



S-911 GPS PERSONAL LOCATOR

USER'S MANUAL & REFERENCE GUIDE

Revision 2.11

Copyright 2005 by Laipac Technology Inc.
All Rights Reserved

www.laipac.com

TABLE OF CONTENTS

Welcome	2
S-911 Personal Locator Features	3
Electrical & Environmental	4
GPS Engine Specifications	4
Getting Started	6
S-911 Personal Locator™ Physical Features	8
Charging the battery	9
Inserting the SIM card	10
Operating the S-911	13
Learning the Basics of the S-911 Personal Locator	15
Report GPS Position in real-time by GSM or GPRS	15
Data Logger for GPS Position (Waypoints)	15
2 Way Communication (Fixed Number Phone calls)	15
Instant Geo-Fence Setting	16
Switch From SMS to GPRS Mode	16
Required Device Programming Procedures	17
Configuring the S-911	17
Frequently Asked Questions	26

SAFETY PRECAUTIONS

Remember to comply with legal requirements and local restrictions when using the S-911. For example in Airplanes, Gas Stations, Hospitals and any other environment where usage of GSM/CDMA equipment is prohibited. The S-911 can interfere with the functionality of pacemakers and hearing-aids. Users should use caution when keeping the S-911 in close proximity to such devices. For more information consult your physician. You may only open the S-911 to replace the battery or SIM card only. Only authorized battery replacements should be used and failure to comply will void the warranty and can cause serious injury. Under no circumstances should the user open the battery.

DISCLAIMER AND LIMITATION OF LIABILITY

The specifications and information regarding the products in this manual are subjected to change without previous notice. All statements, information, and recommendations in this manual are believed to be accurate but are represented without warranty of any kind, express or implied, users must take full responsibility for their applications of any Products - Reproduction of the contents of this manual, in whole or in part, without written permission of Laipac Technology, Inc. is prohibited. S-911 Personal Locator, *Instant Geofence* and *Silent Call 911* are the registered trade mark owned by Laipac Technology, Inc. This product contains Laipac's S-911 software to work under *Microsoft® Windows XP* operation system, including the use of Hyper Terminal, and Microsoft Office Access which are registered trademarks of Microsoft Inc.

Laipac Technology Inc. and its suppliers assume no responsibility for any damage or loss resulting from the use of this product and user's guide. Laipac Technology Inc. and its suppliers assume no responsibility for any loss or claims by third parties that may arise through the use of the software. Laipac Technology Inc. and its suppliers assume no responsibility for any damage or loss caused by no connection of cell phone network, GPS network, and misconduct of monitoring operation, dead battery, or repairs

Copyright 2005 by Laipac Technology, Inc. All Rights Reserved

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

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. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced cell phone, radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the device

Welcome



Congratulations on purchasing the S-911 Personal Locator.

The S-911 Personal Locator is a real-time personal tracking device which operates over GSM/GPRS networks and utilizes a built-in high sensitivity GPS receiver. Your S-911 contains...

- a high sensitivity GPS receiver to connect to a laptop for in-car navigation
- a GPS data logger which can plot more than 1000 waypoints
- a real-time emergency assistance device with location based service
- one-key dialling for 2-way voice communication over GSM and location reporting over SMS/GPRS
- a system ideal for child protection as well as personal, vehicle, and asset security
- a speed limit alert, mileage report, and out of Geo-Fence alert
- And much more...

The S-911 is an all-in-one compact and unique personal safety device.

The following guide will help you set up the S-911 Personal Locator and quickly teach you to use it. If you experience any problems please contact: tech@laipac.com

S-911 Personal Locator™ Features

- Available for GSM/GPRS 850/1900 MHz & 900/1800 MHz
- Complies with FCC & CE
- Compact and robust design for portable usage
- GPS, GSM/GPRS & Battery Status Indicator
- Internal Li-Ion rechargeable battery
- Built in Very High Sensitivity GPS receiver and 360 degree GPS antenna
- 3 x Emergency buttons
 - 2 x Fixed phone number 2-way communication buttons
 - 911 Emergency Call button with silent call feature by digital voice with GPS position report
 - SMS message sending feature and instant Geo-Fence button
- 1 x Power button and 1 x Function button
 - Power On-Off button and sleep mode feature
 - Function button for SMS, Geo-Fence, and SOS features
 - Communication mode switch from GSM <-> GPRS
- Multi-language support allows users to select between English and Spanish for 911 Emergency Calls to police stations, monitoring centres, or other authorities.
- NMEA Output to USB for In-Car navigation.
- Instant Geo-Fence capability with in-out of fence reporting.
- Intelligent data logging by setting distance & time intervals. Data logger has built in 256Kb flash memory to record time stamps, speed, position, and events.
- GSM/SMS and GPRS real-time position reporting by time interval or distance travelled.
- The ability to set parameters either remotely or locally through the S-911 Data Port.
- Distance accumulator built in for mileage reporting.
- Over-speed warning report
- Sleep mode and wake up mode to extend the battery life to over a week.
- New Features include:
 - Detect and accept incoming calls when in GPRS Mode
 - Newly created configuration GUI environment
 - Boot-loader support for easy firmware updates

- Outgoing ring tone and call drop detection
- Improved L.E.D. Status Indication

Electrical & Environmental

	Min	Typical	Max	Units
Li-Ion Battery Voltage	3.6	4.2	-	V
Current Consumption in operation mode	-	70	100	mA
Current Consumption in Sleep Mode	-	0.3	-	mA
Peak Current (< 100mS)			1500	mA
Supply ESD susceptibility			12	kV
Ambient operating temperature	-30		70	° C
Storage temperature	-40		100	° C

GPS ENGINE SPECS (New SW for high sensitivity)

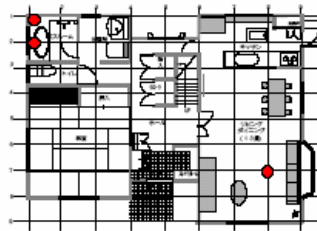
	<i>Value</i>	<i>Units</i>
Channels	12	Ch.
Position accuracy	< 10	Meters
Velocity accuracy	0.1	M/S
Time accuracy	1	uS
Cold start acquisition time	48	S
Warm start acquisition time	38	S
Hot start acquisition time	8	S
Maximum altitude tracked	18,000	M
Tracking Sensitivity	-153	dBm
Navigation Sensitivity	-153	dBm

Some performance examples...

