

VIDEOPHONE BOX

Manual

Version 1.1

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1.Introduction

1.1 PRESENTATION

The Videophone-Box allows the administration of video intercom functions in combination with the Videophone software. After correct installation and commissioning, the following functions are available:

- Receive calls from the external unit of the video intercom on one of the configured client PCs and use supported functions like e.g. door opener activation. A client PC can be one of the following devices:
 - DIVUSDOMUS or DIVUSHOME wall mount PC with multimedia option
 - Portable Tablet PCs
 - Desktop-PCs or Notebooks
- Communicate between the client PCs (no video signal, Interphone functionality).
- Record voice messages which can be opened by the next user of the PC (Messaging-Function)



Note: Detailed information about the Videophone software can be found in the appropriate manual!

The following scheme shows what functionalities are offered through the Videophone system:



1.2 IMPORTANT TERMS

For better comprehension of the following instructions and information, some of the most important terms are explained shortly below:

VoIP: "Voice over IP" is an international standard; like the name already lets suspect, it allows speech communication through the network. Initially developed for internet phoning, this technology is used also in other areas, for example for telephone exchange systems or Videophone systems.

VoIP-Server: The VoIP-Server administers the calls of the individual clients present in the network, just like a telephone central; the identification of this VoIP server takes place through the IP address of the device on which the VoIP server is running. In a network, several VoIP servers can coexist without any problems. It is only important that all clients and each software that should communicate among each other, are using the same VoIP server.

Client: as client we define nothing else than a software or a device which is able to register on the VoIP server and afterwards can receive and make calls; the Videophone software for example is such a client. Each client is identified by a 3 digit number (101,102,103..) and can be reached by calling this number.

It is even possible to run the VoIP server and the Videophone software as client on the same PC; the client will run contemporarily with the server without any problems.

Videophone-Box: the Videophone-Box is a hardware, which converts the analog signals of the video intercom to LAN signals and enters into interaction with the VoIP server. Simultaneously, the Videophone-Box makes available the camera picture of the door station as a network stream which can be accessed at any time by the individual clients through the Videophone-Software (provided that the video signal is active permanently).

Videophone software: software for the communication with the intercom system and visualization of the camera picture of the door camera, as well as for the communication of the individual clients among each other.

a/b phone signal: internationally standardized signal (analogous telephone signal), as it is used by customary analogous telephones.

DTMF signal: "Dual-Tone-Multi-Frequency" is a standardized process to transmit the chosen telephone number to the telephone network. Every number / character corresponds to a certain tone which consists of several frequencies and is recognized from standardized switchboards and the telephone network. The a/b transformer modules, to which the Videophone-Box is connected, also use this technology in order to execute an action over the conveyed DTMF signal (for example to activate the door opener). Usually only short sign combinations, mostly even just individual numbers, are used on that occasion. The a/b transformer module of BPT for example opens the door if it receives the number "2" from the client as a DTMF signal during an active communication.

Network stream: essentially it is a data flow that can be accessed through the network. In case of the Videophone-Box we are speaking about still image collected from the Videophone-Box that are called from the Videophone software as data flow and are displayed in the main window of the Videophone software as a video.

Backend: main process of the Videophone software. It comprises the entire functionality of the software and runs in the background. At incoming calls it can be noticed, as the video windows fades in and the ringtone is activated.

GUI: „Graphical User Interface“. term for a graphical interface through which the user can command the software. Also the Videophone software has an integrated "GUI".

Frontend: the frontend of the Videophone software is the integrated "GUI". Over this graphical interface the user can configure the software and use its various functions.

UDP: „User Datagram Protocol“. UDP is a simplified network protocol which can be used to remotely control the Videophone software. For example, it enables you to create your individual "GUI" which can be used instead of the frontend of the Videophone software.

1.3 SYSTEM REQUIREMENTS

In order to be able to use the whole functionality of a Videophone system, the following devices must be present in the installation:

- At least one DIVUSDOMUS or DIVUSHOME with multimedia. DIVUSDOMUS and DIVUS HOME models with multimedia-option already contain the activated Videophone software.
- VoIP-Server (can also run on one of the installed PCs as software).
- Videophone-Box
- Video intercom system, compatible with the requirements of the intercom module

The Videophone-Box offers compatibility to all video intercom systems on the market which meet the following requirements:

- The intercom system must be able to provide the following signals in front of an incoming telephone call from an external unit of the system (either directly over an analogous BUS signal or over a corresponding converter interface):
- Analogue a/b phone signal (international analogue telephone standard)
- Analogue video signal (RCA 750hm, 1Vpp, like mostly used on camcorders)

It must be possible to transfer a telephone call from the external unit of the video intercom system using the above named signals, so that the call - after the signal conversion over the Videophone-Box - can be handled from the VoIP server. After acceptance of the telephone call (through a DTMF signal), both the video signal and the bidirectional audio signal must be available without any further action.

The video intercom systems existing on the market principally differ in the transfer type of the audio and video data: there are analogous and digital systems. In the case of digital systems, which can be found more and more, there usually exist corresponding converter interfaces, which make available the implied signals. In the appendix of this manual you can find a list of some compatible intercom systems that already have been tested by DIVUS in combination with Videophone. For more information about compatibility of certain intercom systems with Videophone or an updated list of the tested products, please contact the technical support of DIVUS.

1.4 CONTENT OF THE PACKAGE

The Videophone-Box is delivered with the following components:

- Videophone-Box
- Accessories::
 - Power supply Audio (VoIP)
 - Power supply Video
 - Network cable RJ45 Audio (VoIP)
 - Network cable RJ45 Video (Videosever)
 - 2 wire phone cable RJ11 for connecting the Videophone-Box with the a/b phone signal of the intercom system
 - RCA cable / plug for connecting the Videophone-Box with the video signal of the intercom system
 - Product insert containing the default settings of the Videophone-Box (for example the IP addresses, user credentials etc.)

2. Wiring and configuration

2.1 INTRODUCTION

For a better comprehension, please read the following short explanation on how the Videophone-Box works:

The Videophone-Box is only used to convert the analogous signals of the intercom system to network-capable signals, so that the VoIP server can handle the signals. In order that the individual clients can communicate among each other and with the video intercom, all must register on the same VoIP server.

The analogous a/b telephone signal is converted into an international VoIP-Standard, through which the VoIP server can create communication with the intercom system. The analogous video signal is converted into a network video stream by the Videophone-Box, which can be shown at any time from the Videophone software. The software combines the audio and video signals, what makes possible visual communication with the person who is ringing at the door.

As soon as the button on the external unit is pressed, a corresponding dial module or a/b transformer module which is connected to the Videophone-Box over a telephone cable, dials out a number. The Videophone-Box recognizes this number and makes a connection to the PC with the active VoIP server over the network. The VoIP server executes the actions which were defined for the number dialed by the a/b transformer module; normally, a connection to several clients is established. As soon as the connection to the clients is up, the Videophone software appears automatically on the client PCs, showing the video signal of the external unit and emitting the ringtone over the built-in loudspeaker.

So there is an acoustic signalization whenever anybody rings at the door and additionally the video window shows who the person in front of the door is and what it is doing.

By clicking on the "Accept" button, the call will be activated and the audio communication between the client and the external unit of the intercom system will be established. For establishing this communication so-called DTMF tones are transmitted to the intercom system. In the same way, but with different DTMF tone sequences, the door opener or the door light can be controlled. Also, the connection can be terminated by the Videophone software by clicking on the related button of the frontend.

In few words the Videophone-Box can be seen as interface between client PCs with Videophone software (network) and intercom systems (analogous signals).

Furthermore, the Videophone software enables calls among the single clients (Interphone function).

