



SMS Protocol compatible for SatFONE.watch and SatFONE.pro

Abstract

This document, first of all, provides a quick start list, selecting the most frequently used SMS commands, to help you do the very first sample test.

Secondly, the chapter “general SMS commands” gives the most details respect to each command, in 4 parts, structure, explanations, example, and reply. With a full comprehension of these, you can configure the device in a highly flexible way, as well as to receive relevant information from it.

In the third section, you can find some particular commands for some product models, not compatible in the others. This difference comes from that in capability of these models.

Last but not the least, some information about working mode and functions are displayed as appendix.

Important to note

- There should be no space “ ” in any command;
- Comma “,” is obligatory as indicated;
- Both capital letter (ABC) and lower-case one (abc) work;
- Please check the SIM card status, if you did not receive any SMS reply from device;
- There are probably some hidden commands, please consult the sales;
- There are some particular sim cards that don't support SMS, like some IOT, or GPRS-only cards. Please confirm with your SIM card provider;
- In some cases, one long SMS (>150 bytes) can be split into two ones, thus possibly disabling the map link. Please consult your SIM card provider.
- In every section, you can come back to catalog by clicking “back to catalog”;

Catalog

1. Most Frequently used SMS Commands (Quick Start List)	5
2. General SMS Commands	6
G.2 Password	8
G.3 SMS Whitelist	9
G.4 SOS Alarm Settings	10
G.6 Bluetooth	12
G.7 Wi-Fi	13
G.8 LBS	14
G.11 Vibration	16
G.12 Beep	16
G.14 Volume	19
G.16 Time Zone	21
G.17 Prefix	21
G.20 Turn off Device	23
G.21 Device Information	23
G.22 Alarms	24
22.1 SOS Emergency Alarm	24
22.2 Fall Down Alarm	24
22.3 Geo Fence Alarm	25
22.4 No Motion Alarm	25
22.5 Motion Alarm	26
22.6 Tilt Alarm	27

22.7 Over Speed Alarm	27
22.8 Welfare Alarm	27
G.23 Alarm Clock	29
G.25 Internet Setting	30
G.26 Working Mode	32
G.27 Continuous Locate	33
G.28 Stop Sending Stored Historical Data to Server	33
G.29 Check Function Settings	34
G.30 Set GPS Map Link	34
G.31 Home Wi-Fi List	37
3. Particular SMS Commands	38
P04 Particular in SatFONE.pro	38
P04.1 Change the Language_SatFONE.pro	38
P04.2 Alarm Speak_SatFONE.pro	39
P04.3 OTA Upgrade_SatFONE.pro	40
P05 Particular in SatFONE.watch	41
P05.1 Change the Language_SatFONE.watch	41
P05.2 Heart Rating SatFONE.watch	42
P05.4 Message Display_SatFONE.watch	43
P05.5 Long press screen to trigger SOS_SatFONE.watch	43
Appendix	44

1. Most Frequently used SMS Commands (Quick Start List)

Item	Command Structure	Command Example
Set Contact Numbers	A1,1,1,(phone number)	A1,1,1,123456789
Set SMS Password	P(password)	P123456
Request Location	loc	loc
Wi-Fi ON/OFF	Wifi(0=off, 1=on)	Wifi1
Microphone Volume	Micvolume(volume)	Micvolume10
Speaker Volume	Speakervolume(volume)	Speakervolume90
Prefix	Prefix(0=off, 1=on),(prefix name)	prefix1,Emma
Check Battery Status	battery	battery
Fall Down Alarm	fl(0=off, 1=on),(sensitivity1-9),(0=no call, 1=call)	fl1,5,1
No Motion Alarm	nmo(0=off, 1=on),(no motion time), (0=no call, 1=call)	NMO1,80M,1
APN	S(0=no call, 1=call),(apn)	S1,internet
Server	IP(0=no call, 1=call),(server IP),(port number)	IP1,www.smart-locator.com,6060
GPRS	S(0=of,2=on)	S2
Working Mode	Mode1	mode1
	Mode2,(motion interval),(no motion interval)	mode2,03M,01h
	Mode3,(interval)	mode3,01H
	Mode4,(interval)	mode4,30m
	Mode5,(interval)	mode5,10h
	Mode6,(motion interval),(no motion interval)	Mode6,03M,01h
Continuous Locate	CL(interval),(duration)	CL10s,600s
Check Function Settings	status	status

2. General SMS Commands

The general SMS commands are compatible for product models SatFONE.pro and SatFONE.watch.

G.1 Contact Numbers

Setting contact numbers is the very first step for the device to work. This contact number list is the foundation for all the functions related to calling and sending SMS: SOS, fall down alarm, tilt alarm, no motion alarm, whitelist, etc.

1. Contact Numbers	
1.1 Set Contact Numbers	
Structure	A(n),(SMS Yes/No),(call Yes/No),(phone number)
Explanation	(n) Value range: 1~10 Contact number sequence
	(SMS Yes/No) Value range: 0~1 0 - Do not receive SMS when there is an alarm 1 - Receive SMS when there is an alarm
	(call Yes/No) Value range: 0~1 0 - Do not receive Call when there is an alarm 1 - Receive Call when there is an alarm
	(phone number) Mobile number or Landline.
Example	A1,1,1,123456789
Reply	Set contact number 1 ok.
1.2 Check Contact Numbers	
Structure	A?

