elmeg

elmeg C48.net

D@VOS.net

elmeg D@VOS.net / elmeg C48.net

Important notice for PABX systems!

In addition to the elmeg C48.net PABX system, the elmeg D@VOS-24.net and elmeg D@VOS-44.net are also both described together in this manual.

The only difference between these two PABX systems is that there is no internal ISDN connection in the D@VOS-24.net.Detailed information about this is provided in the section »Assembly«. This point must also be observed for configuration and use of features, which are possible only in conjunction with an internal ISDN connection.

Therefore, a distinction is only made in the following descriptions between the elmeg C48.net and D@VOS.net.

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1　Description

1.1　Description for elmeg C48.net

The elmeg C48.net is an ISDN telecommunications system for operation at an ISDN access (point-to-point or point-to-multipoint connection) using the Euro-ISDN protocol (DSS1).Eight analog terminal devices can be connected via integrated jacks.The PABX system is also equipped with an internal ISDN connection at which up to eight (8) ISDN terminal devices can be operated.Assignment of internal phone numbers is freely configurable between 00...99.
You can connect external music on hold or doorline phone to the PABX.
Calling using analog terminal devices should be conducted using the DTMF method and these devices should be equipped with a Flash key. Analog terminal devices , which use pulse dialing can neither use functions nor codes.
Please note that not all of the ISDN terminal devices offered on the market can utilize the performance features provided by the PABX system with their keypad interface.
All terminal devices connected to the system must be »TC Terminals Guideline« or »R&TTE Guideline« approved.

1.2　Description for D@VOS.net

The elmeg D@VOS-24.net and elmeg D@VOS-44.net PABX systems are ISDN telecommunications devices for operation at an ISDN point-to-multipoint or point-to-point access using the Euro-ISDN protocol (DSS1).Analog terminal devices can be connected via integrated jacks. The PABX system elmeg D@VOS-44.net is also equipped with an internal ISDN connection at which up to eight (8) ISDN terminal devices can be operated. Assignment of internal phone numbers is freely configurable between 00...99. Calling using analog terminal devices should be conducted using the DTMF method and these devices should be equipped with a Flash key. Analog terminal devices , which use pulse dialing can neither use functions nor codes.
Please note that not all of the ISDN terminal devices offered on the market can utilize the performance features provided by the PABX system with their keypad interface.
All terminal devices connected to the system must be »TC Terminals Guideline« or »R&TTE Guideline« approved.

USB Interface

The PABX system not only permits quick access to the Euro-ISDN network for telephony, but also offers quick and easy access for your computer to the Euro-ISDN network via USB.As a result, you do not need any additional ISDN card for your PC. The PABX is equipped with an integrated USB port for connection to the PC.
Depending on the programs and drivers installed in your PC, your pabx system can be used for example forexecuting data transfer, sending or receiving fax messages, implementing an answering machine via your PC or surfing the Internet.

To operate the PABX at a computer you require a PC with a USB port and the Windows 98, ME or 2000 operating system.

The PABX system is a full-speed USB terminal device. A so-called fast device supports data transfer rates up to 12 MBit per second.
Power to the PABX and, hence, to the USB port of the PABX is supplied via a 230 VAC power supply. Since power supply is therefore not required by the USB, you can use the PABX system at passive hubs or at terminal devices with an integrated hub (e.g.keyboard). If you use a hub, ensure that the hub is compatible in accordance with USB Specification 1.1.

The PABX system is a self-powered, full-speed terminal device.

1.3 Cleaning

You can easily clean your PABX without any difficulties. Use a slightly moistened cloth or an anti-static cloth for this. Do not use any solvents! Never use a dry cloth. Electrostatic charges could damage the electronics in the system. Always ensure, however, that no moisture penetrates into your PABX, as this could result is damage to the PABX.

1.4 Safety notes

1.4.1 Important notes for using the PABX system

• Unauthorized opening of the PABX and improper repairs may result in risk of injury for the user.

Attention: Unplug the 230 VAC connector plug or the plug-in power supply before removing the enclosure cover and working on the cable terminal bay.Replace the top on the PABX before plugging the power connector back in .

- Keep moisture out of the PABX at all times! This would pose a risk of electrical shock If you expose the inside of the pabx to liquids the pabx can be destroyed.
- You should not connect or disconnect any lines during thunderstorms.
- Only SELV terminal devices, or those that comply with ETS 300047, may be connected to the PABX. This regulation is fulfilled when approved terminal devices are used as intended.
- The distance between the plug-in power supply unit and the PABX and to the ISDN connection should not exceed 1.5 meters so that standard connecting lines can be used.

Only plug the plug-in power supply unit into the 230 VAC outlet in the direction indicated.
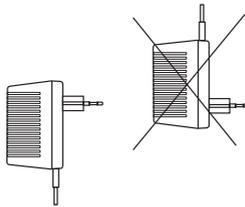
- elmeg C48.net: If you wish to install this pabx together with the safety module (FSM), a »ground« (waterpipe, heating system pipe or an earth bonding conductor for the house wiring system) should be located near the installation location of the system).
- The PABX is operated with 230 VAC using the plug-in power supply unit.Please ensure that the electrical outlet (grounding or outlet) for the PABX (and accessory units) is freely accessible at all times and that connection to the electrical system is conducted by trained, qualified electricians to avoid any hazards to persons or property. Where at all possible, provide a separate power circuit for the 230 V connection of your PABX system, as this protects it against failure and ensures continued operation in the event of short-circuiting of other household appliances.
- We recommend that you protect your PABX system against power surges, such as can occur during thunderstorms, by installing surge suppressors. For further information please contact your local electrician.
- Do not install the PABX system in the vicinity of electronic devices, such as Hifi stereos, office equipment or microwaves, to rule out any mutual interference.
  Installation near heat sources, such as radiators, or in damp rooms should also be avoided.
  o The ambient temperature at the location where the system is operated must be between 5 to 40° C.

1.4.2   Loss of Power

The PABX system is not operable on loss of power (230 V mains voltage).

1.4.3   Installation

The installation manual on the CD contains important information about assembling and installing your PABX.

1.5   Indicators on the elmeg D@VOS.net

B1 B2 Indicates the status of the external ISDN connection's B-channels.

- Flashes when a call is made

- Lights up when a call is in progress

Indicates that a new message has been received by the PC (answering machine of the elmeg CAPI-Tools).

@ Indicates, that a file has been received via the EFT program of the CAPI tools.

Fax Indicates that a new fax has been received by the PC (fax program of the elmeg CAPI-Tools).

USB Indicates the status / activities on the USB port.

- Lights up when the USB port for the PABX system is ready for operation at the connected PC (USB driver active). You can launch PC programs via the USB port.

- Flickers when data is being exchanged via the USB port, for-ex.CAPI application programs (CAPI-Tools), CTI applications (PC-Tel) or new software downloading into pabx system.

- Off when the USB port for the PABX system is not ready for operation at the connected PC (not logged in, or not recognized), or when the PC/USB port is in the suspended mode.

Ready for operation indicator.

- Lights up when the PABX is ready for operation.

- Flashes when 480 data records have been saved in the charges memory of the PABX.

1.6 Indicators on the elmeg C48.net

The position of the indicator is given in the installation manual for the elmeg C48.net on the CD.

O   Ready for operation indicator.

- Lights up when the PABX is ready for operation.

- Flashes when 480 data records have been saved in the charges memory of the PABX.

1.7 Supported Performance Features

The following ISDN performance features are supported by the PABX system at the exchange office of the network service provider; some of these may have to be applied for at your service provider.

- HOLD: Hold / Broker's call
- ECT: Call switching
- 3PTY: Three-party conference call
- CD: Call deflection (forwarding of calls)
- PR: Partial Rerouting. Individuelle Anrufweiterschaltung für Endgeräte am Anlagenanschluss
- CLIP / CLIR: Activation/Deactivation of caller ID to party being called.
- COLP / COLR: Activation/Deactivation of called party ID to caller.
- AOCD: Transmission of charge costs during a call.
- AOCE: Transmission of costs of call at end of call.
- CCBS: Call-back on busy, as soon as subscriber is available.
- CCNR: Call-back to available subscriber as soon as that party has lifted and replaced the handset.
- MCID: Malicious caller ID (tracing).
- CFB / CFU / CFNR: Call forwarding
- UUS1: Transmission of user-defined text messages
- SUB: Expanded addressing for a terminal device
- X.31: Support for SMS Professional via S_0 and USB

Please note that some of the features described in these operating manual must be applied for at your service provider.

1.8 Symbols

Please note: different terminal devices will not necessarily have the same dial tones, ringing signals or procedures for use.

1.8.1 Symbols used

☏	Lift up the handset of your telephone.
🕽	This symbol indicates the call status. You have lifted the handset of your telephone.
☏	Replace the handset of your phone in the carriage, or the telephone is idle.
📢	This symbol indicates signaling at a terminal device, for example your phone rings.
▦	You can dial the desired number.
1 ... 0 **✳ #**	Dial a specified code, number or character.
0 ... 9 ✳	Dial a code or a character.
R	This symbol prompts you to press the flash key.
〜	Indicates that an acknowledgement signal can be heard in the handset.
✱	This symbol indicates that a conference call is active.
⚠	This symbol indicates that a configuration is required. Be sure to complete the "Initial programming" (see page 77) before entering codes.

1.9   Acoustic signals

The following tones describe signaling for the PABX when using telephones.
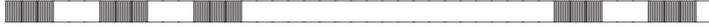
Internal dial tone (421 Hz)

Internal dial tone. You will hear this dial tone after lifting the handset for »calling external parties with line acces digit«. This signal indicates that you can dial a number. After 40 seconds this signal changes to the busy signal; hang up the handset and then lift it up again. You will then hear again the internal dial tone.

Busy tone. (421Hz)

Busy tone. You will hear this signal, when the called external or internal subscriber is busy.

Positive acknowledgement signal (mixed tone 421 Hz and 320 Hz)

The positive acknowledgement signal indicates that your input has been accepted.

Negative acknowledgement signal (mixed tone 421Hz and 320 Hz)

Negative acknowledgement signal.If you hear this tone, the selected function can not be used or the performance feature has not been configured or has been canceled.
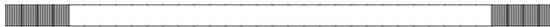
Internal ringing signal (421 Hz)

This signal indicates that the telephone of the external or internal subscriber is ringing.

Time intervals of the signals in seconds

1   2   3   4   5
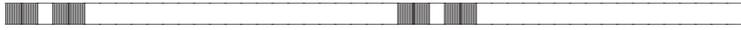
Special dial tone (421 Hz and 316 Hz mixed)

This signal indicates that your phone has been set for call rerouting.

External dial tone (425 Hz)

A continuous signal that you hear when the external ISDN connection is occupied.<R)
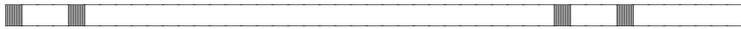
Call waiting tone (421 Hz)

Call waiting tone.This tone signals that an external party is calling you during an ongoing call. The call waiting signal is sounded for a maximum of 30 seconds.

Signal call tone (441 Hz) (elmeg C48.net)

You will hear this tone when you accept a signal call. You can program the duration of the signal call tone.

Time intervals of the signals in seconds

| 1 | 2 | 3 | 4 | 5 |
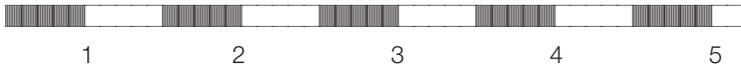
1.10 Calling cycles

The figures below show the duration of the calling cycles when using analog telephones.

Internal call, internal call-back, internal repeat call

Internal call: You are called either directly, or in an enquiry call by an internal user.

Internal call-back:You are called automatically when the party you attempted to call hangs up the handset for his/her phone.

Internal repeat call:You initiate an enquiry call, but replace the handset before dialing. The first call that is on hold is signaled at your terminal device by call-back for 3 minutes. If your telephone has been configured for calling line identification (CLIP), this signal call will be displayed just like a normal external call.

External call, external call-back, external repeat call

External call: You are called by an external party.

External call-back: You are called automatically when the party you attempted to call hangs up the handset for his/her phone.

External repeat call:You initiate an enquiry call, but replace the handset before dialing. The first call that is on hold is signaled at your terminal device by call-back for 3 minutes.

CLIP: If your analog telephone has been configured for calling line identification (CLIP), it will be called with this signal.

Door entry phone call

Door entry phone call: When the bell button of the door entry phone is pressed, the telephones entered in the doorline call distribution list will ring for approximately one minute with this frequency. If your telephone has been configured for calling line identification (CLIP), this signal call will be displayed just like a normal external call.

Time intervals of the signals in seconds

| 1 | 3 | 5 | 7 | 9 |
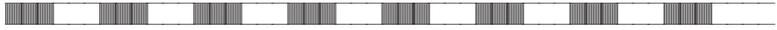
Signal call

Signal call: The analog telephones entered in the signal call list will ring with this frequency. You can program the length of the signal call. If your telephone has been configured for calling line identification (CLIP), this signal call will be displayed just like a normal external call.
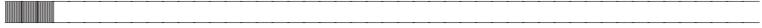
Communication data overflow

Communication data overflowThis signal indicates a communication data overflow at a system telephone.Depending on the system telephone type used, the caller list either displays the service number together with a message or the service number only.

Time interval of the signals in seconds

1   3   5   7   9

2 Installation

2.1 Installing the PABX

Before beginning the installation of your PABX check the package to ensure that all items are included.

Package contents:

- 1 PABX unit
- 1 plug-in power supply unit (elmeg D@VOS.net)
- 1 ISDN connecting cord
- 1 USB connecting cord
- 1 set of operating instructions
- 1 drilling template
- 1 CD-ROM for configuration, drivers and software for USB applications, Windows 98 and higher, installation instructions
- 1 enclosed package containing:
  Terminals, 3 dowels und 3 screws.
-

2.1.1 Installation sequence

This section describes the sequence of installation for your PABX. It is important that you adhere to the installation sequence given here.

- Select a location for installing the system that is not more than 1.5 meters away from a 230V~ outlet and the NTBA (ISDN connection).
- elmeg C48.net:A "ground" (waterpipe, heating system pipe or an earth bonding conductor for the house wiring system) should be located near the installation location of the system.
- Do not install the PABX system in the vicinity of electronic devices, such as Hifi stereos, office equipment or microwaves, to rule out any mutual interference.
  Also avoid installing the system near any heat sources, such as radiators, or in damp rooms.
  The ambient temperature at the installation location must be between 5 and 40°C.
- Once you have selected a suitable location, hold the drilling template over the planned location, align it vertically and maintain the distances shown on the template.
- Mark the drilling points on the wall using the drilling template.
- Check for secure fitting of all the attachment points for the PABX system on the wall and ensure that there are no power lines, cables, etc. located at or under the marked drilling holes.

- Drill the three mounting holes at the marked positions. When using anchoring studs, use a 6 mm masonry drill to drill the holes and then insert the anchor studs into the holes.

- Screw two screws into the top two anchor studs in the wall until there is a space of around 5 mm between the head of the screw and the wall.

Attention! Mind electrostatic charge. To ensure that you have no electrostatic charge, touch a conducting object connected to »ground« (e.g. water pipe) before you open the PABX system.

- elmeg C48.net: Opening the pabxPress in on the two plastic springs marked here until the cover is released. Carefully raise the cover at the rear. It can then be easily lifted off The terminal panel is then visible under the enclosure cover.
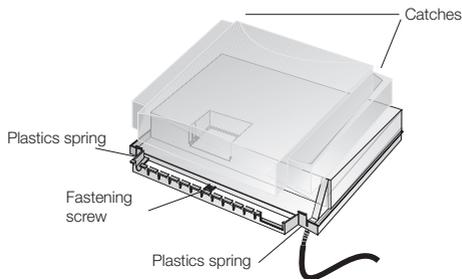
- Opening the pabx elmeg DA@VOS.net:Press in on the two plastic springs marked here until the cover is released. Carefully raise the cover at the rear. It can then be easily lifted off The terminal panel is then visible under the enclosure cover.
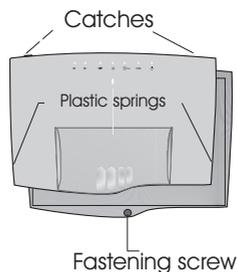
- Fit the mounts on the back of the PABX over the heads of the screws.

- After this, screw the third screw in tightly at the marked position to secure the PABX on the wall.

- Install the jacks for the ISDN terminal devices and the analog terminal devices and then connect the PABX system to the jacks.

- Plug the terminal device connectors into the jacks.
- If you wish to configure your PABX system yourself via the PC, you can do this via the USB port on the PABX, or at the internal ISDN connection.
To configure your system via the internal ISDN connection, you must have an operational ISDN PC card installed in your PC. Connect the PC to the PABX system using one of the installed ISDN jacks.
To configure your system via the PC port, connect the PC port on your PABX to the USB port on your PC using the PC connecting cord supplied with the system.
- Close the enclosure. To do this, insert the catches (on the back of the bottom of the enclosure) into the openings in the PABX enclosure cover. Then press down on the front of the cover until you hear the catches catch.
- Connect port »S0:EXT« to the NTBA via the ISDN connecting cord.

The mains plug for the NTBA does not have to be plugged in to operate the PABX.

- Start up your PABX system.

2.2   Terminals of the PABX (elmeg C48.net)

This documentation is meant to provide you with a brief outline about the installation possibilities for your pabx system.A detailed description on how to connect various terminal devices can be found on the CD-ROM supplied with your system.

2.2.1   Internal ISDN port

The internal ISDN connection of the PABX provides 2.5 Watts of power for connecting at least two (2) ISDN terminal devices.

2.2.2   Analog ports

You can connect up to eight (8) analog terminals to your pabx system.Only analog terminal devices with DTMF dialing should be used at the analog ports. The R key must execute theflash function. The functions described in the operating and configuration instructions can be used without any restrictions with these terminal devices.

Flash duration detection can be set by PC configuration.

2.3 Terminals of the PABX elmeg D@VOS.net
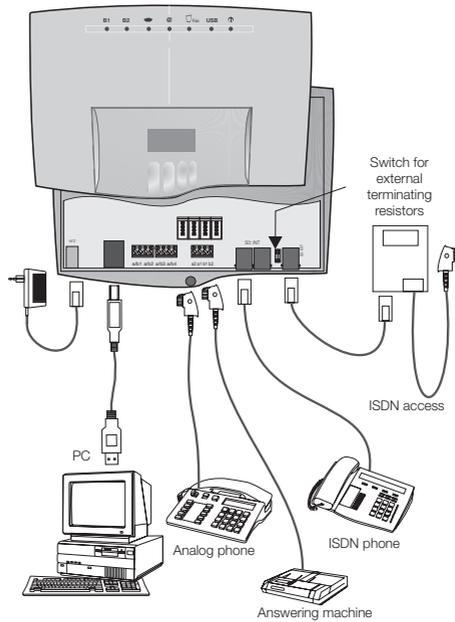
2.3.1 ISDN Port (D@VOS-24.net)

Since the D@VOS-24.net is not equipped with an internal ISDN connection, you must connect both RJ45 jacks and the screw-type terminals in parallel with the external ISDN connection. The mains plug of the NTBA must be plugged in to use other ISDN terminal devices at this connection.

2.3.2 Internal ISDN port (D@VOS-44.net)

The internal ISDN connection of the PABX provides 2.5 Watts of power for connecting at least two (2) ISDN terminal devices. You can connect an ISDN terminal device directly to the PABX as shown in Figure . If you wish to connect other terminal devices, please read the instructions for hard wiring in the installation manual   on the CD.

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2.3.3 Analog ports

Only analog terminal devices with DTMF dialing should be used at the analog ports. The R key must execute theflash function. The functions described in the operating and configuration instructions can be used without any restrictions with these terminal devices.

Flash duration detection can be set by PC configuration.

