SM1

Welcome Guide

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1 Getting started

This chapter gives a general introduction to the SM1 Welcome Pack, together with installation instructions for the smartcard reader.

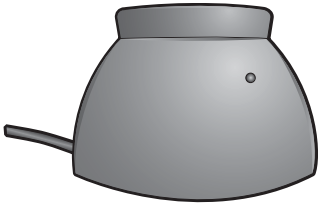
Introduction

The SM1 Welcome Pack is designed to provide everything you need to use your SM1 Smart Mouse smartcard reader, and includes demonstration programs as examples of using smartcards with your PC.

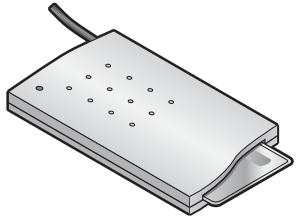
Components

The SM1 Welcome Pack contains the following components:

- SM1 Smart Mouse smartcard reader with either a serial connection (SM1 C) or a USB connection (SM1 USB).



Vertical package



Horizontal package

- A CD-ROM containing the Welcome Pack installer, and an electronic version of this *SM1 Welcome Guide*.
- This *SM1 Welcome Guide*.
- A SIM card holder, allowing you to read a mobile-phone SIM card using the SM1.

If any of these components are missing please contact your supplier.

Installing the Welcome Pack for the SM1 C

Installing the SM1 C hardware

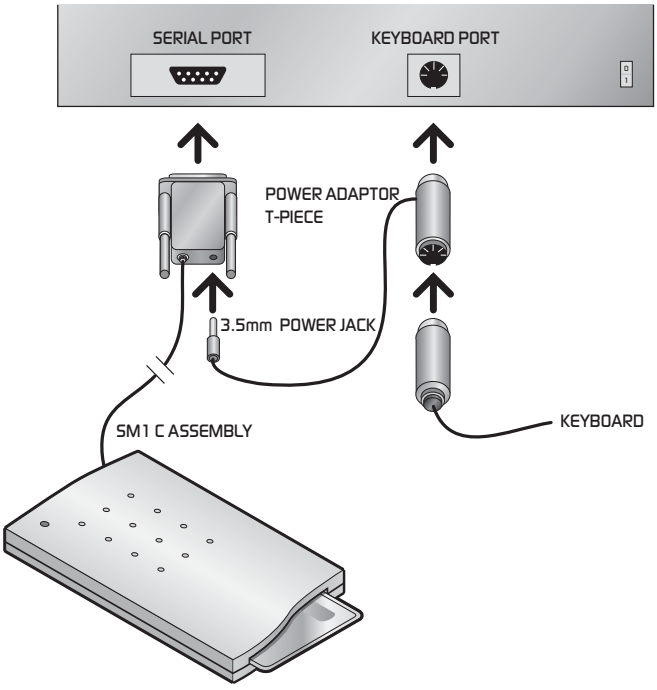
The SM1 C uses low power technology. In most cases, this means that the serial port will supply sufficient power to operate the Smart Mouse reader and the smartcard.

To install the SM1 C on your system:

- Switch off all power to your system.
- Insert the 9-pin D-type plug of the SM1 C into an unassigned serial port.
- Continue with the Welcome Pack installation.

In some cases, you will need to use an external power source. If so:

- Switch off all power to your system.
- Unplug the keyboard connector from your computer.
- Insert the power adaptor T-piece into the keyboard port on your computer.
- Insert the keyboard connector into the power adaptor T-piece.
- Insert the 3.5mm power jack from the power adaptor T-piece into the 9-pin D-type plug of the SM1 C.



- Insert the 9-pin D-type plug of the SM1 C into an unassigned serial port.
- Continue with the Welcome Pack installation.

Installing the Welcome Pack

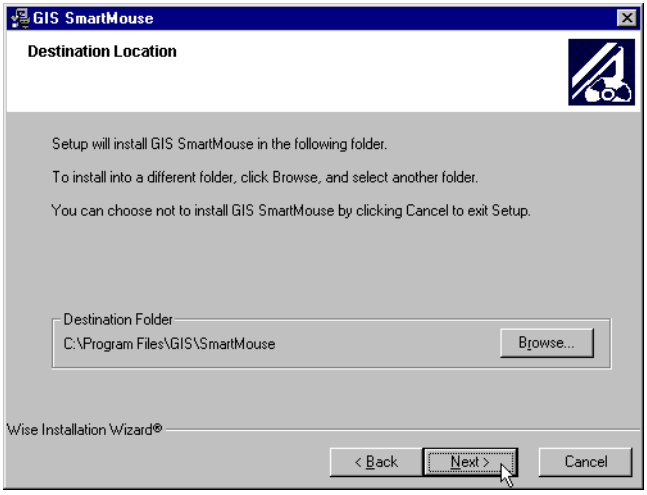
Insert the installation CD-ROM into your PC's CD-ROM drive.