Explanation	To check the current status of contact number list
Example	A?
Reply	A1: 1,1,15899795842 A2: 1,0,13632770106 A3: 0,1,15986236978
1.3 Remove Contact Numbers	
Structure	removeA(n)
Explanation	To remove contact number “n” Value range: 1~10
Example	removeA5
Reply	Contact number 5 removed.

G.2 Password

- With this command sent, a password will be required in head of all commands. For example:
321654Loc, 321654A1.
- The preset password won't be erased by changing a new sim card.
- **Be sure to remember the new password, otherwise, you must ask your distributor to reset to factory settings in case the password forgotten.**
- Make sure the password is of 6 digits, if not the tracker cannot recognize the password.

2. Password

2.1 Set Password

Structure	P(password)
Example	P321654 Password must be 6 digital numbers and the first bit cannot be "0"
Reply	Set password ok.

2.2 Change Password

Structure	(old password)P(new password)
Example	321654P123456
Reply	Your password has been changed successfully.

2.3 Delete Password

Structure	(password)P0
Explanation	<pwd> Your current password.
Example	123456P0
Reply	Password deleted successfully.

G.3 SMS White List

Device will receive SMS only from contact numbers on Whitelist.

3. SMS Whitelist

Structure	sms(n)
Explanation	0=whitelist off, 1=whitelist on
Example	sms0
Reply	Allow device to receive text message from all numbers.
Example	sms1
Reply	Allow device to receive text message only from authorized numbers.

G.4 SOS Alarm Settings

To set the way to activate the SOS, ring time and talk time.

N means $N \cdot 0.1$ second. (20 means $20 \cdot 0.1$ seconds= 2 seconds)

4. SOS Alarm Settings

4.1 SOS Button

Structure	SOS(mode),(time)	
Explanation	(mode)	1=long press, 2=double click
	(time)	(Value range: 1~100)*0.1 second
Example	SOS1,20	
Reply	Set long press 2 seconds ok.	
It means long press 2 seconds to trigger SOS alarm.		
Example	SOS2,20	
Reply	Set double click 2 seconds ok.	
Double click SOS button in 2 seconds to trigger SOS alarm		

4.2 SOS Alarm Ring Time and Talk Time

Structure	soscall(ring time),(talk time)	
Explanation	Ring time means ringing maximally for xxx seconds, then call to next contact number Value range: 1~60 seconds	
	Talk time is the maximal time to talk during a call Value range: 0~65535 seconds	
Example	Soscall35S,20m	
S=seconds, m=minutes, h=hours		
Reply	Set ring time 35 seconds, talk time 20 minutes ok.	

4.3 SOS Call Loops

Structure	Loop(time)
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Explanation	Value range: 0~10 loop means SOS calling cycles to all authorized number
	0=infinite loop
	1=only once
Example	Loop5
Reply	Set SOS loop 5 times ok.

G.5 Request Location

After sending LOC, the device will be looking for the signal of Bluetooth, Wi-Fi and GPS, if the Bluetooth location is fixed, the device will stop searching for Wi-Fi and GPS signals.

5. Request Location

5.1 Location

Structure	Loc
Example Reply	GPS Loc! Now: Loc Time:07/04/2021 17:36:44 Speed:0km/h Altitude:97.0 Battery:57% www.google.com/maps?q=22.6537233,114.0006070

5.2 GPS Location (SatFONE.pro only)

Structure	Loc,gps
Explanation	The device will be only looking for the GPS signal. The device only searches GPS location for a maximum of 3 minutes, if up to date GPS location is not available, the device will reply last known GPS location.

G.6 Bluetooth

The device will not be looking for Bluetooth location if BLE0 is set. You can turn on or off the Bluetooth positioning. Setting the location coordinates for the charging base is the very first step to using the charging base.

6. Bluetooth

6.1 Keep Device Connected to Charging Base via Bluetooth (SatFONE.pro only)

Structure	BK(n)
Explanation	0=not always connected, 1=always connected
Example	BK0
Reply	Stay Connection off.

If the setting is BK0, the device will not stay connected to the charging base, even when the device is in the range of docking.

6.2 Set Coordinates for Charging Base (SatFONE.pro)

Structure	BL(latitude),(longitude)
Example	BL22.6180000,114.0360000
Reply	Set BLE location ok.

6.3 Turn on/off Bluetooth Location

Structure	BLE(n)
Explanation	1=on, 0=off
Example	BLE0
Reply	BLE loc off.

G.7 Wi-Fi

To turn on/off Wi-Fi. It will detect Wi-Fi hot spot and transfers those MAC address to coordinates. Users will receive Wi-Fi location if GPS location is not available.

7. Wi-Fi

7.1 Turn on/off Wi-Fi

Structure	Wifi(n)
Explanation	0=off, 1=on
Example	Wifi0
Reply	WiFi off.

7.2 Set Map Link for Wi-Fi

Structure	WIFIURL(http)/web/geolocation/%s/%s
Explanation	Change Wi-Fi format when necessary. Note: Please ask your agent before making any changes
Example	WIFIURLtracking.com/web/geolocation/%s/%s
Reply	WIFIURL Set ok.