The PABX is equipped with two types of internal connections:

- Two connections to the RJ11-jack.
- The Germany version has four TAE jacks instead of two RJ11 jacks. Both of the codes for the TAE plugs (TAE...F and TAE...N). The abbreviation TAE...Fsignifies that only TAE plugs for telephones can be used at this connection. The abbreviation TAE...N indicates that only TAE plugs for terminal devices other than telephones (Non-telephony devices), such as fax machines and modems can be used at this connection.
- Four connections for hard-wiring of outlets.
  If you have plugged a terminal device into one of the TAE or RJ11 jacks you can not use the associated hard-wired connection.

2.3.4 PC port

The USB port is used for linking a PC to the PABX system. Use the USB connecting cord supplied with the system for this.
If you have a different USB cord, please note that the distance between the PABX and the PC may not be greater than five (5) meters, depending on the type of USB cord that is used.

The USB port for the PABX is like an internal subscriber for the PABX system. You can make settings for these internal subscribers (such as automatic pick-up of outside line, call control, LCR, etc.) via PC configuration. If your system does not use automatic exchange line acquition, you must first dial the line access digit (LAD) before you can establish an external data communication link.

2.3.5 Doorline phone interface (elmeg C48.net)

You can connect a doorline phone module to your pabx system.To connect a door intercom unit to your PABX system you need the TFE module or the Doorline module from Deutsche Telekom AG (DTAG), which are available as accessories at specialized dealers.

With a connected doorline phone, the doorline phone module provides you with the following functions:

- Interfacing of a standard door phone unit with speaker and microphone, without preamps.
- Interfacing of a door intercom module according to FTZ guideline123D12.
- Interfacing of call signalling which is operated in parallel with the doorbell at the existing ringing system (dedicated call distribution is possible for each of the three bell button connections).
- Interfacing of a central alarm bell or second bell for direct or alternating voltage.
- Interfacing of call signalling (doorline phone module call distribution) using buttons, without any additional external power supply.
- Use of switching contacts for each doorline phone module.These contacts can also be actuated externally (remote control)..
- Indication of door opening function by a red LED on the doorline phone module.

The »DoorLine« module supplied by Deutsche Telekom AG is used as a two-wire USB port for the »DoorLine« phone. Please ask your specialized dealer for more information on module features.

2.3.6 External music on hold (elmeg C48.net

Internal music on hold is produced by the pabx system.If you do not wish to utilize internal music on hold you can connect an external device at the built-in jack for feed-in of music on hold.The internal music on hold is then deactivated automatically by the plug and replaced by the music from the external source.The 3.5 mm stereo jack is not supplied with the PABX and must be purchased from a dealer.

Note: Ensure that any music you feed in externally is free of any third-party copyrights.

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3 Commissioning

3.1 As-delivered, Initial State of the PABX System

3.1.1 Phone number plan

When you start up your PABX for the first time a number of settings are already pre-configured (default settings). This includes the internal numbers. This means that you can place calls immediately after switching on your PABX.

- **Internal numbers:** Numbers 20....29 are set for the »Connection of ISDN terminal devices« on the internal ISDN bus; numbers 10....17 DAVOS.net 10...13) for the analog connections, and numbers 30 … 39 for the USB connection.
- **Internal service number:** The internal number 59 has been assigned as the service number. This number is used to provide access for the PC to the PABX system via the internal ISDN connection. You can configure the PABX via the internal ISDN connection and a PC with an ISDN card.
- **External service number:** An MSN or, with a point-to-point access, a direct dial-in number is assigned to the internal service number 59 during PC configuration.This »external service number« is the only access possible for configuring »Follow me«, »Room monitoring« and for »Switching contacts of the elmeg C48.net« from an outside location.
- **Team 00:**
- D@VOS.net: In the initial state the numbers 10, 11, 12, 13 and 20 are entered and enabled for Team 00 in the day/night call allocation.
- elmeg C48.net: In the initial state the numbers 10, 11 and 20 are entered and enabled for Team 00 in the day/night call allocation.

3.1.2 Default settings

- The external ISDN connection is set to point-to-multipoint access.
- The four-digit password is set to **0 0 0 0**.
- The six-digit password is set to **0 0 0 0 0 0**.
- Assignment of an external ISDN connection is made by entering **0** (also for data links via the USB port).
- The internal ISDN connection is set as a »Short passive bus«.
- The switchable call mode for Team 0 is set to »Day mode«.
- The group call is set for »simultaneous«.
- The switching privilege for teams is configured for no terminal device.
- All users are in Pick-up group 00.
- Accepting (pick-up) of a call is possible for all terminal devices.

- Analog connections are configured for telephones that use DTMF dialing and flash key.
- The active terminal devices are authorized for international calls.
- The dial filter has not been configured.
- The number of the caller is displayed (caller ID).
- The B number is transmitted to the caller.
- Call waiting for a/b terminal devices has been configured.
- No entries in telephone directory.
- Music on hold (MOH): Internal MOH melody 1 is played.
- No time or date is stored.
- The charge rate counters are set to 0.
- Up to 500 call data records can be stored for the terminal devices.
- The numbers in the call data records are shown in their full length.
- Call data records for incoming calls are stored only when a project number has been assigned.
- Analog charge rate transmission is deactivated.
- Analog number transmission is activated.
- The keypad function for the external ISDN connection is not enabled for terminal devices.
- Remote access can be initiated from any terminal device.
- Remote switching authorization (External follow me) is deactivated.
- The switchover times are set as follows in the calendar for all days of the week:
  Switchover from Night / Day: 8:00 AM
  Switchover from Day / Night: 4:00 PM
- A calendar has not been assigned to the team options.
- LCR is not active, but has been prepared for downloading of the tariff rate tables.

3.2   Initial Commissioning

Install your PABX as described in the section »Installation«.

Make all necessary connections, including the 230 V AC mains power supply.

> When you switch on the 230 V~ power supply, ensure that it is not interrupted during the initialization phase of the PABX (approx. 20 seconds)!

Da@VOS.net: In its initial state, the PABX will signal an external call at the analog terminal devices and at the ISDN terminal device that has the number 20.

elmeg C48.net: In its initial state, the PABX will signal an external call at the analog terminal devices and at the ISDN terminal device that has the number 10.

You must then assign the numbers (MSNs and direct dial-in) to the terminal devices via PC configuration to ensure that the other connected telephones and terminal devices can all be reached by external parties.

Your PABX is equipped with an internal »Phone number plan« (see page 17) that can be edited. In the system's initial status the internal numbers are set (default). You can change these internal numbers as you require through configuration with the PC.

Consult the operating instructions for your ISDN terminal devices to find out how and with which settings the various performance features can be used.

> Your PABX supports the flash function for analog telephones. Therefore, never just briefly replace the handset or press the button in the cradle briefly with your hand, as the PABX would take this as a flash signal instead of hanging up.

3.3   Starting your PABX on Your Own

A CD containing the Windows configuration program is included in the PABX package.

You can configure your PABX via the USB port of your PC. Use the USB connecting cord supplied with the system to connect the USB ports of the PABX and the PC.

You must have an operating system that supports USB in order to configure a PABX via a USB port..
(as per 06/2001:Windows 98 / ME / 2000)

If you have an ISDN card with CAPI 2.0 installed in your PC you can also conduct PC configuration via the internal ISDN connection of the PABX.This type of configuration is possible starting with the Windows 95 / Windows NT4 operating systems.

The following performance features can not, however, be used under Windows 95 / Windows NT4:

• USB interface and any programs that require this interface to run (PC-Tel, CAPI-Tools, CAPI, TAPI, NDISWAN).
• Speed & Easy Configurator

The following performance features / programs can be used together with an ISDN card installed in the PC:

• Professional Configurator
• Download Manager
• Charge Manager.

- Telephone Directory Manager.
- LCR Manager.
- Call-by-Call Manager.

3.4   Configuration Programs

You have two options available for configuring your PABX: » Speed & Easy Configurator« or »Professional Configurator« .

- Speed & Easy Configurator

Initial quick and easy configuration of your PABX is possible using theSpeed & Easy Configurator.

> When using the Speed & Easy Configurator , any system configuration settings that you have already made will be overwritten.This is why the Speed & Easy Configurator is recommended more as an initial configuration program for your PABX.

Have the installation CD at hand.

Insert the CD supplied with the system in the CD ROM drive. The program will start automatically. The »Welcome screen mask« is then displayed. Select the menu» Speed & Easy Configurator«. and then follow the instructions given by the program. Your PC will restart after »CAPI installation«. Leave the CD in the drive. After rebooting, the PC displays the »Welcome screen mask« again. Follow the instructions given by the program.

- Professional Configurator

Using this program you can configure the performance features for your PABX as you require. As you configure your PABX you have the option of first reading out the configuration that you performed using »Speed & Easy Configurator«.You can then complete these settings step by step and import them into the PABX. You should also store your configuration on your PC.

3.5 Remote Access

You can also have your PABX configured by the service center at a certified dealer's. Call the service center, get their advice and tell them how you wish to have your system configured. The dealer's service center can then configure your PABX system remotely from their office. Your dealer can provide you with the number for the service center.

You can also set up a remote access connection to the service center on your own, or release your PABX for dial-in by the service center. The dealer's service center only has access to data on your PABX when the system is enables for remote access.

The following procedure describes remote access from analog terminal devices, Of course you may also use ISDN telephones.

3.5.1 Remote access with call to the dealer's service center

You call the service center from an analog telephone, for example, at connection 1 (internal number 10), or from a telephone at connection 2 (internal number 11). You are then connected with a service technician who explains the further procedure to you. When requested by the technician you push the R key and then hear the internal dial tone.

♪	R ✳ 7 9 2	0	▦	#	⸚	♪
Call to service center		Line access digit	Number for service center		Ack. signal	Continue call

You are then re-connected with the service technician and can continue your call. If you initiate remote access using an ISDN telephone you will have to push the R key once again, depending on the terminal device being used.

- The service technician can then load data from your PABX and conduct the configuration based on your request and needs.
- The service technician can not, however, view or edit your password, but Your system may be reset to its initial status (0000) however.
- The service technician then loads the edited data back into your PABX and ends the data transfer.

This remote access link to the service center involves two connections that are charged to you.

3.5.2 Remote access without further call to dealer's service center

. You call up the service center and You are then connected with a service technician who explains the further procedure to you. You then hang up the handset and initiate the remote access procedure as follows:

📞	✳7️⃣9️⃣2️⃣	0️⃣	⌗	#
Lift up handset		Line access digit	Number for service center	

You will hear the internal music on hold once a connection to the service center has been established.

When the data have been transferred the service center will terminate the connection.
You then hear the busy signal. Replace the handset.

> The connection is terminated immediately if you hand up the handset during an ongoing connection to the service center.

3.5.3 Enabling the PABX for dial-in by the service center

You can enable your PABX for dial-in by the service center. The service technician can then perform a remote configuration for your system. Enabling for remote access lasts for around30 minutes.

📞	✳7️⃣8️⃣2️⃣	⚊	📞
Lift up handset		Ack. signal	Replace handset

The PABX system is now enabled for dial-in by the service center.

It is now possible for the service technician to dial in to your PABX, to read out (export) your configuration data, to edit this data and to transfer the data back into the PABX.

> No further data links can be established when your PABX has been released for dial-in by the service center.

If you wish to inhibit remote access to your PABX again, proceed as described under »Inhibiting remote access«.

Continuous enabling of PABX for dial-in by service center

You can also define a permanent release of your PABX for dial-in by the service center. You can only set up this release function using the WIN-Tools configuration program. To activate this function you must define at least one number (max. 3 numbers) that is permitted for dial-in to the PABX.

Ending an active, incoming remote access connection

You can terminate a connection set up by the service center using the following procedure.

⬆	# 7 9 2	⠶	⬇
Lift up handset		Ack. signal	Replace handset

Inhibit remote access

⬆	# 7 9 9	⠶	⬇
Lift up handset		Ack. signal	Replace handset

An existing connection to a service center is not terminated.

4 System telephones connected to the internal ISDN bus

4.1 System Telephones elmeg CS100 / CS300 / CS310 / CS320

Your PABX is prepared for operation with system telephones. No special programming is required for these system telephones. The PABX automatically recognizes the activated system telephones and provides functions typical for these telephones in a special menu.

You can also configure the following function keys on system telephones and expansion modules for the system telephones: The system telephone operating instructions include a description of these functions and their configuration and use .

4.1.1 Intercom call

An intercom call allows you to set up a connection from one system telephone to another system telephone without this connection having to be accepted by pushing a button. Intercom calls are accepted automatically by the phone being called when the function »Hands-free calling« is activated, provided:

- the telephone is idle,
- the intercom call function has not been specifically deactivated and
- »Do not disturb« has been deactivated.

If you lift the handset of a system telephone during an intercom call, the call is continued over the handset.

If an intercom call is not terminated by one of the two users, the connection is terminated automatically after a time defined in the PABX (around 2 minutes).

If the function »Do not disturb« is activated at a system telephone, intercom calls can not be placed to that phone. Intercom calls can be activated or inhibited specifically using a function key or a code procedure.

Activate / inhibit intercom calling

🛋	✱ / #	5 9 0	··	🛋
Lift up handset	Activate intercom calling / Inhibit intercom calling		Ack. signal	Replace handset

Intercom calls can be placed to system telephones and to elmeg ISDN telephones.

4.2 elmeg DECT 100

You can also use the elmeg DECT 100 ISDN telephones at your PABX. No special programming is required for these telephones. The PABX automatically recognizes an elmeg DECT 100 that is connected to the system and provides functions typical for these telephones in a special menu.
The elmeg DECT 100 was developed for elmeg PABX systems and is therefore recommended for convenient mobile calling with these PABX systems owing to its special system functions. The battery standby times may be reduced when other DECT products are used at internal ISDN connections.

4.3 PABX System Menu

A special menu containing functions typical for the system is provided by the PABX. This menu, and the associated performance features, are managed solely in the PABX.

You can select the languageof your display.provided the desired language has been configured using the telephone directory program.

The following performance features are available in the system menu:

- telephone directory of the PABX (see page 40)
- Follow me (see Page 58)
- Message (only DECT mobile unit, see page)
- Intercom (only DECT mobile unit, see page25)
- Direct call (see page)
- Switching call allocations (call distribution) (see page 75)
- Cost registration (see page 60)
- LCR (see page 61)

Refer to the operating instructions of the terminal device being used to find out how to reach the PABX system menu.

4.3.1 Telephone directory

Using system telephones, you can make place from the PABX telephone directory.

To search for an entry in the telephone directory enter the first few letters (maximum 8) for the entry and then confirm your input.
Eight (8) entries from the PABX telephone directory are always shown which you can view one after the other.

Select the desired entry and confirm by clicking »OK«.
You must then begin dialing by picking up the handset.

> When using system telephones (except for the DECT 100) you can reach the PABX telephone directory by pressing Shift + the telephone directory softkey (e. g.»tbook« or »Telephone directory«).

4.3.2 Follow me

Using system telephones, you can set up call forwarding from another terminal device of your PABX system to your telephone or mobile unit. This call forwarding is based on the feature Follow me for the PABX.

Enter the number of the subscriber that is to be forwarded to your telephone and the type of call forwarding using the system menu. In addition, you can also delete an existing call forwarding function. A distinction is made between the following types of call forwarding:

»Activate« / »Always active«
All calls are forwarded to your telephone or mobile unit.

»Removal active« (only elmeg DECT 100)
All calls are forwarded to your DECT mobile unit as long as it is not in the charger. If you have placed your mobile unit in the charger, calls will not be signaled at the mobile unit, but only at the terminal device that was originally called.

If you configure call forwarding from a DECT mobile unit, the function is carried out at the internal number (MSN) that your mobile unit transmitted to the PABX during the last call. If you configure call forwarding from another system telephone, call forwarding is made to the first MSN entered in the system telephone.

Utilisation

4.3.3   Message (only DECT mobile unit)

The »Message« menu is not only available to DECT mobile units, as this function has also been implemented in all of the other system telephones.
Using the message function you can establish a connection to another telephone or team without this connection having to be actively accepted.

The same conditions and prerequisites apply to a message for a DECT mobile unit as to messages for other telephones (see page).

4.3.4   Intercom calls (only DECT mobile unit)

The »Intercom« menu is not only available to DECT mobile units, but also to all other system telephones, as this function has also been implemented in these units.
You can set up a connection from a DECT mobile unit to another system telephone using the menu »Intercom«. This connection does not have to be actively accepted.

The same conditions and prerequisites apply to intercom calling between a DECT mobile unit and a system telephone as to intercom calling between two system telephones (see page 25).

4.3.5   Direct call

If the direct call function has been configured your telephone will dial a number that you have input previously. If you do not begin dialing a number within five (5) seconds after lifting up the handset, dialing is then begun automatically.

You can configure the number for a direct call via the system menu. The PABX system recognizes by the length of the number whether you have entered an internal or external number. You therefore do not need to input a prefix code for external numbers.
You can also deactivate or delete a direct call number that has been previously configured.

4.3.6   Switchable call modes

In the menu »Day / Night« of the system menu you can switch over the call mode for the PABX without using the allocated codes (see page 75). The telephones must be authorized for switchover of the call modes.

You can also activate the switchable call modes alternately for a team, for all teams or for the doorline module of the elmeg C48.net.

4.3.7   Cost registration

The cost registration function allows you to view the accrued units and call charges for the terminal devices and, if required, to delete this data.
This feature is protected by a 6-digit password (PIN2).

If you wish to clear all of the counters for the terminals devices enter »✳« instead of the number for the internal user.

4.3.8   LCR

Using the system telephones you can obtain information about the update status of the LCR rate tables (see page 61), or initiate an update for the rate tables.
If LCR data is present in the PABX, the date and time of the last download of the rate tables and the date set for the next update of the tables (automatic:Date and time, or manual) are displayed.

Please ask you specialized dealer, whether these settings are possible with your system.

5   Making Calls

Some terminal devices are able to use their own special procedures for the functions described in the following. Refer to the operating instructions for the terminal device being used for detailed information.

Only telephone connections, i.e. calls between subscribers, are presented in the following usage procedures as examples. For analog telephones, these functions are only described for dtmf-dialing terminal devices equipped with a flash key. The tones and signals described in the following are heard when using analog telephones. These tones may be different for ISDN telephones and analog telephones which generate their own dial tones. Other information may also be shown in the display of these telephones.

5.1   Calling external parties

Your PABX is equipped with an external ISDN port. You can set up two connections simultaneously via the two B channels of this ISDN connection. These connections may also be to two different parties simultaneously. For example, you can call an external business partner while simultaneously transferring data from your PC to a different business partner. When you initiate an external call via your PABX, the system automatically transmits your number and ID (the terminal device, such as telephone, fax machine, that is being used). This ensures that only a terminal having the same ID code is called at the subscriber being called (phone calls phone, fax group 4 calls fax group 4).

If a terminal connection is configured for a multi-functional device in the PABX, external calls are signaled with the ID »Analog telephony«, »ISDN telephony« and »Fax device« at the terminal device. Here, when you initiate an external call, the service ID code »Analog telephony« is transmitted.

It is not necessarily required that all telephones / terminal devices be available for making calls throughout the world. It is sometimes even more advantageous when some telephones are authorized for local calls only (phone bills also more transparent).

The exchange authorization function exists to control and monitor this. An individual authorization for outgoing calls (external) can be assigned in PC configuration for each PABX user. This authorization is broken down into 5 different categories.

Utilisation

The user

- has unlimited calling authorization.
- has call authorization for national (long-distance) calls.
- has call authorization for local calls.
- can be reached for incoming calls, but can only make internal calls.
- is authorized for internal calls only.

> Please note: ISDN terminal devices active at the ISDN connection may not have the same signals, ringing cycles or operating procedures as the internal terminal devices for the PABX system.

The individual users of the PABX can configure activation of automatic exchange line acquisition or dialing calls using a prefix digit. When automatic exchange line acquisition is activated, you will be switched immediately to the external ISDN connection when you lift the handset and will then hear the dial tone for the exchange. You can then begin dialing the external number at once.

