

Personal Tracker ST900

Ver. 0.2



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1. Introduction

ST900 is a mobile personal tracking device which is small in size as well as cost competitive.

It can be attached to the belt and report the current location data to your mobile phone or to the designated server for the display on a PC whenever.

You can find your children's location on a real time base or your children can send you a SOS signal any time.

2. Features

- ***New technology and latest GPS Chipset.***
- ***GSM Quad band support 850/900/1800/1900 Mhz band width.***
- ***SMS/GPRS communication.***
- ***Three speed dials.***
- ***Voice monitoring***
- ***Voice Call with Hands free kit***
- ***Volume Up/Down in call***
- ***SOS button for emergency.***
- ***Notification for low battery***
- ***Auto-report for real tracking.***
- ***Built in motion detector for motion alarm.***
- ***Safety zone function***
- ***50 Geo-fence for notification.***
- ***Logs 10,000 waypoints(Not implemented)***
- ***Speed violation alarm***
- ***Remote update firmware by serial port(Not implemented)***
- ***Power down mode***
- ***Indicates for GSM,GPS and Battery capacitance level***

2-1. Hardware Specification

2-1-1. GSM/GPRS specification

Item	Description
Power Consumption	Active mode : report interval : 3min. – 77mA(10.8 Hours) 1Hour – 6.2mA(5.5 Days)

	<p>Sleep mode : 4.4mA (7.8 Days)</p> <p>Notice :</p> <p>Not guaranteed, it heavily varies, depending upon GSM network and GPS signal condition.</p>
Frequency / Sensitivity	<p>GSM 850 / 900MHz -104dBm</p> <p>DCS1800 / PCS1900MHz -102dBm</p>
Temperature Range	-20°C ~ +80°C
GPRS	<p>Multi-slot Class 10</p> <p>Support all 4 coding schemes (CS-1, CS-2, CS-3 and CS-4)</p>
Battery	Rechargeable 4.2V, Li-Polymer Battery- 800mAh
Dimension	49 x 73 x 16(T)
Weight	53(including the battery)
Approval	CE, FCC, RoHS, GCF (Option)

2-1-2. GPS specification

Item	Description
Receiver Type	<p>50-channel</p> <p>GPS L1 C/A Code</p> <p>SBAS : WAAS, EGNOS, MASA, GAGAN</p>
Update Rate	1Hz
Accuracy	<p>Position 2.5m CEP</p> <p>SBAS 2.0m CEP</p>
Acquisition	<p>Cold starts 29sec.</p> <p>Warm start 29sec.</p> <p>Aided start <1sec.</p> <p>Hot start <1sec.</p>
Sensitivity	<p>Tracking -160dBm</p> <p>Reacquisition -160dBm</p> <p>Cold start -144dBm</p>
Supply Voltage	Single voltage supply : 2.8V or 3.0V
Digital I/O Voltage Level	2.8V or 3.0V

Antenna type	Intenna
Operating Temp	-40 ~ +85 °C

- 1 All SV @ -130 dBm
- 2 Dependent on aiding data connection speed and latency
- 3 Demonstrated with a good active antenna

3. Accessories

- Wall Charger ---1
- Data Cable ---1
- Carry bag(option -1
- Hands Free(option) --1

4. Install SIM card

Steps :

1. Pick up the stainless cover.



2. Put the SIM Card into the holder



3. Put down the stainless cover left and fasten it in place.



5. Charging battery

● Initially, the rechargeable battery is recommended to charge completely before device usage. Connect ST900 to its supplied charger cable and allow a 4 hour battery charge time as bellow.



< Charging Status >

Red LED blinking : under 30% of full capacitance

Orange LED blinking : 30- 90%

Green LED blinking : Almost Full

Green LED lighting : Full

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6. Appearance



7. LED & Button description

Item	Description
SOS	Emergency button.
OK	Acknowledge button.
CALL1	Preset Phone Number
CALL2	Preset Phone Number
CALL3	Preset Phone Number
Power	Power On/Off
LED1	GSM network status
LED2	GPS signal status
LED3	Battery status

8. Key Functions & LED indicator

Functions	Description
SOS	<p>If you press the SOS button for more than 1sec, ST900 will send an emergency SMS message with vibration to you after then, call up to your phone for voice monitoring mode. If failed, the vibrator is generated for 2 times and trying to next preset phone number. If it failed again in connection, call transfer to the next preset phone number again. The SMS will send only one per each preset phone number. If it failed all of these, it's trying to first preset phone number again. It will be looping until success.</p> <p>If you want to cancel before successfully voice call, press OK button for more 2sec. then it will be stopped with vibration.</p>
Call1/Call2/Call3	<p>You can make a call to the preset phone number with CALL button.</p> <p>Press the button for 1sec. or more, then the first phone number is ready to be connected (it will be vibrated 1 time shortly). In this condition, it will be made. If you want to call to the other phone number, then please press CALL2 or CALL 3 button again and it will be vibrated 1 time shortly and then make it will try outgoing call also. If there's any failed then it will be vibrated 2 times.</p> <p>If you press the OK key for more than 2sec during the call, the call condition is cancelled with 2 times vibration.</p> <p>For voice communication, you need ear piece. If ear piece is not available, then</p>

