

**KlasHopper™ 600 PCMCIA
Windows 2000/XP User Manual**

Version: Release 1.

First Printing: April 2003

Copyright © Klas Ltd. 2000 - 2003

All rights reserved. No part of this manual may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express prior written consent of Klas Ltd.

All company names and logos are trademarks or registered trademarks of their originators.

Information in this manual is subject to change without notice. Klas Ltd. reserves the right to make improvements and/or changes in the products described in this manual at any time.

TABLE OF CONTENTS

1. INTRODUCTION AND OVERVIEW 1

1.1. INTRODUCTION 1

1.2. INTERFACES 1

1.3. PACKAGE CONTENTS 1

1.4. FEATURES 1

1.5. INSTALLATION 2

1.6. HOW TO CONNECT 3

2. SOFTWARE INSTALLATION 4

2.1. OVERVIEW 4

2.2. STARTING THE INSTALL 4

2.3. RUNNING THE INSTALL 5

2.4. REMOVING THE SOFTWARE 144

3. CONFIGURATION..... 17

3.1. STARTING THE CONFIGURATION APPLICATION 17

3.2. HOT DIAL/HOT ANSWER 18

3.2.1. WHAT IS HOT DIAL/HOT ANSWER? 18

3.2.2. CONFIGURING FOR HOT DIAL/HOT ANSWER 19

3.3. V.25BIS 20

3.3.1. WHAT IS V.25BIS? 20

3.3.2. CONFIGURING FOR V.25BIS 20

3.4. MANUAL DIAL 21

3.4.1. WHAT IS MANUAL DIAL? 21

3.4.2. CONFIGURING FOR MANUAL DIAL 21

3.5. THE SERIAL INTERFACE 22

3.6. RAISE DTR WHILE LISTENING FOR A CALL 23

4. AVAILABLE RESOURCES 24

4.1. INTRODUCTION 24

4.2. DEVICE MANAGER 24

5. VERIFY INSTALLATION 344

5.1. OVERVIEW 34

5.2. MODEMS 34

5.3. WINDOWS DEVICE MANAGER 41

6. DIAL-UP NETWORKING 42

6.1. NETWORK AND DIAL-UP CONNECTIONS 42

6.2.	NEW CONNECTION	43
6.3.	LOCATION INFORMATION	44
6.4.	NETWORK CONNECTION WIZARD	45
6.5.	NETWORK CONNECTION TYPE.....	46
6.6.	INTERNET CONNECTION WIZARD	47
6.7.	MODEM SELECTION.....	48
6.8.	PHONE NUMBER	49
6.9.	USER NAME AND PASSWORD	50
6.10.	CONNECTION NAME	51
6.11.	EMAIL CONFIGURATION	52
6.12.	FINISH.....	53
7.	MAKING A CALL WITH KLASHOPPER	54
7.1.	INITIATE CONNECTION.....	54
7.2.	DIALING	56
7.3.	VERIFY USER NAME AND PASSWORD	56
7.4.	LOGON.....	56
7.5.	CONNECTION STATUS	57
7.6.	DISCONNECT	57
8.	TROUBLESHOOTING	58
8.1.	OVERVIEW	58
8.2.	RECOGNITION OF KLASHOPPER CARD.....	58
8.3.	KLASHOPPER RESOURCES	58
8.4.	KLASHOPPER MODEM	58
8.5.	DIAL MODE	58
8.6.	ARE MY NETWORK SETTINGS CORRECT?	59
8.7.	IS THE REMOTE END USING THE PPP PROTOCOL?	59
8.8.	IS THE REMOTE END USING THE HDLC PROTOCOL?.....	59
8.9.	ARE THE CABLE AND INTERFACE CORRECT?	59
8.10.	PPP LOG	60
8.10.1	ENABLING THE PPP LOG.....	60
8.10.2	VIEWING THE PPP LOG.....	60
8.11.	USING THE DIAGNOSTIC APPLICATION.....	61
9.	CABLES AND INTERFACES.....	62
9.1.	OVERVIEW	62
10.	APPENDICES.....	63
10.1.	APPENDIX A. SPECIFICATIONS.....	63
10.2.	APPENDIX B. SATELLITE TERMINALS AND SYNCHRONOUS DEVICES.....	64
10.3.	APPENDIX C. WARRANTY INFORMATION.....	65

10.4. APPENDIX D. CONTACT INFORMATION AND TROUBLESHOOTING 66

1. Introduction and Overview

1.1. Introduction

This document describes how to install KlasHopper 600 PCMCIA in the Windows 2000/XP operating systems. Please note that the screen shots, which are taken from Windows 2000 Professional, differ slightly from Windows XP. However the functionality is the same.

1.2. Interfaces

The following interfaces are available in the KlasHopper 600 PCMCIA family:

KlasHopper 600 PCMCIA – RS-232 DB-25
KlasHopper 600 PCMCIA – RS-449 DB-37
KlasHopper 600 PCMCIA – RS-530 DB-25
KlasHopper 600 PCMCIA – X.21 DB-15

Please contact Klas for information on custom cables.

KlasHopper 600 PCMCIA is also available in PCI format. Please contact Klas Sales (sales@klasonline.com) for further information.

1.3. Package Contents

KlasHopper 600 PCMCIA contains the following components:

- 1 x PCMCIA card
- Driver software (CDROM)
- Necessary Cables
- User Manual
- Getting Started/License Agreement

1.4. Features

KlasHopper is a new way of communicating between synchronous devices and laptops. KlasHopper is easy to install and works with Dial-Up Networking just like a regular modem. KlasHopper provides high throughput (64kbit/s, 128kbit/s and greater) and supports standard Internet protocols including PPP and TCP/IP.

KlasHopper has been tested with the following devices:

- M4 Satellite Terminal
- Synchronous Terminal Adapters over ISDN lines
- Synchronous modems over analogue lines
- Bulk encryption devices

Please contact Klas for information on how to use KlasHopper with other synchronous devices.

KlasHopper supports standard networking protocols such as TCP/IP and UDP. As it runs underneath Dial-Up Networking it can support any Internet application including:

- Web Browser
- File Transfer
- Email
- H.323 Videoconferencing

KlasHopper makes it easy to connect to the Internet and corporate Intranets. It can communicate with any remote device that supports PPP (RFC 1618). This includes standard ISDN Internet dial-up accounts and corporate routers. KlasHopper 600 PCMCIA also supports the HDLC protocol, which is used in certain specialized e-mail systems.

KlasHopper supports advanced connection modes including V.25bis, Hot (DTR) Dial and Manual Dial. Hot Answer is also supported when answering a call.

1.5. Installation

Take the following steps when installing KlasHopper:

1. Install the KlasHopper software (refer to Section 2).
2. Insert the KlasHopper 600 PCMCIA in a free PCMCIA slot.

1.6. How to connect

Take the following steps to connect KlasHopper to a remote device or server such as the Internet:

1. Following installation, configure the required dial mode (refer to Section 3).
2. Configure the synchronous device (consult the documentation that came with your device).
3. Connect the supplied cable between KlasHopper and the synchronous device.
4. Create a Dial-Up Networking entry, and connect to the remote PC (refer to Section 6).

2. Software Installation

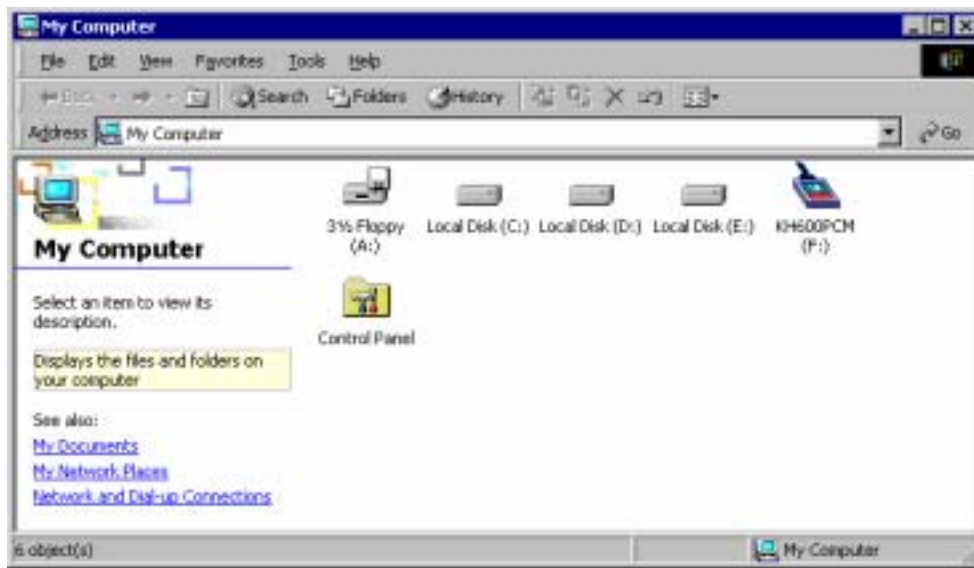
2.1. Overview

The KlasHopper software installs a modem driver on your laptop that allows you use the PCMCIA card just like a regular modem.

2.2. Starting the Install

There are two different ways that you can run the install program:

- (i) If you downloaded the software from the web, simply double click on the EXE file to run the install.
- (ii) If you have obtained the software on a CD-ROM, insert the CD into the CD drive. The install program should automatically run. If not, proceed to the 'My Computer' icon, and double click to display the following dialog box.

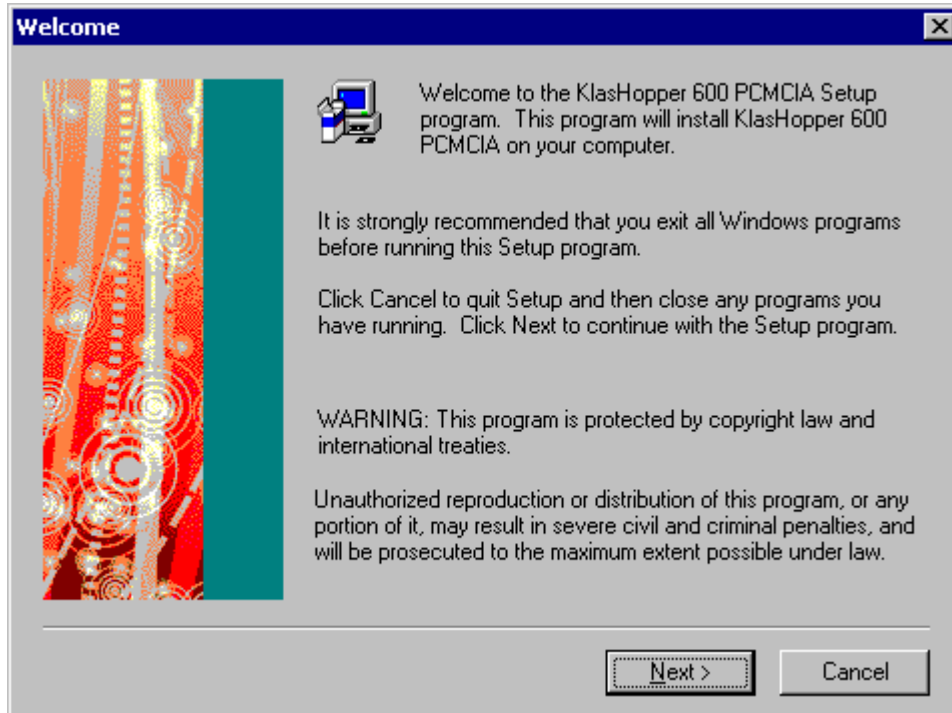


Double click on the CD drive icon (F in the example above) and the install program will run. If it does not run, locate the file START.EXE and double click on this.

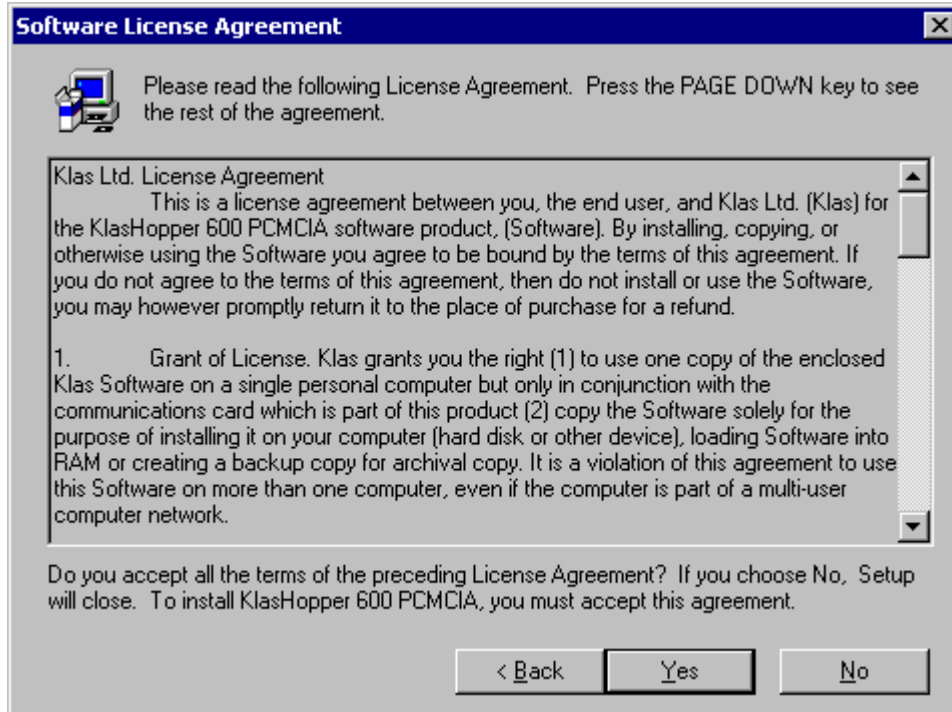
2.3. *Running the Install*

The first screen to appear when installing the product is the welcome screen shown below. Exit any other applications before continuing with the install.

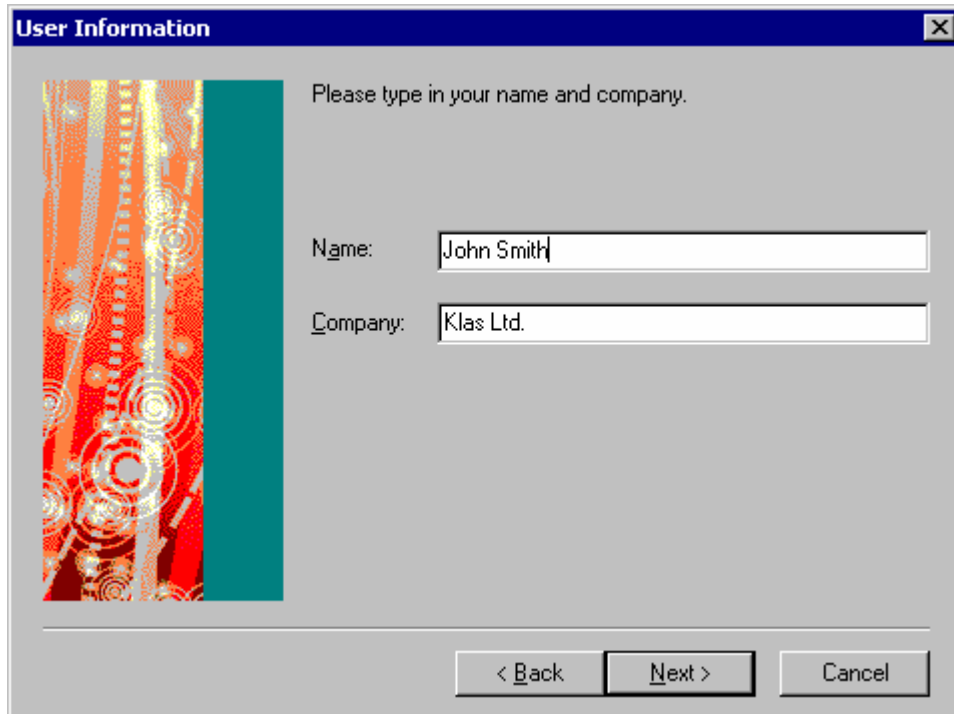
Select Next to continue.



This screen gives details of the License Agreement that you are entering into with Klas by installing and running the product. Scroll down and read the agreement in its entirety before proceeding. Select Yes to proceed.



Enter your name and company in the spaces provided and click on Next to continue with the install.