G.8 LBS

To turn on/off LBS. LBS location is fixed based on the cell-towers data which is received from device. Usually, the device will find the nearest cell tower and will show its location near it. However, the LBS location provided by the device is usually much less accurate than other location methods. (when there is no GPS data, Wi-Fi or BLE, the system uses LBS as a backup.)

8. LBS

7.1 Turn on/off LBS

Structure	LBS(n)
Explanation	0=off, 1=on
Example	lbs0
Reply	lbs off.

G.9 AGPS

Assisted GPS is a system that is often able to significantly improve startup performance or time-to-first-fix and improve the GPS location to be more precise. GPS will search for the location, starting from the area around this point, thus improving efficiency to provide location information.

9. AGPS

9.1 Turn on/off AGPS

Structure	Agps(n)
Explanation	0=off, 1=on
Example	Agps0
Reply	Agps off.

9.2 Set AGPS Coordinates

Structure	Agpsloc(n),(latitude,longtitude)
Explanation	n=0, Do not Allow GPS to update coordinates from time to time.

	n=1, Allow GPS to update coordinates from time to time.
Example	agpsloc1,114.1234567,22.1234568
Reply	AGPS Loc set ok.
9.3 Check AGPS settings	
Structure	Agpsloc?
Reply	AGPS Loc 1,1141234567,221234568.

G.10 Side Buttons

Support SatFONE.pro.

10. Side Buttons

10.1 Upper Button

Structure	X(n),(time)	
Explanation	n=0	Upper button does not call
	n=1-10	To call contact number n
	time	(Value range: 1~100)*0.1 second. For example, 20=long press 2 seconds
Example	X2,20	
Reply	Set to dial the A2 ok.	

10.2 Lower Button

Explanation of functions (no SMS commands)	
Function 1	Double click the button to turn on/off voice prompts.
Function 2	Press and hold button 3 seconds, and at the same time press the CALL2 button on the charging base, then the device and charging base will pair to each other via Bluetooth.

G.11 Vibration

11. Vibration

Structure	Vibrate(n)
Explanation	n=0, vibration off
	n=1, vibrate when user push SOS button, tilt alarm, fall alarm, incoming call, press side button, turn on/off device.
Example	Vibrate0
Reply	Vibration Off!

G.12 Beep

This command is to control all the voice prompts on/off made by SOS, tilt, fall, motion alarms and other voice warnings.

12. Beep

Structure	Beep(n)
Explanation	n=0, beep off
	n=1, vibrate when user push SOS button, tilt alarm, fall alarm, incoming call, press side button, turn on/off device.
Example	Beep0
Reply	Beep Off!

G.13 Call

To set rules in calling and answering calls.

13. Call

13.1 Incoming Call

Structure	callin(n)
Explanation	n=0, All numbers can call in
	n=1, Only authorized numbers can call in
	To decide who can call the device
Example	callin0
Reply	Allow all numbers to call in.

13.2 Answering the Incoming Call

Structure	Answer(n),(time)
Explanation	n=0, automatic answering the call
	n=1, press any button to answer the call
	Value range: 1~10 seconds automatic answering the call after how many seconds ringing.
	The way to answer the incoming call.
Example	Answer0,5
Reply	Set automatic answering call ok.
Example	Answer1
Reply	Set to press the button to answer the call ok.

13.3 Hang up the Call

Structure	Hangup(n)
Explanation	n=0, users cannot hang up on their own
	n=1, user can hang up the call by press SOS button
	The way to hang up the call
Example	Hangup0

Reply	Set hangup0 ok.
13.4 Call Back	
Structure	Callback(phone number)
Explanation	Device will call the set number immediately after the message is sent.
Example	Callback123456789
Reply	call 123456789 ok.
13.5 Stop call sequence	
Structure	scs(n)
Explanation	When a call is connected, it will not call the next contact
Example	scs1
Reply	Stop calling sequence set OK!
Example	scs0
Reply	Allow calling sequence set OK!
13.6 Stop call immediately (SatFONE.pro only)	
Structure	stopcall
Example	stopcall
Reply	Stop success!

G.14 Voice Volume

To set the volume of incoming call ringtone, microphone, speaker, and voice prompts. Speaker can be turned on and off for SOS call, and call through the side upper button.

14. Volume

14.1 Incoming Call Ringtone Volume

Structure	RT(level)
Explanation	Volume range: 0~100
	Volume adjustment for a ringtone
Example	RT50
Reply	Set ringtone volume 50 ok. (incoming call)

14.2 Microphone Volume

Structure	Micvolume(level)
Explanation	Volume range: 0~15
	Microphone volume adjustment for two-way talking
Example	Micvolume10
Reply	Set microphone volume 10 ok.

14.3 Speaker Volume

Structure	speakervolume(level)
Explanation	Volume range: 0~100
	Speaker volume adjustment for two-way talking
Example	Speakervolume90
Reply	Set speaker volume 90 ok.

14.4 Voice Volume

Structure	voice(level)
Explanation	Volume range: 0~100
Example	volume90
Reply	Set voice prompt volume 90 ok.