The Welcome Pack installer should run automatically; if not, double-click the CD-ROM icon in the **My Computer** folder, and double-click the **smartmouse.exe** icon.

When the Welcome screen appears:

- Click the **Next ›** button to display the End User License Agreement.

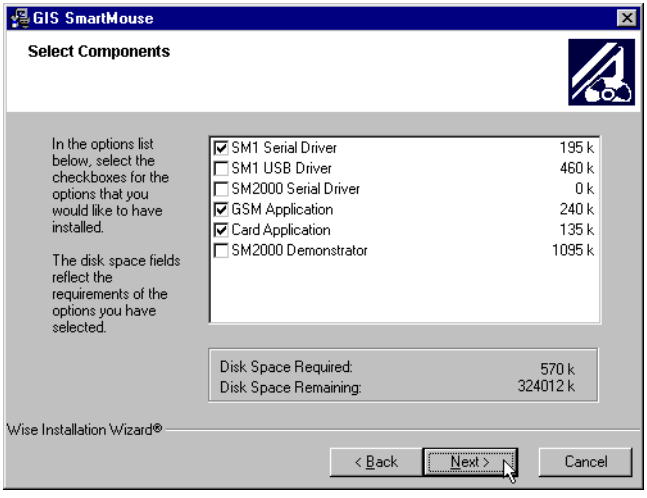
- Click the **Next ›** button to agree to the License Agreement and to specify where to install the SM1 files:



By default the files are installed in `C:\Program Files\GIS\SmartMouse`.

- Click the **Next ›** button to accept the default location, or click the **Browse...** button to choose another location.

The next dialogue box allows you to specify which components you want to install:



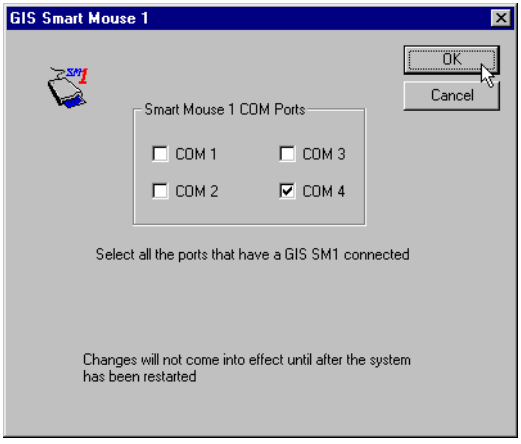
To install the SM1 Welcome package you should select the following options:

- **SM1 Serial Driver**.
- **GSM Application**.
- **Card Application**.

- Click the **Next ›** button to install the options you have selected.

A progress indicator then shows the progress of the installation.

The following dialogue box then allows you to specify which port your SM1 is connected to:



- Select the appropriate port and click the **OK** button to continue.

You may then be instructed to restart your machine.

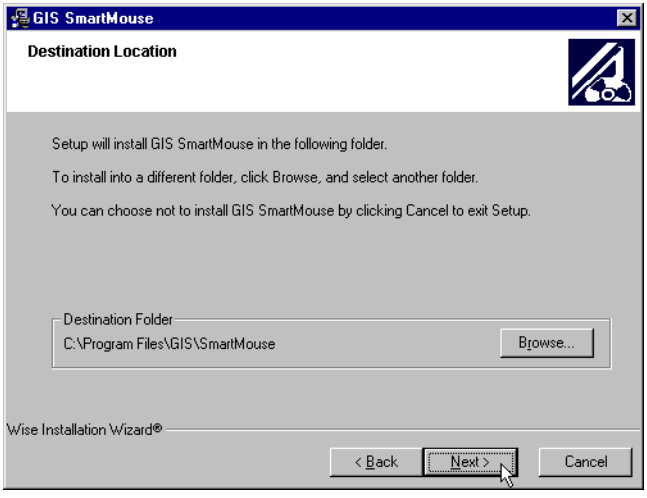
Installing the Welcome Pack for the SM1 USB for Windows 98 and ME

Insert the installation CD-ROM into your PC's CD-ROM drive.

The Welcome Pack installer should run automatically; if not, double-click the CD-ROM icon in the **My Computer** folder, and double-click the **smartmouse.exe** icon.