You can activate or deactivate automatic exchange line acquisition as described on Page 33 of these instructions.

In the initial state, automatic exchange line acquisition is not configured.

5.1.1 Calling external parties without »Automatic exchange line acquisition«

Lift up handset	**0** Dial line access digit	Dial external number	The phone being called rings	Conversa- tion

> If you hear the busy signal after dialing the first 0 your telephone either does not have authorization for making external calls, or the external ISDN connection is busy.

5.1.2 Calling external parties with »Automatic exchange line acquisition«

Lift up handset	Dial external number	The phone being called rings	Conversation

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5.1.3 Activating / deactivating automatic exchange line acquisition

The individual users of the PABX can configure activation of automatic exchange line acquisition or dialing calls using a prefix digit. When automatic exchange line acquisition is activated, you will be switched immediately to the external ISDN connection when you lift the handset and will then hear the dial tone for the exchange. You can then begin dialing the external number at once.
If you deactivate automatic exchange line acquisition you must dial a prefix (LAD) when you make an external call. You will hear the internal dial tone when you lift up your handset.

Activating/Deactivating automatic exchange line acquisition

⬆	✱ / ✱ #	5 6	∿	⬇
Lift up handset	activate / deactivate		Ack. signal	Replace handset

5.2 Making internal calls

All phone calls, fax transmissions or data transmissions that take place between internal analog and ISDN terminal devices are internal connections for which no charges are billed.

If a connection is set up between internal terminal devices and the terminal devices active at the external ISDN point-to-multipoint connection (to which your PABX system is also connected), this is considered as being an external connection for which charges are billed.

5.2.1 Making internal calls without »Automatic exchange line acquisition«

⬆	▦	«◁»	♪
Lift up handset	Dial internal number	The phone being called rings	Conversation

5.2.2 Making internal calls with »Automatic exchange line acquisition«

If you wish to make an internal call, or initiate a function such as accepting calls (pick-up), lift up the handset and press the asterisk key. You can then place an internal call.
If you hear the busy signal when you lift the handset (external ISDN connection busy) press the asterisk key again and you will hear the internal dial tone.

📞	✳	▦	🔊	☎
Lift up handset		Dial internal number	The phone being called rings	Conversation

5.3 Accepting Calls

🔊	📞	☎	📞
Telephone rings	Lift up handset	Conversation	Replace handset

5.4 Enable / Inhibit Call Waiting for a Further Call

Using the function »Call waiting« you can be called by other parties while conducting an ongoing call. When a second callers calls up you will hear the call waiting signal in your handset and can then decide whether you want to continue your call with the current caller, or whether you want to take the call waiting caller right away.

Call waiting for external calls is possible with analog telephones. Please refer to the corresponding section in the operating instructions for your ISDN terminals for proper use of this function.
If a call waiting signal is signaled during an ongoing call using analog telephones and you ignore the call waiting signal it will be deactivated after around 30 seconds. You can also disable call waiting with analog telephones so that no call waiting signals are given during your calls.

Enable / inhibit call waiting

📞	✳ / #	5 8	📳	📞
Lift up handset	Enable / Inhibit		Ack. signal	Replace handset

34

5.5   Accepting Calls (Pick up)

An external call is signaled at the telephone of another subscriber.
You can now create different pick-up groups of subscribers for whom pick-up (accepting) of calls is possible. A call can only be accepted by subscribers/terminal devices of the same pick-up group. Assignment of subscribers to pick-up groups can be made regardless of the settings for the Day/Night team call assignments.

> However, picking up a call is possible only within the pick-up group to which your terminal device has been assigned via PC configuration. In the initial state all terminal devices are assigned to pick-up group 00 so that calls can be accepted from any telephone.

A telephone near you begins ringing. You would like to accept the call at your own phone.

☎	✳ 0	♪
Lift up handset	Accept call	Conversation

5.6   Accepting Calls from Answering Machine

Calls that are signaled at the answering machine (answering machine has not yet switched on) can be accepted within the defined group using the feature »Picking up a call«. If the answering machine has already accepted the connection you can also take this call from your telephone.

☎	✳ 0 / # 0	♪
Lift up handset	Take call / conversation from answering machine	Conversation

5.7   Automatic Call-back on Busy / on No Answer

This function can only be used by telephones that permit suffix dialing! Automatic call-back from an enquiry call is not possible.

Automatic call-back on busy

Let's assume that you must urgently contact a business partner or an internal subscriber. When you call their number you always get a busy signal how-

ever. If you were to be provided with a message that the subscriber you are attempting to call has ended his/her call, this would increase your chances of reaching that party considerably.

Using the function »Call-back on busy« you can reach your party as soon as he/she hangs up the handset at the end of the call. Your telephone will then ring. When you then lift your handset, a connection is set up automatically to that party.

An internal »Call-back on busy« is deleted automatically after 30 minutes. The external »Call-back on busy« is deleted after a period defined by the exchange (around 45 minutes). You can also manually delete this function before this period expires.

Automatic call-back on no answer

Let's assume that you must urgently contact a business partner or an internal subscriber. When you call their number you always get a ringing signal, but the party is not near the phone or does not answer. If supported by your network provider, you can use the function »Call-back on no answer« to reach the party immediately when he/she ends a call, or lifts and then replaces his/her handset.Your telephone will then ring. When you then lift your handset, a connection is set up automatically to that party.

Important information about use and acknowledgement signals!

In the following procedures a distinction is made between analog and ISDN telephones with regard to use and acoustic tones/signals.

5.7.1 Configuring call-back for analog telephones

«📞»		✳ 4	〰	⤓
Internal or external subscriber is busy or does not answer			Ack. signal	Replace handset

When the subscriber that was called hangs up his/her handset your telephone will ring.
When you lift up your handset the subscriber for which call-back is active is called. If the party answers you can conduct your call.

5.7.2 Configuring »call-back on busy «for ISDN telephones

This performance feature is supported by the PABX for ISDN telephones at the internal ISDN connection. Please refer to the operating instructions for your ISDN telephone for proper use.

5.7.3   Configuring »call-back on No Answer «for ISDN telephones

⟨⟨▷⟩⟩	✳ 4	⸱⸱⸱	☇
Internal or external sub- scriber does not answer		Ack. signal (or announcement)	Replace handset

When the subscriber that was called hangs up his/her handset your tele-
phone will ring.
When you lift up your handset the subscriber for which call-back is active is
called. If the party answers you can conduct your call.

5.7.4   Canceling automatic call-back for analog telephones

Analog telephones use this procedure for canceling:

- Internal and external call-back on busy.
- Internal call-back on no answer.
- An external »Call-back on no answer« is canceled by the exchange after the
  defined time period expires.

☇	# 4 0	⸱⸱⸱	☇
Lift up handset	Cancel call-back	Ack. signal	Replace handset

5.7.5   Canceling automatic »Call-back on no answer« for ISDN
telephones

Internal call-back on no answer is canceled with ISDN telephones using the
following procedure. An external »Call-back on no answer« is canceled by the
exchange after the defined time period expires.

☇	# 4 0	⸱⸱⸱	☇
Lift up handset	Cancel call-back	Ack. signal	Replace handset

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5.8   Calling Several Telephones at Once (Team Call)

You can place a call to all the members of a team using the assigned number (group call).

A distinction is made between thee types of team call variants, »Team call simultaneous«, »Team call linear«, »Team call rotating« and »Teamcall consecutive«.

- Team call simultaneous:
  All assigned terminal devices are called simultaneously. If a telephone is busy call waiting can be initiated.
- Team call linear:
  All assigned terminal devices are called one after the other (as entered in the PC configuration). If one telephone is busy, the next available one is called. The call is signaled for around 15 seconds. You can set this time to between 1 and 99 seconds however during PC configuration.
- Team call rotating:
  This type of team call is a special variant of the linear team call. After all of the terminal devices of a team have been called the call is signaled again at the first terminal device. The call is signaled until the caller either hangs up, or until the call is terminated by the exchange office (after around 2 minutes).
- Team call consecutive :
  The terminal devices are called in the order that they have been entered in the subscriber list in PC configuration.Each terminal device that has already been called will continue to be called until all of the devices that are entered have been called.Using PC configuration you can define when the next terminal device is to be called each time.

> If you have set linear or rotating team call for a team, the members of this team can not forward calls when the call is being signaled (call deflection).

5.9   Defining Your Own Number for the Next Call

Let's assume that you have to make a business call late in the evening from your home. You can do this be defining your business number (MSN) as the outgoing MSN for this call.
This has two advantages for you: First, the costs for the call will be registered for the selected MSN, and secondly, the party you are calling can recognize you by your business MSN that is displayed.

Before you begin to make an external call you can define which number is to be transmitted to the exchange office and to the party you are calling. This MSN must first be assigned to an index during PC configuration (see External numbers). When you then also dial this index, the assigned MSN is transmitted to the party being called. The charge for this call at your network service provider is then billed to this MSN.

You wish to set up a connection with an external party and have a certain number transmitted along with the call.

📞	# 8 1	⌨	⌨	🔊	📞
Lift up handset		Index for the MSN (0 … 9)	Dial number		Conversa-tion

5.10 Temporarily Suppressing Transmission of Your Own Number

If you do not wish to have your number displayed at the party being called before he/she lifts up the handset, you can suppress the transmission of your MSN specifically for that call.

This feature must be applied for at your network service provider.

Transmission of the caller's own number is suppressed using the following procedure with analog terminal devices.
Please refer to the operating instructions for ISDN terminal devices on how to initiate this feature.

📞	✳ 5 9 4	⌨	🔊	📞
Lift up handset		Dial number		Conversa-tion

5.11 Noting an external ISDN connection

You can use for each terminal device an »automatic call back« (sbcr free) or note »an external ISDN connection«. The last entered feature will be active. The previously entered feature will be cancelled.

ISDN terminal devices can use this feature provided keypad dialing is possible during an ongoing call or when the line is busy.

You want to call an outside party but the external ISDN connection is busy. With this procedure, you can note an external ISDN connection. As soon as this ISDN connection is again available, your telephone rings and you can make your call. All existing »Reservations« will be cancelled automatically at 0:00.
You can only use this feature on telephones that support suffix dialing.

You wish to call an external party. T he external ISDN connection is busy. You hear the busy signal.

✆	✱ 4	☎	⟪▷⟫	☎
You hear the busy signal.		Hang up handset	Called susbcriber is again available.	
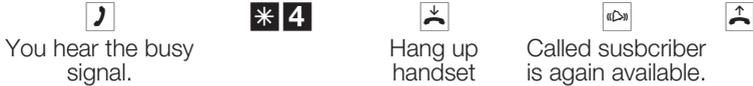
Now switch your ISDN telephone to keypad mode.

Dial the number of the external party you wish to call.

5.12 Canceling »Noting an external ISDN connection«

☎	# 4 1	∿	☎
Lift up handset		Ack. signal	Hang up handset

5.13 PABX Telephone Directory

The PABX system is equipped with an integrated telephone directory in which you can make up to 300 (D@VOS.net) or 500 entries (elmeg C48.net), each with up to a 24-digit number and up to a 20-character name (text).You can use the search function to enter up to 8 characters for searching. Configuring of the telephone directory is performed using the telephone directory program on the WIN-Tools CD-ROM. You can create or edit telephone directory entries using this software.
When you download new firmware versions for your PABX system, all of the telephone directory data is deleted. Therefore, save all of your telephone directory data to your PC prior to loading new firmware.

5.13.1 Exporting/Loading the telephone directory

The contents of the telephone directory can be exported, and also loaded, via a PC at the USB port, or at an ISDN connection. You can have the service center export the directory of your pabx in a remote access link and then upload it again when the firmware download is completed.

5.13.2 Showing names in the display of the system telephone

When a subscriber is called by an internal or external party, the name that is entered in the telephone directory is shown in the display in addition to the telephone number. With internal calls, the name from the telephone directory is displayed only if no name has been entered during PC configuration under »Internal subscriber«. If a name has been entered here, this name is displayed, as it has priority over the name in the telephone directory.

5.13.3 Speed dialing from the telephone directory

Every number in the PABX telephone directory is assigned to a speed dialing index (000...299 D@VOS.net or 000 ... 499 C48.net).You can dial this speed dialing index in place of the long number. The speed dialing memory is integrated into the PABX telephone directory. Observe the information provided in PC configuration.

⬑	⁕ # or # ⁕	▦	⟪☊⟫	♪
Lift up handset		Select speed dialing index (000...299) (000...499)	Subscriber is called	Conversation

5.14 Call Rerouting during Call Signaling (Call Deflection)

If you are not able, or do not wish, to accept a call, you have the option of re-routing the call to a different subscriber while the call is being signaled. If you transfer a call to an external subscriber the charges for the connection from your terminal to the final destination of the call will be charged to you.
You can utilize this feature with system telephones or ISDN telephones that support this function (refer to operating instructions for terminal device being used).

Forwarding external calls to external parties

Forwarding of calls while the call is being signaled depends on the team that is being called:

If several members are entered for a team, call forwarding in the PABX is carried out via the second B channel of the ISDN connection. This also applies

when the connection has the feature CD (call deflection). The PABX can not be reached by external parties while call forwarding is in progress.

If only one member is entered for a team, call forwarding in the PABX is carried out via the second B channel of the ISDN connection when the connection does not have the feature CD. The PABX can not be reached by external parties while call forwarding is in progress. If the connection does have the CD feature activated however, the call is forwarded to the exchange office. Both B channels are then immediately available again and the PABX can be reached by external parties.

> Call forwarding by a team member is only possible when »Team call simultaneous« call signaling has been set for the team.

5.15   Voice announcement

You can use an analog port of your pabx for an intercom function by configuring this port for voice announcements This enables you make voice announcements for example into a waiting room via an internal telephone. During PC configuration you can configure one of the switching contacts such that contact is made during an ongoing call or voice announcement. You can use this feature for example for connecting an amplifier or stopping music play-back into the waiting room while you make your announcement.

> A voice announcement extension can be reached by internal subscribers only.

⤒	▦	♪	⤓
Lift up handset	Dial the internal number of the voice announcement extension	Voice announcement	Voice announcement

5.16   Message

Would you like to call your coworkers to a meeting, or invite your family out to eat? SYou could call each separate person to do this, or you can use the message function. With this function you need to make only one call to reach all of the telephones that are authorized for messages, without the called parties having to lift up the handsets of their phones.
Attention, Although you can be heard when you use the message function, it may not be possible to hear your coworkers or family members that you call. At the internal ISDN connection of your PABX only the first two team tele-

phones can be used simultaneously for a message. You can enable or inhibit the message function for each internal user (see page 43).

Refer to the operating instructions for your telephones whether the phones support the message feature.

Sending a message

⤴	✳ 5 4 0	▦	᠁	♪
Lift up handset		Internal or team number	Ack. signal	Message

5.16.1   Enable / Inhibit Message

You can enable or inhibit the sending of messages to your telephone. If you have disabled messages being sent to your phone, the caller that is attempting to send a message to you will hear the busy signal.

Enabling / Inhibiting   messages at telephones

⤴	✳ / #	5 9 1	᠁	⤓
Lift up handset	Enable message / Inhibit message		Ack. signal	Replace handset

5.17   Room Monitoring

You can monitor a room acoustically from a telephone in your PABX system, or from an external telephone. To do this, the telephone in the room to be monitored must be enabled for room monitoring with the correct code and the handset removed from the holder, or hands-free calling must be activated. If you hang up the handset of the phone in the room being monitored, or if you deactivate hands-free calling, room monitoring is ended and the feature is deactivated again.
This performance feature can not be used in conjunction with enquiry call, call forwarding or team call functions.

> Room monitoring is deactivated after each PC configuration and must subsequently be enabled and configured once again.

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5.17.1 Enabling room monitoring for an internal telephone

📞	✱ 5 9 3	🔆	
Lift up handset		Ack. signal	Do not replace handset / Do not deactivate hands-free calling

5.17.2 Room monitoring from an internal telephone

📞	🎛	🔆	
Lift up handset	Dial the number of the telephone to be used for room monitoring	Ack. signal	Room monitoring is activated

5.17.3 Room monitoring from external telephones

Using this function, room monitoring can be performed by an external telephone.

To initiate room monitoring from an external telephone, dial the number (MSN extension or direct dial-in number) to which the service number for the PABX is assigned. The service number (internal virtual subscriber) is assigned to this MSN in the PABX. You must then enter a 6-digit PIN. The PABX then checks your authorization for executing room monitoring from an external phone based on this PIN2.

In the initial state (when delivered), the internal number 59 is entered as the service number. This number can not be used in teams.

Please note that you must first allocate a multiple subscriber number (MSN) or direct dial-in number to this service number during PC configuration.

Room monitoring is protected by a 6-digit PIN 2 and can be activated by entering this PIN 2.

> In the initial state, this PIN 2 is set to ⓪⓪⓪⓪⓪⓪. To ensure adequate security you must change this PIN 2 and enable remote access to the PABX if you wish to use this performance feature.

You are at an external telephone.

Lift up the handset of the phone from which you wish to conduct room monitoring and dial the MSN or direct dial-in number to which the service number for the PABX is assigned.

If remote access has been enabled and possible at this time you will hear the special dial tone of your PABX.
Set your phone to DTMF dialing, or use a DTMF manual transmitter.

⊞	∴	⊞	∴	
Enter PIN 2	Ack. signal	Dial the number of the telephone to be used for room monitoring	Ack. signal	Room monitoring is activated

To end room monitoring, hang up the handset of the external telephone.

5.18   Malicious Call Identification (MCID) (Tracing)

You must apply for this feature at your service provider. You will then be informed of further procedures there. If you dial the appropriate code during a call, or after the caller has ended a call (you will hear the busy signal for the exchange) the caller's number is saved at the exchange. ISDN telephones can also use dedicated functions for this performance feature.

♪	＊ 5 1	∴	⤓
Ongoing call, or caller hangs up		Ack. signal	Replace handset

Attention: Only hang up the handset after you have entered the code for tracing the caller and hear the positive acknowledgement signal.

5.19   Allocating Project Numbers

Project numbers can be used, for example, for invoicing telephone calls for specific customers. If you have initiated calls yourself you can save the data for call duration and costs for this customer under the project number. If you are called by a customer, you can store the call data for this particular customer.

A project is activated by entering a code and a project number consisting of up to 6 digits.

If you have exported call data records using the cost registration program on the CD, you can, for example, sort, filter or compile these data records according to project numbers.

5.19.1   Project number for call you initiate

⤒	＊ 5 0	⊞	#	∴	⊞
Lift up handset		Enter project number (max. 6-digit)		Ack. signal	Dial number

Utilisation

5.19.2 Project number for external call to ISDN terminal device

You can use this performance feature at an ISDN terminal if your ISDN terminal device supports the function »Net direct« (Keypad) during an ongoing call.

You are conducting a call and wish to register it for a project.

📞	✳ 5 0	▦	#	⸚	📞
Conversation		Enter project number (max. 6-digit)		Ack. signal	Continue call

5.19.3 Project number for an external call

You can use this performance feature at an analog or an ISDN terminal device if your ISDN terminal does not support the function »Net direct« (Keypad) during an ongoing call.

You are conducting a call and wish to register it for a project.

📞	R ✳ 5 0	▦	#	⸚	R 📞
Conversation		Enter project number (max. 6-digit)		Ack. signal	Continue call

5.20 Keypad Function (»Net direct«)

Only recently you purchased the most modern telephone on the market. Since then, however, new performance features have been added to the ISDN network which you are not able to use just by pushing a button. Using the »Keypad« function you can utilize current ISDN functions by entering a key sequence from your ISDN or analog telephone.

Ask your network service provider about this and about obtaining the appropriate codes (e.g. activating filters at the exchange). Use of this feature must be enables for a user defined in configuration in the section »Internal user« on the tab »Performance features«. If the feature »Automatic exchange line acquisition« is activated you will not be able to use the keypad function. You must deactivate the »Automatic exchange line acquisition« function first.