The image shows a Windows-style dialog box titled "User Information". The dialog has a blue title bar with a close button (X) in the top right corner. The main area is light gray and contains the text "Please type in your name and company." Below this text are two input fields. The first is labeled "Name:" and contains the text "John Smith". The second is labeled "Company:" and contains the text "Klas Ltd.". To the left of the input fields is a vertical decorative bar with a red and orange background and a teal vertical stripe. At the bottom of the dialog are three buttons: "< Back", "Next >", and "Cancel".

User Information [X]

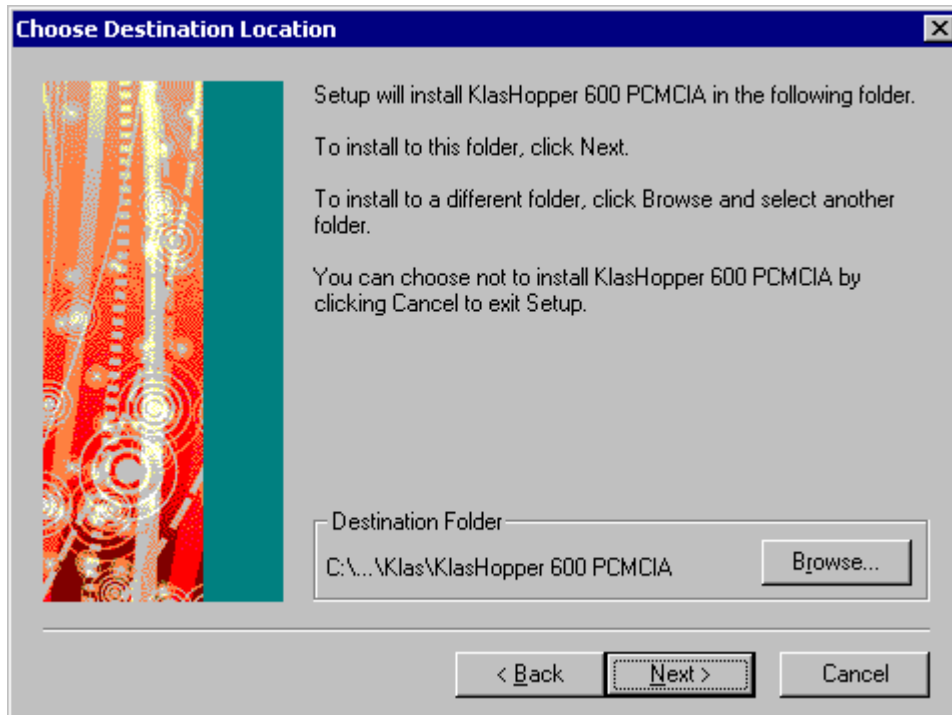
Please type in your name and company.

Name:

Company:

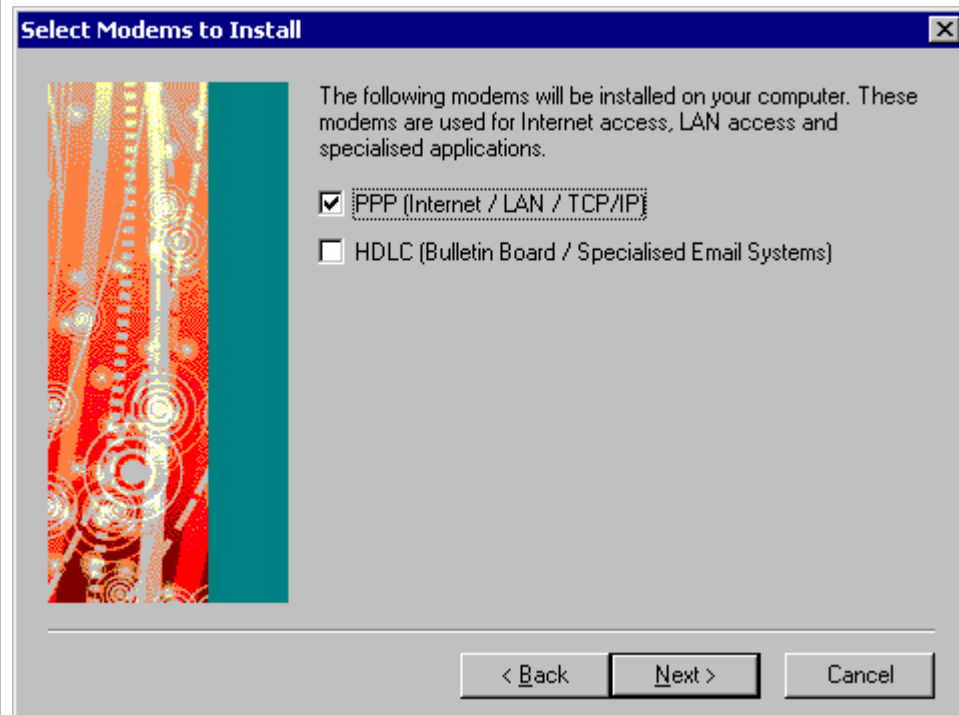
< Back Next > Cancel

The installation program automatically places the application files in the destination folder shown on this screen. If you would like the files to be placed elsewhere click on Browse and select the folder where you want the files to be placed. When you have finished selecting a folder click on Next to continue.

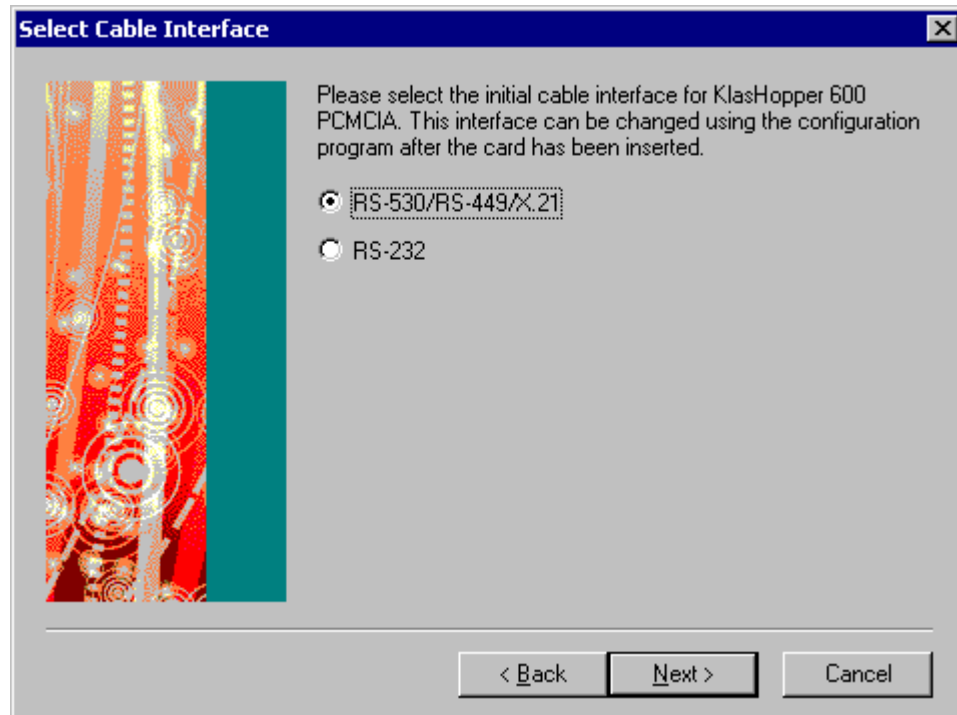


Select the required protocol(s) that you wish to install. The PPP protocol is used for standard systems that use Dial-Up Networking, e.g. connection to the Internet. The HDLC protocol is used for specialised e-mail systems.

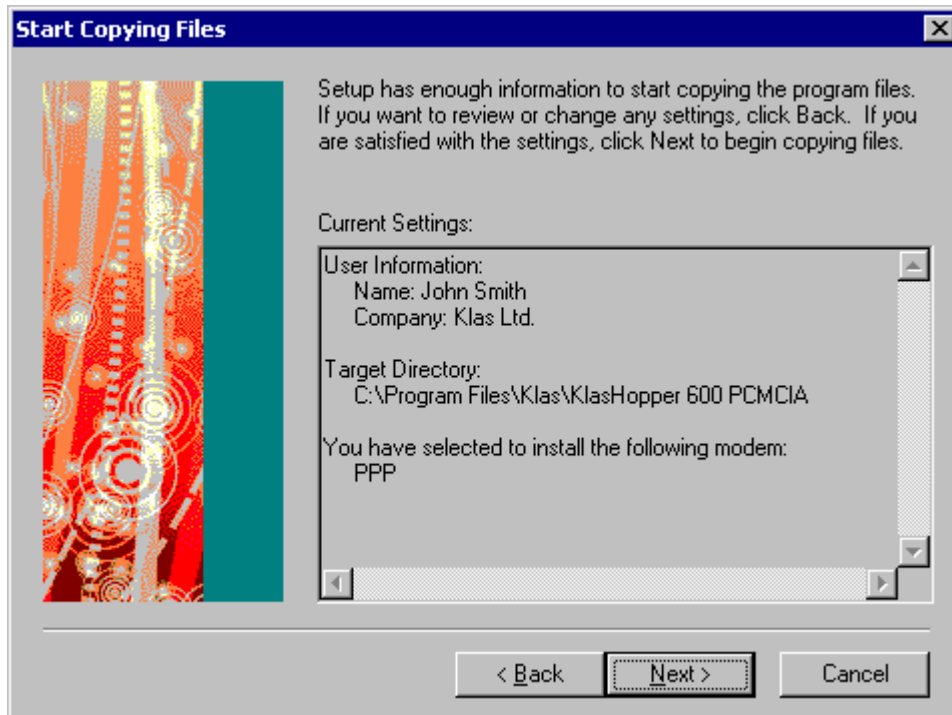
Select Next to continue.



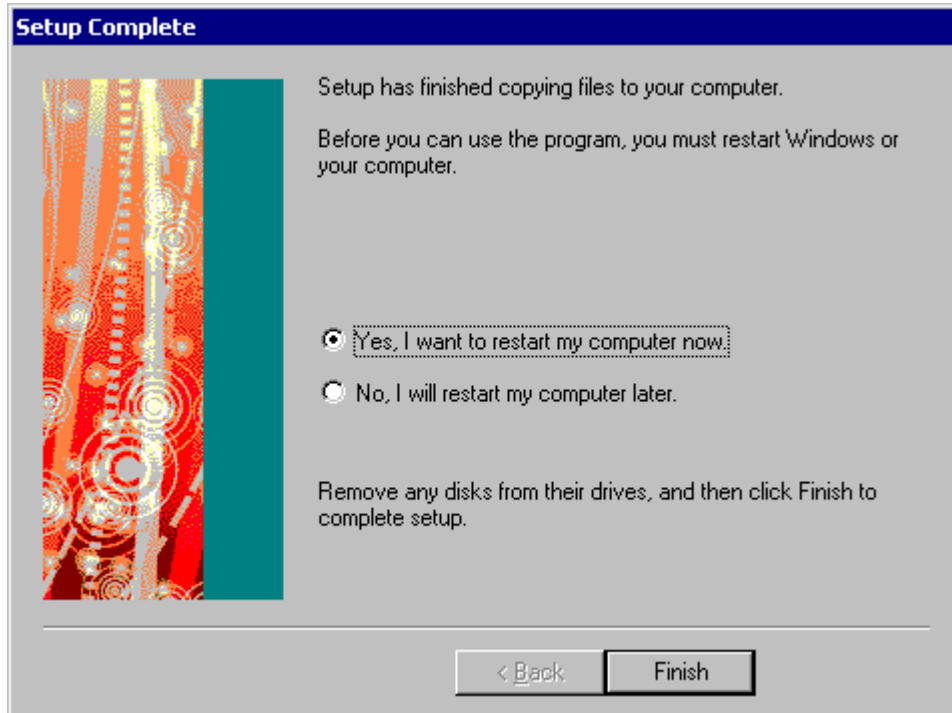
Select the initial serial interface that you want the card to be set in. This can be changed once the software has been installed and the card has been inserted (Section 3.5). Please ensure that you have selected the correct interface for the cable you are using. Note that Klashopper 600 also supports RS-530A.



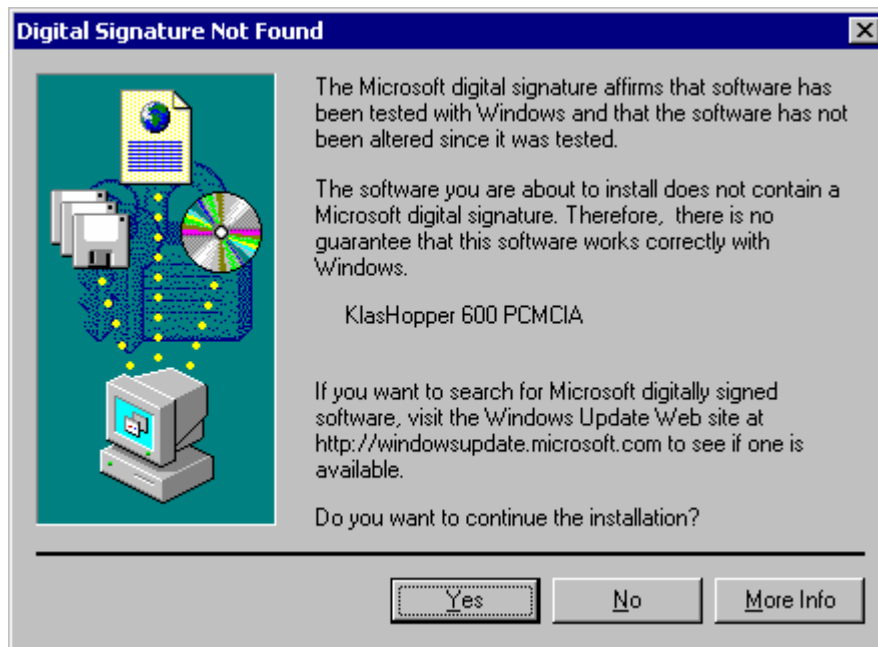
This screen summarises the information that has been entered during installation. If the information is correct click on Next and the program starts to copy the application files to the directory shown on this screen. If you need to make any changes click on Back and make the changes on the appropriate screen



It is necessary to restart windows before the product can be run. It is recommended that you restart Windows now by selecting the option chosen below, and clicking on Finish.



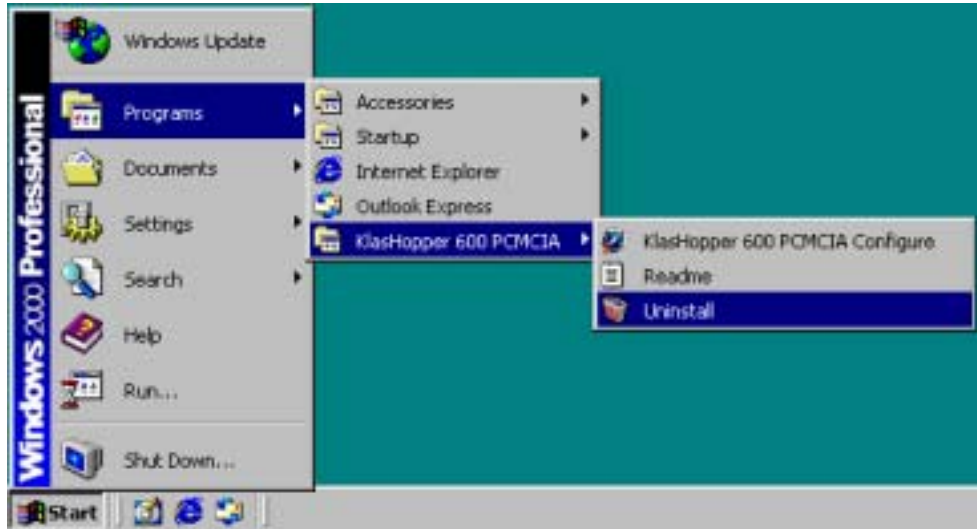
Insert the KlasHopper 600 card following the restart. The following Digital Signature dialog box is displayed. Select Yes to complete the installation of KlasHopper.



