elmeg IP290
Version V3.00

Manual

Foreword

Congratulations on the purchase of your elmeg IP290 Voice-over IP telephone!

Telephony is part of our everyday life. Over a period of more than 100 years a form of communication has evolved that is impossible to ignore. In spite of the new technology base of the elmeg IP290, most of its look and feel will be very familiar to you and you should be able to use it intuitively.

The world of the Internet, on the other hand, has opened up a whole range of new possibilities. Many users work with web browsers and own one or more email accounts. These users will find it easy to manage the phone via its web interface or to make a call to, for example, "sip: john@domain.de".

We are confident that developments in the computer industry will follow those in the telecom world.

VoIP is not only about transporting speech over data networks. It is about interoperability and breaking up a vertical market, as well as streamlining business processes by seamlessly integrating the telephone into computer networks and applications. With its technical flexibility, elmeg's commitment to all open and relevant standards and our cooperation with other vendors in the VoIP industry, the elmeg IP290 represents a safe investment for the future.

We would like to take this opportunity to wish you a great time in the world of VoIP.

Note to the reader

This manual describes the elmeg IP290 running in **administrator mode**. The current version of this user manual can be obtained from:

Table of Contents

Installation

Delivery Content

Please check whether the delivery contains the following parts:

- The base unit with display and keypad
- The handset
- The handset cable
- The power supply

Safety Notes

Please observe the following safety advice. It is crucial for the safe and reliable operation of the device.

Power supply

Uuse the external power supply that is included in the package. Other power supplies may cause damage to the phone, affect the behavior or induce noise.

Setting up the Phone

The elmeg IP290 should only be placed on even, horizontal surfaces that enable the rubber pads to ensure a secure grip. Do not place the elmeg IP290 on carpets or other materials that contain fibers that could block the air vents and cause overheating.

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Cleaning

To clean the elmeg I P 2 9 0 use an anti-static cloth. Please avoid cleaning liquids as they might damage the surface or internal electronics of the phone.

Connecting the phone

First connect one end of the handset cable to the handset and then to the jack on the left-hand side of the phone.

Next plug the Ethernet (network) cable into the RJ45 connector, which is named "NET" and is the nearest to the middle of the phone, and plug the other end into the network side to establish a data link. The second RJ45 connector at the edge of the phone named "PC" or "UP0" is for daisy-chaining further Ethernet devices without the need for a second Ethernet connection line.

Iinsert the plug of the power supply into the connector next to the data line and hook up the casing into the mains.

If you want to use a headset, it can be connected to the audio jacks on the rear side of the elmeg IP290. The connector named "in" is for the microphone.

Keypad

The numeric keypad with the keys 0 to 9, * and # is used to enter digits and letters. Depending on the operating mode, different actions can be performed (see the table below):

- Entry of digits only (e.g. when dialing a phone number),
- Type in letters and digits by pressing the keys repeatedly (similar to a cellular phone).

1

The key is used to invoke the menu. To cancel actions or input, the CANCEL key can be used. The key confirms actions, selections and inputs.

Depending on the operating mode, the keys can have context-specific meanings and are described in this user manual.

The softkeys F1 to F3 located below the display are context-sensitive function keys. Their current mapping is depicted with texts in the bottom line of the display.

The five keys on the right with LEDs are the programmable function keys onto which different functionalities can be mapped.

The keys of the numeric block in different operating modes are shown below:

1

Key	Digits	Lower case	Upper case
0	0	(SPC)_0	(SPC)_0
1	1	.@1,?!-/(): ;&%*#+<=>$[]	.@1,?!-/(): ;&%*#+<=>$[]
2	2	abc2	ABC2
3	3	def3	DEF3
4	4	ghi4	GHI4
5	5	jkl5	JKL5
6	6	mno6	MNO6
7	7	pqrs7$	PQRS7$
8	8	tuv8	TUV8
9	9	wxyz9	WXYZ9
# or . after timeout,	# or . after timeout,	number guessing	number guessing
*	*	Toggles upper and lower case	

Initialization

Booting

The booting process comprises a series of different configuration steps that set up the phone for future use by any user.

Selecting the language

The phone will ask the administrator to select the language of the phone the first time it boots up.

```
Select Language:
←            English              →
```

Choose the appropriate language with the ● or ● keys. Press
● to activate your selection.

DHCP Configuration

If the network supports DHCP, then on bootup option select "On" when the menu appears:
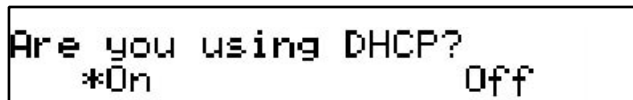
```
Are you using DHCP?
   *On              Off
```

The phone has a built-in DHCP client. It will receive an IP address and other Network-related settings (Netmask, IP gateway, DNS server) from the DHCP server.

If, on the other hand, DHCP is not used, select "Off" in the menu above. The administrator will subsequently be asked for the following settings.

Selecting the IP Address

The administrator can provide a static IP address for the phone if DHCP is not used.

1

```
IP Address:
I92.168.175.225
```

A valid IP address appropriate to the network in which the phone is being used can be provided.

Selecting the Netmask

Similarly, the administrator will be asked to provide IP addresses for Netmask:

```
Netmask:
255.255.0   .0
```

Selecting the IP Gateway

If a valid Netmask has been provided, the administrator will be asked for the IP address of the IP gateway:

```
IP Gateway:
I92.168.0   .1
```

Selecting the DNS Server

The last item for this series of networkrelated configuration is the IP address for the DNS server:

```
DNS Server:
▌92.168.0   .9
```

Selecting the Tone Scheme

The administrator will then be asked for the tone scheme to be used on the phone:

```
Select Dialtone:
←         USA          →
```

Selecting the Timezone

The timezone to be used on the phone can also be selected by moving through the different timezone options available in the menu and pressing ⊙ to activate your selection.

```
Select Timezone:
←   -5: USA (New York)  →
```

If the settings explained above are set up properly, the phone will ask for the first account registration.

Logging on the first account

If no number is assigned to the phone, you will be prompted to type in your account name. This consists of your phone number succeeded by @ and the address of your registrar (for SIP) or gatekeeper (H.323). The phone tries to guess the correct registrar/gatekeeper address, so it could look something like this:

```
Account:              123
[intern.snom.de
```

1

After typing in your account name, confirm your account by pressing the ⬤ key.

The phone tries to register your given account name at the given registrar/gatekeeper. The idle screen is shown and if no "NR" is displayed in the middle of the first line, your registration has been successful.

```
6/21 (445)          9:23AM
    DND    PhoneBk CallLog
```

When this state has been reached, the time and date are displayed in the first line of the display. If your extension is numeric it is also displayed in brackets.

Logon

Mobility

In office environments, different employees sometimes share desktops at the same time or at different points in time (e.g. employees working different shifts etc). The phones that are located at the desktops need to be able to cater for this.

To ease the effort of assigning the appropriate phone number to the phone for each different employee, the elmeg IP290 offers the so-called mobility features, which are described in the next sub-chapters.

Logon wizard

If no number is assigned to the phone, you will be prompted to type in your account name. This consists of your phone number succeeded by @ and the address of your registrar (for SIP) or gatekeeper (H.323). The phone tries to guess the correct registrar/gatekeeper address, so it could look something like this:

```
Account:           123
@intern.snom.de
```

After typing in your account name, confirm your account by pressing the ⬤ key.

The phone tries to register your given account name at the given registrar/gatekeeper. The idle screen is shown, and if no "NR" is displayed in the middle of the first line, your registration has been successful.

```
6/21 (445)              9:23AM
    DND    PhoneBk CallLog
```

Registration menu

2

From the idle screen use the arrow keys to scroll to the menu "Other Settings". The "Reg" key is assigned to the registration submenu.

```
←     Other  Settings     →
TimeZone    Reg  DialTone
```

After pressing "Reg" you can choose the registration line you want to use. With "Next" you can move through the seven different registration lines.

Logon user

Suppose you want to logon a user 777 by using the third registration line.

```
3:                          →
  Next              Edit
```

Press "Edit" to start editing the registration line information. First type in the phone number of the user:

```
Account:                 123
▓
```

```
Account:              123
777█
```

After confirming with ⬤ the registrar/gatekeeper address should be typed in.

2

```
Registrar:            123
█
```

```
Registrar:            abc
intern.snom.de█
```

After pressing ⬤ the whole registration line is shown again.

```
3: 777@intern.snom.de  →
   Next  Activate  Edit
```

Logoff user

Choose the registration line where you want to logoff the user and press "Edit".

```
3: 777@intern.snom.de  →
   Next  Activate  Edit
```

```
Account:              123
777█
```

Remove the current phone number with ⊙. Confirm this and the following registrar/gatekeeper entry by pressing ⓞⓚ. Registrar/ gatekeeper entry can remain filled in for later use.