The keypad functions can only be used by terminal devices to which an MSN has been assigned during configuration and for which this feature has been applied for at the exchange.

Initiating the keypad function

⬆ **Lift up handset**	**0** Dial line access digit	✱ or # Initiate keypad function	▦ Enter codes	⬇ Hang up handset

5.21 Multi-function Device

If an analog terminal device connection for the PABX has been configured as a »Multi-function port« <N>for multi-function devices, all calls will come in, regardless of their service function. With exchange line acquisition using a code the service IDs for »analog telephony«, »Fax Group 3« or »ISDN telephony« can be transmitted, regardless of the configuration for the analog connection. The service ID »analog telephony« is transmitted when you dial a 0.
Example:
You are unable to reach a fax machine of Group 3 that is operated with the service ID at a remote ISDN PABX system. By dialing the appropriate code, your PABX transmits the service ID »Fax Group 3«. The remote PABX system recognizes the service and connects you to the fax machine.

You would like to make an external connection to a certain service.

⬆ **Lift up handset**	✱**77**	**4** / **3** / **2** »Analog telephony« / »Fax Group 3« / »ISDN telephony«	▦ Dial the external number

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6   Conducting Calls with Several Parties

While you are conducting a call you can

- call a further party (enquiry call).
- accept a second call during an ongoing call (call waiting).
- transfer a call.
- transfer in the network (ECT).
- connect a waiting caller.
- conduct two calls at once while switching between the calls (broker's call).
- talk to two parties simultaneously (three-party conference call).

If you wish to utilize these functions at an external point-to-multipoint connection, you must apply for them. Ask your network service provider for details.

> The following sequences and codes apply to the use of analog telephones. ISDN telephones have their own (dedicated) procedures. Consult the operating instructions for your terminal devices for further information.

6.1   Enquiry Call

You can call another party at any time during an ongoing call.

☏	You are conducting a call. You would like to call another party.
R	Press the R key. You will then hear the internal dial tone.
▦	If you wish to speak to an external party, dial 0 first.
	If you hear a busy signal after dialing 0, either your telephone does not have proper authorization for an external call, or the line is busy.
▦	Dial the number of the party you wish to reach. You hear the ringing tone in the handset.
	The party is being called. The party being called lifts up the handset of his/her phone.
☏	Conduct your call.
	To end the enquiry call press the Disconnect key on your ISDN phone.

or

Utilisation

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R **✳** **1**	With analog terminal devices you must first dial the code **R** **✳** **1** the current call is then canceled and you are re-connected with the first party.
☏	Continue with your call.

6.2   Call Waiting

During an ongoing call you can accept, or refuse, a waiting call at any time.

> With analog telephones, no call waiting signals are given during internal calls. Call waiting is possible, however, for external calls to analog telephones.

6.2.1   Accepting a call (entering into an enquiry call)

☏	You are conducting a call. A second, external party calls you. You will hear the call waiting signal.
R **✳** **4**	Dial this code.
☏	You will be connected with the waiting party. Your first call is put on hold (see »Enquiry call«). For further procedures refer also to »Broker's call« or »Three-party conference call«.

6.2.2   Refusing a call

☏	You are conducting a call. A second business partner calls you. You will hear the call waiting signal.
R **✳** **1**	Dial this code to refuse the waiting call. The caller will then hear the busy signal.

6.2.3   Accepting a call

You can also accept a waiting call by hanging up the handset and ending the first call. When then lift up the handset again you will be connected with the caller who was previously waiting.

6.3 Transferring Calls

6.3.1 Transferring calls internally without advance notice

You can transfer calls when you dial the number of the internal party and then hang up the handset. The internal party is then called and can take the call when he/she lifts the handset.

📞   You are conducting an external call.

[R]   Press the R key.
You will hear the internal dial tone in the handset.

⌨   Dial the number of the internal party to whom you wish to transfer the call.

You will hear the ringing signal in your handset.
The internal party is being called.

If you hear the busy signal press the R key again to retrieve the call that is on hold.

📞   Hang up. The other party is being called. The party being called lifts up the handset and conducts the external call. If the called internal party does not lift up his/her handset you will be called back at your telephone after around 30 seconds.

6.3.2 Transferring calls with advance notice

You wish to transfer an internal or external call to another internal party and speak with that party beforehand.

📞   You are conducting an internal or external call. You wish to transfer the call to another party.

[R]   Press the R key. You will hear the internal dial tone.

If you hear the busy signal, press the R key again to retrieve the call.

⌨   Dial the number of the party to whom you wish to transfer the call.
You hear the ringing signal in your handset.
The other party is being called.
The party lifts up his/her handset.

📞   Conduct this internal call.
Tell your internal partner that you wish to transfer the call currently on hold to him/her.

📞   Hang up.

The other internal party can then continue with the call.

6.4 Explicit Call Transfer (ECT)

During an ongoing call, you have the option of accepting a further call, or of initiating a second call yourself. The first party is put on hold during the enquiry call. You can then connect both parties with one another and you will be disconnected (from that call).

In the Windows configuration program you can define for each subscriber separately whether an external party is to be put on hold in the PABX or in the exchange office.

Transfer within the PABX

The feature »Hold in the PABX« must be configured.

The two external callers will be connected via the PABX. Your PABX is not available for other external calls while an external, transferred call is in progress.

Transfer in the exchange office

The feature »Hold in the exchange office« must be configured.

The two external callers will be connected in the exchange office. Your PABX remains fully available (for two connections) while the transferred call is in progress.

You can only utilize this function if the performance feature »ECT« has been activated for your ISDN connection. Ask your network service provider for details.

6.4.1 Connecting calls

Please note that ISDN terminal devices can only utilize the performance feature »Connect« via a special key or menu function. The following procedure applies only to analog telephones.

☏	You are conducting a call with party 1. A further call is signaled, for example by call waiting.
R ✳ 4	Dial this code. Party 2 answers; you can speak with Party 2 and Party 1 is put on hold. and Party 1 is put on hold.
R ✳ 4	You would like to connect the two parties with one another. Dial this code. The two parties are then connected. The charges for the connection are billed to the party who established the connection.

Utilisation

6.4.2   Connecting a waiting caller

You have the option of putting several connections on hold and using a further connection (enquiry call connection) to transfer a party on hold. You can utilize this feature with a system telephone or with an ISDN telephone that support this function (refer to operating instructions for terminal device involved).

6.5   Broker's Call

The performance feature broker's call allows you to switch back and forth between internal or external callers. The party that is on hold will hear the music on hold (when programmed). With analog telephones you can switch between two callers. You can terminate each specific call. During system configuration you can define whether the callers are to be put on hold in your PABX or in the exchange office.

♪   You are conducting a call and wish to speak to a further party, without the first caller being able to hear your conversation with the second caller.

R   Press the R key.
You will then hear the internal dial tone.

▦   If you wish to speak to an external party, dial 0 first.

Dial the number of the party you wish to reach.
You will hear the ringing signal in your handset.
The other party is being called.
The party being called lifts up the handset of his/her phone.

♪   Conduct your call.
The first call is put on hold.

R ✳ 2   Dial this code to return to your first caller; the second party is put on hold. You can then use this code to switch back and forth between the two callers.

    or

R ✳ 0   You can end the call that is on hold.
Dial this code.

    or

R ✳ 1   You can end the current call.
Dial this code.

- If you switch back and forth between an internal caller and an external party (broker's call) and then hang up your handset, your call is terminated and the two callers will be connected with one another!
- If you switch back and forth between two external parties (broker's call) and then hang up your handset, the current call is terminated and the caller on hold will call you by way of the »Call-back« function.
- If, during a broker's call, you press the R key and then dial *4, the two external parties are connected with one another and your call with both of the external parties is terminated. The charges for the call that you initiated will be billed to you.

6.6   Three-party Conference Call

You can make three-party conference calls with external and internal callers.

To conduct a three-party conference call in the exchange office with two external callers the performance feature »Hold in exchange office« must be specified during configuration. Only one B channel of the ISDN connection is occupied with two external callers.

The performance feature »Hold in PABX« must be configured to conduct a three-party conference call in the PABX with external or internal caller. Both B channels of the ISDN connection are used when making a three-party conference call with two external parties.

You can also include a caller from »call waiting« or »on hold« in an ongoing call.

6.6.1   Initiating a three-party conference call

📞   You are conducting a call with one party and wish to include a further party in the call.

R   Press the R key.
You will hear the internal dial tone.

If you wish to speak to an external party, dial 0 first.

▦   Dial the number of the party you wish to reach.
You will hear the ringing signal in your handset. The other party is being called.
The party being called lifts up the handset of his/her phone.

📞   You would like to include this party in the first call.

| ⁅R⁆ ⁅✳⁆ ⁅3⁆ | Dial this code. |

| ⁅✄⁆ | Conduct your three-party conference call. |

You would now like to exclude the party that you first brought into the conference call from further conversation. This caller then remains on hold in an enquiry call.

| ⁅R⁆ ⁅✳⁆ ⁅2⁆ | Dial this code. |

| ⁅♪⁆ | You can then continue your call with the second party. The first party is on hold. |

The conference is ended when you hang up your handset. A party included in the conference call can hang up at any time and the party which initiated the call can then continue the conference with the remaining callers.

7 Never Out of Touch

7.1 Call forwarding

Using the function »Call forwarding«, the PABX provides you with a means for remaining accessible, even if you leave your desk or phone. This is achieved by the system automatically forwarding calls to another internal or external number. During PC configuration for the PABX you can specify for each internal subscriber whether this feature is to be executed within your PABX system or in the exchange office.

Call forwarding in the PABX

The PABX connects the calling party with the internal or external subscriber that you have specified. The B channel of the ISDN connection is used for an external call, depending on your particular configuration.

Call forwarding can also be made to a team number.

Call forwarding in the exchange office

• You can use the features supplied by your network operator privided that these features are active. Contact your network service provider for more information.

The exchange office connects calling parties with the external number that you have specified. Internal call forwarding is activated by the PABX within the PABX.

At a point-to-multipoint connection all calls are forwarded for the MSN that is called. Other terminal devices of the PABX to which the same MSN has been assigned are not called (partial rerouting).

> If call forwarding has been configured but is not carried out by the exchange office (because this feature was not applied for) calls will automatically be forwarded by the pabx.

There are three different variants of call forwarding:

• Call forwarding immediately – The call is forwarded immediately to the defined number.

• Call forwarding on no answer – The call is forwarded after 15 seconds (depending on the setting in the PABX or at the exchange office; partial rerouting).

• Call forwarding on busy – The call is forwarded only if the destination telephone is busy.

Ongoing call forwarding cal also be overwritten by a new call forwarding. Other call forwarding variants may also be activated simultaneously. For example call forwarding by time, to number 12345 and AWS on busy, to number 45677.

7.1.1   Activating call forwarding

Using this procedure, all calls will be forwarded to the MSN to which the terminal device initiating the function is assigned, even if several terminal devices are assigned to this MSN.

The PABX recognizes automatically by the length of the number whether call forwarding is to be made to an internal or external subscriber. This is why the destination number for call forwarding to an external subscriber is always input without the line access digit (LAD).

⬆	✳	**6 1** / **6 2** / **6 3**	⬚	**#**	∿	⬇
Lift up handset		Call forwarding continuous/ Call forwarding on no answer / Call forwarding on busy	Destination number for call forwarding (without LAD)		Ack. signal	Replace handset

7.1.2   Deactivating call forwarding

⬆	**#**	**6 1** / **6 2** / **6 3**	∿	⬇
Lift up handset		Call forwarding continuous / Call forwarding on no answer / Call forwarding on busy	Ack. signal	Replace handset

7.1.3   Call forwarding in Teams

Certain conditions apply for call forwarding to users who are assigned to a team:
Each individual user can initiate call forwarding from his/her internal number to another user (regardless of that user's team assignment).
Call forwarding can also be specified from a user to a team number. If call forwarding is initiated from one team number to the team number for a different team, the function will not be active and the user initiating the call forwarding

function is called. In this case, call forwarding only becomes active if there is only one user entered under the team number for which call forwarding is specified.

<div style="background-color: #FFC000;">
Call forwarding from one team number to another team number is only possible when there is only one user entered for the team that is forwarding the call.
</div>

7.1.4 Example

Team allocations:

Users 10 and 11 are assigned to Team 00 (Team number 28).
Users 13 and 20 are assigned to Team 01 (Team number 29).
User 14 is assigned to Team 02 (Team number 18).

1st possibility:

User 10 activates call forwarding to user 13:

When user 10 is called with the number 10, the call is forwarded to user 13.

If Team 00 is called (internal or external call) with the team number 28, the call is forwarded to user 13. User 11 in Team 00 is called.

2nd possibility:

User 10 activates call forwarding to team number 29 (Team 01):
When user 10 is called with the number 10, the call is forwarded to Team 01 (user 13 and 20 are called).
If Team 00 is called (internal or external call) with the team number 28, the call is not forwarded to Team 01 (user 13 and 20).

3rd possibility:

User 14 activates call forwarding to team number 28 (Team 00):
When user 14 is called with the number 14, the call is forwarded to Team 00 (user 10 and 11 are called).
If Team 02 is called (internal or external call) with the team number 18, the call is not forwarded to Team 00 (user 10 and 11).

4th possibility:

User 10 activates call forwarding to user 11:
When user 10 is called with the number 10, the call is forwarded to user 11.
If Team 00 is called (internal or external call) with the team number 28, the call is forwarded only to user 11.

Utilisation

Call forwarding is activated by ISDN terminal devices in accordance with their specific operating sequences. Please consult the operating instructions for your ISDN terminal devices for proper use.

7.2 Follow me (configuring call forwarding from a different telephone)

If you are at a different location, and not at your phone, you have the possibility of having calls made to your phone while you are away forwarded to a telephone near or at your current location (Follow me). You can also forward calls from other phones to your phone. When you lift up the handset of your phone a special dial tone will remind you that you have call forwarding currently activated.

7.2.1 Internal configuration of call forwarding (internal Follow me)

📞	✱ 6 4	▦	#	⌁	📞
Lift up handset		Internal number whose calls are to be forwarded		Ack. signal	Hang up handset

Call will then be forwarded to the specified telephone.

7.2.2 Deactivation of internal call forwarding (internal and external Follow me)

📞	# 6 4	▦	#	⌁	📞
Lift up handset		Internal number for which call forwarding is to be canceled.		Ack. signal	Hang up handset

7.2.3 External activation / deactivation of call forwarding (external Follow me)

For the weekend you have rerouted the fax number of your office to your private fax machine at home. Now, you make the nearly 30 minute trip to work and would like to receive the fax messages addressed to your office in your office.
This is where you can use the function »Follow me - external« to cancel call forwarding from home so that your fax messages will arrive there where you

need them when you arrive at your office.
Of course you can also use this function to set up or cancel call forwarding to any destination you desire.
To set up call forwarding, dial the MSN assigned to the service number (internal virtual user) from your external location. In the initial state, the number 59 is entered as the service number.
Remote access must be enabled during configuration in order for you to use this function. The PABX uses the 6-digit PIN2 to check the authorization for call forwarding from an external location.
Please note that you must first assign the service number to an MSN during PC configuration to use this function.
In the initial state the 6-digit PIN2 for remote access authorization is set to 000000. You must change the PIN2 in the PC configuration, as otherwise you will not be allowed access to the PABX system.

You are located at an external telephone.

Lift up the handset of your phone and dial the MSN to which the service number has been assigned.

If remote access for call forwarding is enabled you will hear the special dial tone for your PABX.
Set your phone to DTMF dialing, or use a DTMF manual transmitter.

Setting up call forwarding from an external location

▦	∿	*64	▦	*	0	▦	#
Enter PIN 2	Ack. signal		Internal number whose calls are to be forwarded		Destination number for call forwarding (with LAD)		

You will then hear the positive acknowledgement signal for about 1 second; the connection is then terminated and you will hear the busy signal.
Replace the handset.

Canceling call forwarding from an external location

▦	∿	#64	▦	#	∿	☎
Enter PIN 2	Ack. signal		Internal number for which call forwarding is to be canceled		Ack. signal	Hang up handset

After you cancel call forwarding (positive acknowledgement signal), the connection is terminated and you will hear the busy signal.

Utilisation

8 Monitoring Costs

8.1 Call data records

The PABX can store up to 500 call data records. This data is not lost in the event of a loss of power.

The call charges can be displayed at ISDN terminal devices that support this feature.
The PABX saves call data records that can then be output at the PC, laptop or printer.During configuration you can specify whether call data records are to be saved for specific terminal devices etc (under »Internal subscriber« at the tab «Features»).
These call data records contain information about the type of connection, the terminal device initiating the connection, the external number called and the charges for each call.Call data records can be registered for all incoming, external calls, or by a specified project number.
In the initial state, all incoming and outgoing external calls that you make are stored.
You can use the corresponding program on the VD to edit the call data records.

There are two ways to transfer the costs of calls:

Transfer of rate information in units. These units are then converted to a currency value using a defined factor.The currency must be specified previously in PC configuration however.

Transfer of the currency value. No conversion is required at the terminal device when this method is used.

Ask your network provider which method is used to transmit your charge rate data. Ensure that your terminal device supports the method that is used.

You can use either of these methods with your PABX system. The factory setting of your PABX system is for transfer of units. If your network service provider changes over to the transfer of units the 230 V ~ power supply for your PABX must beinterrupted for around 30 seconds. When the PABX is then restarted it will automatically recognize the new method being employed.

After that, you will have to change this setting in order to perform evaluation using the charge manager program on your PC!

8.1.1 Communication data overflow

If the pabx memory has already stored more than 480 communication data sets, a communication data overflow can be indicated by system telephones.Depending on the system telephone type used, the caller list either

displays the service number together with a message or the service number only. The ready indicator flashes until the communication data are deleted.

8.1.2 Terminal devices

The communication / call charges can be displayed at any terminal devices that support this feature.

8.1.3 Analog terminals

Charge pulse can be transmitted to terminal devices via the first 4 analog ports.The transmit pulse frequency can be set during PC configuration to 16kHz or 12kHz.
elmeg D@VOS.net: The transmit pulse frequency is fixed and can not be modified.

8.2 Call charge Accounts (Cost limit, Allowance account)

A call charge account can be set up for each internal user. The charge rate units available to that particular user are defined in this account. If the user uses up his/her allotted units he/she can then only make internal calls. If this limit is reached during an ongoing call, the call can be completed. The user can make external calls again when the number of units on his/her account is then increased.

> Please note that user's charge account must be activated and transmission of the rate information must be applied for at your network service provider in order to utilize this performance feature. If you make a call using a different provider which does not transfer the charge rate information, the call account function will be ineffective.

Before you enter the units for the call account you must clear the unit counters for the internal number of the account holder.
After this you can configure the call account.

8.3 Least Cost Routing (LCR)

> Please ask you specialized dealer, whether this feature is possible with your system.

You can obtain the rate data for the LCR function from TELEDATA-UPDATE Gesellschaft für Telefon-Tarifdaten-Management mbH mbH using the default number in the product.ELMEG GmbH & Co. KG Kommunikationstechnik cannot warrant that this tariff data is up-to-date, complete and correct and declines any liability resulting from the use of such data.

Normally, when you lift up the handset of your phone and dial the LAD (as-delivered state: 0) you will be connected with your network service provider. The built-in Least Cost Routing feature lets you make calls via an alternative carrier or service provider.
Your pabx supports two different Least Cost Routing procedures, which you can use. In its initial state, no LCR procedure is activated in your PABX.
Configuration of the various LCR procedures is performed using a PC and the WIN-Tools CD supplied with the system.Switching between the different LCR procedures can also be effected using appropriate code procedures at an authorized telephone. You can set whether the LCR procedure will be applied to all users of the PABX, or whether only individual users are authorized to use LCR.

