

- ***ELSA QuickStep™ 1000pro-PCI***
- ***ELSA QuickStep™ 1000pro***
- ***ELSA QuickStep™ 3000-PCI***
- ***ELSA QuickStep™ 3000***

Copyright © 1998 ELSA AG, Aachen (Germany)

Alle Angaben in dieser Dokumentation sind nach sorgfältiger Prüfung zusammengestellt worden, gelten jedoch nicht als Zusicherung von Produkteigenschaften. ELSA haftet ausschließlich in dem Umfang, der in den Verkaufs- und Lieferbedingungen festgelegt ist.

Weitergabe und Vervielfältigung der zu diesem Produkt gehörenden Dokumentation und Software und die Verwendung ihres Inhalts sind nur mit schriftlicher Erlaubnis von ELSA gestattet. Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

ELSA ist DIN-EN-ISO-9001-zertifiziert. Mit der Urkunde vom 16.05.1995 bescheinigt die akkreditierte Zertifizierungsstelle TÜV CERT die Konformität mit der weltweit anerkannten Norm DIN EN ISO 9001. Die an ELSA vergebene Zertifikatsnummer lautet 09 100 5069.

Marken

Windows®, Windows NT® und Microsoft® sind eingetragene Marken von Microsoft, Corp.

Alle übrigen verwendeten Namen und Bezeichnungen können Marken oder eingetragene Marken ihrer jeweiligen Eigentümer sein. Das ELSA-Logo ist eine eingetragene Marke der ELSA AG.

ELSA behält sich vor, die genannten Daten ohne Ankündigung zu ändern, und übernimmt keine Gewähr für technische Ungenauigkeiten und/oder Auslassungen.

ELSA AG

Sonnenweg 11

52070 Aachen

www.elsa.de

Aachen, October 1998

No. 20627/1098

Preface

Thank you for placing your trust in this ELSA product.

With the *ELSA QuickStep*, you have selected an ISDN PC board which supports all major operating systems. The highest quality standards in manufacturing and stringent quality control are the basis for high product standards and consistent product quality.

Scope of Delivery

Please ensure that the delivery is complete before beginning with the installation of your ISDN PC board.

- ISDN Plug&Play board *ELSA QuickStep*
- ISDN line connection cable
- Documentation
- *ELSA QuickStep* CD
- Proof of license (yellow serial number sticker)

Documentation

The included documentation consists of the following:

- Installation Guide
Hardware installation and installation of the drivers for various operating systems
- Manual
Installation of the communications software and additional drivers
- Electronic documentation (on CD-ROM)
Additional information

Online Services



If you have questions or require additional help, our online services are at your disposal around the clock. The complete scope of support and services provided by ELSA can be found in the manual in the section 'Advice and Help'.

Contents

Introduction	1
What Does <i>ELSA QuickStep</i> Offer?	2
What Software Can I Use?	3
Communications Software	5
ELSA ISDN Tools.....	6
Are the Hardware and Drivers Correctly Installed?.....	6
What's Happening on the ISDN Line?	7
Setting up the D channel Protocol	8
Testing the CAPI Interface (Windows NT only).....	9
<i>ELSA-RVS-COM</i>	10
What Does ELSA-RVS-COM Have to Offer?.....	10
Setup for ELSA-RVS-COM	11
The Installation Wizard for ELSA-RVS-COM	12
LapLink for Windows 95 and Windows NT.....	13
The 'Take Two' License.....	14
What Can LapLink Do?.....	14
Installing and Uninstalling	14
<i>ELSA-ZOC</i>	15
What Does ELSA-ZOC Have to Offer?	15
Installation of ELSA-ZOC	15
Workshop	17
Remote Access with LapLink	18
What Is a Host, What Is a Client?	18
Preparing.....	18
Connection Establishment	22
File Transfer	24
Dial-Up Networking under Windows 95	25
Internet and Online Services	27
Internet and EMail (e.g. Dial-Up Networking under Windows 95)	28
Sending and Receiving EMail	29
Online Services	30
Faxing with <i>QuickStep</i>	30
Telephone and Answering Machine.....	33
Data Transfer	34
Dial-Up Networking	34
EuroFileTransfer with <i>ELSA-RVS-COM</i>	38

Mailboxing with <i>ELSA-ZOC</i>	41
ISDN Connections	43
Introduction—What Does ISDN Involve?	44
The Basic Package—ISDN with Analog Devices.....	48
The Next Step up—For Freelancers	50
Stage 2—For Small Companies	53
Troubleshooting	55
Driver Installation Problems	56
To Ensure that your Drivers Are Correctly Installed, Use	56
Resolving Conflicts	56
Faxing with ELSA Products	57
<i>ELSA-RVS-COM</i>	57
Delrina WinFax Pro 8.02	59
General Problems.....	60
More than Three MSNs for <i>ELSA-RVS-COM</i>	60
Conflicts with PBX Systems.....	60
OS/2	61
OS/2 Freezes when Loading the CAPI Driver.	61
The Printer Output no Longer Works after the Installation.	61
cFos/DOS or T-Online Reports a CAPI Register Error	62
Appendix	63
Technical Data	64
Advice and Help.....	66
Who to Contact?	66
The ELSA LocalWeb.....	67
ELSA Software Updates	67
Repair?	68
Warranty Conditions	69
.....	70
Index	71

■ Introduction

This Plug&Play ISDN PC board *ELSA QuickStep* is the comprehensive ISDN solution for the ISA (*ELSA QuickStep 1000pro* and *ELSA QuickStep 3000*) and PCI bus systems (*ELSA QuickStep 1000pro-PCI* and *ELSA QuickStep 3000-PCI*). The board may be used under Windows NT 4.0, Windows 98, Windows 95 and Windows 3.1x, as well as DOS and OS/2. *ELSA QuickStep* upgrades your PC to a complete ISDN communications center with Group 3 fax, answering machine, EuroFileTransfer and Internet access components.

The board is ready for immediate use thanks to the included software with its preconfigured components for all major communications applications.

What Does <i>ELSA QuickStep</i> Offer?	2
What Software Can I Use?	3

What Does *ELSA QuickStep* Offer?

The following is an outline of the principal features of the *ELSA QuickStep* to give you a quick overview of its capabilities.

Operating systems

ELSA QuickStep ISDN adapters are Plug&Play boards with support Windows NT 4.0, Windows 98, Windows 95, Windows 3.1, OS/2 and DOS.

Simple Installation

ELSA QuickStep ISDN PC boards are particularly easy to install:

- Insert the board
- Start your computer
- Install the software
- Go!

Connecting the Board to the S₀ Interface

ELSA QuickStep permits the connection of a PC to the S₀ interface of an ISDN basic rate connection or a PBX (private branch exchange) system.

ISDN Operation

The ISDN PC board works via the ISDN interface according to various transmission protocols at speeds of up to 128,000 bps. The highest data rates are reached with the use of channel bundling (Multilink PPP), e.g. when using NDIS-WAN Miniports.

Status Displays

Two color-coded LEDs on the mounting bracket of your *ELSA QuickStep* board permit the monitoring of the ISDN connection and the line to facilitate troubleshooting of possible system faults.

Applications

The accompanying software enables *ELSA QuickStep* applications such as:

- Access to the Internet and online services (e.g. via data networks)
- Remote access with a full version of LapLink for Windows
- Remote data processing with *ELSA-ZOC*
- Use of your computer as a convenient fax machine (with *ELSA-RVS-COM*)
- Answering machine function (with sound card and *ELSA-RVS-COM*)
- Analog modem operation at 33,600 bps (*ELSA QuickStep 3000* and *ELSA QuickStep 3000-PCI* only)

What Software Can I Use?

Simply installing the *ELSA QuickStep* with its associated drivers is not enough to connect your computer with the world. The utilities described below are in part installed automatically and simultaneously with the drivers, while others have to be manually installed subsequently.

ELSA-RVS-COM



ELSA-RVS-COM

ELSA-RVS-COM is a communications suite with a wide range of functions. In addition to fax and EuroFileTransfer, *ELSA-RVS-COM* also offers an answering machine. It also provides you with a virtual COM port.

LapLink for Windows



Laplink

LapLink for Windows is a comprehensive program package for data transmission and control of remote computers. Once a connection has been successfully established, you can exchange data between two computers, both with LapLink for Windows installed.

ELSA-ZOC



ELSA-ZOC is a powerful, modern terminal program for direct access to BBS systems and other computers using any terminal program under Windows.

CAPI Interface

A CAPI interface is automatically installed together with the drivers of *ELSA QuickStep*. CAPI stands for **C**ommon **I**SDN **A**pplication **P**rogramming **I**nterface and connects the ISDN adapter to other drivers or application programs that provide, e.g. network cards for access to the Internet, a modem or a fax machine in your computer.

NDIS WAN



The 'ELSA NDIS WAN miniport' driver for Windows is automatically installed with the drivers for *QuickStep*. Under Windows this software provides a network adapter, with which you can for instance establish a connection to the Internet via the Dial-Up Network. NDIS WAN also permits the use of both B channels for one connection (channel bundling).

■ Communications Software

In addition to the Windows drivers, the *ELSA QuickStep* includes a number of additional drivers and programs necessary to take full advantage of the features of the ISDN PC board.

These include the remote access program LapLink for Windows, the *ELSA-RVS-COM* communications suite, the terminal program *ELSA-ZOC* and a variety of useful tools to set up and test your ISDN connection.

This chapter provides a brief introduction to these programs and gives some guidelines for installation. For further information, access the online help of the specific application.

Chapter 'Workshop' on page 17 provides information on the use of the individual applications in your daily work.

ELSA ISDN Tools.....	6
<i>ELSA-RVS-COM</i>	10
LapLink for Windows 95 and Windows NT	13
<i>ELSA-ZOC</i>	15

ELSA ISDN Tools

The ELSA ISDN tools contain a number of small applications to perform the following functions:

- Setting up the ISDN connection for the specific D-channel protocol
- Testing the hardware and CAPI interface installation
- Monitoring of the status of the S₀ interface and data transfers
- Logging of CAPI interface events (to assist ELSA's product support in the event of installation problems)

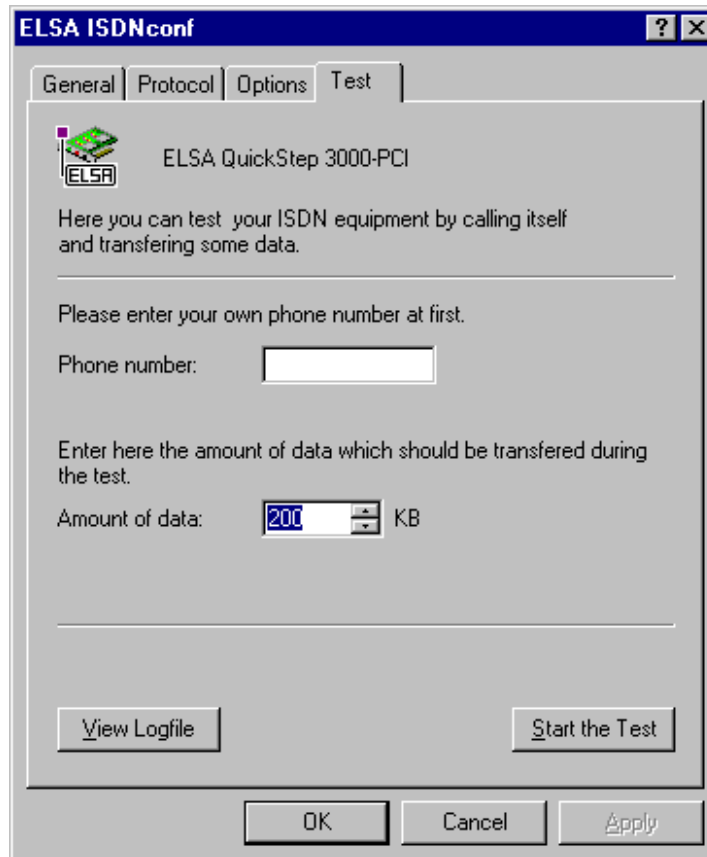
Are the Hardware and Drivers Correctly Installed?

ELSA CONNtest is a monitoring program designed to check the hardware and driver installation of your ISDN adapter. *CONNtest* attempts to establish a connection and transfer data to itself via the ISDN adapter.

- ① Start *CONNtest* under Windows 95 or Windows 98 with **Start ► Programs ► ELSAisdn ► ELSA CONNtest**.



Under Windows NT, click **Start** ► **Programs** ► **ELSAisdn** ► **ELSA ISDNconfig** and go to the 'Test' tab.



- ② Enter the number of your ISDN connection and start the data transfer.

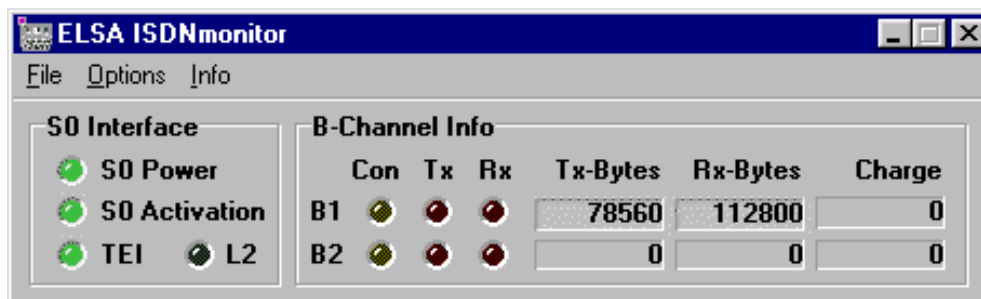
CONNtest will verify the correct installation of the CAPI, the D channel and both B channels of your ISDN connection.

What's Happening on the ISDN Line?

The *ELSA ISDNmonitor* is an important utility for tracking the movement of data over the various channels of your ISDN connection. Start the *ISDNmonitor* with **Start** ► **Programs** ► **ELSAisdn** ► **ELSA ISDNmonitor** or always automatically with Windows to have the latest information on your ISDN line status available at all times.

The status of the S_0 bus, the allocation of the B channels, as well as data transfers and charges are displayed when a connection is established. The contents of the display can

be modified under 'Detail' in the Options menu. Additional information can be displayed using the System menu, such as the version of the CAPI driver.



The displays provide the following information:

S ₀ Interface		
S ₀ Activation	Off	S ₀ bus is not active
	On	S ₀ bus is active
TEI	Off	No TEI assigned
	On	TEI assigned
L2	Off	D channel not established
	On	D channel established

B-channel info		(B channels B1/B2)
Con	Off	B channel not active
	Half on	B channel requested
	On	B channel established (chargeable)
Tx	Off	No data sent
	On	Data sent
Rx	Off	No data received
	On	Data received

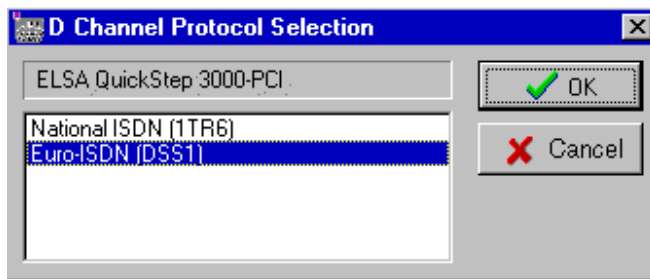
Setting up the D channel Protocol

The *ELSA QuickStep* is set up for operation on an ISDN connection with DSS1 (Euro ISDN) by default. If you would like to use the *ELSA QuickStep* on an ISDN connection using 1TR6 (national ISDN in Germany) as its D channel protocol, you must select this protocol beforehand.

Windows 95 and Windows 98

Select the D channel protocol under Windows 95 and Windows 98 with *Protonet*.

- ① Start *Protoset* with **Start ► Programs ► ELSAisdn Protoset**.



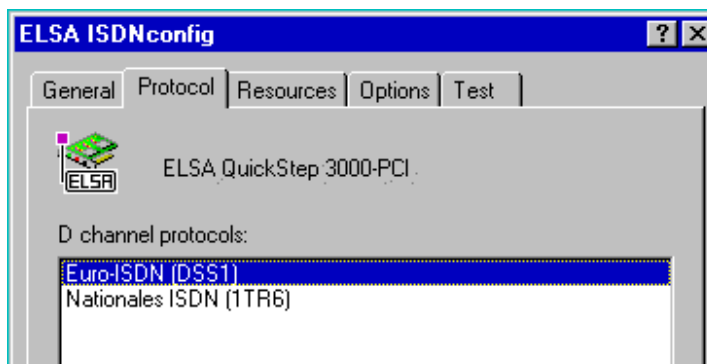
- ② Mark the required D channel protocol in the list and click **OK**.

Restart Windows to activate the drivers for the new protocol.

Windows NT 4.0

Under Windows NT the D channel protocol is selected with *ELSA ISDNconfig*. However, unlike Windows 95 or Windows 98, the protocol settings can be found on a separate tab of the program.

- ① Start *ELSA ISDNconfig* with **Start ► Programs ► ELSAisdn ► ELSA ISDNconfig**. Select the 'Protocol' tab.