14.5 SOS Speaker Switch

Structure	sospeaker(n)
Explanation	n=0, turn off speaker

	n=1, turn on speaker
	The speaker can be turned on/off if the call made by SOS alarm.
Example	Sosspeaker1
Reply	Turn on speaker ok. (SOS call)
14.6 Call Button Speaker Switch	
Structure	Xspeaker(n)
Explanation	n=0, turn off speaker
	n=1, turn on speaker
	The speaker can be turned on/off if the call made by CALL button
Example	xspeaker0
Reply	Turn off speaker ok. (call button)

G.15 LED

Support SatFONE.pro.

15. LED

Structure	led(n)
Explanation	n=0, turn off LED
	n=1, turn on LED
Example	LED0
Reply	LED off.

G.16 Time Zone

The device clock time depends on the time zone, related to the time report, alarm clock, alarm time, location time, etc.

16. Time Zone

Structure	TZ(time zone code):(minute)
Explanation	Value range: +00 ~ +14, -00 ~ -14
	Minute=0/15/30/45
Example	tz+1
Reply	Set time zone +1 ok.
Example	tz+10:15
Reply	Set time zone +10:15 ok.

G.17 Prefix

To identify the device name, when receiving SMS messages from device.

17. Prefix

Structure	Prefix(n),(text)
Explanation	n=0, prefix off
	n=1, prefix on
	Text=prefix context Value range: maximum characters can be 100.
Example	Prefix1,Emma
Reply	Set Emma ok.

G.18 Battery

To set (up to 2) low battery alarms, and to check the battery status.

18. Battery

18.1 Low Battery Alarm

Structure	Low(n),(level)
Explanation	n=0, low power alarm off
	n=1, low power alarm on
	Value range: 0~100
Example	Low1,15
Reply	Set low power alarm 15% ok.

18.2 Low Battery Alarm Voice (SatFONE.pro only)

Structure	Lowuser(n),(level)
Explanation	n=0, low power alarm voice off
	n=1, low power alarm voice on
	Value range: 0~100
Example	Lowuser1,20
Reply	Set low power alarm 20% ok.

18.3 Battery Status

Structure	battery
Reply	Battery: 88%

G.19 Find My Device

After the text message "findme" is sent to the device, device will play voice prompt "I am here" and last for 30 seconds, the voice prompt can be stopped by pressing the button when device is found.

19. Find My Device

Structure	findme
Reply	(no reply)

G.20 Turn off Device

20. Turn off

Structure	off
Reply	(no reply)

G.21 Device Information

To request information respect to IMEI, firmware version, device version.

21. Device Information

Structure	V?
Reply Example	IMEI:863921033969786 GSM signal quality: 15 Software version: V07BX.8601.2109 version: V1.0.29.1

G.22 Alarms

SOS, Fall down alarm, Geo-fence alarm, Motion alarm, Tilt alarm, No motion alarm, Over-speed alarm.

22. Alarms

22.1 SOS Emergency Alarm

Structure	(no command)
Alarm Example	Help Me GPS Loc! Now: Loc Time:01/09/2021 09:46:51 Alarm Time:01/09/2021 09:46:33 Speed:0km/h Altitude:85.1 Battery:100% www.google.com/maps?q=22.6537455,114.0005853

22.2 Fall Down Alarm

Structure	fl(n),(sensitivity level),(call yes/no)	
Explanation	n=0	Fall alarm off
	n=1	Fall alarm on
	sensitivity level	1-9. 1=least sensible, 9=most sensible
	call yes/no	Value range: 0~1 0 – Do not receive a call when there is an alarm 1 – Receive call when there is an alarm
Example	FL1,1,1	
Reply	Set fall down alarm ok!	

Alarm Example	Now: Loc Time:26/08/2021 11:23:55 Alarm Time:26/08/2021 11:23:48 Speed:0km/h Altitude:77.6 Battery:100% www.google.com/maps?q=22.6536771,114.0004660
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22.3 Geo Fence Alarm

Structure	Geo(n),(on/off),(leave/enter),(distance)	
Explanation	n	Geo fence number value range: 1~4
	On/off	0=off, 1=on
	Leave/enter	0=leave, 1=enter
	Distance	Value range: 100~65535 meters
Suggestion	The distance should be no less than 100 meters	
Example	Geo1,1,0,100m	
Reply	Set geo fence 1 in, 100 M radius ok.	
Alarm Example	Geo Fence alarm 1 i GPS Loc! Now: Loc Time:28/08/2021 08:40:17 Alarm Time:28/08/2021 08:40:17 Speed:1km/h Altitude:114.7 Battery:97% www.google.com/maps?q=22.6583923,114.0004503	

22.4 No Motion Alarm

Structure	nmo(n),(static time),(call Yes/No)	
Explanation	n	0=off, 1=on
	Static time	Value range: 60~36000 seconds
	S=seconds, M=minutes, H=hours	
	Call yes/no	0=no, 1=yes
Example	NMO1,80M,1	