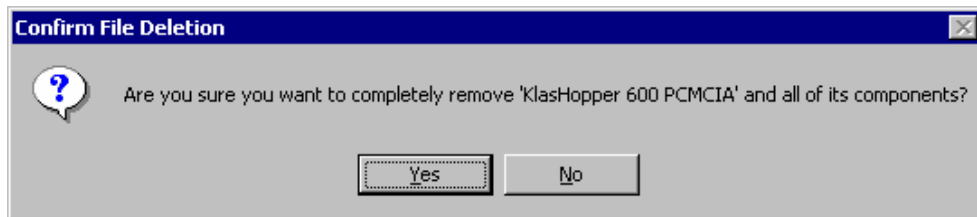
You should now proceed to Section 5 to verify that the KlasHopper has been correctly installed.

2.4. Removing the software

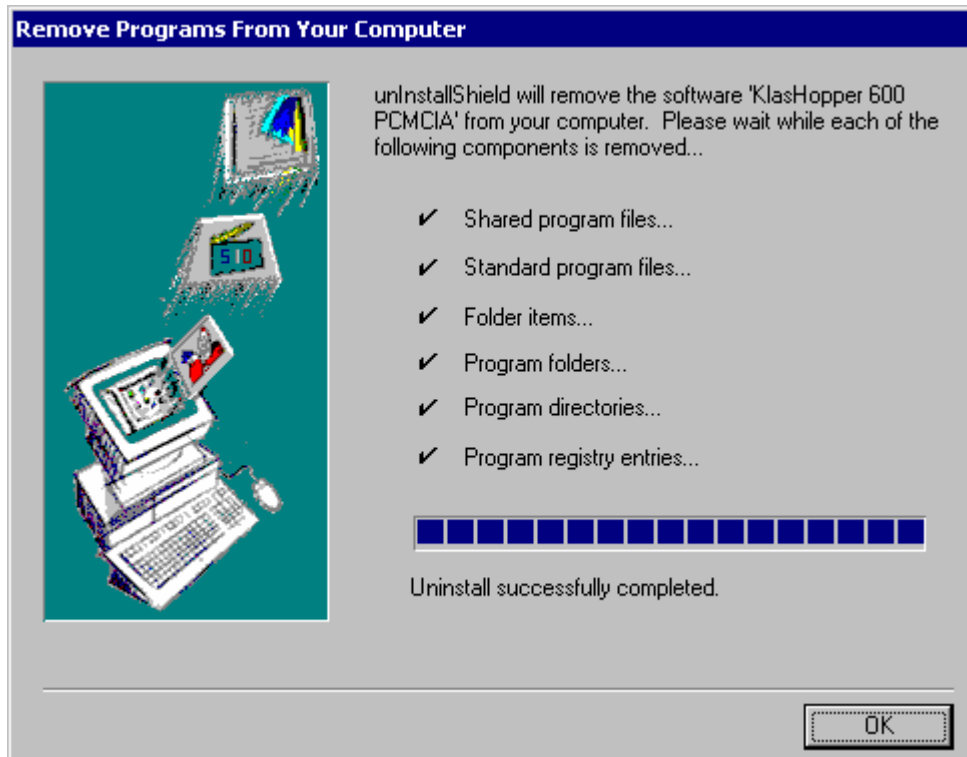
To uninstall the software proceed to the Windows Start menu and select Programs. KlasHopper is listed as one of the applications. Select this option and click on Uninstall.



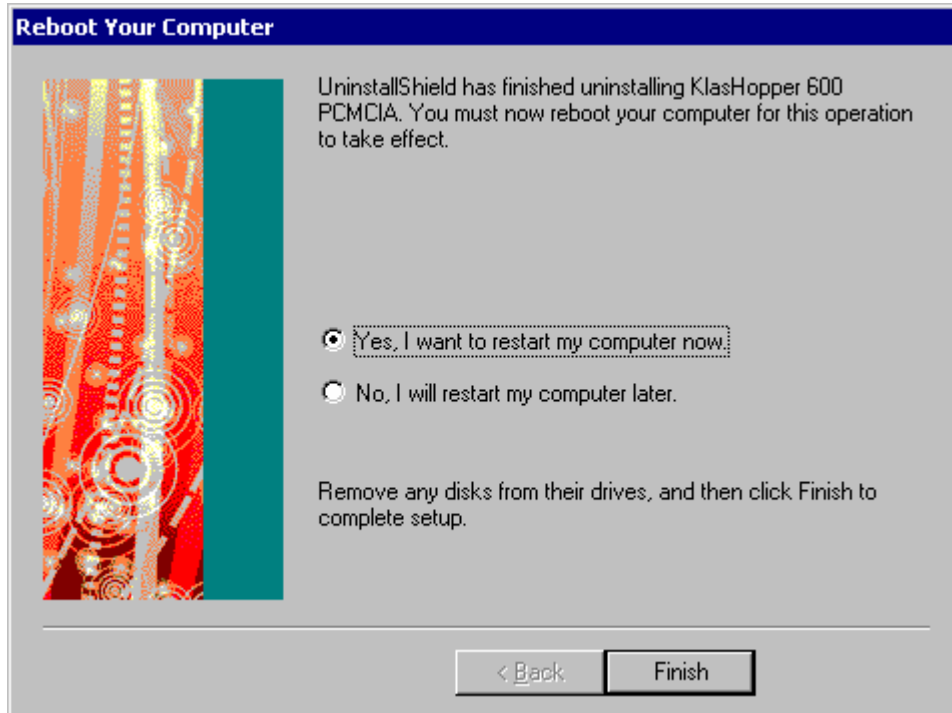
You will be asked if you are sure you want to remove the application from your system. Select Yes to remove the application.



The application is now removed from your system. Click on OK to complete the process.



You are now prompted to restart your PC. Select Finish to confirm.



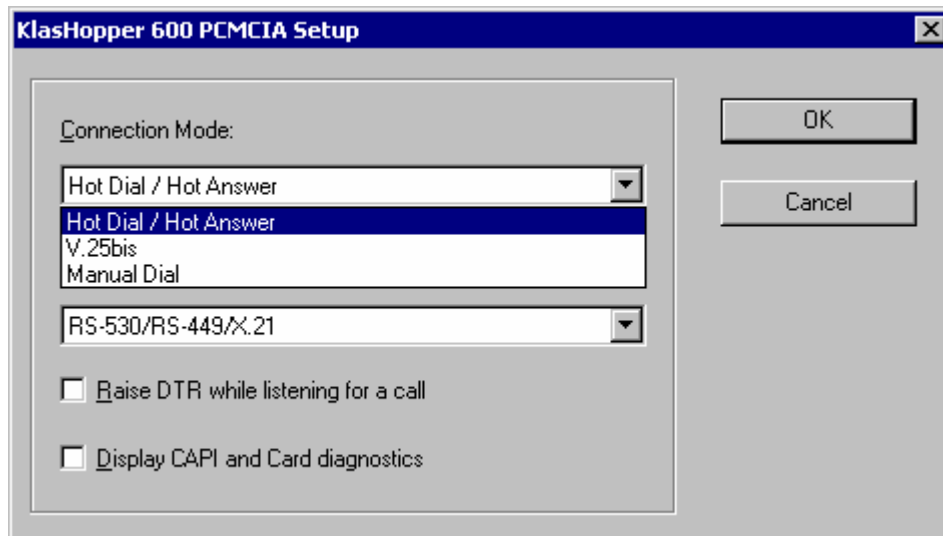
3. Configuration

3.1. Starting the Configuration Application

To configure KlasHopper proceed to Start-Programs-KlasHopper 600 PCMCIA Configure.



The Configuration Application is displayed. Select the required connection mode, and click OK.



The different connection modes are explained below.

3.2. Hot Dial/Hot Answer

3.2.1. What is Hot Dial/Hot Answer?

The Hot Dial feature allows KlasHopper dial a pre-stored number in the satellite terminal or synchronous device. Hot Dial is supported by most satellite terminals - consult the documentation that came with your satellite terminal to learn how to configure it for Hot Dial.

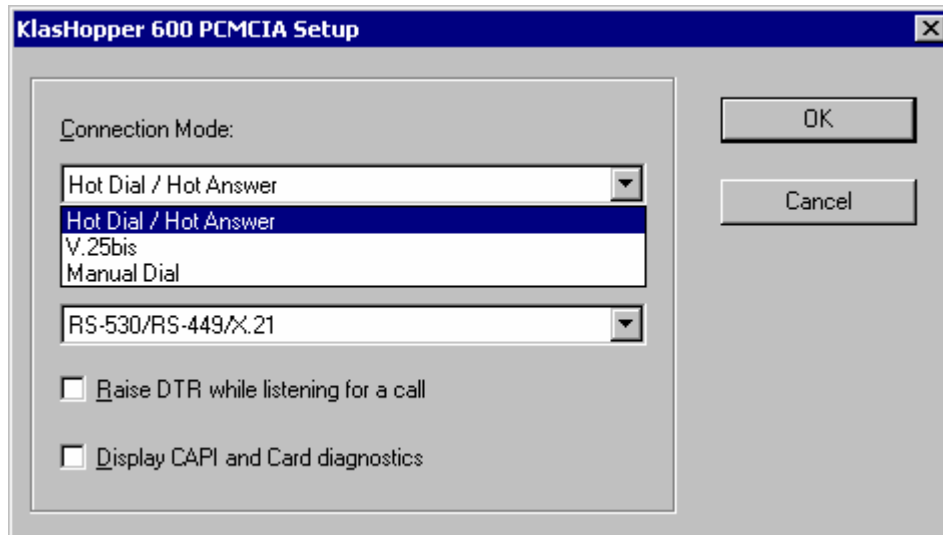
When a user instructs KlasHopper to establish a connection, KlasHopper raises DTR. The satellite terminal (or synchronous device) dials a pre-stored number. KlasHopper waits for DCD to be raised by the satellite terminal when a connection is established. If the satellite terminal fails to establish a call, KlasHopper reports this to the user after a certain timeout period.

The Hot Answer feature allows KlasHopper answer an incoming call. The satellite terminal must be configured to auto-answer all incoming calls. When the satellite

terminal answers a call, it raises DCD. KlasHopper monitors DCD. When DCD goes high, it informs Windows.

3.2.2. Configuring for Hot Dial/Hot Answer

1. Run the Configuration Application as described in Section 3.1.
2. Select Hot Dial / Hot Answer from the Connection Mode menu and click OK.



3. You may be prompted to restart your PC. When your PC has restarted, KlasHopper will be ready for Hot Dial/Hot Answer.

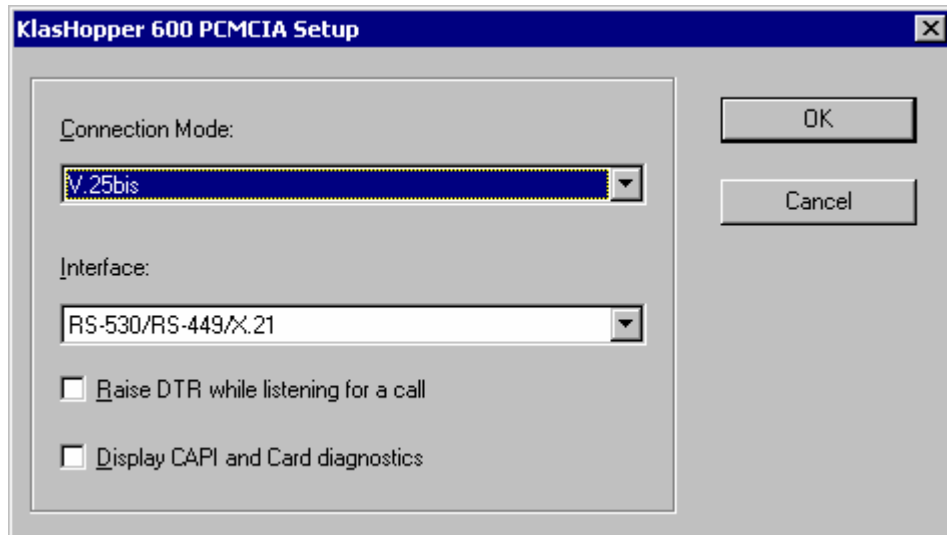
3.3. V.25bis

3.3.1. What is V.25bis?

V.25bis is an advanced connection method available on certain satellite terminals and synchronous devices. It allows the number entered in Dial-Up Networking to be used when establishing a connection (just like a regular modem). Consult the documentation that came with your satellite terminal to learn how to configure it for V.25bis.

3.3.2. Configuring for V.25bis

1. Run the Configuration Application as described in section 3.1.
2. Select V.25bis from the Connection Mode menu and click OK.



3. You may be prompted to restart your PC. When your PC has restarted, KlasHopper will be ready for V.25bis.

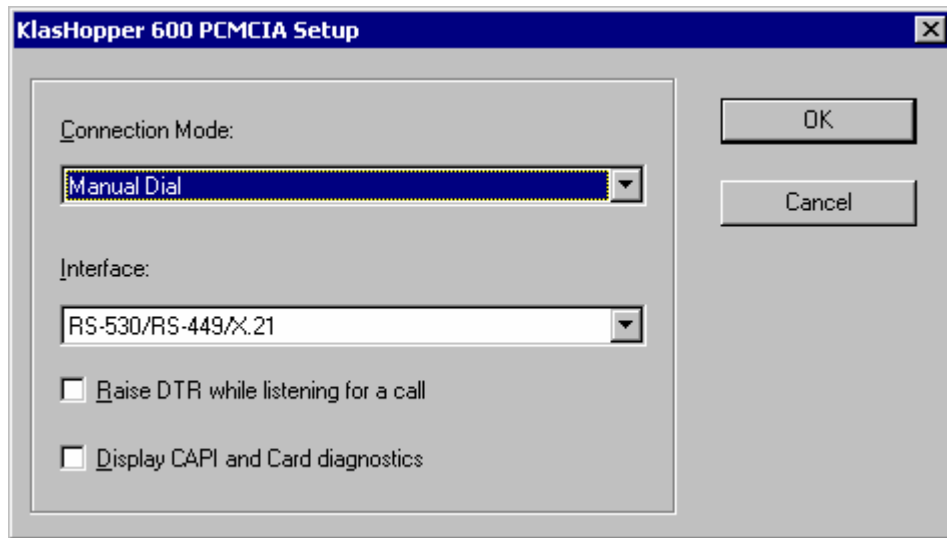
3.4. Manual Dial

3.4.1. What is Manual Dial?

With Manual Dial, KlasHopper assumes the connection is already established via some other means such as the handset of the satellite terminal or the front panel of the synchronous device. KlasHopper immediately starts sending and receiving data. Only use this mode if Hot Dial and V.25bis are not available on your satellite terminal.

3.4.2. Configuring for Manual Dial

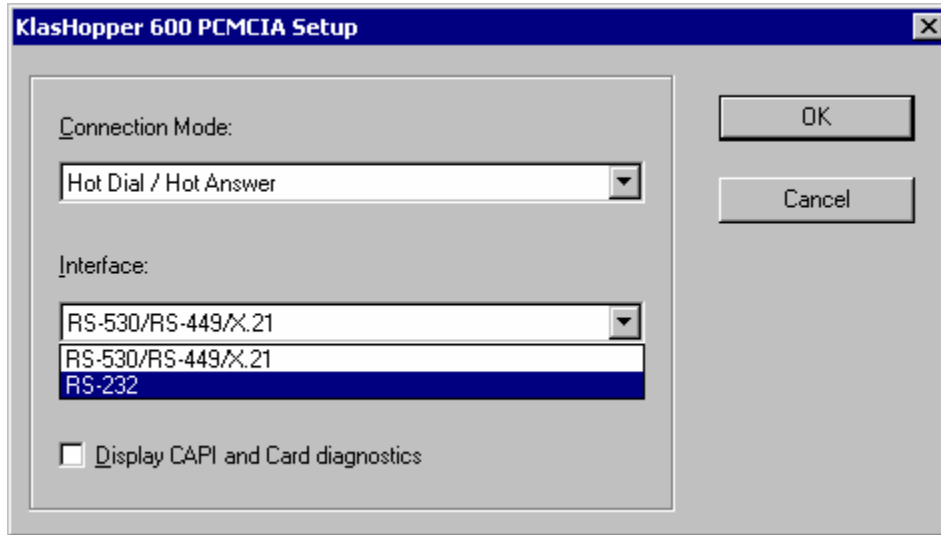
1. Run the Configuration Application as described in section 3.1.
2. Select Manual Dial from the Connection Mode menu and click OK.