Select outgoing line

Select the registration line you want to use as your outgoing identity for the next call by pressing "Next".

```
1* 447@intern.snom.de   →
  Next              Edit
```

And activate the chosen registration line by pressing "Activate".

```
2: 555@intern.snom.de   →
  Next   Activate   Edit
```

By choosing a different registration line, your originator phone number is changed to this line. This means that different people can start calls from the same phone with their own originator phone number and the called phone will display this current outgoing line information. The current outgoing line is marked at the registrations screen with a "*" directly in front of the registered SIP line.

```
2* 555@intern.snom.de   →
  Next              Edit
```

DND

DND functionality is available on the idle screen of the elmeg IP290 phone. DND is short for "Do Not Disturb". If this mode is activated, it means that incoming calls will no longer come through to the phone and you will be completely undisturbed by the phone. If there is a mailbox set up for you, the calls are redirected to this. Before this mode is activated you will be asked if you really want to change to this mode.

2

```
Do not disturb?
  On              *Off
```

In idle screen, "DND" is displayed in the middle of the first line of the screen if the mode is activated.
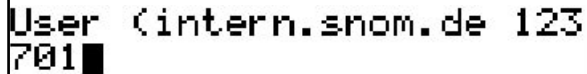
```
6/21 DND        10:11AM
    DND   PhoneBk CallLog
```

Challenge/Authentication

In SIP, an administrator can also set up authentication requirements for each registration on the phone. The password for each account name on its realm (domain/registrar) can be set up through the web interface of the phone in Settings/SIP/Authentication.

If the authentication password is not set, or is set wrongly, the account will not register on that domain and the phone will be challenged for that line. A challenge response will ask for the correct username. This can look like:
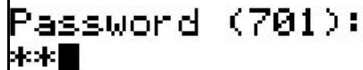
```
User (intern.snom.de 123
701█
```

It is possible to change the username as it could have been typed incorrectly by mistake. Confirm your change by pressing ⬤.

You will then be asked for the password for that registration account. Type in the password in the window that will look like the following:

```
Password (701):
**█
```

The default mode for password input is integer. You can switch to alphanumeric input by pressing the '*' key on the keypad. The password is hidden and replaced by a series of *s to keep it hidden from prying eyes.

The same procedure will be repeated for all the accounts with authentication. The challenge responses are stored in the phone and will be used at re-registration or on reboot. You can also view/edit this information on the web interface.

Basic Functions

Idle state

In idle state, the phone shows the date and time in the first line of the display and the second line shows the currently valid functions mapped onto the three softkeys.

```
6/21 (445)          9:23AM
     DND    PhoneBk CallLog
```

Dialing

There are two methods with which to begin a call from the idle state of elmeg IP290. You can either start dialing with the handset resting in the cradle and then pick it up, or you can pick up the handset and then dial the number. In the latter case you will have to press ⏺ to indicate that the number is complete and dialing can commence.

```
>444
              Cancel
```
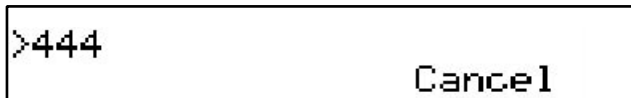
The elmeg IP290 shows the current communication status in the display.

Input Modes

Dependent on the context, various types of inputs are possible. The active input mode is sometimes indicated (by example during editing a phonebook entry) in the top right-hand corner of the display:

123	Only digits can be entered.
ABC	Upper case mode. By pressing *, lower case mode can be toggled.
abc	Lower case mode. Use * to activate upper case mode.

Key mapping for input:

◀	Moves the cursor to the left.
▶	Moves the cursor to the right.
C<-	Deletes the character to the left of the cursor.
©/Clear	Clears the input.
A->1	Changes input mode to numbers..
a->A	Changes input mode to capital letters.
1->a	Changes input mode to small letters.

As indicated in the table above, with "A->1", "a->A" or "1->a" the input mode can be changed. After using a specific input mode for dialing a number, the phone saves this mode as default for future use. If you want to use a different mode, begin dialing and if the mode is wrong, choose your preferred mode and continue dialing.

Dialing a phone number

A telephone number is dialed with the numeric keypad.

```
▶56222145█
   1→a        C<-      Clear
```

If block dial is on (this is the default) and the user has not done anything for a few seconds, the phone will remind the user to press the ⊙ key in order to start the call.
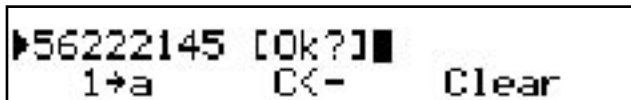
```
▶56222145 [Ok?]█
   1→a        C<-      Clear
```

3

Key mapping:

◀	Moves the cursor to the left.
▶	Moves the cursor to the right.
C<-	Deletes the character to the left of the cursor.
A->1	Changes input mode to numbers.
a->A	Changes input mode to capital letters.
1->a	Changes input mode to small letters.
OK	Dials the number.
ESC	Aborts the dialing.

Dialing an H.323/SIP address

An H.323/SIP address can be entered via the alphanumeric block. You will find the "@" symbol by pressing the numeric key "1" several times.

```
▶user@test.com▮
      a→A        C<-        Clear
```

TIP

E.164 numbers

E.164 is the standard that defines normal phone numbers. They may contain digits from 0-9, * and #. H.323 differentiates between these numbers and "H.323 addresses" that may contain alphanumeric characters. Several Gatekeeper implementations do not differentiate between E.164 numbers and H.323 addresses. If you encounter problems, try specifying the number as an H.323 address.

Key mapping:

◀	Moves the cursor to the left.
▶	Moves the cursor to the right.
C<-	Deletes the character to the left of the cursor.
A->1	Changes input mode to numbers.
a->A	Changes input mode to capital letters.

1->a	Changes input mode to small letters.
(OK)	Dials the H.323/SIP address if entered correctly.
(ESC)	Aborts the dialing.

Dialing an IP address

The IP address can be entered via the numeric block. Please use the "*" key instead of the dot (".")!

```
▶192*168*0*88█
   1⇒a      C<-      Clear
```

3

Key mapping:

◀	Moves the cursor to the left.
▶	Moves the cursor to the right.
C<-	Deletes the character to the left of the cursor.
A->1	Changes input mode to numbers.
a->A	Changes input mode to capital letters.
1->a	Changes input mode to small letters.
(OK)	Dials the IP address if entered correctly.
(ESC)	Aborts the dialing of the IP address.

TIP

Dialing an IP Address

When calling an IP address, the called phone or computer cannot determine which user you want to reach. In SIP mode it is assumed that "anonymous" is being called, and with H.323 no assumptions are made. This works with many phones and applications. Therefore, you should only use this method in exceptional cases, as the entry of IP addresses is rather cumbersome.

3

Number guessing

For your convenience, this functionality offers you the first number from dialed numbers, missed calls, received calls or phonebook that matches the beginning of the number you have already typed in.

If the displayed number is not what you expected, you can get the next matching number by pressing the "#" key (in alphanumeric modes). Otherwise, continue typing your desired number or press the ● or ● function key and the number guessing is temporarily switched off for this session of editing a phone number.

Terminating a call

You can end a call by setting the handset on its cradle, pressing the hook switch or pressing Cancel. The elmeg IP290 will terminate the call and return to the idle state.

Incoming call

When your elmeg IP290 is called, it rings and displays the following screen.

```
444
Deny All          Deny
```

Accepting a call

Picking up the handset or pressing [OK] will accept the call. The elmeg IP290 is now in a call.

```
444                    0:28
  Xfer     Mute     Cancel
```

3

Key mapping:

R	Hold / resume call.
Xfer	Transfer call.
🔊	Handsfree mode on/off.
Mute/Unmute	Mutes / unmutes the microphone.
◄ / ►	Changes the volume.

See below for a further description.

Denying/blocking a call

When the elmeg IP290 signals an incoming call, you have the option to deny the call with "Deny".

```
444
Deny All          Deny
```
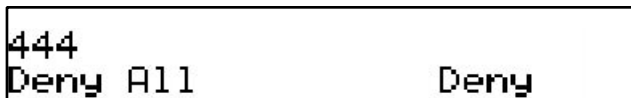
If you decide to press „Deny All", the caller will be placed on the deny list and will always be denied automatically. If "Deny All" is not displayed, this means that it is switched off in the settings. You can enable it again via the web interface.