If device doesn't move (no motion) for 80 minutes, in 81 minutes, no motion alarm will be activated, device will send a text message or make a call immediately.		
Reply	Set no motion alarm 1 hour 20 minutes ok.	
Alarm Example	No Motion Alarm! GPS Loc! Now: Loc Time:01/09/2021 18:08:39 Alarm Time:01/09/2021 18:08:39 Speed:1km/h Altitude:86.3 Battery:76% www.google.com/maps?q=22.6536985,114.0005760	
22.5 Motion Alarm		
Structure	Mo(n),(static time),(duration time),(call Yes/No)	
Explanation	n	0=off, 1=on
	Static time	Value range: 60~36000 seconds
	Duration time	Value range: 60~36000 seconds
	S=seconds, M=minutes, H=hours	
	Call Yes/no	0=no, 1=yes
Example	mo1,05m,03s,1	
Reply	Set motion alarm ok.	
Motion for 3 seconds after staying no motion for more than 5 minutes		
Alarm Example	Motion Alert!3 seconds! GSM and WIFI-Loc: Loc Time:23/06/2021 17:25:12 Alarm Time:23/06/2021 17:24:45 Battery:100% smart-locator.com/web/geolocation/wg/YyK9-tAnYQQ4qaitPcGApKME07W3gZyqiPhyeFiwo2A6fBzFSalQK3MGyxGs8JK02afBqfCStNy9ma5UdZU3SAexSA7s8OQ2pUAxPPdb_ryoFU3X96asZG6XwxLHpMCI3TofygspszAEBBT0IKcEeBg==	

22.6 Tilt Alarm

Structure	Tilt(n),(degree),(duration time),(call Yes/No)	
Explanation	n	0=off, 1=on
	Degree	Value range: 30-90
	Duration Time	Value range: 10~3600 seconds
	Call Yes/No	0=no, 1=yes
Example	tilt1,45,30s,1	
Reply	Set tilt alarm 45 degrees ok.	

Device will make a 30 seconds warning beep (20 seconds is fixed, user can't modify the beep time) if the device is detected vertically tilt over 45 degrees and the tilt last for 30 seconds. After 30 seconds beep warning, device will send the alert to contact numbers. or If the device is automatically adjusted to less than 45 degrees before 30 seconds beep finish, the alarm will be automatically canceled.)

Alarm Example	Tilt Alarm GPS Loc! Now: Loc Time:12/08/2021 15:08:55 Alarm Time:12/08/2021 15:08:55 Speed:2km/h Altitude:97.2 Battery:100% www.google.com/maps?q=22.6538115,114.0006836	
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22.7 Over Speed Alarm

Structure	Speed(n),(speed)	
Explanation	n	0=off, 1=on
	speed	Value range: 20-400 km/h
Example	Speed0	
Reply	Over speed alarm canceled.	
Example	Speed1,100km/h	
Reply	Set over speed alarm 100km/h ok.	

Alarm Example	Over-speed alarm50km/h Now: Loc Time:13/07/2021 18:44:54 Alarm Time:13/07/2021 18:45:05 Speed:73km/h Altitude:32.1 Battery:100% www.google.com/maps?q=22.6645401,113.9950130	
22.8 Welfare Alarm (SatFONE.pro7B and SatFONE.pro4)		
Structure	Welfare<n>,<set up time>,<warning time>,<callYes/No>	
Description	Checkin: press 2 seconds on the side bottom button to start the timer Checkout: press 2 seconds again on the side bottom button to end the timer	
Explanation	n	0=off,1=on
	Set up time	Value range: 600~360000 seconds
	Warning time	Value range: 120~600 seconds
	Call Yes/No	0=no,1=yes
Example	Welfare1,600,120,1	
Reply	Welfare alarm.	
Example	Welfare0	
Reply	Welfare check off.	
Alarm Example	Welfare Alert GSM and WIFI-Loc: Loc Time:23/06/2021 17:25:12 Alarm Time:23/06/2021 17:24:45 Battery:100% smart-locator.com/web/geolocation/wg/YyK9-tAnYQQ4qaitPcGApKME07W3gZyqiPhyeFiwo2A6fBzFSalQK3MGyxGs8JK02afBqfCStNy9ma5UdZU3SAexSA7s8OQ2pUAxPPdb_ryoFU3X96asZG6XwxLHpMCI3TofygzspzAEBBT0IKcEeBg==	

G.23 Alarm Clock

Device will ring, or play voice prompts, when it's clock time.

23. Alarm Clock

Structure	CLK(n),(on/off),(time),(type),(date)	
Explanation	n	Value range 1~4. Clock number
	On/off	0=off, 1=on
	time	00:00-24:00
	type	Value range 1~4. Voice/music type
	date	Value range 1~7. Monday to Sunday
Example	CLK1,0	
Reply	Alarm clock 1 off.	
Example	CLK2,1,19:30,3,1,2,4	
Reply	Alarm clock 2 on.	
Clock number2, at 19:30 with alarm type 3, play every Tuesday and Thursday		

G.24 No Disturb Time

Device will not make any sound even if someone calls. User will not hear any ringtone when there is an incoming call, and device will not play any voice warnings at all.

24. No Disturb Time

Structure	ND(n),(start time),(end time)	
Explanation	n	0=off, 1=on
	Start time	Value range: 00:00-24:00
	End time	Value range: 00:00-24:00
Example	ND1,19:00,06:00	
Reply	No disturb from 19:00 to 6:00 ok.	
Example	ND0	
Reply	No disturb off.	

