DotSurfer User Manual

GTRAN™
Moving data faster.

Version: 1.0.0

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➢ DotSurfer Introduction

GTRAN DotSurfer 1X PCMCIA Card is high-speed Wireless Modem that supports up to 153Kpbs under cdma2000 1X Network.

Product Features

→ Supports wireless connection up to 153Kbps under cdma2000 1x Network
→ Minimizes laptop battery power consumption through self Power control
→ Send and Receive SMS under any operating system
→ Can check for card status while online
→ Supports OS that majority of the users use such as Windows 98, 2000, XP, CE 3.0 and Linux. (Plans to support MacOS and PalmOS)
→ Provides Application Program in order to maximize user's convenience.

➢ WINDOWS 2000/XP Procedures

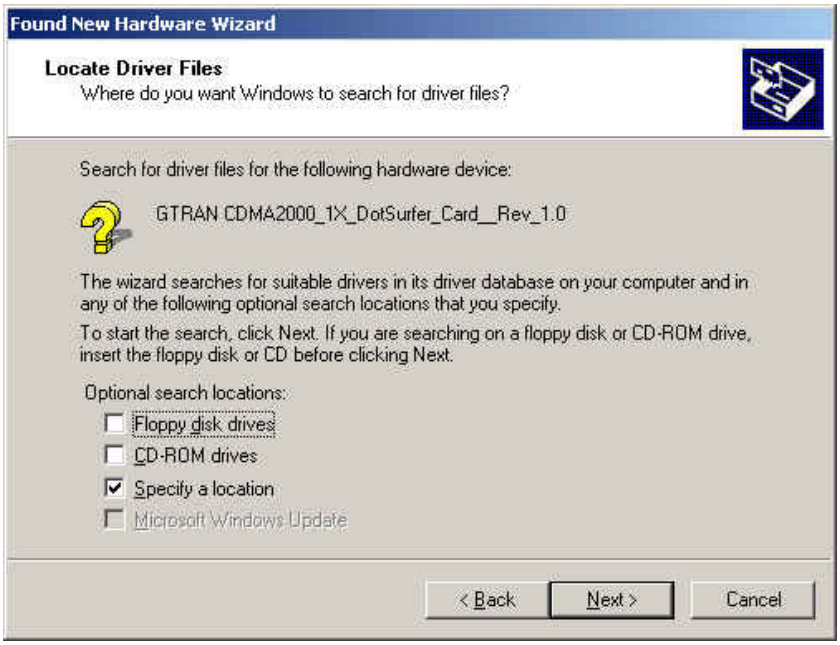
1. Driver Install
2. Driver Uninstall
3. Driver Update

1. Driver Install

①. Insert the Card.

When **Found New Hardware Check Wizard** screen appears, choose the option as below and click **Next**> button.

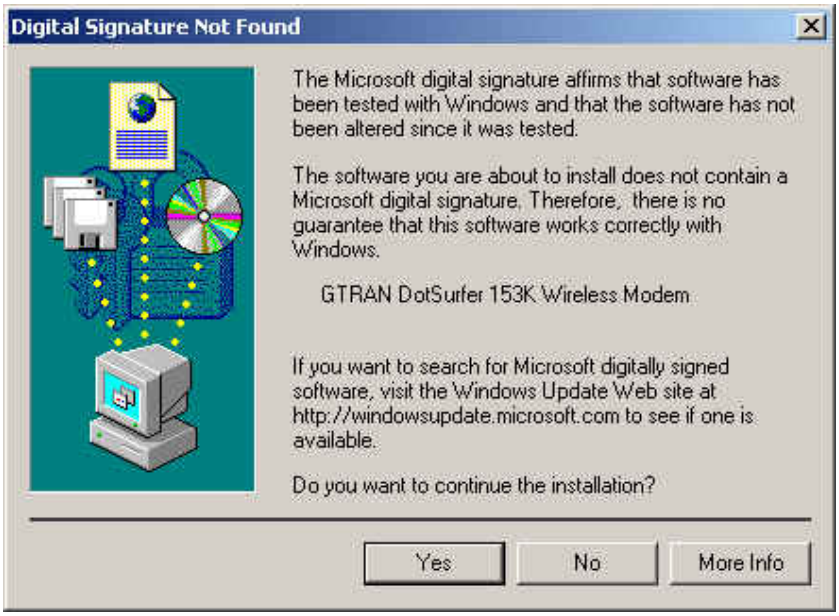
②. Choose location to search for Driver file and click **Next>** button.



③. Assign file path and click **OK** button.

④. From the assigned route, search for driver file. Once file is found, you'll see a screen that says **"Found New Hardware Wizard"**.
Click **Next>** button and go to the next step.

⑤. You'll see the screen below since we currently do not have digital name provided by Microsoft. Continue with the installation. Click **Yes** button and the installation will be complete.



⑥. To check if Driver installation is complete, go to **Start -> Properties-> Control Panel-> System -> Hardware -> Device Manager -> Modem.** You can verify that **GTRAN DotSurfer 153K Wireless Modem** is installed.

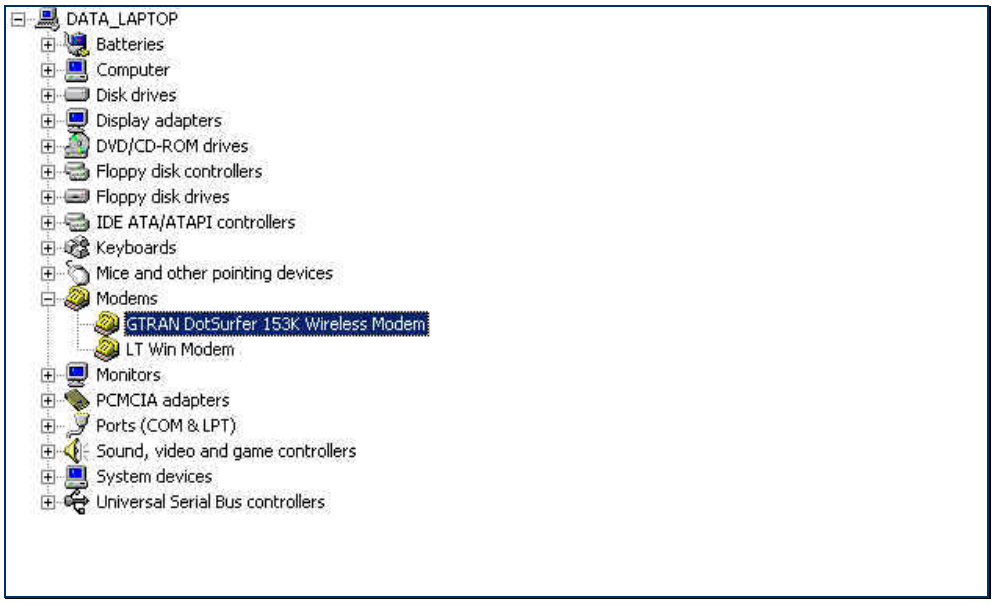
2. Driver uninstall

①. Go to **Start** and choose **Properties -> Control Panel-> System.**

②. Go to **System Properties** window and choose **Hardware -> Device Manager** tab.

③. Go to **Device Manager** window and choose **Modem-> GTRAN Dotsurfer....**

④. Choose **GTRAN DotSurfer..** Modem and right click the mouse. Choose **Uninstall** from the pop-up menu and uninstall will start.



3. Driver Update

①. Follow 2. Driver uninstall procedure shown above and remove the device driver.