2.2 WIRING

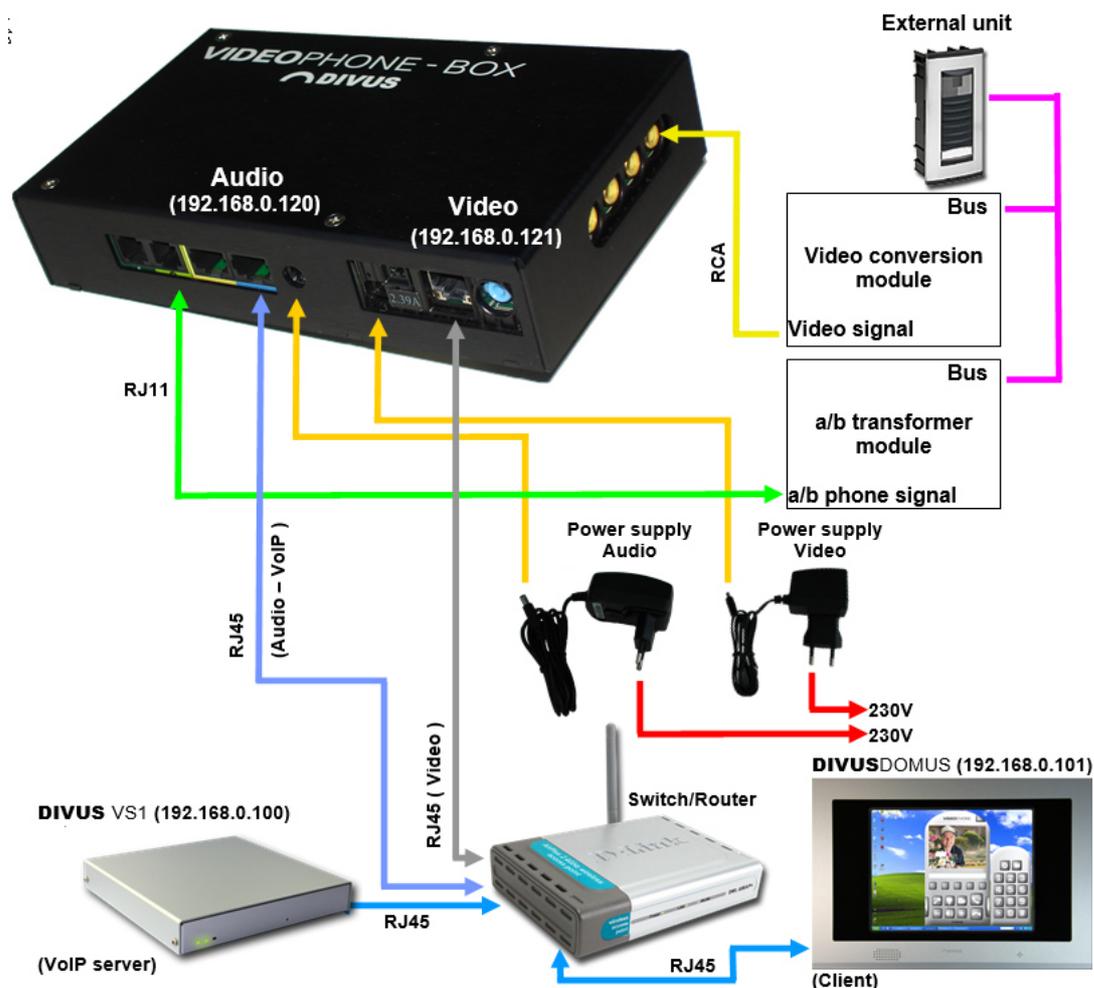
As already mentioned, the Videophone-Box is divided in 2 parts:

Audio: A VoIP gateway converts the analogous a/b signal from the intercom system into standard VoIP packages. The required connections are the following:

- a) Connect the power supply Audio to a 230V power socket
- b) Connect the RJ11 phone cable with the a/b phone line of the intercom system
- c) Connect the RJ45 network cable Audio (VoIP) with the local network (Switch/Router)

Video: A video server converts the analogous video signal from the intercom system into a network stream. The required connections are the following:

- a) Connect the power supply Video to a 230V power socket.
- b) Connect the RCA video cable to the analogous video signal of the intercom system.
- c) Connect the RJ45 network cable to the local network (Switch/Router)



2.3 CONFIGURATION OF THE INTERCOM SYSTEM

The video intercom system must be configured in a way that – in presence of a telephone call from the external unit – the a/b phone signal and the video signal are activated by the conversion modules of the intercom system. Normally such conversion modules are handled like internal units inside the intercom bus system.

2.4 AUDIO CONFIGURATION (VOIP)

2.4.1 Introduction

The VoIP gateway of the Videophone-Box converts the analogous a/b phone signal into VoIP signals, which can be evaluated by the VoIP server and afterwards redirected to the different client PCs. As shown below, the gateway has 4 communication ports:

PORT	ANSCHLUSSTYP	FARBE	FUNKTION
Line	RJ11	Dark green	Connection to an external telephone line (function only on request)
PHONE	RJ11	Light green	Connection to the a/b phone signal from the intercom system (use only the inner two contacts of the RJ11 plug)
ETHERNET	RJ45	Yellow	Router connection with integrated DHCP server, only for configuration
INTERNET	RJ45	Blue	Connection to the network, for communication with the VoIP server and the Videophone software and at the same time for remote configuration purpose



The configuration menu of the gateway can be accessed over the blue INTERNET port from every PC whose IP address is compatible with the IP address of the gateway itself.

2.4.2 PREPARE THE NETWORK CONNECTION

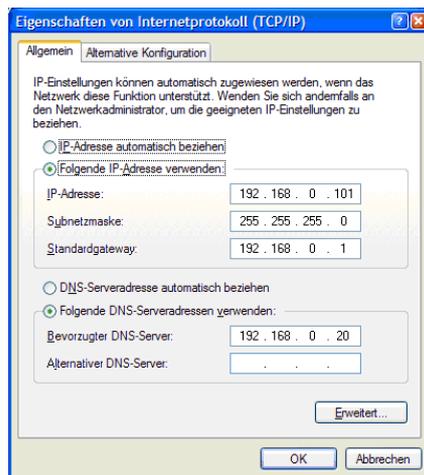
In order to access the gateway configuration menu:

1. Ensure that the blue INTERNET port of the VoIP gateway and the PC, over which you want to configure the gateway, are connected to the local net-work. The PC and the VoIP gateway can also be connected directly; in this case a crossover network cable must be used to connect the devices. Fur-thermore check that the power supply of the VoIP gateway is plugged in.



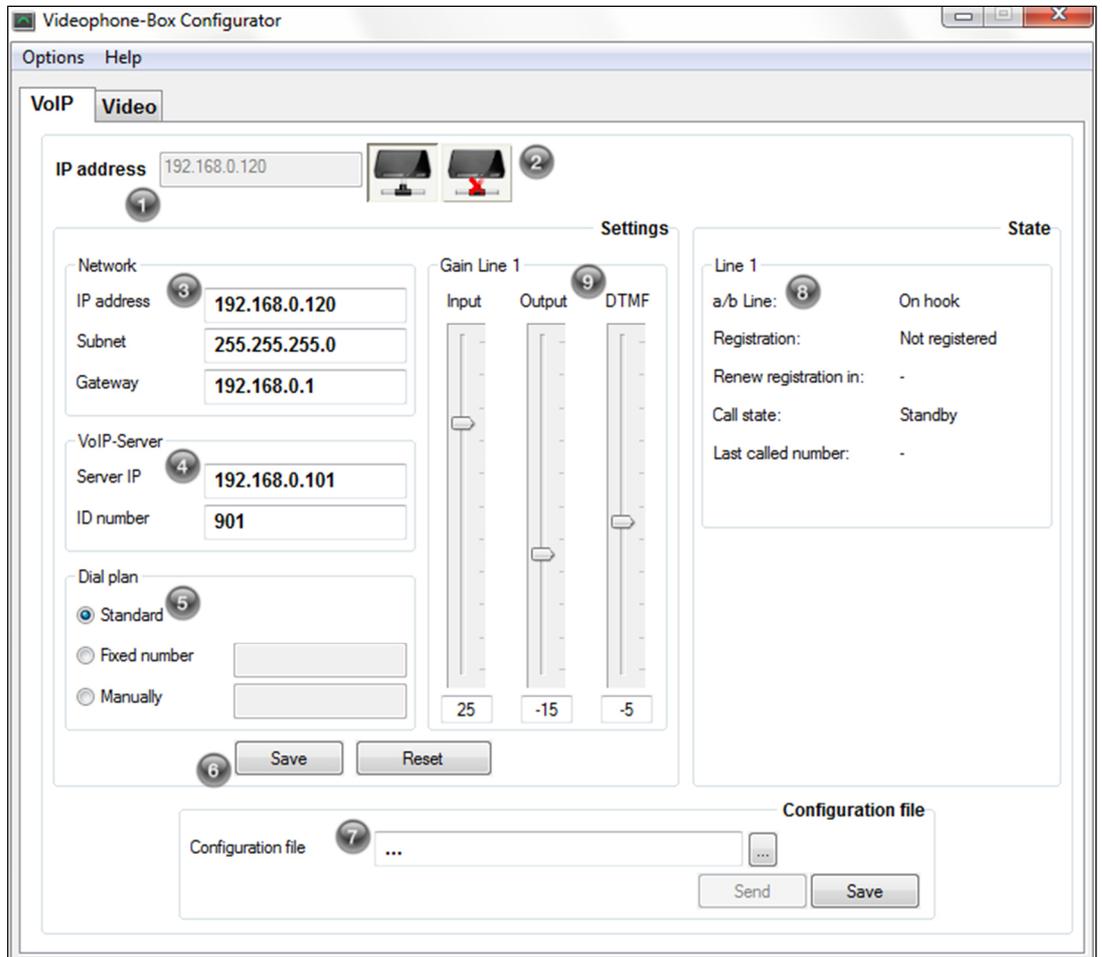
Important: don't connect the VoIP gateway to your network before you configured it in accordance to your network.