G.25 Internet Setting

To set APN, Heartbeat, Server. Heartbeat only works in mode 1,2,3,6.

25. Internet Setting

25.1 APN

Structure	S1,(APN),(username),(password)	
Explanation	APN	APN set by particular operators
	Username	(sometimes without)
	Password	(sometimes without)

To make device online to the platform, the user needs to set up the APN.

- Some APN without user name and password, so please leave it blank.
- Make sure that the SIM card in the tracker supports the internet function.
- The APN can be acquired from your local Telecom operators

Example	S1,internet
Reply	Set APN ok.

25.2 Heartbeat

Structure	GPRSHB(time)	
Explanation	Time	Value range: 60~86400 seconds
	S=seconds,M=minutes, H=hours	
	Time=0	Heartbeat off

The heartbeat packet function is used to keep the Transmission Control Protocol (TCP) connection open when the interval of scheduled GPRS reporting is long

Example	GPRSHB5M
Reply	Set heartbeat 5 minutes ok.

25.3 Server IP&Port

Structure	IP(n),(IP/domain name),(port)	
Explanation	n	0=off, 1=on
	IP/domain name	Server IP
	port	Server port
Example	IP1,www.smart-locator.com,6060	
Reply	Set IP ok.	

Example	IP0
Reply	IP connection disabled.
25.4 GPRS Connection	
Structure	S(n)
Explanation	n=0, GPRS off
	n=2, GPRS on
Example	S2
Reply	GPRS is connecting.
25.5 Check GPRS Settings	
Structure	GPRS?
Reply Example	GRPS: ON APN: internet Username: Password: IP: 1, www.smart-locator.com Port: 6060 Move report time: 30 minutes No move report time: 60 minutes HB: on, 20 minutes

G.26 Working Mode

There are currently 6 working modes. Please check appendix 1 and the document 'Working mode' to know more details.

26. Working Mode		
26.1 Mode 1		
Structure	mode1	
Reply	Set mode 1 ok.	
26.2 Mode 2		
Structure	mode2,(movement time interval),(no movement time interval)	
Explanation	movement time interval	Data update interval when moving
	no movement time interval	Data update interval when not moving
SatFONE.pro7B and SatFONE.pro4 value range for 30~86400 seconds, SatFONE.watch for 60~ ∞		
Example	mode2,03M,01h	
Reply	Set mode2, 3 minutes,1 hour ok.	
26.3 Mode 3		
Structure	Mode3, (time interval)	
Explanation	Time interval	Data update interval when Moving or not moving
SatFONE.pro7B and SatFONE.pro4 value range for 30~86400 seconds, SatFONE.watch for 60~ ∞		
Example	mode3,01H	
Reply	Set mode3, 1 hour ok.	
26.4 Mode 4		
Structure	Mode4, (time interval)	
Explanation	Time interval	Data update interval when Moving or not moving
SatFONE.pro value range for 60~604800 seconds, SatFONE.watch for 60~ ∞		
Example	mode4,30m	
Reply	Set mode4, 30 minutes ok.	
26.5 Mode 5		
Structure	mode5, (time interval)	
Explanation	Time interval	Data update interval when Moving or not moving
SatFONE.pro7B and SatFONE.pro4 value range for 1200~604800 seconds, SatFONE.watch for 60~		
Example	mode5,10h	

Reply	Set mode5, 10 hours ok.
26.6 Mode 6	
(Same as mode 2)	

G.27 Continuous Locate

Continuous locate function will be activated automatically in case of SOS alarm, to track continuously according to a certain interval during several minutes.

27. Continuous Locate

Structure	CL(report interval),(duration time)	
Explanation	report interval	Value range: 10~600 seconds
	duration time	Value range: 60~1800 seconds
H=hour, M=minute, S=second		
Example	CL10S,600S	
Reply	Set live tracking every 10 seconds and last for 10 minutes ok.	

G.28 Stop Sending Stored Historical Data to Server

28. Stop Sending Historical Data to the Server

Structure	flush
Reply	Flush ok!

G.29 Check Function Settings

Check the current settings.

29. Check Settings

Structure	status
Reply	Mode:4,0 second LED: on Beep: on Vibration: on Time zone: +10:00 GEO Fence:0,0,0,0 Motion alarm: off No Motion alarm: off Tilt alert: off Fall alarm: on, level:5 Low power alarm: on,15% SOS Call:10 minutes, loop:1

G.30 Set GPS Map Link

To change GPS map link format when necessary.

30. Set GPS Map Link

Structure	GPSURLwww.google.com/maps?q=%7f,%7f
Reply	GPSURL Set ok.

G.31 Home Wi-Fi List

To set, add, delete and check Home Wi-Fi list.