②. Click subfolder **INF** which is under Windows folder. However, you may not see the INF folder. In this case, go to **View**, click **Option**, and choose **Show All Files**.

③. In the **INF** folder, find all the INF type files that begin with "OEM".

④. Open this file from a text editor such as Notepad. If you see a phrase "GTRAN 1X Dotsurfer" on top of the text, delete the file that has PNF extension that is the same name.

⑤. Prepare the newest version of Win2K(or XP) DotSurfer Device Driver.

⑥. Remove the Card and reinsert. Then select and install the newest version device driver by following 1. Driver install procedure.

➢ WINDOWS 98/ME Procedures

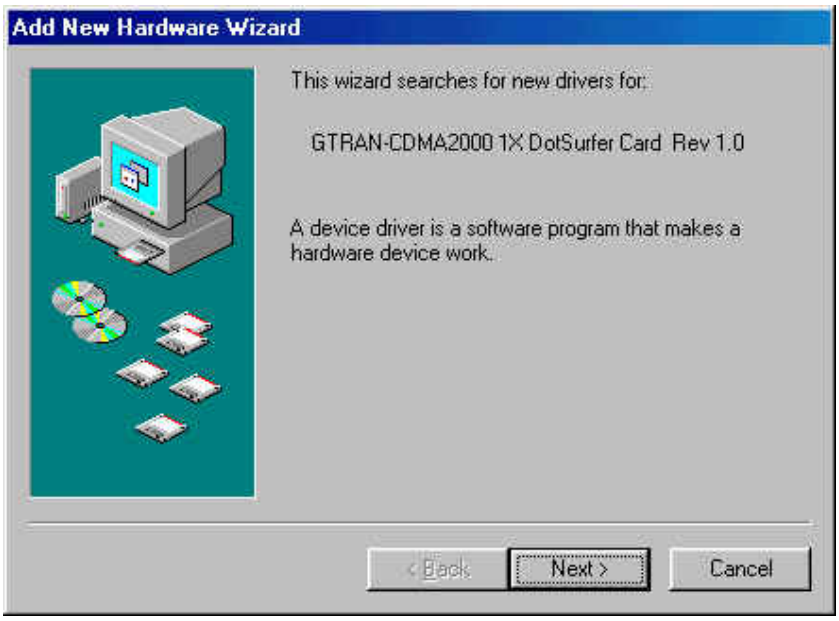
1. Driver install
   - Windows 98
   - Windows ME
2. Driver uninstall
3. Driver Update

1. Driver Install

1.1 Windows 98

①. Insert the Card.

When **"Add New Hardware Check Wizard "** screen appears, choose the option as below and click **Next>** button.

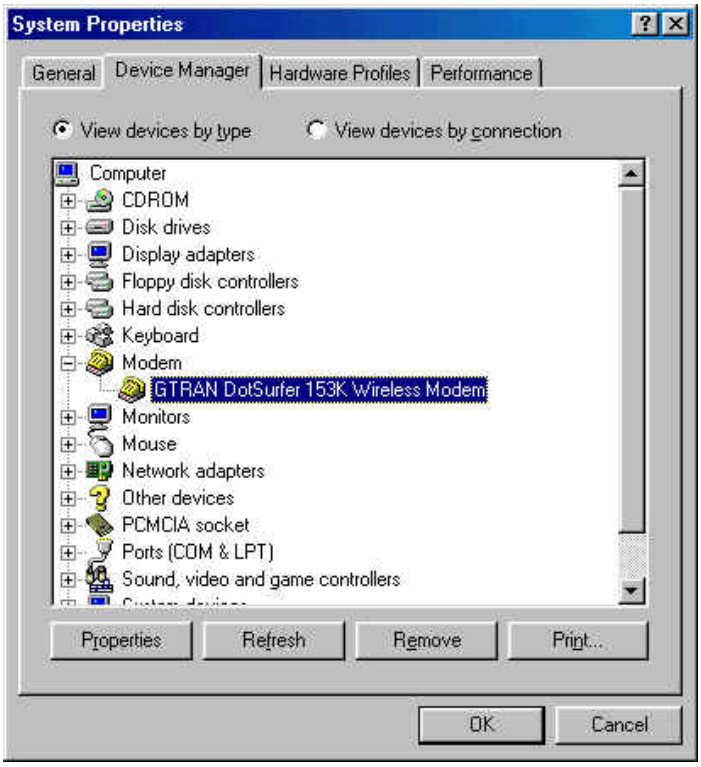


②. Choose the option as shown below and click **Next>** button.

③. Select the location to search for new Driver and click **Next>** button.

④. Once Driver file is found from the assigned location, you'll see a screen showing the search result. Click **Next>** button.

⑤. Once Driver installation is complete, go to **Start** and click **Settings-> Control Panel-> Modem**. You will be able to check whether **GTRAN DotSurfer 153K Wireless Modem** is installed.



1.2 Windows ME

①. Insert the CD.

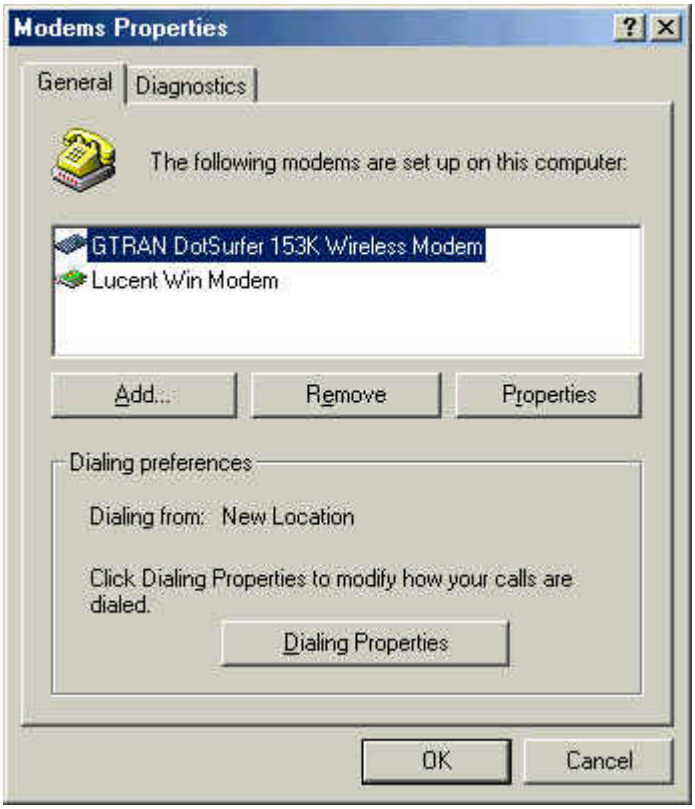
②. Insert the Card. When **"Add New Hardware Wizard "** screen appears, choose the option as below and click **Next>** button.

③. If the install is completed regularly, then the screen appears as below. Click **Finish** button.

2. Driver Uninstall

①. Go to **Start** and select **Settings-> Control Panel-> Modem**.

②. From **Modem Registration Information** window, select **GTRAN Dotsurfer 153 Wireless Modem.**



③. While selected, click **Remove** button.

3. Driver Update

①. Follow 2. Driver uninstall procedure shown above and remove the device driver.

②. Click subfolder **INF** which is under Windows folder.

③. Click subfolder **OTHER** which is under **INF**.

④. From this directory, delete file that begins with **GTRAN 1X**.