Adjusting the volume

While conducting a call, you can use the arrow keys to invoke the volume control.
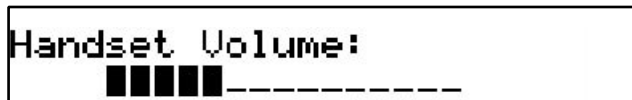
```
Handset Volume:
     █████_____
```

Key mapping:

◄	Reduces the volume in steps.
►	Increases the volume in steps.
OK	Sets the volume and returns.
ESC	Returns without setting the volume.

Mute / Unmute

Sometimes during a call the user may want to mute the microphone. This can be done by pressing the function key "Mute". Press "Unmute" to re-enable the microphone.

Handset / Handsfree / Headset

The elmeg IP290 supports calls being made while using the handset or the handsfree capability. During a call, it is possible to easily switch between both modes by pressing the function key ◖🔊◗.

```
← ┌─────────────────────────┐ →
  │    Headset Device       │
  │ RJ Conn  *None   Chinch │
  └─────────────────────────┘
```

If a headset is connected and the audio output is set to headset ("RJ Conn" or "Chinch"), the elmeg IP290 will treat the headset as the output device for calls. For using elmeg IP290 in a call center environment, the connected headset will be the default case for dealing with the phone. The ◖OK◗ key is therefore used to accept incoming calls.

3

Key mapping:

◖🔊◗	Switch to handsfree mode and back.
◖OK◗	Accept incoming calls while headset mode is on.
◖ESC◗	Returns to the idle state.

Programmable Keys

The five programmable keys on elmeg IP290 on the right beside the number block are the programmable function keys, which have the following options:

- Line
- Destination
- Intercom

- Park Orbit
- Voice Recorder
- DTMF

Each of these buttons has an LED indicating the status of the respective programmable key at any given time.

Some features are common to all of these options:

a. Pressing any button when its LED is blinking and the phone is ringing will receive the call.

b. Pressing the button when a call is in progress at that key, indicated by the constantly on LED, will put the call on hold.

c. Pressing any button while editing a number for dialing at that key will erase the number and the phone will go to idle state.

Each of these different options will now be explained in detail.

Line

"Line" can be used in one of the following ways:

a. To map a local sip line: A user can assign the local lines to programmable keys by selecting this option and setting the url of the local line as argument to that key setting, e.g. if a phone has 2 registrations, 501@my.proxy.com and 502@my.proxy.com. The user has the option to map two programmable keys to each one of these lines by selecting ‚Line' and setting the respective sip url as argument. In this case, all the calls to a particular line will go to its matching programmable key, e.g. if 502@my.proxy.com is mapped at key P2, the LED on that key will start blinking if there is an incoming call on that line. Similarly, if the user presses P2 in the idle state, 502@my.proxy.com will become the active line for that call. This feature enables the customer to use his different sip accounts as he would use different PSTN phone lines. It is also possible to assign different ringtones for each sip line in order to make an acoustic differentiation. This can be done either at the proxy or at Settings/Sip/ Lines page on the phone web interface.

b. To map a sip url for call pickup: Selecting this option with an sip url as argument will subscribe to dialog state changes of the phone with that registration. The LED on that key will show the status

of the registration as idle, talking or ringing by varying frequencies of blinking. This allows the user to pick up a ringing call remotely simply with the press of a button. An example of its usage can be mapping the office reception phone line at the phone of a secretary. If for some reason a ringing phone is not answered at the reception, the secretary can see its ringing status by the blinking LED and pick up the call simply by pressing that programmable key. In this way, no calls go unanswered.

c. **Free Key:** ‚Line' is also the default setting for the programmable keys. If no argument is set, the keys are treated as free. Outgoing and incoming calls not bound to any other key go to the first such free key.

Destination

The user can map a sip url to a particular programmable key by setting this option and providing the url as argument. This option can be used in the following ways:

a. If the sip line 505@my.proxy.com is bound to key P3 with this option, all calls coming to the phone from this number will go to P3.

b. If, on the other hand, P3 is pressed during the idle state, 505@my.proxy.com will be dialed, as it is set as destination for this key.

c. In the ringing state, if the call comes from any line other than 505@my.proxy.com, pressing P3 will transfer the incoming call to 505@my.proxy.com.

Intercom

This option is similar to ‚Destination' with the exception that pressing the key bound to ‚Intercom' enables the intercom mode and the phone will be directly connected to the set elmeg phone if authentication is set up properly. This feature is useful in an office environment as a quick access button to connect to the operator or secretary.

Park orbit

elmeg 4S provides its customers with the opportunity to set up parking orbits at the media server, where calls can be parked and picked up. The option "Park Orbit" enables the phone to provide this feature.

Suppose key P4 is bound to orbit1@my.proxy.com. The LED on this key now displays the status of calls, if any, that are parked on this orbit. If the LED is blinking, this means that a call is parked there and the user can easily pick up this call by pressing P4. If, on the other hand, the user wants to park a call, pressing P4 during the call will park it at orbit1@my.proxy.com until the same or another user picks it up later. The caller will hear the holding music. This feature is useful for call center environments and all such places where there is a great inflow of calls and some kind of queuing is required to manage them.

Voice recorder

This option can be set up with a valid voice recording account. Suppose that vr@my.proxy.com offers voice recording and is bound to key P5 on the phone. Its usage is explained in the following:

a.   During a call, by pressing P5 the user is able to record the conversation he is having with the other party. Pressing button P5 again will end the recording process. The recorded media can later be listened to by accessing the recorder account vr@my.proxy.com.

b.   This feature is also useful for recording short messages or memos to self. By pressing P5 in the idle state a user can record an important message to be listened to later.

c.   The same applies for recording the proceedings of a debate or discussion,

d.   To keep audio minutes of a meeting, or

e.   To record an important conference call hosted at the phone.

DTMF

In H323 mode, this line type offers the ability to set up the programmable keys as additional function keys concerning PBX functionality controlled via DTMF key codes. Upon a key press to the programmable key set up as DTMF line type, the specified number sequence is dialed as DTMF key codes.

elmeg IP290 Menus

By pressing the 🄵 key in idle state, the menu is invoked. The following submenus are available: Call Forwarding, Forwarding Options, Configuration, Volume Settings, General Settings, Other Settings, System Info, SW Update, Information.

```
┌─────────────────────────────────┐
│←     Call Forwarding     →      │
│  *Off     Time    Always        │
└─────────────────────────────────┘
```

Key mapping:

◄   Goes to the previous submenu.

►   Goes to the next submenu.

OK   Enters the submenu.

ESC Returns to the previous screen
     state.

Call Forwarding

In the Call Forwarding menu, an administrator can set up the options for call forwarding.

```
┌─────────────────────────────────┐
│←     Call Forwarding     →      │
│  *Off     Time    Always        │
└─────────────────────────────────┘
```

Forwarding Options

In the Forwarding Options menu, call forwarding on busy can be set up.

```
┌──────────────────────────────────┐
│ ←    Forwarding Options    →     │
│              Busy                │
└──────────────────────────────────┘
```

───── **TIP** ──────────────────────────────────────

Call forwarding is explained in detail in a later chapter entitled
"**Transfer**".

───

3

Configuration

In this menu, basic configuration of the phone can be changed.
The menu looks like this:

```
┌──────────────────────────────────┐
│ ←      Configuration       →     │
│   Reset   Reboot    DHCP         │
└──────────────────────────────────┘
```

Reset

By pressing the softkey "Reset", you can reset the phone to
factory settings. This operation clears all the settings on the phone and
restores the default factory settings. This should only be used with the
utmost care, which is why a second screen requiring the administrator
password appears. Press ⬤ to confirm your password or ⬤ to return
to the menu.

```
┌──────────────────────────────────┐
│ Admin Mode Pwd          123      │
│ **█                              │
└──────────────────────────────────┘
```

If the correct administrator password is given, the phone will ask for a reboot.

Reboot

By pressing the softkey "Reboot", you can restart the phone without unplugging the power cable. This is called a "Soft Restart". This operation also requires confirmation.

```
Reboot?
            Cancel
```
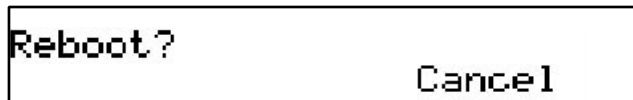
DHCP

Pressing the softkey "DHCP" takes you to the DHCP submenu that looks like this:

```
Are you using DHCP?
   *On          Off
```

If your network supports DHCP, press the softkey "On". The phone has a built-in DHCP client. It will receive an IP address and other Network-related settings (Netmask, IP gateway, DNS server) from the DHCP server.