When the Welcome screen appears:

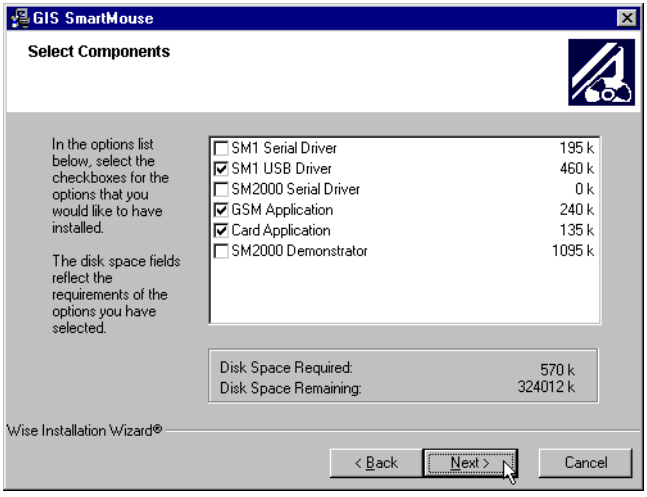
- Click the **Next ›** button to display the End User License Agreement.
- Click the **Next ›** button to agree to the License Agreement and to specify where to install the SM1 files:



By default the files are installed in `C:\Program Files\GIS\SmartMouse`.

- Click the **Next ›** button to accept the default location, or click the **Browse...** button to choose another location.

The next dialogue box allows you to specify which components you want to install:



To install the SM1 USB smartcard reader you should select the following options:

- **SM1 USB Driver**.
- **GSM Application**.
- **Card Application**.

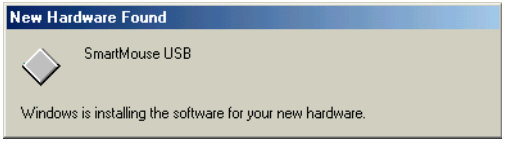
- Click the **Next ›** button to install the options you have selected

A progress indicator will show the progress of the installation. When it has finished:

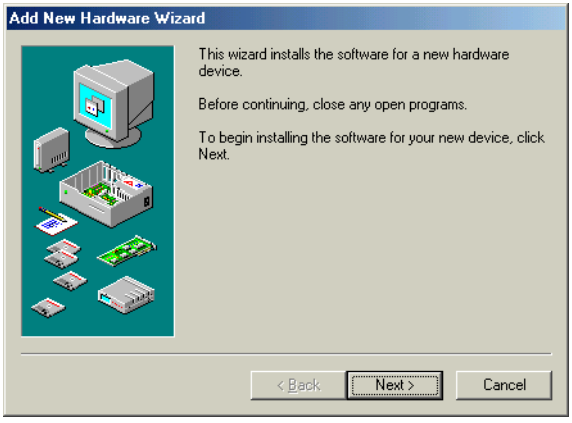
- Click the **Finish ›** button.

- Connect the SM1 USB to the USB port on your computer.

Windows automatically detects the SM1 USB and displays the following window:



The **Add New Hardware Wizard** window is then displayed:

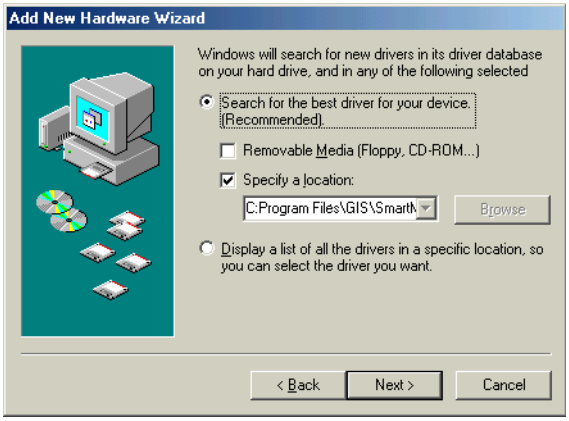


- Click the **Next ›** button.

This displays the following window:

- Select **Specify the location of the driver (Advanced)**.
- Click the **Next ›** button.

This displays the following window:



- Select **Specify a location:**.
- On the **Specify a location:** drop-down list, select the location of the GIS SM1 USB drivers.

The next window confirms the location of the SM1 USB drivers:

- Click the **Next ›** button to confirm the location of the drivers to be installed.

When Windows has finished installing the SM1 USB drivers, the following window is displayed:

- Click the **Finish** button to complete the installation.

Your SM1 USB smartcard reader is now ready for use.