⑤. Get newest version of **Win98 DotSurfer Device Driver**.

⑥. Remove the card and reinsert follow procedures under 1. Driver install to install. Here, select the newest version of Device Driver.

➢ WINDOWS 2000/XP and WINDOWS 98/ME

Procedures

1. GT Dialer II Installation

- Initial Install
- Update Install
- Uninstall

2. GT Dialer II Program User Manual

- Main Screen and Icon Description
- Network Connect and Disconnect
- Internet Connection
- SMS Send and Receive
- Address Book Management
- Theme and Other Configuration
- Call History

3. GT Indicator

- GT Indicator User Manual
- GT Indicator Icon Description

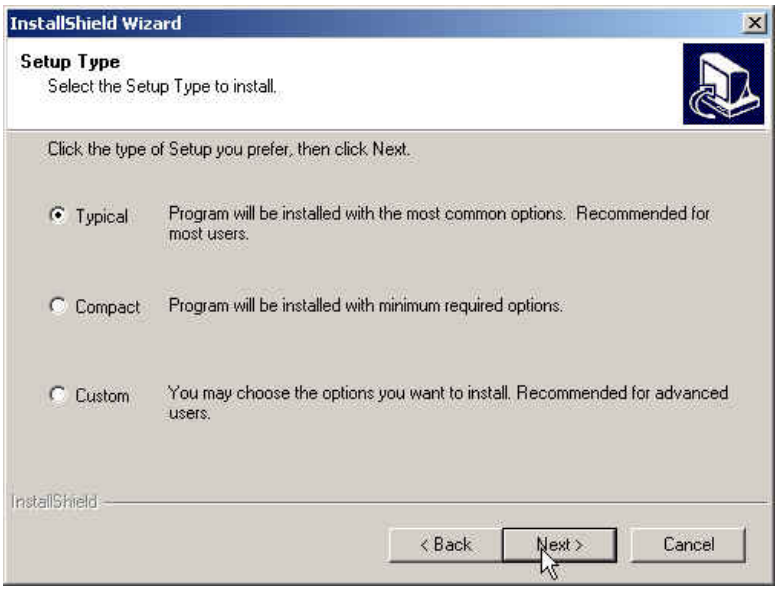
1. GT Dialer II program

1.1 Initial install

③. Run **Setup.exe**. Install Shield Wizard will start in order to assist the installation process.

④. Assign path to install the program and click **Next>** button.

⑤. From the screen asking for the installation type, choose the type you want and click **Next>** button.



Procedures for each installation method are explained below.

1.1.1 Standard Installation

①. Select **Standard Installation** and click **Next>** button as shown above. Install Shield Wizard will automatically complete the installation.
Under **Standard Installation**, GT Dialer II, GT Indicator, GT Updater, Basic Theme file, document file, and Device Driver file will be installed.

②. While installing, if **msvcrt.dll** file already exists, you'll see the screen below. Complete the installation by clicking **Ignore**.

1.1.2 Minimum Installation

Select **Minimum Installation** and click **Next>** button from the Installation Type Select screen. Install Shield Wizard will automatically complete the installation.

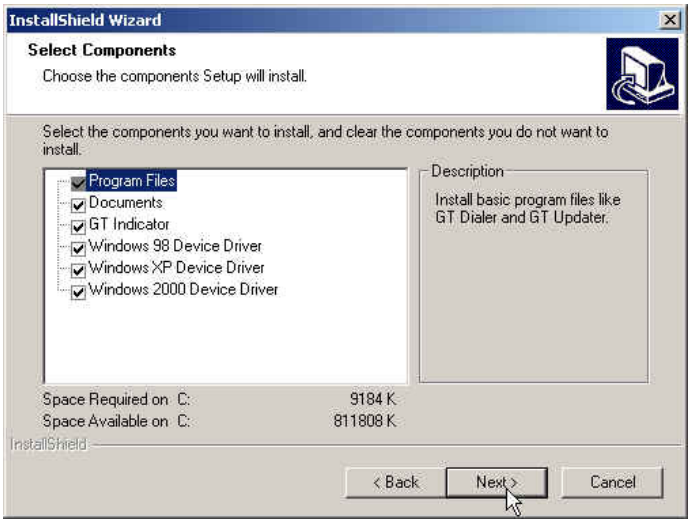
Under Minimum Installation, GT Dialer II, GT Updater, Basic Theme file will be installed.

1.1.3 Custom Installation

① Select **Custom Installation** and click **Next>** button from the **Installation Type Select** screen.

② Select the item that the install program install and click **Next>** button. Install Shield Wizard will automatically complete the installation.

If you select GT Indicator program, 'Basic program file' and 'GT Dialer II Skin file' will automatically be selected as well.



<Caution>

GT Indicator Program runs properly only under IE 5.01 version or higher.

1.2 Update Install

①. Connect System from the Network.

②. Go to **Start** and run **Program-> GTRAN-> GT Dialer II-> GT Updator**.
Connect Gtran server for update GT Dialer, then choose item.

③. Select the item to be updated and click **Update**. This updates new features of GT Dialer II and Device Driver Update in the user's system.

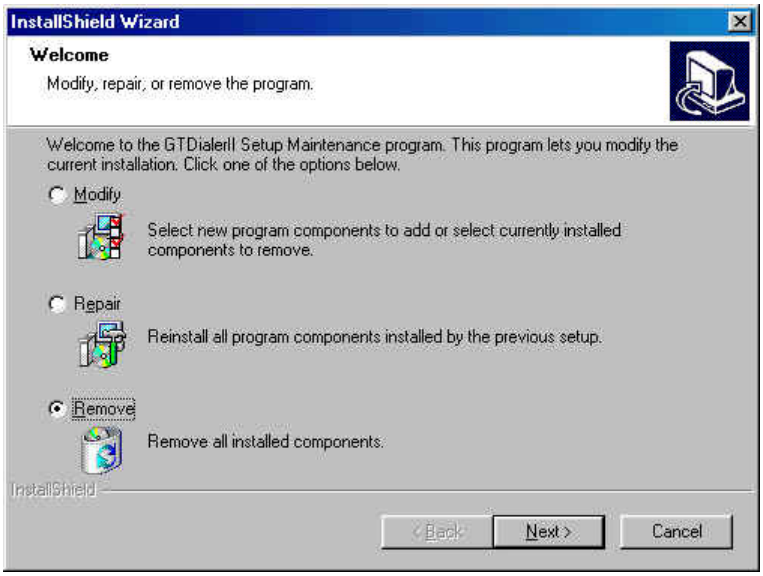
④. Once the Update is properly finished, you'll read **Updated** under **State** and **'2' Item Update Finished' on bottom line**

1.3 Remove Program

1.3.1 Remove from Setup program

①. Run **Setup.exe**.

②. InstallShield Wizard will run the screen shown below will appear.
Click **Remove** and click **Next>** button.



③. When Remove Confirmation screen appears, start the removal process by clicking **OK**.

1.3.2 Removing from the Control Panel

①. Click **Start -> Settings -> Control Panel -> Add/Remove Programs**.