If you press the softkey "Off", you will be asked for basic network settings as explained in the earlier chapter entitled "Initialization".

Volume Settings

In the menu sub-item "Volume Settings" the following window is displayed:

3

```
←      Volume Settings      →
   Hand       Head     Speaker
```

Here, the volume of the handset speaker, headset speaker or casing speaker can be adjusted. Select one of the three choices.

A tone is played back at the selected volume and you can decide on the desired setting.

Key mapping:

◄ Reduces the volume in steps.

► Increases the volume in steps.

OK Sets the volume and returns.

ESC Returns without setting the volume.

General Settings

In the menu sub-item "General Settings", the following window is called up:

```
←      General Settings      →
Contrast   Lang   RingTone
```

Lang

Select the appropriate Language as explained in the "Initialization" chapter above.

RingTone

Select the submenu "RingTone". Here, the ring tone can be set.

```
Select normal melody:
←          Ringer 1          →
```

The selected ring tone is played back and you can decide on the desired setting.

Key mapping:

▶ Moves the cursor to the next ring tone.

◀ Moves the cursor to the previous ring tone.

OK Activates the selection and returns.

ESC Returns without changing the ring tone.

3

Contrast

Select the submenu "Contrast" in the "General Settings" menu. Here, the display contrast can be adjusted.

```
Display Contrast:
     ██████_____
```
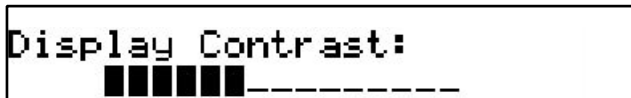
The selected contrast is displayed and you can decide on the desired setting.

Key mapping:

◀ Reduces the contrast in steps.

▶ Increases the contrast in steps.

OK Sets the contrast and returns.

ESC Returns without setting the contrast.

3

Web Interface

In the menu sub-item „Web Interface", the following window is displayed:

```
←        Web Interface      →
 Server      HTTP      HTTPS
```

In the subsequent submenus you can set up whether the web interface should be accessible via HTTP only, HTTPS only or via HTTP and HTTPS. The appropriate ports for both protocols can also be set here.

Other Settings

In the menu sub-item "Other Settings", the following window is displayed:

```
←      Other Settings      →
TimeZone      Reg  DialTone
```

In the subsequent submenus you can set up Timezone, Registrations and Tone schemes for the phone. These operations have all been explained in the earlier chapter entitled "Initialization".

System Info

The following is displayed in the menu sub-item "System Info":

```
←        System Info       →
 Network            Memory
```

In the subsequent submenus you can see the Network status TX/RX and total and available memory of the phone.

3

VLAN Settings

In the menu sub-item "VLAN Settings" the following window is displayed:

```
←        VLAN Settings      →
    ID    Priority   Reset
```

The ID (0..4095) and priority (0..7) values for VLAN can be set here. "Reset" removes them properly from the phone again.

SW Update

In the menu item "SW Update" the following window is displayed:

```
←        SW Update        →
      Not Available
```

When a software update is available, the softkey display changes to "Available", and pressing it reboots the phone to get the desired binary file.

Keymapping

In the menu sub-item "Fkeys" the following window is displayed:

```
←         Keymapping         →
              Fkeys
```

Press OK 🆗 to enter the function key selection menu.

```
Select Functionkey:
←         Key 1              →
```

Use the arrow keys ◀ or ▶ to select the desired function key and press OK.

```
Key Type:
←         Line              →
```

Again using the arrow keys ◀ or ▶, specify the type of keymapping for the selected key and press OK 🆗.

```
Number:               123
█
```

Specify the number to which the key should be mapped.

Information

In the menu item "Information", the following window is activated:

```
←      Information      →
   IPAdr     MAC    Version
```

Here, you can look up the software version, the currently assigned IP address and the MAC address of the phone.

IPAdr

Pressing the softkey "IPAdr" takes you to this submenu and you can see the IP address of the phone. This window looks like this:

```
IP Address:
192.168.175.225
```

MAC

Similarly, the "MAC" softkey in the "Information" menu takes you to this submenu and you can see the MAC address of the phone. This window could look like this:

```
MAC:
000413100E96
```

Version

This submenu, accessed by pressing the "version" softkey in the "Information" menu, shows the firmware version on the phone. The display in this submenu could look like this:

```
Version:
 elmeg   -SIP 2.10a 5087
```

Advanced Functions
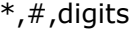
Hold and resume

When a call is in progress, pressing the flash key "R" <kbd>R</kbd> puts the call on hold, i.e. the speech is set to mute (neither party can hear the other).

```
Calls on Hold: 1
Sven <sip:444@intern.sno
```

Pressing the flash key again will resume the call. While a call is on hold, you can establish another call by dialing the desired number and pressing OK <kbd>OK</kbd>.

Key mapping:

◄	Moves backward through the list of held calls.
►	Moves forward through the list of held calls.
ESC	Terminates the held call already being displayed.
R	Resumes the held call already being displayed.
*,#,digits	Can be used to initiate another call.
🔊	Handsfree mode on/off.

Transfer

Direct Transfer

During a call, after pressing the transfer key „Xfer", the connected party is put on hold. Now you are able to dial a number to which the call should be directly transferred.

```
444                      0:08
    Xfer       Mute    Cancel
```

```
▶■
      1→a        C<-      Clear
```

As soon as you press ⬭, the elmeg IP290 will transfer the held party to that number.

Key mapping:

◀	Moves the cursor to the left.
▶	Moves the cursor to the right.
C	Deletes the character to the left of the cursor.
1->a	Changes input mode to capital letters.
a->A	Changes input mode to small letters.
A->1	Changes input mode to numbers.
OK	The elmeg IP290 transfers the call.

ESC   Aborts the transfer.

Consultation Transfer

While a call is in progress, put the connected party on hold by pressing the **R** key.

While the call is on hold, you can establish a second call by dialing the desired number and pressing OK. When the second call is established, you can consult the second party, i.e. to announce the call. By pressing the transfer key "Xfer" or hook on the handset, you can connect the two parties.

Conference

If the phone is connected with two calls, one on hold and one active, you can connect all three phones in a conference by pressing function key "Cnf.On".

```
444                    0:05
  Xfer      Mute    Cnf.On
```

By pressing function key "Cnf.Off", the conference is disconnected again and the calls are dropped.

```
444                    0:19
  Xfer      Mute    Cnf.Off
```

4

Call Diversion

All kinds of call diversions can be set, changed and deactivated in the submenu "Call Forwarding" and "Forwarding Options". The one that is currently active is marked with a preceding "*".

Diverting all calls

By selecting the option "Always" in submenu "Call Forwarding", every incoming call is diverted immediately to the number set without ringing the phone.

To disable this feature simply select "Off".

Divert when Busy

By activating the option "Busy" in submenu "Forwarding Options", every incoming call is diverted to the number set if another call is already in progress.

4

Divert when not answered

In sub-item "Time" of submenu "Call Forwarding", you can set the number of seconds after which every incoming unanswered call is diverted to the number you have also set up here.

Note: To activate "immediate call divert", see above.

Call completion

The call completion functionality helps the user to establish calls successfully even if the other party is busy or not answering.

On busy (CCBS)

This is helpful if the party you are trying to reach is busy. If call completion support is enabled, the following window will appear during a call attempt:

```
Activate Call Completion
                  Cancel
```

By pressing the ⓞⓚ key, call completion is activated and the phone waits for the other party to return to idle.

```
Waiting: 424
                  Cancel
```

Pressing "Cancel" doesn't cancel the call completion procedure, but allows you to make or receive calls in parallel.

4

```
21.6. CC            3:32PM
    DND   PhoneBk CallLog
```

When the other party becomes idle, the following window appears:

```
Dial 424?
                  Cancel
```

By pressing ⓞⓚ key, the phone will redial the number in order to establish a connection to the other party that was previously busy and is now idle again.

On no response (CCNR)

While calling a number you can enable call completion on no response by pressing the CC key.

```
424
              CC      Cancel
```

The phone will now wait for the dial destination to become active again. The user can make and receive calls in the meantime by pressing "Cancel" and going to the idle screen.

```
Waiting: 424
                      Cancel
```

4

When the other side is available, the display will prompt you to dial the number again.

```
Dial 424?
                      Cancel
```

By pressing ⬤ key, the phone will redial the number in order to establish a connection to the other party that was previously busy and is now idle again. That was previously idle and is now active again.

DTMF Tones

During a call, e.g. with a voicemail system, pressing the digits 0-9, * or # will generate and send DTMF tones to the other party.