Installing the Welcome Pack for the SM1 USB for Windows 2000 and XP

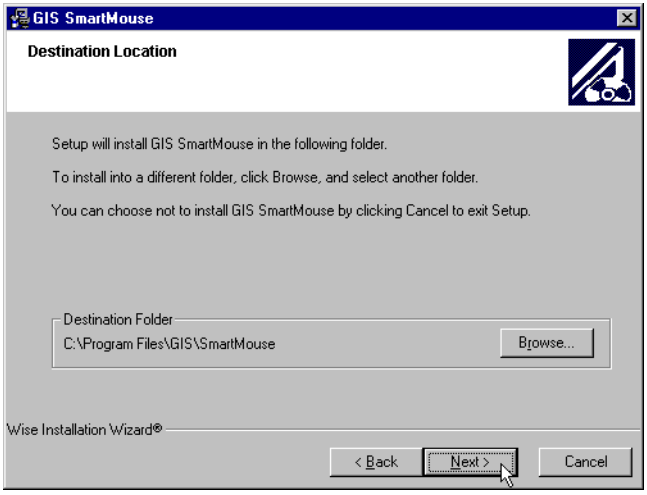
Insert the installation CD-ROM into your PC's CD-ROM drive.

The Welcome Pack installer should run automatically; if not, double-click the CD-ROM icon in the **My Computer** folder, and double-click the **smartmouse.exe** icon.

When the Welcome screen appears:

- Click the **Next ›** button to display the End User License Agreement.

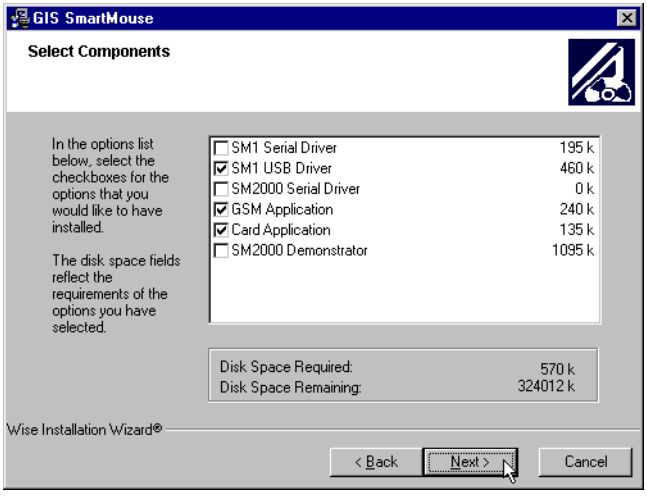
- Click the **Next ›** button to agree to the License Agreement and to specify where to install the SM1 files:



By default, the files are installed in `C:\Program Files\GIS\SmartMouse`.

- Click the **Next ›** button to accept the default location, or click the **Browse...** button to choose another location.

The next dialogue box allows you to specify which components you want to install:



To install the SM1 USB smartcard reader you should select the following options:

- **SM1 USB Driver**.
- **GSM Application**.
- **Card Application**.

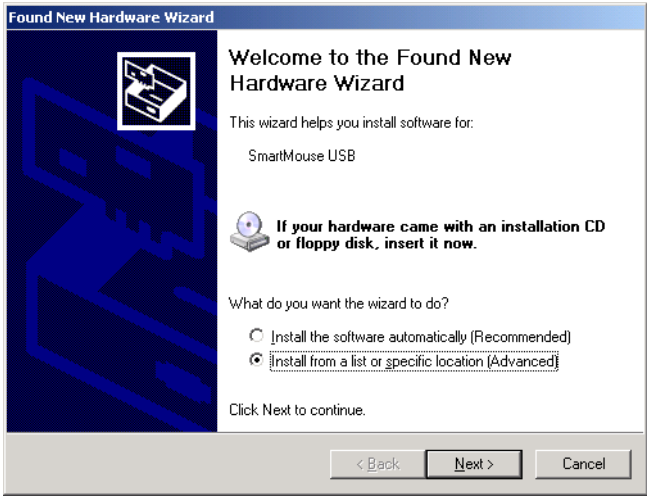
- Click the **Next ›** button to install the options you have selected

A progress indicator then shows the progress of the installation. When it has finished:

- Click the **Finish ›** button.

- Connect the SM1 USB to the USB port on your computer.