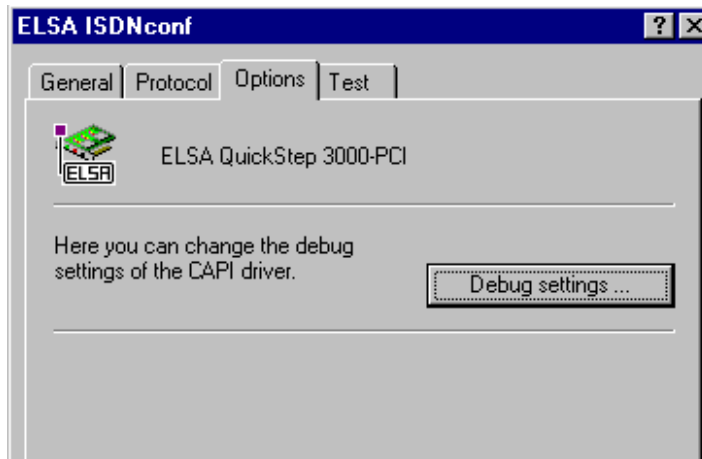
- ② Mark the required D channel protocol in the list and click **OK**.

Restart Windows to activate the drivers for the new protocol.

Testing the CAPI Interface (Windows NT only)

ELSA ISDNconfig offers an additional function under Windows NT which can be used to record CAPI interface events.

- ① Start *ELSA ISDNconfig* with **Start ► Programs ► ELSAisdn ► ELSA ISDNconfig** and go to the 'Options' tab.



- ② The **Debug Settings** button opens a window with the debug output settings.

These logs (also known as traces), are primarily designed to assist the ELSA Support team in the event of driver and installation problems.



Please note: *Incorrect debug output parameters can impair or completely disable the CAPI interface. Do not change the settings on the 'Options' tab without consulting the ELSA Support team.*

ELSA-RVS-COM

What Does *ELSA-RVS-COM* Have to Offer?

ELSA-RVS-COM is a powerful, universal communications program which provides you with the most important data communications applications in a convenient, easy-to-use package.

When used with your *ELSA QuickStep*, *ELSA-RVS-COM* provides the following functions:

Internet and Online Services

- World Wide Web access through providers or online services (e.g. CompuServe)
- access to foreign videotext systems

Fax

- fax group 3 and group 4 via software or hardware
- fax operation at up to 14,400 bps
- sending faxes directly from Windows applications through a Windows printer driver
- delayed fax transmission
- fax polling

File Transfer

- convenient PC-to-PC file transfer
- EuroFileTransfer with Explorer-compatible user interface

Telephone and Answering Machine

- full ISDN telephony features (in conjunction with a full-duplex sound card)
- digital answering machine (requires sound card)

Virtual COM Ports

- Virtual COM ports enable employment of traditional data communications software such as *Telix for Windows*.

CommCenter

- universal receive status with CommCenter

Setup for *ELSA-RVS-COM*

The setup program for *ELSA-RVS-COM* copies the required files to the selected drive and creates a program group on your Windows desktop.

System Requirements

For the operation of *ELSA-RVS-COM* the following minimum requirements (besides installation of ISDN adapter and the CAPI driver) must be fulfilled:

Operating system	Microsoft Windows 95, Windows 98 or Windows NT 4.0
CPU	fully compatible with Pentium or higher
RAM	16 MB min., 32 MB min. for fax operation

Disk space	25 MB min. free before installation 12 MB min. in operation for virtual RAM (swap file)
Graphics board	Video adapter VGA (640 x 480 pixels, 16 colors/gray scale) min. 256 colors min. for Videotext
Other	Sound card & microphone for answering machine

Follow the steps below to install *ELSA-RVS-COM*:

- ① Start Windows.
- ② Insert the *ELSA QuickStep* CD in your CD drive (e.g. D:). If the setup program does not start automatically, double-click 'autorun.exe' on the *ELSA QuickStep* CD.
- ③ Start the installation by clicking on ***ELSA-RVS-COM*** in the welcome screen selection. The serial number entry window will appear.
- ④ In the 'KEY' field, enter the *ELSA-RVS-COM* serial number on the enclosed serial number sticker (please note that the number is case-sensitive) and click **Next**.
- ⑤ The welcome screen appears. Read the displayed notes and press **Next**. Following the License Agreement, the target directory selection window will be displayed.
- ⑥ Accept the proposed target directory or enter the path and the name of the directory in which you want to install the program. Then click **Next**. Please read the following notes and press **Next**. Now the program files will be copied. Now setup is terminated.

The Installation Wizard for *ELSA-RVS-COM*

The Installation Wizard will support you in configuring the services you require after restart, such as fax and answering machine functions and in entering the subscriber numbers of your ISDN line.

- You may use the 'Express Configuration' option to setup a fully functional ISDN system with only a few inputs. You only have to enter a telephone number, for example, and do not need to take care of the assignment of numbers to services, such as fax, answering machine, etc.
- Only if you have special configuration requirements (e.g. various numbers for fax, EFT, etc.) do you need to start the 'User-Defined Configuration'. Then, you can enter various numbers and assign these particular functions.

You may also call the wizard later at any time to modify or enhance the configuration.



ELSA-RVS-COM has its own 'Inbox' for fax and voice messages. No Microsoft Exchange or Outlook components are required if you do not expressly activate this option when setting up ELSA-RVS-COM via 'User/defined Installation'.

The following paragraphs will describe some important configuration items for the various operating systems.



If you experience difficulties when configuring ELSA-RVS-COM, support and further information is available at all times using the comprehensive ELSA-RVS-COM help function.

Entering the Subscriber Numbers

During the user-defined installation you will be prompted for your ISDN line's subscriber number(s). There are different dialog windows for the various ISDN systems, for example Euro-ISDN and 1TR6 (the German national ISDN).

■ Euro-ISDN connection

For a Euro-ISDN line you will normally enter the subscriber numbers of your line as MSN1, MSN2 and MSN3 (Multiple Subscriber Numbers).

The central number and extensions are entered separately for private branch exchanges. Please contact your provider for further information on your ISDN connection if required.

■ National ISDN connection

For a German national ISDN line you will need to assign MSN1 – MSN3 to EAZ numbers (terminal device selection numbers). If the EAZ fields are left blank, the last MSN digit will automatically be used as the EAZ number.

Windows NT 4.0: Installing Modems

In Windows 95 two different CAPI modems (e.g. RVS CAPI modem ISDN V.120 or RVS CAPI modem ISDN Internet PPP) will be installed automatically.

In Windows NT 4.0 the window 'RVS-COM Installation: RVS ISDN Modems' permits the manual installation of various modems. If you want to install the 'RVS ISDN CAPI Modem', for instance, click on **Install**. The 'Install new modem' dialog will appear. Select the 'Don't detect my modem; I will select it from a list' item and click on **Next**. In the next window, select 'RVS Datentechnik' under 'Manufacturers' and the 'RVS ISDN CAPI Modem', for example. Confirm your choice with **Next**. Now select the COM port you plan to use and click on **Next**. Your CAPI modem will automatically be added to the modem selection list.

LapLink for Windows 95 and Windows NT

LapLink is a fully comprehensive program for "remote control" and "data transfer" between remote computers.

The 'Take Two' License

Before you can use the LapLink services, LapLink must be installed on all the computers that are to be linked. But don't panic: the LapLink license that you received with *ELSA QuickStep* allows you to install the software on two computers.

What Can LapLink Do?

LapLink provides you with everything you need to connect two remote computers. Under the categories data transfer and remote control, LapLink offers you the following services:

- Data transfer allows you to copy and move files from one computer to another.
- With data transfer, it is also possible to synchronize folders. The Xchange service is a convenient means of reorganizing individual files, folders, or even entire directory structures. In order to keep from interrupting your work for file synchronization, Xchange accomplishes its tasks automatically as desired, even under the cover of night...
- In the case of remote control, one computer user guarantees another free access to the first user's own files, programs, services, etc. The guest at the controlling computer can work on the host (the controlled computer) just as though it were his or her own.
- The dialog function allows users to exchange short messages on the two linked computers.
- You use the security settings to specify exactly who may have access to your computer. On installation the security settings are initially set so no one can have access to your data.

Installing and Uninstalling

To install LapLink please proceed as follows:

- ① Start Windows.
- ② Insert the *ELSA QuickStep* CD in your CD drive (e.g. D:). If the setup program does not start automatically, double-click 'cdsetup.exe' on the *ELSA QuickStep* CD.
- ③ Start the installation by clicking on **LapLink for Windows** in the menu on the welcome screen.
- ④ Then follow the instructions for the installation program and within a few minutes, you will have access to LapLink's full range of functions.

If at any time you decide you no longer wish to use LapLink on your computer, simply click **Start ► Programs ► LapLink for Windows v7.5 ► Uninstall**. LapLink then removes all files and system entries.

ELSA-ZOC

ELSA-ZOC is a powerful, advanced terminal program, that provides you with direct access under Windows to BBS systems and other computers using different terminal programs.

What Does *ELSA-ZOC* Have to Offer?

ELSA-ZOC is a special version of ZOC bundled with ELSA products (ISDN terminal adapters and ISDN cards). Among others *ELSA-ZOC* incorporates the following features and characteristics:

- support for most transfer protocols (including V.120, X75),
- connections via CAPI 2.0 and Windows modems,
- convenient phone book with import options (e.g. for *Telix* telephone books), and
- chat mode.

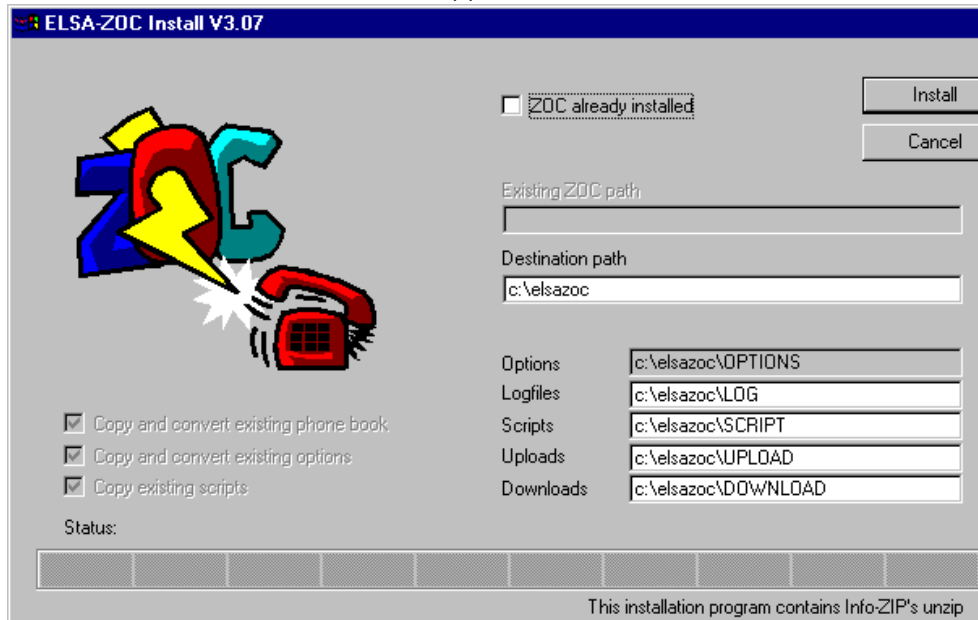
ELSA-ZOC is fully functional, and ZOC/Pro includes the following additional functions: REXX, DDE, Telnet and Rlogin, Named Pipes, VT52, VT220, Kermit and CompuServe transfer, as well as an online viewer (during downloads). A special upgrade from *ELSA-ZOC* to the ZOC/Pro version is available from the dealer. Information is available in the program online help.

Installation of *ELSA-ZOC*

ELSA-ZOC is very easy to install. After just a few minutes you will make your first call, e.g. to any BBS. To install *ELSA-ZOC* please proceed as follows:

- ① Start Windows.
- ② Insert the *ELSA QuickStep* CD in your CD drive (e.g. D:). If the setup program does not start automatically, double-click on 'autorun.exe' on the *ELSA QuickStep* CD.

- ③ Start the installation by clicking on **ELSA-ZOC** in the menu on the welcome screen. The *ELSA-ZOC* install screen appears.



- ④ Select the setup paths for the program files and, if necessary, for the various add-ins, and click on **Install**. After successful installation, *ELSA-ZOC* generates an entry in the Windows Start menu.

■ Workshop

The examples in this section are intended to show you how quickly and easily you can use the *ELSA QuickStep* and the accompanying software in practical applications.

Special emphasis is given to remote access with Laplink for Windows and Internet access.

The *QuickStep* fax and answering machine functions (with *ELSA-RVS-COM*, for example) will also be covered.

The chapter concludes with data transfer via the Windows Dial-Up Networking as well as access to BBSs and terminal software with *ELSA-ZOC*.

We have tested all applications under the beta versions of Windows 98. Their full functionality will be at your disposal also when using this operating system.

Remote Access with LapLink.....	22
Dial-Up Networking under Windows 95	29
Internet and Online Services	32
Faxing with <i>ELSA QuickStep</i>	35
Telephone and Answering Machine.....	36
Data Transfer	37
Mailboxing with <i>ELSA-ZOC</i>	45

Remote Access with LapLink

This workshop assists you over the first hurdles of remote access. 'Remote access' as applied to LapLink refers to accessing a remote computer for file transfers, as well as remote control or remote assistance of the other computer.

As an example, we'll set up a computer in a company which can be accessed by the company's field staff and teleworkers. With LapLink, users who work off the company premises can exchange data with the head office or use special programs on the computers in the company.

What Is a Host, What Is a Client?

To improve the understanding of this chapter, let's start by explaining a number of the terms used in conjunction with LapLink.

Experienced users of programs for data transfer and remote control of computers will probably find much familiar material here and can skip immediately to the next section.

LapLink always links two computers for data transfer or remote control of a computer. Both computers are given different names to distinguish them from each other:

- Host

One of the two computers has a passive role. It is called the **host** or even **source computer**. The host (in this case the computer in the company) offers its options and functions to the other computer.

- Client

The other computer has the active role. It is called the **client** and uses the host with its functions when it needs them. The client (in this case the computer of the field-service employee) establishes the connection to the host and also generally terminates it.

- Remote computer

LapLink refers to the computer at the other end of the connection as the **remote computer** (also known as **distant computer**). Other programs sometimes also use this designation for the client.

- Remote access

Access from one computer to another remote computer is referred to as **remote access**.

Preparing

You have seen that a host offers services that other computers wish to make use of. This requires preparation of both the host and the client(s).

The Host

First, of course, you need to configure a computer that will make an offer to the clients. The procedure is as follows:

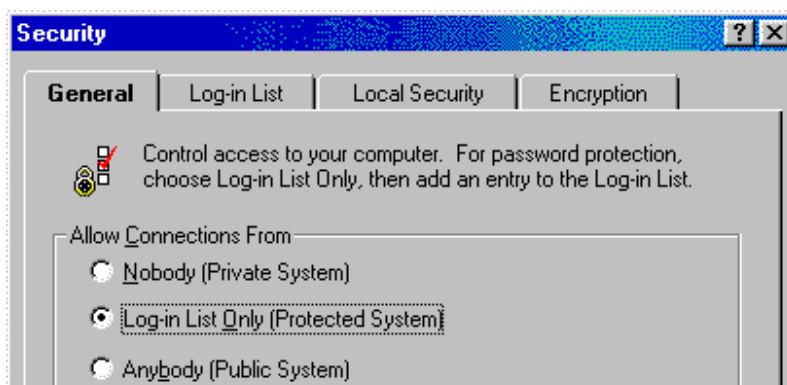
- ① One computer in the company is required for remote access. It should preferably not be directly used by employees.

If this computer is in the local area network (LAN) of the company, the clients will also have access to all free resources and services in the network. This is convenient for the employees but in principle also involves the risk of unauthorized access to the LAN. Therefore: Don't forget the security settings!

To enable other computers to establish a connection to the host, the host must naturally be "wired" in some way. In this example, you select an ISDN adapter, which can be contacted via a digital telephone connection.

- ② You install LapLink for Windows 95 on this computer as described in the chapter 'LapLink for Windows 95 and Windows NT' on page 13. The security settings are now set up so that no one can access this computer.
- ③ After the installation you click directly on **Options ► Security...** For the security of your system you can distinguish between
 - private system: No one may access the host (makes no sense for the host but does for the clients)
 - protected system: Only the users agreed in the access list can access the host
 - public system: Anyone can access the host (dangerous, particularly if the host is on a LAN).

Select the option 'Protected System' for the example of "remote access by outside workers".



- ④ Now you click on the tab 'Log-in List'. The **Add** button opens a window in which you can log on a new client.

First enter the user name and the password that the client needs to log on to the host. Then you can specify the services the client may use:

- file transfer
- remote control
- chat

The 'Modem Callback' options first enable you to assign the telephone connection costs either to the host or to the client, secondly the callback enhances security because only one specific telephone connection is specified for the client. The options are self-explanatory, but please note the following:



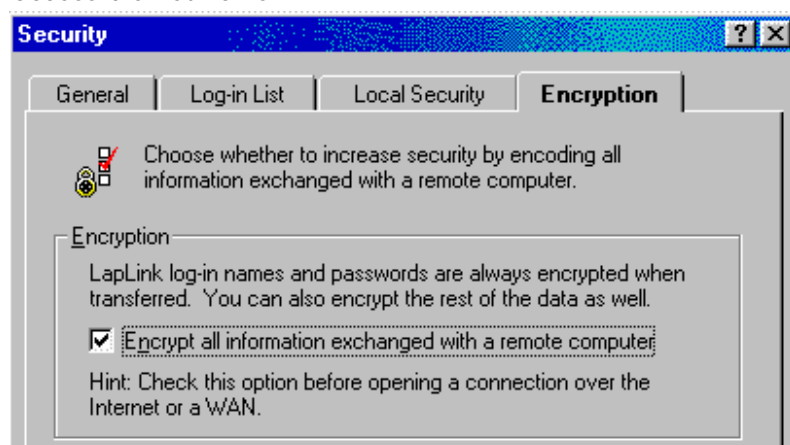
Outside workers, who e.g. call from hotels or other companies, should be able to set a call number themselves with the callback options ('Any Number' option).