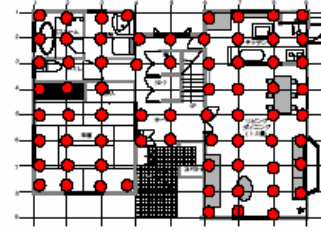
EnVironment



Standard



New Software



Getting Started

IMPORTANT NOTICE: PLEASE READ AND FULLY UNDERSTAND THIS MANUAL BEFORE ATTEMPTING TO OPERATE THE S-911 PERSONAL LOCATOR. FAILURE TO COMPLY CAN RESULT IN IMPROPER USAGE WHICH IS NOT COVERED BY THE MANUFACTURES WARRANTY

You will need the following items on hand to follow the instructions in this guide

Hardware

S-911 Personal Locator

AC travel charger 110-220V with cable

USB Programming cable

You will also need the following items which are not included in the purchase of the unit itself:









- SIM card for which you have an activated account with a mobile operator*
- Location with GSM/GPRS coverage for S-911 Personal Locator **
- Electrical outlet
- PC or laptop with USB port through which you can configure the S-911 unit
- Windows® 2000/XP OS

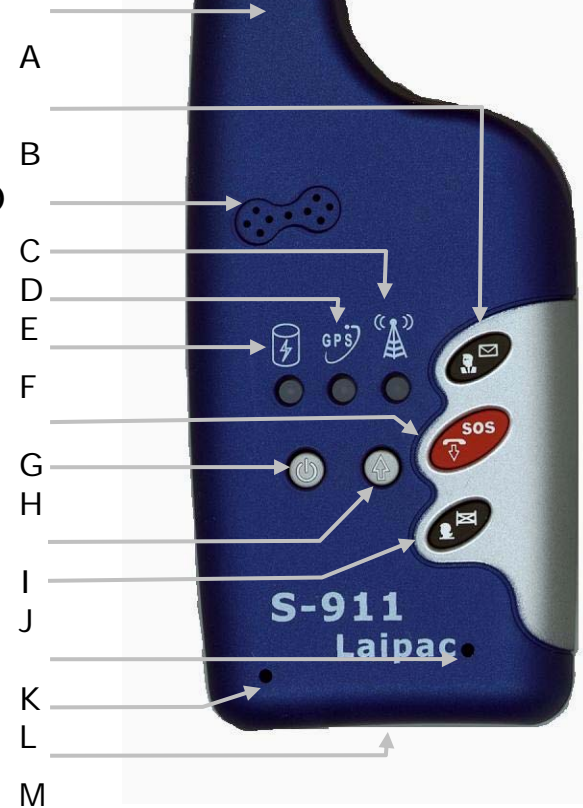
** We recommend choosing the GPRS (General Packet Radio Service) Data service option*




*** S-911 Personal Locator is dual band for 850/1900Mhz (model 205) or 900/1800Mhz (model 206). We recommend that users contact their local GSM carrier for the correct frequency before purchasing the unit.*

**S-911 Personal Locator™
physical features**

The following illustrations show the locations and names of the physical features:

- A. GPS Antenna**
-  **B. Button 1 (Speed Dial 1 & SMS Transmit)**
- C. Speaker**
-  **D. GSM/GPRS LED Indication**
-  **E. GPS LED Indication**
-  **F. Busy/Battery LED Indication**
-  **G. Button 2 (Hang Up & SOS 911)**
-  **H. Power On/Off**
-  **I. Shift-** When held down in conjuncture with button 1,2,3 the S-911 performs alternate operation associated with that button.
-  **J. Button 2 (Speed Dial 2 & Enable Default Geofence Radius)**
- K. Reset Pin Hole**
- L. Microphone**
- M. Charging/Data Port**



Button	Function	Alternate Function
	Speed Dial	Send SMS position
	Hang-up	S.O.S
	Speed Dial 2	Enable Geofence

Charging the battery

Before using your S-911 Personal Locator, charging the battery is necessary. Without fully charging the unit it may not turn on at first attempt. We recommend 3-4 hours to fully charge the unit.

When the battery voltage drops to 3.0V, the S-911 Low Battery Alert LED (Red Status LED) will flash to warn the user to charge the S-911 device so that the device may continue to work. When the battery voltage drops to 2.8V, the S-911 microcontroller will turn off the device to prevent the battery from over-discharging. It is recommended to connect the S-911 to the charger whenever possible. While on charge, the Battery Charge Management System will engage the Floating Charge Mode. In this mode, the microcontroller will monitor the battery and engage charging when the voltage drops below 3.6V.

When the battery charger is plugged in, the Red Status LED will be on to indicate that the S-911's battery charging procedure is activated.

To charge the battery, plug the universal travel type (100-220AC) AC adaptor into a wall outlet. Then plug the charger's cable connector into the Data Port of the S-911, as shown in the picture. The LED of the charger adaptor will blink between green and red which indicates that charging is in progress. The LED will turn to green when the charging process is complete.



Inserting the SIM card

A valid SIM (Subscriber Identity Module) card must be provided by the user in order to use this device. Your GSM Mobile phone carrier will give you one when you subscribe. The SIM card must be a 3V SIM. The S-911 personal locator is not compatible with the older 5V version SIM cards. Your SIM card will contain account information such as your phone number, network information, SMS settings ... etc.

Notes: Your provider for location based service may supply you with an S-911 personal locator which has a SIM card already inside. If so do not open the case or the warranty may be void. The S-911 personal locator® is designed to be a robust and anti-vandalism personal safety device. It is unlike a cell phone where the battery may be easily removed. The user will find that in most situations, the SIM card has been installed by the distributor or service provider along with a warranty seal.

If you need to insert a SIM card into your unit:

1. Remove the main screw



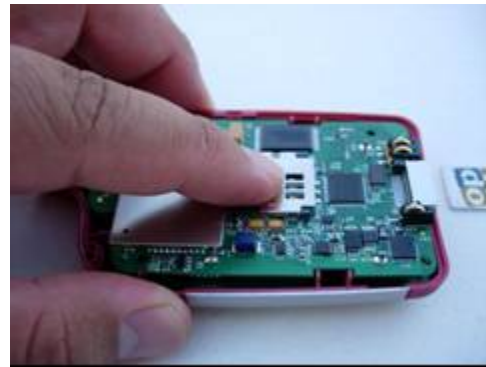
**Main
Screw**

2. Use your fingers to open the case as shown in the picture below.



3. Follow the pictures for the placement of the SIM card.

Note: Please be as cautious as possible during this process because the internal circuitry may be damaged by excessive Electrostatic Discharge (ESD).