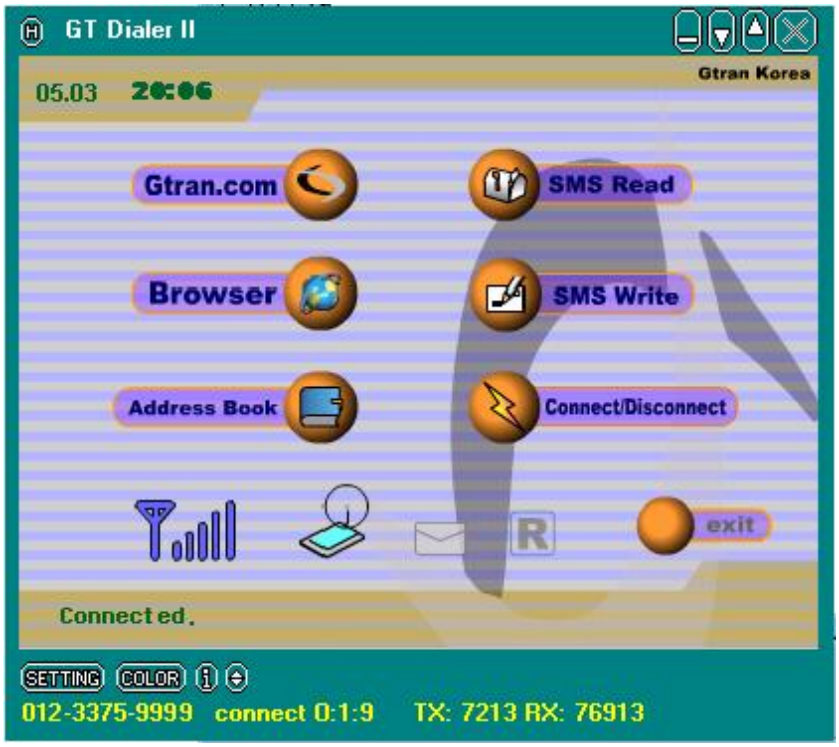
②. Among the programs currently installed, select **GT Dialer II** and delete by clicking **Add/Remove.**

2. GT Dialer II User Manual

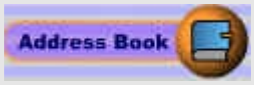
To run **GT Dialer II**, go to **Start** and select **Program-> GTRAN-> GT Dialer II** or double-click **Shortcut to GT Dialer II** icon from wall paper.

2.1 Main Screen and Icons

Main screen shown below will appear once **GT Dialer II** starts running.



The feature and meaning of each icon on the main screen is shown below.

Icon	Description	Icon	Description
	GPS Time		No new message
	Connect to www. gtran.com website		New message arrived
	Connect to general website		Roaming Off
	Phone Directory		Roaming
	Check for SMS received		Exit GT Dialer
	Send SMS		Theme, Default Home Page, SMS tone, Theme color set up
	Network Connect or Disconnect		Modem Diagnostic Information and Call History
	Signal Strength		Network Connected Time.
	Card is inserted in the notebook		Once Connected, Transfer/Receive Byte Size
	Connected to Network		No Service
	Help		Close application
	Reduce Monitor		Minimize monitor
	Enlarge Monitor		Display Phone number, Connection time and Sending/Receiving byte

2.2 Network Connect and Disconnect

2.2.1 Connecting

①. On the main menu, click **Connect/Disconnect**, and you will be connected to the network.

②. As **Connect/Disconnect** runs, if **GT Dialer II** does not recognize the card, an error message as shown below will appear.

If this screen appears, check for card condition and restart **GT Dialer II**.

2.2.2 Cancel

①. While connected to the network, click **Connect/Disconnect**.

②. Network will be disconnected.

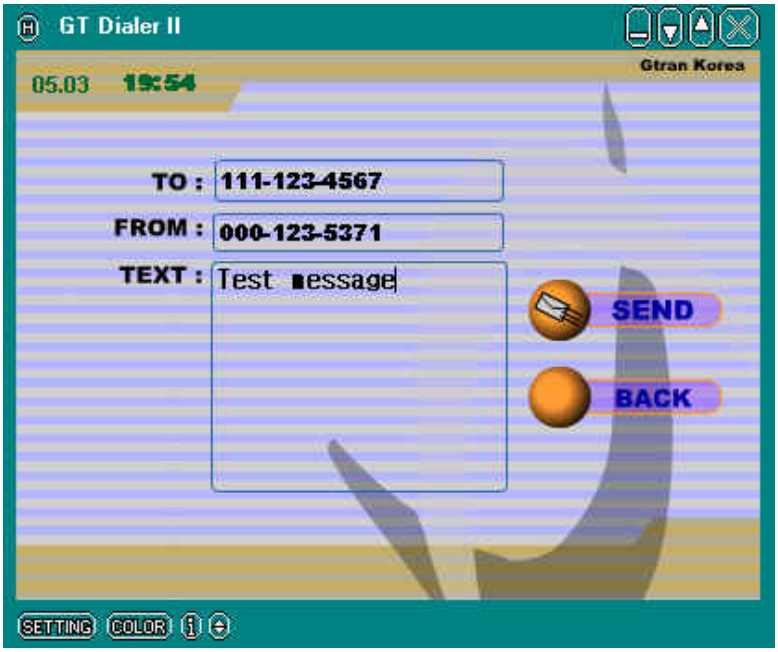
2.3 Connecting to Internet

①. Establish network connection by clicking **Connect/Disconnect** from the main screen. By clicking **Browser** or **Gtran.com** icons, you will go to a web browser. **Browser** goes to the website set up under **Setting–> Default Home Page** and **Gtran.com** goes to 'www.gtran.com' homepage.

2.4 Sending and Reading SMS

2.4.1 Sending SMS

①. From the main screen, click **SMS Write** icon. Send SMS screen will appear.



②. Input receiver's phone number and text.

③. Once finished inputting, click **SEND** button and the message will be sent.

2.4.2 Reading SMS

①. From the main screen, click **SMS Read** icon. Receive SMS screen will appear.

new message

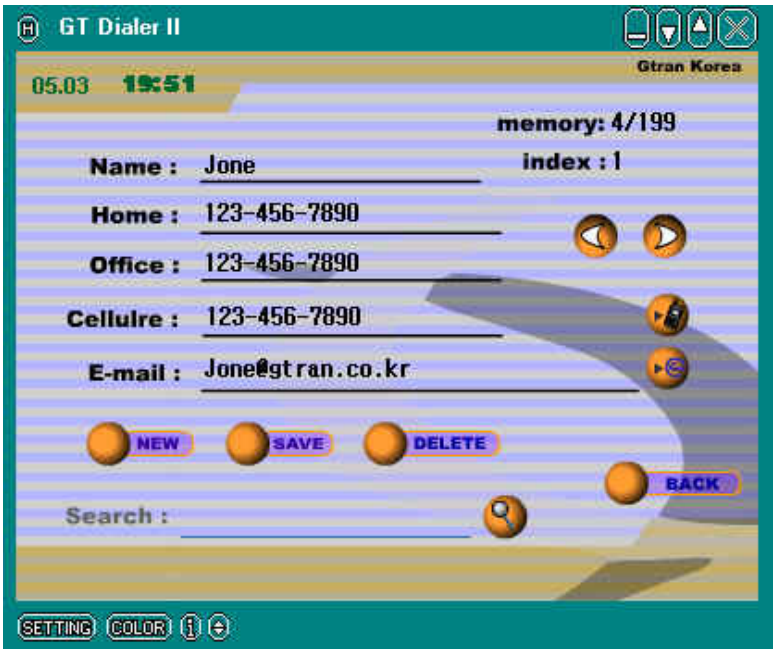
read message.

②. To continue to read other messages, select them by clicking or .

③. To delete the message, click **DELETE**.

2.5 Address Book Management

On the main screen, click **Address Book** icon and **Address Book** screen will appear as shown below.