Ultimately, the log-on list may look as follows:

- ⑤ Another click takes you to the 'Local Security'. To prevent every client from changing the security settings on the host, activate the option 'Protect local security with a password'. The **Set Password** button opens the window in which a new password can be agreed or an existing one can be changed.



- ⑥ The final problem is the question of data encryption. If the corresponding option is activated on the 'Encryption' tab, all data exchanged between client and host will also be encrypted. Encryption is recommended for connections made over publicly accessible networks.



- ⑦ Next, prepare the modem and set it for automatic call acceptance.

The Visitor

In contrast to the host, the client has a much easier time. After installation of LapLink, the security settings need only to be set to the default 'Nobody (Private System)'. Then the following occurs:

- ① In **Options ► Port Setup** the client selects the Windows 95 modems and activates this port. The **Configure** button opens a window that lists all installed Windows modems. Certain options such as automatic answer can be now set for every one of these modems. The **Properties** button opens the window for configuring the modem. The client then accesses the settings in the Windows control panel and if applicable overwrites them with its changes. The **Add** button can be used to install additional Windows 95 modems.
- ② In **Options ► Address Book** the client can enter the details of the host with which a connection is wanted. First a suitable description for the connection is entered. The name of the host, if known, may be entered in the 'Computer Name' field, otherwise the description is entered here again. In the following list the client selects the 'modem' for the connection and enters the call number, his user name and the password for the connection to the main office. The client will have been assigned a user name and password by the main office beforehand.
- ③ In **Options ► Port Setup** the client selects the Windows 95 modems and activates this port. The client selects **Connect ► Connect over Modem** to start the selection of the hosts. He can now search the list of address book entries for the connection that he wishes to establish. The call number is displayed again in the 'Dial' area, and the client can select from a list the modem that he wishes to use to establish the connection.

Connection Establishment

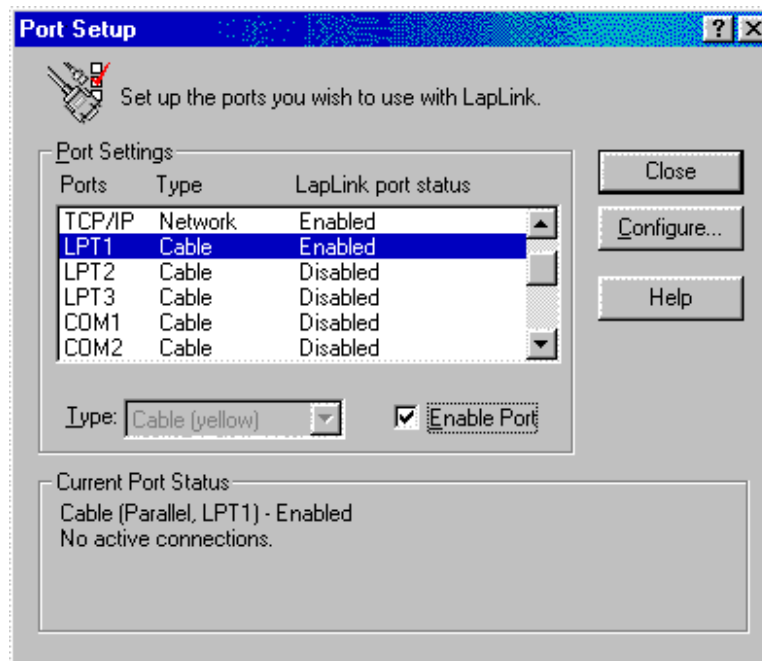
Using LapLink, you can link your computer to other computers using various means. The following connection options are available:

- cable connection
- wireless connection
- modem connection
- network connection
- connection with Dial-Up Networking in Windows 95

Configuring a Port

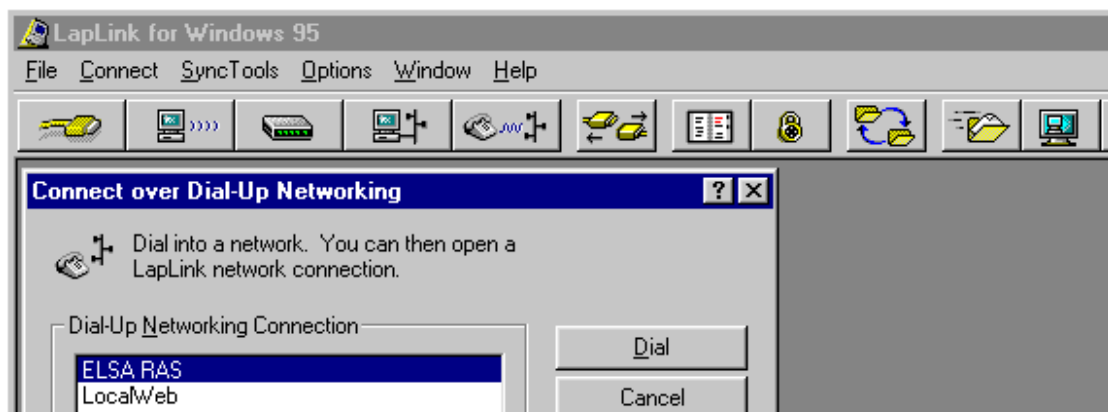
Each connection accesses a 'Port'. These ports might be called, for example, 'Win95' for the modem connections, 'TCP/IP' for the network connections or 'LPT1' for the cable connections. Some of the ports are available immediately after the default installation, others (such as the ports for the cable connections) need to be set up first. Click on **Options**

► **Port Setup.** Then select the desired port in the list and activate it. The current status of the port can be checked at any time in the lower area of the window.



Start Connection

In order to set up this connection to another computer, simply click on the icon for the relevant connection type at the top of the window:



When connecting by Dial-Up Networking you can select one of the available connections and start the connection to this remote station.

Starting a connection via *ELSA-Communicate! Pro*

If you have *ELSA-Communicate! Pro* and LapLink installed on your computer, you can call up your computer at home from a remote location and automatically start LapLink.

This can be useful, for example, if you have *ELSA-Communicate! Pro* running constantly with fax and answering machine functions on your computer at home, and you would like to access your computer via a LapLink connection from the office.

ELSA-Communicate! Pro is automatically set up for this function by default.

The procedure is as follows:

- ① Call the computer on which *ELSA-Communicate! Pro* is serving as an answering machine by telephone.
- ② Follow the instructions and press the keys on your telephone until you are in a mail-box with the option of leaving a voice message (with ①), leaving a fax message (with ②) or polling fax messages (with ③).
- ③ Press ⑦ on your telephone. *ELSA-Communicate! Pro* will then prompt you to end the call.
- ④ *ELSA-Communicate! Pro* will then automatically open the COM port on your computer at home and will start LapLink.
- ⑤ If you now call the computer with your modem, LapLink will take the call and provide functions such as remote control and data transfer.
- ⑥ Exit LapLink when you no longer need it so that *ELSA-Communicate! Pro* can once again access the COM port and accept calls.

File Transfer

LapLink provides numerous options for data transfer. We would like to introduce two procedures here that can often make your day-to-day work easier.

We also have to distinguish between two different applications:

- You wish to connect to another computer and send some specific files to this computer or download them from this computer.
- You wish to compare the data on one computer (e.g. your notebook) with the data on another computer (e.g. the workstation in the office) and update both sets of data.

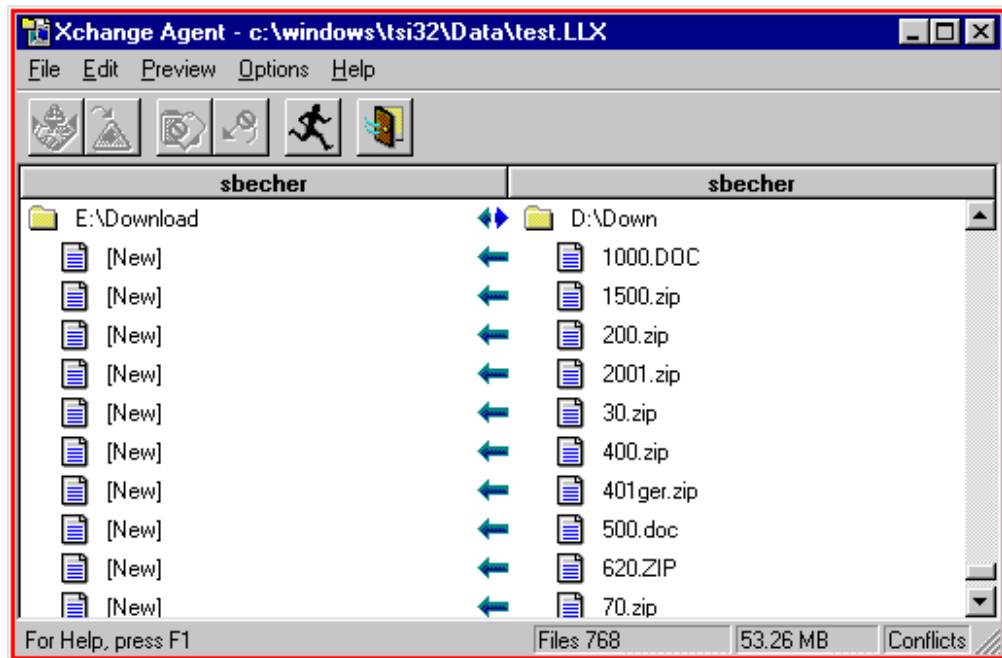
Targeted Data Exchange

To exchange specified data, establish a connection to the other computer and then open the 'Data transfer' window. Your screen will then show two windows that look similar to the explorer in which you can drag&drop files between the two computers in either direction.

Regular Data Comparison

When you regularly work on your data in the office and on the road, the LapLink Xchange services provide an extremely convenient method of keeping the data up to date and the same on both computers. Set up an Xchange service wizard once and specify which fold-

ers are to be compared. This wizard can be run at any time and will automatically compare the data. LapLink warns of possible conflicts before running the wizard.



Dial-Up Networking under Windows 95

If you would like to use the *ELSA QuickStep* for connections to other computers or entire networks (Internet, company LANs) under Windows 95, you will generally use Dial-Up Networking.

However, Dial-Up Networking is not installed or not completely installed and set up on many computers. Please check your installation using the following information and if necessary supplement your operating system configuration.

Installation of Dial-Up Networking



First check whether Dial-Up Networking is installed in your Windows 95. Open 'My Computer' (generally the icon at the very top left of the Windows 95 desktop).

Look for the Dial-Up Networking icon. If this icon is not present, you will have to install Dial-Up Networking first. You will need your Windows 95 CD for this purpose.

- ① Select **Start ► Settings ► Control Panel ► Add/Remove Programs** to find 'Program Properties'.
- ② Select the 'Windows Setup' tab and mark the entry 'Communications'. Click the **Details** button to open the dialog for selecting communications components.
- ③ Activate the box for 'Dial-Up Networking' and confirm your selection by clicking **OK** twice.

- ④ When prompted, insert your Windows 95 CD into the CD drive and confirm with **OK**. After the required files have been copied, it may be necessary to restart the computer.



*If the required files are not found on the main folder of the CD, try to find them in the D:\win95 or D:\windows subfolders. Alternatively, the key combination **A + D** will open a search window for searching the CD.*

You may also find the files in a subfolder of the Windows folder on your hard drive, e.g. in 'c:\windows\options\cab'.



Dial-Up Networking is then installed and the corresponding item will appear in 'My Computer'.

Installation of the Dial-Up Adapter and the TCP/IP Protocol

In addition to installing Dial-Up Networking, a dial-up adapter (or dial-up driver, according to the operating system version) with the TCP/IP network protocol in the Windows 95 network environment is required. Proceed as follows if these components have not been set up on your computer:

- ① Open the window for configuring the network properties via **Start ► Settings ► Control Panel ► Network**. Check whether there is an entry for the dial-up adapter in the list of network components.
- ② If there is no entry for the dial-up adapter, click on **Add ► Network card ► Add** and select 'Microsoft' as manufacturer and the 'Dial-Up Adapter' as the network card. Confirm by clicking **OK** twice.
- ③ When prompted, insert your Windows 95 CD into the CD drive and confirm with **OK**. After the required files have been copied, the computer will need to be restarted for the new settings to become effective.
- ④ Finally open the window for configuring the network properties again with **Start ► Settings ► Control Panel ► Network**. Check whether there is an entry for the TCP/IP protocol in the list of network components.
- ⑤ If there is no entry for TCP/IP, click on **Add ► Protocol ► Add** and select 'Microsoft' as manufacturer and 'TCP/IP' as protocol. Confirm by clicking **OK** twice.
- ⑥ When prompted, insert your Windows 95 CD into the CD drive and confirm with **OK**. After the required files have been copied, the computer will need to be restarted for the new settings to become effective.

Finally, check the correct entry of the installed components. Open the window for configuring the network properties again with **Start ► Settings ► Control Panel ► Network**. Ensure that the list of network components not only contains entries for the dial-

up adapter and the TCP/IP protocol, but also an entry in the form of 'TCP/IP -> Dial-Up Adapter'.

Then Dial-Up Networking is ready to connect to other computers or networks with *ELSA QuickStep*.

Establishing a New Connection



- ① Double-click in My Computer, Dial-Up Networking on **Make New Connection**.
- ② Enter a name for the connection in the next window, and select 'ELSA ISDN WAN Line 1' as the 'Modem'. To enter the phone numbers go on to the next window by clicking the **Next** button.
- ③ Enter the area code and the phone number of your Internet provider and if required select a different country code. Selecting **Finish** in the following window establishes the new connection.

Multilink PPP (Channel Bundling)

To increase data transfer over a connection in Dial-Up Networking, you can use two B channels of an ISDN basic rate interface **simultaneously** for one connection. The transfer rate will be doubled but there will also be additional telephone costs for two connections!

Please note that channel bundling will only work if the remote station can also use Multilink PPP. Multilink PPP is not supported by all Internet providers, for example.

- ① Click a connection in Dial-Up Networking with the right mouse button to set the 'Properties'.
- ② The 'General' tab allows you to change the phone numbers and the device later. The 'ELSA ISDN WAN Line 1' should be set up as the first device.
- ③ This window allows a second device for the same connection to be selected. This results in the grouping of the two B channels of the ISDN connection, and increases the maximum data transfer rate to 128kbps. In the field 'Additional Devices' use the buttons **Settings** ► **Additional Devices** ► **Add** to select 'ELSA ISDN WAN Line 2' and confirm twice with **OK**.

Internet and Online Services

The Internet and several online services allow you to interactively access a worldwide data communications network containing a vast range of information. They may also be used to exchange EMail messages with other users.

These services require:

- An account with an Internet service provider (generally subject to charges)
- A connection from your computer to the provider's server
- The software to use the services (browsers for the Internet and online services, as well as a separate EMail program if required).

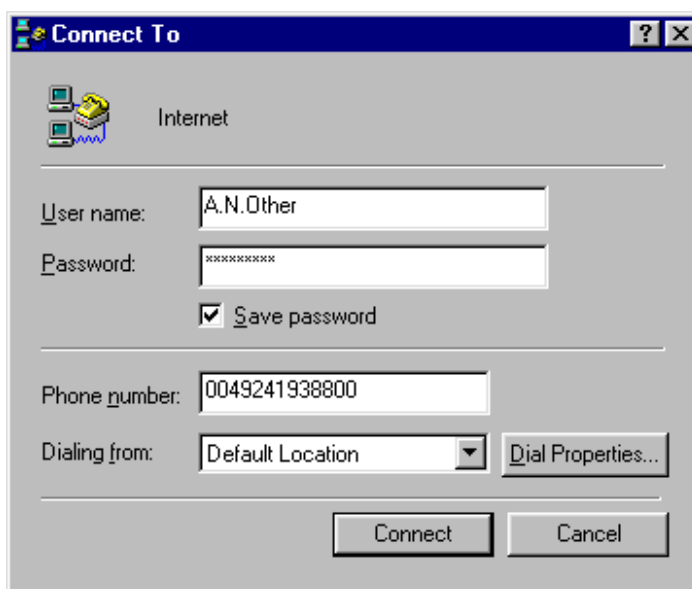
Internet and EMail (e.g. Dial-Up Networking under Windows 95)

During the installation of the *ELSA QuickStep*, a NDIS-WAN driver is automatically installed which provides you with a network card. With Windows 95 Dial-Up Networking, you can easily establish a connection to the Internet using this network card.

As an example we shall demonstrate the connection to the ELSA LocalWeb. The LocalWeb is a copy of the ELSA AG web server and can be reached without paying for an account with an Internet provider. However, access to this server is set up in exactly the same way as the access to many Internet providers.