	<p>ST900 will maintain 'Silent Communication' condition.</p> <p>Notice : If it's empty for pressed CALL key or can't make a call then it will be vibrated twice shortly.</p>
<p>Volume Up / Down</p>	<p>You can control the volume up or down in voice call.</p> <p>CALL1 : Volume up, CALL3 : Volume down</p>
<p>Ok</p>	<ol style="list-style-type: none"> 1. Incoming call: If you press shortly less than 1sec. or press the key of ear piece, it will be accepted. To reject, just press this for more 2 seconds. 2. In call: If you press the key more than 2sec. or press the key of ear piece, it will be ended. 3. In idle : If you want to check the battery level, just press this key for 2sec. <p style="margin-left: 40px;">You can see the color of LED for battery status.</p> <p style="margin-left: 40px;">Red color : almost empty.</p> <p style="margin-left: 40px;">Orange color : enough</p> <p style="margin-left: 40px;">Green color : Full</p> 4. Safety zone : Just press 4 times this key, then ST900 will be set a virtual circle to alert when it goes to outside. <p style="margin-left: 40px;">Using a PC program, you can set a virtual perimeter (circle) on a geographic map, so that ST900 will send an alert notification to you when it exceeds the preset zone. You can set or adjust the virtual perimeter by SMS as well (min. 1 km).</p> <p style="margin-left: 40px;">In order to cancel this, just press 4 times again. It will be turn off with 2 times vibration.</p> <p style="margin-left: 40px;">The valid duration is 2 sec. under after press 1st OK pressed</p>
<p>Power</p>	<p>Turn On :</p> <p>If you press POWER button more than 3 sec, ST900 will be turn on with vibration, LEDs and music sound through ear piece.</p> <p>Turn Off:</p> <p>If you press POWER button until turn on all of the LED, ST900 goes to shutdown with sound through ear piece.</p>
<p>Blue LED</p>	<p>GSM network indicator</p> <p>Turn off this if get a network.</p> <p>Otherwise it will be blinking as bellow..</p> <p>No GSM : 4 times.</p> <p>GSM limited service : 6 times.</p>

	Sim Error : 7 times.
White LED	<p>GPS status indicator</p> <p>Turn off if fixed GPS signal.</p> <p>Otherwise it will be blinking as bellow.</p> <p>No fixed : 2 times.</p> <p>GPS error : 4 times.</p>
LED3(3 colors)	<p>Battery indicator</p> <p>Normally, it's blinking shortly to indicate the battery level for user.</p> <p>RED : Almost empty</p> <p>Orange : enough</p> <p>Green : full</p>

9. Commands

auth(Authentication)

ST900 has a password to prevent unauthorized users from accessing the unit. you can also access it by others phone if you lose your phone.

Command format : <nick name>;AUTH;<password>;<new password>;<owner Number>

Command : ST900;AUTH;123456;54321;21140109

Response : OK; AUTH; ;123456;54321;21140109

Notice : Default : nick name -"ST900" password -12345

find(Location poll)

ST900 will reply the current location to you then you can know whether moving or staying with current speed and heading. the other way is call to ST900. If ST900 received one or more RING and disconnected, it's automatically reply the current location to you.

Command format : <nick name>;FIND

Response format : <nick name>;date;hh:mm:ss;<la>;<lo>;<speed>;<course>;<position fix>

Command : ST900;FIND

Response : ST900;20100825;06:57:35;37.478888;126.888888;4.50;0.00;1

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call(Preset phone number)

The phone buttons on ST900 can be preset numbers. If user press long key such as CALL1,CALL2 or CALL3 then ST900 will make a call to preset phone number.

Command format : <nick name>;CALL;<Phone 1>;<Phone 2>;<Phone 3>

Command : ST900;CALL;21140101;21140102;21140103

Response : OK; CALL;21140101;21140102;21140103

Notice : Even though you don't have three preset phone number, you have to fill all of three fields. Otherwise ST900 will be report parameter error.

speed(speed violation)

When ST900 moves at a greater velocity than the preset speed then it will report to owner.

