353358017784062,D02,0506162517_C1E03.jpg 0506162517_C1E11.jpg 0506162624_C1E03.jpg 0506162630_C1E11.jpg *4E\r\n

File Name:	MEITRACK GPRS Protocol	Creator:	Cavana Cheung
Project:	MVT340/MVT380/MVT100/ MVT600/T1/MT88/MT80i/MT90	Creation Date:	2010-09-16
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GPRS Rx:	\$\$F28,353358017784062,D02,OK*F4\r\n
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43. Take One Picture – D03

GPRS Set:	D03,index,file name
GPRS Get:	D03, OK
Description:	Index: camera number. Min = 1 and normally Max = 2. File Name: The file name of the picture.
Example	
GPRS Tx:	@@D46,353358017784062,D03,1,camera picture.jpg*E2\r\n
GPRS Rx:	\$\$D28,353358017784062,D03,OK*F3\r\n

44. Get Firmware Version and SN – E91

GPRS Set:	E91
GPRS Get:	E91,version,SN
Description:	Get current firmware version and S/N details of the tracker.
Example	
GPRS Tx:	@@W25,353358017784062,E91*7D\r\n
GPRS Rx:	\$\$W38,353358017784062,FWV1.00,12345678*1C\r\n

45. Reboot GSM Module – F01

GPRS Set:	F01
GPRS Get:	F01,OK
Description:	Reboot GSM module.
Example	
GPRS Tx:	@@j25,353358017784062,F01*88\r\n
GPRS Rx:	\$\$j28,353358017784062,F01,OK*19\r\n

46. Reboot GPS Module – F02

GPRS Set:	F02
GPRS Get:	F02,OK
Description:	Reboot GPS Module.
Example	
GPRS Tx:	@@Z25,353358017784062,F02*79\r\n
GPRS Rx:	\$\$Z28,353358017784062,F02,OK*0A\r\n

47. Clear Journey and Running Time – F06

GPRS Set:	F06,X
GPRS Get:	F06,OK
Description:	Clear Journey and Running Time. X=1, clear journey X=2, clear running time X=3, clear journey and running time
Example	

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GPRS Tx:	@@D27,353358017784062,F06,1*C6\r\n
GPRS Rx:	\$\$D28,353358017784062,F06,OK*F8\r\n

48. Delete SMS/GPRS Buffer – F09

GPRS Set:	F09,X
GPRS Get:	F09,OK
Description:	X=1, delete SMS buffer X=2, delete GPRS buffer X=3, delete SMS and GPRS buffer
Example	
GPRS Tx:	@@E27,353358017784062,F09,1*CA\r\n
GPRS Rx:	\$\$E28,353358017784062,F09,OK*FC\r\n

49. Initialization– F11

GPRS Set:	F11
GPRS Get:	F11,OK
Description:	Set all parameters, except for the password, back to factory default.
Example	
GPRS Tx:	@@[25,353358017784062,F11*7A\r\n
GPRS Rx:	\$\$[28,353358017784062,F11,OK*0B\r\n

If you have any questions, please send e-mail to info@meitrack.com. We are here to help you.