3. You may be prompted to restart your PC. When your PC has restarted, KlasHopper will be ready for Manual Dial.

3.5. The Serial Interface

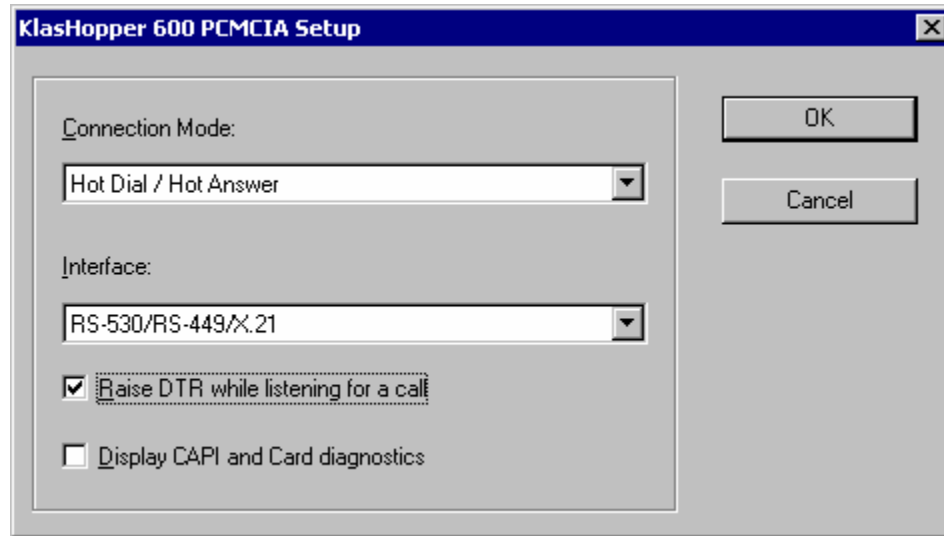
The Interface is comprised of three options – RS-232, RS-530/RS-449/X.21 and RS-530A. During the install one of these options are selected. To change the selection, click on the down arrow to display the options and change the interface according to your needs. Please ensure that you have selected the correct interface for the cable you are using.



You may be prompted to restart your PC. When your PC has restarted KlasHopper 600 PCMCIA will have the desired interface.

3.6. *Raise DTR while listening for a call.*

This optional setting raises DTR while in a listening state. Certain synchronous devices require DTR to be raised to answer a call. To enable this option select 'Raise DTR while listening for a call'. Click OK.



We advise that you contact Klas Sales (sales@klasonline.com) for information on KlasPeer2Peer networking software, which simplifies the whole process of both dialling and answering a call.

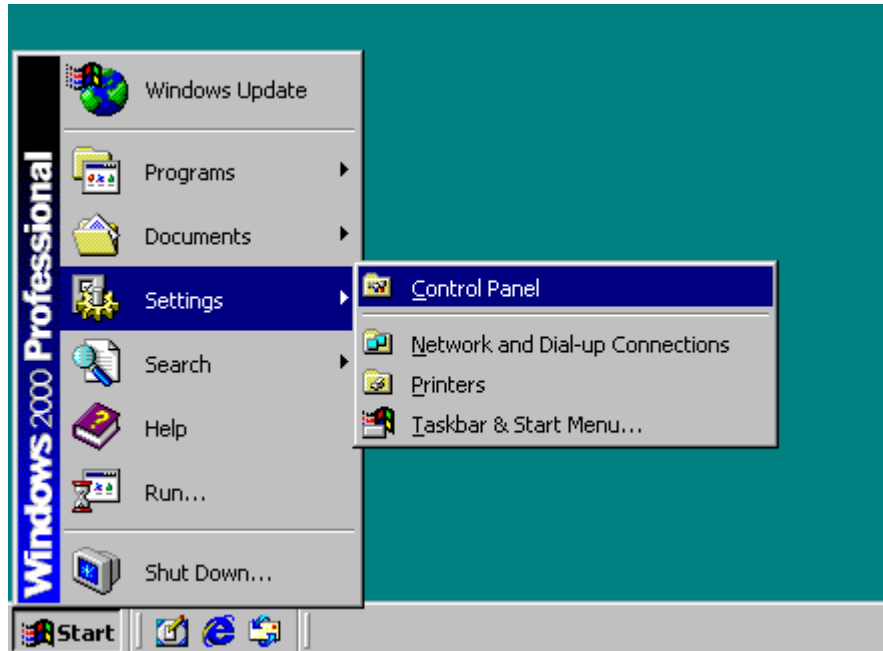
4. Available Resources

4.1. Introduction

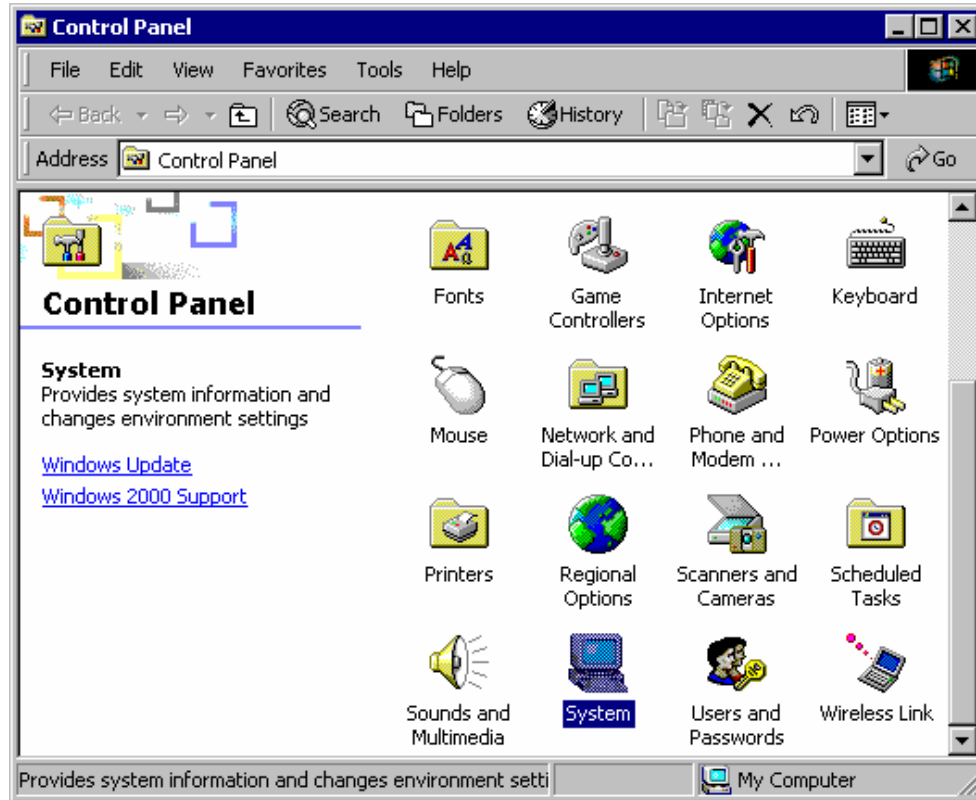
Various resources are assigned to all devices on your machine. When installing a device for the first time, you must check what resources are available. This information can be found in Device Manager.

4.2. Device Manager

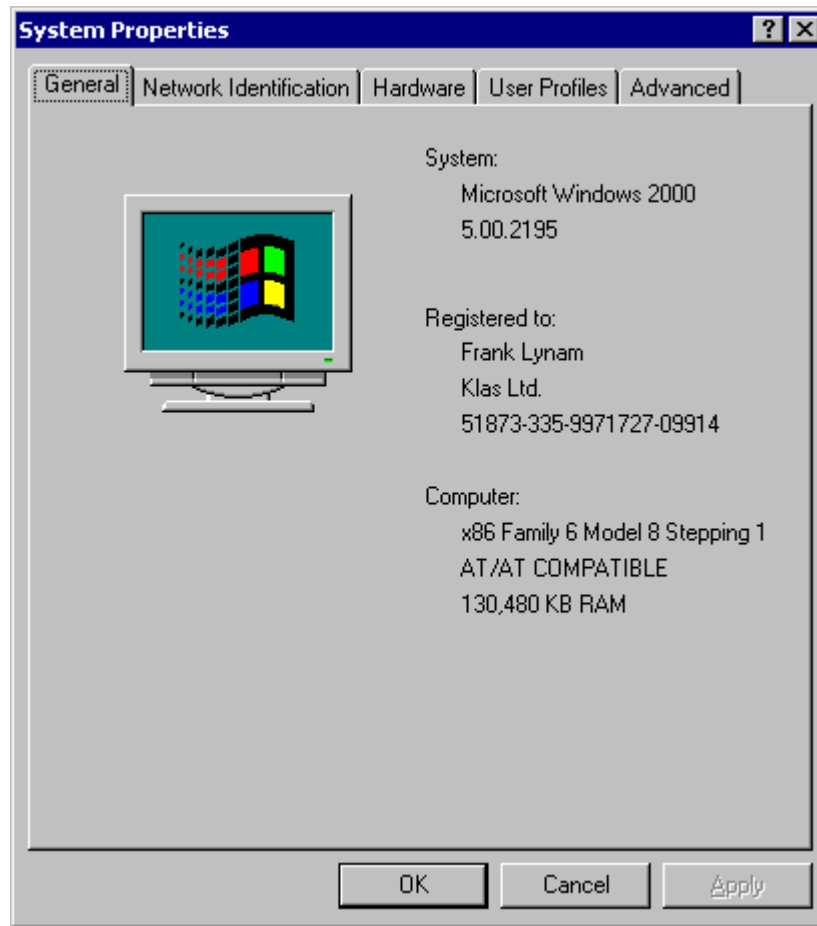
Proceed to Start>Settings>Control Panel



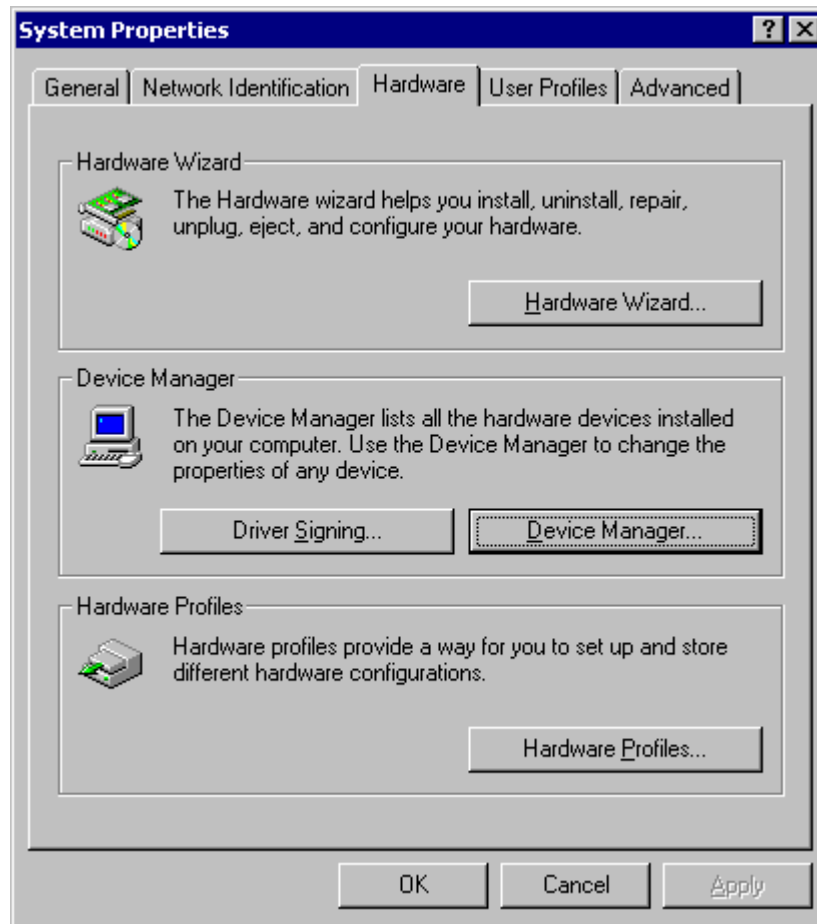
The Control Panel dialog box is displayed. Double-click the System icon.



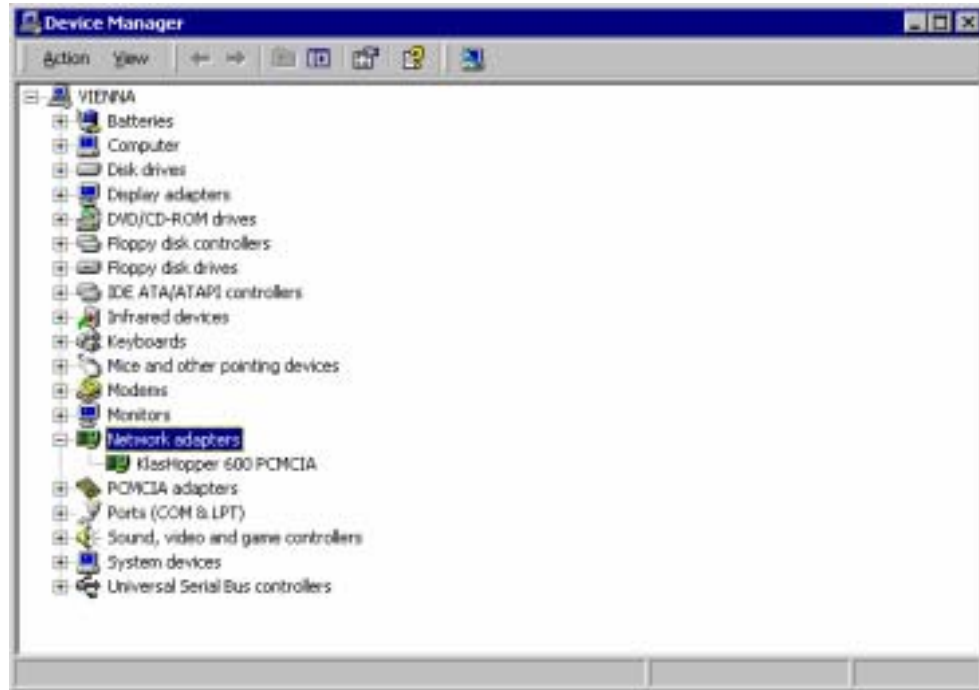
The System Properties are displayed. Select the Hardware tab.



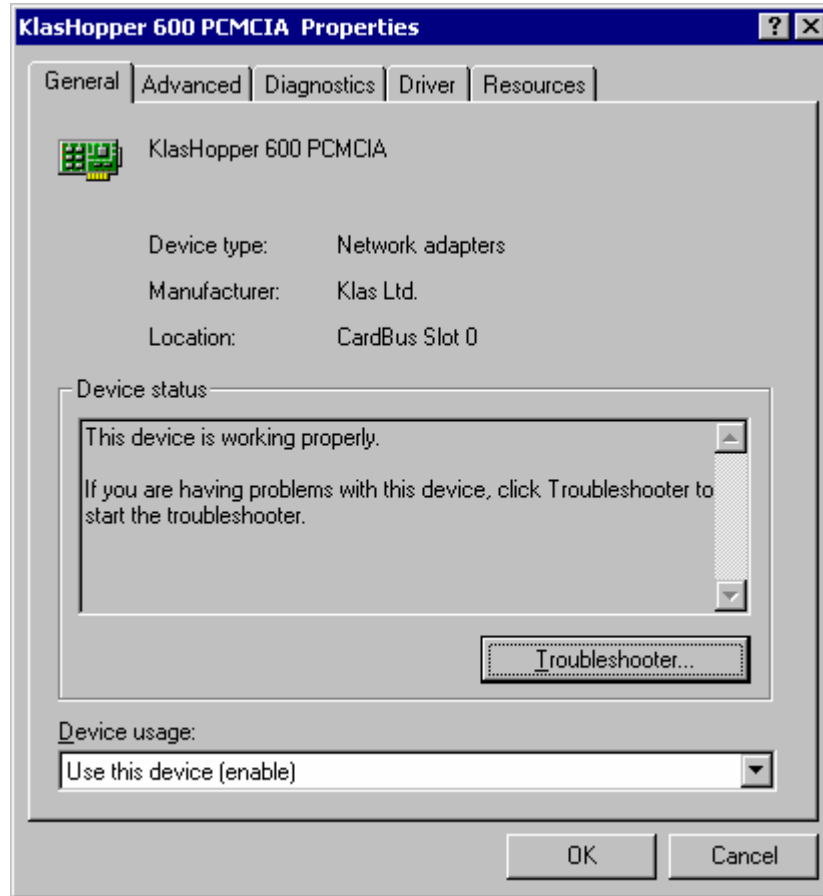
Select the Device Manager option.