Press and Push the SIM card holder with one finger toward right.



Lift the top holder and place the SIM card face down as shown.

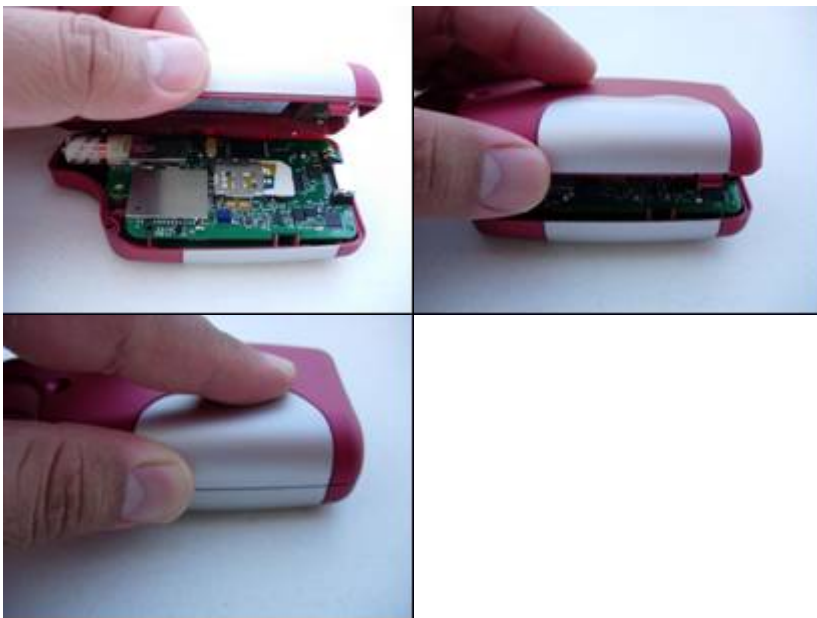


Close the top holder and push to the left to close the SIM card holder.



Non-Contact Slip

Remove the Non-Contact Slip inside the back case.



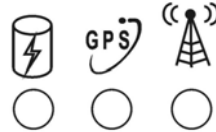
Close the case carefully and replace the main screw.

Congratulations! Now your S-911 is ready to go!


Note: Please ensure that your SIM card is activated, and GPRS service is available. Please contact your GSM Network Service provider for assistance.

Operating the S-911

Do not proceed any further unless you have completed the preceding steps. Once you have inserted a valid SIM card, and fully charged the battery than you are ready to operate the *S-911 Personal Locator*®. Once the cover is closed the 3 LEDs will blink sequentially to indicate that the unit is working with the battery.





Powering up the S-911 Personal Locator™


1. To turn the unit on press the Power button  and hold for 2 seconds. The Status LED will turn on and the GPS and GSM LEDs will also blink.

2. Press and hold the Power button  for 2 seconds and the Status LED  will turn on and off and then the unit will shut down.

Notes:

1. **The Status LED**  will turn on and off each time a command is processed. A command can be issued by pressing a button or executing a tracking task. This is to acknowledge that the task has been processed. Try not to over-press buttons when the Status LED is on. The S-911 personal locator will ignore repeated actions such as pressing the same button multiple times in a short period. It will attempt to respond only to a valid action.

2. **The GSM LED**  will be red when there is no SIM card inside the S-911 Personal Locator. Place a valid SIM card inside the unit (see steps above) and the GSM LED will blink to show that the unit has been registered with the GSM network.

3. **The GPS LED**  will blink green once the unit is on. When the GPS LED stops blinking and stays green the S-911 Personal Locator has achieved a valid GPS location. The S-911 uses a highly sensitive GPS receiver with a 360 degree high gain GPS antenna. It's unlike other commercial products in that the S-911 can be facing any direction and still receive a valid GPS position. In most situations the S-911 needs a direct line of site to open sky to have a short cold start time. Once the unit gets a valid GPS position (GPS LED is constantly green), the user no longer needs to maintain a line of sight to





open sky. The user may then go indoors, under a bridge, inside a vehicle, or navigate through urban environments and the S-911 will continue to keep a valid GPS position. Users must be aware that the S-911 is not yet a 100% indoor GPS system. Real life applications may present situations where RF noise, RF interference, and other conditions may affect the performance of the GPS while indoors.

Learning the Basics of the S-911 Personal Locator

Feature Descriptions

The S-911 Personal Locator™ has the following features:


Report GPS Position in real-time by GSM or GPRS


- Report GPS position by time interval automatically
- Report GPS position by distance traveled automatically
- Report GPS position by event (geo-fence or over-speed)
- Report GPS position by request from the Control Center
- Report GPS position by pressing  + 
- Report GPS position with Digital Voice by pressing  +  for 2 seconds

Data Logger for GPS Position (Waypoints)

- Log GPS position by time interval automatically
- Log GPS position by distance traveled automatically
- Log GPS position by event (geo-fence or over-speed)
- Log GPS position by request from the Control Centre
- Download GPS Data Logger data remotely via GPRS or locally using the USB port

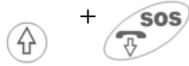
2 Way Communication (Fixed Number Phone calls)

- Initiate 2 way voice communication with the number stored in memory location 1 by pressing 

To hang up, press 

Note: The programmed phone number stored in memory location 1 could be a father's phone number for example.


- **Silent Call** the programmed emergency phone number by pressing



for 2 seconds


Note: This feature provides a silent phone call to the authorities while the user is in a critical situation and not able to talk. A typical scenario may involve calling Emergency 911 or some other Monitoring Centre's phone number with a digital voice message in English or Spanish. The message consists of the following:

*This is an emergency call from the S-911 Personal Locator.
The current UTC time is: hh.mm.ss am or pm, mm/dd/yyyy
The current position is: Latitude xx.xxxx, Longitude xx.xxxx
The current speed is: xx.xx km/hr*

To hang up, press 



- Initiate 2 way voice communication with the number stored in memory location 3 by pressing



To hang up, press 

Note: The programmed phone number stored in memory location 3 could be a Mother's phone number for example.