2. Change the IP address of the PC you are using to a value, which is compatible with the IP address of the VoIP gateway; the illustration beneath shows an example for a VoIP gateway with IP address 192.168.0.120. It's important that the first three blocks of the IP address of the PC are identical to the first three blocks of the IP address of the VoIP gateway (in this case 192.168.0). The fourth block completes the IP address and must be one of the free values in the network (for example 101). For changing the IP configuration of the PC, the network configuration window of the used network connection must be opened; there the entry "Internet Protocol (TCP/IP) Ipv4" (or similar) can be selected and opened by clicking on "Properties".



2.4.3 PREPARE THE NETWORK CONNECTION

Start the Videophone-Box Configurator and open the „VoIP“-tab:



1. **IP address:** Type in the IP address of the VoIP-Gateway, you want to connect to; standard IP address is 192.168.0.120.

2. **Connect/Disconnect:**

With these buttons the connection to the VoIP-Gateway with the specified IP address can be



Established or



Aborted.

3. **Network:**

Once the connection to the VoIP-Gateway is established, these fields contain the network parameter of the VoIP-Gateway it self; off course the settings can be change to the wished values:

- **IP address:** IP address of the VoIP-Gateway; standard 192.168.0.120
- **Subnet:** Subnet mask of the VoIP-Gateway; standard 255.255.255.0
- **Gateway:** Network-Gateway of the VoIP-Gateway; standard 192.168.0.1

4. **VoIP-Server:**

Once the connection to the VoIP-Gateway is established, these fields contain all settings regarding the VoIP-Server; off course also these settings can be changed to the wished values:

- **Server IP:** IP address of the VoIP-Server.
- **ID number:** The ID number identifies the VoIP-Gateway on the VoIP-Server. In standard configuration the VoIP-Server recognizes the ID numbers 901, 902, 903, 904, 905, 906, 907, 908, 909, 910. Through these ID numbers the Videophone-Software can distinguish the defined video source, which video image shall appear on a incoming call from the Videophone-Box with the related ID number; standard 901

5. **Dial Plan:** The Dial plan defines how the VoIP-Gateway handles the digits received by the a/b conversion module from the door intercom installation:

- **Standard:** If this option is choosen, the VoIP-Gateway needs to receive a three digit number from the a/b conversion module of the door intercom installation. In standard configuration the VoIP-Server supports the following three digit number from the q/b conversion module of the Intercom installation: 101, 201, 301, 401, 501, 601, 701, 801, 901; in standard configuration for all these numbers all available Videophone-Clients will ring. If different ring buttons must call different Videophone-Clients, the a/b conversion module of the door intercom installation must be able to dial out different three digit numbers for each ring button. The detailed assignment, which Videophone-Client will ring for which ring button will be to specify in a configuration file of the VoIP-Server.
- **Fixed number:** If the used a/b conversion module is not able to dial out three digit numbers, with this option a fixed htree digit number is integrated in the dial plan; this number can be specified in the appropriate field. Even if the used a/b conversion module dials out two digit numbers or one digit numbers, all these numbers are ignored, only the specified fixed number is used by the VoIP-Gateway to complete the dial plan.
- **Manual:** If it's needed to use a fully customized dial plan, by choosing this option, the custom dial plan can be specified in the appropriate field.

6. **Save/Reset:** Once all settings have the right value, they can be sent to the VoIP-Gateway by pressing the "Save"-button. As soon as the settings are saved upon the VoIP-Gateway, the devise will reboot; once rebooted, the Videophone-Box Configurator will establish the connection to the VoIP-Gateway automatically. By pressing the "Reset"-button, all changes will be lost, because all settings will return to the value actually stored on the device.

7. **Configuration file:** This part of the "VoIP" tab allow to save the current settings of the VoIP-Gateway into a configuration file and otherwise to transfer the settings saved in a configuration file to the VoIP-Gateway:
- **Save:** By clicking on this button, a window will appear, which asks for the name of the new configuration file and the location where to store it.
 - **...:** With this "Browse"-button it's possible to search existing configuration files.
 - **Send:** By clicking this button the settings from a first selected configuration file will be transferred to the VoIP-Gateway; this button is only visible when first a configuration file has been selected. If the selected configuration file contains also network settings a warning message will be prompted.
8. **State Line 1:** This part of the "VoIP" tab contains the relevant status message of the "Line 1" connection (light green) of the VoIP-Gateway; the values are actualized continuously:
- **a/b Line:** shows the state of Line 1 and so indirect the state of the a/b conversion module:
 - On hook: No call in progress, the a/b conversion module is not active.
 - Off hook: A call is in progress, the a/b conversion module is using the line.
 - **Registration:** Shows if the VoIP-Gateway is registered to the VoIP-Server or not:
 - OK: VoIP-Gateway registered succesfully on the VoIP-Server.
 - Failed: VoIP-Gateway failed to register on the VoIP-Server (wrong ID number, VoIP-Server not reachable...).
 - Not registered: The registration is in progress, but the VoIP-Gateway is not registered to the VoIP-Server.
 - Renew registration in: shows the countdown in seconds until the registration on the VoIP-Server will be renewed, or if the VoIP-Gateway is not registered to the VoIP-Server, when the VoIP-Gateway tries to register to the VoIP-Server another time.
 - **Call state:** Shows the actual state of a call:
 - standby: No call in progress, the VoIP-Gateway stands by.
 - Dialing number: The VoIP-Gateway is dialing the number resulting from the dial plan on VoIP-side.
 - Invalid: The number dialed from the VoIP-Gateway is not valid or not available.
 - Call in progress: The number dialed from by the VoIP-Gateway exists and a call is in progress.
 - Callee is ringing: The called Videophone-Client/s ring/ing.
 - Last called number: Shows the last succesfully called number; numbers which could not be called succesfully will not be shown. The shown number is not only the number dialed out by the a/b module, but the complete resulting dial plan.
9. **Gain Line 1:** Sometimes is necessary to change the gain of the incoming and outgoing audio signals on the Videophone-Box:
- **Input:** Gain for the incoming audio signals, passed from the a/b conversion module to the Videophone-Box.
 - **Output:** Gain for the outgoing audio signals, passed from the Videophone-Box to the a/b conversion module.
 - **DTMF:** Volume for playback of DTMF tones generated by the Videophone-Box and passed to the a/b conversion module. If you decrease output gain, the playback volume for DTMF should be increased a little bit and vice versa.

2.4.4 CONFIGURATION WITH WEB-INTERFACE

1. Open your internet browser and type the following URL into the address bar:

<http://<IP address of the VoIP gateway>/admin/advanced>

For default configuration: <http://192.168.0.120/admin/advanced>

2. The configuration menu of the VoIP gateway will appear in the browser window. Click on "admin login" and after-wards on "advanced" (if not already activated) in the right upper area. Then click on "Wan Setup" and the following page should appear:

The field "Static IP" allows to change the IP address of the VoIP gateway itself; don't forget to check if the "Netmask" is compatible with the new IP address. For saving the changes made in this menu click on "Submit All Changes"; the VoIP gateway will reboot and will then be reachable through the new IP address.