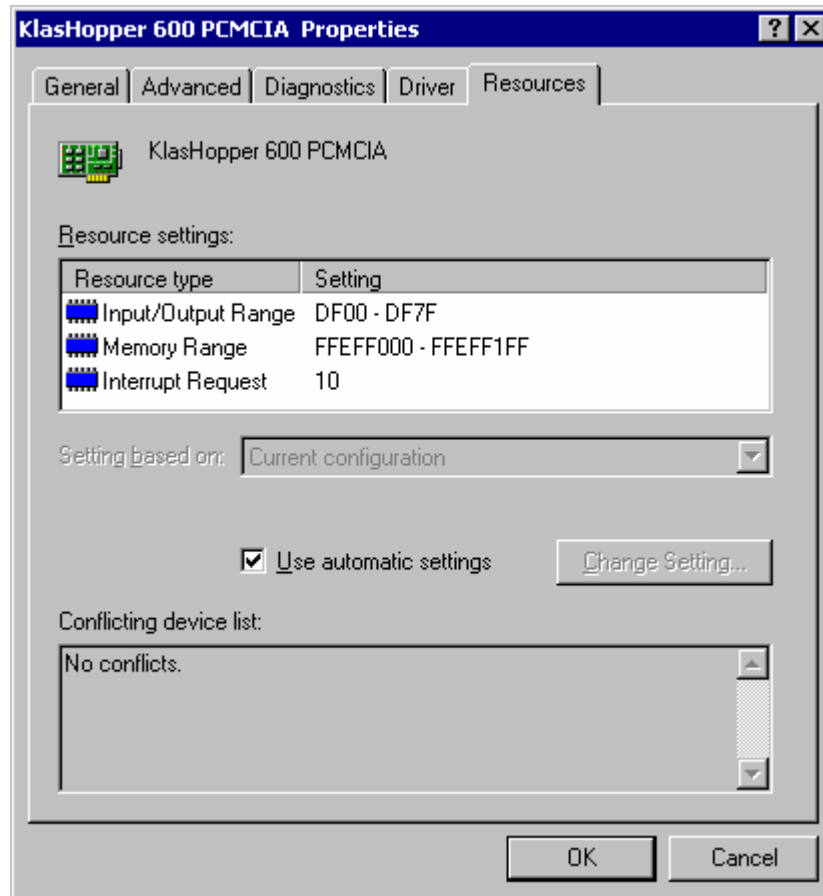
The KlasHopper card is displayed under Network adapters. Double-click on the KlasHopper 600 PCMCIA icon.



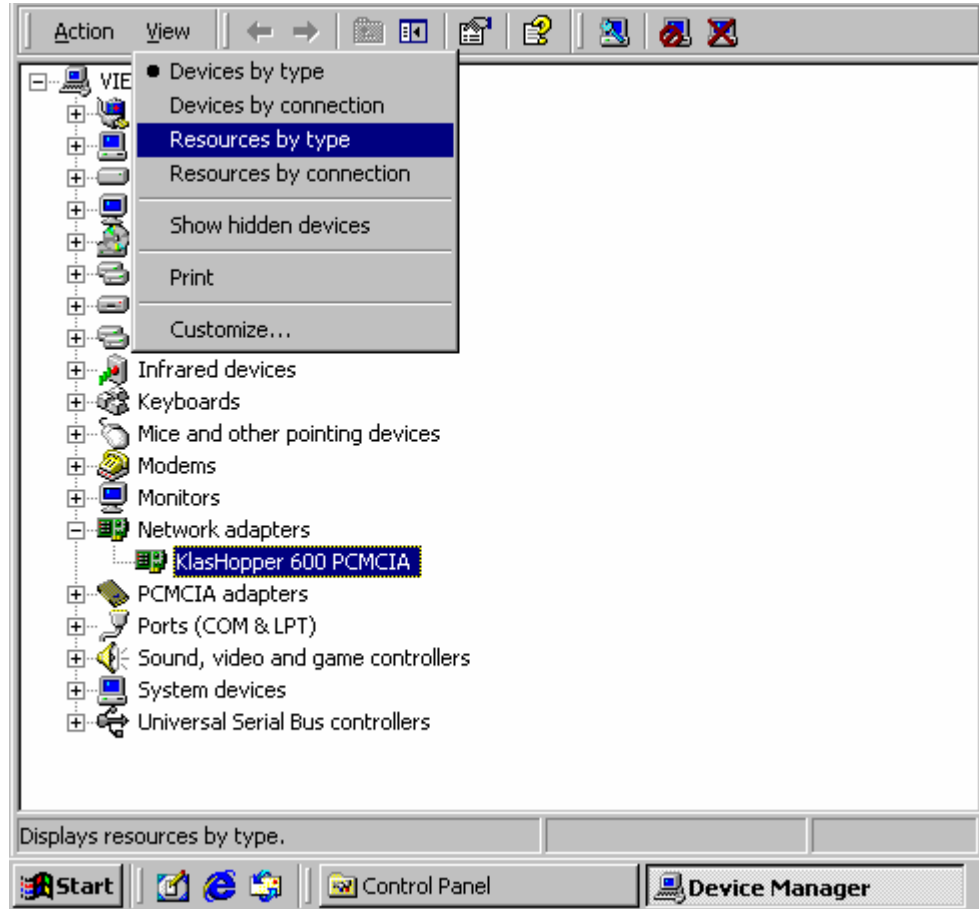
The KlasHopper 600 PCMCIA Properties dialog box is displayed. The Device status should indicate that the KlasHopper card is working properly.



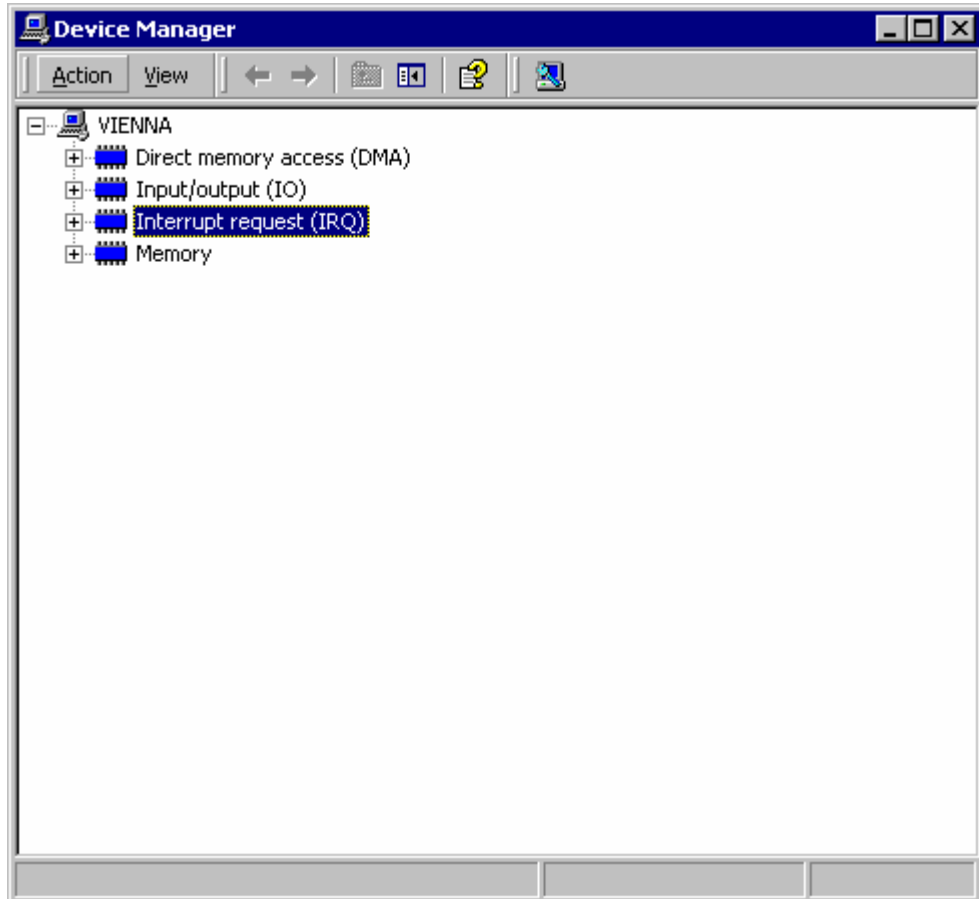
Select the Resources tab. There should be no conflicts.



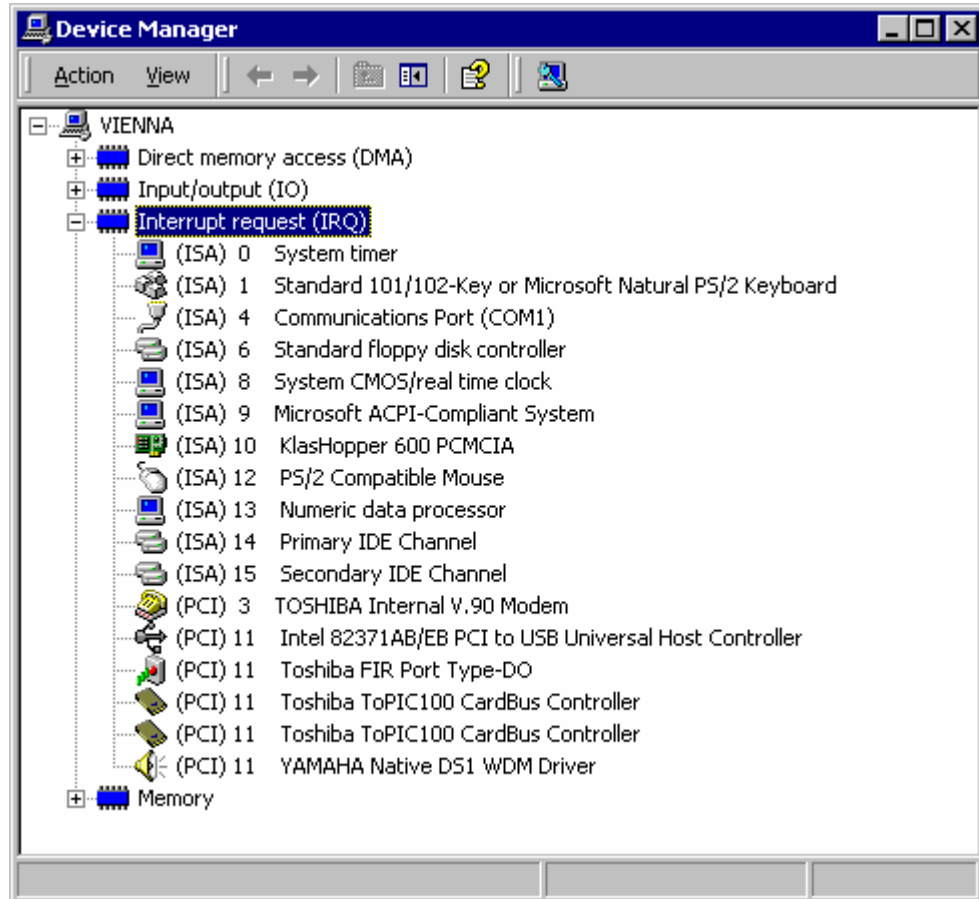
Return to the Device Manager screen, and select 'Resources by type', found under the View menu.



Double-click the 'Interrupt request (IRQ)' option.



A list of all assigned resources is displayed. In this example, the KlasHopper card has been assigned an IRQ of 10.



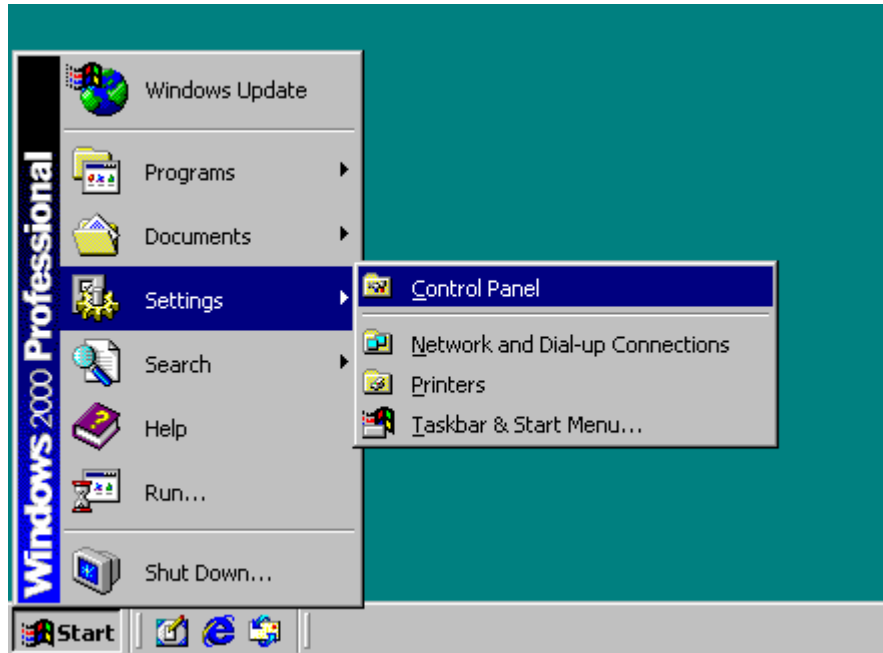
5. Verify Installation

5.1. Overview

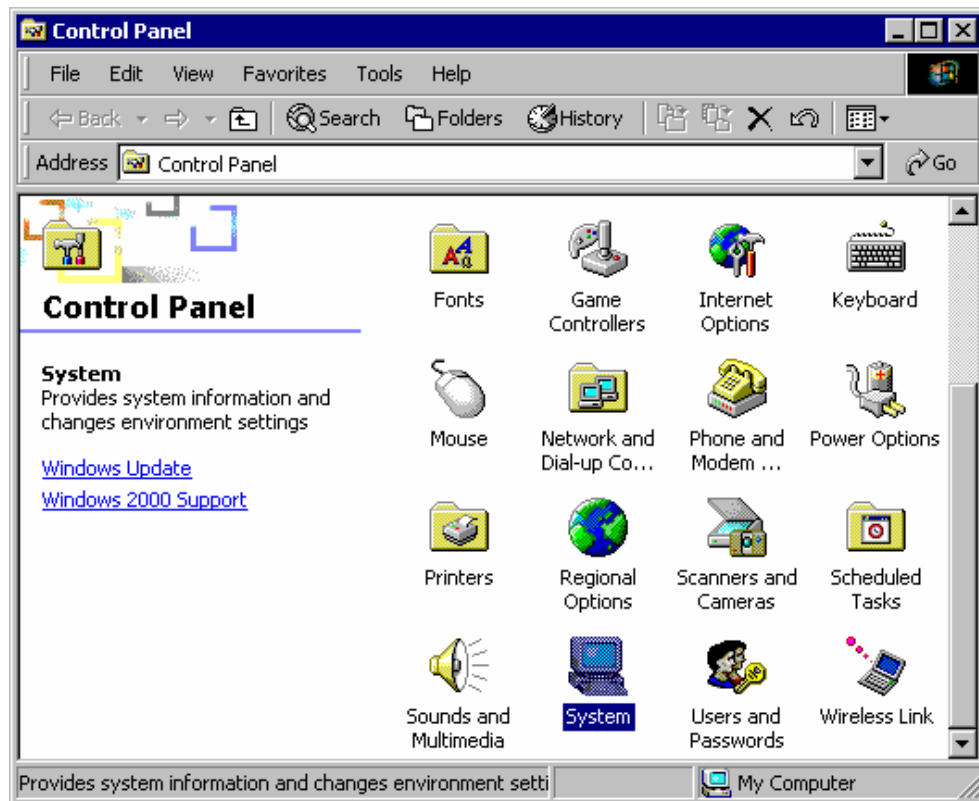
It is important to verify that both the hardware and software are correctly installed before proceeding. Both Modems (Section 5.2) and the Windows Device Manager (Section 5.3) should be checked for confirmation.