Instant Geo-Fence Setting

- By pressing  + , the personal locator will create a virtual Geo-Fence with the default radius (in meters) and the centre point located at the current GPS position. If the device moves out of this virtual fence area, it will report to the control centre or a cell phone as a warning event.

Switch From SMS to GPRS Mode

- To Switch from SMS Mode to GPRS Mode, press and hold the Shift button, then hold the power button for 2 seconds. You will notice the status LED flash indicating the activity is being performed. The S-911 confirms when GPRS mode is active by flashing the antenna LED red with a green background.

Required Device Programming Procedures

The S-911 Personal Locator must be programmed using the provided programming cable and a USB port from a PC or laptop.

In order to configure the S-911 Personal Locator, you must install the S-911™ USB Drivers found on the S-911™ Software & Support CD.

- Place Laipac's S-911™ Software & Support CD into the CD drive and wait for the autorun menu to appear.
- Click on the icon labeled "USB Driver Installation"
- Click on "Install" when the driver installation window appears

A blue, rounded rectangular button with a metallic border and a slight shadow, containing the text "USB Driver Installation" in white, bold, sans-serif font.


Configuring the S-911

Depending on which version of the S-911 Personal Locator firmware you have you may use the HyperTerminal or the Laipac Configuration Utility to configure your device. For version 1.31 and below please use the HyperTerminal for configuration. If you have version 1.32 or newer you may use the Laipac Configuration Utility.

Check COM-PORT Configuration

You need to determine which COM port the S-911 is emulating. To do this, right click on **My Computer**, left click on **properties**, left click on the **Hardware** tab (located at the top), than finally left click on **Device Manager**.

Expand the "PORTS (COM & LPT)" tab within the Device Manager. Take note of which COM PORT the S-911 is occupying



Example:  S911 USB to UART Bridge Controller (COM4)

Once in Device Manager, Using the HyperTerminal

- Run Windows HyperTerminal
PC->Start->All Programs->Accessories->Hyper-terminal, Create a new name for S-911 Setup and choose a COM port which matches the Laipac S-911 USB Virtual COM port which was found above with the following settings:

**Bits Per Second = 9600, Data Bits = 8, Parity = None, Stop Bit = 1,
Flow Control = None.**

(Note: If Flow Control is set to Hardware it will cause the Hyper-terminal to ignore any keyboard input. Users will experience trouble when forgetting to set Flow Control to None.)

- Once the S-911™ is plugged in, hit the “Connect” button in HyperTerminal
- Turn On the S-911 by pressing  and holding for 1 second . The Status LED will now be ON. After 20-30 seconds the Status LED will turn off and the GPS LED will either flash or stay on continuously depending on the outdoor conditions.

You may now press  to turn on GSM Mode.

- Use a paper clip or similar to press the **Reset** button through the Reset hole with a paper clip or similar object. This allows the device to go into programming mode and the following information will appear in the HyperTerminal window:
- If the HyperTerminal connection has been properly setup, than immediately after pushing the reset button, you should see “WAIT” appear in the HyperTerminal Window. Roughly 10 seconds after “WAIT” appears, you will be asked do you want to adjust the settings. Press “Y” to confirm.
- You will require all of the information below prior to programming the device. Please ensure that you fully understand all of the parameters and settings. If you are unsure, please contact tech@laipac.com for further description.
- NOTE: You will require specific carrier information from your GSM Network Service Provider. Please contact them to aquire:
 - **GPRS Dial Number**
 - **GPRS APN Parameter**
 - **GPRS APN User Name**
 - **GPRS APN Password**



Reset Hole

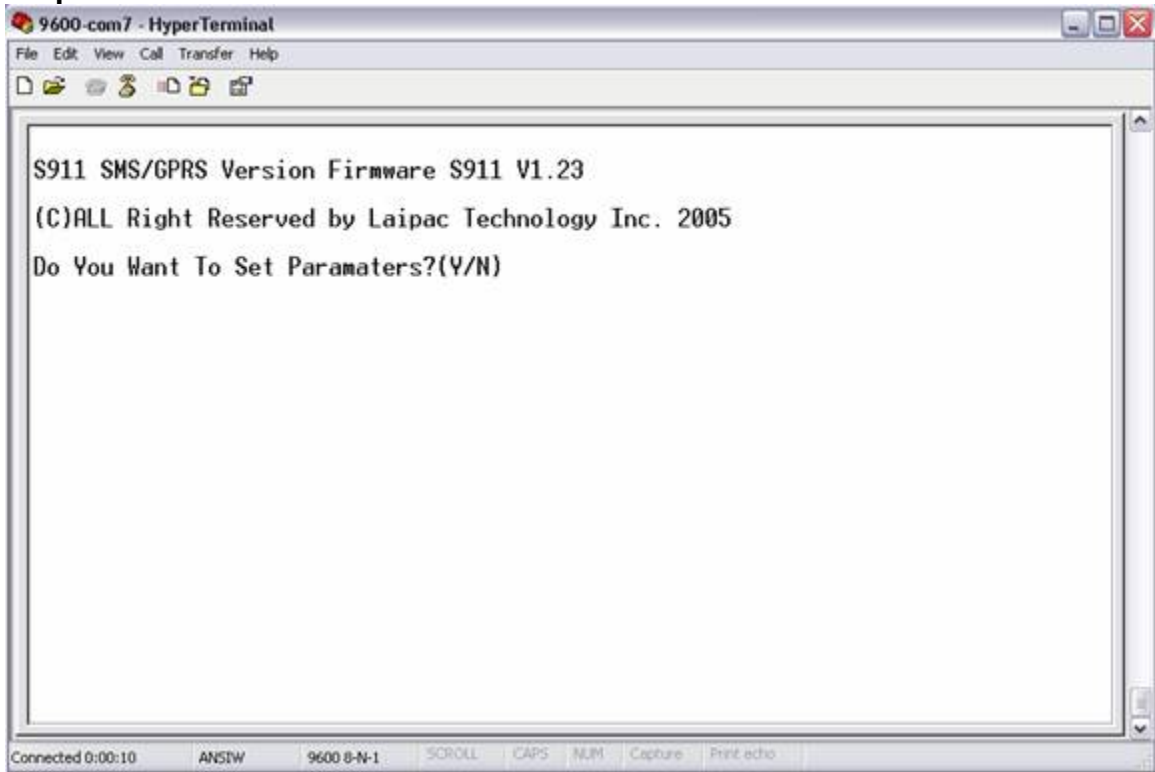
- **Device ID**
For identification purposes; Your LAIPAC™ representative has supplied you with this number and should be used if the LAIPAC™ GPRS Evaluation Server is being used. It can be up to 8 characters. For the sake of this demonstration our example is "99999999".
- **Device Password**
For security purposes; it can be up to 8 characters. Please use the password given to you by your LAIPAC™ representative when programming your device.
e.g: "00000000".
- **Default Operation Mode (GPRS or SMS)**
You can set which mode you would like the modem to be in once powered on. *We recommend SMS as the default mode* to ensure proper communication and testing. For more information on switching the unit into GPRS mode, please see the *Feature Descriptions* section above
- **SMS Base Station Phone Number**
This is the destination number for SMS messages sent from the S-911™. Please ensure the number format is 11 digits. I.e.: 14165551212
- **Fixed Phone Number 1**
This number will be dialed and a two-way voice call will be initiated when pressed. Please ensure the number format is 11 digits. e.g.: 14165551212
- **Fixed Phone Number 2**
This number will be dialed and a two-way voice call will be initiated when pressed. Please ensure the number format is 11 digits. e.g.: 14165551212
- **Emergency Call Phone Number**
This number will be dialed and a silent emergency voice call will be made informing the receiving party of an emergency and the unit's position (Lat/Long) as well as the UTC time. Check with your local and federal laws when considering 911 as a number. Please ensure the number format is 11 digits. e.g.: 14165551212
- **SMS Position Report by Time Interval**
The personal locator will report the real time GPS position to the Base Station through GSM/SMS periodically every N seconds
- **Position Log by Time Interval**
The personal locator will record the real time GPS position periodically into internal flash memory every N seconds.