Command format : <nick name>;SPEED;<speed limit>

Event Format : <nick name>;<status>;YYYYMMDD;HH:MM:SS;<Latitude>;<Longitude>;<speed>;<course>;<gps fix>

Command : ST900;SPEED;100

Response : OK; SPEED;100

ST900;SPEED VIOLATE;20100826;11:25:26;+37.262839;+127.359847;160.000;000.00;1

ST900;SPEED OBEY;20100826;11:25:26;+37.262839;+127.359847;30.000;000.00;1

network(network Information)

In order to use TCP communication, you have to configure the network information to ST900.

Refer to "Worldwide mobile network Access Point Name(APN) Settings".

Command format : <nick name>;NETWORK;<Bearer>;<APN>;<User ID>;<Password>

Command :ST900;NETWORK;1;telcel;telcel;telcel

Response :OK; NETWORK :1;telcel;telcel;telcel

zone(alarm zone)

ST900 can alert when it goes out from the specified zone.

Command format :<nick-name>;ZONE;<enable>,<Index-No>;<Lat>;<Lon>;<Radius>
,<In>;<Out>

Parameter description

<enable> - enable:1, disable :0

<Index-No> - 2~50

<Radius> - 1~10000

<In>/<Out> - Event enable :1, Disable :0

Command : ST900;ZONE;1;2;37.478811;126.885642;5;1;1

Response :OK; ZONE;1;2;37.478811;126.885642;5;1;1

Event Format : <nick name>;<status>;YYYYMMDD;HH:MM:SS;<Latitude>;<Longitude>;<speed>;<course>
;<gps fix>

Event Message :

ST900;GEO-OUT;2;20100826;12:22:22;+37.478811;+126.885642;160.000;000.00;1

ST900;GEO-IN;2;20100826;12:22:22;+37.478811;+126.885642;100.000;000.00;1

szone

You can set radius for safety zone.

Command format: <nick-name>,SZONE,<radius>

Command : ST900;SZONE;2

Response: OK,SZONE,2

Unit : km

Event Format : <nick name>;<status>;YYYYMMDD;HH:MM:SS;<Latitude>;<Longitude>;<speed>;<course>
;<gps fix>

Event Message :

ST900;SZONE-OUT; 20100826;12:22:22;+37.478811;+126.885642;100.000;000.00;1

ST900;SZONE-IN; 20100826;12:22:22;+37.478811;+126.885642;100.000;000.00;1

motion(alarm motion)

ST900 can detect any motion and report to owner. This is very useful for your trip. For example, if you place it

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door back before leave your hotel room and stranger open the door then ST900 recognize any motion and report it to you. It will be automatically disable this function after report.

Command format : <nick name>;MOTION;<ON or OFF>,<Level>

Command : ST900;MOTION;ON;4

Response : OK;MOTION;ON;4

Level : 1 ~ 10

G-range : there are 10 steps in 2G only.

battery(alarm low battery)

ST900 report a warning message when battery is low(about 20% bellows).

Command format : <nick name>,BATTERY,<ON or OFF>

Command : ST900;BATTERY;ON

Response :OK, BATTERY,ON

svr(sever parameters)

ST900 can communicate by TCP to your Pc or the server.

Command format : <nick name>;SVR;<Server IP>;<Port>

Command : ST900;SVR;211.123.45.1;12345

Response :OK;SVR; 211.123.45.1;12345

report(Auto report)

ST900 can automatically report to you by setting interval time value.

Range : 1 ~ 65535

Disable : 0

Command format : <nick name>;REPORT;<Interval time(sec.)>

Command : ST900;REPORT;600

Response :OK;REPORT;600

Notice : In case of TCP sending, ST900 is not always connected to the server. therefore, there's needs time to GPRS network access and you can't get them immediately if report time is very shortly.

imei(Get IMEI)

ST900 send a message of IMEI information to you.

Command format : <nick name>;IMEI

Command : ST900;IMEI

Response : OK,IMEI,111111111111110

ver(Get version)

ST900 send a message of ST900 software version information to you

Command format : <nick name>;VER

Command ST900;VER

Response : OK;Ver.;ST900-00.00-090929-A

bat?(battery left)

ST900 send a message about battery level to you.

Command format : <nick name>,BAT?

Command: ST900;BAT?

Response : OK,BAT,91.8%

stype(Send Type)

ST900 can support the SMS and TCP communication.

There are four types in protocol as follows.

Protocol type	<mode>	Description
SMS Only	0	Report a message through SMS only.
SMS Preferred	1	Report a message through SMS first and if failed then retry it by TCP.
TCP Only	2	Report a message through TCP only.
TCP Preferred	3	Report a message through TCP first and if failed then retry it by SMS.