Important: Achten Sie darauf, dass der Eintrag „Enable WAN Web Server“ auf „yes“ steht. Sollte dieser Parameter aus Versehen auf „no“ gestellt werden, kann über den blauen INTERNET-Port nicht mehr auf das VoIP-Gateway zugegriffen werden.

3. Go to the section "Voice" of the VoIP gateway configuration menu (always in the same browser window) and click on "Line 1". The following menu will appear:

SIP Settings			
SIP Port:	5060	SIP 100REL Enable:	no
EXT SIP Port:		Auth Resync-Reboot:	yes
SIP Proxy-Require:		SIP Remote-Party-ID:	yes
SIP GUID:	no	SIP Debug Option:	none
RTP Log Intvl:	0	Restrict Source IP:	no
Referor Bye Delay:	4	Refer Target Bye Delay:	0
Referee Bye Delay:	0	Refer-To Target Contact:	no
Sticky 183:	no		

Proxy and Registration			
Proxy:	192.168.0.100		
Outbound Proxy:	192.168.0.100		
Use Outbound Proxy:	no	Use OB Proxy In Dialog:	no
Register:	yes	Make Call Without Reg:	no
Register Expires:	3600	Ans Call Without Reg:	no
Use DNS SRV:	no	DNS SRV Auto Prefix:	no
Proxy Fallback Intvl:	3600	Proxy Redundancy Method:	Normal
Voice Mail Server:		Mailbox Subscribe Expires:	2147483647

Subscriber Information			
Display Name:	901	User ID:	901
Password:	*****	Use Auth ID:	no
Auth ID:	901		
Mini Certificate:			
SRTP Private Key:			

VoIP Fallback To PSTN			
Auto PSTN Fallback:	no		

Dial Plan			
Dial Plan:	<S0:dooropener0>xxx<:@192.168.0.100>		
Enable IP Dialing:	no	Emergency Number:	

FXS Port Polarity Configuration			
Idle Polarity:	Forward	Caller Conn Polarity:	Forward
Callee Conn Polarity:	Forward		

[User Login](#) [basic](#) | [advanced](#)

4. In the screenshot on the last page all parameters, that must be changed, already have been highlighted. Below you can find a short explanation of those parameters:

- "Line Enable": please set this value on "yes" to activate the VoIP functionality of the gateway
- "SIP Port": please choose the port, over which the gateway should communicate with the VoIP server. The default value is "5060".
- "Proxy" and "Outbound Proxy": please insert the IP address of the PC on which the active VoIP server is running (for example 192.168.0.101)
- "Display Name", "User ID", "Auth ID" and "Password": in this fields the authentication data, which the gateway should use to register on the VoIP server, must be specified. These parameters must all use the same value; you can freely choose between the pre-defined values 901,902,903,904,905,906,907,908,909, 910, nevertheless, it is recommended to start with 901. Those values stand for the 10 pre-configured external intercom units supported by Videophone.

- "Dial Plan": in this field, please insert the string "<S0:dooropener0101@192.168.0.100>" if the used a/b transformer module is not able to dial out multiple numbers, or insert "<S0:dooropener0>xxx<:@192.168.0.100>" if the installed a/b transformer module is able to dial out multiple numbers; the string "xxx" is a placeholder for the first three numbers that the VoIP gateway receives over the a/b phone line. If for example the a/b transformer module dials out the number "101", the resulting dial plan string would be "<S0:dooropener0101@192.168.0.100>". Take care about the ":" before the "@" inside the string; when missing, the part "@192.168.0.100>" is not added correctly to the rest of the dial plan. The IP address after the "@" is the IP address of the device running the VoIP server; of course, if the used VoIP server runs on a device with another IP address, the "192.168.0.100" in the dial plan string must be replaced with the correct IP address of the device with the VoIP server running on it.

To save all changed parameters, click on „Submit All Changes“.

5. If you configured the VoIP gateway directly over your PC (by connecting it with a crossover network cable), you can now disconnect the VoIP gateway from the PC and connect the blue INTERNET port of the VoIP gateway to the local network with a normal network cable (RJ45). Now the VoIP gateway is ready for use; you can test if the VoIP gateway is configured correctly by following the steps below:

- Open the start menu of a Windows PC connected to the local network and choose „Run“
- Enter "cmd" in the appearing window for
- opening the „MS-DOS command prompt“
- Type "ping 192.168.0.120" (IP address of the VoIP gateway) and hit „Enter“.
- Wait a moment and check if the VoIP gateway answers to the "ping"-command. If the VoIP gateway does not answer, there is something wrong; either the VoIP gateway is not configured correctly, or it is not connected properly.

2.5 VIDEO CONFIGURATION

2.5.1 CONNECTIONS

- Connect the video signal of the installed door camera to the first input of the video server.
- Plug in the power supply and connect it to the power jack of the video server; ensure that the power switch beneath the power jack is turned on.



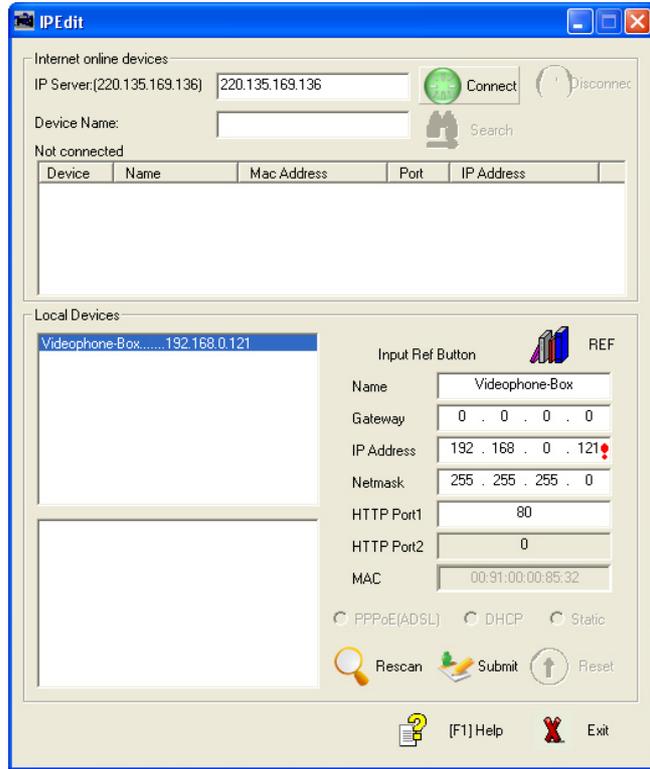
2.5.2 VIDEO SERVER NETWORK SETTINGS

Please insert the Videophone CD into your PC and start the program IPEDIT, which can be found in the folder „Tools“.

If the video server is already connected to the network, its IP address should be listed under "Local Devices". If not, connect the video server to the local network and click on "Rescan" for rescanning the network.

By double-clicking the IP address of the video server you will be redirected to its configuration page, where you can change various settings described in the consequence. In alternative, you can even open a browser window: by inserting the IP address of the video server you will be redirected to its configuration page, too.

The default IP address of the video server can be found on the product insert (normally 192.168.0.121)