- **SMS Position Report by Distance Traveled**
The personal locator will report the real time GPS position to the Base Station through GSM/SMS periodically every N meters.
- **Position Log by Distance**
The personal locator will record the real time GPS position periodically into internal flash memory every N meters.
- **GPRS Dial Number**
Typical is *99#. Please consult your GSM/GPRS Network Service Operator for their particular setting.
- **GPRS APN Parameter**
Please consult your GSM/GPRS Network Service Operator for their particular setting.
- **GPRS APN User Name**
Please consult your GSM/GPRS Network Service Operator for their particular setting
- **GPRS APN Password**
Please consult your GSM/GPRS Network Service Operator for their particular setting
- **GPRS Server IP**
Please consult your monitoring service provider or if you have purchased the GPRS gateway server insert your own static IP address here.
- **GPRS Server Port Number**
Please consult your monitoring service provider or have your own port address here.
- **Instant Geo-Fence Radius**
The radius in meters for Instant Geo-Fence feature
- **Over Speed Alert**
The speed limit setting for over-speed feature (km/h).
- **S-911 device awake time from last operation**
This is the amount of time the device will operate in awake mode after an operation has been requested. Once the awake time expires after the last operation, the device will return to sleep mode.
- **S-911 device sleep time from last activation**
This is the amount of time the device will remain in sleep mode if undisturbed. This is an important feature used for extending battery life.

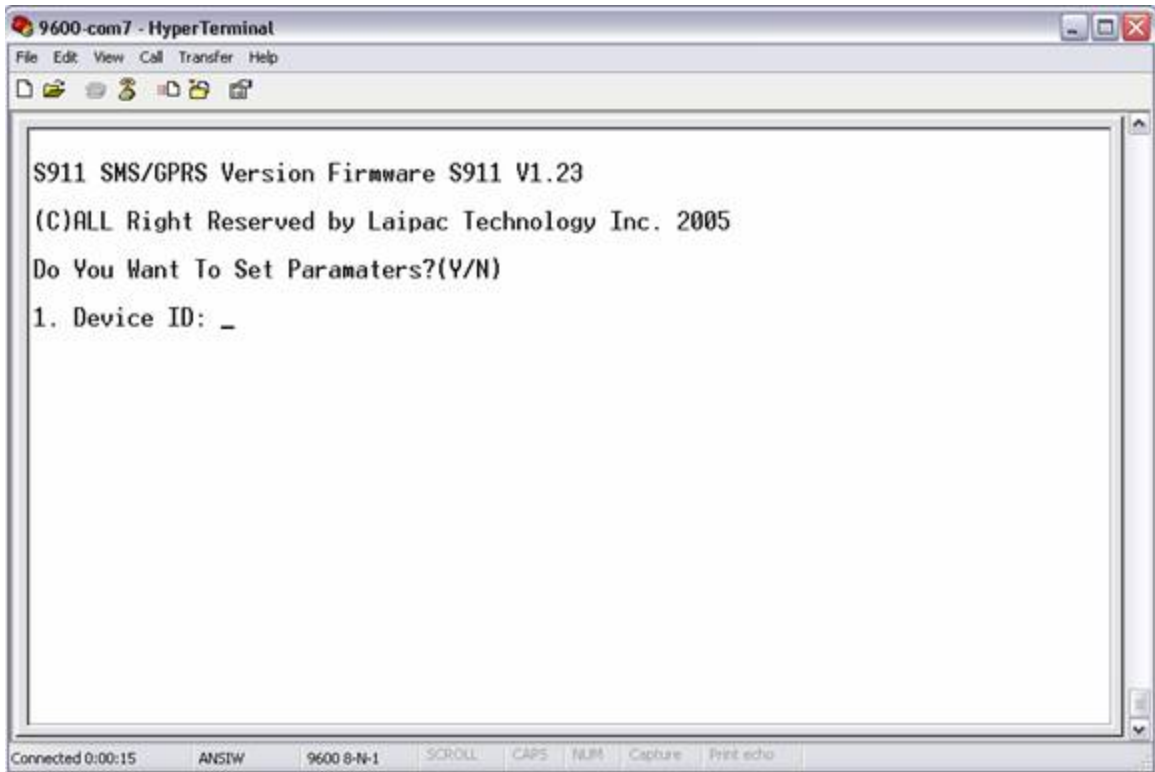
- **Local NMEA sentence BAUD rate**

This allows customization of the NMEA output position message baud rate from the USB port. Standard NMEA sentences are 4800bps and can be used w/ popular mapping programs in conjunction with a laptop.