Command format : <nick name>;STYPE;<mode>

Response : OK,stype,3

Ptype(Protocol type)

ST900 can support several protocol type for users such as server, personal..and so on.

Command format : <nick name>;PTYPE;<protocol type>

Command : ST900;PTYPE;0

Response:OK;PTYPE;0

10. Others

Voice Monitor

ST900 have a microphone. So you can listen to the sound what happen in there.

Data logger

ST900 can store 10,000 way points which is included location and time.

Command format: <nick name>;LOGGER;<Enable/DIsable>;<Interval>

Summary of Commands

Command	Format
Set Auth	<nick name>;AUTH;<password>;<new password>;<owner Number>
Location poll	<nick name>;FIND
Set preset phone number (SOS, Call 1,Call 2)	<nick name>;CALL;<Phone 1>;<Phone 2>;<Phone 3>
Set Zone	:<nick-name>;ZONE;<enable>;<Index-No>;<Lat>;<Lon>;<Radius>;<In>;<Out>
Set Safety zone Radius	<nick-name>;SZONE,<radius>
Set motion alarm	<nick name>;MOTION;<ON or OFF>;<Level>
Set battery alarm	<nick name>;BATTERY,<ON or OFF>
Set over speed alarm	<nick name>;SPEED;<speed limit>
Set network parameters (APN,Usr ID,PWD)	:<nick name>;NETWORK;<Bearer>;<APN>;<User ID>;<Password>
Set server parameters (IP,Port)	<nick name>;SVR;<Server IP>;<Port>
Set Auto-report	<nick name>;REPORT;<Interval time(sec.)>
Get IMEI	<nick name>;IMEI
Get Request version	<nick name>;VER
Get Battery Capacity	<nick name>;BAT?
Set Send Type	<nick name>;STYPE;<mode>
Set Protocol Type	<nick name>;PTYPE;<protocol type>

Alert : speed violation, auto report, battery low, geo-fence violation, motion

Emergency : SOS

APPENDIX

Worldwide mobile network Access Point Name(APN) Settings.

Country	Network	Access Point Name - APN	User Name	Password
Albania	Vodafone	Twa	guest	guest
Argentina	CTI	internet.ctimovil.com.ar	guest	guest
Argentina	Movistar	internet.gprs.unifon.com.ar internet.unifon	wap	wap
Argentina	Personal	gprs.personal.com	[mobile number]	adgj
Australia	Optus	internet	guest	guest
Australia	Telstra	telstra.internet	guest	guest
Australia	Telstra (data bundles)	telstra.datapack	[blank]	Telstra
Australia	Telstra (pay by time)	telstra.pcpack	[blank]	Telstra
Australia	Three	3netaccess	a	a
Australia	Vodafone	vfinternet.au	guest	guest
Austria	Drei	drei.at	guest	guest
Austria	Max Online	gprsinternet	GPRS	[blank]
Austria	Max Online (Business)	business.gprsinternet	GPRS	[blank]
Austria	Max Online (Metro)	gprsmetro	GPRS	[blank]
Austria	Mobilkom A1	a1.net	ppp@a1plus.at	ppp
Austria	OneNet	web.one.at	web	web
Austria	tele.ring	web	web@telering.at	web
Azerbaijan	Azercell	internet	guest	guest
Bangladesh	Grameen Phone	gpinternet	[blank]	[blank]
Belarus	VELCOM	web.velcom.by unlim.velcom.by	web unlim	web unlim
Belgium	Mobistar	internet.be	mobistar	mobistar

	(personal)			
Belgium	Mobistar (business)	web.pro.be	mobistar	mobistar
Belgium	Orange	orangeinternet	guest	guest
Belgium	Proximus (Internet)	internet.proximus.be	guest	guest
Belgium	Proximus (intranet)	intraprox.be	guest	guest
Botswana	Mascom Wireless	internet.mascom	guest	guest
Brazil	Claro	claro.com.br	claro	claro
Brazil	Oi	gprs.oi.com.br	guest	guest
Brazil	Oi (WAP)	wapgprs.oi.com.br	oiwap	oioioi
Brazil	TIM	tim.br	tim	tim
Brazil	Velox	wap.telcel.com	iesgprs	iesgprs2002
Bulgaria	GloBul	internet.globul.bg	globul	[none]
Bulgaria	M-Tel	mms-gprs.mtel.bg	mtel	mtel
Cameroon	MTN Cameroon	INTERNET	guest	guest
Canada	KORE Wireless	apn.zerogravitywireless.com	[blank]	[blank]
Canada	Microcell (Fido)	internet.fido.ca	fido	fido
Canada	Rogers AT&T	internet.com	wapuser1	wap
Chile	Entel PCS	imovil.entelpcs.cl	entelpcs	entelpcs
Chile	Telefonica Movil	web.tmovil.cl	web	web
China	China Mobile	cmnet	guest	guest
China	China Unicom	[none]	guest	guest
Croatia	T-Mobile	web.htgpr	38591	38591
Croatia	VIPNET START	gprs0.vipnet.hr	38591	38591
Croatia	VIPNET PRO	gprs5.vipnet.hr	38591	38591
Croatia	VIPNET 3G	3g.vip.hr	38591	38591