2.5.1 Read and Search Address Book

①. To read stored addresses, click and select.

②. To search by Name,

③. To search by Phone Number,

④. To search by E-mail,

⑤. To search by Index,

2.5.2 Adding to Address Book

①. From **Address Book** screen, click **NEW**.

②. Input Name, Home, Office, Mobile, and E-mail. Click **SAVE** and inputted data will be stored.

2.5.3 Edit Address Book

①. Select the Index to edit and modify appropriate category.

②. When editing is finished, click **SAVE**.

2.5.4 Delete from Address Book

①. Select the Index to delete and click **DELETE**.

2.5.5 Miscellaneous

①. To send SMS from Address Book, click .

This screen is the same screen as the one you get from clicking **SMS Write** from the main screen. The method of sending messages is also same.

②. To send E-mail from Address Book, click .

Clicking the icon will take you to the new message in Outlook Express.

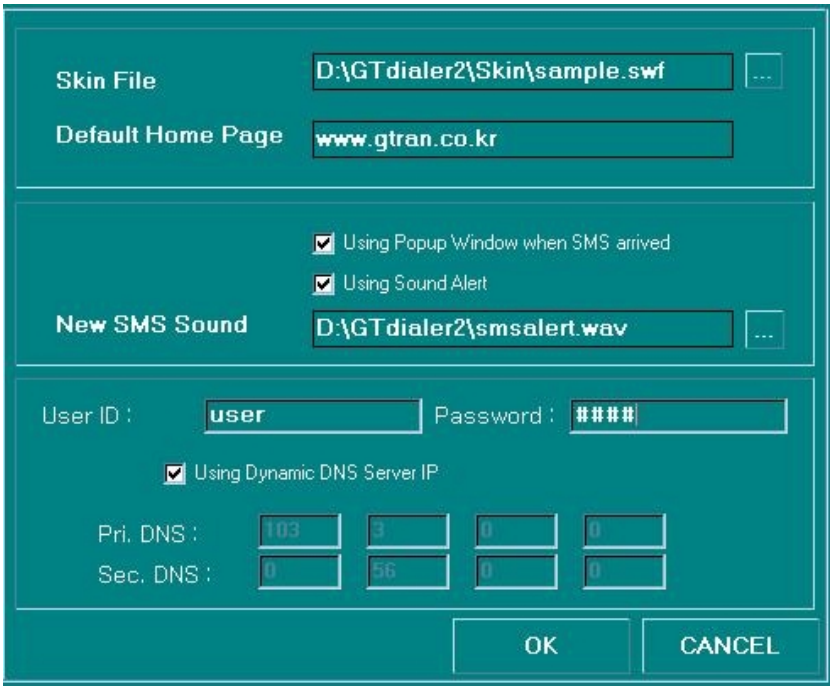
2.6 Set Up Theme and Other

2.6.1 Set up Theme and Other

①. From the main screen, click

which is at the bottom of the screen.

Screen shown below will appear.



②. To change the Theme, go to **Skin File** and select the desired file.

③. To set up a website that appears from clicking **Browser** icon on the main screen, go to **Default Home Page** to set up.

④. To set up SMS sound when new message arrives, put a check mark as shown

and select the sound. To remove the SMS received sound, remove the check mark.

⑤. To set up SMS Pop-Up window when new message arrives, Put a check mark as shown

.

⑥. To connect network, input the User ID, Password, and DNS Server IP.

⑦. Once all the set up is finished, click **OK**.

2.6.2 Color Set Up

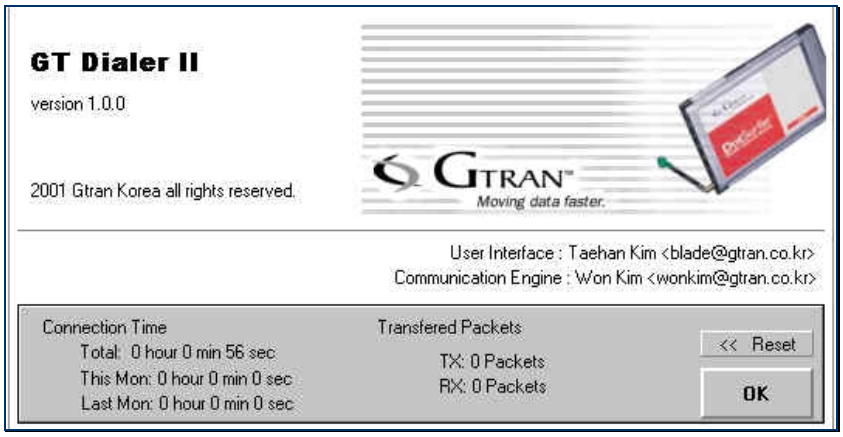
①. Click

which is at the bottom of the main screen.

Once a color is selected, outline color of Theme screen will change.

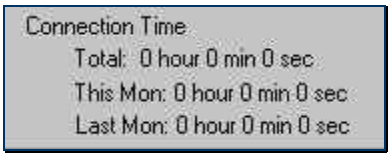
2.7 Access Detailed Usage Information

①. Click which is at the bottom of the main screen and you will see a screen shown below.



②. Detailed usage information is explained below:

- Time Used

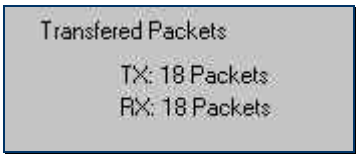


Total: Accumulated time of usage before resetting

This Mon: Accumulated usage time for this month

Last Mon: Accumulated usage time for last month

- Accumulated data volume



TX: Transferred packet size since network is connected till disconnected

RX: Received packet size since network is connected till disconnected

3. GT Indicator

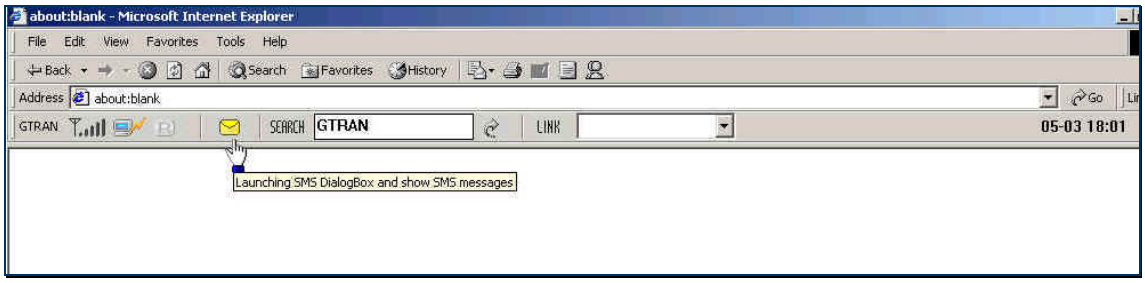
GT Indicator Program is a supplemental program for **GT Dialer**. When web browsing by using IE, the indicator shows information on DotSurfer on top of the screen.
Basic user setting should be IE 5.01 or higher and **GT Dialer** should be running properly.