Please note that there are some providers whose services must be applied for. Some of these providers automatically set up a connection to enroll unregistered customers. If you terminate such a connection during dialing and then subsequently attempt to set up this link again, this may result in errors during calling (communication will not be established). In this case it will be necessary to deactivate the provider concerned in the LCR Manager on the WIN-Tools CD and to update the date records in the PABX.

Important notice for using the LCR procedure

- When a connection is established via a provider, the name of that provider is shown in the display of system telephones.
- Users can be inhibited from using this feature in PC configuration.
- The rate information is not logged completely in the call data records of the PABX when using the LCR procedure, as this information is not furnished by all service providers.
- When call forwarding is activated you should enter the network service provider as the main provider to ensure a high degree of accessibility.
- Call forwarding in the exchange office, or automatic call-back to an external party will always be executed via the network service provider.

8.3.1   Call-by-Call

The feature Call-by-Call allows you to make calls using one or more additional service providers that you have programmed in your system. You can enter up to 10 providers when programming your PABX for this. The PABX will then always first dial the number of the provider that you enter first in programming. If that provider is busy the PABX will automatically dial the number of the next

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provider in the list. If all of the providers in the list are busy the connection will be set up via your standard network service provider.

You can define 50 number in the PABX (partial numbers) that are not affected by the call-by-call function. If you make a call that begins with one of the partial numbers in the list this number is dialed directly, without the code for the provider being added.

Examples of partial numbers that should not be subject to the call-by-call function:

1...9	Numbers in your own area network
010	Dial-up of other providers
0130, 0180, 0190	Service numbers in Germany
0700, 0800, 0900	Service numbers in Germany
0800	Service numbers in Austria
0800, 0900	Service numbers in Switzerland

8.3.2   Call-by-Call with rate tables

When this LCR procedure is used the PABX will dial up the least expensive provider, based on the rate tables and the time when the call is placed. You can select up to 40 providers for this whose rate tables can be loaded in the PABX. Selection of the most reasonably priced provider is made based on the time and the rate zone chosen on the grounds of the local, national or network prefix code. Service numbers (see table) for which a fixed rate applies are not included in the LCR procedure.
If a selected provider is busy the PABX makes further attempts (maximum of 4 repeated attempts for each provider) to set up the connection via this provider before moving on the next most reasonably priced provider in the list. The PABX can make up to 10 attempts at dialing up via providers. If none of these attempts are successful the connection will be set up via your standard network service provider.

You must always download the most current rate tables for your selected providers in order to utilize the LCR function most effectively in your PABX. The LCR service provider »TELEDATA-UPDATE« is available for initial configuration of the rate tables, or for subsequent updating of the tables.

Initial configuration / download of the rate tables

Initial configuration of this LCR function and the requisite download of the rate tables can only be carried out using the LCR manager on the elmeg WIN-Tools CD.The PABX saves the necessary data (for example number of the LCR service provider, desired providers, type of regular download) to your system to enable you to automatically update the rate tables according to your needs at later dates.

In its initial state there are no provider data stored in the PABX. When you initially start the LCR manager on the WIN-Tools CD you will be requested to load a list of possible providers. Check the number of the LCR service provider »TELEDATA-UPDATE« and select the interface to be used for downloading the list of providers.

You can select up to 40 providers from this list that you wish to use for making calls. After you have selected your preferred providers you can load the rate tables from the LCR service provider. The rate tables will then be available in the PABX and on your PC for monitoring.
You can deactivate the providers in the list that you do not wish to use and load the modified data into your PABX.

Updating (Update) the rate tables

There are three different methods for updating the rate tables of your selected provider.

- Manual update using the WIN-Tools LCR Manager
- Automatic updating at a pre-programmed time (e.g. periodically at the 1st of every month)
- Manual update using the PABX system menu
- Manual update using a code procedure

Automatic updating of the rate tables is only possible when you input the appropriate data concerning the time and interval of automatic updating during the initial download via your PC. This data is stored in the PABX. At the pre-programmed time (date), the PABX sets up a data link automatically to the LCR service provider and loads the new rate tables for the providers stored in the PABX. If you deactivate the loaded rate tables for certain providers before the next download, the tables for these providers will not be reloaded.

> After an automatic update using the LCR manager on the WIN-Tools CD check to ensure that the update was carried out properly.

You can also perform a manual update of the provider rate tables in the PABX using the appropriate code procedure.

| ⬆ | ✳ 7 9 8 | 0 | ⌗⌗ | ⌗ |

| ⬆ Lift up handset | ✳ 7 9 8 | 0 Line Ac- cess Digit | number of the LCR service provider »Teledata-Update« | ⌗ |

	Number of the LCR service provider
1	**01 90 87 00 92** (Teledata Update)
2	

When the data link has been established successfully you will hear the music on hold of your PABX. At the completion of data transfer you will hear the busy signal. Replace the handset.

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8.4   Direct call

Say you are away from home and you wish to make a telephone call quickly and in an uncomplicated manner to someone at home (children or grandparents for example).
Since you have already configured the function »Direct call« for one or more of your phones, you only need to lift the handset of one of these phones. After five seconds without any numbers being dialed the PABX will automatically dial the defined direct call number.

You can enter the number yourself of the party that is to be called prior to calling. The PABX system recognizes by the length of the number whether you have entered an internal or external number. You therefore do not need to input a prefix code for external numbers. If you wish to edit a direct call number that has been entered you can simply enter the new direct call number without deleting the old number. You can also perform the following settings using PC configuration.

8.4.1   Preparing a direct call with set numbers

⬆	✳ 6 5	▦	#	⚇	⬇
Lift up handset		Number (without LAD)		Ack. signal	Replace handset

> Now, when you lift up your handset the direct call number will be dialed after five (5) seconds.

8.4.2   Activating the direct call function

⬆	# 6 5 ✳	or	✳ 6 5 #	⚇	⬇
Lift up handset	Deactivate direct call		Re-activate direct call	Ack. signal	Replace handset

The numbers stored in the PABX for direct calls are retained even when the direct call function is deactivated.

8.4.3   Deleting a direct dial-in number

↑	# 6 5 #	··	↓
Lift up handset	Delete direct call	Ack. signal	Replace handset

The stored direct dial-in number is deleted.

9   Block dialing (Austria)

Using block dialing (prepared dialing) you can first input a number completely at a terminal device to put it into the buffer memory in the PABX system. You can then initiate dialing of the complete number. Some network service providers require block dialing to enable direct dialing to a certain terminal device. This performance feature is described in the operating instructions for the ISDN terminal devices. Block dialing is also possible for internal communications.

↑	Lift up the handset of your phone. You will hear the internal dial tone.
* 5 5	Dial this code.
0	Dial this code 0.
▦	Dial the number you wish to call.
#	Begin dialing by pressing the key #. Only now is the call transferred to the exchange office. You will hear the ringing signal in your handset. The external party is being called. The party being called lifts up the handset of his/her phone.
♪	Conduct your call.
↓	End the call by hanging up your handset.

10   TFE (elmeg C48.net)

To connect a door intercom unit to your PABX system you need the TFE module or the Doorline module from Deutsche Telekom AG. The DoorLine module is compatible only with dedicated DoorLine intercoms, given that the module and the door intercom are connected with two wires. Up to three bell buttons can be assigned to each door intercom device. Four bell buttons can be assigned to a DoorLine module. »Day« and »Night« modes can be assigned to each bell button. When the bell button of the door intercom device is pressed, all terminal devices assigned to that particular call mode are called. The door intercom device, however, can only be used by those terminal devices to which the corresponding door intercom rights have been assigned (see PC configuration). You can set the door intercom call duration separately for each bell button via PC configuration (default setting is 40 seconds). With analog phones, a waiting call will be signaled if that analog phone is busy.

You can also program an outside number for the door intercom call mode. When the door bell button is pressed, the call will be routed to the programmed outside number. The communication costs for routing the call to the outside number are assigned to the internal door intercom number.

🕬	🔼)	R	✳9 9	⁙	) 🔽
Door entry phone call	Conversation via doorline phone module		Actuate the door opener	Ack. signal	Conversation via doorline phone module

> Note: If a door entry phone call is signaled at a different telephone or if you hear the door bell ring, you can dial the door intercom phone number and pick up the door entry phone call yourself, provided you have the corresponding rights to do so.

Opening the door with ISDN telephones that do not support suffix dialing: If you wish to open the door, terminate the door entry phone call and replace the handset. Lift up the handset again and dial »*99« to open the door.

10.1   Switching door intercom call modes

10.1.1   Switching all call modes

You can switch over all team call modes and doorline call modes simultaneously. This switchover can be performed by any user with the proper privileges.

10.1.2   Switching all day/night call modes

⬆	✱ / #	9 ✱	〰	⬇
Lift up handset	Swiching day/night		Ack. signal	Replace handset

10.1.3   Switching all day/night call modes

⬆	✱ 9 6 ✱	or	# 9 6 ✱	〰	⬇
Lift up handset	Call mode »Day«		Call mode »Night«	Ack. signal	Replace handset

10.2   Signal input

> The TFE module is equipped with the signal input Me4 and the switching contacts Ma1/Ma2 und Zw1/Zw2.

> The DoorLine module is equipped with one signal input Me and four switching contacts K1...K4

If this signal input is connected, a signal will be transferred to:

>   the switching contact

or

>   the internal extension numbers entered in the signal call list
>   and / or to the switching contact

or

>   the outside telephone numbers and, if selected, to the switching contact.

Signal input

The signal input is marked Me4 on the TFE module and ME on the DoorLine module.If the initiating signal input is activated again during an ongoing signaling call, this signal is ignored.

Signaling call signaled at the switching contact

If a switching contact is configured as a signaling call, this contact is then closed for a time that can be defined (in initial state for 3 seconds).

Internal telephones

Internal analog telephones are called in the cycle of the signaling call. The signaling call for ISDN telephones must be set in accordance with MSN signaling for these phones. When the person being called lifts up the handset of his/her phone, he/she will hear the signal tone for the time configured with the PC. If an answering machine has also been configured, the user will also hear the announcement by the answering machine after it is activated. The number configured for PC configuration is then shown in the display of ISDN telephones and of analog telephones equipped with the CLIP function. If a telephone is busy, the call waiting function is initiated, if at all possible.

If a signaling call can not be put through immediately (e.g. user is busy and call waiting is not possible), it will be repeated after the signaling call time expires. This procedure can be repeated up to 6 times.

External telephones

The signaling call is signaled for a set time at the first telephone entered in the list. If the user does not answer, or if the phone is busy, the second telephone entered in the list is called. If the second user does not answer, or if the phone is busy, the first user is called again. This procedure can be repeated up to 3 times. When the person being called lifts up the handset of his/her phone, he/she will first hear the signal tone, followed by the answering machine announcement, if one has been configured. If a signaling call can not be put through immediately (e.g. no external ISDN connection available), the call is repeated after the programmed signaling calling time has expired. This procedure can be repeated up to 6 times.

> The signaling call always has priority!
> If a signaling call is to be signaled at an external phone, but all of the external ISDN connections are busy, one of these connections will then be terminated and the signaling call signaled via this connection.

Answering machine

The answering machine may be an analog device, an ISDN device, or a PC via an ISDN connection. Assigment is done via a special code.

10.2.1   Signal call

Activating/ de-activating signalisation call function

`☎` `✳` `9` `5` `1`   `0` / `1` / `2`   `📶`   `📞`
De-activating signal call /   Ack.   Hang
Activating internal signal call /   signal   up
Activating external signal call   handset

10.3   Switching contacts

The pabx's TFE doorline phone module is fitted with two switching contacts (Ma1-Ma2 and Zw1-Zw2).Switching contacts can be programmed as on/off switches or as buttons. When programmed as a button, the switching time can be set to between 1 and 999 seconds. A specific code allows you to trigger the corresponding function either internally or externally (remote action).

> In the event of a loss of power and after a reset the switching contacts are idle.

Activating/ de-activating switching contacts

`☎`   `✳` `9` `7` `0` / `#` `9` `7` `0` / `✳` `9` `7` `1`   `1`...`4`   `📶`   `📞`
Activating a switching contact /   Select   Ack.
Deactivating a switching contact /   switching   signal
Key function   contact

Switching contacts from an external location

This feature enables you to trigger a switching contact from an external phone.
In order to switch the contact, dial the service number on your external phone (internal virtual subscriber). In the initial state, the number 59 is entered as the service number. Remote access must have been enabled during configuration. The PABX uses the 6-digit PIN2 to check the authorization for switching contact activation from an external location.

> Please note that you must first assign the service number to an MSN during PC configuration to use this function.

> In the initial state the 6-digit PIN2 for remote access authorization is set to 000000. You must change the PIN2 in the PC configuration, as otherwise you will not be allowed access to the PABX system.

📞⬆	Lift up the handset of your phone (external subscriber).
⌨	Dial the service number of your pabx. (Point-to-multipoint access:MSN Point-to-point access:pabx number+direct dial-in) If remote access to the pabx is enabled you will hear the special dial tone for your PABX. Set your phone to DTMF dialing, or use a DTMF manual transmitter.
⌨	Enter the 6-digit password (PIN2) for your pabx.
〰	You will hear the acknowledgement signal for one second.
⌨	Select the desired function:
✳970	Activating.
#970	Deactivating.
✳971	Key function.
1…4	Select switching contact 1…4.
〰	You will then hear the positive acknowledgement signal for about 1 second; the connection is then terminated and you will hear the busy signal.
📞⬇	Hang up.

11   PABX Settings

You can also conduct the following settings using the PC configuration.

11.1   Activating/Deactivating Call Signaling for Analog Terminal Devices

You can activate/deactivate the ringing of your analog terminal devices for internal, external or all calls. You will still have use of all of the other functions for the terminal device. When the caller places a call he/she will hear the ringing signal. When you lift up the handset during a call (you can not hear the call) you will be connected with the caller.

11.1.1   Deactivating call signaling for analog terminal devices (activating don't disturb feature)

📱	✳️ 5 7	0 / 1 / 2	🔊	📱
Lift up handset		All calls / external calls only / internal calls only	Ack. signal	Replace handset

11.1.2   Activating call signaling for analog terminal devices (deactivating don't disturb feature)

📱	# 5 7 0	🔊	📱
Lift up handset		Ack. signal	Replace handset

11.2   Transmission of Line Access Digit (Line Access for Caller List)

Some ISDN telephones can not utilize the caller list at the PABX. If an external is call made at these telephones, their number that is transmitted is not provided with the required LAD. As a result, a wrong number is dialed on call-back. You can configure »External assignment code (LAD) for caller list« for this telephone to prevent this from happening. The PABX will then place the LAD in front of the number automatically for external calls. You can config-

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ure this performance feature for any terminal device using the procedure described below.

Activating / Deactivating Line Access Digit

🔼	✳ / #	5 9 2	〰	🔽
Lift up handset	activate / deactivate		Ack. signal	Replace handset

11.3   Teams

Teams are groups of persons who work together to achieve a set goal. Normally, this means that all of the members of a team can be reached at a common number for external and internal calls. In the PABX this means that a number can be specifically assigned to each team of telephones / terminal devices, allowing all team members to be reached at all times for external and internal calls.

In PC configuration you can assign up to eight (10) internal numbers or one number for external call forwarding to each of the possible teams. These teams can, in turn, be allocated to the external MSNs. A team number can be specified in PC configuration for the team for internal team calls.

If an internal team member dials a team number, then the team name will be shown during the call on the display of his or her telephone.If a team member answers the call, then his or her name will be displayed.

If the MSN is dialed by an external party, or the team number by an internal user, all of the assigned terminal devices are called. You can enter various terminal devices (e.g. telephone, Fax Group 4) for the teams; the calls are signaled in accordance with their specific service ID.

> Teams can also be called during an ongoing enquiry call or on call forwarding. It is also possible to forward a call to a team.

11.3.1   Call to a busy team member (»Busy on Busy«)

If a member of a team is making a call you can decide whether further calls are to be signaled for this team (PC configuration setting). If the function »Busy on busy« has been configured for this team any further callers making calls to this team will receive the »busy« signal.

11.3.2   Enabling / Inhibiting a member's phone within a team

Let's assume you have to leave your normal area and would still like to be reached by phone at the other location.
You can disable your telephone for call signaling in a team or in all teams and enable it later. Enabling or inhibiting is always conducted simultaneously in the day/ night team call allocation. If your phone is disabled in a team no further team calls will be signaled at your phone.

If all team members' phones are disabled in the day/night team call allocation, the calls for this team will be signaled at the terminal devices of Team 00. If no terminal device is enabled for call signaling in Team 00, the caller will hear the busy signal.<R>D@VOS.net:In the initial state the numbers 10, 11, 12, 13 and 20 are entered and enabled for Team 00 in the day/night team call allocation.

elmeg C48.net: In the initial state the numbers 10, 11 and 20 are entered and enabled for Team 00 in the day/night team call allocation.

> The specific internal number must be assigned to the corresponding team to enable or inhibit a telephone within a team.

11.3.3   Enabling / Inhibiting subscribers within a team

📞	✳ / #	9 4 3	⌨	📶	📞
Lift up handset	Enable/Inhibit subscriber		Team number (00 … 09)	Ack. signal	Replace handset

@1.1.1 =Enable / inhibit member(s) in all teams

📞	✳ / #	9 4 3 ✳	📶	📞
Lift up handset	Enable/Inhibit subscriber		Ack. signal	Replace handset

11.3.4   Switching day/ night call assignments for teams (call distribution)

The Day/Night team call assignment defines which internal telephones should ring when an external call comes in. The day/night team call-assignment list is a table in which incoming calls are assigned to internal users.

Let's say you wish to reroute important business calls to your (home) office to an answering machine for after hours so that you will not be disturbed at

home.

In PC configuration you can assign two different call distribution options (team call assignment day/night) to each team. Call forwarding to an external subscriber is also possible for day/night team call assignments, allowing you to always be reached by important callers, for example. You then only need to switch the team call assignment option from day to night and call will be signaled where you need them to be.

> You can switch over the day/night team call mode at any time during the day or night. This switchover can be performed by any user with the proper privileges (default setting: no subscriber).

11.3.5 Switching all call modes

You can also switch over all team call modes and doorline call modes simultaneously.This switchover can be performed by any user with the proper privileges.

11.3.6 Activating all day/night call modes (teams /doorline phone modules)

☎	✱ / #	9 ✱	⁌	☎
Lift up handset	Swiching day/night		Ack. signal	Replace handset

11.3.7 Activating day/night team call assignment for all teams

☎	✱ 9 3 ✱	or	# 9 3 ✱	⁌	☎
Lift up handset	Call mode »Day«		Call mode »Night«	Ack. signal	Replace handset

11.3.8 Activating day/night team call assignment for one team

☎	✱ 9 3	or	# 9 3	⌗	⁌	☎
Lift up handset	Call mode ᵃDay´		Call mode »Night«	Team number (00 …09)	Ack. signal	Replace handset

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12   Configuration using a telephone

12.1   StartingConfiguration Using a Telephone

Various settings are protected by PIN1 in the PABX. In the default state, this PIN 1 is set to 0000. After you begin configuration you can set the performance features for your system using the codes described here. The telephone being programmed can not be reached while the system is being configured.

You will hear the positive acknowledgement signal once you conclude configuration for a setting successfully. You can then move on to configure the next setting. If you wait for more than 40 seconds between one entry and another, the PABX will terminate configuration and you will hear the busy signal. All input that you have made up to that point which was concluded with a positive acknowledgement signal will be saved when you hang up the handset. Saving is performed for 10 seconds after you hand up the handset. During this period it is important that you do not begin a new configuration of the system, or that power is not interrupted to the system.

The following procedure must be performed one time at the beginning of configuration:

⬆📞	✳✳	〰	0 0 0 0	〰
Lift up handset		Ack. signal	Enter PIN 1	Ack. signal

⚠ This symbol indicates that a configuration is required.Be sure to complete the "Initial programming" before entering codes.