Colombia	Movistar	internet.movistar.com.co	movistar	movistar
Congo	Vodacom	vodanet	vodalive	[blank]
Costa Rica	IceCelular	icecelular	guest	guest
Czech Republic	Cesky Mobil (contract)	internet	guest	guest
Czech Republic	Cesky Mobil (CM Prepay)	cinternet	guest	guest
Czech Republic	Telefonica (contract)	internet	guest	guest
Czech Republic	Telefonica (Go)	gointernet	guest	guest
Czech Republic	Vodafone (contract)	internet	guest	guest
Czech Republic	Vodafone (pre-pay)	ointernet	guest	guest
Czech Republic	T-Mobile	internet.t-mobile.cz	guest	guest
Denmark	3	[none]	guest	guest
Denmark	Orange	web.orange.dk	guest	guest
Denmark	Sonofon	[none]	guest	guest
Denmark	TDC	internet	guest	guest
Dominican Republic	Orange	orangenet.com.do	guest	guest
Egypt	Click Vodafone	internet.vodafone.net	internet	internet
Egypt	MobiNil	mobinilweb	guest	guest
Estonia	EMT	internet.emt.ee	guest	guest
Estonia	RLE	internet	guest	guest
Finland	Dna	internet	guest	guest
Finland	Elisa (Radiolinja)	internet	rlnet	internet
Finland	Saunalahti	internet.saunalahti	guest	guest

Finland	Sonera	internet	[blank]	[blank]
Finland	Song	internet.song.fi	song@internet	songnet
France	Bouygues	ebouygtel.com	guest	guest
France	Bouygues (B2Bouygtel)	b2bouygtel.com	guest	guest
France	Orange (contract)	orange.fr	orange	orange
France	Orange MIB	orange-mib	mportail	mib
France	Orange Mobicarte	orange-acte	orange	orange
France	SFR	websfr	guest	guest
Germany	D2 Vodafone	web.vodafone.de	guest	guest
Germany	E-Plus	internet.eplus.de	eplus	gprs
Germany	O2 (3G)	surfo2	guest	guest
Germany	O2 (GPRS)	internet	guest	guest
Germany	Quam	quam.de	quam	quam
Germany	T-Mobile D1	internet.t-mobile	internet.t-d1.de	t-mobile
Ghana	Areeba (formerly Spacefon)	internet.spacefon.com	guest	guest
Greece	Cosmote	internet	guest	guest
Greece	Telestet	gnet.b-online.gr	MSISDN, e.g. 3093XXXXXXX	24680
Greece	TIM	gint.b-online.gr	web	web
Greece	Vodafone	internet.vodafone.gr	guest	guest
Guatemala	Comcel	Wap.tigo.gt	Wap	Wap
Guatemala	PCS Digital	ideasalo	guest	guest
Guyana	GT&T Cellink Plus	wap.cellinkgy.com	test	test
Hong Kong	CSL	hkcsl or internet	guest	guest
Hong Kong	New World	internet	guest	guest

Hong Kong	Orange	web.orangehk.com	guest	guest
Hong Kong	People	internet	guest	guest
Hong Kong	SmarTone	internet	guest	guest
Hong Kong	Sunday	internet	guest	guest
Hong Kong	Three	web-g.three.com.hk	guest	guest
Hungary	Pannon (normal)	net	guest	guest
Hungary	Pannon (flat rate)	netx	guest	guest
Hungary	Pannon (compressed)	snet	guest	guest
Hungary	T-Mobile (subscription)	internet	[supplied]	[supplied]
Hungary	T-Mobile (non-sub.)	internet	wap	Wap
Hungary	T-Mobile (MMS)	mms-westel	mms	[supplied]
Hungary	Vodafone (contract) (compr.)	internet.vodafone.net	guest	guest
Hungary	Vodafone (contract) (un-comp.)	standardnet.vodafone.net	guest	guest
Hungary	Vodafone (pre-pay) (comp.)	vitamax.internet.vodafone.net	guest	guest
Hungary	Vodafone (pre-pay) (un-comp.)	vitamax.snet.vodafone.net	guest	guest
India	AirTel	airtelgprs.com	guest	guest
India	BPL	bplgprs.com	bplmobile	[blank]
India	BSNL	celloneportal	guest	guest