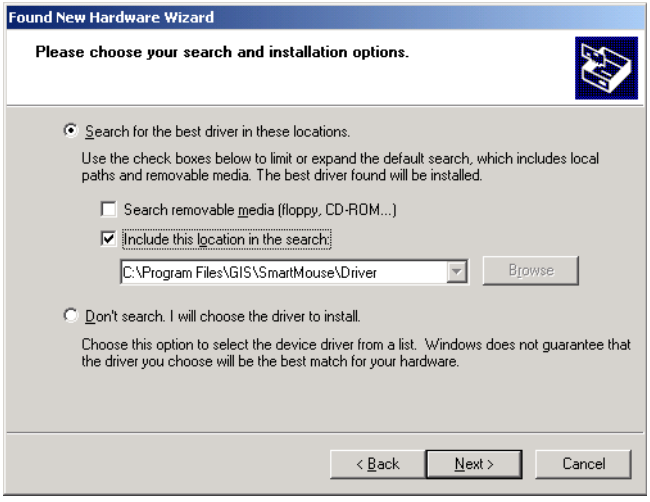
Windows automatically detects the SM1 USB and displays the following window:



- Select **Install from a list or specific location (Advanced)**.

- Click the **Next ›** button.

This displays the following window:



- Select **Search for the best driver in these locations**.
- Select **Include this location in the search:**.
- On the drop-down list, select the location of the GIS Smart Mouse files.
- Click the **Next ›** button.

When Windows has finished installing the SM1 USB drivers, the following window is displayed:

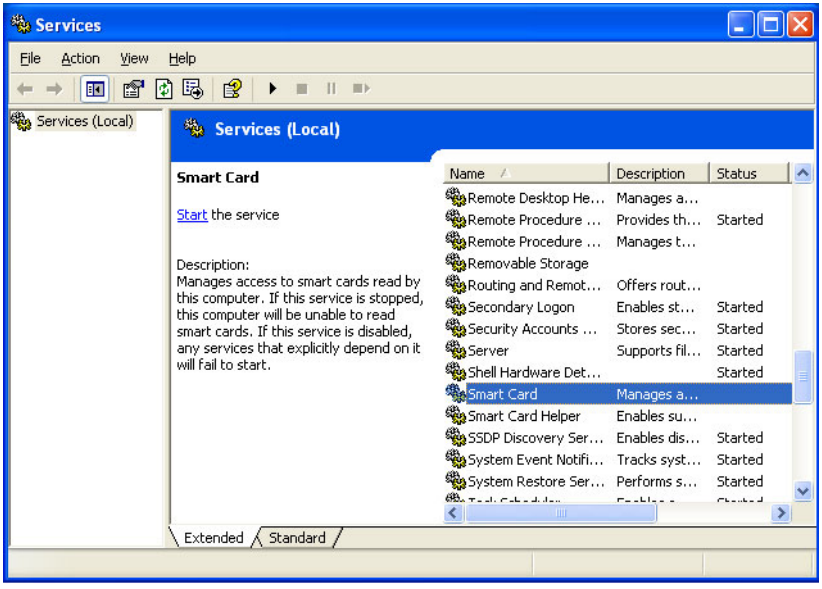
- Click the **Finish** button to complete the installation.

Windows XP smartcard services

If you are using Windows XP you will need to start the smartcard services manually (this is done automatically on Windows 2000).

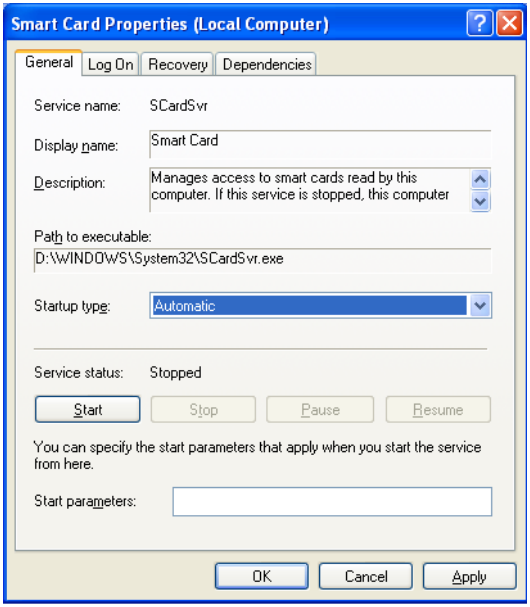
- On the **Start** menu, point to **Settings**, **Control Panel**, **Performance and Maintenance**, **Administrative Tools**, then click **Services.**

This displays the following window:



- Scroll down the list of services and select **Smart Card**.
- Click **Start the service**.

This displays the **Smart Card Properties (Local Computer)** window:



- On the **Startup type** drop-down list, select **Automatic**.
- Click the **Apply** button and then click the **OK** button.

Your SM1 USB smartcard reader is now ready for use.

The Welcome Pack installs the following set of directories and files into the installation directory, by default `C:Program Files\GIS\SmartMouse`.