3.1 GT Indicator User Manual

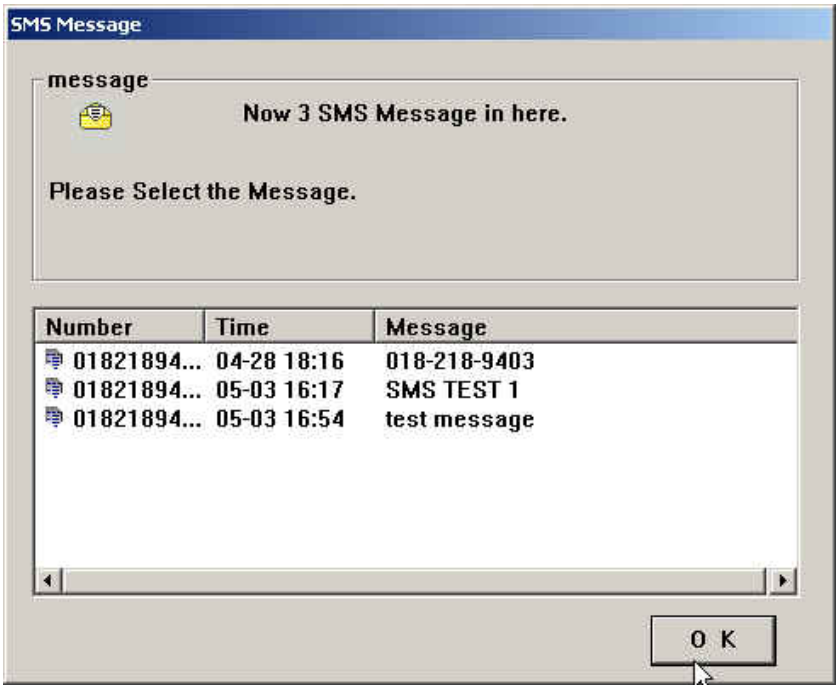
①. Open **Internet Explorer**.

②. Go to **View -> Toolbars** and select **GT Indicator**.

③. Dragging down the right below of address window with the mouse and **GT Indicator** will appear as shown below.



④. To read sms, Click .



3.4 GT Indicator Icons

RSSI Status Indicator Icon	
	No Service
	Signal Strength (RSSI).
CONNECTION Status Indicator Icon	
	Modem is connected to Network
	Network is disconnected
	Dormant Mode
ROAMING Status Icon	
	Roaming Off
	Roaming
SMS Dialog Box Viewer Icon	
	No New SMS Message
	New SMS Message Click the icon to read SMS message
GO to Web Page Search Icon	
	Moves to set up URL page

➢ Win CE Procedures

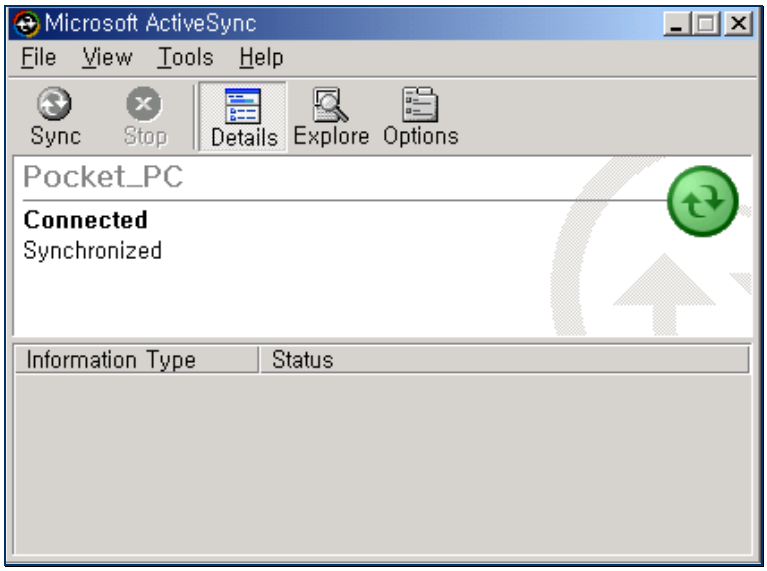
1. Driver Install for COMPAQ iPAQ

2. GT Dialer Install

- Connect to Internet
- GT Dialer User Manual

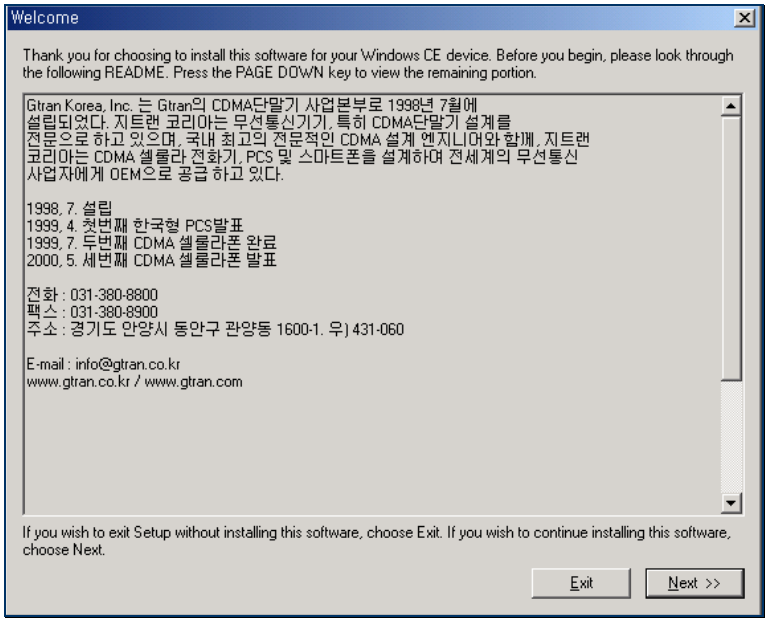
1. Driver Install for COMPAQ iPAQ

①. Run 'MicroSoft Active Sync' then synchronize PC and iPAQ PDA.



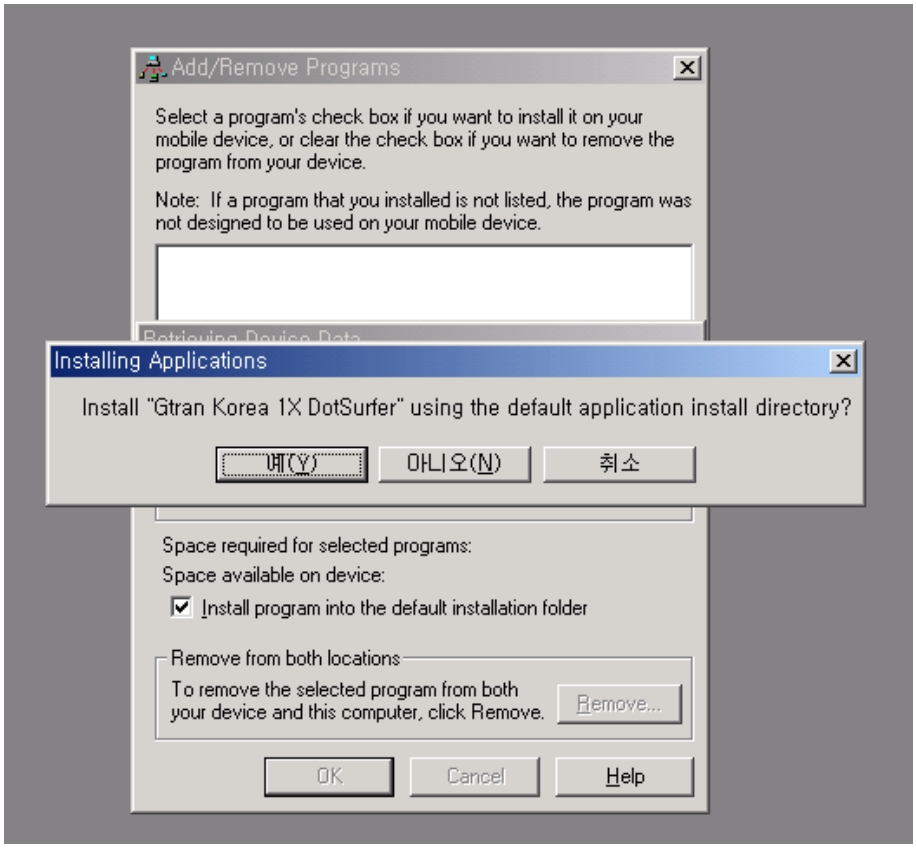
②. Open PC Explorer and run **setup.exe** which is in Window CE folder under DotSurfer1X Card Install folder.