Establishing a New Connection

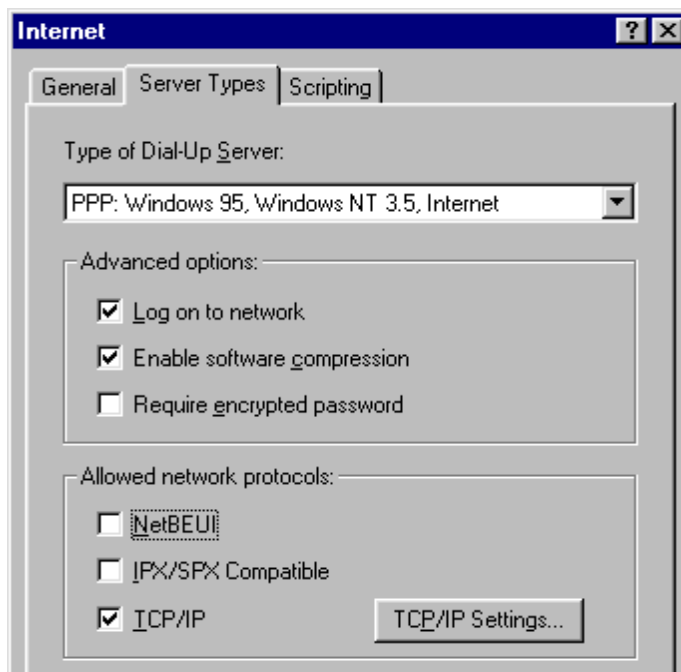
- ① Create a new Dial-Up Networking connection as described in section 'Dial-Up Networking under Windows 95' on page 25. For example, select 'ELSA ISDN WAN Line 1' as your 'modem' and enter the values shown in the next window.



Add the required area codes or identification to the call number as required.

- ② If necessary, set up the Multilink PPP option for the new connection if you wish to increase the data throughput (see 'Multilink PPP (Channel Bundling)' on page 27).

- ③ On the 'Server Types' tab, disable all additional options and enable 'TCP/IP' as the only valid network protocol. Do not change the TCP/IP settings unless your Internet provider advises you to do so.



- ④ The 'Script' tab is only of interest to you if the Internet provider has given you specific information concerning it.



If you need a script to select the provider, you cannot use the NDIS-WAN miniport device for the connection. Use one of the installed modems, with 'X.75' or 'HDLC transparent' protocols, for example.

Connecting

- ① When the connection in the Dial-Up Networking is set up, start the connection by clicking twice on the corresponding icon. During initial startup you are prompted to enter the user name and the password. These are available from your Internet provider.
- ② Use the **Dialing Properties** button to open a window in which you can set the digit for an outside line when using a PBX (e.g. 0). This digit is automatically placed in front of the phone number.
- ③ To connect your computer to the network of networks, click the **Connect** button.
- ④ Start your browser for access to a worldwide, interactive range of information.

Sending and Receiving EMail

For newcomers to the Internet: A provider is a company that places a variety of services related to the Internet at your disposal. Some providers only handle the technical aspects

of Internet access, while others also publish the customer's content on the Internet; others also provide content of their own.

E-Mail is also a service offered by Internet providers. To use this service, you have to give your E-Mail program additional information about accessing your provider:

- your own E-Mail address
- the Internet Mailserver

This information is available from your provider. Both items are entered into the programs at different locations and are absolutely necessary for using E-Mail.

For information concerning the use of your E-Mail program refer to the corresponding documentation.

Online Services

Access software packages for a variety of online services have been included with your ISDN adapter. Access to these services can be established manually, for example, via the Windows Dial-up Network or via the installation programs included in the software.

For necessary information about installing the software packages refer to the corresponding online documentation.

Faxing with *QuickStep*

An ELSA ISDN adapter also lets you use your computer as a convenient fax machine for ISDN connections.

Sending a Fax with *ELSA-RVS-COM*

When it was installed, *ELSA-RVS-COM* configured a special printer driver (RVS Fax) for your standard application programs (e.g. word processing) that will allow you to print your faxes. When you send a document to the 'RVS Fax' printer, the fax wizard takes over the rest of the fax transmission.

Alternatively, you can start sending a fax by clicking **Start ► Programs ► ELSA-RVS-COM ► Create new fax**. In this case as well, the fax wizard takes charge of the further

processing of the fax. It asks you to enter the recipient's name and call number and, further along in the process, offers to enter additional text and use a prepared cover sheet.

Please read the following tips on how to send fax messages effectively using *ELSA-RVS-COM*:

- If you want to send the same fax to several recipients, activate the 'Recipient list' and press the **Add** button to enter the relevant addresses.
- You can display the fax with the RVS FaxViewer before sending it. Then you can either transfer the fax immediately or click the **Fax Settings** button and switch to the 'Schedule' tab to specify a dispatch time. In this way, you can send non-urgent faxes at night and thus save on telephone charges.
- When you click on the **Fax Settings** button, you can create your own coversheets on the 'Cover Sheets' tab.
- If you wish to combine several pages from an application program in a fax transmission, first create the individual fax pages using the particular program and click on **Show fax** on the last page of the Fax Wizard. FaxViewer lets you save the relevant pages individually. If you wish to create 'blank' fax, you can press the **Add** button to combine the relevant files in one fax transmission.

Receiving a Fax

There are basically two possibilities for receiving faxes:

- Another person would like to send you a fax.
- You wish to retrieve a specific preset fax retrieval (fax polling).

In the first case, you simply need to switch on your fax machine (i.e. *ELSA-RVS-COM*) and wait for the incoming fax. Your computer is ready to receive faxes if you have configured fax reception using the *ELSA-RVS-COM* Installation Wizard and the CommCenter is started (also see communication software).

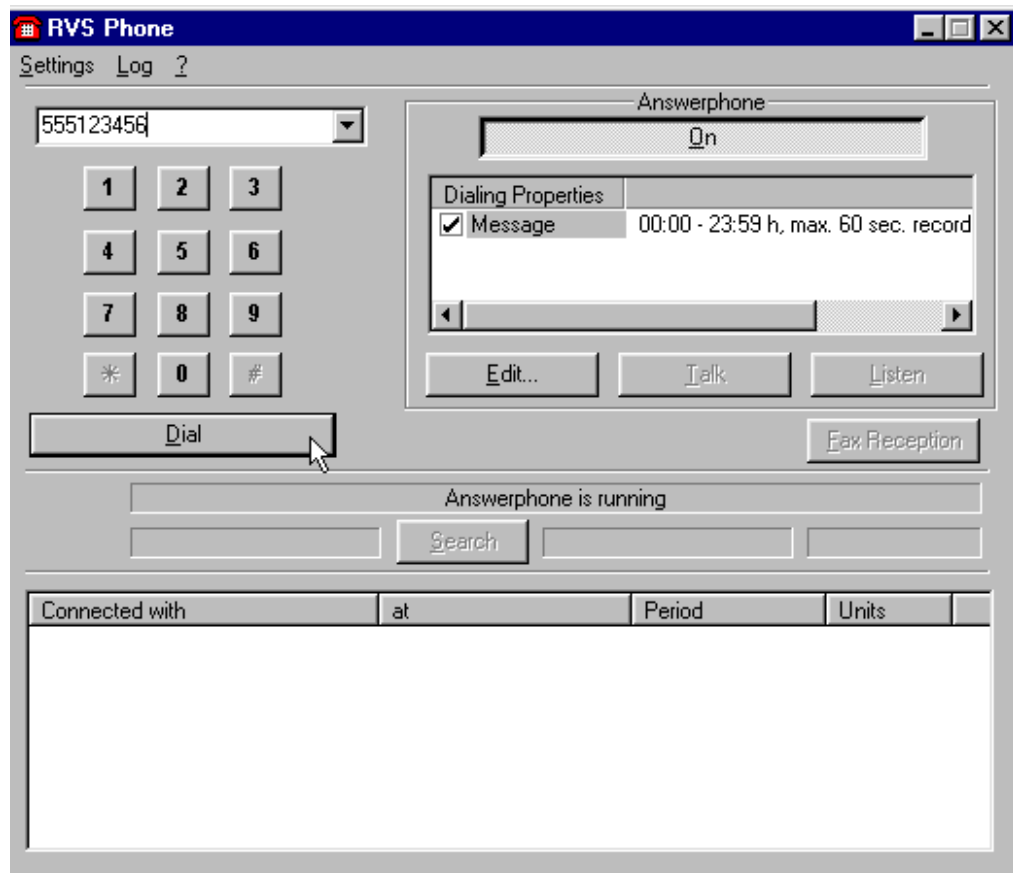
For fax polling, proceed as follows:

- ① Start the 'RVS Phone' in the 'ELSA-RVS-COM' program group.
- ② Dial the call number of the fax machine from which you would like to retrieve the fax.
- ③ As soon as the connection is established, click the **Fax Reception** button.

The remote station's fax machine now transmits the fax to your computer. The call number of the other fax machine and the current connection time are displayed on the status line of the 'RVS Phone'.

Telephone and Answering Machine

The *ELSA QuickStep* also lets you use your computer as a convenient ISDN telephone and answering machine.



This requires:

- *ELSA-RVS-COM* as the communications software with answering machine and telephony functions
- A full-duplex sound card with suitable speakers
- A microphone for recording outgoing messages

When installing *ELSA-RVS-COM* you specify a subscriber number to which the answering machine (and thus also the telephone) responds.

The *ELSA-RVS-COM* answering machine includes the following features:

- recording numerous outgoing and closing messages
- administration of these various outgoing messages with a time table
- setting the maximum recording time for each call

The CommCenter of ELSA-RVS-COM must be running for your computer to accept telephone calls.



Data Transfer

ELSA QuickStep and the software included provides you with several possibilities to transfer data from one PC to another. Always take into account the capabilities of the remote terminal when selecting the method of data transfer.

Dial-Up Networking

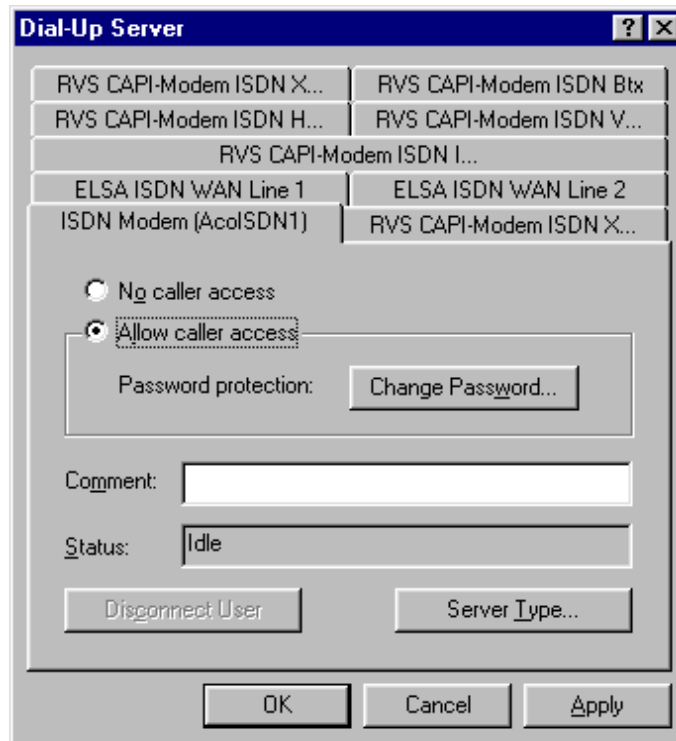
You can set up your computer as a server within the Dial-Up Networking of Windows. This allows you to grant other users (clients) access to your files.

Setting up a Server

Following software and hardware components must be installed for your computer to operate as a server:

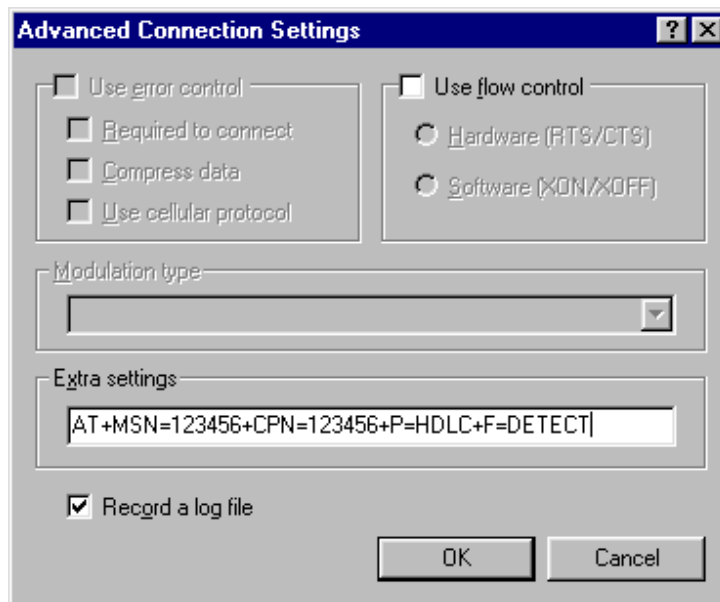
- Microsoft Plus Pack (included in the Windows 95 B version)
- Microsoft Network (Control Panel, Software, Windows Setup)
- Connections (Control Panel, Software, Windows Setup)
- Client for Microsoft networks (Control Panel, Network)
- One of the protocols TCP/IP, IPX or NetBEUI (Control Panel, Network)
- File and printer sharing for Microsoft Networks (Control Panel, Network)

- ① First, open My Computer and double-click the Dial-Up Networking icon. Under **Connections** ► **Server**, enable access to the server via a modem (e.g. 'ISDN modem (AcoISDN1)'). Disable access to the server for all other modems!



- ② Open the Dial-Up Network server settings with the **Server Type** button. Select, for instance, 'PPP' as the server type and activate all options.
- ③ If you would like to restrict the access to your server with a password, open the appropriate window with the **Change password...** button.
- ④ Change the advanced properties of the 'ISDN modem AcoISDN1' under **Control Panel** ► **Modems** ► **Properties**. The entry in the field 'Advanced Properties' should read as follows:

AT + MSN = (Phone number for incoming calls to the Server) + CPN = (Phone number for outgoing calls of the modem) + P = HDLC + F = SYNC

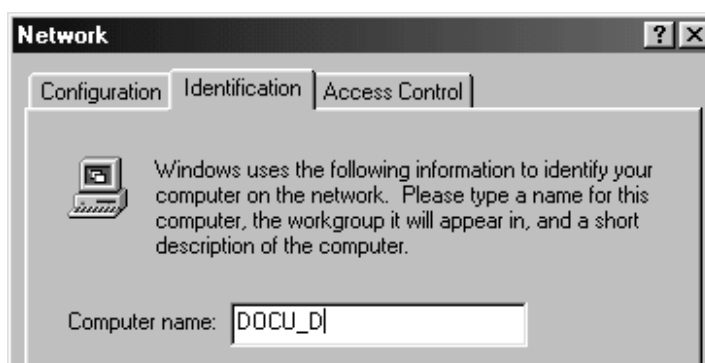


The computer is now ready to operate as a server via ISDN adapters.

Setting up the Client

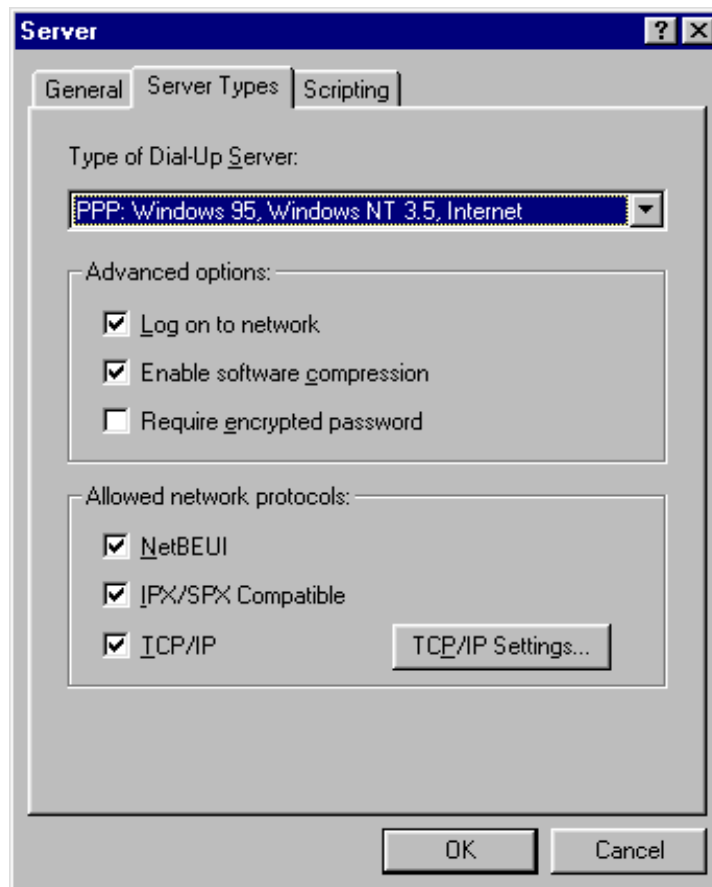
Following software and hardware components must be installed for your computer to operate as a client:

- Microsoft Network (Control Panel, Software, Windows Setup)
- Connections (Control Panel, Software, Windows Setup)
- Client for Microsoft networks (Control Panel, Network)
- The same network protocol as the server (Control Panel, Network)
- You will need the computer name of the server to make the connection from the client to the server. To find out this name, click **Start ► Settings ► Control Panel ► Network ► Identification** on the server.