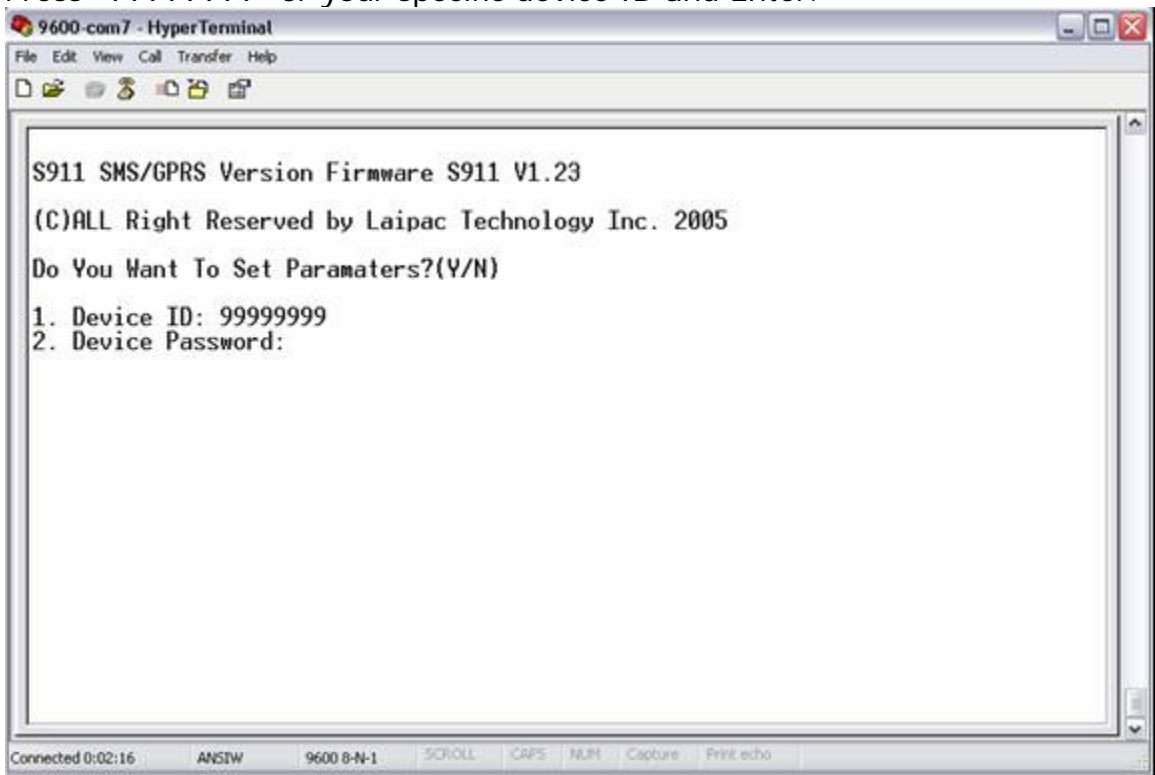
The following pictures show more detail about the programming steps.



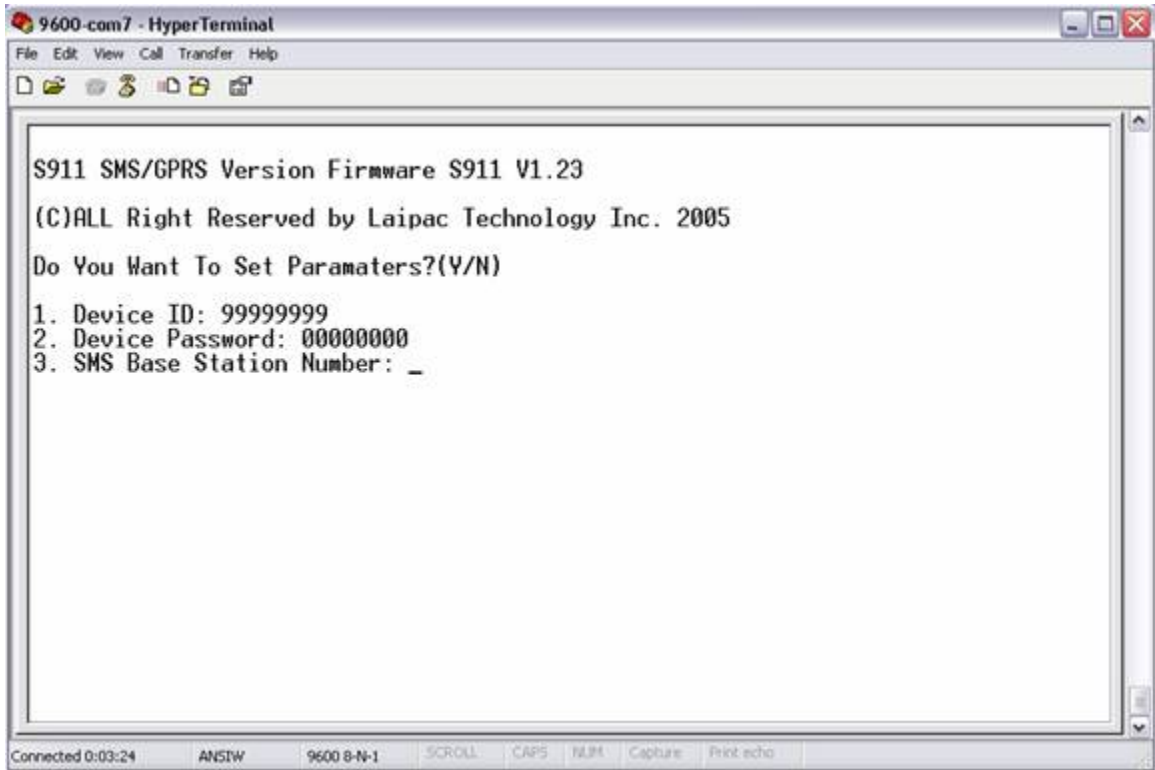
Press 'Y' to continue programming, press 'N' to exit.