Directory	Contents
`\driver`	Drivers for the complete range of GIS smartcard readers.
`\general`	Card Application files: `cardapp.exe` Card Application `cardap.hlp` Card Application help
`\GSM`	GSM Application files: `gsmapp.exe` GSM Application `gsmapp.hlp` GSM Application help
`\gishelp.exe`	Technical Support Application.

Card Application

The Card Application allows you to read the top-level information on a smartcard, to identify the type of card and the applications on the card. For more information see the next chapter.

GSM Application

The GSM Application allows you to read the phone book information stored on a standard mobile phone SIM card, print it, or edit it and store it back to the SIM. For more information see *GSM Application*, page 23.

Technical Support Application

Use this when instructed by GIS technical support to email information about your computer's configuration.

2

Card Application

The Card Application is a simple program which allows you to read the detailed configuration information stored on a smartcard. This chapter will describe how to run the program, read a card, access the information, view it on your screen, save it, and print it.

Reading a smartcard

To run the Card Application

Either:

- Double-click the Card Application program icon on your desktop:

Or:

- Click the **Start** menu, point to **Programs, Smart Mouse,** and then click **Card Application**.

The **Card Application** window will be displayed.

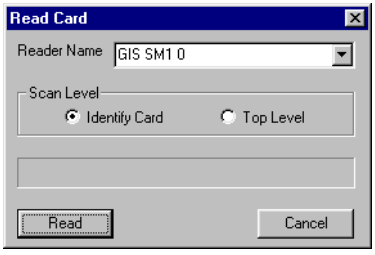
Smartcard information

When reading a card you can choose which **Scan Level** option you require. The **Identify Card** option allows you to view the configuration details stored on the smartcard. The **Top Level** option allows you to view the directory structure of the smartcard.

To read a smartcard

- On the **File** menu, click **New.**

This displays the **Read Card** dialogue box:

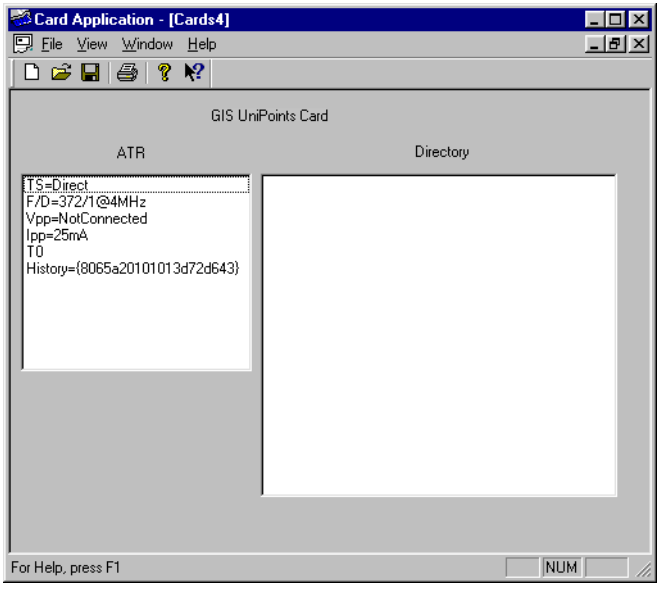


- Select the smartcard reader you are using from the **Reader Name** drop-down menu.

- Select which **Scan Level** you require by selecting either the **Identify Card** or **Top Level** radio buttons.

Identify card

The example below shows typical information displayed by selecting the **Identify Card** option:



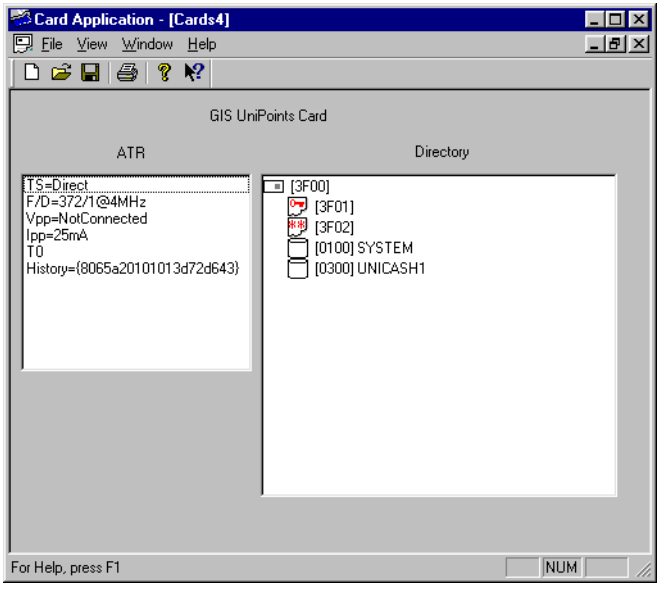
The table below gives a brief explanation of what the data displayed represents:

Data Code	Description
TS	Communication method with card: inverse or direct.
F/D	Clock rate conversion factor and baud rate adjustment factor.
Vpp	Voltage applied to the card when programming.
Ipp	Current applied to the card when programming.
T0	Transmission protocol in use and/or qualifies the interface bytes.
History	General information: card manufacturer, chip type, masked ROM, life status.