India	Hutch (normal)	www	guest	guest
India	Hutch (Gujarat)	web	guest	guest
India	Idea Cellular	internet	guest	guest
India	MTNL Mumbai	mmsmtnlmum	mtnl	mtnl123
India	MTNL Mumbai (Plan 2)	gprsmtnlmum	mtnl	mtnl123
Indonesia	Excelcomindo	www.xlgprs.net	xlgprs	proxl
Indonesia	IM3	www.indosat-m3.net wap.indosat-m3.net	gprs	im3
Indonesia	Indosat (Matrix)	satelindogprs.com indosatgprs	guest	guest
Indonesia	Telkomsel	internet telkomsel	wap	wap123
Ireland	Meteor	isp.mymeteor.ie	my	meteor
Ireland	O2 (contract)	open.internet	gprs	gprs
Ireland	O2 (pre-pay)	pp.internet	gprs	gprs
Ireland	Vodafone (contract)	isp.vodafone.ie	vodafone	vodafone
Ireland	Vodafone (pre-pay)	live.vodafone.com	vodafone	vodafone
Israel	Cellcom	internetg	guest	guest
Israel	MTC-Vodafone	apn01	guest	guest
Israel	Orange	orangeinternet	guest	guest
Italy	Blu	INTERNET	guest	guest
Italy	H3G	tre.it	guest	guest
Italy	TIM	ibox.tim.it	guest	guest
Italy	Vodafone	web.omnitel.it	guest	guest

	(Omnitel)			
Italy	Wind	internet.wind internet.wind.biz	Wind	Wind
Jamaica	Cable & Wireless	wap	guest	guest
Jamaica	Digicel	web.digiceljamaica.com	wapuser	wap03jam
Japan	Vodafone (J-Phone)	vodafone	ai@vodafone	vodafone
Jersey	(See UK)			
Kazakhstan	Beeline	internet.beeline.kz	internet.beeline	[blank]
Kenya	Safaricom	web.safaricom.com	web	web
Laos	ETL	etlnet	guest	guest
Latvia	LMT	internet.lmt.lv	[blank]	[blank]
Latvia	Tele2	internet.tele2.lv	gprs	internet
Lebannon	Cellis FTML	internet.ftml.com.lb	plugged	plugged
Lebannon	MTC Touch	gprs.mtctouch.com.lb	guest	guest
Lithuania	Bite GSM	banga	guest	guest
Lithuania	Omnitel (contract)	gprs.omnitel.net	guest	guest
Lithuania	Omnitel (no contract)	gprs.startas.lt	omni	omni
Luxembourg	LUXGSM	web.pt.lu	guest	guest
Luxembourg	Tango	internet	tango	tango
Luxembourg	VOXmobile	vox.lu	guest	guest
Macau	CTM	ctm-mobile	guest	guest
Macau	Macau Hutchison Telecom (Internet)	web.hutchisonmacau.com	hutchison	1234
Macau	Macau Hutchison Telecom (MMS)	mms.hutchisonmacau.com	hutchison	1234
Malaysia	DIGI	diginet	guest	guest
Malaysia	Celcom	celcom.net.my	guest	guest

Malaysia	Maxis 2G (contract)	internet.gprs.maxis	guest	guest
Malaysia	Maxis 3G (contract)	unet	maxis	wap
Malaysia	Maxis (pre-pay)	net	maxis	net
Malaysia	Timecel	timenett.com.my (timenet.com.my?)	guest	guest
Malaysia	TM Touch	internet	guest	guest
Malta	Go Mobile (contract)	gosurfing	guest	guest
Malta	Go Mobile (pre-pay)	rtgsurfing	guest	guest
Mexico	Telcel	internet.itelcel.com	webgprs	webgprs2002
Moldavia	Moldcell	internet	gprs	gprs
Morocco	Maroc Telecom	iam	wac	1987
Morocco	Medi Telecom	wap.meditel.ma	MEDIWAP	MEDIWAP
Netherlands	KPN Mobile	internet	KPN	gprs
Netherlands	O2	internet	guest	guest
Netherlands	T-Mobile (Ben) active	internet	guest	guest
Netherlands	Telfort	internet	telfortnl	password
Netherlands	Vodafone (normal)	web.vodafone.nl	vodafone	vodafone
Netherlands	Vodafone (business)	office.vodafone.nl	vodafone	vodafone
New Zealand	Vodafone (unrestricted)	internet	guest	guest
New Zealand	Vodafone (restricted)	www.vodafone.net.nz	guest	guest
Nicaragua	Alo Pcs	internet.ideasalo.ni	internet	internet