Message Waiting Indication (MWI)

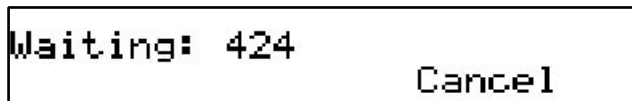If another party tried to reach you and the mailbox recorded a message as you did not answer the call, the idle screen displays that a recorded message is waiting for you.

```
6/21 (445)           4 06PM
      DND      MWI   CallLog
```

At the idle screen, the second softkey turns to show "MWI". In order to listen to the recorded messages, connect to the mailbox by pressing the MWI key.

4

Conducting a Software Update

If your provider/administrator is offering you a new software version for your phone, a "SW" is displayed in the middle of the first line of the idle screen.

```
6/21 SW              4:12PM
   DND    PhoneBk CallLog
```

In this case, the menu item "SW Update" will show "Available".

```
←        SW Update        →
         Available
```

4

Pressing the F2 key reboots your phone after a few seconds. During boot-up, the phone asks you whether or not it should proceed with the bootloader and/or firmware update.

Additional PBX Features

If the phone is set up to use H.323 protocol, additional PBX features are available if they have been enabled.

Pickup

If someone else's phone is ringing and you want to pick up the call with your own phone, you need to press the ⬭ key.

(This functionality also works also with Innovaphone ip400.)

Conference

If the phone is connected with two calls, one on hold and one active, you can connect all three phones in a conference by pressing function key "Cnf.On".

```
424                      0:07
   Xfer      Mute    Cnf.On
```

By pressing function key "Cnf.Off" the conference will be disconnected again.

```
424                      0:11
   Xfer      Mute    Cnf.Off
```

4

4

Call Register

Phone book

The elmeg I P 2 9 0 contains an internal phone book that can be reached from the phone's idle state by pressing the "PhoneBk" key,

```
6/21 (445)          9:23AM
     DND   PhoneBk CallLog
```

which leads to a screen like the one below:

```
Kate Wilson
 Details  Edit     Clear
```

5

Key mapping:

◀	Scrolls to the previous item.
▶	Scrolls to the next item.
Details	Toggles between displaying name or number
Edit	Enters the edit mode for the selected entry.
Clear	Deletes current item.
●ᴼᴷ / Off Hook	Dials the number of the selected entry.

ⓔ   Returns to the idle state.

Adding an entry

In order to add a new entry, go on to the list item <New item> and press "Edit".

```
<New Item>
          Edit
```

Then enter the name and phone number and confirm each item by pressing ⓞⓚ.

```
Edit Name:          abc
Kate Wilson■
```

```
Edit Number:        123
448■
```

Pressing ⓔⓢⓒ aborts the addition of a new entry.

Key mapping:

*	Changes input mode
Ⓒ	Deletes the character to the left of the cursor.
◀	Moves the cursor to the left.
▶	Moves the cursor to the right.
ⓞⓚ	Accepts the entry.

ESC   Cancels the entry.

Editing an entry

After pressing the key "Edit" on the entry to be modified, the name and phone number will be brought up in sequence. Confirm each item by pressing **OK**.

The title of the window indicates which input is expected. **OK** accepts the data and pressing Cancel aborts the editing.

Key mapping:

*	Changes input mode
C	Deletes the character to the left of the cursor.
◄	Moves the cursor to the left.
►	Moves the cursor to the right.
OK	Accepts the entry.
ESC	Aborts the editing process.

Editing of the phonebook can also be done via the webpage Phone / Phonebook.

5
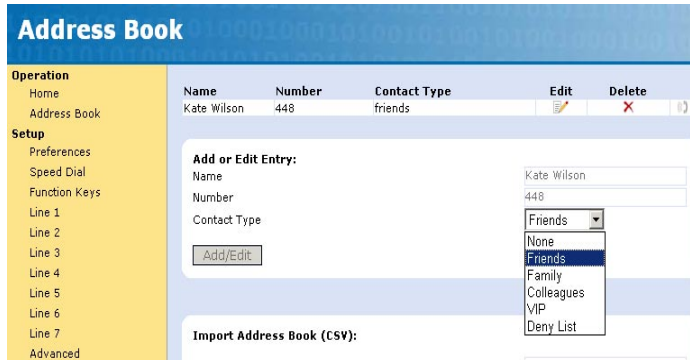
Export

To save the content from an already filled phonebook, right-click onto the link at the bottom of the page Phone / Phonebook called "here" from "Click here to save the current address book."
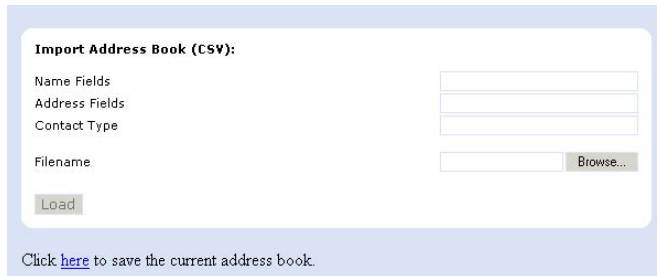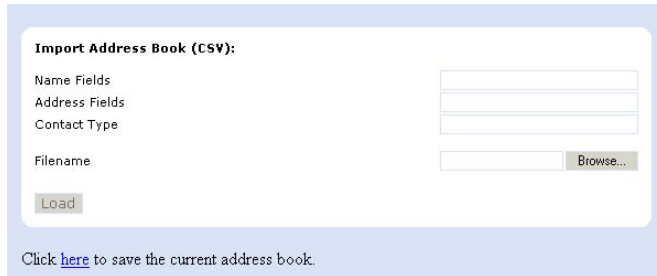
With "Save Target As…" you can save the phone book content in a comma-separated file containing the current address book entries (CSV = Comma-Separated Values).

Import

      To load an Address book from a file, click on the Browse button on the page Phone / Phonebook in the section entitled "Upload Address Book (CSV)". Select the pre-stored csv file from the storage medium and then press the 'Load' button just below the edit box.
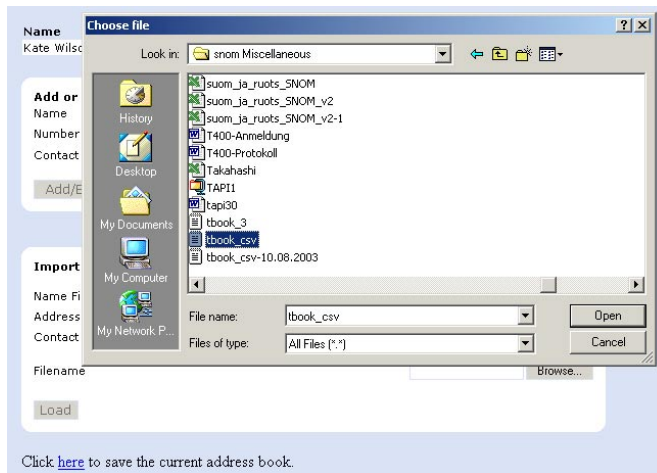
      This will add the address book entries in the stored file to the address book of your elmeg IP290. Name and Address fields refer to the column numbers in which these fields exist in the csv file to be attached. They are not required if the file has proper field headers.

If the file does not have proper field headers, remove the first line containing the header information if there is any (e.g. "Name","Phone","Content Type"), as this is not needed if you are specifying the Name and Address fields explicitly. Enter 1 in the Name field and 2 in the Address field, and press Load. This feature is especially helpful if you have a file that has not been generated by a elmeg phone.
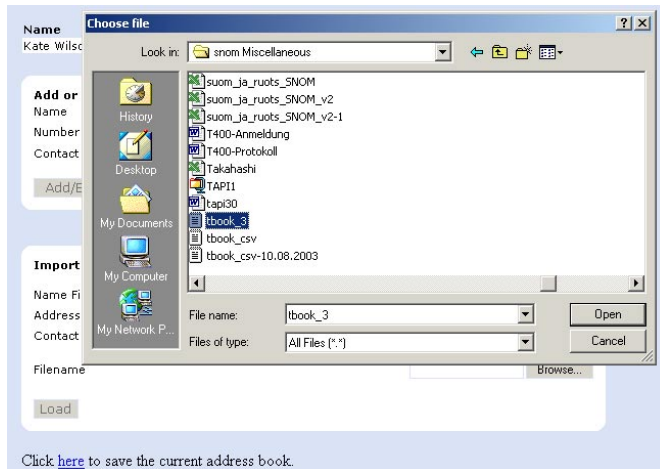
It should not matter if some of the entries already exist in the phone book. They will not be duplicated if both Name and Number are the same. If the number field is the same but the name is not, the file entries will replace the old ones (just like editing the old entry to save a different Name).