You can set the following features:

- Setting up a call charge account (see page)
- Changing PIN 1 or PIN 2 (see page 78)
- Enable or inhibit remote access (see Page 80)
- Activate/ de-activate LCR (see page 81)
- Cancel settings (see page 81)
- Time acceptance (see page 80)
- Setting the date and the time (see page 80)

12.2   PIN 1 / PIN 2

You can prevent misuse of your PABX by other parties by implementing various security functions. Your PABX settings can be protected using your 4-digit PIN1 (code number). Access by external parties (remote access) is protected using your 6-digit PIN2.

PIN 1 (4-digit): Security precaution against misuse of your PABX by other parties.

PIN1 is a 4-digit code number that is required when you wish to protect your system settings against unauthorized access.

PIN 2 (6-digit): Security for settings made from external telephones

For the settings

- External call forwarding (Follow me)
- Room monitoring switching contacts (only elmeg C48.net) from an outside location

prevent unauthorized parties from using your PABX. A 6-digit PIN2 (code number) is provided for this. Only after you enter this 6-digit PIN2 are you allowed to utilize functions in your PABX that can be activated/deactivated from external telephones.

> Remote access using this 6-digit PIN2 is only possible when this PIN2 has been changed individually, i.e. that it is no longer in its initial setting of 000000.

Changing PIN 1 / PIN 2

⚠ **9 1 1**	or	**9 1 2**	▦	▦	∿
Change PIN 1 (4-digit)		Change PIN 2 (6-digit)	Input new PIN	Input new PIN	Ack. signal

Write down your PIN and keep it in a safe place, because, if you forget or lose your PIN 1 you will no longer have access for configuring the PABX. Note: If you do forget your PIN 1, call the service center of your dealer. They can reset your PIN 1 to its initial setting.

12.3 Setting up cost monitoring

12.3.1 Clearing the unit counters

Clear the unit counters for one or all of the users.

ⓘ **8 5 0**	🔢 or ✳	〰
Code	internal number (for one) or * for all internal users	Ack. signal

12.3.2 Setting up / Deleting call accounts

Setting up call accounts

ⓘ **8 3 0**	🔢	🔢	#	〰
Code	internal num- ber	Units, max. 6-place		Ack. signal

Deleting call accounts

ⓘ **8 3 0**	🔢	#	〰
Code	internal number		Ack. signal

If you delete a call account, external calls can no longer be made from the as-
signed terminal device.

12.3.3 Activating/Deactivating call accounts

ⓘ **8 9 0**	🔢	✳ / #	〰
Code	internal number	activate / deactivate	Ack. signal

12.4   Time acceptance from ISDN network

You can activate or deactive the time acceptance function from the ISDN network. This feature is required, in case the ISDN network does not transmit the time correctly. When you switch off, the time setting will be stored by the PABX. You can also enable the time acceptance feature during PABX configuration with a PC.

$\boxed{!}\boxed{7}\boxed{8}\boxed{4}$ $\boxed{*}/\boxed{\#}$ $\boxed{\sim}$

Time accep-   On/off   Ack.
tance   signal

12.5   Setting the date and time

If your service provider does not transmit date and time data, you can enter the date and time manually.

$\boxed{!}\boxed{9}\boxed{8}$ $\boxed{0}\boxed{1}$ $\boxed{0}\boxed{0}$ $\boxed{0}\boxed{0}$ $\boxed{0}\boxed{0}$ $\boxed{0}\boxed{9}$ $\boxed{\sim}$
        ...$\boxed{1}\boxed{2}$ ...$\boxed{3}\boxed{1}$ ...$\boxed{9}\boxed{9}$ ...$\boxed{2}\boxed{3}$ ...$\boxed{5}\boxed{9}$

Setting   Month   Day   Year   Hour   Minute   Ack.
the time   signal
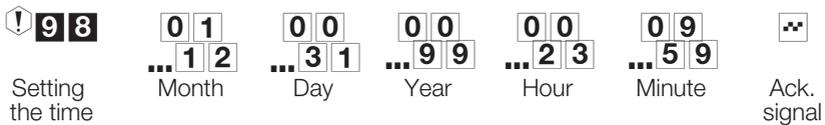
12.6   Enable/InhibitRemote Access

With your PABX you have the option of using the functions

- Call forwarding - Follow me
- Room monitoring, switching contacts of the elmeg C48.net

from an external location. You can specify the required authorization for remote access to your PABX.

Enable/Inhibit authorization for remote access

$\boxed{!}\boxed{7}\boxed{8}\boxed{0}$ $\boxed{*}/\boxed{\#}$ $\boxed{\sim}$

Code   Enable / Inhibit   Ack.
                     remote access   signal

12.7   Activating / de-activating Least Cost Routing (LCR)

Two different LCR procedures (see Page 61) are implemented in your PABX. In PC configuration you can define which internal subscribers have the PABX LCR procedure activated for them.

You can select the LCR procedure to be applied, if any, during PC configuration, or using the following procedure.

> Please ask you specialized dealer, whether these settings are possible with your system.

Selection	Activate LCR procedure
1	Activate Call-by-Call
2	Activate Call-by-Call with rate tables (»Teledata«)
#	Deactivate LCR

⚠ 7 8 1   **▦**   **∿**
Code   Dial the code for   Ack.
              the LCR procedure   signal

12.8   Canceling Settings

You can use the Reset option for your PABX to return the system to a defined initial state. This may be necessary if you wish to cancel configurations you no longer require or want, or to re-program the PABX.)

12.8.1   Resetting settings to initial state

⚠ 9 9 9   **∿**   **↓**
Code   Ack.   Hang up
              signal   handset

An automatic system reset then ensues. All system and user settings will be returned to their initial state.(as-delivered state).

Konfigurierung

12.8.2 Reset for one or all internal subscriber(s)

You can cancel the performance features configured in the PABX for one or all of the subscribers (e.g. call forwarding, call-back and direct call).

⚠️ **9 0 0**   ▦ or ✳   ⦿
internal number or   Ack.
* for all internal subscribers   signal

13   Features which do not require any user action

13.1   User-defined Character Presentation (UUS1)

You can send text messages from one ISDN terminal device to another ISDN terminal without having to call that particular subscriber. There are no additional charges for transmission of these types of messages.

After being transmitted, the text messages are shown in the display of the other terminal device. Depending on the type of ISDN terminal device used, these text messages may be default messages, or freely generated texts. You can only use this feature if it is supported by the ISDN terminal devices involved. Please refer to the operating instructions for your ISDN terminal devices for proper use.

You can also utilize the transmission of text messages from and to external telephones if the performance feature »UUS1 (User to User Signaling1)« has been activated for your connection. Ask your network service provider for details.

13.2   Automatic Changeover of Authorization for External Calls

Do you need to revoke the authorization privileges of certain users / terminal devices of the PABX for making external calls after business hours?
You can specify separately for each telephone / terminal device whether the authorization privileges for making external calls is to be revoked for a certain time defined in the calendar. After the authorization privileges have been changed automatically (as programmed), the user concerned will not be able to place any external calls.

No operating actions are required for this function. In PC configuration you can mark (specify) the user for which call authorization is to be changed. The calendar used to determine when changeover is to take place can be set in PC configuration.

> Emergency calls using terminal devices provided for this purpose, or emergency numbers, are exempt from this authorization privilege change.

13.3   Expanded Addressing (Subadressing)

An ISDN terminal device can be reached at a certain MSN. Using the performance feature »SUB« (Subadressing) you can expand the addressing function for a terminal device with a certain MSN. Subaddressing is transferred transparently by the PABX.

You can only utilize this feature if the performance feature »SUB« (Subadressing) is active for your connection and if it is supported by the ISDN terminal devices involved. Please refer to the operating instructions for your ISDN terminal devices for proper use.

13.4   Calendar

You have a set routine and are either in the office or at home at certain times during the day. Let's say, however, that on Sunday you wish to be available for calls at home in your hobby room.
You can define a calendar in the call distribution for each team. The two team call distribution lists are then changed over in accordance with the data in the calendar.
For example, let's say you wish to change the authorization privileges for a certain user for after business hours.
In PC configuration you can specify separately for each user whether that user's authorization for external calls is to be changed over automatically. Changeover is performed in accordance with the data in the assigned calendar.
In PC configuration you can set up two distinct calendars in the PABX. It is also possible to change over have changeover between a day and night call mode performed automatically at a time you specify. Different day/night changeover times can be selected for each day of the week. A calendar consists of four (4) switching times, which, in turn, can be specifically assigned to the individual days of the week.

> When a calendar is assigned, this overrides any manual changeover made for these modes in the day/night team call assignment list.

Example:

Week day	Calender 1							
	Switching time 1		Switching time 2		Switching time 3		Switching time 4	
	Day	Night	Day	Night	Day	Night	Day	Night
Monday	09:30			18:00	18:45			24:00
Friday		14:00	Inactive		Inactive		23:00	
Saturday	09:00		Inactive		Inactive			23:00

13.5 Parking a call

You have a standard ISDN telephone (not a cordless DECT) at the internal ISDN connection and are conducting a call from this phone. During the call it becomes apparent to you that you must continue this call in a different room. You can "park" the call for around 2 minutes, unplug the telephone from the ISDN connection and then plug it back in in the other room at the internal ISDN connection. After you "unpark" the call you can continue with your conversation.

> This performance feature is supported for ISDN telephones by the PABX at the internal ISDN connection. Please refer to the operating instructions for your ISDN telephone for proper use.

13.6 Data Packet Transfer (X.31)

You can connect a data terminal that operates in compliance with the X.31 transmission standard (data transfer in D channel) to the internal ISDN connection of your PABX. These types of terminals are, for ex. a cash register terminal for electronic payment with ec banking cards, credit cards, ATM cards or customer cards.

Konfigurierung

You must make special settings in the configuration program for the PABX system in order to use these types of terminals.

You can only use this performance feature if the feature »X.31« is activated for your connection and if it is supported by the ISDN terminal devices. Please refer to the operating instructions for the terminal devices involved for proper use.

13.7   Protection of Data Link

You are in the middle of sending out several fax messages. The performance feature »Call waiting« is configured at the connection for your fax machine. If you receive a call from a further fax machine at the same time, the ongoing fax transmission will be disrupted or disconnected completely by the call waiting signal.
The feature »Call waiting« is suppressed at the analog connection of the fax machine, thus also suppressing a potential interference signal, to ensure correct data transfer at all times.
You can set certain types of terminal devices during PC configuration for the analog connections. As soon as you specify an different type of connection than »Telephone«, e.g. »Modem« or »Fax Group 3«, the call waiting function will be deactivated for that connection.

13.8   Priority for Emergency Calls

For »Emergencies«: The »Emergency call« function.
Let's assume that an emergency occurs and you must urgently call the police, fire department or another emergency number. And to make matters worse, both B channels of the ISDN connection are occupied.
You have, however, "informed" your PABX of emergency numbers that must always be reachable in the event of emergencies. If you dial one of these numbers the number is recognized by the PABX and a B channel "freed" automatically by the PABX for an emergency call.

You can enter up to six (6) emergency numbers during PC configuration. Emergency numbers are not affected by any call authorization parameters or call control that are configured.

For the function »Making calls with automatic exchange line acquisition« the external ISDN connection is occupied and calling is permitted. If the external

86

B channels are busy, a B channel is freed (released) and the parties conducting their call on that channel will hear a busy signal. An emergency call already in progress is not interrupted.

For the function »Making calls without automatic exchange line acquisition« the internal connection is occupied and internal calls can be made. You must dial a "0" before making an external call. If all of the external B channels are busy, one B channel is disconnected and the parties conducting their call on that channel will hear a busy signal. An emergency call already in progress is not interrupted.

> If calls are in progress using two ISDN telephones on the same internal ISDN bus, it is not possible to initiate an emergency call from a third ISDN telephone on this bus.

13.9   Call Control

During configuration you can define restrictions for placing external calls for certain terminal devices.

In the initial state the call control is not activated. In PC configuration you can assign each terminal device individually to call control.

The numbers entered in the call inhibit table (in the Section »Call barring«) can not be dialed by the terminal devices for which call control is active. forexample, the entry of the number »0190« in the list would prevent calls being made to costly service providers.
The entries in the call restriction table (in the Section »Call restriction«) can cancel a portion of the restrictions imposed on numbers in call barring. For example, if the number »0190123456« is entered in the call restriction table, this number may be dialed, even if all »0190« numbers have been inhibited by call barring.
If two identical numbers (identical sequence of digits and same number of digits) are entered in both call barring and call restriction, these numbers can not be dialed.

If the prefix number for a different network service provider is dialed from a number that is inhibited by the call control, call control will not be in effect.

> Subscribers without authorization for external calls can obtain the authorization to make external calls via call restriction.

13.10 Voice Mail System (elmeg C48.net)

You can connect a voice mail system to your PABX system.Connect the system at the analog or ISDN port of your PABX.The analog ports can be configured in PC configuration as a Voice Mail System.Further information about voice mail functions are given in the operating instructions for the voice mail system.

elmeg system telephones are equipped with a »VoiceMail« function key.

14 PABX and PC

As a result, you do not need any additional ISDN card for your PC. The PABX is equipped with an integrated USB port for connection to the PC. After you install the programs and drives contained on the CD supplied with the system, various functions are provided by the PC and the PABX via the USB port. You can then:

- configure your PABX via the USB port
- register and edit call data on the PC.
- load new system software into the PABX.
- surf the Internet.
- D@VOS.net only:
- Sending and receiving data in the Eurofile format.
- send and receive fax messages (Group 3 and 4).
- implement an answering machine via your PC.

You can also access the PABX without the USB port using the internal ISDN connection. For this you require a PAC with an ISDN card however. Using the ISDN connection you can configure the PABX, register call data records or load new system software.

14.1 Contents CDROM

In these operating instructions we would like to give you a brief summary about the software included in the scope of supply for the system. Operation and use of the individual programs are not described in these operating instructions. Should any questions or problems arise while you are using the programs you can use the online Help function for assistance. All programs are equipped with a comprehensive online Help function.

14.1.1 Programs for configuring the PABX

Speed&Easy Configurator
The Speed&Easy Configurator allows you to prepare and conduct a prompted installation and initial configuration of the PABX software on your PC and then to export these to your PABX system.

Professional Configurator:
The settings for the individual performance features of your PABX are made in the PABX configuration.You can configure your external MSNs and assign these numbers to individual, internal users, or to a team consisting of several users (members). You can also assign a name for each individual, internal user and configure the various performance features separately (such as authorization privileges, exchange line access, cost logging, etc.), or you can apply the settings of one user to those for a different user. Configuration is also used to define the calendar, numbers for call control (call restriction, call barring) and emergency or direct calls. You can also make general settings for the PABX, for call data logging or for remote access to the PABX system.

Charge Manager:
You can use the program for logging connection data for reading out or clearing call data records stored in the PABX and user-specific counters. The call data records that are read out can be evaluated using various sorting and filtering functions, or exported for processing in other programs.
For example: Sorting functions allow you to compile data records according to internal users, project numbers or numbers that are dialed/transferred. The filtering functions can be used to display data records containing individual properties. You can set these filtering functions to fit your specific needs.

Telephone irectory Manager:
The PABX is equipped with an integrated telephone directory.in which you can store up to 300 numbers, with their associated names. You can access the PABX telephone directory with all phones connected with the system. System telephones can also use the PABX menu. Other telephones can use a code to dial from the telephone directory. Entries are added to the directory using the Telephone Directory Manager on the CD. The import/export function of the telephone directory manager allows imported or exported data to be edited and processed in other programs.

Download Manager:
Using this you can load new system software via your PC into the PABX.This is possible using the integrated USB port of your PABX. If an ISDN card is already installed in your PC you can also update the system software via the internal ISDN connection of the PABX.

LCR Manager Program (for Germany only):
This program allows you to download the rate tables from the service provider »Teledata«, to configure the LCR procedure and to transfer data to the PABX. You can download rate tables either using an ISDN card installed in your PC, or via the USB port of the PABX (when CAPI driver installed for PABX).

TAPI-Configuration:

Using TAPI Configuration you can adapt the TAPI driver for a program that uses that driver. You can also check which MSN is assigned to which terminal device, define new line names and can set the dialing parameters.

First configure the PABX. Then, you must configure the TAPI interface. Use the program »TAPI Configuration« in the start menu. You do not need to make any changes to settings for the PC-Tel program supplied with the system. Simply reply to all of the screen masks with OK.

Uninstall WIN-Tools:

Use this program to modify or repair the »WIN-Tools Installations« or remove them from your hard disk.Start the program and follow the instructions. Drivers that have been installed (such as CAPI, TAPI) are not removed/deleted during this procedure.

14.1.2 Application programs

CAPI-Tools (elmeg DAVOS.net only)

EFT: Using the program elmegEFT you can exchange data via an ISDN connection by Eurofile transfer from one PC to another.

FAX: The fax program for this software package allows you to send and receive fax messages from various applications.

VOICE: This program transforms your PC into a flexible answering machine. You can record announcements or listen to recorded messages using the soundcard of your PC.

PC-Tel:

PC-Tel is software that allows you to take advantage of computer-aided telephony (CTI - Computer Telephony Integration) using the PABX system. In conjunction with the TAPI drivers and with the aid of your PC, you can, for example, control the setting up of connections for a telephone connected to your PABX system.

For example: You wish to initiate or take calls via your PC. A database with up to 8,000 entries is available for this. If you receive a call with the caller's ID, further information about the caller will appear immediately on the screen.

Adobe Acrobat Reader

Program for viewing and printing PDF documents.

14.1.3 Drivers

USB driver (Universal Serial Bus)

Recognition and control for the PABX system after being connected to the USB port of your PC.

Forex.WIN-Tools programs

CAPI driver (Common ISDN Application Programming Interface)
Linking of the PABX to programs that provide data communication
services. For example of CAPI-Tools

NDISWAN driver (NDIS - Network Device Interface Specification / WAN - Wide Area Networking)
Linking of the PABX system in the PC as a special ISDN network card forex.Connection to the Internet via Windows dial-up networking

TAPI driver (Telephony Application Programmer's Interface)
Interfacing to programs that provide computer-aided telephony.
For ex.Windows dialing help, PC-Tel

- Special drivers must be installed if you wish to use the configuration software via the USB port of your PABX.
- To utilize the communications software (CAPI-Tools) or the NDISWAN driver via the USB port of your PABX you must install the CAPI drivers for the PABX contained on the CD supplied with the system.
- If you wish to use the PC-Tel program with the PABX system, you must install the TAPI drivers supplied with the system.

Important note for installation of the CAPI driver

Before installing the new drivers, be sure to remove any existing CAPI drivers in your system (such as the drivers for an installed ISDN card), as Windows only supports one installed CAPI.
Refer to the operating instructions for the device concerned, or for the operating system, for details on removing drivers.

You can also use other programs that access the CAPI drivers for the PABX system. Refer to the operating instructions for the corresponding software packages.

In some special circumstances it may be necessary to also physically remove the ISDN card from the PC in addition to removing the drivers.

14.2 Installing the Programs from the CD ROM

System requirements:

- IBM or 100% compatible PC
- Pentium processor or comparable processor, min. 133 MHz clock frequency
- Min. 32 MB RAM
- CD ROM drive
- Free USB-port
- Operating system that supports USB, e.g. Windows 98 / ME / 2000 (Status: 01/2001)
- Min. 130 MB free hard disk space for installation
- Start your PC.
- Insert the CD ROM supplied with the system in the CD ROM drive of your PC.
- Wait a moment until the program starts automatically. If the autostart option is not activated in your PC, you can start the file »setup.exe« directly from the main directory of the CD using Windows-Explorer (double click on the file), or using the option »Run« in the Windows start menu.
- When the file is started the welcome screen of the CD is displayed.

Installation sequence:

It is important that you install the programs and drivers in the order given:

- WIN-Tools (USB driver is installed automatically)
- CAPI driver (USB driver is installed automatically)
- CAPI-Tools (elmeg DAVOS.net only)
- NDISWAN driver
- TAPI driver(USB driver is installed automatically)
- PC-Tel

Connect the PABX to your PC as described in the section »Installation« of these operating instructions.