③. From the **Welcome** window, click **Next >** button.



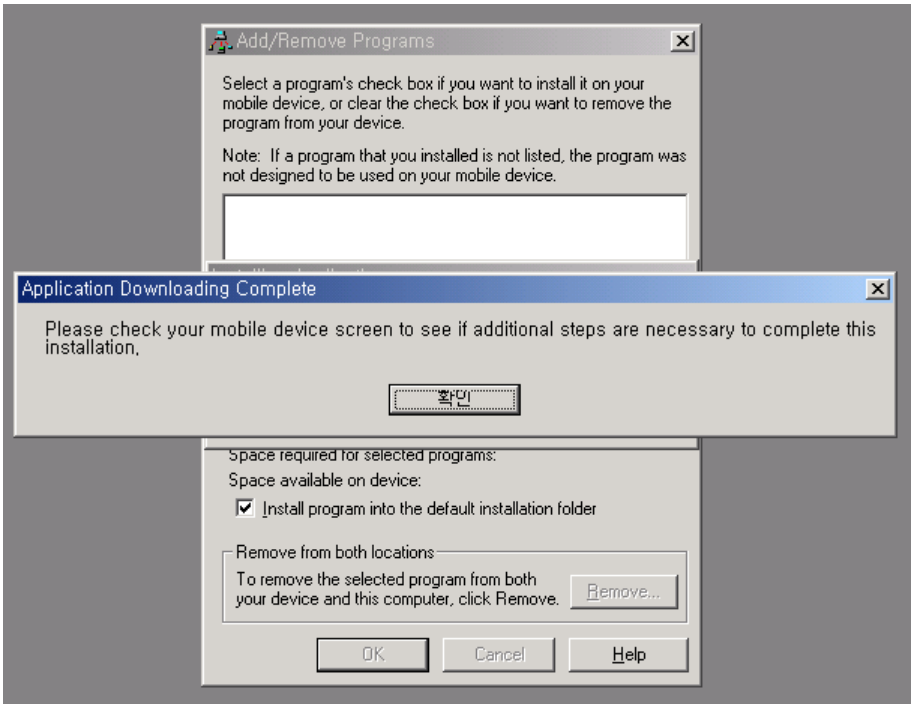
④. On the **License Agreement** screen, click **Yes**.

⑤. On the screen asking to install in Default Installation Folder, click **Yes**.



⑥. When installation is complete, screen will appear as shown below.

As this screen appears, installation automatically will run in iPAQ PDA.

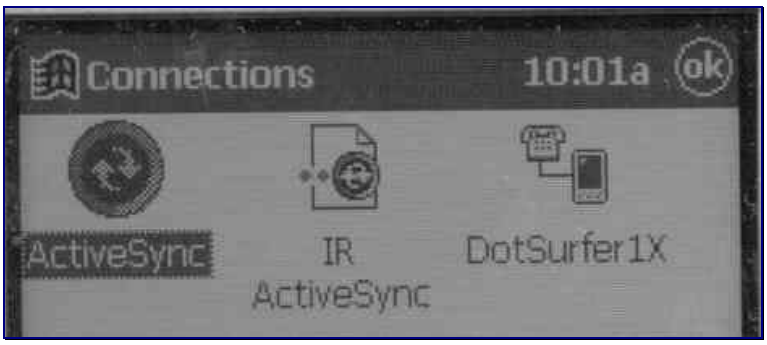


⑦. Insert DotSurfer 1x card after separated iPAQ PDA from the cradle to stop synchronization between PC and iPAQ.

⑧. Insert the card. Using iPAQ's stylus, press the hole on the right bottom of the PDA to **Soft-Reset**.

2. Connecting to Internet

①. Go to **Start -> Programs -> Connections ->DotSurfer 1X**.



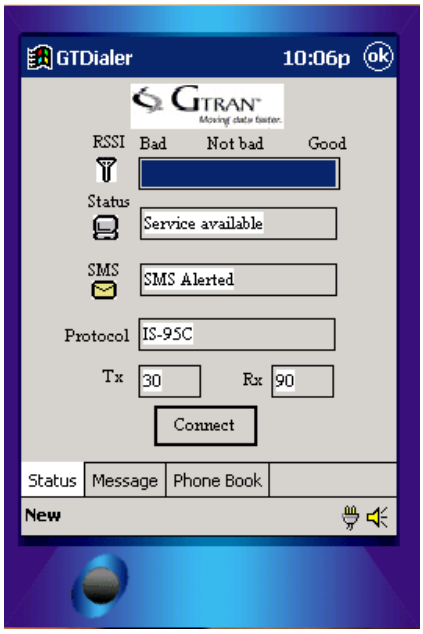
②. When you see the screen below, input user ID, password, etc. and click **Connect**.

③. Once connected, go to **Start –> Internet Explorer** and start surfing the web.

3. GT Dialer User Manual

①. Go to **Start –> Programs –> GT Dialer**.

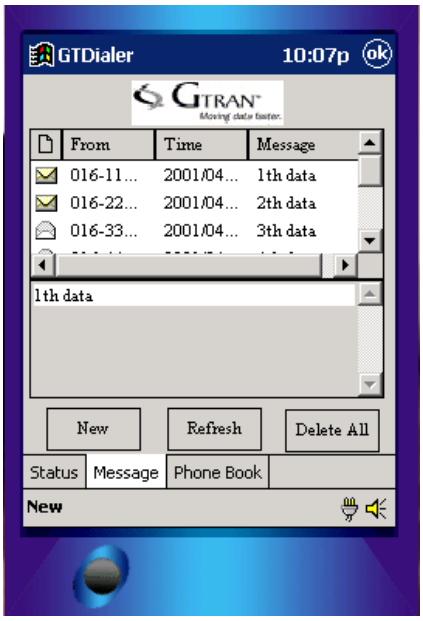
②. Screen showing DotSurfer 1X status will appear.



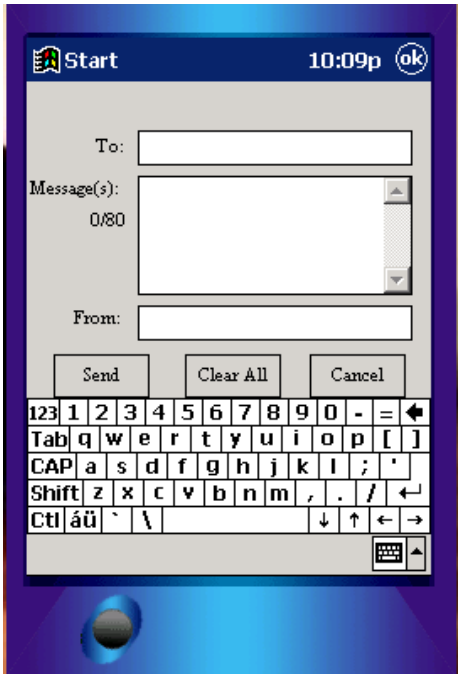
- RSSI: Current Signal Strength
- Status: Current Service Status
- SMS: Alerts when SMS arrives
- Protocol: **Protocol-Type currently connected**
- TX, RX: Transferred/Received **Byte Size**.