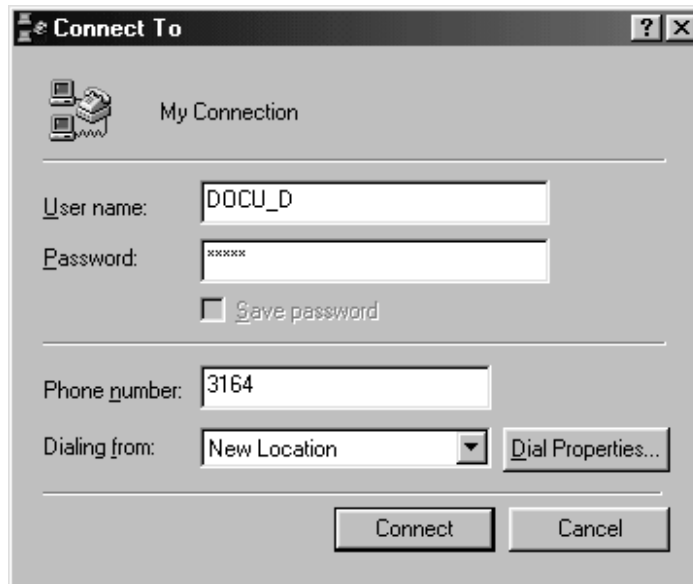
To access the server from another computer, you first have to establish a connection to the server within the Dial-Up Networking.

- ① Double-click on **Make New Connection** in Dial-Up Networking. Enter a name for the connection and select, e.g. 'ISDN ELSA ISDN WAN line 1' for the connection. In the following window enter the number of the server and complete the process by clicking the **Finish** button.
- ② Right-click on the new connection in the Dial-Up Networking to set the properties of the connection. Select the server type which you have set for your server and the advanced options as on the server. Enable the network protocol which is also installed on the server and close the window with **OK**.



- ③ Establish the connection to the server by double clicking on the corresponding icon in the Dial-Up Networking.

- ④ Enter the computer name of the server (see above) as the user name for the connection.



- ⑤ Enter the password specified in Dial-Up Networking under **Connections ► Server** (see item ③ in the section 'Setting up the Server').
- ⑥ Click **Connect** to establish the connection to the server.

You then have access to the shared drives and folders on the server which you can address using functions such as **Find ► Computer** in the Windows Start Menu or the Network Neighborhood. For information on sharing folders and files refer to the Windows help.

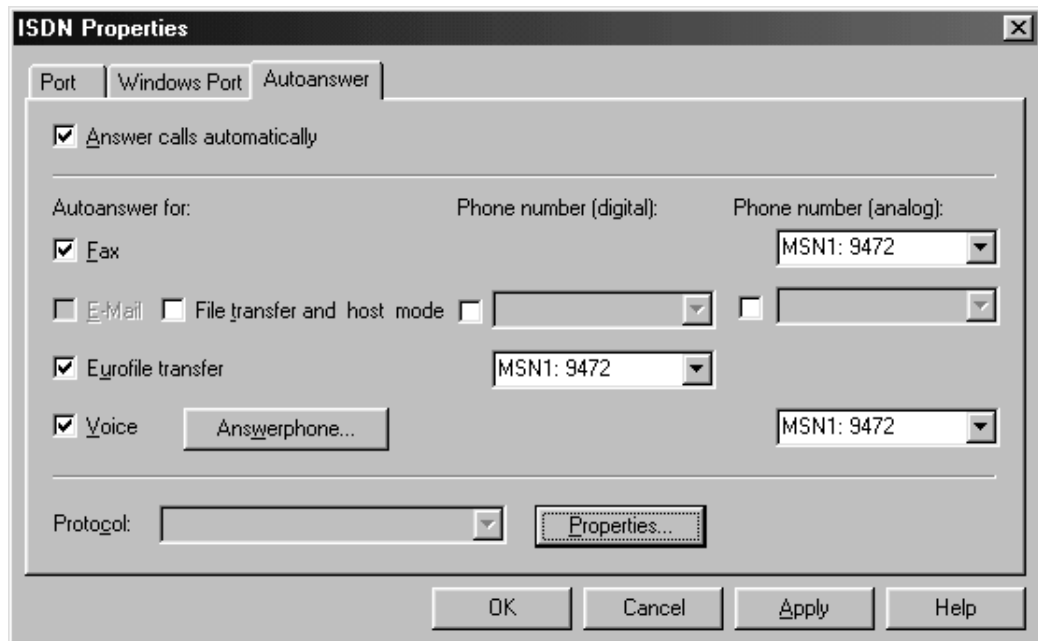
EuroFileTransfer with *ELSA-RVS-COM*

The TransferMaster in *ELSA-RVS-COM* provides a convenient method of transferring files from one computer to another. It simply requires that the ready-to-receive state for EuroFileTransfer be activated on the other PC (e.g. with CommCenter from *ELSA-RVS-COM*).

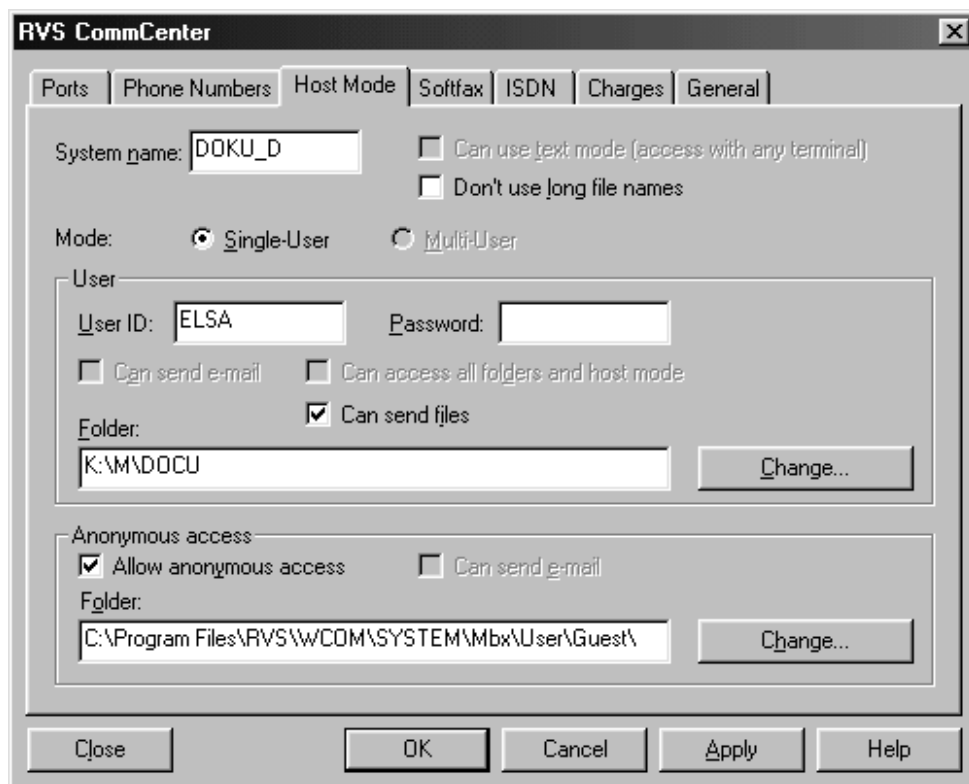
Preparing for EuroFileTransfer

In order to allow other users to access your computer via EuroFileTransfer, set up the access in the *ELSA-RVS-COM* CommCenter by making a few entries.

- ① Activate 'Auto Answer' in the properties for the ISDN connection and select the subscriber number to which the connection for the EuroFileTransfer should react.



- ② On the 'Host Mode' card, define a user name and password and select the directory to be opened to this user. The user can read and write files in this directory and all its subdirectories (if the corresponding option is enabled).



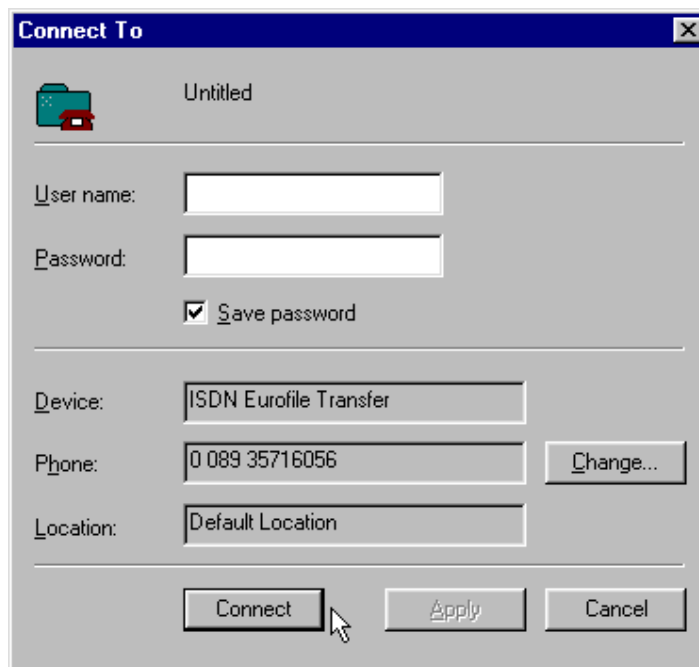
- ③ Deactivate the host mode.

Your computer is ready for EuroFileTransfer as long as the CommCenter is activated.

Transferring Data with EuroFileTransfer

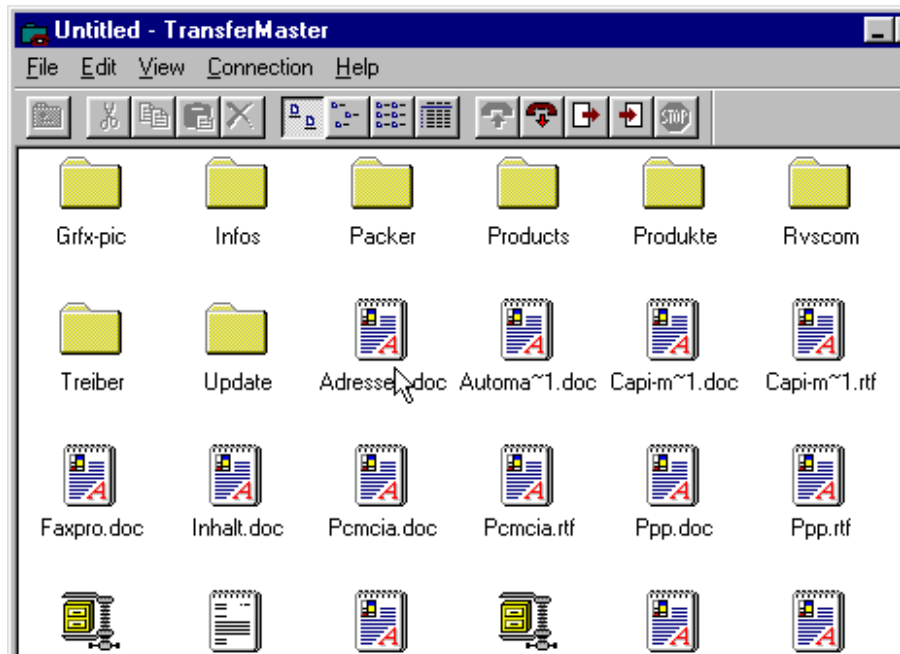
To transfer files yourself from your computer to another (or vice versa), proceed as follows:

- ① Start TransferMaster by double clicking on the corresponding icon.
- ② Open a template (e.g. RVS BBS: ISDN Eurofile), a saved connection, or a window for a new remote station with **Connection ► Connect**.
- ③ Enter a user name if required (none) and password (none) as well as the subscriber number of the remote station (preset) and confirm with **Connect**.



- ④ After the successful call establishment, the files of the remote computer will appear as an additional folder on your own computer. You can transfer these files between the two computers by using drag&drop. In addition, you will be able to open files

on the other computer by double-clicking on them, provided the appropriate application is installed on your own computer.



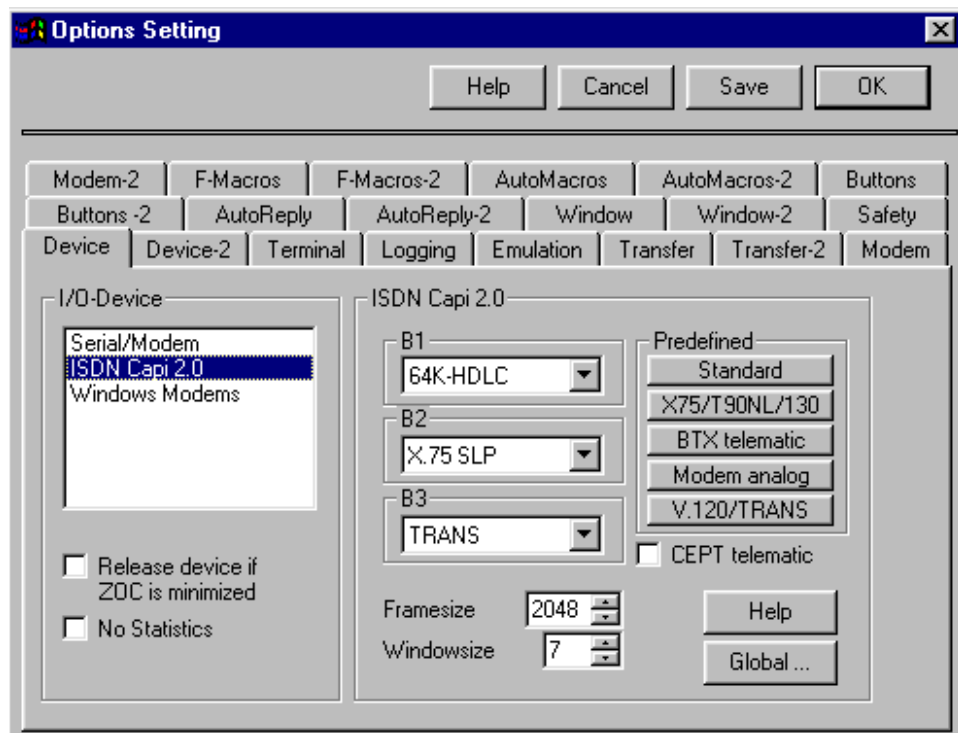
For additional help on data transfer with ELSA-RVS-COM please see the program online help.

Mailboxing with *ELSA-ZOC*

ELSA-ZOC is set up in such a manner that you can launch your first connection immediately on most systems.

- ① Start *ELSA-ZOC* using its entry in the Windows Start Menu.

- ② In the 'Options' menu, select 'Settings'. This window displays the settings for the devices (modems etc.) as well as all program-specific parameters.



'ISDN CAPI 2.0' is already selected by default on the 'Device' tab. *ELSA QuickStep* is now ready for the first file transfer.

- ③ Start 'Manual Dialing...' in the 'Device' menu. Enter the phone number of the required BBS including the direct outward number (most PBXs have 0), the country and area code and click **OK**. After a few seconds you will be greeted with the opening page of the BBS.

■ ISDN Connections

In choosing a modern ISDN connection, you have opened the door to a broad new selection of communications options.

You can use a wider range of services than with analog telephone connections, at higher speeds, and in some cases even simultaneously!

What's more, the assignment of several ISDN subscriber numbers lets you precisely tailor the scope and type of communications services to your requirements.

In this chapter, we would like to provide a few examples for the deployment of various devices (PC, telephone, fax, answering machine, etc.) on your ISDN connection to achieve the most convenient solution for your particular requirements.

Even if you don't find your specific application scenario here, combinations of these examples can provide useful ideas for your applications.

Introduction—What Does ISDN Involve?	50
The Basic Package—	
ISDN with Analog Devices	54
The Next Step up—For Freelancers.....	56
Stage 2—For Small Companies	59

Introduction—What Does ISDN Involve?

This section will introduce the specific characteristics of ISDN as compared to conventional telephone connections in order to illustrate the special capabilities of the ISDN network. While this description is certainly not complete, it covers a number of the questions most frequently asked by new ISDN users.

What Does ISDN Stand for?

ISDN is an abbreviation for **I**ntegrated **S**ervices **D**igital **N**etwork. This name already contains some key information about ISDN:

- It is a digital network.
- A variety of services are integrated in this network.
- Note: This is not a network which provides digital services exclusively. Analog services such as telephony and fax can also be provided via ISDN.

How Many Lines and Subscriber Numbers are Available in the ISDN?

Generally, normal analog telephone connections involve one line with a single number (subscriber number). While several communications devices (e.g. a telephone and a fax) can be connected to a telephone connection, only one device can be used at a time due to the single line.

An ISDN Basic Rate Interface is generally installed for private users and small businesses. The differences to an analog telephone connection: This immediately provides two usable lines, the B channels. An additional line is also available, the D channel, but this channel is used only for control data, such as dialing information, necessary for the establishment and administration of the connection to other devices.

What's more, it is usual for three subscriber numbers to be assigned to your connection. If you need additional subscriber numbers, just apply to your telecommunications provider.