Nigeria	Globacom (Internet)	gprs	wap	[blank]
Nigeria	Globacom (WAP)	glowap	wap	wap
Nigeria	MTN Nigeria	web.gprs.mtnnigeria.net	wap	gprs
Nigeria	Vmobile	wap.vmobile	wap	wap
Norway	Netcom	internet.netcom.no	netcom	netcom
Norway	TalkMore	(same as Netcom)		
Norway	Telenor Mobil (Vodafone)	Internet internet.vodafone.net	guest	guest
Pakistan	UFone	ufone.internet	ufone	ufone
Panama	Cable & Wireless	apn01.cwpanama.com.pa	xxx	xxx
Paraguay	CTI	internet.ctimovil.com.py	ctigprs	ctigprs999
Peru	Claro (TIM)	tim.pe	tim	tulibertad
Philippines	Globe Telecoms (Web)	internet.globe.com.ph	globe	globe
Philippines	Globe Telecoms (WAP)	www.globe.com.ph	globe	globe
Philippines	Smart	internet	witsductoor	banonoy
Philippines	Sun Cellular	minternet	guest	guest
Poland	ERA	erainternet	erainternet	erainternet
Poland	Heyah	heyah.pl	heyah	heyah
Poland	Orange	internet	internet	internet
Poland	Polkomtel	www.plusgsm.pl	guest	guest
Portugal	Optimus	internet	guest	guest
Portugal	TMN	internet	guest	guest
Portugal	Vodafone (Telecel)	internet.vodafone.pt	guest	guest
Russia	BeeLine	internet.beeline.ru	beeline	beeline
Romania	Connex (Vodafone)	internet.connex.ro	internet.connex.ro	connex

Romania	Orange	internet	guest	guest
Russia	Megafon (dv)	internet.dv	guest	guest
Russia	Megafon (kvk)	internet.kvk	guest	guest
Russia	Megafon (ltmsk)	internet.ltmsk	guest	guest
Russia	Megafon (Moscow)	internet.msk	gdata	gdata
Russia	Megafon (mc)	internet.mc	guest	guest
Russia	Megafon (NWGSM)	internet.nw	guest	guest
Russia	Megafon (Siberia)	internet.sib	guest	guest
Russia	Megafon (UGSM)	internet.ugsm	guest	guest
Russia	Megafon (usi)	internet.usi.ru	guest	guest
Russia	Megafon (Volga)	internet.volga	guest	guest
Russia	Motiv (uses BeeLine)	internet.beeline.ru	beeline	beeline
Russia	MTS	internet.mts.ru internet.kuban	mts	mts
Russia	NCC	internet	ncc	[supplied]
Russia	NTC	internet.ntc	guest	guest
Russia	PrimTel	internet.primtel.ru	guest	guest
Saint Lucia	Cable & Wireless	internet	guest	guest
Saint Vincent & the Grenadines	Digicel	wap.digiceloecs.com	wapoecs	wap03oecs
Saudi Arabia	STC	jawalnet.com.sa	guest	guest

SÃnÃgal	Tigo	wap.sentelgsm.com	guest	guest
Serbia-Montenegro	Mobtel Srbija	internet	mobtel	gprs
Serbia-Montenegro	Telekom Srbija	gprsinternet	mts	064
Serbia-Montenegro	Telekom Srbija (MMS service)	mms	mts	064
Serbia-Montenegro	Telekom Srbija (WAP service)	gprswap	mts	064
Singapore	M1	mobilenet	guest	guest
Singapore	SingTel	internet	guest	guest
Singapore	Starhub	shwapint	guest	guest
Slovakia	Eurotel	internet	guest	guest
Slovakia	Globtel	internet	guest	guest
Slovakia	Orange	internet	jusernejm	pasvord
Slovenia	Mobitel (Internet)	internet	mobitel	internet
Slovenia	Mobitel (Internet Pro)	internetpro	mobitel	internet
Slovenia	Simobil	[none]	guest	guest
South Africa	Cell-C	internet	guest	guest
South Africa	MTN	internet	guest	guest
South Africa	Vodacom	internet	guest	guest
South Africa	Virgin Mobile	vdata	guest	guest
Spain	Amena	internet	CLIENTE	AMENA
Spain	Telefonica (Movistar)	movistar.es	movistar	movistar
Sri Lanka	Dialog GSM (contract)	www.dialogsl.com	guest	guest
Sri Lanka	Dialog GSM (pre-pay)	ppwap	guest	guest