3.1 Send and Read SMS

①. After run **“Start –> Programs –>GTDialer”** , click **“Message”** tab on the bottom.



②. To send SMS, click **“New”** button on the bottom.

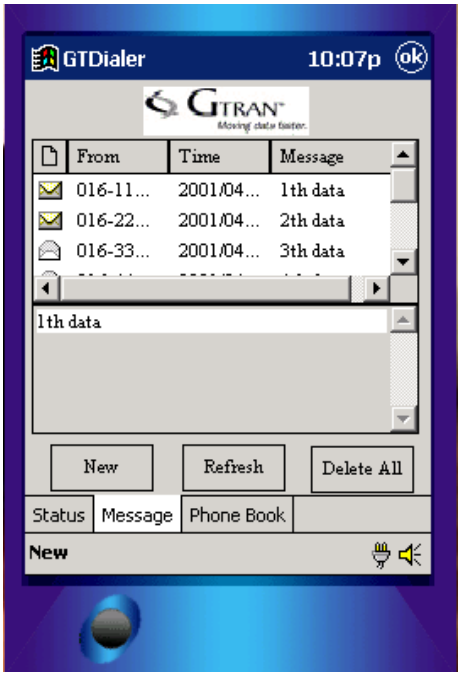


③. After in-put the receiver's number and text message, Click **"Send"** button.

In the sender's number, already included my number.

④. To read SMS, select 'list'.

Double click the line of list's header, when can't see the whole message.



3.2 Delete SMS and etc.

①. To delete SMS, select the message.
Then run Stylus's tap-and-hold, display the pop-up menu.
Select the pop-up menu's **"Delete"**

②. To reply the receive message, select it and run Stylus's tap-and-hold.
Select pop-up menu's "Reply".

③. To forward message to others, run Stylus's tap-and-hold and select pop-up menu's **"Forward"** .

➢ LINUX Procedures

1. Summary

2. Driver Install

- Install in Kernel Source
- Add to Kernel Module
- Replace Kernel Module

3. Using communication

- Verify Setting
- How to Use PPP
- How to Use DotSurfer Messenger Program

1. Summary

This section describes DotSurfer PCMCIA card user manual for Linux based laptops.

Need the following in order to use DotSurfer Card:

- Linux Kernel 2.2 or higher
- Basic Module and setup needed to use PCMCIA Card
- setserial 2.17 or higher

This document does not explain the basic items regarding how to use a PCMCIA card in the laptop nor does Gtran Korea provide technical support regarding this. However, you should not worry. Most of the current Linux Package take PCMCIA users into consideration. Unless under a special condition, you should be able to easily use PCMCIA slot. Incase of difficulties, refer to resources such as PCMCIA-HOWTO.
You can confirm the user's setserial version as a below

setserial –V

Use capital V for option. If version is lower than 2.17, use setserial command without option and verify whether you can use 16950, 16954 which is listed under uart option. If they are not listed under the option list, current setserial being used should be upgraded to the newest version.
You can get the newest version of setserial package from http://sourceforge.net/.
CD provided for user's convenience includes setserial-2.17.tar.gz file.

2. Install

There are three methods of installing DotSurfer 1X Device Driver.

- Install in Kernel Source
- Add to Kernel Module
- Replace Kernel Module

Before installing, login under the root account and decompress dotsurf_drv_1.0.tar.gz file from an appropriate location.

2.1. Install in Kernel Source

①. If Kernel source is installed in the system, you can replace the existing Kernel serial Device Driver with DotSurfer Driver. Because device driver of DotSurfer is based on the existing serial Device Driver and supports all general serial communication functions, it should not be a problem to use general serial port.

②. In order to combine DotSurfer Driver with Kernel source and upgrade, run **install-in-kernel** script and follow instruction.

③. Kernel source is generally installed in /usr/src/linux. Once you assign the location of Kernel source and complete the remaining procedures, source install completes.

④. Run Kernel compile process

⑤. After the entire Kernel compile/install completes, reboot your computer and your installation will be complete.

2.2. Add to Kernel Module

Adding to Kernel source and installing is a very good method. However, having to go through Kernel compile procedures makes it very inconvenient. More fast way is that device driver is loaded into kernel modules only when DotSurfer card is inserted.

①. First, using **make** command, compile the driver.

②. Once compile is complete, run **add-module** script.

③. Once the installation is complete, insert the card.

2.3. Replace Kernel Module

This method applies only to the case where serial Device Driver is installed as a dynamic Module. However, installation is possible in other cases as well.
Generally, serial Device Driver is included in Kernel as static and most Linux packages will have kernel that has static serial device driver. You can change the **'serial.o'** file to new one if your kernel has **serial.o** modules separatory, or you did compile so.
Run **make** command and compile the driver.

①. Run **replace-module script** and install module.

②. Once the installation is complete, insert the card.

< Caution >

* Make sure to select only one of the three methods from above. If you are not sure about which method to use, follow the third method.

3. Using Communication

3.1 Verify Setting

If the driver is installed, you can have wireless network connection using DotSurfer Card. While the card is inserted, DotSurfer card should have a port such as /dev/ttyS1 allotted and in such a case, there should be a /dev/modem link under the applicable port.

①. Using **setserial /dev/ttyS1 -q** command, verify whether the port is set up as below:

/dev/ttyS1, UART:16950/954, Port: 0x2f8, IRQ: 3 flags:spd_cust

Because Port and IRQ change depending on the system and situation, you don't need to worry about it.

②. Also, using **ls -l /dev/DotSurfer** command, verify whether there is a device file as below:

crw-rw-rw- 1 root root 202, 1 1 월 1 12:00 /dev/DotSurfer

③. If there is no such file, you can create it using **mknod** command.

DotSurfer Card provides high-speed data speed of 230400bps. However, it is not necessary to modify the speed of the application in use to 230400bps.

Speed of all the communication programs such as gau, and kppp must be set at 115200bps. You may think that application programs are communicated at 115kbps but the actual speed provided by device driver is 230kbps.

< Caution >

Keep in mind that if application program speed is selected as other than 115200bps, you cannot use DotSurfer card.

3.2 How to Use PPP

When connecting to PPP, **noauth** option must be used. But noauth's option is only root's permission. Also, PPP connection program run root's permission.

There are various ways to connect to PPP using **pppd**. Which method to use is not important.

Note: Run pppd with root's authority as noauth option.

Please refer to various online references for information on how to use **pppd**.

4. How to Use DotSurfer Messenger Program

DotSurfer Messenger program is an X application that allows usage of DotSurfer's various supplemental functions. The system must have GTK+ Library installed. Most of the Package have GTK+ Library. Through DotSurfer Messenger program, you can check for various card status and utilize supplemental functions such as send/receive SMS.
Program is distributed as binary RPM package.
After installing **messenger-1.0.0-1.i386.rpm** file, run **/usr/bin/messenger**.

Warning

This equipment complies with part 15 of the FCC rules. Any changes or modifications not expressly approved by the GTRAN WIRELESS, INC. could void the user's authority to operate the equipment.