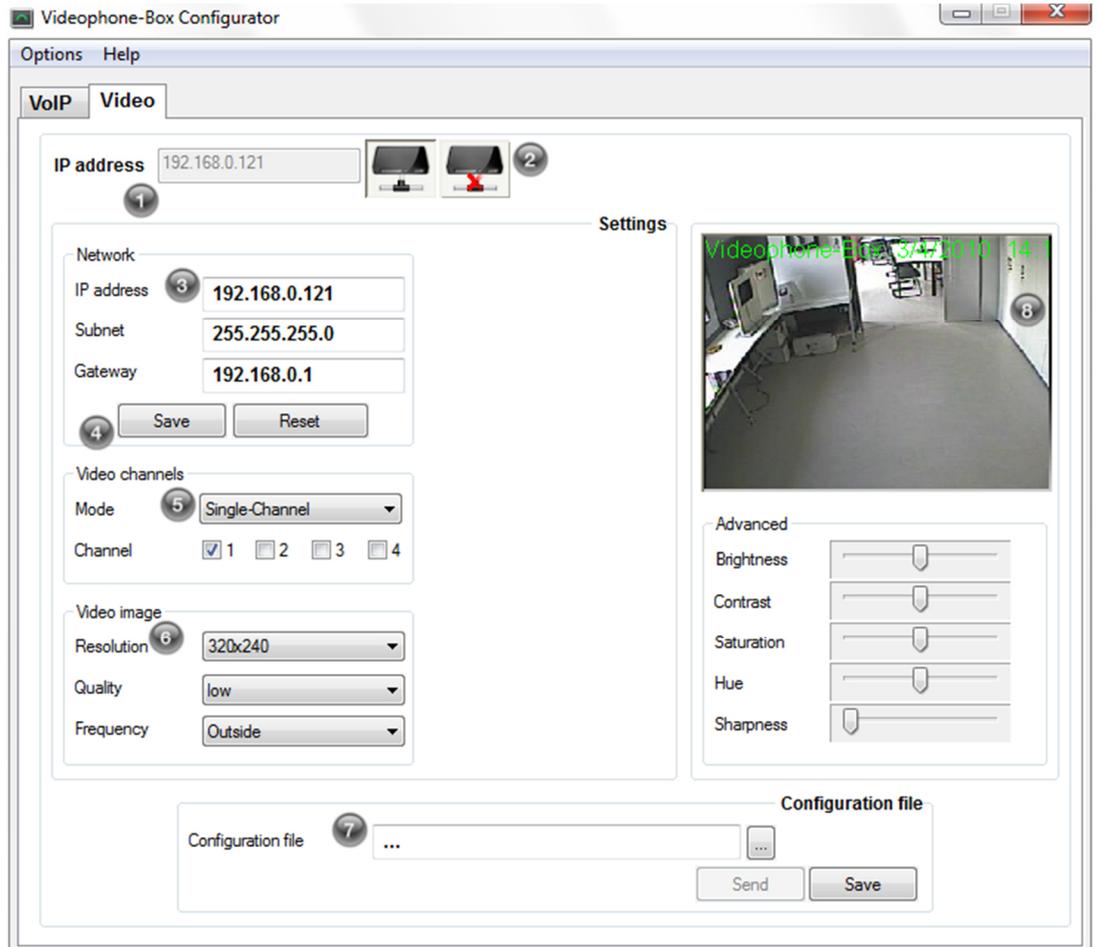


Hint: Please ensure that the network cable (LAN, RJ45) is connected to with the video server. Check out that the video server is switched on (power switch beneath the power jack). If the video server works correctly on the local network, the green LED on the network port of the video server will start blinking or lighten up.

The video server can be configured with Internet Explorer as well as with Firefox or other similar browsers. However, it's recommended to use Internet Explorer, because it is compatible with all functionalities of the video server.

2.5.3 CONFIGURATION WITH VIDEOPHONE-BOX CONFIGURATOR

Start the Videophone-Box Configurator and open the "Video" tab:



- **IP-Address:** Type in the IP address of the videosever you want to connect to; standard IP address is 192.168.0.120 (refer to the package insert)
- **Connect/Disconnect:** With these buttons the connection to the videosever with the specified IP address can be

- o Established,  or

- o Aborted. 

- **Network:** Once the connection to the videosever is established, these fields contain the network parameter of the videosever it self; off course the settings can be change to the wished values:
 - IP address: IP address of the videosever; standard 192.168.0.120
 - Subnet: Subnet mask of the videosever; standard 255.255.255.0
 - Gateway: Network-Gateway for the videosever; standard 192.168.0.1

- **Save/Reset:** Once the network settings are set to the wished values, they can be sent to the videosever by pressing the "Save"-button; the device will reboot after it has received the settings and the Videophone-Box Configurator will establish the connection to the videosever automatically. Otherwise, if the values entered shall be resetted to the values actually saved on the videosever "Reset" must be pressed.

- **Video-Kanäle:** The videosever has 4 video channels, but can show only one channel and not more channels contemporaneously. The videosever offers the possibility to show a selected channel of the 4 channels only or to switch from channel to channel between the selected channels:
 - Single-Channel: Only one of the 4 channels can be selected and will be streamed into the network; the wished channel can be selected through the appropriate checkboxes; standard is channel 1.
 - Mult-Channel: In this operating mode, the resulting stream switches from channel to channel every few seconds. The resulting stream is not a smooth video, but only a switching from camera image to camera image, which the videosever receives on the selected channels. The channels to enable for this operating mode can be selected through the appropriate checkboxes.

- **Video image:** The Video image can be customized in the follwing ways:
 - **Resolution:** The Resolution can be adjusted in multiple steps from 160x120 to 704x576; higher resolution brings more data, which must be transferred over network. For the use with Videophone a resolution of 320x240 is recommended.
 - **Qulity:** The quality of the image can be customized in 5 steps from "minimal" to "maximal"; higher quality brings also more data, ahich must be transferred over the network. For the use with Videophone a quality of "medium" is recommended.
 - **Frequency:** For setting the frequency of the image three options are available "Inside-50Hz", "Inside-60Hz" and "Outside". For cameras mounted outside the "Outside" option is recommended. For cameras mounted inside or outside but under a roof, the option "Inside-50Hz" or "Inside-60Hz" is recommended.

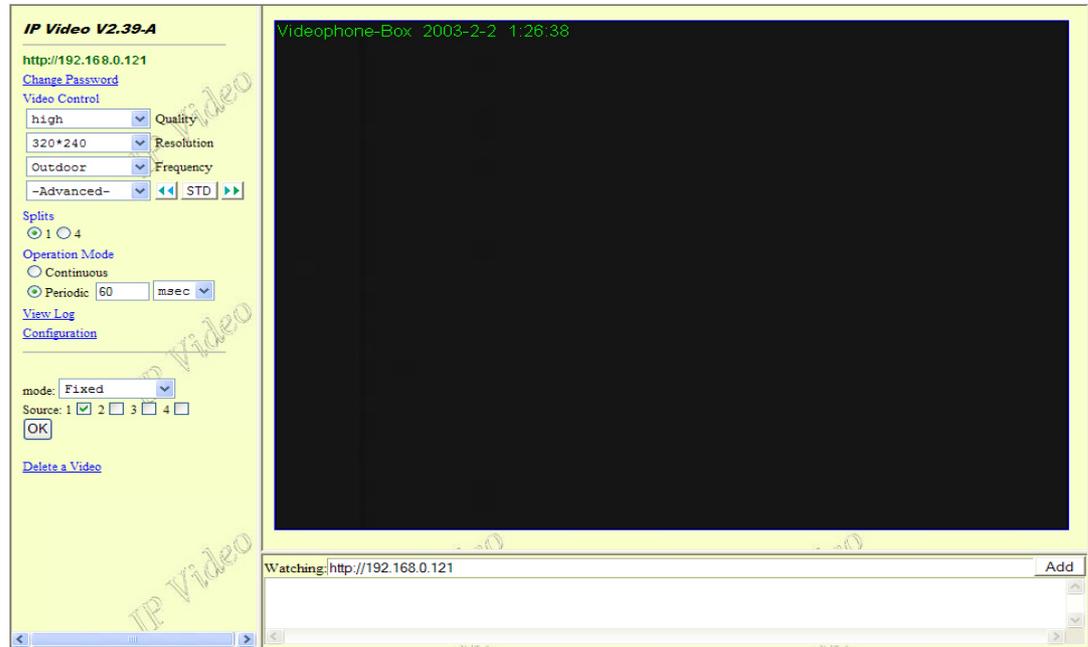
- **Configuration file:** This part of the "Video" tab allow to save the current settings of the videosever into a configuration file and otherwise to transfer the settings saved in a configuration file to the videosever:
 - **Save:** By clicking on this button, a window will appear, which asks for the name of the new configuration file and the location where to store it.
 - **...:** With this "Browse"-button it's possible to search existing configuration files.
 - **Send:** By clicking this button the settings from a first selected configuration file will be transferred to the videosever; this button is only visible when first a configuration file has been selected. If the selected configuration file contains also network settings a warning message will be prompted.

- **Actual image:** Once a connection is established to a videosever, the video stream is shown with date and time at the right side of the tab. By clicking with the right mouse button inside the video some features are available to customize the image appearance.

- **Erweitert:** Sometimes the situation affords to customize the appearance of the image, because there is too much or insufficient light.... With the advanced properties of the Video tab it's possible to adjust the appearance of the image:
 - **Brightness:** Adjust the brightness of the image.
 - **Contrast:** Adjust the contrast of the image.
 - **Saturation:** Adjust the saturation of the image.
 - **Hue:** Adjust the hue of the image.
 - **Sharpness:** Adjust the sharpness of the image.