5.2. Modems

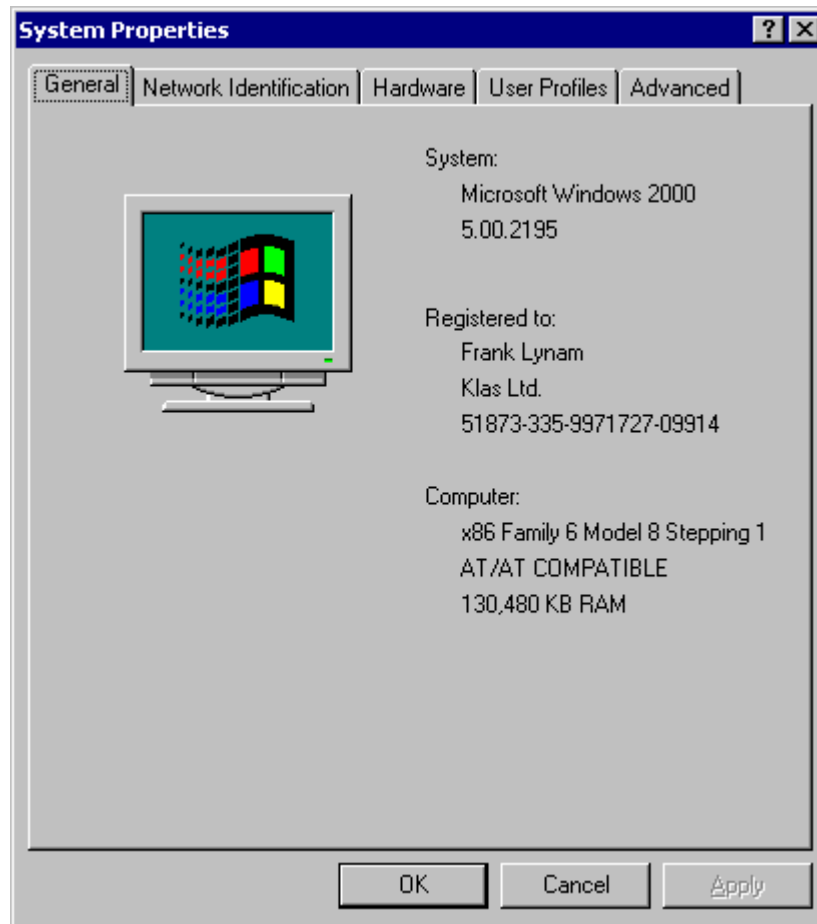
Proceed to Start>Settings>Control Panel as shown below.



A Control Panel dialog box is displayed. Double-click on the System icon.



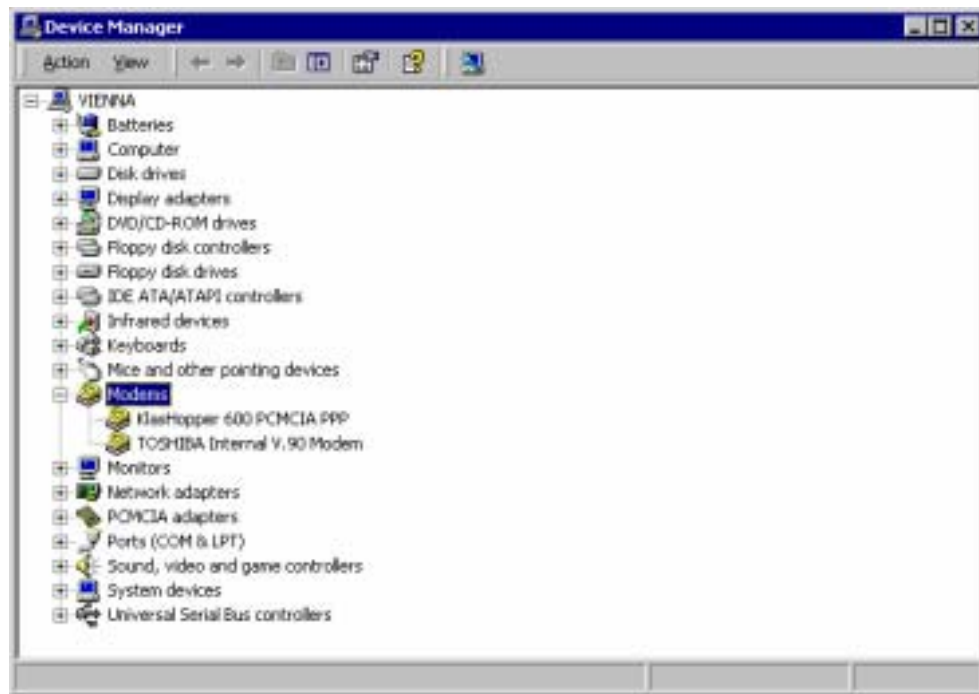
A System Properties dialog box is displayed. Select the Hardware tab.



Proceed to the Device Manager option.

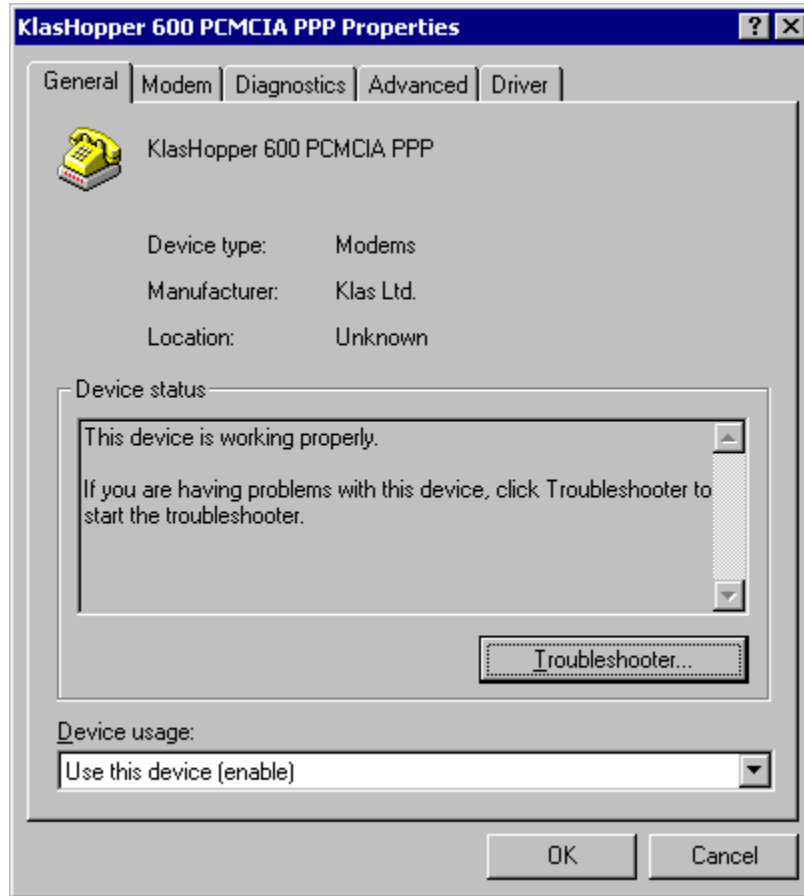


The KlasHopper card should be displayed under the list of modems.

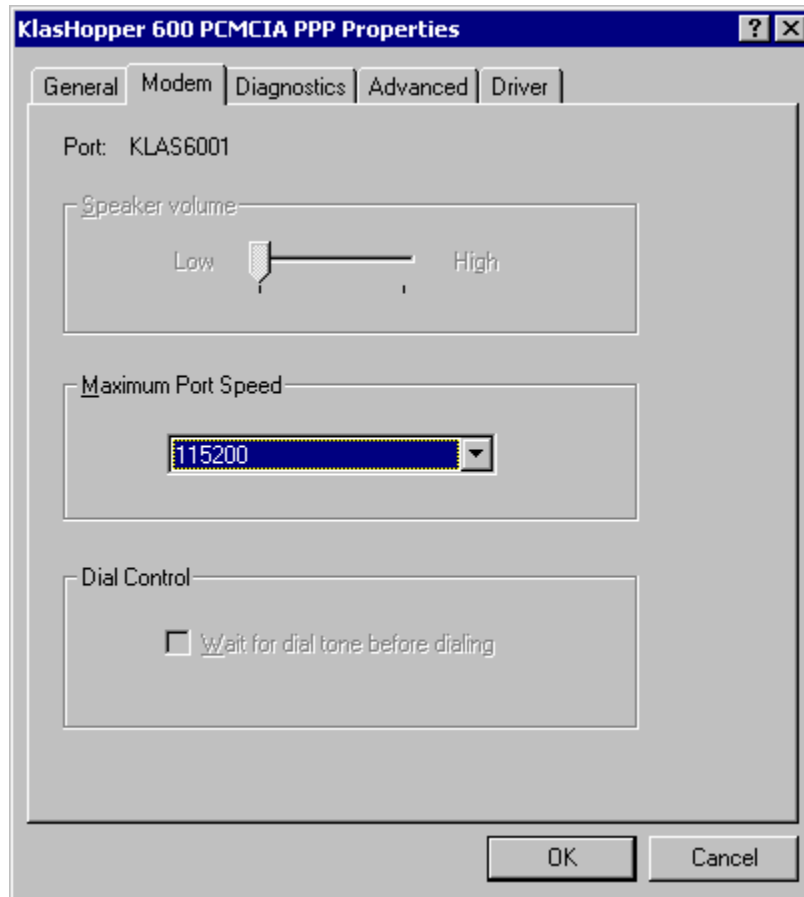


Double-click on 'KlasHopper 600 PCMCIA PPP'.

The KlasHopper 600 PCMCIA PPP Properties dialog box should be displayed. KlasHopper should be listed as a modem.



Select the Modem tab. The KlasHopper properties are displayed. The assigned port is indicated, *i.e.* KLAS6001 in this example. Select Cancel to exit the dialog box.



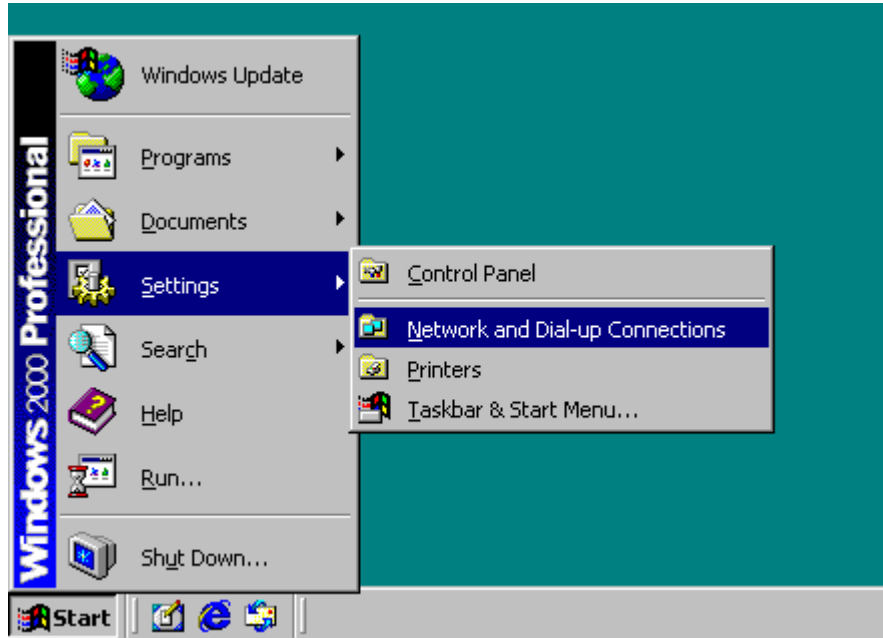
5.3. *Windows Device Manager*

The KlasHopper card should have an IRQ and Input/Output level assigned. Refer to Section 4 to confirm.

6. Dial-Up Networking

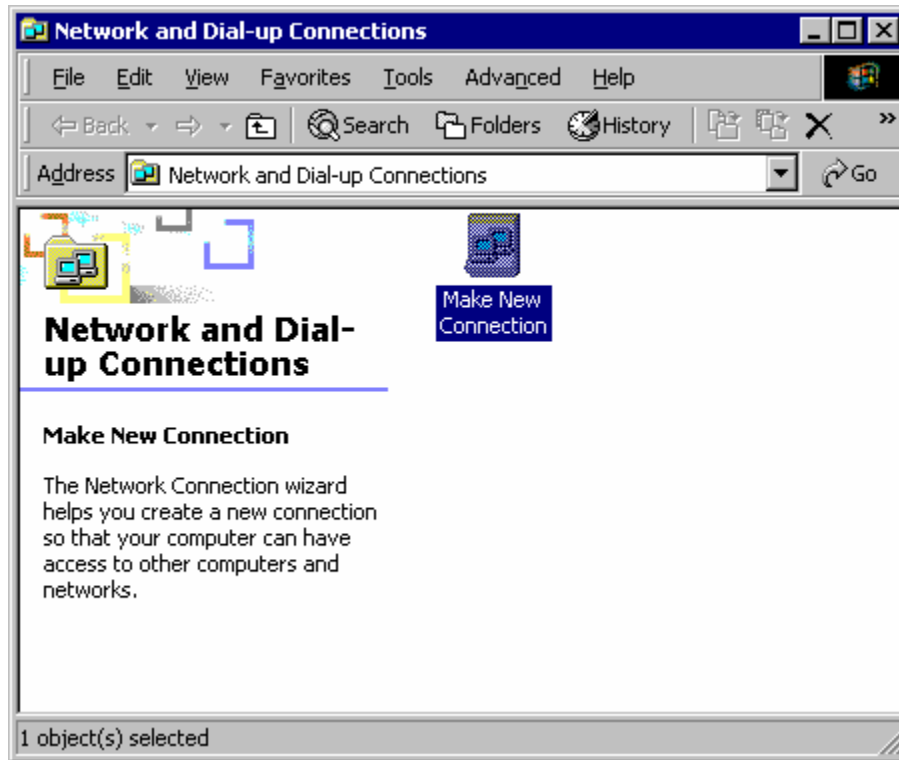
6.1. Network and Dial-Up Connections

Proceed to Start>Settings>Network and Dial-up Connections.



6.2. *New Connection*

Double-click on the Make New Connection icon.



6.3. Location Information

Complete the Location Information details below. Click OK to proceed.

Note: this box is only displayed if this is the first time that a Dial-Up Networking connection has been created.

Location Information ? X

Before you can make any phone or modem connections, Windows needs the following information about your current location.

What country/region are you in now?
Ireland

What area code (or city code) are you in now?
01

If you dial a number to access an outside line, what is it?
9

The phone system at this location uses:
 One dialing Pulse dialing

OK Cancel

6.4. Network Connection Wizard

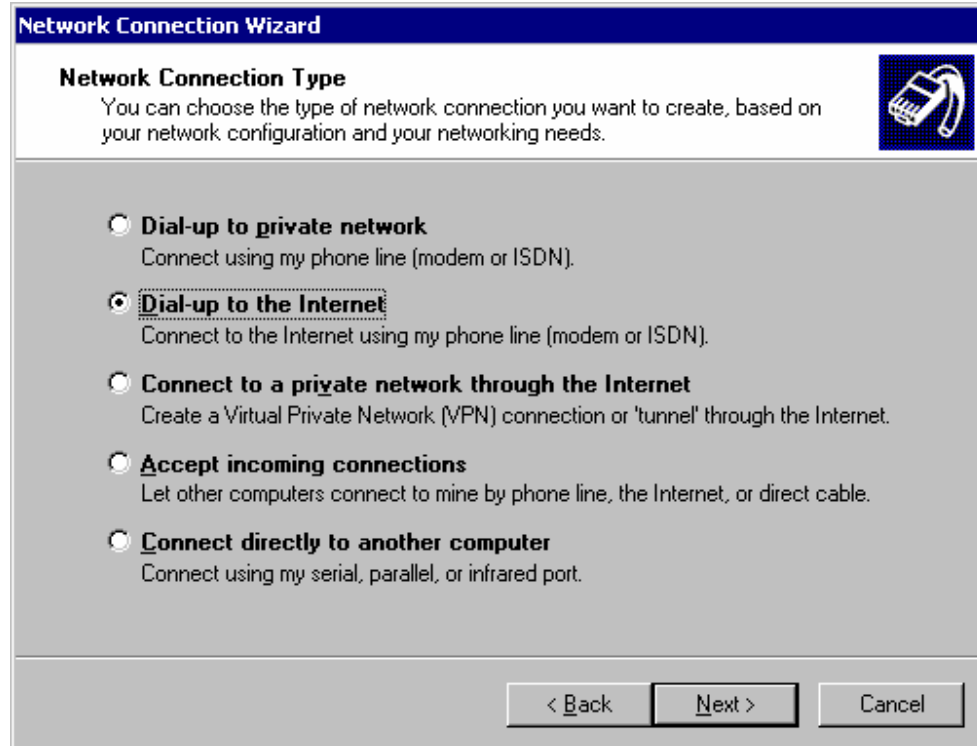
Proceed through the instructions of the Network Connection Wizard by selecting Next.