PABX and PC

15 The PABX System in the Dial-up Network

The ISDN CAPI drivers constitute the link between the PC and the PABX system and the ISDN network. Together with the appropriate software (for example CAPI Tools) you can then transfer data, send or receive fax messages or use your computer as a digital answering machine.
In addition to these application options, your PABX can also be connected with the Internet via the dial/up network under Windows. You can set up this link using the NDISWAN drivers included on the CD.

Connection to the Internet through the PABX is only one of many applications that you can implement using the NDISWAN drivers. This is, however, the most common application used, and the PABX can be viewed as a special ISDN network card and the Internet as a vast network comprising various computers.

Attention:

- Check to ensure that Windows dial-up networking is installed on your PC. If not, install it using the Windows setup program (Windows 98 and Windows Me).
  To do this, open the folder »Software« in the »Control panel« and go to the tab »Windows Setup«.
  Select »Connections« and then click »Details«.
  Check the box in front of »Dial-up network« and confirm your selection of the components to be installed by clicking »OK« twice.
  The dial-up network will then be installed on your PC.

15.1 Internet Connection via the Windows Dial-up Network

You can set up a connection to the Internet via the dial-up network after you have installed and configured the NDISWAN drivers.
Here, the dial-up network only represents the physical connection to the Internet service provider. To view sites (surf) on the Internet you require an Internet browser, such as the Microsoft Internet Explorer or the Netscape Navigator/Communicator.

Please note that some ISPs require that you log in before you can set up a connection.

PABX and PC

15.2 Installation of the NDISWAN drivers

During the installation of the NDISWAN driver, keep the CD for your operating system (e. g.MS Windows 98) handy, as your PC may request that you insert the CD.

The following is a description for installing the NDISWAN drivers and set-up of an Internet connection using MS Windows 98SE.

- With the MS Windows 98 operating system, installation of the NDISWAN drivers for the PABX system is performed using the Windows hardware assistant. The driver is installed as a new hardware item on your PC.

- In the Windows »Start« menu select »Settings« - »Control Panel«, or open the »My computer« symbol on your PC desktop and then select »Control panel«.

- Open the folder »Hardware«.

- The Windows hardware assistant is then started and begins searching for installed or new devices. Follow the instructions given by the hardware assistant and select any settings that are illustrated, where appropriate.
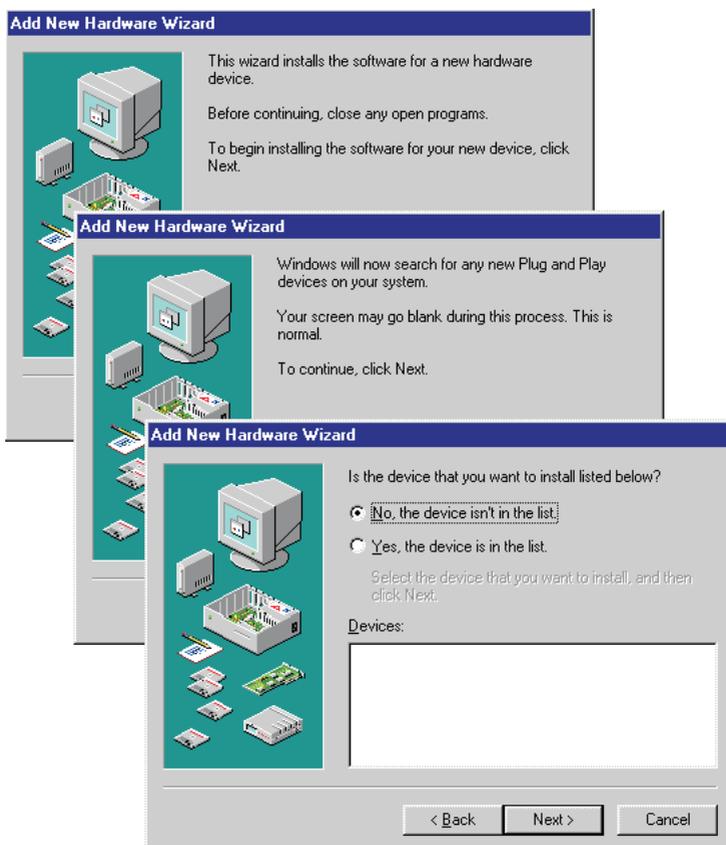
- Since this installation does not involve new hardware, but rather, a driver for existing hardware, select »No, select hardware from list«.
- In the following dialog window select »Other components« as the type of hardware to be installed. Confirm your selection by clicking »Continue«. Confirm your selection by clicking »Continue«.
- Windows will then generate a list of available driver information. Click »Disk« to install the driver from the CD ROM for your PABX. If the drivers for the PABX have already been installed select them from the existing list that is shown.
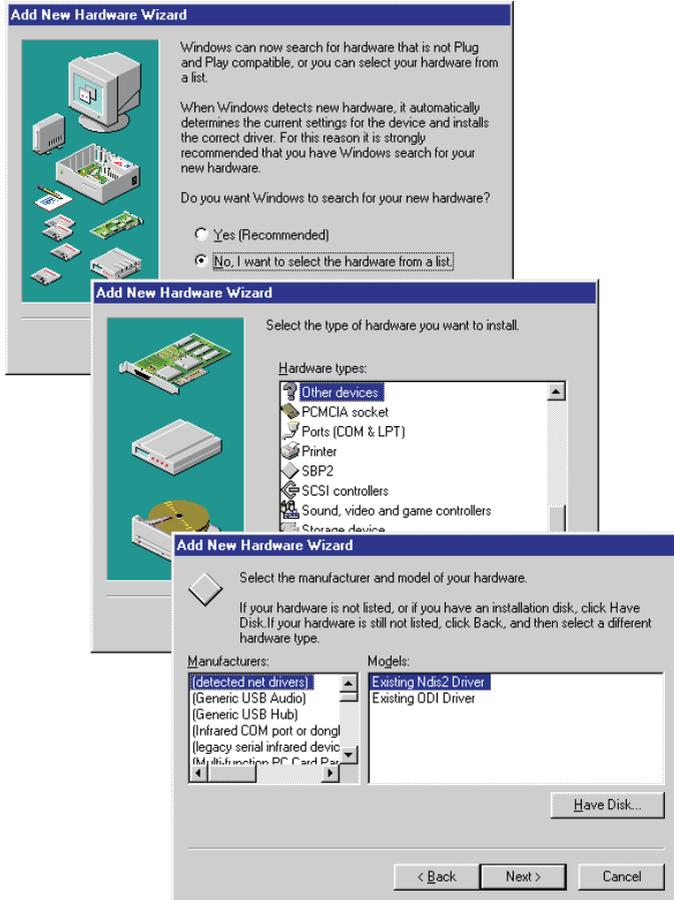
- You can set the current location for the requisite drivers by clicking »Browse«.

- Select the CD ROM drive and the subdirectory for the NDIS-WAN drivers. In the example: »\NDIS WAN«. The file »elndiwan.inf« is also located in this directory. Confirm your selection by pressing »OK«.
- Confirm the selection of the directory from which the drivers are to be copied by clicking »OK« again.

Install From Disk

Insert the manufacturer's installation disk into the drive selected, and then click OK.

OK

Cancel

Copy manufacturer's files from:

A:\

Browse...

Open

File name:
elndiwan.inf

elndiwan.inf

Folders:
I:\ndiswan

i:\
ndiswan

Drives:
i:

OK

Cancel

Network...

Install From Disk

Insert the manufacturer's installation disk into the drive selected, and then click OK.

OK

Cancel

Copy manufacturer's files from:

I:\ndiswan

Browse...

- You will be shown a list of supported devices after the driver information is read in. Select the required terminal device and confirm your selection by clicking »OK«.
  In the example here: »CAPI-WAN Miniport for elmeg-USB Devices«.

- The NDISWAN driver for the PABX can now be copied into the Windows system directories. Confirm the installation of the drivers by clicking »Finish«.

PABX and PC
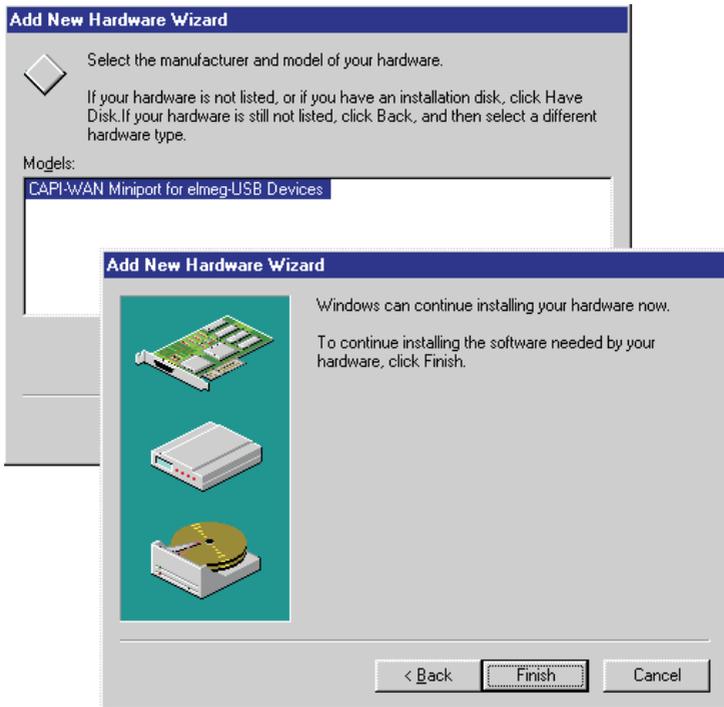
- At the conclusion of installation of the NDISWAN drivers you will be requested to perform the ISDNconfiguration of your PC.
  Follow the instructions given by the configuration wizard and select the illustrated settings that are appropriate.
- D channel protocol: »DSS1-Euro-ISDN« protocol
  Internal numbers for USB port: Initial settings 30 … 39
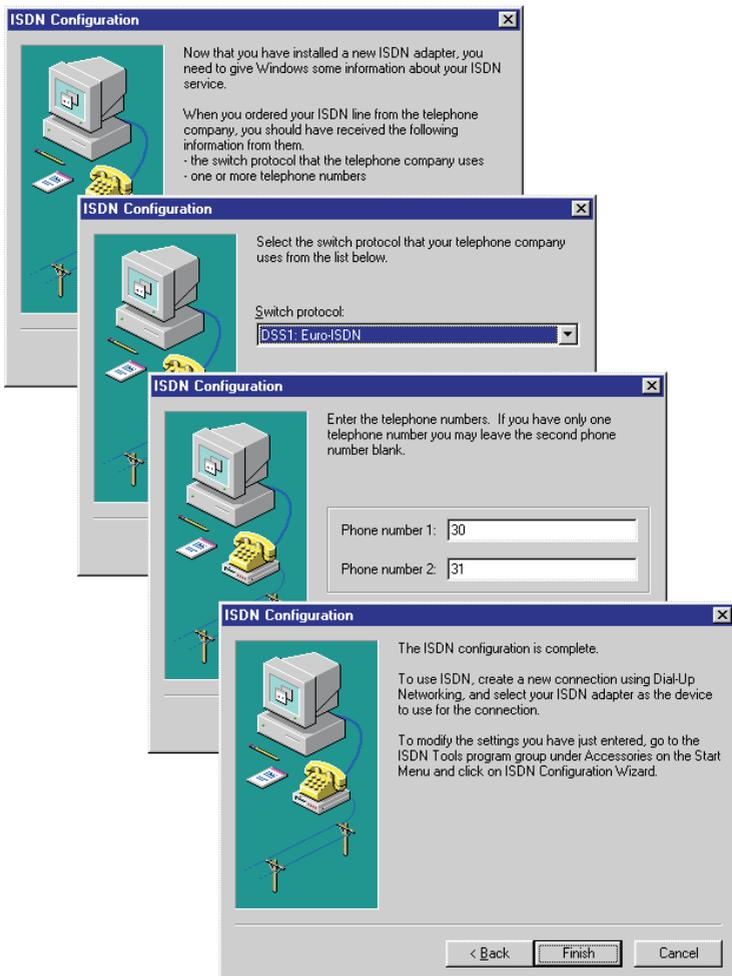
- The drivers are then installed and your PC configured for further applications. You must restart your PC when installation is completed.

PABX and PC

• Click »Yes« when requested to restart your PC.

System Settings Change

? To finish setting up your new hardware, you must restart your computer.

Do you want to restart your computer now?

[Yes]   [No]

• The installation of the NDISWAN drivers is ultimately completed when you restart your PC. To view the drivers that you have installed, select the »Network« folder in the control panel. Two new network entries are displayed here. In the example here:
Network card: »CAPI-WAN Miniport for elmeg-USB Devices«.
Protocol: »NDISWAN - CAPI-WAN Miniport for elmeg USB Devices«.

Network

Configuration | Identification | Access Control

The following network components are installed:

- Client for Microsoft Networks
- CAPI-WAN Miniport for elmeg-USB Devices
- Dial-Up Adapter
- NDISWAN -> CAPI-WAN Miniport for elmeg-USB Devices
- TCP/IP -> Dial-Up Adapter

[Add...]   [Remove]   [Properties]

Primary Network Logon:

Client for Microsoft Networks

[File and Print Sharing...]

Description

[OK]   [Cancel]
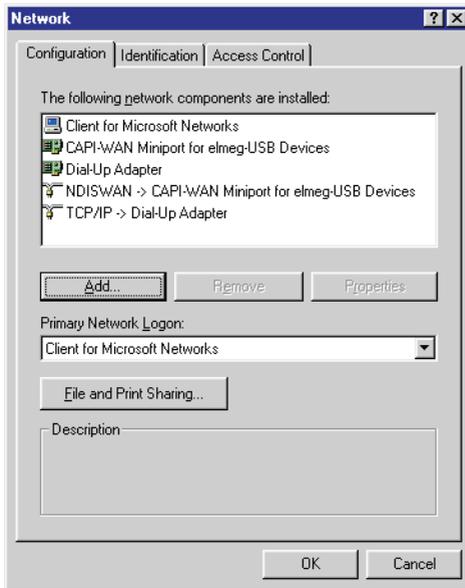
15.3   Setting the dialing parameters

- In the Windows menu »Start« select »Settings« - »Control panel« and then open the folder »Telephony«.
  The settings that you make in the dialog window »Dialing parameters« will apply to all Windows programs that access these parameters.
  Enter the local area code (without a preceding »0«) for your current location.
  Enter »0« for the line access digit for local and long-distance calls.
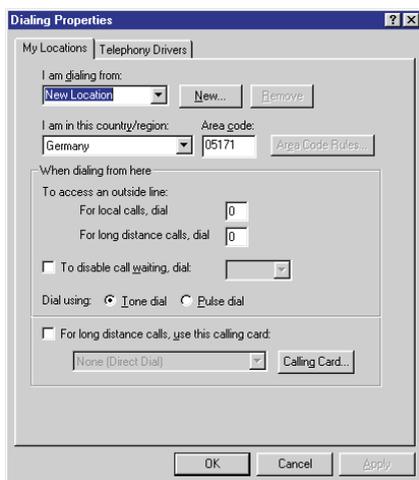
15.4   Setting upan Internet Connection

- To open the dial-up network, select »Programs« - »Accessories« - »Communications« and »Dial-up network« in the »Start« menu.
  Double click on the symbol »Set up new connection«.

- Enter the name of the connection, for example: »T-Online Internet«. »T-Online Internet«.
  Select the device to be used for setting up the connection to the Internet. In the example: »elmeg WAN ISDN Line 1«.
  Confirm your entries by clicking »Continue«.
- Enter the number of your preferred ISP.
  In the example here: T-Online, enter the number 0 19 10 11 as follows:
  Local area code: »« (Not required.)
  Number: »0191011«.
  Confirm your entry by clicking »Continue«.
- Click »Finish« to set up the new connection with your selected settings.
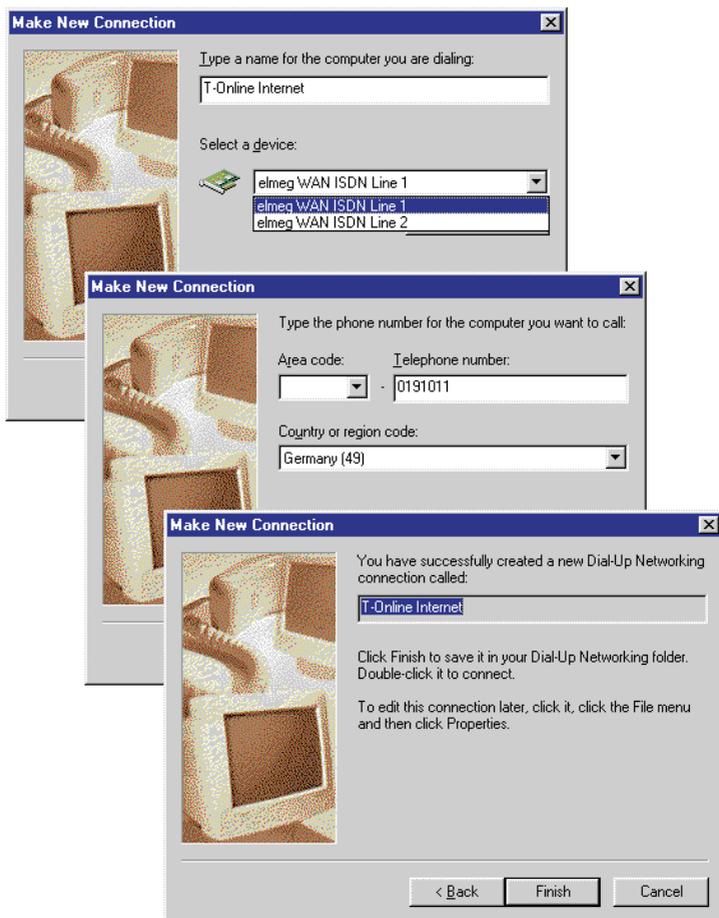
• The new connection »T-Online Internet« is then displayed in the Windows Dial-up network folder.
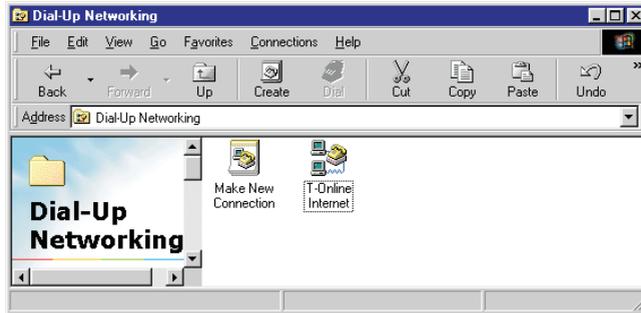
15.5   Setting upan Internet Connection

• Begin setting up an Internet connection by double clicking on the symbol »T-Online Internet«.

• Check the number that is to be dialed. If this number is not correct, click »Dialing parameters« and correct these settings as required (see page).

• If all of the information is correct, click »Connect« to begin the dial-up connection to your Internet service provider.

- You are connected to your desired IP when this connection has been set up successfully.
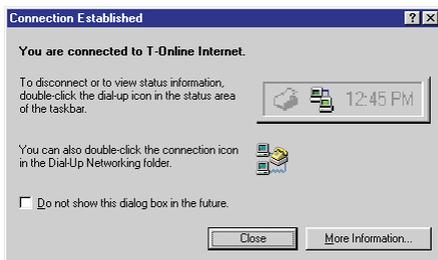
- You can now start an Internet browser (such as MS Internet Explorer, or Netscape Navigator/Communicator) to view pages on the Internet or to download files from the Internet.
- The connection symbol (to the left of the time) indicates an active connection via dial-up networking.Double clicking on this symbol will provide you with details about the current connection (for example duration, data transferred, etc.).
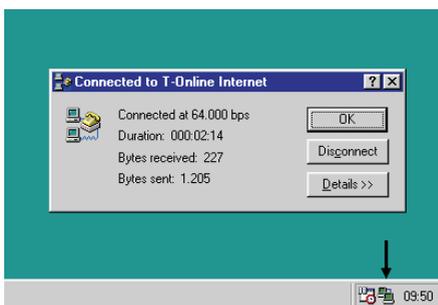
- Double click on the connection symbol in the Windows task bar to terminate an active link. Then, click »Disconnect« to terminate the active connection.