2.5.4 KONFIGURATION WITH WEB-INTERFACE

As soon as the configuration menu of the video server is opened within a browser or with the IPEDIT tool, the following screen will appear:



Hint: The graphical interface of the configuration page itself depends on the used browser. The screenshots that are shown in this manual refer to Microsoft Internet Explorer, which guarantees the full access to all settings / functions of the video server.

In the left column, the primary options of the video server can be modified. The available parameters are:

- **Quality:** compression level of the video signal; a higher quality also causes a larger quantity of data, which has to be transferred and consequently elaborated on the network.
- **Resolution:** resolution of the camera picture, adjustable in pixel (width x height); please choose one of the supported values.
- **Frequency:** frequency of the incoming video signal, depends on the signal of the attached cameras (PAL / NTSC / others).
- **Splits:** defines if only one video signal (full screen) or 4 video signals (split screen) should be shown.
- **Operation mode:** allows to set up a refresh rate; in dependency of this value the pictures of the cameras are updated.
- **Mode:** this setting defines whether the shown video picture should be fixed (there will only be shown the image of the defined channel) or whether should be changed between the different channels (rotation mode, "round robin"); in the first case it can be defined which one of the 4 channels should be shown.



Important! Use only the „fixed“ parameter for the „mode“ settings, other-wise in Videophone there will be no continuous video stream.

In the central part of the configuration window, the current video signal is shown in dependency of the above listed set-tings. The lower part of the screen records messages of the video server, as for example movement notifications in case of active motion detection function. In this window can be supervised even more than one video server: by clicking the but-ton "Add", the IP addresses of other video servers can be inserted.

By clicking on the link "Configuration" in the left column of the screen, further settings of the video server can be edited:

System Settings

Over this page the system settings of the video server, like for example the device name (which is used to identify the vid-eo server within the network), the system time and time zone as well as the ports of the HTTP connection and the video stream, can be modified. The default port for the HTTP connection is "80"; this setting should only be changed if abso-lutely necessary (for example if the signal of the attached cameras as well as the configuration page itself should be visible through internet by enabling the port forwarding function in the DSL router).

User Settings

In this configuration window can be defined whether an authentication is necessary to view the camera images or not. If an authentication should be required, a username and a password can be inserted; if necessary, it is also possible to delete already existing users / passwords.

Motion Detect

This page contains the administration menu of the so called "motion detection" (automatic recognition of movements). To use this function, it must be activated in this page and there must be set the recognition rate (Attention, a higher sensitivity of the recognition rate requires a higher refresh rate of the camera image and could increase the sensitivity of the signal in presence of disturbances).

If a movement is recognized, the following actions can be executed by the video server:

- The forwarding of a mail with the recorded camera pictures as attachment
- The transfer of the recorded camera pictures to a predefined FTP server

In the section "Mail settings" the parameters for the configuration of the mail box can be set, which are necessary to be able to send out mails. Among others, the server (SMTP) and the log-in data of the used mail box as well as the desired recipient's addresses must be specified. In order to send out a mail at the recognition of a movement, the option "send mail when motion detected" must be activated.

The section "FTP settings" however serves to the configuration of the transfer of recorded camera pictures onto a FTP server. In this case, the FTP Server itself, the log-in data and the account name (dependent on the configuration of the FTP server) have to be configured. The option "upload path" permits to insert the target folder on the FTP server, in which the camera pictures should be stored. By changing the value "interval" the time distances, in which the pictures should be copied, can be modified. As already seen in the mail settings, even here an option called "upload images when motion detected" has to be activated in order to be able to use the just described function.

Network Settings

Over this configuration page the network settings of the video server can be changed. Primarily can be set whether the video server should get its IP address over DHCP or whether a static IP address should be used (default setting). In the second case the necessary data must be inserted manually.

Furthermore, the DNS parameters for the internet access can be defined, which are necessary for the correct transfer of the camera pictures via mail / internet.

Over the section "IPMail" the video server can be configured in a way that it sends out periodically an e-mail with its own IP address. This function can be very useful if the IP address of the video server changes dynamically (what in case of a DHCP network can absolutely be, if not regulated separately).

DDNS Settings

The page "DDNS" can be used in order to handle the video server over the free DNS service "DynDNS" (www.dyndns.org). This service - after free registration at www.dyndns.org - allows a constant remote access to the video server over internet even with changing IP address. If this service is activated, the video server sends its IP address to the DynDNS service in regular intervals; if the service recognizes an alteration of the address, it handles the redirection of the signals automatically, so that the camera signal is never interrupted. Further information about this function can be found on the home page of DynDNS.

2.6 FINAL CHECK OF THE CONNECTIONS

Before the different components will be used in combination with the Videophone software, it is recommended to make the following tests, in order to guarantee that all wirings, connections and configurations are correct and working:

Video:

- Please open a new browser window and insert the IP address of the video server
- Now start a call on the external unit of the intercom system
- Check now if the video signal of the door camera is shown correctly in the Browser window. Configure the correct input channel or use the option "quad-view" to view all four channels at the same time. With some intercom systems the video signal will only be activated when a call is launched!

Audio:

- Please open a new browser window and insert the IP address of the VoIP gateway
- Jump to the menu „Voice“, click on „admin login“ and then on „advanced“
- Open the menu „Info“ and refresh the page by hitting „F5“ or selecting "Refresh" in the browser menu.
- Please check if in the section „Line 1 Status“ the „Registration State“ is set to „Registered“. If there is no value or a different value (like e.g. „Registration failed“), the VoIP gateway did not complete the registration on the VoIP server. In this case, please check the connections and settings of the audio part again!



Hint: A custom analogous telephone can be of big benefit for troubleshooting. If it is connected to the Videophone-Box instead of the a/b transformer module, the functionality of the Videophone system can be tested with the telephone. Simply lift the receiver, and dial the required number (for standard configuration 101).

As a result, the active clients should begin to ring and Videophone software should appear. This method can be used as a very quick diagnosis which identifies whether a possible malfunction should be on Videophone or on intercom side.



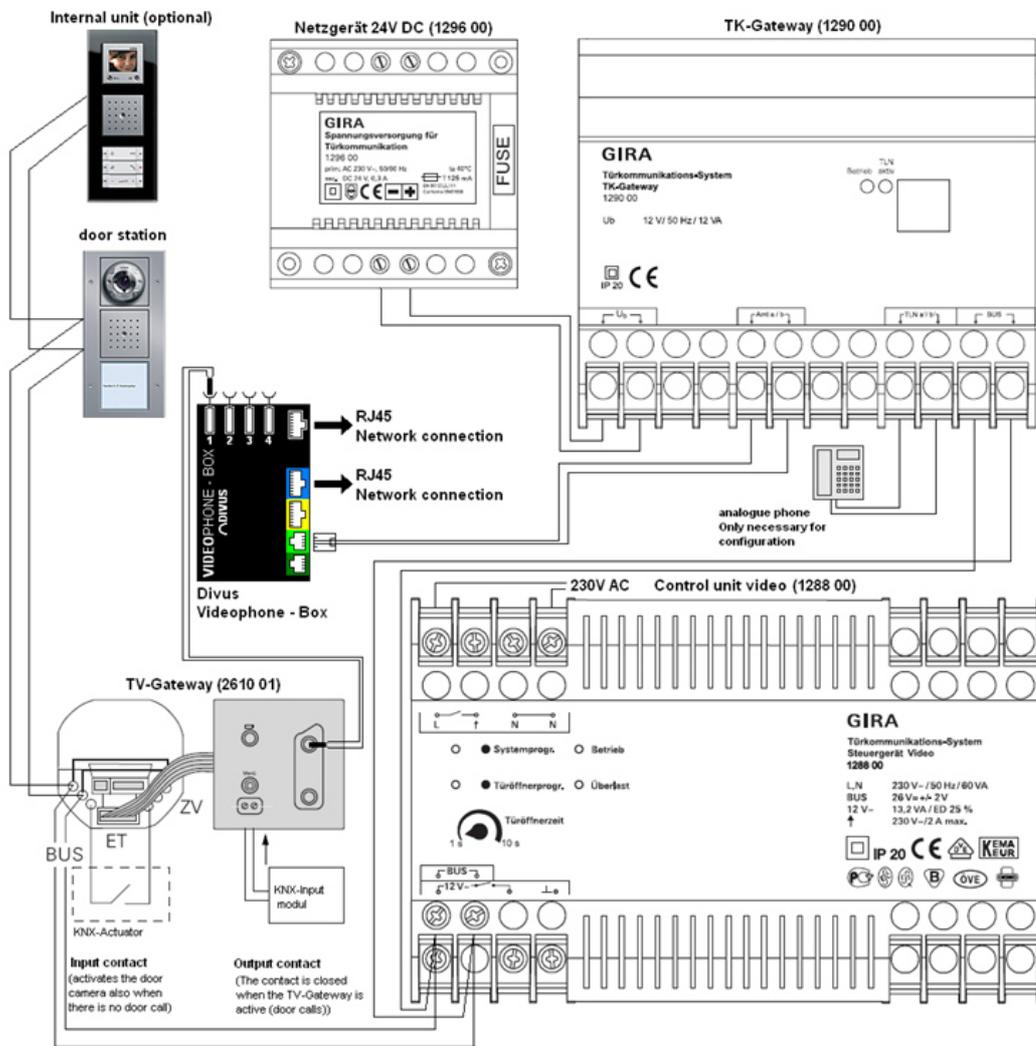
Important: The tests mentioned on this side refer to the entire Videophone system! It is necessary that - beside the Videophone-Box - a VoIP server from DIVUS is present in the network!