6.5. Network Connection Type

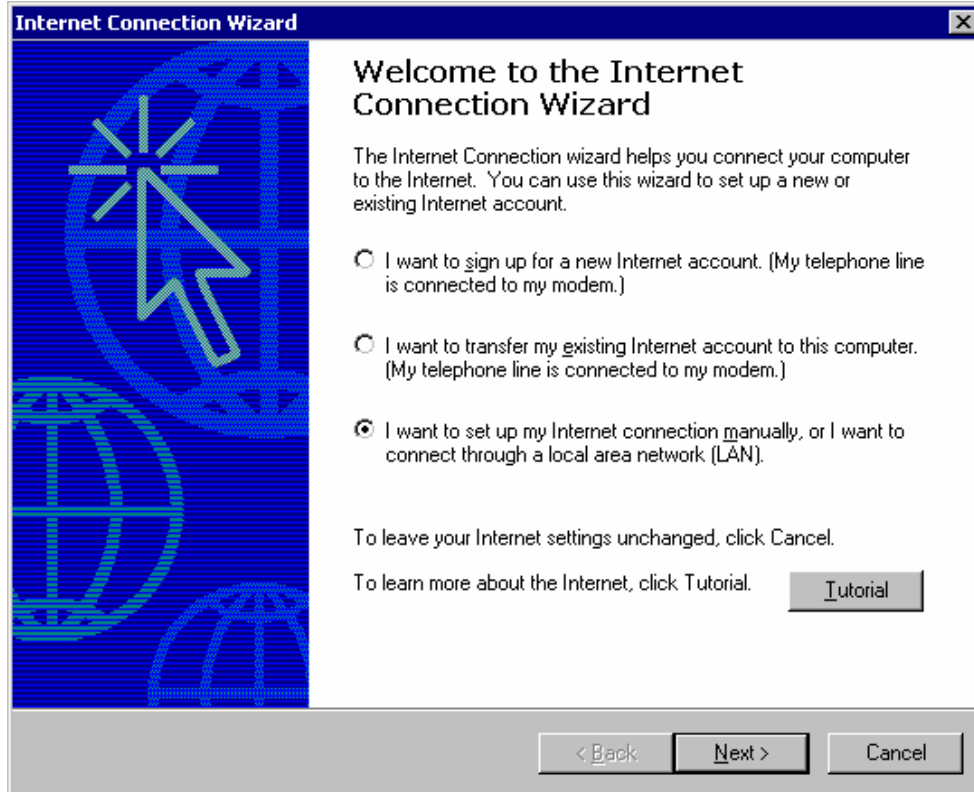
Select the type of network at the remote end, and click Next.

In this example, a connection is being made to the Internet.



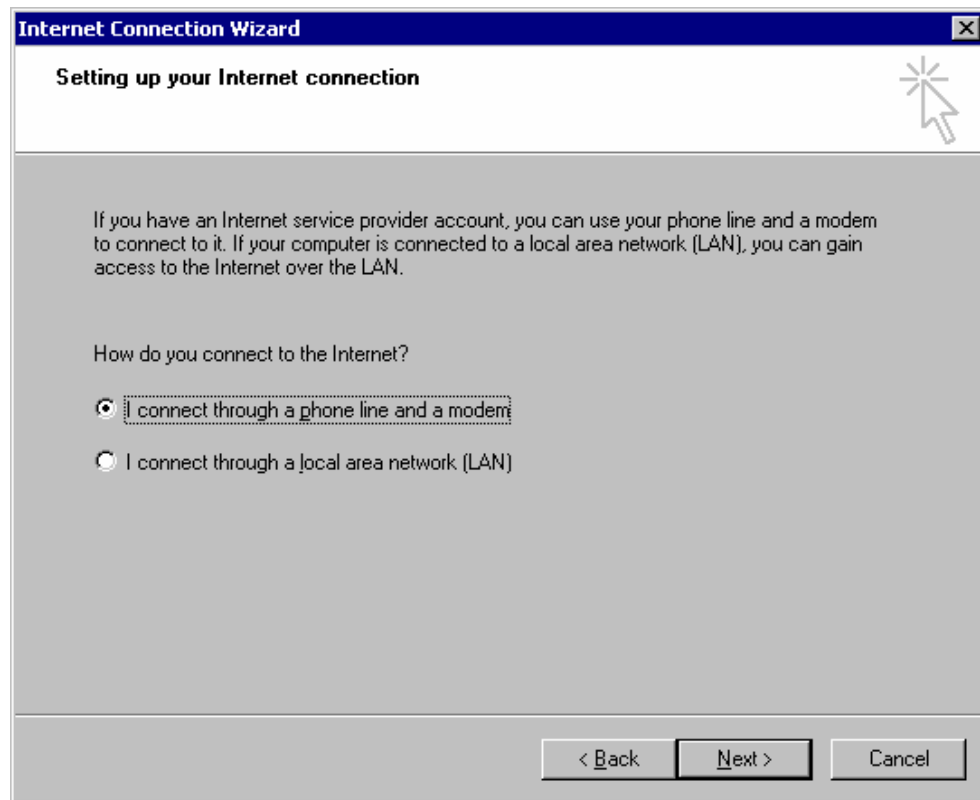
6.6. Internet Connection Wizard

Select 'I want to set up my Internet connection manually, or I want to connect through a local area network (LAN)'. Select Next to proceed.



6.7. Modem selection

Select 'I connect through a phone line and a modem'. Select Next to proceed.

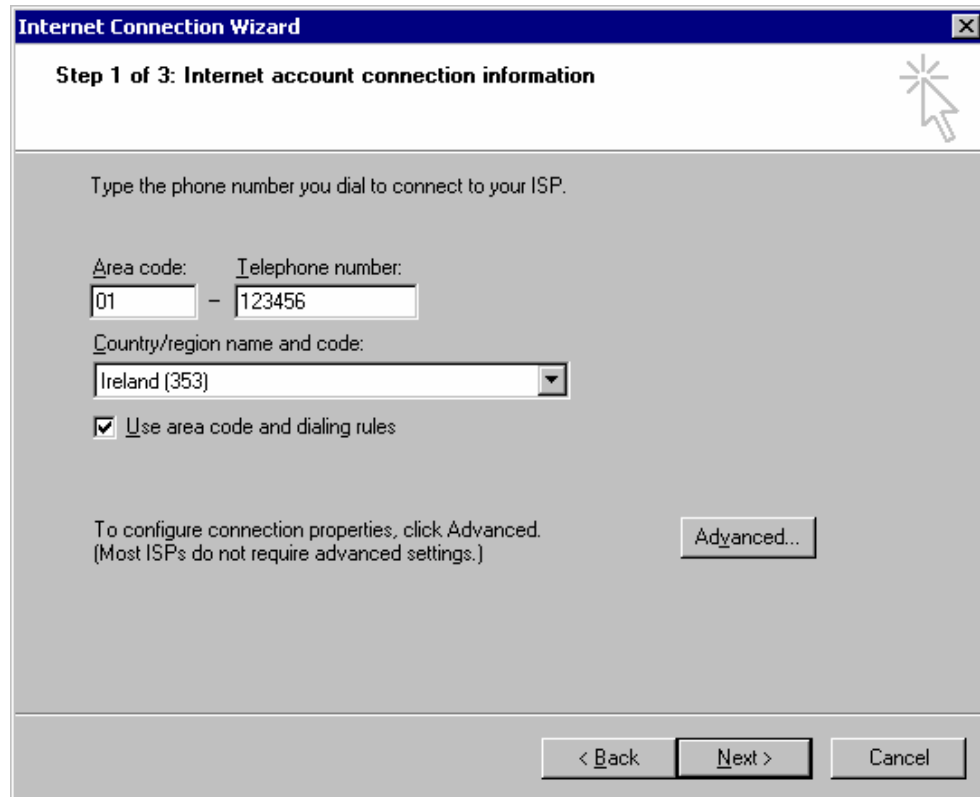


Note: A 'Choose Modem' dialog box may be displayed if you have other communications devices installed on your PC. Choose the KlasHopper card as the modem for your new connection.

6.8. Phone Number

Complete the phone number details for the computer that you want to call. Select Next to proceed.

Note: The phone number entered is only used in the V.25bis connection mode. However in Hot dial mode a number must be entered or the KlasHopper will not dial.

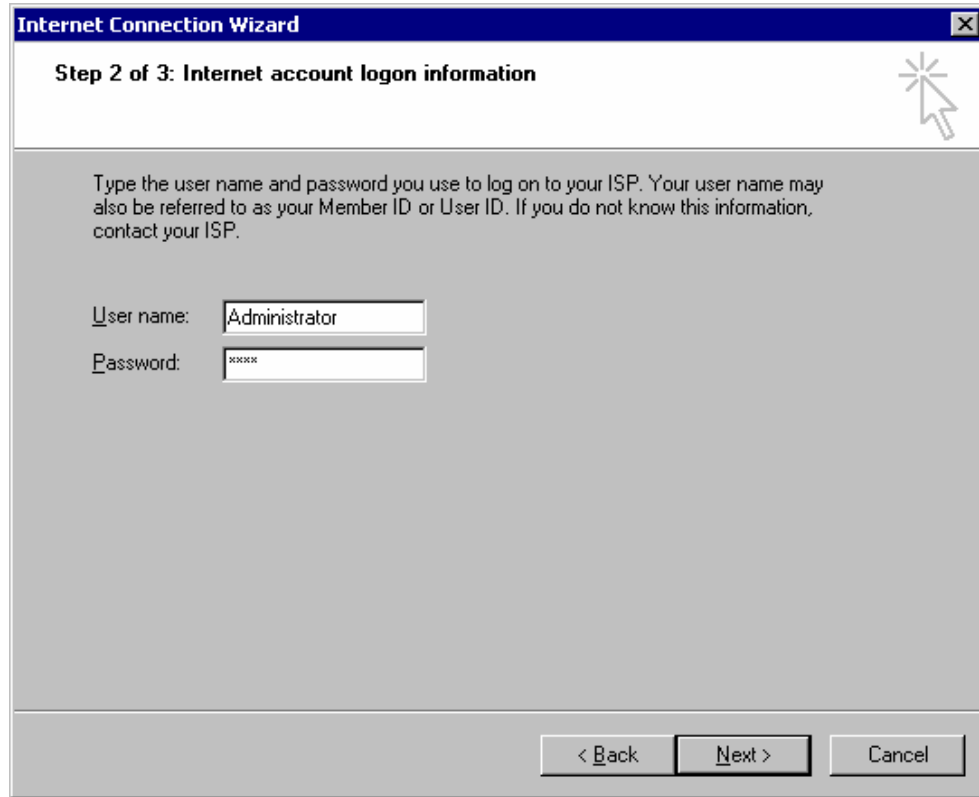


The screenshot shows a Windows dialog box titled "Internet Connection Wizard" with a close button in the top right corner. The main title bar is blue. Below the title bar, the text "Step 1 of 3: Internet account connection information" is displayed in a bold font. A mouse cursor is pointing at a star icon in the top right corner of the dialog. The main area of the dialog is light gray and contains the following elements:

- Instructional text: "Type the phone number you dial to connect to your ISP."
- Form fields for "Area code:" (containing "01") and "Telephone number:" (containing "123456").
- A dropdown menu for "Country/region name and code:" with "Ireland (353)" selected.
- A checked checkbox labeled "Use area code and dialing rules".
- A button labeled "Advanced..." with the text "To configure connection properties, click Advanced. (Most ISPs do not require advanced settings.)" above it.
- Navigation buttons at the bottom: "< Back", "Next >", and "Cancel".

6.9. *User name and password*

Type in the appropriate User Name and Password for the new connection. Select Next to proceed.



The screenshot shows a Windows dialog box titled "Internet Connection Wizard" with a close button (X) in the top right corner. The main title bar is blue. Below the title bar, the text "Step 2 of 3: Internet account logon information" is displayed in bold. To the right of this text is a mouse cursor icon pointing at a star-shaped icon. Below this, there is a block of instructional text: "Type the user name and password you use to log on to your ISP. Your user name may also be referred to as your Member ID or User ID. If you do not know this information, contact your ISP." Underneath the text are two input fields. The first is labeled "User name:" and contains the text "Administrator". The second is labeled "Password:" and contains six asterisks "*****". At the bottom of the dialog box, there are three buttons: "< Back", "Next >", and "Cancel".

Internet Connection Wizard [X]

Step 2 of 3: Internet account logon information

Type the user name and password you use to log on to your ISP. Your user name may also be referred to as your Member ID or User ID. If you do not know this information, contact your ISP.

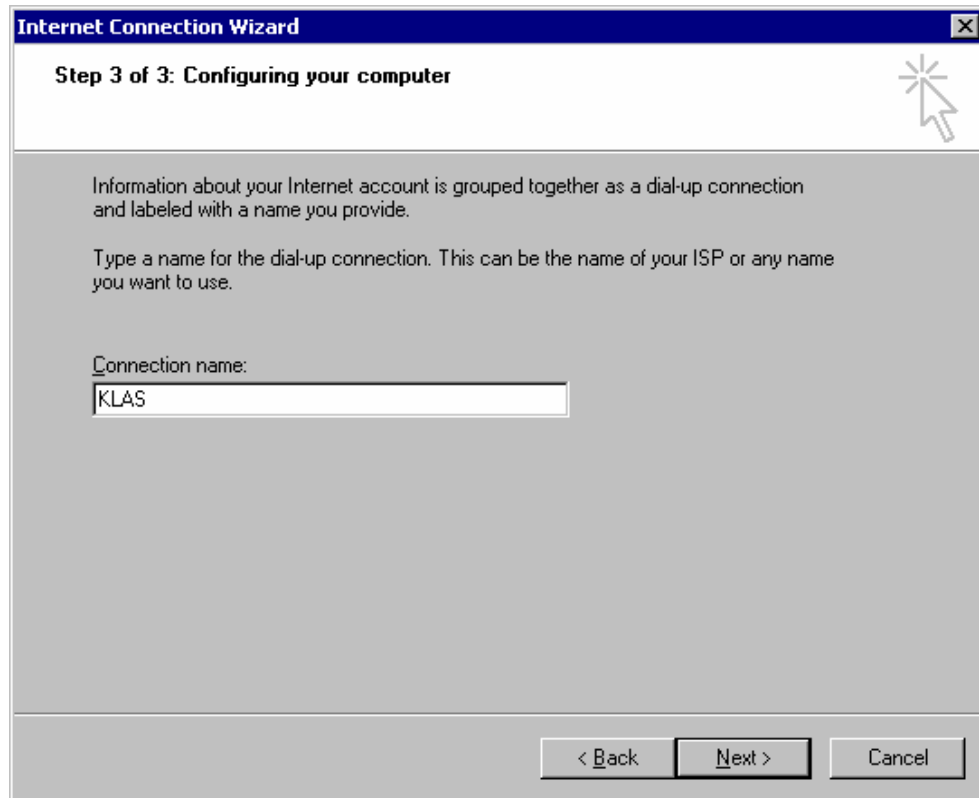
User name:

Password:

< Back Next > Cancel

6.10. *Connection name*

Complete the wizard by naming the new connection. Select Next to proceed.