Sri Lanka	Mobitel	isp	guest	guest
Spain	Vodafone (Airtel)	airtelnet.es	vodafone	vodafone
Sweden	Tele2, Comviq	isplnk1.swip.net	gprs	internet
Sweden	Tele2 (3G)	internet.tele2.se	wap	wap
Sweden	Telenor (GPRS)	internet.vodafone.net	guest	guest
Sweden	Telenor (3G)	services.vodafone.net	guest	guest
Sweden	Telia	online.telia.se	guest	guest
Sweden	Tre (3G)	data.tre.se	void	void
Switzerland	Orange	internet	guest	guest
Switzerland	Sunrise	internet	internet	internet
Switzerland	Swisscom	gprs.swisscom.ch	guest	guest
Taiwan	Chunghwa Telecom	emome or internet	guest	guest
Taiwan	Far EasTone	fetnet01	guest	guest
Taiwan	KG Telecom	internet	guest	guest
Taiwan	Taiwan Cellular	internet	guest	guest
Thailand	AIS	internet	ais	ais
Thailand	DTAC	www.dtac.co.th	guest	guest
Turkey	Aycell	aycell	guest	guest
Turkey	Telsim	telsim	telsim	telsim
Turkey	Türkcell	internet	gprs	gprs
UAE	Etisalat	mnet	mnet	mnet
UK	3	three.co.uk	guest	guest
UK	Jersey Telecom	pepper	abc	abc
UK	O2 (contract)	mobile.o2.co.uk	web	password

UK	O2 (contract) -faster-	mobile.o2.co.uk	faster	password
UK	O2 (pre-pay)	payandgo.o2.co.uk	payandgo	payandgo
UK	Orange (Pay Monthly)	orangeinternet	user	pass
UK	Orange (Pay and Go)	orangewap	Multimedia	Orange
UK	T-Mobile	general.t-mobile.uk	user	pass
UK	Virgin Mobile	goto.virginmobile.com	user	[space]
UK	Vodafone (contract)	internet	web	webs
UK	Vodafone (pre-pay)	pp.vodafone.co.uk	wap	wap
Ukraine	Djuice	www.djuice.com.ua	igprs	igprs
Ukraine	Jeans	www.jeans.ua	guest	guest
Ukraine	Kyivstar	www.kyivstar.net	igprs	internet
Ukraine	Mobi-GSM	internet.urs	guest	guest
Ukraine	UMC	www.umc.ua	guest	guest
Uruguay	ANCEL	gprs.ancel	guest	guest
Uruguay	CTI	internet.ctimovil.com.uy	ctiweb	ctiweb999
Uruguay	Movistar	webapn.movistar.com.uy	movistar	movistar
USA	Cingular (ex AT&T)	proxy	guest	guest
USA	Cingular (With acceleration)	ISP.CINGULAR	ISPDA@ CINGULARGPRS .COM	CINGULAR1
USA	Cingular (NO acceleration)	ISP.CINGULAR	ISP@ CINGULARGPRS .COM	CINGULAR1

USA	Cingular (non-contract)	WAP.CINGULAR	WAP@ CINGULARGPRS .COM	CINGULAR1
USA	T-Mobile (Internet)	internet2.voicestream.com	guest	guest
USA	T-Mobile (VPN)	internet3.voicestream.com	guest	guest
USA	T-Mobile (non- contract)	wap.voicestream.com	guest	guest
Uzbekistan	Uzdunrobita	net.urd.uz	user	pass
Venezuela	Digitel TIM	gprsweb.digitel.ve	guest	guest

Revisions

Rev.	Date	Changes	Initial
0.0	2009-10-18	Created	HG.Park

FCC RF exposure information

This Quad band GSM tracker is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for GSM tracker employs a unit of measurement known as the Specific Absorption Rate, of SAR. The SAR limit set by the FCC is 1.6 W/kg. The tests are performed in positions and locations (e.g., worn on the body) as required by the FCC for each model. The SAR value for this model when tested for use worn on the body, as described in this user guide, is 0.297 W/kg for GPRS 850 and 1.440 W/kg for GPRS 1900.

Body-worn operation

For body worn operation, this tracker has been tested and meets the FCC RF exposure guidelines when used with the accessories supplied for this product.

The FCC has granted an Equipment Authorization for this model handset with all reported SAR levels evaluated as in compliance with the FCC RF emission guidelines. SAR information on this model handset is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on FCC ID: WA2ST900

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) website at <http://www.phonefacts.net>.

The belt clip which provided by manufacturer is designed to maintain a safe distance between the equipment and the user's body. Do not attach the equipment to the body using any non-approved accessories. Use of other accessories may not ensure compliance with FCC Radio Frequency exposure guidelines. Without belt clip, at least 1.5 cm safe distance between the equipment and the user's body should be maintained.



ST900 Packing List

FCC Notice and Cautions

FCC Notice

- The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Cautions

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.