If the tests listed above cannot be concluded in a positive way, please check the settings of the devices as well as their connections again by confronting them to the values shown within the last chapters. However, if the problems still remain, please refer to the technical support of DIVUS.

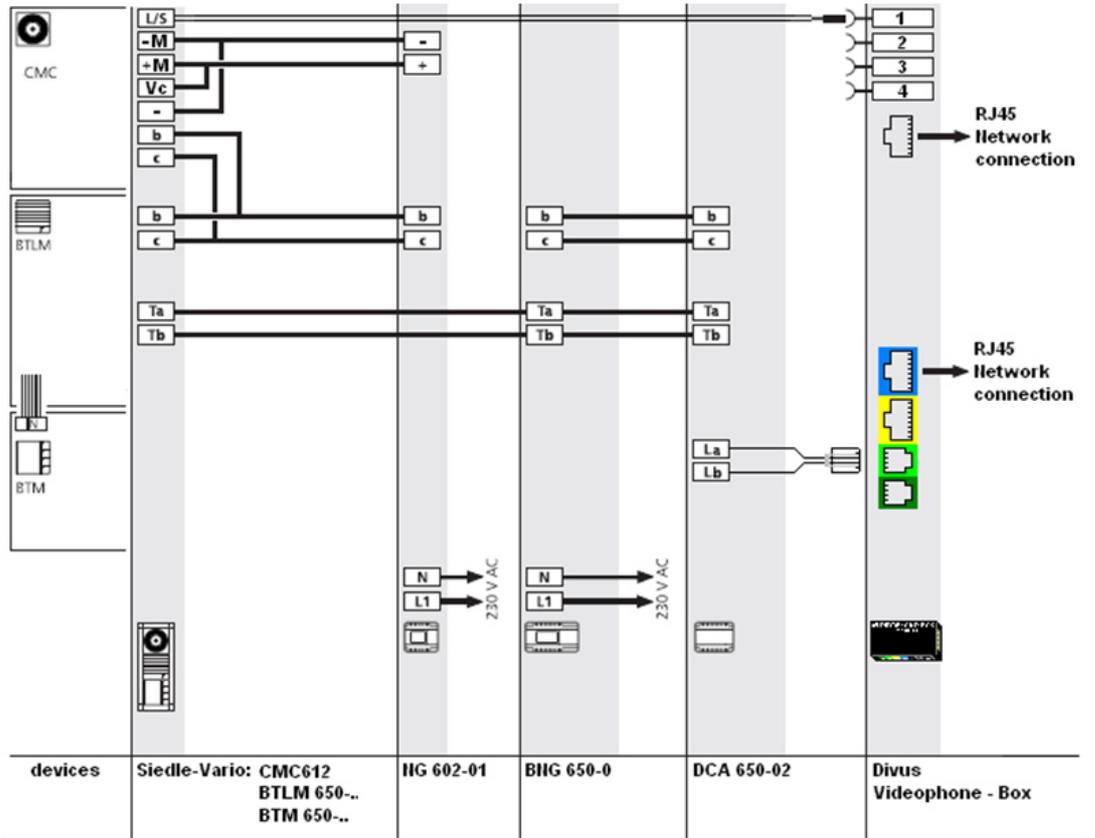
Appendix

I. CONNECTION SCHEMES OF COMPATIBLE INTERCOM SYSTEMS

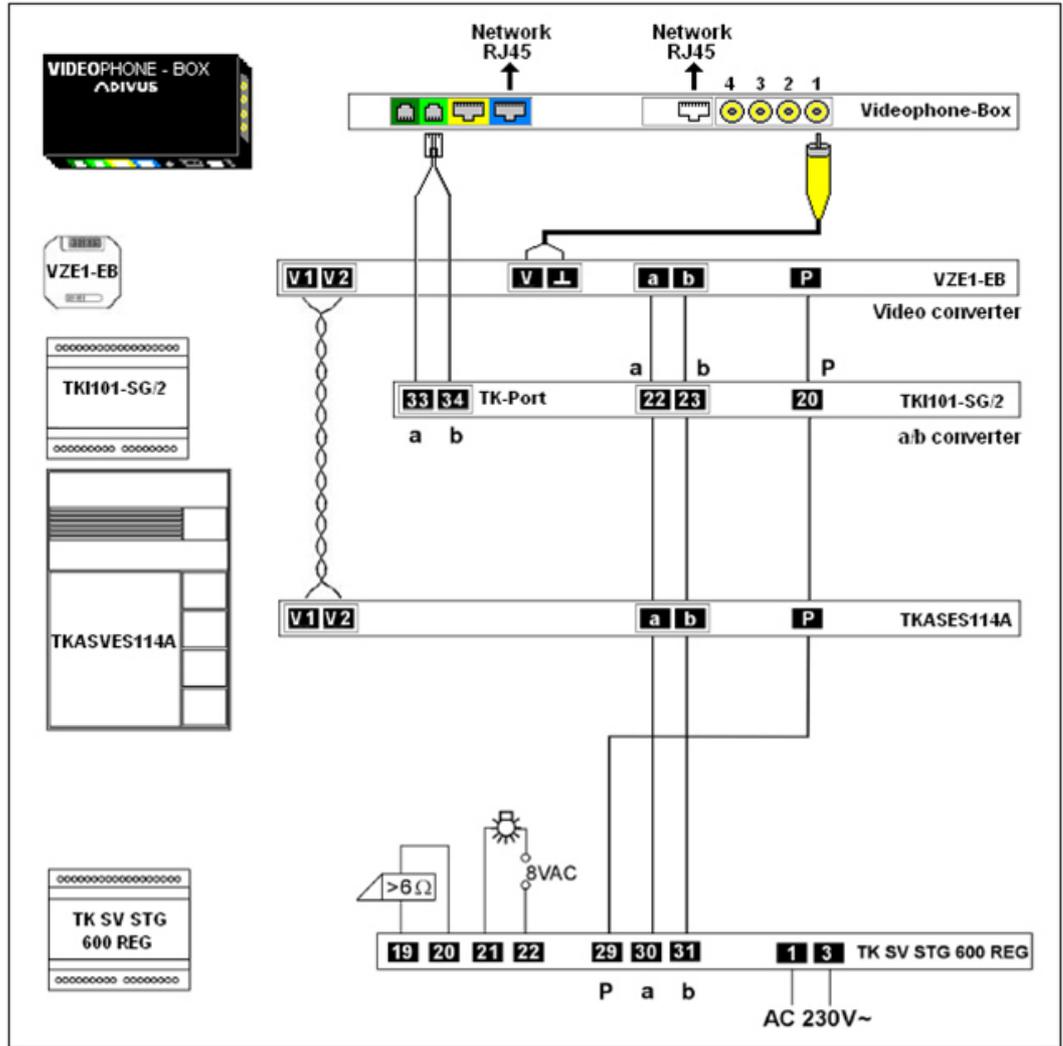
GIRA



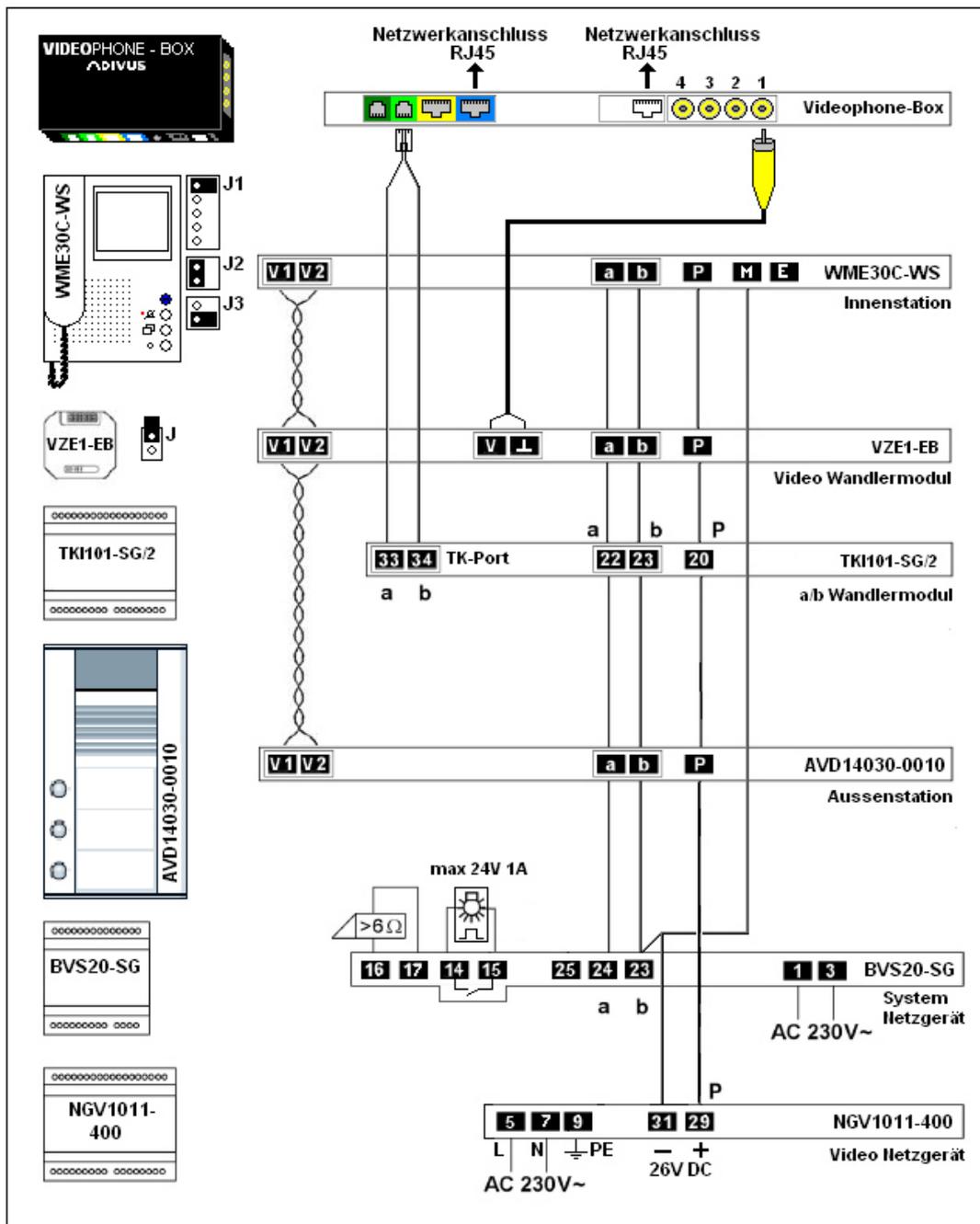
SIEDLE



JUNG



TCS



I RECYCLING INFORMATION



English

Information on Disposal of Old Electrical and Electronic Equipment (applicable for EU countries that have adopted separate waste collection systems)

Products with the symbol (crossed-out wheeled bin) cannot be disposed as household waste.

Old electrical and electronic equipment should be recycled at a facility capable of handling these items and their waste by products. Contact your local authority for details in locating a recycle facility nearest to you. Proper recycling and waste disposal will help conserve resources whilst preventing detrimental effects on our health and the environment.

Deutsch

Entsorgung von gebrauchten Elektrischen und Elektronischen Geräten (anzuwenden in den Ländern der Europäischen Union und anderen europäischen Ländern mit einem separaten Sammelsystem für solche Geräte)

Das Symbol (durchgestrichene Mülltonne) auf dem Produkt oder seiner Verpackung weist darauf hin, dass dieses Produkt nicht als normaler Haushaltsabfall behandelt werden darf, sondern an einer Annahmestelle für das Recycling von elektrischen und elektronischen Geräten abgegeben werden muss. Durch Ihren Beitrag zur korrekten Entsorgung dieses Produktes schützen Sie die Umwelt und die Gesundheit Ihrer Mitmenschen. Un-sachgemäße oder falsche Entsorgung gefährden Umwelt und Gesundheit. Weitere Informationen über das Recycling dieses Produktes erhalten Sie von Ihrer Gemeinde oder den kommunalen Entsorgungsbetrieben.

Italiano

Informazioni sullo smaltimento delle vecchie apparecchiature elettriche ed elettroniche (valido per i paesi europei che hanno adottato sistemi di raccolta separata)

I prodotti recanti il simbolo di un contenitore di spazzatura su ruote barrato non possono essere smaltiti insieme ai normali rifiuti di casa. I vecchi prodotti elettrici ed elettronici devono essere riciclati presso un'apposita struttura in grado di trattare questi prodotti e di smaltirne i loro componenti. Per conoscere dove e come recapitare tali prodotti nel luogo a voi più vicino, contattare l'apposito ufficio comunale. Un appropriato riciclo e smaltimento aiuta a conservare la natura e a prevenire effetti nocivi alla salute e all'ambiente.