The advantages:

- You can assign specific numbers to the individual devices. For example, separate numbers can be assigned to each telephone and the fax machine, as well as to the PC with the *ELSA QuickStep* (subject to the availability of free numbers).
- Two tasks can now be performed simultaneously: For example, it's possible to speak to two different parties at the same time, or to use the telephone and fax at the same time. You can also surf the Internet without tying up the telephone.
- A number of things are also considerably faster using ISDN. Your phone calls won't be any shorter, but the call establishment is quicker. You have a clear advantage when it comes to data applications, as the transfer rates of the *ELSA QuickStep* cannot be reached with an analog modem. If 64,000 bps aren't enough, you can bundle

the ISDN channels to double your transfer rate. This will tie up your connection completely, however, so you will then no longer be reachable by telephone or other services.

What Is the Difference Between DSS1 and 1TR6 (Germany only) ?

The various terminal devices in the ISDN network must agree on a common "language" before they can understand one another. This is standardized for some services, such as telephony, and does not require any further attention. The situation is different for data applications, however: When two devices (e.g. *ELSA QuickStep*) exchange data using a B channel, the language that they use for their interaction is established in a 'protocol'. PPP (Point-to-Point Protocol), which is generally used in the Internet, and X.75 are examples for such protocols.

However, there is also the control channel (D channel) in addition to the basic channels (B channels). This channel also has a protocol which regulates the transfer of control information between the exchange and the terminal device. The 1TR6 protocol was used in Germany in the early years of ISDN. More recent connections operate almost exclusively with the newer Euro-ISDN (DSS1) protocol. It is not necessary for the two communicating terminal units to use the same D-channel protocol. Data from connections using DSS1 will make their way to 1TR6 connections and vice versa.

DSS1 and 1TR6 connections use different designations for the numbers of the terminal devices.

- DSS1 connections provide at least three different **M**ultiple **S**ubscriber **N**umbers (MSNs) which can be assigned to the individual devices.
- 1TR6 connections offer up to ten terminal selection digits (EAZs, from the German **E**ndgerä**a**uswahl**z**iffern) which can be assigned to terminal devices.

The important point is that your terminal devices (e.g. *ELSA QuickStep* and the communications software) are set up to use the D-channel protocol of your connection. To find out more, please see the 'ELSA-ISDN Tools' chapter or the documentation and online help of the software.

Which Services Does ISDN Provide?

ISDN offers the following services which can be used parallel to one another depending on the configuration of your communications equipment (telephones, fax, PC with *ELSA QuickStep*):

- Telephony
- Faxing
- Data applications such as remote data access, data transfer, Internet access and online services

What Are the Differences Between the Individual Services?

When one communications device in the ISDN network needs to contact another, it initially sends out a call on the D channel containing the subscriber number of the device, as well as service indicator or bearer capability information. The communications device uses this bearer capability to inform the opposite devices of the service it requires. The currently available bearer capabilities include:

- Telephony, 3.1 kHz
- Telephony, analog
- Fax Group 2
- Fax Group 3
- Fax Group 4
- a/b services
- Datex-J
- One-way videotex
- Video telephony
- Interactive videotex

Once the device with the appropriate subscriber number has been located, the bearer capability of the device is then verified. A connection is not established until both the subscriber number and the correct service are available.

Although this may at first seem to be a major handicap for the communication of the various devices in the ISDN network, this is in fact one of ISDN's greatest strengths: The clever assignment of subscriber numbers and bearer capabilities permits the parallel deployment of a substantially greater number of terminal devices than would otherwise be possible with 3 subscriber numbers, since each terminal device is assigned a precise task.

Here's a couple of examples:

- The same subscriber number can be assigned to a telephone and *ELSA QuickStep 1000pro-PCI* or *ELSA QuickStep 1000pro*. The telephone will then automatically respond to calls with the 'telephony' bearer capability, while the *ELSA QuickStep* accepts calls with a 'data' bearer capability.
- A separate fax machine and a computer with the *ELSA QuickStep* and fax software (e.g. *ELSA-RVS-COM*) both respond to the same number and the 'fax group 3' bearer capability. If the computer is running, it will be quicker than the fax machine and will accept the call. If the computer is switched off at night, the fax machine will receive the call for lack of other devices capable of doing so.

Can I Continue Using my Old Equipment, such as my Telephone and Fax Machine?

Yes, your “old” equipment can also be used on an ISDN connection. You may not be able to use all of the ISDN-specific functions with them, but any features that were available on your analog telephone line will generally also be usable on the ISDN connection.

Analog terminal equipment must be connected to so-called a/b ports, which convert analog signals to digital form. a/b ports can be found in PBX systems, as separate a/b adapters, or in some external ISDN terminal adapters such as the *ELSA TanGo 2000*.

What Exactly Is an NTBA?

NTBA stands for **N**etwork **T**erminator for **B**asic **A**ccess. This box is mounted on your wall by your telecommunications provider, and may have been connected to a telephone socket left over from an analog line. You may either connect your ISDN terminal devices (such as the *ELSA QuickStep*) to the NTBA, or a PBX system for your telephones, fax, and other communications equipment.

The telephone socket used by the NTBA cannot be used for analog terminal equipment once the line has been converted to ISDN.

And What About the Extras?

These are also available under ISDN, of course. They include a number of functions which increase the simplicity and convenience of telephone conversations in particular, such as:

- call waiting
- brokering
- three-party service
- holding
- call forwarding



Some of these features may require a separate application to your telecommunications provider and may be subject to additional charges.

These features will not be described in detail here, as they are not relevant to data applications with the *ELSA QuickStep*.

Just Skimming...? What's Important?

Here's a summary of the above which you should keep in mind when configuring your communications equipment:

- ISDN provides a variety of communications **services** such as telephony, fax, data applications, video telephony, and videoconferencing.
- You can assign **different subscriber numbers** to the individual devices (three multiple subscriber numbers are available for an ISDN Basic Rate Interface).
- A normal ISDN Basic Rate Interface has **two lines** which you can use **parallel** to one another.
- The various services report their **bearer capability** to other communications devices (telephone, fax, PC). Depending on its configuration, a device can thus accept or reject calls.
- If you are using **both lines at the same time**, for a data transfer for example, no further functions can be used.
- If two devices have the **same number** and can accept the **same services**, the "faster" device will accept the call as a rule.



All of the following examples are presented as self-contained units. If you go through the sections step by step, some of the material in the following explanations will strike you as familiar.

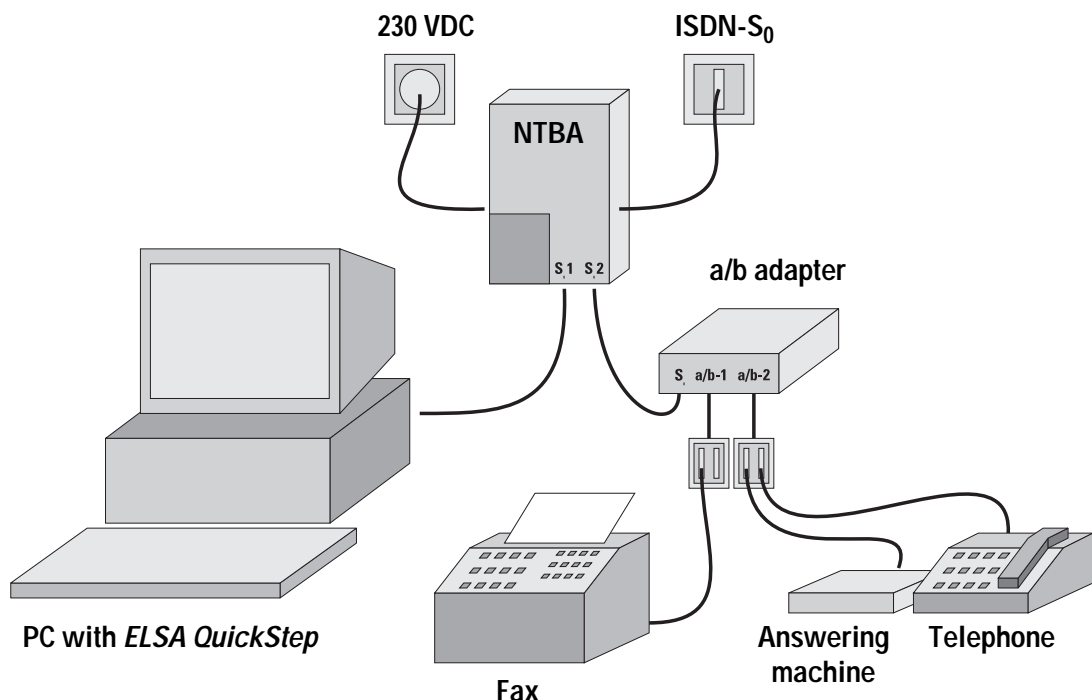
The Basic Package—ISDN with Analog Devices

You've probably already noticed something about the description of ISDN's advantages: Not very much emphasis is placed on the functions of the new digital terminal equipment. A number of the greatest advantages of the digital network can actually be realized using "old" analog equipment, provided that a/b adapters are available.

As a result, most private users do not buy a new ISDN telephone or fax machine immediately after their ISDN connection has been installed, but sit back and wait for the prices of this equipment to drop—or perhaps for the equipment itself to drop in under the Christmas tree. In the mean time, they continue to use their old equipment.

But how do you connect these devices when you would like to take advantage of the new communications options after adding the *ELSA QuickStep*? Our first example shows a possible application for a private user. The initial situation:

- an ISDN Basic Rate Interface (DSS1) with 3 MSNs (e.g. 1234561, 1234562 and 1234563)
- a/b adapter with a/b ports and telephone sockets
- analog telephone
- analog answering machine
- analog fax machine
- PC with *ELSA QuickStep* and *ELSA-RVS-COM*



You would like to achieve the following using this equipment:

- You should always be available under a given telephone number. If you can't answer the phone, the answering machine should take over for you.
- You would also like to receive faxes at all times. If the computer is off, you would like the analog fax machine to receive faxes for you. If the computer is on, the faxes should be received by *ELSA-RVS-COM*. You would also like to send faxes, either straight out of your computer's applications, or on paper using the analog fax machine.
- What's more, you'd like to surf in the Internet and set up your computer in such a manner that you have access to your files at home from your office computer via EuroFileTransfer.

Here's how to realize your goal:

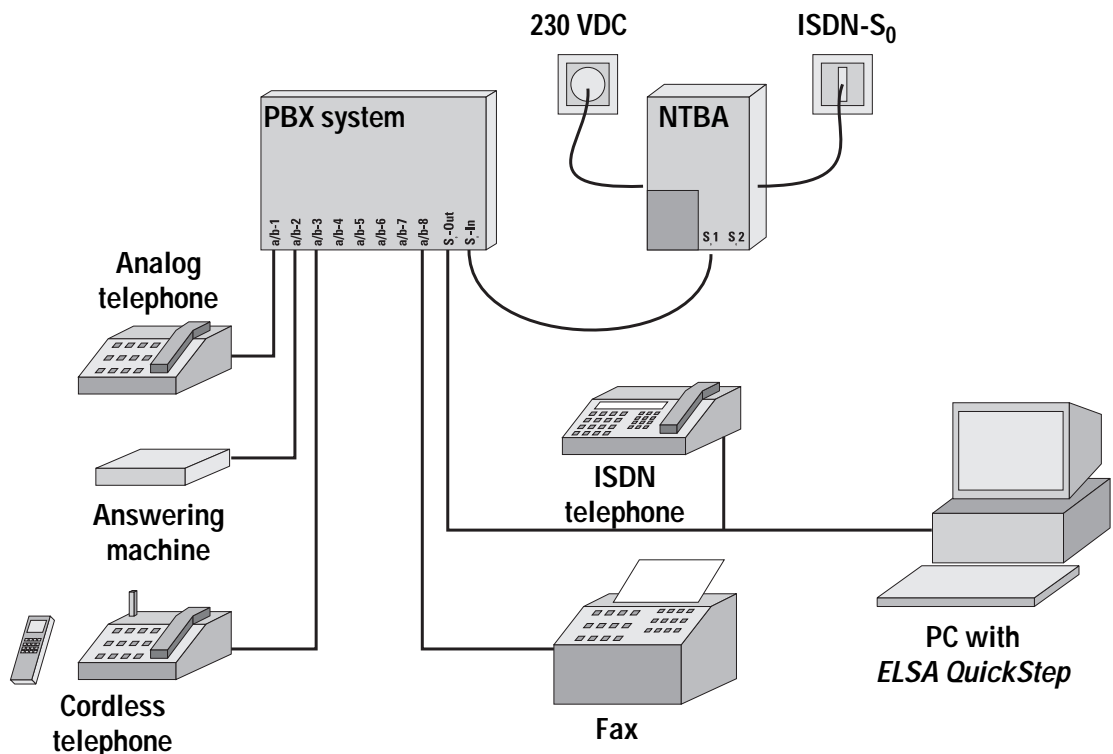
- ① Connect the a/b adapter to one of the two S_0 connections of the NTBA.
- ② On the first a/b port, connect your telephone and the answering machine using a suitable adapter. Program the a/b adapter so that this port responds to the first MSN (123456**1**).
- ③ Connect the fax machine to the other a/b port. Program the a/b adapter so that this port responds to the second MSN (123456**2**).
- ④ Use the other S_0 connection on the NTBA for your PC with the *ELSA QuickStep*. Install *ELSA-RVS-COM* as the communications software on this computer.
- ⑤ Activate automatic call acceptance in the *ELSA-RVS-COM* CommCenter.
 - Select the same MSN for the fax as for the analog fax machine on the a/b port (123456**2**).
 - Select any MSN for EuroFileTransfer.
- ⑥ That's it! You're now always available—by telephone, answering machine or fax. When your computer is on, it handles incoming faxes and lets you access your files at home remotely from another workstation.
- ⑦ Some a/b adapters do not permit this coordination of the fax machine and computer fax functions. If this is the case, select different MSNs for the fax machine and *ELSA-RVS-COM*.

The Next Step up—For Freelancers

The prices for telecommunications equipment have continued to fall in the recent past, prompting ever more freelancers to work in home offices. The number of telephone calls is on the increase, but you don't want to inconvenience your three daughters as a result, so you've decided to buy a small PBX system and an ISDN telephone. You've also applied for a few additional MSNs from your telecommunications provider.

How do you connect the new devices to ensure that your private and business matters remain neatly separated? Our first example shows an application for mixed private and business use. The initial situation is as follows:

- an ISDN Basic Rate Interface (DSS1) with 10 MSNs (e.g. 1234561 to 12345610)
- private branch exchange system (PBX) with an internal S_0 bus and eight a/b ports
- an ISDN telephone
- a normal analog telephone
- a cordless analog telephone
- analog answering machine for private calls
- analog fax machine
- PC with *ELSA QuickStep* and *ELSA-RVS-COM*



You would like to achieve the following using this equipment:

- You need a separate business telephone number. The answering machine in the computer should handle your calls when you are meeting clients.
- The fax machine is exclusively for business use. If the computer is off, you would like the analog fax machine to receive faxes for you. If the computer is on, the faxes should be received by *ELSA-RVS-COM*. You would also like to send faxes, either

straight out of your computer's applications, or on paper using the analog fax machine.

- Each of your daughters should have a telephone and subscriber number of her own. The PBX system should also be so kind as to track the calling charges for your business and your children separately.
- You have an additional cordless telephone to which you would like to assign a separate number for your private use. You would also like to be able to take the cordless handset into the office with you when nobody else is at home but you're expecting an important private call nonetheless.
- The PBX should permit internal telephone calls or the transfer of calls without accruing additional connect charges.
- What's more, from time to time you need to access your files at home from on the road using your notebook and EuroFileTransfer.