5

Call Lists

The elmeg IP290 maintains lists of missed, received and dialed calls that can be accessed by pressing the „call log" key from the idle state.

```
Missed: 1          4 54PM
    DND    PhoneBk CallLog
```

```
Select List:
 Missed Received Dialed
```

Key mapping:

▶	Scrolls to the next call.
◀	Scrolls to the previous call.
Details	Shows details of this call.
Clear	Deletes the current entry.
OK/off Hook	Dials the number of the current entry.
ESC	Returns to the idle state.

For example, after choosing the missed calls, the most recent missed call is displayed first.

```
4:54PM▶ 444
 Details           Clear
```

After pressing "Details", the call details are displayed.

```
To: 447                          →
   Edit        Save        Clear
```

You can step through the Details with ◄ or ► key. Call details shown are To, From, Time and the number of times you missed a call from the same phone, or the duration of the call in the case of dialed and received calls.

```
From: 444                        →
   Edit        Save        Clear
```

```
Time:    5:31PM                  →
   Edit        Save        Clear
```

```
Missed: 1                        →
   Edit        Save        Clear
```

5

Key mapping:

Edit	You can use the current entry for your next call and possibly edit the number before calling it.
Save	Saves the current calling party to the phone book.
Clear	Deletes the current entry.
OK / Off Hook	Dials the number of the current entry.
ESC	Returns to the previous window.

Speed Dial

The elmeg IP290 supports speed dial of up to 33 numbers. These are mapped onto the numbers 0-30, * and #.

Dialing

Speed dialing is initiated by simply typing in a number from 0-30, * or # respectively and confirming with the OK key. In this way, 33 speed dial numbers can be called up without having to look at the display.

Editing speed dial entries

The speed dial numbers can be conveniently set up with the built-in web interface page of your phone.

Speed Dial

Operation
Home
Address Book
Setup
Preferences
Speed Dial
Function Keys
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
Line 7
Advanced
Software Update
Status
System Information

Speed Dial Table:
0:    support@snom.com
1:    john@edwards.com
2:    444
3:
4:
5:
6:
7:
8:
9:
#:
*:

10:
11:

Deny List

The elmeg IP290 gives you the option of putting numbers on a deny list to prevent you being disturbed.

Browsing

Via the web interface submenu Address Book you can reach the phonebook window, which also provides the information for the deny list

5

Name	Number	Contact Type	Edit	Delete	
George Gipp	gipper@hw.org	deny	📝	✗	()
Kate Wilson	448	friends	📝	✗	()
Sven Testphone	445	vip	📝	✗	()

Add or Edit Entry:

Name	
Number	
Contact Type	None ▾

Add/Edit

The numbers to be denied are displayed here and marked with contact type "deny".

Adding a number

While you are being called, you can press the deny list key „Deny All". This will not only deny the call but will also add the number to the deny list.

```
Seven Zero Three
Deny All          Deny
```

In addition, any number can be added to the deny list by adding a new entry via the Address Book webpage and marking it as "deny".

Pressing "Deny" on an incoming call will only deny that instance of the call and will not put it on the Deny List.

Please keep in mind that the contact type "VIP" overrides the DND mode.

Removing a number

Removing a number from the deny list is possible via the phonebook webpage by clicking onto the small red crossed icon at the end of the line that you want to delete. Or just change the contact type!

Settings

A long list of different settings is available for elmeg IP290 that can be used to control the behavior of the phone. These settings are explained in the FAQ "Configuring" elmeg phones for Mass Deployment", which you can find under http://www.elmeg.de The FAQ „How can I update a elmeg phone?" describes the different options on how to update the phone, also via setting file

Settings via Web Browser

It is usually more convenient to use a web browser to configure the settings. The elmeg IP290 has an integrated web server for this purpose. If the phone is connected to a network that provides DHCP, it can be immediately accessed via the browser after boot-up. If you do not want to use DHCP, you must specify the IP address, netmask, gateway, DNS domain and DNS server statically to ensure correct operation.

5
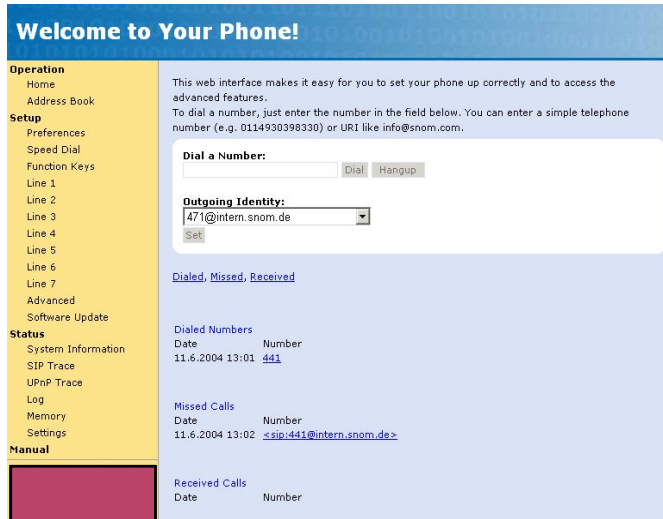
Illustration 1: Web configuration

- Start your web browser (e.g. Mozilla, IE).

- Enter the IP address of the phone as the URL (e.g. 192.168.0.100). If you do not know the IP address, press the arrow keys and scroll to the "Information" submenu and select item "Version".

- On the left-side you will find a selection menu.

- Just click on the desired submenu and the current settings of this submenu will be displayed on the right-thand side.

You can now modify and store the values by using the mouse and keyboard. To store the changes made, just click on the **SAVE** button. Do NOT press SAVE if you want to discard the changes.

Settings Options

The following options are available in Administrator mode via web interface.

Setup Preferences

GENERAL INFORMATION

The webpage may look like this:

General Information:

Language:	English
Number Display Style:	Name
Tone Scheme:	Germany
MWI Notification	Silent
MWI Dial Tone	Stutter
Use Headset Device	none

Language

      Your phone is able to show all display texts in different languages. Here you can select the language that suits you the best.

Number Display Style

      Specifies the display of incoming and outgoing callers:

- **Full Contact**: Shows the complete URL

- **Name**: Only the name is displayed

- **Number**: Only the number is displayed

- **Name+Number: Name and number is displayed**

Tone Scheme

      Select the dialtone you would prefer for your phone.

MWI Notification

      Specify the type of MWI notification that will inform you when a new message comes.

MWI Dial Tone

      Set the dial tone to stutter mode in the case of an active MWI.

5

Use Headset Device

Select the headset device you would like to use. Select none if you don't want to use any headset.

REDIRECTION

You can have all incoming calls diverted to a specific number.

Redirection:

Event	Never
Timeout:	
Number (Redirect):	
Number (Busy):	

The following options for redirection events are available:

- **Never**:

This deactivates all call diverts.

- **Always**:

All calls are diverted to the number specified in "Number Redirect".

- **When Busy**:

When a call is in progress, any other call made to that number is rejected and will receive a busy indication. The phone can be set in such a way that the second caller is diverted to another number set in "Number Busy".

- **After Timeout**:

Calls are diverted after the timeout in seconds specified in "Timeout" to the number specified in "Number Redirect.

The following fields for diversion are available:

Timeout

Specifies the timeout in seconds after which the call should be diverted.

Number redirect

Specifies the number to which the calls should be diverted.

Number busy

Specifies the number to which the calls should be diverted if the phone is busy.

RINGTONES

This section looks like the following:

Ringtones:

Default Selection	Source
"Friends"	Ringer1
"Family"	Ringer1
"Colleagues"	Ringer1
Ringer Device for Headset	Use Speaker
Default Ringer	Ringer1
Custom Melody URL:	

5

Default Selection

Select the criterion according to which the ringing melody is selected for incoming calls, i.e. based on the caller or callee address.

Contact Type Specific Ringers

Specify the ringing melodies for different contact types from your personalized phone book entries. These melodies will be used only if you selected "Source" in the Default Selection setting above.

Ringer Device for Headset

If you want to hear the ring tone via the headset only choose "headset". Otherwise, choose "speaker" as usual.

Default Ringer

Choose the default ringing melody for your elmeg phone through this setting.

Custom Melody URL

Specify a URL to your own ringing melody. The type of files that should be supplied to the phone are: "PCM 8 kHz 16 bit/sample (linear) mono WAV".