6.11. Email configuration

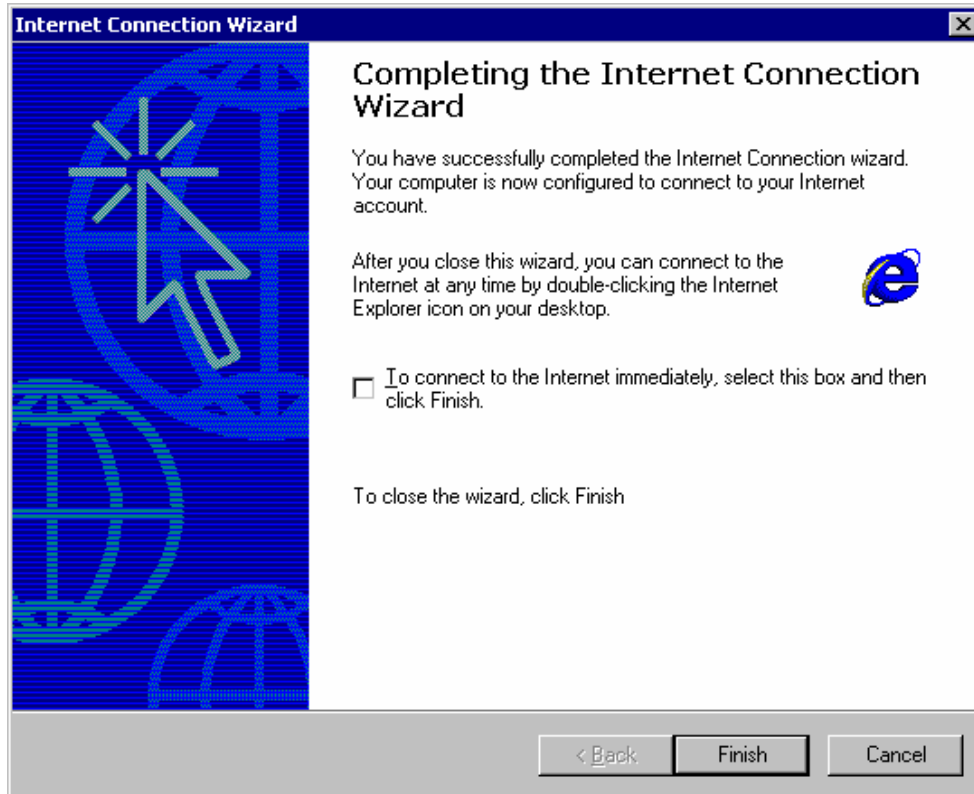
Select 'No', if you do not want to configure your e-mail. Click Next to proceed.



6.12. Finish

Click on Finish to complete the Internet configuration.

If you do not want to immediately connect, de-select 'To connect to the Internet immediately, else select this box and then click Finish'.

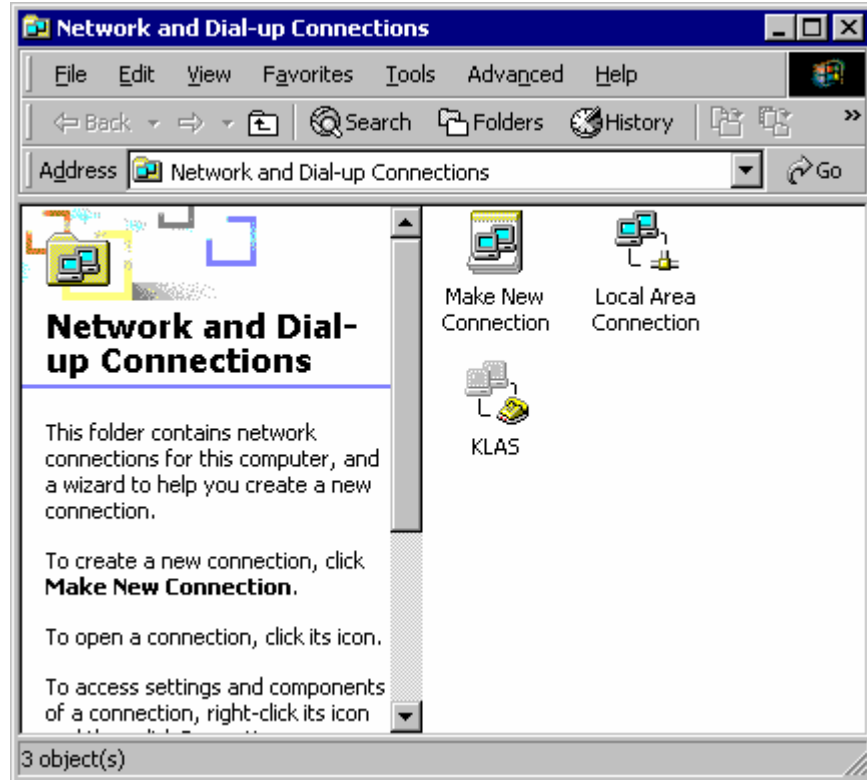


7. Making a Call with KlasHopper

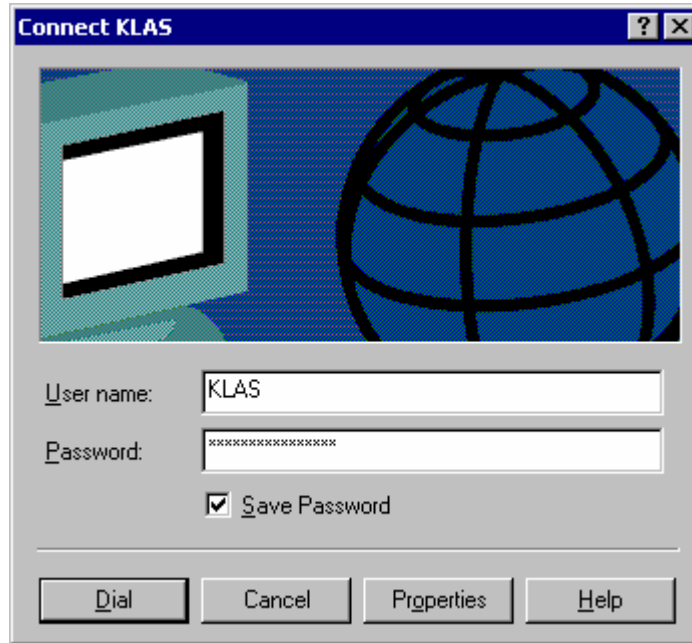
7.1. Initiate Connection

Proceed to the Network and Dial-up Connections dialog box, by clicking on Start>Settings>Network and Dial-up Connections (Refer to Section 6).

Note: A drop-down menu may be displayed. Select the newly created connection, *i.e.* 'KLAS' in this example.



Double-click on the new connection icon to display a Connect box.

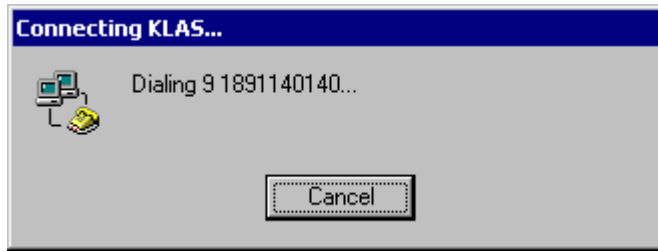


Select Dial to initiate the connection.

7.2. *Dialling*

The KlasHopper card attempts to establish the connection. Ensure that the displayed number is correct.

Note: This number is only used if the V.25bis connection mode is being used.



Note: The above example is for a standard call from an ISDN line, however, please note that for a call from a satellite terminal, the full international number is required.

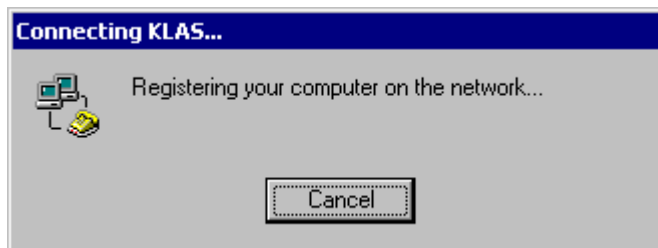
7.3. *Verify User Name and Password*

The status screen indicates that the connection has been made to the remote PC. The remote PC is verifying user name and password details.



7.4. *Logon*

Following verification of user name and password, the PC is permitted access to the remote PC, and log on to the remote network.



7.5. Connection Status

A connection status box can be accessed via the connection icon in the tray.

7.6. Disconnect

To disconnect from a remote device, right-click on the connection icon in the tray. Then select Disconnect.

8. Troubleshooting

8.1. Overview

Establishing a connection between KlasHopper and a remote device involves many networking components. If any of the components fail the connection may not be established. This section provides suggestions for solving communication problems by verifying that each component is working correctly.

8.2. Recognition of KlasHopper Card

The newly installed KlasHopper hardware should be recognized once your laptop has been restarted. If it is not recognized, move the card to a different PCMCIA slot, and check if this changes the situation.

8.3. KlasHopper Resources

The KlasHopper card uses resources such as IRQs, and IO ports. Refer to Section 4 to determine that resources have been correctly assigned, and there are no conflicts.

If no IRQ has been assigned to the KlasHopper card, move the card to a different PCMCIA slot in your laptop, and check to see if this changes the situation.

8.4. KlasHopper modem

The KlasHopper card installs a modem driver. Refer to Section 5.2 to determine that the modem driver has been properly installed, and a port has been correctly assigned.

8.5. Dial Mode

KlasHopper supports three dial modes for establishing connections. Each mode treats the connection process in a different way. Make sure that the satellite terminal or synchronous device is configured for the same dial mode as KlasHopper. See Section 3 for information on configuring KlasHopper.

8.6. Are my Network Settings correct?

If you are establishing a connection, but fail after the 'Verifying user name and password' box, examine this checklist:

1. Are you using the correct user name and password? Remember that some remote devices treat upper and lower case characters differently.
2. Are your networking settings (such as TCP/IP) correctly enabled for the connection?

8.7. Is the remote end using the PPP protocol?

KlasHopper supports the PPP protocol (RFC 1618). This is the protocol used by many servers including ISDN routers. Ensure that the remote device is using the correct protocol.

8.8. Is the remote end using the HDLC protocol?

KlasHopper also supports the HDLC protocol. This is the protocol used by many specialized e-mail systems. If the HDLC protocol is being used, ensure that the remote device is also using this protocol.

8.9. Are the cable and interface correct?

Are you using the correct cable and interface between KlasHopper and your satellite terminal (or synchronous device)? KlasHopper can be supplied with the following interfaces:

- RS-232 DB-25
- RS-530 DB-25
- RS-449 DB-37
- X.21 DB-15

If you have access to a break-out box, check that the appropriate lines (such as DTR and DCD) are being raised during the connection.

8.10. PPP log

The PPP log (PPP.LOG) contains detailed information on the progress of a connection. It is only created after the 'Verifying User Name and Password' box is displayed.

9.10.1 Enabling the PPP Log

Type the following commands into a command prompt window to enable PPP logging:

```
netsh
ras
set tracing PPP enable
exit
```

After logging is enabled, the computer logs all PPP activity to the ppp.log file in the %SystemRoot%\Tracing (e.g. C:\WINNT\Tracing) folder.

Turn off logging when you are finished troubleshooting. To disable PPP logging type the following commands into a command prompt window:

```
netsh
ras
set tracing PPP disabled
exit
```

9.10.2 Viewing the PPP Log

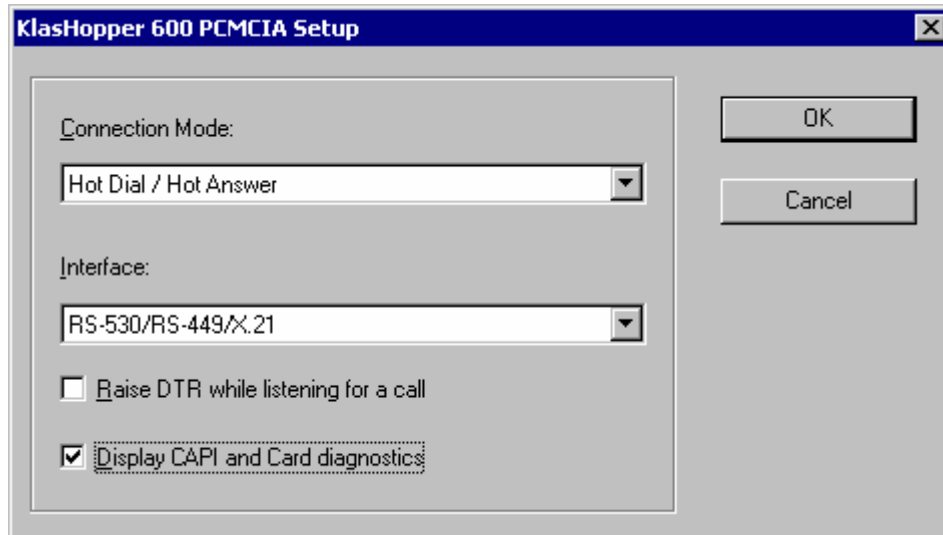
The PPP.LOG file is only created if a successful ISDN or satellite connection is initially established to the remote device, and Windows attempts to logon.

Two general types of problems are quickly identified using the PPP.LOG:

- Incorrect user name/password combination or authentication method. Examine the packets transferred and see if the server rejects a user name/password attempt.
- Examine the packets received. If no bytes are received, there is probably some problem with the cable or interface.

8.11. Using the Diagnostic Application

There is a Diagnostic Application with KlasHopper. This shows detailed information about the card during dial attempts and data transfer. To display the diagnostics, run the Configuration Application as described in Section 3. Select 'Display CAPI and Card diagnostics'. Click OK.



Restart your PC if prompted. The Diagnostic Application will run the next time a connection is established to a remote PC.

9. Cables and Interfaces

9.1. Overview

KlasHopper is supplied with one of the following interfaces:

- RS-232 DB-25
- RS-449 DB-37
- RS-530 DB-25
- X.21 DB-15

Please contact Klas for information on custom cables. The cable interfaces are described over.

10. Appendices

10.1. Appendix A. Specifications

Software

TAPI Modem Compatible
Windows 95/98/Me/2000/XP
PPP (RFC 1618)
HDLC

Hardware

PCMCIA card
Plug and Play compatible resource assignment

Interfaces

KlasHopper 600 PCMCIA with RS-232 DB-25 Cable
KlasHopper 600 PCMCIA with RS-530 DB-25 Cable
KlasHopper 600 PCMCIA RS-449 DB-37 Cable
KlasHopper 600 PCMCIA with X.21 DB-15 Cable

Environmental

Temperature Range: 0 C to 60 C
Humidity Range: 0 to 95% (non-condensing)

Power Requirements

200 mA +5V

Certification

Complies with FCC limits for a Class B digital device
Conforms with CE requirements

10.2. *Appendix B. Satellite Terminals and Synchronous Devices*

Satellite Terminals

- NERA WorldCommunicator
- Thrane & Thrane Capsat Messenger
- MTI-M4-128
- E-Lite Inmarsat M4 terminal

ISDN TAs

- KlasTA
- ADTRAN ISU 2x64
- Multi-Tech MTA128ST

Analogue Modems

- Multi-Tech MT2834 series

Bulk Encryption Devices

- KIV-7
- STE
- BRENT
- BRENT2

10.3. *Appendix C. Warranty Information*

Warranty Agreement

Klas Ltd. warrants KlasHopper to be free of defects for ninety (90) days from the date of purchase. Klas Ltd. will repair or replace any KlasHopper product that fails to perform under normal operating conditions and in accordance with the procedures outlined in this document during the warranty period. Any damage that results from improper installation, operation and general misuse voids all warranty rights.

Although every attempt has been made to ensure the accuracy of this document, Klas Ltd. assumes no liability for damages resulting from errors in this manual and related documents. Klas Ltd. reserves the right to edit or append this document at any time without notice.

Freight & Duty

The shipping party for all warranty returns shall incur the cost of freight & duty.

Customer Records

Please complete the following information and retain for your records. Have this information available when requesting warranty service.

Date of Purchase:

PC Model:

10.4. *Appendix D. Contact Information and Troubleshooting*

Please report any problems encountered during the installation or use of KlasHopper.

Sales & Support Enquiries:

USA

Toll Free Phone: 1-866-263-5467

Toll Free Fax: 1-866-532-3091

UK

Toll Free Phone: 0800 056 4250

Toll Free Fax: 0800 056 4366

Canada

Toll Free Phone: 1-866-296-5199

Toll Free Fax: 1-866-237-0879

International

Phone: +353-1-662-4270

Fax: +353-1-662-4272

Web Site: www.klasonline.com

Sales Enquiries: sales@klasonline.com

Technical Support: support@klasonline.com

Postal Address:

Klas Ltd.,
Bracetown Business Park,
Clonee,
Co. Meath,
Ireland.