For more information consult the ISO 7816 specification.

Top level

The following example shows typical directory structure information displayed by selecting the **Top Level** option:



This shows two files (3F01 and 3F02), and two directories (SYSTEM and UNICASH1).

It is not possible to view the directory structure of smartcards with high security levels.

To save the information

- On the **File** menu, click **Save.**

The **Save As** dialogue box is displayed.

- Choose a location to save the file.

All files created by the Card Application have the extension *.crd.

To print the information

- On the **File** menu, click **Print Setup.**

To quit from the Card Application

- On the **File** menu, click **Exit.**

3

GSM Application

The GSM Application allows you to view or edit the phone book information stored on a GSM mobile phone SIM card. This provides an easier way of editing and managing your phone book than using the mobile phone functions, and it allows you to share information with other applications such as Microsoft Excel and Outlook. This chapter describes how to access the phone book, add, edit, and export entries, and save new information back to a SIM card.

Reading a SIM card

To run the GSM Application

Either:

- Double-click the GSM Application program icon on your desktop:

Or:

- Click the **Start** menu, point to **Programs, Smart Mouse,** and then click **GSM Application**.

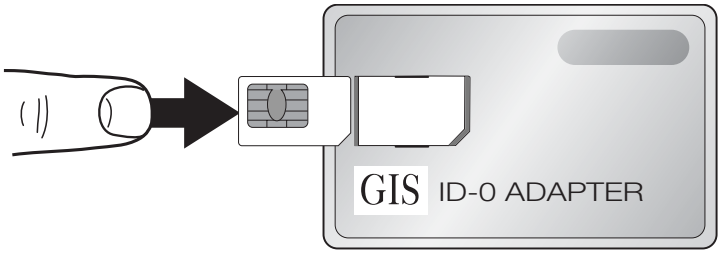
The **GSM Application** window will be displayed.

SIM card security

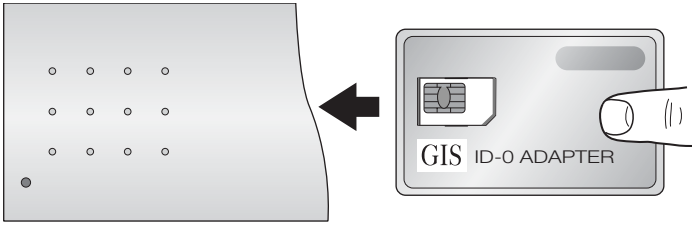
The GSM Application can only access information from an unlocked SIM card. Be sure to switch off all security on the SIM card before proceeding. To do this follow the instructions in the user guide that accompanied your GSM mobile phone.

To read a GSM SIM card

- Carefully remove the SIM card from your mobile phone following the manufacturer's instructions.
- Insert it into the SIM card carrier provided with the SM1 reader as shown in the following illustration:

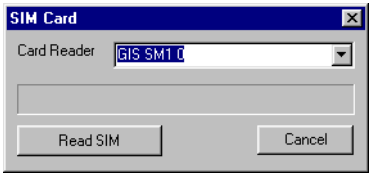


- Insert the carrier into the SM1 reader:



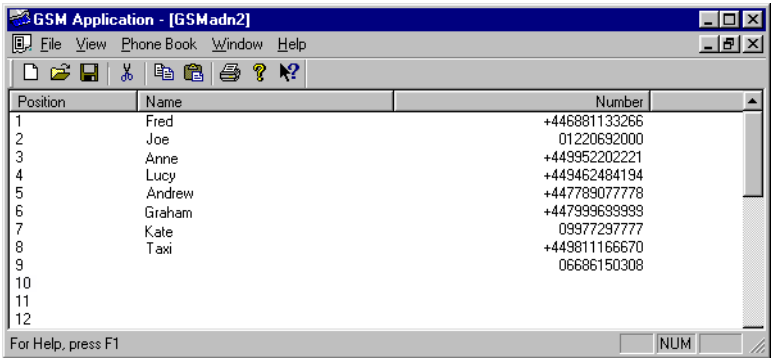
- On the **File** menu, click **New.**

This displays the **SIM Card** dialogue box:



- Select the smartcard reader you are using from the **Card Reader** drop-down menu.
- Click the **Read SIM** button.