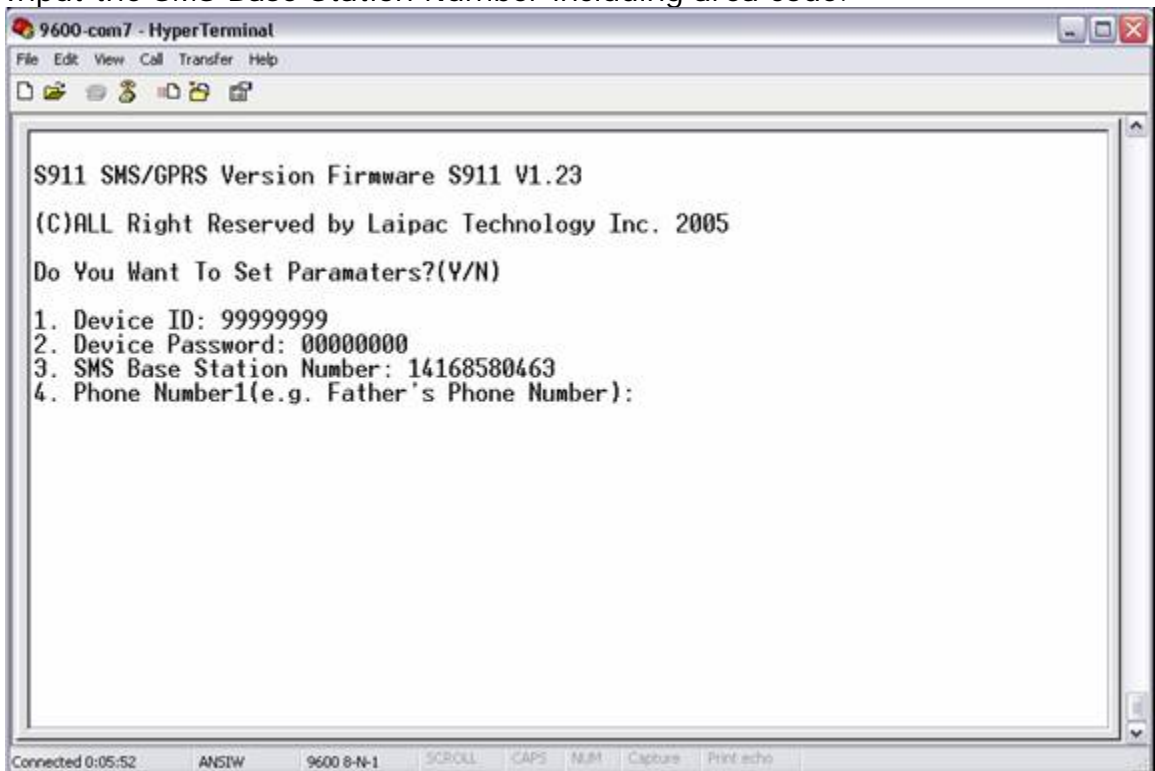
Press "99999999" or your specific device ID and Enter.



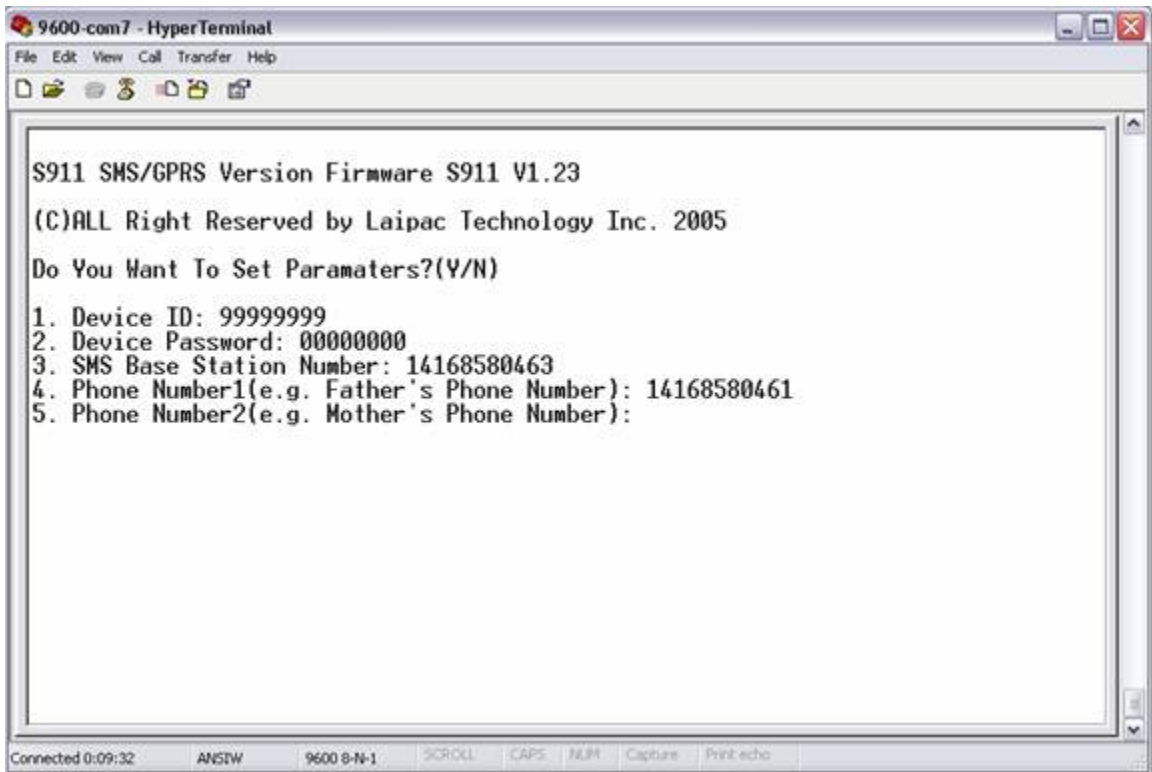
Input "00000000" for the Password and Enter.