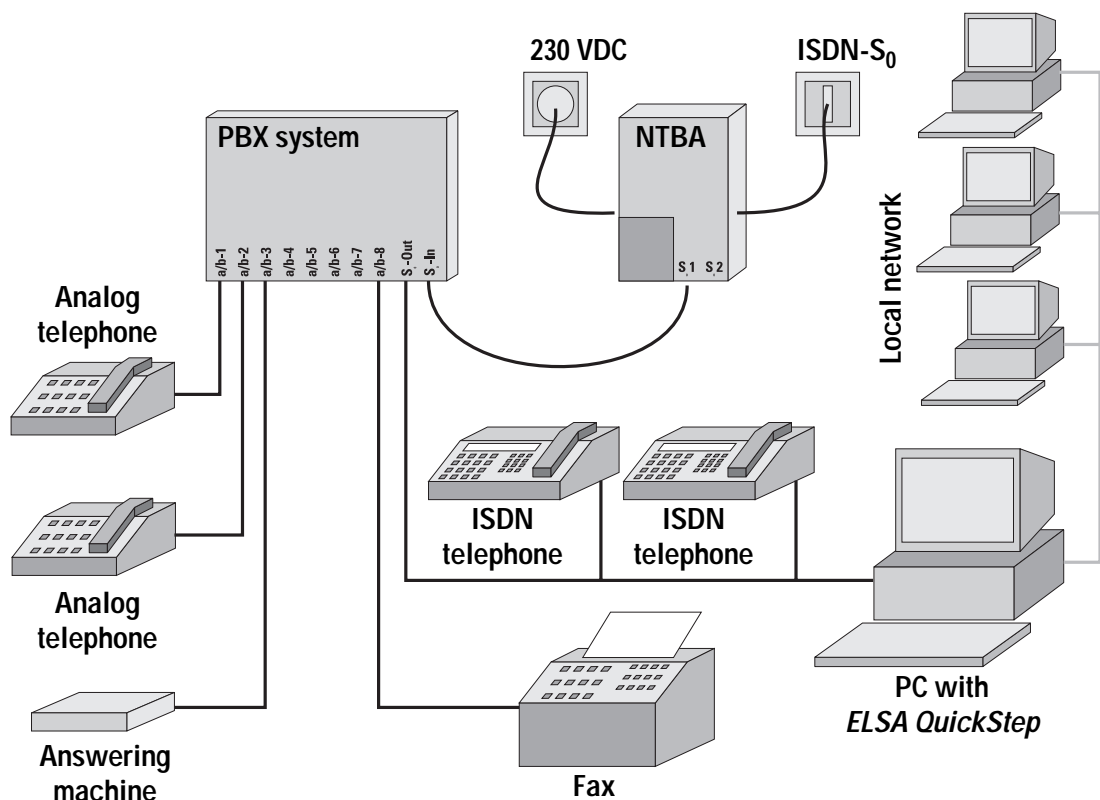
Here's how to realize your goal:

- ① Connect the PBX system to one of the two S_0 connections of the NTBA.
- ② The analog telephones, answering machine and fax machine are each connected to an a/b port. The ports for the telephones and the fax are each assigned their own MSN (123456**1** to 123456**3**) via the PBX. Set the a/b port of the answering machine to the same MSN as the private family phone.
- ③ Connect the ISDN telephone and the PC with the *ELSA QuickStep* to the S_0 bus of the PBX system. Set the ISDN telephone to the next MSN (123456**4**).
- ④ Install *ELSA-RVS-COM* as the communications software on the computer. Activate automatic call acceptance in the *ELSA-RVS-COM* CommCenter.
 - Select the same MSN for the fax as for the analog fax machine on the PBX (123456**3**).
 - Set the answering machine to the same MSN as the ISDN telephone (123456**4**).
 - Select any MSN for EuroFileTransfer (123456**5**).
- ⑤ That's it! You're now always available—business or private, by telephone, answering machine or fax. When your computer is on, it handles incoming faxes and lets you access your files at home remotely from another workstation. And if you happen to be enjoying your lunch break in the kitchen, the answering machine will let your clients know when you will be back in the office.

Stage 2--For Small Companies

Business is booming and you now have employees that also need access to telephones and the fax. You've moved to a larger office and are now confronted with a new situation:

- an ISDN Basic Rate Interface (DSS1) with 10 MSNs (e.g. 123456**1** to 123456**10**)
- private branch exchange with an internal S_0 bus and eight a/b ports
- a number of ISDN telephones
- a number of old analog telephones
- analog answering machine
- analog fax machine
- a network with several workstations and Windows NT Server with the *ELSA QuickStep* and professional version of RVS-COM



You would like to achieve the following using this equipment:

- All of your employees can be reached at their desks under their own extensions.
- The answering machine accepts all calls on your days off and lets your clients know when you and your staff will be available again.
- The fax machine handles all incoming faxes.
- All employees can send faxes from their workstations.

Here's how to realize your goal:

- ① Connect the PBX system to one of the two S_0 connections of the NTBA.
- ② The analog telephones, answering machine and fax machine are each connected to an a/b port. The ports for the telephones and the fax are each assigned their own MSN via the PBX. Assign all MSNs to the a/b port of the answering machine and ensure that it is always switched on after business hours.
- ③ Connect the ISDN telephones and the PC with the *ELSA QuickStep* to the S_0 bus of the PBX system. Set the ISDN telephones to additional free MSNs.
- ④ Install the professional version of RVS-COM on the server as your communications software. This version is available from the manufacturer (see the online help for sources). Install the regular version of *ELSA-RVS-COM* on the individual workstations. All of the functions of the *ELSA QuickStep* are thus available to all workstations in the network.
- ⑤ That's it! All employees can now send faxes from their workstations. All incoming faxes are immediately printed out. During your lunch break the answering machine will let your clients know when you will be back in the office.

■ Troubleshooting

This chapter describes the solutions to problems which have been encountered in the past.

If you ever encounter difficulties when using your ELSA product, check this section first to see whether our Support team already has a solution for you.

Current information and updates of this section are available from the Support fax-line.

Driver Installation Problems	60
Faxing with ELSA Products	61
General Problems.....	64
Conflicts with PBX Systems.....	64
Problems with Targo LT under Windows 95 ..	65
OS/2	65

Driver Installation Problems

To Ensure that your Drivers Are Correctly Installed, Use

ELSA ISDNmonitor or *ELSA CONNtest*

as described in the 'ELSA ISDN Tools' section of the 'Communications Software' chapter.

Windows 95

In the Device Manager, look for an exclamation mark in front of the *ELSA QuickStep* board.

Windows NT 4.0

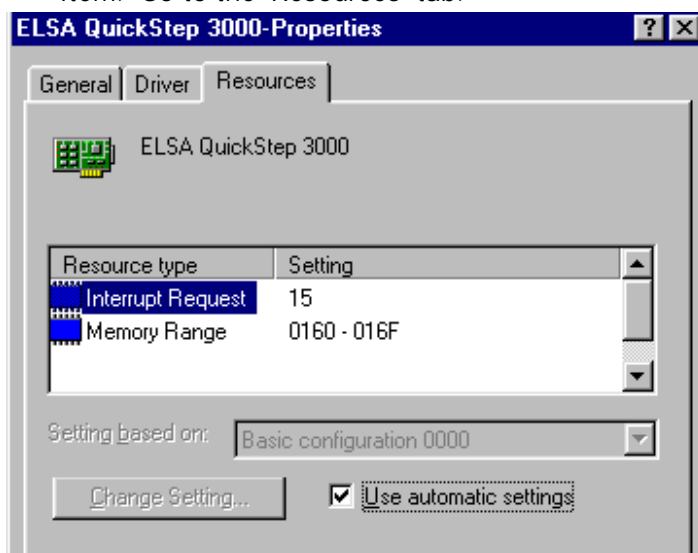
The event log states 'The parameter is incorrect'.

Resolving Conflicts

ISA Boards under Windows 95

Click **Start** ► **Settings** ► **Control Panel** ► **System** ► **Device Manager**.

- If your list contains the item 'Other devices', check whether your *QuickStep* board is entered there. If so, please delete it. Next, restart your computer and check its function using the *ISDNmonitor*.
- Otherwise, double-click on your *ELSA QuickStep* board under the 'Network adapters' item. Go to the 'Resources' tab.



Uncheck the box labelled 'Use automatic settings'. You can now change the IRQ and/or I/O range by double-clicking these values.



Please refer to the technical data in the 'Appendix' for the addresses and IRQs which are suitable for your product.

If you can't find a tab marked 'Resources', please contact support. Set the board to use another (free) range. Restart your computer and check its function using the *ISDNmonitor*.

ISA Boards under Windows NT 4.0

Click **Start ► Programs ► ELSAisdn ► ISDNconfig**. A dialog box will appear. Go to the 'Resources' tab. Uncheck the box labelled 'Set Automatic (PnP)'.

Click **Change settings...**. You can now change the IRQ and/or I/O range to free values.

Please refer to the technical data in the Appendix for the addresses and IRQs which are suitable for your product.

Restart your computer and check the board's function using the *ISDNmonitor*.

PCI Boards

The resources for PCI boards can only be set in the computer's BIOS.

Please consult your retailer if you are not familiar with the allocation of resources in the BIOS.

Faxing with ELSA Products

ELSA-RVS-COM

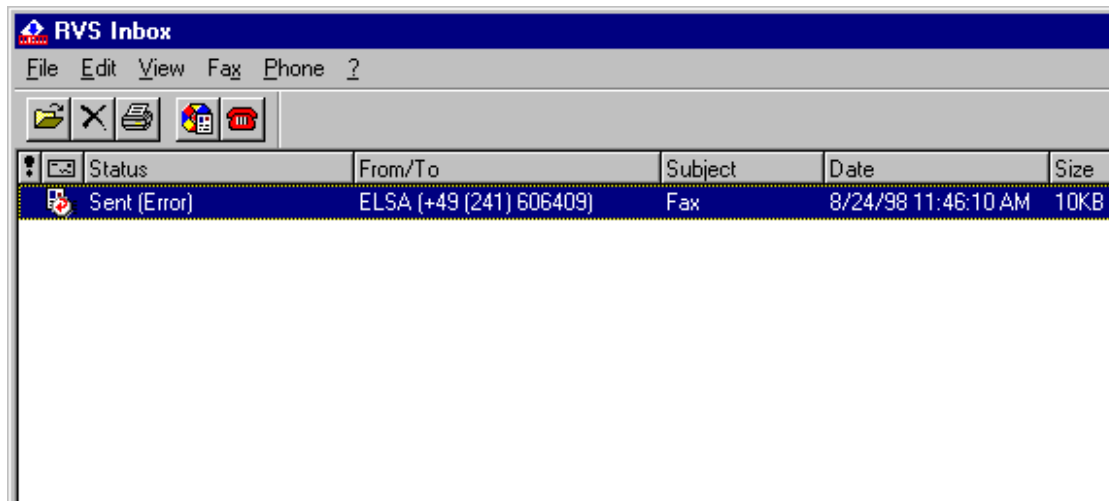
The fax was not sent

A common problem when sending fax messages is the incorrect input of fax numbers. The recipient's area code must be entered without the leading zero.

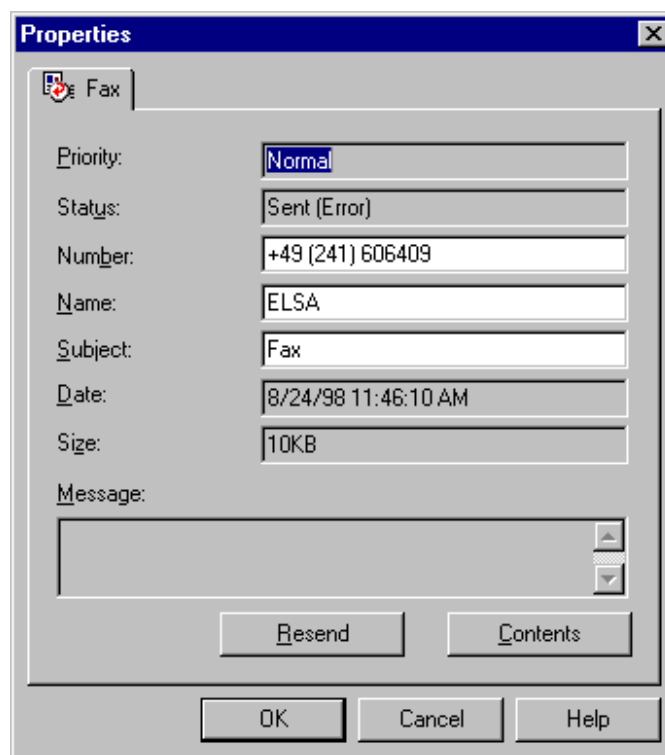
- ① If you would like to send a fax using **Start ► Programs ► ELSA-RVS-COM ► Create new fax**, be sure to drop the leading zero from the area code. In other words, instead of entering '0241' for Aachen, use only '241'.
- ② If you accidentally enter the area code **with** the leading zero, *ELSA-RVS-COM* will report a busy remote station and will offer to send the fax at a later time. Use **Start**



- **Programs** ► **ELSA-RVS-COM** ► **Inbox** to open the list of all sent and received fax and voice messages.



- ③ Double-click the fax entry marked as failed, correct the number and click the **Resend** button.

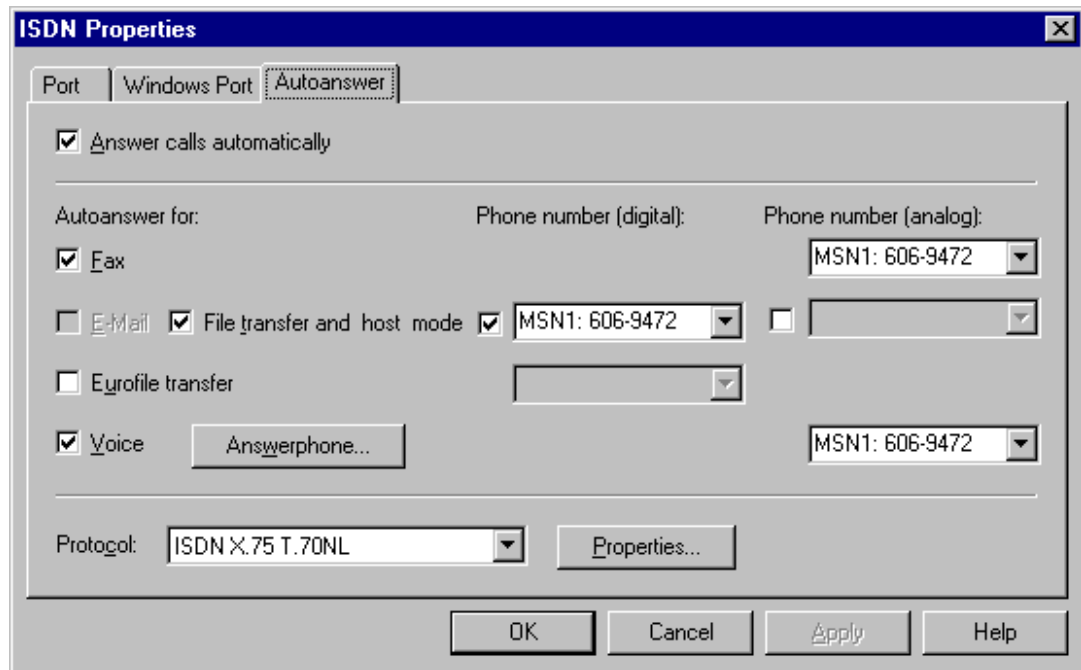


This problem can also occur when sending a fax from another application, such as Win-Word, using **File** ► **Print** ► **RVS FAX**.

When assigning subscriber numbers, be sure that the fax and answering machine, for example, receive different numbers. Only one number can be assigned to analog services.

The fax was not received

Open the RVS CommCenter. The option 'Answer calls automatically' must be selected under the specifications for ISDN on the 'Autoanswer' tab.



The fax number entered during installation of *ELSA-RVS-COM* must be exactly the same as the number entered in the 'Autoanswer for' – Phone number (analog):' field.

If a PBX is being used on the second S₀ bus, please ensure that the MSN has not been assigned twice (e.g. telephone MSN:1 on the PBX and MSN:1 as fax on the ELSA ISDN PC board).



Ensure that the RVS CommCenter is always enabled when booting your operating system. This can be seen in the taskbar at the lower right of the Windows 95 and Windows NT desktops.

Delrina WinFax Pro 8.02

WinFax Pro Can Be Used with these ELSA Products

Delrina WinFax Pro 8.02 can only be used with the following ELSA products:

- *ELSA QuickStep 3000*
- *ELSA QuickStep 3000-PCI*
- *ELSA MicroLink MC all*
- *ELSA MicroLink ISDN/PCF and ISDN/PCFpro*

WinFax Pro 8.02 does not support ELSA products that do not have an analog modem chip.

Configuring WinFax Pro 8.02 for Use with ELSA ISDN Boards

- ① Start WinFax Pro.
- ② Click **Setup ► Modem... ► Add...** and select 'Other'.
- ③ Highlight the 'ISDN' entry and click **OK**.
- ④ Select the manufacturer 'Generic' and model 'Generic ISDN'.



The update for WinFax Pro 8.00 to Version 8.02 is available on the Internet at [ftp://ftp.symantec.com](ftp://ftp.symantec.com/public/english/products/winfax/v80) in the //public/english/products/winfax/v80 directory.

General Problems

More than Three MSNs for *ELSA-RVS-COM*

The 'Subscriber Number' dialog in *ELSA-RVS-COM* only permits three MSNs to be specified. The registry must be edited to permit the administration of additional MSNs by *ELSA-RVS-COM*.

Begin by closing all *ELSA-RVS-COM* components and starting REGEDIT (**Start ► Run ► Regedit**).

Under **HKEY_LOCAL_MACHINE ► SOFTWARE ► RVS Datentechnik ► RVS-COM Version 1.0 ► ModemControl ► Numbers**, add a new string value for each additional MSN (**Edit ► New ► String Value**) with the names 'MSN4', 'MSN5' etc. Next, change the values of the entries to the appropriate MSNs (**Edit ► Modify ► Value Data**).

Close the registry editor and restart the CommCenter. The new MSNs are now available in the subscriber number selection. The *ELSA-RVS-COM* dropdown boxes are generally limited to three entries. It is possible to select the additional entries using the up and down cursor keys, however.

Conflicts with PBX Systems

ISDN uses so-called bearer capabilities to distinguish the various protocols of incoming calls. This bearer capability specifies the purpose of the call establishment and the type of protocol. 16 different services are available. Among the most important are:

Bearer capability	Service
1	Telephony
2	Fax Group
3	Modem

Bearer capability	Service
4	Fax Group 4
5	BTX 64 kbps
7	Data transfer 64 kbps

Problems with the bearer capability can make themselves felt in a variety of ways.

- Connections cannot be established.
- Connections can only be established with certain services, such as telephone.
- No calls can be received from external sources.
- Connections can be established to external callers using certain services.

If you suspect that your PBX has a configuration problem related to bearer capabilities, check the following:

- Connect the ELSA ISDN board directly to the NTBA.
- Check the service configuration of your PBX.
- Ensure that the BIOS of your PBX is up to date.