This displays the phone book information stored on the SIM card:

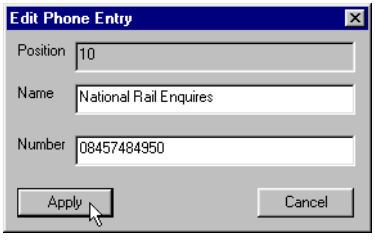


Editing the phone book

To add an entry to the phone book

- On the **Phone Book** menu, click **New Entry**.

This displays the **Edit Phone Entry** dialogue box:



- Enter the name and number in the appropriate fields.
- Click the **Apply** button.

To edit a phone book entry

Either:

- Select an entry in the phone book list.
- On the **Phone Book** menu, click **Edit Phone Entry**.

Or:

- Right click a phone book entry.
- Click **Edit Phone Entry** on the pop-up menu.

Or:

- Double-click a phone book entry.

This will display the **Edit Phone Entry** dialogue box. You can now edit the entry as described in *To add an entry to the phone book,* page 25.

Voice tags

Voice recognition tags are stored on the mobile phone's memory and not on the SIM card. If you do make any changes to numbers stored on your SIM card using the GSM Application you may have to manually redo any attached voice tags using your mobile phone.

To delete a phone book entry

Either:

- Select an entry in the phone book list.
- On the **Phone Book** menu, click **Delete Entry.**

Or:

- Right-click the entry in the phone book list
- Click **Delete Entry** on the pop-up menu.

This deletes the entry from the GSM Application. If you want to delete the entry from the SIM card you will need to save the changes to your SIM card using **Save to SIM**.

To delete multiple entries from the phone book hold down Shift while selecting entries from the phone book list.

To copy a single entry to the SIM

Either:

- Select an entry from the phone book list.
- On the **Phone Book** menu, click **Copy to SIM**.

Or:

- Right-click the entry in the phone book list.
- Click **Copy to SIM** on the pop-up menu.

To save all entries to the SIM

To save time, you can do all your edits and updates to your phone book and save them to the SIM in one action.

- On the **Phone Book** menu, click **Save to SIM**.

To save the phone book information to a file

- On the **File** menu, click **Save**.

This displays the **Save As** dialogue box.

- Choose a location to save the file.

This feature enables you to keep a back-up copy of your phone book entries, which you can copy to another mobile phone SIM card if your mobile phone is lost or broken. All files created by the GSM Application have the extension `*.adn`.

To save the phone book information for use in another application

- On the **File** menu, click **Save As...**.

This displays the **Save As** dialogue box.

- In the **Save as Type** drop-down menu select **Comma Separated Value (`*.csv`)**.

You can then import the `*.csv` file into another application such as Microsoft Excel or Outlook by setting **Files of Type** to include `*.csv` files.

To print the information

- On the **File** menu, click **Print**.

To quit from GSM Application

- On the **File** menu, click **Exit**.

4

Technical overview

The following chapter provides technical information for the GIS SM1 USB and SM1 C.

Host interface

SM1 USB

The SM1 USB is designed for PCs with a USB interface and is compatible with Microsoft PC/SC drivers (Windows 98/ME, 2000, and XP). It provides a full speed interface for USB and supports Plug and Play. It is powered by the USB port.

SM1 C

The SM1 C is designed for PCs with an RS232C serial interface and is compatible with Windows libraries (DLL) drivers (Windows 3.1x, 95/98, ME, 2000, NT, and XP). It also supports Microsoft PC/SC drivers (Windows 95/98, ME, 2000, NT, and XP). The card is reset using RTS and detected using CTS. It is optionally powered from the PS/2 port.

Card interface

The SM1 contains a six-contact wipe card acceptor with a 3.57MHz clock. It is fully compatible with ISO-7816-1/2 and ISO-7816 - T=1/T=0 and supports both 5V and 3V cards (Class A and A/B). An LED indicator identifies when a card is present.

General specifications

External dimensions	Horizontal package: Vertical package:	70mm x 104mm x 18mm (W x H x D) 35mm x 100mm x 72mm (W x H x D)
Colour	Cool grey	
Weight	150g	
Power	SM1 USB: SM1 C:	+5v from the USB port (optional). +5v from the keyboard port (optional).
Operating environment	0 to +50°C ambient, 95% humidity (non-condensing).	
Transit and storage	-10 to +60°C ambient, 95% humidity (non-condensing).	
Card slot life	100,000 insertions	

Note: SM1 USB and SM1 C are both available in horizontal and vertical packages.

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