Français

Information sur l'élimination des anciens équipements électriques et électroniques (applicable dans les pays de l'Union Européenne qui ont adopté des systèmes de * collecte sélective)

Les produits sur lesquels le pictogramme (poubelle barrée) est apposé ne peuvent pas être éliminés comme ordures ménagères. Les anciens équipements électriques et électroniques doivent être recyclés sur des sites capables de trier ces produits et leurs déchets. Contactez vos autorités locales pour connaître le site de recyclage le plus proche. Un recyclage adapté et l'élimination des déchets aideront à conserver les ressources et à nous préserver des leurs effets nocifs sur notre santé et sur l'environnement.

Nederlands

Informatie over het weggooien van elektrische en elektronische apparatuur (particulieren)

Dit symbool geeft aan dat gebruikte elektrische en elektronische producten niet bij het normale huishoudelijke afval mogen. Lever deze producten in bij de aangewezen 'inzamelingspunten, waar ze gratis worden geaccepteerd en op de juiste manier worden verwerkt, teruggewonnen en hergebruikt. Voor inleveradressen zie www.nvmp.nl, -- www.ictmilieu.nl, www.stibat.nl. Wanneer u dit product op de juiste manier als afval inlevert, spaart u waardevolle hulpbronnen " en voorkomt u potentiële negatieve gevolgen voor de volksgezondheid en het milieu, die anders kunnen ontstaan door een onjuiste verwerking van afval.

Espanol

Información acerca de la eliminación de equipos eléctricos y electrónicos al final de la vida útil (aplicable a los países de la Unión Europea que hayan adoptado sistemas independientes de recogida de residuos)

Los productos con el símbolo de un contenedor con ruedas tachado no podrán ser desechados como residuos domésticos. Los equipos eléctricos y electrónicos al final de la vida útil, deberán ser reciclados en instalaciones que puedan dar el tratamiento >• adecuado a estos productos y a sus subproductos residuales correspondientes. Póngase en contacto con su administración local para obtener información sobre el punto de recogida más cercano. Un iralamiento correcto del redclaje y la eliminación de residuos ayuda a conservar los recursos y evita al mismo tiempo efectos perjudiciales en la salud y el medio ambiente.