AUTO ANSWER

elmeg phones have auto-answering capabilities. Through these settings you can control the behavior of auto answer. This section looks like:

Auto Answer:

Auto Answer	○ on ● off
Auto Answer Indication	○ on ● off
Type of Answering	Handsfree ▼

5

Auto Answer

You can disable auto answer on your phone by turning this setting off. Turn it on to enable auto answer again.

Auto Answer Indication

If you want to be informed if an incoming call is automatically answered from your phone select "on".

Type of Answering

If auto answer is on, you can select how you would like to receive the incoming call, i.e. in handsfree mode or on the handset.

PRIVACY SETTINGS:

Privacy Settings:
Call Line Identification Presentation (CLIP)   ○ Hide ⦿ Show
Call Line Identification Restriction (CLIR)   ○ Reject ⦿ Accept

Call Line Identification Presentation (CLIP)

Show or hide your own phone number upon establishing a call.

Call Line Identification Restriction (CLIR)

Reject or Accept anonymous incoming calls.

Setup Speed Dial

Speed Dial Table

Set up your speed dial numbers via this webpage.

Speed Dial	

5

Operation	Speed Dial Table:	
Home		
Address Book	0:	support@snom.com
Setup	1:	john@edwards.com
Preferences	2:	444
Speed Dial	3:	
Function Keys	4:	
Line 1	5:	
Line 2	6:	
Line 3	7:	
Line 4	8:	
Line 5	9:	
Line 6	#:	
Line 7	*:	
Advanced		
Software Update	10:	
Status	11:	
System Information		

Function Keys

You have the option to program the five keys with LEDs on your elmeg IP290. This section helps you achieve this objective. Program the keys P1-P5 to perform any of the 5 different functions. They include "Line", "Destination", "Intercom", "Park Orbit" and "Voice Recorder". Each of these was explained in detail in the chapter entitled "Programmable Keys". You also need to specify the number for each of the keys in order to enable the specific key utility to work.

5

Setup Lines 1-7

Through this page you can set up SIP lines you would like to use on your phone. You have the option to set up to seven lines. Each line setting looks like the following:

LOGIN INFORMATION

Name

Set the name you would like to associate with each line, e.g. "John Smith".

Account

This is the account with which you would register to a registrar/ proxy. It could be alphanumeric, e.g. "js", or based on digit like "701" in the screenshot above.

Password

The password to be used for challenge responses. In order to protect privacy, passwords are not displayed in their true form.

Registrar

Specify the IP address or url of the registrar/proxy with which you would like to register this account.

5

Mailbox

If you have set up a mailbox, specify the account name for that mailbox here to associate it with this particular SIP line.

Ringtone

Through this setting, you can select a distinctive ring tone that will alert you when a call comes in at this particular line. In order for this to work, you will have to have specified "Destination" in the setting 'Default Selection' in Preferences.

ADVANCED LINE SETTINGS

Outbound Proxy

You can specify the outbound proxy here.

Dial Plan

You can set up the dial plan for this line here.

5

Q-Value

You can set up the probability of registration for each line through this setting. The default is 1.0.

Proposed Expiry

You can select the time when the registration on this line expires. The phone will send a fresh re-registration request at the expired time.

Transport

Select the protocol for transport layer communication through this setting.

Offer ICE

Choose whether or not you want to use ICE.

Codec 1-5

You can select the preferred order for the potential used codec. The available options for the elmeg I P 2 9 0 are G.711 ulaw, G.711 alaw, G.722, G.723.1 and G.729a

Packet size

You can select the packet size in bytes here. It affects only ulaw and alaw codecs (other codecs have fixed packet size). (10 ms), 160 (20 ms), 240 (30 ms) and 320 (40 ms) bytes are available.

Setup Advanced

NETWORK

With these settings you can set up the basic network settings of your phone. The web interface for this looks like the following:

Network:

DHCP	⊙ on ○ off
IP address:	192.168.179.200
Netmask:	255.255.0.0
Phone name:	
IP Gateway:	192.168.0.1

5

DHCP

Turn the use of DHCP on or off with this option.

IP address

You can change the IP address of the device through this setting. Changing this parameter requires a reboot. This parameter is mandatory in order to enable the Ethernet connection.

Netmask

Change the netmask for the device. Changing this parameter also requires a reboot.

Phone name

Change the Hostname of the phone here. If this parameter is available, it is used for identifying the device in SIP signalling.

IP Gateway

This setting shows the IP address of the default IP gateway (*not* the VoIP gateway). It is the address to which the packets get routed if the desired packet address is not in the current subnet. Setting up this parameter is mandatory in order to reach an external network.

DNS

```
DNS:
Domain:              intern.snom.de
DNS Server 1:        192.168.0.9
DNS Server 2:        195.58.161.3
```

Domain

Specify the DNS domain for your phone here.

DNS Server 1

Specify the IP address of the DNS server for your network here.

DNS Server 2

Specify the IP address of a backup DNS server for your network here.

TIME SETTINGS

```
Time:
NTP Time server:     192.53.103.103
Timezone             +1 Germany (Berlin)
```

NTP Time server

Specify the url or IP address of the NTP server here.

Timezone

Select the time zone most appropriate to your geographical location through this option.

HTTP

```
HTTP:
User:
Password:
HTTP Proxy:
HTTP port:                    80
HTTPS port:                   443
Webserver connection type     http or https ▼
```

User

Here you can select the HTTP username for your phone.

Password

Set up the HTTP password for your phone here.

HTTP Proxy

You can select the HTTP proxy address for your phone here.

HTTP port

Similarly, specify the HTTP port to be used by your phone through this setting.

HTTPS port

Specify here the HTTPS port to be used by your phone for HTTPS connections.

5

Webserver connection type

Set up the type of connection the phone's webserver is willing to answer to:

- http
- https
- http & https
- off

Phone Behavior

Phone Behavior:

Call Completion	⊙ on ○ off
IDNA (RFC 3490) Support	⊙ on ○ off
Action on Ethernet cable replug	Do Nothing ▼
Auto Dial	Off ▼
Number Guessing	⊙ on ○ off
Block URL Dialing	○ on ⊙ off
Deny All Feature	⊙ on ○ off
Challenge Response on Phone	⊙ on ○ off
Broadsoft Call Control Features	⊙ on ○ off
Call Waiting Indication	⊙ on ○ off
Dialtone during Hold	⊙ on ○ off
Disconnect on Onhook	⊙ on ○ off

5

Call Completion

Turning this setting to "On" will prompt the user to activate call completion, if possible, while dialing a number. When the dialed party becomes available again, your phone will be able to automatically redial the number.

IDNA (RFC 3490) Support

Switch on support for Internationalizing Domain Names in Applications (IDNA).

Action on Ethernet cable replug

Choose the action which should be performed after the network connection is reestablished: Do nothing" or „reboot".

Auto Dial

This setting is switched off by default. You can set a timeout after which a number is dialed automatically without pressing the ⬤ key or taking the cradle off hook.

Number Guessing

Here, the number guessing functionality can be activated or deactivated.

Block URL Dialing

You can block the dialing of sip urls by turning this setting on. In this case only numeric numbers will be allowed as input.

Deny All Feature

When turned on, this setting shows "Deny All" softkey on incoming calls to put the incoming numbers in the Deny List. Turning it off will disable this feature.

Challenge Response on Phone

As explained in an earlier chapter, elmeg phones can handle challenge responses on the phone. Turning this setting off will disable this feature and you will only be able to handle authentication through the web interface of the phone.

Broadsoft Call Control Features

Support for Broadsoft call control can be enabled here.

Call Waiting Indication

You can enable or disable the CWI on the phone through this setting.

Dialtone during Hold

Turning this setting on will produce a dial tone when a call is being held and the user is trying to dial the second number. Otherwise a dial tone will not be played.

Disconnect on Onhook

Sometimes it is useful to disable disconnection of a call when the handset is placed Onhook, e.g. during conference calls or handsfree mode etc. This can be achieved by turning this setting off.

5

Keys

Here you can change the key behavior on the phone to suit your wishes. This section of web page may look like

Keys:

Break Key	⦿ on ○ off
Transfer on Onhook	⦿ on ○ off
Block DND	○ on ⦿ off
Logon Wizard	⦿ on ○ off

Break Key

The Break Key on the phone can be used either to disconnect the connected call or as a Transfer hard key. You can make that choice through this setting.

Transfer on Onhook

In case the transfer feature triggered by onhook is confusing you, you can switch it off here.

Block DND

Administrators have an option to disable the DND feature. This can be achieved by turning the "Block DND" setting on. If this setting is turned on, the users on the phone will not get the DND option on their phones. This can be useful in call center environments.