If your ELSA ISDN board functions correctly on the NTBA, please contact the service staff or manufacturer of your PBX.

OS/2

OS/2 Freezes when Loading the CAPI Driver.

When starting, the *ELSA QuickStep* ISA board driver normally queries the BIOS for the board's resources. This routine doesn't work correctly with some mainboard BIOS versions, causing the system to stop. This query can be bypassed by explicitly stating the resources to be used and specifying an I/O address higher than '0x360'. For example,

```
DSS1C20X. SYS /a380 /r10
```

loads the driver CAPI 2.0 to the address '0x380' and interrupt '10'.

The Printer Output no Longer Works after the Installation.

The I/O-Port 0x278 is used for the configuration of ISA PnP boards. By default, this address is used by the second parallel port. In some systems, this setting is used for the first parallel port, however. If you encounter problems with your printer, check the LPT interface settings: Use an address other than '0x278', such as '0x378'.

cFos/DOS or T-Online Reports a CAPI Register Error

In this case, not enough free DOS memory is available to these programs. You can increase the amount of available memory by adding the instruction

DOS=HIGH,UMB

to the CONFIG.SYS.

Appendix

This appendix has not only the technical data but, more important, help with any problems you might have with your new ELSA product.


All contact addresses for our Support via various means of communication (Internet, telephone, fax, mail) are listed in the 'Advice and Help' section.

The general guarantee conditions are at the end of the chapter.

Technical Data	70
Advice and Help.....	72
Warranty Conditions.....	74

Technical Data

	<i>ELSA QuickStep 1000pro</i>	<i>ELSA QuickStep 1000pro-PCI</i>	<i>ELSA QuickStep 3000</i>	<i>ELSA QuickStep 3000-PCI</i>
D-channel protocols	DSS1 (Euro-ISDN), 1TR6 (German national ISDN)			
ISDN protocols	V.120, X.75, X.75/T.70NL, X.75-T-Online, T.90NL, EuroFileTransfer (ISO 8208), PPP/HDLC transp., Multilink PPP			
Operating Systems	Windows NT 4.0, Windows 98, Windows 95, Windows 3.1x, DOS, OS/2			
Software	ELSA-RVS-COM, ELSA-ZOC, full version of LapLink for Windows, ELSA ISDN tools			
Drivers	CAPI 2.0, CAPI 1.1, NDIS-WAN Miniport (PPP/MLPPP)			
Fax G3	SoftFax: Transmit at up to 14,400 bps, receive at up to 9,600 bps with 486/66; Transmit and receive at up to 14,400 bps with 486/100 or better		HardFax: V.17, V.33, V.29, V.27ter (14.400 - 2400 bps)	
Telephone/ Answering machine	Digital, in conjunction with a full-duplex sound card			
Permits	Germany, EU, Switzerland			
Modem speed	Softmodem at 2,400 bps		V.34, V.32bis, V.32, V.22bis, V.21, V.23, Bell 212A, Bell 103 (33,600 - 300 bps), V.42bis, MNP5	
Installation	Automatic hardware and software installation (Plug&Play)			
Bus system	ISA, 16 bit	PCI, 32 bit	ISA, 16 bit	PCI, 32 bit
Dimensions (not including bracket)	122 x 55 mm	128 x 55	133 x 104 mm	120 x 106
Interrupts:	1 interrupt, configurable as 3, 4, 5, 7, 10, 11, 12, or 15	1 interrupt from 0 to 15	1 interrupt, configurable as 3, 4, 5, 7, 10, 11, 12, or 15	1 interrupt from 0 to 15
I/O addresses	1 address (8 bytes) configurable in the 160h to 360h range	127 bytes and 8 bytes in the 0x0000 to 0xffff range Memory requirements: 127 bytes in the 0x00000000 to 0xffffffff range	1 address (16 bytes) configurable in the 160h to 360h range	127 bytes and 16 bytes in the 0x0000 to 0xffff range Memory requirements: 127 bytes in the 0x00000000 to 0xffffffff range
Power supply	5 V via the PC			
Power consumption				
Standby	120mA	190mA	160mA	230mA
ISDN Operation	140mA	210mA	180mA	250mA
Analog operation	-	-	380mA	450mA

Status display	Two LEDs for the monitoring of the ISDN line and connection status, <i>ISDNmonitor</i> . Significance of LEDs: see following table.			
	LED	Status	Description	
	The green LED shows the status of the ISDN line and the connection to the exchange (TEI assignment).	Off	No S ₀ voltage, S ₀ bus not active	No connection to the exchange (no TEI assigned)
		Flashing quickly (3x per sec.)	S ₀ voltage or S ₀ bus active	No connection to the exchange (no TEI assigned)
		Constantly lit	S ₀ voltage or S ₀ bus active	Connection to the exchange (TEI assigned)
	This LED remains lit continuously on most ISDN Basic Rate Interfaces. The green LED may only light up when a connection is established when using certain PBX systems (e.g. Siemens HICOM).			
	The yellow LED shows the connection status of the ISDN board.	Off	No call, no connection	
		Flashing slowly (1x per sec., 2x or 3x in total)	Incoming call, terminal device is not responsible or establishes connection itself	
		Flashing quickly (3x per sec.)	Valid call pending, not (yet) answered	
		Constantly lit	Connection is/being established	

Advice and Help

If you encounter any problems during the installation or operation of your ELSA product, please consult this manual first. On the ELSA CD or floppy disk you will find a file called README.TXT, containing late-breaking changes and additional information not available when this manual was printed.

If you have further questions, you can contact our Support team. Ensure that you can provide the following information.

- Exact model name of your ELSA device.
- Version of the ELSA driver, firmware or INF file, including the date and time.
- Operating system, hardware environment and bus system.
- Name and version of the application program with the error.
- A detailed error description. To be certain, try to reproduce the error at least three times and exactly describe the steps you took to deliberately trigger the error.

Who to Contact?

First you should contact the dealer where you bought your ELSA product. If there are still questions remaining, contact one of the following:

■ ELSA on the Internet

ELSA WWW site with ELSA newsgroups www.elsa.com

ELSA LocalWeb +49-241-938800

(ELSA's dial-up WWW site: no Internet provider required!)	ISDN	X75, V120, PPP
	Analog	V.90, V.34, K56flex
	Protocol	PPP oder MLPPP
	User name	guest
	No password	

■ ELSA Support Faxline

By fax to the ELSA Support faxline +49-241-606-6499

■ ELSA by Mail

Or write to ELSA

ELSA AG
Data Communications Support
Sonnenweg 11
52070 Aachen
Germany

■ ELSA Support Hotline

If very urgent, call the
ELSA Support hotline

+49-241-606-6141

Mondays to Fridays from 9.00 am until 5.00 pm (CET)

■ ELSA World Wide

You can contact the ELSA subsidiaries:

ELSA, Inc.

2231 Calle De Luna
Santa Clara, CA 95054
USA

Phone:	+1-408-919-9100
	+1-800-272-ELSA
Fax:	+1-408-919-9120

ELSA Asia, Inc.

7F-11, No. 188, Sec. 5
Nanking East Road
Taipei 105
Taiwan, R.O.C.

Phone:	+886-22-7685730
Fax:	+886-22-7660873

ELSA Japan, Inc.

Mita Suzuki Building 3F
5-20-14 Shiba, Minato-ku
Tokyo 108-0014
Japan

Phone:	+81-3-5765-7391
Fax:	+81-3-5765-7235

The ELSA LocalWeb

The ELSA LocalWeb provides direct access to ELSA's local Internet server, and contains the same information as the Internet web server www.elsa.com. Here you will find information about all ELSA products, the latest drivers, software and documentation, and you have the opportunity to put questions to our sales and support departments via the ELSA news server. To access the ELSA LocalWeb, you need a dialer program (e.g. the Dial-Up Networking in Windows 95) and an Internet browser.

To make a connection, first start the dialer software. Where information for the DNS server is requested, enter the IP address as 172.22.1.2. The user name is guest; no password is necessary. With a successful connection active, the browser software can be started with the ELSA Internet address www.elsa.com.

ELSA Software Updates

The latest versions of the ELSA software are always available for download from our Internet WWW site www.elsa.com or our LocalWeb and via direct FTP from [ftp.elsa.com](ftp://ftp.elsa.com). You will also find lots of information and answers to frequently asked questions (FAQs). You might also consider the newsgroups on our Web pages. Before

you contact the ELSA Support team, please make sure that you are using the latest ELSA software (driver, firmware or INF file) versions.

Repair?

If you are not sure whether your ELSA expansion board is defective or if the problem is just a driver which is incorrectly installed, please call the ELSA Support hotline before you send the board for repair. Should you need to send in the ELSA expansion board to be repaired, please use suitable packing material and the original box to prevent damage during transport. In addition, please include a copy of the original purchase receipt as well!

You can help reduce the repair time by including a detailed description of the fault with the device, which will help us track down the error source.

Before you send your device to ELSA, please make a note of the device's serial number. This can be found on the bar-code sticker on the device and on the packaging. Have this number ready in case we have to contact you.

Warranty Conditions

The ELSA AG warranty, valid as of June 01, 1998, is given to purchasers of ELSA products in addition to the warranty conditions provided by law and in accordance with the following conditions:

1 Warranty Coverage

- a) The warranty covers the equipment delivered and all its parts. Parts will, at our sole discretion, be replaced or repaired free of charge if, despite proven proper handling and adherence to the operating instructions, these parts became defective due to fabrication and/or material defects. Also we reserve the right to replace the defective product by a successor product or repay the original purchase price to the buyer in exchange to the defective product. Operating manuals and possibly supplied software are excluded from the warranty.
- b) Material and service charges shall be covered by us, but not shipping and handling costs involved in transport from the buyer to the service station and/or to us.
- c) Replaced parts become property of ELSA.
- d) ELSA are authorized to carry out technical changes (e.g. firmware updates) beyond repair and replacement of defective parts in order to bring the equipment up to the current technical state. This does not result in any additional charge for the customer. A legal claim to this service does not exist.

2 Warranty Period

The warranty period for ELSA products is six years. Excepted from this warranty period are ELSA color monitors and ELSA videoconferencing systems with a warranty period of 3 years. This period begins at the day of delivery from the ELSA dealer. Warranty services do not result in an extension of the warranty period nor do they initiate a new warranty period. The warranty period for installed replacement parts ends with the warranty period of the device as a whole.

3 Warranty Procedure

- a) If defects appear during the warranty period, the warranty claims must be made immediately, at the latest within a period of 7 days.
- b) In the case of any externally visible damage arising from transport (e.g. damage to the housing), the transport company representative and ELSA should be informed immediately. On discovery of damage which is not externally visible, the transport company and ELSA are to be immediately informed in writing, at the latest within 7 days of delivery.
- c) Transport to and from the location where the warranty claim is accepted and/or the repaired device is exchanged, is at the purchaser's own risk and cost.
- d) Warranty claims are only valid if the original purchase receipt is returned with the device.

4 Suspension of the Warranty

All warranty claims will be deemed invalid

- a) if the device is damaged or destroyed as a result of acts of nature or by environmental influences (moisture, electric shock, dust, etc.),
- b) if the device was stored or operated under conditions not in compliance with the technical specifications,

- c) if the damage occurred due to incorrect handling, especially to non-observance of the system description and the operating instructions,
- d) if the device was opened, repaired or modified by persons not authorized by ELSA,
- e) if the device shows any kind of mechanical damage,
- f) if in the case of an ELSA Monitor, damage to the cathode ray tube (CRT) has been caused especially by mechanical load (e.g. from shock to the pitch mask assembly or damage to the glass tube), by strong magnetic fields near the CRT (colored dots on the screen), or through the permanent display of an unchanging image (phosphor burnt),
- g) if, and in as far as, the luminance of the TFT panel backlighting gradually decreases with time, or
- h) if the warranty claim has not been reported in accordance with 3a) or 3b).

5 Operating Mistakes

If it becomes apparent that the reported malfunction of the device has been caused by unsuitable software, hardware, installation or operation, ELSA reserves the right to charge the purchaser for the resulting testing costs.

6 Additional Regulations

- a) The above conditions define the complete scope of ELSA's legal liability.
- b) The warranty gives no entitlement to additional claims, such as any refund in full or in part. Compensation claims, regardless of the legal basis, are excluded. This does not apply if e.g. injury to persons or damage to private property are specifically covered by the product liability law, or in cases of intentional act or culpable negligence.
- c) Claims for compensation of lost profits, indirect or consequential detriments, are excluded.
- d) ELSA is not liable for lost data or retrieval of lost data in cases of slight and ordinary negligence.
- e) In the case that the intentional or culpable negligence of ELSA employees has caused a loss of data, ELSA will be liable for those costs typical to the recovery of data where periodic security data backups have been made.
- f) The warranty is valid only for the first purchaser and is not transferable.
- g) The court of jurisdiction is located in Aachen, Germany in the case that the purchaser is a merchant. If the purchaser does not have a court of jurisdiction in the Federal Republic of Germany or if he moves his domicile out of Germany after conclusion of the contract, ELSA's court of jurisdiction applies. This is also applicable if the purchaser's domicile is not known at the time of institution of proceedings.
- h) The law of the Federal Republic of Germany is applicable. The UN commercial law does not apply to dealings between ELSA and the purchaser.

Index

■ Numerics

1TR6 9, 47

■ A

a/b adapter 49
 a/b ports 49
 analog telephone line 49
 Answering machine (Windows 3.1x) 15
 Applications 2
 APPLICOM server 63

■ B

B channel 7, 46
 basic channel 47
 Basic Rate Interface 46
 BBS systems 18
 Bearer capability 62
 bearer capability 48
 Brokering 49
 Browser 32

■ C

Cable connection 27
 Call forwarding 49
 Call waiting 49
 Callback 24
 CAPI 3
 Display version 8
 testing the interface 10
 Channel bundling 2, 3
 Charges 8
 Client 22
 Configure LapLink client 26
 Connection establishment 27
 CONNtest 6
 control channel 47

■ D

D channel 7, 46
 Data rate 2
 Data Transfer 37
 Data transfers 8

Debug Settings 10
 Delrina WinFax Pro 8. 02 61
 Device Manager 58
 Dialog 24
 Dial-up adapter 30
 Dial-Up Network 3
 Dial-Up Network Server 37
 Dial-Up Networking 27, 29, 32
 Connecting 33
 Dialing Properties 33
 Establishing a new connection 32
 Make New Connection 39
 Network protocol 33
 Server types 33
 Dial-up Networking 29
 digital network 46
 Driver 69
 Driver Installation 58
 Driver installation 6
 Driver problems 10
 DSS1 9, 47

■ E

EAZ 47
 ELSA-RVS-COM 3, 11, 36, 41, 44
 File transfer 11
 Answering machine 11, 36
 Euro-ISDN connection 13
 Fax 11
 Installation Wizard 13
 Internet and online services 11
 National ISDN connection 13
 Setup 11
 system requirements 12
 Telephone 11, 36
 Telephony 36
 ELSA-ZOC 3, 18, 44
 Dialing 44
 Features 18
 Installation 18

Phone book	18	Local network	23
Settings	44	LocalWeb	68, 69
Transfer protocols	18		
EMail	32, 33	■ M	
EuroFileTransfer	11, 41	Mailboxing	44
Preparing	41	Microsoft Network	39
Transferring data	42	Microsoft Plus Pack	37
Euro-ISDN	9	Modem connection	27
event log	58	MSN	47, 62
		Multilink PPP	2
■ F		■ N	
Fax	59	national ISDN	9
Delayed fax transmission	11	NDIS-WAN driver	32
Fax operation via hardware	11	NDIS-WAN Miniport	2
Fax polling	11	Network card	32
Fax via software	11	Network connection	27
fax was not received	61	NTBA	49
fax was not sent	59	■ O	
Features	2	Online	34
File and printer sharing	37	Online Services	III
File transfer	24, 28	Online services	31
■ H		OS/2	63
Host	22	■ P	
■ I		PBX	53
I/O range	58	PBX system	62
Installation problems	10	professional version of RVS-COM	55
Installing modems (Windows NT 4.0)	13	protocol	47
internal S0 bus	53	Protoset	9
Internet	31, 68	■ R	
IRQ	58	REGEDIT	62
ISDN	45	Remote control	24
ISDN connection	45	Repair	70
ISDN operation	2	Resolving conflicts	58
ISDN Tools	47	Resources	59
ISDN tools	6	resources	63
ISDNconfig	9, 10	■ S	
ISDNmonitor	8	S0 bus	
■ L		Status	8
LapLink	22	Security settings	23
LapLink address book	26	service provider	32
LapLink for Windows	3	services	46
LapLink server	23		

Setting services (Windows 3.1x)	14	Terminal program	3, 18
Setting up the D channel protocol	9	testing hardware installation	6
Software	3	Three-party service	49
Start connection	28	T-Online	11, 64
subscriber numbers	46	Trace	10
Subscriber numbers (EAZ numbers, Windows 3.1x)	14	TransferMaster	41
Subscriber numbers (Windows 95)	13	■ U	
Support	68	Upgrade to ZOC/Pro	18
Support hotline	68	User IDs (Windows 3.1x)	15
■ T		■ V	
Targo LT	63	Videoconferencing	11
TCP/IP	27, 30	■ W	
Technical Data	65	Wireless connection	27
Telegate	63	World Wide Web	11
telephone socket	49	WWW	68