32. Home Wi-Fi List		
31.1 Delete Home Wi-Fi List		
Structure	WFD	
Reply	Delete home wifi list successfully.	
31.2 Automatically Add Home Wi-Fi List		
Structure	WFA(coordinates),(location name)	
Explanation	coordinates	latitude,longitude
	location name	For example, home, office, garden
To automatically add Beacons nearby, with RSSI >80		
Example	WFA22.6535181,114.0009472,office	
Reply	Add successfully Home WiFi (mac address).	
31.3 Set Home Wi-Fi List		
Structure	WFS(coordinates),(mac1),(location name1);(mac2),(location name2);.....	
Explanation	coordinates	latitude,longitude
	mac	Home WiFi mac address
	Location name	For example, home, office, garden
You can set only one location in one command, and you can set more than one Home Wi-Fi for one location		

Example	WFS22.6535181,114.0009472,f7:37:b7:10:81:ce,room1;E6:6F:80:A9:61:5D,room2	
Reply	home wifi list set OK.	
31.4 Check Home Wi-Fi List		
Structure	WFQ(n)	
Explanation	n	Check from Home WiFi (n)
Example	WFQ1	
Reply	1,F7:37:B7:10:81:CE,office1 2,C4:9F:A6:15:24:3F,office2 3,D3:E3:AC:86:5E:46,office7 4,DF:19:ED:B3:63:4C,room1 5,DF:79:14:AF:36:87,room9 6,EA:D9:02:05:82:61,room3 7,F1:19:79:42:18:21,room4 8,CD:B1:31:A7:BB:F9,room2 9,F3:64:2A:58:FB:57,room8 10,F9:2A:AB:5A:2E:E3,room6	
31.5 Turn on/off Home Wi-Fi Location		
Structure	WFE(n)	
Explanation	n=0	Home WiFi off
	n=1	Home WiFi on
Example	WFE1	
Reply	home wifi loc is enabled!	

G.32 TCP fast**32. TCP fast**

Structure	tcpfast(n)	
Explanation	n=0	n=1
Example	Tcpfast0	
Reply	Alert TCP fast off.	

G.33 Heart rate detect

Support SatFONE.watch and SatFONE.pro6

33. Heart rate detect

Structure	hrs(n),(internal time)	
Explanation	n=0	Heart rate detect off
	n=1	Heart rate detect on
	internal time	Value range: 60~86400 seconds
Example	hrs1,60M	
Reply	Set no heart detect 60 minutes ok.	

G.34 Step detect

Support SatFONE.watch and SatFONE.pro6

34. Step detect

Structure	detpedo(n),(internal time)	
Explanation	n=0	Heart rate detect off
	n=1	Heart rate detect on
	internal time	Value range: 60~86400 seconds
Example	detpedo1,60M	
Reply	Set no step detect 60 minutes ok	

G.35 GEO fence detect

Support SatFONE.pro4 and SatFONE.watch

35. Step detect

Structure	detgeo(n),(internal time)	
Explanation	n=0	Heart rate detect off
	n=1	Heart rate detect on
	internal time	Value range: 60~86400 seconds
Example	detgeo1,60M	
Reply	Set GEO detect 60 minutes ok	

3. Particular SMS Commands

Particular Commands are only available in some product models, or some firmware versions.

P04 Particular in SatFONE.pro**P04.1 Change the Language_SatFONE.pro****Change language**

Model	SatFONE.pro
Structure	Lo(language code)

SatFONE.pro Current Language List

Target Language	Command	Reply
English-US	Loen-us	Set en ok.
French	lofr	Set fr ok.
Polish	lopl	Set pl ok.
Dutch	Lonl-nl	Set nl ok.
German	lode	Set de ok.
Chinese	lozh-cn	Set zh ok.
Chinese Yue-Hong Kong	lohk	Set hk ok.
Portuguese	lopt	Set pt ok.
Spanish	loes	Set es ok.
Italian	loit	Set it ok.
Japanese	loja	Set ja ok.
Turkey	lotr	Set tr ok.

P04.2 Alarm Speak_SatFONE.pro

You can send a message to device, then device can speak it as voice. This function is provided by TTS robot-speaking tech and supports many languages. Please, as the first step, change the language setting to the target language.

ALarm Speak

Model	SatFONE.pro	
Firmware	Later than SatFONE.pro.8601.2110	
Structure	Alarm:(text)	
Explanation	text	Whatever you want device to speak
Example	Alarm:good morning	
Reply	Alarmspeak ok.	

P04.3 OTA Upgrade_SatFONE.pro

To upgrade OTA and check the OTA upgrade status.

OTA Upgrade	
Model	SatFONE.pro
P.8.1 To upgrade OTA	
Structure	fota
Explanation	Receiving this command, device will download the OTA file from server, and automatically upgrade.
Reply	Fota received!
P.8.2 To check OTA upgrade	
Structure	fotastatus
Reply 1	update ok Target buildId:1638772748
Reply 2	downloading progress:67% Target buildId:1638772748 check new version success! Started
Reply 3	update failed Target buildId:1638772748

P05 Particular in SatFONE.watch

P05.1 Change the Language_SatFONE.watch

Many languages are available in SatFONE.pro and SatFONE.watch, supported by TTS robot-speaking tech.

Change language

Model	SatFONE.watch
Structure	Lo(language code)

SatFONE.watch Current Language List

Target Language	Command	Reply
English-US	Loen-us	Set en ok.
French	lofr	Set fr ok.
Polish	lopl	Set pl ok.
Dutch	Lonl-nl	Set nl-nl ok.
German	lode	Set de ok.
Chinese	Lozh-cn	Set zh-cn ok.
Czech	Locs-cz	Set cs-cz ok.
Portuguese	lopt	Set pt ok.
Spanish	loes	Set es ok.
Italian	loit	Set it ok.
Australia	Loen-AU	Set en-au ok.