16 USB Home Phoneline Adapter (elmeg C48.net, D@Vos-44.net)

16.1 Description

Home Phoneline Networking offers you the option of linking (networking) up to four PCs using existing analog telephone lines (elmeg C48.net only for the first 4 analog connections). Together with the PCs you can continue to use other devices, such astelephones, fax, answering machine, etc., over the same telephone lines.Voice and data can be transmitted over the same line without any mutual interference.

16.2 Functions

- Network connection via existing home telephone cables
- Connection to the PC-end USB bus
- Requires Microsoft Windows 98 SE or higher
- Transfer rate 1 Mbps
- Compatible with HomePNA 1.1 specification

16.3 System requirements

- PC Pentium 166MMX or higher
- Minimum of 16 MB RAM
- Free USB-port
- Microsoft Windows 98 Second Edition or Windows 2000
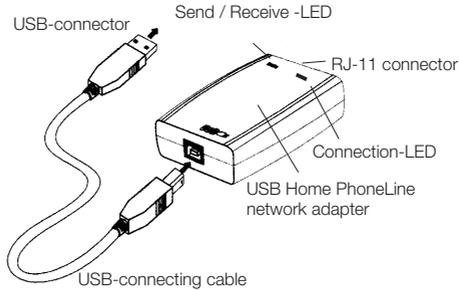
The optional Phoneline Networking adapters are available as two models: As a PCI plug-in card for installing in your PC, or as an external device for connecting to the USB port.

What are the primary advantages of Home Phoneline Networking?

Internet Sharing* You can surf the Internet with up to four PCs simultaneously and still be able to be reached by phone, because all four PCs can "share" one ISDN channel. One PC assumes a master/server function to permit common Internet access via the integrated ISDN PC card functionality of the PABX system. This PC must be connected to the USB-port and to the Phonline Network (an analog port of the pabx system)

Printer Sharing You can share one printer with all connected PCs.

File Sharing data exchange is possible between all connected PCs; This allows you, for example, to easily move large files from one PC to another, or to have access to commonly used files.

Multiplayer Gaming - A number of current computer games offer a multiplayer mode, allowing you to play with or against other players in your own network.

Also required, in addition to the PABX system:

Two or more PCs running on Microsoft Windows 95, 98, ME, 2000 and a free PCI slot or a free USB-port.

Standard telephone cables. The PCs are interconnected in the PABX system. You can simply plug in your PC along with the existing telephones at the internal, analog ports of the PABX. Voice and data can be transmitted over the same line without any mutual interference.

Home Phoneline Networking Adapter The optional Phoneline Networking adapters are available as two models: As a PCI plug-in card for installing in your PC, or as an external device for connecting to the USB port.

Internet Service Provider (ISP) An Internet provider is always required for Internet access. A special connection is required, with the type of connection corresponding to a stand-alone workstation.

17   Installation

- Start up your PC.
- Connect the USB cord to your PC.
- Connect the USB cord to the USB Home PhoneLine Netzwerk Adapter
- Windows will automatically recognize the new USB device and will request that a driver be specified.
- Insert the driver disk in the drive and click OK.
- Windows will then automatically install the device into the system
- The following entry must be present in the device manager at the completion of installation
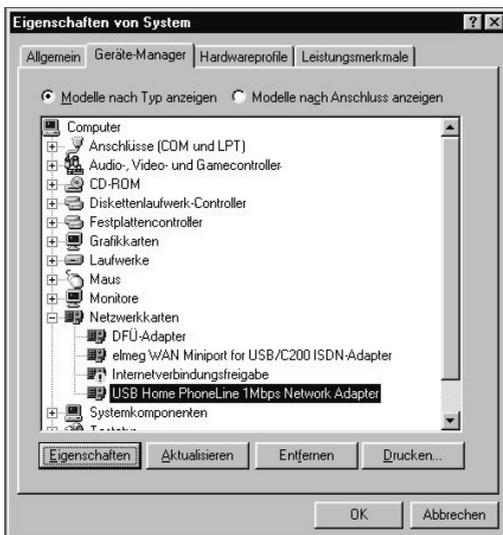
Where to find the device manager: R>My computer ê Control panel ê System ê Device Manager

17.1 Network configuration

You must make the following settings to enable your network to function properly in Windows.

Where to find network configuration:
My computer, Control panel, Network
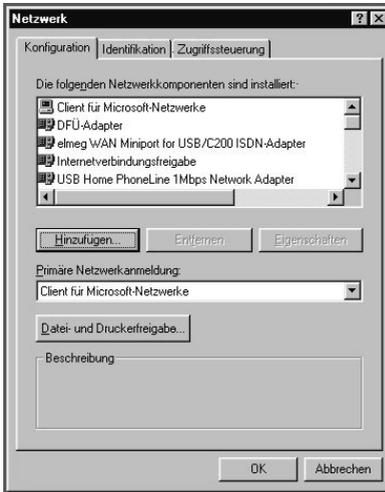
The USB Home PhoneLine Network Adapter is installed as network component.

Use the Add button to link the following network protocols with the USB Home Phoneline Network Adapter

- IPX/SPX-compatible protocol
- NetBEUI
- TCP/IP

17.1.1 Identification

- Computer name:Enter a name here
- Workgroup:
  All PCs belonging to the same workgroup can communicate over the network.

- Description:
  Optional input
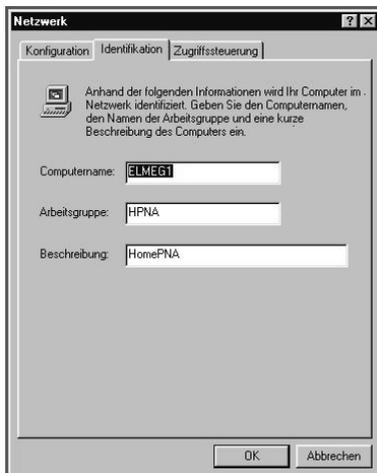
17.1.2   File and printer enable

Here, specify whether other PC in your work group are authorized for access to your files or to the printer (if one is installed)
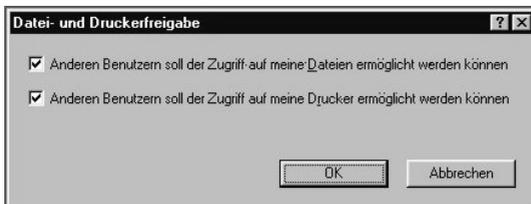
18 Troubleshooting

Not every fault or malfunction is an actual PABX system error. Check your installation configuration with the aid of the following section.

Fault Description	Possible Cause	Fault Remedy
No dial tone after lifting handset.	PABX not connected to power supply properly.	Check 230V~ outlet (for example by plugging in a lamp)
	Plug-in power supply unit / power plug not plugged in properly	Check connection between PABX and 230V~ outlet.
	Terminal device defective.	Replace terminal device / Check terminal device at other connection
	Telephone connection faulted, Faulty installation	Check PABX / jack connections
	PABX settings faulted, Ambiguous programming of PABX system	Unplug and plug the plug-in power supply unit back in. Reset the PABX to initial state.
No internal calls are received.	Station guarding is active	Deactivate station guarding.
	Call forwarding to another number activated (special dial tone in handset).	Cancel call forwarding.
No external calls are received.	Same causes and remedies possible as for »No incoming internal calls«.	
	PABX not connected correctly to the NTBA of your network service provider.	Check the connection between the PABX and NTBA.
	MSN is not entered or assigned correctly in the PABX.	Check the PC configuration for the PABX.
Please note: Check to ensure that ISDN connection is functioning correctly, and that this connection has been enabled by your network service provider. Please contact your service provider.		
No outgoing, external calls possible (including data links via USB).	No authorization for external connections.	Check user settings in PC configuration for the PABX system.
No outgoing, external calls possible (including data links via USB).	Call charge limit reached (Allowance account).	Check user settings in PC configuration for the PABX system. Increase cost limit, or reset the sum counter
	External numbers located in call barring for call control.	Check the settings for call control in the PC configuration for the PABX.

Fault Description	Possible Cause	Fault Remedy
No external connections possible to some remote terminals (including data links via USB).	External numbers located in call barring for call control.	Check the settings for call control in the PC configuration for the PABX.
Room enquiry not possible during an external call.	The telephone's flash key is not properly configured.	Check the setting of your telephone's flash key. »Flash key«, flash interval 80-120 ms. Attention:Enquiry calls are not possible with pulse dialing telephones.

If the PABX is connected at the USB port of the PC and recognized by the PC the USB LED on the PABX will light up. If not, the USB ports of the PC are not activated / faulty, or the drivers for the PABX are not installed.

No connections can be established via the pabx's USB-port.	The same causes and remedies are possible as described for the previous problems (no internal/external connections possible).	
	The USB ports of the PC are not activated or are defective.	In the system control panel (folder »System« - »Device manager«) check whether the USB ports of your PC have been activated.
	PABX drivers not properly loaded.	In the system control panel (folder »System« - »Device manager«) check whether the PABX has been installed correctly. A question mark in front of the entry for the PABX indicates incorrectly installed / loaded drivers. Plug the USB connector for the PABX into the PC again, or restart your PC.
An Internet connection is disconnected without this being registered by the dial-up network.	The PC recognized The PC has recognized fault-like conditions at the USB port and deactivated the USB port.	In the system control panel open the folder »System« - »Device manager«. Then, select the USB controller and open the properties for the »...USB Host Controller«. In the tab »Expanded« deactivate »error recognition«.

19   Technical data

PABX elmeg C48.net:

dimensions W x H x D:	360 x 275 x 90 mm
Weight, approximately:	2.3 kg
Temperature range:	5° C...40° C
Voltage:	230 VAC
Rated power consumption: with 2 connected ISDN telephones	18.5 VA
Maximum power consumption:	30.5 VA
Frequency:	50 Hz
Protection class:	II
Connection cord length:	approx. 2 meters

PABX elmeg D@VOS.net:

dimensions W x H x D:	260 x 192 x 40 mm
Weight, approximately:	0.7 kg without plug-in power supply
Temperature range:	5° C...40° C
Voltage:	230 VAC
Rated power consumption: with 2 connected ISDN telephones	18.5 VA
Maximum power consumption:	25 VA
Frequency:	50 Hz
Protection class:	II
Connection cord length:	approx. 2 meters

ISDN-Connections:

IDSN connection cord length:	approx. 3 meters
External ISDN connection:	DSS1 protocol, point-to-multipoint access DSS1 protocol, point-to-point access
Internal ISDN connection	DSS1 protocol, point-to-multipoint connection
ISDN ports:	Power output approximately 2.5 W
Channel structure:	B+B+D
ISDN cable lengths with 0.6 mm wire diameters:	Short passive bus:max. 120 meters

Analog ports:

Supply (pabx):	symmetrical, 25 mA at 600 Ohm
Max. lenght of telephone connection cables when using installation-grade cable :	0.4 mm wire diameter = 200 m 0.6 mm wire diameter = 350 m
Dialing method:	dtmf-dialing Pulsedialing (limit function)
Character duration:	> 40 ms and < 100 ms
Dead time:	80 ms
Tone recognition:	-10 dBm … 0 dBm
Ringing voltage:	U eff. approx. 35 VAC
Ringing frequency:	50 Hz ± 8%
adjustable flash interval :	100ms to 1000ms in 100ms increments (default setting is 200ms)

USB port:

USB cord length:	approx. 3 meters
Terminals:	Self powered terminal
Speed rating:	Full Speed

PABX elmeg C48.net:

Music on hold interface:

Level:	max -10 dBm
Input resistance:	3,000 Ohm
Input to PABX:	via capacitors
Max. voltage at input:	1.7 Vef , 2.4 Vs~

Doorline module:

Speaker	> 8 Ohm, approx. 2 Watts		
Microphone	Dynamic microphone, or Elektret microphone with built-in preamp.		
Doorbell	Potential-free button		
Contakt T01/To2	24V ~	=	3A
	24V-	=	3A
Kontakt Zw1/Zw2, Ts1/Ts2, Ma1/Ma2	24V ~	=	1A
	24V-	=	1A

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Brief description of functions

This brief description of functions applies to the use of analog terminals. If certain functions of ISDN terminals are not possible, please do refer to the operating instructions of the respective ISDN terminal.

Picking up a call

☎ ✳ 0 ♪	Pick-up of the call

Making internal telephone calls

☎ ▦ ♪	Making internal calls
☎ ✳ ▦ ♪	Internal calls with automatic line acquisition

Making external telephone calls

☎ 0 ▦ ♪	Making outside calls
☎ ▦ ♪	Outside calls with automatic line acquisition

☎ # 8 1 0 ... 9 ▦ ♪	Sending MSNs to remote parties
	0 ... 9 = MSN-Index

Temporarily suppressing transmission of your own number (CLIR)

☎ ✳ 5 9 4 ▦ ♪	Temporarily suppressing transmission of your own number(CLIR)

Dialing phone numbers from the phone directory

☎ ✳ # or # ✳ ▦ ♪	Dialing a phone number via the speed dialing key of the PABX's phone directory

Forwarding a call

♪ R ▦ ♪ ☎	Forwarding an internal call with prior notice
♪ R ▦ ☎	Forwarding an internal call without prior notice
♪ R ▦ ♪	Room enquiry
♪ R ✳ 1 ♪	Terminating a room enquiry with analog terminals
♪ R ✳ 4 ☎	Connecting external callers

Broker's call

♪ R ▦ ♪	Broker's call (room enquiry)

`♪ R * 2 ♪`	Broker's calls between different callers

Call back

`☎ ▦ * 4 ~ ☎`	Requesting automatic call-back
`☎ # 4 0 ~ ☎`	Canceling automatic call-back

Three-party conference call

`♪ R ▦ ♪`	Room enquiry
`♪ R * 3 ✳`	Three-party conference call
`✳ R * 2`	Returning to Broker's call

Call waiting signal

`♪ R * 4 ♪`	Accepting a waiting call
`♪ ☎ ▭ ☎ ♪`	Accepting a waiting call
`♪ R * 1`	Refusing a waiting call

Message

`☎ * 5 4 0 ▦ ♪`	Message to a party

Call modes

`☎ * 9 * ~ ☎`	Activating all day call modes (doorline phone module and teams)
`☎ # 9 * ~ ☎`	Activating all night call modes (doorline phone module and teams)

Team-call modes

`☎ * 9 4 3 0 0 ... 0 9 ~ ☎`	Enabling a member's phone within a team
`☎ # 9 4 3 0 0 ... 0 9 ~ ☎`	Inhibiting a member's phone within a team
`☎ * 9 3 * ~ ☎`	Activating day team call assignment for all teams
`☎ # 9 3 * ~ ☎`	Activating night team call assignment for all teams

Call forwarding

`☎ * 6 1 ▦ # ~ ☎`	Activating immediate Call forwarding

☏ ✳ 6 2 ▦ # ∿ ☏	Activating call forwarding »delayed«
☏ ✳ 6 3 ▦ # ∿ ☏	Activating call forwarding »on busy«
☏ # 6 1 ∿ ☏	Canceling call forwarding »immediate«
☏ # 6 2 ∿ ☏	Canceling »delayed« call forwarding
☏ # 6 3 ∿ ☏	Canceling call forwarding »on busy«

Follow me

☏ ✳ 6 4 ▦ # ∿ ☏	Configuring internal Follow me
☏ # 6 4 ▦ # ∿ ☏	Canceling internal Follow me

Room monitoring

☏ ✳ 5 9 3 ∿	Enable room monitoring
☏ ▦ ♪	Room monitoring from internal terminals

Don't disturb feature

☏ ✳ 5 7 0 ∿ ☏	Inhibiting internal and outside calls
☏ ✳ 5 7 1 ∿ ☏	Inhibiting outside calls
☏ ✳ 5 7 2 ∿ ☏	Inhibiting internal calls
☏ # 5 7 0 ∿ ☏	Re-enabling all calls

Malicious call identification

♪ ✳ 5 1 ∿ ☏	Tracing

Project numbers

☏ ✳ 5 0 ▦ # ∿ ▦ ♪	Enter project number
⟲ ☏ ♪ R ✳ 5 0 ▦ # ∿ R ♪	Project number for an external call

Call answering machine

☏ # 0 ♪	Pick-up of a call from the answering machine

Multifunctional device:

⌨ ✱ **7 7 3** ⌨ ♪   Multifunctional device: Fax Group 3

⌨ ✱ **7 7 4** ⌨ ♪   Multifunctional device: Analog telephony

⌨ ✱ **7 7 2** ⌨ ♪   Multifunctional device: ISDN telephony

Keypad functions

⌨ **0** (*or#) ⌨   Initiate Keypad functions

For a description of functions, please refer to the documentation supplied by the service provider.

Doorline phone module (C48.net)

🔊 ⌨ ♪   Accepting a call

♪ **R** ✱ **9 9** ⌇ ♪   Actuating door opener during a doorline phone call

⌨ ✱ **9 9** ⌇ ⌨   Actuating door opener without answering the doorline phone

⌨ ✱ **9 6** ✱ ⌇ ⌨   Activating all call modes

⌨ # **9 6** ✱ ⌇ ⌨   Deactivating all call modes

Switching contact (C48.net)

⌨ ✱ **9 7 0** **1** ... **4** ⌇ ⌨   Switching contact on
                             1 ... **4** = Select switching contact

⌨ # **9 7 0** **1** ... **4** ⌇ ⌨   Switching contact off
                             1 ... **4** = Select switching contact

⌨ ✱ **9 7 1** **1** ... **4** ⌇ ⌨   Key functions on
                             1 ... **4** = select switching contact

Activating/ de-activating signalisation call function (C48.net)

⌨ ✱ **9 5 1** **0** ... **2** ⌇ ⌨   **0**   = De-activating signalisation call function

                                  1   = Activating internal signalisation call

                                    = Activatingexternal signalisation call

Warranty

1. ELMEG GmbH & Co.KG takes over a 36-month guarantee for this appliance in accordance with the following conditions, calculated from the date of purchase from the dealer, which must be documented by the original invoice or other documentation.

2. The guarantee claims are to be submitted through the specialist dealer from whom the appliance was purchased.

3. The guarantee includes the removal of all damage or defects of the appliance occurring within the guarantee period, which can be proven to stem from material or production faults. Any damage or defects arising from connection, which is not in accordance with the instructions, incorrect handling as well as non-observance of the instructions on programming and use as well as force majeure are excluded. The manufacturer is free to choose to replace the appliance with an appliance of equal value instead of carrying out a repair. Additional claims for compensation are not valid.

4. The guarantee does not cover those defects which only affect the value or usual use of the appliance insignificantly. Additional costs, such as e.g. for installation, journey time and travel, are expressly excluded.

5. This manufacturer's guarantee lapses if alterations have been made to the product or the product is operated in another country, for which it has neither been developed nor manufactured.

6. The fulfilment of guarantee requires that the appliance is sent in complete, packed so as to protect it from breakage or shocks (where possible in the original packaging) with proof of guarantee.The despatch takes place at the expense and risk of the client.

7. Should the inspection result in the fact that it is not a case of guarantee or that the product has no faults the repair and inspection costs shall be at the expense of the client.

8. Warranting causes neither an extension of the warranty term nor sets a new warranty term in course.The warranty term for inserted spare parts ends with the warranty term of the equipment.

C E

This device meets the requirements of the following EC directives:

1999/5/EG R & TTE

Subject to modifications   09- 2001 / 52x2

elmeg D@OS.net / elmeg C48.net