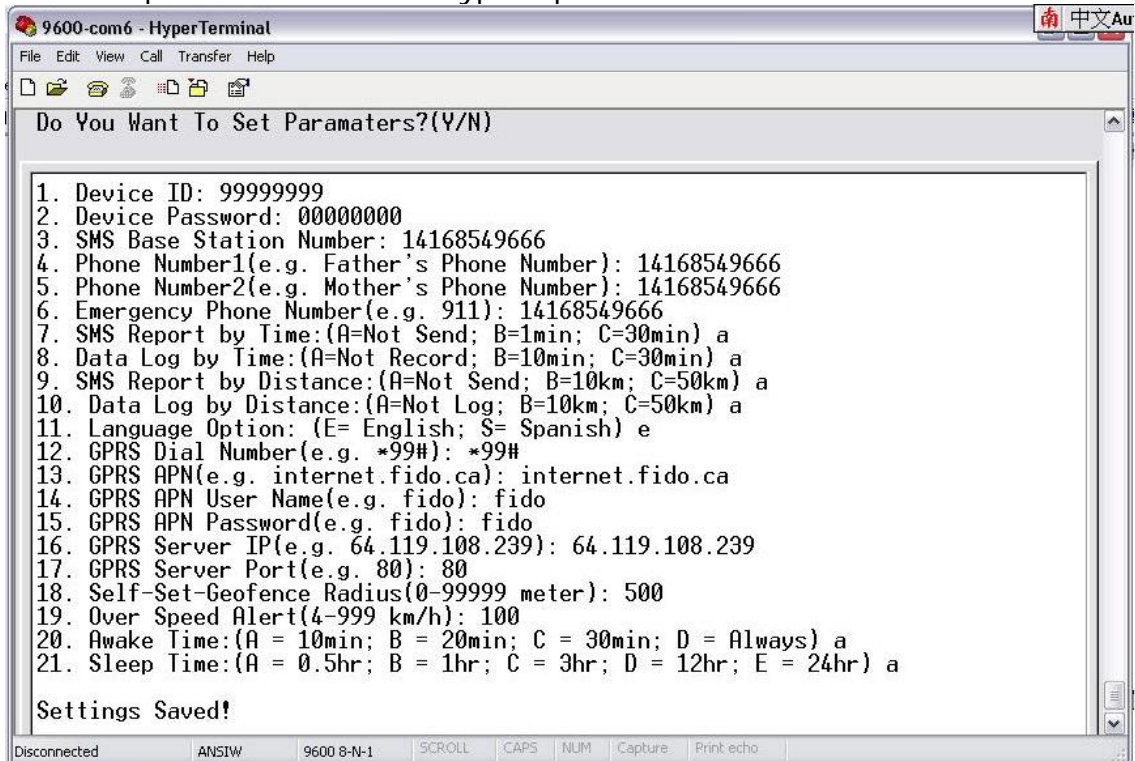
Input the SMS Base Station Number including area code.



Input phone numbers to be stored in memory slots 1 and 3 with complete area code. The emergency phone number may be entered next.



The next picture shows some typical parameters.



The configuration is now complete and the settings have been saved into the internal flash memory.

When using Laipac's GPRS server, the GPRS server IP = 64.119.108.239 and the Port number = 80.

Frequently Asked Questions

Q: Why is the Hyper-terminal not connecting to the S-911 Device?

A:

1. Did you install the S-911 USB driver? If not, you need to click the USB Installation button on the LAIPAC™ Software CD
2. When you plug the S-911 into a PC, does the PC recognize the S-911 USB device?
If not, the USB hardware or USB cable has a problem. Please check them.
3. If the device is recognized, can you check which virtual com port is assigned to the S-911 device? You can check it by going to: PC->Start->Control Panel->System->Hardware->Device Manager->If you check the Universal Serial Bus controllers, you will find: **Laipac S-911 USB Composite Device**
If you check Ports (COM & LPT), you will find: Laipac S-911 USB to UART Bridge Controller (COMX), X could be 4, 5, 6,7...
4. Make sure that Windows assigned a virtual com port for the S-911, then open Hyper-terminal and configure the S-911 device to use the corresponding com port to connect to the S-911 device. Failure to do so will prevent communication setup.

Tips: When you unplug the S-911 from the PC and plug it in again you will find there is no output on the Hyper-terminal. In this case, please press the disconnect button on the Hyper-terminal tools bar and press the connect button. The text output should appear again.

Q: I can see the output data from the S-911 on Hyper-terminal, but when I type on the keyboard on the PC, the S-911 does not respond.

A: First, please check if you are using a correct DB9 cable, the right serial cable should be a strait-through cable not a crossover cable.
Second, please check Hyper-terminal's configuration: menu File->Properties->Configure->Flow Control, it should be set to NONE. If you set it to Hardware this will cause the S-911 not to respond.

Q: I cannot switch the S-911 device to GPRS mode.

A:

- 1 Please check that your SIM card's GPRS service is activated
- 2 Ensure the GSM Red LED is flashing which indicates the GSM modem is on the GSM network
- 3 Check the GPRS parameters like GPRS dial number, APN, APN user name, APN password which should all be provided by you GSM service provider (carrier)

4. Make sure the GPRS server's IP and the port number you input to the S-911 is correct. If you are using Laipac's GPRS server the IP = 64.119.108.239 and the port number = 80

Q: I cannot switch the S-911 device from GPRS mode to SMS mode.

A: Press Shift + SOS button, then you can switch back to SMS mode from GPRS mode. The GPRS Status LED will turn off when the mode switch operation has completed.

Q: My S-911 client software connects to Laipac's GPRS server, the maps opened, but the S-911 device is not shown on the map.

A:

1. Check the GPRS Status LED, if it is not ON, then the S-911 is working in SMS mode or has failed to connect in GPRS mode. Only when the S-911 device is working in GPRS mode can the S-911 be shown on the map. Check the GPRS parameters like APN, APN Username, APN Password, GPRS Server IP and Port number etc.
2. Check the Device ID. The Device ID programmed into the S-911 device should match what is in the S-911 client software database. If they do not match, the S-911 device won't be shown on the map. To change the S-911's Device ID, you should use the USB cable to connect the S-911 to the Hyper-terminal. To change the Device ID inside the S-911 client software, go to C:\Program Files\Laipac\Laipac S-911\S-911.mdb, open the S-911.mdb file, then open table Units, change the Device ID then exit.
3. Don't forget to use the mouse to highlight the S-911 device that you want to track, forgetting doing this will cause the client software not show the device on the map even though the report message has arrive at the client software from the device.

Q: How long should the battery of the S-911 device last after a full charge?

A: The operation time of the battery depends on the how you configure the S-911 device Sleep/Awake mode:

	Awake time =10min	Awake time=20min	Awake time=30min	Awake time=Always
Non Sleep				7hours
Sleep time =0.5hr	28hrs	17.5hrs	14hrs	
Sleep time =1hr	49hrs	28hrs	21hrs	
Sleep time =3hr	133hrs	70hrs	49hrs	
Sleep time =12hr	511hrs	259hrs	175hrs	
Sleep time =24hr	1015hrs	511hrs	343hrs	

Q: Why can't I open the S-911.mdb file?

A: You must have Microsoft Access installed on you computer in order to open the S-911.mdb file.

Federal Communications Commission (FCC) Statement

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

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. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

- 1) this device may not cause interference and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.