P05.2 Heart Rating SatFONE.watch

Heart rating is only available in SatFONE.watch and SatFONE.pro6, as the watch has built-in heart-rate sensor.

Heart Rating	
Model	SatFONE.watch, SatFONE.pro
Structure	hr
Given 20 seconds, no matter heart rating succeeds or fails, SMS will be sent to indicate the status, as well as the TCP message to be sent to platform	
Reply 1	Measure Time:08/12/2021 18:48:26 Heart rate:74 Trust level:66%
Reply 2	Measure Time:02/11/2021 09:43:40 Status: Failed

P05.3 Turn on/off BLE Connection_SatFONE.watch

To turn on/off Bluetooth connection.

Turn on/off BLE Connection		
Model	SatFONE.watch	
Structure	BLECONN(n)	
Explanation	n=0	Bluetooth connection off
	n=1	Bluetooth connection on
Example	BLECONN1	
Reply	BLE Connect on.	

P05.4 Message Display_SatFONE.watch

To display message on SatFONE.watch main page.

Message Display		
Model	SatFONE.watch	
Structue	Display(n),(text)	
Explanation	n=0	Device will not beep
	n=1	Device will beep
Example	display1, Please don't forget to take your medicine!	
Reply	Message displayed!	

P05.5 Turn on/off Long Press screen to trigger SOS_SatFONE.watch

Turn on/off Long Press screen to trigger SOS		
Model	SatFONE.watch	
Structue	tttsos(n)	
Explanation	n=0	Long press screen to trigger SOS Off
	n=1	Long press screen to trigger SOS On
Example	tttsos0	
Reply	tttsos off.	

Appendix 1 Summary of Working Modes

Working Mode		Mobile network	Mobile data	Heartbeat	Interval	Call	SMS	Update location
Mode 1		Always on	Always on	Up to you	No	Anytime	Anytime	Only in events
Mode 2	moving	Always on	Always on	Up to you	Yes	Anytime	Anytime	Events& interval
	No-move	Always on	Always on	Up to you	Yes	Anytime	Anytime	Events & interval
Mode 3	moving	Always on	Always on	Up to you	Yes	Anytime	Anytime	Events & interval
	No-move	Always on	Always on	Up to you	No	Anytime	Anytime	Off
Mode 4		Always on	Events & Interval	Off	Yes	Anytime	Anytime	Events & interval
Mode 5		Off	Events & Interval	Off	Yes	Only SOS	Only SOS	SOS
Mode 6	moving	Always on	Always on	Up to you	Yes	Anytime	Anytime	Events & interval
	No-move	Always on	Always on	Up to you	Yes	Anytime	Anytime	Events & interval
Data-off Mode (Default Factory mode)		Always on	Off	Off	/	Anytime	Anytime	Off

Working Mode		GPS	Positioning methods of priority
Mode 1		Only in events	BLE/Beacon→Home Wi-Fi→GPS→Wi-Fi & GSM
Mode 2	moving	Events & interval	BLE/Beacon→Home Wi-Fi→GPS→Wi-Fi & GSM
	not moving	Off	BLE/Beacon→Home Wi-Fi→Wi-Fi & GSM
Mode 3	moving	Always on if no BLE/Beacon, marking every 100min	BLE/Beacon→Home Wi-Fi→GPS→Wi-Fi & GSM
	not moving	Off	/
Mode 4		Events & interval	BLE/Beacon→Home Wi-Fi→GPS→Wi-Fi & GSM
Mode 5		SOS	BLE/Beacon→Home Wi-Fi→GPS→Wi-Fi & GSM
Mode 6	moving	Events & Activated 3 minutes before interval	BLE/Beacon→Home Wi-Fi→GPS→Wi-Fi & GSM
	not moving	Off	BLE/Beacon→Home Wi-Fi→Wi-Fi & GSM
Data-off mode		SOS	/

Appendix 2 Function List

Functions		Action	Scenario	
1		SOS	Call, SMS, TCP alert, Continuous locate	Any emergency
2	Cellphone	Receive Call	ringtone	Like a cellphone
3		Call1	Call someone on contact list	Like a cellphone
4	Positioning	GPS	Provide location	Like a tracker
5		Bluetooth		Near Docking/Beacon
6		Wi-Fi&GSM		When no GPS/BLE
7	Sensor	Fall alarm	Call, SMS, TCP alert	When people fall
8		Tilt alarm		Coma, shock
9		No motion alarm		Coma, shock
10		Motion alarm		Asset tracking
11	Overspeed Alert		SMS, TCP alert	Driving too fast
12	Low battery alert			Battery low
13	Geo fence			Leaving home/area
14	Power off alert		SMS (SatFONE.pro7B only), TCP alert	Power off
15	Power on alert		TCP alert	Turn on
16	Home mode	Home Wi-Fi	SMS, TCP alert	Come home
17		Beacon		
18		Beacon fence alert		Come/leave home
19	Alarm clock		Voice	It's time to get up,do exercise, take medicine, sleep...
20	Find me			I'm here