Logon Wizard

Turn this setting on if you would like to use the Logon wizard. Switch it off to disable the Logon wizard.

PRESELECTION

This section looks like:

Preselection:

Prefix:	

Prefix

Specify the number to be prefixed to each dialled number.

AUDIO

Here you can set up audio-related settings on your phone. These settings may look like:

Audio:

Mute Microphone	○ on ● off
Disable Casing Speaker	○ on ● off
DTMF echo on Speaker Phone	● on ○ off
Call Released Notification	● on ○ off

Mute Microphone

Setting this to on will mute the microphone of the phone. Tuning it off will enable the microphone again. Specify the number to be prefixed to each dialed number.

Disable Casing Speaker

Turn this setting on to disable your speaker.

DTMF echo on Speaker Phone

Option to switch off DTMF echo.

Call Releases Notification

Turn this on to enable late media when a call is released. Turning it off will take you directly to the idle state when a call drops.

Advanced Network

In this section you can alter the advanced network settings of your phone. This page has the following settings:

5

Advanced Network:

NAT detection	Automatic ▾
STUN server (IP-addr:port):	
STUN binding interval (seconds):	
Use Mapped Address	⊙ on ○ off
Dynamic RTP port start:	10000
Dynamic RTP port end:	11000
Type of Service (TOS):	160
Payload Type:	101
Network identity (hostname):	
Network identity (port):	
SIP T1 (ms):	500
SIP Session Timer (s):	3600
SIP Dirty Host TTL (s):	
SIP Max Forwards:	70
ENUM Suffix:	
Music on hold server:	on_hold@intern.snom.de
Use user=phone	⊙ on ○ off
Publish Presence	○ on ⊙ off
Refer-To Brackets	○ on ⊙ off
Require PRACK	⊙ on ○ off
Symmetrical RTP	⊙ on ○ off

5

NAT detection

Administrators can select the kind of NAT according to their network through this setting. Available options are "Automatic", "UPnP", "STUN", "Static" or "Off". The default is "Automatic".

STUN server (IP-addr:port)

If you selected „STUN" as NAT detection type, specify the address of the STUN server followed by the port number.

STUN binding interval (seconds)

Similarly, set the STUN binding interval time in seconds through this setting.

Use Mapped Address

Through this setting you can switch on/off the mapped address feature.

Dynamic RTP port start

If you want to set up the RTP port dynamically, give the start port number in this setting.

Dynamic RTP port end

Similarly, give the last port number in this setting for dynamic RTP port selection.

Type of Service (TOS)

You can set up the TOS in this setting. A value could, for example, be 160.

Payload Type

Set up the payload type for Out of band DTMF here, e.g. 101.

Network identity (hostname)

Specify the hostname of the Network identity through this setting.

Network identity (port)

Set the port number of the Network identity here.

Local SIP Port

Determines whether you want to use the default SIP port or the port given at "Network Identity"

SIP T1 (ms)

Set the retry timer 1 in milliseconds here.

SIP Session Timer (s)

An administrator can specify the session timer for SIP in seconds here.

Dirty Host TTL (s)

Specify the Time To Live (TTL) for dirty hosts in seconds through this setting.

SIP Max Forwards

If you want to specify the maximum number of forwards, you can set it here.

ENUM Suffix

When using ENUM, you can specify a suffix here if desired.

Music on hold server

5

If you have configured a "music on hold" server, specify that contact here. Music from this server will be played to the other side when you hold a call.

Use user=phone

Turn this setting on if you want to use user=phone in SIP urls. Otherwise select "off" to disable it.

Publish Presence

Control the presence status information through this setting.

Refer-To Brackets

To switch on or off additional brackets in the signaling for Refer-To

Require PRACK

To force the usage of PRACK choose "on" here.

Symmetrical RTP

If you want to use symmetrical RTP switch it "on" here.

UPDATE

5

Update:
Update Policy   Ask for update
Setting URL:

Update Policy

You can select the best possible update policy you would like to adopt for your phone.

Setting URL

Set up the url of the settings server from where you would like to obtain the configuration file to configure your phone.

VLAN

VLAN ID (0..4095) and Priority (0..7)
seperated by a space (e.g. "128 5"):
Id Priority:

ID and Priority

Enter your VLAN ID (0..4095) and Priority (0..7) separated by a space (e.g. "128 5").

DEBUG

Debug:
LCServer: 192.168.0.34

LCServer

Specify the IP address of the remote LCServer if you want your phone to connect to it. You will not normally need to set the LCServer setting as it is for company internal development only.

SECURITY

Security:
Administrator Mode   ⦿ on ◯ off
Administrator Password: ****
Administrator Password (Confirmation):   ****

Administrator Mode

This setting allows you to switch between User & Administrator modes of the phone.

Administrator Password

In Administrator mode, you can set up the admin password through this setting. A password can be an alphanumeric string of any length.

Administrator Password (Confirmation)

You have to confirm the password to ensure no typing errors have been made.

Setup Update

MANUAL SOFTWARE UPDATE

5

Here you can select the binary files to be put on the phone yourself. This section may look like:
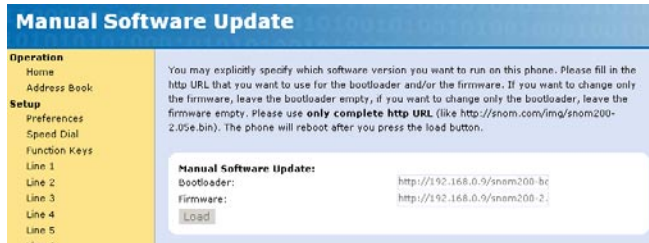
Bootloader

Specify the address for the bootloader file you would like to place on the phone through this setting.

Firmware

Similarly, you can provide the firmware address in this setting.

Press the "**Load**" button if you changed anything in these settings and would like to load the binary files through the newly provided addresses.

H.323

This mode of settings will be available to you if your phone is operating in H.323 mode.

E164 No.

Set the E164 number by which you would like to identify your phone.

H323 ID

Alternatively, you can specify the H323 ID for your phone.

URL ID

Similarly, you have the option to set the H.323 ID in the form of a url through this setting.

GK/GW Mode

Through the GK/GW Mode setting, the administrator has an option to select the mode for the registrar to either "Auto", "Gatekeeper", "Gateway" or "None".

GK/GW IP Address

Specify the IP address of the Gatekeeper or Gateway with which you would like to register your phone.

GK TTL

If you selected "Gatekeeper" in the GK/GW Mode above, you can specify the Time To Live (TTL) through this setting.

Message Center Number

Administrators can set the message center number through this setting.

5

Dynamic RTP port start

If you want to set up the RTP port dynamically, give the start port number in this setting.

Dynamic RTP port end

Similarly, give the last port number in this setting for dynamic RTP port selection.

Type of Service (TOS)

You can set up the TOS in this setting. A value could, for example, be 160.

Payload Type

Set up the payload type for Out of band DTMF here, e.g. 101.

Early Start

Here you can switch the early start feature of the H.323 stack on or off.

Fast Start

This setting allows you to enable/disable the fast start feature.

H.245 Tunneling

Through this setting, administrators can turn on/off the H.245 tunneling.

Tracing

With this setting you can enable or disable H.323 signaling tracing.

H.450 Services

With this blanket setting, you can start or stop the H.450 services.

Status

System Information

You can find information here regarding Phone Type, MAC Address, IP Address, Firmware Version, Bootloader and Firmware URLs.

SIP Trace

Quite a helpful feature to display the SIP signaling.

UPnP Trace

You can discover the UPnP conversation between the phone and other devices here.

Log

Dependent on a selectable log level the log messages are shown here.

Memory

See the current memory usage of your phone.

Settings

Displays all settings of your phone including their current values.

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Reader's Feedback

Elmeg welcomes your evaluation of this manual and any suggestions you may have. These help us to improve the quality and usefulness of our documentation.

Please send your comments and suggestions to:

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Manual Name: elmeg IP290

Version: V3.00   Date:

	Excellent	Good	Fair	Poor
How would you rate the manual overall?	☐	☐	☐	☐
Are the installation instructions effective?	☐	☐	☐	☐
Are the Configuration Instructions effective?	☐	☐	☐	☐
Is the manual properly organized?	☐	☐	☐	☐
Are the illustrations usefull and easy to understand?	☐	☐	☐	☐
Are the suggested and default values useful?	☐	☐	☐	☐
Is the index useful?	☐	☐	☐	☐

☐ Did you find any errors in the manual? (Please reference page and paragraph)_____

_____

How might we improve this manual?_____

_____

_____

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_____Title_____

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Thank you for taking time to fill out this form.

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